



*NetView[®] Performance Monitor
User's Guide
Version 2 Release 7*

SH19-6962-06



*NetView[®] Performance Monitor
User's Guide
Version 2 Release 7*

SH19-6962-06

NetView Performance Monitor User's Guide, Version 2.7

Copyright Notice

© Copyright IBM Corporation 1984, 2001. All rights reserved. May only be used pursuant to a Tivoli Systems Software License Agreement, an IBM Software License Agreement, or Addendum for Tivoli Products to IBM Customer or License Agreement. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual, or otherwise, without prior written permission of IBM Corporation. IBM Corporation grants you limited permission to make hardcopy or other reproductions of any machine-readable documentation for your own use, provided that each such reproduction shall carry the IBM Corporation copyright notice. No other rights under copyright are granted without prior written permission of IBM Corporation. The document is not intended for production and is furnished "as is" without warranty of any kind. **All warranties on this document are hereby disclaimed, including the warranties of merchantability and fitness for a particular purpose.**

U.S. Government Users Restricted Rights—Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corporation.

Trademarks

IBM, Tivoli, the Tivoli logo, APPN, Common User Access, IBMLink, MVS/ESA, MVS/XA, NetView, OS/390, RACF, SP, System/370, VTAM, z/OS are trademarks or registered trademarks of International Business Machines Corporation or Tivoli Systems Inc. in the United States, other countries, or both.

Other company, product, and service names may be trademarks or service marks of others.

Notices

References in this publication to Tivoli Systems or IBM products, programs, or services do not imply that they will be available in all countries in which Tivoli Systems or IBM operates. Any reference to these products, programs, or services is not intended to imply that only Tivoli Systems or IBM products, programs, or services can be used. Subject to valid intellectual property or other legally protectable right of Tivoli Systems or IBM, any functionally equivalent product, program, or service can be used instead of the referenced product, program, or service. The evaluation and verification of operation in conjunction with other products, except those expressly designated by Tivoli Systems or IBM, are the responsibility of the user. Tivoli Systems or IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to the IBM Director of Licensing, IBM Corporation, North Castle Drive, Armonk, New York 10504-1785, U.S.A.

ISO 9001 Certification

This product was developed using an ISO 9001 certified quality system.

Certification has been awarded by Bureau Veritas Quality International (BVQI) (Certification No. BVQI - 92086 / A).

BVQI is a world leader in quality certification and is currently recognized by more than 20 accreditation bodies.

Contents

Figures..... xi

Tables..... xvii

Preface xix

Who Should Read this Guide xix

What this Guide Contains..... xix

Publications..... xx

 NPM Library..... xx

 Related Publications..... xxi

 Accessing Publications Online..... xxi

 Ordering Publications..... xxi

 Providing Feedback about Publications..... xxi

Contacting Customer Support..... xxii

I Using LookAt to Look Up Message Explanations..... xxii

Conventions Used in this Guide..... xxiii

I Changes for This Edition..... xxiii

Changes for the Previous Edition..... xxiii

Using Syntax Diagrams..... xxiii

 Reading Syntax Diagrams..... xxiii

 Abbreviating Keywords..... xxiv

 Parameters..... xxiv

 Repeating Parameters..... xxv

 Reading Fragments..... xxv

 Long Syntax Diagrams..... xxvi

Part I. Using NPM 1

Chapter 1. Introducing NPM..... 5

 What Is NPM?..... 5

 Collecting Data..... 5

 Displaying NPM Data..... 7

 Customizing Your NPM Environment..... 7

 Logging On and Off..... 8

 Changing Your Password..... 9

 Using NPM Panels, Keys, and Commands..... 10

 NPM Panels..... 10

 NPM Commands..... 11

Control Keys	12
Understanding NPM Messages.	12
Getting Help for Online Panels	13
Getting Help for Online Messages	13
Using the Primary Options Menu.	14
Using NPM Fast Path Commands	15
Communicating With Other NPMs.	15
Customizing Your User Profile	16
Reassigning PF Keys.	16
Modifying Functional Variables	18
Displaying Your Security Profile	18
Displaying Session Accounting Data	19
Obtaining National Language Support	20

Chapter 2. Collecting and Analyzing Network Data 23

Network Management Panels.	23
Using the List Option for NCPs.	25
Displaying a List of NCP Network Resources	25
Starting an Active or Deferred Network Collection.	26
Displaying Network Detail Data	28
Displaying, Altering, or Stopping a Network Collection	29
Expanding a Resource List	31
Stopping All Collections	32
Using the List Option for Routers	33
Displaying a List of Router Network Resources	33
Starting a Router Network Collection.	35
Displaying Information for a Selected Router.	36
Displaying, Altering, or Stopping a Network Collection	37
Stopping All Router Collections.	38
Using the Select and List Option for NCPs	38
Using the Select and List Option for Routers	40
Using the Find Resource Option	41
Using the Start Collection Option for NCPs.	42
Using the Start Collection Option for Routers	44
Using the Alter Collection Option for NCPs.	45
Using the Alter Collection Option for Routers	47
Using the Stop Collection Option for NCPs	49
Using the Stop Collection Option for Routers	50

Using the Review Data Option for NCPs	50
Displaying ODLC LAN Resources Data for a LAN PU	51
Displaying ODLC LAN Resources Data for a LAN Physical Link	52
Displaying Frame Relay Resources Data for a Physical Station	53
Displaying Frame Relay Resources Data for a Logical Link	54
Displaying Frame Relay Resources Data for a Physical Link	56
Displaying NEO Resources Data	57
Displaying Network Detail Data for Lines	58
Displaying Network Detail Data for PU	59
Displaying NTRI Resources Data for a Logical Link	61
Displaying NTRI Resources Data for a Physical Link	63
Displaying Network Detail Data for CCUs	65
Displaying Ethernet Resources Data	67
Displaying X.25 Resources Data	68
Displaying Monitor Event Messages for Network Collections	69
Displaying Router Network Collection Data	71
Displaying CPU Information for Cisco Routers	76
Displaying CPU Information for IBM Routers	76
Displaying Memory Pool Information for Cisco Routers	77
Displaying Memory Information for IBM Routers	78
Displaying CIP Information for Cisco Routers	80
Using the Dynamic Data Display Option for NCPs	81
Using the Dynamic Data Display Option for Routers	84

Chapter 3. Collecting and Analyzing Session Data 87

Session Management Panels	87
Starting Session Collection	88
Displaying, Altering, or Stopping an Active Session Collection	91
Displaying, Altering, or Stopping a Deferred Session Collection	94
Displaying Dynamic Response Times Data	95
Displaying IP Detail Analysis Data	98
Displaying LU Detail Analysis Data	102
Displaying Session Analysis Summary Data	105
Displaying Session Performance Status Information	107
Displaying Session Monitor Event Messages	114

Chapter 4. Collecting and Analyzing RTM Data 117

RTM Management Panels	117
Enabling RTM Collection	118
Disabling RTM Collection	118

Determining RTM Collection Status	119
Performing RTM LU Detail Analysis	119
Performing RTM Session Analysis	123
Chapter 5. Collecting and Analyzing LAN Data	125
LAN Management Panels	125
Selecting a LAN Bridge	126
Collecting LAN Bridge Data	127
Selecting a LAN Segment	129
Collecting LAN Segment Data.	130
Displaying LAN Segment Configuration Data	131
Displaying LAN Data	132
Displaying LAN Collection Monitor Event Messages	136
Chapter 6. Collecting and Analyzing VTAM Statistics Data	139
VTAM Management Panels	139
Displaying VTAM Environment Data.	140
Collecting and Displaying VTAM Global Data.	141
Collecting and Displaying VTAM Buffer Pool Data	144
Collecting and Displaying Virtual Route Data	145
Collecting and Displaying VTAM Device Data	148
Collecting and Displaying Application Data	151
Collecting and Displaying Address Space Data.	152
Starting VTAM Statistics Collections	154
Displaying VTAM Statistics Data.	156
Displaying/Altering/Stopping Active VTAM Data Collections.	157
Issuing Direct VTAM Statistics Collection Commands	159
Using Direct Commands to Start a VTAM Collection.	160
Using Direct Commands to Alter a VTAM Collection	162
Using Direct Commands to Stop a VTAM Collection.	164
Using Direct Commands to Display VTAM Detail Data	164
Displaying VTAM Monitor Event Messages.	172
Chapter 7. Collecting and Analyzing NetWare Resources Data	175
Chapter 8. Collecting and Analyzing Dynamic Data	177
Using PF Keys and Commands	178
Dynamic Display Output Relevant Counters.	179
Example	180
Using the DYN Command.	181

Example	182
Using Fast Paths	184
Fast Path =1.8	184
Fast Path =2.4	185
Example	186

Chapter 9. Using NPM Control Functions 187

NPM Control Function Panels	187
Unbinding Users and Displaying NPM User Information	189
Using the Sessions Display and Management Panel	189
Managing NPALUs	190
Displaying Performance Measurement Tables	193
Managing Data Files	196
Displaying SMF Record Status	198
Sending a Message to Another NPM User	199
Executing NPM EXECs	200
Managing LAN Collection	200
Performing NPM Accounting Functions	203
Selecting Network Accounting NCPs	205
Ending NPM	211

Part II. Reference 213

Chapter 10. NPM Commands 215

Online Commands	215
System Console Commands	218
Using the System Console to Enter Commands	219
Using the CLOCK Keyword	220
Using the OPTION Keyword	221
OPTION=START:	221
OPTION=STOP:	222
OPTION=STOPALL:	222
Altering Options with NPM Panels	223
Using the INTERVAL Keyword	223
NetWare Resources, Network, and VTAM Intervals	224
Session Intervals	224
LAN Bridge Intervals	224
LAN Segment Intervals	225
NPM System Console Command Descriptions	225

Rules for Coding NPM Commands	225
Special Characters on Non-US Keyboards	226

Chapter 11. System Console Commands: ABEND to NSAMDFY..... 227

ABEND	228
DISPLAY	229
EXECUTE	231
GENERIC.....	233
INTERVAL.....	236
IPCOLL	237
LANMGR.....	243
LBRGCOLL.....	245
LINE.....	249
LSEGCOLL	252
LU	255
LUGROUP	257
LWGCOLL.....	259
LWGRES	267
LWGSTOP	269
NCP	270
NETCOLL	277
NGACNTL.....	295
NGAMDFY	297
NOTRACE	300
NSACNTL	302
NSAMDFY.....	304

Chapter 12. System Console Commands: NSASOLCT to VVRCOLL 307

NSASOLCT	308
PU	310
SEND.....	313
SESSAPPL.....	315
SESSCOLL.....	322
SMFCNTL	330
SNAP	332
SNMPTGT	334
STOP	336

TIME	337
TRACE	338
VADRCOLL	340
VAPLCOLL	344
VAPNCOLL	348
VARY	351
VBPLCOLL	353
VCSMROLL	359
VDEVCOLL	362
VGBLCOLL	368
VMNPCOLL	374
VRTPCOLL	378
VVRCOLL	382
Part III. Appendixes	389
Appendix A. Archiving and Rebuilding Data Sets and Files.....	391
Archiving and Rebuilding Data Sets and Files	391
Glossary	403
Index	415

Figures

1. NetView Performance Monitor Logon Panel (FNM0LLOG)	8
2. Command Field	9
3. Select Option Field	9
4. Logoff Panel (FNM00CLF)	9
5. NPM Panel IDs	10
6. Control Keys Display	12
7. Primary Options Panel (FNM00PRI)	14
8. User Profile Panel (FNM00PRM)	16
9. Primary Program Function Key Definitions Panel (FNM00PF2)	17
10. Alternate Program Function Key Definitions Panel (FNM00PF3)	17
11. Functional Variables Panel (FNM00VAR)	18
12. Security Profile Panel (FNM00UPB)	19
13. Session Accounting Data Panel (FNM00ACC)	20
14. National Language Selection Panel (FNM00LNG)	20
15. Network Management Panel (FNM01NET)	24
16. Resource List Panel (FNM02RSL)	25
17. Network Start Panel (FNM03STD)	27
I 18. Network Start Panel (FNM03STM)	27
I 19. Network Start Panel (FNM03STM)	28
20. Network Review Panel (FNM02RVM)	29
21. Command List Panel (FNM03NCL)	30
I 22. Network Alter Panel (FNM03STM)	30
I 23. Network Alter Panel (FNM03STM)	31
24. Network Router List Panel (FNM02RSR)	33
25. Network Start Panel for Router (FNM03STE)	35
26. Network Start Panel for Router (FNM03SRR)	35
27. Display Router Information Panel (FNM03RSD)	36
28. Display Router Information Panel (FNM03RSY)	36
29. Command List Panel for Router (FNM03NCR)	37
30. Network Alter Panel for Router (FNM03SRR)	38
31. Select and List Panel (FNM02SL1)	39
32. Resource List Panel (FNM02RSL)	39
33. Select and List Panel (FNM02SL2)	40
34. Network Router List Panel (FNM02RSR)	41
35. NCP Name Selection Panel (FNM02UPL)	42
36. Resource List Panel (FNM02RSL)	42
37. Network Start Panel (FNM03STD)	43
I 38. Network Start Panel (FNM03STM)	43
I 39. Network Start Panel (FNM03STM)	44
40. Network Start Panel for Router (FNM03STE)	45
41. Network Start Panel for Router (FNM03SRR)	45
42. Network Alter Panel (FNM03STD)	46
I 43. Network Alter Panel (FNM03STM)	47
I 44. Network Alter Panel (FNM03STM)	47
45. Network Alter Panel for Router (FNM03STE)	48
46. Network Alter Panel for Router (FNM03SRR)	49
47. Network Stop Panel (FNM03STD)	49
48. Network Stop Panel for Router (FNM03STE)	50
49. Network Review Panel (FNM02RVM)	51

50. Network Review Data for ODLC LAN Resources Panel (FNM03RVC)	52
51. Network Review Data for ODLC LAN Resources Panel (FNM03RVZ)	52
52. Network Review Data for ODLC LAN Resources Panel (FNM03RVD)	53
53. Network Review Data for OLDC LAN Resources Panel (FNM03RV8)	53
54. Network Review Data for Frame Relay Resources Panel (FNM03RVF)	54
55. Network Review Data for Frame Relay Resources Panel (FNM03RV9)	54
56. Network Review Data for Frame Relay Resources Panel (FNM03RVV)	55
57. Network Review Data for Frame Relay Resources Panel (FNM03RVB)	55
58. Network Review Data for Frame Relay Resources Panel (FNM03R11)	56
59. Network Review Data for Frame Relay Resources Panel (FNM03RVU)	56
60. Network Review Data for Frame Relay Resources Panel (FNM03RVA)	57
61. Network Review Data for Frame Relay Resources Panel (FNM03R10)	57
62. Network Review Data for NEO Resources Panel (FNM03RVG)	58
63. Network Review Data for NEO Resources Panel (FNM03RV5)	58
64. Network Review Data Panel (FNM03RVL)	59
65. Network Review Data Panel (FNM03RV1)	59
66. Network Review Data Panel (FNM03RVY)	60
67. Network Review Data Panel (FNM03RVR)	60
68. Network Review Data Panel (FNM03RV2)	61
69. Network Review Data for NTRI Resources Panel (FNM03RVN)	62
70. Network Review Data for NTRI Resources Panel (FNM03RVQ)	62
71. Network Review Data for NTRI Resources Panel (FNM03RV3)	63
72. Network Review Data for NTRI Resources Panel (FNM03RVS)	63
73. Network Review Data for NTRI Resources Panel (FNM03RVH)	64
74. Network Review Data for NTRI Resources Panel (FNM03RVO)	64
75. Network Review Data for NTRI Resources Panel (FNM03RV4)	65
76. Network Review Data Panel (FNM03RVP)	66
77. Network Review Data Panel (FNM03CU0)	66
78. Network Review Data for 3746 Line Processor Panel (FNM03CU4)	67
79. Network Review Data for 3746 Line Processor Panel (FNM03CUL)	67
80. Network Review Data for Ethernet Resources Panel (FNM03RVT)	68
81. Network Review Data for Ethernet Resources Panel (FNM03RV7)	68
82. Network Review Data for X.25 Resources Panel (FNM03RVX)	69
83. Network Review Data for X.25 Resources Panel (FNM03RV6)	69
84. Network Review Panel (FNM02RVM)	70
85. Review Monitor Event Messages Panel (FNM03RVE)	70
86. Router Review Panel (FNM02RRV)	71
87. Network Router Review Data Panel (FNM03RI1)	72
88. Network Router Review Data Panel (FNM03RI2)	72
89. Network Router Review Data Panel (FNM03RI3)	73
90. Network Router Review Data Panel (FNM03RI4)	74
91. Network Review Data Panel for Router (FNM03RI5)	75
92. Network Router Review Data Panel (FNM04CPC)	76
93. Network Router Review Data Panel (FNM04CPI)	77
94. Network Router Review Data Panel (FNM04MEC)	78
95. Network Router Review Data Panel (FNM04MI1)	79
96. Network Router Review Data Panel (FNM04MI2)	79
97. Network Router Review Data Panel (FNM04MI3)	80
98. Network Router Review Data Panel (FNM04CI1)	81
99. Network Router Review Data Panel (FNM04CI2)	81
100. Dynamic NCP Data Panel (FNM02DDN)	82
101. Dynamic NCP Data Panel (FNM03DDN)	83

102. Dynamic NCP Data Panel in Auto Refresh Mode (FNM03DDN)	83
103. Dynamic Router Data Display Panel (FNM02DDR)	84
104. Dynamic Router Data Display Panel (FNM03DDC)	85
105. Dynamic Router Data Display Panel in Auto Refresh Mode (FNM03DDR).	85
106. Response Times Panel (FNM01SES)	88
107. Start Session Panel (FNM02SCL).	89
108. Session Monitor Selection Panel (FNM03SAS).	90
109. Session Status/Stop (Active) Resource Panel (FNM03SSA).	91
110. Session Status/Stop (Active) Details Panel (FNM04SSA)	92
111. Session Status/Stop (Active) Resource Menu Panel (FNM04SAP).	92
112. Alter Active Session Panel (FNM05ALT)	93
113. Session Monitor Selection Panel (FNM03SAS).	93
114. Session Status/Stop (Deferred) Resource Panel (FNM04SSD)	94
115. Alter Deferred Session Panel (FNM05ALD).	95
116. Dynamic Response Times Data Panel (FNM02DDS)	96
117. Dynamic Response Times Data Display Panel (FNM03DDA)	97
118. Dynamic Response Times Data Display Panel (FNM03DDT)	97
119. Dynamic Response Times Data Display Panel, Auto-Refresh Mode (FNM03DDA)	98
120. Dynamic Response Times Data Display Panel, Auto-Refresh Mode (FNM03DDT)	98
121. IP Detail Analysis Panel (FNM02DNI)	99
122. Transit Time Interval Panel (FNM03TI3)	100
123. Transit Time Distributions/Interval Panel (FNM03DI2)	100
124. Volumes/Interval Panel (FNM03V02)	101
125. NPM Session Analysis Summary - IP Address (FNM03SMI)	101
126. LU Detail Analysis Panel (FNM02DNM)	102
127. Transit Time Interval Panel (FNM03TI1)	103
128. Transit Time Distributions/Interval Panel (FNM03DI1)	104
129. Volumes/Interval Panel (FNM03V01)	104
130. NPM Session Analysis Summary - Logical Unit (FNM03SMN)	105
131. Session Analysis Panel (FNM02SAN).	105
132. NPM Session Analysis Summary - Application (FNM03SMN)	106
133. NPM Session Summary LU List - Application Panel (FNM04LTN).	107
134. Performance Status Analysis Panel (FNM02PDT)	108
135. Performance Status Host Selection Panel (FNM02PSM)	108
136. Performance Status - Nodes Panel (FNM02PHN)	109
137. NPM Session Summary LU List - Node Panel (FNM04LTN)	110
138. Performance Status - Host/Applications Panel (FNM02PHA)	110
139. Performance Status - Lines Panel (FNM02PNL)	111
140. Performance Status - Line/Application Panel (FNM02PLA).	112
141. Performance Status - Physical Unit Panel (FNM02PLP)	112
142. Performance Status - Logical Unit Panel (FNM02PPL)	113
143. Performance Status - Line/Session Volumes Panel (FNM02PVL).	114
144. Session Monitor Review Panel (FNM02SAM)	114
145. Session Monitor Event Messages Panel (FNM03SAE)	115
146. RTM Management Panel (FNM01RTM)	118
147. RTM LU Detail Analysis Panel (FNM02DRM).	119
148. Response Time/Interval Panel (FNM03TI2)	120
149. Distribution Interval Panel (FNM03D02)	121
150. Distribution Summary Panel (FNM03D02)	122
151. RTM Session Analysis Summary Panel (FNM03SMR)	122
152. RTM Session Analysis Summary Panel (FNM02SAR)	123
153. RTM Session Analysis Summary - Application Panel (FNM03SMR).	124

154. RTM Session Summary LU List - Virtual Route Panel (FNM04LTR)	124
155. LAN Resource Type Panel (FNM01LAN).	125
156. LAN Bridge Selection Panel (FNM02LBS).	126
157. LAN Bridge Collection Control Panel (FNM03LBC)	127
158. LAN Bridge Detailed Configuration Panel (FNM03LBD)	128
159. LAN Segment Selection Panel (FNM02LSS)	130
160. LAN Segment Collection Control Panel (FNM03LSC)	131
161. LAN Segment Detailed Configuration Panel (FNM03LSD)	132
162. LAN Review Panel (FNM02LBM)	133
163. LAN Bridge Data Detail Panel (FNM03LBR)	134
164. LAN Bridge Lost Frames Detail Panel (FNM03LB2)	134
165. LAN Review Panel (FNM02LBM)	135
166. LAN Segment Data Detail Panel (FNM03LSR)	136
167. LAN Review Panel (FNM02LBM)	136
168. Review Monitor Event Messages Panel (FNM03RVE)	137
169. VTAM Resource Type Selection Panel (FNM01VTM)	140
170. View VTAM Environment Data Panel (FNM03VE1)	141
171. VTAM Global Data Selection Panel (FNM02GS1)	142
172. VTAM Global Current Data Panel (FNM02GS2)	143
173. VTAM Global Current Data Panel (FNM02GS3)	143
174. VTAM Global Current Data Panel (FNM02GS4)	144
175. VTAM Buffer Pool Selection Panel (FNM02BS1)	144
176. VTAM Buffer Pool Current Data Panel (FNM02BS2)	145
177. Destination Subarea Selection Panel (FNM02SS1)	146
178. Virtual Route Selection Panel (FNM03VS1)	146
179. Virtual Route Current Data Panel (FNM03VS2)	147
180. Virtual Route Current Data Panel (FNM03VS3)	148
181. VTAM Device Selection Panel (FNM02DS1)	148
182. VTAM Device Current Data Panel (FNM02DS2)	149
183. VTAM Device Current Data Panel (FNM02DS3)	150
184. VTAM MPC Device Current Data (FNM03MP1)	150
185. VTAM Device Current Data (FNM03MP2)	151
186. VTAM Application Selection Panel (FNM02PS1)	151
187. VTAM Application Current Data Panel (FNM02PS2)	152
188. VTAM Address Space Selection Panel (FNM02AS1)	153
189. VTAM Address Space Current Data Panel (FNM02AS2)	154
190. VTAM Start Panel (FNM03VTD)	154
191. VTAM Start Panel (FNM03VTC)	155
192. VTAM Start Panel (FNM03VT2)	156
193. VTAM Data Analysis Panel (FNM03VAN)	157
194. Command List Panel (FNM03VCL)	158
195. VTAM Alter Panel (FNM03VTC)	158
196. VTAM Alter Panel (FNM03VT2)	159
197. Direct Commands Panel (FNM02CMD)	160
198. VTAM Start Panel (FNM03VTD)	161
199. VTAM Start Panel (FNM03VTC)	161
200. VTAM Start Panel (FNM03VT2)	162
201. VTAM Alter Panel (FNM03VTD)	162
202. VTAM Alter Panel (FNM03VTC)	163
203. VTAM Alter Panel (FNM03VT2)	164
204. VTAM Stop Panel (FNM03VTD)	164
205. VTAM Data Analysis Panel (FNM03VAN)	165

206. VTAM Global Detail Data Panel (FNM04GD1)	166
207. VTAM Global Detail Data Panel (FNM04GD2)	167
208. VTAM Global Detail Data Panel (FNM04GD3)	167
209. VTAM Buffer Pool Detail Data Panel (FNM04BD1).	168
210. Virtual Route Detail Data Panel (FNM04VD1)	169
211. Virtual Route Detail Data Panel (FNM04VD2)	169
212. VTAM Device Detail Data Panel (FNM04DD1)	170
213. VTAM Device Detail Data Panel (FNM04DD2)	170
214. VTAM MPC Device Detail Panel (FNM04MD1)	171
215. VTAM Application Detail Data Panel (FNM04PD1)	172
216. VTAM Address Space Detail Data Panel (FNM04AD1)	172
217. VTAM Monitor Event Messages Panel (FNM0VMON).	173
218. Primary Options Panel (FNM00PRI).	179
219. Dynamic NCP Data Display Panel (FNM03DDN).	181
220. Dynamic NCP Data Display Panel, Auto Refresh Mode (FNM03DDN).	181
221. Network Management Panel (FNM01NET).	182
222. Network Review Panel (FNM02RVM)	182
223. Network Review Data Panel (FNM03RVP).	183
224. Dynamic NCP Data Display Panel (FNM03DDN).	183
225. Dynamic NCP Data Display Panel, Auto Refresh Mode (FNM03DDN).	184
226. Dynamic NCP Data Display Panel (FNM02DDN).	184
227. Dynamic Router Data Panel (FNM02DDR)	185
228. Dynamic Response Times Data Display Panel (FNM02DDS)	185
229. Network Management Panel (FNM01NET).	186
230. Dynamic NCP Data Display Panel (FNM02DDN).	186
231. Control Functions Panel (FNM01OMN)	188
232. User Display and Management Panel (FNM02OUS)	189
233. Sessions Display and Management Panel (FNM02OSS)	190
234. NPALU Display and Management Panel (FNM02OCC)	191
235. NCP Detail Display Panel (FNM02OCR)	192
236. NCP Detail Display Panel (FNM02OCS)	192
237. Network Accounting Display Panel (FNM02OCN)	193
238. Network Accounting Threshold Display Panel (FNM02OCT)	193
239. Performance Measurement Table Display Panel (FNM02OPM)	194
240. Summary Display Panel (FNM02OPS)	195
241. File Services Summary Panel (FNM02OPR).	195
242. Virtual Storage Summary Display Panel (FNM02OPV).	196
243. Session Collection Performance Panel (FNM02OPC)	196
244. Data File Display and Management Panel (FNM02OFL).	197
245. SMF User Record Display and Management Panel (FNM02OSM)	199
246. Send Message Panel (FNM02OMS)	199
247. Execute an NPM EXEC Panel (FNM02OEX).	200
248. LAN Management Control Panel (FNM02LMC).	201
249. LAN Bridge Control Panel (FNM02LBB).	202
250. LAN Segment Control Panel (FNM02LSB)	203
251. Accounting panel (FNM02ACC).	204
252. Network Session Accounting NCP Selection Panel (FNM0ABCS).	205
253. Network Gateway Accounting NCP Selection Panel (FNM0ABCG)	206
254. Network Session Accounting Modification Panel (FNM0ABM2).	207
255. Network Session Accounting Threshold Modification Panel (FNM0ABM3).	207
256. Network Session Accounting Modification Panel (FNM0ABMM)	208
257. Network Accounting Status Panel (FNM0ABS2).	209

258. Network Accounting Thresholds Status Panel (FNM0ABS3)	209
259. Network Session Accounting Status Panel (FNM0ABST)	210
260. Network Gateway Accounting Modification Panel (FNM0ABMG)	210
261. NPM Termination Panel (FNM02OTR).	211
262. Sample NPMARCHV.	392
263. Example Format of the Control Statements.	399
264. Example Pointer Report	400

Tables

1.	NPM Online Commands	215
2.	Collection Interval Example	224
3.	Hexadecimal Representations of Special Characters in NPM	226
4.	NetWare Resource Groups	260
5.	NetWare Monitor Types on LWGCOLL Command	265
6.	Netcoll Data Types and Resources	294
7.	VARY Command Options Available for NPM Resources	352

Preface

The *NetView Performance Monitor User's Guide* provides the basic information needed to operate Tivoli® NetView® Performance Monitor (NPM).

Who Should Read this Guide

This guide is designed for those who use NPM on a daily basis to manage a communications network. New operators can use the overview material provided in Part I, “Using NPM” to get started with NPM. Experienced operators and system programmers can use the material provided in Part II, “Reference” when performing advanced NPM operations.

What this Guide Contains

This book contains the following sections:

Part I. Using NPM

Part I contains the following chapters:

- Chapter 1, “Introducing NPM”.
Describes basic NPM tasks. It acquaints you with NPM commands, online panels, and PF keys. The chapter also describes how to view information about your NPM environment and how to customize certain aspects to fit the way you use NPM.
- Chapter 2, “Collecting and Analyzing Network Data”
Describes the online panels used in NPM’s network management function.
- Chapter 3, “Collecting and Analyzing Session Data”
Describes the online panels used in NPM’s response times management function.
- Chapter 4, “Collecting and Analyzing RTM Data”
Describes the online panels used in NPM’s response time monitor (RTM) management function.
- Chapter 5, “Collecting and Analyzing LAN Data”
Describes the online panels used in NPM’s local area network (LAN) management function.
- Chapter 6, “Collecting and Analyzing VTAM Statistics Data”
Describes the online panels used in NPM’s virtual telecommunications access method (VTAM) management function.
- Chapter 7, “Collecting and Analyzing NetWare Resources Data”
Provides an overview of the facilities NPM uses to collect NetWare resources performance data.
- Chapter 8, “Collecting and Analyzing Dynamic Data”
Describes the use of the Dynamic Data Display function.
- Chapter 9, “Using NPM Control Functions”
Describes the online panels used in NPM control functions.

Part II. Reference

Part II contains the following chapters:

- Chapter 10, “NPM Commands”
Describes the online commands that can be issued from online panels and provides an introduction to the system console commands that can be issued from the system console (with the proper authorization).
- Chapter 11, “System Console Commands: ABEND to NSAMDFY”
Describes the NPM system console commands from ABEND to NSAMDFY in alphabetical sequence. There is a general description and a syntax diagram for every command.
- Chapter 12, “System Console Commands: NSASOLCT to VVRCOLL”
Describes the NPM system console commands from NSASOLCT to VVRCOLL in alphabetical sequence. There is a general description and a syntax diagram for every command.

Part III. Appendixes

Part III contains the following appendix:

- Appendix A, “Archiving and Rebuilding Data Sets and Files”
Provides procedures for archiving and rebuilding NPM files.

A glossary and an index are provided at the end of the guide.

Example scenarios about using NPM to help solve common network problems are provided in the *NetView Performance Monitor Concepts and Planning*.

Publications

This section lists publications in the NPM library and any other related documents. It also describes how to access Tivoli publications online, how to order Tivoli publications, and how to make comments on Tivoli publications.

NPM Library

The following documents are available in the NPM library:

- *NetView Performance Monitor Concepts and Planning*, GH19-6961
Provides information about the basic concepts of NPM and helps you plan for installing NPM and migrating from a previous release.
- *NetView Performance Monitor Installation and Customization*, SH19-6964
Provides information about installing, customizing, and tuning NPM.
- *NetView Performance Monitor Console User's Guide*, SH19-4522
Explains how to use the graphical interface for NPM.
- *NetView Performance Monitor Reference*, SH19-6965
Provides information for operators, system programmers, and system planners who want to produce reports and write applications using data collected by NPM.
- *NetView Performance Monitor Messages and Codes*, SH19-6966

Provides information to help operators and system programmers understand, interpret, and respond to NPM messages and codes.

- *NetView Performance Monitor User's Guide*, SH19-6962

Provides information for new and experienced operators who use NPM on a daily basis to manage a communication network.

- *NetView Performance Monitor Diagnosis*, LY19-6381

Provides information about analyzing an NPM problem, classifying it as a specific type of failure, collecting data, and describing the problem to the Customer Support.

- *IBM Online Library Omnibus Edition OS/390 Collection Kit*, SK2T-6700 (available December 2001)

CD containing all OS/390 documentation.

- *IBM Online Library z/OS Software Products® Collection Kit*, SK3T-4270 (available December 2001)

CD containing all z/OS documentation.

Related Publications

A product bibliography is included in the *NetView Performance Monitor Concepts and Planning*.

Accessing Publications Online

You can access many Tivoli publications online at the Tivoli Customer Support Web site: <http://www.tivoli.com/support/documents/>

These publications are available in PDF or HTML format, or both. Translated documents are also available for some products.

Ordering Publications

You can order many Tivoli publications online at the following Web site: <http://www.ibm.com/shop/publications/order>

You can also order by telephone by calling one of these numbers:

- In the United States: 800-879-2755
- In Canada: 800-426-4968
- In other countries, for a list of telephone numbers, see the following Web site: http://www.tivoli.com/inside/store/lit_order.html

Providing Feedback about Publications

We are very interested in hearing about your experience with Tivoli products and documentation, and we welcome your suggestions for improvements. If you have comments or suggestions about our products and documentation, contact us in one of the following ways:

- Send an e-mail to pubs@tivoli.com.
- Complete our customer feedback survey at the following Web site: <http://www.tivoli.com/support/survey>

Contacting Customer Support

If you have a problem with any Tivoli product, you can contact Tivoli Customer Support. See the *Tivoli Customer Support Handbook* at the following Web site:
<http://www.tivoli.com/support/handbook/>

The handbook provides information about how to contact Tivoli Customer Support, depending on the severity of your problem, and the following information:

- Registration and eligibility
- Telephone numbers and e-mail addresses, depending on the country you are in
- What information you should gather before contacting support

Note: For Tivoli NetView for OS/390 customers only, additional support is available on the NETVIEW CFORUM (Customer Forum) through the IBMLink™ system. This forum is monitored by NetView developers who answer questions and provide guidance. When a problem with the code is found, you are asked to open an official problem management record (PMR) to get resolution.

Using LookAt to Look Up Message Explanations

LookAt is an online facility that allows you to look up explanations for z/OS™ messages, system abends, and some codes. Using LookAt to find information is faster than a conventional search because in most cases LookAt goes directly to the explanation.

You can access LookAt from the Internet at:

<http://www.ibm.com/servers/eserver/zseries/zos/bkserv/lookat/lookat.html>

or from anywhere in z/OS where you can access a TSO command line (for example, TSO prompt, ISPF, z/OS UNIX System Services running OMVS).

To find a message explanation on the Internet, go to the LookAt Web site and simply enter the message identifier (for example, IAT1836 or IAT*).

To use LookAt as a TSO command, LookAt must be installed on your host system. You can obtain the LookAt code for TSO from a disk on your *z/OS Collection Kit*, SK3T-4269 or from the LookAt Web site. To obtain the code from the LookAt Web site, do the following:

1. Go to <http://www.ibm.com/servers/eserver/zseries/zos/bkserv/lookat/lookat.html>.
2. Click the **News** button.
3. Scroll to **Download LookAt Code for TSO and VM**.
4. Click the ftp link, which will take you to a list of operating systems. Select the appropriate operating system. Then select the appropriate release.
5. Find the **lookat.me** file and follow its detailed instructions.

To find a message explanation from a TSO command line, simply enter: **lookat** *message-id*. LookAt will display the message explanation for the message requested.

Note: Some messages have information in more than one book. For example, IEC192I has routing and descriptor codes listed in *z/OS MVS Routing and Descriptor Codes*, SA22-7624. For such messages, LookAt prompts you to choose which book to open.

Conventions Used in this Guide

The term *data set* is used in this guide to refer to members of partitioned data sets.

In NPM panels, statements, and commands, the term *LU* means a terminal. Unlike the SNA definition, this definition of LU does not include applications. In NPM, the abbreviation *APPL* means application program.

The term *z/OS* is used in this book to mean *z/OS and OS/390* operating systems. Where the term OS/390 does appear, the related information applies *only* to OS/390 operating systems.

Changes for This Edition

The following changes have been made to this guide for NPM Version 2 Release 7:

- NPM version numbers have been updated throughout this guide.
- LookAt information has been added to this preface.
- A new command (SESSAPPL) has been added to the “NPM Commands” chapters.
- Information for the support of 3776X950 counters has been added to Chapter 2, “Collecting and Analyzing Network Data” and Chapter 11, “System Console Commands: ABEND to NSAMDFY.”

Changes for the Previous Edition

The following changes were made to this guide for NPM Version 2 Release 6:

- NPM version numbers were updated throughout the guide.
- New PF keys were added to the panels. Details of the new PF keys and how to customize them was added.
- A new chapter, “Collecting and Analyzing Dynamic Data,” was added.
- Cryptic labels in 3270 panels were renamed. For a mapping of the old and new labels, refer to the *NetView Performance Monitor Concepts and Planning* manual.

Using Syntax Diagrams

This guide uses syntax diagrams to illustrate the required syntax of commands and statements. This section describes how to use these diagrams.

Reading Syntax Diagrams

The syntax diagrams start with double arrowheads on the left (▶▶) and move along the main line until you end with two arrowheads facing each other (▶◀). To use a syntax diagram, follow any path from left to right. When you reach the end of a line, go to the beginning of the next line, if there is one. For whatever path you choose, code every item that appears on the path. All spaces, commas, and other characters are significant.

Abbreviating Keywords

In a syntax diagram, keywords are all or partly in uppercase. Where an abbreviation is possible, the abbreviation is shown in uppercase and the rest of the keyword is shown in lowercase. Variable values that you provide are shown in *italics*.



The previous diagram shows that you can code the SEND command in either of the following ways:

```

SE 'message text'
SEND 'message text'
  
```

Parameters

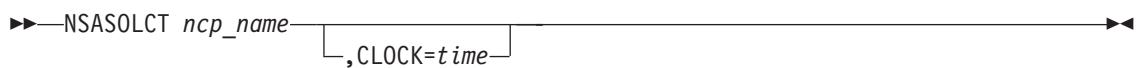
The following are types of parameters used in syntax diagrams:

Parameter	Description
Required	Required parameters are displayed on the main path.
Optional	Optional parameters are displayed below the main path.
Default	Default parameters are displayed above the main path.

Parameters are classified as keywords or variables. Keywords are displayed in uppercase letters and can be typed in uppercase or lowercase. For example, a command is a keyword.

Variables are italicized, appear in lowercase letters, and represent names or values you supply. For example, a file name is a variable.

In the following example, NSASOLCT is a command, the variable parameter is *ncp_name*, the keyword is CLOCK, and CLOCK's variable is *time*. You replace the variables with your own values.



Required Parameters

A stack of parameters with the first parameter on the main path means that you must choose only one from the stack.

In the following example, the required parameters are LU, GROUP, CDRM, or APPL.



Default and Optional Parameters

Items shown above the main line are defaults. Items shown below the main line are optional.



The previous diagram shows that if you do not specify a host, HOST=LOCAL is used. To send a message to a different host, for example NYC, code the SEND command as follows:
 SEND 'message text',HOST=NYC

Repeating Parameters

Items that can be repeated are shown as follows:



The previous diagram shows that the following are all valid ways of coding the CRITERIA statement:

- CRITERIA
- CRITERIA 'expression'
- CRITERIA 'expression1','expression2'
- CRITERIA 'expression1','expression2','expression3'
- CRITERIA 'expression1','expression2','expression3','expression4'

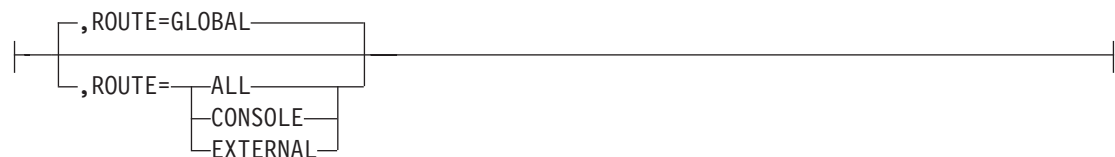
and so on.

Reading Fragments

Syntax diagrams can contain fragments. A fragment is indicated by vertical bars with the name of the fragment between the bars. The fragment appears after the main diagram, as shown in the following example.



Route:

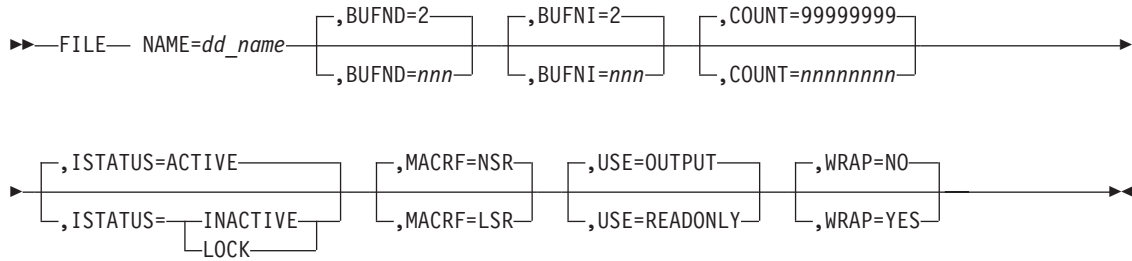


The previous diagram shows that the following are all valid ways of coding the SEND command:

```
SE 'message text'  
SE 'message text',ROUTE=GLOBAL  
SE 'message text',ROUTE=ALL  
SE 'message text',ROUTE=CONSOLE  
SE 'message text',ROUTE=EXTERNAL
```

Long Syntax Diagrams

When more than one row is needed for a syntax diagram, the continued line ends with a single arrowhead (▶) and the following line begins with a single arrowhead (▶), as shown in the following example.



Part I. Using NPM

Chapter 1. Introducing NPM	5
What Is NPM?	5
Collecting Data	5
Displaying NPM Data	7
Customizing Your NPM Environment	7
Logging On and Off	8
Changing Your Password	9
Using NPM Panels, Keys, and Commands	10
NPM Panels	10
Symbols and Notations in NPM Panels	11
NPM Commands	11
Control Keys	12
Understanding NPM Messages	12
Getting Help for Online Panels	13
Getting Help for Online Messages	13
Using the Primary Options Menu	14
Using NPM Fast Path Commands	15
Communicating With Other NPMs	15
Customizing Your User Profile	16
Reassigning PF Keys	16
Modifying Functional Variables	18
Displaying Your Security Profile	18
Displaying Session Accounting Data	19
Obtaining National Language Support	20
Chapter 2. Collecting and Analyzing Network Data	23
Network Management Panels	23
Using the List Option for NCPs	25
Displaying a List of NCP Network Resources	25
Starting an Active or Deferred Network Collection	26
Displaying Network Detail Data	28
Displaying, Altering, or Stopping a Network Collection	29
Expanding a Resource List	31
Stopping All Collections	32
Using the List Option for Routers	33
Displaying a List of Router Network Resources	33
Starting a Router Network Collection	35
Displaying Information for a Selected Router	36
Displaying, Altering, or Stopping a Network Collection	37
Stopping All Router Collections	38
Using the Select and List Option for NCPs	38
Using the Select and List Option for Routers	40
Using the Find Resource Option	41
Using the Start Collection Option for NCPs	42
Using the Start Collection Option for Routers	44
Using the Alter Collection Option for NCPs	45
Using the Alter Collection Option for Routers	47
Using the Stop Collection Option for NCPs	49

Using the Stop Collection Option for Routers	50
Using the Review Data Option for NCPs	50
Displaying ODLC LAN Resources Data for a LAN PU	51
Displaying ODLC LAN Resources Data for a LAN Physical Link	52
Displaying Frame Relay Resources Data for a Physical Station	53
Displaying Frame Relay Resources Data for a Logical Link	54
Displaying Frame Relay Resources Data for a Physical Link	56
Displaying NEO Resources Data	57
Displaying Network Detail Data for Lines	58
Displaying Network Detail Data for PU	59
Displaying NTRI Resources Data for a Logical Link	61
Displaying NTRI Resources Data for a Physical Link	63
Displaying Network Detail Data for CCUs	65
Displaying Ethernet Resources Data	67
Displaying X.25 Resources Data	68
Displaying Monitor Event Messages for Network Collections	69
Displaying Router Network Collection Data	71
Displaying CPU Information for Cisco Routers	76
Displaying CPU Information for IBM Routers	76
Displaying Memory Pool Information for Cisco Routers	77
Displaying Memory Information for IBM Routers	78
Displaying CIP Information for Cisco Routers	80
Using the Dynamic Data Display Option for NCPs	81
Using the Dynamic Data Display Option for Routers	84

Chapter 3. Collecting and Analyzing Session Data..... 87

Session Management Panels	87
Starting Session Collection	88
Starting Session Collection (Resource Already Defined to VTAM)	89
Starting Session Collection (Resource Not Yet Defined to VTAM)	90
Displaying, Altering, or Stopping an Active Session Collection	91
Displaying, Altering, or Stopping a Deferred Session Collection	94
Displaying Dynamic Response Times Data	95
Displaying IP Detail Analysis Data	98
Displaying Transit Time Interval Data	99
Displaying Transit Time Distribution Data	100
Displaying Interval Volume Data	101
Displaying Transit Time Summary Data	101
Displaying LU Detail Analysis Data	102
Displaying Transit Time Interval Data	103
Displaying Transit Time Distribution Data	103
Displaying Interval Volume Data	104
Displaying Transit Time Summary Data	105
Displaying Session Analysis Summary Data	105
Displaying Session Performance Status Information	107
Completing the Performance Status - Host Application Panel	110
Completing the Performance Status - Lines Panel	110
Displaying Lines by Application	111
Completing the Performance Status - Physical Unit Panel	112
Displaying Lines by Session Volumes	113
Displaying Session Monitor Event Messages	114

Chapter 4. Collecting and Analyzing RTM Data	117
RTM Management Panels	117
Enabling RTM Collection	118
Disabling RTM Collection	118
Determining RTM Collection Status	119
Performing RTM LU Detail Analysis	119
Displaying RTM LU Response Times by Interval	120
Displaying RTM LU Response Time Distribution by Interval	120
Displaying an RTM LU Response Time Distribution Summary	121
Displaying an RTM Response Time Summary	122
Performing RTM Session Analysis	123
 Chapter 5. Collecting and Analyzing LAN Data	 125
LAN Management Panels	125
Selecting a LAN Bridge	126
Collecting LAN Bridge Data	127
Displaying LAN Bridge Configuration Data	128
Selecting a LAN Segment	129
Collecting LAN Segment Data	130
Displaying LAN Segment Configuration Data	131
Displaying LAN Data	132
Displaying LAN Bridge Data	132
Displaying LAN Segment Data	134
Displaying LAN Collection Monitor Event Messages	136
 Chapter 6. Collecting and Analyzing VTAM Statistics Data	 139
VTAM Management Panels	139
Displaying VTAM Environment Data	140
Collecting and Displaying VTAM Global Data	141
Collecting and Displaying VTAM Buffer Pool Data	144
Collecting and Displaying Virtual Route Data	145
Collecting and Displaying VTAM Device Data	148
Collecting and Displaying Application Data	151
Collecting and Displaying Address Space Data	152
Starting VTAM Statistics Collections	154
Displaying VTAM Statistics Data	156
Displaying/Altering/Stopping Active VTAM Data Collections	157
Issuing Direct VTAM Statistics Collection Commands	159
Using Direct Commands to Start a VTAM Collection	160
Using Direct Commands to Alter a VTAM Collection	162
Using Direct Commands to Stop a VTAM Collection	164
Using Direct Commands to Display VTAM Detail Data	164
Displaying VTAM Global Detail Data	165
Displaying VTAM Buffer Pool Detail Data	168
Displaying VTAM Virtual Route Detail Data	168
Displaying VTAM Device Detail Data	169
Displaying VTAM Application Detail Data	171
Displaying VTAM Address Space Detail Data	172
Displaying VTAM Monitor Event Messages	172
 Chapter 7. Collecting and Analyzing NetWare Resources Data	 175

Chapter 8. Collecting and Analyzing Dynamic Data	177
Using PF Keys and Commands	178
Dynamic Display Output Relevant Counters.....	179
Example	180
Using the DYN Command.....	181
Example	182
Using Fast Paths	184
Fast Path =1.8.....	184
Fast Path =2.4.....	185
Example	186
Chapter 9. Using NPM Control Functions	187
NPM Control Function Panels	187
Unbinding Users and Displaying NPM User Information	189
Using the Sessions Display and Management Panel	189
Managing NPALUs	190
Displaying NCP Detail Data without Accounting Support.....	191
Displaying NCP Detail Data with Accounting Support	192
Displaying Performance Measurement Tables.....	193
Managing Data Files	196
Displaying SMF Record Status	198
Sending a Message to Another NPM User	199
Executing NPM EXECs.....	200
Managing LAN Collection.....	200
Changing LAN Bridge Collection Parameters.....	201
Changing LAN Segment Collection Parameters	202
Performing NPM Accounting Functions	203
Selecting Network Accounting NCPs	205
Modifying Session Accounting Parameters	206
Displaying Accounting Parameters	208
Modifying Network Gateway Accounting.....	210
Ending NPM.....	211

1

Introducing NPM

This chapter introduces the basic capabilities and functions of the NetView Performance Monitor (NPM).

What Is NPM?

NPM is a performance and accounting tool you can use to collect, monitor, and analyze your communication network data. NPM can help you measure network performance, determine the source of a problem, identify potential problems, and plan for growth. NPM also collects accounting data, which you can use to bill network customers.

There are three main tasks you can perform with NPM:

- Collecting data
- Displaying data
- Customizing your NPM environment

An overview of each of these primary tasks is provided in the following sections.

The remainder of this chapter describes basic NPM functions, including:

- Logging on and off
- Using NPM's online panels
- Using NPM commands
- Reading NPM messages
- Getting help
- Customizing your user profile

Collecting Data

NPM collects data on a variety of resources, including lines, VTAM[®], logical units (LUs), and applications. Your NPM might have been set up to collect data automatically. Contact your system programmer for information about which data is collected automatically. This data is grouped into the following categories:

- **Network data** is collected from the network control programs (NCPs) connected to NPM and includes the following:
 - Information about each NCP, including communication control unit (CCU) utilization, NCP buffer counts, and slowdown statistics
 - Message traffic statistics for lines, CCUs, physical units (PUs), LUs, physical links (NCP/token ring interconnect (NTRI) resources) and logical links. These statistics include the number of bytes sent and received, the number of polls, and the number of positive responses to polls.
 - Information about lines, including line utilization, error counts, and retransmissions

- Message traffic statistics for other network resources, such as frame relay resources, Ethernet local area network (LAN) resources, and outboard data link control (ODLC) LAN resources
- **Session data** is collected from VTAM and includes the following:
 - Operator, host, and network transit times for LUs, LU groups, applications, NCPs, and hosts
 - Volume statistics for LUs, LU groups, applications, NCPs, and hosts, including the number of path information units (PIUs) and bytes sent and received.

Note: NPM can collect data for a complete VTAM through TCP/IP session. This enhanced session collection capability is available for TN3270 and TN3270E servers running OS/390 Version 2 Release 5 or higher.
- **Response time monitor (RTM) data** is collected from the NetView session monitor and includes response time for lines, LUs, PUs, and applications.
- **LAN data** comes through the NetView program from LAN Managers. This data consists of LAN bridge data and LAN segment data and includes the following:
 - Information about a LAN's detailed configuration
 - The number of broadcast and non-broadcast frames that passed over a bridge during a collection interval
 - The number of frames that were lost on a bridge
 - LAN segment utilization
- **VTAM statistics data** is collected from VTAM and includes the following:
 - Application data, such as the number of active sessions, sessions waiting for an inbound response, and number of advanced program-to-program communication (APPC) sessions
 - Address space data, such as private storage usage and the number of access method control blocks (ACBs) opened by all tasks within the address space
 - Buffer pool data, such as the number of buffers allocated, currently in use, and available for each buffer pool
 - Storage use data, such as the number of expansions and the number of requesters waiting for a buffer pool
 - Performance data about VTAM-controlled resources, such as virtual routes and channel-attached devices
 - Internal VTAM data, such as central processing unit (CPU) usage and allocated common storage area (CSA)
 - VTAM environment data, such as release numbers, operating system mode, start list name, and configuration file name
 - VTAM APPN[®] data, such as topology and directory services data.
 - CSM data, such as the number of buffer pools in the ECSA or in the data space.
 - MNPS data, such as the number of session bytes written to CF for an application.
 - RTP data, such as the number of path switches that occur for an RTP or the status of an RTP resource.

- **Network accounting data** is collected from the NCPs connected to NPM and includes network gateway and network session accounting statistics for LU sessions.
- **NetWare resources data** is NPM's name for data collected from resources controlled by Novell's NetWare product. Agent servers use a part of NPM called the NPM NetWare Agent to collect performance data using NetWare counters. These counters are combined into groups to provide the following information:

Communications group	Gives information about specific IPX and SPX protocol-related information.
LAN Board group	Gives information about communications device drivers.
Router Global group	Gives routing information about the router services (packets information).
Server Global group	Gives a general overview of the Agent server activity, including CPU utilization, connections, disk operation, communications, and other information.
Server Volume group	Gives detailed storage information about all disk volumes on the Agent server.

- **SNMP router data** is collected utilizing the Simple Network Management Protocol (SNMP) to retrieve Management Information Base (MIB) data about a router's performance from:
 - Network Hardware Division (NHD) routers
 - Generic routers
 - Cisco routers
 - CS/NT routers

Displaying NPM Data

You can locate the source of a network problem and identify potential problems by viewing NPM data online.

NPM can display collected data online in the following ways:

- Interval data displays, also called detail data displays, show data for each collection interval.
- Summary data displays show data for an entire period, including average values for that period.
- Monitor event messages indicate data that has exceeded specified thresholds for each collection interval. In some cases, these messages indicate when data values have returned within thresholds.

NPM can also produce a variety of hardcopy reports from collected data for long-term data analysis. See the *NetView Performance Monitor Reference* for information about these reports.

Customizing Your NPM Environment

You can make your work easier and more efficient by altering certain characteristics of your NPM environment to reflect your daily tasks. These characteristics include language support, function key definitions, date format, and the number of panel lines assigned to the scroll function.


```

FNM03CU1

Command ==>

```

Figure 2. Command Field

Some panels have a Select Option field instead of a Command field. The Select Option field is displayed near the upper left corner of the panel as shown in Figure 3.

```

FNM00PRI

Select Option ==>

```

Figure 3. Select Option Field

You can also log off by pressing the LOGOFF PF key, if it is defined on your NPM panels. The defined PF keys are displayed at the bottom of each NPM panel. The Logoff panel (FNM00CLF), shown in Figure 4, is displayed when you press the LOGOFF PF key. This panel prevents you from accidentally logging off of NPM.

```

FNM00CLF                NPM V2R7  5655-043
                        NETVIEW PERFORMANCE MONITOR
                        LOGOFF

Command ==>

Host Name = LOCAL      User ID = OPER1

You have requested to logoff from NPM

Press ENTER to confirm logoff or END to cancel this request

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 4. Logoff Panel (FNM00CLF)

Press ENTER to log off of NPM, or use the END command to cancel the logoff procedure.

Changing Your Password

Use the following procedure to change your NPM password:

1. Access the NPM logon panel (FNM0LLOG), shown in Figure 1 on page 8.
2. Type your user ID in the USER ID field and your password in the PASSWORD field.
3. Type your new password in the NEW PASSWORD field.
4. Press ENTER.

Note: You can change your password when you log on if your system uses the Resource Access Control Facility (RACF®) for security checking. See your system programmer for information about your system's security.

Using NPM Panels, Keys, and Commands

This section describes how to use NPM panels, control keys, and commands for performing NPM tasks.

NPM Panels

The panel references in this book include a panel ID to help you identify the panels being described. Panel IDs are displayed in the upper left corner of your NPM panels, as shown in Figure 5.



Figure 5. NPM Panel IDs

If you want to see a panel ID that is not displayed, type PANELID on the Command line or in the Select Option field and press ENTER.

Note: Chapters 2 through 7 contain examples of all NPM panels associated with the primary NPM functions. These functions are accessed from the Primary Options panel (FNM00PRI), shown in Figure 7 on page 14.

NPM input panels can be grouped into two general categories: panels where you select an option, and panels where you type information into fields. To select a panel option, type the number corresponding to that option in the Select Option field and press ENTER. To enter data on panel fields, use the tab key to move the cursor to the appropriate field and type the necessary information.

Some panel fields permit only specific values or formats. Other fields require values to be in a certain range. If you leave certain fields blank on some panels NPM either uses a default value or prompts you for the missing information.

After you complete a panel and press ENTER, NPM verifies the information you supplied. NPM begins processing the selected task if all the information is valid. Otherwise, NPM redisplay the panel and indicates any entries that are not valid.

NPM list panels display the data collected by NPM or the status of a data collection. Most NPM list panels provide the following features:

- Most NPM list panels display data in a sorted order. You can use the SORT command to change the sorting criteria on many NPM display panels to meet your specific requirements. See “Online Commands” on page 215 for more information about the SORT command.
- Many list panels allow the use of the REFRESH command. The REFRESH command displays the most current state of collected data, collection status, and other status messages. See “Online Commands” on page 215 for more information about the REFRESH command.

- Many NPM list panels display a “More:” indicator in the upper right corner. The following symbols are used with the More indicator:
 - < Indicates there is data to the left of the current display
 - > Indicates there is data to the right of the current display
 - + Indicates there is data below the current display
 - Indicates there is data above the current display
- The BACKWARD and FORWARD commands can be used to quickly move through large amounts of displayed data. The FORWARD command is active until the last line of data is displayed. The BACKWARD command is not active while the first line of data is displayed.

Symbols and Notations in NPM Panels

NPM uses the following symbols to indicate unusual conditions on display panels:

Symbol	Meaning
*	The value cannot be displayed.
?	The value is incorrect. It is either negative or too large to display.
-	The data for this field is not available to NPM.

NPM uses the following special notations to display large numbers on panels:

Notation	Meaning
K	The displayed number is divided by 1000.
M	The displayed number is divided by 1000000.
Kb	The displayed number is divided by 1024. This number indicates kilobytes of virtual storage.
Mb	The displayed number is divided by 1048576. This number indicates megabytes of virtual storage.

NPM Commands

There are two types of NPM commands:

- **Online commands** can be issued by any NPM user to manipulate panel data and perform general operating tasks. To use an online command that is not assigned to one of your PF keys, type the command on the Command line or in the Select Option field of any NPM panel and press ENTER. The online commands that you can use this way are listed and described in “Online Commands” on page 215.

You can issue multiple online commands in a single entry by using semicolons to separate them. The following example command string scrolls up fifteen lines from the end of the current file, then displays the help panel.

```
Command ==> bot;up 15;help
```

- **System console commands** are used to perform complex NPM functions, such as starting data collections. These commands are issued from the system console and require specific authority to use. The NPM system console commands are listed and described in Chapter 11, “System Console Commands: ABEND to NSAMDFY” and Chapter 12, “System Console Commands: NSASOLCT to VVRCOLL”.

Control Keys

NPM online commands can be assigned to PF keys to perform such tasks as scrolling through a panel, moving to other panels, and getting help. The online commands that can be assigned to PF keys are described in “Online Commands” on page 215. See “Reassigning PF Keys” on page 16 for information about assigning commands to your PF keys.

Because PF key definitions are installation dependent, specific PF key numbers are not discussed in this book. The initial PF key definitions assigned to each NPM panel are displayed at the bottom of the panels. An example is shown in Figure 6.

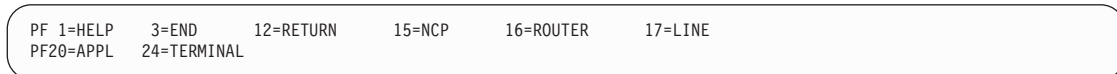


Figure 6. Control Keys Display

Note: You can press the END PF key from any NPM panel to display the previous panel. You can also press the RETURN PF key from any NPM panel to display the Primary Options panel (FNM00PRI).

NPM also uses the following control keys:

Key Name	Function
ENTER	Submits your requests to NPM.
PA2	Implements the RESHOW command. RESHOW deletes the information on a panel and redisplay the panel as it appeared prior to your input. You can also use the RESHOW command to clear a displayed message. Any queued messages are displayed when you use the RESHOW command.
CLEAR	Deletes the current message (and all queued messages) and redisplay the current panel.

Understanding NPM Messages

You can receive messages that provide information or alert you to problems as you work with NPM. There are two types of NPM messages:

- **Monitor event messages** alert you when collected data has exceeded or returned within monitor thresholds. These messages are displayed at the top of your NPM panel.
- **Operator messages** alert you to problems about data you entered or about the system. These messages are displayed at the bottom of NPM panels. The severity of the condition is indicated by the color of a message. The following list describes the meaning of each message color:
 - White** Information
 - Yellow** Warning
 - Red** Error
 - Reverse red** Severe
 - Flashing red** NPM is ending

Note: Three asterisks (***) displayed at the end of an NPM message indicates there are additional (queued) messages. Press the PA2 key to clear the current message and display any queued messages.

See the *NetView Performance Monitor Messages and Codes* for more information about NPM messages. See “Getting Help for Online Messages” for information about online help for NPM messages.

Getting Help for Online Panels

You can use NPM’s online help facility to get the following information about NPM panels: Press the HELP PF key to display the online help facility. Note that a help panel can consist of one or more pages. Use the FORWARD, BACKWARD, UP, and DOWN PF keys to scroll through multiple pages of help information.

- An overview of the panel function
- A list of available options
- Descriptions of the input fields and their defaults
- Instructions for processing the panel

You can browse through the online help facility to familiarize yourself with NPM’s features and functions. Use fast path =T to display the NPM Help Facility panel (FNM0G000), and select the category of help you need. See the *NetView Performance Monitor Reference* for more information about NPM fast paths.

Getting Help for Online Messages

You can get online help for any NPM message. The online message help panels display the following information:

- An explanation of the error or condition
- What NPM does
- What you can do
- What a programmer can do
- Comments

Use the following procedure to view online help information for a message that is currently displayed:

1. Press the HELP PF key to display the message help panel.
2. Press the END PF key when you are finished reading the explanation. The original message is still displayed. If you press the HELP PF key again, help information for the current panel is displayed.

You can press the PA2 key to clear the current message and display any queued messages.

Note: The CLEAR key removes the current message and any queued messages.

Use the following procedure to view online help information a second time or to view information for a message that is not currently displayed:

1. Type HELPMMSG FNMnnnn in the Command or Select Option field, where nnnn is the message number. You need to type only the last three digits for three-digit messages. You do not need to type a leading zero.
2. Press the END PF key when you are finished viewing the information. The panel from which you entered the HELPMMSG command is redisplayed.

Using the Primary Options Menu

All NPM functions except NetWare can be started from the Primary Options panel (FNM00PRI), shown in Figure 7. Option 9 is the only choice for NetWare users. The Primary Options panel is displayed immediately after you log on to NPM. The options displayed on this panel are related to the three tasks discussed earlier in this chapter: collecting data, displaying data, and customizing your NPM environment.

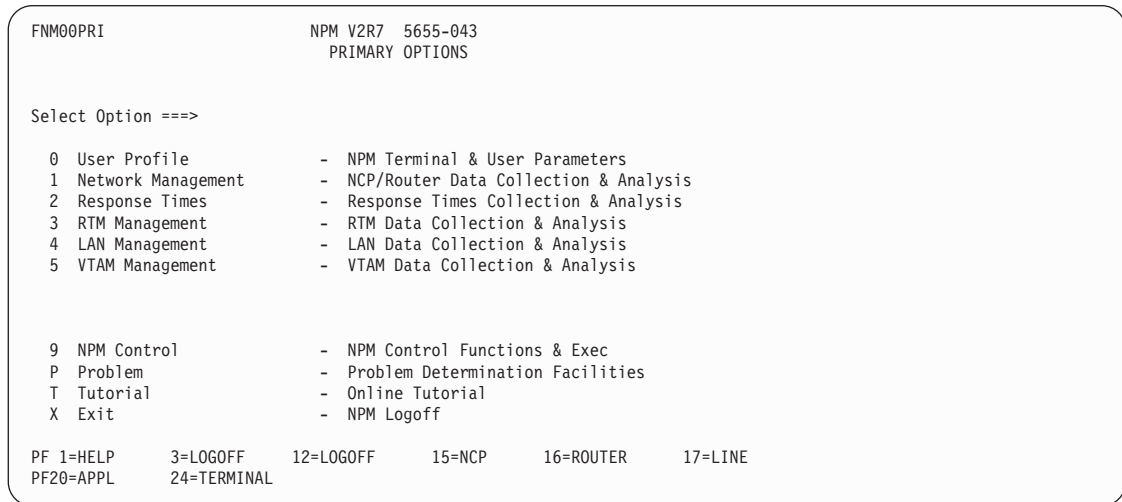


Figure 7. Primary Options Panel (FNM00PRI)

The following options are available on the Primary Options panel:

Option	Description
0 User Profile	Enables you to customize your NPM environment. With this option you can perform such tasks as redefining your PF keys to reflect the commands you most commonly use. See “Customizing Your User Profile” on page 16 for information about performing these tasks.
1 Network Management	Enables you to collect and analyze network data. “Collecting and Analyzing Network Data” on page 23 describes the panels used in this NPM function.
2 Response Times	Enables you to collect and analyze session data. “Collecting and Analyzing Session Data” on page 87 describes the panels used in this NPM function.
3 RTM Management	Enables you to collect and analyze RTM data. “Collecting and Analyzing RTM Data” on page 117 describes the panels used in this NPM function.
4 LAN Management	Enables you to collect and analyze LAN data. “Collecting and Analyzing LAN Data” on page 125 describes the panels used in this NPM function.
5 VTAM Management	Enables you to collect and analyze VTAM data. “Collecting and Analyzing VTAM Statistics Data” on page 139 describes the panels used in this NPM function.

9 NPM Control	Enables you to control NPM functions. You can use this option to perform tasks such as managing NPM files, running NPM EXECs, and sending messages to NPM users. Any user can display the NPM control data, but only users with the correct authorization can issue control commands. See “Displaying Your Security Profile” on page 18 for information about displaying your NPM authorization. “Using NPM Control Functions” on page 187 describes the panels used in this NPM function.
P Problem	Accesses the NPM problem determination facility. This option is displayed if you have authorization to use it. Contact your system programmer or see the <i>NetView Performance Monitor Diagnosis</i> for more information about this option.
T Tutorial	Accesses the NPM help facility. Use this option to reach the NPM Help Facility panel (FNM0TPRI), where you can browse through NPM’s help panels.
X Exit	Allows you to exit NPM. You can also type LOGOFF in the Command or Select Option field of any NPM panel and press ENTER.

To use NPM, select the option on the Primary Options panel that relates to the task you want to perform. Online panels are displayed to guide you through the selected NPM task. Information about the panels displayed for each of the NPM primary options is provided in Chapters 2 through 7.

Using NPM Fast Path Commands

You can quickly access many NPM panels by using fast path commands. To use a fast path command to display a panel type an equal sign (=) and the panel’s fast-path number in any Command or Select Option field and press ENTER. See the *NetView Performance Monitor Reference* for more information about NPM fast paths.

Communicating With Other NPMs

You can issue commands to NPMs running on other hosts. Your local NPM must be bound (connected) to the remote NPM to issue commands. See “Using the Sessions Display and Management Panel” on page 189 for procedures to bind to NPMs running on other hosts.

Assuming you are an authorized user on the remote NPM, you can start data collections and perform other NPM functions just as you can on your local NPM. To direct an NPM command to an NPM running on another host, type the name of the host in the Host Name field, then issue the command.

Note: NPM Version 2 releases are not compatible with NPM Version 1 releases. Error messages are displayed if you attempt to communicate with NPM Version 1 releases using NPM Version 2.

Customizing Your User Profile

Your ability to interact with NPM is determined by your security and user profiles as defined by your system programmer. Although you cannot change your security profile, you can customize some functions in your user profile, such as PF key assignments, to make NPM easier for you to use. Use the following procedure to display the User Profile panel (FNM00PRM):

1. Select option 0 from the Primary Options panel (FNM00PRI) (see Figure 7 on page 14) to display the User Profile panel (FNM00PRM), shown in Figure 8. You can also use fast path =0 to display the User Profile panel.

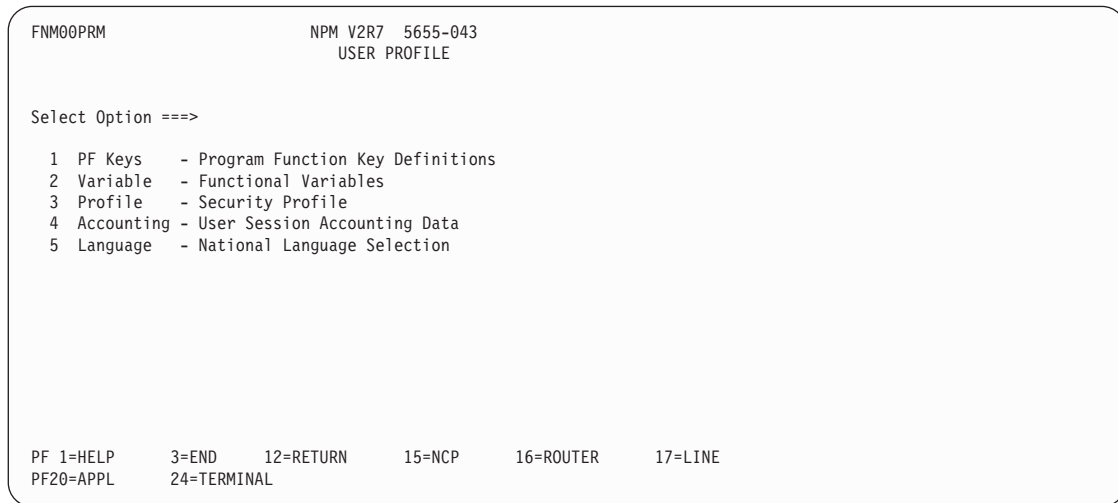


Figure 8. User Profile Panel (FNM00PRM)

2. Type the number of a user profile option in the Select Option field and press ENTER.

The following sections describe the NPM user profile functions and show you how to use NPM panels to perform these tasks.

Reassigning PF Keys

NPM online commands are assigned to your PF keys when NPM is initialized. These commands can be NPM’s default assignments or assigned by your system programmer. If you frequently use other commands, or if you want to assign commands to different PF key numbers to make your keyboard easier to use, you can redefine any PF key.

You can assign any of the NPM commands listed in “Online Commands” on page 215 to a PF key.

Note: NPM requires that the following PF keys be assigned:

HELP	Accesses the help facility.
END	Processes your entries and returns to the previous menu.
RETURN	Returns you to the Primary Options panel (FNM00PRI).
NCP	Invokes Dynamic Data Display for NCPs.
ROUTER	Invokes Dynamic Data Display for routers.
LINE	Invokes Dynamic Data Display for SDLC lines.

APPL	Invokes Dynamic Data Display for applications.
TERMINAL	Invokes Dynamic Data Display for terminals.

To display the PF keys:

1. Select option 0 from the Primary Options panel (FNM00PRI), or use fast path =0, to display the User Profile panel (FNM00PRM).
2. Select option 1 from the User Profile panel to display the Primary Program Function Key Definitions panel (FNM00PF2), shown in Figure 9. It displays PF keys 13 through 24:

```

FNM00PF2                NPM V2R7 5655-043
                        USER PROFILE
                        PRIMARY PROGRAM FUNCTION KEY DEFINITIONS
Command ==>

PF13 ==>
PF14 ==>
PF15 ==> NCP
PF16 ==> ROUTER
PF17 ==> LINE
PF18 ==>
PF19 ==>
PF20 ==> APPL
PF21 ==>
PF22 ==>
PF23 ==>
PF24 ==> TERMINAL
Press ENTER to display alternate keys or END to save changes and exit

PF 1=HELP    3=END    12=RETURN    15=NCP    16=ROUTER    17=LINE
PF20=APPL    24=TERMINAL

```

Figure 9. Primary Program Function Key Definitions Panel (FNM00PF2)

3. Press ENTER to display the Alternate Program Function Keys Definitions panel (FNM00PF3), shown in Figure 10:

```

FNM00PF3                NPM V2R7 5655-043
                        USER PROFILE
                        ALTERNATE PROGRAM FUNCTION KEY DEFINITIONS
Command ==>

PF1 ==> HELP
PF2 ==> LIST
PF3 ==> END
PF4 ==> TRANSIT
PF5 ==> VOLUME
PF6 ==> DISTRIB
PF7 ==> BACKWARD
PF8 ==> FORWARD
PF9 ==> SUMMARY
PF10 ==> TOP
PF11 ==> BOTTOM
PF12 ==> RETURN
Press ENTER to display primary keys or END to save changes and exit

PF 1=HELP    3=END    12=RETURN    15=NCP    16=ROUTER    17=LINE
PF20=APPL    24=TERMINAL

```

Figure 10. Alternate Program Function Key Definitions Panel (FNM00PF3)

Modifying Functional Variables

Your user profile defines functional variables that affect the way data is displayed. You can change these variables to fit your specific needs. For example, you might find it easier to view data by scrolling only a half page at a time, instead of the default full page.

You can also instruct NPM to save the data you enter on some NPM panels so that you do not have to retype all the information each time you use NPM.

Use the following procedure to modify these functional variables:

1. Select option 0 from the Primary Options panel (FNM00PRI), or use fast path =0, to display the User Profile panel (FNM00PRM).
2. Select option 2 from the User Profile panel to display the Functional Variables panel (FNM00VAR), shown in Figure 11. You can also use fast path =0.2 to display the Functional Variables panel.

```
FNM00VAR                NPM V2R7 5655-043
                        USER PROFILE
                        FUNCTIONAL VARIABLES

Command ==>

Scroll                 ==> DATA      (Page|Data|Half|Max|Csr|nnn)
Date Format             ==> MDY        (MDY|DMY|YMD)
Time Zone Conversion   ==> NO         (Yes|No)
Save Profile Option    ==> YES        (Yes|No)
NPM Command Option     ==> NO         (Yes|No)
PF Key Set Option      ==> ALL        (PRI|ALT|ALL)
PF Key Format Option    ==> MAX        (Max|Six)
Logon Date             ==> TODAY      (Today|Last)

Press ENTER to save changes or END to save changes and exit

PF 1=HELP      3=END      12=RETURN   15=NCP      16=ROUTER   17=LINE
PF20=APPL     24=TERMINAL
```

Figure 11. Functional Variables Panel (FNM00VAR)

3. Tab to the field next to the variable you want to change.
4. Type an option for the selected variable. See the *NetView Performance Monitor Reference* for descriptions of these variables and their parameters.
5. Press the END PF key. NPM saves your changes and returns you to the User Profile panel (FNM00PRM).

Displaying Your Security Profile

Your NPM security profile, which is set up during installation, defines the areas of NPM you can access. Depending on your authorization, you might not be able to perform all the tasks described in this book, even if they are displayed on your Primary Options panel.

Use the following procedure to display your security profile:

1. Select option 0 from the Primary Options panel (FNM00PRI), or use fast path =0, to display the User Profile panel (FNM00PRM).

2. Select option 3 from the User Profile panel to display the Security Profile panel (FNM00UPB), shown in Figure 12. You can also use fast path =0.3 to display the Security Profile panel.

Note: The information shown in the Security Profile panel (FNM00UPB) defines your current NPM security authorizations. However, these authorizations can be overridden if SECURITY=MINIMAL is coded on the FNMINIT statement. See the *NetView Performance Monitor Installation and Customization* for additional information about the SECURITY keyword.

```

FNM00UPB                NPM V2R7 5655-043
                        USER PROFILE
                        SECURITY PROFILE

Command ==>

Profile : PROF1                Current Use Count:    2
                                Maximum Use Count:   15

Message Receiver      : NO

Session Analysis     : YES      Control Commands   : NO
Session Commands    : YES      Data File Management : NO
Network/VTAM Analysis : YES     SMF Control        : NO
Network/VTAM Commands : YES     LAN Management     : YES
Network Accounting   : YES

                                Problem Determination : NO

PF 1=HELP      3=END      12=RETURN      15=NCP      16=ROUTER      17=LINE
PF20=APPL     24=TERMINAL

```

Figure 12. Security Profile Panel (FNM00UPB)

The user with the example security profile shown in Figure 12 is able to collect and analyze network, session, LAN, VTAM statistics data, and network accounting data. This user is not able to receive system messages or perform NPM control functions, data file management, SMF control functions, or problem determination tasks.

See the *NetView Performance Monitor Reference* for descriptions of these variables and their parameters.

Displaying Session Accounting Data

You can display accounting information for your NPM sessions, such as your user ID, NPM profile name, and the number of active sessions.

Use the following procedure to display your session accounting data:

1. Select option 0 from the Primary Options panel (FNM00PRI), or use fast path =0, to display the User Profile panel (FNM00PRM).
2. Select option 4 from the User Profile panel to display the Session Accounting Data panel (FNM00ACC), shown in Figure 13 on page 20. You can also use fast path =0.4 to display the Session Accounting Data panel.

See the *NetView Performance Monitor Reference* for descriptions of these variables and their parameters.

Obtaining National Language Support

```
FNM00ACC                NPM V2R7 5655-043
                        USER PROFILE
                        SESSION ACCOUNTING DATA

Command ==>>

User ID   : USER1
Profile  : PROF1
Sessions : 1

          Date      Time      Elapsed
Current Session : 06/27/00 12:22:30 01:30:00
Last Session   : 06/26/00 08:45:00 00:45:00
First Session  : 06/25/00 08:30:00 02:30:00

PF 1=HELP    3=END    12=RETURN   15=NCP    16=ROUTER   17=LINE
PF20=APPL   24=TERMINAL
```

Figure 13. Session Accounting Data Panel (FNM00ACC)

Obtaining National Language Support

You can change the language of NPM's online panels to any language installed on your system. You can also choose to display your panels in English with all uppercase characters.

Use the following procedure to change the national language displayed on NPM panels:

1. Select option 0 from the Primary Options panel (FNM00PRI), or use fast path =0, to display the User Profile panel (FNM00PRM).
2. Select option 5 from the User Profile panel to display the National Language Selection panel (FNM00LNG), shown in Figure 14. This panel lists the languages available on your system. You can also use fast path =0.5 to display the National Language Selection panel.

```
FNM00LNG                NPM V2R7 5655-043
                        USER PROFILE
                        NATIONAL LANGUAGE SELECTION

Command ==>>

Enter / to select a language

Option  Name      Language
=>      ENGLISH   AMERICAN ENGLISH
=>      UENGLISH  UPPER CASE ENGLISH
=>      JAPANESE  JAPANESE
=>      KATAKANA  JAPANESE KATAKANA

PF 1=HELP    3=END    12=RETURN   15=NCP    16=ROUTER   17=LINE
PF20=APPL   24=TERMINAL
```

Figure 14. National Language Selection Panel (FNM00LNG)

3. Tab to the Option field next to the language you want to use and type /.

4. Press the END PF key to save your changes and return to the User Profile panel. NPM panels are now displayed in the selected language.

2

Collecting and Analyzing Network Data

You can use NPM's network management function to perform the following tasks:

- Display a list of network resources (Network Control Programs (NCPs), lines, PUs, or LUs) and display their hierarchical relationships
- Start an active or deferred collection on a selected resource
- Stop an active or deferred collection on a selected resource
- Alter an active or deferred collection on a selected resource
- Display a list of collections for a selected resource
- Stop all active collections and DataView collections, but not deferred collections
- Display VSAM data
- Display a list of router network resources
- Start a collection on a selected router resource
- Display a list of collections for a selected router resource
- Stop all collections on a selected router resource.
- Display dynamic data.

Notes:

1. 3746 APPN network nodes appear to NPM exactly the same as NCPs. In this chapter the term NCP is used to mean either an NCP or a 3746 APPN network node.
2. See the *NetView Performance Monitor Reference* for detailed descriptions of NPM panel fields.

Network Management Panels

Use the following procedures to perform NPM network data collection and analysis:

1. Select option 1 from the Primary Options panel (FNM00PRI) to display the Network Management panel (FNM01NET), shown in Figure 15 on page 24. You can also use fast path =1 to display the Network Management panel:

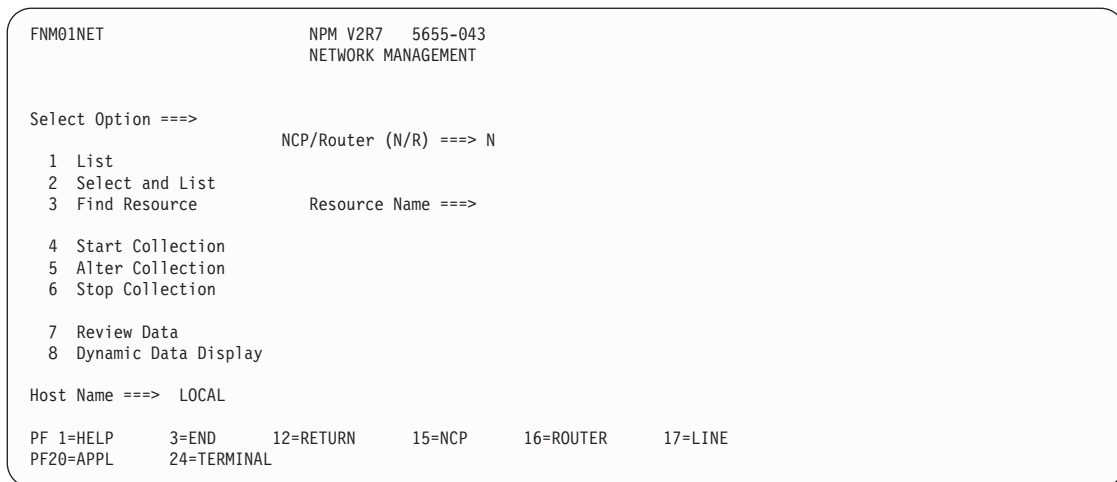


Figure 15. Network Management Panel (FNM01NET)

2. The Network Management panel displays eight options. Before you select an option, use the NCP/Router field to specify whether you want to work with NCP or Router resources. This field is set to N (NCP) by default. Type one of the following option numbers in the Select Option field and press ENTER:

Option	NCP/Router	Action
1	N/R	Lists NCPs or Routers See “Using the List Option for NCPs” on page 25 or “Using the List Option for Routers” on page 33 for detailed procedures.
2	N/R	Selects and lists NCP resources or Router resources. See “Using the Select and List Option for NCPs” on page 38 or “Using the Select and List Option for Routers” on page 40 for detailed procedures.
3	N	Searches for a known resource. Not applicable for Routers. See “Using the Find Resource Option” on page 41 for detailed procedures.
4	N/R	Starts network data collection for NCP resources or for Router resources. See “Using the Start Collection Option for NCPs” on page 42 or “Using the Start Collection Option for Routers” on page 44 for detailed procedures.
5	N/R	Alters network data collection for NCP resources or for Router resources. See “Using the Alter Collection Option for NCPs” on page 45 or “Using the Alter Collection Option for Routers” on page 47 for detailed procedures.
6	N/R	Stops network data collection for NCP resources or for Router resources. See “Using the Stop Collection Option for NCPs” on page 49 or “Using the Stop Collection Option for Routers” on page 50 for detailed procedures.
7	N/R	Displays network data for NCP resources or for Router resources. See “Using the Review Data Option for NCPs” on page 50 or “Displaying Router Network Collection Data” on page 71 for detailed procedures.

8	N/R	Displays dynamic network data for NCP resources or for Router resources. For detailed procedures, see “Using the Dynamic Data Display Option for NCPs” on page 81 or “Using the Dynamic Data Display Option for Routers” on page 84.
---	-----	--

Using the List Option for NCPs

Use the List option for NCPs to perform network data collection and analysis when you do not know the name of an NCP (or its subordinate network resources). You can also use this option to display the hierarchical structure of a network resource.

To perform network data collection and analysis, use the procedures described in “Using the Find Resource Option” on page 41 or “Displaying, Altering, or Stopping a Network Collection” on page 29. If you know the specific resource name, use the procedures described in “Using the Review Data Option for NCPs” on page 50.

Displaying a List of NCP Network Resources

Use the following procedure to display a list of NCP network resources:

1. Accept the default of N in the NCP/Router field and select option 1 from the Network Resource Type Selection panel (FNM01NET) to display the Resource List panel (FNM02RSL), shown in Figure 16.

The Resource List panel displays a list of NCPs for the selected host.

```

FNM02RSL                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        RESOURCE LIST

Command ==>

Host Name = LOCAL
Enter Command: LOCATE <Resource>, REFRESH, SORT <NAME/TYPE/STATUS>
or Option: S=Start, R=Review, L=List, X=Expand, Z=Stop All

   Resource  Resource NCP  Valid  Data  Collection  Monitor
Option Name   Type    Name  Options Forwd  Status      Status
=>  NCP01    NCP      SRLXZ  0     INACTIVE
=>  NCP02    NCP      SRLXZ  0     INACTIVE
=>  NCP03    NCP      SRLXZ  0     INACTIVE

PF 1=HELP    2=REFRESH  3=END    8=FORWARD 11=BOTTOM 12=RETURN
PF15=NCP    16=ROUTER 17=LINE  20=APPL   24=TERMINAL
    
```

Figure 16. Resource List Panel (FNM02RSL)

2. You can modify the way information is displayed on the Resource List panel. Type one of the following commands on the Command line and press ENTER:

Command	Action
LOCATE <Resource>	Locates a specific resource either by full resource name or by partial resource name.
SORT NAME	Sorts by resource name.
SORT TYPE	Sorts by resource type and resource name.
SORT STATUS	Sorts by collection status, monitor status, and resource name.

REFRESH | Redisplays the current state of collected data or collection status.

3. Type one of the following options in the Option field next to a specific resource displayed on the Resource List panel and press ENTER:

Option	Action
S	Starts collection on the selected resource. See “Starting an Active or Deferred Network Collection” for detailed procedures.
R	Displays data written to a VSAM file for the selected resource. See “Displaying Network Detail Data” on page 28 for detailed procedures.
L	Lists all collections for the selected resource. See “Displaying, Altering, or Stopping a Network Collection” on page 29 for detailed procedures.
X	Displays all resources hierarchically under a selected resource. See “Expanding a Resource List” on page 31 for detailed procedures. Note: Option X (Expand) is available only on the NCP, line, and PU resource lists. It is not active when the LU resource list is displayed, or when the Find Resource option is selected from the Network Resource Type Selection panel (FNM01NET).
Z	Ends all active collections on the selected resource. See “Stopping All Collections” on page 32 for detailed procedures.

Note: The Valid Options field displays the options that can be selected for each network resource displayed on the Resource List panel.

An error message is displayed if you select an option that is not displayed in the Valid Options field.

Starting an Active or Deferred Network Collection

Use the following procedure to start an active or deferred network collection from the Resource List panel (FNM02RSL), shown in Figure 16 on page 25:

Note: You must ensure that the NPALU required for the collection is bound to NPM. See “Managing NPALUs” on page 190. You must also verify that the designated destination files for the collected data are not full. See “Managing Data Files” on page 196.

1. Type S in the Option field next to a specific resource on the Resource List panel. Press ENTER to display the first Network Start panel (FNM03STD), shown in Figure 17 on page 27.

Note: The FNM03STD and FNM03STM panels are used in multiple NPM functions. The panel titles are varied automatically by NPM, depending on the type of function being performed (Start, Stop, or Alter).

```

FNM03STD                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK START

Command ==>

Interval Number ==> 1          <-----*-----*
                                *-----*
                                Num   Time
NCP Name           ==> NCP01
Resource Name      ==> NCP01
Dynamic Resource   ==> NO      (Yes/No)
Start Time         ==> 00 : 00 : 00 (hh:mm:ss)
Stop Time          ==> 00 : 00 : 00
Daily              ==> NO      (Yes/No)
                                *-----*

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 17. Network Start Panel (FNM03STD)

- Complete the first Network Start panel. Type the times in the Start Time and Stop Time fields if you want to start or stop the collection at a specific time.
- Press ENTER to display the second Network Start panel (FNM03STM), shown in Figure 18. Use the FORWARD command to display the additional information on the third Network Start panel (FNM03STM), shown in Figure 19 on page 28.

Note: The monitor criteria displayed on the FNM03STM panels varies, depending on the type of resource you select.

```

FNM03STM                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK START
                        More:+

Command ==>

Host Name = LOCAL      NCP Name = NCP01      Resource Name = NCP01

Data Destinations      NPMLLOG  VSAM  SMF  ALERT  GLOBAL
Detail                 ==> YES   YES   NO   N/A   N/A
Monitor                 ==> YES   YES   NO   NO    YES
Resolve Monitors       ==> NO   (Yes/No)

Monitor Criteria
Free buffers            (0-2147483646)  ==> 0   : 0
CCU utilization         (0-100)          ==> 0   : 0
% of time in slowdown  (0-100)          ==> 0   : 0
Buffer utilization     (0-100)          ==> 0   : 0
Processor utilization  (0-100)          ==> 0   : 0
Shared data utilization (0-100)          ==> 0   : 0
PF 1=HELP      3=END      7=BACKWARD  8=FORWARD  10=TOP    11=BOTTOM
PF12=RETURN   15=NCP     16=ROUTER  17=LINE    20=APPL   24=TERMINAL

```

Figure 18. Network Start Panel (FNM03STM)

```

FNM03STM                NPM V2R7  5655-043                More: -
                        NETWORK MANAGEMENT
                        NETWORK START

Command ==>

Host Name = LOCAL      NCP Name = NCP01      Resource Name = NCP01

Data Destinations      NPMLLOG VSAM  SMF  ALERT  GLOBAL
Detail                 ==> YES  YES  NO   N/A   N/A
Monitor                ==> YES  YES  NO   NO    YES
Resolve Monitors       ==> NO   (Yes/No)

Monitor Criteria
Shared data utilization (0-100)          ==> 0      : 0
Program data utilization (0-100)         ==> 0      : 0
NNP Processor Util.    (0-100)           ==> 0      : 0
NNP APPN Buffer Util.  (0-100)           ==> 0      : 0
NNP APPN Memory Util. (0-100)           ==> 0      : 0

PF 1=HELP      3=END      7=BACKWARD  8=FORWARD  10=TOP      11=BOTTOM
PF12=RETURN   15=NCP     16=ROUTER  17=LINE    20=APPL    24=TERMINAL
    
```

Figure 19. Network Start Panel (FNM03STM)

Note: Monitor criteria entered in the HIGH column must be greater than the criteria entered in the LOW column, with one exception. You can enter a zero in the HIGH column, regardless of what is entered in the LOW column. Entering a zero in either the LOW or HIGH fields for a monitor turns off that portion of the monitor.

- Complete the second and third Network Start panels (FNM03STM) and press ENTER to start collection on the selected resource. The Resource List panel is redisplayed. You can use the REFRESH command to display the current collection status for the resource.

Displaying Network Detail Data

Use the following procedure to display network detail data from the Resource List panel (FNM02RSL), shown in Figure 16 on page 25:

- Type R in the Option field next to a specific resource on the Resource List panel. Press ENTER to display the Network Review panel (FNM02RVM), shown in Figure 20 on page 29.

Note: See “Displaying Monitor Event Messages for Network Collections” on page 69 for procedures to display monitor event messages for network collections.


```

FNM02RVM                                NPM V2R7  5655-043
                                           NETWORK MANAGEMENT
                                           NETWORK REVIEW

Command ==>

Host Name      ==> LOCAL
Resource Name  ==> NCP01                (Name)
Resource Type  ==> NCP                  (Name/ALL only for Data Type=MONITOR)
Review File Name ==> REVIEW              (REVIEW for active review file)

Start Date     ==> 09 / 30 / 00         (mm/dd/yy)
Stop Date      ==> 09 / 30 / 00

Start Time     ==> 00 : 00 : 00         (hh:mm:ss)
Stop Time      ==> 00 : 00 : 00

Data Type      ==> DETAIL                (Detail/Monitor)

PF 1=HELP      2=RESTYPE      3=END      9=SUMMARY      12=RETURN      15=NCP
PF16=ROUTER    17=LINE        20=APPL    24=TERMINAL
    
```

Figure 20. Network Review Panel (FNM02RVM)

2. Verify that the specific resource name is displayed in the Resource Name field and that NCP is displayed in the Resource Type field.
3. Type DETAIL in the Data Type field.
4. Press ENTER to display detail data for the specified network resource.

Notes:

- a. The panel format used to display network review data varies, depending on the type of network resource selected. The various types of network detail data displays are shown in Figure 50 on page 52 through Figure 83 on page 69.
- b. For panels accessed through FNM02RVM to see data for NCP and LAN bridge resources only Mode 2 emulator (25x80) is available.

Displaying, Altering, or Stopping a Network Collection

Use the following procedure to display, alter, or stop an active or deferred network collection from the Resource List panel (FNM02RSL), shown in Figure 16 on page 25:

1. Type L in the Option field next to a specific network resource on the Resource List panel. Press ENTER to display the Command List panel (FNM03NCL), shown in Figure 21 on page 30.

The Command List panel displays a list of all the network data collections, active and deferred, for the selected resource. You can alter or stop an active or deferred collection from this panel.

Display, Alter, or Stop a Network Collection

```

FNM03NCL                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        COMMAND LIST

Command ==>>

Host Name = LOCAL      NCP Name = NCP01      Resource Name = NCP01
Enter Command: REFRESH or Option: A=Alter, P=Stop

Option  Time      Collect  <--Detail-->  <-----Monitor----->
=>      00:00:00  05:00:00  STARTED      NO      1      Y      Y      N      Y      Y      N      N      N
=>      12:00:00  13:00:00  DEFERRED     YES     2      Y      Y      N      Y      N      N      N      N

PF 1=HELP      2=REFRESH  3=END      12=RETURN  15=NCP      16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL

```

Figure 21. Command List Panel (FNM03NCL)

- To stop a collection, type P in the Option field next to a specific collection. Press ENTER to stop the selected collection.
You can use the REFRESH command to display the current collection status for the resource.
- To alter a collection, type A in the option field next to a specific collection. Press ENTER to display the first Network Alter panel (FNM03STM), shown in Figure 22. Use the FORWARD command to display the additional information on the second Network Alter panel (FNM03STM), shown in Figure 23 on page 31. These panels are used to alter network collection on any network resource type.

```

FNM03STM                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK ALTER
                        More:+

Command ==>>

Host Name = LOCAL      NCP Name = NCP01      Resource Name = NCP01

Data Destinations      NPMLLOG VSAM  SMF  ALERT  GLOBAL
Detail                  ==>> YES  YES  NO   N/A   N/A
Monitor                 ==>> YES  YES  NO   NO    YES
Resolve Monitors       ==>> NO   (Yes/No)

Monitor Criteria
Free buffers             (0-2147483646)  ==>> 0 : 0
CCU utilization         (0-100)         ==>> 0 : 0
% of time in slowdown  (0-100)         ==>> 0 : 0
Buffer utilization      (0-100)         ==>> 0 : 0
Processor utilization   (0-100)         ==>> 0 : 0
Shared data utilization (0-100)         ==>> 0 : 0
PF 1=HELP      3=END      7=BACKWARD  8=FORWARD  10=TOP      11=BOTTOM
PF12=RETURN   15=NCP     16=ROUTER  17=LINE    20=APPL     24=TERMINAL

```

Figure 22. Network Alter Panel (FNM03STM)

```

FNM03STM                NPM V2R7  5655-043                More: -
                        NETWORK MANAGEMENT
                        NETWORK ALTER

Command ==>

Host Name = LOCAL      NCP Name = NCP01      Resource Name = NCP01

Data Destinations      NPMLOG  VSAM    SMF    ALERT  GLOBAL
Detail                ==> YES   YES    NO    N/A    N/A
Monitor                ==> YES   YES    NO    NO     YES
Resolve Monitors      ==> NO   (Yes/No)

Monitor Criteria
Shared data utilization (0-100)          ==> 0    : 0
Program data utilization (0-100)         ==> 0    : 0
NNP Processor Util.    (0-100)          ==> 0    : 0
NNP APPN Buffer Util.  (0-100)          ==> 0    : 0
NNP APPN Memory Util. (0-100)          ==> 0    : 0

PF 1=HELP      3=END      7=BACKWARD  8=FORWARD  10=TOP      11=BOTTOM
PF12=RETURN   15=NCP     16=ROUTER  17=LINE    20=APPL     24=TERMINAL
    
```

Figure 23. Network Alter Panel (FNM03STM)

- Complete these panels and press ENTER to process the collection alteration. The Resource List panel is redisplayed.
You can use the REFRESH command to display the current collection status for the resource.

Note: You can alter only the Monitor Criteria and the Data Destinations fields.

Expanding a Resource List

Use the following procedure to expand a network resource from the Resource List panel (FNM02RSL), shown in Figure 16 on page 25:

- Type X in the Option field next to a specific resource name on the Resource List panel (FNM02RSL). Press ENTER to display a list of all subordinate resources for the selected resource.

Note: You can continue to use the X option to expand the displayed resource lists. You can expand the lines list to display a list of PUs under a line, and then expand the PU list to display a list of LUs under a PU.

- When the specific resource you are looking for is displayed, type one of the following options in the Option field next to the resource and press ENTER:

Option	Action
S	Starts collection on the selected resource. See “Starting an Active or Deferred Network Collection” on page 26 for detailed procedures.
R	Reviews data written to a VSAM file for the selected resource. See “Displaying Network Detail Data” on page 28 for detailed procedures.
L	Lists all collections for the selected resource. See “Displaying, Altering, or Stopping a Network Collection” on page 29 for detailed procedures.
Z	Stops all active collections on the selected resource. See “Stopping All Collections” on page 32 for detailed procedures.

Stopping All Collections

Type Z next to a resource name on the Resource List panel (FNM02RSL), shown in Figure 16 on page 25. Press ENTER to stop all active collections for that resource, including data forwarding collections.

A message is displayed indicating collection has been stopped for the selected resource.

Note: This option does not affect deferred collections.

Using the List Option for Routers

Use the List option for routers to perform network data collection and analysis when you do not know the name of a router network resource.

Displaying a List of Router Network Resources

Use the following procedure to display a list of router network resources:

1. Type R in the NCP/Router field and select option 1 from the Network Resource Type Selection panel (FNM01NET) to display the Network Router List panel (FNM02RSR), shown in Figure 24.

The Network Router List panel displays a list of router resources for the selected host.

```

FNM02RSR                                NPM V2R7  5655-043
                                           NETWORK MANAGEMENT
                                           NETWORK ROUTER LIST

Command ==>

Host Name = LOCAL
Enter Command: LOCATE <Resource>, REFRESH, SORT <NAME/TYPE/STATUS>
or Option: S=Start, R=Review, L=List, Z=Stop All, D=Display

  Resource      Router      Resource  Valid  Data  <- Status ->
Option Name     Host Name   Type      Options Forwd Coll. Mon.
=> 69.100.110.254 cisco-2505-tk0.rom CISCO    DSRLZ  0   STARTED  I
=> 69.100.86.100  mss-8210-002.rome MSS8210  DSRLZ  0   STARTED  I
=> 69.100.112.254 2210-24m-tk0.rome NHD2210  DSR    0   INACTIVE
=> 69.100.86.3    2216-tn1.rome.lab  NETU     DSR    0   INACTIVE

PF 1=HELP      3=END      8=FORWARD 12=RETURN 15=NCP    16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL

```

Figure 24. Network Router List Panel (FNM02RSR)

2. You can modify the way information is displayed on the Network Router List panel. Type one of the following commands on the Command line and press ENTER:

Command	Action
LOCATE <Resource>	Locates a specific resource either by full resource name or by partial resource name.
SORT NAME	Sorts by resource name.
SORT TYPE	Sorts by resource type and resource name.
SORT STATUS	Sorts by collection status, monitor status, and resource name.
REFRESH	Redisplays the current state of collected data or collection status.

3. Type one of the following options in the Option field next to a specific resource displayed on the Network Router List panel and press ENTER:

Option	Action
S	Starts collection on the selected router resource. See “Starting a Router Network Collection” on page 35 for detailed procedures.

Displaying Router Network Resources

R	Displays details of data written for the selected resource (router). See “Displaying Router Network Collection Data” on page 71 for detailed procedures.
Z	Ends all active collections on the selected router resource. See “Stopping All Router Collections” on page 38 for detailed procedures.
D	Displays information for a selected router. See “Displaying Information for a Selected Router” on page 36 for detailed procedures.

Note: The Option: field displays the options that can be selected for each network resource displayed on the Network Router List panel.

An error message is displayed if you select an option that is not displayed in the Option: field.

If the TCP/IP goes down, you can display a list of router network resources. Type one of the following options in the Option field next to a specific resource displayed on the Network Router List panel and press ENTER:

Option	Meaning
S	When the TCP/IP was down this option is disabled.
R	Displays details of data written for the selected router (detail or monitor).
Z	When the TCP/IP was down this option is disabled.
D	Displays information for a selected router.
L	Lists all collections for the selected resource.

Note: You can alter or stop a collection only when the TCP/IP is up and running.

Starting a Router Network Collection

Use the following procedure to start a router network collection from the Resource List panel (FNM02RSR), shown in Figure 24 on page 33.

Note: You must ensure that the designated destination files for the collected data are not full. See “Managing Data Files” on page 196.

1. Type **S** in the Option field next to a specific resource on the Resource List panel. Press **ENTER** to display the Network Start panel (FNM03STE), shown in Figure 25.

```

FNM03STE                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK START

Command ==>

Interval Number  ==> 1
Router Name      ==> 69.100.110.254
Dynamic Resource ==> NO      (Yes/No)

Start Time       ==> 00 : 00 : 00  (hh:mm:ss)
Stop Time        ==> 00 : 00 : 00

Daily           ==> NO      (Yes/No)

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF 20=APPL     24=TERMINAL

*-----*
<-----> Interval
          Num  Time
          --  --
          1  00:01:00
          2  00:02:00
          3  00:04:00
          4  00:08:00
          5  00:16:00
          6  00:32:00
          7  01:04:00
*-----*

```

Figure 25. Network Start Panel for Router (FNM03STE)

2. Complete the Network Start panel. Type the times in the Start Time and Stop Time fields if you want to start or stop the collection at a specific time.
3. Press **ENTER** to display the second router Network Start panel (FNM03SRR), shown in Figure 26:

```

FNM03SRR                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK START

Command ==>

Host Name = LOCAL      Router name = 69.100.110.254      Router type = CISCO
Data Destinations      NPMLOG   VSAM   SMF   ALERT  GLOBAL
Detail                 ==> YES    YES   NO    N/A    N/A
Monitor                ==> YES    YES   NO    NO     YES
Resolve Monitors       ==> NO    (Yes/NO)

Monitor Criteria
CPU Utilization        (0-100)          ==> 0 : 0
Pool Utilization       (0-100)          ==> 0 : 0
Interface throughput   (0-100)          ==> 0 : 0
Discarded In packets % (0-100)          ==> 0 : 0
Discarded Out packets % (0-100)          ==> 0 : 0
CIP card CPU Utilization (0-100)          ==> 0 : 0

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF 20=APPL     24=TERMINAL

```

Figure 26. Network Start Panel for Router (FNM03SRR)

4. Press ENTER to start collection on the selected resource. The Resource List panel is redisplayed.

You can use the REFRESH command to display the current collection status for the resource.

Displaying Information for a Selected Router

Use the following procedure to display information for a selected router from the Resource List panel (FNM02RSR), shown in Figure 24 on page 33:

1. Type D in the Option field next to a specific resource on the Resource List panel. Press ENTER to display the first Display Router Information panel (FNM03RSD), shown in Figure 27.

```
FNM03RSD                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        DISPLAY ROUTER INFORMATION

Router Host Name  cisco-2505-tk0.rome.lab.tivoli.com

Descr  Cisco Internetwork Operating System Software::IOS (tm) 2500 Software
       (C2500-AINR-L), Version 11.2(8), RELEASE SOFTWARE (fc1)::Copyright (c)
       1986-1997 by Cisco Systems, Inc::Compiled Tue 05-Aug-97 02:30 by ckralik

ObjectID  1.3.6.1.4.1.9.1.31

PF 1=HELP      3=END      8=FORWARD   12=RETURN   15=NCP      16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL
```

Figure 27. Display Router Information Panel (FNM03RSD)

2. Press PF8 (FORWARD) to display the second Display Router Information panel (FNM03RSY), shown in Figure 28.

```
FNM03RSY                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        DISPLAY ROUTER INFORMATION

Contact  E. Pascolini

Admin    vvlrome-2505

Location Rome=Torrino Italy9

PF 1=HELP      3=END      7=BACKWARD  12=RETURN   15=NCP      16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL
```

Figure 28. Display Router Information Panel (FNM03RSY)

Displaying, Altering, or Stopping a Network Collection

Use the following procedure to display, alter, or stop an active or deferred network collection from the Resource List panel (FNM02RSR), shown in Figure 24 on page 33:

1. Type L in the Option field next to a specific network resource on the Resource List panel. Press ENTER to display the Command List panel (FNM03NCR), shown in Figure 29.

The Command List panel displays a list of all the network data collections, active and deferred, for the selected resource. You can alter or stop an active or deferred collection from this panel.

```

FNM03NCR                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        COMMAND LIST

Command ==>>

Host Name = LOCAL  Router Name = 69.100.110.254  Router Type = Cisco
Enter Command: REFRESH or Option: A=Alter, P=Stop

      Time          Collect
Option Start  Stop  Status  Daily Int LOG VSAM SMF LOG VSAM SMF ALERT GBL
=>      00:00:00 00:00:00 STARTED  NO   1  Y  Y  N  Y  Y  N  N  Y
=>      16:30:00 17:30:00 DEFERRED NO   1  Y  Y  N  N  Y  N  N  Y

PF 1=HELP      3=END      8=FORWARD  12=RETURN  15=NCP      16=ROUTER
PF17=LINE     20=APPL     24=TERMINAL
    
```

Figure 29. Command List Panel for Router (FNM03NCR)

2. To stop a collection, type P in the Option field next to a specific collection. Press ENTER to stop the selected collection.
You can use the REFRESH command to display the current collection status for the resource.
3. To alter a collection, type A in the option field next to a specific collection. Press ENTER to display the Network Alter panel (FNM03SRR) shown in Figure 30 on page 38. You can use this panel to alter network collection on any network resource type.

```
FNM03SRR                      NPM V2R7  5655-043
                                NETWORK MANAGEMENT
                                NETWORK ALTER

Command ==>

Host Name = LOCAL  Router Name = 69.100.110.254  Router Type = Cisco

Data Destinations      NPMLLOG  VSAM    SMF    ALERT  GLOBAL
Detail                ==> YES   YES    NO    N/A    N/A
Monitor               ==> YES   YES    NO    NO     YES
Resolve Monitors      ==> NO   (Yes/No)

Monitor Criteria
CPU Utilization      (0-100)  ==> 0    :0
Pool Utilization     (0-100)  ==> 0    :0
Interface throughput (0-100)  ==> 0    :0
Discarded In packets % (0-100) ==> 0    :0
Discarded Out packets % (0-100) ==> 0    :0
CIP card CPU Utilization (0-100) ==> 0    :0

PF 1=HELP      3=END      12=RETURN    15=NCP      16=ROUTER    17=LINE
PF 20=APPL     24=TERMINAL
```

Figure 30. Network Alter Panel for Router (FNM03SRR)

4. Complete this panel and press ENTER to process the collection alteration. The Resource List panel is redisplayed.

You can use the REFRESH command to display the current collection status for the resource.

Note: You can alter only the Monitor Criteria and the Data Destinations fields.

Stopping All Router Collections

Type Z next to a router resource name on the Resource List panel (FNM02RSR), shown in Figure 24 on page 33. Press ENTER to stop all active collections for that router resource.

A message is displayed indicating collection has been stopped for the selected router resource.

Using the Select and List Option for NCPs

Use the Select and List option for NCPs to obtain a list of NCP resources that accepts some search criteria: partial resource name (using the wildcard character) and an optional resource type.

Use the following procedure to select and list NCP resources:

1. Accept the default of N in the NCP/Router field and select option 2 from the Network Resource Type Selection panel (FNM01NET) to display the Select and List panel (FNM02SL1), shown in Figure 31 on page 39. You can also use fast path =1.2 to display the Select and List panel.

Using the Select and List Option for Routers

Use the Select and List option for Routers to obtain a list of Router resources that accepts some search criteria: partial router IP address (using subnet mask) and an optional resource type.

Use the following procedure to select and list Router resources:

1. Type R in the NCP/Router field and select option 2 from the Network Resource Type Selection panel (FNM01NET) to display the Select and List panel (FNM02SL2), shown in Figure 33. You can also use fast path =1.2 to display the Select and List panel.

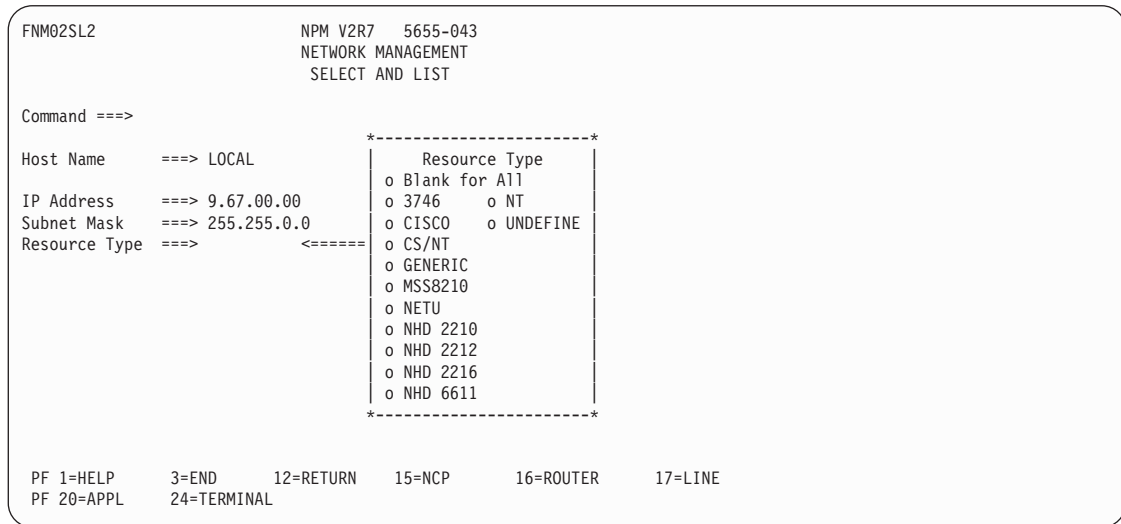


Figure 33. Select and List Panel (FNM02SL2)

2. Type either a full router address or a partial router address (using the subnet mask) in the IP Address field and an optional resource type in the Resource Type field.
3. Press ENTER to obtain a list of resources that satisfy the search criteria. The Network Router List panel (FNM02RSR), shown in Figure 34 on page 41, displays the list of resources.

```

FNM02RSR                                NPM V2R7  5655-043
                                           NETWORK MANAGEMENT
                                           NETWORK ROUTER LIST

Command ==>

Host Name = LOCAL
Enter Command: LOCATE <Resource>, REFRESH, SORT <NAME/TYPE/STATUS>
or Option: S=Start, R=Review, L=List, Z=Stop All, D=Display

      Resource      Router      Resource  Valid  Data  <- Status ->
Option Name        Host Name   Type      Options Forwd Coll. Mon.
=> 69.100.110.254  cisco-2505-tk0.rom  CISCO     DSRLZ  0   STARTED  I
=> 69.100.86.100  mss-8210-002.rome  MSS8210   DSRLZ  0   STARTED  I
=> 69.100.112.254  2210-24m-tk0.rome  NHD2210   DSR    0   INACTIVE
=> 69.100.86.3    2216-tn1.rome.lab  NETU      DSR    0   INACTIVE

PF 1=HELP      3=END      8=FORWARD 12=RETURN 15=NCP    16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL

```

Figure 34. Network Router List Panel (FNM02RSR)

4. Follow the network data collection procedure described in “Using the List Option for Routers” on page 33.

Using the Find Resource Option

Use the Find Resource option to perform network data collection functions when you know the name of a network resource. This option is available only for NCP resources. This option lets you access the Resource List panel (FNM02RSL), shown in Figure 36 on page 42, more efficiently.

Use the following procedure to find the name of a resource using the Find Resource option:

1. Type 3 in the Select Option field on the Network Resource Type Selection panel (FNM01NET), shown in Figure 15 on page 24.
2. Type the full name of a specific resource in the Resource Name field, and press ENTER. If there is more than one resource with the name you entered in your network, the NCP Name Selection panel (FNM02UPL) is displayed. See Figure 35 on page 42. If there is only one resource in your network with the name you specified, the Resource List panel is displayed, shown in Figure 36 on page 42.

Using the Find Resource Option

```
FNM02UPL                                NPM V2R7  5655-043
                                         NETWORK MANAGEMENT
                                         NCP NAME SELECTION

Command ==>>

Host Name = LOCAL      Resource Name = RES01
Enter Command: LOCATE <Name> or Option: /=Select

Option      NCP Name
=>          NCP01
=>          NCP02

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF 20=APPL   24=TERMINAL
```

Figure 35. NCP Name Selection Panel (FNM02UPL)

Type a slash mark (/) next to the correct NCP name and press ENTER to display the Resource List panel, shown in Figure 36. The Resource List panel displays a hierarchical list of related resources for the resource you specified in step 1.

```
FNM02RSL                                NPM V2R7  5655-043
                                         NETWORK MANAGEMENT
                                         RESOURCE LIST

Command ==>>

Host Name = LOCAL
Enter Command: LOCATE <Resource>, REFRESH, SORT <NAME/TYPE/STATUS>
or Option: S=Start, R=Review, L=List, X=Expand, Z=Stop All

Option      Resource      Resource  NCP  Valid  Data  Collection  Monitor
Name        Name          Type     Name Options Forwd Status   Status
=>          NCP01         NCP      NCP  SRLZ   6     STARTED   EXCEEDED
=>          LINE01         LINK     NCP  SRLZ   0     DEFERRED
=>          PU01          PU       NCP  SRLZ   0     INACTIVE
=>          LU01          LU       NCP  SRLZ   0     INACTIVE

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF 20=APPL   24=TERMINAL
```

Figure 36. Resource List Panel (FNM02RSL)

3. Follow the network data collection procedures described in “Using the List Option for NCPs” on page 25.

Using the Start Collection Option for NCPs

Use the Start Collection option for NCPs to start network data collection when you know the name of an NCP (or a subordinate network resource). Use the following procedure to start a collection on any type of network resource:

1. Accept the default of N in the NCP/Router field and select option 4 from the Network Resource Type Selection panel (FNM01NET) to display the first Network Start panel

(FNM03STD), shown in Figure 37. You can also use fast path =1.4 to display the first Network Start panel .

```

FNM03STD                      NPM V2R7  5655-043
                                NETWORK MANAGEMENT
                                NETWORK START

Command ==>

Interval Number  ==> 1
NCP Name         ==> NCP01
Resource Name    ==> NCP01
Dynamic Resource ==> NO      (Yes/No)

Start Time       ==> 00 : 00 : 00  (hh:mm:ss)
Stop Time        ==> 00 : 00 : 00
Daily            ==> NO      (Yes/No)

*-----*
|<=====| Interval |
| Num   | Time  |
|-----|-----|
| 1     | 00:03:45 |
| 2     | 00:07:30 |
| 3     | 00:15:00 |
| 4     | 00:30:00 |
| 5     | 01:00:00 |
| 6     | 02:00:00 |
| 7     | 04:00:00 |
|-----|-----|
*-----*

PF 1=HELP      3=END      12=RETURN   15=NCP      16=ROUTER   17=LINE
PF 20=APPL     24=TERMINAL
    
```

Figure 37. Network Start Panel (FNM03STD)

- Complete the first Network Start panel and press ENTER to display the second Network Start panel (FNM03STM), shown in Figure 38. Use the FORWARD command to display the additional information on the third Network Start panel (FNM03STM), shown in Figure 39 on page 44.

```

FNM03STM                      NPM V2R7  5655-043
                                NETWORK MANAGEMENT
                                NETWORK START
                                More:+

Command ==>

Host Name = LOCAL      NCP Name = NCP01      Resource Name = NCP01

Data Destinations      NPMLOG  VSAM    SMF     ALERT  GLOBAL
Detail                 ==> YES   YES    NO     N/A    N/A
Monitor                 ==> YES   YES    NO     NO     YES
Resolve Monitors       ==> NO   (Yes/No)

Monitor Criteria
Free buffers            (0-2147483646)  ==> 0      : 0
CCU utilization         (0-100)          ==> 0      : 0
% of time in slowdown  (0-100)          ==> 0      : 0
Buffer utilization      (0-100)          ==> 0      : 0
Processor utilization   (0-100)          ==> 0      : 0
Shared data utilization (0-100)          ==> 0      : 0

PF 1=HELP      3=END      7=BACKWARD  8=FORWARD  10=TOP    11=BOTTOM
PF12=RETURN   15=NCP     16=ROUTER   17=LINE    20=APPL   24=TERMINAL
    
```

Figure 38. Network Start Panel (FNM03STM)

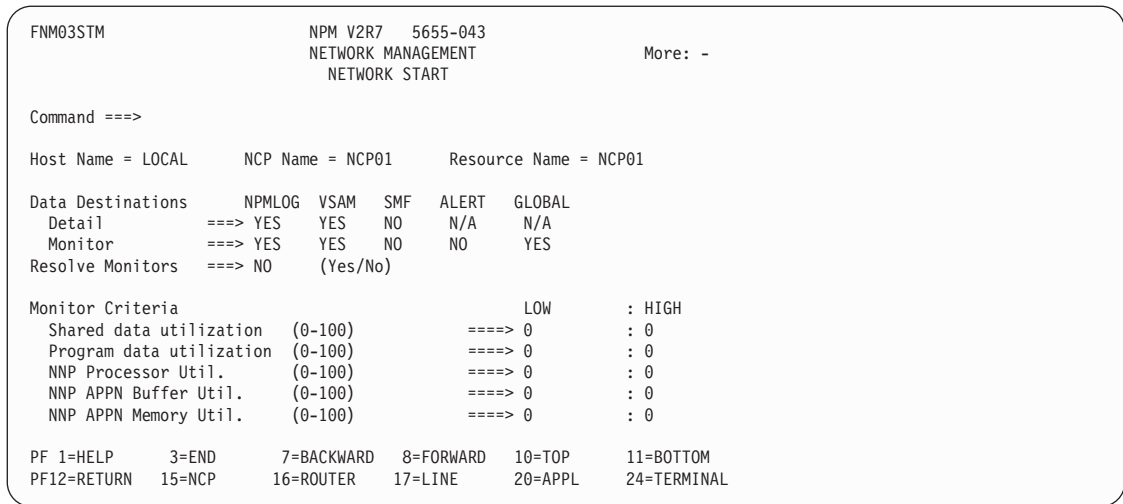


Figure 39. Network Start Panel (FNM03STM)

- Complete the second and third Network Start panels and press ENTER to start collection on the selected resource.

Note: The four monitors that are valid for data collection on an NCP resource are displayed in Figure 38 on page 43. If the Dynamic Resource field is set to YES on the Network Start panel (FNM03STD), the complete set of available network monitors is displayed.

Using the Start Collection Option for Routers

Use the Start Collection option for Routers to start network data collection when you know the name of a Router. Use the following procedure to start a collection on any type of router:

- Type R in the NCP/Router field and select option 4 from the Network Resource Type Selection panel (FNM01NET) to display the Network Start panel (FNM03STE), shown in Figure 40 on page 45. You can also use fast path =1.4 to display the Network Start panel.


```

FNM03STE                                NPM V2R7  5655-043
                                         NETWORK MANAGEMENT
                                         NETWORK START

Command ==>

Interval Number ==> 1                    <-----*-----*
Router Name      ==> 69.100.110.254      Num   Time
Dynamic Resource ==> N/A                 (Yes/No)
Start Time       ==> 00 : 00 : 00        (hh:mm:ss)
Stop Time        ==> 00 : 00 : 00
Daily            ==> N/A                 (Yes/No)
*-----*-----*
1  00:01:00
2  00:02:00
3  00:04:00
4  00:08:00
5  00:16:00
6  00:32:00
7  01:04:00
*-----*-----*

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF 20=APPL     24=TERMINAL
    
```

Figure 40. Network Start Panel for Router (FNM03STE)

Note: The monitor criteria list changes according to the router type.

- Complete the Network Start panel. Type the times in the Start Time and Stop Time fields if you want to start or stop the collection at a specific time.
- Press ENTER to display the second Network Start panel (FNM03SRR), shown in Figure 41:

```

FNM03SRR                                NPM V2R7  5655-043
                                         NETWORK MANAGEMENT
                                         NETWORK START

Command ==>

Host Name = LOCAL  Router name = 69.100.110.254  Router type = CISCO
Data Destinations  NPMLLOG  VSAM  SMF  ALERT  GLOBAL
Detail            ==> YES  YES  NO  N/A  N/A
Monitor           ==> YES  YES  NO  NO  YES
Resolve Monitors  ==> NO  (Yes/NO)

Monitor Criteria          LOW  :HIGH
CPU Utilization (0-100)  ==> 0  :0
Pool Utilization (0-100) ==> 0  :0
Interface throughput (0-100) ==> 0  :0
Discarded In packets % (0-100) ==> 0  :0
Discarded Out packets % (0-100) ==> 0  :0
CIP card CPU Utilization (0-100) ==> 0  :0

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF 20=APPL     24=TERMINAL
    
```

Figure 41. Network Start Panel for Router (FNM03SRR)

- Press ENTER to start the collection on the selected resource.

Using the Alter Collection Option for NCPs

Use the Alter Collection option for NCPs to alter network data collection when you know the name of an NCP (or a subordinate network resource). Use the following procedure to alter a collection on any type of NCP resource:

1. Accept the default of N in the NCP/Router field and select option 5 from the Network Resource Type Selection panel (FNM01NET) to display the first Network Alter panel (FNM03STD), shown in Figure 42. You can also use fast path =1.5 to display the first Network Alter panel.

The Network Alter panel is displayed only from the direct path when altering collections. All fields on this panel are input fields. The Interval Number, Resource Name, Start Time, and Stop Time fields are used to identify the collection to be altered to the NCP.

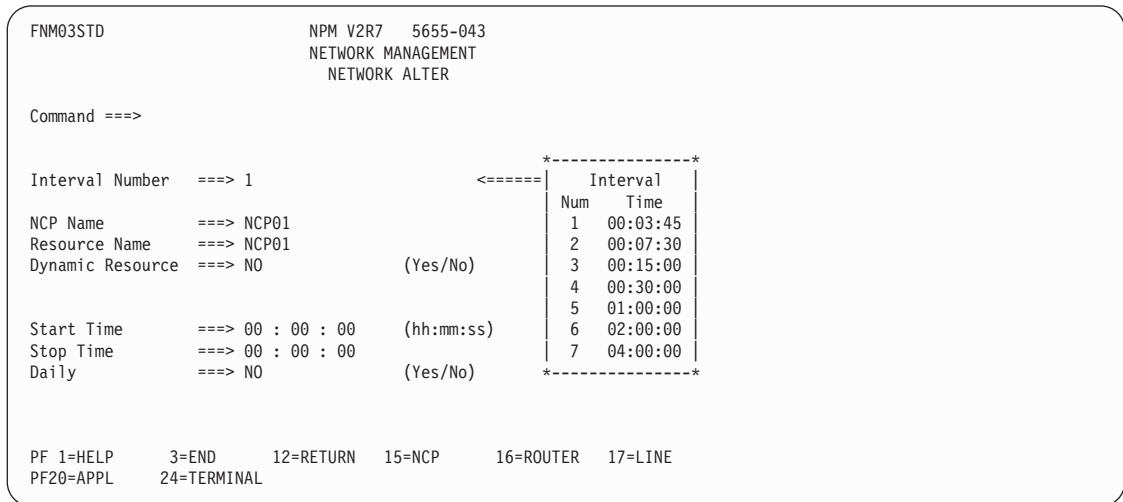


Figure 42. Network Alter Panel (FNM03STD)

2. Complete this panel and press ENTER to display the second Network Alter panel (FNM03STM), shown in Figure 43 on page 47. Use the FORWARD command to display the additional information on the third Network Alter panel (FNM03STM), shown in Figure 44 on page 47.

Note: NPM verifies 1) that the selected resource is defined to NPM, and 2) that a collection has been started for the resource that matches the criteria entered on the Network Alter panel (FNM03STD). An error message is displayed if either verification fails.

NPM does not perform these verifications if you specify a generic resource name, such as ALLLINES.

```

FNM03STM                NPM V2R7  5655-043                More:+
                        NETWORK MANAGEMENT
                        NETWORK ALTER

Command ==>

Host Name = LOCAL      NCP Name = NCP01      Resource Name = NCP01

Data Destinations      NPMLOG  VSAM   SMF   ALERT  GLOBAL
Detail                ==> YES   YES   NO   N/A   N/A
Monitor                ==> YES   YES   NO   NO    YES
Resolve Monitors      ==> NO   (Yes/No)

Monitor Criteria
Free buffers           (0-2147483646)  ==> 0   : 0
CCU utilization        (0-100)          ==> 0   : 0
% of time in slowdown (0-100)          ==> 0   : 0
Buffer utilization     (0-100)          ==> 0   : 0
Processor utilization  (0-100)          ==> 0   : 0
Shared data utilization (0-100)          ==> 0   : 0
PF 1=HELP      3=END      7=BACKWARD  8=FORWARD  10=TOP    11=BOTTOM
PF12=RETURN   15=NCP     16=ROUTER  17=LINE   20=APPL  24=TERMINAL

```

Figure 43. Network Alter Panel (FNM03STM)

```

FNM03STM                NPM V2R7  5655-043                More: -
                        NETWORK MANAGEMENT
                        NETWORK ALTER

Command ==>

Host Name = LOCAL      NCP Name = NCP01      Resource Name = NCP01

Data Destinations      NPMLOG  VSAM   SMF   ALERT  GLOBAL
Detail                ==> YES   YES   NO   N/A   N/A
Monitor                ==> YES   YES   NO   NO    YES
Resolve Monitors      ==> NO   (Yes/No)

Monitor Criteria
Shared data utilization (0-100)          ==> 0   : 0
Program data utilization (0-100)          ==> 0   : 0
NNP Processor Util.     (0-100)          ==> 0   : 0
NNP APPN Buffer Util.    (0-100)          ==> 0   : 0
NNP APPN Memory Util.   (0-100)          ==> 0   : 0
PF 1=HELP      3=END      7=BACKWARD  8=FORWARD  10=TOP    11=BOTTOM
PF12=RETURN   15=NCP     16=ROUTER  17=LINE   20=APPL  24=TERMINAL

```

Figure 44. Network Alter Panel (FNM03STM)

- Complete the second and third Network Alter panels and press ENTER to alter the collection.

Note: You can alter only the Data Destinations and the Monitor Criteria fields on the second and third Network Alter Panels (FNM03STM).

If you specify a generic resource name, such as ALLLINES, all the valid monitor criteria are displayed as zeros.

Using the Alter Collection Option for Routers

Use the Alter Collection option for Routers to alter network data collection when you know the name of a router. Use the following procedure to alter a collection on any type of router:

Alter Collection for Routers

1. Type R in the NCP/Router field and select option 5 from the Network Resource Type Selection panel (FNM01NET) to display the Network Alter panel (FNM03STE), shown in Figure 45. You can also use fast path =1.5 to display the Network Alter panel.

The Network Alter panel is displayed only from the direct path when altering collections. All fields on this panel are input fields. The Interval Number, Resource Name, Start Time, and Stop Time fields are used to identify the collection to be altered to the NCP.

```
FNM03STE                                NPM V2R7  5655-043
                                         NETWORK MANAGEMENT
                                         NETWORK ALTER

Command ==>>

Interval Number ==> 1                    <===== *-----*
Router Name      ==> 69.100.110.254
Dynamic Resource ==> NO                    (Yes/No)
Start Time       ==> 00 : 00 : 00          (hh:mm:ss)
Stop Time        ==> 00 : 00 : 00
Daily            ==> NO                    (Yes/No)

                                         *-----*
                                         | Interval |
                                         | Num  Time |
                                         |-----|
                                         | 1  00:01:00 |
                                         | 2  00:02:00 |
                                         | 3  00:04:00 |
                                         | 4  00:08:00 |
                                         | 5  00:16:00 |
                                         | 6  00:32:00 |
                                         | 7  01:04:00 |
                                         |-----|
                                         *-----*

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF 20=APPL     24=TERMINAL
```

Figure 45. Network Alter Panel for Router (FNM03STE)

2. Complete the Network Alter panel and press ENTER to display the second Network alter panel, shown in Figure 46 on page 49.

Note: NPM verifies 1) that the selected resource is defined to NPM, and 2) that a collection has been started for the resource that matches the criteria entered on the Network Alter panel (FNM03STE). An error message is displayed if either verification fails.

```

FNM03SRR                      NPM V2R7  5655-043
                              NETWORK MANAGEMENT
                              NETWORK ALTER

Command ==>

Host Name = LOCAL      Router name = 69.100.110.254      Router type = CISCO
Data Destinations      NPMLOG      VSAM      SMF      ALERT      GLOBAL
Detail                 ==> YES      YES      NO      N/A      N/A
Monitor                ==> YES      YES      NO      NO      YES
Resolve Monitors       ==> NO      (Yes/No)

Monitor Criteria
CPU Utilization        (0-100)          ==> 0      : 0
Pool Utilization       (0-100)          ==> 0      : 0
Interface throughput   (0-100)          ==> 0      : 0
Discarded In packets % (0-100)          ==> 0      : 0
Discarded Out packets % (0-100)          ==> 0      : 0
CIP card CPU Utilization (0-100)          ==> 0      : 0

PF 1=HELP      3=END      12=RETURN      15=NCP      16=ROUTER      17=LINE
PF 20=APPL     24=TERMINAL

```

Figure 46. Network Alter Panel for Router (FNM03SRR)

- The new values specified in the Data Destinations fields are used in the current network data collection.

Using the Stop Collection Option for NCPs

Use the Stop Collection option for NCPs to stop network data collection when you know the name of an NCP (or a subordinate network resource). Use the following procedure to stop a collection on any type of NCP resource:

- Accept the default of N in the NCP/Router field and select option 6 from the Network Resource Type Selection panel (FNM01NET) to display the Network Stop panel (FNM03STD), shown in Figure 47. You can also use fast path =1.6 to display the Network Stop panel.

```

FNM03STD                      NPM V2R7  5655-043
                              NETWORK MANAGEMENT
                              NETWORK STOP

Command ==>

Interval Number ==> 1
NCP Name        ==> NCP01
Resource Name   ==> NCP01
Dynamic Resource ==> NO      (Yes/No)

Start Time      ==> 00 : 00 : 00      (hh:mm:ss)
Stop Time       ==> 00 : 00 : 00
Daily           ==> NO      (Yes/No)

*-----*
<=====| Interval
          | Num  Time
          |-----|
          | 1  00:03:45
          | 2  00:07:30
          | 3  00:15:00
          | 4  00:30:00
          | 5  01:00:00
          | 6  02:00:00
          | 7  04:00:00
          |-----*

PF 1=HELP      3=END      12=RETURN      15=NCP      16=ROUTER      17=LINE
PF 20=APPL     24=TERMINAL

```

Figure 47. Network Stop Panel (FNM03STD)

2. Complete the Network Stop panel and press ENTER to stop a collection on the selected resource. The specific collection to be stopped is identified by the Resource Name, NCP Name, Interval Number, Start Time, and Stop Time fields.

Using the Stop Collection Option for Routers

Use the Stop Collection option for Routers to stop network data collection when you know the name of a Router. Use the following procedure to stop a collection on any type of router:

1. Type R in the NCP/Router field and select option 6 from the Network Resource Type Selection panel (FNM01NET) to display the Network Stop panel (FNM03STE), shown in Figure 48. You can also use fast path =1.6 to display the Network Stop panel.

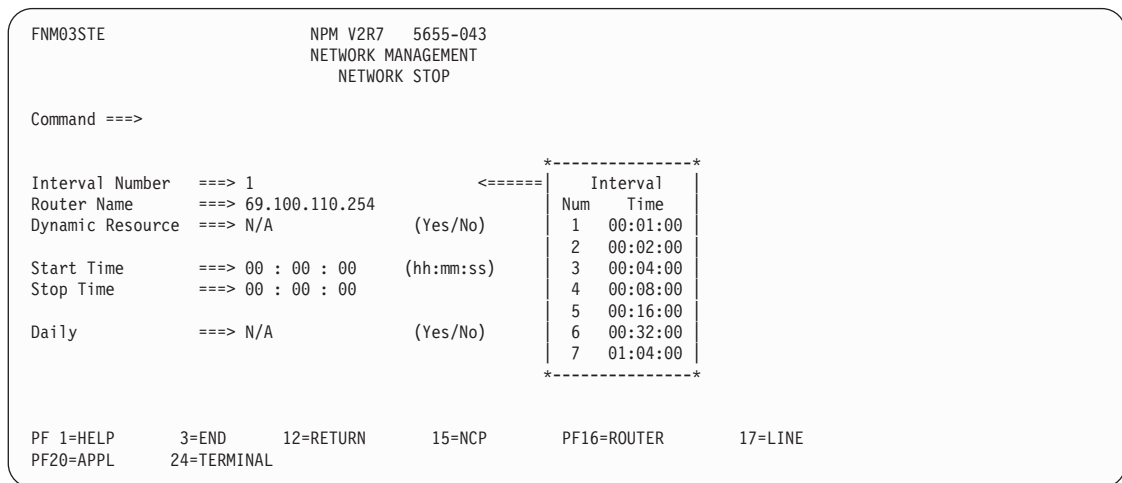


Figure 48. Network Stop Panel for Router (FNM03STE)

2. Complete the Network Stop panel and press ENTER to stop a collection on the selected resource. The specific collection to be stopped is identified by the Router Name, Interval Number, Start Time, and Stop Time fields.

Using the Review Data Option for NCPs

Use the Review Data option for NCPs to display network data collection when you know the name of an NCP (or a subordinate network resource). You can display:

- Detailed data
- Summarized data
- Monitor event messages

Use the following procedure to display network detail data:

1. Accept N as the default in the NCP/Router field and select option 7 from the Network Resource Type Selection panel (FNM01NET) to display the Network Review panel (FNM02RVM), shown in Figure 49 on page 51. You can also use fast path =1.7 to display the Network Review panel.

Note: See “Displaying Monitor Event Messages for Network Collections” on page 69 for procedures to display network monitor event messages.

```

FNM02RVM                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW

Command ==>

Host Name      ==> LOCAL
Resource Name  ==> NCP01      (Name)
Resource Type  ==> NCP        (Name/ALL only for Data Type=MONITOR)
Review File Name ==> REVIEW   (REVIEW for active review file)

Start Date     ==> 09 / 30 / 00 (mm/dd/yy)
Stop Date      ==> 09 / 30 / 00

Start Time     ==> 00 : 00 : 00 (hh:mm:ss)
Stop Time      ==> 00 : 00 : 00

Data Type      ==> DETAIL     (Detail/Monitor)

PF 1=HELP      2=RESTYPE      3=END      9=SUMMARY   12=RETURN   15=NCP
PF16=ROUTER   17=LINE       20=APPL    24=TERMINAL

```

Figure 49. Network Review Panel (FNM02RVM)

2. Type either a full resource name or a partial resource name in the Resource Name field.
3. Type a resource type in the Resource Type field (you can display a list of valid resource types by pressing PF2 (=RESTYPE)).
4. Type DETAIL in the Data Type field.
5. Press ENTER to display detail data for the network resource specified on the Network Review panel (FNM02RVM).

Notes:

- a. Press PF9 (=SUMMARY) to display summarized data on the specified network resource.
- b. The panel format used to display network detail data varies, depending on the type of resource selected. The various types of network detail data displays are shown in Figure 50 on page 52 through Figure 83 on page 69.

Displaying ODLC LAN Resources Data for a LAN PU

The Network Review Data for ODLC LAN Resources panel (FNM03RVC) is shown in Figure 50 on page 52. This panel is displayed when an outboard data link control (ODLC) LAN physical unit is specified in the Resource Name field on the Network Review panel (FNM02RVM).

```

FNM03RVC                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR ODLC LAN RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = LNK001  Data Type = ODLCNPU DETAIL
Date/Time: from 09/30/99 11:45:00 to 09/30/99 12:00:00

End      Interval Resource  IFrames  Bytes  Retransmit  Tot DUs  PU Reply TIC3
Time     hh:mm:ss Name      /Min     /Sec   IFrms Bytes  Discard Timeouts Util
11:45:00 00:15:00 LNK001   2026    198      9  666      0      0    1
12:00:00 00:15:00 LNK001   2284    194      7  100      3      0    1

PF 1=HELP      3=END      9=SUMMARY   12=RETURN   15=NCP      16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL
    
```

Figure 50. Network Review Data for ODLC LAN Resources Panel (FNM03RVC)

Displaying ODLC LAN Resources Data for a LAN Physical Link

The Network Review Data for ODLC LAN Resources panel (FNM03RVZ) is shown in panel Figure 51. This panel is displayed when an ODLC LAN physical link is specified in the Resource Name field on the Network Review panel (FNM02RVM).

Use the RIGHT command to display additional information about the selected link on the Network Review Data for ODLC LAN Resources panels, (FNM03RVD and FNM03RV8) shown in Figure 52 on page 53 and Figure 53 on page 53.

```

FNM03RVZ                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR ODLC LAN RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04PG1C1  Data Type = ODLCNLK DETAIL
Date/Time: from 09/13/99 10:45:48 to 09/13/99 10:45:48

End      Interval Resource  IFrames  Bytes  Retransmit  Tot PDUs
Time     hh:mm:ss Name      /Min     /Sec   IFrames Bytes  Discarded
10:45:48 2:00 A04PG1C1  5533    39794   17  1099

PF 1=HELP      3=END      5=RIGHT   9=SUMMARY   12=RETURN   15=NCP
PF16=ROUTER   17=LINE    20=APPL  24=TERMINAL
    
```

Figure 51. Network Review Data for ODLC LAN Resources Panel (FNM03RVZ)


```

FNM03RVD                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR ODLC LAN RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04PG1C1  Data Type = ODLCNLK DETAIL
Date/Time: from 09/13/99 10:45:48 to 09/13/99 10:45:48

End      Interval Resource  PU Reply Tic3  HPR Frames  HPR Bytes
Time    hh:mm:ss Name      Timeouts Util  Sent  Recv  Sent  Recv
10:45:48  2:00 A04PG1C1  5      42   5108  4368  31509 46690

PF 1=HELP    3=END    4=LEFT    5=RIGHT    9=SUMMARY 12=RETURN
PF15=NCP    16=ROUTER 17=LINE   20=APPL   24=TERMINAL

```

Figure 52. Network Review Data for ODLC LAN Resources Panel (FNM03RVD)

```

FNM03RV8                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR ODLC LAN RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04PG1C1  Data Type = ODLCNLK DETAIL
Date/Time: from 09/13/99 10:45:48 to 09/13/99 10:45:48

End      Interval Resource  HPR Frames Disc  TIC3
Time    hh:mm:ss Name      Sent      Recv  Stations
10:45:48  2:00 A04PG1C1  165      6074  222

PF 1=HELP    3=END    4=LEFT    9=SUMMARY 12=RETURN 15=NCP
PF16=ROUTER 17=LINE  20=APPL   24=TERMINAL

```

Figure 53. Network Review Data for OLDC LAN Resources Panel (FNM03RV8)

Displaying Frame Relay Resources Data for a Physical Station

The Network Review Data for Frame Relay Resources panel (FNM03RVF) is shown in Figure 54 on page 54. This panel is displayed when a frame relay physical station is specified in the Resource Name field on the Network Review panel (FNM02RVM). The panel data includes congestion and message statistics.

Use the RIGHT command to display additional information on the Network Review Data for Frame Relay Resources panel (FNM03RV9), shown in Figure 55 on page 54.

```

FNM03RVF                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR FRAME RELAY RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = FRLINK01      Data Type = FRPHYST DETAIL
Date/Time: from 09/30/00 11:45:00 to 09/30/00 12:00:00

End      Interval Resource Queue IFrms Bytes Time Retransmit Congestion Frame
Time    hh:mm:ss Name   Len /Min /Sec  Outs IFrms Bytes Forw Back Disc
11:45:00 00:15:00 FRLINK01  4 2131 110    12  520 1182  520  520
12:00:00 00:15:00 FRLINK01  5 2177 256    10  220 1125  522  552

PF 1=HELP      3=END      5=RIGHT      9=SUMMARY 12=RETURN 15=NCP
PF16=ROUTER   17=LINE    20=APPL     24=TERMINAL
    
```

Figure 54. Network Review Data for Frame Relay Resources Panel (FNM03RVF)

```

FNM03RV9                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR FRAME RELAY RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = FRLINK01      Data Type = FRPHYST DETAIL
Date/Time: from 09/30/00 11:45:00 to 09/30/00 12:00:00

End      Interval Resource Lnkutil
Time    hh:mm:ss Name   Pri Sec
11:45:00 00:15:00 FRLINK01  2
12:00:00 00:15:00 FRLINK01  1

PF 1=HELP      3=END      9=SUMMARY 12=RETURN 15=NCP 16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL
    
```

Figure 55. Network Review Data for Frame Relay Resources Panel (FNM03RV9)

Displaying Frame Relay Resources Data for a Logical Link

The Network Review Data for Frame Relay Resources panel (FNM03RVV) is shown in Figure 56 on page 55. This panel is displayed when a frame relay logical link is specified in the Resource Name field on the Network Review panel (FNM02RVM). The panel data includes congestion and message statistics.

Use the RIGHT command to display additional information on the Network Review Data for Frame Relay Resources panels (FNM03RVB and FNM03R11), shown in Figure 57 on page 55 and Figure 58 on page 56.

```

FNM03RVV                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR FRAME RELAY RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04LFR3A  Data Type = FRLOGLK DETAIL
Date/Time: from 02/27/98 16:03:00 to 02/27/98 16:05:00

End      Interval Resource Queue IFrms Bytes Time Retransmit Congestion Frame
Time    hh:mm:ss Name      Len /Min /Sec  Outs IFrms Bytes Forw Back Disc
16:03:00 0:47 A04LFR3A   4 1009  88  10   12  520 2056  520
16:03:59 1:00 A04LFR3A   6 1780  86  502  504 1012 2548 1012
16:05:00 1:00 A04LFR3A   8  781  68  10   12  520 2056  520

PF 1=HELP      3=END      5=RIGHT     9=SUMMARY   12=RETURN   15=NCP
PF16=ROUTER   17=LINE    20=APPL    24=TERMINAL

```

Figure 56. Network Review Data for Frame Relay Resources Panel (FNM03RVV)

```

FNM03RVB                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR FRAME RELAY RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04LFR3A  Data Type = FRLOGLK DETAIL
Date/Time: from 02/27/98 16:03:00 to 02/27/98 16:05:00

End      Interval Resource Lnkutil  HPR Frames      HPR Bytes
Time    hh:mm:ss Name      Pri Sec   Sent Recv   Sent Recv Queued
16:03:00 0:47 A04LFR3A  ---      16896 1152   32653 59256   90
16:03:59 1:00 A04LFR3A  ---      15678 1152   32653 59256   90
16:05:00 1:00 A04LFR3A  ---      16896 1152   32653 59256   90

PF 1=HELP      3=END      4=LEFT     5=RIGHT     9=SUMMARY   12=RETURN
PF15=NCP      16=ROUTER  17=LINE    20=APPL    24=TERMINAL

```

Figure 57. Network Review Data for Frame Relay Resources Panel (FNM03RVB)

```

FNM03R11                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR FRAME RELAY RESOURCES

Command ==>>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04LFR3A  Data Type = FRLOGLK DETAIL
Date/Time: from 02/27/98 16:03:00 to 02/27/98 16:05:00

End      Interval Resource  HPR Frames Disc
Time     hh:mm:ss Name      Sent  Recv
16:03:00 0:47 A04LFR3A  30280 32622
16:03:59 1:00 A04LFR3A  30280 32456
16:05:00 1:00 A04LFR3A  30280 32765

PF 1=HELP      3=END      4=LEFT      9=SUMMARY    12=RETURN    15=NCP
PF16=ROUTER   17=LINE    20=APPL     24=TERMINAL
    
```

Figure 58. Network Review Data for Frame Relay Resources Panel (FNM03R11)

Displaying Frame Relay Resources Data for a Physical Link

The Network Review Data for Frame Relay Resources panel (FNM03RVU) is shown in Figure 59. This panel is displayed when a frame relay physical link is specified in the Resource Name field on the Network Review panel (FNM02RVM). The panel data includes congestion and message statistics.

Use the RIGHT command to display additional information on the Network Review Data for Frame Relay Resources panels (FNM03RVA and FNM03R10), shown in Figure 60 on page 57 and Figure 61 on page 57.

```

FNM03RVU                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR FRAME RELAY RESOURCES

Command ==>>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04FPL28  Data Type = FRPHYLK DETAIL
Date/Time: from 02/27/98 16:03:00 to 02/27/98 16:06:00

End      Interval Resource Queue IFrms Bytes Time Retransmit Congestion Frame
Time     hh:mm:ss Name      Len /Min /Sec Outs IFrms Bytes Forw Back Disc
16:03:00 0:58 A04FPL28  4  815  71      12  520  2056  520  1040
16:03:59 1:00 A04FPL28  6 1780  86      504 1012  2548  1012  2042
16:05:00 1:00 A04FPL28  8  781  68      12  520  2056  520  1040

PF 1=HELP      3=END      5=RIGHT     9=SUMMARY    12=RETURN    15=NCP
PF16=ROUTER   17=LINE    20=APPL     24=TERMINAL
    
```

Figure 59. Network Review Data for Frame Relay Resources Panel (FNM03RVU)

```

FNM03RVA                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR FRAME RELAY RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04FPL28  Data Type = FRPHYLK DETAIL
Date/Time: from 02/27/98 16:03:00 to 02/27/98 16:06:00

End      Interval Resource  Lnkutil  IP Data  Frames  Tot IP  Frames
Time     hh:mm:ss Name      Pri  Sec   Sent  Recv   Sent  Recv
16:03:00 0:58 A04FPL28  0    0     520  520   520  520
16:03:59 1:00 A04FPL28  0    0    1012 1012  1012 1012
16:05:00 1:00 A04FPL28  0    0     520  520   520  520

PF 1=HELP      3=END      4=LEFT     5=RIGHT    9=SUMMARY  12=RETURN
PF15=NCP      16=ROUTER  17=LINE    20=APPL    24=TERMINAL

```

Figure 60. Network Review Data for Frame Relay Resources Panel (FNM03RVA)

```

FNM03R10                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR FRAME RELAY RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04FPL28  Data Type = FRPHYLK DETAIL
Date/Time: from 02/27/98 16:03:00 to 02/27/98 16:06:00

End      Interval Resource  IP Frames  IP Bytes
Time     hh:mm:ss Name      Discarded  Sent  Recv
16:03:00 0:58 A04FPL28  492      492   0
16:03:59 1:00 A04FPL28  492      492   0
16:05:00 1:00 A04FPL28  492      492   0

PF 1=HELP      3=END      4=LEFT     9=SUMMARY  12=RETURN  15=NCP
PF16=ROUTER   17=LINE    20=APPL    24=TERMINAL

```

Figure 61. Network Review Data for Frame Relay Resources Panel (FNM03R10)

Displaying NEO Resources Data

The Network Review Data for NEO Resources panel (FNM03RVG) is shown in Figure 62 on page 58. This panel is displayed when an NEO resource is specified in the Resource Name field on the Network Review panel (FNM02RVM). The panel data includes line utilization and the number of PDUs and octets transmitted across the resource.

Use the RIGHT command to display additional information on the Network Review Data for NEO Resources panel (FNM03RV5), shown in Figure 63 on page 58.

```

FNM03RVG                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR NEO RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = NE001      Data Type = NEOLINK DETAIL
Date/Time: from 09/30/00 11:45:00 to 09/30/00 12:00:00

End      Interval Resource   Queue  PDUs  Octets  Line-Ut
Time     hh:mm:ss Name      Length /Min   /Sec   Pri Sec  Errors
11:45:00 00:15:00 NE001     0     10    131   15  7    0
12:00:00 00:15:00 NE001     8      1     16    0  1    0

PF 1=HELP      3=END      5=RIGHT      9=SUMMARY    12=RETURN    15=NCP
PF16=ROUTER   17=LINE    20=APPL      24=TERMINAL
    
```

Figure 62. Network Review Data for NEO Resources Panel (FNM03RVG)

```

FNM03RV5                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR NEO RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = NE001      Data Type = NEOLINK DETAIL
Date/Time: from 09/30/00 11:45:00 to 09/30/00 12:00:00

End      Interval Resource   Retransmit
Time     hh:mm:ss Name      PDU's  Octets
11:45:00 00:15:00 NE001     0      0
12:00:00 00:15:00 NE001     0      0

PF 1=HELP      3=END      12=RETURN    15=NCP      16=ROUTER    17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 63. Network Review Data for NEO Resources Panel (FNM03RV5)

Displaying Network Detail Data for Lines

The Network Review Data panel (FNM03RVL) is shown in Figure 64 on page 59. This panel is displayed when a line resource is specified in the Resource Name field on the Network Review panel (FNM02RVM). The panel data includes line utilization and message statistics.

Use the RIGHT command to display additional information on the Network Review Data for Lines panel (FNM03RV1), shown in Figure 65 on page 59.

```

FNM03RVL                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04CP1  Data Type = LINE DETAIL
Date/Time: from 03/01/99 13:38:59 to 03/18/99 13:39:13

End      Interval Resource  Queue Msgs  Bytes  Line-Ut  Polls/Min
Time     hh:mm:ss Name      Length /Min /Sec  Pri  Sec  Rate %Neg  Errors
13:38:59 0:53 A04CP1    48 7493  154    0  0  3458  58  48
13:40:00 1:00 A04CP1    16 5103   85    0  0  2041  50  16
13:41:00 1:00 A04CP1    48 6623  136    0  0  3057  58  48
13:41:10 0:10 A04CP1    16 30K   507    0  0 12166  50  16
13:39:00 1:00 A04CP1    16 5095   85    0  0  2038  50  16
13:39:13 0:13 A04CP1    48 30K   625    0  0 14070  58  48

PF 1=HELP      3=END      5=RIGHT     9=SUMMARY    12=RETURN    15=NCP
PF16=ROUTER   17=LINE    20=APPL    24=TERMINAL

```

Figure 64. Network Review Data Panel (FNM03RVL)

```

FNM03RV1                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04CP1  Data Type = LINE DETAIL
Date/Time: from 03/01/99 13:38:59 to 03/18/99 13:39:13

End      Interval Resource  Retransmit
Time     hh:mm:ss Name      PIUs Bytes
13:38:59 0:53 A04CP1    80 1664
13:40:00 1:00 A04CP1    16 640
13:41:00 1:00 A04CP1    80 1664
13:41:10 0:10 A04CP1    16 640
13:39:00 1:00 A04CP1    16 640
13:39:13 0:13 A04CP1    80 1664

PF 1=HELP      3=END      9=SUMMARY    12=RETURN    15=NCP      16=ROUTER
PF17=LINE     20=APPL    24=TERMINAL

```

Figure 65. Network Review Data Panel (FNM03RV1)

Displaying Network Detail Data for PU

The Network Review Data panel (FNM03RVY) is shown in Figure 66 on page 60. This panel is displayed when a PU resource is specified in the Resource Name field on the Network Review panel (FNM02RVM). The panel data includes line utilization and message statistics.

Use the **RIGHT** command to display additional information on the Network Review Data panels (FNM03RVR and FNM03RV2), shown in Figure 67 on page 60 and Figure 68 on page 61

Review Data for NCPs

```

FNM03RVY                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04P01A  Data Type = PU DETAIL
Date/Time: from 03/31/99 15:04:59 to 03/31/99 15:11:44

End      Interval Resource  Queue Msgs  Bytes  Line-Ut  Polls/Min
Time     hh:mm:ss Name      Length /Min /Sec   Pri  Sec   Rate %Neg Errors
15:04:59 1:02 A04P01A  48 6441  132   0   0   2973  58   48
15:06:00 1:01 A04P01A  16 5061   84   0   0   2024  50   16
15:06:59 0:59 A04P01A  48 6723  138   0   0   3103  58   48
15:07:59 1:00 A04P01A  16 5095   85   0   0   2038  50   16
15:09:00 1:00 A04P01A  48 6623  136   0   0   3057  58   48
15:10:00 1:00 A04P01A  16 5103   85   0   0   2041  50   16
15:10:59 0:59 A04P01A  48 6746  138   0   0   3114  58   48
15:11:44 0:45 A04P01A  16 6812  114   0   0   2725  50   16

PF 1=HELP      3=END      5=RIGHT     9=SUMMARY    12=RETURN    15=NCP
PF16=ROUTER   17=LINE    20=APPL     24=TERMINAL

```

Figure 66. Network Review Data Panel (FNM03RVY)

```

FNM03RVR                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04P01A  Data Type = PU DETAIL
Date/Time: from 03/31/99 15:04:59 to 03/31/99 15:11:44

End      Interval Resource  Retransmit  HPR Frames  HPR Bytes
Time     hh:mm:ss Name      PIUs Bytes  Sent  Recv  Sent  Recv  Queued
15:04:59 1:02 A04P01A  80 1664  2560  2560  2560  2560  2560
15:06:00 1:01 A04P01A  16  640  2048  2048  2048  2048  2048
15:06:59 0:59 A04P01A  80 1664  2560  2560  2560  2560  2560
15:07:59 1:00 A04P01A  16  640  2048  2048  2048  2048  2048
15:09:00 1:00 A04P01A  80 1664  2560  2560  2560  2560  2560
15:10:00 1:00 A04P01A  16  640  2048  2048  2048  2048  2048
15:10:59 0:59 A04P01A  80 1664  2560  2560  2560  2560  2560
15:11:44 0:45 A04P01A  16  640  2048  2048  2048  2048  2048

PF 1=HELP      3=END      4=LEFT     5=RIGHT     9=SUMMARY    12=RETURN
PF15=NCP      16=ROUTER  17=LINE    20=APPL     24=TERMINAL

```

Figure 67. Network Review Data Panel (FNM03RVR)


```

FNM03RV2                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04P01A  Data Type = PU DETAIL
Date/Time: from 03/31/99 15:04:59 to 03/31/99 15:11:44

End      Interval Resource  HPR FR Disc
Time     hh:mm:ss Name      Sent  Recv
15:04:59 1:02 A04P01A  512  512
15:06:00 1:01 A04P01A  512  512
15:06:59 0:59 A04P01A  512  512
15:07:59 1:00 A04P01A  512  512
15:09:00 1:01 A04P01A  512  512
15:10:00 1:00 A04P01A  512  512
15:10:59 0:59 A04P01A  512  512
15:11:44 0:45 A04P01A  512  512

PF 1=HELP      3=END      4=LEFT      9=SUMMARY   12=RETURN   15=NCP
PF16=ROUTER   17=LINE    20=APPL     24=TERMINAL

```

Figure 68. Network Review Data Panel (FNM03RV2)

Displaying NTRI Resources Data for a Logical Link

The Network Review Data for NTRI Resources panel (FNM03RVN) is shown in Figure 69 on page 62. This panel is displayed when an NTRI logical link is specified in the Resource Name field on the Network Review panel (FNM02RVM). This panel displays NTRI review data, such as TIC utilization and message statistics.

Use the SUMMARY command to display a summary of all data found in the review file for the specified NTRI resource and time period.

Use the RIGHT command to display additional information on the Network Review Data for NTRI Resources panels (FNM03RVQ and FMN03RV3), shown in Figure 70 on page 62 and Figure 71 on page 63.

Review Data for NCPs

```

FNM03RVN                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR NTRI RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = J0003005  Data Type = LOGLINK DETAIL
Date/Time: from 03/01/99 15:01:00 to 03/01/99 15:04:00

End      Interval Resource  Queue  IFrames Bytes Time  Retransmit  TIC
Time    hh:mm:ss Name      Length /Min  /Sec  Outs  IFrames Bytes Util
15:01:00 0:22 J0003005    4      2119  185  10    12   520
15:01:59 0:59 J0003005    6      1789   86  502   504 1012
15:03:00 1:01 J0003005    8       775   68  10    12   520
15:04:00 1:00 J0003005   10      1774   85  502   504 1012

PF 1=HELP      3=END      5=RIGHT     9=SUMMARY   12=RETURN   15=NCP
PF16=ROUTER   17=LINE    20=APPL    24=TERMINAL

```

Figure 69. Network Review Data for NTRI Resources Panel (FNM03RVN)

```

FNM03RVQ                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR NTRI RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = J0003005  Data Type = LOGLINK DETAIL
Date/Time: from 03/01/99 15:01:00 to 03/01/99 15:04:00

End      Interval Resource  Congst Active  HPR Frames      HPR Bytes
Time    hh:mm:ss Name      Count  Conns  Sent  Recv  Sent  Recv  Queued
15:01:00 0:22 J0003005    10     10    10    10    10    10    512
15:01:59 0:59 J0003005    502    502   502   502   502   502   1014
15:03:00 1:01 J0003005    10     10    10    10    10    10    1024
15:04:00 1:00 J0003005    502    502   502   502   502   502   1526

PF 1=HELP      3=END      4=LEFT     5=RIGHT     9=SUMMARY   12=RETURN
PF15=NCP      16=ROUTER  17=LINE    20=APPL    24=TERMINAL

```

Figure 70. Network Review Data for NTRI Resources Panel (FNM03RVQ)

```

FNM03RV3                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR NTRI RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = J0003005  Data Type = LOGLINK DETAIL
Date/Time: from 03/01/99 15:01:00 to 03/01/99 15:04:00

End      Interval Resource      HPR FR Disc
Time     hh:mm:ss Name          Sent  Recv
15:01:00 0:22 J0003005      1476 1476
15:01:59 0:59 J0003005      1476 1476
15:03:00 1:01 J0003005      1476 1476
15:04:00 1:00 J0003005      1476 1476

PF 1=HELP      3=END      4=LEFT      9=SUMMARY      12=RETURN      15=NCP
PF16=ROUTER   17=LINE    20=APPL     24=TERMINAL

```

Figure 71. Network Review Data for NTRI Resources Panel (FNM03RV3)

Displaying NTRI Resources Data for a Physical Link

The Network Review Data for NTRI Resources panel (FNM03RVS) is shown in Figure 72. This panel is displayed when an NTRI physical link is specified in the Resource Name field on the Network Review panel (FNM02RVM). This panel displays NTRI review data, such as TIC utilization and message statistics.

Use the SUMMARY command to display a summary of all data found in the review file for the specified NTRI resource and time period.

Use the RIGHT command to display additional information on the Network Review Data for NTRI Resources panels (FNM03RVH, FNM03RVO, and FNM03RV4), shown in Figure 73 on page 64, Figure 74 on page 64 and Figure 75 on page 65.

```

FNM03RVS                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR NTRI RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04TR89  Data Type = PHYLINK DETAIL
Date/Time: from 03/29/99 14:47:00 to 03/29/99 14:52:00

End      Interval Resource      Queue IFrames Bytes Time  Retransmit TIC
Time     hh:mm:ss Name          Length /Min /Sec Outs IFrames Bytes Util
14:47:00 1:05 A04TR89          4      729  64      12  520  4
14:48:00 1:00 A04TR89          6      1765 85      504 1012 18
14:48:59 0:59 A04TR89          8      796  70      12  520  4
14:49:59 1:00 A04TR89          10     1765 85      504 1012 18
14:50:59 1:00 A04TR89          12     781  68      12  520  4
14:52:00 1:00 A04TR89          14     1759 85      504 1012 18

PF 1=HELP      3=END      5=RIGHT      9=SUMMARY      12=RETURN      15=NCP
PF16=ROUTER   17=LINE    20=APPL     24=TERMINAL

```

Figure 72. Network Review Data for NTRI Resources Panel (FNM03RVS)

Review Data for NCPs

```

FNM03RVH                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR NTRI RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04TR89  Data Type = PHYLINK DETAIL
Date/Time: from 03/29/99 14:47:00 to 03/29/99 14:52:00

End      Interval Resource  Congst Active IP Data Frames  TOT IP Frames
Time     hh:mm:ss Name      Count  Conns   Sent  Recv   Sent  Recv
14:47:00 1:05 A04TR89      12     16    3548  2048   3548  2048
14:48:00 1:00 A04TR89     504    24    3548  2048   3548  2048
14:48:59 0:59 A04TR89      12     32    3548  2048   3548  2048
14:49:59 1:00 A04TR89     504    40    3548  2048   3548  2048
14:50:59 1:00 A04TR89      12     48    3548  2048   3548  2048
14:52:00 1:00 A04TR89     504    56    3548  2048   3548  2048

PF 1=HELP      3=END      4=LEFT      5=RIGHT      9=SUMMARY     12=RETURN
PF15=NCP      16=ROUTER  17=LINE     20=APPL     24=TERMINAL

```

Figure 73. Network Review Data for NTRI Resources Panel (FNM03RVH)

```

FNM03RVO                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR NTRI RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04TR89  Data Type = PHYLINK DETAIL
Date/Time: from 03/29/99 14:47:00 to 03/29/99 14:52:00

End      Interval Resource  IP Frames  IP Bytes  Num FR  FR Frames
Time     hh:mm:ss Name      Disc  Sent  Recv  Con Act  Sent  Recv
14:47:00 1:05 A04TR89      2048   0     0    2048   0     0
14:48:00 1:00 A04TR89     2048   0     0    2048   0     0
14:48:59 0:59 A04TR89     2048   0     0    2048   0     0
14:49:59 1:00 A04TR89     2048   0     0    2048   0     0
14:50:59 1:00 A04TR89     2048   0     0    2048   0     0
14:52:00 1:00 A04TR89     2048   0     0    2048   0     0

PF 1=HELP      3=END      4=LEFT      5=RIGHT      9=SUMMARY     12=RETURN
PF15=NCP      16=ROUTER  17=LINE     20=APPL     24=TERMINAL

```

Figure 74. Network Review Data for NTRI Resources Panel (FNM03RVO)

```

FNM03RV4                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR NTRI RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04TR89  Data Type = PHYLINK DETAIL
Date/Time: from 03/29/99 14:47:00 to 03/29/99 14:52:00

End      Interval Resource  FR Bytes
Time     hh:mm:ss Name      Sent   Recv
14:47:00 1:05 A04TR89    0      0
14:48:00 1:00 A04TR89    0      0
14:48:59 0:59 A04TR89    0      0
14:49:59 1:00 A04TR89    0      0
14:50:59 1:00 A04TR89    0      0
14:52:00 1:00 A04TR89    0      0

PF 1=HELP      3=END      4=LEFT      9=SUMMARY   12=RETURN   15=NCP
PF16=ROUTER   17=LINE    20=APPL     24=TERMINAL

```

Figure 75. Network Review Data for NTRI Resources Panel (FNM03RV4)

Displaying Network Detail Data for CCUs

The Network Review Data panel (FNM03RVP) is shown in Figure 76 on page 66. This panel is displayed when a CCU is specified in the Resource Name field on the Network Review panel (FNM02RVM). The panel data includes CCU utilization, slowdown, and buffer information.

Use the **RIGHT** command to display additional information for the CCUs on the Network Review Data panels (FNM03CU0 and FNM03CU4), shown in Figure 77 on page 66 and Figure 78 on page 67.

Use the **RIGHT** or **LEFT** commands to display additional information on the Network Review Data panels (FNM03CU5 through FNM03CUC) (not shown).

Use the **RIGHT** or **LEFT** commands to display additional information for the CCUs on the Network Review Data panel (FNM03CUL), shown in Figure 79 on page 67.

Review Data for NCPs

```

FNM03RVP                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04NCP    Data Type = NCP DETAIL
Date/Time: from 03/16/99 09:57:59 to 03/16/99 10:00:59
Slowdown Limit: 4194K

End      Interval Resource   CCU   <- Free Buffer ->   Channel
Time     hh:mm:ss Name      Util  QLen  High  Low  Interm Hold
09:57:59 1:00 A04NCP   100  4194K 8716K 8126K   8   16
09:58:59 1:00 A04NCP   100  5243K 8913K 7995K  12  24
10:00:00 1:00 A04NCP   100  4194K 8978K 7930K   8   16
10:00:59 1:00 A04NCP   100  5243K 9715K 7799K  12  24

PF 1=HELP    3=END      9=SUMMARY   12=RETURN   15=NCP      16=ROUTER   17=LINE
PF 20=APPL   24=TERMINAL

```

Figure 76. Network Review Data Panel (FNM03RVP)

```

FNM03CUO                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04NCP    Data Type = NCP DETAIL
Date/Time: from 03/16/99 09:57:59 to 03/16/99 10:00:59
Slowdown Limit: 4194K

End      Interval Resource Interval  Max Buff  Upper Limit  Num Buff
Time     hh:mm:ss Name      Slowdown  Used       Buff Available in use
09:57:59 1:00 A04NCP   40        500       800        400
09:58:59 1:00 A04NCP   20        500       800        400
10:00:00 1:00 A04NCP   40        500       800        400
10:00:59 1:00 A04NCP   20        500       800        400

PF 1=HELP    3=END      4=LEFT      5=RIGHT     9=SUMMARY   12=RETURN
PF15=NCP    16=ROUTER 17=LINE     20=APPL    24=TERMINAL

```

Figure 77. Network Review Data Panel (FNM03CU0)

```

FNM03CU4                NPM V2R7   5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR 3746 LINE PROCESSOR

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04NCP   Data Type = NCP DETAIL
Date/Time: from 03/16/99 09:57:59 to 03/16/99 10:00:59

End      Interval Resource   Type  CPU Ut.  Buf Ut.  Prg Ut.
Time     hh:mm:ss Name      (2080) (2080) (2080) (2080)
          1:00 A04NCP      CLP   50      15      20
09:57:59
          1:00 A04NCP      CLP   80      15      20
09:58:59
          1:00 A04NCP      CLP   50      15      20
10:00:00
          1:00 A04NCP      CLP   80      15      20
10:00:59

PF 1=HELP      3=END      4=LEFT      9=SUMMARY    12=RETURN    15=NCP
PF16=ROUTER   17=LINE    20=APPL     24=TERMINAL

```

Figure 78. Network Review Data for 3746 Line Processor Panel (FNM03CU4)

```

FNM03CUL                NPM V2R7   5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA FOR 3746 LINE PROCESSOR

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A04NCP   Data Type = NCP DETAIL
Date/Time: from 09/21/01 11:38:00 to 09/21/01 11:48:00

End      Interval Resource   Type  CPU Ut.  APPN Buf.  APPN Mem.
Time     hh:mm:ss Name      (NNP) (NNP) (NNP) (NNP)
          0:45 A04NCP      NNP   20      50      15
11:38:00
          1:00 A04NCP      NNP   30      30      20
11:39:00
          0:52 A04NCP      NNP   90      40      70
11:42:59
          1:00 A04NCP      NNP   90      90      30
11:43:59

PF 1=HELP      3=END      4=LEFT      8=FORWARD    9=SUMMARY    11=BOTTOM
PF12=RETURN   15=NCP     16=ROUTER   17=LINE      20=APPL      24=TERMINAL

```

Figure 79. Network Review Data for 3746 Line Processor Panel (FNM03CUL)

Displaying Ethernet Resources Data

The Network Review Data for Ethernet Resources panel (FNM03RVT) is shown in Figure 80 on page 68. This panel is displayed when an Ethernet resource is specified in the Resource Name field on the Network Review panel (FNM02RVM).

Use the RIGHT command to display additional information on the Network Review Data for Ethernet Resources panel (FNM03RV7), shown in Figure 81 on page 68.

```

FNM03RVT                                NPM V2R7  5655-043
                                           NETWORK MANAGEMENT
                                           NETWORK REVIEW DATA FOR ETHERNET RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = RES01  Data Type = ETHERPL DETAIL
Date/Time: from 09/30/00  11:45:00 to 09/30/00  12:00:00

End      Interval Resource  Queue  Transmit  Received  Collisions
Time     hh:mm:ss Name      Length Bytes/Sec Bytes/Sec  One      More
11:45:00 00:15:00 RES01    26      98      444      6        0
12:00:00 00:15:00 RES01    84     194     123      0        3

PF 1=HELP      3=END      5=RIGHT      9=SUMMARY    12=RETURN    15=NCP
PF16=ROUTER   17=LINE    20=APPL      24=TERMINAL
    
```

Figure 80. Network Review Data for Ethernet Resources Panel (FNM03RVT)

```

FNM03RV7                                NPM V2R7  5655-043
                                           NETWORK MANAGEMENT
                                           NETWORK REVIEW DATA FOR ETHERNET RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = RES01  Data Type = ETHERPL DETAIL
Date/Time: from 09/30/00  11:45:00 to 09/30/00  12:00:00

End      Interval Resource  Transm
Time     hh:mm:ss Name      Deferred
11:45:00 00:15:00 RES01      2
12:00:00 00:15:00 RES01     12

PF 1=HELP      3=END      9=SUMMARY    12=RETURN    15=NCP    16=ROUTER
PF17=LINE     20=APPL    24=TERMINAL
    
```

Figure 81. Network Review Data for Ethernet Resources Panel (FNM03RV7)

Displaying X.25 Resources Data

The Network Review Data for X.25 Resources panel (FNM03RVX) is shown in Figure 82 on page 69. This panel is displayed when an X.25 resource is specified in the Resource Name field on the Network Review panel (FNM02RVM). The panel data includes line utilization and message statistics.

Use the RIGHT command to display additional information on the Network Review Data for X.25 Resources panel (FNM03RV6), shown in Figure 83 on page 69.


```

FNM03RVX                                NPM V2R7  5655-043
                                           NETWORK MANAGEMENT
                                           NETWORK REVIEW DATA FOR X.25 RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = X2501      Data Type = NX25LINK DETAIL
Date/Time: from 09/30/00  11:45:00 to 09/30/00  12:00:00

End      Interval Resource  Queue IFrames  Bytes  Packs  Line-Ut  RNR-Rej
Time     hh:mm:ss  Name      Length  /Min   /Sec   /Min  Pri Sec Sent Rcvd

11:45:00 00:15:00 X2501      10     982    110           2  4  10  1
12:00:00 00:15:00 X2501       4      716    161           1  5   0  0

PF 1=HELP      3=END      5=RIGHT      9=SUMMARY      12=RETURN      15=NCP
PF16=ROUTER   17=LINE    20=APPL      24=TERMINAL

```

Figure 82. Network Review Data for X.25 Resources Panel (FNM03RVX)

```

FNM03RV6                                NPM V2R7  5655-043
                                           NETWORK MANAGEMENT
                                           NETWORK REVIEW DATA FOR X.25 RESOURCES

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = X2501      Data Type = NX25LINK DETAIL
Date/Time: from 09/30/00  11:45:00 to 09/30/00  12:00:00

End      Interval Resource  Retransmit
Time     hh:mm:ss  Name      IFrames Bytes

11:45:00 00:15:00 X2501      0      0
12:00:00 00:15:00 X2501      0      0

PF 1=HELP      3=END      9=SUMMARY      12=RETURN      15=NCP      16=ROUTER
PF17=LINE     20=APPL    24=TERMINAL

```

Figure 83. Network Review Data for X.25 Resources Panel (FNM03RV6)

Displaying Monitor Event Messages for Network Collections

Use the following procedure to display monitor event messages for network collections:

1. Accept the default of N in the NCP/Router field and select option 7 from the Network Resource Type Selection panel (FNM01NET) to display the Network Review panel (FNM02RVM), shown in Figure 84 on page 70. You can also use fast path =1.7 to display the Network Review panel.

```

FNM02RVM                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW

Command ==>

Host Name      ==> LOCAL
Resource Name  ==> *          (Name)
Resource Type  ==> ALL       (Name/ALL only for Data Type=MONITOR)
Review File Name ==> REVIEW  (REVIEW for active review file)

Start Date     ==> 09 / 30 / 00 (mm/dd/yy)
Stop Date      ==> 09 / 30 / 00

Start Time     ==> 00 : 00 : 00 (hh:mm:ss)
Stop Time      ==> 00 : 00 : 00

Data Type      ==> MONITOR    (Detail/Monitor)

PF 1=HELP      2=RESTYPE    3=END      9=SUMMARY   12=RETURN   15=NCP
PF16=ROUTER   17=LINE      20=APPL   24=TERMINAL
    
```

Figure 84. Network Review Panel (FNM02RVM)

2. Type * in the Resource Name field, ALL in the Resource Type field and MONITOR in the Data Type field of the Network Review panel (FNM02RVM) to review all monitor messages.

If your release of NPM does not support the wildcard function, type MONITOR in the Resource Name field, ALL in the Resource Type field and MONITOR in the Data Type field of the Network Review panel (FNM02RVM) to review all monitor messages.

To review monitor messages for a specific network resource, type the resource name in the Resource Name field, the resource type in the Resource Type field and MONITOR in the Data Type field of the Network Review panel.

3. Press ENTER to display the Review Monitor Event Messages panel (FNM03RVE), shown in Figure 85. The Review Monitor Event Messages panel (FNM03RVE) displays all monitor event messages generated for the specified resource.

```

FNM03RVE                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        REVIEW MONITOR EVENT MESSAGES

Command ==>

Host Name = LOCAL      Resource Name = NCP01      Data Type = NETWORK RESOURCES
Date/Time: from 09/30/00 11:45:00 to 09/30/00 13:30:00

Actual  Resource Monitor  Actual
Time    Name    Type    Value  Monitor Event Description          Limit
11:45:07 NCP01  LINEUTL 35     MONITOR VALUE WAS BELOW THE LIMIT OF 45
12:00:09 NCP01  LINEUTL 47     RESOLVED, NO LONGER BELOW THE LIMIT OF 45
12:15:00 NCP01  LINEUTL 66     MONITOR VALUE WAS ABOVE THE LIMIT OF 60
12:30:00 NCP01  LINEUTL 7      RESOLVED, NO LONGER ABOVE THE LIMIT OF 60

PF 1=HELP      3=END      12=RETURN   15=NCP      16=ROUTER   17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 85. Review Monitor Event Messages Panel (FNM03RVE)

Displaying Router Network Collection Data

Use the following procedure to display router network collection data from the Resource List panel (FNM02RSR), shown in Figure 24 on page 33:

1. Type R in the Option field next to a specific resource on the Resource List panel. Press ENTER to display the Router Review panel (FNM02RRV), shown in Figure 86.

```

FNM02RRV                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK ROUTER REVIEW

Command ==>

Host Name      ==> LOCAL
Resource Name  ==> 69.100.110.254  (Name)

Start Date     ==> 09 / 10 / 99  (mm/dd/yy)
Stop Date     ==> 09 / 10 / 99

Start Time     ==> 00 : 00 : 00  (hh:mm:ss)
Stop Time     ==> 00 : 00 : 00

Data Type     ==> DETAIL          (Detail/Monitor)

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 86. Router Review Panel (FNM02RRV)

2. Modify any data according to the display required. Press ENTER to display the first Network Review Data panel (FNM03R11) for the router, shown in Figure 87 on page 72.

```

FNM03RI1                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK ROUTER REVIEW DATA                More: +>

Command ==>>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL
Resource Name = 69.100.110.254      Router Host Name = cisco-2505-tkp.rom
Resource Type = CISCO
Date/Time   from 08/07/00 10:55:59      to 08/07/00 11:46:59
Enter Command: REFRESH
              C=CPU Data, MP=Mem. POOL Data, CIP=CIP data

End      Interval  Interface  <-----RECEIVED----->  <-----SENT----->
Time     hh:mm:ss  Index      Tot/K  Err%  Disc%  Tot/K  Err%  Disc%
10:55:59 00:01:01  1          0      0     0      0      0     0
10:55:59 00:01:01  2          2      0     0      3      0     0
10:55:59 00:01:01  3          2      0     0      1      0     0
10:55:59 00:01:01  4          2      0     0      1      0     0
10:55:59 00:01:00  1          0      0     0      0      0     0
10:55:59 00:01:00  2          2      0     0      3      0     0
10:55:59 00:01:00  3          2      0     0      1      0     0
10:55:59 00:01:00  4          2      0     0      1      0     0
10:55:59 00:00:59  1          0      0     0      0      0     0
10:55:59 00:00:59  2          2      0     0      3      0     0
10:55:59 00:00:59  3          2      0     0      1      0     0
10:55:59 00:00:59  4          2      0     0      1      0     0
10:55:59 00:01:01  1          0      0     0      0      0     0
10:55:59 00:01:01  2          2      0     0      3      0     0
PF 1=HELP    3=END      5=RIGHT    8=FORWARD  11=BOTTOM  12=RETURN
PF15=NCP    16=ROUTER 17=LINE    20=APPL   24=TERMINAL
    
```

Figure 87. Network Router Review Data Panel (FNM03RI1)

- Press PF5 (RIGHT) to display the second Network Review Data panel (FNM03RI2) for the router, shown in Figure 88.

```

FNM03RI2                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK ROUTER REVIEW DATA                More: <+>

Command ==>>
Host Name = LOCAL
Resource Name = 69.100.110.254      Router Host Name = cisco-2505-tk0.rom
Resource Type = CISCO
Date/Time   from 08/07/00 10:55:59      to 08/07/00 11:46:59
Enter Command: REFRESH
              C=CPU Data, MP=Mem. POOL Data, CIP=CIP Data

End      Interval  Interface  Max      Speed      Interface
Time     hh:mm:ss  Index      Datagram  Utilization
10:55:59 00:01:00  2          1500      2048000    0
10:55:59 00:01:00  3          4464      16000000   0
10:55:59 00:01:00  4          4464      16000000   0
10:56:59 00:01:00  2          1500      2408000    0
10:56:59 00:01:00  3          4464      16000000   0
10:56:59 00:01:00  4          4464      16000000   0
10:57:59 00:01:00  2          1500      2408000    0
10:57:59 00:01:00  3          4464      16000000   0
10:57:59 00:01:00  4          4464      16000000   0
10:58:59 00:01:00  2          1500      2048000    0
10:58:59 00:01:00  3          4464      16000000   0
10:58:59 00:01:00  4          4464      16000000   0
10:58:59 00:01:00  2          1500      2048000    1
PF 1=HELP    3=END      4=LEFT     5=RIGHT    8=FORWARD  11=BOTTOM
PF12=RETURN  15=NCP    16=ROUTER  17=LINE    20=APPL   24=TERMINAL
    
```

Figure 88. Network Router Review Data Panel (FNM03RI2)

- Press PF5 (RIGHT) to display the third Network Review Data panel (FNM03RI3) for the router, shown in Figure 89.
Press PF4 (LEFT) to return to the first Network Review Data panel (FNM03RI1).

```

FNM03RI3                NPM V2R7  5655-043                More: < + >
                        NETWORK MANAGEMENT
                        NETWORK ROUTER REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL
Resource Name = 69.100.110.254      Router Host Name = cisco-2505-tk0.rom
Resource Type = CISCO
Date/Time   from 08/07/00 10:55:59      to 08/07/00 12:02:59
Enter Command: REFRESH
                C=CPU Data, MP=Mem. POOL Data, CIP=CIP Data

End      Interval  Interface  Out Queue  <----Stack Layer---->
Time     hh:mm:ss  Index      Len         Higher      Lower
10:55:59 00:01:00    2          0           0           0
10:55:59 00:01:00    3          0           0           0
10:55:59 00:01:00    4          0           0           0
10:56:59 00:01:00    2          0           0           0
10:56:59 00:01:00    3          0           0           0
10:56:59 00:01:00    4          0           0           0
10:57:59 00:01:00    2          0           0           0
10:57:59 00:01:00    3          0           0           0
10:57:59 00:01:00    4          0           0           0
10:58:59 00:01:00    2          0           0           0
10:58:59 00:01:00    3          0           0           0
10:58:59 00:01:00    4          0           0           0
10:58:59 00:01:00    2          0           0           0

PF 1=HELP      3=END      4=LEFT      5=RIGHT      8=FORWARD    11=BOTTOM
PF12=RETURN    15=NCP     16=ROUTER   17=LINE      20=APPL     24=TERMINAL
    
```

Figure 89. Network Router Review Data Panel (FNM03RI3)

- Press PF5 (RIGHT) to display the Network Review Data panel (FNM03RI4):

Review Data for Routers

```
FNM03RI4          NPM V2R7  5655-043          More: < + >
                  NETWORK MANAGEMENT
                  NETWORK ROUTER REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL
Resource Name = 69.100.110.254      Router Host Name = cisco-2505-tk0.rom
Resource Type = CISCO
Date/Time      from 08/07/00 10:55:59      to 08/07/00 12:02:59
Enter Command: REFRESH
                C=CPU Data, MP=Mem. POOL Data, CIP=CIP Data

End      Interval Interface  <-- APPN LS XID --> <-- APPN LS MSG -->
Time     hh:mm:ss   Index    In      Out     In      Out
10:55:59 00:01:00  2        0       0       0       0
10:55:59 00:01:00  3        0       0       0       0
10:55:59 00:01:00  4        0       0       0       0
10:56:59 00:01:00  2        0       0       0       0
10:56:59 00:01:00  3        0       0       0       0
10:56:59 00:01:00  4        0       0       0       0
10:57:59 00:01:00  2        0       0       0       0
10:57:59 00:01:00  3        0       0       0       0
10:57:59 00:01:00  4        0       0       0       0
10:58:59 00:01:00  2        0       0       0       0
10:58:59 00:01:00  3        0       0       0       0
10:58:59 00:01:00  4        0       0       0       0
10:58:59 00:01:00  2        0       0       0       0

PF 1=HELP    3=END      4=LEFT     5=RIGHT    8=FORWARD  11=BOTTOM
PF12=RETURN  15=NCP     16=ROUTER  17=LINE    20=APPL   24=TERMINAL
```

Figure 90. Network Router Review Data Panel (FNM03RI4)

This panel shows the APPN data for routers.

6. Press PF5 (RIGHT) to display the Network Review Data panel (FNM03RI5):

```

FNM03RI5                NPM V2R7  5655-043                More: < + >
                        NETWORK MANAGEMENT
                        NETWORK ROUTER REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL
Resource Name = 69.100.110.254      Router Host Name = cisco-2505-tk0.rom
Resource Type = CISCO
Date/Time   from 08/07/00 10:55:59      to 08/07/00 12:02:59
Enter Command: REFRESH
                C=CPU Data, MP=Mem. POOL Data, CIP=CIP Data

End      Interval Interface  <--Unicast Pkts--> <-- Multicast Pkts -->
Time     hh:mm:ss  Index      In      Out     In      Out
10:55:59 00:01:00  2          49     61     0       0
10:55:59 00:01:00  3          0      14     48      0
10:55:59 00:01:00  4          0      14     48      0
10:56:59 00:01:00  2          44     58     0       0
10:56:59 00:01:00  3          0      13     52      0
10:56:59 00:01:00  4          0      14     51      0
10:57:59 00:01:00  2          46     58     0       0
10:57:59 00:01:00  3          0      14     48      0
10:57:59 00:01:00  4          0      14     48      0
10:58:59 00:01:00  2          45     58     0       0
10:58:59 00:01:00  3          0      14     52      0
10:58:59 00:01:00  4          0      14     52      0
10:58:59 00:01:00  2          44     57     0       0

PF 1=HELP      3=END      4=LEFT      5=RIGHT      8=FORWARD    11=BOTTOM
PF12=RETURN   15=NCP     16=ROUTER   17=LINE      20=APPL     24=TERMINAL

```

Figure 91. Network Review Data Panel for Router (FNM03RI5)

Displaying CPU Information for Cisco Routers

You can display CPU information for Cisco routers from any of the following Network Review Data panels:

- FNM03RI1, shown in Figure 87 on page 72
- FNM03RI2, shown in Figure 88 on page 72
- FNM03RI3, shown in Figure 89 on page 73
- FNM03RI4, shown in Figure 90 on page 74
- FNM03RI5, shown in Figure 91 on page 75

To display CPU information for Cisco routers, enter C on the command line and press ENTER. Figure 92 is displayed:

```

FNM04CPC                                NPM V2R7  5655-043      More +
                                         NETWORK MANAGEMENT
                                         NETWORK ROUTER REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL
Resource Name = 69.100.110.254          Router Host Name = cisco-2505-tk0.rom
Resource Type = CISCO
Date/Time      from 08/07/00 10:54:59      to 08/07/00 14:22:59
Enter Command: REFRESH

End      Interval  CPU      Average  Average
Time     hh:mm:ss  Busy %   Busy 1 %  Busy 5 %
10:54:59 00:00:59  21       22        22
10:55:59 00:01:00  28       25        23
10:56:59 00:01:00  28       25        24
10:57:59 00:01:00  28       25        24
10:58:59 00:01:00  29       25        25
10:59:59 00:01:00  22       25        25
11:01:00 00:01:01  21       25        25
11:02:00 00:01:00  22       25        25
11:03:00 00:01:00  21       25        26
11:04:00 00:01:00  28       34        28
11:05:00 00:01:00  29       36        31
11:05:59 00:00:59  23       37        33
11:06:59 00:01:00  22       38        32
11:07:59 00:01:00  23       38        33

PF 1=HELP      3=END      12=RETURN   15=NCP      16=ROUTER   17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 92. Network Router Review Data Panel (FNM04CPC)

Displaying CPU Information for IBM Routers

You can display CPU information for IBM® routers from any of the following Network Review Data panels:

- FNM03RI1, shown in Figure 87 on page 72
- FNM03RI2, shown in Figure 88 on page 72
- FNM03RI3, shown in Figure 89 on page 73
- FNM03RI4, shown in Figure 90 on page 74
- FNM03RI5, shown in Figure 91 on page 75

To display CPU information for IBM routers, enter C on the command line and press ENTER. Figure 93 is displayed:

```

FNM04CPI                      NPM V2R7  5655-043
                               NETWORK MANAGEMENT   More +
                               NETWORK ROUTER REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL
Resource Name = 69.100.86.100      Router Host Name = mss-8210-002.rome
Resource Type = MSS8210
Date/Time      from 08/07/00 11:11:30      to 08/07/00 11:58:30
Enter Command: REFRESH

End      Interval  CPU
Time     hh:mm:ss  Load %
11:11:30 00:01:01  0
11:12:30 00:01:00  0
11:13:30 00:01:00  0
11:14:30 00:01:00  0
11:15:30 00:01:00  0
11:16:29 00:00:59  0
11:17:29 00:01:00  0
11:18:29 00:01:00  0
11:19:29 00:01:00  0
11:20:30 00:01:01  0
11:21:30 00:01:00  0
11:22:30 00:01:00  0
11:23:30 00:01:00  0
11:24:30 00:01:00  0

PF 1=HELP      3=END      8=FORWARD   11=BOTTOM   12=RETURN   15=NCP
PF16=ROUTER   17=LINE    20=APPL    24=TERMINAL

```

Figure 93. Network Router Review Data Panel (FNM04CPI)

Displaying Memory Pool Information for Cisco Routers

You can display memory pool information for Cisco routers from any of the following Network Review Data panels:

- FNM03RI1, shown in Figure 87 on page 72
- FNM03RI2, shown in Figure 88 on page 72
- FNM03RI3, shown in Figure 89 on page 73
- FNM03RI4, shown in Figure 90 on page 74
- FNM03RI5, shown in Figure 91 on page 75

To display memory pool information for Cisco routers, enter MP on the command line and press ENTER. Figure 94 on page 78 is displayed:

```

FNM04MEC                NPM V2R7  5655-043      More +
                        NETWORK MANAGEMENT
                        NETWORK ROUTER REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL
Resource Name = 69.100.110.254      Router Host Name = cisco-2505-tk0.rom
Resource Type = CISCO
Date/Time   from 08/07/00 10:57:59      to 08/07/00 11:59:00
Enter Command: REFRESH

End      Interval  Pool  Pool  Pool  Pool  Largest  Pool
Time     hh:mm:ss   Type Alternate Used   Free   Pool Free  Util %
10:57:59 00:01:00   1     2     1330148 14693Kb 14790604 8
10:57:59 00:01:00   2     0     1667344 429808 211152 80
10:58:59 00:01:00   1     2     1330148 14693Kb 14790604 8
10:58:59 00:01:00   2     0     1667344 429808 211152 80
10:59:59 00:01:00   1     2     1330148 14693Kb 14790604 8
10:59:59 00:01:00   2     0     1667344 429808 211152 80
11:01:00 00:01:01   1     2     1330148 14693Kb 14790604 8
11:01:00 00:01:01   2     0     1667344 429808 211152 80
11:02:00 00:01:00   1     2     1330148 14693Kb 14790604 8
11:02:00 00:01:00   2     0     1667344 429808 211152 80
11:03:00 00:01:00   1     2     1330148 14693Kb 14790604 8
11:03:00 00:01:00   2     0     1667344 429808 211152 80
11:04:00 00:01:00   1     2     1330148 14693Kb 14790604 8
11:04:00 00:01:00   2     0     1667344 429808 211152 80

PF 1=HELP      3=END      8=FORWARD   11=BOTTOM   12=RETURN   15=NCP
PF16=ROUTER   17=LINE    20=APPL     24=TERMINAL
    
```

Figure 94. Network Router Review Data Panel (FNM04MEC)

Displaying Memory Information for IBM Routers

You can display memory information for IBM routers from any of the following Network Review Data panels:

- FNM03RI1, shown in Figure 87 on page 72
- FNM03RI2, shown in Figure 88 on page 72
- FNM03RI3, shown in Figure 89 on page 73
- FNM03RI4, shown in Figure 90 on page 74
- FNM03RI5, shown in Figure 91 on page 75

To display memory information for IBM routers:

1. Enter MP on the command line and press ENTER. Figure 95 on page 79 is displayed:

```

FNM04MI1                                NPM V2R7  5655-043
                                           NETWORK MANAGEMENT
                                           More:   + >
                                           NETWORK ROUTER REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL
Resource Name = 69.100.86.100   Router Host Name = mss-8210-002.rome.
Resource Type = MSS8210
Date/Time: from 08/07/00 11:11:30 to 08/07/00 11:58:30
Enter Command: REFRESH

End      Interval  <--Memory-->  <----- Heap ----->  <----- Buffer ----->
Time     hh:mm:ss   Size  Used%  Total Mem.  Util%  Tot.Glb.  Glb.Util.%
11:11:30 00:01:01    0    0     43628Kb   14     400        0
11:12:30 00:01:00    0    0     43628Kb   14     400        0
11:13:30 00:01:00    0    0     43628Kb   14     400        0
11:14:30 00:01:00    0    0     43628Kb   14     400        0
11:15:30 00:01:00    0    0     43628Kb   14     400        0
11:16:29 00:00:59    0    0     43628Kb   14     400        0
11:17:29 00:01:00    0    0     43628Kb   14     400        0
11:18:29 00:01:00    0    0     43628Kb   14     400        0
11:19:29 00:01:00    0    0     43628Kb   14     400        0
11:20:30 00:01:01    0    0     43628Kb   14     400        0
11:21:30 00:01:00    0    0     43628Kb   14     400        0
11:22:30 00:01:00    0    0     43628Kb   14     400        0
11:23:30 00:01:00    0    0     43628Kb   14     400        0
11:24:30 00:01:00    0    0     43628Kb   14     400        0
PF 1=HELP      3=END      5=RIGHT    8=FORWARD 11=BOTTOM 12=RETURN
PF15=NCP      16=ROUTER 17=LINE    20=APPL   24=TERMINAL

```

Figure 95. Network Router Review Data Panel (FNM04MI1)

2. Press PF5 (RIGHT) to display the Network Router Review Data panel (FNM04MI2):

```

FNM04MI2                                NPM V2R7  5655-043
                                           NETWORK MANAGEMENT
                                           More: < + >
                                           NETWORK ROUTER REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name= LOCAL
Resource Name = 69.100.86.100   Router Host Name = mss-8210-002.rome.
Resource Type= MSS8210
Date/Time: from 08/07/00 11:11:30 to 08/07/00 11:58:30
Enter Command: REFRESH

End      Interval  <--Mem. Thresh-->  <-----Heap Memory----->
Time     hh:mm:ss   Warn  Critic  Reserved  NeverAlloc  PreviousAlloc
11:11:30 00:01:01    0      0     26584    37697Kb     664
11:12:30 00:01:00    0      0     26584    37697Kb     1048
11:13:30 00:01:00    0      0     26584    37697Kb     1048
11:14:30 00:01:00    0      0     26584    37697Kb     664
11:15:30 00:01:00    0      0     26584    37697Kb     1048
11:16:29 00:00:59    0      0     26584    37697Kb     1048
11:17:29 00:01:00    0      0     26584    37697Kb     1048
11:18:29 00:01:00    0      0     26584    37697Kb     1048
11:19:29 00:01:00    0      0     26584    37697Kb     664
11:20:30 00:01:01    0      0     26584    37697Kb     1048
11:21:30 00:01:00    0      0     26584    37697Kb     1048
11:22:30 00:01:00    0      0     26584    37697Kb     1048
11:23:30 00:01:00    0      0     26584    37697Kb     1048
11:24:30 00:01:00    0      0     26584    37697Kb     664
PF 1=HELP      3=END      4=LEFT    5=RIGHT    8=FORWARD 11=BOTTOM
PF12=RETURN   15=NCP    16=ROUTER 17=LINE    20=APPL   24=TERMINAL

```

Figure 96. Network Router Review Data Panel (FNM04MI2)

3. Press PF5 (RIGHT) to display the Network Router Review Data panel (FNM04MI3):

```

FNM04MI3                                NPM V2R7  5655-043
                                           NETWORK MANAGEMENT
                                           NETWORK ROUTER REVIEW DATA
More: <  +

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL
Resource Name = 69.100.86.100   Router Host Name = mss-8210-002.rome.
Resource Type = MSS8210
Date/Time: from 08/07/00 11:11:30 to 08/07/00 11:58:30
Enter Command: REFRESH

End      Interval  <-----Buffer Memory ----->      <--Global Buffer-->
Time    hh:mm:ss   Res      NeverAll  PermAll   Fair      Low
11:11:30 00:01:01    0         0         0         44       80
11:12:30 00:01:00    0         0         0         44       80
11:13:30 00:01:00    0         0         0         44       80
11:14:30 00:01:00    0         0         0         44       80
11:15:30 00:01:00    0         0         0         44       80
11:16:29 00:00:59    0         0         0         44       80
11:17:29 00:01:00    0         0         0         44       80
11:18:29 00:01:00    0         0         0         44       80
11:19:29 00:01:00    0         0         0         44       80
11:20:30 00:01:01    0         0         0         44       80
11:21:30 00:01:00    0         0         0         44       80
11:22:30 00:01:00    0         0         0         44       80
11:23:30 00:01:00    0         0         0         44       80
11:24:30 00:01:00    0         0         0         44       80

PF 1=HELP      3=END      4=LEFT      8=FORWARD  11=BOTTOM  12=RETURN
PF15=NCP     16=ROUTER 17=LINE     20=APPL   24=TERMINAL
    
```

Figure 97. Network Router Review Data Panel (FNM04MI3)

4. Press PF4 (LEFT) to display the Network Router Review Data panel (FNM04MI1).
5. Press PF4 (LEFT) to display the Network Router Review Data panel (FNM04MI2).

Displaying CIP Information for Cisco Routers

You can display CIP information for Cisco routers from any of the following Network Review Data panels:

- FNM03R11
- FNM03R12
- FNM03R13
- FNM03R14
- FNM03R15

To display CIP information for Cisco routers:

1. Enter CIP on the command line and press ENTER. The Network Router Review Data panel (FNM04CI1) is displayed, see Figure 98 on page 81:

```

FNM04CI1                NPM V2R7  5655-043                More  *>
                        NETWORK MANAGEMENT
                        NETWORK ROUTER REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL
Resource Name = 69.120.120.1      Router Host Name =
Resource Type = CISCO
Date/Time      from 08/07/00 15:10:00      to 08/07/00 15:16:00

End      Interval  Card  <---Memory--->  %CPU  <---  &CPU Load  --->
Time     hh:mm:ss  Index Total/KB Free/KB  Util  1 min  5 min  60 min
15:10:00 00:00:59    1   36864 20474    3     3     3     3
15:11:00 00:01:00    1   36864 20474    3     3     3     3
15:11:59 00:00:59    1   36864 20474    3     3     3     3
15:12:59 00:01:00    1   36864 20474    3     3     3     3
15:13:59 00:01:00    1   36864 20474    3     3     3     3
15:15:00 00:01:01    1   36864 20474    3     3     3     3
15:16:00 00:01:00    1   36864 20474    3     3     3     3

PF 1=HELP      3=END      8=FORWARD  11=BOTTOM  12=RETURN  15=NCP
PF16=ROUTER   17=LINE   20=APPL   24=TERMINAL

```

Figure 98. Network Router Review Data Panel (FNM04CI1)

- Press PF5 (RIGHT) to display the Network Router Review Data panel (FNM04CI2):

```

FNM04CI2                NPM V2R7  5655-043                More  *>
                        NETWORK MANAGEMENT
                        NETWORK ROUTER REVIEW DATA

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL
Resource Name = 69.120.120.1      Router Host Name =
Resource Type = CISCO
Date/Time      from 08/07/00 15:10:00      to 08/07/00 15:16:00
Enter Command: REFRESH

End      Interval  Card  <---  %DMA Load  --->  Time since  Major SW  Major HW
Time     hh:mm:ss  Index 1 min  5 min  60 min Last reset Revision Revision
15:10:00 00:00:59    1     0     0     0   2496927    27     1
15:11:00 00:01:00    1     0     0     0   2496986    27     1
15:11:59 00:00:59    1     0     0     0   2497046    27     1
15:12:59 00:01:00    1     0     0     0   2497106    27     1
15:13:59 00:01:00    1     0     0     0   2497166    27     1
15:15:00 00:01:01    1     0     0     0   2497226    27     1
15:16:00 00:01:00    1     0     0     0   2497286    27     1

PF 1=HELP      3=END      8=FORWARD  11=BOTTOM  12=RETURN  15=NCP
PF16=ROUTER   17=LINE   20=APPL   24=TERMINAL

```

Figure 99. Network Router Review Data Panel (FNM04CI2)

- Press PF4 (LEFT) to display the Network Router Review Data panel (FNM04CI1).

Using the Dynamic Data Display Option for NCPs

Use the Dynamic Data Display option to display network data on 3270 panels without waiting for a collection interval to end and without waiting until NPM has written the data into the review files. Real time data is collected and displayed on the screen using the refresh interval (as in the NPM console). You can also refresh the data automatically at any time. For more information, see “Collecting and Analyzing Dynamic Data” on page 177.

Note: The dynamic data function includes and replaces the last interval function.

Use the following procedure to display NCP dynamic data information:

1. Accept the default of N in the NCP/Router field and select option 8 from the Network Management panel (FNM01NET) to display the Dynamic NCP Data Display panel (FNM02DDN), shown in Figure 100. You can also use fast path=1.8 to display the Dynamic NCP Data Display panel:

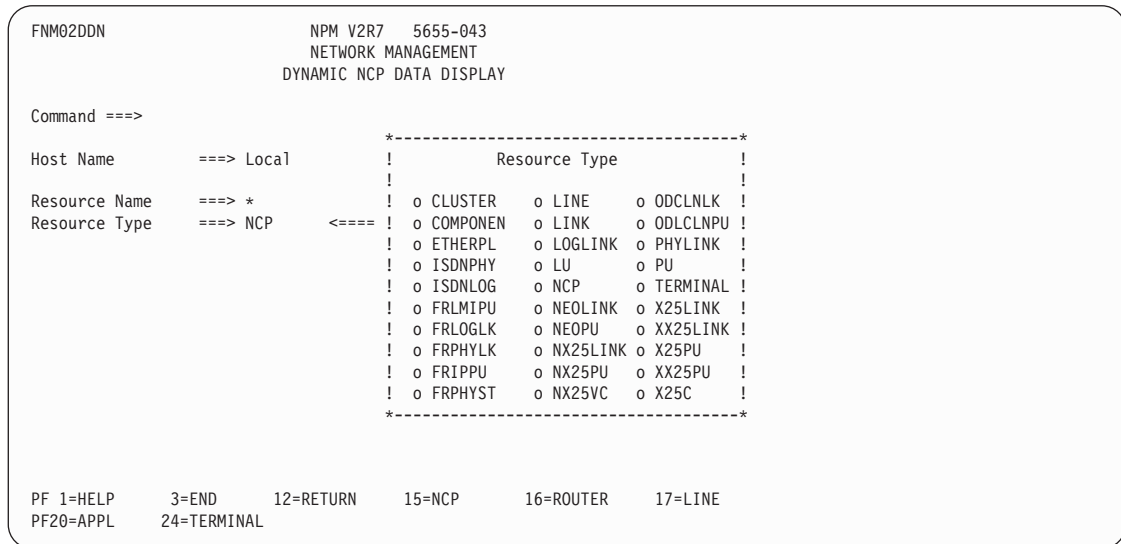


Figure 100. Dynamic NCP Data Panel (FNM02DDN)

The default for Resource Name is * (all resources). The default for Resource Type is blank.

2. To display dynamic data for a specific type of NCP resource, specify a Resource Type from the Resource Type box. For example, NCP, LINK, PU, LU, and so on. Also specify a full or partial Resource Name (using the wildcard character). A different output panel is used depending on the type of resource, together with a selected group of counters. For this example, specify NCP as the Resource Type.
3. Press ENTER to display the Dynamic NCP Data Display panel (FNM03DDN), shown in Figure 101 on page 83. This panel displays data about the specified resources collected during the last collection interval.

```

FNM03DDN                      NPM V2R7  5655-043
                               NETWORK MANAGEMENT
                               DYNAMIC NCP DATA DISPLAY

Command ==>
Press ENTER to start auto refresh
Host Name = Local
Resource Name = *      Resource Type = NCP
Current Interval = from 8/17/00 12:03:29 to 8/17/00 12:03:59
Refresh Interval = 30 (secs.)

Resource  Resource End      CCU  <- Free Buffer ->  <-Channel->  Slowdown
Name      Type      Time  Util  Qlen  High  Low  Interm Hold  %  Limit
A03NCP    NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K
A04NCP    NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K
A31XI     NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K
NCPB      NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K

PF 1=HELP      3=END      8=FORWARD  12=RETURN  15=NCP      16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL

```

Figure 101. Dynamic NCP Data Panel (FNM03DDN)

4. Start the auto refresh of NCP data by pressing ENTER. The output panel will go into auto refresh mode. You can exit auto refresh mode using the ATTN key. Figure 102 shows auto refresh mode for NCPs:

```

FNM03DDN                      NPM V2R7  5655-043
                               NETWORK MANAGEMENT
                               DYNAMIC NCP DATA DISPLAY

Command ==>

Host Name = Local
Resource Name = *      Resource Type = NCP
Current Interval = from 8/17/00 12:03:29 to 8/17/00 12:03:59
Refresh Interval = 30 (secs.)

Resource  Resource End      CCU  <- Free Buffer ->  <-Channel->  Slowdown
Name      Type      Time  Util  Qlen  High  Low  Interm Hold  %  Limit
A03NCP    NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K
A04NCP    NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K
A31XI     NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K
NCPB      NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K

PRESS THE ATTENTION KEY TO EXIT

```

Figure 102. Dynamic NCP Data Panel in Auto Refresh Mode (FNM03DDN)

Using the Dynamic Data Display Option for Routers

Use the Dynamic Data Display option to display network data on 3270 panels without waiting for a collection interval to end and without waiting until NPM has written the data to the review files. Real time data is collected and displayed on the screen using the refresh interval (as in the NPM console). You can also refresh the data automatically at any time. For more information, see “Collecting and Analyzing Dynamic Data” on page 177.

Note: The dynamic data function includes and replaces the last interval function.

Use the following procedure to display router dynamic data information:

1. Specify R in the NCP/Router field, then select option 8 from the Network Management panel (FNM01NET) to display the Dynamic Router Data panel (FNM02DDR), shown in Figure 103. You can also use fast path =1.8 to display the Dynamic Router Data panel.

```

FNM02DDR                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        DYNAMIC ROUTER DATA DISPLAY

Command ==>

Host Name                ==> LOCAL                *-----*
                        !           Resource Type  !
                        !           !           !
IP Address                ==> 0.0.0.0            ! o 3476      o NT      !
Subnet Mask (wildcard)   ==> 0.0.0.0            ! o CISCO     o ALLROUT !
Resource Type            ==> CISCO <----- ! o CS/NT      !
                        ! o GENERIC              !
                        ! o MSS8210              !
                        ! o NETU                 !
                        ! o NHD2210              !
                        ! o NHD2212              !
                        ! o NHD2216              !
                        ! o NHD2211              !
                        *-----*

PF 1=HELP      3=END      12=RETURN   15=NCP      16=ROUTER   17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 103. Dynamic Router Data Display Panel (FNM02DDR)

The default for IP Address and Subnet Mask is 0.0.0.0 (all resources). The default for Resource Type is blank.

2. To display dynamic data for a specific type of router, specify a Resource Type from the Resource Type box. Alternatively, specify CISCO as the Resource Type to display data for all types of router. Different output panels are used depending on the type of router. In addition, specify either a full or partial IP address. For this example, specify CISCO as the Resource Type and leave the default values for IP Address and Subnet Mask.
3. Press ENTER to display the Dynamic Router Data Display panel (FNM03DDC), shown in Figure 104 on page 85. This panel displays data about the specified resources collected during the last collection interval.


```

FNM03DDC                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        DYNAMIC ROUTER DATA DISPLAY

Command ==>
Press ENTER to start auto refresh
Host Name = LOCAL
IP Address = 0.0.0.0      Resource Type = CISCO
Current Interval = from 8/17/00 14:55:59 to 8/17/00 14:56:30
Refresh Interval = 30 (secs.)

Resource      Resource End      Interface CPU   Mem-Pool   CIP-card
Name          Type    Time      Index Util Util  Type  Util  Index CPU
69.100.87.250 CISCO   10:18:59  19  40    8    4   27    1   3
69.100.91.2   CISCO   10:18:59  1   43    0    6   50    1   3
69.120.120.1  CISCO   10:18:59  19  40    8    4   27    1   3

PF 1=HELP      3=END      8=FORWARD  12=RETURN  15=NCP   16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL

```

Figure 104. Dynamic Router Data Display Panel (FNM03DDC)

This panel displays data for the best interval collection of the selected resources.

4. Start the auto refresh of router data by pressing ENTER. The output panel will go into auto refresh mode. You can exit auto refresh mode using the ATTN key. Figure 105 shows auto refresh mode for routers:

```

FNM03DDR                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        DYNAMIC ROUTER DATA DISPLAY

Command ==>

Host Name = LOCAL
IP Address = 0.0.0.0      Resource Type = CISCO
Current Interval = from 8/17/00 14:55:59 to 8/17/00 14:56:30
Refresh Interval = 30 (secs.)

Resource      Resource End      Interface CPU   Mem-Pool   CIP-card
Name          Type    Time      Index Util Util  Type  Util  Index CPU
69.100.87.250 CISCO   10:18:59  19  40    8    4   27    1   3
69.100.91.2   CISCO   10:18:59  1   43    0    6   50    1   3
69.120.120.1  CISCO   10:18:59  19  40    8    4   27    1   3

PRESS THE ATTENTION KEY TO EXIT

```

Figure 105. Dynamic Router Data Display Panel in Auto Refresh Mode (FNM03DDR)

3

Collecting and Analyzing Session Data

This chapter describes how to use NPM to collect session information and correlate it to other NPM information. You can use NPM's session management function to perform the following tasks:

- Alter a session collection
- Display dynamic data information
- Display LU/IP information
- Display session performance status information
- Display session monitor event messages
- Display the status of active session data collection
- Perform session data analysis
- Specify a resource and parameters for session data collection
- Stop a session collection

Note: See the *NetView Performance Monitor Reference* for detailed descriptions of the NPM panel fields.

Session Management Panels

This section describes the panels used in session management. Use the following procedures to perform NPM session management collection and analysis functions:

1. Select option 2 from the Primary Options panel (FNM00PRI) to display the Response Times panel (FNM01SES), shown in Figure 106 on page 88. You can also use fast path =2 to display the Response Times panel.

```

FNM01SES                                NPM V2R7  5655-043
                                         RESPONSE TIMES

Select Option ==>

  1 Start Session
  2 Active Collection - List/Stop/Alter
  3 Deferred Collection - List/Stop/Alter

  4 Dynamic Data Display
  5 IP Detail Analysis
  6 LU Detail Analysis
  7 Session Analysis
  8 Performance Status Display
  9 Session Monitor Display

Host Name ==> LOCAL

PF 1=HELP    3=END    12=RETURN  15=NCP   16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
    
```

Figure 106. Response Times Panel (FNM01SES)

2. Type one of the following option numbers in the Select Option field and press ENTER:

Option	Action
1	Starts session collection. See “Starting Session Collection” for detailed procedures.
2	Stops or alters active session data collections or displays active collection status. See “Displaying, Altering, or Stopping an Active Session Collection” on page 91 for detailed procedures.
3	Stops or alters deferred session data collections or displays deferred collection status. See “Displaying, Altering, or Stopping a Deferred Session Collection” on page 94 for detailed procedures.
4	Displays dynamic data. See “Displaying Dynamic Response Times Data” on page 95 for detailed procedures.
5	Displays IP session information. See “Displaying IP Detail Analysis Data” on page 98 for detailed procedures.
6	Displays LU session information. See “Displaying Dynamic Response Times Data” on page 95 for detailed procedures.
7	Performs session data analysis. See “Displaying Session Analysis Summary Data” on page 105 for detailed procedures.
8	Displays performance status information. See “Displaying Session Performance Status Information” on page 107 for detailed procedures.
9	Displays session monitor event messages. See “Displaying Session Monitor Event Messages” on page 114 for detailed procedures.

Starting Session Collection

The Start Session panel (FNM02SCL) enables you to specify a resource and parameters for session collection.

Note: You must verify that the designated destination files for the collected data are not full before starting a collection. See “Managing Data Files” on page 196.

Starting Session Collection (Resource Already Defined to VTAM)

Use the following procedure to start session collection for a resource already defined to VTAM:

1. Select option 1 from the Response Times panel (FNM01SES) to display the Start Session panel (FNM02SCL), shown in Figure 107. You can also use fast path =2.1 to display the Start Session panel.

```

FNM02SCL                      NPM V2R7  5655-043
                               RESPONSE TIMES
                               START SESSION

Command ==>
Resource Name    ==> 146.84.65.114
Node Name       ==>
Host Name       ==> LOCAL
Dynamic Resource ==> NO                (Yes/No)
Session Statistics ==> YES            (Yes/No/Vo1/Xc1/Rsp)
VTAM Log        ==> 0                 (0/1/2/3)
Minimum PIU Trace ==> YES            (Yes/No)
GTF Trace       ==> NO                (Yes/No)
Transit Thresholds:
  Operator      ==> .00 : 4620        (Low:High)
  Network       ==> .00 : 3330        (Low:High)
  Host          ==> 1.00 : 2.00      (Low:High)
Distribution Bounds ==> 5.00 : 10.00 : 20.00 : 30.00
Start Time     ==> 00 : 00 : 00      (hh:mm:ss)
Stop Time      ==> 00 : 00 : 00      (hh:mm:ss)
Daily          ==> NO                (Yes/No)
PF 1=HELP     3=END   12=RETURN  15=NCP   16=ROUTER  17=LINE
PF20=APPL    24=TERMINAL

```

Figure 107. Start Session Panel (FNM02SCL)

2. Type the name of the resource for which you want to collect data in the Resource Name field.

Note: You can enter an IP address as a resource name. The IP address is the client's remote address/port number. If only the remote address is specified, session collection is started for all clients that have that address (regardless of the client's port number).

You must also enter a node name if the resource is an LU or an IP address that is not defined to NPM. After the node name has been entered, the resource is defined to NPM. You do not have to define the resource again (unless you restart NPM).

3. Complete the Start Session panel, ensuring that the Dynamic Resource field is set to NO, and press ENTER to display the Session Monitor Selection panel (FNM03SAS), shown in Figure 108 on page 90.

```

FNM03SAS                NPM V2R7  5655-043
                        RESPONSE TIMES
                        SESSION MONITOR SELECTION

Command ==>
Enter Monitor Criteria for Resource 146.84.65.114      Criteria
                                                    Low   :   High
Average Operator Transit Time      ==>   .40 :   .50
Average Host Transit Time          ==>   .00 :   .00
Average Network Transit Time       ==>   .00 :   .00
Maximum Operator Transit Time      ==>   .00 :   .00
Maximum Host Transit Time          ==>   .00 :   .00
Maximum Network Transit Time       ==>   .00 :   .00
% of Operator Trans Exceeding Transit Thresholds ==>   0 :   0
% of Host Trans Exceeding Transit Threshold      ==>  10 :  20
% of Network Trans Exceeding Transit Threshold   ==>   0 :   0
Number of Active LUs in a Summary Record        ==>   0 :   0
Average Number of PIUs per Minute              ==>   0 :   0
Average Number of Bytes per Second             ==>   0 :   0

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 108. Session Monitor Selection Panel (FNM03SAS)

- Use the Session Monitor Selection panel to set the low and high monitor criteria for the displayed resource. Move the cursor to the monitor criteria fields you want to change and enter the new high and low threshold values. Set the monitor criteria fields to zero if you do not want to monitor the collection. Refer to “monitor data types” on page 326 for more information about the ranges of values you can use.

Note: It is not necessary to enter anything on this panel if the monitor criteria field values are correct.

- Press ENTER to start the collection for the selected resource.

Starting Session Collection (Resource Not Yet Defined to VTAM)

Use the following procedure to start session collection for a resource not yet defined to VTAM:

- Select option 1 from the Response Times panel (FNM01SES) to display the Start Session panel (FNM02SCL), shown in Figure 107 on page 89. You can also use fast path =2.1 to display the Start Session panel.

- Type YES in the Dynamic Resource field. NPM starts a session collection and displays the following message:

```
FNM269I SESSION COLLECTION REQUEST FOR ID=resource id IS ACCEPTED EVEN IF THE RESOURCE IS NOT DEFINED TO V
```

At the same time, VTAM returns the sense code 08060002.

- When the resource has been defined to VTAM, NPM starts collecting the session data for the resource.

Note: If you start a session collection for a resource not yet defined to VTAM without setting the Dynamic Resource field to YES, NPM does not start any collection. VTAM returns the sense code 8060000 and NPM displays the following message:

```

FNM277W SCSS START COMMAND FAILED
FNM273E SCSS SESSION COLLECTION REQUEST REJECTED BY VTAM - IST0511I for ID=resource id

```

Displaying, Altering, or Stopping an Active Session Collection

Use the following procedure to display, alter, or stop, the status of an active session collection:

1. Select option 2 from the Response Times panel (FNM01SES) to display the Session Status/Stop (Active) Resource panel (FNM03SSA), shown in Figure 109. You can also use fast path =2.2 to display the Session Status/Stop (Active) Resource panel.

The Session Status/Stop (Active) Resource panel enables you to stop or display the status of an active session collection.

```

FNM03SSA                NPM V2R7  5655-043
                        RESPONSE TIMES
                        SESSION STATUS/STOP (ACTIVE) RESOURCE

Command ==>

Host Name = LOCAL
Enter Option: S=Detailed Status, P=Stop, Z=Stop All

Option  Resource  Resource  Maximum  Session
Name    Type      Collected  Collected  Logging  Data Forwd  Monitors
=> S    HOST01    HOST      250        0        0        0        0
=>      HOST02    CDRM      50         0        0        0        0
=>      TSO     APPL      2          2        0        0        0
=>      NCP01    NCP       437        1        0        1        1

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
    
```

Figure 109. Session Status/Stop (Active) Resource Panel (FNM03SSA)

2. Type one of the following options in the Option field next to a specific resource and press ENTER:

Option	Action
S	Displays detailed status information about the selected resource. The Session Status/Stop (Active) Details panel (FNM04SSA) is displayed if you select option S for HOST, NCP, LUGRP, or CDRM resource types. See Figure 110 on page 92. The Session Status/Stop (Active) Details panel enables you to stop or alter active session collections. The Session Status/Stop (Active) Resource Menu panel (FNM04SAP) is displayed if you select option S for an APPL resource type. See Figure 111 on page 92. The Session Status/Stop (Active) Resource Menu panel enables you to stop a collection for an application, or alter active session collection parameters for an application.
P	Stops logging data for the selected resource. Collection on the selected resource stops immediately.
Z	Ends all active collections on the selected resource.

Display, Alter, or Stop Active Session Collection

```

FNM04SSA                NPM V2R7  5655-043
                        RESPONSE TIMES
                        SESSION STATUS/STOP (ACTIVE) DETAILS

Command ==>>

Host Name = LOCAL      Resource Name = HOST01      Resource Type = HOST
Enter Option: A=Alter, P=Stop, Z=Stop All

Option Resource          Session Data          Oper Thr Netw Thr Host Thr
      Name              Stats  Forw Log Min GTF Low/High Low/High Low/High
=>   HOST01             NO           0  0 YES NO  .00   .00   .00
                                     .00   .00   .00

=>   146.84.65.114/3000 NO           0  0 YES NO  .00   .00   .00
                                     .00   .00   .00

=>   DA3L061           NO           0  0 YES NO  .00   .00   .00
                                     .00   .00   .00

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
  
```

Figure 110. Session Status/Stop (Active) Details Panel (FNM04SSA)

```

FNM04SAP                NPM V2R7  5655-043
                        RESPONSE TIMES
                        SESSION STATUS/STOP (ACTIVE) RESOURCE MENU

Command ==>>

Host Name = LOCAL      Application Name = TSO
Enter Option: A=Alter, P=Stop, Z=Stop All

Option Resource  Session Data          Operator  Network  Host
      Name       Stats  Forwd Log Min GTF Thresholds Thresholds Thresholds
=>   TSO        YES   0  0 YES NO  .20 .30 .10 .20 .10 .20
Synonym
TS00001
TS00002

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
  
```

Figure 111. Session Status/Stop (Active) Resource Menu Panel (FNM04SAP)

- Type one of the following options in the Option field next to a specific resource on either the Session Status/Stop (Active) Details panel or the Session Status/Stop (Active) Resource Menu panel and press ENTER:

Option	Action
A	Alters the collection on the selected resource. The Alter Session panel (FNM05ALT) is displayed, shown in Figure 112 on page 93. This panel enables you to alter parameters for an active or deferred session collection.
P	Stops data collection for the selected resource.
Z	Ends all active collections on the selected resource.


```

FNM05ALT                NPM V2R7  5655-043
                        RESPONSE TIMES
                        ALTER ACTIVE SESSION

Command ==>

Resource Name = LU032
Host Name     = LOCAL

Session Statistics ==> YES                (Yes/No/Vol/Xcl/Rsp)
VTAM Log       ==> 0                    (0/1/2/3)
Minimum PIU Trace ==> YES                (Yes/No)
GTF Trace      ==> NO                   (Yes/No)
Transit Thresholds
Operator       ==> .20 : .30            (Low:High)
Network       ==> .10 : .20            (Low:High)
Host          ==> .10 : .20            (Low:High)
Distribution Bounds ==> 5.00 : 10.00 : 20.00 : 30.00

PF 1=HELP      3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 112. Alter Active Session Panel (FNM05ALT)

4. Type the name of the resource for which you want to alter session collection parameters in the Resource field.
5. Press ENTER to display the Session Monitor Selection panel (FNM03SAS), shown in Figure 113. You can use the Session Monitor Selection panel to initialize or modify the low and high monitor criteria for the displayed resource.

```

FNM03SAS                NPM V2R7  5655-043
                        RESPONSE TIMES
                        SESSION MONITOR SELECTION

Command ==>
Enter Monitor Criteria for Resource LU032

Criteria
Low      :      High
Average Operator Transit Time ==> .40 : .50
Average Host Transit Time    ==> .00 : .00
Average Network Transit Time ==> .00 : .00
Maximum Operator Transit Time ==> .00 : .00
Maximum Host Transit Time    ==> .00 : .00
Maximum Network Transit Time ==> .00 : .00
% of Operator Trans Exceeding Transit Thresholds ==> 0 : 0
% of Host Trans Exceeding Transit Threshold ==> 10 : 20
% of Network Trans Exceeding Transit Threshold ==> 0 : 0
Number of Active LUs in a Summary Record ==> 0 : 0
Average Number of PIUs per Minute ==> 0 : 0
Average Number of BYTES per Second ==> 0 : 0

PF 1=HELP      3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 113. Session Monitor Selection Panel (FNM03SAS)

6. Move the cursor to the monitor criteria fields you want to change and enter the new high and low threshold values. See the *NetView Performance Monitor Installation and Customization* for the allowed values for each monitor data type.

Note: Do not enter anything on this panel if the monitor criteria field values are correct.

7. Press ENTER to alter the collection for the selected resource.

Displaying, Altering, or Stopping a Deferred Session Collection

Use the following procedure to display, alter, or stop a deferred session collection:

1. Select option 3 from the Response Times panel (FNM01SES) to display the Session Status/Stop (Deferred) Resource panel (FNM04SSD), shown in Figure 114. You can also use fast path =2.3 to display the Session Status/Stop (Deferred) Resource panel.

This panel enables you to stop a deferred session collection, or alter deferred session collection parameters.

```
FNM04SSD                NPM V2R7  5655-043
                        RESPONSE TIMES
                        SESSION STATUS/STOP (DEFERRED) RESOURCE

Command ==>>

Host Name = LOCAL                      Type=HOST
Enter Option: A=Alter, P=Stop

Option  Resource          Session
=>     Name              Stats   Log Min GTF  Start   Stop
=>     DA3L061           YES     1  YES NO  09:30:00 16:00:00
=>     146.84.65.114/3000 YES     1  YES NO  09:30:00 16:00:00

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
```

Figure 114. Session Status/Stop (Deferred) Resource Panel (FNM04SSD)

2. Type one of the following options in the Option field next to a specific resource and press ENTER:
 - A** Alters the collection on the selected resource. The Alter Deferred Session panel (FNM05ALD) is displayed. See Figure 115 on page 95.
 - P** Stops data collection for the selected resource.
3. Alter the parameters for a deferred session collection on the Alter Deferred Session panel. The resource to be altered is specified in the Resource Name and Node Name fields.

```

FNM05ALD                NPM V2R7  5655-043
                        RESPONSE TIMES
                        ALTER DEFERRED SESSION

Command ==>

Resource Name = LU032
Node Name     =
Host Name     = LOCAL

Session Statistics ==> YES          (Yes/No/Vol/Xcl/Rsp)
VTAM Log      ==> 1                (0/1/2/3)
Minimum PIU Trace ==> YES          (Yes/No)
GTF Trace     ==> NO              (Yes/No)
Transit Thresholds
Operator      ==> .00 : .00        (Low:High)
Network       ==> .00 : .00        (Low:High)
Host          ==> .00 : .00        (Low:High)
Distribution Bounds ==> 5.00 : 10.00 : 10.00 : 30.00

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 115. Alter Deferred Session Panel (FNM05ALD)

4. Press ENTER to display the Session Monitor Selection panel (FNM03SAS). See Figure 113 on page 93.
5. Change the monitors displayed on the Session Monitor Selection panel as desired.
6. Press ENTER to process the alter command.

Displaying Dynamic Response Times Data

The Dynamic Data Display function allows you to display response times data on 3270 panels without waiting for a collection interval to end and without waiting until NPM has written the data to the review files. Real time data is collected and displayed on the screen using the refresh interval (as in the NPM console). You can also refresh the data automatically at any time. For more information, see “Collecting and Analyzing Dynamic Data” on page 177.

Note: The Dynamic Data function includes and replaces the old Last Interval function.

1. Select option 4 from the Response Times Management panel (FNM01SES) to display the Dynamic Response Times Data Display panel (FNM02DDS), shown in Figure 116 on page 96. You can also use fast path =2.4 to display the Dynamic Response Times Data Display panel.

Displaying Dynamic Response Times Data

```
FNM02DDS          NPM V2R7  5655-043
                  RESPONSE TIMES
                  DYNAMIC RESPONSE TIMES DATA DISPLAY

Command ==>>>

Host Name          ==>> LOCAL

Resource Name      ==>> *                (for APPL, TERMLU, ALLTERM)

IP address         ==>> 0.0.0.0          (for TERMIP, ALLTERM)
Subnet Mask (wildcard) ==>> 0.0.0.0

Resource Type      ==>> APPL  <====!
                               Resource Type  !
                               ! o APPL   - Application  !
                               ! o TERMLU - SNA Terminal !
                               ! o TERMIP - TCP/IP Terminal !
                               ! o ALLTERM - Any type term. !
                               *-----*

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 116. Dynamic Response Times Data Panel (FNM02DDS)

The default for Resource Name is * (all resources). The default for IP address and Subnet Mask is '0.0.0.0' (all IP addresses), and for Resource Type is blank.

2. To display dynamic data for an application or a logical unit, specify the Resource Type (APPL, TERMLU, or ALLTERM) and either a full or partial resource name (using the wildcard character) in the Resource Name field.

To display dynamic data for an IP address, specify the Resource Type (TERMIP or ALLTERM) and either a full or partial IP address (using the IP Address and Subnet Mask fields).

3. Press ENTER to display the dynamic data panel for applications (FNM03DDA), shown in Figure 117 on page 97, or the dynamic data panel for terminal (FNM03DDT), shown in Figure 118 on page 97. This panel displays transit time and volume data about the specified resources collected during the last collection interval.

```

FNM03DDA                NPM V2R7  5655-043
                        RESPONSE TIMES
                        DYNAMIC RESPONSE TIMES DATA DISPLAY

Command ==>>
Press ENTER to start auto refresh.
Host Name = LOCAL
Resource Name = *           Resource Type = APPL
Current Interval = from 08/16/00 15:41:01 to 08/16/00 15:42:00
Refresh Interval = 30 (secs.)

Resource Resource End      Trans-Time Transaction <- Bytes ->
Name      Type   Time      Host Netw Total  Resp  Input Output
NPMA01    APPL   15:42:00  9.40  .04   4    4    40  2745
TS0       APPL   15:42:00  .02   .02   18   18   165 2893

PF 1=HELP      3=END      12=RETURN   15=NCP      16=ROUTER   17=LINE
PF20=APPL     24=TERMINAL

```

Figure 117. Dynamic Response Times Data Display Panel (FNM03DDA)

```

FNM03DDT                NPM V2R7  5655-043
                        RESPONSE TIMES
                        DYNAMIC RESPONSE TIMES DATA DISPLAY

Command ==>>
Press ENTER to start auto refresh.
Host Name = LOCAL
Resource Name = *           IP addr. = 0.0.0.0           Resource Type = ALLTERM
Current Interval = from 08/16/00 15:43:09 to 08/16/00 15:50:59
Refresh Interval = 30 (secs.)

Resource      Res  Appl  End      Trans-Time Trans <- Bytes ->
Name          Type Name  Time     Host Netw Total  Input Output
$01A060      TERMLU TSO   15:50:57 .01 .01  57  516 1976
£B1B1B1      TERMLU NPMA01 15:50:59 .13 .04   3   41  3282

PF 1=HELP      3=END      8=FORWARD  12=RETURN   15=NCP      16=ROUTER
PF17=LINE     20=APPL    24=TERMINAL

```

Figure 118. Dynamic Response Times Data Display Panel (FNM03DDT)

- From the output panels you can start the auto refresh of Response Times data by pressing the ENTER key. The output panel goes into "auto refresh" mode. To exit refresh mode, use the ATTN key.

The auto-refresh mode for applications shows:

Displaying Dynamic Response Times Data

```
FNM03DDA                NPM V2R7  5655-043
                        RESPONSE TIMES
                        DYNAMIC RESPONSE TIMES DATA DISPLAY

Command ==>>>

Host Name = LOCAL
Resource Name = *           Resource Type = APPL
Current Interval = from 08/16/00 16:00:59 to 08/16/00 16:01:30
Refresh Interval = 30 (secs.)

Resource Resource End      Trans-Time Transaction <- Bytes ->
Name     Type   Time      Host Netw Total  Resp  Input Output
NPMA01   APPL  16:01:30 .08  .04   5     5    54  3339
TSO      APPL  16:01:30 .01  .01   32    32   291 4202

PRESS THE ATTENTION KEY TO EXIT
```

Figure 119. Dynamic Response Times Data Display Panel, Auto-Refresh Mode (FNM03DDA)

The auto-refresh mode for terminals shows:

```
FNM03DDT                NPM V2R7  5655-043
                        RESPONSE TIMES
                        DYNAMIC RESPONSE TIMES DATA DISPLAY

Command ==>>>

Host Name = LOCAL
Resource Name = *           IP addr. = 0.0.0.0           Resource Type = ALLTERM
Current Interval = from 08/16/00 15:43:09 to 08/16/00 15:50:59
Refresh Interval = 30 (secs.)

Resource      Res  Appl  End      Trans-Time Trans <- Bytes ->
Name          Type Name  Time      Host Netw Total  Input Output
$01A060      TERMLU TSO    15:50:57 .01  .01   57   516  1976
EB1B1B1     TERMLU NPMA01 15:50:59 .13  .04   3    41   3282

PRESS THE ATTENTION KEY TO EXIT
```

Figure 120. Dynamic Response Times Data Display Panel, Auto-Refresh Mode (FNM03DDT)

Displaying IP Detail Analysis Data

Use the following procedure to display IP information:

1. Select option 5 from the Session Management panel (FNM01SES) to display the IP Detail Analysis panel (FNM02DNI), shown in Figure 121 on page 99. You can also use fast path =2.5 to display the IP Detail Analysis panel.

```

FNM02DNI                                NPM V2R7  5655-043
                                           SESSION MANAGEMENT
                                           IP DETAIL ANALYSIS

Select Option ==>
 1 Transit Time/Interval    3 Volumes/Interval
 2 Distribution/Interval    4 Transit Time Summary

IP Name/Port Number    ==> 146.84.65.114/3000
Host Name              ==> LOCAL
Data Qualifiers:
  Application          ==>
File Name              ==> SESSION    (SESSION for active session file)
Date                  from ==> 09 / 30 / 00 to ==> 09 / 30 / 00 (mm/dd/yy)
Time                  from ==> 08 : 00 : 00 to ==> 17 : 00 : 00 (hh:mm:ss)

PF 1=HELP      3=END      12=RETURN   15=NCP      16=ROUTER   17=LINE
PF20=APPL     24=TERMINAL

```

Figure 121. IP Detail Analysis Panel (FNM02DNI)

- The IP Detail Analysis panel enables you to set up an IP detail data display. Enter an IP address in the IP Name field, type one of the following options in the Select Option field, and press ENTER:

Option	Action
1	Displays transit times for each interval. The Transit Time/Interval panel (FNM03TI3) is displayed. See “Displaying Transit Time Interval Data”.
2	Displays transit time distributions for each interval. The Transit Time Distributions/Interval panel (FNM03DI2) is displayed. See “Displaying Transit Time Distribution Data” on page 100.
3	Displays volume data for each interval. The Volumes/Interval panel (FNM03V02) is displayed. See “Displaying Interval Volume Data” on page 101.
4	Displays the transit time summary. The NPM Session Analysis Summary - IP Address panel (FNM03SMI) is displayed. See “Displaying Transit Time Summary Data” on page 101.

Note: You can also enter data in the Application field on the IP Detail Analysis panel (FNM02DNI) to further qualify and limit the IP data displayed.

Displaying Transit Time Interval Data

The Transit Time Interval panel (FNM03TI3), shown in Figure 122 on page 100, displays transit time data for the IP selected on the IP Detail Analysis panel (FNM02DNI). This data includes average host, operator, and network transit times for each application associated with the IP. There is no indicator on the panel.

```

FNM03TI3                NPM V2R7  5655-043
                        SESSION MANAGEMENT
                        TRANSIT TIME/INTERVAL

Command ==>>>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      IP Address = 146.84.65.114/3000

Application Operator Host/Net Transactions From/To Session Mgr
              <- Transit Time -> Total/Resp Date Time User ID/SLU
NPMA01      .29      .02      4 08/21/00 07:24:31
TELNET
NPMA01      .21      .00      3 08/21/00 07:48:39
TELNET
NPMA01      .26      .00      3 08/21/00 07:49:38
TELNET

PF 1=HELP    3=END      5=VOLUME    6=DISTRIB   8=FORWARD   9=SUMMARY
PF11=BOTTM  12=RETURN  15=NCP      16=ROUTER  17=LINE     20=APPL
PF24=TERMINAL
    
```

Figure 122. Transit Time Interval Panel (FNM03TI3)

Note: You can display this panel from any of the other IP transit time panels by using the TRANSIT command.

Displaying Transit Time Distribution Data

The Transit Time Distributions/Interval panel (FNM03DI2), shown in Figure 123, displays transit time data for the IP selected on the IP Detail Analysis panel (FNM02DNI). This data includes the number of transit times that fell within each distribution range specified on the Start Session panel (FNM02SCL).

```

FNM03DI2                NPM V2R7  5655-043
                        SESSION MANAGEMENT
                        TRANSIT TIME DISTRIBUTIONS/INTERVAL

Command ==>>>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      IP Address = 146.84.65.114/3000

Distrib  Trans  Range 1  Range 2  Range 3  Range 4  Infinity  From/To Date/Time
Oper      5      0-5     5-10    10-20   20-30   30 +      08/21/00 11:45:55
Host      0      0       0       0       0       0         0         11:46:13

Distrib  Trans  Range 1  Range 2  Range 3  Range 4  Infinity  From/To Date/Time
Oper      3      0-5     5-10    10-20   20-30   30 +      08/21/00 11:46:15
Host      0      0       0       0       0       0         0         11:46:25

Distrib  Trans  Range 1  Range 2  Range 3  Range 4  Infinity  From/To Date/Time
Oper      1      0-5     5-10    10-20   20-30   30 +      08/21/00 11:46:58
Host      0      0       0       0       0       0         0         11:46:58

PF 1=HELP    3=END      4=TRANSIT   5=VOLUME    8=FORWARD   9=SUMMARY
PF11=BOTTM  12=RETURN  15=NCP      16=ROUTER  17=LINE     20=APPL
PF24=TERMINAL
    
```

Figure 123. Transit Time Distributions/Interval Panel (FNM03DI2)

NPM updates the Distrib Host fields for transactions that have only host transit time.

Note: You can display this panel from any of the other IP transit time panels by using the DISTRIB command.

Displaying Interval Volume Data

The Volumes/Interval panel (FNM03V02), shown in Figure 124, displays session volume data for the IP selected in the IP Detail Analysis panel (FNM02DNI). This data includes volume statistics for each interval.

```

FNM03V02                NPM V2R7  5655-043
                        SESSION MANAGEMENT
                        VOLUMES/INTERVAL

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      IP Address = 146.84.65.114/3000

      <----- Inbound -----> <----- Outbound ----->
      PIUS   Size  Bytes  PIUS   Size  Bytes  From/To Date/Time
User      5    12    63    5    922   4614  08/21/00 08:39:38
System    5     3    15    0     0     0      08:39:52

User      3    13    40    4    562   2248  08/21/00 08:39:38
System    4     3    12    0     0     0      08:39:52

User      1     6     6    1    631   631   08/21/00 08:39:38
System    1     3     3    0     0     87    08:39:52

PF 1=HELP      3=END      4=TRANSIT  6=DISTRIB  8=FORWARD  9=SUMMARY
PF11=BOTTOM   12=RETURN  15=NCP    16=ROUTER  17=LINE    20=APPL
PF24=TERMINAL

```

Figure 124. Volumes/Interval Panel (FNM03V02)

Note: You can display this panel from any of the other IP transit time panels by using the VOLUME command.

Displaying Transit Time Summary Data

The NPM Session Analysis Summary - IP Address panel (FNM03SMI), shown in Figure 125, displays session summary data for the IP selected in the IP Detail Analysis panel (FNM02DNI). This data includes average and maximum transit times for the host, operator, and network.

```

FNM03SMI                NPM V2R7  5655-043
                        SESSION MANAGEMENT
                        NPM SESSION ANALYSIS SUMMARY - IP ADDRESS

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Records = 50   IP Address = 146.84.65.114
Application =          Port Num=
Requested Date/Time: from 08/21/00 00:00:00 to 08/21/00 00:00:00
Actual Date/Time   : from 08/21/00  7:24:56 to 08/21/00 12:14:16

Transactions      Total      Response
                  227        227
Operator          Host          Network
Average Transit  .45         .21         .24
Maximum Transit  42.90      42.61      .36
                  PIU Count   Avg Size    Total Bytes
User Data In     283        9           2439
User Data Out    290        706        204853
System Data In   291        3           874
System Data Out  1          5           5
PF 1=HELP      3=END      4=TRANSIT  5=VOLUME  6=DISTRIB  12=RETURN
PF15=NCP      16=ROUTER  17=LINE    20=APPL   24=TERMINAL

```

Figure 125. NPM Session Analysis Summary - IP Address (FNM03SMI)

Displaying LU Detail Analysis Data

Use the following procedure to display LU information:

1. Select option 6 from the Response Times panel (FNM01SES) to display the LU Detail Analysis panel (FNM02DNM), shown in Figure 126. You can also use fast path =2.6 to display the LU Detail Analysis panel.

```

FNM02DNM                NPM V2R7  5655-043
                        RESPONSE TIMES
                        LU DETAIL ANALYSIS

Select Option ==>
  1 Transit Time/Interval  3 Volumes/Interval
  2 Distribution/Interval  4 Transit Time Summary

LU Name                ==> LU032
Host Name              ==> LOCAL
Data Qualifiers:
  Application          ==>
  Line                 ==>
  Physical Unit        ==>
  Virtual Route Number ==>          (0-7)
  Transmission Priority ==>        (0-2)
File Name              ==> SESSION  (SESSION for active session file)
Date                  from ==> 08 / 21 / 00 to ==> 08 / 21 / 00 (mm/dd/yy)
Time                  from ==> 08 : 00 : 00 to ==> 17 : 00 : 00 (hh:mm:ss)

PF 1=HELP      3=END      12=RETURN  15=NCP   16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 126. LU Detail Analysis Panel (FNM02DNM)

2. The LU Detail Analysis panel enables you to set up an LU detail data display. Enter an LU name in the LU Name field, type one of the following options in the Select Option field, and press ENTER:

Option	Action
1	Displays transit times for each interval. The Transit Time/Interval panel (FNM03TI1) is displayed. See “Displaying Transit Time Interval Data” on page 103.
2	Displays transit time distributions for each interval. The Transit Time Distributions/Interval panel (FNM03DI1) is displayed. See “Displaying Transit Time Distribution Data” on page 103.
3	Displays volume data for each interval. The Volumes/Interval panel (FNM03V01) is displayed. See “Displaying Interval Volume Data” on page 104.
4	Displays the transit time summary. The NPM Session Analysis Summary panel (FNM03SMN) is displayed. See “Displaying Transit Time Summary Data” on page 105.

Note: You can also enter data in the following LU Detail Analysis panel (FNM02DNM) fields to further qualify and limit the LU data displayed:

- Application
- Line
- Physical unit
- Virtual route number and transmission priority

Displaying Transit Time Interval Data

The Transit Time Interval panel (FNM03TI1), shown in Figure 127, displays transit time data for the LU selected on the LU Detail Analysis panel (FNM02DNM). This data includes average host, operator, and network transit times for each application associated with the LU. You can use data flow control PIUs to update the network transit times and counters. There is no indicator on the panel.

```

FNM03TI1                NPM V2R7  5655-043
                        RESPONSE TIMES
                        TRANSIT TIME/INTERVAL

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      LU Name = LU032

Application  <- Transit Time -> Transactions      From/To      Session Mgr
Operator    Host/Net  Total/Resp    Date      Time      User ID/SLU
TSO         .32      .32          5      08/21/00 09:00:00
           .29      .29          5              09:00:00

TSO         .20      .00          3      08/21/00 09:01:00
           .19      .19          3

PF 1=HELP      3=END      5=VOLUME      6=DISTRIB      9=SUMMARY      12=RETURN
PF15=NCP      16=ROUTER  17=LINE      20=APPL      24=TERMINAL
    
```

Figure 127. Transit Time Interval Panel (FNM03TI1)

Note: You can display this panel from any of the other LU transit time panels by using the TRANSIT command.

Displaying Transit Time Distribution Data

The Transit Time Distributions/Interval panel (FNM03DI1), shown in Figure 128 on page 104, displays transit time data for the LU selected on the LU Detail Analysis panel (FNM02DNM). This data includes the number of transit times that fell within each distribution range specified on the Start Session panel (FNM02SCL).

```

FNM03D11                NPM V2R7  5655-043
                        RESPONSE TIMES
                        TRANSIT TIME DISTRIBUTIONS/INTERVAL

Command ==>>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      LU Name = LU032

      Trans  Range 1  Range 2  Range 3  Range 4  Infinity  From/To Date/Time
Distrib      5      0-5    5-10    10-20   20-30    30 +
Oper         5      5      0      0      0      0      08/21/00 11:45:55
Host         0      0      0      0      0      0      08/21/00 11:46:13

Distrib      3      0-5    5-10    10-20   20-30    30 +
Oper         3      3      0      0      0      0      08/21/00 11:46:15
Host         0      0      0      0      0      0      08/21/00 11:46:25

Distrib      1      0-5    5-10    10-20   20-30    30 +
Oper         1      1      0      0      0      0      08/21/00 11:46:58
Host         0      0      0      0      0      0      08/21/00 11:46:58
PF 1=HELP    3=END      4=TRANSIT  5=VOLUME  8=FORWARD  9=SUMMARY
PF11=BOTTM  12=RETURN  15=NCP    16=ROUTER 17=LINE   20=APPL
PF24=TERMINAL
    
```

Figure 128. Transit Time Distributions/Interval Panel (FNM03D11)

NPM updates the Distrib Host fields for transactions that have only host transit time.

Note: You can display this panel from any of the other LU transit time panels by using the DISTRIB command.

Displaying Interval Volume Data

The Volumes/Interval panel (FNM03V01), shown in Figure 129, displays session volume data for the LU selected in the LU Detail Analysis panel (FNM02DNM). This data includes volume statistics for each interval.

```

FNM03V01                NPM V2R7  5655-043
                        RESPONSE TIMES
                        VOLUMES/INTERVAL

Command ==>>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      LU Name = LU032

      <----- Inbound ----->  <----- Outbound ----->
      PIUS  Size  Bytes  PIUS  Size  Bytes  From/To Date/Time
User      5    12    63    5    922   4614  08/21/00 08:39:38
System    5     3    15    0     0     0      08/21/00 08:39:52

User      3    13    40    4    562   2248  08/21/00 08:39:38
System    4     3    12    0     0     0      08/21/00 08:39:52

User      1     6     6    1    631   631   08/21/00 08:39:38
System    1     3     3    0     0     87    08/21/00 08:39:52

PF 1=HELP    3=END      4=TRANSIT  6=DISTRIB  8=FORWARD  9=SUMMARY
PF11=BOTTM  12=RETURN  15=NCP    16=ROUTER 17=LINE   20=APPL
PF24=TERMINAL
    
```

Figure 129. Volumes/Interval Panel (FNM03V01)

Note: You can display this panel from any of the other LU transit time panels by using the VOLUME command.

Displaying Transit Time Summary Data

The NPM Session Analysis Summary - Logical Unit panel (FNM03SMN), shown in Figure 130, displays session summary data for the LU selected in the LU Detail Analysis panel (FNM02DNM). This data includes average and maximum transit times for the host, operator, and network.

```

FNM03SMN                NPM V2R7  5655-043
                        RESPONSE TIMES
                        NPM SESSION ANALYSIS SUMMARY - LOGICAL UNIT

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Records = 8      VR/TP = /
Application =          Line =          PU =
Group =                Node =          LU = LU032
Requested Date/Time: from 08/21/00 00:00:00 to 08/21/00 00:00:00
Actual Date/Time : from 08/21/00 11:46:13 to 08/21/00 11:51:58

Transactions          Total      Response
22                    22
Average Transit      Operator  Host      Network
.63                   .10      .21
Maximum Transit      1.45    1.13    .60
                    PIU Count  Avg Size  Total Bytes
User Data In         22      9        199
User Data Out         23     742     17071
System Data In        23      3        69
System Data Out       0       0         0
PF 1=HELP            3=END      4=TRANSIT  5=VOLUME  6=DISTRIB  12=RETURN
PF15=NCP             16=ROUTER 17=LINE   20=APPL  24=TERMINAL
    
```

Figure 130. NPM Session Analysis Summary - Logical Unit (FNM03SMN)

Displaying Session Analysis Summary Data

Use the following procedure to perform session data analysis:

1. Select option 7 from the Session Management panel (FNM01SES) to display the Session Analysis panel (FNM02SAN), shown in Figure 131. You can also use fast path =2.7 to display the Session Analysis panel.

The Session Analysis panel enables you to set up a session data display.

```

FNM02SAN                NPM V2R7  5655-043
                        RESPONSE TIMES
                        SESSION ANALYSIS

Select Option ==> 1
 1 Application      3 Physical Unit   5 Virtual Route
 2 Line            4 Group

Identifier          ==> TSO
Host Name           ==> LOCAL
Data Qualifiers:
  Application        ==>
  Line               ==>
  Physical Unit      ==>
  Virtual Route Number ==> (0-7)
  Transmission Priority ==> (0-2)
File Name           ==> SESSION
Date:               from ==> 08 / 21 / 00 to == 08 / 21 / 00 (mm/dd/yy)
Time:               from ==> 08 : 00 : 00 to == 17 : 00 : 00 (hh:mm:ss)

PF 1=HELP          3=END      12=RETURN    15=NCP      16=ROUTER    17=LINE
PF20=APPL         24=TERMINAL
    
```

Figure 131. Session Analysis Panel (FNM02SAN)

Session Analysis Summary Data

2. Type the number corresponding to the type of resource data you want to display in the Select Option field.

Option	Action
1	Displays session data by application
2	Displays session data by line
3	Displays session data by physical unit
4	Displays session data by group name
5	Displays session data by virtual route

3. Type either the full resource name or a partial resource name in the Identifier field and complete the panel as required.

Note: You can enter additional data to further qualify the data you want to display.

4. Press ENTER to display the NPM Session Analysis Summary panel (FNM03SMN), shown in Figure 132. This panel displays session summary data for the resource selected in the Session Analysis panel (FNM02SAN). This data includes average and maximum transit times for the host, operator, and network.

```
FNM03SMN                NPM V2R7  5655-043
                        RESPONSE TIMES
                        NPM SESSION ANALYSIS SUMMARY - APPLICATION

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Records = 8      VR/TP = /
Application = TSO       Line =          PU =
Group =               Node =          LU =
Requested Date/Time: from 08/21/00 00:00:00 to 08/21/00 00:00:00
Actual Date/Time : from 08/21/00 11:46:13 to 08/21/00 11:51:58

Transactions          Total      Response
Operator              22          22
Host                  .63         .10
Network               1.45       1.13
PIU Count             23          9
Avg Size              742        199
Total Bytes           23          3
User Data In          0           0
User Data Out         23          17071
System Data In        23          69
System Data Out       0           0
PF 1=HELP            2=LIST      3=END      4=TRANSIT  5=VOLUME   6=DISTRIB
PF12=RETURN          15=NCP     16=ROUTER  17=LINE   20=APPL    24=TERMINAL
```

Figure 132. NPM Session Analysis Summary - Application (FNM03SMN)

5. You can use the LIST command to display the NPM Session Summary LU List panel (FNM04LTN), shown in Figure 133 on page 107. This panel lists each LU associated with the application, line, physical unit, LU group, virtual route, or NCP.

Note: The titles of the FNM03SMN and FNM04LTN panels vary, depending on which of the five resource types you select. (The *application* resource type is used in this example.)

```

FNM04LTN                NPM V2R7  5655-043
                        RESPONSE TIMES
                        NPM SESSION SUMMARY LU/IP LIST - APPLICATION

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL
Application = TSO      Line =          PU =
Group       =          Node =          VR/TP = /
Date/Time: from 8/21/00 08:00:00 to 08/21/00 17:00:00

Session Names          Transactions  <-Average Transit Time ->  Total
                        Total Response Operator  Host  Network  Bytes
LI032                  277          277          .45  .21    .24  208171
TSO

146.84.65.114/3000    277          277          .45  .21    .24  208171
TSO

PF 1=HELP      3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 133. NPM Session Summary LU List - Application Panel (FNM04LTN)

The NPM Session Summary LU List - Application panel (FNM04LTN) displays the session partners for the resource specified on the Session Analysis panel (FNM02SAN). This data includes average host, operator, and network response times.

Displaying Session Performance Status Information

Performance status analysis displays allow you to view a network from a hierarchical perspective. You can view the network without knowing the resource names. Use the following procedure to display performance status information:

1. Select option 8 from the Response Times panel (FNM01SES) to display the Performance Status Analysis panel (FNM02PDT), shown in Figure 134 on page 108. You can also use fast path =2.8 to display the Performance Status Analysis panel.

The Performance Status Analysis panel enables you to specify a host for which NPM displays transit time data.

Session Performance Status Information

```
FNM02PDT                NPM V2R7  5655-043
                        RESPONSE TIMES
                        PERFORMANCE STATUS ANALYSIS

Command ==>

Host Name      ==> LOCAL      (Blank for list of hosts)

Dates and times below are optional

Start Date     ==> 08 / 21 / 00 (dd/mm/yy)
Stop Date      ==> 08 / 21 / 00

Start Time     ==> 00 : 00 : 00 (hh:mm:ss)
Stop Time      ==> 00 : 00 : 00

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 134. Performance Status Analysis Panel (FNM02PDT)

2. Type the host name in the Host Name field. If you leave this field blank and press ENTER, a list of available hosts is displayed on the Performance Status Host Selection panel (FNM02PSM), shown in Figure 135.
The Performance Status Host Selection panel enables you to select a host for which you want to display performance data.

```
FNM02PSM                NPM V2R7  5655-043
                        RESPONSE TIMES
                        PERFORMANCE STATUS HOST SELECTION

Command ==>

Enter / to select Host

Option  Host Name  Appl ID  Status  Description
=>      HOSTA     APPL01  ACTIVE  ROME ITALY
=>      HOSTB     APPL02  INACTIVE LONDON ENGLAND
=>      HOSTC     APPL03  INACTIVE DALLAS TEXAS

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 135. Performance Status Host Selection Panel (FNM02PSM)

3. Type the start and stop date and time in the appropriate fields on the Performance Status Analysis panel (FNM02PDT).
4. Type / in the Option field next to a specific host name and press ENTER to display the Performance Status - Nodes panel (FNM02PHN), shown in Figure 136 on page 109.

The Performance Status - Nodes panel displays transit time exceptions for all nodes on the host you have selected. You can also use this panel to select a node that you want to examine more closely.

```

FNM02PHN                NPM V2R7  5655-043
                        RESPONSE TIMES
                        PERFORMANCE STATUS - NODES

Command ==>>

Host = LOCAL
Date/Time: from 08/21/00 08:00:00 to 08/21/00 17:00:00
Enter Option: /=Select Node, L=LU/IP List

          Percentage of Transactions Exceeding Response Time Thresholds
Option  Node   Total Trans  Resp Trans  Operator  Host  Network
=>     HOST01      15          15         .0        .0    .0
=>     HOST02      67          67         .0        .0    .0
=>     A04NCP2      0           0          .0        .0    .0

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
    
```

Figure 136. Performance Status - Nodes Panel (FNM02PHN)

5. Type one of the following options in the Option field beside a specific node name:

Option	Action
L	Displays data for all LUs associated with this node. The NPM Session Summary LU List - Node panel (FNM04LTN) is displayed. See Figure 137 on page 110. The NPM Session Summary LU List - Node panel displays transit time data for all applications on the node selected on the NPM Session Analysis Summary panel (FNM02SAN).
/	Displays data associated with this node. See “Completing the Performance Status - Host Application Panel” on page 110 and “Completing the Performance Status - Lines Panel” on page 110.

Session Performance Status Information

```

FNM04LTN                NPM V2R7  5655-043
                        RESPONSE TIMES
                        NPM SESSION SUMMARY LU/IP LIST - APPLICATION

Command ==>
Insert DYN to get dynamic (real time) data
Host Name = LOCAL
Application = TSO      Line =          PU =
Group      =          Node =          VR/TP = /
Date/Time: from 08/21/00 08:00:00 to 08/21/00 17:00:00

Session Names          Transactions <-Average Transit Time -> Total
                        Total Response Operator Host Network Bytes
LI032                  277      277      .45  .21  .24  208171
TSO

146.84.65.114/3000    277      277      .45  .21  .24  208171
TSO

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 137. NPM Session Summary LU List - Node Panel (FNM04LTN)

Completing the Performance Status - Host Application Panel

Type / next to the name of a host node on the Performance Status - Nodes panel (FNM02PHN) to display the Performance Status Host/Application panel (FNM02PHA), shown in Figure 138. This panel displays data for all applications on the host, including transit time exceptions.

```

FNM02PHA                NPM V2R7  5655-043
                        RESPONSE TIMES
                        PERFORMANCE STATUS - HOST/APPLICATIONS

Command ==>

Host Name = LOCAL
Date/Time: from 08/21/00 08:00:00 to 08/21/00 17:00:00

Application          Percentage of Transactions Exceeding Transit Time Thresholds
                        Total Trans  Resp Trans  Operator  Host  Network
TSO                  53          53          .0       .0   .0

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 138. Performance Status - Host/Applications Panel (FNM02PHA)

Completing the Performance Status - Lines Panel

Use the following procedure to display data for all lines associated with the NCP or CDRM node:

- Type / next to the name of an NCP or CDRM node on the Performance Status - Nodes panel (FNM02PHN) to display the Performance Status - Lines panel (FNM02PNL), shown in Figure 139.
The Performance Status - Lines panel displays transit time exceptions for all lines on the node you have selected. You can also use this panel to select a line that you want to examine more closely.

```

FNM02PNL                NPM V2R7  5655-043
                        RESPONSE TIMES
                        PERFORMANCE STATUS - LINES

Command ==>

Host Name = LOCAL      Node Name = NODE01
Date/Time: from 08/21/00 08:00:00 to 08/21/00 17:00:00
Enter Option: A=Application, M=Summary, V=Volume, S=PU Status

Option  Line      Percentage of Transactions Exceeding Transit Time Thresholds
=>      LINE01      Total Trans  Resp Trans  Operator  Host  Network
                          0             0           .0       .0    .0

PF 1=HELP      3=END      12=RETURN   15=NCP      16=ROUTER   17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 139. Performance Status - Lines Panel (FNM02PNL)

- Type one of the following options in the Option field next to a specific line name:

Option	Action
A	Displays the percentages of the exceeded transit time thresholds for each application associated with this line. See “Displaying Lines by Application”.
M	Displays a transit time summary for the specified line on the NPM Session Analysis Summary - Line panel (FNM03SMN). See Figure 132 on page 106 for information about this panel.
V	Displays the percentage and volume that each session on this line is contributing to the total load. See “Displaying Lines by Session Volumes” on page 113.
S	Displays data for all PUs associated with this line. See “Completing the Performance Status - Physical Unit Panel” on page 112.

Displaying Lines by Application

Select option A on the Performance Status - Lines panel (FNM02PNL) to display the Performance Status - Line/Application panel (FNM02PLA), shown in Figure 140 on page 112. This panel displays transit time exceptions for all applications on the line you have selected.

Session Performance Status Information

```
FNM02PLA                NPM V2R7  5655-043
                        RESPONSE TIMES
                        PERFORMANCE STATUS - LINE/APPLICATION

Command ==>>

Host Name = HOST01      Node Name = NCP01   Line = LINE01
Date/Time: from 08/21/00 08:00:00 to 08/21/00 17:00:00

Application      Percentage of Transactions Exceeding Transit Time Thresholds
                Total Trans  Resp Trans  Operator   Host  Network
TS0              132         132         .0         .0   .0

PF 1=HELP      3=END      12=RETURN  15=NCP     16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 140. Performance Status - Line/Application Panel (FNM02PLA)

Completing the Performance Status - Physical Unit Panel

Use the following procedure to display performance status information for PUs and LUs on a line:

1. Select option S on the Performance Status - Lines panel (FNM02PNL) to display the Performance Status - Physical Unit panel (FNM02PLP), shown in Figure 141. This panel displays transit time exceptions for all PUs on the line you have selected. You can also use this panel to select a PU that you want to examine more closely.

```
FNM02PLP                NPM V2R7  5655-043
                        RESPONSE TIMES
                        PERFORMANCE STATUS - PHYSICAL UNIT

Command ==>>

Host Name = HOST01      Node Name = NCP01   Line = LINE01
Date/Time: from 08/21/00 08:00:00 to 08/21/00 17:00:00
Enter Option: M=Summary, S=LU Status

Option      PU Name      Percentage of Transactions Exceeding Transit Time Thresholds
=>          PU01          Total Trans  Resp Trans  Operator   Host  Network
                132         132         .0         .0   .0

PF 1=HELP      3=END      12=RETURN  15=NCP     16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 141. Performance Status - Physical Unit Panel (FNM02PLP)

2. Type one of the following options in the Option field next to a specific PU and press ENTER:

Option	Action
--------	--------

- M** Displays the NPM Session Analysis Summary - Line panel (FNM03SMN). See Figure 132 on page 106 for information about this panel.
- S** Displays the Performance Status - Logical Unit panel (FNM02PPL), shown in Figure 142. This panel displays transit time exceptions for all LUs on the PU you have selected. You can also use this panel to select an LU that you want to examine more closely.

```

FNM02PPL                      NPM V2R7  5655-043
                               RESPONSE TIMES
                               PERFORMANCE STATUS - LOGICAL UNIT

Command ==>

Host Name = LOCAL   Node Name = NODE01  LINE = LINE01  PU = PU01
Date/Time: from 08/21/00 08:00:00 to 08/21/00 17:00:00
Enter Option: M=Summary

                               Percentage of Transactions Exceeding Transit Time Thresholds
Option  LU Name  Total Trans  Resp Trans  Operator  Host  Network
=>      LU032   165          153         42.4     13.9  30.7

PF 1=HELP      3=END      12=RETURN  15=NCP     16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 142. Performance Status - Logical Unit Panel (FNM02PPL)

3. Select option M on the Performance Status - Logical Unit panel to display the NPM Session Analysis Summary - Logical Unit (FNM03SMN). See Figure 132 on page 106 for information about this panel.

Displaying Lines by Session Volumes

Select option V on the Performance Status - Lines panel (FNM02PNL) to display the Performance Status - Line/Session Volumes panel (FNM02PVL), shown in Figure 143 on page 114. This panel displays the volume and percentage of volume that each session contributes to the total line load.

```
FNM02PVL                                NPM V2R7  5655-043
                                         RESPONSE TIMES
                                         PERFORMANCE STATUS - LINE/SESSION VOLUMES

Command ==>

Host Name = HOST01  Node Name = NCP01      Line = LINE01
Date/Time: from 08/21/00 08:00:00 to 08/21/00 17:00:00

                                         Proportional Session Volumes To Line Volumes
LU Name  Application Total PIUS  % PIU  Total Bytes  % Bytes
LU032    TSO           2        .1      12          .0
LU032    TSO          262       24.8    76021      14.9

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
```

Figure 143. Performance Status - Line/Session Volumes Panel (FNM02PVL)

Displaying Session Monitor Event Messages

Use the following procedure to display session monitor event messages:

1. Select option 9 from the Response Times panel (FNM01SES) to display the Session Monitor Review panel (FNM02SAM), shown in Figure 144. You can also use fast path =2.9 to display the Session Monitor Review panel.

```
FNM02SAM                                NPM V2R7  5655-043
                                         RESPONSE TIMES
                                         SESSION MONITOR DISPLAY

Command ==>

Host Name      ==> LOCAL
Resource Name  ==> 146.84.65.114/3000 (Name/Monitor)
Session File Name ==> SESSION (SESSION for active session file)

Start Date     ==> 03 / 18 / 00 (mm/dd/yy)
Stop Date      ==> 03 / 18 / 00

Start Time     ==> 00 : 00 : 00 (hh:mm:ss)
Stop Time      ==> 00 : 00 : 00

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
```

Figure 144. Session Monitor Review Panel (FNM02SAM)

2. Type a resource name in the Resource Name field to display session monitor event messages for a specific resource.
Type MONITOR in the Resource Name field to display the session monitor event messages for all the resources.

Note: If you specify a start and stop date and time, only the monitor events that occur in that interval are displayed. Otherwise, all session monitor events are displayed.

- Press ENTER to display the Session Monitor Event Messages panel (FNM03SAE), shown in Figure 145. The Session Monitor Event Messages panel displays monitor event messages that occur when a threshold is reached, exceeded, or resolved.

```

FNM03SAE                NPM V2R7  5655-043
                        RESPONSE TIMES
                        SESSION MONITOR EVENT MESSAGES

Command  ==>>

Host Name = HOST01      Resource Name = 146.84.65.114/3000
Date/Time: from 08/21/00 10:57:56 to 08/21/00 10:58:45

Actual  Resource          Monitor  Actual
Time    Name              Type     Value  Monitor Event Desc  Limit
10:57:56 146.84.65.114/3000  MONATMOP  7.36   ABOVE LIMIT OF      1.00
10:57:56 146.84.65.114/3000  MONATMOP  7.10   ABOVE LIMIT OF      1.00
10:57:56 146.84.65.114/3000  MONMTMOP  42.90  ABOVE LIMIT OF      1.00
10:57:56 146.84.65.114/3000  MONMTMHT  42.61  ABOVE LIMIT OF      1.00
10:57:56 146.84.65.114/3000  MONPCTHT  17.00  ABOVE LIMIT OF      1.00
10:57:56 146.84.65.114/3000  MONAPIUS  13.00  ABOVE LIMIT OF      1.00

PF 1=HELP      3=END      8=FORWARD  11=BOTTOM  12=RETURN  15=NCP
PF16=ROUTER   17=LINE    20=APPL   24=TERMINAL
    
```

Figure 145. Session Monitor Event Messages Panel (FNM03SAE)

4

Collecting and Analyzing RTM Data

This chapter describes how to use NPM to collect and display response time monitor (RTM) data. You can use NPM's RTM management function to perform the following tasks:

- Enable RTM data collection
- Disable RTM data collection
- Determine whether RTM data collection is enabled or disabled
- Perform RTM LU detail analysis. You can use this function to display the following RTM detail data for an LU:
 - Response time distribution summary
 - Response time distributions for each interval
 - Response time summary
 - Response times for each interval
- Perform RTM session analysis. You can use this function to display RTM summary data for the following NPM resources:
 - Applications
 - Lines
 - LU groups
 - Physical units
 - Virtual routes

Note: See the *NetView Performance Monitor Reference* for detailed descriptions of the NPM panel fields.

RTM Management Panels

This section describes the NPM online panels used in RTM data collection. Use the following procedures to perform RTM data collection and analysis functions:

1. Select option 3 from the Primary Options panel (FNM00PRI) to display the RTM Management panel (FNM01RTM), shown in Figure 146 on page 118. You can also use fast path =3 to display the RTM Management panel.

```
FNM01RTM                NPM V2R7  5655-043
                        RTM MANAGEMENT

Select Option ==>>

  1  Enable RTM Collection
  2  Disable RTM Collection
  3  Query RTM Collection

  6  RTM LU Detail Analysis
  7  RTM Session Analysis

Host Name ==>>  LOCAL

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 146. RTM Management Panel (FNM01RTM)

2. Type one of the following option numbers in the Select Option field and press ENTER:

Option	Action
1	Enables RTM collection. See “Enabling RTM Collection”.
2	Disables RTM collection. See “Disabling RTM Collection”.
3	Queries RTM collection. See “Determining RTM Collection Status” on page 119.
6	Performs RTM LU detail analysis. See “Performing RTM LU Detail Analysis” on page 119.
7	Performs RTM session analysis. See “Performing RTM Session Analysis” on page 123.

Enabling RTM Collection

Select option 1 from the RTM Management panel (FNM01RTM) to enable RTM data collection.

Note: Because NPM receives RTM data from the NetView program through an SMF exit routine, ensure that NetView is started and is receiving RTM data. See NetView documentation for RTM collection setup procedures. Also see the *NetView Performance Monitor Installation and Customization* for information about installing and enabling RTM collection from the NetView program.

A message is displayed on the RTM Management panel indicating that RTM collection has been enabled. See the *NetView Performance Monitor Messages and Codes* for additional information if a message is displayed that indicates RTM collection has not been enabled.

Disabling RTM Collection

Select option 2 from the RTM Management panel to disable RTM data collection.

A message is displayed on the RTM Management panel (FNM01RTM) indicating that RTM collection has been disabled. See the *NetView Performance Monitor Messages and Codes* for additional information if a message is displayed that indicates RTM collection has not been disabled.

Determining RTM Collection Status

Select option 3 from the RTM Management panel to query RTM data collection status.

A message is displayed on the RTM Management panel (FNM01RTM) indicating whether RTM data collection is enabled or disabled.

Performing RTM LU Detail Analysis

You can display RTM detail data for any LU in your network. Use the following procedure to perform RTM LU detail analysis:

1. Select option 6 from the RTM Management panel to display the RTM LU Detail Analysis panel (FNM02DRM), shown in Figure 147. You can also use fast path =3.6 to display the RTM LU Detail Analysis panel.

The RTM LU Detail Analysis panel enables you to set up an RTM detail data display. Once you have entered LU identification information on this panel, it is not necessary to re-enter the information.

```

FNM02DRM                NPM V2R7  5655-043
                        RTM MANAGEMENT
                        RTM LU DETAIL ANALYSIS

Select Option ==>>
 1 Response Time/Interval  3 Distribution Summary
 2 Distribution/Interval   4 Summary Logical Unit

LU Name          ==>> LU01
Host Name        ==>> LOCAL
Data Qualifiers:
Application       ==>>
Line             ==>>
Physical Unit     ==>>
Virtual Route Number ==>>      (0-7)
Transmission Priority ==>>    (0-2)
File Name        ==>> SESSION (SESSION for active session file)

Date:           from ==>> 09 / 30 / 00 to ==>> 09 / 30 / 00 (mm/dd/yy)
Time:           from ==>> 00 : 00 : 00 to ==>> 00 : 00 : 00 (hh:mm:ss)

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 147. RTM LU Detail Analysis Panel (FNM02DRM)

2. Type one of the following information data type options in the Select Option field:

Option	Action
1	Displays response times for each interval. See “Displaying RTM LU Response Times by Interval” on page 120 for a description of the Response Time/Interval panel (FNM03TI2).
2	Displays response time distributions for each interval. See “Displaying RTM LU Response Time Distribution by Interval” on page 120 for a description of the Distribution Interval panel (FNM03D02).
3	Displays a response time distribution summary. See “Displaying an RTM

LU Response Time Distribution Summary” on page 121 for a description of the Distribution Summary panel (FNM03D02).

- 4 Displays a response time summary. See “Displaying an RTM Response Time Summary” on page 122 for a description of the RTM Session Analysis Summary panel (FNM03SMR).
3. Complete the rest of the panel and press ENTER. Data must be entered in the following RTM LU Detail Analysis panel (FNM02DRM) fields:
 - Selection Option
 - LU
 - Host Name
 - File Name

Displaying RTM LU Response Times by Interval

Select option 1 from the RTM LU Detail Analysis panel (FNM02DRM) to display the Response Time/Interval panel (FNM03TI2), shown in Figure 148. You can also use fast path =3.6.1 to display the Response Time/Interval panel.

The Response Time/Interval panel displays RTM data for the LU selected on the RTM LU Detail Analysis panel. The data is displayed in four intervals per panel. This data includes average operator response times for each application associated with the LU.

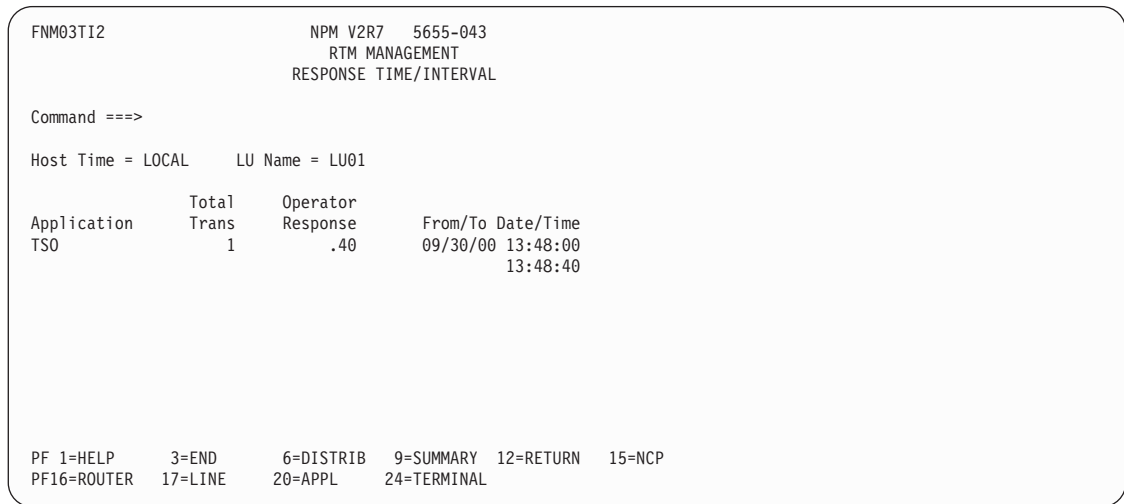


Figure 148. Response Time/Interval Panel (FNM03TI2)

Note: You can use the DISTRIB command to display the Distribution Interval panel (FNM03D02). You can use the SUMMARY command to display the Distribution Summary panel (FNM03D02).

Displaying RTM LU Response Time Distribution by Interval

Select option 2 from the RTM LU Detail Analysis panel (FNM02DRM) to display the Distribution Interval panel (FNM03D02), shown in Figure 149 on page 121. You can also use fast path =3.6.2 to display the Distribution Interval panel.

The Distribution Interval panel (FNM03D02) displays five ranges of operator response times by interval. The data includes the number of response times that fell within each distribution range.

```

FNM03D02                NPM V2R7  5655-043
                        RTM MANAGEMENT
                        DISTRIBUTION INTERVAL

Command ==>

Host Name = LOCAL      LU Name = LU01

App1/Trans  Range 1  Range 2  Range 3  Range 4  Infinity  From/To Date/Time
TSO         0-0.5  0.5-1   1-2     2-5     5 +      09/30/00 13:48:18
           10      8        2        0        0        0          13:50:40

TSO         0-0.5  0.5-1   1-2     2-5     5 +      09/30/00 13:52:18
           11      7        4        0        0        0          13:54:40

TSO         0-0.5  0.5-1   1-2     2-5     5 +      09/30/00 13:56:18
           12      6        6        0        0        0          13:58:40

PF 1=HELP      3=END      4=TRANSIT  7=BACKWARD  8=FORWARD  9=SUMMARY
PF10=TOP      11=BOTTOM  12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 149. Distribution Interval Panel (FNM03D02)

Note: You can use the TRANSIT command to display the Response Time/Interval panel (FNM03TI2). You can use the SUMMARY command to display the Distribution Summary panel (FNM03D02).

Displaying an RTM LU Response Time Distribution Summary

Select option 3 from the RTM LU Detail Analysis panel (FNM02DRM) to display the Distribution Summary panel (FNM03D02), shown in Figure 150 on page 122. You can also use fast path =3.6.3 to display the Distribution Summary panel.

The Distribution Summary panel (FNM03D02) displays ranges of response times by application and range. A new summary line is displayed if the application or any of the range values change.

```

FNM03D02                NPM V2R7  5655-043
                        RTM MANAGEMENT
                        DISTRIBUTION SUMMARY

Command ==>

Host Name = LOCAL      LU = LU01

App1/Trans  Range 1  Range 2  Range 3  Range 4  Infinity  From/To Date/Time
TSO         0-0.5   0.5-1   1-2     2-5     5 +      09/30/00 13:48:18
          33      21      12      0       0       0          13:58:40

PF 1=HELP      3=END      4=TRANSIT  6=DISTRIB  12=RETURN  15=NCP
PF16=ROUTER   17=LINE    20=APPL   24=TERMINAL
    
```

Figure 150. Distribution Summary Panel (FNM03D02)

Note: You can use the TRANSIT command to display the Response Time/Interval panel (FNM03TI2). You can use the DISTRIB command to display the Distribution Interval panel (FNM03D02).

Displaying an RTM Response Time Summary

Select option 4 from the RTM LU Detail Analysis panel (FNM02DRM) to display the RTM Session Analysis Summary panel (FNM03SMR), shown in Figure 151. You can also use fast path =3.6.4 to display the RTM Session Analysis Summary panel.

The RTM Session Analysis Summary panel displays RTM summary data for the resource specified on the RTM LU Detail Analysis panel (FNM02DRM). This data includes average operator response times and the percentage of response times that fell within each distribution range.

```

FNM03SMR                NPM V2R7  5655-043
                        RTM MANAGEMENT
                        RTM SESSION ANALYSIS SUMMARY - APPLICATION

Command ==>
Host Name = LOCAL
Application = TSO      LINE =      PU =
Group =              LU =      VR/TP = VR TP
Requested Date/Time: from 09/30/00 00:00:00 to 09/30/00 01:00:00
Actual Date/Time : from 09/30/00 00:00:00 to 09/30/00 01:00:00

Transaction      Operator      Percent of
Count           Response      Objective
    79           0.93          36.70

Percent of Transactions by Range
Range 1      Range 2      Range 3      Range 4      Infinity
    6.32      30.37      24.05      17.72      21.51

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 151. RTM Session Analysis Summary Panel (FNM03SMR)

Performing RTM Session Analysis

The RTM session analysis function displays data in terms of whole collections, providing an overview of an entire collection. You can use this function to display panels that summarize the collected data for higher level resources, such as:

- Applications
- Lines
- LU groups
- Physical units
- Virtual routes

Use the following procedure to perform RTM session analysis:

1. Select option 7 from the RTM Management panel (FNM01RTM) to display the RTM Session Analysis Summary panel (FNM02SAR), shown in Figure 152. You can also use fast path =3.7 to display the RTM Session Analysis Summary panel.

This panel enables you to set up an RTM session data display. Your entries on this panel determine the types of summary panels that are displayed.

```

FNM02SAR                NPM V2R7  5655-043
                        RTM MANAGEMENT
                        RTM SESSION ANALYSIS

Select Option ==>>
 1 Application   3 Physical Unit   5 Virtual Route
 2 Line         4 Group

Identifier          ==>> TSO
Host Name           ==>> HOST1
Data Qualifiers:
Application         ==>>
Line               ==>>
Physical Unit      ==>>
Virtual Route Number ==>>      (0-7)
Transmission Priority ==>>      (0-2)
File Name          ==>> SESSION (SESSION for active session file)
Date:              from ==>> 09 / 30 / 00 to ==>> 09 / 30 / 00 (mm/dd/yy)
Time:              from ==>> 00 : 00 : 00 to ==>> 00 : 00 : 00 (hh:mm:ss)

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 152. RTM Session Analysis Summary Panel (FNM02SAR)

2. Type one of the following information data types in the Select Option field:

Option	Action
1	Displays summary data for a specific application
2	Displays summary data for a specific line
3	Displays summary data for a specific PU
4	Displays summary data for a specific LU group
5	Displays summary data for a virtual route

3. Complete the rest of the panel. You must enter data in the following RTM Session Analysis Summary panel fields:

- Selection Option
- Identifier
- Host Name
- File Name

- Press ENTER to display the RTM Session Analysis Summary panel (FNM03SMR), shown in Figure 153. Because all of the five resource type panels have the same format, only one panel type (Application) is used in the examples in this section.

The RTM Session Analysis Summary panel (FNM03SMR) displays RTM summary data for the resource type that you selected on the RTM Session Analysis Summary panel (FNM02SAR). This data includes average operator response times and the percentage of response times that fell within each distribution range.

```

FNM03SMR                NPM V2R7  5655-043
                        RTM MANAGEMENT
                        RTM SESSION ANALYSIS SUMMARY - APPLICATION

Command ==>
Host Name = LOCAL
Application = TSO      LINE =          PU =
Group      =          LU =          VR/TP = VR TP
Requested Date/Time: from 09/30/00 00:00:00 to 09/30/00 08:00:00
Actual Date/Time  : from 09/30/00 00:00:00 to 09/30/00 08:00:00

Transaction      Operator      Percent of
Count            Response      Objective
    79             5.93             36.70

Percent of Transactions by Range
Range 1   Range 2   Range 3   Range 4   Infinity
   6.32     30.37    24.05    17.72    21.51

PF 1=HELP    2=LIST    3=END    12=RETURN  15=NCP    16=ROUTER
PF17=LINE   20=APPL   24=TERMINAL
    
```

Figure 153. RTM Session Analysis Summary - Application Panel (FNM03SMR)

- Use the LIST command to display the RTM Session Summary LU List panel (FNM04LTR), shown in Figure 154. This panel displays additional summary data for every LU connected to, or in session with, the selected resource.

```

FNM04LTR                NPM V2R7  5655-043
                        RTM MANAGEMENT
                        RTM SESSION SUMMARY LU LIST - APPLICATION

Command ==>
Host Name = LOCAL
Application = TSO      LINE =          PU =
Group      =          LU =          VR/TP = VR TP
Date/Time: from 09/30/00 08:00:00 to 09/30/00 17:00:00

Session Names      Total      Oper
                   Trans       Resp
LU01 / TSO         54         4.75

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
    
```

Figure 154. RTM Session Summary LU List - Virtual Route Panel (FNM04LTR)

- Use the END command to return to the RTM Session Analysis Summary panel (FNM03SMR).

5

Collecting and Analyzing LAN Data

This chapter describes how to use NPM to collect LAN information. You can use the NPM LAN management function to perform the following tasks:

- Start, stop, or modify LAN bridge data collections
- Start, stop, or modify LAN segment data collections
- Display LAN detail data
- Display LAN monitor event messages

Note: See the *NetView Performance Monitor Reference* for detailed descriptions of the NPM panel fields.

LAN Management Panels

This section describes the panels used in NPM's LAN management function. Use the following procedure to perform LAN data collection and analysis functions:

1. Select option 4 from the Primary Options panel (FNM00PRI) to display the LAN Resource Type Selection panel (FNM01LAN), shown in Figure 155. You can also use fast path =4 to display the LAN Resource Type Selection panel.

```

FNM01LAN                      NPM V2R7  5655-043
                               LAN MANAGEMENT
                               LAN RESOURCE TYPE SELECTION

Select Option ==>

  1 LAN Bridge Selection
  2 LAN Segment Selection

 
  9 LAN Review

Host Name ==> LOCAL

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 155. LAN Resource Type Panel (FNM01LAN)

2. Type one of the following options in the Select Option field and press ENTER:

Option	Action
--------	--------

- 1 Selects a LAN bridge for data collection or analysis. See “Selecting a LAN Bridge” for detailed procedures.
- 2 Selects a LAN segment for data collection or analysis. See “Selecting a LAN Segment” on page 129 for detailed procedures.
- 9 Displays LAN monitor messages or detail data. See “Displaying LAN Data” on page 132 for detailed procedures.

Selecting a LAN Bridge

Use the following procedure to select a LAN bridge:

1. Select option 1 from the LAN Resource Type panel to display the LAN Bridge Selection panel (FNM02LBS), shown in Figure 156. You can also use fast path =4.1 to display the LAN Bridge Selection panel.

Note: You must define any LAN Managers you need to perform LAN bridge collections to NPM. Use either the EXECUTE command or console support to define LAN Managers. If a LAN Manager is not defined, NPM does not have the proper configuration information and a NO DATA FOUND message is displayed.

See the *NetView Performance Monitor Installation and Customization* for information about defining a LAN Manager to NPM.

You can use the LAN Bridge Selection panel (FNM02LBS) to perform the following tasks:

- Select a LAN bridge on which you want to start a collection, modify collection parameters, or review data
- Stop all collections for a specific LAN bridge
- Display configuration data for a specific LAN bridge
- Stop logging LAN bridge data to a host

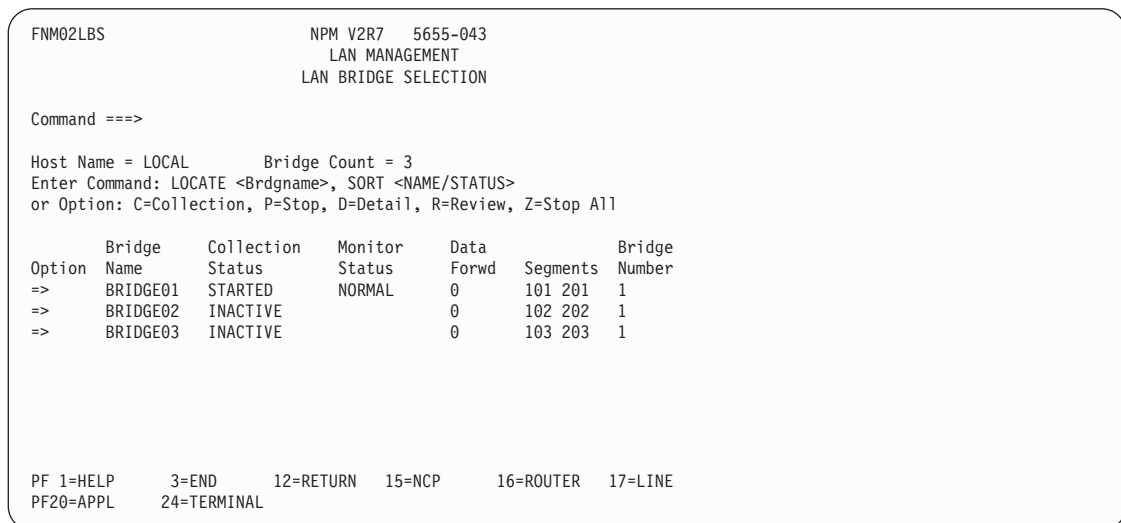


Figure 156. LAN Bridge Selection Panel (FNM02LBS)

2. Type one of the following options in the Option field next to a specific bridge name:

Option	Action
C	Displays the LAN Bridge Collection Control Panel (FNM03LBC). You can use this panel to change the status of a LAN bridge collection. See “Collecting LAN Bridge Data”.
P	Stops logging resource data to the host.
D	Displays LAN bridge configuration information on the LAN Bridge Detailed Configuration panel (FNM03LBD). See “Displaying LAN Bridge Configuration Data” on page 128.
R	Displays monitor messages or detail data from the review file on the LAN Review panel (FNM02LBM). See “Displaying LAN Data” on page 132.
Z	Ends all collections (both active and data forwarding) for the selected LAN bridge.

Collecting LAN Bridge Data

Use the following procedure to collect LAN bridge data:

1. Type **C** in the Option field of the LAN Bridge Selection panel (FNM02LBS) to display the LAN Bridge Collection Control panel (FNM03LBC), shown in Figure 157.

The LAN Bridge Collection Control panel enables you to start, stop, or modify collection and monitoring on the LAN bridge specified on the LAN Bridge Selection panel.

```

FNM03LBC                NPM V2R7  5655-043
                        LAN MANAGEMENT
                        LAN BRIDGE COLLECTION CONTROL

Command ==>
Enter Option: S=Start, D=Detail, R=Review

Host Name = LOCAL      Bridge Name = BRIDGE01  Collection Status = INACTIVE
Data Forwd = 0         Seg1/Br/Seg2 = 101 1 201  Monitor Status   = N/A

Monitor Thresholds:
Broadcast frames/minute from segment #1 ==> 0 : 0 (Low:High)
Broadcast frames/minute from segment #2 ==> 0 : 0 (Low:High)
Non-broadcast frames/minute from segment #1 ==> 0 : 0 (Low:High)
Non-broadcast frames/minute from segment #2 ==> 0 : 0 (Low:High)
Frames lost/minute from segment #1 ==> 0 : 0 (Low:High)
Frames lost/minute from segment #2 ==> 0 : 0 (Low:High)
Start Time ==> 00 : 00 : 00 (hh:mm:ss)
Stop Time ==> 00 : 00 : 00
Daily ==> NO (Yes/No)

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 157. LAN Bridge Collection Control Panel (FNM03LBC)

2. Type one of the following options on the Command line and press ENTER:

Option	Action
S	Starts collection on the LAN bridge.
P	Stops logging resource data to the host.
A	Modifies LAN bridge collection threshold values and times.

- D** Displays information about the bridge's configuration. See "Displaying LAN Bridge Configuration Data".
- R** Displays monitor messages or detail data from the review file. See "Displaying LAN Data" on page 132.

Note: The available options displayed on the panel vary, depending on the collection status of the selected bridge. For example, option S (START) is not available if the collection status of the bridge is STARTED.

Displaying LAN Bridge Configuration Data

Use the following procedure to display configuration information for a LAN bridge defined to NPM:

1. Select option D on either the LAN Bridge Selection panel (FNM02LBS) or the LAN Bridge Collection Control panel (FNM03LBC) to display the LAN Bridge Detailed Configuration panel (FNM03LBD), shown in Figure 158.

The LAN Bridge Detailed Configuration panel displays configuration information for the selected LAN bridge. The bridge is identified by the Seg1/Br/Seg2 field. This information includes all LAN Managers and bridge names associated with the bridge.

```
FNM03LBD                NPM V2R7  5655-043
                        LAN MANAGEMENT
                        LAN BRIDGE DETAILED CONFIGURATION

Command ==>
Enter Option: C=Collection, R=Review
Host Name = LOCAL      Bridge Name = BRIDGE01  Collection Status = STARTED
Data Forwd = 0         Seg1/Br/Seg2 = 101 1 201  Monitor Status  = INACTIVE

Bridge Names / LAN Mgr  SP Name      Type                = TR-TR    (L)
-----/-----
BRIDGE01 / A31P021     Frame forwarding    = ACTIVE
                          Limited broadcast seg#1 = N
                          Limited broadcast seg#2 = N
                          Hop count seg#1         = 1
                          Hop count seg#2         = 1
                          Max possible frame size = 1024

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 158. LAN Bridge Detailed Configuration Panel (FNM03LBD)

2. Type one of the following options on the Command line and press ENTER:

Option	Action
C	Displays the LAN Bridge Collection Control panel (FNM03LBC). You can use this panel to change the status of a LAN bridge data collection.
R	Displays monitor messages or detail data from the review file on the LAN Review panel (FNM02LBM).

You can choose to update the following LAN bridge definitions on this panel for a bridge that is already defined to NPM:

- Segments
- Bridge number
- Frame forwarding

- Limited broadcast segment #1
- Limited broadcast segment #2
- Hop count segment #1
- Hop count segment #2
- Maximum possible frame size

Use the following procedure to change these definitions:

- a. Unlink the bridge from the LAN Manager.
- b. Issue the RECONFIG command from the LAN Bridge Control panel (FNM02LBB).
- c. Change the definition of the bridge to the LAN Manager.
- d. Relink the bridge to LAN Manager.
- e. Reissue the RECONFIG command from the LAN Bridge Control panel (FNM02LBB).

Note: FNM02LBB and FNM02LBS are the only panels from which you can issue a RECONFIG command. However, NPM automatically issues the RECONFIG command every four hours.

See “Managing LAN Collection” on page 200 for more information on the RECONFIG command.

Selecting a LAN Segment

Use the following procedure to select a LAN segment:

1. Select option 2 from the LAN Resource Type panel to display the LAN Segment Selection panel (FNM02LSS), shown in Figure 159 on page 130. You can also use fast path =4.2 to display the LAN Segment Selection panel.

Note: You must define any LAN Managers you need to perform LAN segment collections to NPM. Use either the EXECUTE command or console support to define LAN Managers. If a LAN Manager is not defined, NPM does not have the proper configuration information and a NO DATA FOUND message is displayed.

See the *NetView Performance Monitor Installation and Customization* for information about defining a LAN Manager to NPM.

The LAN Segment Selection panel lists all LAN segments known to NPM and the current collection status. For segments with active collections, the panel lists the previous interval’s segment utilization, the current interval’s segment utilization average, and the last sample taken. You can start, modify, or stop collection on LAN segments from this panel.

Selecting a LAN Segment

```
FNM02LSS                NPM V2R7  5655-043
                        LAN MANAGEMENT
                        LAN SEGMENT SELECTION

Command ==>>

                        Display = 00:00:00   Interval = 23:45:00
Host Name = LOCAL      Segment Count = 2
Enter Command: LOCATE <Segment>, SORT <NUMBER/STATUS/UTIL>
or Option: C=Collection, P=Stop, D=Detail, R=Review, Z=Stop All

  Segment  Collection  Monitor  Data  <--- Segment Utilization --->
Option  Number  Status   Status  Forwd  Previous  Current  Last Sample
=>      101    STARTED  INACTIVE  0      26 %     35 %     8 %
=>      102    INACTIVE  INACTIVE  0      0        0        0

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 159. LAN Segment Selection Panel (FNM02LSS)

2. Type one of the following options in the Option field next to a specific segment number and press ENTER:

- C** Displays the LAN Segment Collection Control panel (FNM03LSC). You can use this panel to change LAN segment collection status. See “Collecting LAN Segment Data”.
- P** Stops logging resource data to the host.
- D** Displays LAN segment configuration information on the LAN Segment Detailed Configuration panel (FNM03LSD). See “Displaying LAN Segment Configuration Data” on page 131.
- R** Displays monitor messages or detail data from the review file on the LAN Review panel (FNM02LBM). See “Displaying LAN Data” on page 132.
- Z** Ends all collections (both active and data forwarding) for the selected LAN segment.

Collecting LAN Segment Data

Use the following procedure to collect LAN segment data:

1. Type C in the Option field of the LAN Segment Selection panel (FNM02LSS) and press ENTER to display the LAN Segment Collection Control panel (FNM03LSC), shown in Figure 160 on page 131.

The LAN Segment Collection Control panel enables you to start, stop, or modify collection or monitoring on the LAN segment specified on the LAN Segment Selection panel (FNM02LSS).

```

FNM03LSC                NPM V2R7  5655-043
                        LAN MANAGEMENT
                        LAN SEGMENT COLLECTION CONTROL

Command ==>
Enter Option: S=Start, P=Stop, D=Detail, R=Review
Host Name = LOCAL      Segment Number = 101    Collection Status = INACTIVE
Data Forwd = 0         Utilization   =         Monitor Status   = N/A

Monitor Thresholds:
Segment Utilization Percentage      ==> 0 : 0 (Low:High)

Start Time ==> 00 : 00 : 00          (hh:mm:ss)
Stop Time  ==> 00 : 00 : 00
Daily      ==> NO                    (Yes/No)

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 160. LAN Segment Collection Control Panel (FNM03LSC)

2. Type one of the following options in the Command field:

Option	Action
S	Starts collection on the LAN segment.
P	Stops logging resource data to the host.
A	Modifies LAN segment collection threshold values and times.
D	Displays LAN segment configuration information on the LAN Segment Detailed Configuration panel (FNM03LSD). See “Displaying LAN Segment Configuration Data”.
R	Displays monitor messages or detail data from the review file on the LAN Review panel (FNM02LBM). See “Displaying LAN Data” on page 132.

Note: The available options displayed on the LAN Segment Collection Control panel vary, depending on the segment’s collection status. For example, option S (START) is not available if the collection status is STARTED.

Displaying LAN Segment Configuration Data

Use the following procedure to display configuration information for a LAN segment defined to NPM:

1. Select option D from either the LAN Segment Selection panel (FNM02LSS) or the LAN Collection Control panel (FNM03LSC). Press ENTER to display the LAN Segment Detailed Configuration panel (FNM03LSD), shown in Figure 161 on page 132.

The LAN Segment Detailed Configuration panel displays configuration information for the specified LAN segment. The segment is displayed in the Segment Number field. The configuration information includes the names of up to four LAN Managers for which this segment is defined.

```
FNM03LSD                NPM V2R7  5655-043
                        LAN MANAGEMENT
                        LAN SEGMENT DETAILED CONFIGURATION

Command ==>
Enter Option: C=Collection, R=Review
Host Name = LOCAL      Segment Number = 101      Collection Status = STARTED
Data Forwd = 0         Utilization   = 39 %      Monitor Status   = EXCEEDED

LAN Mgr SP Name       Type = TR-16M
A31P021               Status = SOFT ERROR

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 161. LAN Segment Detailed Configuration Panel (FNM03LSD)

2. Type one of the following options on the Command line and press ENTER:

Option	Action
C	Displays the LAN Segment Collection Control panel (FNM02LSC). You can use this panel to change the status of a segment data collection.
R	Displays monitor messages or detail data from the review file on the LAN Review panel (FNM02LBM).

Note: The options displayed on the LAN Segment Detailed Configuration panel (FNM03LSD) depend on the collection status of the segment. If the collection status of the segment is UNAVAIL, option C (Collection) is not available.

Displaying LAN Data

This section describes how to display LAN bridge detail data or LAN segment detail data.

Note: See “Displaying LAN Collection Monitor Event Messages” on page 136 for procedures to display LAN monitor event messages.

To review LAN data or monitor event messages, you must specify that LAN bridge or segment data be sent to the review file. See “Managing LAN Collection” on page 200 for information about specifying data destinations for LAN data.

Displaying LAN Bridge Data

Use the following procedure to display LAN bridge data:

1. Select option 9 from the LAN Resource Type panel to display the LAN Review panel (FNM02LBM), shown in Figure 162 on page 133. You can also use fast path =4.9 to display the LAN Review panel.


```

FNM02LBM                                NPM V2R7  5655-043
                                         LAN MANAGEMENT
                                         LAN REVIEW

Command ==>

Host Name      ==> LOCAL
LAN Resource Name ==> BRIDGE01      (Name/Monitor)
LAN Resource Type ==> 1             (1=Bridge, 2=Segment)
Review File Name ==> REVIEW         (REVIEW for active session file)

Start Date     ==> 09 / 30 / 00     (mm/dd/yy)
Stop Date      ==> 09 / 30 / 00

Start Time     ==> 00 : 00 : 00     (hh:mm:ss)
Stop Time      ==> 00 : 00 : 00

Data Type      ==> DETAIL           (Detail/Monitor)

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 162. LAN Review Panel (FNM02LBM)

2. Type a LAN bridge name in the LAN Resource Name field.
3. Type 1 in the LAN Resource Type field.

Note: The LAN Resource Name field and the LAN Resource Type field are already filled in if you select option R from one of the LAN bridge collection panels. Otherwise, these fields are blank.

4. Type a starting and stopping date range in the Start Date and Stop Date fields for the data you want to review.
5. Type a starting and stopping time range in the Start Time and Stop Time fields for the data you want to review.
6. Type DETAIL in the Data Type field.
7. Press ENTER to display the LAN Bridge Data Detail panel (FNM03LBR), shown in Figure 163 on page 134. The LAN Bridge Data Detail panel (FNM03LBR) displays data for the LAN bridge selected on the LAN Review panel (FNM02LBM). This data includes the average number of broadcast and non-broadcast frames per minute and the number of lost frames.

You can use the SUMMARY command to display the data in summary form. The data is averaged into a single line and the panel title changes to Summary.

Displaying LAN Data

```
FNM03LBR                NPM V2R7  5655-043
                        LAN MANAGEMENT
                        LAN BRIDGE DATA DETAIL

Command ==>>

Host Name = LOCAL
Bridge Name = BRIDGE32  Review File = REVIEW  Seg1/Br/Seg2 = 101 1 201
Date/Time: from 9/30/00 08:00:00  to  9/30/00 12:00:00

Date      Time      Interval      BC Frms/Min      Non-BC Frms/Min      Lost Frames
Seg#1 Seg#2      Seg#1 Seg#2      Seg#1 Seg#2
02/07/00 09:30:00    14:59        141  141          141  141        310  310

PF 1=HELP      3=END      5=RIGHT      9=SUMMARY 12=RETURN 15=NCP
PF16=ROUTER   17=LINE   20=APPL     24=TERMINAL
```

Figure 163. LAN Bridge Data Detail Panel (FNM03LBR)

8. Use the RIGHT command to display the LAN Bridge Lost Frames Detail panel (FNM03LB2), shown in Figure 164, or use the END command to return to the LAN Review panel (FNM02LBM).

The LAN Bridge Lost Frames Detail panel displays data for the LAN bridge selected on the LAN Review panel (FNM02LBM). This data includes the number of lost frames, providing reasons for frames not being forwarded.

You can use the SUMMARY command to display the data in summary form. The data is averaged into a single line and the panel title changes to Summary.

```
FNM03LB2                NPM V2R7  5655-043
                        LAN MANAGEMENT
                        LAN BRIDGE LOST FRAMES DETAIL

Command ==>>

Host Name = LOCAL
Bridge Name = BRIDGE01  Review File = REVIEW  Seg1/Br/Seg2 = 101 1 201
Date/Time: from 9/30/00 08:00:00  to  9/30/00 12:00:00

Date      Time      Interval      Inoperative Congestion Link Error  Other
Seg#1 Seg#2      Seg#1 Seg#2      Seg#1 Seg#2 Seg#1 Seg#2
09/30/00 09:30:00    14:59        100  100        100  100  ----- 10  10

PF 1=HELP      3=END      4=LEFT      9=SUMMARY 12=RETURN 15=NCP
PF16=ROUTER   17=LINE   20=APPL     24=TERMINAL
```

Figure 164. LAN Bridge Lost Frames Detail Panel (FNM03LB2)

9. Use the LEFT command to return to the LAN Bridge Data Detail panel (FNM03LBR).

Displaying LAN Segment Data

Use the following procedure to display LAN segment data:

1. Select option 9 from the LAN Resource Type panel to display the LAN Review panel (FNM02LBM), shown in Figure 165.

```

FNM02LBM                NPM V2R7  5655-043
                        LAN MANAGEMENT
                        LAN REVIEW

Command ==>

Host Name      ==> LOCAL
LAN Resource Name ==> 101      (Name/Monitor)
LAN Resource Type ==> 2      (1=Bridge, 2=Segment)
Review File Name ==> REVIEW   (REVIEW for active session file)

Start Date     ==> 09 / 09 / 00 (mm/dd/yy)
Stop Date      ==> 09 / 09 / 00

Start Time     ==> 00 : 00 : 00 (hh:mm:ss)
Stop Time      ==> 00 : 00 : 00

Data Type      ==> DETAIL     (Detail/Monitor)

PF 1=HELP     3=END       12=RETURN    15=NCP     16=ROUTER   17=LINE
PF20=APPL    24=TERMINAL
    
```

Figure 165. LAN Review Panel (FNM02LBM)

2. Type a LAN segment number in the LAN Resource Name field.
3. Type 2 in the LAN Resource Type field.

Note: The LAN Resource Name field and the LAN Resource Type field are already filled in if you select option R from one of the LAN segment collection panels. Otherwise, these fields are blank.

4. Type a starting and stopping date range in the Start Date and Stop Date fields for the data you want to review.
5. Type a starting and stopping time range in the Start Time and Stop Time fields for the data you want to review.
6. Type DETAIL in the Data Type field.
7. Press ENTER to display the LAN Segment Data Detail panel (FNM03LSR), shown in Figure 166 on page 136.

The LAN Segment Data Detail panel (FNM03LSR) displays data for the LAN segment specified on the LAN Review panel (FNM02LBM). This data includes the segment utilization with a statistical degree of confidence, and the number of the segment utilization samples taken during the collection interval.

Note: The larger the number of samples, the closer the displayed segment utilization value is to the true segment utilization.

Displaying LAN Data

```
FNM03LSR                      NPM V2R7  5655-043
                              LAN MANAGEMENT
                              LAN SEGMENT DATA DETAIL

Command ==>

Host Name = LOCAL
Segment Number = 101      Segment Type = TR-16M  Review File = REVIEW1
Date/Time: from 9/30/00 08:00:00 to 9/30/00 12:00:00

Date      Time      Interval      Segment      Utilization      Samples
09/30/00  09:30:00  00:15:00     10 +/- 5%    12
09/30/00  09:45:00  00:15:00     12 +/- 3%    21
09/30/00  09:59:59  00:15:00     12 +/- 5%    12
09/30/00  10:15:01  00:15:00     30 +/- 3%    21

PF 1=HELP    3=END    9=SUMMARY  12=RETURN  15=NCP    16=ROUTER
PF17=LINE   20=APPL  24=TERMINAL
```

Figure 166. LAN Segment Data Detail Panel (FNM03LSR)

8. Use the SUMMARY command to display the data in summary form. The data is averaged into a single line and the panel title changes to Summary. You can use the END command to return to the LAN Review panel (FNM02LBM).

Displaying LAN Collection Monitor Event Messages

Use the following procedure to display LAN monitor event messages:

1. Select option 9 from the LAN Resource Type panel to display the LAN Review panel (FNM02LBM), shown in Figure 167.

```
FNM02LBM                      NPM V2R7  5655-043
                              LAN MANAGEMENT
                              LAN REVIEW

Command ==>

Host Name      ==> LOCAL
LAN Resource Name ==> MONITOR      (Name/Monitor)
LAN Resource Type ==> 2           (1=Bridge, 2=Segment)
Review File Name ==> REVIEW       (REVIEW for active session file)

Start Date     ==> 09 / 09 / 00    (mm/dd/yy)
Stop Date      ==> 09 / 09 / 00

Start Time     ==> 00 : 00 : 00    (hh:mm:ss)
Stop Time      ==> 00 : 00 : 00

Data Type      ==> DETAIL         (Detail/Monitor)

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
```

Figure 167. LAN Review Panel (FNM02LBM)

2. Type MONITOR in the LAN Resource Name field to display LAN monitor messages. NPM displays monitor messages for both LAN bridges and segments, ignoring the content of the LAN Resource Type field.

To display LAN monitor messages for a specific LAN bridge or segment resource, type the resource name in the LAN Resource Name field, and type MONITOR in the Data Type field.

NPM displays monitor messages for the specified resource, ignoring the content of the LAN Resource Type field.

3. Press ENTER to display the Review Monitor Event Messages panel (FNM03RVE), shown in Figure 168.

```

FNM03RVE                NPM V2R7  5655-043
                        LAN MANAGEMENT
                        REVIEW MONITOR EVENT MESSAGES

Command  ==>

Host Name = LOCAL      Resource Name = MONITOR  Data Type = LAN RESOURCES
Date/Time: from 09/30/00 01:21:30 To 09/30/00 01:26:00

Actual   Resource Monitor   Actual
Time     Name    Type    Value  Monitor Event Description      Limit
01:21:30 101    SEGUTIL 68     MONITOR VALUE WAS ABOVE THE LIMIT OF 60
01:22:00 101    SEGUTIL 7      MONITOR VALUE WAS BELOW THE LIMIT OF 10

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL

```

Figure 168. Review Monitor Event Messages Panel (FNM03RVE)

The Review Monitor Event Messages panel (FNM03RVE) displays **monitor event messages** and **monitor resolution messages**. These types of messages are displayed when a threshold is reached, exceeded, or resolved.

6

Collecting and Analyzing VTAM Statistics Data

This chapter describes how to use NPM to collect information from VTAM and correlate it to other NPM information about NCPs and SNA sessions. You can use NPM's VTAM management function to perform the following tasks:

- Display VTAM environment data
- Collect and display VTAM global data
- Collect and display VTAM buffer pool data
- Collect and display VTAM virtual route data
- Collect and display VTAM device data
- Collect and display VTAM application data
- Collect and display VTAM address space data

Note: See the *NetView Performance Monitor Reference* for detailed descriptions of the NPM panel fields.

VTAM Management Panels

This section describes the online panels used in NPM's VTAM management function. Use the following procedures to perform VTAM statistics collection and analysis:

1. Select option 5 from the Primary Options panel (FNM00PRI) to display the VTAM Resource Type Selection panel (FNM01VTM), shown in Figure 169 on page 140. You can also use fast path =5 to display the VTAM Resource Type Selection panel.

```
FNM01VTM                NPM V2R7  5655-043
                        VTAM MANAGEMENT
                        VTAM RESOURCE TYPE SELECTION

Select Option ==>>

 1 View Environment Data
 2 Collect and View Global Data
 3 Collect and View Buffer Pool Data
 4 Collect and View Virtual Route Data
 5 Collect and View Device Data
 6 Collect and View Application Data
 7 Collect and View Address Space Data

 9 Direct Commands

Host Name ==>> LOCAL

PF 1=HELP   3=END   12=RETURN  15=NCP   16=ROUTER  17=LINE
PF20=APPL  24=TERMINAL
```

Figure 169. VTAM Resource Type Selection Panel (FNM01VTM)

2. Type one of the following option numbers in the Select Option field and press ENTER:

Option	Action
1	Displays environment data. See “Displaying VTAM Environment Data” for detailed procedures.
2	Collects and displays global data. See “Collecting and Displaying VTAM Global Data” on page 141 for detailed procedures.
3	Collects and displays buffer pool data. See “Collecting and Displaying VTAM Buffer Pool Data” on page 144 for detailed procedures.
4	Collects and displays virtual route data. See “Collecting and Displaying Virtual Route Data” on page 145 for detailed procedures.
5	Collects and displays device data. See “Collecting and Displaying VTAM Device Data” on page 148 for detailed procedures.
6	Collects and displays application data. See “Collecting and Displaying Application Data” on page 151 for detailed procedures.
7	Collects and displays address space data. See “Collecting and Displaying Address Space Data” on page 152 for detailed procedures.
9	Issues direct VTAM collection commands. See “Issuing Direct VTAM Statistics Collection Commands” on page 159 for detailed procedures.

Note: If VTAMCOLL=NO is coded in your FNMINIT file, the message VTAM STATISTICS COLLECTION NOT ENABLED is displayed when you select options 1 to 7.

Displaying VTAM Environment Data

Select option 1 from the VTAM Resource Type Selection panel (FNM01VTM) to display the View VTAM Environment Data panel (FNM03VE1), shown in Figure 170 on page 141. You can also use fast path =5.1 to display the View VTAM Environment Data panel.

The View VTAM Environment Data panel (FNM03VE1) displays basic information about the host VTAM specified on the VTAM Resource Type Selection panel (FNM01VTM). The information displayed on this panel does not change unless you stop and restart VTAM.

```

FNM03VE1                NPM V2R7  5655-043
                        VTAM MANAGEMENT
                        VIEW VTAM ENVIRONMENT DATA

Command ==>

Host Name = LOCAL

Network Name           = NET1           VTAM Start List Name       = ATCSTR01
Host CDRM Name         = SSCP01         VTAM Config File Name      = ATCCON01
VTAM Release           = VE33
VTAM Subarea Number   = 1124           Job Name/User ID           = NETNPM
Host Element Number    = 1              Address Space ID/Machine ID = 56

OS ID                  = MVS
OS Release              = SP4.2.0
OS Mode                 = MVS/ESA

PF 1=HELP    3=END    12=RETURN    15=NCP    16=ROUTER    17=LINE
PF20=APPL   24=TERMINAL

```

Figure 170. View VTAM Environment Data Panel (FNM03VE1)

Collecting and Displaying VTAM Global Data

The VTAM global data option enables you to collect a variety of information about VTAM, including storage information, CPU utilization, and I/O information.

Note: This VTAM management function uses four separate panels to display VTAM data. Use the RIGHT and LEFT commands to move between the panels described in this section.

Use the following procedure to collect and view global data:

1. Select option 2 from the VTAM Resource Type Selection panel (FNM01VTM) to display the VTAM Global Data Selection panel (FNM02GS1), shown in Figure 171 on page 142. You can also use fast path =5.2 to display the VTAM Global Data Selection panel.

The VTAM Global Data Selection panel (FNM02GS1) is a resource list that displays a list of global data. The only type of resource listed for NPM is VTAM, indicated by its SSCP name.

```
FNM02GS1                NPM V2R7  5655-043                More:  >
                        VTAM MANAGEMENT
                        VTAM GLOBAL DATA SELECTION

Command ==>>

Host Name = LOCAL
Enter Command: REFRESH or Option: S=Start, R=Review, L=List, Z=Stop All

Option   SSCP      Data   Collection   Monitor
=>      SSCP01    0     STARTED     EXCEEDED

PF 1=HELP    2=REFRESH  3=END    5=RIGHT   12=RETURN  15=NCP
PF16=ROUTER 17=LINE   20=APPL  24=TERMINAL
```

Figure 171. VTAM Global Data Selection Panel (FNM02GS1)

2. Type one of the following options in the Option field and press ENTER:

Option	Action
S	Starts a collection. See “Starting VTAM Statistics Collections” on page 154.
R	Displays VTAM global data written to a VSAM file. See “Displaying VTAM Statistics Data” on page 156.
L	Lists all VTAM global collections. See “Displaying/Altering/Stopping Active VTAM Data Collections” on page 157.
Z	Ends all active VTAM global collections.

Note: You can issue these commands from any of the four VTAM global data panels.

3. Use the RIGHT command to display the first VTAM Global Current Data panel (FNM02GS2), shown in Figure 172 on page 143.

The first VTAM Global Current Data panel (FNM02GS2) displays currently sampled data if the collection status for global data is STARTED.

```

FNM02GS2                NPM V2R7  5655-043                More: < >
                        VTAM MANAGEMENT
                        VTAM GLOBAL CURRENT DATA

Command ==>>

Host Name = LOCAL
Enter Command: REFRESH or Option: S=Start, R=Review, L=List, Z=Stop All

Option SSCP      Sampled      Maximum Ever      Average Alloc      Interval Max
=>      SSCP01    hh:mm:ss          CSA24      CSA      CSA24      CSA
                                17466      709530      15350      67414      15358      67434

PF 1=HELP      2=REFRESH  3=END      4=LEFT      5=RIGHT  12=RETURN
PF15=NCP      16=ROUTER  17=LINE    20=APPL     24=TERMINAL
    
```

Figure 172. VTAM Global Current Data Panel (FNM02GS2)

- You can use the RIGHT command to display the second VTAM Global Current Data panel (FNM02GS3), shown in Figure 173, or use the LEFT command to return to the VTAM Global Data Selection panel (FNM02GS1).

The second VTAM Global Current Data panel (FNM02GS3) displays additional currently sampled data.

```

FNM02GS3                NPM V2R7  5655-043                More: < >
                        VTAM MANAGEMENT
                        VTAM GLOBAL CURRENT DATA

Command ==>>

Host Name = LOCAL
Enter Command: REFRESH or Option: S=Start, R=Review, L=List, Z=Stop All

Option SSCP      Sampled      % VTAM      <----- Page-Ins ----->
=>      SSCP01    hh:mm:ss    CPU Usage    Private Common  LPA  Total
                                .04          450    300    427  1177

PF 1=HELP      2=REFRESH  3=END      4=LEFT      5=RIGHT  12=RETURN
PF15=NCP      16=ROUTER  17=LINE    20=APPL     24=TERMINAL
    
```

Figure 173. VTAM Global Current Data Panel (FNM02GS3)

- You can use the RIGHT command to display the third VTAM Global Current Data panel (FNM02GS4), shown in Figure 174 on page 144, or use the LEFT command to return to the first VTAM Global Current Data panel (FNM02GS2).

The third VTAM Global Current Data panel (FNM02GS4) displays additional currently sampled data.

```

FNM02GS4                NPM V2R7  5655-043                More: <
                        VTAM MANAGEMENT
                        VTAM GLOBAL CURRENT DATA

Command ==>>

Host Name = LOCAL
Enter Command: REFRESH or Option: S=Start, R=Review, L=List, Z=Stop All

Option  SSCP          Sampled <----- SIO Counts ----->
=> *    SSCP01        hh:mm:ss  NCPs CTCs Local-SNA Non-SNA DASD Misc  MPCR  MPC
                                2   3     4         5     0    0    1    1

PF 1=HELP      3=END      4=LEFT      12=RETURN   15=NCP      16=ROUTER
PF17=LINE     20=APPL    24=TERMINAL
    
```

Figure 174. VTAM Global Current Data Panel (FNM02GS4)

6. You can use the LEFT command to return to the second VTAM Global Current Data panel (FNM02GS3).

Collecting and Displaying VTAM Buffer Pool Data

Use the following procedure to collect and view buffer pool data:

1. Select option 3 from the VTAM Resource Type Selection panel (FNM01VTM) to display the VTAM Buffer Pool Selection panel (FNM02BS1), shown in Figure 175. You can also use fast path =5.3 to display the VTAM Buffer Pool Selection panel.

This panel displays a list of buffer pools.

```

FNM02BS1                NPM V2R7  5655-043                More: >
                        VTAM MANAGEMENT
                        VTAM BUFFER POOL SELECTION

Command ==>>

Host Name = LOCAL
Enter Command: LOCATE <Pool>, REFRESH, SORT <NAME/STATUS>
or Option: S=Start, R=Review, L=List, Z=Stop All

Option  Buffer  Data  Collection  Monitor
Option  Pool   Forwd Status      Status
=>      AP00   0     STARTED    EXCEEDED
=>      CRPL   0     INACTIVE
=>      I000   0     INACTIVE
=>      LF00   0     INACTIVE
=>      LP00   0     INACTIVE
=>      SF00   0     INACTIVE
=>      SP00   0     INACTIVE
=>      WP00   0     INACTIVE
PF 1=HELP      2=REFRESH  3=END      5=RIGHT    8=FORWARD  11=BOTTOM
PF12=RETURN   15=NCP    16=ROUTER  17=LINE    20=APPL    24=TERMINAL
    
```

Figure 175. VTAM Buffer Pool Selection Panel (FNM02BS1)

2. Type one of the following options in the Option field and press ENTER:

Option	Action
S	Starts a VTAM buffer pool data collection. See “Starting VTAM Statistics Collections” on page 154.

- R** Displays VTAM buffer pool data written to a VSAM file. See “Displaying VTAM Statistics Data” on page 156.
- L** Lists all active VTAM buffer pool data collections. See “Displaying/Altering/Stopping Active VTAM Data Collections” on page 157.
- Z** Ends all active VTAM buffer pool data collections.

Note: You can issue these commands from the VTAM Buffer Pool selection and current data panels.

3. Use the **RIGHT** command to display the VTAM Buffer Pool Current Data panel (FNM02BS2), shown in Figure 176.

The VTAM Buffer Pool Current Data panel displays the current data for a buffer pool. This data is only available if the collection status is **STARTED**.

```

FNM02BS2                NPM V2R7  5655-043                More: <
                        VTAM MANAGEMENT
                        VTAM BUFFER POOL CURRENT DATA

Command ==>

Host Name = LOCAL
Enter Command: LOCATE <Pool>, REFRESH, SORT <NAME/STATUS>
or Option: S=Start, R=Review, L=List, Z=Stop All

      Buffer  Sampled <- Avg Buffers -> <- Max Buffers ->  Req Waiting  Number
Option Pool hh:mm:ss Alloc Used Avail Alloc Used Avail   Avg Max    Expands
=>   AP00 09:47:29   16   0   16   16   0   16   0   0      0
=>   CRPL 00:00:00
=>   IO00 00:00:00
=>   LF00 00:00:00
=>   LP00 00:00:00
=>   SF00 00:00:00
=>   WP00 00:00:00

PF 1=HELP    2=REFRESH  3=END    4=LEFT    8=FORWARD 10=TOP
PF11=BOTTOM 12=RETURN  15=NCP   16=ROUTER 17=LINE   20=APPL
PF24=TERMINAL

```

Figure 176. VTAM Buffer Pool Current Data Panel (FNM02BS2)

4. Use the **LEFT** command to display the VTAM Buffer Pool Selection panel (FNM02BS1).

Collecting and Displaying Virtual Route Data

Use the following procedure to collect and view virtual route data:

1. Select option 4 from the VTAM Resource Type Selection panel (FNM01VTM) to display the Destination Subarea Selection panel (FNM02SS1), shown in Figure 177 on page 146. You can also use fast path =5.4 to display the Destination Subarea Selection panel. The Destination Subarea Selection panel (FNM02SS1) displays a list of destination subareas.

```

FNM02SS1                NPM V2R7  5655-043
                        VTAM MANAGEMENT
                        DESTINATION SUBAREA SELECTION

Command ==>>

Host Name = LOCAL
Enter Command: LOCATE <Node>, REFRESH, SORT <NAME/NUMBER>
or Option: X=Expand

      Destination  Destination
Option Node Name  Subarea
=>     *UNKNOWN   1324
=>     NCP1234    1234
=>     SSCP1124   1124
=>     SSCP1376   1376

PF 1=HELP    2=REFRESH  3=END    8=FORWARD 11=BOTTOM 12=RETURN
PF15=NCP     16=ROUTER  17=LINE  20=APPL   24=TERMINAL
    
```

Figure 177. Destination Subarea Selection Panel (FNM02SS1)

2. You can use the X (Expand) option to display virtual route and transmission priorities (VR/TP) under a particular destination subarea. Type X in the Option field next to a destination subarea and press ENTER to display the Virtual Route Selection panel (FNM03VS1), shown in Figure 178.

The Virtual Route Selection panel displays a list of VR/TP pairs for the subarea that was expanded from the Destination Subarea Selection panel (FNM02SS1). You can use this panel to start a collection, list all collections, end all active collections, or review data for a specific VR/TP pair.

```

FNM03VS1                NPM V2R7  5655-043
                        VTAM MANAGEMENT
                        VIRTUAL ROUTE SELECTION
                        More:  >

Command ==>>

Host Name = LOCAL      Dest Subarea = 1124  Dest Node Name = SSCP1124
Enter Command: REFRESH, SORT <VR/STATUS/BLOCK/SESSIONS>
or Option: S=Start, R=Review, L=List, Z=Stop All

      Data      Collection  Monitor
Option VR  TP  Forwd  Status  Status
=>     1  0   5   STARTED EXCEEDED
=>     1  1   0   DEFERRED
=>     1  2   5   STARTED  NORMAL

PF 1=HELP    2=REFRESH  3=END    5=RIGHT   8=FORWARD 11=BOTTOM
PF12=RETURN 15=NCP     16=ROUTER 17=LINE   20=APPL   24=TERMINAL
    
```

Figure 178. Virtual Route Selection Panel (FNM03VS1)

3. Type one of the following options in the Option field and press ENTER:

Option	Action
S	Starts a virtual route data collection. See “Starting VTAM Statistics Collections” on page 154.

- R** Displays virtual route data written to a VSAM file. See “Displaying VTAM Statistics Data” on page 156.
- L** Lists all active virtual route data collections. See “Displaying/Altering/Stopping Active VTAM Data Collections” on page 157.
- Z** Ends all active virtual route data collections.

Note: You can issue these commands from any of the three virtual route panels.

4. Use the **RIGHT** command to display the first virtual Route Current Data panel (FNM03VS2), shown in Figure 179.

The Virtual Route Current Data panel (FNM03VS2) displays the current data for a virtual route if the collection status is **STARTED**.

```

FNM03VS2                NPM V2R7  5655-043                More: < >
                        VTAM MANAGEMENT
                        VIRTUAL ROUTE CURRENT DATA

Command ==>>

Host Name = LOCAL      Dest Subarea = 1124  Dest Node Name = SSCP1124
Enter Command: REFRESH, SORT <VR/STATUS/BLOCK/SESSIONS>
or Option: S=Start, R=Review, L=List, Z=Stop All

Option  VR   TP   Sampled      % Time   % Time   LU-LU   Total   Queued
=>      1    0   hh:mm:ss   Blocked  Active   Sessions Sessions PIUs
=>      1    1   00:15:00    10      99      5        5       61
=>      1    2   00:15:00     0     100     10       3       0

PF 1=HELP      2=REFRESH  3=END      4=LEFT    5=RIGHT   8=FORWARD
PF11=BOTTOM   12=RETURN 15=NCP     16=ROUTER 17=LINE   20=APPL
PF24=TERMINAL

```

Figure 179. Virtual Route Current Data Panel (FNM03VS2)

5. You can use the **RIGHT** command to display the second Virtual Route Current Data panel (FNM03VS3), shown in Figure 180 on page 148, or use the **LEFT** command to return to the Virtual Route Selection panel (FNM03VS1). The second Virtual Route Current Data panel (FNM03VS3) displays additional current data for a virtual route.

```

FNM03VS3                NPM V2R7  5655-043                More: <
                        VTAM MANAGEMENT
                        VIRTUAL ROUTE CURRENT DATA

Command ==>>

Host Name = LOCAL      Dest Subarea = 1124      Dest Node Name = SSCP1124
Enter Command: REFRESH, SORT <VR/STATUS/BLOCK/SESSIONS>
or Option: S=Start, R=Review, L=List, Z=Stop All
                        Current      Interval
Option  VR  TP  hh:mm:ss  Window Size  Window Size  <---- PIUs ---->
=>     1   0  00:15:00   0    7    0    7    Inbound Outbound
=>     1   1  00:00:00   0    7    0    7    533    444
=>     1   2  00:15:00   0    7    0    7    115    115

PF 1=HELP      2=REFRESH  3=END      4=LEFT      8=FORWARD  12=RETURN
PF15=NCP      16=ROUTER  17=LINE   20=APPL    24=TERMINAL
    
```

Figure 180. Virtual Route Current Data Panel (FNM03VS3)

- Use the LEFT command to display the first Virtual Route Current Data panel (FNM03VS2).

Collecting and Displaying VTAM Device Data

Use the following procedure to collect and display VTAM CTC device or MPC device data. Option X=Expand is available for MPC devices only. The same facilities are available for both CTC and MPC devices.

- Select option 5 from the VTAM Resource Type Selection panel (FNM01VTM) to display the VTAM Device Selection panel (FNM02DS1), shown in Figure 181. You can also use fast path =5.5 to display the VTAM Device Selection panel.

The VTAM Device Selection panel displays a list of VTAM devices.

```

FNM02DS1                NPM V2R7  5655-043                More: >
                        VTAM MANAGEMENT
                        VTAM DEVICE SELECTION

Command ==>>

Host Name = LOCAL
Enter Command: LOCATE <Channel>, REFRESH, SORT <NAME/TYPE/STATUS/SLOWDOWN>
or Option: S=Start, R=Review, L=List, X=Expand, Z=Stop All

Option  Channel  Channel  Channel  Data  Collection  Monitor
=>     L360     3333    CTC      0     STARTED    EXCEEDED
=>     L1A0     MPCG

PF 1=HELP      2=REFRESH  3=END      5=RIGHT    12=RETURN  15=NCP
PF16=ROUTER   17=LINE   20=APPL   24=TERMINAL
    
```

Figure 181. VTAM Device Selection Panel (FNM02DS1)

- For CTC devices, type any of the following options apart from Z in the Option field and press ENTER:

Option	Action
S	Starts a VTAM device data collection. See “Starting VTAM Statistics Collections” on page 154.
R	Displays VTAM device data written to a VSAM file. See “Displaying VTAM Statistics Data” on page 156.
L	Lists all active VTAM device data collections for a device. See “Displaying/Altering/Stopping Active VTAM Data Collections” on page 157.
X	Displays all valid MPC devices defined for the specified MPC group.
Z	Ends active VTAM device data collections for a device.

Note: You can issue these options from any of the three VTAM device data panels.

- Use the RIGHT command to display the first VTAM Device Current Data panel (FNM02DS2), shown in Figure 182.

The VTAM Device Current Data panel (FNM02DS2) displays the current data for a VTAM device if the collection status is STARTED.

```

FNM02DS2                NPM V2R7  5655-043                More: < >
                        VTAM MANAGEMENT
                        VTAM DEVICE CURRENT DATA

Command ==>>

Host Name = LOCAL
Enter Command: LOCATE <Channel>, REFRESH, SORT <NAME/TYPE/STATUS/SLOWDOWN>
or Option: S=Start, R=Review, L=List, X=Expand Z=Stop All

Option Channel      Sampled Channel  % Time % Time  Attn  Read <---- PIUs ---->
=>      L360        hh:mm:ss  Address Slowdown Active  Rcvd  Attn  Inbound Outbound
=>      L1A0

```

PF 1=HELP 2=REFRESH 3=END 4=LEFT 5=RIGHT 12=RETURN
PF15=NCP 16=ROUTER 17=LINE 20=APPL 24=TERMINAL

Figure 182. VTAM Device Current Data Panel (FNM02DS2)

- Use the RIGHT command to display the second VTAM Device Current Data panel (FNM02DS3), shown in Figure 183 on page 150, or use the LEFT command to display the VTAM Device Selection panel (FNM02DS1).

The second VTAM Device Current Data panel (FNM02DS3) displays additional current data for a VTAM device.

```

FNM02DS3                NPM V2R7  5655-043                More: <
                        VTAM MANAGEMENT
                        VTAM DEVICE CURRENT DATA

Command ===>

Host Name = LOCAL
Enter Command: LOCATE <Channel>, REFRESH, SORT <NAME/TYPE/STATUS/SLOWDOWN>
or Option: S=Start, R=Review, L=List, X=Expand Z=Stop All

Option Channel    Sampled Ch Pgm Ch Pgm  Read  <-Channel Pgm Starts Due To->
=>      L360      hh:mm:ss Writes Reads Buffers Timer Queue Dest-Cap Hi-Pri
=>      L1A0

```

Option	Channel	Sampled	Ch	Pgm	Ch	Pgm	Read	<-Channel	Pgm	Starts	Due To->
=>	L360	00:15:00					5	1	1	45	0
=>	L1A0										

```

PF 1=HELP      2=REFRESH  3=END      4=LEFT      12=RETURN  15=NCP
PF16=ROUTER   17=LINE     20=APPL   24=TERMINAL

```

Figure 183. VTAM Device Current Data Panel (FNM02DS3)

- To display data for an MPC device, type X in the Option field on panel FNM02DS1 and press ENTER to display the VTAM MPC Device Current Data panel (FNM03MP1), shown in Figure 184.

The VTAM MPC Device Current Data panel (FNM03MP1) displays the status of MPC VTAM devices.

```

FNM03MP1                NPM V2R7  5655-043                More: >
                        VTAM MANAGEMENT
                        VTAM MPC DEVICE CURRENT DATA

Command ===>

Host Name = LOCAL      MPC Group = L1A0
Enter Command: LOCATE <CHANNEL>, REFRESH, SORT <NAME/TYPE/STATUS/SLOWDOWN>
or Option: S=Start, R=Review, L=List, Z=Stop All

Option Channel Device Data Collection Monitor
=> * 01A0 WRITE 0 NORMAL Status
    01A1 READ 0 INACTIVE

PF 1=HELP      3=END      5=RIGHT  12=RETURN  15=NCP      16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL

```

Figure 184. VTAM MPC Device Current Data (FNM03MP1)

- Use the RIGHT command to display the VTAM Device Current Data panel (FNM03MP2), shown in Figure 185 on page 151, or use the LEFT command to display the VTAM Device Selection panel (FNM02DS1).

The VTAM Device Current Data panel (FNM03MP2) displays current data for VTAM MPC devices.

```

FNM03MP2                NPM V2R7  5655-043                More: <
                        VTAM MANAGEMENT
                        VTAM DEVICE CURRENT DATA

Command ==>>

Host Name = LOCAL      MPC Group = L1A0
Enter Command: LOCATE <CHANNEL>, REFRESH, SORT <NAME/STATUS/SLOWDOWN>
or Option: S=Start, R=Review, L=List, Z=Stop All

      Channel  Sampled  % Time % Time  Read  Buffer % MPC  % MPC  Number of
Option Address  hh:mm:ss Slowdown Active Attn  Util  SIO  Bytes  Bytes/SIO
=> *  01A0    11:20:00      0   100    0     4   65   97     34
=> *  01A1    11:20:00      0   100    0     3   65   96     34

PF 1=HELP      3=END      4=LEFT    12=RETURN   15=NCP      16=ROUTER
PF17=LINE     20=APPL    24=TERMINAL

```

Figure 185. VTAM Device Current Data (FNM03MP2)

Collecting and Displaying Application Data

Use the following procedure to collect and view VTAM application data:

1. Select option 6 from the VTAM Resource Type Selection panel (FNM01VTM) to display the VTAM Application Selection panel (FNM02PS1), shown in Figure 186. You can also use fast path =5.6 to display the VTAM Application Selection panel.

The VTAM Application Selection panel (FNM02PS1) displays a list of applications.

```

FNM02PS1                NPM V2R7  5655-043                More: >
                        VTAM MANAGEMENT
                        VTAM APPLICATION SELECTION

Command ==>>

Host Name = LOCAL
Enter Command: LOCATE <Appl>, REFRESH, SORT <NAME/STATUS>
or Option: S=Start, R=Review, L=List, Z=Stop All

      Data      Collection
Option Appl  Forwd  Status
=>  APPL1    23     STARTED
=>  APPL2    12     STARTED
=>  APPL3     5     DEFERRED

PF 1=HELP      2=REFRESH  3=END      5=RIGHT    8=FORWARD  11=BOTTOM
PF12=RETURN   15=NCP     16=ROUTER  17=LINE    20=APPL    24=TERMINAL

```

Figure 186. VTAM Application Selection Panel (FNM02PS1)

2. Type one of the following options in the Option field and press ENTER:

Option	Action
S	Starts a VTAM application data collection. See “Starting VTAM Statistics Collections” on page 154.

- R** Displays VTAM application data written to a VSAM file. See “Displaying VTAM Statistics Data” on page 156.
- L** Lists all active VTAM application data collections for this application. See “Displaying/Altering/Stopping Active VTAM Data Collections” on page 157.
- Z** Ends all active VTAM application data collections for this application.

Note: You can issue these commands from both VTAM application panels.

3. Use the **RIGHT** command to display the VTAM Application Current Data panel (FNM02PS2), shown in Figure 187.

The VTAM Application Current Data panel (FNM02PS2) displays the current data collected for resources with a collection status of **STARTED**.

```

FNM02PS2                NPM V2R7  5655-043                More: <
                        VTAM MANAGEMENT
                        VTAM APPLICATION CURRENT DATA

Command ==>>>

Host Name = LOCAL
Enter Command: LOCATE <Appl>, REFRESH, SORT <NAME/STATUS>
or Option: S=Start, R=Review, L=List, Z=Stop All

Option  Appl      Sampled  <----- Sessions ----->  Inbnd Pacing Receive
=>      APPL1     09:45:00  1      1      1      0      0      0      0      Any
=>      APPL2     00:00:00
=>      APPL3     00:00:00

PF 1=HELP      2=REFRESH    3=END      4=LEFT      8=FORWARD   11=BOTTOM
PF12=RETURN   15=NCP      16=ROUTER  17=LINE     20=APPL    24=TERMINAL
    
```

Figure 187. VTAM Application Current Data Panel (FNM02PS2)

4. You can use the **LEFT** command to return to the VTAM Application Selection panel (FNM02PS1).

Collecting and Displaying Address Space Data

Use the following procedure to collect and view address space data:

1. Select option 7 from the VTAM Resource Type Selection panel (FNM01VTM) to display the VTAM Address Space Selection panel (FNM02AS1), shown in Figure 188 on page 153. You can also use fast path =5.7 to display the VTAM Address Space Selection panel.

The VTAM Address Space Selection panel displays a list of address spaces.

```

FNM02AS1                NPM V2R7  5655-043                More: >
                        VTAM MANAGEMENT
                        VTAM ADDRESS SPACE SELECTION

Command ==>>

Host Name = LOCAL
Enter Command: LOCATE <Space>, REFRESH, SORT <NAME/STATUS>
or Option: S=Start, R=Review, L=List, Z=Stop All

      Job Name  Data  Collection
Option /User ID  Forwd  Status
=>     APPL1    0      STARTED
=>     APPL2    0      STARTED
=>     APPL3    0      DEFERRED

PF 1=HELP    2=REFRESH  3=END    5=RIGHT  8=FORWARD 11=BOTTOM
PF12=RETURN 15=NCP     16=ROUTER 17=LINE  20=APPL   24=TERMINAL

```

Figure 188. VTAM Address Space Selection Panel (FNM02AS1)

2. Type one of the following options in the Option field and press ENTER:

Option	Action
S	Starts a VTAM address space data collection. See “Starting VTAM Statistics Collections” on page 154.
R	Displays VTAM address space data written to a VSAM file. See “Displaying VTAM Statistics Data” on page 156.
L	Lists all active VTAM address space collections. See “Displaying/Altering/Stopping Active VTAM Data Collections” on page 157.
Z	Ends all active VTAM address space data collections.

Note: You can issue these options from both of the VTAM address space data panels.

3. Use the RIGHT command to display the VTAM Address Space Current Data panel (FNM02AS2), shown in Figure 189 on page 154, or use the LEFT command to return to the VTAM Address Space Selection panel (FNM02AS1).

The VTAM Address Space Current Data panel displays current VTAM address space information.

Starting VTAM Collections

```

FNM02AS2                NPM V2R7  5655-043                More: <
                        VTAM MANAGEMENT
                        VTAM ADDRESS SPACE CURRENT DATA

Command ==>>>

Host Name = LOCAL
Enter Command: LOCATE <Space>, REFRESH, SORT <NAME/STATUS>
or Option: S=Start, R=Review, L=List, Z=Stop All

   Option  Job Name  Sampled  Number  Number  Sessions  Sessions  Private Storage
   /User ID hh:mm:ss  ACBs    PSTs    Active   Pending   Used by VTAM
=>  APPL1   00:15:00    1      3      1        0        238K
=>  APPL2   00:15:00    5      5      1        0        100K
=>  APPL3   00:00:00

PF 1=HELP    2=REFRESH  3=END      4=LEFT    8=FORWARD 11=BOTTOM
PF12=RETURN 15=NCP     16=ROUTER 17=LINE   20=APPL   24=TERMINAL

```

Figure 189. VTAM Address Space Current Data Panel (FNM02AS2)

Starting VTAM Statistics Collections

Use the following procedure to start a VTAM statistics collection from any VTAM Selection or Current Data panel:

1. Type S in the Option field next to a specific resource displayed on any VTAM Selection or Current Data panel.
2. Press ENTER to display the VTAM Start panel (FNM03VTD), shown in Figure 190. You can also use fast path =5.9.1 to display the VTAM Start panel.

The VTAM Start panel (FNM03VTD) is the first of two VTAM start collection panels. This panel is shared by all VTAM resource types.

```

FNM03VTD                NPM V2R7  5655-043
                        VTAM MANAGEMENT
                        VTAM START

Command ==>>>

Interval Number  ==>> 1
Resource Name    ==>> AP00
or              ==>> VR TP
Virtual Route   ==>>
Resource Type    ==>> BPL (GBL/BPL/VR/DEV/APL/ADR/MPCG)
Dynamic Resource ==>> N/A (Yes/No)

Start Time      ==>> 10:30:00 (hh:mm:ss)
Stop Time       ==>> 12:00:00
Daily           ==>> YES (Yes/No)

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL

```

Interval	
Num	Time
1	00:03:45
2	00:07:30
3	00:15:00
4	00:30:00
5	01:00:00
6	02:00:00
7	04:00:00

Figure 190. VTAM Start Panel (FNM03VTD)

3. Complete this panel and press ENTER to display the second VTAM Start panel (FNM03VTC), shown in Figure 191 on page 155.

The second VTAM Start panel (FNM03VTC) is used to specify data destinations and set monitors for a VTAM collection.

Note: An alternate second VTAM Start panel is displayed if you are starting a collection for either *address space* or *application* resource types. See the VTAM Start panel (FNM03VT2), shown in Figure 192 on page 156.

```

FNM03VTC                NPM V2R7  5655-043
                        VTAM MANAGEMENT
                        VTAM START

Command ==>

Host Name = LOCAL      Resource Name = AP00      Upper Level =
Resource Type = BPL    VR =          TP =          Dest Subarea =

Data Destinations      NPMLOG  VSAM  SMF  ALERT  GLOBAL
Detail                 ==> YES   NO   NO   N/A   N/A
Monitor                ==> YES   NO   NO   NO   NO
Resolve Monitors       ==> NO    (Yes/No)

Monitor Criteria
Thrashing coefficient (20-9999)    ==> 0      : HIGH
Expansion rate (0-2147483646)    ==> 0      : 0

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 191. VTAM Start Panel (FNM03VTC)

4. See step 8 if you are starting a collection on address space or application resource types.
5. Specify the destinations for the collected data by typing YES or NO in the Data Destinations Detail fields.
6. Specify whether you want to resolve monitors.

If you type NO in the Resolve Monitors field, monitor messages are generated only if collected data falls outside of the specified monitor criteria ranges.

If you type YES in the Resolve Monitors field, a single monitor message is generated when collected data falls outside of a monitor criteria range. No additional monitor messages are generated for that monitor until the collected data returns to the specified range.

7. Set monitors (if required) for the selected data collection.

Type numerical values in the LOW and HIGH fields for each monitor you want to set. The valid numerical ranges for each monitor are displayed in parenthesis next to each monitor. For example, the valid range of values for the Thrashing coefficient monitor (shown in Figure 191) is 20 to 9999.

Note: Monitor criteria entered in the HIGH column must be greater than the criteria entered in the LOW column, with one exception. You can enter a zero in the HIGH column, regardless of what is entered in the LOW column. Entering a zero in either the LOW or HIGH fields for a monitor turns off that portion of the monitor.

```
FNM03VT2                NPM V2R7  5655-043
                        VTAM MANAGEMENT
                        VTAM START

Command ==>

Host Name = LOCAL      Resource Name = APPL01   Resource Type = APL
                        Dest Subarea =          VR =          TP =

Data Destinations      NPMLLOG VSAM  SMF  ALERT  GLOBAL
Detail                 ==> YES  NO   NO   N/A   N/A

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 192. VTAM Start Panel (FNM03VT2)

8. (Only for collections for address space or application resource types.)

If you are starting a collection on address space or application resource types, specify the destinations for the collected data by typing YES or NO in the Data Destinations Detail fields on the VTAM Start panel (FNM03VT2).

Note: You cannot set monitor criteria for application or address space collections. Monitor criteria fields are not displayed on the alternate VTAM Start panel (FNM03VT2).

9. Press ENTER to start the collection.

Displaying VTAM Statistics Data

Use the following procedure to display a VTAM statistics collection from any VTAM Selection or Current Data panel:

1. Type R in the Option field next to a specific resource displayed on any VTAM Selection or Current Data panel.
2. Press ENTER to display the VTAM Data Analysis panel (FNM03VAN). You can also use fast path =5.9.4 to display the VTAM Data Analysis panel.

The VTAM Data Analysis panel enables you to specify criteria for searching the VSAM review file for data. This panel can be used with all VTAM resource types.

Note: When using this panel to select and display VTAM data, you can enter a Start Time that is later than the Stop Time, if the Stop Date is later than the Start Date.

The detail data panels that are displayed vary, depending on which VTAM resource type you select.


```

FNM03VAN                NPM V2R7  5655-043
                        VTAM MANAGEMENT
                        VTAM DATA ANALYSIS

Command ==>

Host Name = LOCAL

Data Type      ==> DETAIL      Upper Level
Resource Name  ==> AP00       ==>
or             VR TP        DESTSA
Virtual Route  ==>
Resource Type  ==> BPL        <=====
Search criteria Start      Stop
Time           ==> 10 : 30 : 00 12 : 00 : 00 (hh:mm:ss)
Date           ==> 09 / 30 / 00 09 / 30 / 00 (mm/dd/yy)

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 193. VTAM Data Analysis Panel (FNM03VAN)

3. Complete the VTAM Data Analysis panel and press ENTER to display one of the following VTAM detail data panels:
 - VTAM Global Detail Data. See “Displaying VTAM Global Detail Data” on page 165.
 - VTAM Buffer Pool Detail Data. See “Displaying VTAM Buffer Pool Detail Data” on page 168.
 - VTAM Virtual Route Detail Data. See “Displaying VTAM Virtual Route Detail Data” on page 168.
 - VTAM Device Detail Data. See “Displaying VTAM Device Detail Data” on page 169.
 - VTAM Application Detail Data. See “Displaying VTAM Application Detail Data” on page 171.
 - VTAM Address Space Detail Data. See “Displaying VTAM Address Space Detail Data” on page 172.
 - VTAM Monitor Event Messages. See “Displaying VTAM Monitor Event Messages” on page 172.

Displaying/Altering/Stopping Active VTAM Data Collections

Use the following procedure to display, alter, or stop active VTAM statistics collections from any VTAM Selection or Current Data panel:

1. Type L in the Option field next to a specific resource displayed on any VTAM Selection or Current Data panel.
2. Press ENTER to display the Command List panel (FNM03VCL), shown in Figure 194 on page 158.

The Command List panel displays all active NPM collections for the selected resource. You can stop or alter VTAM data collections from the Command List panel.

Display/Alter/Stop Active VTAM Collections

```

FNM03VCL                      NPM V2R7  5655-043
                               VTAM MANAGEMENT
                               COMMAND LIST

Command ==>>

Host Name = LOCAL      Resource Name = NCP01      Resource Type = GBL
                               Dest Subarea = 1124      VR =      TP =
Enter Command: REFRESH or Option: A=Alter, P=Stop

      Time      Collect      <--Detail--> <-----Monitor----->
Option Start  Stop   Status   Daily Int LOG VSAM SMF LOG VSAM SMF ALERT GBL
=>      00:00:00 05:00:00 STARTED  NO   1  Y  Y  N   Y  Y  N  N  N  N

PF 1=HELP      2=REFRESH  3=END      12=RETURN  15=NCP      16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL
  
```

Figure 194. Command List Panel (FNM03VCL)

3. To stop a collection, type P in the Option field next to a specific collection. Press ENTER to stop the selected collection.
You can use the REFRESH command to display the current collection status for the resource.
4. To alter a collection, type A in the option field next to a specific collection. Press ENTER to display the VTAM Alter panel (FNM03VTC), shown in Figure 195.
The VTAM Alter panel enables you to alter a VTAM collection. This panel appears when you press ENTER from panel FNM03VTD.

Note: If you are altering a collection for either address space or application resource types, an alternate VTAM Alter panel (FNM03VT2) is displayed, shown in Figure 196 on page 159.

```

FNM03VTC                      NPM V2R7  5655-043
                               VTAM MANAGEMENT
                               VTAM ALTER

Command ==>>

Host Name = LOCAL      Resource Name = AP00      Upper Level =
Resource Type = BPL    VR =      TP =      Dest Subarea =

Data Destinations      NPMLLOG  VSAM   SMF   ALERT  GLOBAL
Detail                 ==>> YES   NO    NO    N/A    N/A
Monitor                 ==>> YES   NO    NO    NO     NO
Resolve Monitors       ==>> NO    (Yes/No)

Monitor Criteria
Threshing coefficient (20-9999) ==>> 0      : HIGH
Expansion rate         (0-2147483646) ==>> 0      : 0

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
  
```

Figure 195. VTAM Alter Panel (FNM03VTC)

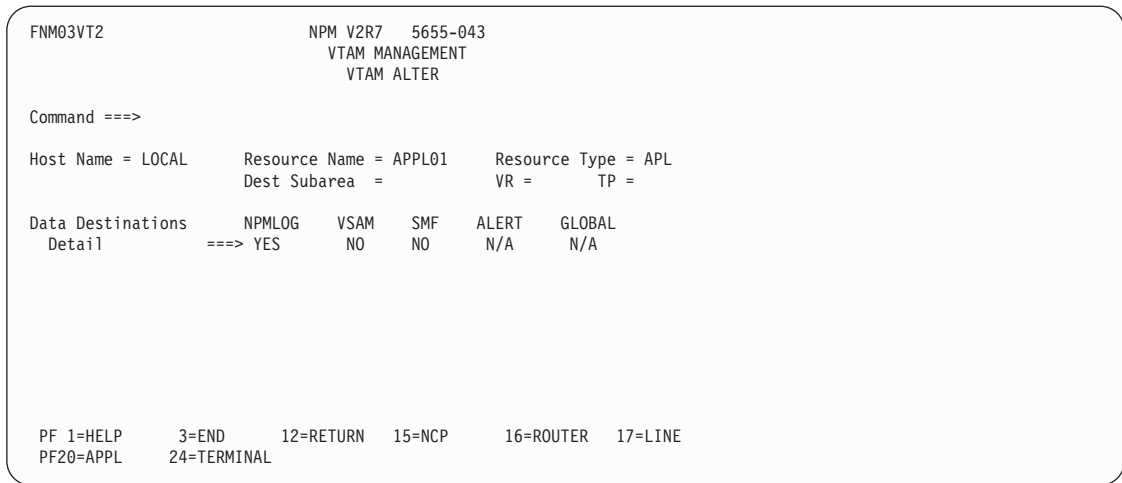


Figure 196. VTAM Alter Panel (FNM03VT2)

5. Complete either the VTAM Alter panel (FNM03VTC) or the VTAM Alter panel (FNM03VT2) and press ENTER to alter a collection on the selected VTAM resource.

Issuing Direct VTAM Statistics Collection Commands

You can issue direct NPM VTAM statistics commands when:

- You know the name of the resource and do not want to spend time moving through the resource list panels to find it.
- A resource is not currently defined to NPM.
- You want to use a generic name, such as ALLVR (all virtual routes). Generic names are not displayed on panel lists.

Note: There are some limitations associated with VTAM statistics collections for dynamic and generic resources. For VTAM statistics collections on a dynamic resource, you cannot alter or stop a collection using direct VTAM panels until the resource is defined to NPM. However, you can stop this type of collection using the appropriate VTAM collection console command. For example, you would use the VVRCOLL command to stop these types of collections on dynamic virtual routes. See “NPM Commands” on page 215 for information about using the various VTAM system console commands to stop a collection.

There are additional limitations for deferred VTAM collections on resources defined by generic names, such as ALLVR. For example, if you start a deferred collection on ALLVR, collection information for the individual virtual routes cannot be displayed on NPM panels until the collection is started.

Use the following procedure to issue direct NPM VTAM statistics commands:

1. Select option 9 from the VTAM Resource Type Selection panel (FNM01VTM) to display the Direct Commands panel (FNM02CMD), shown in Figure 197 on page 160. You can also use fast path =5.9 to display the Direct Commands panel.

```
FNM02CMD                                NPM V2R7  5655-043
                                         VTAM MANAGEMENT
                                         DIRECT COMMANDS

Select Option ===>

 1 Start a Collection
 2 Alter a Collection
 3 Stop a Collection
 4 Review Data

Host Name = LOCAL

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 197. Direct Commands Panel (FNM02CMD)

2. Type one of the following option numbers in the Select Option field and press ENTER:

Option	Action
1	Starts a VTAM collection. See “Using Direct Commands to Start a VTAM Collection”.
2	Alters a VTAM collection. See “Using Direct Commands to Alter a VTAM Collection” on page 162.
3	Stops a VTAM collection. See “Using Direct Commands to Stop a VTAM Collection” on page 164.
4	Displays VTAM data. See “Using Direct Commands to Display VTAM Detail Data” on page 164.

Using Direct Commands to Start a VTAM Collection

Use the following procedure to start a VTAM data collection:

1. Select option 1 from the Direct Commands panel (FNM02CMD) to display the VTAM Start panel (FNM03VTD), shown in Figure 198 on page 161. You can also use fast path =5.9.1 to display the VTAM Start panel.

The VTAM Start panel (FNM03VTD) is the first of two VTAM start collection panels. This panel is shared by all VTAM resource types.

```

FNM03VTD                                NPM V2R7  5655-043
                                         VTAM MANAGEMENT
                                         VTAM START

Command ==>

Interval Number  ==> 1
Resource Name    ==> AP00
or              VR TP
Virtual Route    ==>
Resource Type    ==> BPL (GBL/BPL/VR/DEV/APL/ADR/MPCG)
Dynamic Resource ==> N/A (Yes/No)

Start Time      ==> 10:30:00 (hh:mm:ss)
Stop Time       ==> 12:00:00
Daily           ==> YES (Yes/No)

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
    
```

Interval	
Num	Time
1	00:03:45
2	00:07:30
3	00:15:00
4	00:30:00
5	01:00:00
6	02:00:00
7	04:00:00

Figure 198. VTAM Start Panel (FNM03VTD)

- Complete this panel and press ENTER to display the second VTAM Start panel (FNM03VTC), shown in Figure 199.

Note: If you are starting a collection for either address space or application resource types, an alternate second VTAM Start panel (FNM03VT2) is displayed, shown in Figure 200 on page 162.

```

FNM03VTC                                NPM V2R7  5655-043
                                         VTAM MANAGEMENT
                                         VTAM START

Command ==>

Host Name = LOCAL      Resource Name = AP00      Upper Level =
Resource Type = BPL    VR =          TP =          Dest Subarea =

Data Destinations      NPMLLOG  VSAM    SMF    ALERT  GLOBAL
Detail                 ==> YES   NO     NO     N/A    N/A
Monitor                ==> YES   NO     NO     NO     NO
Resolve Monitors       ==> NO   (Yes/No)

Monitor Criteria
Thrashing coefficient (20-9999) ==> 0 : 0
Expansion rate (0-2147483646) ==> 0 : 0

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 199. VTAM Start Panel (FNM03VTC)

Direct Command - Start VTAM Collection

```

FNM03VT2                NPM V2R7  5655-043
                        VTAM MANAGEMENT
                        VTAM START

Command ==>>

Host Name = LOCAL      Resource Name = APPL01   Resource Type = APL
                        Dest Subarea =          VR =          TP =

Data Destinations     NPMLLOG  VSAM   SMF   ALERT  GLOBAL
Detail                ==>> YES   NO    NO    N/A    N/A

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
  
```

Figure 200. VTAM Start Panel (FNM03VT2)

- Complete either the VTAM Start panel (FNM03VTC), or the VTAM Start panel (FNM03VT2), and press ENTER to start a collection on the selected VTAM resource.

Note: You cannot set monitor criteria for application or address space collections. Monitor criteria fields are not displayed on the alternate VTAM Start panel (FNM03VT2).

Using Direct Commands to Alter a VTAM Collection

Use the following procedure to alter a VTAM data collection:

- Select option 2 from the Direct Commands panel (FNM02CMD) to display the first VTAM Alter panel (FNM03VTD), shown in Figure 201. You can also use fast path =5.9.2 to display the VTAM Alter panel.

```

FNM03VTD                NPM V2R7  5655-043
                        VTAM MANAGEMENT
                        VTAM ALTER

Command ==>>

Interval Number  ==>> 1
Resource Name    ==>> AP00      ==>> Upper Level
or              VR TP          DESTSA
Virtual Route   ==>>
Resource Type    ==>> BPL      (GBL/BPL/VR/DEV/APL/ADR/MPCG)
Dynamic Resource ==>> N/A      (Yes/No)

Start Time      ==>> 10:30:00   (hh:mm:ss)
Stop Time       ==>> 12:00:00
Daily           ==>> YES      (Yes/No)

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
  
```

Interval	
Num	Time
1	00:03:45
2	00:07:30
3	00:15:00
4	00:30:00
5	01:00:00
6	02:00:00
7	04:00:00

Figure 201. VTAM Alter Panel (FNM03VTD)

- Complete this panel and press ENTER to display the second VTAM Alter panel (FNM03VTC), shown in Figure 202 on page 163.

Notes:

- a. NPM verifies 1) that the selected resource is defined to NPM, and 2) that a collection has been started for the resource that matches the criteria entered on the VTAM Alter panel (FNM03VTD). An error message is displayed if either verification fails.
NPM does not perform these verifications if you specify a generic VTAM resource name, such as ALLVR.
- b. If you are altering a collection for either *address space* or *application* resource types, the second VTAM Alter panel (FNM03VT2) is displayed, shown in Figure 203 on page 164.

```

FNM03VTC                                NPM V2R7  5655-043
                                         VTAM MANAGEMENT
                                         VTAM ALTER

Command ==>

Host Name = LOCAL      Resource Name = AP00      Upper Level =
Resource Type = BPL    VR =          TP =          Dest Subarea =

Data Destinations      NPMLOG   VSAM   SMF   ALERT   GLOBAL
Detail                 ==> YES    NO    NO    N/A     N/A
Monitor                ==> YES    NO    NO    NO      NO
Resolve Monitors      ==> NO      (Yes/No)

Monitor Criteria
Threshing coefficient (20-9999) ==> 0      : HIGH
Expansion rate (0-2147483646) ==> 0      : 0

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 202. VTAM Alter Panel (FNM03VTC)

Note: You can alter only the Data Destinations and the Monitor Criteria fields on the VTAM Alter panel (FNM03VTC).

If you specify a generic resource name, such as ALLVR, all the valid monitor criteria are displayed as zeros.

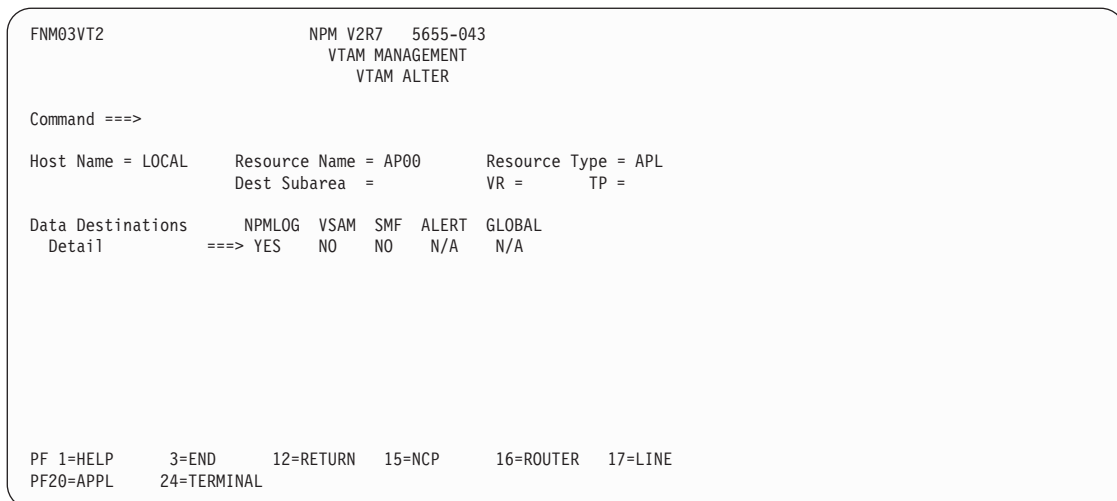


Figure 203. VTAM Alter Panel (FNM03VT2)

3. Complete either the VTAM Alter panel (FNM03VTC) or the VTAM Alter panel (FNM03VT2).
4. Press ENTER to alter the specified collection.

Using Direct Commands to Stop a VTAM Collection

Use the following procedure to stop a VTAM data collection:

1. Select option 3 from the Direct Commands panel (FNM02CMD) to display the VTAM Stop panel (FNM03VTD), shown in Figure 204. You can also use fast path =5.9.3 to display the VTAM Stop panel.

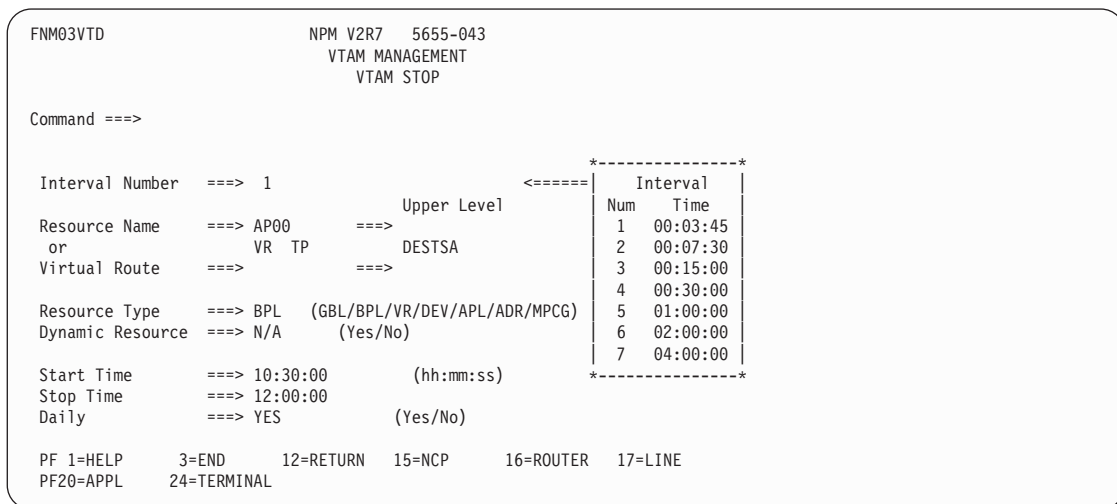


Figure 204. VTAM Stop Panel (FNM03VTD)

2. Complete this panel and press ENTER to end the specified VTAM collection.

Using Direct Commands to Display VTAM Detail Data

Use the following procedure to display VTAM detail data:

1. Select option 4 from the Direct Commands panel (FNM02CMD) to display the VTAM Data Analysis panel (FNM03VAN). You can also use fast path =5.9.4 to display the VTAM Data Analysis panel.

The VTAM Data Analysis panel enables you to specify criteria for searching the VSAM review file for data. FNM03VAN is a generic VTAM panel which can be used to search for all resource types. Depending on which type of VTAM resource you select, different detail data panels are displayed. Each of the VTAM detail data panels displayed with this option are described in this section.

Note: When using this panel to select and display VTAM data, you can enter a Start Time that is later than the Stop Time, if the Stop Date is later than the Start Date.

```

FNM03VAN                NPM V2R7  5655-043
                        VTAM MANAGEMENT
                        VTAM DATA ANALYSIS

Command ==>

Host Name = LOCAL

Data Type      ==> DETAIL      Upper Level
Resource Name  ==> AP00      ==>
or             VR TP        DESTSA
Virtual Route  ==>

Resource Type   ==> BPL      <=====

Search criteria  Start      Stop
Time            ==> 10 : 30 : 00  12 : 00 : 00  (hh:mm:ss)
Date            ==> 09 / 30 / 00  09 / 30 / 00  (mm/dd/yy)

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
  
```

```

*-----*
Resource Type
GBL - VTAM global
BPL - Buffer pool
VR - Virtual route
DEV - Device
APL - Application
ADR - Address space
MPCG - MPC group
ALL - All types
*-----*
  
```

Figure 205. VTAM Data Analysis Panel (FNM03VAN)

2. Complete the VTAM Data Analysis panel and press ENTER to display one of the following VTAM detail data panels:
 - VTAM Global Detail Data. See “Displaying VTAM Global Detail Data”.
 - VTAM Buffer Pool Detail Data. See “Displaying VTAM Buffer Pool Detail Data” on page 168.
 - VTAM Virtual Route Detail Data. See “Displaying VTAM Virtual Route Detail Data” on page 168.
 - VTAM Device Detail Data. See “Displaying VTAM Device Detail Data” on page 169.
 - VTAM Application Detail Data. See “Displaying VTAM Application Detail Data” on page 171.
 - VTAM Address Space Detail Data. See “Displaying VTAM Address Space Detail Data” on page 172.
 - VTAM Monitor Event Messages. See “Displaying VTAM Monitor Event Messages” on page 172.

Displaying VTAM Global Detail Data

Use the following procedure to view VTAM global detail data:

Direct Command - Display VTAM Detail Data

1. Type the following data on the VTAM Data Analysis panel (FNM03VAN) and press ENTER to display the first VTAM Global Detail Data panel (FNM04GD1), shown in Figure 206:
 - A valid VTAM global name in the Resource Name field
 - DETAIL in the Data Type field
 - GBL in the Resource Type field

The first VTAM Global Detail Data panel (FNM04GD1) displays a list of records written to the VSAM review file globally for VTAM.

```
FNM04GD1                NPM V2R7  5655-043          More:  >
                        VTAM MANAGEMENT
                        VTAM GLOBAL DETAIL DATA

Command ==>>

Host Name = LOCAL
Date/Time: from 09/30/00 15:32:24 to 09/30/00 15:32:24
Enter Command: REFRESH

      Interval      Maximum Ever      Average Alloc      Interval Max
End Time hh:mm:ss  CSA24      CSA  CSA24      CSA  CSA24      CSA
15:32:24 00:15:00  17394  656805  15246    656282  15246    656282

PF 1=HELP      2=REFRESH  3=END      5=RIGHT  12=RETURN  15=NCP
PF16=ROUTER   17=LINE   20=APPL   24=TERMINAL
```

Figure 206. VTAM Global Detail Data Panel (FNM04GD1)

2. Use the RIGHT command to display the second VTAM Global Detail Data panel (FNM04GD2), shown in Figure 207 on page 167.

The VTAM Global Detail Data panel (FNM04GD2) displays additional records written to the VSAM review file globally for VTAM.

```

FNM04GD2                NPM V2R7  5655-043                More: < >
                        VTAM MANAGEMENT
                        VTAM GLOBAL DETAIL DATA

Command ===>

Host = LOCAL
Date/Time: from 09/30/00 15:32:24 to 09/30/00 15:32:24
Enter Command: REFRESH

      Interval      % VTAM  <----- Page-Ins ----->
End Time hh:mm:ss CPU Usage Private Common LPA Total
15:32:24 00:15:00   .04      156    27    16   199

PF 1=HELP    2=REFRESH  3=END    4=LEFT    5=RIGHT  12=RETURN
PF15=NCP    16=ROUTER  17=LINE  20=APPL   24=TERMINAL
    
```

Figure 207. VTAM Global Detail Data Panel (FNM04GD2)

- Use the RIGHT command to display the third VTAM Global Detail Data panel (FNM04GD3), shown in Figure 208.

The VTAM Global Detail Data panel (FNM04GD3) displays additional records written to the VSAM review file globally for VTAM.

```

FNM04GD3                NPM V2R7  5655-043                More: <
                        VTAM MANAGEMENT
                        VTAM GLOBAL DETAIL DATA

Command ===>

Host Name = LOCAL
Date/Time: from 05/02/00 08:00 to 05/02/00 17:00
Enter Command: REFRESH

      Interval      <----- SIO Counts ----->
End Time hh:mm:ss NCPs CTCs Local-SNA Non-SNA DASD Misc MPCR MPCW
15:32:24 00:15:00   0    0      0      1    0    0    1    1

PF 1=HELP    3=END    4=LEFT    12=RETURN  15=NCP    16=ROUTER
PF17=LINE    20=APPL  24=TERMINAL
    
```

Figure 208. VTAM Global Detail Data Panel (FNM04GD3)

Displaying VTAM Buffer Pool Detail Data

Type the following data on the VTAM Data Analysis panel (FNM03VAN) and press ENTER to display the VTAM Buffer Pool Detail Data panel (FNM04BD1), shown in Figure 209:

- A valid buffer pool name in the Resource Name field
- DETAIL in the Data Type field
- BPL in the Resource Type field

The VTAM Buffer Pool Detail Data panel displays a list of records written to the VSAM review file for the specified buffer pool.

```
FNM04BD1                NPM V2R7  5655-043
                        VTAM MANAGEMENT
                        VTAM BUFFER POOL DETAIL DATA

Command ==>>

Host Name = LOCAL      Buffer Pool = AP00
Date/Time: from 09/30/00 15:32:24 to 09/30/00 15:32:24
Enter Command: REFRESH

      Interval  <- Avg Buffers ->  <- Max Buffers ->  Req Waiting  Number
End Time hh:mm:ss  Alloc Used Avail  Alloc Used Avail  Avg Max  Expands
15:32:24 12:00:11   16  0  16    16  0  16    0  0    0

PF 1=HELP      2=REFRESH  3=END      12=RETURN  15=NCP      16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL
```

Figure 209. VTAM Buffer Pool Detail Data Panel (FNM04BD1)

Displaying VTAM Virtual Route Detail Data

Use the following procedure to view VTAM virtual route detail data:

1. Type the following data on the VTAM Data Analysis panel (FNM03VAN) and press ENTER to display the first Virtual Route Detail Data panel (FNM04VD1), shown in Figure 210 on page 169:
 - A valid virtual route name in the Resource Name field
 - DETAIL in the Data Type field
 - VR in the Resource Type field

The Virtual Route Detail Data panel displays a list of records written to the VSAM review file for a particular virtual route.

```

FNM04VD1                NPM V2R7  5655-043                More: >
                        VTAM MANAGEMENT
                        VIRTUAL ROUTE DETAIL DATA

Command ==>

Host Name = LOCAL      Destination Subarea = 51      VR = 0  TP = 0
Date/Time: from 09/30/00 15:32:24 to 09/30/00 15:32:24
Enter Command: REFRESH, SORT <TIME/BLOCK/SESSIONS>

      Interval  % Time  % Time  LU-LU  Total  Queued
End Time hh:mm:ss Blocked Active Sessions Sessions PIUs
15:32:24 00:15:00      0     100      12     16      8

PF 1=HELP      2=REFRESH  3=END      5=RIGHT  12=RETURN  15=NCP
PF16=ROUTER   17=LINE    20=APPL   24=TERMINAL
    
```

Figure 210. Virtual Route Detail Data Panel (FNM04VD1)

- Use the RIGHT command to display the second virtual route detail data panel (FNM04VD2), shown in Figure 211.

The second Virtual Route Detail Data panel displays additional records written to the VSAM review file for the specified virtual route.

```

FNM04VD2                NPM V2R7  5655-043                More: <
                        VTAM MANAGEMENT
                        VIRTUAL ROUTE DETAIL DATA

Command ==>

Host Name = LOCAL      Destination Subarea = 51      VR = 0  TP = 0
Date/Time: from 09/30/00 15:32:24 to 09/30/00 15:32:24
Enter Command: REFRESH, SORT <TIME/BLOCK/SESSIONS>
      Current      Interval
End Time Interval Window Size Window Size <---- PIUs ---->
15:32:24 hh:mm:ss Min Max Min Max Inbound Outbound
          00:15:00  8  8  8  8  33  34

PF 1=HELP      2=REFRESH  3=END      4=LEFT   8=FORWARD  12=RETURN
PF15=NCP      16=ROUTER  17=LINE    20=APPL  24=TERMINAL
    
```

Figure 211. Virtual Route Detail Data Panel (FNM04VD2)

- You can use the LEFT command to return to the first Virtual Route Detail Data Panel (FNM04VD1).

Displaying VTAM Device Detail Data

You can display VTAM Device Detail data for CTC devices, MPC groups, and MPC devices.

To display data for CTC devices or MPC groups, use the following procedure:

Direct Command - Display VTAM Detail Data

1. Type the following data on the VTAM Data Analysis panel (FNM03VAN) and press ENTER to display the first VTAM Device Detail Data panel (FNM04DD1), shown in Figure 212:

- A valid VTAM device name in the Resource Name field
- DETAIL in the Data Type field
- DEV or MPCG in the Resource Type field

The first VTAM Device Detail Data panel displays a list of records written to the VSAM review file for the specified VTAM device.

```
FNM04DD1                NPM V2R7  5655-043                More: >
                        VTAM MANAGEMENT
                        VTAM DEVICE DETAIL DATA

Command ==>>

Host Name = LOCAL      Channel Address = 1122  Channel Type = CTC
Date/Time: from 09/30/00 15:32:24 to 09/30/00 15:32:24
Enter Command: REFRESH, SORT <TIME/SLOWDOWN>

      Interval          % Time % Time  Attn  Read  <---- PIUs ---->
End Time hh:mm:ss  Channel Slowdown Active  Rcvd  Attn  Inbound Outbound
15:32:24 00:15:00  CHANNEL1      0    100     0    33    33    34

PF 1=HELP      2=REFRESH  3=END      5=RIGHT  12=RETURN  15=NCP
PF16=ROUTER   17=LINE    20=APPL   24=TERMINAL
```

Figure 212. VTAM Device Detail Data Panel (FNM04DD1)

2. You can use the RIGHT command to display the second VTAM Device Detail Data panel (FNM04DD2), shown in Figure 213.

The second VTAM Device Detail Data panel (FNM04DD2) displays additional records written to the VSAM review file for the specified VTAM device.

```
FNM04DD2                NPM V2R7  5655-043                More: <
                        VTAM MANAGEMENT
                        VTAM DEVICE DETAIL DATA

Command ==>>

Host Name = LOCAL      Channel Address = 1122  Channel Type = CTC
Date/Time: from 09/30/00 15:32:24 to 09/30/00 15:32:24
Enter Command: REFRESH, SORT <TIME/SLOWDOWN>

      Interval  Ch Pgm  Ch Pgm  Read  <-Channel Pgm Starts Due to->
End Time hh:mm:ss  Writes  Reads  Buffers  Timer  Queue  Dest-Cap  Hi-Pri
15:32:24 00:15:00                200    21    5    1    45

PF 1=HELP      2=REFRESH  3=END      4=LEFT  12=RETURN  15=NCP
PF16=ROUTER   17=LINE    20=APPL   24=TERMINAL
```

Figure 213. VTAM Device Detail Data Panel (FNM04DD2)

- You can use the LEFT command to return to the first VTAM Device Detail Data panel (FNM04DD1).

To display VTAM device detail data for MPC devices, use the following procedure:

Type R in the Option field on either the VTAM MPC Device Current Data panel (FNM03MP1) or on the VTAM Device Current Data panel (FNM03MP2) and press ENTER to display the VTAM MPC Device Detail Data panel (FNM04MD1), shown in Figure 214.

Alternatively, type the following data on the VTAM Data Analysis panel (FNM03VAN) and press ENTER:

- A valid VTAM MPC group name in the Resource Name field
- The channel name of the MPC group to which the MPC device belongs in the Upper Level field
- DETAIL in the Data Type field
- DEV in the Resource Type field

```

FNM04MD1                NPM V2R7  5655-043                More:
                        VTAM MANAGEMENT
                        VTAM MPC DEVICE DETAIL DATA

Command ==>>>

Host Name = LOCAL      Device Direction = WRITE      Channel Address = 01A0
Date/Time: from 05/02/00 08:00 to 05/02/00 17:00
Enter Command: REFRESH, SORT <TIME/SLOWDOWN>

      Interval  % Time % Time  Attn Buffer % MPC % MPC Number of
End Time hh:mm:ss Slowdown Active  Rcvd  Util  SIO Bytes Bytes/SIO
11:19:32 00:00:00      0   100      0    4   65   97      34

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 214. VTAM MPC Device Detail Panel (FNM04MD1)

Displaying VTAM Application Detail Data

Type the following data on the VTAM Data Analysis panel (FNM03VAN) and press ENTER to display the VTAM Application Detail Data panel (FNM04PD1), shown in Figure 215 on page 172:

- A valid VTAM application name in the Resource Name field
- DETAIL in the Data Type field
- APL in the Resource Type field

The VTAM Application Detail Data panel displays a list of records written to the VSAM review file for the specified application.

```

FNM04PD1                NPM V2R7  5655-043                More:  +
                        VTAM MANAGEMENT
                        VTAM APPLICATION DETAIL DATA

Command ==>>

Host Name = LOCAL      Application = NPM1
Date/Time: from 09/30/00 15:32:24 to 09/30/00 15:32:24
Enter Command: REFRESH

      Interval  <----- Sessions ----->  Inbnd  Pacing  Receive
End Time hh:mm:ss  Active Domain  PLU  APPC  Pend  Rsp  Rsp  Any
15:32:24 00:00:25      1      1      1      0      0      0      0      1

PF 1=HELP      2=REFRESH  3=END      12=RETURN  15=NCP      16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL
    
```

Figure 215. VTAM Application Detail Data Panel (FNM04PD1)

Displaying VTAM Address Space Detail Data

Type the following data on the VTAM Data Analysis panel (FNM03VAN) and press ENTER to display the VTAM Address Space Detail Data panel (FNM04AD1), shown in Figure 216:

- A valid VTAM address space name in the Resource Name field
- DETAIL in the Data Type field
- ADR in the Resource Type field

The VTAM Address Space Detail Data panel displays a list of records written to the VSAM review file for the specified address space.

```

FNM04AD1                NPM V2R7  5655-043
                        VTAM MANAGEMENT
                        VTAM ADDRESS SPACE DETAIL DATA

Command ==>>

Host Name = LOCAL      Address Space = APPL1
Date/Time: from 09/30/00 15:32:24 to 09/30/00 15:32:24
Enter Command: REFRESH

      Interval      Number  Number  Sessions  Sessions  Private Storage
End Time hh:mm:ss  AS ID   ACBs   PSTs   Active   Pending   Used by VTAM
15:32:24 00:15:00      22      1      3      0      0      291112

PF 1=HELP      2=REFRESH  3=END      12=RETURN  15=NCP      16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL
    
```

Figure 216. VTAM Address Space Detail Data Panel (FNM04AD1)

Displaying VTAM Monitor Event Messages

Use the following procedure from the VTAM Data Analysis panel (FNM03VAN), shown in Figure 205 on page 165, to display VTAM monitor event messages:

1. Type MONITOR in the Data Type field.
2. Type the name of a specific VTAM resource in the Resource Name field to display monitor event messages for the resource, or type ALL in the Resource Name field to display all monitor event messages for all VTAM resources.
3. Press ENTER to display the VTAM Monitor Event Messages panel (FNM0VMON), shown in Figure 217.

The VTAM Monitor Event Messages panel (FNM0VMON) displays VTAM monitor event messages, exception messages, and resolution messages for the resources specified on the VTAM Data Analysis panel (FNM03VAN).

```

FNM0VMON                NPM V2R7  5655-043
                        VTAM MANAGEMENT
                        VTAM MONITOR EVENT MESSAGES

Command ===>

Host Name = LOCAL
Date/Time: from 09/30/00 15:32:00 to 09/30/00 15:34:00
Enter Command: LOCATE <Resource>, REFRESH, SORT <TIME/NAME/TYPE>

Actual  Resource Monitor  Actual
Time    Name    Type    Value  Monitor Event Description      Limit
15:32:00 CHANNEL1 VDVSLWDN 90    MONITOR VALUE WAS ABOVE THE LIMIT OF 80
15:34:00 CRPL    VXPNRATE 11    MONITOR VALUE WAS ABOVE THE LIMIT OF 10

PF 1=HELP      2=REFRESH  3=END      12=RETURN  15=NCP     16=ROUTER
PF17=LINE     20=APPL   24=TERMINAL

```

Figure 217. VTAM Monitor Event Messages Panel (FNM0VMON)

7

Collecting and Analyzing NetWare Resources Data

This chapter gives an overview of the facilities NPM provides for collecting NetWare resources performance data. You can use NPM's NetWare resources data collection function to perform these tasks:

- Add or delete NPM's NetWare resource definitions
- Start, stop, or modify data collections on NetWare resources
- Start, stop, or modify the monitoring of NetWare resources
- Produce batch reports detailing the performance of NetWare resources

Using a nonprogrammable terminal, you can issue these commands from a system console or in an NPM EXEC:

- **LWGRES** to define NetWare resources that are to be used for collection purposes. See "LWGRES" on page 267 for more information.
- **LWGCOLL** to start and stop collections or monitors on NetWare resources defined by the LWGRES command. See "LWGCOLL" on page 259 for more information.
- **LWGSTOP** stops all active collections on all NetWare resources. See "LWGSTOP" on page 269 for more information.

8

Collecting and Analyzing Dynamic Data

Use the Dynamic Data Display function to display network and response times data on 3270 panels without waiting for a collection interval to end and without waiting until NPM has written the data to the review files. Real time data is collected and displayed on the screen using the refresh interval (as in the NPM console). You can also refresh the data automatically at any time.

For all type of Network and Response Times resources, Dynamic Data Display shows the start of the last collection interval when data was collected for these resources. After the last interval data is shown on the screen, NPM waits for your requests. If you press ENTER, NPM starts the automatic refresh for all the resources that match with the selection criteria.

Notes:

1. Using the traditional Review Data functionality, you can analyze data collected until the last interval has expired. The Dynamic Data functionality is introduced to allow you to monitor real-time data on critical/limited resources with an automatic refresh. For performance reasons, the number of resources that NPM can display is limited to 200 for each interval. It is not feasible to monitor more than 200 resources, that is, more than ten display panels.
2. During automatic refresh, you cannot enter any information from your keyboard and your PF keys do not function. To regain control of your keyboard, press ATTN key (ESC on personal computers). This key 'freezes' the display and enables you to perform other functions. When you press the ATTN key, the PF keys you can use are displayed on the bottom of your screen. Press ENTER to restart the dynamic display.

Attention

If you are using the Personal Communication 3270 emulator, the recommended version is 4.3.

For version 4.1 or earlier, it is recommended that you disable the Keystroke Buffering function. To do this, select **Assist -> Keyboard Setup**.

To access the Dynamic Data Display, use one of:

PF Keys and commands	See "Using PF Keys and Commands" on page 178.
The DYN command	See "Using the DYN Command" on page 181.
Fast paths	See "Using Fast Paths" on page 184.

Using PF Keys and Commands

To access the Dynamic Data Display, use one of the following PF keys:

PF Key	Command	Used for ...
15	NCP	NCPs
16	ROUTER	IBM, NT and Cisco routers
17	LINE	SDLC lines
20	APPL	VTAM applications
24	TERMINAL	SNA LU and TCP/IP terminal

Defaults for PF keys are:

PF Key	Resource Name	Subnet Mask	Resource Type	Result
NCP	*	-	NCP	The collection is started on all NCPs defined to NPM.
LINE	*	-	LINK	The collection is started on all SDLC lines defined to NPM.
ROUTER	0.0.0.0	0.0.0.0	ALLROUT	The collection is started on all routers defined to NPM.
APPL	*	-	APPL	The collection is started on all applications defined to NPM.
TERMINAL (SNA/IP)	* 0.0.0.0	- 0.0.0.0	ALLTERM	The data is displayed for all the LUs or TCP/IP terminals that are currently in session with an application defined to NPM.

Where:

* indicates that any resource name or IP address could be specified

- indicates that the subnet mask could not be specified for that resource type.

Note

To use these PF keys with old (pre-NPM 2.5 plus upgrade) NPM operators, you need a profile migration. To update the user profile already defined, do the following:

- Delete the current profile. NPM automatically creates the new profile at logon time with the new PF keys defined.

–OR–

- Use the old profile. To do this, you must change the PF key set manually (=0.1, "Program function key definition"). If you currently use 12 PF keys:
 1. Select 24 PF keys.
 2. Reset the second group of PF keys.
 3. Set the new PF keys on the second group.

Either way, you can still use the old profile and use the function related to the PF keys by entering the commands (NCP, ROUTER, LINE, and so on) directly on the command line.

If you are a new operator, or you migrated your profile, NPM displays the new PF keys on all panels and always with the same PF key number. For example:

```

FNM00PRI                NPM V2R7  5655-043
                        PRIMARY OPTIONS

Select Option ===>

 0 User Profile         - NPM Terminal and User Parameters
 1 Network Management   - NCP/Router Data Collection & Analysis
 2 Response Times       - Response Times Collection & Analysis
 3 RTM Management       - RTM Data Collection & Analysis
 4 LAN Management       - LAN Data Collection & Analysis
 5 VTAM Management      - VTAM Data Collection & Analysis

 9 NPM Control          - NPM Control Functions & Exec
 P Problem              - Problem Determination Facilities
 T Tutorial              - Online Tutorial
 X Exit                 - NPM logoff

PF 1=HELP      3=LOGOFF   12=LOGOFF   15=NCP    16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 218. Primary Options Panel (FNM00PRI)

When you press a PF key or enter the relative command, NPM shows the Dynamic Data Display panels with the last data collected (last interval data) for active resources, with a set of relevant counters. For each type of command, a corresponding set of counters is displayed. If you press PF3 in the Dynamic Data Display panel, you return to the Primary Options panel (FNM00PRI).

Dynamic Display Output Relevant Counters

In the output panels the following data and counters are displayed for each type of resource:

Data	Counters
NCP	Resource Name
	Resource Type (NCP)
	End time
	CCU utilization
	Free buffers queue length
	Free buffers highest number
	Free buffers lowest number
	Channel intermediate queue length
	Channel hold queue length
	Percentage of NCP slowdown
	NCP slowdown limit
LINE (SDLC)	Resource Name
	Resource Type (LINK)
	End time
	Queue Length
	Messages/min
	Char/sec
	Line utilization

Dynamic Display Output Relevant Counters

Data	Counters
	Pools/Min
	Percentage of negative pools
	Errors
	Retransmitted PIUs
	Retransmitted bytes
ROUTER	Resource Name (IP address)
	Resource Type (for example, Cisco, NHD2210, NT)
	End time
	CPU utilization (for Cisco and IBM routers)
	Memory utilization (for IBM routers)
	Global buffer utilization (for IBM routers)
	Interface index (the one with higher utilization)
	Interface utilization
	Pool type (the one with higher utilization, for Cisco routers)
	Pool utilization
APPLICATION	Resource Name
	Resource Type (APPL)
	End time
	Average Host Transaction Time
	Average Network Transaction Time
	Total number of transactions processed
	Total number of transactions with definite response
	Total bytes Inbound
	Total bytes Outbound
TERMINAL	Resource Name (LU name or IP address)
	Resource Type (TERMLU or TERMIP)
	Application Name
	End time
	Average Host Transaction Time
	Average Network Transaction Time
	Total number of transactions processed
	Total bytes Inbound
	Total bytes Outbound

Example

This example shows you how to view real time data for all your NCPs.

1. In any NPM 3270 panel, press PF 15 (NCP). The Dynamic NCP Data panel is displayed. This panel shows all last interval NCP data for the NCPs with active collections. It is a static output panel:


```

FNM03DDN                NPM V2R7   5655-043
                        NETWORK MANAGEMENT
                        DYNAMIC NCP DATA DISPLAY

Command ==>
Press ENTER to start auto refresh.
Host Name = Local
Resource Name = *      Resource Type = NCP
Current Interval = from 8/17/00 12:03:29 to 8/17/00 12:03:59
Refresh Interval = 30 (secs.)

Resource  Resource End      CCU  <- Free Buffer ->  <-Channel->  Slowdown
Name      Type      Time  Util  Qlen  High  Low  Interm Hold  %  Limit
A03NCP    NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K
A04NCP    NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K
A31XI     NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K
NCPB      NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K

PF 1=HELP      3=END      8=FORWARD    12=RETURN    15=NCP      PF16=ROUTER
PF17=LINE     20=APPL    24=TERMINAL
    
```

Figure 219. Dynamic NCP Data Display Panel (FNM03DDN)

- To start the auto refresh of the NCP data, press ENTER. The output panel goes into auto refresh mode, see Figure 220:

```

FNM03DDN                NPM V2R7   5655-043
                        NETWORK MANAGEMENT
                        DYNAMIC NCP DATA DISPLAY

Command ==>

Host Name = Local
Resource Name = *      Resource Type = NCP
Current Interval = from 8/17/00 12:03:29 to 8/17/00 12:03:59
Refresh Interval = 30 (secs.)

Resource  Resource End      CCU  <- Free Buffer ->  <-Channel->  Slowdown
Name      Type      Time  Util  Qlen  High  Low  Interm Hold  %  Limit
A03NCP    NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K
A04NCP    NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K
A31XI     NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K
NCPB      NCP      12:03:59  100  4194K  8716K  8126K  8  16  40  41945K

PRESS THE ATTENTION KEY TO EXIT
    
```

Figure 220. Dynamic NCP Data Display Panel, Auto Refresh Mode (FNM03DDN)

To exit auto refresh mode, press ATTN.

Using the DYN Command

You can use the DYN command from the Network and Response Times output review panels.

When you enter DYN on the command line of a review panel, the Dynamic Data Display output panel is displayed with a set of relevant counters. The Dynamic Data Display collects and shows actual data using the same selection criteria used to review historical data.

Note: The Dynamic Data Display function is active only on the LOCAL host. If the review of historical data is on a remote NPM, the DYN command returns an error message.

Example

This example shows you how to review historical data for your NCPs and view real time data for these resources. To do this:

1. From the NPM primary option (FNM00PRI) select option 1. The Network Management panel (FNM01NET) is displayed, see Figure 221:

```
FNM01NET                NPM V2R7  5655-043
                        NETWORK MANAGEMENT

Select Option ==> 7

                        NCP/Router (N/R) ==> N

1 List
2 Select and List
3 Find Resource
                        Resource Name ==>
4 Start Collection
5 Alter Collection
6 Stop Collection

7 Review Data
8 Dynamic Data Display

Host Name ==> LOCAL

PF 1=HELP    3=END    12=RETURN  15=NCP   16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
```

Figure 221. Network Management Panel (FNM01NET)

2. Select option 7, Review Data, and set NCP/Router (N/R) to N. The Network Review panel (FNM02RVM) is displayed, see Figure 222:

```
FNM02RVM                NPM V2R7  5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW

Command ==>

Host Name      ==> LOCAL
Resource Name  ==> A0*      (Name)
Resource Type  ==> NCP      (Name/ALL only for Data Type=MONIOR)
Review File Name ==> REVIEW (REVIEW for active review file)

Start Date     ==> 00 / 00 / 00 (mm/dd/yy)
Stop Date      ==> 00 / 00 / 00

Start Time     ==> 00 : 00 : 00 (hh:mm:ss)
Stop Time      ==> 00 : 00 : 00

Data Type      ==> DETAIL   (Detail/Monitor)

PF 1=HELP    2=RESTYPE  3=END    9=SUMMARY  12=RETURN  15=NCP
PF16=ROUTER 17=LINE    20=APPL  24=TERMINAL
```

Figure 222. Network Review Panel (FNM02RVM)

3. Specify Resource Name=A0* and Resource Type=NCP. Press ENTER. The Network Review panel (FNM03RVP) is displayed, see Figure 223 on page 183:

```

FNM03RVP                NPM V2R7   5655-043
                        NETWORK MANAGEMENT
                        NETWORK REVIEW DATA

Command ==> DYN
Insert DYN to get dynamic (real time) data
Host Name = LOCAL      Resource Name = A0*      Data Type = NCP DETAIL
Date/Time: from 10/14/99 16:39:59 to 12/29/99 14:34:56
Slowdown Limit: 38M

End      Interval Resource  CCU  <- Free Buffer ->      Channel
Time     hh:mm:ss Name      Util  Qlen  High  Low  Interm Hold
16:39:59 0:20 A03NCP  100  5243K 8651K 8192K  12  24
16:41:00 1:00 A03NCP  100  4194K 8716K 8126K   8  16
16:42:00 1:00 A03NCP  100  5243K 8913K 7995K  12  24
16:42:59 0:59 A03NCP  100  4194K 8454K 8323K   8  16
09:35:59 0:49 A03NCP  23  5243K 8651K 8192K  12  24
09:36:05 0:06 A03NCP  100  4194K 8454K 8323K   8  16
17:30:01 0:32 A03NCP  100  5243K 8651K 8192K  12  24
17:30:44 0:43 A03NCP  100  4194K 8454K 8323K   8  16
15:07:00 0:51 A03NCP  26  5243K 8651K 8192K  12  24
15:07:29 0:30 A03NCP  100  4194K 8454K 8323K   8  16

PF 1=HELP      3=END      5=RIGHT      9=SUMMARY      12=RETURN      15=NCP
PF16=ROUTER   17=LINE    20=APPL     24=TERMINAL

```

Figure 223. Network Review Data Panel (FNM03RVP)

- To start the Dynamic Data Display function for the resource you are displaying, enter DYN on the command line and press ENTER. The output panel of that function is displayed, see Figure 224:

```

FNM03DDN                NPM V2R7   5655-043
                        NETWORK MANAGEMENT
                        DYNAMIC NCP DATA DISPLAY

Command ==>
Press ENTER to start auto refresh
Host Name = LOCAL
Resource Name = A0*      Resource Type = NCP
Current Interval = from 06/14/99 11:56:30 to 06/14/99 11:57:00
Refresh Interval = 30 (secs.)

Resource Resource End      CCU  <- Free Buffer ->      Channel Slowdown
Name      Type    Time    Util  Qlen  High  Low  Interm Hold % Limit
A03NCP   NCP    11:57:00 100  5243K 8651K 8192K  12  24 40 4194K
A03NCP   NCP    11:57:00 100  4191K 8716K 8126K   8  16 40 4194K

PF 1=HELP      3=END      12=RETURN      15=NCP      16=ROUTER      17=LINE
PF20=APPL     24=TERMINAL

```

Figure 224. Dynamic NCP Data Display Panel (FNM03DDN)

- To start the auto refresh of the NCP data, press ENTER. The output panel goes into auto refresh mode, see Figure 225 on page 184:

Using the DYN Command

```

FNM03RVP                NPM V2R7    5655-043
                        NETWORK MANAGEMENT
                        DYNAMIC NCP DATA DISPLAY

Command ==>>
Host Name = LOCAL
Resource Name = A0*      Resource Type = NCP
Current Interval = from 06/14/99 11:56:30 to 06/14/99 11:57:00
Refresh Interval = 30 (secs.)

Resource Resource End      CCU  <- Free Buffer ->      Channel  Slowdown
Name      Type      Time    Util  Qlen  High  Low  Interm Hold  % Limit
A03NCP   NCP      11:57:00 100  5243K 8651K 8192K 12  24  40 4194K
A03NCP   NCP      11:57:00 100  4191K 8716K 8126K 8   16  40 4194K

PRESS THE ATTENTION KEY TO EXIT

```

Figure 225. Dynamic NCP Data Display Panel, Auto Refresh Mode (FNM03DDN)

6. To exit auto refresh mode, press ATTN.

Using Fast Paths

Fast Path =1.8

Use fast path =1.8 and NCP/Router=N to display the Dynamic NCP Data panel (FNM02DDN):

```

FNM02DDN                NPM V2R7    5655-043
                        NETWORK MANAGEMENT
                        DYNAMIC NCP DATA DISPLAY

Command ==>>

Host Name      ==>> LOCAL      !          Resource Type      !
!
Resource Name  ==>> *          !  o CLUSTER  o LINE  o ODCLNLK !
Resource Type  ==>> NCP      <==== !  o COMPONEN o LINK  o ODLCNPU !
!  o ETHERPL  o LOGLINK o PHYLINK !
!  o ISDNPHY  o LU      o PU      !
!  o ISDNLOG  o NCP    o TERMINAL !
!  o FRLMIPU  o NEOLINK o X25LINK !
!  o FRLOGLK  o NEOPU  o XX25LINK !
!  o FRPHYLK  o NX25LINK o X25PU   !
!  o FRIPPU   o NX25PU  o XX25PU   !
!  o FRPHYST  o NX25VC  o X25C    !
!
*-----*

PF 1=HELP      3=END      12=RETURN    15=NCP      PF16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 226. Dynamic NCP Data Display Panel (FNM02DDN)

Use fast path =1.8 and NCP/Router=R to display the Dynamic NCP Data panel (FNM02DDR):

```

FNM02DDR                NPM V2R7   5655-043
                        NETWORK MANAGEMENT
                        DYNAMIC ROUTER DATA DISPLAY

Command ==>

Host Name                ==> LOCAL          !           Resource Type      !
                        !           !           !           !           !
IP Address                ==> 0.0.0.0      ! o 3476      o NT              !
Subnet Mask (wildcard)   ==> 0.0.0.0      ! o CISCO     o ALLROUT        !
Resource Type            ==> ALLROUT <==== ! o CS/NT     !              !
                        ! o GENERIC   !              !
                        ! o MSS8210  !              !
                        ! o NETU     !              !
                        ! o NHD2210  !              !
                        ! o NHD2212  !              !
                        ! o NHD2216  !              !
                        ! o NHD2211  !              !
                        *-----*

PF 1=HELP      3=END      12=RETURN   15=NCP      PF16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 227. Dynamic Router Data Panel (FNM02DDR)

Fast Path =2.4

Use fast path =2.4 to display the Dynamic Response Times Data panel (FNM02DDS):

```

FNM02DDS                NPM V2R7   5655-043
                        RESPONSE TIMES
                        DYNAMIC RESPONSE TIMES DATA DISPLAY

Command ==>

Host Name                ==> LOCAL

Resource Name            ==> *              (for APPL, TERMLU, ALLTERM)

IP address               ==> 0.0.0.0      (for TERMIP, ALLTERM)
Subnet Mask (wildcard)  ==> 0.0.0.0

Resource Type           ==> APPL <==== !           Resource Type      !
                        ! o APPL - Application !
                        ! o TERMLU - SNA Terminal !
                        ! o TERMIP - TCP/IP Terminal !
                        ! o ALLTERM - Any type term. !
                        *-----*

PF 1=HELP      3=END      12=RETURN   15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 228. Dynamic Response Times Data Display Panel (FNM02DDS)

From each of these input panels you can select the resource name type for which you want dynamic data displayed.

For detailed information, see:

- “Using the Dynamic Data Display Option for NCPs” on page 81
- “Using the Dynamic Data Display Option for Routers” on page 84
- “Displaying Dynamic Response Times Data” on page 95

Example

This example shows you how to view real time data for NCP with names that begin with A0*. To do this:

1. From the NPM Primary Options panel (FNM00PRI) select option 1. The Network Management panel (FNM01NET) is displayed, see Figure 229:

```

FNM01NET                NPM V2R7   5655-043
                        NETWORK MANAGEMENT

Select Option ==>>  8

                        NCP/Router (N/R) ==>> N

  1 List
  2 Select and List
  3 Find Resource

                        Resource Name ==>>

  4 Start Collection
  5 Alter Collection
  6 Stop Collection

  7 Review Data
  8 Dynamic Data Display

Host Name ==>> LOCAL

PF 1=HELP      3=END      12=RETURN   15=NCP    16=ROUTER   17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 229. Network Management Panel (FNM01NET)

2. Select option 8 and set NCP/Router (N/R) to N. The Dynamic NCP Data Display panel (FNM02DDN) for NCP resources is displayed, see Figure 230:

```

FNM02DDN                NPM V2R7   5655-043
                        NETWORK MANAGEMENT
                        DYNAMIC NCP DATA DISPLAY

Command ==>>

Host Name      ==>> LOCAL
Resource Name  ==>> A0*
Resource Type  ==>> NCP

                        *-----*
                        !           Resource Type           !
                        !           !           !           !
!   o CLUSTER   o LINE   o ODCLNLK !
!   o COMPONEN o LINK   o ODLCLNPU !
!   o ETHERPL   o LOGLINK o PHYLINK !
!   o ISDNPHY   o LU     o PU      !
!   o ISDNLOG   o NCP    o TERMINAL !
!   o FRLMIPU   o NEOLINK o X25LINK !
!   o FRLOGLK   o NEOPU  o XX25LINK !
!   o FRPHYLK   o NX25LINK o X25PU  !
!   o FRIPPU    o NX25PU  o XX25PU  !
!   o FRPHYST   o NX25VC  o X25C   !
                        *-----*

PF 1=HELP      3=END      12=RETURN   15=NCP    PF16=ROUTER   17=LINE
PF20=APPL     24=TERMINAL
    
```

Figure 230. Dynamic NCP Data Display Panel (FNM02DDN)

3. Specify Resource Name=A0* and Resource Type=NCP. Press ENTER. The dynamic data is displayed in the same way as for the PF keys and the DYN command (see previous examples).

9

Using NPM Control Functions

This chapter describes how to use NPM control functions to perform the following tasks:

- Display NPM user IDs, status, and profile information
- Bind to and unbind from other NPMs and establish communication sessions for sending and receiving data
- Bind NPM to and unbind NPM from an NPALU and display the status of the NPALUs in your network
- Display NPM performance measurement information
- Open, close, reset, switch, lock, unlock, and display the status of NPM data files
- Display SMF record types and specify partitioned data set (PDS) member names to update SMF control tables
- Send messages to other NPM users
- Run NPM EXECs
- Define parameters for LAN data collection
- Perform NPM accounting functions
- End NPM

Note: See the *NetView Performance Monitor Reference* for detailed descriptions of the NPM panel fields.

NPM Control Function Panels

Use the following procedures to perform NPM control functions:

1. Select option 9 from the Primary Options panel (FNM00PRI) to display the Control Functions panel (FNM01OMN), shown in Figure 231 on page 188. You can also use fast path =9 to display the Control Functions panel.

```
FNM01OMN                NPM V2R7  5655-043
                        CONTROL FUNCTIONS

Select Option ==>>

  1 User Display and Management
  2 Session Display and Management
  3 NPALU Display and Management
  4 Performance Measurement Table Display
  5 Data File Display and Management
  6 SMF User Record Display and Management
  7 Send Message (US English Only)
  8 Execute an NPM Exec
  9 LAN Management Control
 10 Accounting
                                99 NPM Termination

Host Name ==>> LOCAL

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 231. Control Functions Panel (FNM01OMN)

2. Type one of the following option numbers in the Select Option field and press ENTER:

Option	Action
1	Unbinds users from NPM and displays user IDs, status, and profile information. See “Unbinding Users and Displaying NPM User Information” on page 189.
2	Binds to and unbinds from other NPMs and establishes communication sessions for sending and receiving data. See “Using the Sessions Display and Management Panel” on page 189.
3	Binds NPM to and unbinds NPM from an NPALU and displays the status of the NPALUs in your network. See “Managing NPALUs” on page 190.
4	Displays NPM performance information. See “Displaying Performance Measurement Tables” on page 193.
5	Opens, closes, resets, switches, locks, unlocks, and displays the status of NPM data files. See “Managing Data Files” on page 196.
6	Displays SMF record types and specifies PDS member names to update SMF control tables. See “Displaying SMF Record Status” on page 198.
7	Sends messages to other NPM users. See “Sending a Message to Another NPM User” on page 199.
8	Runs NPM EXECs. See “Executing NPM EXECs” on page 200.
9	Defines parameters for LAN data collection. See “Managing LAN Collection” on page 200.
10	Performs NPM accounting functions. See “Performing NPM Accounting Functions” on page 203.
99	Ends NPM. See “Ending NPM” on page 211.

Unbinding Users and Displaying NPM User Information

Use the following procedure to unbind users from NPM and display NPM user IDs, profiles, and status:

1. Select option 1 from the Control Functions panel (FNM01OMN) to display the User Display and Management panel (FNM02OUS), shown in Figure 232. You can also use fast path =9.1 to display the User Display and Management panel.

This panel displays a list of NPM users, profiles, terminal IDs, and connection status.

```

FNM02OUS                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        USER DISPLAY AND MANAGEMENT

Command ==>>

Host Name = LOCAL
Enter Option:  U=Unbind

Option  User ID      Profile  Terminal  Status/Remarks
=>      OPER1        PROFILEA  CLS1TR01  CONNECTED
=>      OPER2        PROFILEB  CLS1TR02  CONNECTED LU62
=>      NPM1         FNMDEFLT  DISCONNECTED
=>      SYSTEM      FNMDEFLT  DISCONNECTED

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
  
```

Figure 232. User Display and Management Panel (FNM02OUS)

2. To unbind a user from NPM, type U in the Option field next to a user ID and press ENTER.

Using the Sessions Display and Management Panel

Use the following procedure to bind to and unbind from other NPMs in your network (if the proper definitions are in place). You can also use this NPM control function to prevent (lock) or enable (unlock) access to other NPMs in your network.

1. Select option 2 from the Control Functions panel (FNM01OMN) to display the Session Display and Management panel (FNM02OSS), shown in Figure 233 on page 190. You can also use fast path =9.2 to display the Session Display and Management panel.

```
FNM020SS                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        SESSION DISPLAY AND MANAGEMENT

Command ==>>

Host Name = LOCAL
Enter Option: B=Bind, U=Unbind, L=Lock, N=Unlock

Option  Host Name  Application  Location      Status/Remarks
=>      HOSTA     NPMHOSTA    MIAMI         CONNECTED
=>      HOSTB     NPMHOSTB    NEW YORK     DISCONNECTED
=>      HOSTC     NPMHOSTC    LOS ANGELES  DISCONNECTED

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
```

Figure 233. Sessions Display and Management Panel (FNM020SS)

The following terms can be displayed in the Status/Remarks field on the Sessions Display and Management panel (FNM020SS):

CONNECTED

The remote NPM is bound to the host specified in the Host Name field.

DISCONNECTED

The remote NPM is not bound to the host specified in the Host Name field.

INCOMPATIBLE RELEASE

The remote NPM is running a version of NPM earlier than V2R1.

LOCKED

The remote NPM cannot be accessed by the host specified in the Host Name field.

QUIESCED

The remote NPM is in the process of ending the connection to the host specified in the Host Name field.

2. Type one of the following options in the Option field next to the appropriate host name and press ENTER:

Option	Action
B	Binds (connects) this NPM to a remote NPM.
U	Unbinds (disconnects) this NPM from a remote NPM.
L	Prevents this NPM from accessing a remote NPM.
N	Enables this NPM to access a remote NPM.

Managing NPALUs

NPM must be bound to the primary NPALU of an NCP in order to perform network collection for resources defined to that NCP. NPM must also be bound to the primary NPALU or a backup NPALU in order to perform network accounting data collection. Similarly, NPM must bind to the NPALU of a 3746 APPN network node to collect performance or accounting data from the node. Use the following procedure to bind and unbind NPALUs:

1. Select option 3 from the Control Functions panel (FNM01OMN) to display the NPALU Display and Management panel (FNM02OCC), shown in Figure 234. You can also use fast path =9.3 to display the NPALU Display and Management panel.

```

FNM02OCC                NPM V2R7   5655-043
                        CONTROL FUNCTIONS
                        NPALU DISPLAY AND MANAGEMENT

Command ==>

Host Name = LOCAL
Enter Option: /=Select, B=Bind, U=Unbind

Option  NCP Name  NCP Release  CCU Model  NPALU Name  Status/Remarks
=> /    NCP01      V6R2        3745-170   NPALU1      DISCONNECTED

PF 1=HELP    3=END    12=RETURN  15=NCP     16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
    
```

Figure 234. NPALU Display and Management Panel (FNM02OCC)

2. Type one of the following options in the Option field next to a specific NPALU or NCP name and press ENTER:

Option	Action
B	Binds (connects) the NPALU to NPM. An operator message indicating the bind is complete is displayed.
U	Unbinds (disconnects) the NPALU from NPM. An operator message indicating the unbind is complete is displayed.
/	Displays NCP detail data. The NCP Detail Display panel (FNM02OCR) is displayed if you do not have NCP accounting support. See “Displaying NCP Detail Data without Accounting Support”. The alternate NCP Detail Display panel (FNM02OCS) is displayed if you do have NCP accounting support. See “Displaying NCP Detail Data with Accounting Support” on page 192.

Displaying NCP Detail Data without Accounting Support

Select option / from the NPALU Display and Management panel (FNM02OCC) to display the NCP Detail Display panel (FNM02OCR), shown in Figure 235 on page 192.

The NCP Detail Display panel displays NCP generation parameters. This panel is displayed if you do not have NCP accounting support. If you have NCP accounting support, the NCP Detail Display panel (FNM02OCS) is displayed.

```

FNM02OCR                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        NCP DETAIL DISPLAY

Command ==>>>

Host Name   = LOCAL      NCP Name    = NCP01      Session Coll = YES
CCU Model   = 3745-170   NCP Release = V6R2      DNC           = YES
NCP Date    = 09/30/00   NCP Time    = 15:31:06  DNC Interval  = 5
NCP Subarea = 6          Max Coll    = 100       NCP Net ID   = NET1

NCP GenLevel = A234
Config Date  = 09/30/00  Config Time  = 20:23:52

NPALU: NPALU1

PF 1=HELP    3=END      12=RETURN   15=NCP      16=ROUTER   17=LINE
PF20=APPL   24=TERMINAL
    
```

Figure 235. NCP Detail Display Panel (FNM02OCR)

Displaying NCP Detail Data with Accounting Support

Use the following procedure to display NCP detail data if you have accounting support:

1. Select option / from the NPALU Display and Management panel (FNM02OCC) to display the NCP Detail Display panel (FNM02OCS), shown in Figure 236.

The NCP Detail Display panel displays NCP generation parameters. You can monitor the highest and lowest usage trends by viewing the panel periodically.

Note: Use the NEXT and PREVIOUS commands to move between the FNM02OCS, FNM02OCN, and FNM02OCT panels.

```

FNM02OCS                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        NCP DETAIL DISPLAY

Command ==>>>

Host Name   = LOCAL      NCP Name    = NCP01      Session Coll = YES
CCU Model   = 3745-170   NCP Release = V6R2      DNC           = YES
NCP Date    = 09/30/00   NCP Time    = 15:32:09  DNC Interval  = 5
NCP Subarea = 6          Max Coll    = 2020     NSA           = ALL
NCP Net ID  = NET1      NCP PU Name = NCP01     NGA           = NO

NCP GenLevel = 08/30/00  15:30:00
Config Date  = 09/30/00  Config Time  = 16:02:12

NPALUs: P D S   1NPALU1 / NPM01      5          / NPM01
                 2NPALU2 / NPM02      6          / NPM02
                 3NPALU3 / NPM03      7          / NPM03
                 4NPALU4 / NPM04      8          / NPM04

PF 1=HELP    3=END      7=PREVIOUS  8=NEXT      10=TOP      11=BOTTOM
PF12=RETURN  15=NCP     16=ROUTER   17=LINE     20=APPL     24=TERMINAL
    
```

Figure 236. NCP Detail Display Panel (FNM02OCS)

2. Use the NEXT command to display the Network Accounting Display panel (FNM02OCN), shown in Figure 237 on page 193.

The Network Accounting Display panel displays information about network accounting. This data is accumulated in the NCP and transferred to NPM.

```

FNM020CN                      NPM V2R7  5655-043
                              CONTROL FUNCTIONS
                              NETWORK ACCOUNTING DISPLAY

Command ==>

Host Name = LOCAL             NCP PU Name = NCP01

NSC Tot   = 0                NSC Delay  = 0                NSA PLU   = 0
NSC Use   = 0                NSC Lost   = 0                NSA SLU   = 0
NSCX Tot  = 0                NSCX Use   = 0                NGA Sess  = 0

NSA PDU Distribution: 50    :100    :200    :500    :1000   :5000
NGA PDU Distribution: 50    :100    :200    :500    :1000   :5000

PF 1=HELP    3=END    7=PREVIOUS  8=NEXT    10=TOP    11=BOTTOM
PF12=RETURN  15=NCP   16=ROUTER  17=LINE   20=APPL   24=TERMINAL

```

Figure 237. Network Accounting Display Panel (FNM020CN)

- Use the NEXT command to display the Network Accounting Threshold Display panel (FNM020CT), shown in Figure 238.

This panel displays the threshold settings for network accounting collection on each application.

```

FNM020CT                      NPM V2R7  5655-043
                              CONTROL FUNCTIONS
                              NETWORK ACCOUNTING THRESHOLD DISPLAY

Command ==>

Host Name = LOCAL             NCP PU Name = NCP01

Application  PDU      Octets   Status
NSA          64       256    ENABLED
NGA          0        0      DISABLED

PF 1=HELP    3=END    7=PREVIOUS  8=NEXT    10=TOP    11=BOTTOM
PF12=RETURN  15=NCP   16=ROUTER  17=LINE   20=APPL   24=TERMINAL

```

Figure 238. Network Accounting Threshold Display Panel (FNM020CT)

Displaying Performance Measurement Tables

Use the following procedure to display NPM performance measurement table information:

Performance Measurement Tables

1. Select option 4 from the Control Functions panel (FNM01OMN) to display the Performance Measurement Table Display panel (FNM02OPM), shown in Figure 239. You can also use fast path =9.4 to display the Performance Measurement Table Display panel. This panel displays original, current, and low measurements of host storage used by NPM.

The storage values displayed on the performance measurement tables reflect only the storage explicitly acquired by NPM from the operating system. These values do not include the storage required to load the NPM code or storage used by the operating system, such as I/O buffers.

Note: You can use the NEXT or PREVIOUS commands to page through the NPM performance measurement information panels.

```
FNM02OPM                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        PERFORMANCE MEASUREMENT TABLE DISPLAY

Command ===>

Host Name = LOCAL
Total CSA Used: 284760  Total Storage Used: 1119Kb

                Session  Buffer  Buffer  File
                Number   Number Segments Buffers
Maximum Available      679    400    2016   5304
Current Available      679    400    1960   5304
Lowest Available       679    400    1936   5296

Lost Records           0        0

Press NEXT or PREVIOUS for additional PMT displays

PF 1=HELP    3=END    7=PREVIOUS  8=NEXT    10=TOP    11=BOTTOM
PF12=RETURN  15=NCP   16=ROUTER  17=LINE   20=APPL   24=TERMINAL
```

Figure 239. Performance Measurement Table Display Panel (FNM02OPM)

2. Use the NEXT command to display the Summary Display panel (FNM02OPS), shown in Figure 240 on page 195. The Summary Display panel displays information about NPM users, NCPs, and data collection parameters.

```

FNM020PS                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        SUMMARY DISPLAY

Command ===>

Host Name = LOCAL
Job Name   = NPM21      Host Name   = HOST01
NPM Appl ID = NPM21     Host Subarea = 12
SMF ID     = NPM2      VTAM Net ID = NETA

Maximum Operators = 15      Current Operators = 5
Base Interval     = 00:03:45  Session Interval = 00:03:45
Synchronization  = 1 60     Time Zone       = 01:59:59 EAST
Logon Retry       = 3        Security        = MINIMAL

Maximum NCPs     = 20      Current NCPs   = 1
Maximum Subarea  = 256

Press NEXT or PREVIOUS for additional PMT displays
PF 1=HELP      3=END      7=PREVIOUS  8=NEXT     10=TOP     11=BOTTOM
PF12=RETURN   15=NCP     16=ROUTER  17=LINE    20=APPL    24=TERMINAL

```

Figure 240. Summary Display Panel (FNM020PS)

- Use the NEXT command to display the File Services Summary panel (FNM02OPR), shown in Figure 241.

The File Services Summary panel displays information about all NPM data files. This information includes the number of records in each file, the number of records written to the file during this NPM session, and the number of records lost.

```

FNM02OPR                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        FILE SERVICES SUMMARY

Command ===>

Host Name = LOCAL

File Name   <-----> Records <----->
            Current  Total  Lost  Record Type  Total
FNMSES1    397     397   186   Session      186
FNMREV1    15      76    0     Network      52
FNMLWG1    0        0     0     RTM           0
FNMLG1     273     275   15    Accounting    0
FNMVLOG1   237     237   0     Command/Event 62
FNMSMF     262     262   0     LAN           2
FNMALERT   0        0     0     VTAM          24
            0        0     0     NetWare       2

Press NEXT or PREVIOUS for additional PMT displays
PF 1=HELP      3=END      7=PREVIOUS  8=NEXT     10=TOP     11=BOTTOM
PF12=RETURN   15=NCP     16=ROUTER  17=LINE    20=APPL    24=TERMINAL

```

Figure 241. File Services Summary Panel (FNM02OPR)

- Use the NEXT command to display the Virtual Storage Summary Display panel (FNM02OPV), shown in Figure 242 on page 196.

The Virtual Storage Summary Display panel displays information about NPM's virtual storage on the host. This information includes CSA and buffer storage.

```

FNM020PV                                NPM V2R7  5655-043
                                CONTROL FUNCTIONS
                                VIRTUAL STORAGE SUMMARY DISPLAY

Command ==>>

Host Name = LOCAL

Control Block      Maximum      Current      Lowest
Area              Available     Available    Available
Storage
Buffers           2016         1960         1936         CAT         28672
QCBs              315          307          299          CBS         175328
TPRBs             512          511          508          Buffers     422088
VSRBs            13           13           12           FST         212352
FSBs              304          304          296          VDT         5441
Storage           Private      CSA          Total        Init         0
Below 16 Meg     1399Kb      4608         1404Kb      Panel       122592
Above 16 Meg     6297Kb      98064        6395Kb      Config      2659
Total            7696Kb      102672       7799Kb      Console     222

Press NEXT or PREVIOUS for additional PMT displays
PF 1=HELP        3=END         7=PREVIOUS   8=NEXT       10=TOP       11=BOTTOM
PF12=RETURN     15=NCP        16=ROUTER   17=LINE      20=APPL      24=TERMINAL
    
```

Figure 242. Virtual Storage Summary Display Panel (FNM020PV)

5. Use the NEXT command to display the Session Collection Performance panel (FNM020PC), shown in Figure 243.

The Session Collection Performance panel displays information about session collection.

```

FNM020PC                                NPM V2R7  5655-043
                                CONTROL FUNCTIONS
                                SESSION COLLECTION PERFORMANCE

Command ==>>

Host Name = LOCAL

Control Block      Session      Buffers      Requests      Buffer Trace      Internal Trace
Maximum Avail     49          208          0              0                0
Current Avail     49          208          0              0                0
Lowest Avail      49          208          NPM Count     0                0
Requests          0           0            Trace Time    .000000          .000000
Errors            0           0            Trace Avg     .000000          .000000
                  NPM Time      .000          .000
                  NPM Avg       .000          .000

RTM Events        0
DNC Events        0

Note: All times and averages are in seconds

Press NEXT or PREVIOUS for additional PMT displays
PF 1=HELP        3=END         7=PREVIOUS   8=NEXT       10=TOP       11=BOTTOM
PF12=RETURN     15=NCP        16=ROUTER   17=LINE      20=APPL      24=TERMINAL
    
```

Figure 243. Session Collection Performance Panel (FNM020PC)

Managing Data Files

This NPM control function allows you to open, close, reset, switch, lock, or unlock the following NPM data files:

- Review
- Session statistics
- NPM log
- VTAM PIU log
- SMF
- Alerts
- LAN work group

Use the following procedure to manage these NPM data files:

1. Select option 5 from the Control Functions panel (FNM01OMN) to display the Data File Display and Management panel (FNM02OFL), shown in Figure 244. You can also use fast path =9.5 to display the Data File Display and Management panel.

```

FNM02OFL                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        DATA FILE DISPLAY AND MANAGEMENT

Command ==>>

Host Name = LOCAL
Enter Option: 0=Open, C=Close, R=Reset, S=Switch, L=Lock, U=Unlock

Option  File Name  Beginning and Ending Date/Time  Status/Remarks
=>      FNMSSES1                EMPTY
=>      FNMSSES2                EMPTY
=>      FNMREV1    09/30/00 10:02  09/30/00 11:08  ACTIVE
=>      FNMREV2                OPEN      EMPTY
=>      FNMLWG1                ACTIVE   EMPTY
=>      FNMLWG2                EMPTY
=>      FNMLOG1                EMPTY
=>      FNMLOG2                EMPTY
=>      FNMSMF                  ACTIVE   EMPTY
=>      FNMVLOG1               EMPTY
=>      FNMVLOG2               EMPTY

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL

```

Figure 244. Data File Display and Management Panel (FNM02OFL)

The Data File Display and Management panel (FNM02OFL) enables you to perform data file management procedures on NPM data files. This panel displays NPM data file names, the beginning and ending times that records were added to the files, and status information. The status of a file can be one of the following:

- EMPTY** The file either contains no data or the file has been opened to obtain its status. If the FILE initialization statement is coded with ISTATUS=INACTIVE, the file status is EMPTY until an NPM user requests that the file be opened, or until online analysis is performed on the file. The file does not contain data if the file still displays a status of EMPTY.
- OPEN** The file is open to the online system for input and analysis.
- ACTIVE** The file is both OPEN and the primary file. The name of the primary file is highlighted.
- STOP** You have issued a CLOSE command for the SMF data set or the alert interface. The file is not actually closed, but logging activity stops until you issue an OPEN command for it.
- FULL** The file is full. No further records can be written to it, although it can still be read if it is open. Once a file becomes FULL, it must be reset before new records can be written to it.
- A switch is automatically attempted when the primary file is FULL. If the primary file displays an OPEN status and FULL, the switch was unsuccessful and collection is suspended until the file is reset.
- UNUSABLE** The file cannot be accessed.

LOCK The file has been locked by the control operator.

A file is closed if no status is displayed. NPM cannot read or write data to the file, and you cannot use the file until it is opened or reset.

Note: NPM determines the status of a file only after it has attempted to use that file. The status of the file remains EMPTY until that time.

2. To change the status of a file, type one of the following options in the Option field next to a file name and press ENTER:

Option	Action
C	Closes the file and stops data from being written to the file. Use this option before you dump a file to tape.
L	Locks the file and prevents NPM and NPM users from using the file.
O	Opens the file and enables NPM to write data to a file.
R	Resets the file and deletes the contents of a file so it can receive data again, or reset an open file if it is not active. Use this option after a file has been closed and dumped to tape. This option is not valid for logical files. See the <i>NetView Performance Monitor Installation and Customization</i> for more information about logical files.
S	Forces NPM to switch to the next available file before the current file becomes full. This option is not valid for logical files. For session, review, and LAN work group files, NPM switches to the next file which is neither full, locked, nor defined as inactive at initialization. For other files, NPM switches to the next file that is empty and was not defined as inactive at initialization. Switching to a closed session, review, or LAN work group file automatically activates the file and closes the former active file. However, switching to a closed NPM log or VTAM log stops data collection and closes the active file.
U	Unlocks the file and allows NPM and NPM users to use the file.

Displaying SMF Record Status

Use the following procedure to display the status of SMF user records:

1. Select option 6 from the Control Functions panel (FNM01OMN) to display the SMF User Record Display and Management panel (FNM02OSM), shown in Figure 245 on page 199. You can also use fast path =9.6 to display the SMF User Record Display and Management panel.

The SMF User Record Display and Management panel displays the status of SMF user records. You can also use this panel to determine whether to log the information in these records.

```

FNM020SM                                NPM V2R7  5655-043
                                           CONTROL FUNCTIONS
                                           SMF USER RECORD DISPLAY AND MANAGEMENT

Command ==>>

Host Name = LOCAL
Enter PDS member name to update entire SMF control table
Member ==>>
Enter Option: L=Log, N=No Logging

Option Type  User Description  Passed   Returned  Status/Remarks
=>    0      IPL                0         0    LOGGING
=>    1      DUMP HEADER          0         0    LOGGING
=>    2      DUMP TRAILER         0         0    LOGGING
=>    3      JES OUTPUT          17        17    LOGGING
=>    4      STEP TERMINATION    0         0    LOGGING
=>    5      JOB TERMINATION     0         0    LOGGING
=>    6      NOT INITIALIZED    10        10    LOGGING
=>    7      DATA LOST           0         0    LOGGING

PF 1=HELP    3=END    8=FORWARD  11=BOT TOM  12=RETURN  15=NCP
PF16=ROUTER 17=LINE   20=APPL   24=TERMINAL
    
```

Figure 245. SMF User Record Display and Management Panel (FNM020SM)

2. Type one of the following options in the Option field next to a specific SMF record type and press ENTER:

Option	Action
L	Enables data logging for this record type.
N	Disables data logging for this record type.

Sending a Message to Another NPM User

Use the following procedure to send messages to another NPM user:

1. Select option 7 from the Control Functions panel (FNM01OMN) to display the Send Message panel (FNM02OMS), shown in Figure 246. You can also use fast path =9.7 to display the Send Message panel.

```

FNM02OMS                                NPM V2R7  5655-043
                                           CONTROL FUNCTIONS
                                           SEND MESSAGE

Command ==>>

Host Name ==>> LOCAL

Operator ==>>
Console ==>> (1 to 65535)
Route ==>> A11 (A11/Global/Console/External/Terminal)

Text ==>>

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
    
```

Figure 246. Send Message Panel (FNM02OMS)

2. Type the name of the host that the operator with whom you want to communicate is using in the Host Name field.

3. Type the ID of the operator with whom you want to communicate in the Operator field.
4. Type the console number for the operator in the Console field (if applicable).
5. Type your message in the Text field and press ENTER.

Executing NPM EXECs

Use the following procedure to execute an NPM EXEC:

1. Select option 8 from the Control Functions panel (FNM01OMN) to display the Execute an NPM EXEC panel (FNM02OEX), shown in Figure 247. You can also use fast path =9.8 to display the Execute an NPM EXEC panel.

```
FNM02OEX                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        EXECUTE AN NPM EXEC

Command ==>

Host Name = LOCAL

NPM Exec Name ==> EXEC01

List NPM exec ==> YES   (Yes/No)

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
```

Figure 247. Execute an NPM EXEC Panel (FNM02OEX)

2. Type the name of the host that will process the NPM EXEC in the Host Name field.
3. Type the name of the NPM EXEC you want to execute in the NPM exec Name field.
4. Type YES in the List NPM exec field if you want a listing of the EXEC sent to the SYSPRINT file.
5. Press ENTER to process the EXEC.

Managing LAN Collection

Use the following procedure to change collection parameters for LAN bridges or LAN segments:

1. Select option 9 from the Control Functions panel (FNM01OMN) to display the LAN Management Control panel (FNM02LMC), shown in Figure 248 on page 201. You can also use fast path =9.9 to display the LAN Management Control panel.

The LAN Management Control panel (FNM02LMC) allows you to change collection parameters on LAN bridges or LAN segments.

```

FNM02LMC                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        LAN MANAGEMENT CONTROL

Select Option ==>

 1 LAN Bridge Control
 2 LAN Segment Control

Host Name ==> LOCAL

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 248. LAN Management Control Panel (FNM02LMC)

2. Type one of the following options in the Select Option field and press ENTER:

Option	Action
1	Changes collection parameters for LAN bridges. See “Changing LAN Bridge Collection Parameters”.
2	Changes collection parameters for LAN segments. See “Changing LAN Segment Collection Parameters” on page 202.

Changing LAN Bridge Collection Parameters

Use the following procedure to change collection parameters on LAN bridges:

1. Select option 1 from the LAN Management Control panel (FNM02LMC) to display the LAN Bridge Control panel (FNM02LBB), shown in Figure 249 on page 202. You can also use fast path =9.9.1 to display the LAN Bridge Control panel.
You can use the LAN Bridge Control panel to specify global parameters that affect all LAN bridge collections. You can also issue dynamic reconfigurations to update the panel with any changes on the LAN.

```
FNM02LBB                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        LAN BRIDGE CONTROL

Command ==>

Host Name = LOCAL

Data Destinations      NPMLLOG  VSAM  ALERT  GLOBAL
Detail                ==> YES   YES   N/A    N/A
Monitor               ==> YES   YES   NO     NO
Resolve Monitors      ==> NO    (Yes/No)

Interval Length (minutes) ==> 15  (5,10,15,20,30,60)
Interval Synch (minutes) ==> 0   (Must be less than Interval Length)

To update the list of LAN resources, enter RECONFIG on command line

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 249. LAN Bridge Control Panel (FNM02LBB)

2. Enter the following LAN bridge collection parameters, as required:

- Select a data destination.

- Select an interval length value.

You can change the interval length at any time. Changes to the interval length take effect immediately. For example, if you change the interval length value from 10 to 15 at 11:11, collections occur at 11:00, 11:10, 11:15, 11:30, 11:45, and so on.

- Select an interval synch value.

You can set the interval synch to any value, provided it is less than the interval length value. For example, if the interval synch value is 3 and the interval length value is 10, collections occur at 11:03, 11:13, 11:23, 11:33, and so on. Changes to the interval synch value take effect at the next interval boundary.

3. Type RECONFIG on the Command line and press ENTER to dynamically refresh the configuration of the LAN resources.

Note: The FNM02LBB and FNM02LSB panels are the only panels from which you can issue a RECONFIG command.

Changing LAN Segment Collection Parameters

Use the following procedure to change collection parameters on LAN segments:

1. Select option 2 from the LAN Management Control panel (FNM02LMC) to display the LAN Segment Control panel (FNM02LSB), shown in Figure 250 on page 203. You can also use fast path =9.9.2 to display the LAN Segment Control panel.

The LAN Segment Control panel enables you to specify global parameters that affect all LAN segment collections. You can also issue dynamic reconfigurations to update the panel with any changes on the LAN.

```

FNM02LSB                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        LAN SEGMENT CONTROL

Command ==>

Host Name = LOCAL

Data Destinations      NPMLOG  VSAM  ALERT  GLOBAL
Detail                 ==> YES   YES   N/A    N/A
Monitor                ==> YES   YES   NO     NO
Resolve Monitors       ==> NO    (Yes/No)

Interval Length (minutes) ==> 15  (5,10,15,20,30,60)
Interval Synch (minutes)  ==> 0   (Must be less than Interval Length)
Sampling Interval (seconds) ==> 40  (40-300)

To update the list of LAN resources, enter RECONFIG on command line

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL

```

Figure 250. LAN Segment Control Panel (FNM02LSB)

2. Enter the following LAN segment collection parameters, as required:

- Select a data destination.

- Select an interval length value.

You can change the interval length at any time. Changes to the interval length take effect immediately. For example, if you change the interval length value from 10 to 15 at 11:11, collections would at 11:00, 11:10, 11:15, 11:30, 11:45, and so on.

- Select an interval synch value.

You can set the interval synch to any value, provided it is less than the interval length value. For example, if the interval synch value is 3 and the interval length value is 10, collections occur at 11:03, 11:13, 11:23, 11:33, and so on. Changes to the interval synch value take effect at the next interval boundary.

- Select a sampling interval value.

You can set the sampling interval to any value between 40 and 300. You can increase the size of the sampling interval value to improve system performance by reducing CPU utilization when you are collecting on a large number of segments.

3. Type RECONFIG on the Command line and press ENTER to dynamically refresh the configuration of the LAN resources.

Note: The FNM02LBB and FNM02LSB panels are the only panels from which you can issue a RECONFIG command.

Performing NPM Accounting Functions

Use the following procedure to perform NPM accounting functions:

1. Select option 10 from the Control Functions panel (FNM01OMN) to display the Accounting panel (FNM02ACC), shown in Figure 251 on page 204. You can also use fast path =9.10 to display the Accounting panel.

The Accounting panel enables you to select accounting control functions.

```
FNM02ACC                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        ACCOUNTING

Select Option ==>>

 1 Session Accounting Enable
 2 Session Accounting Disable
 3 Session Accounting Modify
 4 Session Accounting Solicit
 5 Accounting Status
 6 Gateway Accounting Enable
 7 Gateway Accounting Disable
 8 Gateway Accounting Modify
 9 Gateway Accounting Solicit

Host Name ==>> LOCAL
NCP Name ==>>

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 251. Accounting panel (FNM02ACC)

2. Type the name of the NCP for which you want to perform accounting functions in the NCP Name field. See “Selecting Network Accounting NCPs” on page 205 for procedures to use when you do not know the NCP name.
3. Type one of the following option numbers in the Select Option field and press ENTER:

Option	Action
1	Enables the sending of session accounting statistics. A message indicating that session accounting is enabled is displayed.
2	Disables the sending of session accounting statistics. A message indicating that session accounting is disabled is displayed.
3	Modifies session accounting. See “Modifying Session Accounting Parameters” on page 206.
4	Solicits session accounting data. A message is displayed indicating that the solicit command was issued to the NCP.
5	Displays accounting status. See “Displaying Accounting Parameters” on page 208.
6	Enables the sending of gateway accounting statistics. A message is displayed indicating that gateway accounting is enabled.
7	Disables the sending of gateway accounting statistics. A message is displayed indicating that gateway accounting is disabled.
8	Modifies gateway accounting data. See “Modifying Network Gateway Accounting” on page 210.
9	Solicits gateway accounting. A message is displayed indicating that the solicit command was issued to the NCP.

Note: The accounting options displayed on the Accounting panel (FNM02ACC) can be selected using the NGACNTL, NGAMDFY, NSACNTL, NSAMDFY, and NSASOLCT system console commands. You can specify CLOCK and DAILY

parameters for these accounting options when you use these system console commands. See “NPM Commands” on page 215 for more information.

Selecting Network Accounting NCPs

A list of NCPs is displayed if the NCP Name field is left blank on the Accounting panel (FNM02ACC).

If you select a Network Session Accounting (NSA) function without specifying a NCP name, the Network Session Accounting NCP Selection panel (FNM0ABCS), is displayed. (See Figure 252.)

You can use this panel to select a NCP for network accounting collection. Type / in the Option field next to a specific NCP name and press ENTER.

```

FNM0ABCS                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        NETWORK SESSION ACCOUNTING NCP SELECTION

Command ==>

Host Name ==> LOCAL      Selected Option ==> STATUS
Enter / to perform selected option

Option NCP Name PRI  Accounting PLU  SLU  PDU  Octets  NPA LU Status
=> /   NCP01  YES   ENABLED YES  YES  100   300   CONNECTED

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL

```

Figure 252. Network Session Accounting NCP Selection Panel (FNM0ABCS)

If you select a Network Gateway Accounting (NGA) function without specifying a NCP name, the Network Gateway Accounting NCP Selection panel (FNM0ABCG) shown in Figure 253 on page 206, is displayed. (See Figure 252.)

You can use this panel to select an NCP for network gateway accounting collection. Type / in the Option field next to a specific NCP name and press ENTER.

```
FNM0ABCG                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        NETWORK GATEWAY ACCOUNTING NCP SELECTION

Command ==>>

Host Name ==>> LOCAL   Selected Option ==>> ENABLE
Enter / to perform selected option

Option  NCP Name  PRI  Accounting  NGA   PDU   Octets  NPALU Status
=> /    NCP01     YES   ENABLED    YES   64    256     CONNECTED

PF 1=HELP      3=END      12=RETURN   15=NCP     16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 253. Network Gateway Accounting NCP Selection Panel (FNM0ABCG)

Modifying Session Accounting Parameters

This section describes how to modify session accounting collection parameters. There are two possible panel flows available when you select option 3 from the Accounting panel (FNM02ACC). The panels displayed depend on whether the specified NCP supports protocol data unit (PDU) distributions.

Modifying With PDU Distribution Support

Use the following procedure to modify session accounting collection parameters for NCPs that support PDU distributions:

1. Select option 3 from the Accounting panel (FNM02ACC) to display the Network Session Accounting Modification panel (FNM0ABM2), shown in Figure 254 on page 207. You can also use fast path =9.10.3 to display the Network Session Accounting Modification panel.

You can use this panel to modify collection parameters for network session accounting.

```

FNM0ABM2                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        NETWORK SESSION ACCOUNTING MODIFICATION

Command ==>>

Host Name      = LOCAL
NCP Name       = NCP01
Session Partners = NPALU1 / NPM1
NSA            = ENABLED

Update and press ENTER to continue

NSA PLU Sessions ==>> YES   (Yes/No)
NSA SLU Sessions ==>> YES   (Yes/No)

PDU Distribution ==>> 50    : 100   : 200   : 500   : 1000  : 5000

PF 1=HELP      3=END      8=FORWARD 12=RETURN 15=NCP   16=ROUTER
PF17=LINE     20=APPL    24=TERMINAL

```

Figure 254. Network Session Accounting Modification Panel (FNM0ABM2)

2. Modify the fields as desired.
3. Press ENTER to display the Network Session Accounting Threshold Modification panel (FNM0ABM3), shown in Figure 255.

You can use this panel to modify collection thresholds for network session accounting.

```

FNM0ABM3                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        NETWORK SESSION ACCOUNTING THRESHOLD MODIFICATION

Command ==>>

Host Name = LOCAL
NCP Name = NCP01

Update and press ENTER to modify

Application      PDU          Octets
NSA              ==>> 64          ==>> 256

PF 1=HELP      3=END      7=BACKWARD 12=RETURN 15=NCP   16=ROUTER
PF17=LINE     20=APPL    24=TERMINAL

```

Figure 255. Network Session Accounting Threshold Modification Panel (FNM0ABM3)

4. Modify the fields as desired and press ENTER.

Modifying Without PDU Distribution Support

Use the following procedure to modify session accounting collection parameters for NCPs that do not support PDU distributions:

1. Select option 3 from the Accounting panel (FNM02ACC) to display the Network Session Accounting Modification panel (FNM0ABMM), shown in Figure 256 on page 208. You can also use fast path =9.10.3 to display the Network Session Accounting Modification panel.

You can use this panel to modify collection parameters for network session accounting.

```
FNM0ABMM                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        NETWORK SESSION ACCOUNTING MODIFICATION

Command ==>>

Host Name = LOCAL
NCP Name  = NCP01
Primary   = NPALU1 / NPM1
Accounting = ENABLED

Update and press ENTER to modify

PLU Sessions ==>> YES      (Yes/No)
SLU Sessions ==>> YES      (Yes/No)
PDU         ==>> 64
Octets      ==>> 256

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 256. Network Session Accounting Modification Panel (FNM0ABMM)

2. Modify the fields as desired and press ENTER.

Displaying Accounting Parameters

This section describes how to display the current network accounting data collection parameters. There are two possible panel flows available when you select option 5 from the Accounting panel (FNM02ACC). The panels displayed depend on whether the specified NCP supports PDU distributions.

With PDU Distribution Support

Use the following procedure to display accounting collection parameters for NCPs that support PDU distributions:

1. Select option 5 from the Accounting panel (FNM02ACC) to display the Network Accounting Status panel (FNM0ABS2), shown in Figure 257 on page 209. You can also use fast path =9.10.5 to display the Network Accounting Status panel.

This panel displays collection parameters for network session accounting.

```

FNM0ABS2                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        NETWORK ACCOUNTING STATUS

Command ==>

Host Name = LOCAL
NCP Name  = NCP01
Primary   = NPALU1 / NPM1
NSA Active = NPALU1 / NPM1
NGA Active =      /

NSA PLU   = YES           NGA Sessions = YES
NSA SLU   = YES

NSA PDU Distributions:  50 : 100 : 200 : 500 : 1000 : 5000
NGA PDU Distributions:  50 : 100 : 200 : 500 : 1000 : 5000

PF 1=HELP    3=END    8=FORWARD 12=RETURN 15=NCP    16=ROUTER
PF17=LINE   20=APPL  24=TERMINAL

```

Figure 257. Network Accounting Status Panel (FNM0ABS2)

2. Press ENTER to display the Network Accounting Thresholds Status panel (FNM0ABS3), shown in Figure 258.

This panel displays collection thresholds and status information for network accounting.

```

FNM0ABS3                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        NETWORK ACCOUNTING THRESHOLDS STATUS

Command ==>

Host Name = LOCAL
NCP Name  = NCP01

Application   PDU      Octets   STATUS
NSA           64       256     ENABLED
NGA           0        0       STATUS

PF 1=HELP    3=END    7=BACKWARD 12=RETURN 15=NCP    16=ROUTER
PF17=LINE   20=APPL  24=TERMINAL

```

Figure 258. Network Accounting Thresholds Status Panel (FNM0ABS3)

Without PDU Distribution Support

Select option 5 from the Accounting panel (FNM02ACC) to display the Network Session Accounting Status panel (FNM0ABST), shown in Figure 259 on page 210. You can also use fast path =9.10.5 to display the Network Session Accounting Status panel.

This panel displays collection parameters for network session accounting.

```
FNM0ABST                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        NETWORK SESSION ACCOUNTING STATUS

Command ==>>

Host Name   = LOCAL
NCP Name    = NCP01
Primary     = NPALU1 / NPM1
Active      = NPALU1 / NPM1
Accounting  = ENABLED
PLU Sessions = YES
SLU Sessions = YES
PDU         = 64
Octets      = 256
Status      = CONNECTED

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
```

Figure 259. Network Session Accounting Status Panel (FNM0ABST)

Modifying Network Gateway Accounting

Use the following procedure to modify network gateway accounting collection parameters:

1. Select option 8 from the Accounting panel (FNM02ACC) to display the Network Gateway Accounting Modification panel (FNM0ABMG), shown in Figure 260. You can also use fast path =9.10.8 to display the Network Gateway Accounting Modification panel.

You can use the Network Gateway Accounting Modification panel to modify collection parameters for network gateway accounting.

```
FNM0ABMG                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        NETWORK GATEWAY ACCOUNTING MODIFICATION

Command ==>>

Host Name    = LOCAL
NCP Name     = NCP01
Session Partners = NPALU1 / NPM1
NGA          = ENABLED

Update and press ENTER to modify

NGA Sessions   ==>> NO          (Yes/No)
NGA PDU        ==>> 64
NGA Octets     ==>> 256
PDU Distribution ==>> 50 : 100 : 200 : 500 : 1000 : 5000

PF 1=HELP    3=END    12=RETURN  15=NCP    16=ROUTER  17=LINE
PF20=APPL   24=TERMINAL
```

Figure 260. Network Gateway Accounting Modification Panel (FNM0ABMG)

2. Complete the panel and press ENTER to submit the modified parameters to NPM.

Ending NPM

Use the following procedure to shut down NPM:

1. Select option 99 from the Control Functions panel (FNM01OMN) to display the Termination panel (FNM02OTR), shown in Figure 261. You can also use fast path =9.99 to display the Termination panel.

```
FNM02OTR                NPM V2R7  5655-043
                        CONTROL FUNCTIONS
                        TERMINATION

Command ==>

Host Name = LOCAL      User ID = USER01

You have selected the NPM termination option

Press ENTER to confirm termination or END to cancel this request

PF 1=HELP      3=END      12=RETURN  15=NCP      16=ROUTER  17=LINE
PF20=APPL     24=TERMINAL
```

Figure 261. NPM Termination Panel (FNM02OTR)

2. Press ENTER to confirm NPM shut down and exit NPM, or use the END command to cancel the shut down.

Part II. Reference

Chapter 10. NPM Commands	215
Online Commands	215
System Console Commands	218
Using the System Console to Enter Commands	219
WTOR Interface	220
MODIFY Command	220
Disabling System Console Support	220
Using the CLOCK Keyword	220
Using the OPTION Keyword	221
OPTION=START:	221
OPTION=STOP:	222
OPTION=STOPALL:	222
Altering Options with NPM Panels	223
Using the INTERVAL Keyword	223
NetWare Resources, Network, and VTAM Intervals	224
Session Intervals	224
LAN Bridge Intervals	224
LAN Segment Intervals	225
NPM System Console Command Descriptions	225
Rules for Coding NPM Commands	225
Special Characters on Non-US Keyboards	226
Chapter 11. System Console Commands: ABEND to NSAMDFY	227
ABEND	228
DISPLAY	229
EXECUTE	231
GENERIC	233
INTERVAL	236
IPCOLL	237
LANMGR	243
LBRGCOLL	245
LINE	249
LSEGCOLL	252
LU	255
LUGROUP	257
LWGCOLL	259
LWGRES	267
LWGSTOP	269
NCP	270
NETCOLL	277
NGACNTL	295
NGAMDFY	297
NOTRACE	300
NSACNTL	302
NSAMDFY	304
Chapter 12. System Console Commands: NSASOLCT to VVRCOLL	307
NSASOLCT	308

PU	310
SEND	313
I SESSAPPL	315
SESSCOLL	322
SMFCNTL	330
SNAP	332
SNMPTGT	334
STOP	336
TIME	337
TRACE	338
VADRCOLL	340
VAPLCOLL	344
VAPNCOLL	348
VARY	351
VBPLCOLL	353
VCSMCOLL	359
VDEVCOLL	362
VGBLCOLL	368
VMNPCOLL	374
VRTPCOLL	378
VVRCOLL	382

10

NPM Commands

This chapter provides an introductory description to the two types of NPM commands:

- Online commands that anyone can issue
- System console commands that require special authorization in your security profile.

The online commands are described fully in this chapter.

The system console commands are described fully in the following chapters, in which they are presented in alphabetical order, in Chapter 11, “System Console Commands: ABEND to NSAMDFY” and Chapter 12, “System Console Commands: NSASOLCT to VVRCOLL”.

Online Commands

You can enter online commands from NPM panels in the following ways:

- Type the command in any Command or Select Option field and press ENTER. You can string commands together by typing a semicolon (;) between them.

For example, the following series of commands displays the File Services Summary panel (FNM02OPR):

```
=9.4;next;next
```

- Press a PF key that has been defined as the command you want to execute.

Note: You must type the search argument in the Command or Select Option field if you define a PF key for either HELPMMSG, LOCATE, or SORT. For example, to locate NCP26 on a selection menu, you must type NCP26 *before* pressing the LOCATE PF key. NPM displays a message if you do not supply the necessary information.

See “Reassigning PF Keys” on page 16 for instructions on assigning commands to PF keys.

Table 1 lists and describes the NPM online commands.

Table 1. NPM Online Commands

Command	Description
APPL	Calls Dynamic Data Display for all applications defined to the local host and with active terminal session.
BACKWARD	Scrolls toward the top of the data set or table, or scrolls to a previous table.
BOTTOM	Displays the last panel of data if there is more than one panel.
CURSOR	Moves the cursor to the Command or Select Option field.
DISTRIB	Displays the distribution of transit times over several time spans. This command is available only on NPM session analysis panels.

Table 1. NPM Online Commands (continued)

Command	Description
DOWN	Scrolls toward the bottom of the data set or table, or scrolls to the next table.
DYN	Active on network and session review panels. Calls Dynamic Data Display using the selection criteria of the current review panel.
END	Processes the last entry made and returns you to the previous panel.
FORWARD	Scrolls toward the bottom of the data set or table, or scrolls to the next table.
HELP	Displays help information for the current panel. If an operator message is displayed on the panel, help information is given for the message rather than the panel. For more information about help, see “Getting Help for Online Panels” on page 13. Note: You cannot issue fast paths from the help panels displayed when you issue the HELP command.
HELPMMSG	Displays help message panels for a specific message. The operand is the message identifier in the form, FNMnnnn, where nnnn is the NPM message number. For three-digit NPM messages, you do not have to enter a leading zero. If you assign a PF key for this command, you must type the message identifier in the Command or Select Option field.
HOSTID	ON Displays the name of the local host in the top left corner of the panel. The PANELID command takes precedence over the HOSTID command; when the PANELID is set to ON, the host name is not displayed. OFF Turns off the name of the local host displayed in the top left corner of the panel.
KEYS	Displays the PF key definition panel, so you can change your PF key settings. Note: You cannot issue fast paths from the definition panels displayed when you issue the KEYS command.
LINE	Calls Dynamic Data Display for all SDLC lines defined to the local host.
LIST	Displays a list of LU and application session pairs. This command is available only on NPM session analysis panels.
LEFT	Scrolls the display one panel to the left.
LOCATE	Finds a specific item in a list. You can also use the wildcard character (*) to find a resource using only a partial name. You cannot use the wildcard character when you search for LAN segment numbers or LAN bridge names. If NPM cannot find the item, an error message is displayed. If you specify LOCATE or LOCATE *, NPM repeats the last LOCATE command. <i>Examples:</i> <ul style="list-style-type: none"> ■ To choose NCP99 on a selection menu, type L NCP99 in the Command field and press ENTER. If NCP99 is in the selection menu on your panel, the cursor moves to it. If NPM must scroll to find NCP99, NCP99 is displayed at the top of the list when it is found. ■ To select several NCP names between NCP90 and NCP99, type L NCP9* in the Command field. NPM moves the cursor to the first name that contains the characters NCP9. You can then make your selections. <p>If you assign a PF key for this command, you must type the search argument in the Command or Select Option field.</p>
LOGOFF	Logs you off of NPM.
NATLANG	Enables you to choose another language for the panel and message text displayed at your terminal. You can issue the command with an operand that specifies a language, or you can omit the operand and see a list of available languages. Note: You cannot issue fast paths from the language selection panel displayed when you issue the NATLANG command.
NCP	Calls Dynamic Data Display for all NCPs defined to the local host.

Table 1. NPM Online Commands (continued)

Command	Description
NEXT	Displays the next panel in the sequence.
NPM	<p>Enables you to temporarily suspend the current NPM task, execute up to three additional tasks simultaneously, and return to your original task.</p> <p>Performing multiple tasks simultaneously is called <i>nesting</i>. When you nest NPM tasks, NPM displays the current nesting level in the top right corner of each new menu or panel so you can keep track of how many levels you have nested.</p> <p><i>Example:</i></p> <p>If you are viewing summary data for NPM LUs and someone calls to report a problem about one of the CCUs in another host, you can take the following actions:</p> <ol style="list-style-type: none"> 1. Type NPM in the Command field and press ENTER. The Primary Options menu (FNM00PRI) is displayed with the nesting level (1) in the upper right corner of the panel. NPM saves the panel you were using while you attempt to solve the problem. 2. Perform tasks such as checking whether collection is in progress. 3. When you are finished with the task, return to the Primary Options menu (FNM00PRI) and press the END key. NPM displays the data you were viewing before you received the problem report.
PANELID	<p>ON Displays the panel ID number in the top left corner of the current panel and all subsequent panels. You can use this ID to report a problem with the panel or to look up reference material in this book. PANELID ON is the initial setting. Because ON is also the default, typing only PANELID is equivalent to typing PANELID ON.</p> <p>OFF Turns off the panel ID number displayed in the top left corner of the current panel and all subsequent panels.</p>
PFSHOW	<p>ON Displays the PF key definitions at the bottom of the panel. If you assign PFSHOW to a PF key, the key always works as PFSHOW ON.</p> <p>OFF Turns off the PF key definitions displayed at the bottom of the panel.</p>
PREVIOUS	Displays the previous panel in the sequence.
PRINT	Copies the contents of the current panel to the SYSPRINT file.
PROFILE	<p>Displays your current NPM user profile parameters.</p> <p>Note: You cannot issue fast paths from the profile panels displayed when you issue the PROFILE command.</p>
RECONFIG	Dynamically obtains LAN bridge and LAN segment configuration information. You can issue this command from the LAN Bridge Control panel (FNM02LBB) or from the LAN Segment Control panel (FNM02LSB). This command is issued automatically every four hours by NPM.
REFRESH	Redisplays NPM panel data to reflect the most current state of collection activity.
RETURN	Processes the last entry made and displays the Primary Options panel (FNM00PRI).
RIGHT	Scrolls the display one panel to the right.
ROUTER	Calls Dynamic Data Display for all routers defined to the local host.

Table 1. NPM Online Commands (continued)

Command	Description
SORT	Sorts fields displayed on NPM display panels. The following types of sort criteria are available:
BLOCK	Sorts by the virtual route percentage blocked during the interval, and resource name.
NAME	Sorts by resource name.
NUMBER	On VTAM panels, sorts by destination subarea number. On LAN segment panels, sorts by LAN segment number.
SESSIONS	Sorts by number of sessions on a virtual route and resource name.
SLOWDOWN	Sorts by percentage of time a device was in slowdown, and resource name.
STATUS	Sorts by collection status, monitor status, and resource name.
TIME	Sorts by collection date, time, and resource name.
TYPE	Sorts by resource type and resource name. On monitor review panels, sorts by monitor type.
UTIL	Sorts resources in ascending order by resource utilization. Within a segment utilization group, segments are sorted by segment number.
VR	Sorts incrementally by virtual route name and transmission priority.
SUMMARY	Summarizes data across all intervals.
TERMINAL	Calls Dynamic Data Display for all terminals currently in session with some applications.
TIME {hostname}	Displays the local and GMT time in the current host.
TOP	Displays the first panel of data if there is more than one panel.
TRANSIT	Displays the operator, host, and network transit times. This command is available only on NPM session analysis panels.
UP	Scrolls toward the top of the data set or table, or scrolls to a previous table.
VOLUME	Displays the session volumes for an LU, including the number of PIUs and bytes. This command is available only on NPM session analysis panels.
WHO	Displays the following information about a user: <ul style="list-style-type: none"> ■ NPM operator ID ■ Current security profile name ■ Terminal address ■ Local host name

System Console Commands

You can issue commands to NPM directly from the system console if you have the proper authority. You can also send system console commands from one NPM to another, but they are subject to NPM security at the target NPM. The sending NPM must be authorized at the target NPM to send commands.

You can use the following **data collection commands** to start data collections without accessing the NPM online panels:

- GENERIC
- INTERVAL
- IPCOLL
- LANMGR
- LBRGCOLL

- LINE
- LSEGCOLL
- LU
- LUGROUP
- LWGCOLL
- LWGRES
- LWGSTOP
- NCP
- NETCOLL
- NGACNTL
- NGAMDFY
- NSACNTL
- NSAMDFY
- NSASOLCT
- PU
- SESSAPPL
- SESSCOLL
- SMFCNTL
- VADRCOLL
- VAPLCOLL
- VAPNCOLL
- VBPLCOLL
- VDEVCOLL
- VGBLCOLL
- VVRCOLL

You can use the following **console control commands** for such tasks as sending messages to other NPM users, displaying information about resources, and managing data files:

- ABEND
- DISPLAY
- EXECUTE
- NOTRACE
- SEND
- SNAP
- STOP
- TIME
- TRACE
- VARY

All of these commands are described fully in Chapter 11, “System Console Commands: ABEND to NSAMDFY” and Chapter 12, “System Console Commands: NSASOLCT to VVRCOLL”.

Using the System Console to Enter Commands

There are two methods of using the system console to enter commands. Your system is set up for either of the following:

- WTOR interface
- MODIFY command

Each of these methods is described in this section.

WTOR Interface

You can use the WTOR interface to pass commands to NPM. This interface is enabled if PROMPT=YES is specified on the CONSOLE initialization statement. The interface issues the message FNM939 to which you can respond with the REPLY command.

►►—Reply *nn command_text*—►►

```
nn FNM939A hostname REPLY WITH VALID NPM SYSTEM OPERATOR COMMAND
```

The following list describes the variables used in the REPLY command and the message FNM939A:

nn Specifies the reply number assigned by the operating system

hostname
Specifies the name of the host

command_text
Specifies the command you want to issue to NPM

Note: If you reply with the STOP command, NPM issues another FNM939A message. This is a normal occurrence and requires no additional action. The previous request to end NPM is being processed.

MODIFY Command

You can use the MODIFY command to pass commands to NPM. This command is enabled if COMMAND=YES is specified on the CONSOLE initialization statement.

►►—modiFy *procname,command_text*—►►

The following list describes the variables you can code in this command:

procname
Specifies the name of the procedure used to start NPM

command_text
Specifies the command you want to issue to NPM

Disabling System Console Support

You can turn off STOP and MODIFY command processing by issuing the following command:

```
CONSOLE COMMAND=NO
```

Note: You must use fast path =9.99 to end NPM if you issue this command.

Using the CLOCK Keyword

Most NPM commands that you can issue at startup have an optional CLOCK keyword. This keyword determines when data collection starts and stops. Some commands have a single CLOCK value that determines when the command is issued. Other commands have two CLOCK values: a start time and a stop time. These CLOCK values are the same as the START TIME and STOP TIME fields on the NPM online panels. The CLOCK keyword is optional unless you also specify DAILY=YES for the command.

Note: If you code DAILY=YES, you must code both the start and stop times on the CLOCK keyword, and you must code them with a value greater than 0.

Commands included in the initialization data set are initiated just once each time NPM is activated. Therefore, if a startup command requests data collection from 10 a.m. to 12 p.m. with `DAILY=NO`, and NPM is brought up on Monday and remains active for five days, this collection occurs only on Monday. If `DAILY=YES`, the collection occurs each day during the specified time period.

Times are specified in a *hh.mm.ss* format based on a 24-hour clock.

hh Hours range from 00–24. The time 24.00.00 is converted to 23.59.59 by NPM. The default is 00.

mm Minutes range from 00–59. Minutes are optional. The default is 00.

ss Seconds range from 00–59. Seconds are optional. The default is 00.

The stop time must be at least one base interval greater than the start time, except when both are coded as 00.00.00. The times cannot span midnight. For example, you cannot specify a start time of 23.00.00 and an end time of 01.00.00. If you specify `DAILY=YES`, it is not possible to code the start time equal to 00.00.00. If you do code the start time as 00.00.00, message FNM021E is generated.

If you code a start time of 00.00.00, or do not code a time at all, NPM begins collection immediately when the command is issued. You can also specify that collection occur continuously by coding both the start and stop times as 00.00.00, or by omitting the `CLOCK` keyword.

If the start time you code is later than the current system time, NPM waits until the start time to process the command. For example, if the current time is 10.15.00 and the start time is 13.30.00, NPM waits until 13.30.00 (1:30 p.m.) to start collecting data. If the start time has already passed, NPM processes the command immediately. For example, if the current time is 10.15.00 and the start time is 08.00.00, NPM starts collection right away, at 10:15 a.m.

Similarly, if the stop time is later than the current system time, NPM waits until the stop time to stop the collection. If the stop time has already passed, NPM stops collection immediately. For network and VTAM collections, NPM logs the data for the completed portion of the current interval when the collection is stopped. For NetWare resources collections, interval and summary records are not written, but monitor resolution notifications are sent if they have been requested.

Using the **OPTION** Keyword

This section describes the processing associated with the `OPTION` keyword on the `IPCOLL`, `LBRGCOLL`, `LSEGCOLL`, `LWGCOLL`, `NETCOLL`, and `VxxxCOLL` commands, which is used to start and stop the collection of data.

OPTION=START:

- When you code `OPTION=START` without a corresponding start or stop time, the command is executed immediately and the command keywords are saved.
- When you code `OPTION=START` with a corresponding start and stop time, if the start time has passed, the command is executed immediately. The stop is deferred to the specified stop time. If both the start and stop times have passed, the `DAILY` keyword is checked. If `DAILY=YES` is coded, the command is deferred until the following day. If

DAILY=NO is coded, the command fails. DAILY is only valid if both the start and stop times are specified. If the start time has not passed, the entire command is deferred.

- When you code OPTION=START with only a corresponding start time, the command is deferred until the requested start time. If the start time has passed, the command is executed immediately. When a command is entered with only a stop time, START is executed immediately, and STOP is deferred. If the stop time has passed, the command is rejected.

OPTION=STOP:

- When you code OPTION=STOP without a corresponding start or stop time, the command stops the current collection for the given interval immediately. If a deferred stop is associated with the active collection, the command also deletes the associated stop (not valid for generic names). If no collection is active, an error message is issued.
- When you code OPTION=STOP with both a corresponding start and stop time, the deferred queue is searched for a corresponding command. If a matching command is found with the same resource name, interval, start, and stop time, it is removed. The command could also be the current active collection, in which case the collection is stopped.
- When you code OPTION=STOP with only a corresponding start time, and the start time (x) has not passed, the deferred queue is searched for a corresponding command, and the command is deleted (if found). If the start time has passed and there is a current active collection, the collection is stopped.
- When you code OPTION=STOP with only a corresponding stop time, the command is executed immediately if there is an active collection and the stop time (y) has already passed. If the stop time (y) has not passed, and the RESOURCE is not a GENERIC BUCKET (for example, ALLLINES, PU, ALLVR), the processing logic is as follows:
IF no collection active, error message;

```
ELSE (collection active):  
  
IF active collection is ( $\theta,y$ ) THEN  
  
    Stop the active collection and delete the associated STOP;  
  
ELSE  
  
IF active collection is ( $\theta,\theta$ ) or ( $x,\theta$ ) THEN  
  
    Stop at ( $\theta,y$ )  
  
ELSE /* active is ( $x,y$ ) */  
  
    error
```

If the stop time (y) has not passed, and the RESOURCE is a GENERIC BUCKET (for example, ALLLINES, PU, ALLVR), a STOP command is scheduled at time (y).

OPTION=STOPALL:

This command affects only active collections. After you issue OPTION=STOPALL, all of the active collections in all of the intervals for the chosen resource are stopped, including all collections for the REFRESH interval. This option does not affect deferred collections.

Note: You cannot use OPTION=STOPALL with the LBRGCOLL and LSEGCOLL commands.

Altering Options with NPM Panels

You can use NPM panels to modify the options you chose when you coded the LBRGCOLL, LSEGCOLL, NETCOLL, and VxxxCOLL commands.

- To alter the options you have coded on the VxxxCOLL and NETCOLL commands, choose the Alter a Collection option on NPM panel FNM02CMD.
- To alter the options you have coded on the LBRGCOLL command, choose the Alter a Collection option on NPM panel FNM02LBC.
- To alter the options you have coded on the LSEGCOLL command, choose option A, Modify a Collection option, on NPM panel FNM02LSC.

Note: You cannot modify options through NPM EXECs or from the system console.

Using the INTERVAL Keyword

NPM collects data when a specified interval ends. NPM calculates the length of the interval differently for different types of collections.

For LAN segment and LAN bridge collections, NPM calculates the length of the interval, based on the value in minutes you specify on the LBRGINT and LSEGINT keywords on the NPM initialization statement in FNMINIT.

where:

LBRGINT Specifies the interval in minutes used for LAN bridge collection.

LSEGINT Specifies the interval in minutes used for LAN segment collection.

For NetWare resources, network, session, and VTAM collections, NPM calculates the length of the interval, based on two factors: the length of the base interval and the interval number.

- You specify the length of the base interval in seconds for NetWare resources, network, session, and VTAM collections, with the INTERVAL keyword on the NPM initialization statement.
- You specify the interval number for NetWare resources and VTAM collections, with the INTERVAL keyword on the LWGCOLL or VxxxCOLL command in FNMSTRT.
- You specify the interval number for session collections, with the SESSINT keyword of the NPM initialization statement in FNMINIT.

where:

INTERVAL (on the NPM statement)

Specifies the base-interval length, in seconds, used for NetWare resources, network, session, and VTAM collections. The default is 225 seconds.

INTERVAL (on the LWGCOLL and VxxxCOLL commands)

Specifies the interval number used for NetWare resources and VTAM collections. The value of the interval number can be any number from 1 to 7. The default value is 1.

SESSINT Specifies the interval number used for session collections.

NetWare Resources, Network, and VTAM Intervals

NPM uses seven collection intervals to determine when to collect NetWare resources, network, and VTAM data. NPM calculates these intervals, based on the base-interval length, in seconds, and the interval number.

Table 2 shows the interval times resulting from selected base interval lengths and interval numbers. The value for each interval higher than Interval 1 is twice the value of the previous interval.

For example, if you specify a base-interval length of 30 seconds and an interval number of 5, each interval will be 8-minutes long.

For NetWare resources and VTAM collections, you can change the default interval number by coding the LWGINT and VTAMINT keywords on the DEFAULTS statement in FNMINIT. These keywords are optional.

where:

- LWGINT** Specifies the default interval number used for NetWare resources collections. The interval number can be any number from 1 to 7. The default is 1.
- VTAMINT** Specifies the default interval number used for VTAM collections. The interval number can be any number from 1 to 7. The default is 1.

Table 2. Collection Interval Example

Base interval 1	Interval 2	Interval 3	Interval 4	Interval 5	Interval 6	Interval 7
30 sec	1 min	2 min	4 min	8 min	16 min	32 min
45 sec	90 sec	3 min	6 min	12 min	24 min	48 min
1 min	2 min	4 min	8 min	16 min	32 min	64 min
225 sec	450 sec	15 min	30 min	1 hr	2 hr	4 hr
5 min	10 min	20 min	40 min	80 min	160 min	320 min
15 min	30 min	1 hr	2 hr	4 hr	8 hr	16 hr

You can select base interval lengths other than those shown in Table 2. You select one of the seven intervals for NPM to use on the command or panel you use to start network collection.

Session Intervals

Session data collection uses the same base interval as in NetWare resources, network, and VTAM data collections, but multiplies it by a single session interval value. The result of the multiplication determines the length of the collection interval. For example, if you specify a base interval of 1 minute and a session interval number of 10, session data is collected every 10 minutes. Specify the session interval with the SESSINT keyword of the NPM initialization statement.

LAN Bridge Intervals

LAN bridge data collection uses its own base interval. You specify the interval length in minutes on either the LBRGINT keyword of the NPM initialization statement or on the LAN Bridge Control panel. Collection can occur every 5, 10, 15, 20, 30, or 60 minutes.

LAN Segment Intervals

LAN segment data collection uses its own base interval. You specify the interval length in minutes on either the LSEGINT keyword of the NPM initialization statement or on the LAN Segment Control panel. Collection can occur every 5, 10, 15, 20, 30, or 60 minutes.

NPM System Console Command Descriptions

This section lists the NPM system console commands in alphabetical sequence. There is a general description and a syntax diagram for every command. Each of the console command keywords shown in the syntax diagrams are described.

The following information is also provided for each NPM command:

- **Console Authorization:** Identifies the authorization that you need to issue the command from the console.
- **Where:** Identifies where you can issue the command. You can issue commands from the system console, from FNMSTRT, or by running an NPM EXEC.

Many commands can either be issued from the system console or coded in FNMSTRT or in NPM EXECs. You must have CONTROL=COMMANDS authorization to run an NPM EXEC from an online panel.

Rules for Coding NPM Commands

A description and syntax diagram for each NPM command is provided in the following sections. Follow the syntax diagrams when coding the commands.

- Commands can start in any column, but cannot extend beyond column 71. You can continue commands on a subsequent line by ending the current line with a comma and starting the next logical line with the next operand.
- There should not be any blanks within the command text on any line, unless they are part of a string enclosed in single quotes.
- Commands are scanned for syntax before the operands are processed. If a syntax error is found in a command, NPM issues a message and ignores the entire command.
- Keywords can be specified only once in a command.
- Variables can be defined as strings enclosed in single quotes, delimited by commas. Literal strings can be defined with or without quotes. However, single quotes are required if the string contains blanks or special characters.
- If you want to use the default values for all keywords of a statement, do not code the statement. If you code a statement without any associated keywords, the following message is issued and all default values are taken:
FNMxxxx: SYNTAX ON COMMAND IS NOT VALID
- Names can be from one to eight characters. Valid characters are A to Z, 0 to 9, the at (@), pound (#), and dollar (\$) symbols. The first character cannot be numeric.

Note: NetWare server names can be from 2 to 47 characters. Valid characters are A to Z, 0 to 9, the dash (-), and the underscore (_).

- Certain keywords allow multiple values. Multiple values should be separated by commas and enclosed within parentheses. If you specify only one value, the parentheses are optional.

Special Characters on Non-US Keyboards

NPM and NetWare require a number of special characters in addition to A to Z and 0 to 9. When you use the interactive panels, your keyboard input is translated into the correct hexadecimal representation through a translation table.

If you are using a non-US keyboard, you need to be aware of the hexadecimal representation that NPM and NetWare expect. Table 3 lists special characters and their hexadecimal values required by NPM. When requested to enter one of these special characters, ensure that the character on your keyboard produces the correct hexadecimal representation. For example, if the instructions say to enter a dollar (\$) symbol, enter the character on your keyboard that corresponds to X'5B'.

Table 3. Hexadecimal Representations of Special Characters in NPM

Symbol	Name	Hex
¢	Cent	4A
.	Period	4B
(Left parenthesis	4D
&	Ampersand	50
\$	Dollar	5B
*	Asterisk	5C
)	Right parenthesis	5D
¬	Not symbol	5F
-	Dash	60
,	Comma	6B
_	Underscore	6D
>	Greater than	6E
:	Colon	7A
#	Pound	7B
@	At sign	7C
'	Single quote	7D
=	Equals	7E

11

System Console Commands: ABEND to NSAMDFY

This chapter lists the NPM system console commands from ABEND to NSAMDFY in alphabetical sequence. There is a general description and a syntax diagram for every command. Each of the system console command keywords shown in the syntax diagrams are described.

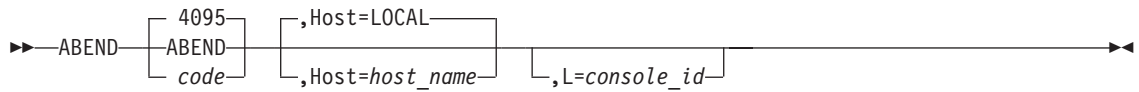
The following information is also provided for each NPM command:

- **Console Authorization:** Identifies the authorization that you need to issue the command from the console.
- **Where:** Identifies where you can issue the command. You can issue commands from the system console, from FNMSTRT, or by running an NPM EXEC.

Many commands can either be issued from the system console or coded in FNMSTRT or in NPM EXECs. You must have CONTROL=COMMANDS authorization to run an NPM EXEC from an online panel.

ABEND

Use the ABEND command to end NPM abnormally with a dump.



Authorization Needed: Problem determination

Where: Console

The following list describes the keywords you can code on the ABEND command:



Specifies the ABEND code used to end NPM. The code can range from 4000 to 4095.



Specifies the host that receives the command.



Specifies the console that receives response messages.

Example

Enter the following console command to cause the abnormal end of NPM with code 4090:

```
F NPMV2R7,ABEND 4090
```


DISPLAY

Use the DISPLAY command to display information about the resources that NPM uses to collect data. The DISPLAY command does not display information about the resources on which NPM is currently collecting data.

```
▶▶—DISPLAY resource—,ID=resource_name— [ ,Host=LOCAL— ] [ ,Host=host_name— ] [ ,L=console_id— ]▶▶
```

Authorization Needed: None

Where: Console

```
▶▶— resource— resource—▶▶
```

Specifies the resources to display:

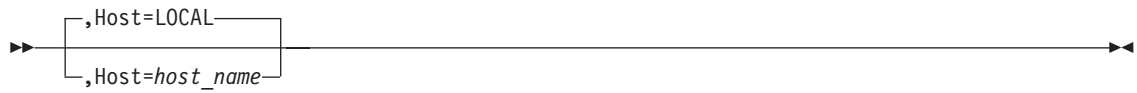
ALERT	The FNMALEERT logical file defined to this NPM
FILE	All FNMSES x , FNMREV x , FNMLWG x , FNMLLOG x , FNMVLOG x , FNMSMF, and FNMALEERT files defined to this NPM
LOG	All FNMLLOG x files defined to this NPM
LWG	All FNMLWG x files defined to this NPM
NPALU	All NPALUs defined to this NPM
NPM	All NPMs defined to this NPM
OPER	All active NPM operators
REV	All FNMREV x files defined to this NPM
SES	All FNMSES x files defined to this NPM
SMF	The FNMSMF logical file defined to this NPM
VLOG	All FNMVLOG x files defined to this NPM

```
▶▶—,ID=resource_name—▶▶
```

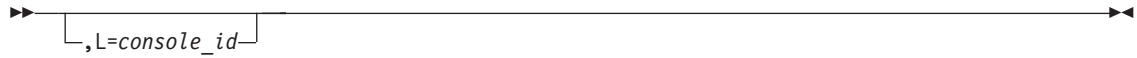
Specifies the NPM resource to display. This resource can be an NPM operator, operator terminal, host, application, NPALU, NCP, or the data definition name of a file.

If the *resource* variable is used with the ID keyword, only the resource specified by the ID keyword is displayed. For example, if you display files and you use the ID keyword to specify a specific file, you see information on that file only. If you do not use the ID keyword, you see information on all files.

DISPLAY



Specifies the host that receives the command.



Specifies the console that receives response messages.

Example

Use the following command to display the status of a specific NCP NPALU (NCP001) on host NYC:

```
F NMPV2R7,DISPLAY ID=NCP001,HOST=NYC
```

In response to this command, NPM displays the following messages:

FNM945I	NAME	STATUS	NCP	VERSION	GENLEVEL	HOST:NYC
FNM946I	SA01NPL1	ACTIVE	NCP001	V5R2	08/04/91	10:15:33
FNM946I	SA01NPL2	INACTIVE	NCP001	V5R2	08/04/91	10:15:33
FNM946I	SA01NPL2	ACT_LU62	NCP001	V5R2	08/04/91	10:15:33

These messages list the NPALU name and status for the NCP. There can be two lines for the NPALU name: the primary NPALU and the backup NPALU. See the *NetView Performance Monitor Installation and Customization* for more information about these messages.

EXECUTE

Use the EXECUTE command to run NPM EXECs. See the *NetView Performance Monitor Installation and Customization* for information about coding NPM EXECs.

```

▶—Execute Member=member_name [ ,PRintmbr=No ] [ ,PRintmbr=Yes ] [ ,Host=LOCAL ] [ ,Host=host_name ]
▶— [ ,L=console_id ]

```

Note: The Host keyword is only available from the system console

Authorization Needed: Control commands

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the EXECUTE command:

```

▶— Member=member_name

```

Specifies the NPM EXEC member to read and execute. The maximum length of this operand is eight characters.

```

▶— [ ,PRintmbr=No ] [ ,PRintmbr=Yes ]

```

Specifies whether to print the contents of the EXEC in the SYSPRINT log.

```

▶— [ ,Host=LOCAL ] [ ,Host=host_name ]

```

Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.

```

▶— [ ,L=console_id ]

```

Specifies the console that receives response messages. You code this keyword only if you are issuing the command from the system console.

Example

Enter the following console command to execute a member of the FNMSCMDS data set named NCP001:

EXECUTE

F NPMV2R7,EX MEMBER=NCP001,PR=NO

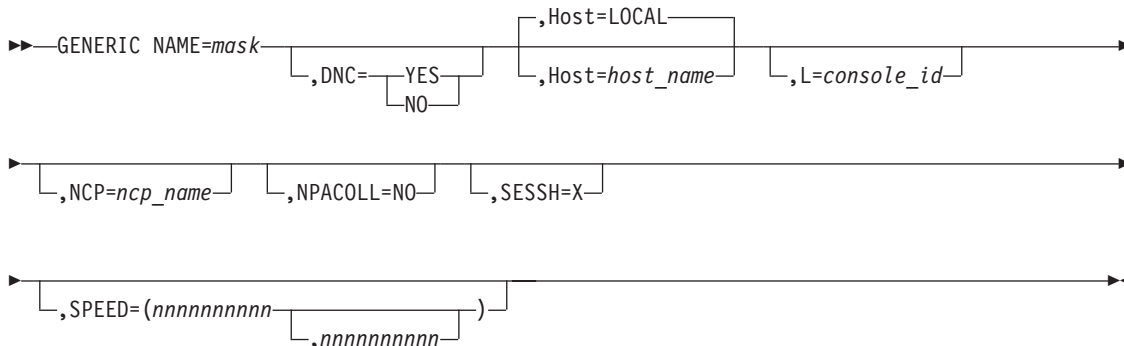
NPM alerts you when the command has successfully completed by issuing the following message:

FNM114I EXECUTE COMPLETE, MEMBER=NCP001

GENERIC

Use the GENERIC command to modify the parameters of resources matching the generic mask.

All of the keywords on this command, except SESSH, are overridden by the information in the NCP resource resolution table (RRT) and VTAMLST each time the NCP is replaced. You should include this command in an NPM EXEC following the NCP command. This causes this command to execute each time you update the NCP definition.



Note: The Host keyword is only available from the system console

Authorization Needed: Control commands

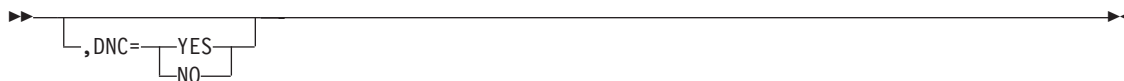
Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the GENERIC command:



Specifies a mask used to compare resource names found in the NCP. It has a maximum length of eight alphanumeric or special characters.

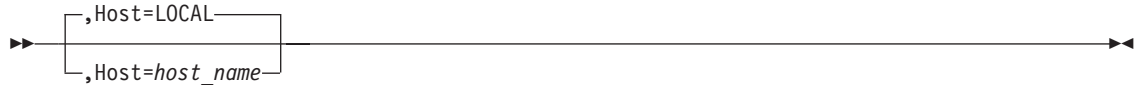
The alphanumeric characters (A to Z and 0 to 9) are compared position-by-position, from the mask to the resource name. Special characters in the mask can match more than one character in the resource name. The greater-than (>) character matches any alphabetic character, the cent (¢) character matches any numeric character, and the logical not (¬) character matches any character. See Table 3 on page 226 for a list of the hexadecimal representations of special characters used in NPM.



Specifies the dynamic network collection (DNC) parameter associated with resources matched by the name mask.

- YES** Starts network data collection for an LU in this NCP when a session connection occurs, and stops network data collection when a session disconnection occurs.
- NO** Stops DNC for any LU in this NCP. The default is defined by the DNC parameter of the NPM NCP command used to define this NCP to NPM.

NPM sets DNC=NO on this command if DNC=NO is coded on the CONTROL statement in FNMINIT.



Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.



Specifies the console that receives response messages. You code this keyword only if you are issuing the command from the system console.



Specifies the name of the NCP for this command. All resources that match the generic mask in the specified NCP are updated.

If you do not specify an NCP, all resources that match the generic mask are updated.



Specifies that network data collection commands on the resources matched by the mask be rejected. You can use this option to exclude network data collection on inactive resources.

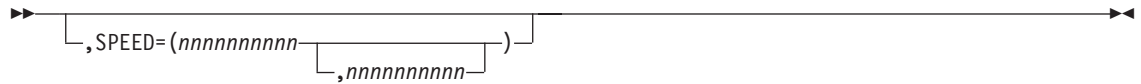
If you specify NPACOLL=NO, DNC defaults to NO for LUs.

If you specify NPACOLL=NO to prevent data collection on a resource, you cannot turn collection back on by reissuing the command. You must execute the NCP command again before you can collect data on the resource.



Specifies the SESSH parameter associated with resources matched by the name mask. Use this parameter to exclude session data collection for the resources matched by the name mask.

An active session collection is not stopped for the resource. `SESSH` is used to prevent session collection on a resource when session collection was started by application. This option is typically used for printers.



Specifies the line speed or speeds associated with the line. The `SPEED` keyword applies only to `LINE` resources. Specify one speed for a half-duplex line and two speeds for a full-duplex line. For a full-duplex line, the first speed is the transmit speed and the second speed is the receive speed.

The first number can range from 134 to 2 147 483 647. The second number can be either 0 or in the range from 134 to 2 147 483 647.

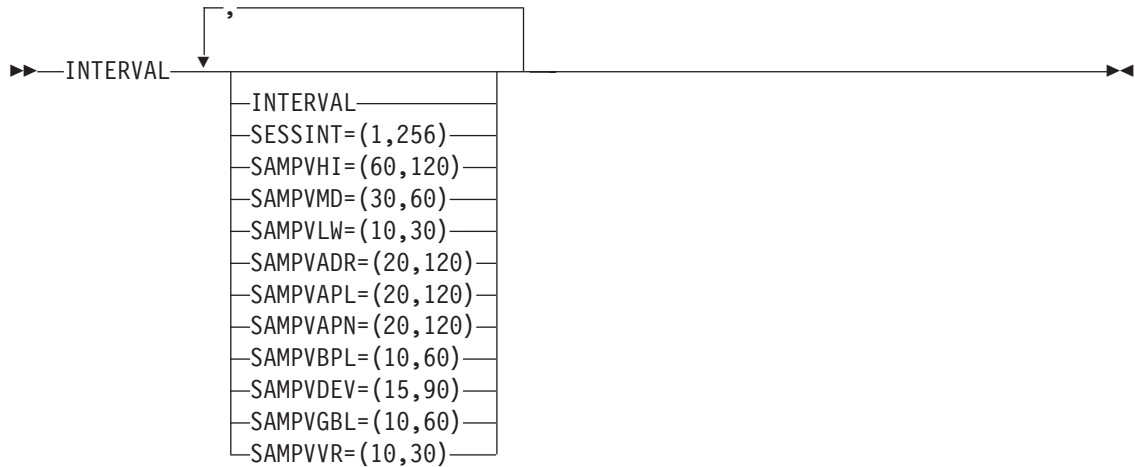
Example

Use the following console command to specify the mask for all printers, stop `DNC`, and exclude session data collection:

```
GENERIC NAME=PRT>>,DNC=NO,SESSH=X
```

INTERVAL

Use the INTERVAL command to modify the session collection interval or the VTAM sampling intervals that have been set in FNMINIT or by previously issued INTERVAL commands.



Authorization Needed: Control commands

Where: Console, NPM EXEC

The following list describes the keywords you can code on the INTERVAL command:

- SESSINT** Specifies how many base intervals to wait before collecting session data. You can set SESSINT to any number from 1–256. This value is multiplied by the base interval to determine the actual length of the session interval. Session data is written to the session file at the end of the specified interval and when the session ends. See “Using the Interval Parameter” in the *NetView Performance Monitor Installation and Customization* for information about using the INTERVAL parameter.
- SAMPVHI** Specifies the sampling interval used to collect VTAM application data, address space data, APPN data, MNPS data, and VTAM global data. The valid range is 60-120 seconds.
- SAMPVMD** Specifies the sampling interval used to collect VTAM device data, buffer pool, and CSM data. The valid range is 30-60 seconds.
- SAMPVLW** Specifies the sampling interval used to collect VTAM virtual route data and RTP data. The valid range is 10-30 seconds.

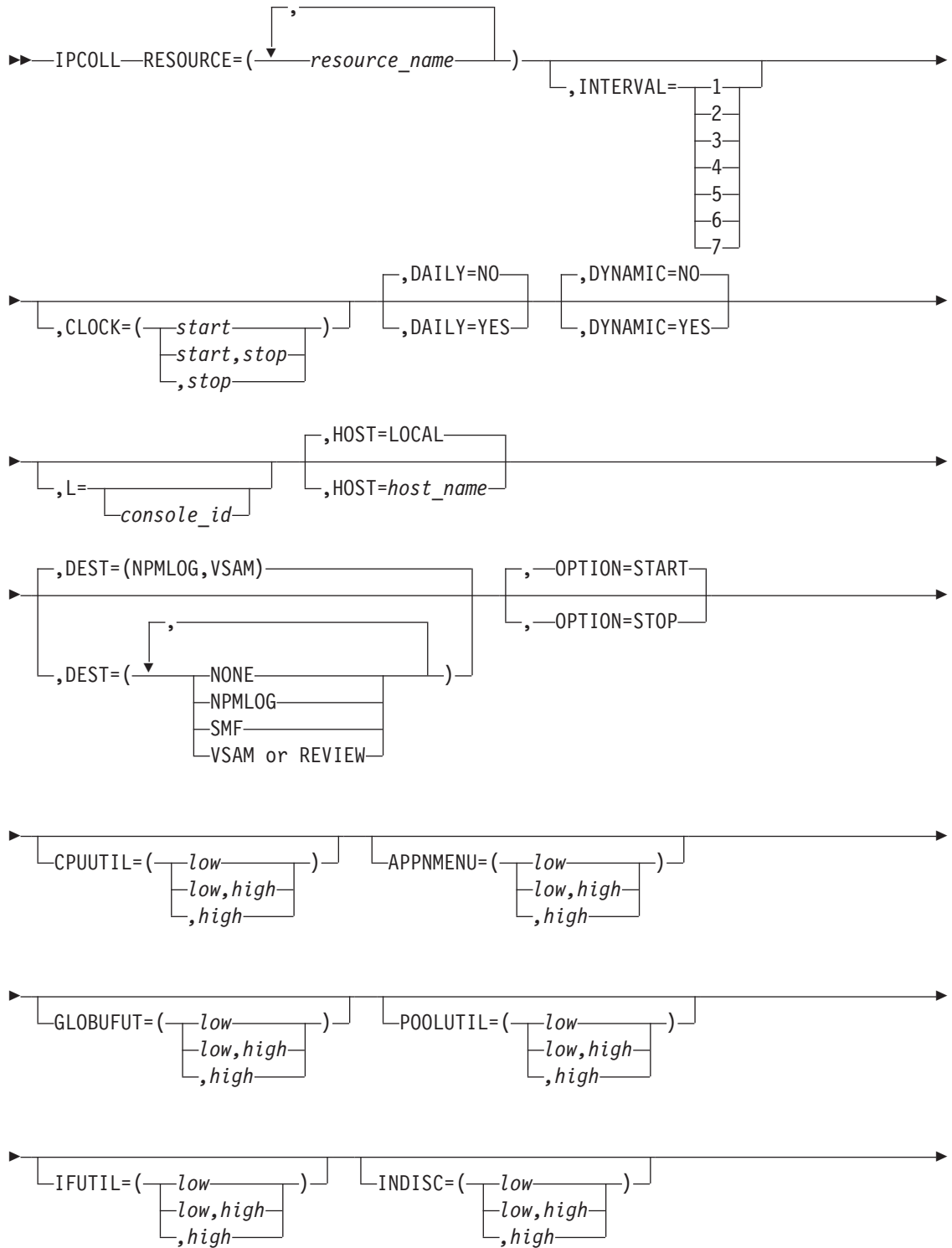
Example

Use the following console command to modify the session collection interval from the previously defined value to 4:

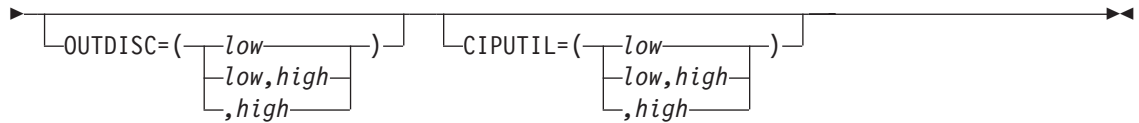
```
INTERVAL SESSINT=(4)
```


IPCOLL

Use the IPCOLL command to start or stop SNMP collections.



11. System Console Commands



Authorization Needed: Network collection

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the IPCOLL command:



Specifies the IP addresses or host names of the SNMP routers that will receive the collection command. It is a required keyword.



Specifies the number of the interval for which you want to start the network collection. The value can be from 1 to 7. It defaults to the `INTERVAL` parameter set on the `DEFAULTS` statement in `FNMINIT`. See “Using the `INTERVAL` Keyword” on page 223 for more information on the `INTERVAL` parameter.



Specifies the times the command is to be started and stopped, in `hh.mm.ss` format. You must specify the start and stop times on the `CLOCK` keyword if you code the `DAILY` keyword as `DAILY=YES`.

See “Using the `CLOCK` Keyword” on page 220 for more information about the `CLOCK` keyword.



Specifies whether you want this collection to be started each day.

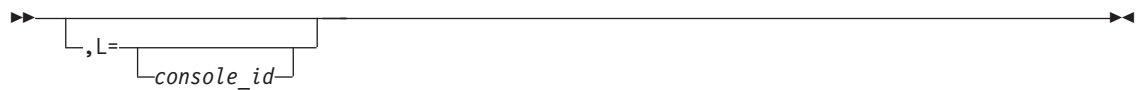
You can have only one collection active at any one time for the same combination of resource, interval, and counter group. If you have a daily collection that is deferred because its start time is in the future, the deferred collection is not started if another collection is active when the deferred collection is due to start. In this situation, the deferred collection fails and is enqueued for the next day.



Specifies whether this resource is a dynamically reconfigurable resource.

For switched resources, you should code `DYNAMIC=YES` to ensure that data is collected. In addition, if you code `DYNAMIC=YES`, NPM will not stop the collection if the resource is deleted, but will suspend the collection until the stop time is reached or the resource is added again.

Pay special attention in specifying resource names when you code `DYNAMIC=YES`. Because the collection you are going to start is dynamic, there is no verification of the resource name (any name is valid).



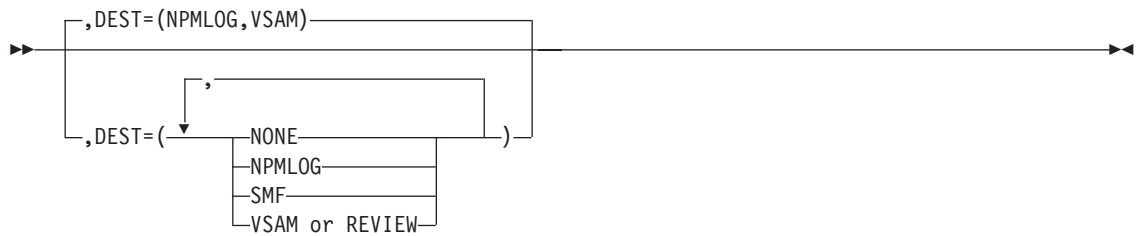
Specifies the console that receives response messages. You code this keyword only if you issue the command from the system console.



The host name you specify can be any host defined to NPM with the ANPM initialization statement.

To collect on the host where NPM is running, use `HOST=LOCAL`; otherwise, use the ANPM statement.

Note: You cannot specify the `HOST` keyword both in an `EXEC` and in `FN MSTRT` for the `IPCOLL` command. The `HOST` keyword can be specified only when the `IPCOLL` command is issued from the console.



Specifies the destination of the network data records. You can define multiple destinations on this keyword, and the `NONE` setting is ignored if you code any other parameters.

Note: The operator can override the default as long as the target files are available.

- NONE** No network data records are to be written.
- NPMLLOG** Network data records are written to the data sets defined by the `FILE` initialization statements as `FNMLOGx`.
- SMF** Network data records are written to SMF.
- VSAM** Network data records are written to the data sets defined by the `FILE` initialization statements as `FNMREVx`. `VSAM` is the default.



Specifies whether to start or stop SNMP collection. For more information about the `OPTION` keyword, see “Using the `OPTION` Keyword” on page 221.



Specifies the monitor limits for percentage CPU usage for IBM and Cisco routers. Both numbers can range from 1 to 100. The low criteria value must be less than the high criteria value.



Specifies the monitor limit for percentage APPN memory usage for IBM routers. Both numbers can range from 1 to 100. The low criteria value must be less than the high criteria value.

```

>> GLOBUFUT=( low )
             low,high
             ,high

```

Specifies the monitor limit for percentage global buffers usage for IBM routers. Both numbers can range from 1 to 100. The low criteria value must be less than the high criteria value.

```

>> POOLUTIL=( low )
              low,high
              ,high

```

Specifies the monitor limit for percentage memory pool usage for Cisco routers (individual Cisco memory pool usage). Both numbers can range from 1 to 100. The low criteria value must be less than the high criteria value.

```

>> IFUTIL=( low )
            low,high
            ,high

```

Specifies the monitor limit for percentage interface utilization (individual interface throughput). Both numbers can range from 1 to 100. The low criteria value must be less than the high criteria value.

```

>> INDISC=( low )
            low,high
            ,high

```

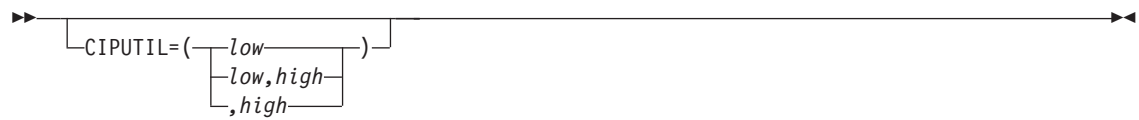
Specifies the monitor limit for percentage of packets received on the interface. Both numbers can range from 1 to 100. The low criteria value must be less than the high criteria value.

```

>> OUTDISC=( low )
              low,high
              ,high

```

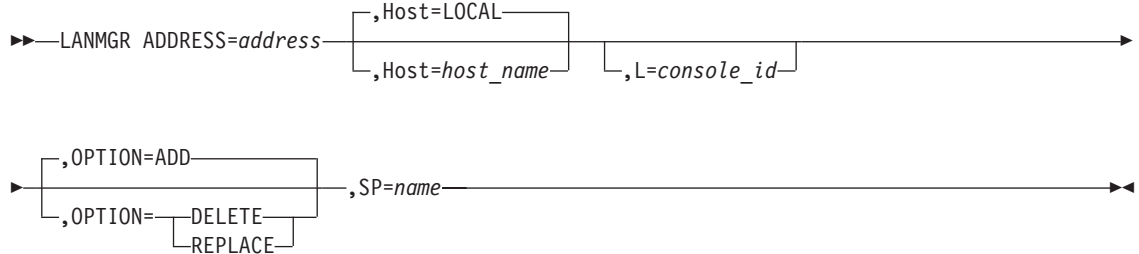
Specifies the monitor limit for percentage of packets discarded on the interface. Both numbers can range from 1 to 100. The low criteria value must be less than the high criteria value.



Specifies the monitor limit for percentage of CIP utilization for Cisco routers. Both numbers can range from 1 to 100. The low criteria value must be less than the high criteria value.

LANMGR

LANMGR commands define LAN Managers to be used for LAN bridge and LAN segment data collection. With the LANMGR command, you can add, replace, or delete a LAN Manager. This command also defines all LAN bridges and LAN segments known by the LAN Manager.



Note: The Host keyword is only available from the system console.

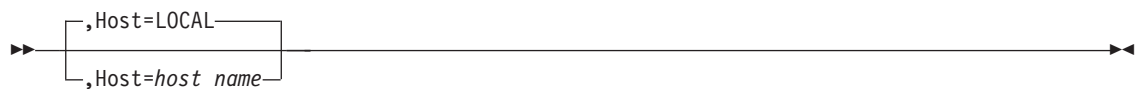
Authorization Needed: LAN management

Where: Console, FNMSTRT, NPM EXEC

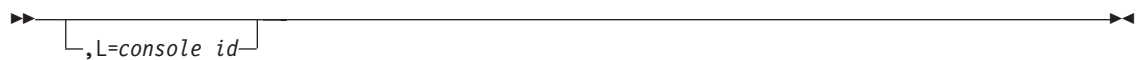
The following list describes the keywords you can code on the LANMGR command:

▶▶ ADDRESS=address

Specifies the adapter address used by the LAN Manager. It consists of 12 hexadecimal characters.



Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.



Specifies the console that receives response messages. You code this keyword only if you are issuing the command from the system console.



Specifies the action to perform:

LANMGR

- ADD** Adds a LAN Manager. If you try to add a LAN Manager that is already defined, ADD acts like REPLACE.
- DELETE** Deletes a LAN Manager.
- REPLACE** Triggers a refresh of the configuration for this LAN Manager.

If you try to delete or replace a LAN Manager that is not defined, the command is ignored and a message is issued.

▶▶—,SP=*name*—————▶▶

Specifies the PU name of the LAN Manager service point as defined to VTAM.

Example

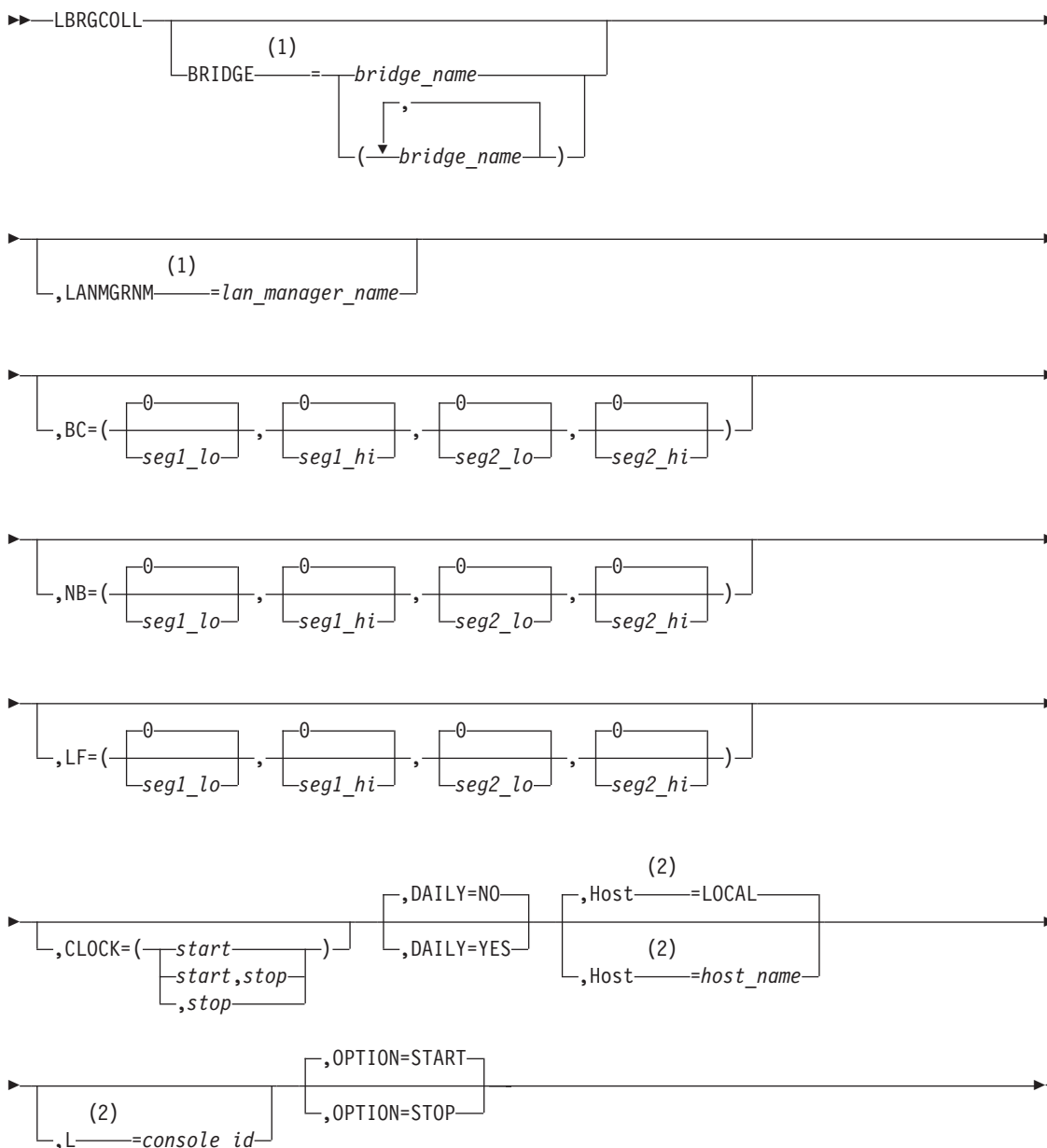
Use the following console command to define LANNPM9 to NPM:

```
LANMGR OPTION=ADD,  
        ADDRESS=189537654080,  
        SP=LANNPM9
```


LBRGCOLL

The LBRGCOLL command enables you to start or stop the collection of LAN bridge data for LAN bridges in your network. You can collect data such as numbers of broadcast, non-broadcast, and lost frames.

You must define the LAN bridge to NPM using the LANMGR command, before you can start collection on it. You can code REVIEW=YES on the DEFAULT statement if you want to route LAN bridge data to the current review file for online display. You can also use the LAN Bridge Control (FNM02LBB) panel to specify the review file as a data destination.



Notes:

- You can specify up to 200 bridges. You must specify either the BRIDGE keyword or the LANMGRNM keyword. If both are specified, the LANMGRNM keyword is ignored and collection occurs only for the named bridge.

2 Only from the system console

Authorization Needed: LAN management

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the LBRGCOLL command:

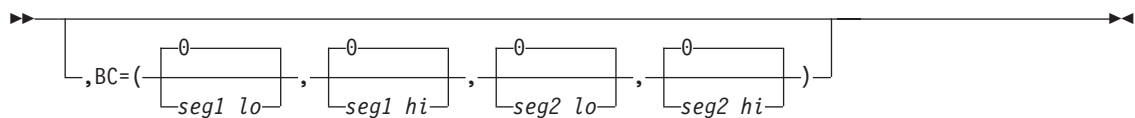


Instructs NPM to start or stop collection on the specified bridges. You can specify up to 200 bridge names.

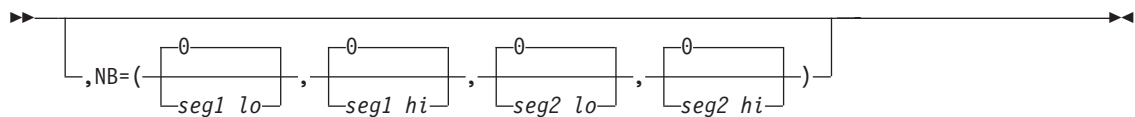
You must specify either the BRIDGE keyword or the LANMGRNM keyword. If you specify both, the collection occurs on the specified bridge and the LANMGRNM keyword is ignored. If the bridge is not defined to NPM, the request is queued until the bridge is defined to a known LAN Manager, or until the next reconfiguration occurs.



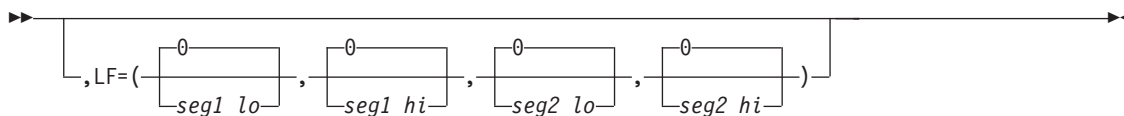
Instructs NPM to start or stop collection on all bridges linked to this LAN Manager. The LAN Manager name should match the name defined by the SP™ keyword in the LANMGR command.



Specifies the low and high threshold values for broadcast frames forwarded per minute from segment 1 and segment 2. For example, code BC=(100,6000,0,0) to monitor only the first segment. Code BC=(0,0,100,6000) to monitor only the second segment.



Specifies the low and high threshold values for non-broadcast frames forwarded per minute from segment 1 and segment 2. For example, to monitor only the first segment, code NB=(100,100,0,0). Code NB=(0,0,100,100) to monitor only the second segment.



Specifies the low and high threshold values for lost frames forwarded from segment 1 and segment 2. For example, code LF=(10,100,0,0) to monitor only the first segment. Code LF=(0,0,10,100) to monitor only the second segment.



Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. You must specify the start and stop times on the CLOCK keyword if you code the DAILY keyword as DAILY=YES. See “Using the CLOCK Keyword” on page 220 for more information on the CLOCK keyword.



Specifies whether the command is to be executed each day.



Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.



Specifies the console that receives response messages. You code this keyword only if you are issuing the command from the system console.



Specifies whether to start or stop LAN bridge collection. If the OPTION=STOP, all keywords except BRIDGE and LANMGRNM are ignored. See “Using the OPTION Keyword” on page 221 for more information about the OPTION keyword.

Example

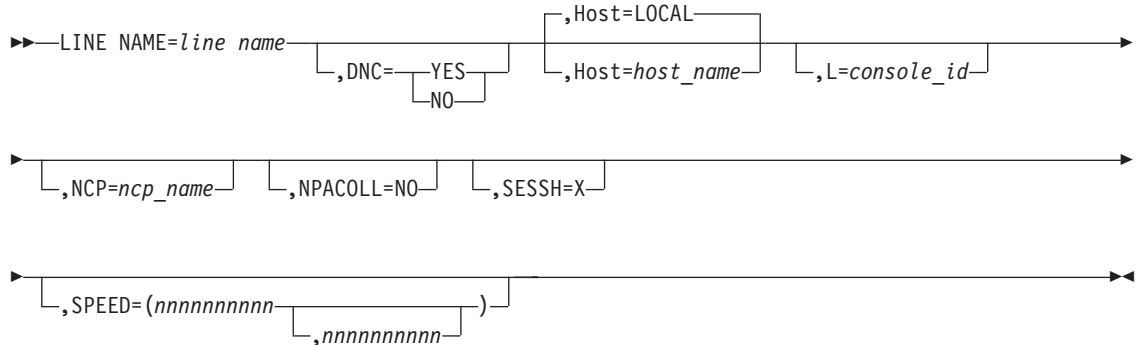
Use the following console command to collect data on bridge BRGA011, monitor broadcast frames forwarded, non-broadcast frames forwarded, and lost frames from 8 am to 4 pm:

```
LBRGCOLL BRIDGE=BRGA011,  
          BC=(500,2000,500,2000),  
          NB=(200,1000,200,1000),  
          LF=(0,100,0,100),  
          CLOCK=(08.00.00,16.00.00)
```

LINE

Use the LINE command to modify the parameters associated with a line.

All of the keywords used with this command, except SESSH, are overridden by the information in the NCP RRT and VTAMLST each time the NCP is replaced. You should include this command in an NPM EXEC following the NCP command so each time you update the NCP definition you also execute this command.



Note: The Host and L keywords are only available at the system console.

Authorization Needed: Control commands

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the LINE command:

▶ NAME=*line_name* ▶▶

Specifies the name of a line defined in one of the NCP generations.

▶ ,DNC= YES NO ▶▶

Specifies the dynamic network collection (DNC) parameter associated with the LUs on this line.

YES Starts network data collection for the LUs on this line when a session connection occurs, and stops network data collection when a session disconnection occurs.

NO Stops DNC for any LUs on this line. The default is defined by the DNC parameter of the NPM NCP command used to define this line's NCP to this NPM.

NPM sets DNC=NO on this command if DNC=NO is coded on the CONTROL statement in FNMINIT.



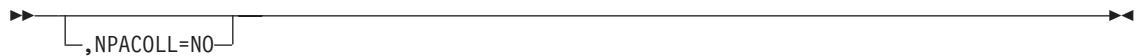
Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.



Specifies the console that receives response messages. You code this keyword only if you are issuing the command from the system console.



Specifies the name of the NCP for this command. Only the line in the specified NCP is updated. If you do not specify the NCP keyword, the first line that matches the name is updated.



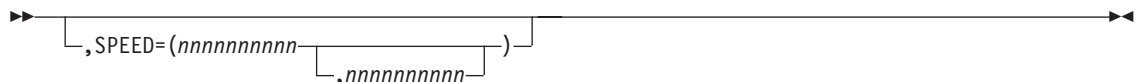
Specifies that network data collection commands on this line be rejected. You can use this option to exclude collection on inactive lines. This keyword does not change the NPACOLL value for PUs and LUs defined with this line.

If you specify NPACOLL=NO to prevent collection on a resource, you cannot turn collection back on by reissuing the command. You must execute the NCP command again before you can collect on the resource.



Specifies the SESSH parameter associated with the LUs on this LINE. Use this parameter to exclude session data collection for LUs defined on this LINE.

An active session collection is not stopped for the resource. You use SESSH to prevent session collection of a resource when session collection was started by application. This option is typically used for printers.



Specifies the line speed or speeds associated with the line. Specify one speed for a half-duplex line and two speeds for a full-duplex line. For a full-duplex line, the first speed is the transmit speed and the second speed is the receive speed.

The first number can range from 134 to 2 147 483 647. The second number can be either 0 or in the range from 134 to 2 147 483 647.

Example

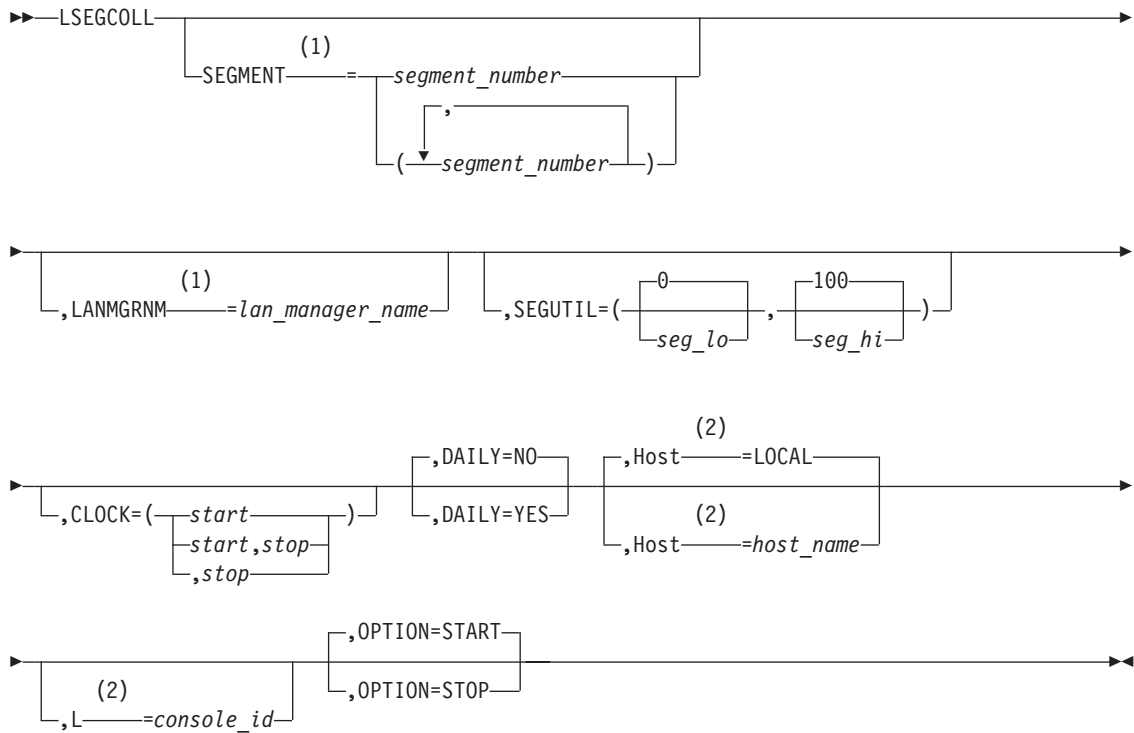
Use the following console command to change the line speed to 9600 and exclude network data collection for a line named L02LN020:

```
LINE NAME=L02LN020,SPEED=9600,NPACOLL=NO
```

LSEGCOLL

The LSEGCOLL command enables you to start or stop the collection of LAN segment utilization data for LAN segments in your network.

You must define the LAN segment to NPM using the LANMGR command before you can start a collection on it. You can code REVIEW=YES on the DEFAULT statement if you want to route LAN segment data to the current review file for online display. You can also use the LAN Segment Control (FNM02LSB) panel to specify the review file as a data destination.



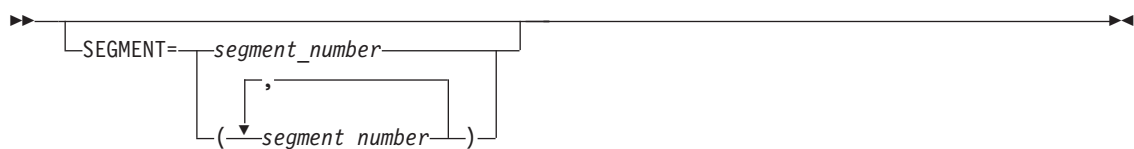
Notes:

- 1 You can specify up to 200 segments. You can specify only the SEGMENT keyword or the LANMGRNM keyword. If both are specified, an error occurs and no collection takes place.
- 2 Only from the system console

Authorization Needed: LAN management

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the LSEGCOLL command:



Instructs NPM to start or stop collection on the specified segment numbers. You can specify up to 200 segment numbers.

You can specify only the SEGMENT keyword or the LANMGRNM keyword. If you specify both, the collection does not occur. If the segment is not attached to any LAN Manager known by NPM, the request is queued until the segment is defined to a known LAN Manager or until the next reconfiguration occurs.

```
▶▶ [ ,LANMGRNM=lan_manager_name ] ▶▶
```

Instructs NPM to start or stop collection on all segments linked to this LAN Manager. The LAN Manager name should match the name defined by the SP keyword in the LANMGR command.

```
▶▶ [ ,SEGUTIL=( [ 0 ] [ ,100 ] ) ] ▶▶
                [ seg_lo ] [ ,seg_hi ]
```

Specifies the low and high threshold values for segment utilization percentage. A monitor is not started unless you code this keyword.

```
▶▶ [ ,CLOCK=( [ start ] ) ] ▶▶
                [ start,stop ]
                [ ,stop ]
```

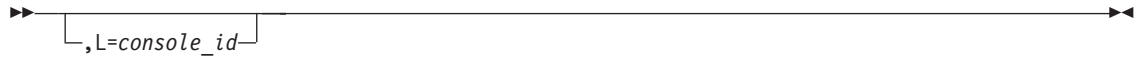
Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. If you specify OPTION=STOP, the CLOCK keyword, the DAILY keyword, and the thresholds specified for the SEGUTIL keyword are ignored. See “Using the CLOCK Keyword” on page 220 for more information on the CLOCK keyword. You must specify the start and stop times on the CLOCK keyword if you code the DAILY keyword as DAILY=YES.

```
▶▶ [ ,DAILY=NO ] ▶▶
    [ ,DAILY=YES ]
```

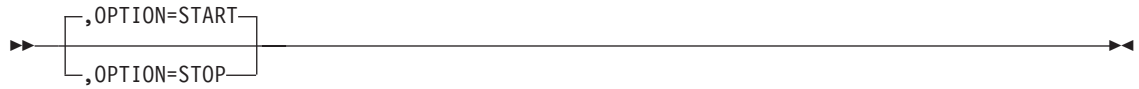
Specifies whether the command is to be executed each day.

```
▶▶ [ ,Host=LOCAL ] ▶▶
    [ ,Host=host_name ]
```

Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.



Specifies the console that receives response messages. You code this keyword only if you issue the command from the system console.



Specifies whether to start or stop LAN segment collection. If you code `OPTION=STOP`, all keywords except `SEGMENT` and `LANMGRNM` are ignored. See “Using the `OPTION` Keyword” on page 221 for more information about the `OPTION` keyword.

Example

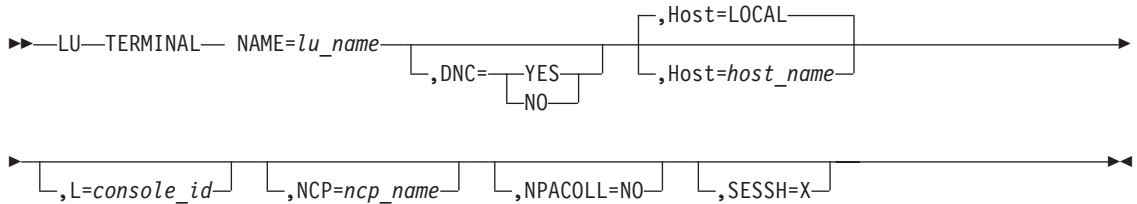
Use the following command to collect data on a segment named `A1C` and monitor the segment utilization percentage from 8 am to 4 pm daily:

```
LSEGCOLL SEGMENT=A1C,  
          SEGUTIL=(10,50),  
          CLOCK=(08.00.00,16.00.00),  
          DAILY=YES
```

LU

Use the LU command to modify the dynamic configuration network collection parameters associated with an LU.

All the keywords used with this command (except SESSH) are overridden by the information in the NCP RRT and VTAMLST each time the NCP is replaced. You should include the LU command in an NPM EXEC (following the NCP command) that executes each time you update the NCP definition.



Note: The Host and L keywords are only available from the system console.

Authorization Needed: Control commands

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the LU command:



Specifies the name of an LU defined in one of the NCP generations.



Specifies the dynamic network collection (DNC) parameter associated with the LU.

YES Starts network data collection for the LU when a session connection occurs, and stops network data collection when a session disconnection occurs.

NO Stops DNC for this LU. The default is defined by the DNC parameter for the PU that contains this LU.

If DNC=NO is specified on the CONTROL statement in FNMINIT, NPM sets DNC=NO on this command.



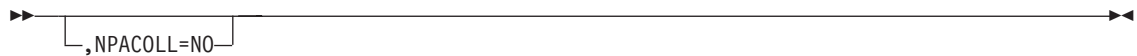
Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.



Specifies the console that receives response messages. You code this keyword only if you are issuing the command from the system console.



Specifies the name of the NCP for this command. Only the LU in the specified NCP is updated. If you do not specify the NCP keyword, the first LU that matches the name is updated.



Specifies that network data collection commands on this LU or `TERMINAL` command be rejected. You can use this option to exclude collection on inactive resources. If you code `NPACOLL=NO`, NPM sets `DNC=NO` for LUs.

If you specify `NPACOLL=NO` to prevent collection on a resource, you cannot turn collection back on by reissuing the command. You must execute the `NCP` command again before you can collect on the resource.



Specifies the `SESSH` parameter associated with this LU. Use this option to exclude session data collection for this LU. The default is defined by the `SESSH` keyword for the PU containing this LU.

An active session collection is not stopped for the resource. You use `SESSH` to prevent session collection of a resource when session collection was started by application. This option is typically used for printers.

Example

Use the following console command to stop DNC and exclude network data collection for an LU named LU32005:

```
LU NAME=U032005,DNC=NO,NPACOLL=NO
```

LUGROUP

Use the LUGROUP command to define groupings of LUs. When you group LUs in this way, session data can be summarized and viewed for the group as a whole, not only for the individual LUs. For example, transit time values recorded for a group represent the average transit time of all the component LUs. Similarly, byte count values recorded for a group represent the total of all the byte counts for all the LUs in the group.

The LUGROUP command instructs NPM to read a member of the FNMSCMDS data set in which the LUs that comprise the grouping are defined. A mask function can be used to make the definitions quicker and simpler. The full syntax of the group definition member is explained in the “Working with Groups of Logical Units” section of the *NetView Performance Monitor Installation and Customization* book.

After an LU group is defined using the LUGROUP command, summary records for the group are created if session collection is active on at least one of the LUs. This is true whether session collection is started on an application with which an LU is in session, on the individual LUs themselves, or directly on the LU group name.

```

▶▶—LUGROUP NAME=lugroup_name—▶▶
      |,OPTION=ADD
      |,OPTION=REPLACE
      |,OPTION=DELETE
  
```

Authorization Needed: Control commands

Where: Console, FNMSTRT, NPM EXEC

Note: To use this command on the NPM statement of FNMINIT, the HOSTCOLL variable must be set to yes, and the LUGRPNUM must be set to a number other than 0.

The following list describes the keywords you can code on the LUGROUP command:

```

▶▶— NAME=lugroup_name—▶▶
  
```

Specifies the name that you want to associate with the LU group. An LU group definition member with the same name must be present in the FNMSCMDS data set. Note that the name you choose for the LU group must be unique, and must not be the same as any other resource known to NPM.

```

▶▶— |,OPTION=ADD
      |,OPTION=REPLACE
      |,OPTION=DELETE
  
```

Specifies whether the LU group named in this command is being added, replaced, or deleted.

ADD Adds an LU group. If you try to add an LU group that is already defined to NPM, NPM replaces the LU group.

LUGROUP

REPLACE Replaces an LU group. It works like a DELETE followed by an ADD. It can be used to update an LU group definition if changes have been made to the LU group definition member.

DELETE Deletes an LU group.

If you try to delete or replace an LU group that is not defined to NPM, the command is ignored and a message is issued.

Example

Use the following console command to delete the LU group named LONDON:

```
LUGROUP NAME=LONDON,OPTION=DELETE
```

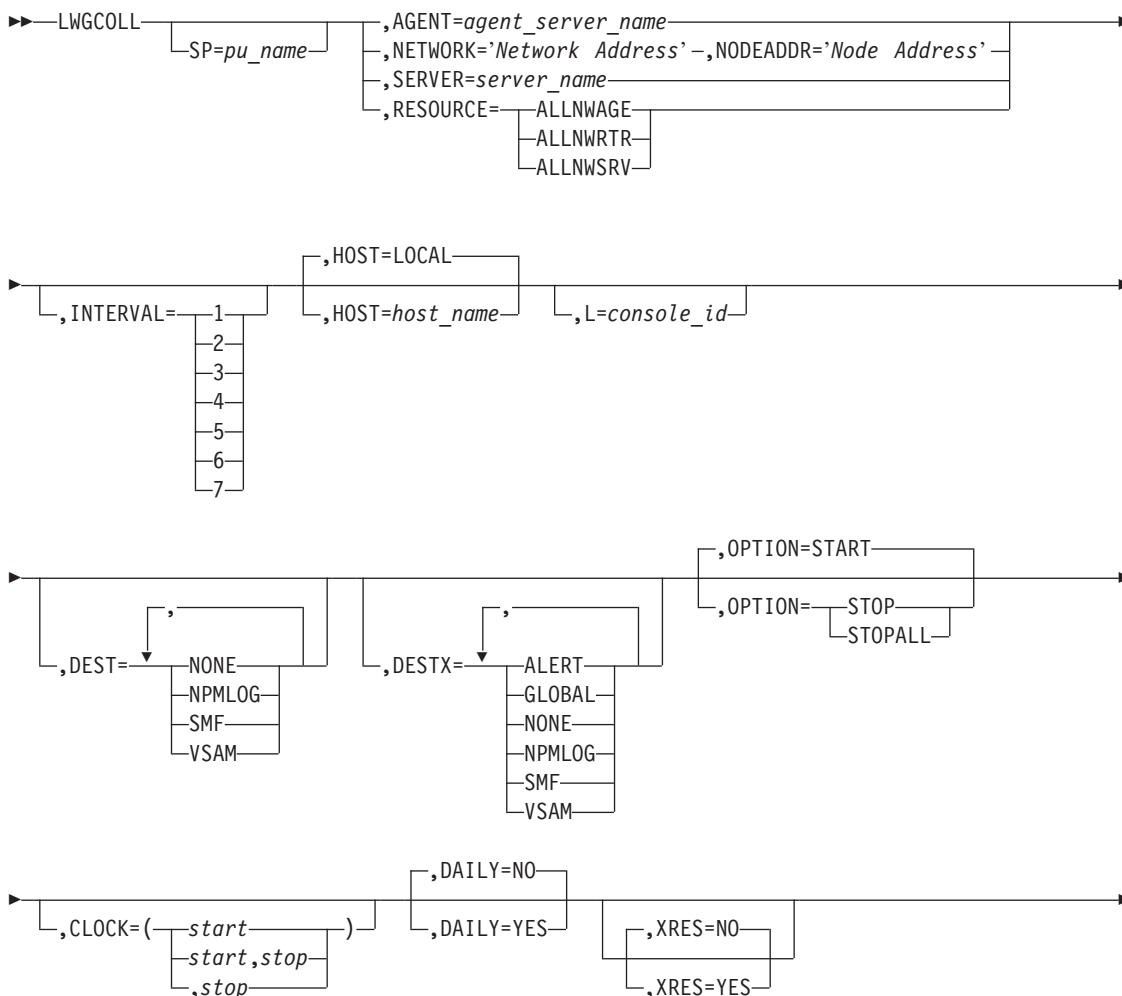
LWGCOLL

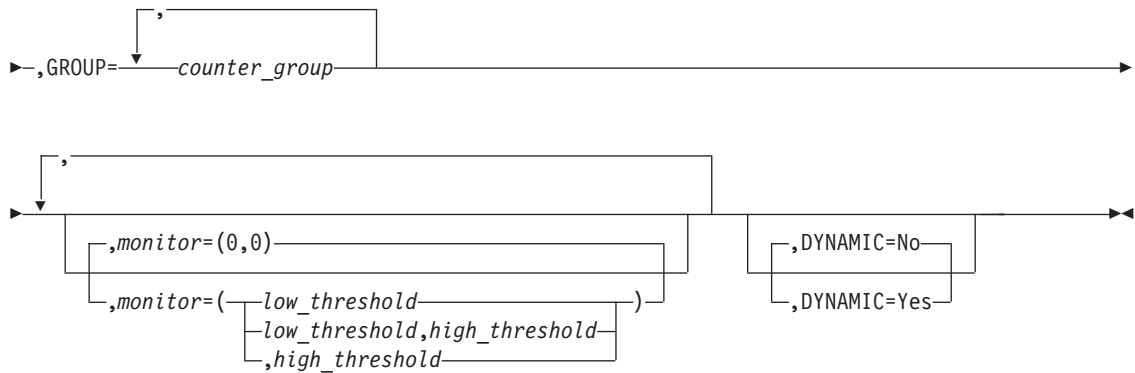
Use the LWGCOLL command to automatically start and stop a collection on a NetWare resource within your NetWare network, or to start or stop monitoring particular components of your NetWare network. The resource you specify must be defined previously using the LWGRES command.

Use this command to collect data for one or more counter groups and to start or stop monitors. If you specify some monitors, NPM collects data for all the NetWare resources you have chosen, but it monitors only the resources that are compatible with the monitors that you explicitly set.

A collection becomes active when NPM receives an acknowledgement from NetWare that NetWare has started the collection. You can have only one collection active at any one time for the same combination of resource, interval, and counter group.

If the LWGCOLL command fails to start because of a transient error condition in the NPM NetWare Agent, NPM retries the command. NPM makes up to 10 attempts to restart the command automatically at 30-second intervals before returning an error message.



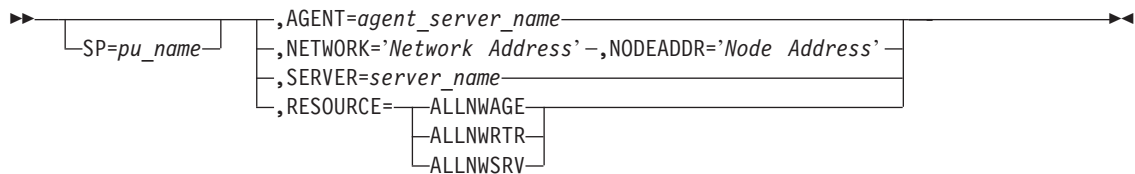


Note: The L keyword is only available from the system console.

Authorization Needed: NetWare collection

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the LWGCOLL command:



Specifies to NPM the name of the resource or resource group for which you want to start or stop NetWare collections. The resource can be a specific resource or a group of resources.

The resource types are:

- Agent server** A server with the NPM NetWare Agent installed.
- Server** A server without the NPM NetWare Agent installed.
- External router** A router (external to the agent server).

NPM enables you to combine resources of a particular type so that you can start or stop collections on a group of resources. The resource group is identified on the RESOURCE keyword on the LWGCOLL and LWGRES commands as follows:

Table 4. NetWare Resource Groups

Resource Group	LWGCOLL Parameter	LWGRES Parameter
Agent server	ALLNWAGE	NWAGE
Server	ALLNWSRV	NWSRV
External Router	ALLNWRTRAGE	NWRTR

You start or stop collections on a specific resource or a resource group as follows:

Specifying the SP, PU name, and a specific NetWare resource

Use this option to start or stop collections explicitly on the single resource you specify:

1. Specify the Service Point (SP) Physical Unit (PU) name
The SP PU name is from one to eight characters. Valid characters are A to Z, 0 to 9, the at (@), pound (#), and dollar (\$) symbols. The first character cannot be numeric.
2. Specify the single NetWare resource:
Choose either an Agent server, external router, or server as follows:
 - Use the AGENT keyword and the agent server name to select a specific agent server. The server name can have from 2 to 47 characters. Valid characters are A to Z, 0 to 9, the dash (-), and the underscore (_).
 - Use the NETWORK and NODEADDR keywords to specify the internetwork packet exchange (IPX) network address and the IPX node address to select a specific external router. The network address is a value from X'1' to X'FFFFFFFE'. The node address is a value from X'1' to X'FFFFFFFFFE'.
 - Use the SERVER keyword and the server name to select a specific server.

Specifying the SP, PU name, and a NetWare resource group

Use this option to start or stop collections on a resource group for the SP PU name you specify:

1. Specify the SP PU name
2. Specify the RESOURCE keyword and choose one of these resource groups:
 - ALLNWAGE for all Agent servers
 - ALLNWSRV for all servers
 - ALLNWRTR for all external routers

Omitting the SP, PU name, and identifying a specific NetWare resource

Use this option to start or stop collections implicitly on the single resource you specify using either the AGENT, NETWORK, or SERVER keyword. NPM determines a default SP PU name depending on the resource type you specify.

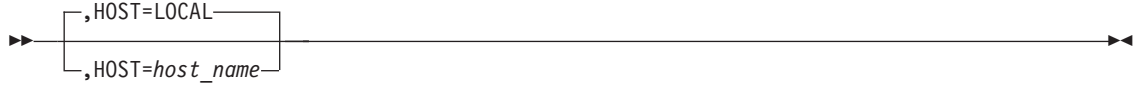
The default name is the first SP name found by NPM for which a resource with the same agent server name, or network and node address, or server name, has been defined to NPM with an LWGRES command.

Omitting the SP, PU name, and identifying a NetWare resource group

Use this option to start or stop collections on all resources for the resource group you specify on the RESOURCE keyword regardless of their SP name.



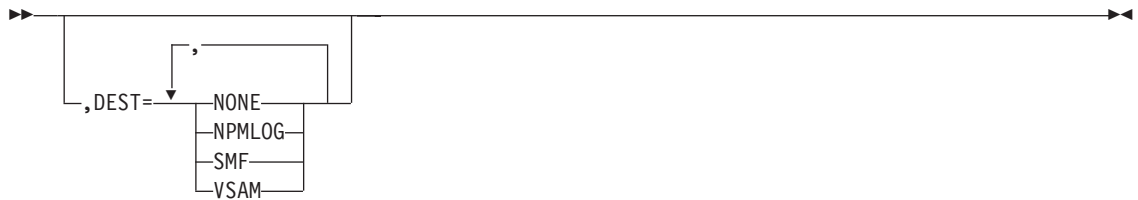
Specifies the number of the interval for which you want to start the NetWare resources collection. The value can be from 1 to 7. If you do not specify an interval, it defaults to the INTERVAL parameter set on the DEFAULTS statement in FNMINIT. If this parameter is not set, it defaults to 1. See “Using the INTERVAL Keyword” on page 223 for more information on the INTERVAL parameter.



The HOST keyword specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.



The CONSOLE ID keyword specifies the console that receives response messages. You can code this parameter only if you are issuing the command from the system console.



Specifies the destination of the NetWare resources collection data records. You can define multiple destinations on this keyword, and the NONE setting is ignored if you code any other parameters. It defaults to the LWG parameters set on the NPM statement in FNMINIT. If the LWG parameters are not set, it defaults to VSAM and NPMLLOG.

- NONE** No NetWare data records are to be written.
- NPMLLOG** NetWare data records are written to the data sets defined by the FILE initialization statements as FNMLLOGx.
- SMF** NetWare data records are written to SMF.
- VSAM** NetWare data records are written to the data sets defined by the FILE initialization statements as FNMLWGx.

Note: The operator can override the default if the target files are available.



Specifies the destination of the NetWare resources collection data exception records. You can define multiple destinations on this keyword. The NONE variable is ignored if you code any other parameters. It defaults to the LWG parameters set on the NPM statement in FNMINIT. If the LWG parameters are not set, it defaults to VSAM, NPMLOG, and ALERT.

ALERT	NetWare data exception records are formatted into alerts and sent to the NetView program, as long as ALERT=YES is coded explicitly or as a default.
GLOBAL	NetWare data exception messages are broadcast to all NPM operators who are authorized as GLOBAL=YES. If none of the authorized operators are logged on, the messages are sent to the console.
NONE	No NetWare data exception records are to be written.
NPMLOG	NetWare data exception records are written to the data sets defined by the FILE initialization statements as FNMLOGx.
SMF	NetWare data records are written to SMF.
VSAM	NetWare data exception records are written to the data sets defined by the FILE initialization statements as FNMLWGx.

Note: The operator can override the default as long as the target files are available.



Specifies whether to start or stop a NetWare resources collection or to stop all collections. The effect of this command depends on whether collections are already active or deferred, the current time of day, and how the CLOCK keyword is coded. The STOPALL option stops all active collections for all intervals for the NetWare resources and counter group you specify.

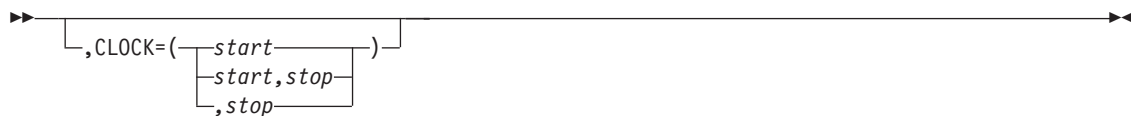
After issuing an LWGCOLL command that includes the STOP or STOPALL option for an active collection, that is a collection where NPM has received an acknowledgement from NetWare that the collection has been started, you might obtain message FNM1187E. Message FNM1187E means that NPM has not received an acknowledgement from NetWare that a collection has been stopped. The collection might not be stopped by the NPM NetWare Agent and any collection data sent to NPM is discarded.

If a collection is not stopped and NPM keeps receiving data from NetWare, NPM issues message FNM1177I. You can stop such a collection by issuing the following command from the NetView console:

```
RUNCMD SP=sp_name APPL=IBMNPAG SNAME=nw_name STOP CORRELAT=collection_correlator
```

where the values for SP, SNAME, and CORRELAT are taken from message FNM1187E.

See “Using the OPTION Keyword” on page 221 for more information about the OPTION keyword.



Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. You must specify the start and stop times on the CLOCK keyword if you code the DAILY keyword as DAILY=YES.

See “Using the CLOCK Keyword” on page 220 for more information on the CLOCK keyword.



Specifies whether you want this collection to be started each day. If DAILY=YES, you must specify a time on the CLOCK keyword.

You can have only one collection active at any one time for the same combination of resource, interval, and counter group. If you have a daily collection that is deferred because its start time is in the future, the deferred collection is not started if another collection is active when the deferred collection is due to start. In this situation, the deferred collection fails and is enqueued for the next day.



Specifies whether resolution messages are generated for a monitor. If you specify NO, NPM generates monitor event messages for every interval when data is outside the thresholds. If you specify YES, NPM generates monitor event messages when data first falls outside the set thresholds. NPM also generates monitor resolution messages when the data first falls back within the thresholds or passes from above high threshold to below the low threshold.



The GROUP keyword specifies the NetWare counter groups to be started or stopped. Choose one or more of these counter groups:

- COMM** To collect Communications counter group data about specific IPX and SPX protocol-related information.
- GLOBAL** To collect Server Global counter group data obtaining a general overview of the Agent server activity, including CPU utilization, connections, disk operation, communications, and other information.
- LANBOARD** To collect Router LAN board counter group data for communications device

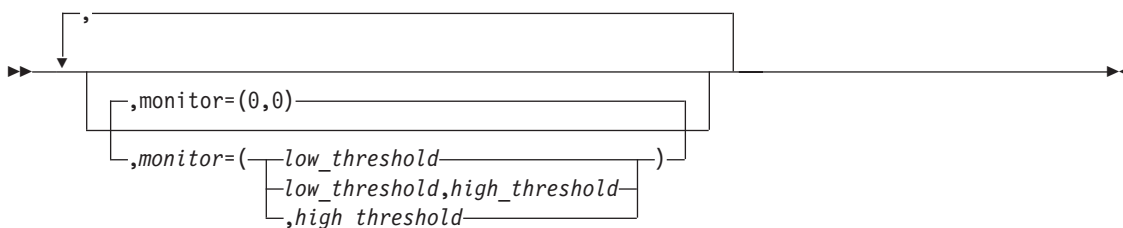
drivers. One record is written for each LAN board driver. Therefore, you can have up to 16 LAN board records written for each collection interval and one summary record.

- ROUTER** To collect Router Global counter group data obtaining routing information about the router services (packets information).
- VOLUME** To collect Server Volume counter group data obtaining detailed storage information about disk volumes on the Agent server. One record is written for each volume. Therefore, you can have up to 64 volume records written for each collection interval and one summary record.
- ALL** To collect data on all of the NetWare counter groups.

If you choose the ALL option, the counters started depend on the specific resource type or generic resource type specified:

- Agent server starts all counters
- External router or server starts the COMM, LANBOARD, and ROUTER counters

See the *NetView Performance Monitor Reference* for more information about the NetWare counter groups.

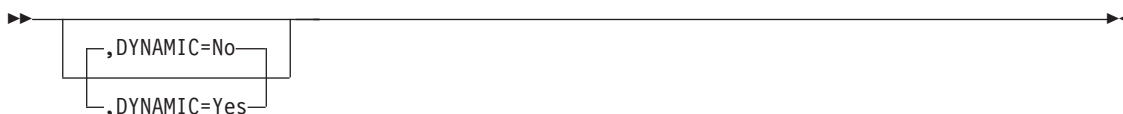


Specifies the individual components of your network that are to be monitored. NPM monitors alert you when data falls outside the thresholds you specify on the *threshold* variable.

The monitor types you specify depend on the GROUP parameter as shown in Table 5:

Table 5. NetWare Monitor Types on LWGCOLL Command

Counter Group	Monitor Type	Monitor Description
COMM	—	You cannot monitor this counter group
GLOBAL	CONNUTIL SRVUTIL	Percentage of connections in use on the server Percentage utilization of the server's CPU
LANBOARD	PACKRCVD PACKXMIT	Total number of packets received by the LAN driver Total number of packets transmitted by the LAN driver
ROUTER	RTRBUFFS RTRHOPS	Number of packets discarded because no receive buffers were available Number of packets discarded because of too many hops
VOLUME	VOLUTIL	Percentage of volume space used on the server



Determines whether a collection is to be started on resources that become defined in the future by a LWGRES command. If a resource is not defined when the LWGCOLL command is made, the resource goes into pending mode until the resource is defined using the LWGRES command or until the stop time is reached. In addition, if you code DYNAMIC=YES, NPM will not stop the collection if the resource is deleted, but will suspend the collection until the stop time is reached or the resource is added again.

Example

Use the following command to collect server global data daily and monitor the percentage utilization of the server's CPU for all servers with the NPM NetWare Agent installed:

```
LWGCOLL RESOURCE=ALLNWAGE,  
DAILY=YES,  
CLOCK=(00.07.00,12.00.00),  
SRVUTIL=(20,80),  
XRES=NO,  
GROUP=GLOBAL
```

LWGRES

The LWGRES command defines a NetWare resource for NPM collection purposes. With the LWGRES command, you can add or delete the one NetWare resource you specify.

► `LWGRES`—`SP=pu_name`—, `NETWORK=network_address`—, `NODEADDR=node_address`—►

► `,SERVER=server_name`—, `AGENT=agent_server_name`—, `RESOURCE=NWAGE`—
 ► `,RESOURCE=NWRTR`—
 ► `,RESOURCE=NWSRV`—►

► `,HOST=LOCAL`—
 ► `,HOST=host_name`—, `L=console_id`—, `OPTION=ADD`—
 ► `,OPTION=DELETE`—►

Note: The L keyword is only available from the system console.

Authorization Needed: NetWare collection

Where: Console, FNMSTRT, NPM EXEC

The following list describes the parameters you can code on the LWGRES command:

► `SP=pu_name`—►

Specifies the Service Point (SP) Physical Unit (PU) name. Names can be from one to eight characters. Valid characters are A to Z, 0 to 9, the at (@), pound (#), and dollar (\$) symbols. The first character cannot be numeric.

► `,NETWORK=network_address`—, `NODEADDR=network_address`—►

Specifies the IPX network address and the physical node address of a NetWare resource that identifies the node in a connectivity ring. The network address is a value from X'1' to X'FFFFFFFE'. The node address is a value from X'1' to X'FFFFFFFFFFE'.

► `,SERVER=server_name`—►

Specifies the name of a server. The server name can have from 2 to 47 characters. Valid characters are A to Z, 0 to 9, the dash (-), and the underscore (_).

► `,AGENT=agent_server_name`—►

Specifies the name of a server containing the NPM NetWare Agent. The server name can have from 2 to 47 characters. Valid characters are A to Z, 0 to 9, the dash (-), and the underscore (_).

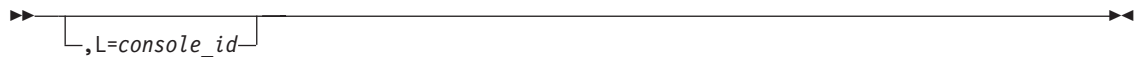


Specifies the type of resource you are defining to NPM for collection.

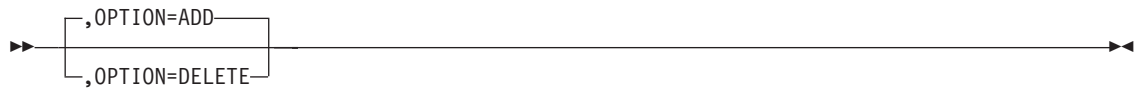
- NWAGE** NetWare agent server
- NWRTR** NetWare external router
- NWSRV** NetWare server



Specifies the host that receives this command. You code this keyword only if you issue the command from the system console.



Specifies the console that receives response messages. You code this keyword only if you issue the command from the system console.



Specifies the action to perform:

- ADD** Adds a NetWare resource. If you try to add a NetWare resource that is already defined, the command is ignored and a message is issued.
- DELETE** Deletes a NetWare resource. If you try to delete a NetWare resource that is not defined, the command is ignored and a message is issued.

Example

Use the following command to add a server resource:

```
LWGRES SP=NWSRV1,
NETWORK=100B,NODEADDR=100004,
SERVER=SERV_NAME,
AGENT=NW_SERV_NAM_01,
RESOURCE=NWSRV
```


LWGSTOP

Use the LWGSTOP command to stop all active collections on all NetWare resources. (A collection becomes active when NPM receives an acknowledgement from NetWare that NetWare has started the collection.)

Before stopping NPM, if you have active NetWare collections, issue an LWGSTOP command from the system console to stop all active NetWare collections and to prevent the NPM NetWare Agent from collecting and forwarding data.

Note: You can only issue this command from the system console.

```

▶ LWGSTOP [HOST=LOCAL]
           [HOST=host_name]
           [,L=console_id]
  
```

Note: The L keyword is only available from the system console.

Authorization Needed: NetWare collection

Where: Console, FNMSTRT, NPM EXEC

The following list describes the parameters you can code on the LWGSTOP command:

```

▶ [HOST=LOCAL]
   [HOST=host_name]
  
```

Specifies the host that receives this command.

```

▶ [,L=console_id]
  
```

Specifies the console that receives response messages. Code this keyword only if you issue the command from the system console.

Example

Use the following command to stop all active collections on all NetWare resources specifying the host to receive the command:

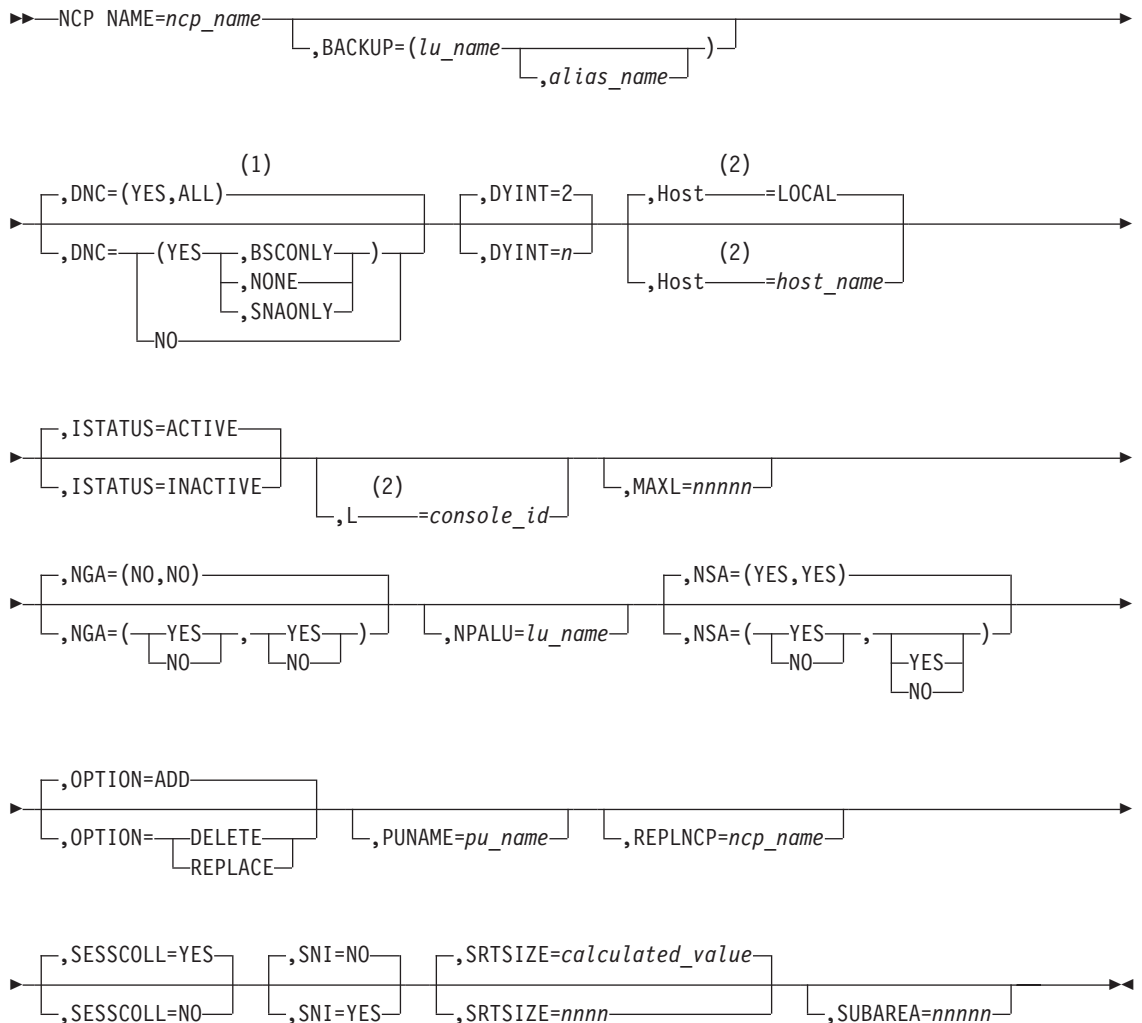
```
LWGSTOP HOST=NPMB
```

NCP

Use the NCP command to define NCP nodes to be used for network data collection and optionally for session data collection. You can also use the NCP command to add, replace, or delete NCPs. The command can also be used to add, replace, or delete 3746 APPN network nodes for which dummy VTAMLST and RRT members have been generated.

You can modify the network configuration information that NPM reads from the NCP RRT and from VTAMLST. The GENERIC, LINE, LU, and PU commands in NPM enable you to prevent collection on specific resources, change the line speed NPM uses to compute line utilization, and modify the SESSH value used for session data collection. When you issue an NCP command, it overrides all of the parameters previously specified by GENERIC, LINE, LU, and PU commands, except the SESSH keyword.

If you plan to use GENERIC, LINE, LU, and PU commands, you should code them in an NPM EXEC, following the NCP command that defines the NCP they modify. Each time you redefine the NCP, issue the EXEC so your GENERIC, LINE, LU, and PU commands are also executed.



Notes:

- 1 If the NCP does not support network collection, the default is DNC=NO.
- 2 Only from the system console

Authorization Needed: Control commands

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the NCP command:

▶ NAME=*ncp_name* ▶

Specifies the NCP or 3746 APPN network node (NN) from which you collect network data. The name you specify for *ncp_name* must be the same as the name that is specified in the NCP load module. If this is the name of an NCP or NN that is new to NPM, NPM adds the NCP or NN.

If this is the name of an existing NCP or NN, NPM replaces the parameters for the existing definition with the parameters specified in this NCP command.

▶ [,BACKUP=(*lu_name* [,*alias_name*])] ▶

Specifies the backup NPALU used to collect network session accounting (NSA) data. In order to take over the collection of NSA data when the session with the primary NPALU is inactive, the LU name must match one of the possible seven backup NPALUs generated in the NCP. The session with the backup LU starts as soon as NPM and the primary LU become active. Each NPALU can be in session with only one NPM.

Note: You must specify an alias name if the backup LU name is translated to an alias name in this network.

▶ [,DNC=(YES,ALL)]
▶ [,DNC=(YES [,BSONLY])]
▶ [,NONE]
▶ [,SNAONLY]
▶ NO ▶

Determines whether dynamic network collection occurs for the LUs in this NCP. Dynamic network collection is available only for resources generated with NPACOLL=YES. HOSTCOLL=YES must be specified to collect accounting records and to start and stop dynamic network collection.

YES NPM starts network data collection for an NCP's LU when a session connection occurs, and stops network data collection when a session disconnects. The NPM's host must own the LUs to collect DNC data as sessions start and stop.

- NO** NPM does not perform dynamic network collection.
- ALL** NPM performs DNC collection on all of the NCP's LU and terminal resources. ALL is the default if you code DNC=YES.
- BSCONLY** NPM performs DNC collection on all terminal resources. Specify DNC=(YES,BSCONLY) when using network session accounting to prevent duplicate data collection.
- NONE** NPM does not collect data from an NCP's LUs. Coding DNC=(YES,NONE) is the same as coding DNC=NO.
- SNAONLY** NPM performs DNC collection on all of the NCP's LU resources. Use the NPM DNC parameter of the NCP generation definition to control dynamic network collection for individual LUs. This parameter is available only with the NCP/Emulation Program Definition Facility of NCP V3R3 or a later release.

You can override the DNC parameter for individual resources in the NCP generation by the DNC parameters in the LINE, PU, and LU control commands. The default is specified by the DNC keyword of the CONTROL initialization statement. If the NCP does not support network collection (NPA=NO is specified in the BUILD macro), DNC=NO is the default.

If DNC=NO is coded on the CONTROL statement in FNMINIT, NPM sets DNC=NO on this command.



Defines the collection interval for the NCP's LU in dynamic network collection.

You can set DYINT to any number from 1 to 7. If you specify DNC=NO, DYINT is set to 0. If you specify DNC=YES, the interval you specify cannot also be used as the interval for the start network data collection commands that specify LU or terminal resources.



Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.



Determines whether the NPM is to bind the primary NPALU during initialization. If ISTATUS=INACTIVE, an NPM operator with control authority must issue a bind request to the NPALU before this NCP's network collection can occur. If LOGAPPL=APPLID is

specified on the NPALU's VTAMLST definition, ISTATUS=INACTIVE should also be specified. The NPM automatically binds with the NPALU when the NPALU becomes active.

Note: The LOGAPPL parameter refers to the application ID specified on the VTAM initialization statement. When the NPALU session is re-established after a session failure, any outstanding NCP network collection commands are restarted.

→ `[,L=console_id]` →

Specifies the console that receives response messages. You code this keyword only if you are issuing the command from the system console.

→ `[,MAXL=nnnnn]` →

Defines the number of common storage area (CSA) entries reserved for collecting session data by node, LU, and LU group. You can set MAXL to any number from 1 to 32760. If you specify SESSCOLL=NO, there are no CSA LU entries and the MAXL keyword has no effect.

When you do not specify SESSCOLL=YES and MAXL, the number of CSA LU entries is determined by the number of LUs and terminals the NCP defines. If the specified MAXL value is greater than the number of LUs and terminals the NCP defines, NPM will not reset the MAXL value to that number. Extra CSA entries are allocated for dynamically added LUs. (This is possible with the dynamic control block function added in NCP V7R1). You must be very careful, therefore, to avoid wasting CSA when you define MAXL.

Consider all LUs when coding the MAXL keyword because it specifies the NCP's cumulative maximum LU number for which NPM can collect session data. For example, if you start session collection on 50 LUs, stop collection, then start session collection on 50 different LUs, set MAXL to at least 100. If you exclude LUs from collection, their total must also be included on the MAXL keyword. Once the MAXL value has been reached, additional session collection requests are rejected.

→ `[,NGA=(NO,NO)`
`[,NGA=([YES],[YES])`
`[NO]`,`[NO]`)] →

Specifies whether NPM is able to receive network gateway accounting data when it is the current receiver. The first operand applies to the primary NPALU and the second operand applies to the backup NPALU for possible NPM sessions.

NPA=YES and SESSACC=YES must also be specified on the BUILD macro in the NCP generation definition.



Specifies the primary NPALU's alias name in this network. The default is the primary NPALU name specified in the NCP definition. NPALU names must be unique in the network.

The default primary NPALU is the primary NPALU defined in the NCP generation definition. If you specify the name of an NPALU that has been defined as a backup NPALU in the NCP generation definition, the name you specify is ignored and the default name is used.

The NPALU keyword is ignored if NPA=NO is specified in the NCP's BUILD definition statement.



Specifies whether NPM is able to receive network session accounting data when it is the current receiver. The first operand applies to the primary NPALU and the second operand applies to the backup NPALU for possible NPM sessions.

NPA=YES and SESSACC=YES must also be specified on the BUILD macro in the NCP generation definition. SNI=YES must be coded on NCP commands that define 3746 APPN network nodes to NPM, if there will be more than one such node defined. This is to avoid problems caused by duplicate resource names.



Specifies whether the NCP in this command is being deleted, added, or replaced. If you code NCP=DELETE, all other keywords except NAME are ignored. Specifying NPM=ADD adds an NCP definition to NPM.



Assigns a unique name associated with the CCU. There can be several NCP load modules with different names for the same CCU, but each NCP has the same PU name. The name references the resources in the NCP (including the NCP itself). When records are written with a configuration section, the subarea name shows the PU name.

The PU name is taken from the BUILD macro for NCPs generated for NCP Version 4 Release 3 or a later release. The default is the NCP name if the PU name is not specified on the NCP BUILD macro or in the NPM NCP command.

→ [,REPLNCP=*ncp_name*] →

Specifies the name of an existing NCP that is being replaced. Only use this keyword if you are replacing an existing NCP with an NCP that has a different name. You do not need to code REPLNCP if you are replacing an NCP with the same name.

If the NCP you specify is not defined to NPM, NPM issues message FNM504W and continues as if you did not code REPLNCP.

→ [,SESSCOLL=YES]
→ [,SESSCOLL=NO] →

Specifies whether the NCP's LUs are available for session collection. If HOSTCOLL=NO or INTRFACE=YES is specified on the NPM initialization statement, CSA is not allocated and the SESSCOLL keyword has no effect. This keyword does not affect network collection.

Note: If you specify SESSCOLL=NO, do not code a CDRM initialization statement for this NCP.

→ [,SNI=NO]
→ [,SNI=YES] →

Specifies whether NPM should build a separate symbol table for this NCP. The SRTSIZE keyword specifies the symbol table's size.

Only use SNI=YES when the NCP resource names duplicate other NCP resource names. When you use SNI=YES, the NCP name becomes a qualifier for this NCP's resources in collection commands. For example, in a start session collection command on a switched LU, you must code the CDRM keyword with the NCP name.

SNI=YES is highly recommended if any 3746 NNP resources are communicating with NPM. In this case, SNI=YES should be coded on each and every NCP command.

→ [,SRTSIZE=*calculated_value*]
→ [,SRTSIZE=*nnnn*] →

Specifies the NCP's symbol resource table size if you code SNI=YES. The value must be a prime number. The default is calculated from the number of defined NCP resources divided by forty. The minimum value is thirteen and the maximum value is one half of the number of resources.



Specifies the subarea number of the NCP. You can set SUBAREA to any number from 1 to 65535. The default is the subarea defined in the NCP generation.

Unique subarea numbers are required for all hosts, cross-domain resources, and NCPs that are defined for session collection.

If this NCP is not used for session collection, is in another network, and duplicates an existing subarea number, you can use the SUBAREA keyword to replace the subarea defined in the NCP. This only changes NPM's definition of the NCP's subarea.

Example

Use the following console command to set the following conditions for an NCP named NX2NV3:

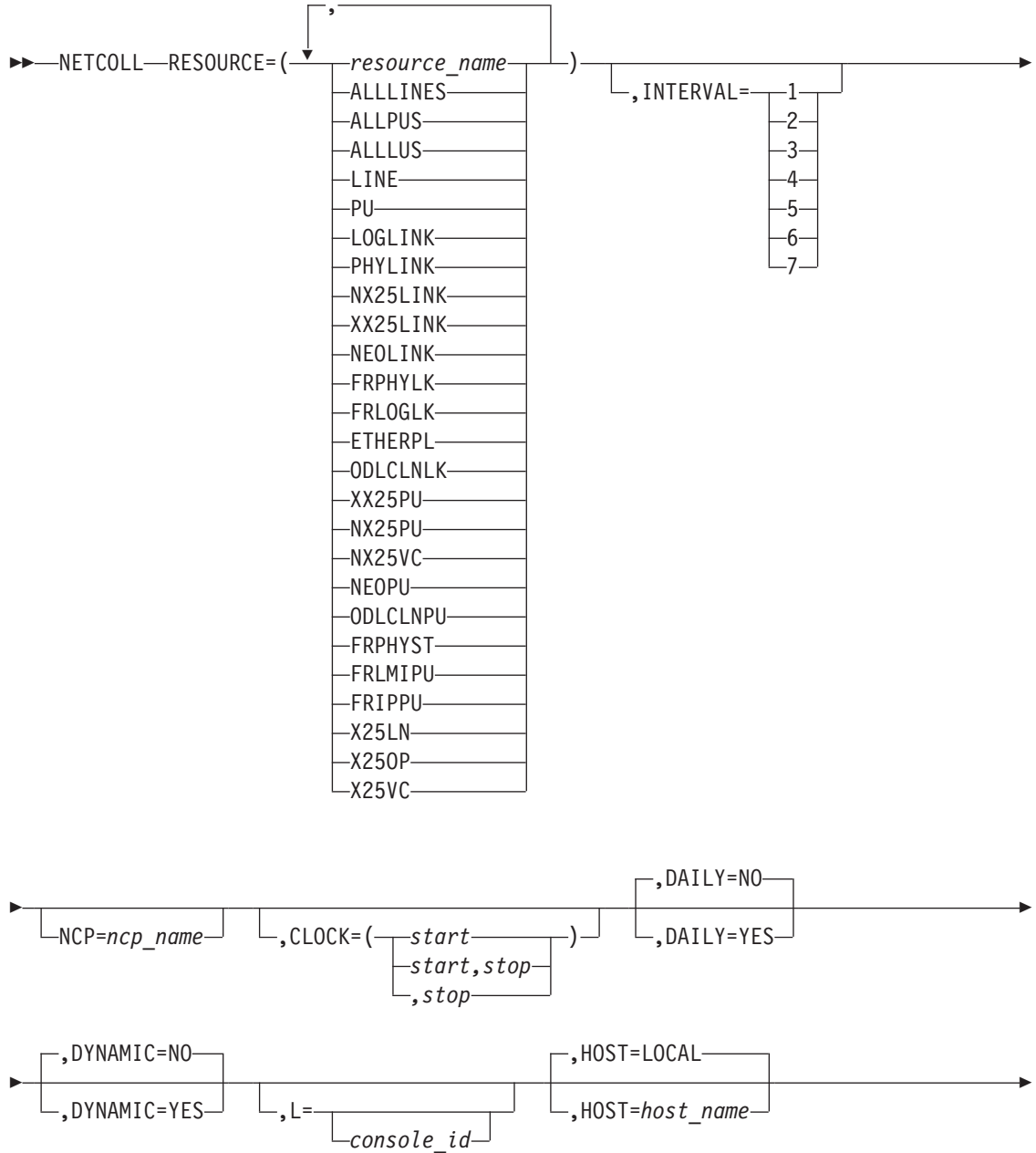
- Specify N02NPNPU as a backup NCP
- Start DNC when the NCP is connected
- Bind the NPALU
- Set the maximum number of session collections to 100
- Enable NSA data reception
- Enable NGA data reception

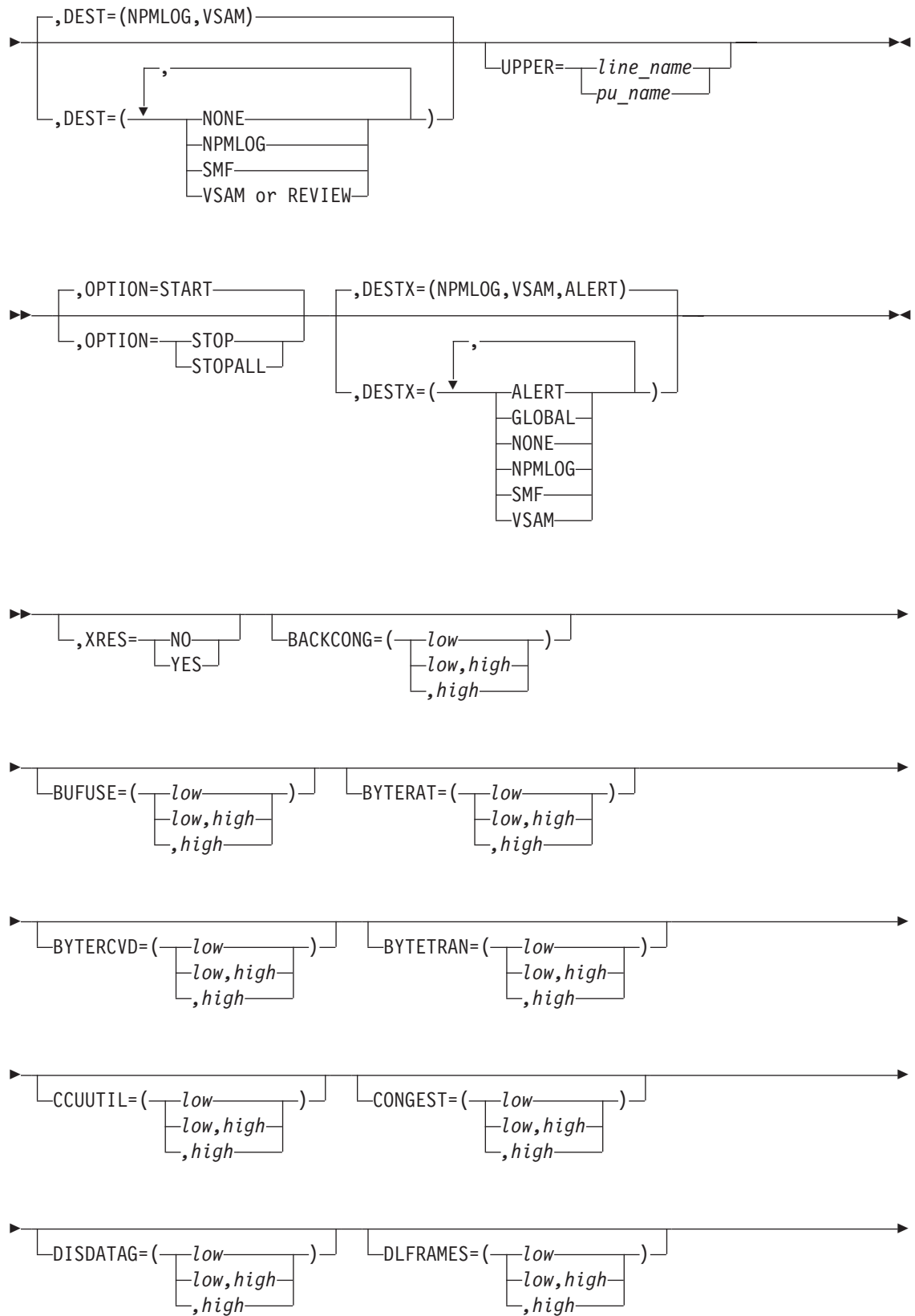
```
NCP NAME=NX2NV3,  
    BACKUP=N02NPNPU,  
    DNC=YES,  
    ISTATUS=ACTIVE,  
    MAXL=100,  
    NSA=(YES,YES),  
    NGA=(YES,YES)
```

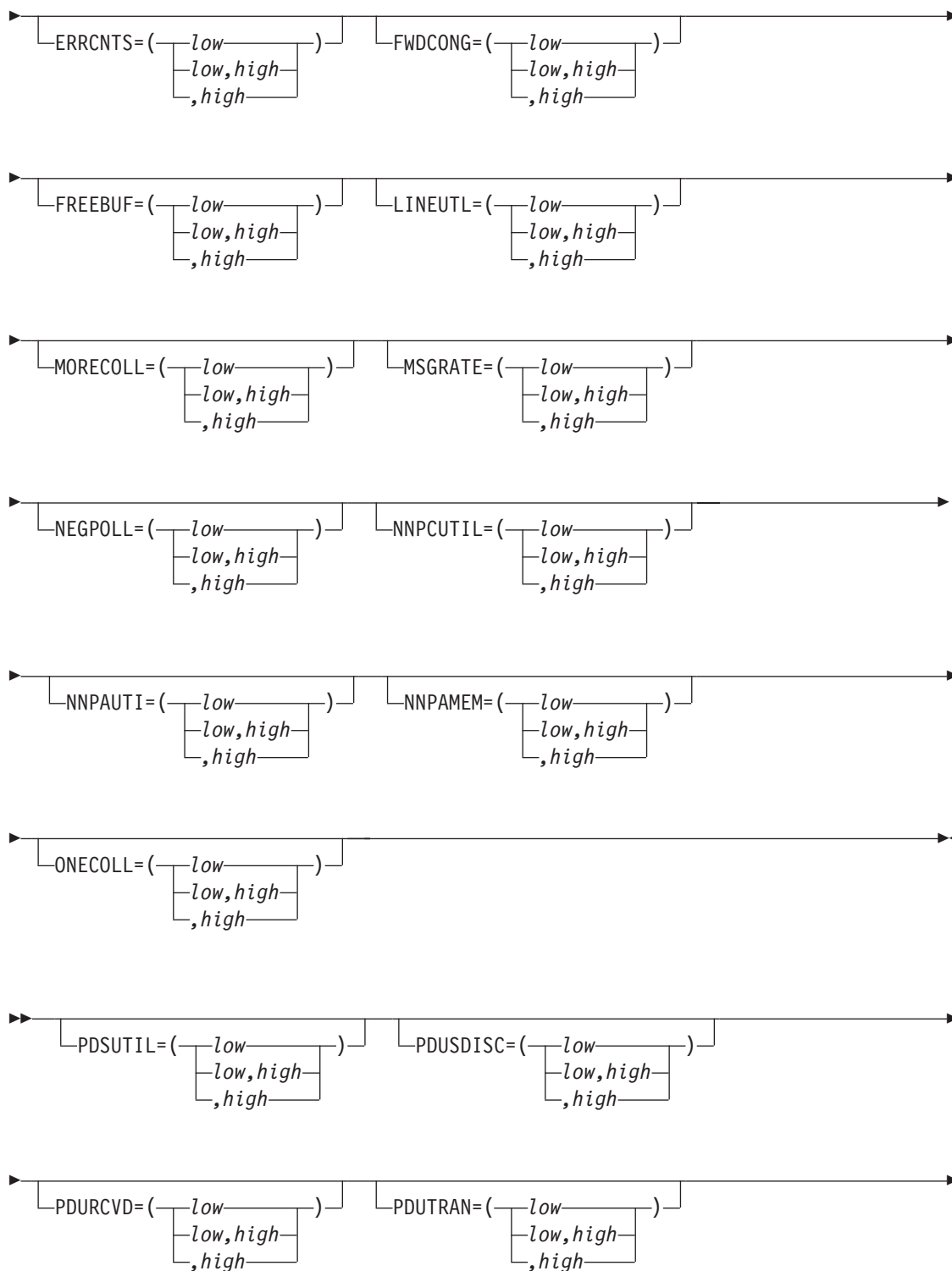

NETCOLL

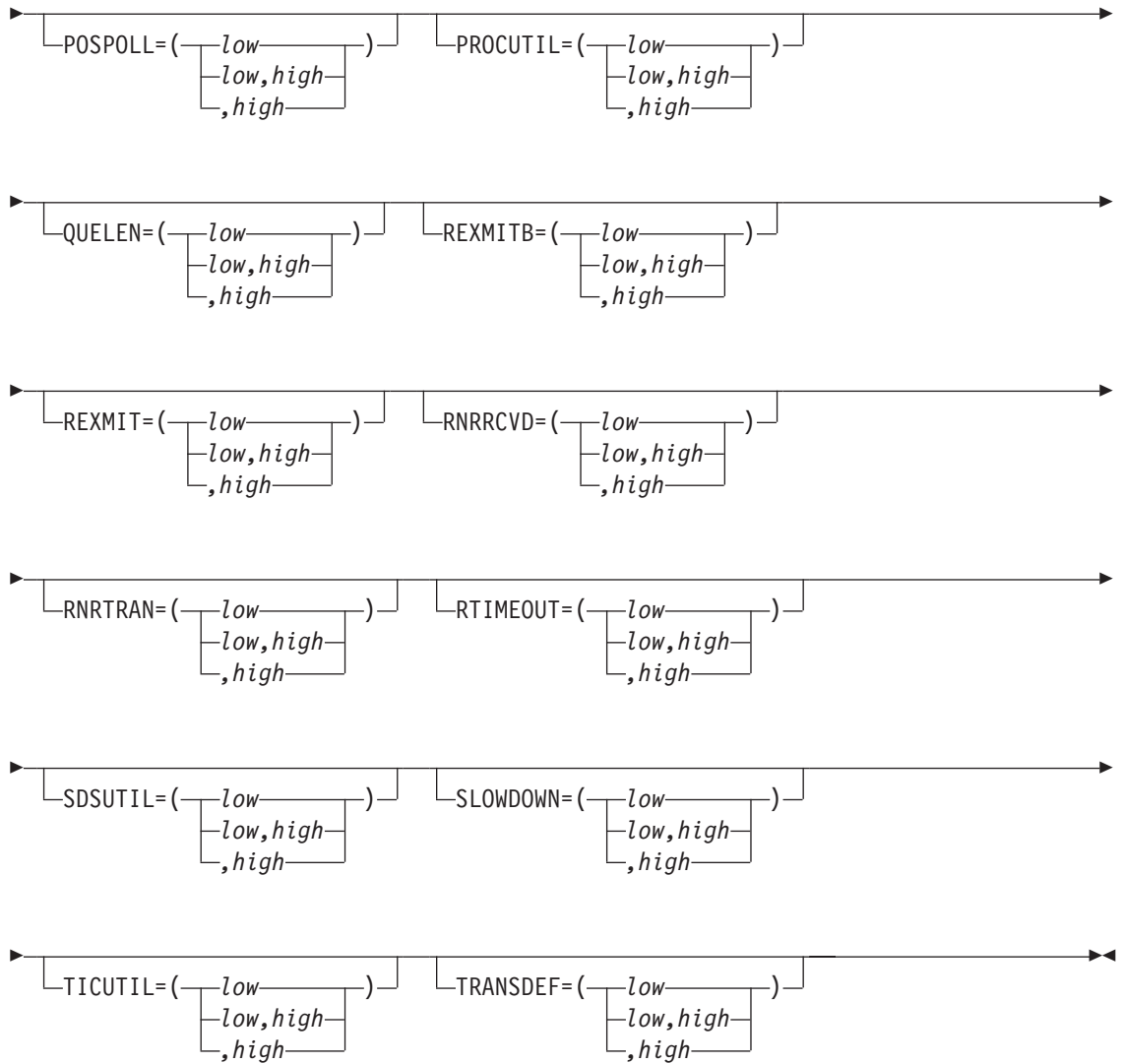
Use the NETCOLL command to start or stop NPM network collections.

You can have only one collection active at any one time for the same combination of resource, interval, and counter group.





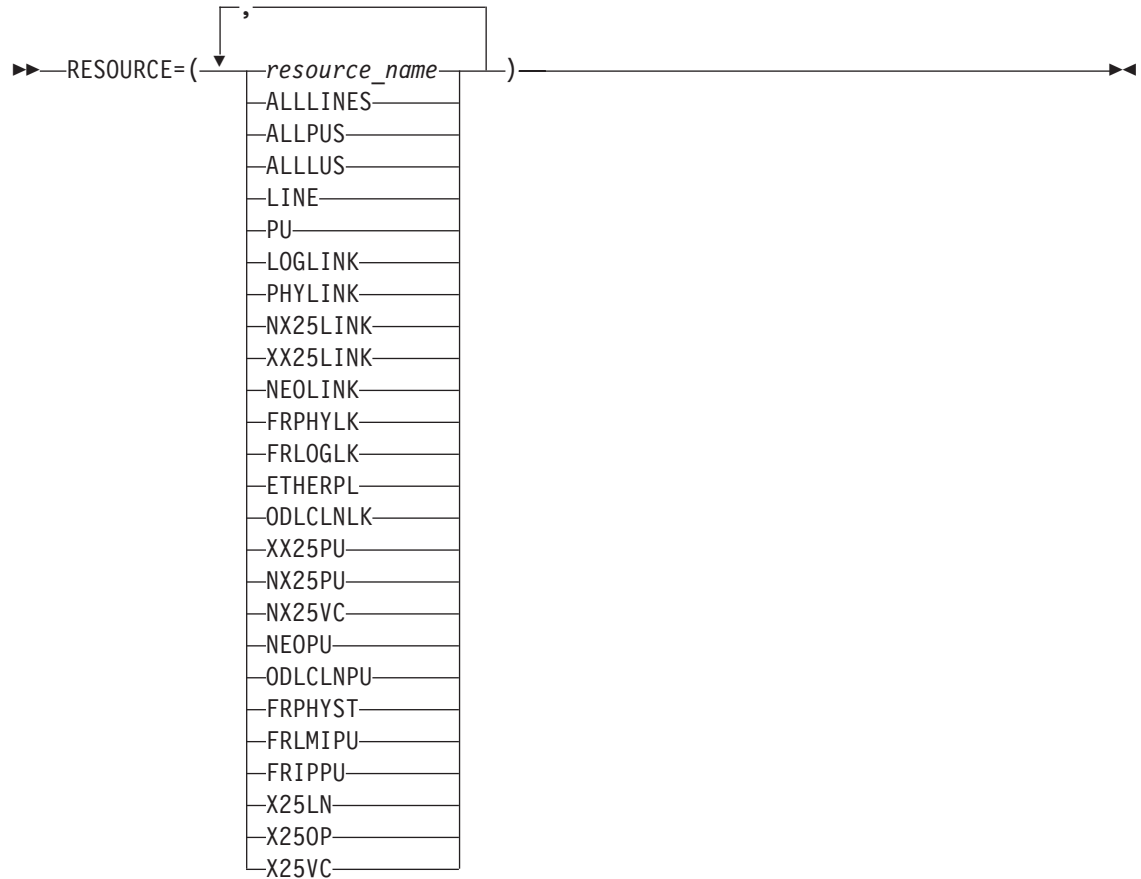




Authorization Needed: Network collection

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the NETCOLL command:



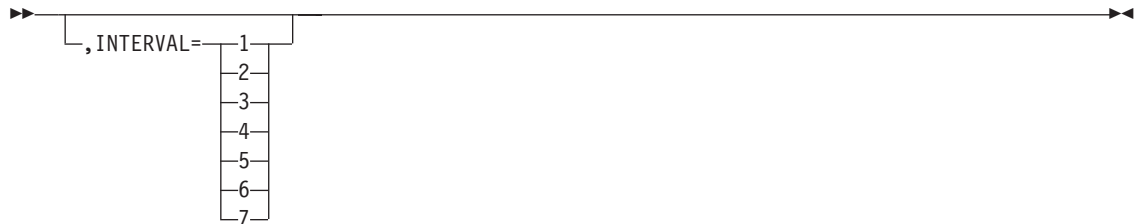
Specifies the name of the resource for which you want to start the network collection. It is a required keyword. You can also specify the resource as ALLLINES, ALLPUS, ALLLUS, or any of the following resource types:

LINE	SDLC, BSC, Start/Stop lines, or channels
PU	SDLC, BSC, or Start/Stop PUs
LOGLINK	NTRI logical links
PHYLINK	NTRI physical links
NX25LINK	NPSI links
XX25LINK	XI links
NEOLINK	NEO links
FRPHYLK	Frame relay physical links
FRLOGLK	Frame relay logical links
ETHERPL	Ethernet links
ODLCLNLK	ODLC links
XX25PU	XI PUs
NX25PU	NPSI PUs
NX25VC	NPSI virtual circuits
NEOPU	NEO PUs
ODLCLNPU	ODLC PUs
FRPHYST	Frame relay physical PUs
FRLMIPU	Frame relay LMI PUs
FRIPPU	Frame relay IP PUs
X25LN	X.25 ODLC lines

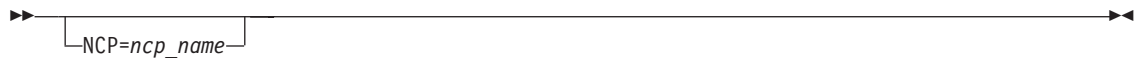
X25OP X.25 ODLC PUs
X25VC X.25 ODLC virtual circuits

Note: X25LN, X25OP, and X25VC are valid for ODLC resources attached to a 3746-900 CCU under NCP V7R5M0+IR33900 or later.

If you use ALLLINES or ALLPUS, and you also set some monitors, NPM collects data for all the resources you have chosen but it monitors only the resources that are compatible with the monitors that you explicitly set. You can specify multiple resource names by separating them with commas within parentheses.



Specifies the number of the interval for which you want to start the network collection. The value can be from 1 to 7. It defaults to the INTERVAL parameter set on the DEFAULTS statement in FNMINIT. See “Using the INTERVAL Keyword” on page 223 for more information on the INTERVAL parameter.



Specifies the name of the NCP under which the specified resource resides. You must code the NCP keyword when you code DYNAMIC=YES. You must also code the NCP keyword when you code the UPPER keyword.

This keyword is used to specify which NCP controls the resources to be monitored by NPM. When you want to start a collection on the NCP itself, you must enter the NCP name in the RESOURCE keyword.

If the NCP keyword is not coded, all generic resources listed in the resource keyword will be monitored on all matching nodes.



Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. You must specify the start and stop times on the CLOCK keyword if you code the DAILY keyword as DAILY=YES.

See “Using the CLOCK Keyword” on page 220 for more information about the CLOCK keyword.



Specifies whether you want this collection to be started each day.

You can have only one collection active at any one time for the same combination of resource, interval, and counter group. If you have a daily collection that is deferred because its start time is in the future, the deferred collection is not started if another collection is active when the deferred collection is due to start. In this situation, the deferred collection fails and is enqueued for the next day.



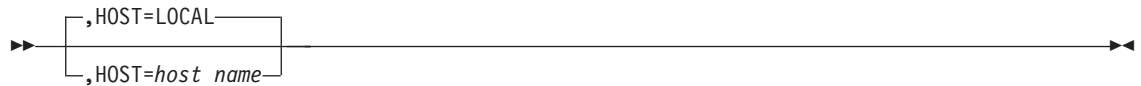
Specifies whether this resource is a dynamically reconfigurable resource. Collection is started for all the LUs or PUs that are dynamically added if you code DYNAMIC=YES and the RESOURCE keyword as ALLLUS or ALLPUS. You must specify the NCP keyword when the DYNAMIC keyword is set to YES.

For switched resources, you should code DYNAMIC=YES to ensure that data is collected. In addition, if you code DYNAMIC=YES, NPM will not stop the collection if the resource is deleted, but will suspend the collection until the stop time is reached or the resource is added again.

Pay special attention in specifying resource names when you code DYNAMIC=YES. Because the collection you are going to start is dynamic, there is no verification of the resource name (any name is valid).



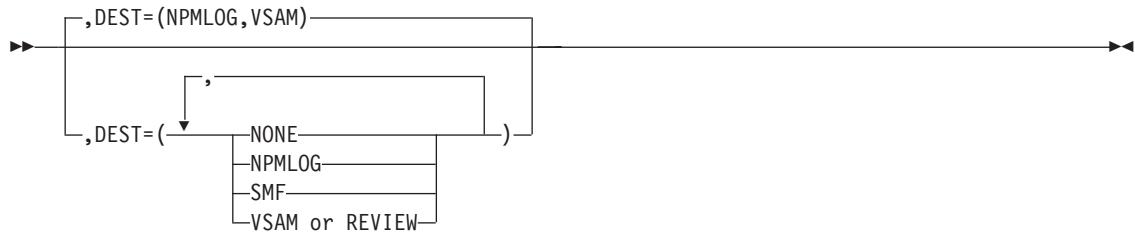
Specifies the console that receives response messages. You code this keyword only if you issue the command from the system console.



The host name you specify can be any host defined to NPM with the ANPM initialization statement.

To collect on the host where NPM is running, use HOST=LOCAL; otherwise, use the ANPM statement.

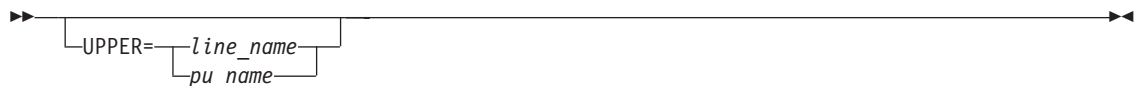
Note: You cannot specify the HOST keyword both in an EXEC and in FNMSTRT for the NETCOLL command. The HOST keyword can be specified only when the NETCOLL command is issued from the console.



Specifies the destination of the network data records. You can define multiple destinations on this keyword, and the NONE setting is ignored if you code any other parameters.

Note: The operator can override the default as long as the target files are available.

- NONE** No network data records are to be written.
- NPMLLOG** Network data records are written to the data sets defined by the FILE initialization statements as FNMLOGx.
- SMF** Network data records are written to SMF.
- VSAM** Network data records are written to the data sets defined by the FILE initialization statements as FNMREVx. VSAM is the default.



Specifies to restrict the data recording to generic resource groups, such as ALLPUS or ALLLUS. You code the UPPER keyword with a *line_name* if you code the RESOURCE keyword as ALLPUS, ALLLUS, or any of the following:

- PU** SDLC, BSC, or S/P PUs
- XX25PU** XI PUs
- NX25PU** NPSI PUs
- NX25VC** NPSI virtual circuits
- NEOPU** NEO PUs
- ODLCLNPU** ODLIC PUs
- FRPHYST** Frame relay physical PUs
- FRLMIPU** Frame relay LMI PUs

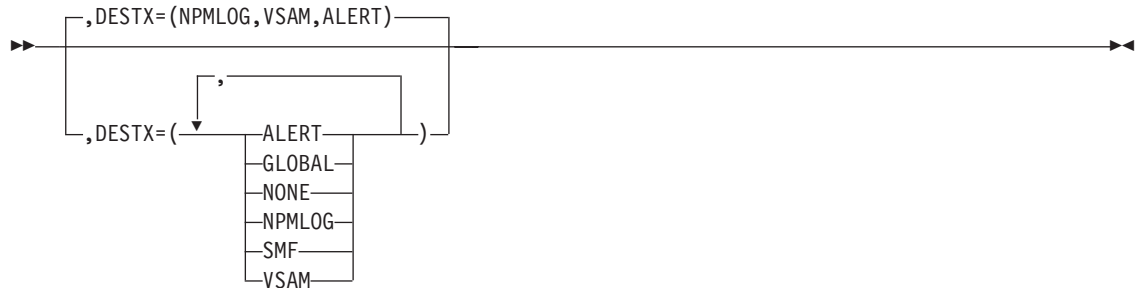
This option restricts the data recording to all PUs or LUs on the line. You must code the NCP keyword if you code the UPPER keyword.

You code the UPPER keyword with a *pu_name* if you code the RESOURCE keyword as ALLLUS. This option restricts data recording to all LUs on the PU.



Specifies whether to start or stop a collection, or to stop all collections. The effect of this command depends on whether collections are already active or deferred, the current time of day, and how the CLOCK keyword is coded. The STOPALL option stops all active collections on a resource for all intervals.

See “Using the OPTION Keyword” on page 221 for more information about the OPTION keyword.



Specifies the destination of the network data exception records. You can define multiple destinations on this keyword. The NONE variable is ignored if you code any other parameters.

- ALERT** Network data exception records are formatted into alerts and sent to the NetView program, as long as ALERT=YES is coded on the NPM statement in FNMINIT.
- GLOBAL** Network data exception messages are broadcast to all NPM operators who are authorized as GLOBAL=YES. If none of the authorized operators are logged on, the messages are sent to the console.
- NONE** No network data exception records are to be written.
- NPMLLOG** Network data exception records are written to the data sets defined by the FILE initialization statements as FNMLOGx.
- SMF** Network data records are written to SMF.
- VSAM** Network data exception records are written to the data sets defined by the FILE initialization statements as FNMREVx.

Note: The operator can override the default as long as the target files are available.



Specifies whether to generate monitor resolutions when a previous exception condition has been resolved.



Specifies the monitor limits for backward congestion count during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



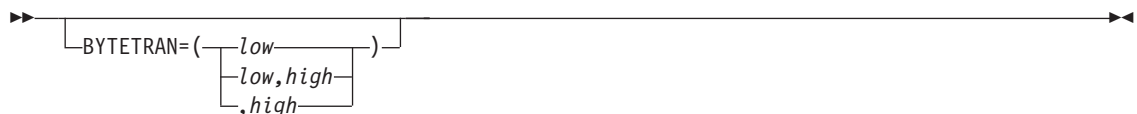
Specifies the monitor limits for percentage of NCP buffers used during the last interval. Both numbers can range from 0 to 100. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for octets sent and received per second during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for octets received per second during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for octets transmitted per second during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.

```

>>----->>
|
|  CCUUTIL=(low )
|           |low,high|
|           |high  |
|           |
|-----|

```

Specifies the monitor limits for CCU utilization during the last interval. Both numbers can range from 0 to 100. The low criteria value must be less than the high criteria value.

```

>>----->>
|
|  CONGEST=(low )
|           |low,high|
|           |high  |
|           |
|-----|

```

Specifies the monitor limits for congestion count during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.

```

>>----->>
|
|  DISDATAG=(low )
|            |low,high|
|            |high  |
|            |
|-----|

```

Specifies the monitor limits for datagrams discarded during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.

```

>>----->>
|
|  DLFRAMES=(low )
|            |low,high|
|            |high  |
|            |
|-----|

```

Specifies the monitor limits for frames discarded during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.

```

>>----->>
|
|  ERRCNTS=(low )
|           |low,high|
|           |high  |
|           |
|-----|

```

Specifies the monitor limits for number of temporary errors or retries during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



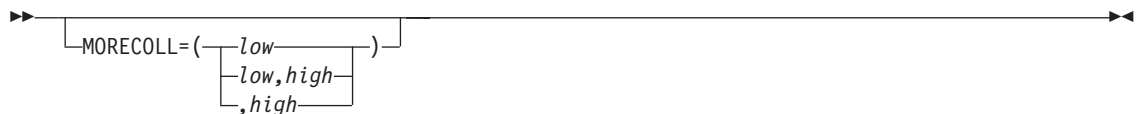
Specifies the monitor limits for forward congestion count during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for the number of available buffers in the CCU during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



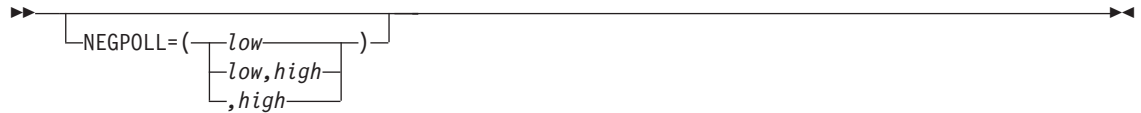
Specifies the monitor limits for line utilization during the last interval. Both numbers can range from 0 to 100. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for the number of times more than one collision occurred during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for protocol data units sent and received per minute during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for negative polls per minute during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



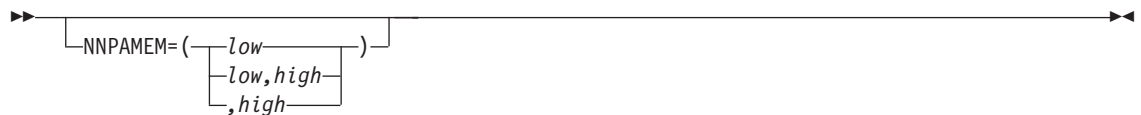
Specifies the monitor limits for NNP microprocessor utilization during the last interval. Both numbers can range from 0 to 100. The low criteria value must be less than the high criteria value.

This monitor is valid only when a network collection is started on a CCU that has a 3746-NNP expansion frame attached.



Specifies the monitor limits for APPN buffer utilization during the last interval. Both numbers can range from 0 to 100. The low criteria value must be less than the high criteria value.

This monitor is valid only when a network collection is started on a CCU that has a 3746-NNP expansion frame attached.



Specifies the monitor limits for APPN memory utilization during the last interval. Both numbers can range from 0 to 100. The low criteria value must be less than the high criteria value.

This monitor is valid only when a network collection is started on a CCU that has a 3746-NNP expansion frame attached.



Specifies the monitor limits for the number of times one collision occurred during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for fast program storage utilization during the last interval. Both numbers can range from 0 to 100. The low criteria value must be less than the high criteria value.

This monitor is valid only when a network collection is started on a CCU that has a 3746 model 900 expansion frame attached.



Specifies the monitor limits for PDUs discarded at the ODLC physical link during the last interval (the Unrecognized PDUs and Misaddressed Frames received are also included). Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for PDUs received per minute during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for protocol data units transmitted per minute during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.

```

>>----->>
|
|  POSPOLL=(low)
|           |
|           |low,high
|           |
|           |,high
|
|----->>

```

Specifies the monitor limits for positive polls per minute during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.

```

>>----->>
|
|  PROCUTIL=(low)
|            |
|            |low,high
|            |
|            |,high
|
|----->>

```

Specifies the monitor limits for processor CPU utilization during the last interval. Both numbers can range from 0 to 100. The low criteria value must be less than the high criteria value.

This monitor is valid only when a network collection is started on a CCU that has a 3746 model 900 expansion frame attached.

```

>>----->>
|
|  QUELEN=(low)
|          |
|          |low,high
|          |
|          |,high
|
|----->>

```

Specifies the monitor limits for queue length during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.

```

>>----->>
|
|  REXMITB=(low)
|           |
|           |low,high
|           |
|           |,high
|
|----->>

```

Specifies the monitor limits for percentage of total octets retransmitted during the last interval. Both numbers can range from 0 to 100. The low criteria value must be less than the high criteria value.

```

>>----->>
|
|  REXMIT=(low)
|          |
|          |low,high
|          |
|          |,high
|
|----->>

```

Specifies the monitor limits for percentage of total PDUs retransmitted during the last interval. Both numbers can range from 0 to 100. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for receive not ready (RNR-Rej) packets received during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for RNR-Rej packets transmitted during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



Specifies the number of times the acknowledge timer expired for an ODLC LAN station PU during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for buffer storage utilization during the last interval. Both numbers can range from 0 to 100. The low criteria value must be less than the high criteria value.

This monitor is valid only when a network collection is started on a CCU that has a 3746 model 900 expansion frame attached.



Specifies the monitor limits for the percentage of time the CCU was in slowdown during the last interval. Both numbers can range from 0 to 100. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for TIC utilization during the last interval. Both numbers can range from 0 to 100. The low criteria value must be less than the high criteria value.



Specifies the monitor limits for transmission deferred by the Ethernet Transmission Subsystem (EES) during the last interval. Both numbers can range from 0 to 2 147 483 646. The low criteria value must be less than the high criteria value.

Examples

The following example NETCOLL command starts collection on all lines defined to NCP1 using interval 3. These lines include SDLC lines, NTRI logical links, NTRI physical links, NPSI links, XI links, NEO links, frame relay logical links, frame relay physical links, Ethernet links, and ODLC links. The default is OPTION=START.

```
NETCOLL RESOURCE=ALLLINES,
        NCP=NCP1,
        INTERVAL=3
```

The following example NETCOLL command starts collection on all NTRI physical links, using collection interval 7, and monitors TIC utilization over 72 percent:

```
NETCOLL RESOURCE=PHYLINK,
        NCP=NCP2,
        INTERVAL=7,
        TICUTIL=(0,72)
```

The following example NETCOLL command starts collection on all NTRI physical links, using collection interval 7, and monitors congestion counts over 5. The monitoring of TIC utilization from the last command is still active after this command is issued.

```
NETCOLL RESOURCE=PHYLINK,
        NCP=NCP2,
        INTERVAL=7,
        MONCONGT=(0,5),
```

The following example NETCOLL command starts collection on an LU named LUB. Because this resource is a dynamic resource, it is not currently defined to NPM. The command will be saved until LUB is added.

```
NETCOLL RESOURCE=LUB,
        INTERVAL=1,
        DYNAMIC=YES
```

The following example NETCOLL command stops collection on a line named LINEA. You can use this command to stop collections using an EXEC, or from the console.

```
NETCOLL RESOURCE=LINEA,
        INTERVAL=1,
        OPTION=STOP
```

NETCOLL Data Types and Resources

Not all data types can be monitored for every resource. An X in Table 6 indicates which NETCOLL data types can be monitored for different types of resources.

Table 6. Netcoll Data Types and Resources

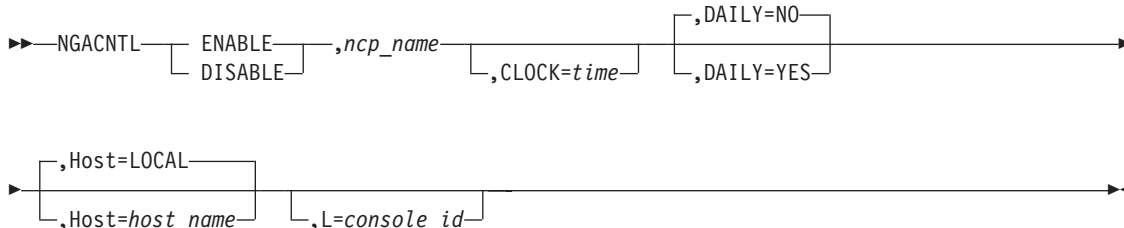
Data Type	Resource Type																			
	CC U	LI NE	PU	LU	PH YL IN K	LO GL IN K	NX 25 LI NK	XX 25 LI NK	NE OL IN K	NX 25 PU	XX 25 PU	NX 25 VC	NE OP U	FR PH YL K	FR LO GL K	FR PH YS T	FR LM IP U	ET HE RP L	OD LC LN LK	OD LC LN PU
BACKCONG														X	X	X				
BUFUSE	X																			
BYTERAT		X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X
BYTERCVD		X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X
BYTETRAN		X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X
CCUTIL	X																			
CONGEST					X															
DISDATAG																			X	
DLFRAMES														X		X	X			
ERRCNTS		X	X					X					X							
FWDCONG														X	X	X				
FREEBUF	X																			
LINEUTL		X					X	X	X											
MORECOLL																			X	
MSGRATE		X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X
NEGPOLL		X	X																	
NNPAMEM	X																			
NNPAUTI	X																			
NNPCUTIL	X																			
ONECOLL																			X	
PDSUTIL	X																			
PDUSDISC																				X
PDURCVD		X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X
PDUTRAN		X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X
POSPOLL		X	X																	
PROCUTIL	X																			
QUELEN		X	X	X	X	X	X	X					X	X	X	X		X		
REXMITB		X	X		X	X	X	X					X	X	X			X	X	X
REXMIT		X	X		X	X	X	X					X	X	X			X	X	X
RNRRCVD							X	X		X	X									
RNRTRAN							X	X		X	X									
RTIMEOUT																				X
SDSUTIL	X																			
SLOWDOWN	X																			
TICUTIL					X									X						
TRANSDEF																		X		

NGACNTL

Use the NGACNTL command to request NCP to enable or disable transmission of network gateway accounting (NGA) data. This command does not start or stop an NCP from collecting NGA data, it only controls the transmission of the data to NPM.

NPA=YES must be specified on the BUILD macro of the NCP generation along with GWSESAC=(YES,...) and SESSACC=(YES,...).

If GWSESAC=(YES,DEFER,...) is specified on the BUILD macro of the NCP generation, an NGAMDFY command is required to notify the NCP to start collecting NGA data.

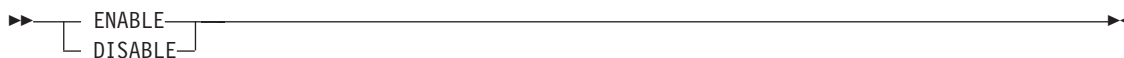


Note: The Host and L keywords are only available from the system console.

Authorization Needed: Network accounting

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the NGACNTL command:

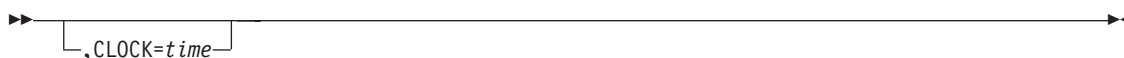


ENABLE allows the transmission of network gateway accounting data from the NCP to NPM. This keyword does not start data collection. It is used only to enable the transmission after a previous disable request.

DISABLE prevents the transmission of network gateway accounting data from the NCP to NPM. This keyword does not stop data collection. The NCP continues to collect the data. If NPM becomes the current receiver of network gateway accounting data, the status is changed to ENABLE to be compatible with the NCP enable or disable status.



Specifies the 1- to 7-character alphanumeric NCP name. The NCP name must be defined to NPM.



NGACNTL

Specifies the time to enable or disable the NCP's transmission of network gateway accounting (NGA) data to this NPM. If you do not specify a time, the command is executed immediately.



Specifies whether the command is to be executed each day. If DAILY=YES, you must specify a time on the CLOCK keyword.



Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.



Specifies the console that receives response messages. You code this keyword only if you issue the command from the system console.

Example

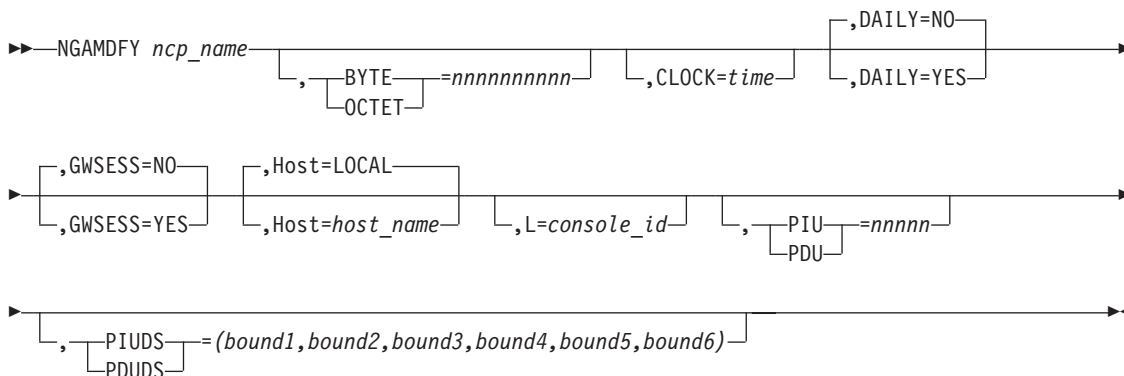
Use the following console command to enable the transmission of NGA data from an NCP named NX2NV3 to NPM:

```
NGACNTL ENABLE,NX2NV3
```

NGAMDFY

Use the NGAMDFY command to request an NCP to modify collection parameters for network gateway accounting. If GWSESAC=(YES,DEFER,...) was specified on the BUILD macro in the NCP generation, this command also requests the NCP to start collection of NGA data. The NGAMDFY command does not affect the transmission of the data from the NCP to NPM. See “NGACNTL” on page 295.

NPA=YES must be specified on the BUILD macro of the NCP generation along with GWSESAC=(YES,...) and SESSACC=(YES,...).



Note: The Host keyword is only available from the system console.

Authorization Needed: Network accounting

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the NGAMDFY command:



Note: The Host and L keywords are only available from the console. Specifies the name of the NCP.



Specifies the new byte threshold value. You can specify any number from 256 to 2 147 483 646. The byte threshold must always be greater than the PIU threshold. The range that NPM allows for this keyword is smaller than the range that NCP allows.



Specifies the time that the command is to be issued by NPM. If the NPM is not the current receiver of accounting data, the command is held until the NPM becomes the current receiver of the accounting data.



Specifies whether the command is to be executed each day. If you specify DAILY=YES, you must also specify a time on the CLOCK keyword.



Specifies whether the NCP should collect accounting data for gateway sessions. This keyword affects only new sessions.



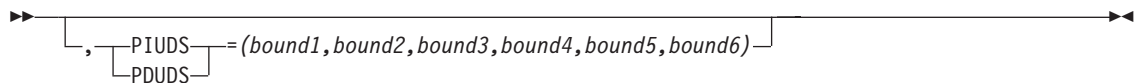
Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.



Specifies the console that receives response messages. You code this keyword only if you issue the command from the system console.



Specifies the new PIU threshold value. You can set PIU to any number from 64 to 32767. It should always be less than the BYTE threshold. The range that NPM allows for this keyword is smaller than the range that NCP allows.



Specifies up to six boundary byte values for the PIU distribution counts. The minimum PIU boundary byte value is 0. If 0 is specified in the first position, no distribution counts are

collected. If 0 is specified in any other position, all positions following it default to 0. The maximum PIU boundary byte value is 32767. The boundary values define up to seven collection buckets as follows:

- Bucket 1** Count of PIUs from 0 to boundary 1 bytes
- Bucket 2** Count of PIUs from boundary 1 to boundary 2 bytes
- Bucket N** Count of PIUs from boundary N-1 to boundary N bytes
- Bucket N+1** Count of PIUs greater than boundary N bytes.

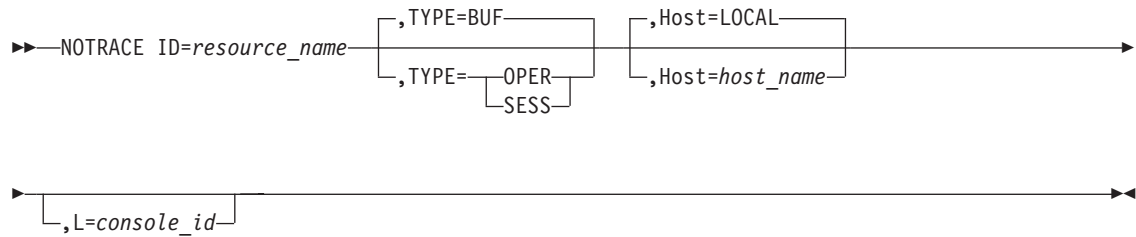
Example

Use the following console command to modify the gateway session accounting data for an NCP named A03NCPG1. The new byte threshold is 3000. The new PIU threshold is 100.

```
NGAMDFY A03NCPG1,  
        GWSSESS=YES,  
        OCTET=3000,  
        PDU=100,  
        PDUDS=(10,11,12,13,14,15)
```

NOTRACE

Use the NOTRACE command to stop NPM or VTAM traces.



Note: The Host and L keywords are only available from the system console.

Authorization needed to stop a buffer trace: Console

Authorization needed to stop other traces: Problem determination

The following list describes the keywords you can code on the NOTRACE command:



Specifies the resource name. The ID coded here depends on the variable you code for the TYPE keyword:

- If you specify TYPE=BUF, *resource_name* is the name of a VTAM resource.
- If you specify TYPE=OPER, *resource_name* is an NPM operator ID.
- If you specify TYPE=SESS, *resource_name* is the name of a session collection resource.



Specifies the type of trace to stop:

BUF

Stops the VTAM buffer trace for the resource named by the ID keyword. GTF=NO is set for the session collection status of the resource.

OPER

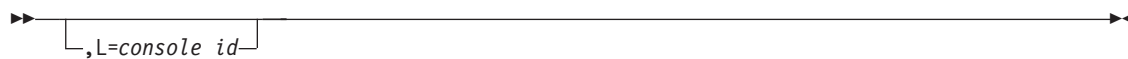
Stops the NPM operator trace for the NPM operator named by the ID keyword.

SESS

Stops the NPM session trace for the VTAM resource named by the ID keyword. A session collection command for this resource must already have been issued for this resource to be affected.



Specifies the host that receives the command.



Specifies the console that receives response messages.

Example

Use the following console command to stop the buffer trace for the VTAM resource NR5153E1:

```
F NPMV2R7,NOTRACE ID=NR5153E1,TYPE=BUF
```

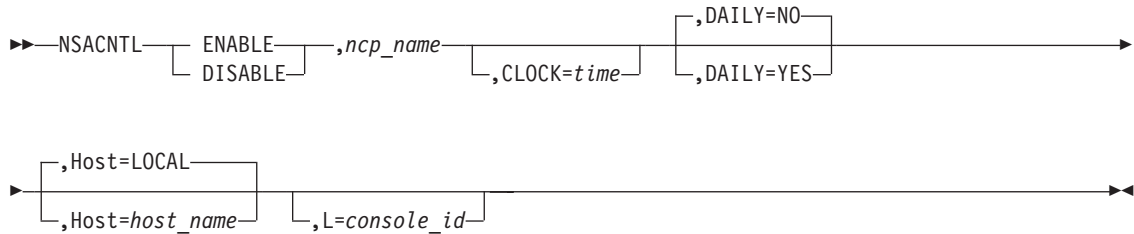
NPM alerts you when the command has been successfully completed by issuing the following message:

```
FNM275I NOTRACE COMMAND COMPLETED
```

NSACNTL

Use the NSACNTL command to request NCP to enable or disable transmission of network session accounting (NSA) data. This command does not start or stop NCP from collecting NSA data, it only controls the transmission of the data to NPM.

NPA=YES must be specified on the BUILD macro of the NCP generation along with SESSACC=(YES,...). If SESSACC=(YES,DEFER,...) is specified on the BUILD macro of the NCP generation, an NSAMDFY command is required to set the PLU or SLU options and to notify the NCP to start collecting on these session types.



Note: The Host and L keywords are only available from the system console.

Authorization Needed: Network accounting

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the NSACNTL command:

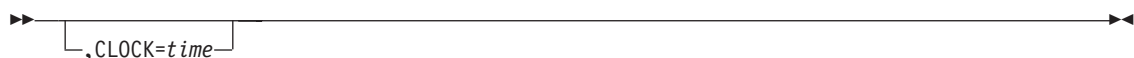


ENABLE allows the transmission of network session accounting data from the NCP to NPM. This keyword does not start data collection. It is used only to enable the transmission after a previous DISABLE request.

DISABLE prevents the transmission of network session accounting data from the NCP to NPM. This keyword does not stop data collection. The NCP continues to collect the data. If NPM becomes the current receiver of the data, the status is changed to ENABLE to be compatible with the NCP enable or disable status.



Specifies the 1- to 7-character alphanumeric NCP name. The NCP name must be defined to NPM.



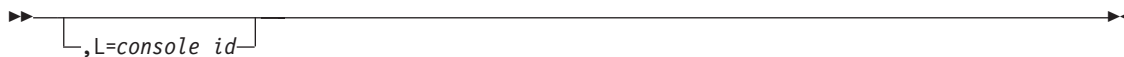
Specifies the time to enable or disable the NCP's transmission of network session accounting (NSA) data to this NPM. If you do not specify a time, the command is executed immediately.



Specifies whether the command is to be executed each day. If you specify `DAILY=YES`, you must specify a time on the `CLOCK` keyword.



Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.



Specifies the console that receives response messages. You code this keyword only if you are issuing the command from the system console.

Example

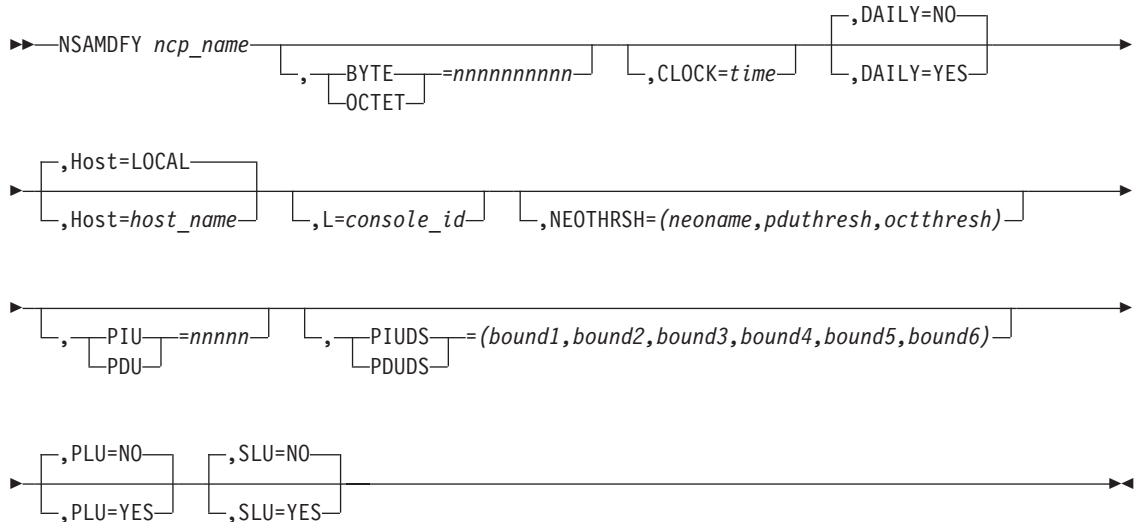
Use the following console command to enable the transmission of NSA data from an NCP named `NX2NV3` to NPM:

```
NSACNTL ENABLE,NX2NV3
```

NSAMDFY

Use the NSAMDFY command to request NCP to modify its collection parameters for network session accounting. If SESSACC=(YES,DEFER,...) was specified on the BUILD macro in the NCP generation, this command also requests the NCP to start collection of NSA data. The NSAMDFY command does not affect the transmission of data from the NCP to NPM. See “NSACNTL” on page 302.

NPA=YES must be specified on the BUILD macro of the NCP generation along with SESSACC=(YES,...). If you want to collect on all sessions, specify PLU=YES and SLU=YES. See “NSACNTL” on page 302.



Note: The Host and L keywords are only available from the system console.

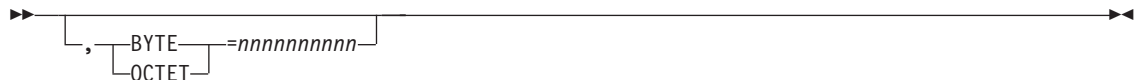
Authorization Needed: Network accounting

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the NSAMDFY command:



Specifies the name of the NCP.



Specifies the new byte threshold value. You can set BYTE to any number from 256 to 2 147 483 646. The byte threshold must always be greater than the PIU threshold. The range that NPM allows for this keyword is smaller than the range that NCP allows.

Specifies the time that the command is to be issued by NPM. If the NPM is not the current receiver of accounting data, the command is held until the NPM becomes the current receiver of the accounting data.

Specifies whether the command is to be executed each day. If you specify DAILY=YES, you must specify a time on the CLOCK keyword.

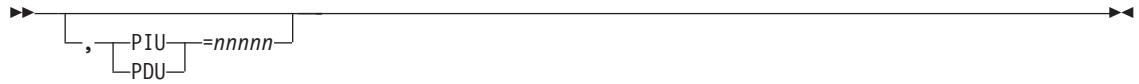
Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.

Specifies the console that receives response messages. You code this keyword only if you issue the command from the system console.

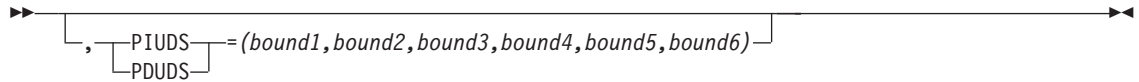
Specifies the thresholds for sending accounting data to NPM.

<i>neoname</i>	The name of the NPSI, XI, or generic NEO application specified or to which defaulted in the NCP generation.
<i>pduthresh</i>	The number of PDUs you want the NEO application to set as a threshold. <i>pduthresh</i> ranges from 65536 to 2 147 483 646 for NPSI and XI and from 0 to 2 147 483 646 for a generic NEO.
<i>octthresh</i>	The number of octets you want the NEO application to set as a threshold. <i>octthresh</i> ranges from 65536 to 2 147 483 646 for NPSI and XI and from 0 to 2 147 483 646 for a generic NEO.

When the PDU or octet threshold is reached, the NCP sends accounting data to NPM.



Specifies the new PIU threshold value. You can set PIU to any number from 64 to 32767. It should always be less than the BYTE threshold. The range that NPM allows for this keyword is smaller than the range that NCP allows.



Specifies up to six boundary byte values for the PIU distribution counts. The minimum PIU boundary byte value is 0. If 0 is specified in the first position, no distribution counts are collected. If 0 is specified in any other position, all positions following it default to 0. The maximum PIU boundary byte value is 32767. The boundary values define up to seven collection buckets as follows:

- Bucket 1** Count of PIUs from 0 to boundary 1 bytes
- Bucket 2** Count of PIUs from boundary 1 to boundary 2 bytes
- Bucket N** Count of PIUs from boundary N-1 to boundary N bytes
- Bucket N+1** Count of PIUs greater than boundary N bytes.



Specifies whether the NCP should collect accounting data for the boundary-attached PLU half-sessions. This keyword affects only new sessions.



Specifies whether the NCP should collect accounting data for the boundary-attached SLU half-sessions. This keyword affects only new sessions.

Example

Use the following console command to request NCP A03NCPG to modify the collection parameters for network session accounting. The new byte threshold is 3000. The new PIU threshold is 100. The command is to be issued at 1:44 p.m.

```
NSAMDFY A03NCPG,
        OCTET=3000,
        PDU=100,
        CLOCK=13.44.00,
        PDUDS=(11,12,13,14,15,16)
```

12

System Console Commands: NSASOLCT to VVRCOLL

This chapter lists the NPM system console commands from NSASOLCT to VVRCOLL in alphabetical sequence. There is a general description and a syntax diagram for every command. Each of the system console command keywords shown in the syntax diagrams are described.

The following information is also provided for each NPM command:

- **Console Authorization:** Identifies the authorization that you need to issue the command from the console.
- **Where:** Identifies where you can issue the command. You can issue commands from the system console, from FNMSTRT, or by running an NPM EXEC.

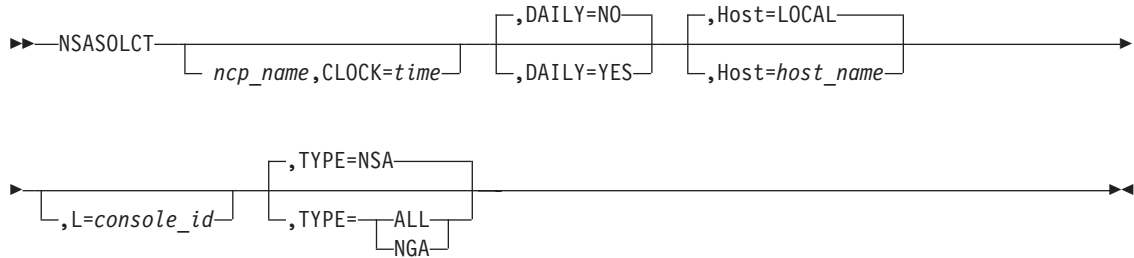
Many commands can either be issued from the system console or coded in FNMSTRT or in NPM EXECs. You must have CONTROL=COMMANDS authorization to run an NPM EXEC from an online panel.

NSASOLCT

Use the NSASOLCT command to request NCP to send NPM the current accounting counters for NSA or NGA. The SOLICIT command issues an ENABLE command if NSA or NGA is disabled for the type of accounting data requested.

Note: If the current accounting counters in the NCP are zero, no data is returned to NPM.

NPA=YES must be specified on the BUILD macro of the NCP generation along with SESSACC=(YES,...) for session accounting or SESSACC=(YES,...) and GWSESAC=(YES,...) for gateway accounting.



Note: The Host and L keywords are only available from the console.

Authorization Needed: Network accounting

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the NSASOLCT command:

►► *ncp_name* —————►►

Specifies the name of the NCP.

►► [,CLOCK=*time*] —————►►

Specifies the time that the command is to be issued.

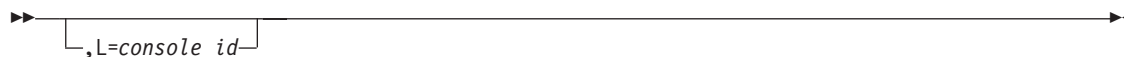
This command is issued when this NCP's first NPALU (with the accounting capability specified in this command) binds to this NPM. If the time specified has already passed and the NPALU in the NCP is bound to NPM, this command is issued immediately. If NPM is not bound to the NPALU in the NCP when the clock time specified on the command occurs, the command is held until NPM binds to the NPALU. The command is issued immediately once the NPALU is bound.

►► [,DAILY=NO]
[,DAILY=YES] —————►►

Specifies whether the command is to be executed each day. If you specify DAILY=YES, you must specify a time on the CLOCK keyword.



Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.



Specifies the console that receives response messages. You code this keyword only if you issue the command from the system console.



Specifies the type of accounting data to be solicited and sent to NPM. Current interval data for all the active sessions is queued to be sent back to the requesting NPM.

Example

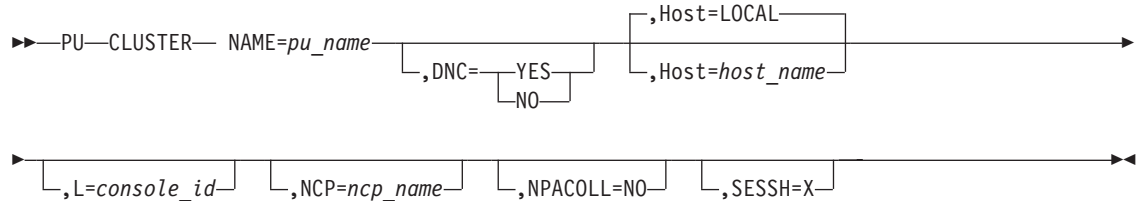
Use the following console command to request an NCP named A03NCPG2 to send NPM the current counters for network gateway accounting. The command is to be issued daily at 1:54 p.m.

```
NSASOLCT A03NCPG2,
        CLOCK=13.54.00,
        DAILY = YES,
        TYPE = NGA
```

PU

Use the PU command to establish defaults for parameters of the LUs controlled by this PU.

All of the keywords on this command, except SESSH, are overridden by the information in the NCP RRT and VTAMLST each time the NCP is replaced. You should include the PU command in an NPM EXEC (along with the NCP command), to execute the PU command each time you update the NCP definition.



Note: The Host and L keywords are only available from the system console.

Authorization Needed: Control commands

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the PU command:



Note: The Host and L keywords are only available from the console. Specifies the name of a PU defined in one of the NCPs.



Specifies the dynamic network collection (DNC) parameter associated with the PU.

YES

Starts network data collection for the LUs on this PU when a session connection occurs, and stops network data collection when a session disconnection occurs.

NO

Stops DNC for any LUs defined on this PU.

The default is defined by the DNC parameter for the line to which this PU is connected.

If DNC=NO is specified on the CONTROL statement in FNMINIT, NPM sets DNC=NO on this command.



Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.



Specifies the console that receives response messages. You code this keyword only if you issue the command from the system console.

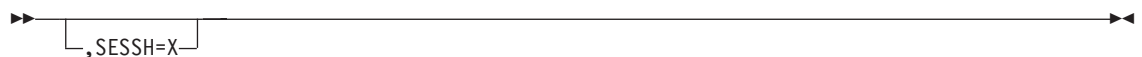


Specifies the name of the NCP for this command. Only the PU in the specified NCP is updated. If you do not specify the NCP keyword, the first PU that matches the name is updated.



Specifies that network data collection commands on this PU or CLUSTER be rejected. You can use this option to exclude collection on inactive resources. This keyword does not change the NPACOLL value for LUs defined with this PU.

If you specify NPACOLL=NO to prevent collection on a resource, you cannot turn collection back on by reissuing the command. You must execute the NCP command again before you can collect on the resource.



Specifies the SESSH parameter associated with this PU. Use this parameter to exclude session data collection for LUs associated with this PU. The default is defined by the SESSH parameter for the line containing this PU.

An active session collection is not stopped for the resource. Use SESSH to prevent session collection of a resource when session collection was started by application. This option is typically used for printers.

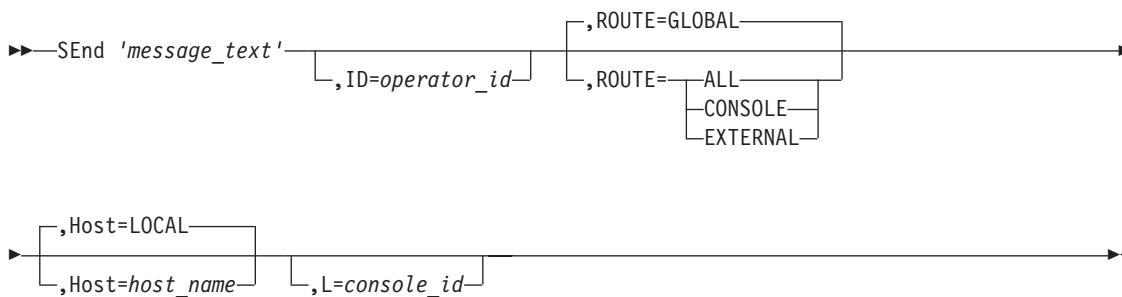
Example

Use the following console command to establish defaults for the parameters of the LUs controlled by PU A70T0012. This example command also specifies to reject NETCOLL commands on the PU, identifies the PU's NCP, and indicates dynamic network collection.

PU NAME=A70T0012,
NPACOLL= NO,
NCP = A70T01,
DNC = YES

SEND

Use the SEND command to send messages to other NPM operators.



Notes:

1. If you specify the ID, the ROUTE keyword is ignored, except ROUTE=EXTERNAL. If you specify the L keyword, the default is ROUTE=CONSOLE.
2. The Host and L keywords are only available from the console.

Authorization Needed: None

Where: Console

The following list describes the keywords you can code on the SEND command:



Specifies the text of the message to be sent. The maximum length of the message text is 64 characters.



Identifies the operator who receives the message.



Determines how to route the message:

ALL Sends the message to all active NPM operators.

CONSOLE

Sends the message to the console operator.

EXTERNAL

Sends the message to the indicated NPM operator, if logged on. If

SEND

EXTERNAL=YES is defined for the operator in the OPERATOR initialization statement, and the operator is not logged on, NPM sends the message to a TSO or CMS user with the same operator ID. If ROUTE=EXTERNAL, you must also specify *operator_id*.

GLOBAL

Sends the message to all active NPM operators who have GLOBAL=YES in their active profiles.



Specifies the host that receives the command.



Specifies the console that receives response messages.

Example

Use the following console command to tell all NPM operators that you are shutting down NCP001 for a CE change:

```
F NPMV2R7,SE 'NCP001 will be down for a CE change',ROUTE=GLOBAL
```

NPM sends the message “NCP001 will be down for a CE change” to all operators and alerts you that it has successfully completed the command by issuing the following message:

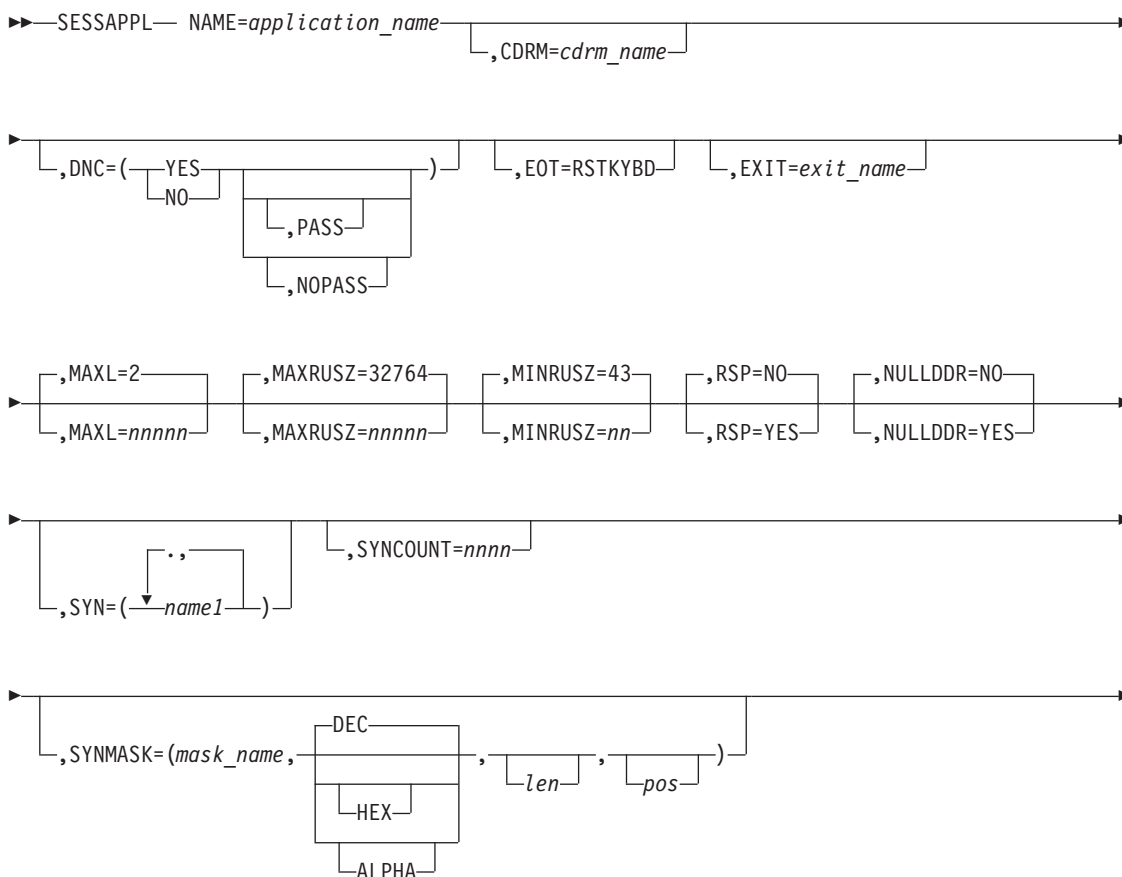
```
FNM275I SEND COMMAND COMPLETED
```

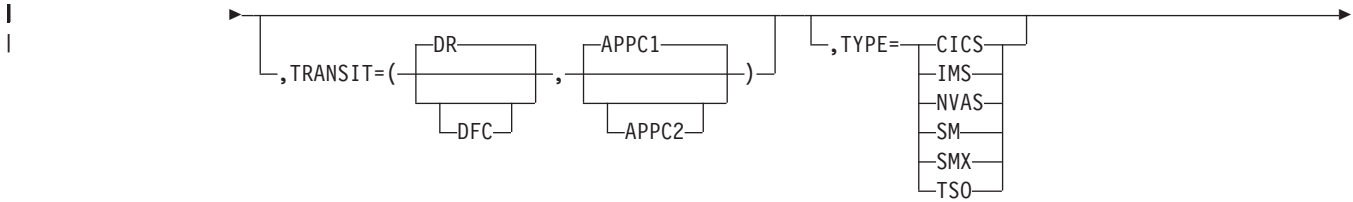
SESSAPPL

Use the SESSAPPL commands to define application characteristics for applications executing in the same host as NPM. You can also use a SESSAPPL command to add, replace, or delete an application definition. Each SESSAPPL command is used to define a single application.

Notes:

1. To use the SESSAPPL command the HOSTCOLL initialization parameter of the FNMINIT member must be set to YES.
2. The REPLACE and DELETE OPTIONS are available only for applications added using the SESSAPPL command. The SESSAPPL command cannot replace or delete the applications defined using the APPL initialization statement. It is recommended that you migrate the APPL initialization statement into SESSAPPL commands.
3. The REPLACE and DELETE OPTIONS are also available to change or delete a dynamically-added application (an NPM undefined application on which a session collection was started).





Note: You can code up to 200 names for the SYN keyword.

Authorization Needed: Session commands

Where: Console, NPM EXEC

The following list describes the keywords you can code on the SESSAPPL command:

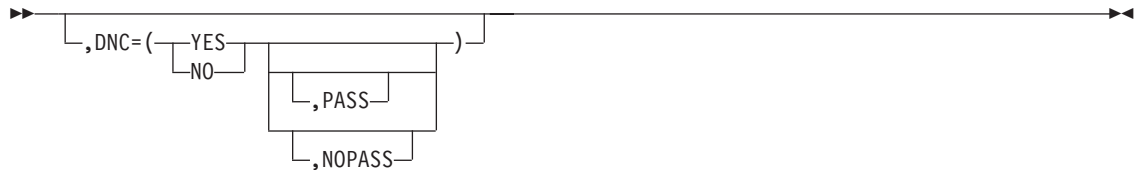
►► NAME=*application_name* ◀◀

Specifies the application name to use when starting or stopping session collection. The application name can be from 1–8 alphanumeric characters in length.

Note: If you do not use the SYN or SYNMASK parameter, this name must match the name used by the application program to open its VTAM ACB.

►► ,CDRM=*cdrm_name* ◀◀

Specifies the name from the CDRM statement that identifies the host in which this application is running. If you specify CDRM, the SESSAPPL command is used to provide configuration information only. The default is the value from the NAME parameter on the HOST statement, which is the name of the local NPM host.



Specifies whether dynamic network collection is activated when a logical unit starts a session with this application.

The following operands are optional for the DNC parameter:

PASS Specifies that this application passes control to a particular application. Dynamic network collection does not occur for a session with the primary application, such as TSO and the NetView program, but only for synonym collections. Synonyms must be defined for these applications.

NOPASS

Specifies that dynamic network collection occurs for both the application and its synonyms.

→ [,EOT=RSTKYBD] →

Specifies the End of Transaction Mode, which determines when NPM calculates host transit times for TSO applications. The EOT parameter tells NPM what to consider as the final output for a specific application. When the application writes its final output, the timestamp related to this PIU is used by NPM to calculate the Host Transit Time.

When EOT=RSTKYBD is set, NPM considers as End of Host Transit Time the first outbound PIU that has its Keyboard Restore bit set to ON and either an only-in-chain (OIC) or a last-in-chain (LIC) indicator.

→ [,EXIT=exit_name] →

Specifies the name of an exit routine to call to determine the host and network transit times. If you do not specify an exit parameter, no exit routine is called and the standard NPM transit times are calculated. For LU 6.2 sessions running the half-duplex flip-flop mode, specify EXIT=FNMSDCA2 to correctly create reports using FNMTAP.

→ [,MAXL=2]
→ [,MAXL=nnnnn] →

Specifies the maximum number of LUs that maintain sessions with the application during two consecutive session intervals. The SESSINT parameter of the NPM statement determines the session interval. You can set MAXL to any value from 1–32760.

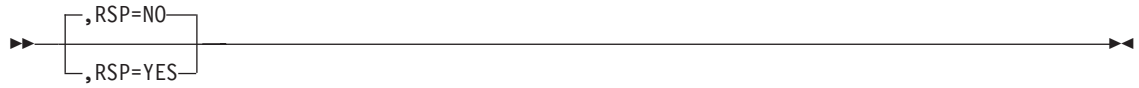
Note: The value specified for MAXL does not allocate storage in CSA for collection control blocks. The storage for applications is allocated from the NPM private address space.

→ [,MAXRUSZ=32764]
→ [,MAXRUSZ=nnnnn] →

Specifies the largest amount of RU (request/response unit) data that NPM copies to the VTAMLOG data set when you specify MIN=NO on the SESSCOLL command. You can set MAXRUSZ to any value from 2–32764. The value of MAXRUSZ is set to MINRUSZ if its specified value is less than MINRUSZ.



Specifies the minimum PIU size for application data recorded when you specify MIN=YES in the SESSCOLL command. You can set MINRUSZ to any value from 2–43.



Specifies whether session collection can be started for the application with SESSH=R (dynamic definite response).



Specifies whether the NULL RUs (PIUs carrying a zero-length RU) can be used if a session collection has been started with DDR.



Specifies up to 200 synonyms for the named application. You can define additional synonyms with the SYNCOUNT and SYNMASK keywords.

When choosing a synonym name, the following rules apply:

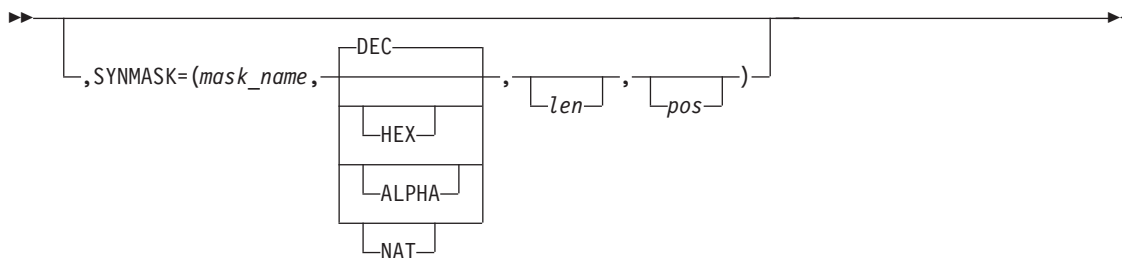
- All synonyms must be defined to VTAM.
- A synonym cannot duplicate another application name specified in an NPM SESSAPPL command or in the NPM APPL initialization statement.
- The synonym cannot be all numbers. The first character must be a letter or a national character (@, #, \$).

Note: Do not specify the SYN parameter for session manager SLU applications using the NetView synergy interface.



Specifies the number of synonyms to generate for this application. You can set SYNCOUNT to any number from 1–9999. Do not code SYNCOUNT without coding SYNMASK. See the SYNMASK description for more information.

Note: Do not specify the SYNCOUNT parameter for session manager SLU applications using the NetView synergy interface.



Specifies a synonym for the named application. The *mask_name* has the format of *APPLIDnnnn*, where the synonym count replaces *nnnn*. The value of *nnnn* is the first application synonym name generated and the number of *n* characters indicates how many characters in the synonym are numbers. For example, TSO0001 allows for up to 9999 TSO synonyms, beginning with TSO0001.

When choosing a mask name, the following rules apply:

- All synonyms must be defined to VTAM.
- The first character must be a letter or a national character (@,#,\$).
- *nnnn* must match the requirements of the radix value. For example, if the *radix* is **DEC** then *nnnn* must consist of numeric digits only.
- You can define the position and length of the variable part of the synonym by the *pos* and the *len* values.

Note: Do not specify the SYNMASK parameter for session manager SLU applications using the NetView synergy interface.

radix

Is the value used to generate the synonyms. It can be one of the following:

DEC

The generated synonyms use a radix value of 10.

The characters used to generate the synonyms range from 0–9. This is the default.

HEX

The generated synonyms use a radix value of 16.

The characters used to generate the synonyms range from 0–9 and from A–F.

ALPHA

The generated synonyms use a radix value of 36.

The characters used to generate the synonyms range from 0–9 and from A–Z.

NAT

The generated synonyms use a radix value of 39.

The characters used to generate the synonyms range from 0–9, A–Z, and the characters @, #, and \$.

| *pos*
 | Is the position in the SYNMASK string where the replacement character string is to be
 | generated. A value from 2–7 is allowed.

| *len*
 | Is the length of the replacement character string in the SYNMASK string. A value from
 | 2–5 is allowed.

| **Notes:**

- | 1. The sum of *pos* and *len* cannot exceed nine.
- | 2. If you define the *len* value, you must also define the *pos* value.
- | 3. If *pos* is not defined, the string is scanned for characters to define the starting value.

| **Example 1:**

| SESSAPPL NAME=APNDC,SYNCOUNT=72,SYNMASK=(APNDC00,ALPHA,6,2)

| generates the following synonyms:

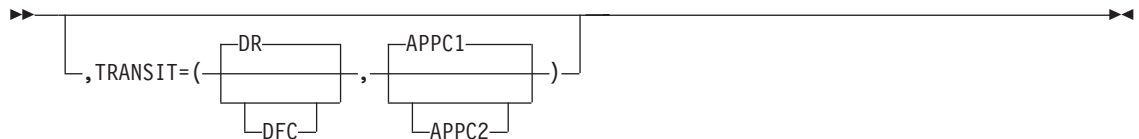
| APNDC00, APNDC01, ... ,APNDC09, APNDC0A, APNDC0E, ... ,APNDC0Z
 | APNDC10, APNDC11, ... ,APNDC19, APNDC1A, APNDC1E, ... ,APNDC1Z

| **Example 2:**

| SESSAPPL NAME=NSM,SYNCOUNT=32,SYNMASK=(NSM30J,HEX,4,2)

| generates the following synonyms:

| NSM30J, NSM31J, NSM32J, ... ,NSM39J, NSM3AJ, NSM3BJ, ... ,NSM3FJ
 | NSM40J, NSM41J, NSM42J, ... ,NSM49J, NSM4AJ, NSM4BJ, ... ,NSM4FJ



| Specifies network transit time calculation parameters.

| For LU0 and LU2 sessions:

| **DR** Specifies that network transit time is calculated only for user data PIUs that
 | have definite responses.

| **DFC** Specifies that data control PIUs are included in the network transit time
 | calculations.

| For LU 6.2 sessions:

| **APPC1** Specifies that network transit time is calculated using those PIUs that specify
 | confirm.

| **APPC2** Specifies that network transit time is calculated using the elapsed time
 | between an outbound PIU and the next inbound PIU.



Specifies special processing for certain types of applications.

- | | |
|-------------|--|
| CICS | Defines the Customer Information Control System (CICS) application. |
| IMS | Specifies for NPM to ignore the clear screen, and PA2 (message advance) and unlock keyboard messages when computing transit times. NPM still counts these messages in the volume statistics. |
| NVAS | Defines session manager applications such as NetView Access Services. |
| SM | Defines session manager applications such as TPX. |
| SMX | Defines session manager applications such as TPX. It enables you to collect data for applications running either on the same host on which NPM is running, or on a different host. |
| TSO | Defines the Time Sharing Option. |



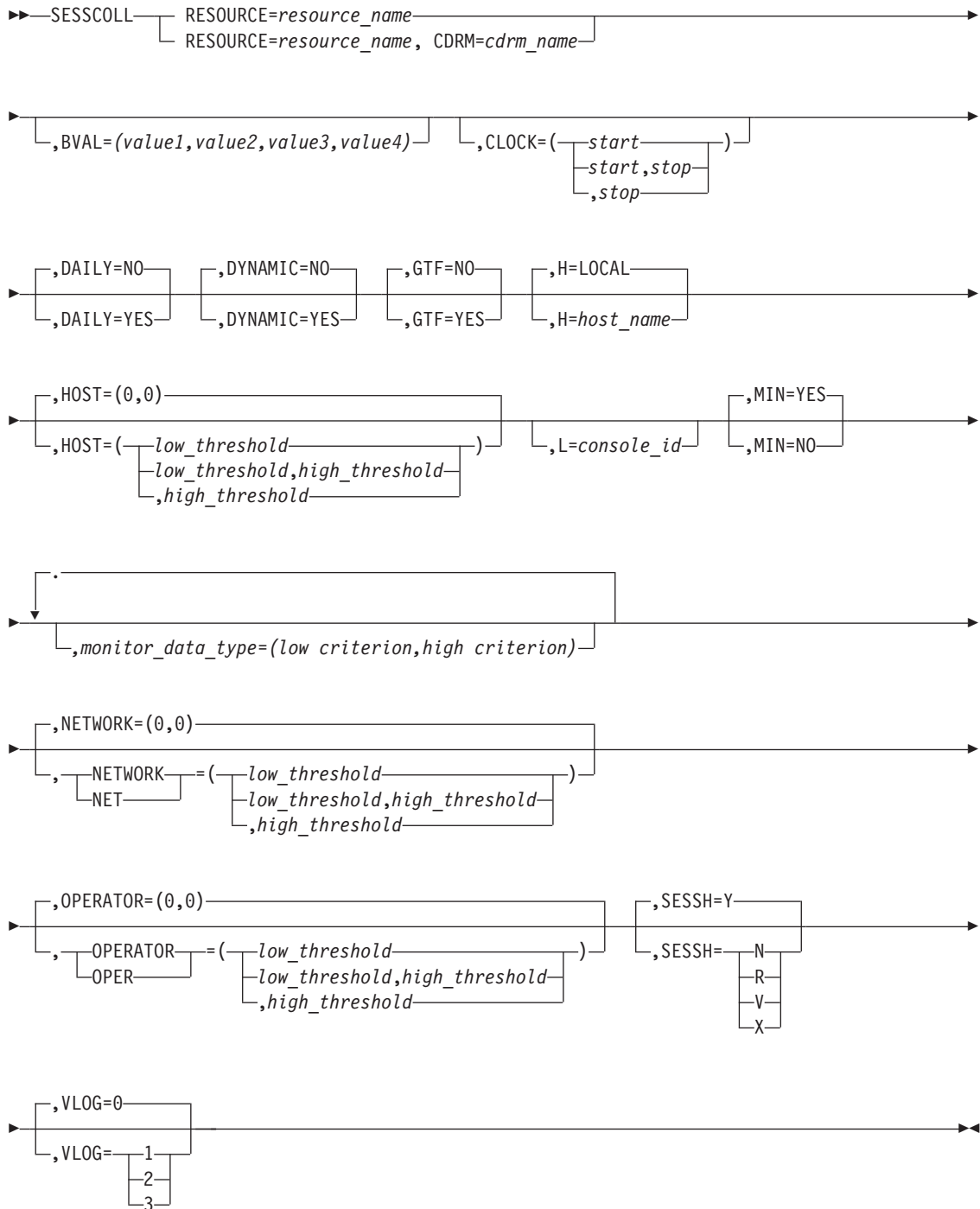
Specifies the option for application definition.

- | | |
|----------------|-------------------------------------|
| ADD | Adds an application definition. |
| REPLACE | Replaces an application definition. |
| DELETE | Deletes an application definition. |

Note: The DELETE and REPLACE OPTIONs are available only for applications added using the SESSAPPL command and not for those applications defined using the APPL statement in the FNMINIT member.

SESSCOLL

Use the SESSCOLL command to start a session collection.



Note: The H and L keywords are only available from the console.

Authorization Needed: Session commands

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the SESSCOLL command:

```

└─ RESOURCE=resource_name
└─ RESOURCE=resource_name, CDRM=cdrm_name

```

Specifies the resource name for which you want session data collection started. The following list describes the available resource types:

RESOURCE=*resource_name*

The resource name can be the name of an LU, an IP address, a group, a CDRM, or an APPL. If the LU name is either defined in an NCP defined to NPM, or defined in an LU command, the CDRM keyword is not required.

The IP address is the client's remote address/port number. If only the remote address is specified, session collection is started for all clients that have that address (regardless of the client's port number).

If the resource is an LU and a switched resource, or if it is an IP address, you must code the CDRM keyword with the node name to which the LU dials in.

CDRM=*cdrm_name*

Specifies a CDRM name, from 1- to 8-alphanumeric characters. This name is the name from the HOST or CDRM initialization statement or from the NCP command.

The CDRM keyword is the same as the Node Name field on the Start Session panel (FNM02SCL). You can use the term NODE as an alias for CDRM.

If the CDRM name is an NCP that has an NCP PU name, use the NCP PU name as the CDRM name. You need to specify the CDRM name only when the resource for which you want to collect data is an LU not defined to NPM.

For switched major node resources and locally attached LUs, the NODENAME keyword must be the host PU name. This is because the switched major node resources and the locally attached LUs are owned by VTAM in the NPM host.

```

└─ ,BVAL=(value1,value2,value3,value4)

```

Specifies the upper boundary values that define the distribution groups in the Logical Unit Distributions panel. When operator transit time is measured, the count is incremented for the distribution group in which it falls.

You must specify four boundary values in ascending order and none can equal zero. The fifth upper boundary value is infinity, for all transit times that are above the fourth distribution boundary. BVAL can range from 0.01 to 9999.99 in hundredths of seconds.

The defaults are specified by the THRESHOLD initialization statement.

```

└─ ,CLOCK=(start)
└─ ,CLOCK=(start,stop)
└─ ,CLOCK=stop

```

Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. You must specify the start and stop times on the CLOCK keyword if you code the DAILY keyword as DAILY=YES. If the stop time is omitted, the operation continues until the collection is stopped, or until NPM ends.

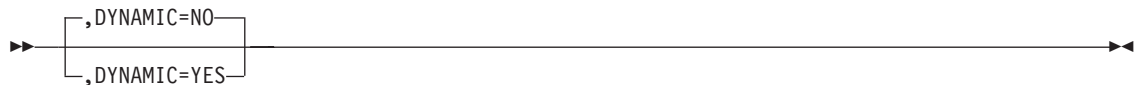
Notes:

1. If there is any conflict between the stop times specified in SESSCOLL commands for the same resource, the earlier stop time prevails.
2. If you are using a VTAM release earlier than Version 3 Release 4.1, NPM collects session data using the VTAM buffer trace. If you stop the VTAM buffer trace for a resource, NPM session collection is stopped, regardless of the stop time specified.

See “Using the CLOCK Keyword” on page 220 for more information on the CLOCK keyword.

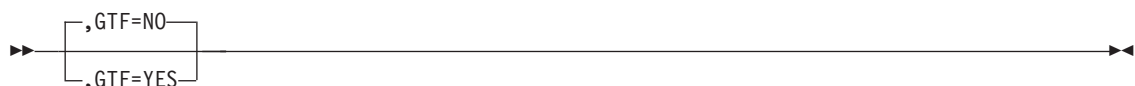


Specifies whether the command is to be executed each day.



| Specifies whether session collection is started dynamically even for resources that are
 | currently inactive. If you specify DYNAMIC=YES to start a session collection for a
 | resource that is not yet defined to VTAM, NPM displays a message stating that a collection
 | is started but the resource is not defined to VTAM. When the resource has been defined to
 | VTAM, NPM starts collecting data for the resource.

| **Note:** If you are using the SESSCOLL command via the system console, you must also set
 | CDRM=LOCAL.

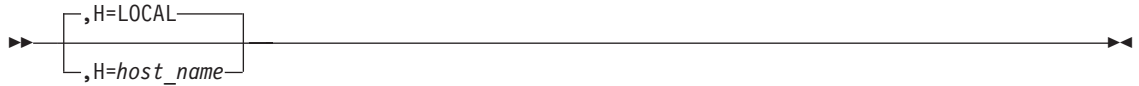


Specifies whether to send PIUs to GTF for logging. The GTF keyword overrides VTAM buffer trace requests made by a VTAM operator. If you specify GTF=NO, NPM stops any request from a VTAM operator to send VTAM buffer trace entries to GTF. If you specify GTF=YES, the VTAM buffer trace continues to be written to GTF after NPM ends, unless it is specifically stopped in NPM before NPM ends. You can also stop the VTAM buffer trace after NPM has ended with the VTAM MODIFY command.

To avoid conflicts, specify GTF=YES when a VTAM operator needs to start a VTAM buffer trace to GTF in the VTAM program product and session collection is also requested in NPM. When you start a VTAM buffer trace to GTF for any resource, trace entries are recorded for all resources that have session collection with GTF=YES specified.

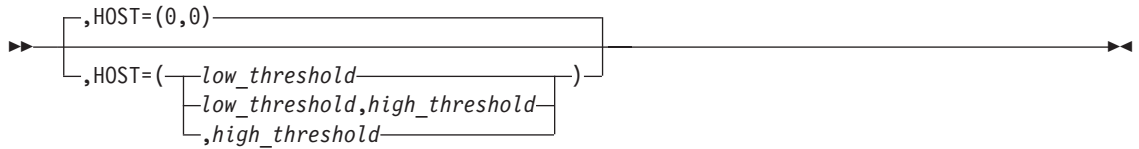
The default is specified by the GTF parameter of the DEFAULTS initialization statement.

Note: If you have VTAM Version 3 Release 4.1 and code GTF=YES, NPM resets it to GTF=NO. No message is issued.



Specifies the host to which this command is applied. The host name you specify can be any host defined to NPM with the NPM initialization statement.

Note: You cannot specify the HOST keyword in an EXEC for the SESSCOLL command.



Specifies the lower and upper threshold values for application or host transit time data. This keyword is the same as the host transit threshold specified on the Start Session Collection panel. Data is monitored against these thresholds. If host transit time falls outside either of these values, the data is highlighted in the session analysis panels.

Threshold values are given in seconds and can range from 0 to 4620. The lower boundary is given first. If both values are zero (the default), no monitoring occurs.

The specified threshold should not be greater than the value of the MAXHOST keyword on the THRESHOLD initialization statement. The default is specified by the THRESHOLD statement.

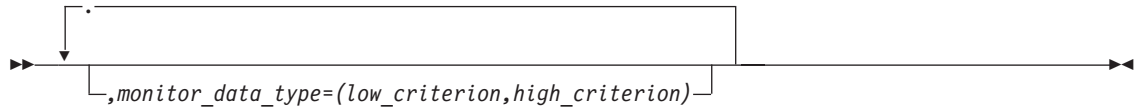


Specifies the console that receives response messages. You code this keyword only if you issue the command from the system console.



Specifies whether to write abbreviated PIUs to the VTAM log. Entire PIUs are written if MIN=NO.

The default is specified by the MIN parameter of the DEFAULTS initialization statement.



Specifies the monitor data types that are possible to start using the online panels or the SESSCOLL command. NPM can monitor the following types of data:

MONATMOP

Average operator transit time. This is the total operator transit time divided by the total number of operator transactions. Low and high criteria values for this monitor data type must be set within the range of 0.00 to 4620.00.

MONATMHT

Average host transit time. This is the total host transit time divided by the total number of host transactions. Low and high criteria values for this monitor data type must be set within the range of 0.00 to 4620.00.

MONATMNT

Average network transit time. This is the total network transit time divided by the total number of network transactions. Low and high criteria values for this monitor data type must be set within the range of 0.00 to 4620.00.

MONMTMOP

Maximum operator transit time in the interval. Low and high criteria values for this monitor data type must be set within the range of 0.00 to 4620.00.

MONMTMHT

Maximum host transit time in the interval. Low and high criteria values for this monitor data type must be set within the range of 0.00 to 4620.00.

MONMTMNT

Maximum network transit time in the interval. Low and high criteria values for this monitor data type must be set within the range of 0.00 to 4620.00.

MONPCTOP The percentage of the total operator transactions that have exceeded the operator high threshold that was specified on the OPERATOR keyword. Low and high criteria values for this monitor data type must be set within the range of 0 to 100.

MONPCTHT The percentage of the total host transactions that have exceeded the host high threshold that was specified on the HOST keyword. Low and high criteria values for this monitor data type must be set within the range of 0 to 100.

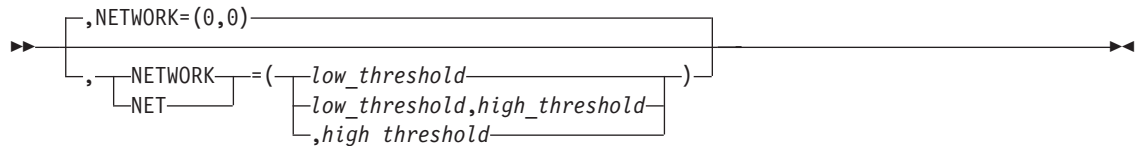
MONPCTNT The percentage of the total network transactions that have exceeded the network high threshold that was specified on the NETWORK keyword. Low and high criteria values for this monitor data type must be set within the range of 0 to 100.

MONLUSUM

Number of active LUs added to create the APPL/NODE/HOST summary record. This monitor data type is not applicable when the resource is an LU. Low and high criteria values for this monitor data type must be set within the range of 0 to 21 474 836.

MONAPIUS Average number of PIUs per minute. Low and high criteria values for this monitor data type must be set within the range of 0 to 21 474 836. The per minute calculation for APPLs and nodes is based on the length of the session interval, but for LUs the interval time is based on the time of the last PIU minus the first PIU during the interval.

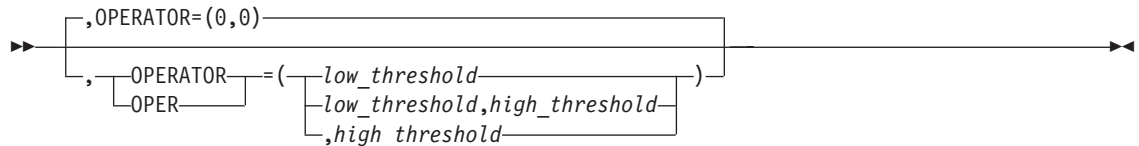
MONABYTE Average number of bytes per second. Low and high criteria values for this monitor data type must be set within the range of 0 to 21 474 836. The per minute calculation for APPLs and nodes is based on the length of the session interval, but for LUs the interval time is based on the time of the last PIU minus the first PIU during the interval.



Specifies the upper and lower threshold values for network transit time data. This parameter is the same as the network transit thresholds parameter specified on the Start Session Collection panel. Data is monitored against these thresholds. If network transit time falls outside either of these values, the data is highlighted in the session analysis panels.

Threshold values are given in seconds and can range from 0 to 4620. The lower boundary is given first. If both values are zero (the default), no monitoring occurs.

The specified threshold should not be greater than the value of the MAXNET parameter on the THRESHOLD initialization statement. The default is specified by the THRESHOLD statement.



Specifies the upper and lower threshold values for total or operator transit time data. This keyword is the same as the operator transit thresholds specified on the Start Session Collection panel. Data is monitored against these thresholds. If operator transit time falls outside either of these values, the data is highlighted in the session analysis panels.

Threshold values are given in seconds and can range from 0 to 4620. The lower boundary is given first. If both values are zero (the default), no monitoring occurs.

The specified threshold should not be greater than the value of the MAXOPER parameter of the THRESHOLD initialization statement. The default is specified by the THRESHOLD statement.



Specifies how data is compiled and written to the session file:

- Y** Collects session data and writes it to the session file.
- R** Turns on definite response and writes data to the session file.
- V** Collects only volume data for this LU and writes it to the session file.
- X** Excludes this LU from session collection if it is in session with an application for which data is being collected.
- N** Does not collect session data or write it to the session file. Session monitors are not allowed if SESSH=N.

The default is specified by the SESSH parameter of the DEFAULTS initialization statement.



Specifies whether PIUs should be written to the VTAM log, and what type of logging should occur:

- 0** Do not log PIUs
- 1** Write inbound and outbound PIUs to the VTAM log
- 2** Write only inbound PIUs to the VTAM log
- 3** Write inbound and outbound PIUs plus internal trace records to the VTAM log

The VTAM API trace must be active before you start NPM if internal trace records are to be collected and written to the VTAM log for later analysis.

If INTTRACE=YES is specified on the NPM initialization statement, the VTAM internal trace is started. If INTTRACE=NO, and you specify VLOG=3 (log PIUs and internal trace records), VLOG is automatically set to 1 (log PIUs only).

Note: If you have VTAM Version 3 Release 4.1 and you code VLOG=3, NPM resets it to VLOG=1. No message is issued.

The default is specified by the VLOG parameter of the DEFAULTS initialization statement.

Example

Use the following console command to set the following conditions for session collection:

- Start session collection for any logical unit in session with the application NPM

- Stop collection when a stop command is issued or NPM terminates
- Write inbound and outbound PIUs to the NPM VTAM log
- Monitor the percentage of operator transactions that exceed the high operator thresholds of 0.5 seconds. If the percentage is above 75 percent, NPM should send an alert to NetView or send a message to the NPM Session data set.

```
SESSCOLL RESOURCE=NPM,  
          SESSH=Y,  
          OPERATOR=(0.0,0.5),  
          VLOG=1,  
          HOST=(0.0,0.2),  
          NET=(0.0,0.2),  
          BVAL=(0.1,0.3,0.5,1.0),  
          MONPCTOP=(0,75)
```

| To start session collection on a grouping of logical units (LUs), issue the following
| command:

```
| SESSCOLL RESOURCE=LUGROUP3,CDRM=cdrm_name
```

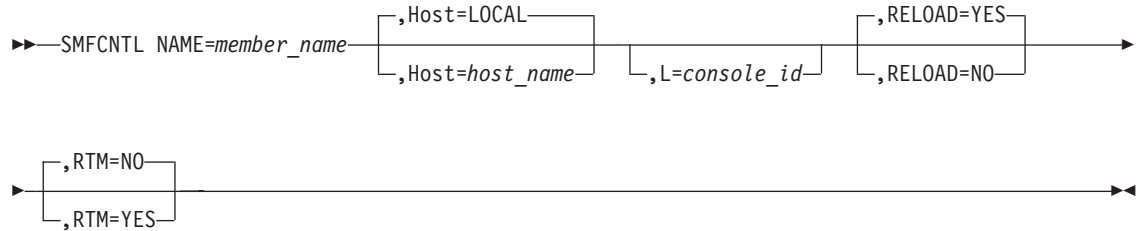
| LUGROUP3 is a member in FNMSCMDS in which the LUs that comprise the grouping are
| defined.

SMFCNTL

The SMFCNTL command defines options for processing SMF and RTM data. The following conditions must be met to use SMFCNTL:

- You must be using an operating system with SMF in operation.
- The SMF IEFU83 and IEFU84 exits must include FNMU83X1.
- If you specify RTM=YES, the SMF IEFU83 exit must include FNMU83X2.
- SMF=YES must be coded on the CONTROL initialization statement.

See the *NetView Performance Monitor Installation and Customization* and the *NetView Performance Monitor Concepts and Planning* for more information about the SMF exit.



Note: The Host and L keywords are only available from the system console.

Authorization Needed: SMF control

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the SMFCNTL command:



Specifies a member of the FNMSCMDS partitioned datasets. *member_name* can be from 1- to 8-alphanumeric characters. This member contains SMFTYP statements that describe the processing options for SMF record types. See the *NetView Performance Monitor Installation and Customization* for more information about SMFTYP statements.



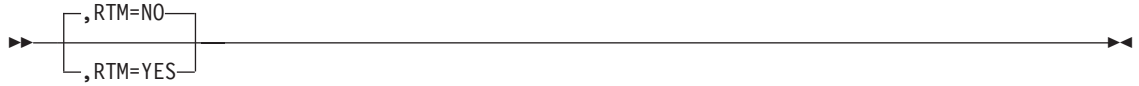
Specifies the host that receives the command. You code this keyword only if you are issuing the command from the system console.



Specifies the console that receives response messages. You code this keyword only if you issue the command from the system console.



Specifies whether to initialize the SMF control table. The SMF logging options are set in this control table. On subsequent starts of NPM the table is not updated unless you specify **RELOAD=YES**.



Specifies whether to process RTM SMF records written by the NetView program. The RTM parameter of the NPM statement determines where the reformatted RTM records are written.

Note: The RTM parameter of the CONTROL initialization statement determines if NPM collects RTM records from the NetView program.

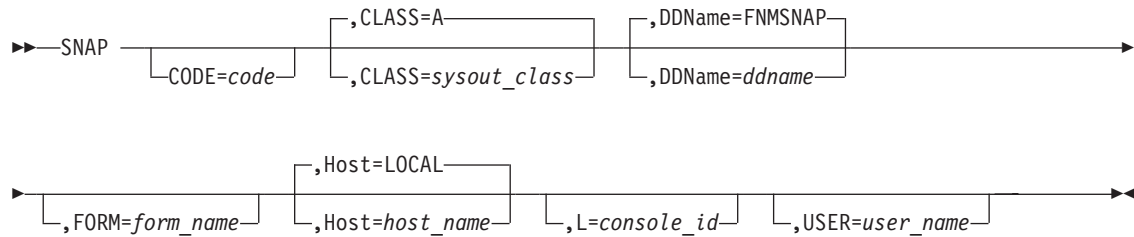
Example

The following example command specifies MEMBER2 as the FNMSCMDS member to be executed. The command also specifies that the SMF control table is not to be initialized if NPM is restarted, and allows processing of RTM SMF records from the NetView program.

```
SMFCNTL NAME = MEMBER2,
        RELOAD = NO,
        RTM = YES
```

SNAP

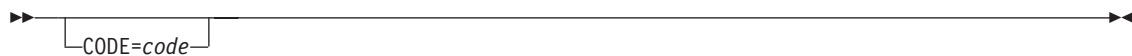
Use the SNAP command to take a formatted dump of the NPM address space.



Authorization Needed: Problem determination

Where: Console

The following list describes the keywords you can code on the SNAP command:



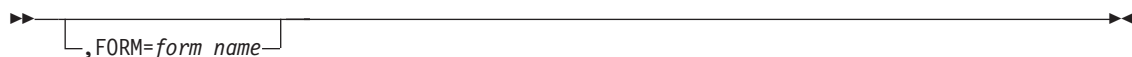
Specifies a number from 1 to 255 that is used to identify the SNAP dump.



Specifies a character from A to Z that identifies the SYSOUT class of the SNAP SYSOUT data set. The default is taken from the SYSOUT parameter of the DEBUG initialization statement.



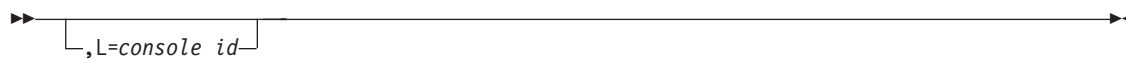
Specifies the DDNAME of a data set in which to write the dump. The SYSOUT data set is allocated if a data set is not specified. The default is taken from the SNAP parameter of the DEBUG initialization statement.



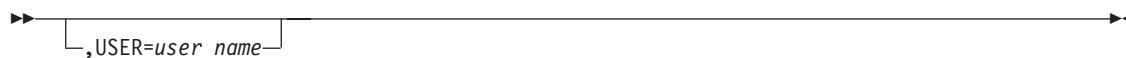
Specifies the 4-character form name for the SNAP SYSOUT data set.



Specifies the host that receives the command.



Specifies the console that receives response messages.



Specifies the eight-character name of the user who receives the SNAP SYSOUT data set.

Example

Use the following console command to dump NPM:

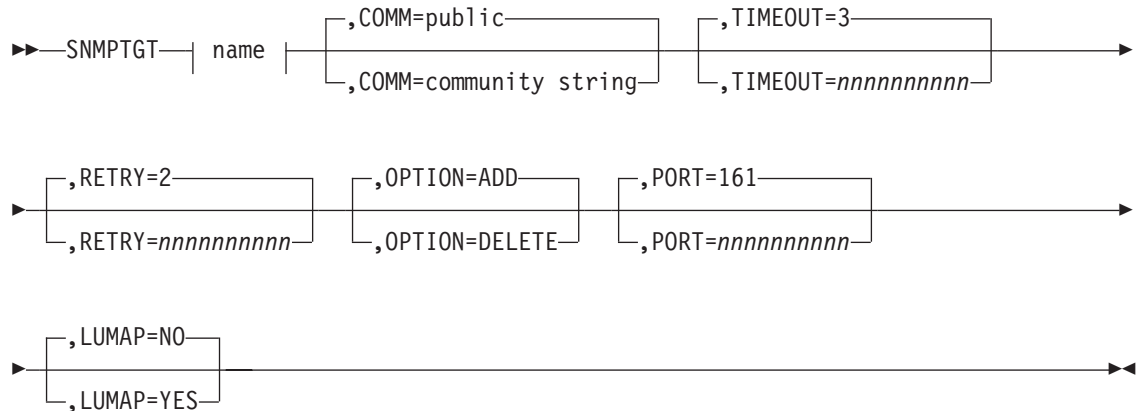
```
F NPMV2R7,SNAP CODE=33,CLASS=P
```

NPM alerts you when the command has been successfully completed by issuing the following message:

```
FNM275I SNAP COMMAND COMPLETED
```

SNMPTGT

Use the SNMPTGT command to determine whether MIB data should be retrieved from a router (both NHD and generic) and whether the TN3270E-RT-MIB Service Level Agreement (SLA) capability should be enabled.



name

| NAME=host_name or IP_address |

Authorization Needed: Problem determination

Where: Console

The following list describes the keywords you can code in the SNMPTGT command:



name

| NAME=host_name or IP_address |

Specifies the host name or IP address of a host from which data can be retrieved via the SNMP protocol.



This field is set with the SNMPv1 or SNPPv2c community string that the snmp component should use when attempting to retrieve MIB data from a target. If null, then the winsnmp assumes that the target is an snmpv3 entity. Null (0) fills any unused portion of this field. Defaults to public in lowercase.

Note: This field is case-sensitive. The command should only be issued from the console for community names that are uppercase. Use the NPM EXEC for lower or mixed-case community names.

```

>> [ ,TIMEOUT=3
    [ ,TIMEOUT=nnnnnnnnnn
  
```

Specifies the SNMP request timeout in seconds. Maximum value is 4 294 967 295. Defaults to 3.

```

>> [ ,RETRY=2
    [ ,RETRY=nnnnnnnnnn
  
```

Specifies the SNMP retry count on timeout condition. Maximum value is 4 294 967 295. Defaults to 2.

```

>> [ ,OPTION=ADD
    [ ,OPTION=DELETE
  
```

Specifies whether the SNMP target should be deleted or added.

```

>> [ ,PORT=161
    [ ,PORT=nnnnnnnnnn
  
```

Specifies the UDP port of the SNMP agent in the SNMP-managable network element. Maximum value is 4 294 967 295. Defaults to 161.

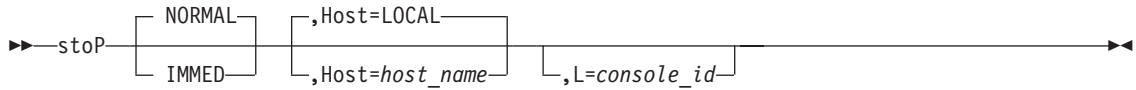
```

>> [ ,LUMAP=NO
    [ ,LUMAP=YES
  
```

Specifies whether the retrieval of IP client to SLU mapping for the router is enabled (YES) or disabled (NO). The router must support the TN3270E MIB as defined by RFC 2561. Defaults to NO.

STOP

Use the STOP command to stop NPM.



Authorization Needed: Control commands

Where: Console

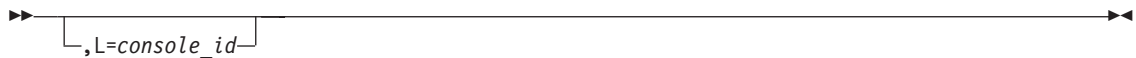
The following list describes the keywords you can code on the STOP command:



Specifies whether to end NPM normally or immediately. In the case of an immediate end, NPM ends the console task and posts the main task to end all other tasks.



Specifies the host that receives the command.



Specifies the console that receives response messages.

Example

Use the following console command to stop NPM:

```
F NPMV2R7, P
```

NPM alerts you when the command has been successfully completed by issuing the following message:

```
FNM275I STOP COMMAND COMPLETED
```

Note: You can also use the STOP command to stop NPM:



In this command, *procname* is the name of the procedure used to start NPM.

TIME

Use the TIME command to display the current time at the local or a remote NPM.

```

>> TIME [Host=LOCAL]
         [Host=host_name] ,L=console_id
  
```

Authorization Needed: None

Where: Console

The following list describes the keywords you can code on the TIME command:

```

>> [ ,Host=LOCAL]
    [ ,Host=host_name]
  
```

Specifies the host that receives the command.

```

>> [ ,L=console_id]
  
```

Specifies the console that receives response messages.

Example

Use the following console command to display the time at the remote NPM in host NYC:

```
F NPMV2R7,TIME H=NYC
```

NPM displays the following message in response to this command:

```
FNM940I LOCAL: 09/30/00 10:35:33, GMT: 09/30/00 16:35:33, ELAPSED: 2.40, HOST: NYC
```

This message lists the local and Greenwich Mean Time at the named host. See the *NetView Performance Monitor Messages and Codes* for more information about this message.

TRACE

Use the TRACE command to start NPM or VTAM traces.

```

▶▶ TRACE ID=resource_name [ ,TYPE=BUF ] [ ,Host=LOCAL ] [ ,L=console_id ]
                             [ ,TYPE=OPER ] [ ,Host=host_name ]
                             [ SESS ]

```

Authorization needed to start a buffer trace: Console

Authorization needed to start other traces: Problem determination

The following list describes the keywords you can code on the TRACE command:

```

▶▶ ID=resource_name

```

Specifies the resource name. The name you code here depends on the variable you code for TYPE:

- If you specify TYPE=BUF, *resource_name* is the name of a VTAM resource.
- If you specify TYPE=OPER, *resource_name* is an NPM operator ID.
- If you specify TYPE=SESS, *resource_name* is the name of a session collection resource.

```

▶▶ [ ,TYPE=BUF ]
   [ ,TYPE=OPER ]
   [ SESS ]

```

Specifies the type of trace to start:

BUF Starts a VTAM buffer trace for the resource named by the ID keyword. GTF=NO is set for the session collection status of the resource.

OPER Starts an NPM operator trace for the NPM operator named by the ID keyword.

SESS Starts an NPM session trace for the VTAM resource named by the ID keyword. A session collection command for this resource must already have been issued for this resource to be affected.

```

▶▶ [ ,Host=LOCAL ]
   [ ,Host=host_name ]

```

Specifies the host that receives the command.

```

▶▶ [ ,L=console_id ]

```

Specifies the console that receives response messages.

Example

Use the following console command to start a buffer trace on VTAM resource NR5153E1:

```
F NPMV2R7,TRACE ID=NR513E1,TYPE=BUF
```

NPM alerts you when the command has been successfully completed by issuing the following message:

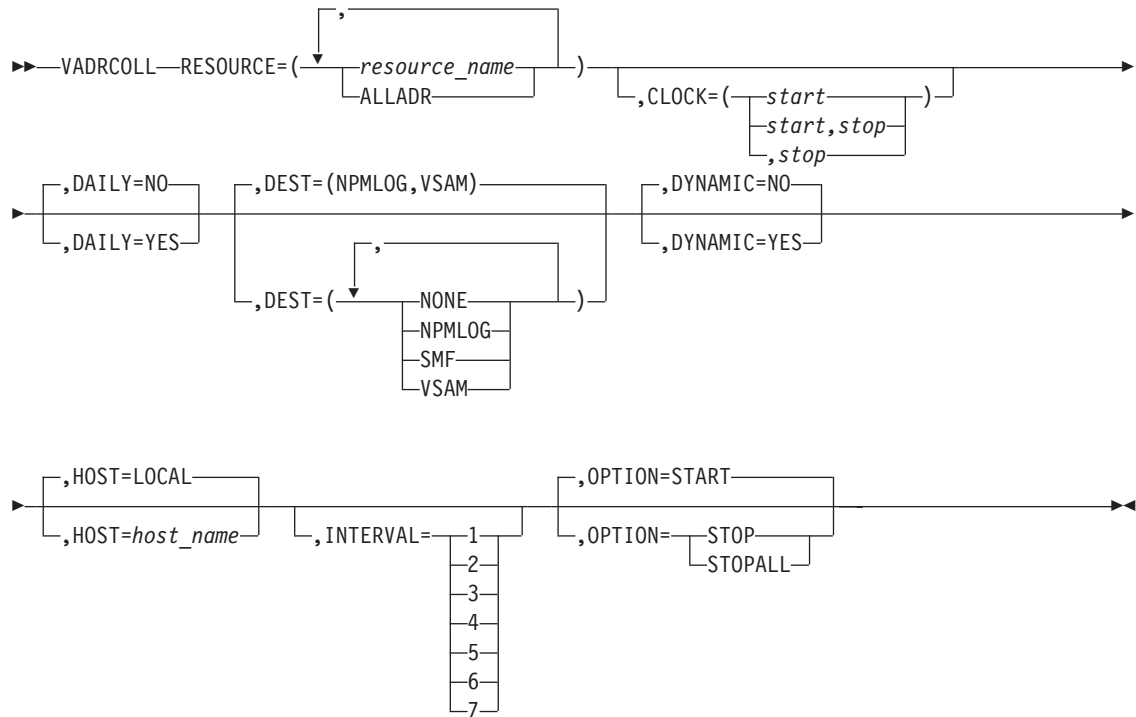
```
FNM275I TRACE COMMAND COMPLETED
```

VADRCOLL

Use the VADRCOLL command to automatically start and stop collection for address spaces that have active VTAM applications. You can collect data such as the number of pending sessions in a specific address space.

You can have only one collection active at any one time for the same combination of resource and interval.

Note: The VTAMCOLL keyword must be coded YES on the NPM statement before you can start data collection.



Authorization Needed: Network collection

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the VADRCOLL command:



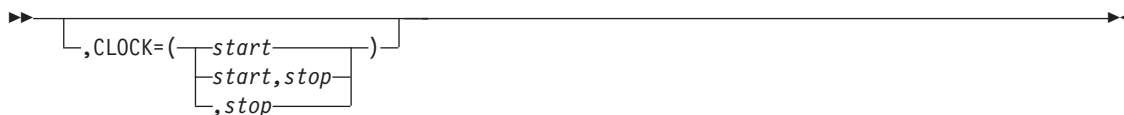
Specifies the resource on which to start a collection.

ALLADR Starts collection on all address spaces that have active VTAM applications.

resource_name

Starts collection on a specific address space. You can specify more than one address space. The name consists of 1 to 8 alphanumeric characters.

Note: NPM starts collection using the first address space name it finds that matches the name specified for the RESOURCE keyword. Avoid selecting address spaces with duplicate names to ensure collection on the correct address space



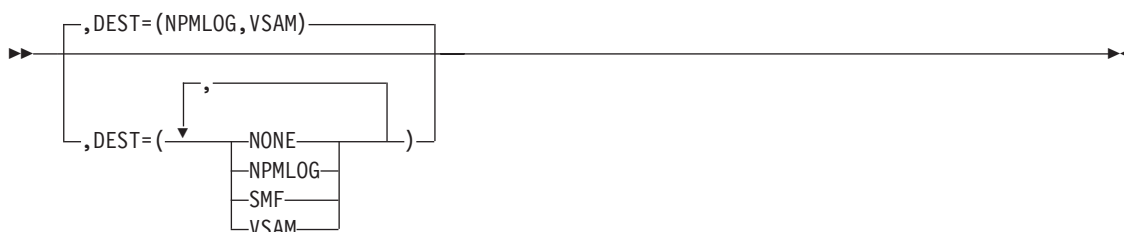
Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. You must specify the start and stop times on the CLOCK keyword if you code the DAILY keyword as DAILY=YES.

See “Using the CLOCK Keyword” on page 220 for more information about the CLOCK keyword.



Specifies whether the command is to be executed daily.

You can have only one active collection at any one time for the same combination of resource and interval. If you have a daily collection that is deferred because its start time is in the future, the deferred collection is not started if another collection is active when the deferred collection is due to start. In this situation, the deferred collection fails and is queued for the next day.



Specifies the destination of the VTAM statistics data records. You can define multiple destinations on this keyword. The NONE setting is ignored if you code any other parameters.

NONE	No VTAM statistics data records are to be written.
NPMLLOG	VTAM statistics data records are written to the data sets defined by the FILE initialization statements as FNMLOGx.
SMF	VTAM statistics data records are written to SMF.
VSAM	VTAM statistics data records are written to the data sets defined by the FILE initialization statements as FNMREVx.

Note: The operator can override the default as long as the target files are available.



Permits collection to be started on resources that become active in the future. In addition, if you code `DYNAMIC=YES`, NPM will not stop the collection if the resource is deleted, but will suspend the collection until the stop time is reached or the resource is added again.

The resource name can be any resource specified with the `RESOURCE` keyword. Pay special attention in specifying resource names when you code `DYNAMIC=YES`. Because the collection you are going to start is dynamic, there is no verification of the resource name (any name is valid).



Specifies the host to which this command is applied. The host name you specify can be any host defined to NPM with the `ANPM` initialization statement.

To collect on the host where NPM is running, use `HOST=LOCAL`; otherwise, use the `ANPM` statement.

Note: You cannot specify the `HOST` keyword in an `EXEC` for this VTAM statistics collection command.



Specifies the collection interval number for which you want to start VTAM collection. The value can be from 1 to 7. It defaults to the `VTAMINIT` parameter on the `DEFAULTS` statement. See “Using the `INTERVAL` Keyword” on page 223 for more information on the `INTERVAL` parameter.



Specifies whether to start or stop a collection, or to stop all collections. The effect of this command depends on whether collections are already active or deferred, the current time of day, and how the CLOCK keyword is coded. The STOPALL option stops all active collections on a resource for all intervals.

See “Using the OPTION Keyword” on page 221 for more information about the OPTION keyword.

Example

Use the following command to collect data on an address space called NETVIEW between 8 am and 6 pm every day:

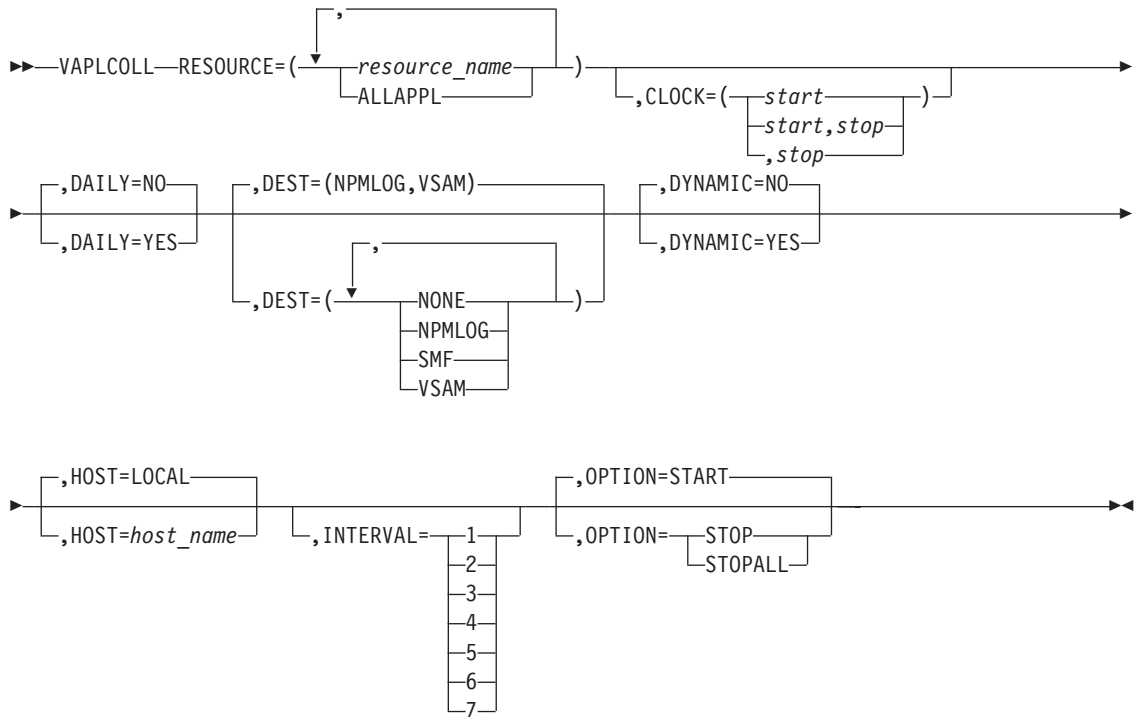
```
VADRCOLL RESOURCE=NETVIEW,
          CLOCK=(08.00.00,18.00.00),
          DAILY=YES,
          DYNAMIC=NO
```

VAPL呢OLL

Use the VAPL呢OLL command to automatically start and stop collection of VTAM application data. You can collect data such as the number of active sessions to a specific application.

You can have only one collection active at any one time for the same combination of resource and interval.

Note: The VTAMCOLL keyword must be coded YES on the NPM statement before you can start data collection on VTAM applications.



Authorization Needed: Network collection

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the VAPL呢OLL command:



Specifies the resource on which to start a collection.

ALLAPPL Starts collection on all applications known to VTAM.

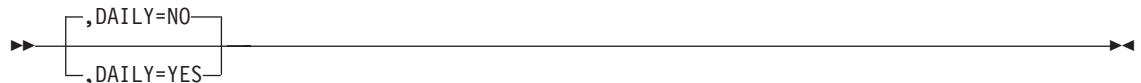
resource_name

Starts collection on a specific application. You can specify more than one application. The name consists of 1 to 8 alphanumeric characters.



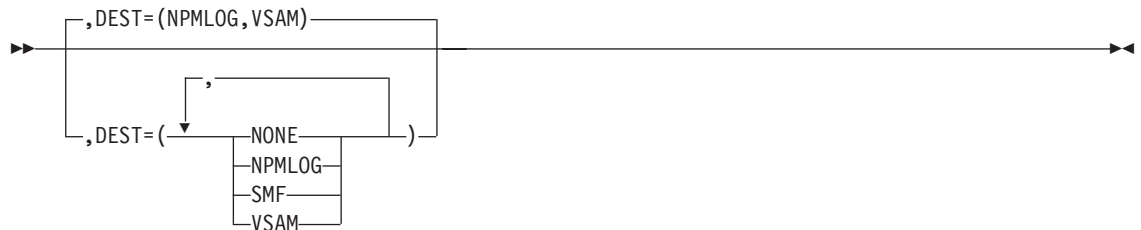
Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. You must specify the start and stop times on the CLOCK keyword if you code the DAILY keyword as DAILY=YES.

See “Using the CLOCK Keyword” on page 220 for more information about the CLOCK keyword.



Specifies whether the command is to be executed daily.

You can have only one active collection at any one time for the same combination of resource and interval. If you have a daily collection that is deferred because its start time is in the future, the deferred collection is not started if another collection is active when the deferred collection is due to start. In this situation, the deferred collection fails and is enqueued for the next day.



Specifies the destination of the VTAM statistics data records. You can define multiple destinations on this keyword. The NONE setting is ignored if you code any other parameters.

NONE	No VTAM statistics data records are to be written.
NPMLLOG	VTAM statistics data records are written to the data sets defined by the FILE initialization statements as FNMLOGx.
SMF	VTAM statistics data records are written to SMF.
VSAM	VTAM statistics data records are written to the data sets defined by the FILE initialization statements as FNMREVx.

Note: The operator can override the default as long as the target files are available.



Permits collection to be started on resources that become active in the future. In addition, if you code `DYNAMIC=YES`, NPM will not stop the collection if the resource is deleted, but will suspend the collection until the stop time is reached or the resource is added again.

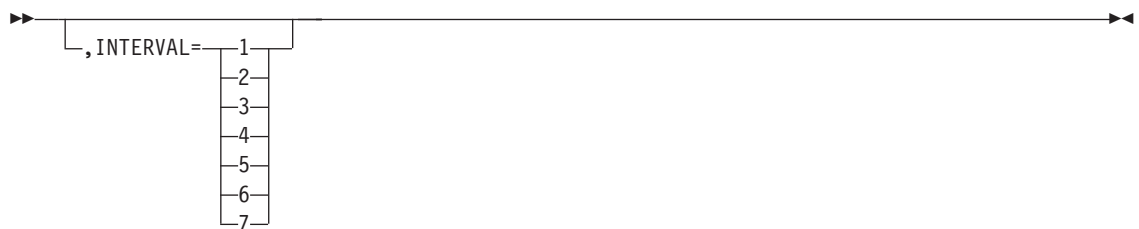
The resource name can be any resource specified with the `RESOURCE` keyword. Pay special attention in specifying resource names when you code `DYNAMIC=YES`. Because the collection you are going to start is dynamic, there is no verification of the resource name (any name is valid).



Specifies the host to which this command is applied. The host name you specify can be any host defined to NPM with the `ANPM` initialization statement.

To collect on the host where NPM is running, use `HOST=LOCAL`; otherwise, use the `ANPM` statement.

Note: You cannot specify the `HOST` keyword in an `EXEC` for this VTAM statistics collection command.



Specifies the collection interval number for which you want to start VTAM collection. The value can be from 1 to 7. It defaults to the `VTAMINIT` parameter on the `DEFAULTS` statement. See “Using the `INTERVAL` Keyword” on page 223 for more information on the `INTERVAL` parameter.



Specifies whether to start or stop a collection, or to stop all collections. The effect of this command depends on whether collections are already active or deferred, the current time of day, and how the `CLOCK` keyword is coded. The `STOPALL` option stops all active collections on a resource for all intervals.

See “Using the OPTION Keyword” on page 221 for more information about the OPTION keyword.

Example

Use the following command to collect on all applications between 8 am and 6 pm every day:

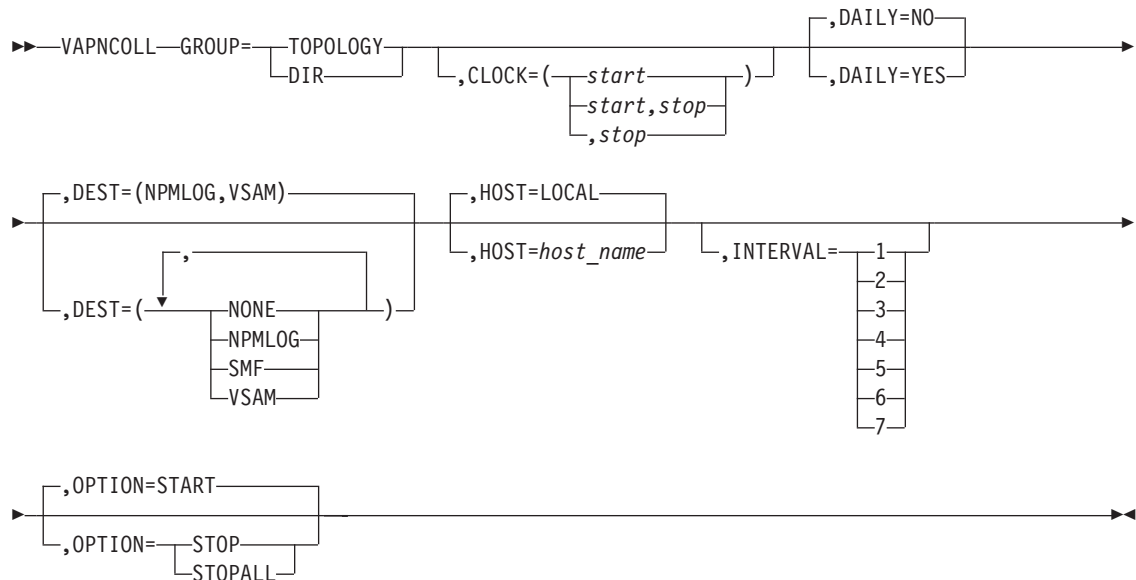
```
VAPLCOLL RESOURCE=ALLAPPL,  
          CLOCK=(08.00.00,18.00.00),  
          DAILY=YES,  
          DYNAMIC=NO
```

VAPNCOLL

Use the VAPNCOLL command to automatically start and stop collection of VTAM APPN topology and directory services data. You can collect data such as the number of network nodes in the topology database.

You can have only one collection active at any one time for the same combination of resource and interval.

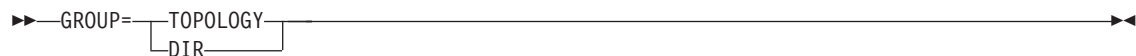
Note: The VTAMCOLL keyword must be coded YES on the NPM statement before you can start data collection on VTAM APPN data.



Authorization Needed: Network collection

Where: Console, FNMSTRT, NPM EXEC

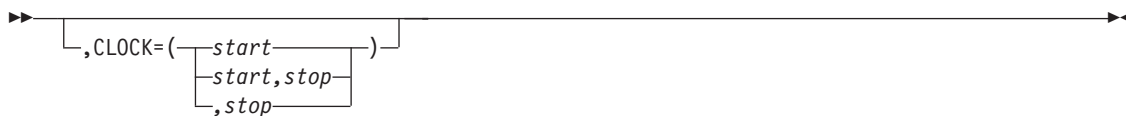
The following list describes the keywords you can code on the VAPL COLL command:



Specifies the counter group on which to start a collection. The keyword RESOURCE will also be accepted in place of GROUP.

TOPOLOGY Starts collection on the APPN topology counter group to collect data such as the number of network nodes in the topology database.

DIR Starts collection on the APPN directory services counter group to collect data such as the current number of entries in the cache.



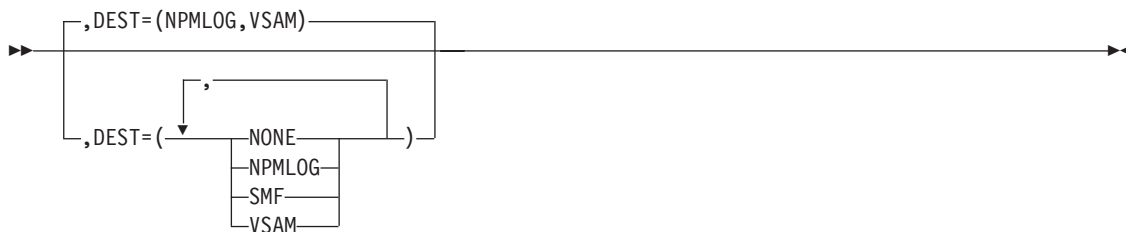
Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. You must specify the start and stop times on the CLOCK keyword if you code the DAILY keyword as DAILY=YES.

See “Using the CLOCK Keyword” on page 220 for more information about the CLOCK keyword.



Specifies whether the command is to be executed daily.

You can have only one active collection at any one time for the same combination of resource and interval. If you have a daily collection that is deferred because its start time is in the future, the deferred collection is not started if another collection is active when the deferred collection is due to start. In this situation, the deferred collection fails and is enqueued for the next day.



Specifies the destination of the VTAM statistics data records. You can define multiple destinations on this keyword. The NONE setting is ignored if you code any other parameters.

NONE	No VTAM statistics data records are to be written.
NPMLLOG	VTAM statistics data records are written to the data sets defined by the FILE initialization statements as FNMLOGx.
SMF	VTAM statistics data records are written to SMF.
VSAM	VTAM statistics data records are written to the data sets defined by the FILE initialization statements as FNMREVx.

Note: The operator can override the default as long as the target files are available.



Specifies the host to which this command is applied. The host name you specify can be any host defined to NPM with the ANPM initialization statement.

To collect on the host where NPM is running, use HOST=LOCAL; otherwise, use the ANPM statement.

Note: You cannot specify the HOST keyword in an EXEC for this VTAM statistics collection command.



Specifies the collection interval number for which you want to start VTAM collection. The value can be from 1 to 7. It defaults to the VTAMINIT parameter on the DEFAULTS statement. See “Using the INTERVAL Keyword” on page 223 for more information on the INTERVAL parameter.



Specifies whether to start or stop a collection, or to stop all collections. The effect of this command depends on whether collections are already active or deferred, the current time of day, and how the CLOCK keyword is coded. The STOPALL option stops all active collections on a resource for all intervals.

See “Using the OPTION Keyword” on page 221 for more information about the OPTION keyword.

Example

Use the following command to collect topology data between 8 am and 6 pm every day:

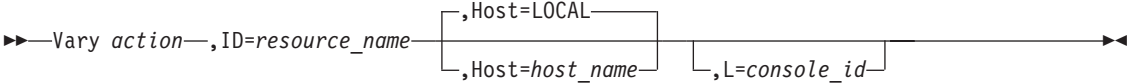
```
VAPNCOLL GROUP=TOPOLOGY,
          CLOCK=(08.00.00,18.00.00),
          DAILY=YES
```

VARY

Use the VARY command to modify the status of the following NPM resources:

- Session, review, LAN work group, NPM log, VTAM log, FNMSMF, and FNMALEERT files
- NPALU sessions with NPM
- NPM-to-NPM sessions
- Operator station terminals
- LU 6.2 sessions

These resources must have been defined to NPM during initialization.



Authorization Needed: Console

Where: Console

The following list describes the keywords you can code on the VARY command:



Specifies how to modify the status of the resource:

ACT Activates the resource. If the resource is a file name, the file is opened. For NPALUs and NPMs, the session is started.

INACT Ends the connection between NPM and the resource. If the resource is a file name, the file is closed. For NPALUs and NPMs, a CLSDST is issued. For an operator station terminal, the operator is logged off and a CLSDST is issued.

LOCK Prevents NPM and NPM operators from using the file or the NPM-to-NPM session until an UNLOCK request is issued.

RESET Empties the data set and makes it available to record new data. You can reset a closed file or an open file which is not active. This option is valid only with file resources.

SWITCH Makes the current file the new primary file. If the resource is the current primary file, the file is closed and an attempt is made to start recording on the next available file. This option is valid only with file resources.

UNLOCK Allows NPM and NPM operators to use the file or the NPM-to-NPM session.



Identifies the resource to modify.

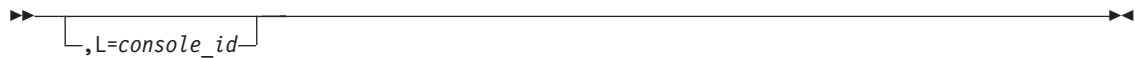
The VARY command affects different resources in different ways. Table 7 shows the status changes that VARY causes for each type of resource.

Table 7. VARY Command Options Available for NPM Resources

Resource	ACT	INACT	LOCK	UNLOCK	SWITCH	RESET
ALERT	Unlock	Lock	Lock	Unlock	-	-
FILE	Open	Close	Lock	Unlock	Switch	Reset
LOG	Open	Close	Lock	Unlock	Switch	Reset
LU 6.2	-	Unbind	-	-	-	-
LWG	Open	Close	Lock	Unlock	Switch	Reset
NPALU	Bind	Unbind	-	-	-	-
NPM	Bind	Unbind	Lock	Unlock	-	-
OPERATOR	-	Unbind	-	-	-	-
REV	Open	Close	Lock	Unlock	Switch	Reset
SES	Open	Close	Lock	Unlock	Switch	Reset
SMF	Unlock	Lock	Lock	Unlock	-	-
VLOG	Open	Close	Lock	Unlock	Switch	Reset



Specifies the host that receives the command.



Specifies the console that receives response messages.

Example

Use the following console command to make the file FNMSES1 inactive:

```
F NPMV2R7,V INACT,ID=FNMSSES1
```

NPM alerts you when the command has been successfully completed by issuing the following message:

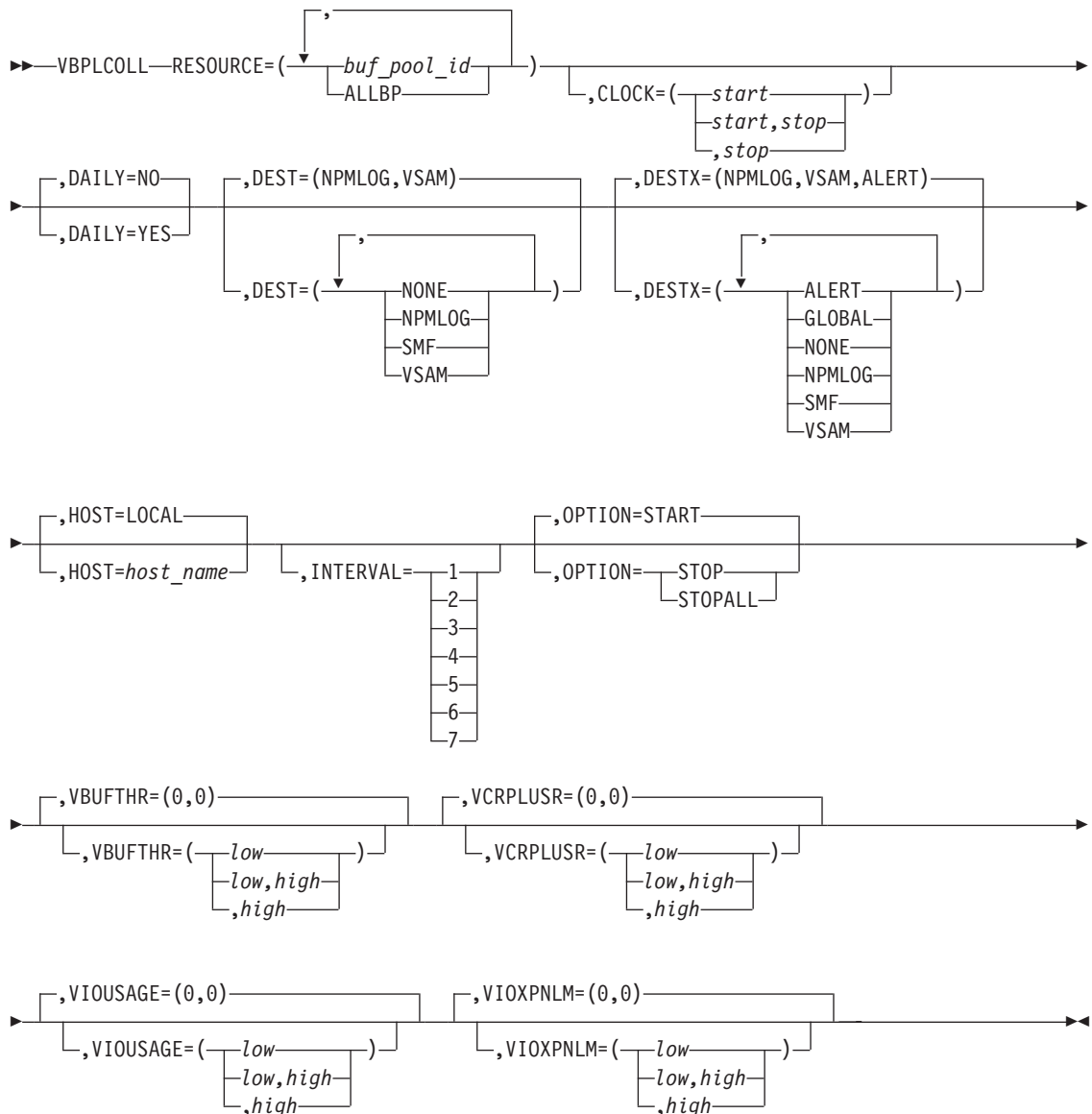
```
FNM275I VARY COMMAND COMPLETED
```

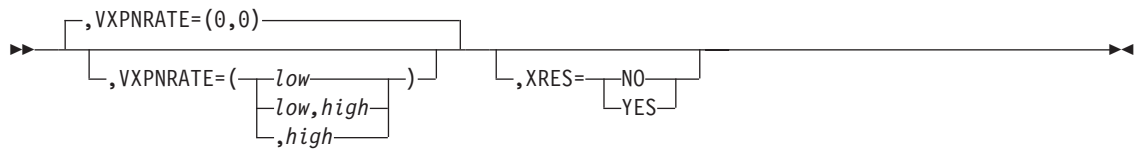
VBPLCOLL

Use the VBPLCOLL command to automatically start and stop collection and monitoring of VTAM buffer pool data. You can collect data such as the maximum number of buffers allocated since the last collection interval, and determine whether a particular buffer pool is in fixed or pageable storage.

You can have only one collection active at any one time for the same combination of resource and interval.

Note: The VTAMCOLL keyword must be coded YES on the NPM statement before you can start data collection on VTAM buffer pools.





Authorization Needed: Network collection

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the VBPLCOLL command:



Specifies the buffer pool ID.

ALLBP Starts collection on all buffer pools.

buf_pool_id Assigns different monitor values to individual buffer pools.



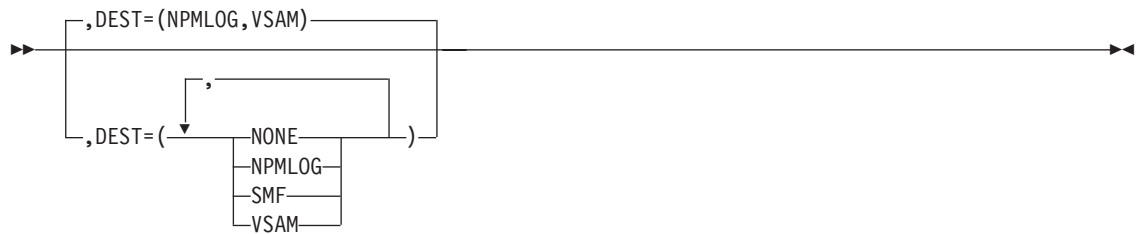
Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. You must specify the start and stop times on the **CLOCK** keyword if you code the **DAILY** keyword as **DAILY=YES**.

See “Using the **CLOCK** Keyword” on page 220 for more information about the **CLOCK** keyword.



Specifies whether the command is to be executed daily.

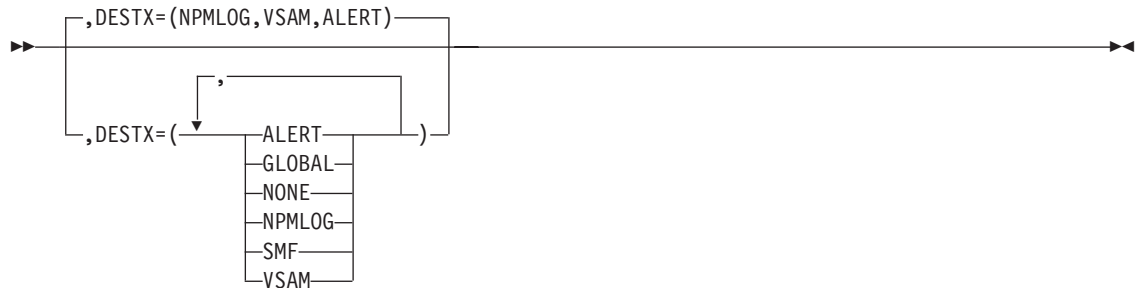
You can have only one active collection at any one time for the same combination of resource and interval. If you have a daily collection that is deferred because its start time is in the future, the deferred collection is not started if another collection is active when the deferred collection is due to start. In this situation, the deferred collection fails and is enqueued for the next day.



Specifies the destination of the VTAM statistics data records. You can define multiple destinations on this keyword. The `NONE` setting is ignored if you code any other parameters.

- NONE** No VTAM statistics data records are to be written.
- NPMLLOG** VTAM statistics data records are written to the data sets defined by the `FILE` initialization statements as `FNMLOGx`.
- SMF** VTAM statistics data records are written to SMF.
- VSAM** VTAM statistics data records are written to the data sets defined by the `FILE` initialization statements as `FNMREVx`.

Note: The operator can override the default as long as the target files are available.



Specifies the destination of the VTAM statistics data exception records. You can specify multiple destinations on this keyword. The `NONE` parameter is ignored if you code any other parameters.

- ALERT** VTAM statistics data exception records are formatted into alerts and sent to the NetView program, as long as `ALERT=YES` is coded on the `NPM` statement in `FNMINIT`.
- GLOBAL** VTAM statistics data exception messages are broadcast to all `NPM` operators who are authorized as `GLOBAL=YES`. If none of the authorized operators are logged on, the messages are sent to the console.
- NONE** No VTAM statistics data exception records are to be written.
- NPMLLOG** VTAM statistics data exception records are written to the data sets defined by the `FILE` initialization statements as `FNMLOGx`.
- SMF** VTAM statistics data records are written to SMF.
- VSAM** VTAM statistics data exception records are written to the data sets defined by the `FILE` initialization statements as `FNMREVx`.

Note: The operator can override the default as long as the target files are available.



Specifies the host to which this command is applied. The host name you specify can be any host defined to NPM with the ANPM initialization statement.

To collect on the host where NPM is running, use HOST=LOCAL; otherwise, use the ANPM statement.

Note: You cannot specify the HOST keyword in an EXEC for this VTAM statistics collection command.



Specifies the collection interval number for which you want to start VTAM collection. The value can be from 1 to 7. It defaults to the VTAMINIT parameter on the DEFAULTS statement in FNMINIT. See “Using the INTERVAL Keyword” on page 223 for more information on the INTERVAL parameter.



Specifies whether to start or stop a collection, or to stop all collections. The effect of this command depends on whether collections are already active or deferred, the current time of day, and how the CLOCK keyword is coded. The STOPALL option stops all active collections on a resource for all intervals.

See “Using the OPTION Keyword” on page 221 for more information about the OPTION keyword.



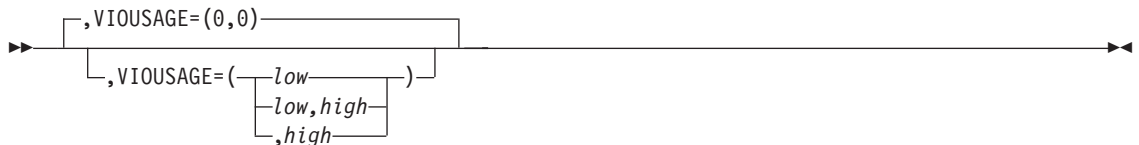
Specifies the lower and upper threshold values for the degree of VTAM buffer pool thrashing. The degree of thrashing is calculated using the following formula:

$$\frac{\text{Number of expansions} * \text{Expansion increment}}{\text{Maximum total buffers used}} \times 20 = \text{Thrashing_coefficient}$$

The thrashing coefficient is 20 when the ratio of these three variables is equal to 1. The range for this monitor is from 20 to 9999. Values higher than 9999 are converted to 9999, values below 20 are converted to 20. A value larger than 100 suggests that thrashing is occurring.



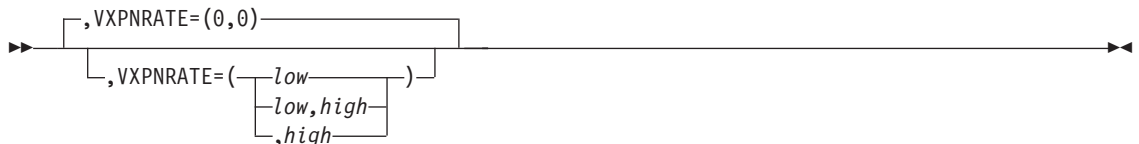
Specifies the lower and upper threshold values for highest percentage of VTAM copy request parameter list (CRPL) buffer used by any single user. The users of the CRPL buffer pool are identified by their jobnames. This monitor is only valid for the CRPL buffer pool name.



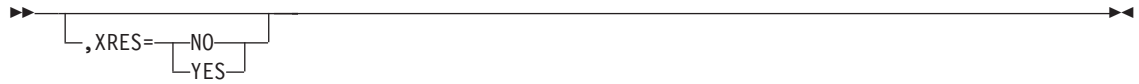
Specifies the lower and upper threshold values for highest percentage of VTAM I/O buffer use. The I/O buffers are classified by general SSCP traffic count, VR pacing response traffic count, and so on. This monitor is valid only for I/O buffer pool names.



Specifies the lower and upper threshold values for the highest percentage of VTAM I/O buffers in use within the I/O buffer expansion limit specified in the VTAM start option list. This monitor is valid only for I/O buffer pool names.



Specifies the lower and upper threshold values for the VTAM buffer pool expansion rate.



Determines whether exception or resolution mode is used for all exceptions generated by exceeded threshold conditions. The default is specified by the XRES keyword of the DEFAULTS initialization statement.

NO Exception messages, records, or alerts are generated for every interval in which the threshold is exceeded.

YES Exception messages, records, or alerts are generated for the first interval in which a threshold is exceeded. No more exception messages are generated. When the threshold condition ceases to exist, a resolution message, record, or alert is generated, containing a correlation that matches the original exception notification.

The following conditions cause the threshold conditions to be resolved:

- The data value being monitored is no longer outside the thresholds
- The monitor threshold is stopped
- The monitor threshold is eliminated
- The resource is deleted
- A destination field is changed to not receive any more exception notifications, and an exception was previously sent to this destination
- NPM is stopping

Examples

Use the following command to monitor the expansion rate and degree of thrashing between 11 am and 2 pm one day:

```
VBPLCOLL RESOURCE=I000,
          VBUFTHR=(20,200),
          CLOCK=(11.00.00,14.00.00),
          VXPNRATE=(30,90)
```

Use the following command to monitor the expansion rate and I/O buffer users occurring daily, between 9 am and 11:30 am:

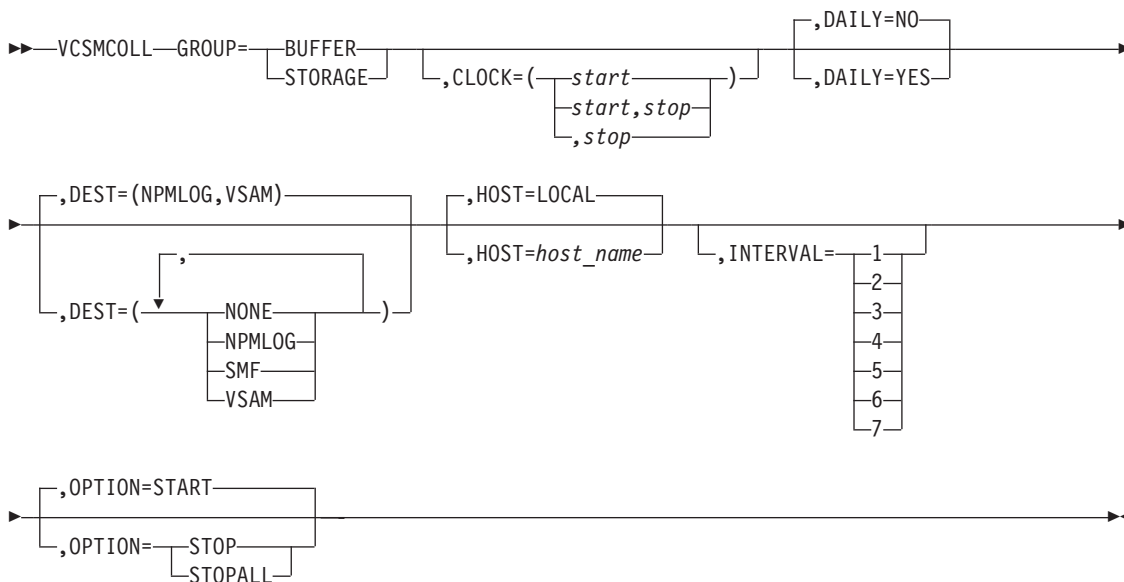
```
VBPLCOLL RESOURCE=I000,
          CLOCK=(09.00.00,11.30.00),
          DAILY=YES,
          VXPNRATE=(30,90),
          VIOUSAGE=(0,70)
```

VCSMROLL

Use the VCSMROLL command to automatically start and stop collection of VTAM APPN topology and directory services data. You can collect data such as the number of buffer pools in the ECSA or in the data space.

You can have only one collection active at any one time for the same combination of resource and interval.

Note: The VTAMROLL keyword must be coded YES on the NPM statement before you can start data collection on VTAM APPN data.



Authorization Needed: Network collection

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the VCSMROLL command:



Specifies the counter group on which to start a collection. The keyword RESOURCE will also be accepted in place of GROUP.

BUFFER Starts collection on the CSM buffer pool to collect data such as the number of buffer pools available and the number of buffer pools currently in the data space or in ECSA.

STORAGE Starts collection on the CSM storage data to collect data such as the maximum storage to use for ECSA and how much is actually being used.



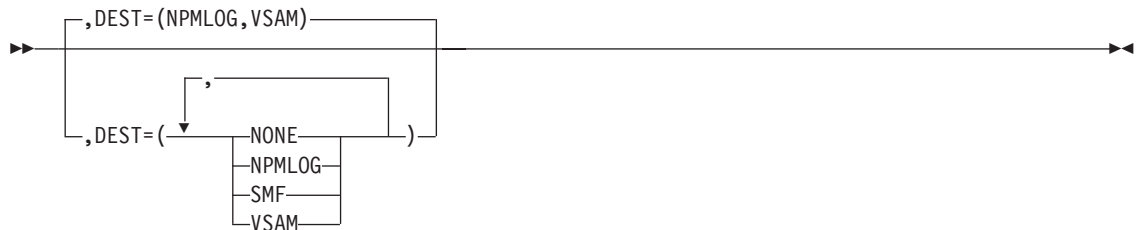
Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. You must specify the start and stop times on the `CLOCK` keyword if you code the `DAILY` keyword as `DAILY=YES`.

See “Using the `CLOCK` Keyword” on page 220 for more information about the `CLOCK` keyword.



Specifies whether the command is to be executed daily.

You can have only one active collection at any one time for the same combination of resource and interval. If you have a daily collection that is deferred because its start time is in the future, the deferred collection is not started if another collection is active when the deferred collection is due to start. In this situation, the deferred collection fails and is enqueued for the next day.



Specifies the destination of the VTAM statistics data records. You can define multiple destinations on this keyword. The `NONE` setting is ignored if you code any other parameters.

- NONE** No VTAM statistics data records are to be written.
- NPMLLOG** VTAM statistics data records are written to the data sets defined by the `FILE` initialization statements as `FNMLOGx`.
- SMF** VTAM statistics data records are written to SMF.
- VSAM** VTAM statistics data records are written to the data sets defined by the `FILE` initialization statements as `FNMREVx`.

Note: The operator can override the default as long as the target files are available.



Specifies the host to which this command is applied. The host name you specify can be any host defined to NPM with the ANPM initialization statement.

To collect on the host where NPM is running, use HOST=LOCAL; otherwise, use the ANPM statement.

Note: You cannot specify the HOST keyword in an EXEC for this VTAM statistics collection command.



Specifies the collection interval number for which you want to start VTAM collection. The value can be from 1 to 7. It defaults to the VTAMINIT parameter on the DEFAULTS statement. See “Using the INTERVAL Keyword” on page 223 for more information on the INTERVAL parameter.



Specifies whether to start or stop a collection, or to stop all collections. The effect of this command depends on whether collections are already active or deferred, the current time of day, and how the CLOCK keyword is coded. The STOPALL option stops all active collections on a resource for all intervals.

See “Using the OPTION Keyword” on page 221 for more information about the OPTION keyword.

Example

Use the following command to collect topology data between 8 am and 6 pm every day:

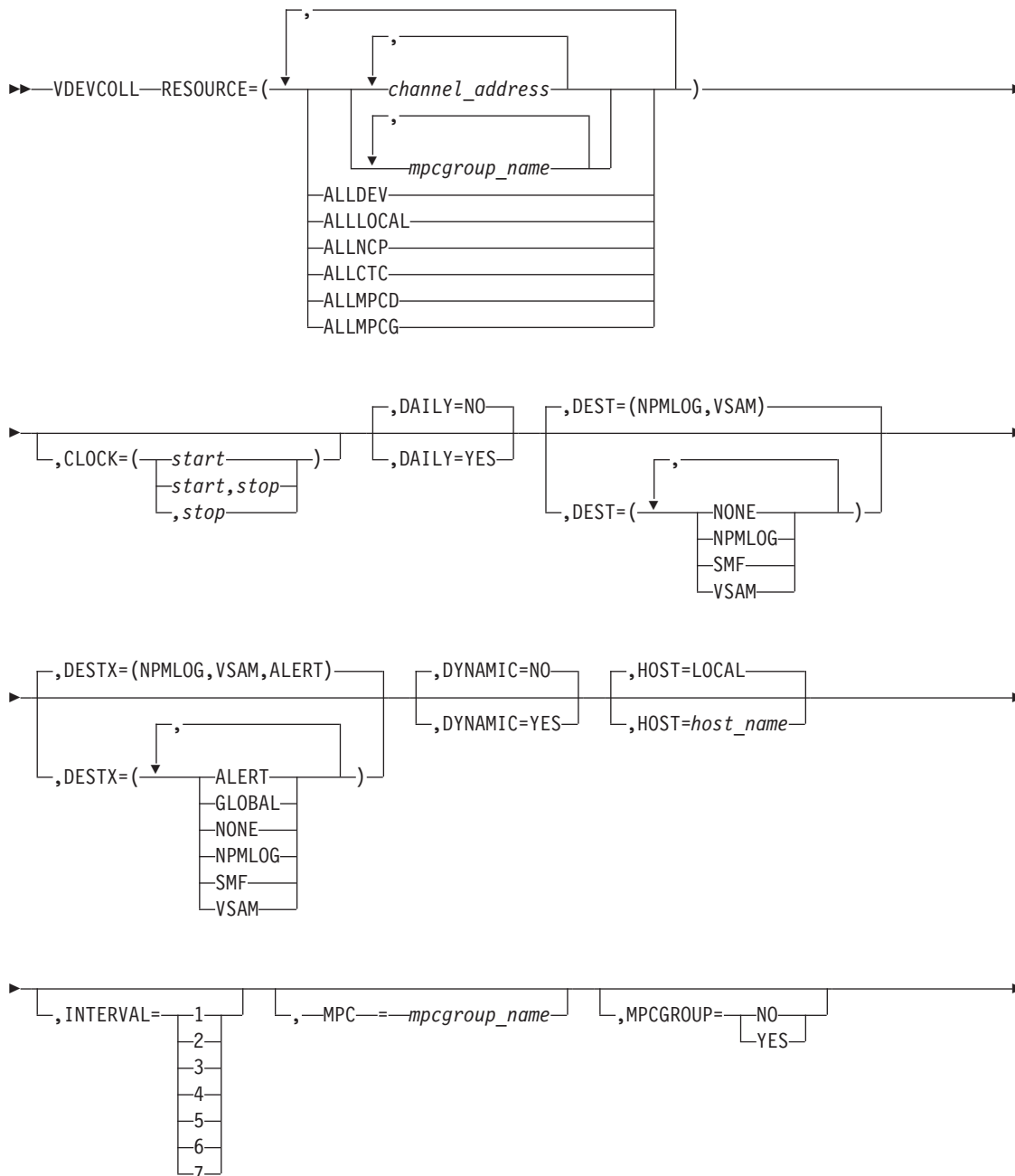
```
VCSMROLL GROUP=STORAGE,
          CLOCK=(08.00.00,18.00.00),
          DAILY=YES
```

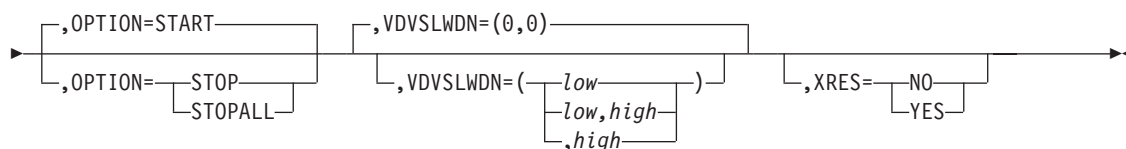
VDEVCOLL

Use the VDEVCOLL command to automatically start and stop collection and monitoring of channel-activity data for channel-attached resources. You can collect data such as the number of inbound PIUs, number of outbound PIUs, and the total attentions received for a channel.

You can have only one collection active at any one time for the same combination of resource and interval.

Note: The VTAMCOLL keyword must be coded YES on the NPM statement before you can start data collection on attached channels.

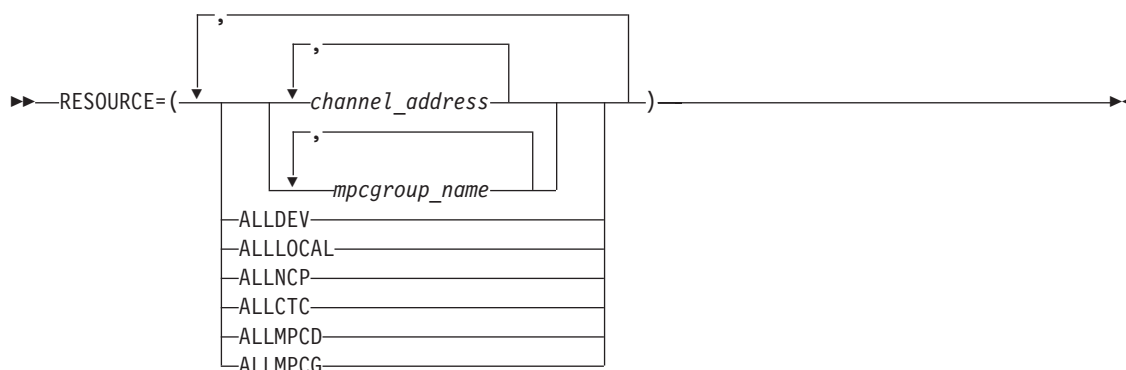




Authorization Needed: Network collection

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the VDEVCOLL command:



Specifies the resource on which to start a collection.

channel_address

Starts collection on a specific channel address. You can specify more than one channel address. If you specify a *channel_address*, you cannot specify an *mpcgroup_name*. The *channel_address* must be 4-characters long. For example, use 0361 if the channel address is 361.

mpcgroup_name

Starts collection on a particular MPC group. If you specify an *mpcgroup_name*, you cannot specify a *channel_address*. You can specify more than one MPC group name.

ALLDEV Starts collection on all channel-attached resources.

ALLLOCAL Starts collection on all PU type 2 resources.

ALLNCP Starts collection on all PU type 4 resources.

ALLCTC Starts collection on all PU type 5 resources.

ALLMPCD Starts collection on all MPC devices for all MPC groups. If you specify a MPC group name on the MPC keyword, collection is started on all MPC devices for just the MPC group you specify in the MPC keyword.

ALLMPCG Starts collection on all MPC groups.

Note: If you specify ALLDEV and a particular resource name or a generic PU type within the same statement, collection occurs on all channels. The other values are ignored.



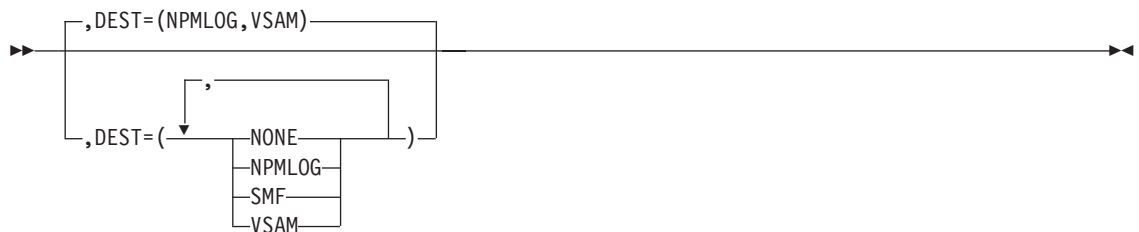
Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. You must specify the start and stop times on the `CLOCK` keyword if you code the `DAILY` keyword as `DAILY=YES`.

See “Using the `CLOCK` Keyword” on page 220 for more information about the `CLOCK` keyword.



Specifies whether the command is to be executed daily.

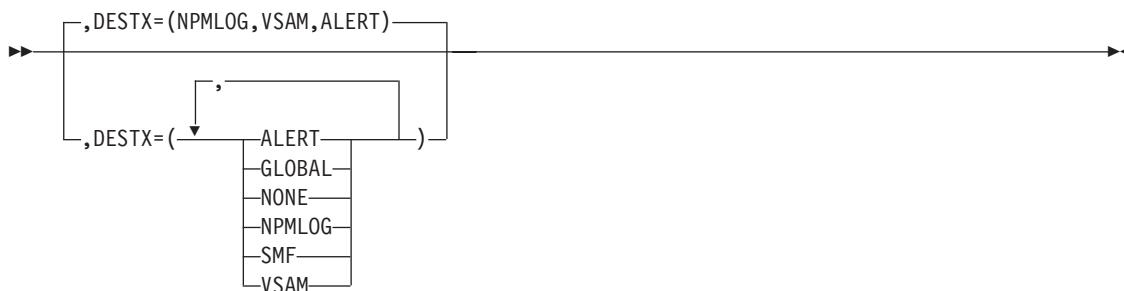
You can have only one active collection at any one time for the same combination of resource and interval. If you have a daily collection that is deferred because its start time is in the future, the deferred collection is not started if another collection is active when the deferred collection is due to start. In this situation, the deferred collection fails and is enqueued for the next day.



Specifies the destination of the VTAM statistics data records. You can define multiple destinations on this keyword. The `NONE` setting is ignored if you code any other parameters.

- NONE** No VTAM statistics data records are to be written.
- NPMLLOG** VTAM statistics data records are written to the data sets defined by the `FILE` initialization statements as `FNMLOGx`.
- SMF** VTAM statistics data records are written to SMF.
- VSAM** VTAM statistics data records are written to the data sets defined by the `FILE` initialization statements as `FNMREVx`.

Note: The operator can override the default as long as the target files are available.



Specifies the destination of the VTAM statistics data exception records. You can specify multiple destinations on this keyword. The NONE parameter is ignored if any other parameters are coded.

- ALERT** VTAM statistics data exception records are formatted into alerts and sent to the NetView program as long as ALERT=YES is coded on the NPM statement.
- GLOBAL** VTAM statistics data exception messages are broadcast to all NPM operators that are authorized as GLOBAL=YES. If none of the authorized operators are logged on, the messages are sent to the console.
- NONE** No VTAM statistics data exception records are to be written.
- NPMLLOG** VTAM statistics data exception records are written to the data sets defined by the FILE initialization statements as FNMLOGx.
- SMF** VTAM statistics data records are written to SMF.
- VSAM** VTAM statistics data exception records are written to the data sets defined by the FILE initialization statements as FNMREVx.

Note: The operator can override the default as long as the target files are available.



Permits collection to be started on resources that become active in the future. In addition, if you code DYNAMIC=YES, NPM will not stop the collection if the resource is deleted, but will suspend the collection until the stop time is reached or the resource is added again.

The resource name is any resource that you can specify with the RESOURCE keyword. Pay special attention in specifying resource names when you code DYNAMIC=YES. Because the collection you are going to start is dynamic, there is no verification of the resource name (any name is valid).



Specifies the host to which this command is applied. The host name you specify can be any host defined to NPM with the ANPM initialization statement.

To collect on the host where NPM is running, use HOST=LOCAL; otherwise, use the ANPM statement.

Note: You cannot specify the HOST keyword in an EXEC for this VTAM statistics collection command.



Specifies the collection interval number for which you want to start VTAM collection. The value can be from 1 to 7. It defaults to the VTAMINIT parameter on the DEFAULTS statement. See “Using the INTERVAL Keyword” on page 223 for more information on the INTERVAL parameter.



Specifies the particular MPC group name for which you want to start a collection. In this case, specify ALLMPCD on the RESOURCE keyword.

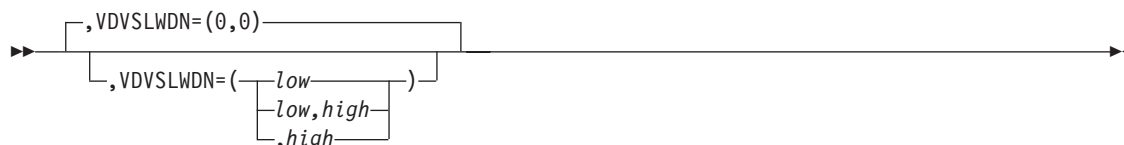


Use the YES option this keyword to start a collection on the MPC group identified by the MPC group name on the RESOURCE keyword.



Specifies whether to start or stop a collection, or to stop all collections. The effect of this command depends on whether collections are already active or deferred, the current time of day, and how the CLOCK keyword is coded. The STOPALL option stops all active collections on a resource for all intervals.

See “Using the OPTION Keyword” on page 221 for more information about the OPTION keyword.



Specifies the lower and upper threshold values for the percentage of time a particular channel is in slowdown during the specified interval. If the slowdown rate falls outside either of these values, the statistic is highlighted in the VTAM analysis panel. Slowdown for a channel is an indication that the attached node to VTAM is in a slowdown situation. For example, when an NCP is in slowdown, the channel to the NCP also goes into slowdown.

This alert is not valid if you start a collection on an MPC group.



Determines whether exception or resolution mode is used for all exceptions generated by exceeded threshold conditions. The default is specified by the XRES keyword of the DEFAULTS initialization statement.

- NO** Exception messages, records, or alerts are generated for every interval in which the threshold is exceeded.
- YES** Exception messages, records, or alerts are generated for the first interval in which a threshold is exceeded. No more exception messages are generated. When the threshold condition ceases to exist, a resolution message, record, or alert is generated, containing a correlation matching the original exception notification.

The following conditions cause the threshold conditions to be resolved:

- The data value being monitored is no longer outside the thresholds
- The monitor threshold is stopped
- The monitor threshold is eliminated
- The resource is deleted
- A destination field is changed to not receive any more exception notifications, and an exception was previously sent to this destination
- NPM is stopping

Example

Use the following command to collect data on all NCPs (all type 4 PUs) and monitor the percentage of slowdown time between 8 am and 6 pm daily. Any newly activated channels to NCPs will also have data collected.

```

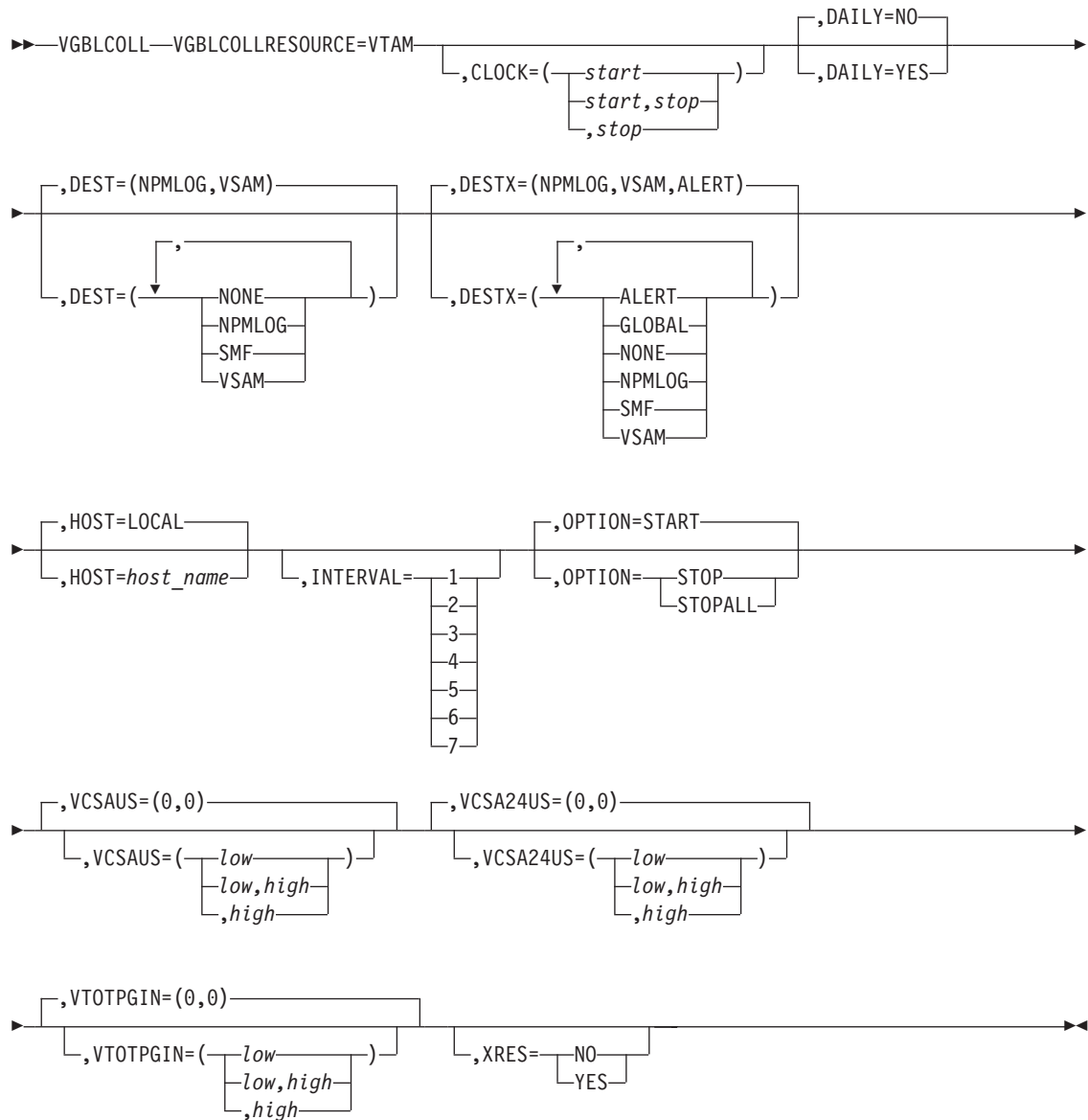
VDEVCOLL RESOURCE=ALLNCP,
          CLOCK=(08.00.00,18.00.00),
          DAILY=YES,
          VDVSLWDN=(0,30),
          DYNAMIC=YES
  
```

VGBL COLL

Use the VGBL COLL command to automatically start and stop collection and monitoring of VTAM environment and storage use data. You can collect data such as the maximum CSA used since VTAM was started.

You can have only one collection active at any one time for the same combination of resource and interval.

Note: The VTAMCOLL keyword must be coded YES on the NPM statement before you can start data collection on VTAM global data.



Authorization Needed: Network collection

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the VGBLCOLL command:

►—RESOURCE=VTAM—◄

Specifies the resource on which to start a collection. The RESOURCE keyword must be coded RESOURCE=VTAM for EXEC and console support for the VGBLCOLL command.

►—,CLOCK=(
 —start—
 —start,stop—
 —,stop—
)—◄

Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. You must specify the start and stop times on the CLOCK keyword if you code the DAILY keyword as DAILY=YES.

See “Using the CLOCK Keyword” on page 220 for more information about the CLOCK keyword.

►—,DAILY=NO—
 ►—,DAILY=YES—◄

Specifies whether the command is to be executed daily.

You can have only one active collection at any one time for the same combination of resource and interval. If you have a daily collection that is deferred because its start time is in the future, the deferred collection is not started if another collection is active when the deferred collection is due to start. In this situation, the deferred collection fails and is enqueued for the next day.

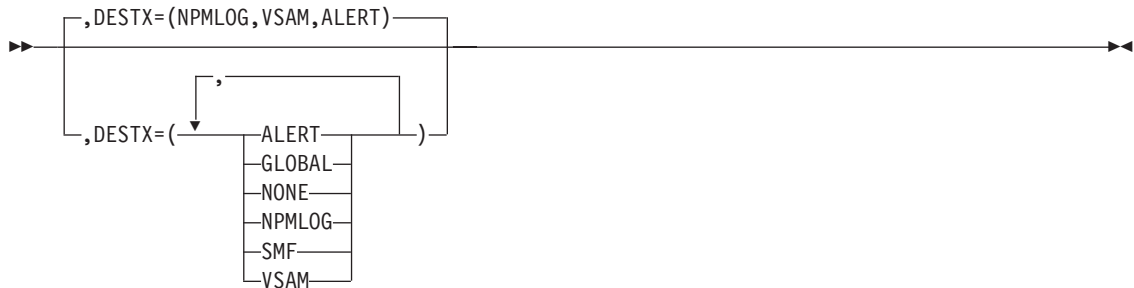
►—,DEST=(NPMLLOG,VSAM)—
 ►—,DEST=(
 —NONE—
 —NPMLLOG—
 —SMF—
 —VSAM—
)—◄

Specifies the destination of the VTAM statistics data records. You can define multiple destinations on this keyword. The NONE setting is ignored if you code any other parameters.

- NONE** No VTAM statistics data records are to be written.
- NPMLLOG** VTAM statistics data records are written to the data sets defined by the FILE initialization statements as FNMLLOGx.
- SMF** VTAM statistics data records are written to SMF.

VSAM VTAM statistics data records are written to the data sets defined by the FILE initialization statements as FNMREVx.

Note: The operator can override the default as long as the target files are available.



Specifies the destination of the VTAM statistics data exception records. You can specify multiple destinations on this keyword. The NONE parameter is ignored if you code any other parameters.

ALERT VTAM statistics data exception records are formatted into alerts and sent to the NetView program, as long as `ALERT=YES` is coded on the NPM statement.

GLOBAL VTAM statistics data exception messages are broadcast to all NPM operators that are authorized as `GLOBAL=YES`. If none of the authorized operators are logged on, the messages are sent to the console.

NONE No VTAM statistics data exception records are to be written.

NPMLLOG VTAM statistics data exception records are written to the data sets defined by the FILE initialization statements as FNMLOGx.

SMF VTAM statistics data records are written to SMF.

VSAM VTAM statistics data exception records are written to the data sets defined by the FILE initialization statements as FNMREVx.

Note: The operator can override the default as long as the target files are available.



Specifies the host to which this command is applied. The host name you specify can be any host defined to NPM with the ANPM initialization statement.

To collect on the host where NPM is running, use `HOST=LOCAL`; otherwise, use the ANPM statement.

Note: You cannot specify the `HOST` keyword in an EXEC for this VTAM statistics collection command.



Specifies the collection interval number for which you want to start VTAM collection. The value can be from 1 to 7. It defaults to the VTAMINIT parameter on the DEFAULTS statement. See “Using the INTERVAL Keyword” on page 223 for more information on the INTERVAL parameter.



Specifies whether to start or stop a collection, or to stop all collections. The effect of this command depends on whether collections are already active or deferred, the current time of day, and how the CLOCK keyword is coded. The STOPALL option stops all active collections on a resource for all intervals.

See “Using the OPTION Keyword” on page 221 for more information about the OPTION keyword.



Specifies the lower and upper threshold values for total VTAM CSA use. This is the total CSA above and below the line used by VTAM.

This monitor is based on the VTAM start option CSALIMIT specification. CSALIMIT=0 means there is no limit on how much CSA VTAM uses. In this case, the monitor computes the percentage of maximum total CSA that VTAM is using. CSALIMIT=*n* means there is a cap limit of *n* for how much total CSA VTAM uses. In this case, the monitor computes the percentage of maximum total CSA VTAM is using in relation to the defined limit of *n*.



Specifies the lower and upper threshold values for VTAM CSA24 use. CSA24 use monitors only the explicitly requested 24-bit addressable storage (GETMAIN LOC=BELOW) by VTAM. The CSA24 use monitor does not apply if VTAM does not explicitly request the desired storage location (GETMAIN LOC=ANY) and a 24-bit addressable storage is returned.

This monitor is based on the VTAM start option CSA24 specification. CSA24=0 means there is no limit on how much CSA24 VTAM uses. In this case, the monitor computes the percentage of maximum total CSA24 that VTAM is using. CSA24=*n* means there is a cap limit of *n* for how much total CSA24 VTAM uses. In this case, the monitor computes the percentage of maximum total CSA24 VTAM is using in relation to the defined limit of *n*.



Specifies the lower and upper threshold values for VTAM total page-ins per second. The statistic is highlighted on the VTAM analysis panel if the number of VTAM total page-ins falls outside either of these two values.



Determines whether exception or resolution mode is used for all exceptions generated by exceeded threshold conditions. The default is specified by the XRES keyword of the DEFAULTS initialization statement.

- NO** Exception messages, records, or alerts are generated for every interval in which the threshold is exceeded.
- YES** Exception messages, records, or alerts are generated for the first interval in which a threshold is exceeded. No more exception messages are generated. When the threshold condition ceases to exist, a resolution message, record, or alert is generated, containing a correlation matching the original exception notification.

The following conditions cause the threshold conditions to be resolved:

- The data value being monitored is no longer outside the thresholds
- The monitor threshold is stopped
- The monitor threshold is eliminated

- The resource is deleted
- A destination field is changed to not receive any more exception notifications, and an exception was previously sent to this destination
- NPM is stopping

Examples

Use the following command to monitor VTAM CSA use and VTAM CSA24 use occurring between 11 am and 2 pm on one day. Any newly activated channels to NCPs also have data collected.

```
VGBLCOLL RESOURCE=VTAM,  
          VCSAUS=(0,90),  
          CLOCK=(11.00.00,14.00.00),  
          VCSA24US=(30,90)
```

Use the following command to monitor the VTAM total page-ins and VTAM CSA use occurring daily between 9 am and 11:30 pm:

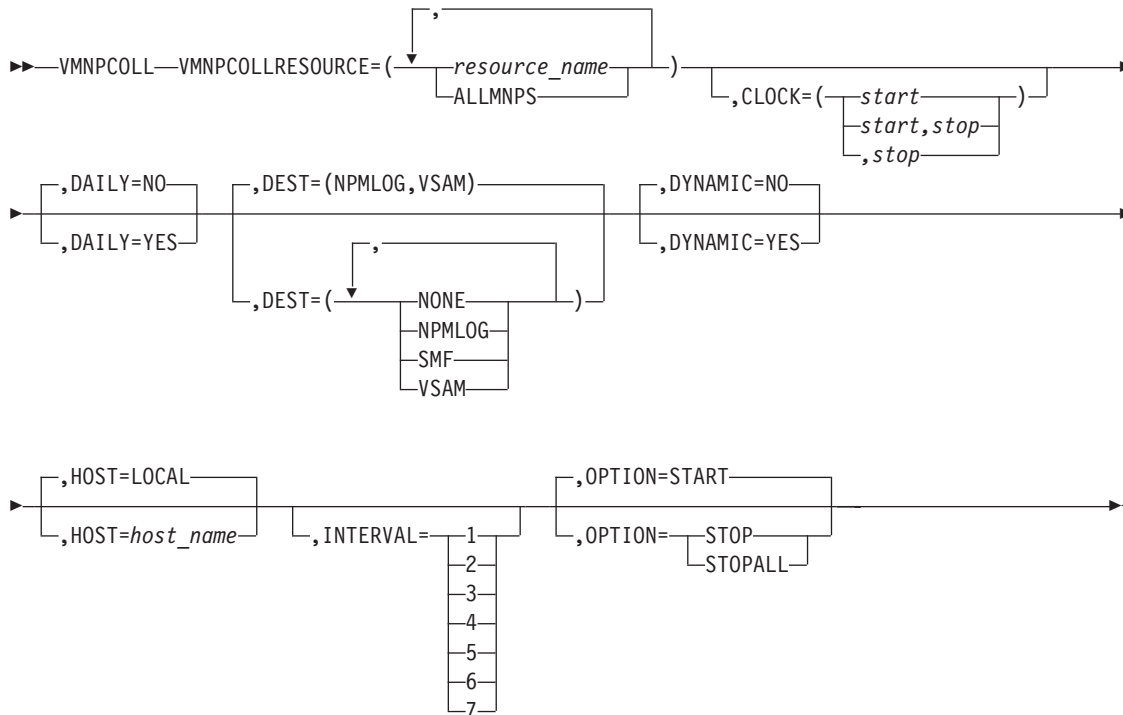
```
VGBLCOLL RESOURCE=VTAM,  
          CLOCK=(09.00.00,11.30.00),  
          DAILY=YES,  
          VCSAUS=(0,90),  
          VTOTPGIN=(10,80)
```

VMNPCOLL

Use the VMNPCOLL command to automatically start and stop collection of VTAM MNPS application data. You can collect data such as the number of session bytes written to CF for an application.

You can have only one collection active at any one time for the same combination of resource and interval.

Note: The VTAMCOLL keyword must be coded YES on the NPM statement before you can start data collection on VTAM applications.



Authorization Needed: Network collection

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the VMNPCOLL command:

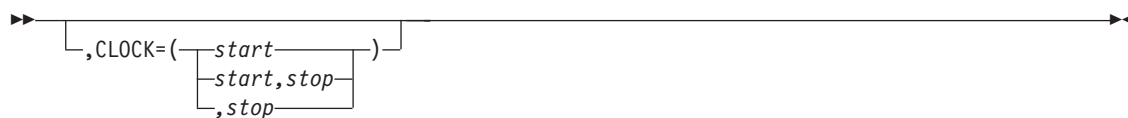


Specifies the resource on which to start a collection.

ALLMNPS Starts collection on all MNPS applications known to VTAM.

resource_name

Starts collection on a specific application. You can specify more than one application. The name consists of 1 to 8 alphanumeric characters.



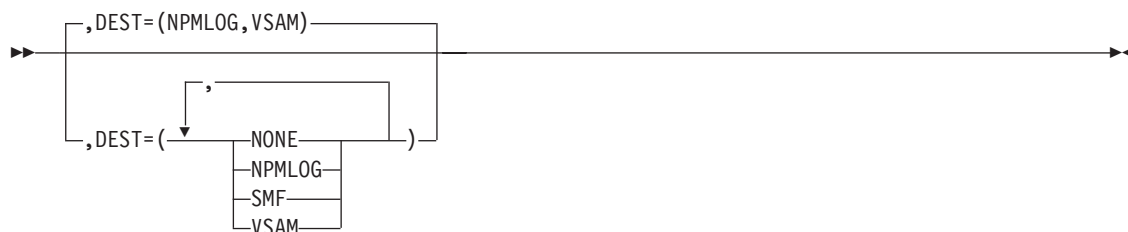
Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. You must specify the start and stop times on the CLOCK keyword if you code the DAILY keyword as DAILY=YES.

See “Using the CLOCK Keyword” on page 220 for more information about the CLOCK keyword.



Specifies whether the command is to be executed daily.

You can have only one active collection at any one time for the same combination of resource and interval. If you have a daily collection that is deferred because its start time is in the future, the deferred collection is not started if another collection is active when the deferred collection is due to start. In this situation, the deferred collection fails and is enqueued for the next day.



Specifies the destination of the VTAM statistics data records. You can define multiple destinations on this keyword. The NONE setting is ignored if you code any other parameters.

NONE	No VTAM statistics data records are to be written.
NPMLLOG	VTAM statistics data records are written to the data sets defined by the FILE initialization statements as FNMLOGx.
SMF	VTAM statistics data records are written to SMF.
VSAM	VTAM statistics data records are written to the data sets defined by the FILE initialization statements as FNMREVx.

Note: The operator can override the default as long as the target files are available.



Permits collection to be started on resources that become active in the future. In addition, if you code `DYNAMIC=YES`, NPM will not stop the collection if the resource is deleted, but will suspend the collection until the stop time is reached or the resource is added again.

The resource name can be any resource specified with the `RESOURCE` keyword. Pay special attention in specifying resource names when you code `DYNAMIC=YES`. Because the collection you are going to start is dynamic, there is no verification of the resource name (any name is valid).



Specifies the host to which this command is applied. The host name you specify can be any host defined to NPM with the `ANPM` initialization statement.

To collect on the host where NPM is running, use `HOST=LOCAL`; otherwise, use the `ANPM` statement.

Note: You cannot specify the `HOST` keyword in an `EXEC` for this VTAM statistics collection command.



Specifies the collection interval number for which you want to start VTAM collection. The value can be from 1 to 7. It defaults to the `VTAMINIT` parameter on the `DEFAULTS` statement. See “Using the `INTERVAL` Keyword” on page 223 for more information on the `INTERVAL` parameter.



Specifies whether to start or stop a collection, or to stop all collections. The effect of this command depends on whether collections are already active or deferred, the current time of day, and how the CLOCK keyword is coded. The STOPALL option stops all active collections on a resource for all intervals.

See “Using the OPTION Keyword” on page 221 for more information about the OPTION keyword.

Example

Use the following command to collect on all applications between 8 am and 6 pm every day:

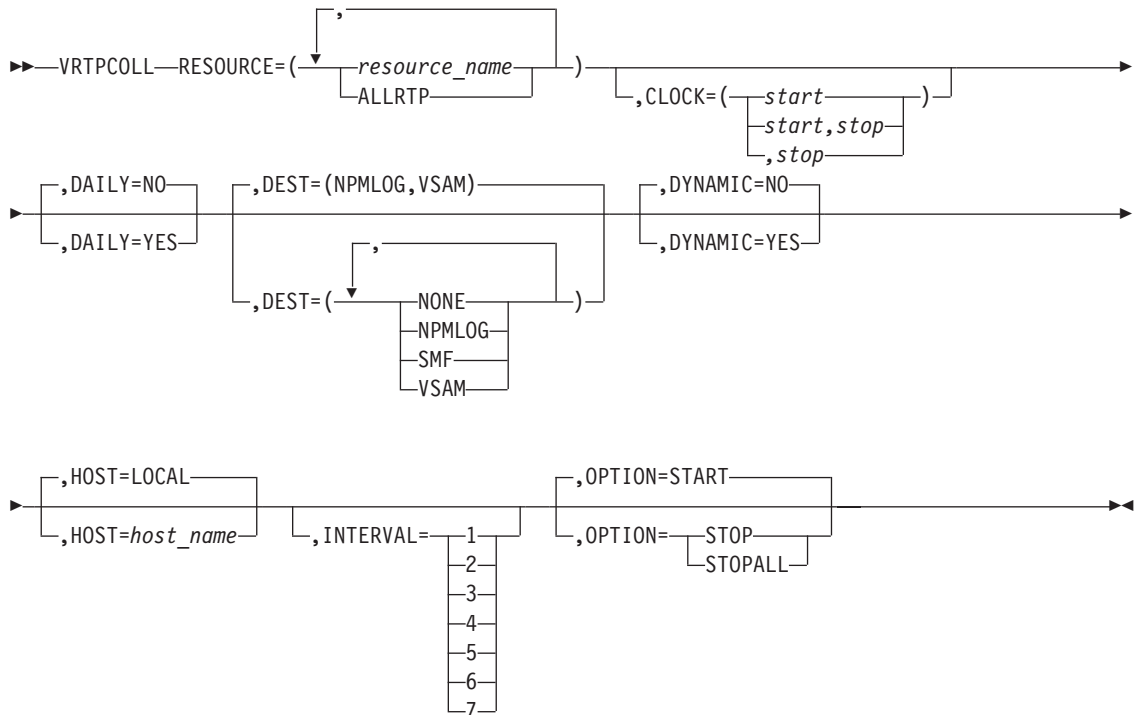
```
VMNPCOLL RESOURCE=ALLMNPS,
          CLOCK=(08.00.00,18.00.00),
          DAILY=YES,
          DYNAMIC=YES
```

VRTPCOLL

Use the VRTPCOLL command to automatically start and stop collection of VTAM RTP data. You can collect data such as the number of path switches that occur for an RTP or the status of an RTP resource.

You can have only one collection active at any one time for the same combination of resource and interval.

Note: The VTAMCOLL keyword must be coded YES on the NPM statement before you can start data collection on VTAM applications. The minimum requirement for RTP collections is two VTAM V4R4 systems connected to each other (configured to support APPN and to support HPR running RTP).



Authorization Needed: Network collection

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the VRTPCOLL command:



Specifies the resource on which to start a collection.

ALLRTP Starts collection on all RTP resources known to VTAM.

resource_name

Starts collection on a specific application. You can specify more than one RTP application. The name consists of 1 to 8 alphanumeric characters, generally starting with CNR.



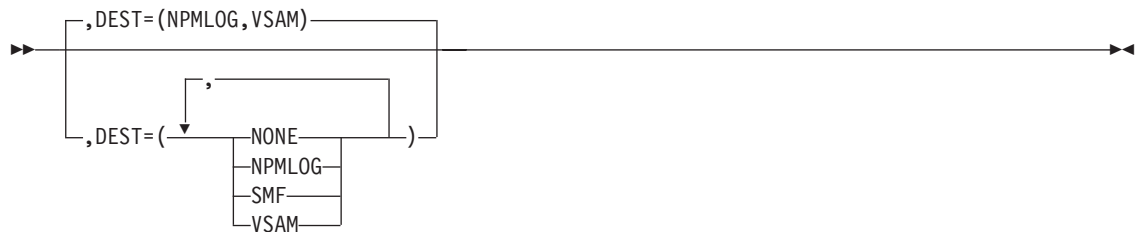
Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. You must specify the start and stop times on the `CLOCK` keyword if you code the `DAILY` keyword as `DAILY=YES`.

See “Using the `CLOCK` Keyword” on page 220 for more information about the `CLOCK` keyword.



Specifies whether the command is to be executed daily.

You can have only one active collection at any one time for the same combination of resource and interval. If you have a daily collection that is deferred because its start time is in the future, the deferred collection is not started if another collection is active when the deferred collection is due to start. In this situation, the deferred collection fails and is queued for the next day.



Specifies the destination of the VTAM statistics data records. You can define multiple destinations on this keyword. The `NONE` setting is ignored if you code any other parameters.

- NONE** No VTAM statistics data records are to be written.
- NPMLLOG** VTAM statistics data records are written to the data sets defined by the `FILE` initialization statements as `FNMLLOGx`.
- SMF** VTAM statistics data records are written to SMF.
- VSAM** VTAM statistics data records are written to the data sets defined by the `FILE` initialization statements as `FNMREVx`.

Note: The operator can override the default as long as the target files are available.



Permits collection to be started on resources that become active in the future. In addition, if you code `DYNAMIC=YES`, NPM will not stop the collection if the resource is deleted, but will suspend the collection until the stop time is reached or the resource is added again.

The resource name can be any resource specified with the `RESOURCE` keyword. Pay special attention in specifying resource names when you code `DYNAMIC=YES`. Because the collection you are going to start is dynamic, there is no verification of the resource name (any name is valid).



Specifies the host to which this command is applied. The host name you specify can be any host defined to NPM with the `ANPM` initialization statement.

To collect on the host where NPM is running, use `HOST=LOCAL`; otherwise, use the `ANPM` statement.

Note: You cannot specify the `HOST` keyword in an `EXEC` for this VTAM statistics collection command.



Specifies the collection interval number for which you want to start VTAM collection. The value can be from 1 to 7. It defaults to the `VTAMINIT` parameter on the `DEFAULTS` statement. See “Using the `INTERVAL` Keyword” on page 223 for more information on the `INTERVAL` parameter.



Specifies whether to start or stop a collection, or to stop all collections. The effect of this command depends on whether collections are already active or deferred, the current time of day, and how the CLOCK keyword is coded. The STOPALL option stops all active collections on a resource for all intervals.

See “Using the OPTION Keyword” on page 221 for more information about the OPTION keyword.

Example

Use the following command to collect on all applications between 8 am and 6 pm every day:

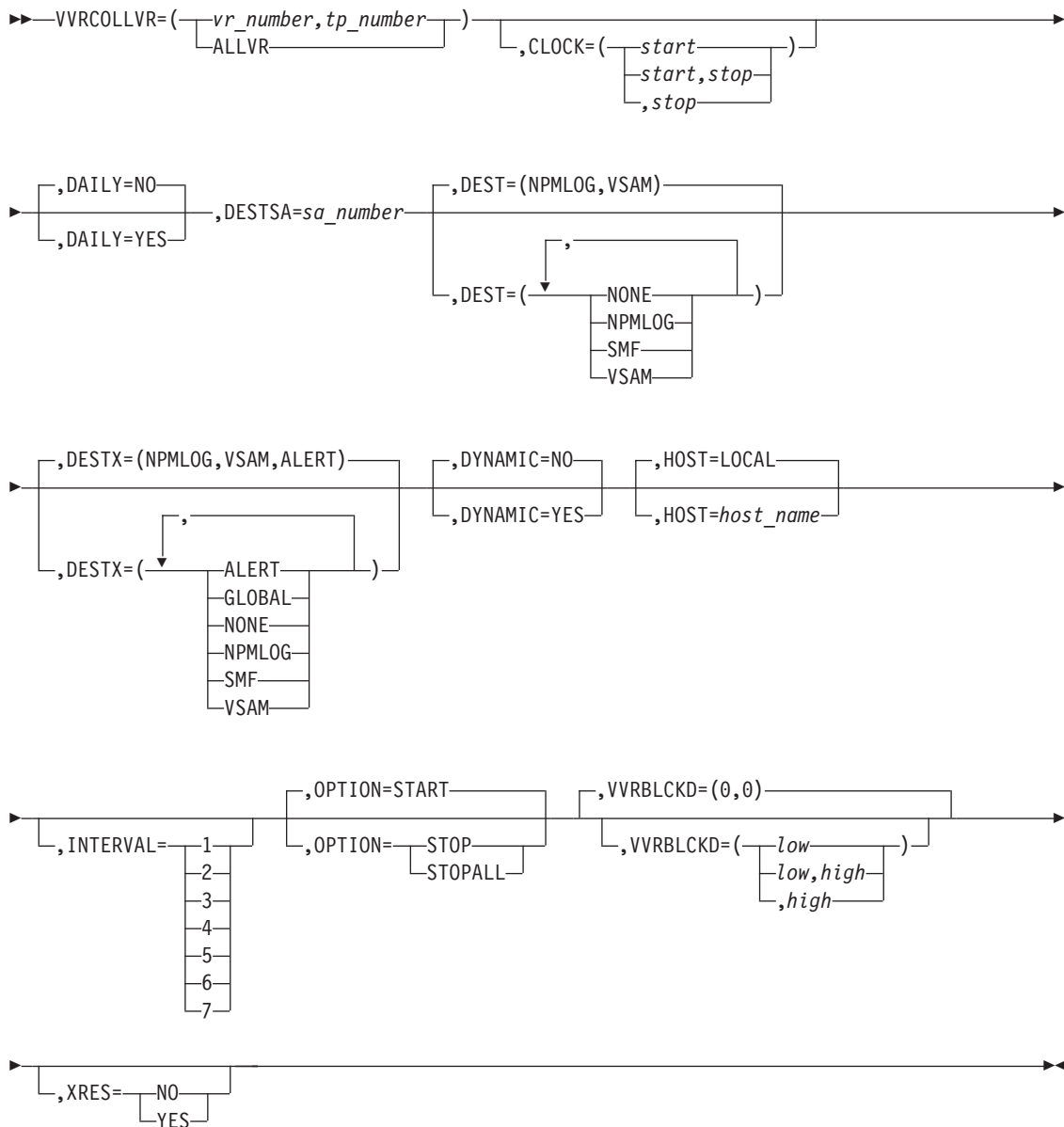
```
VRTPCOLL RESOURCE=ALLRTP,  
          CLOCK=(08.00.00,18.00.00),  
          DAILY=YES,  
          DYNAMIC=NO
```

VVRCOLL

Use the VVRCOLL command to automatically start and stop collection and monitoring of VTAM virtual route data. You can collect data such as virtual route state, flow control state, and the amount of time that a virtual route is blocked. DESTSA, VR, and TP are the keywords that provide flexibility to collect virtual route data from all subareas and specific VRs with a particular transmission priority (TP).

You can have only one collection active at any one time for the same combination of resource and interval.

Note: The VTAMCOLL keyword must be coded YES on the NPM statement before you can start data collection on virtual routes.



Authorization Needed: Network collection

Where: Console, FNMSTRT, NPM EXEC

The following list describes the keywords you can code on the VVRCOLL command:

►►—VR=(vr_number, tp_number)
 └─ALLVR—┘

Specifies collection on one or more VR/TP pair routes. *vr_number* is a VR number from 0 to 7. The *tp_number* is a TP number from 0 to 2. The DESTSA keyword is required if you code one or more VR/TP pair routes.

Specifying VR=ALLVR starts collection on all VR/TP pairs to destination subareas specified in the DESTSA keyword. The DESTSA keyword is optional if you code VR=ALLVR.

►►—,CLOCK=(start)
 └─start, stop—┘
 , stop

Specifies the times the command is to be started and stopped, in *hh.mm.ss* format. You must specify the start and stop times on the CLOCK keyword if you code the DAILY keyword as DAILY=YES.

See “Using the CLOCK Keyword” on page 220 for more information about the CLOCK keyword.

►►—,DAILY=NO
 └─,DAILY=YES—┘

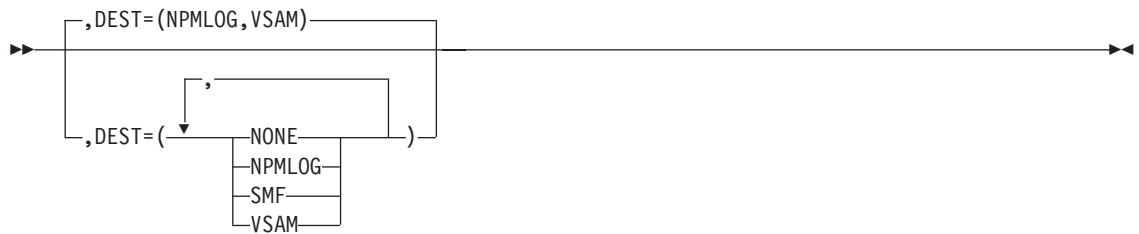
Specifies whether the command is to be executed daily.

You can have only one active collection at any one time for the same combination of resource and interval. If you have a daily collection that is deferred because its start time is in the future, the deferred collection is not started if another collection is active when the deferred collection is due to start. In this situation, the deferred collection fails and is enqueued for the next day.

►►—,DESTSA=*sa_number*

Specifies the subarea number of a specific host. *sa_number* allows collection on virtual routes to a specific destination subarea. The *sa_number* can be from 1 to 65535.

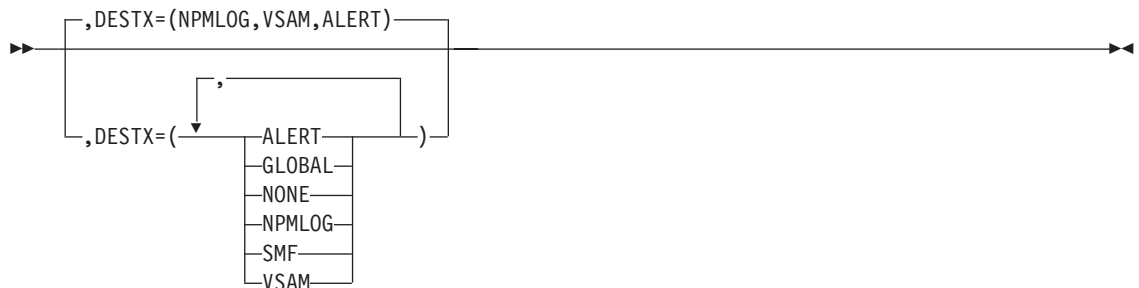
Note: See the VR keyword description for this command for more information about the DESTSA keyword.



Specifies the destination of the VTAM statistics data records. You can define multiple destinations on this keyword. The NONE setting is ignored if you code any other parameters.

- NONE** No VTAM statistics data records are to be written.
- NPMLLOG** VTAM statistics data records are written to the data sets defined by the FILE initialization statements as FNMLOGx.
- SMF** VTAM statistics data records are written to SMF.
- VSAM** VTAM statistics data records are written to the data sets defined by the FILE initialization statements as FNMREVx.

Note: The operator can override the default as long as the target files are available.



Specifies the destination of the VTAM statistics data exception records. You can specify multiple destinations on this keyword. The NONE parameter is ignored if you code any other parameters.

- ALERT** VTAM statistics data exception records are formatted into alerts and sent to the NetView program, as long as ALERT=YES is coded on the NPM statement.
- GLOBAL** VTAM statistics data exception messages are broadcast to all NPM operators that are authorized as GLOBAL=YES. If none of the authorized operators are logged on, the messages are sent to the console.
- NONE** No VTAM statistics data exception records are to be written.
- NPMLLOG** VTAM statistics data exception records are written to the data sets defined by the FILE initialization statements as FNMLOGx.
- SMF** VTAM statistics data records are written to SMF.
- VSAM** VTAM statistics data exception records are written to the data sets defined by the FILE initialization statements as FNMREVx.

Note: The operator can override the default as long as the target files are available.



Permits collection to be started on resources that become active in the future. In addition, if you code `DYNAMIC=YES`, NPM will not stop the collection if the resource is deleted, but will suspend the collection until the stop time is reached or the resource is added again.

The resource name is any resource that you can specify with the `RESOURCE` keyword. Pay special attention in specifying resource names when you code `DYNAMIC=YES`. Because the collection you are going to start is dynamic, there is no verification of the resource name (any name is valid).



Specifies the host to which this command is applied. The host name you specify can be any host defined to NPM with the `ANPM` initialization statement.

To collect on the host where NPM is running, use `HOST=LOCAL`; otherwise, use the `ANPM` statement.

Note: You cannot specify the `HOST` keyword in an `EXEC` for this VTAM statistics collection command.



Specifies the collection interval number for which you want to start VTAM collection. The value can be from 1 to 7. It defaults to the `VTAMINIT` parameter on the `DEFAULTS` statement. See “Using the `INTERVAL` Keyword” on page 223 for more information on the `INTERVAL` parameter.



Specifies whether to start or stop a collection, or to stop all collections. The effect of this command depends on whether collections are already active or deferred, the current time of day, and how the CLOCK keyword is coded. The STOPALL option stops all active collections on a resource for all intervals.

See “Using the OPTION Keyword” on page 221 for more information about the OPTION keyword.



Specifies the lower and upper threshold values for the percentage of time a particular virtual route is blocked during the specified interval.



Determines whether exception or resolution mode is used for all exceptions generated by exceeded threshold conditions. The default is specified by the XRES keyword of the DEFAULTS initialization statement.

- NO** Exception messages, records, or alerts are generated for every interval in which the threshold is exceeded.
- YES** Exception messages, records, or alerts are generated for the first interval in which a threshold is exceeded. No more exception messages are generated. When the threshold condition ceases to exist, a resolution message, record, or alert is generated, containing a correlation matching the original exception notification.

The following conditions cause the threshold conditions to be resolved:

- The data value being monitored is no longer outside the thresholds
- The monitor threshold is stopped
- The monitor threshold is eliminated
- The resource is deleted
- A destination field is changed to not receive any more exception notifications, and an exception was previously sent to this destination
- NPM is stopping

Example

Use the following command to collect on virtual route 2, with a transmission priority of 1, to destination subarea 4, daily between 8 am and 5 pm, and monitoring the percentage of time the VR is blocked.

```
VVRCOLL DESTSA=4,  
VR=(2,1),  
CLOCK=(08.00.00,17.00.00),  
DAILY=YES,  
VVRBLCKD=(10,50),  
DYNAMIC=YES
```

Use the following command to collect on virtual route 1, with a transmission priority of 1, to destination subarea 8, without monitoring.

```
VVRCOLL DESTSA=(8),VR=(1,1)
```

Part III. Appendixes



Archiving and Rebuilding Data Sets and Files

Archiving and Rebuilding Data Sets and Files

The session data collected by NPM is useful for historical analysis as well as for solving immediate problems. You can use session data to project growth and performance based on how the network (or a component of the network) performed in the past. To make such projections, archive the collected data for later analysis using the archiving and rebuilding programs provided with NPM.

Archiving and rebuilding session files enables you to tailor session files for modeling, capacity planning, or trend analysis, or for resolving problems of configuration changes. Such flexibility in redefining and recreating session files also enables you to obtain an accurate definition of network performance problems.

To archive session files, define more than one session (FNMSSES x) file. When the current session file becomes full, NPM automatically switches to the next defined session file. You can then archive the full session file to the NPM archived file using standard facilities of VSAM access method services (AMS). An NPM operator can also archive files that are not full by forcing NPM to switch to the next file.

This appendix contains step-by-step instructions for archiving and rebuilding files, and describes the sample JCL provided for this purpose.

Archiving and Rebuilding Session Files

To write records from a session file to an archive file, modify and execute the sample FNMARCHV procedure, provided in NPM.V2R7M0.SFNMJCL1, and shown in Figure 262 on page 392.

```

//NPMARCHV JOB (ACCOUNTING,INFORMATION),PROGRAMMER.NAME,
//          MSGLEVEL=1,MSGCLASS=A,CLASS=A
//NPMARCHV PROC HLQ=NPM,REL=V2R7M0,
//          OUT='*',
//          UNIT=SYSDA,
//          DATAIN='NPM.V2R7M0.SESS02',
//          SORTLIB='SYS1.SORTLIB',
//          OSER=XXXXXX
//*****
//STEP0 EXEC PGM=IDCAMS
//*****
//**
//** STEP0: COPY SESSION FILE TO SEQUENTIAL DATA SET FOR FNMSELCT **
//**
//*****
//SYSPRINT DD SYSOUT=&OUT.
//NPMSESS1 DD DSN=&DATAIN,DISP=SHR
//NPMSESS0 DD DSN=&&NPMSES0,UNIT=&UNIT,.
//          DCB=(RECFM=VB,LRECL=4096,BLKSIZE=4100),
//          DISP=(NEW,PASS,DELETE),SPACE=(CYL,(2,1),RLSE)
//STEP1 EXEC PGM=FNMSELCT
//*****
//**
//** STEP1: EXECUTE FNMSELCT TO SELECT AND/OR PRINT THE RECORDS **
//**
//*****
//STEPLIB DD DSN=&HLQ..&REL..SFNMLMD1,DISP=SHR
//SYSPRINT DD SYSOUT=&OUT.
//NPMSEL DD DDNAME=SYSIN
//NPMIN DD DSN=&&NPMSES0,DISP=(OLD,DELETE,DELETE)
//NPMOUT DD DSN=&&NPMSES1,UNIT=&UNIT,.
//          DCB=(RECFM=VB,LRECL=4096,BLKSIZE=4100),
//          DISP=(NEW,PASS,DELETE),SPACE=(CYL,(2,1),RLSE)
//SYSUDUMP DD SYSOUT=&OUT.
//STEP2 EXEC PGM=FNMPOINT
//*****
//**
//** STEP2: EXECUTE FNMPOINT TO ADD POINTER RECORDS **
//**
//*****
//STEPLIB DD DSN=&HLQ..&REL..SFNMLMD1,DISP=SHR
//SYSPRINT DD SYSOUT=&OUT.
//NPMIN DD DSN=&&NPMSES1,DISP=(OLD,DELETE)
//NPMOUT DD DSN=&&NPMSES2,UNIT=&UNIT,.
//          DCB=(RECFM=VB,LRECL=4096,BLKSIZE=4100),
//          DISP=(NEW,PASS,DELETE),SPACE=(CYL,(2,1),RLSE)
//SYSUDUMP DD SYSOUT=&OUT.

```

Figure 262. Sample NPMARCHV (Part 1 of 2)

```

//STEP3 EXEC PGM=SORT,PARM='SIZE(MAX) '
//*****
//**
//** STEP3: SORT OUTPUT FROM FNMPPOINT **
//**
//*****
//SORTLIB DD DSN=&SORTLIB,DISP=SHR
//SYSOUT DD SYSOUT=&OUT.
//SORTIN DD DSN=&&NPMSSES2,DISP=(OLD,DELETE)
//SORTOUT DD DSN=&&NPMSSES3,UNIT=&UNIT,.
//          DCB=(RECFM=VB,LRECL=4096,BLKSIZE=4100),
//          DISP=(NEW,PASS,DELETE),SPACE=(CYL,(1,1),RLSE)
//SORTWK01 DD UNIT=&UNIT,SPACE=(CYL,(10))
//SORTWK02 DD UNIT=&UNIT,SPACE=(CYL,(10))
//STEP4 EXEC PGM=IDCAMS
//*****
//**
//** STEP4: A. DELETE PREVIOUS SESSION DATA SET (IF ANY) **
//**          B. DEFINE NEW SESSION CLUSTER **
//**          C. COPY ARCHIVED DATA FILE TO CLUSTER **
//**
//*****
//SYSPRINT DD SYSOUT=&OUT.
//NPMSSESS3 DD DSN=&&NPMSSES3,DISP=(OLD,DELETE)
//NPMSSESS4 DD DISP=SHR,UNIT=&UNIT,VOL=SER=&OSER.
//          PEND
//          EXEC NPMARCHV
//STEP0.SYSIN DD *
REPRO -
          INFILE(NPMSSESI) -
          OUTFILE(NPMSSESS0)
/*
//STEP1.SYSIN DD *
LU=ALL
/*
//STEP3.SYSIN DD *
SORT FIELDS=(5,24,BI,A),FILSZ=E18500
RECORD TYPE=V
/*
//STEP4.SYSIN DD *
DELETE -
          NPM.SESS02 -
          PURGE -
          ERASE
SET MAXCC = 0
DEFINE CLUSTER( -
          NAME(NPM.SESS02) -
          FILE(NPMSSESS4) -
          VOLUMES(XXXXXX) /* CHANGE XXXXXX TO &OSER */ -
          RECORDSIZE(128 512) -
          REUSE -
          INDEXED -
          SHAREOPTIONS(2 3) -
          KEYS(20 0) -
          CYLINDERS(4 0) -
          REPLICATE )
IF MAXCC = 0 THEN DO
REPRO -
          INFILE(NPMSSESS3) -
          OUTdata set(NPM.SESS02)
END

```

Figure 262. Sample NPMARCHV (Part 2 of 2)

There are five steps to archiving and rebuilding a session file:

- Archive the session file.

- Select records from the session data archived file.
- Add pointer records to the file.
- Sort the indexed file.
- Build the session data VSAM key sequenced data set (KSDS).

Step 0. Archive the File

To archive a session file, STEP0 of the NPMARCHV procedure copies the file to a sequential data set. The following list describes the data sets needed for archiving a file:

NPMSESS1 Specifies the session data VSAM data set to be archived.

NPMSESS0 Specifies the sequential data set to which the data is written. This data set can include previously archived data. The NPMSESS0 data set must have the following characteristics:

Organization:	Sequential
Record format:	Variable block
Record length:	4096
Block size:	4100 minimum; you can specify another size if necessary

Step 1. Select Records from the Session Data Archived File

You can select records from the archived file to be written to a tailored session data file by coding control statements. In addition to creating a tailored file, you can obtain a formatted printout of the selected records. See the *NetView Performance Monitor Reference* for more information about printing session records from an archived file.

The following list describes the data sets used in STEP1 of the NPMARCHV procedure:

STEPLIB	The library containing the load module
SYSPRINT	The data set to which output is written
NPMSEL	A PDS member containing the control statements
NPMIN	The data set containing the NPM archived file
NPMOUT	The output data set containing the selected records
SYSUDUMP	The data set to which a dump is written if this step fails

Coding Control Statements

Control statements enable you to specify selection criteria for the records to include in your rebuilt session file. For example, you can specify that only data pertaining to one application be archived.

Code the control statements in the data set to which the NPMSEL statement points in the example JCL. The control statements consist of primary selectors and selection restrictors. The primary selector is the first network resource identified in a control statement. The selection restrictors define additional record selection criteria.

A control statement can consist of only a primary selector or a primary selector and one or more selection restrictors. For example, the following control statement consists of only a primary selector; it selects all session data records for the LU LUIMS01:

```
LU=LUIMS01
```

To further restrict the records selected, you can add more selection restrictions. For example, the following control statement selects RTM records for LUIMS01 from the time it was in

session with IMS (and its traffic was traversing virtual route 2 at transmission priority 1.) The primary selector in this example is LU and the selection restrictors are APPL, VR, TPR, and RECTYPE:

```
LU=LUIMS01,APPL=IMS,VR=2,TPR=1,RECTYPE=RTM
```

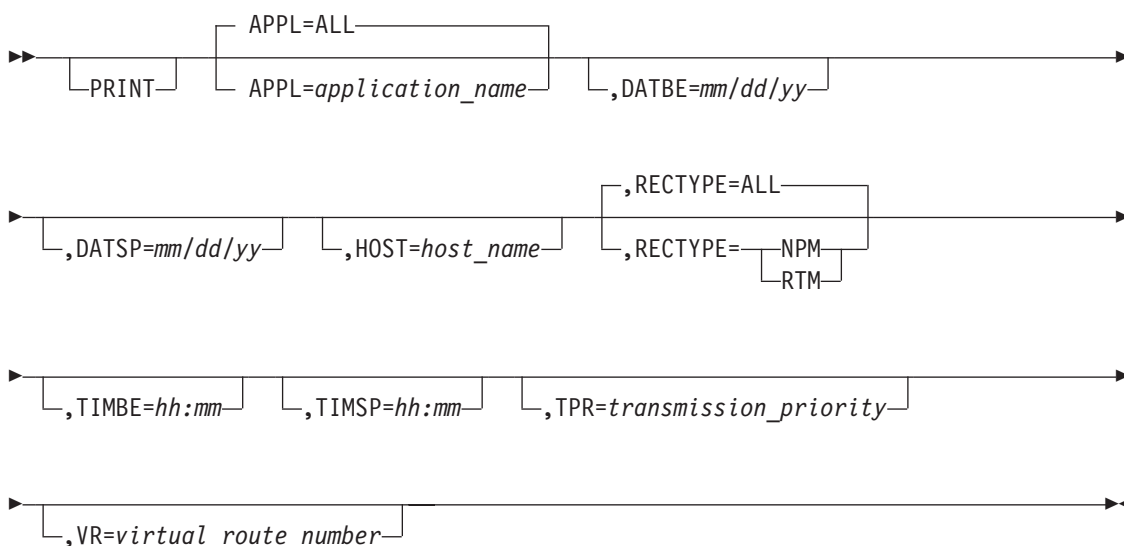
Specifying ALL on any primary selector with no selection restrictors results in the selection of the entire archived data set.

You can also use some primary selectors as selection restrictors. The syntax diagrams for each primary selector show the valid combinations.

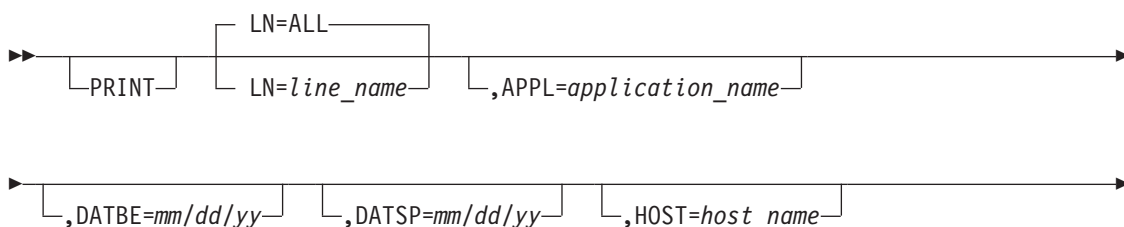
Control statements can start in any column, but cannot extend beyond column 72. You can code more than one control statement with any primary selector. However, new statements must begin on a new line. A statement ends when a blank is encountered and the last character is not a comma. Commas are used to separate operands within a control statement. To include comments with the control statements, type an asterisk (*) in the first column of each comment statement.

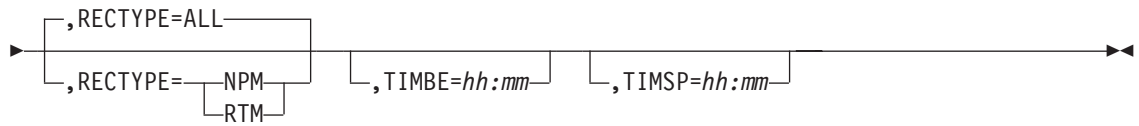
The format of control statements is shown in the following syntax diagrams. Figure 263 on page 399 shows example control statements and provides an explanation of the keywords.

Primary Selector=APPL

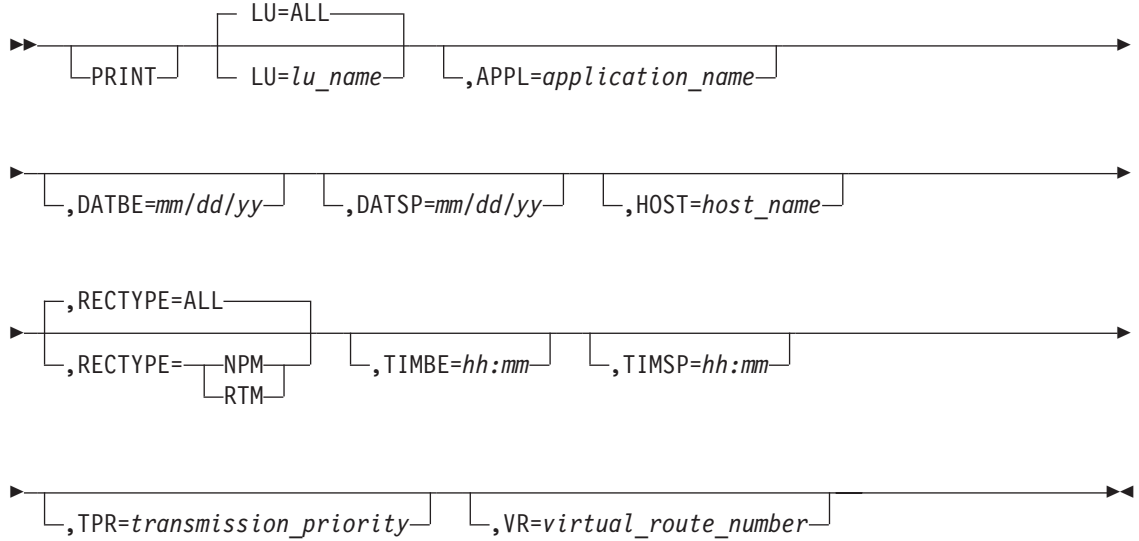


Primary Selector=LN

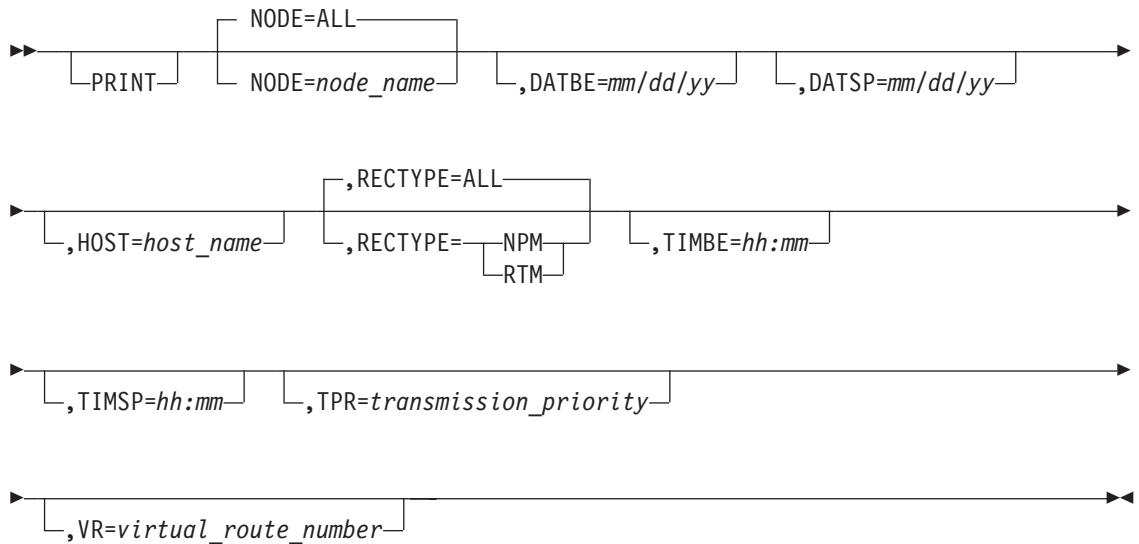




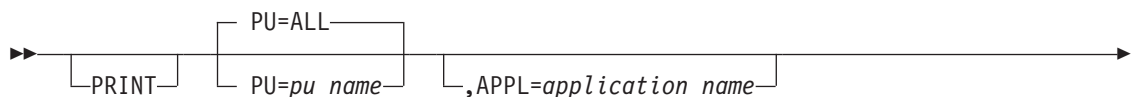
Primary Selector=LU

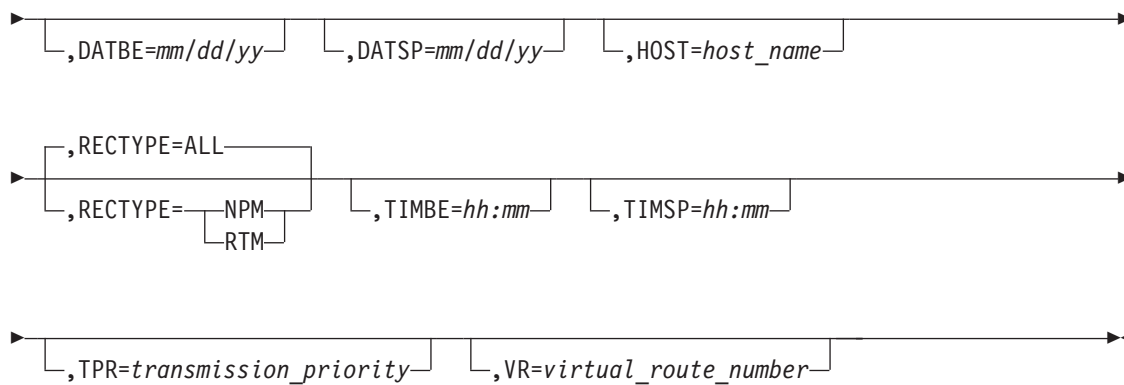


Primary Selector=NODE

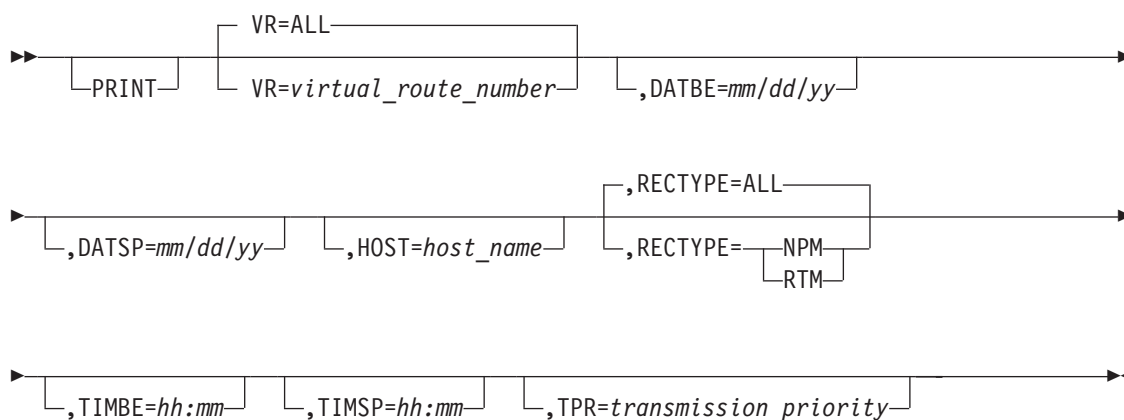


Primary Selector=PU





Primary Selector=VR



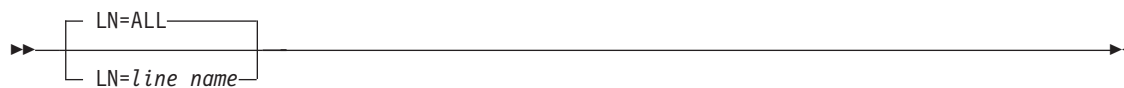
The following list describes the keywords and operands you can code in control statements.



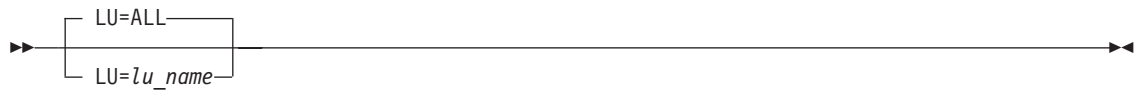
Prints the selected records to the SYSPRINT data set. You must code PRINT as the first control statement if you use it.



A 1- to 8-character alphanumeric name of an application running on a host in the network.



A 1- to 8-character alphanumeric name of a line in the network.



A 1- to 8-character alphanumeric name of a logical unit in the network.



A 1- to 8-character alphanumeric name of a node in the network.



A 1- to 8-character alphanumeric name of a physical unit in the network.



The 1-digit number of a virtual route in the network.



Beginning date of the report.



Ending date of the report.



A 1- to 8-character alphanumeric name of a host on the network. This name is specified in a HOST NPM initialization statement.



Specifies whether selected records contain NPM data, RTM data, or both NPM and RTM data:

NPM Selects only NPM data

RTM Selects only RTM data

ALL Selects both NPM and RTM data

▶ `[,TIMBE=hh:mm]` ▶

Beginning time of the report. The TIMBE and TIMSP selection restrictors work on a daily basis. Records must fall between the specified times on each selected day to be included.

Time is based on a 24-hour clock. Note that the separator between hours and minutes is a colon, not a period.

▶ `[,TIMSP=hh:mm]` ▶

Ending time of the report. The TIMBE and TIMSP selection restrictors work on a daily basis. Records must fall between the specified times on each selected day to be included.

Time is based on a 24-hour clock. Note that the separator between hours and minutes is a colon, not a period.

▶ `[,TPR=transmission_priority]` ▶

A 1-digit transmission priority number. The number must be 0, 1, or 2. If you specify TPR, you must also supply VR.

Figure 263 shows how you can code the control statements.

```
PRINT
LU=LU01,VR=0,APPL=APPL01,RECTYPE=NPM
NODE=NODE02,PU=PU02,HOST=HOST01,LN=LINE01,RECTYPE=RTM
NODE=NODE03,PU=PU02,HOST=HOST01,LN=LINE01,RECTYPE=RTM
VR=3,TPR=0,DATBE=10/30/00,DATSP=11/02/00
PU=A3174A,DATBE=10/14/00,TIMBE=08:30,DATSP=10/14/00,TIMSP=17:00
PU=A3174A,DATBE=10/15/00,TIMBE=08:30,DATSP=10/15/00,TIMSP=17:00
LN=LN102,APPL=APPL02,HOST=HOST04
APPL=TS02,VR=1,TPR=2
```

Figure 263. Example Format of the Control Statements

Step 2. Add Pointer Records to the File

After selecting the records for your rebuilt file, NPMARCHV creates index records for the primary selectors.

The following list describes the DD statements needed for adding pointer records:

- STEPLIB** The library containing the load module
- SYSPRINT** The data set to which output is written
- NPMIN** The selected session data that is the input to STEP2
- NPMOUT** The session data set containing pointer index records
- SYSUDUMP** The data set to which the dump is written if NPMARCHV abends

Pointer Report

STEP2 of NPMARCHV generates a hard-copy report listing the index records that it creates. An example pointer report is shown in Figure 264.

```

1 2           3           4
A N   CDRM04   HOST01
5 R000111 R000112
A A   TESTCICS HOST01
R000111 R000112 T02D0102 T02D0103 U02C0102 U02C0104
A P   CL02D01  HOST01
T02D0101 T02D0102 T02D0103 T02D0104
A N   CHAMB01  HOST01
T02D0101 T02D0102 T02D0103 T02D0104 U02C0101 U02C0102 U02C0103
U02C0104
A L   G01LN02D HOST01
T02D0101 T02D0102 T02D0103 T02D0104
A A   TSO       HOST01
T02D0101 T02D0104 U02C0101
A P   PU02C01  HOST01
U02C0101 U02C0102 U02C0103 U02C0104
A L   G03LN02C HOST01
U02C0101 U02C0102 U02C0103 U02C0104
A A   NCF06000 HOST01
U02C0103
A A   NCF06     HOST01
U02C0103
  
```

Figure 264. Example Pointer Report

The headings for the pointer report contain the following information:

- 1** The record type for a pointer record. The record types can be either of the following:
 - A** NPM pointer record
 - B** RTM pointer record
- 2** The primary selector type. Primary selector types can be any of the following:
 - A** Application
 - H** Host
 - L** Line
 - N** Node
 - P** Physical unit
 - V** Virtual route
- 3** The primary selector name. If blank, NPM uses the default ALL.
- 4** The host name.

The line or lines following the heading, **5**, give a list of LU names associated with that particular index record.

For example, the heading for the first index record shown in Figure 264 on page 400 indicates that this is an NPM pointer record (A), the primary selector type is a node (N), the primary selector name is CDRM04, and the host name is HOST01. The LUs associated with this index record are R000111 and R000112.

Step 3. Sort the Indexed File

After NPMARCHV creates an indexed file of the selected session records, it sorts the file back into VSAM key sequence. The following list describes the DD statements used in the sort:

SORTLIB	The library containing the sort module
SYSOUT	The data set to which the output is written
SORTIN	The tailored session data file
SORTOUT	The sorted output file
SORTWK01	A work area needed for the sort module
SORTWK02	A work area needed for the sort module

Step 4. Build the Session Data VSAM KSDS

Once your indexed file is reformatted, STEP4 builds a new session data VSAM KSDS using the VSAM REPRO function.

The following list describes the DD statements for this step:

SYSPRINT	The data set to which the output for FNMGDEF is written
NPMSESS3	The data set name of the sorted indexed input file
NPMSESS4	The new VSAM KSDS session data file

You can now use the rebuilt file for NPM's online panels.

Glossary

A

ACB

(1) In VTAM programs, access method control block. (2) In NCP, adapter control block. (3) Application control block.

access method control block (ACB)

(1) A control block that links an application program to VSAM or VTAM. (2) In VTAM statistics collection, the control block passed to VTAM when an application is establishing itself as able to send and receive data.

access method services (AMS)

The facility used to define and reproduce VSAM key-sequenced data sets (KSDS).

active collection

In NPM, the process of collecting data at the current time about a resource.

ACTPU

Activate physical unit. In SNA, a command used to start a session on a physical unit.

adapter control block (ACB)

In NCP, a control block that contains line control information and the states of I/O operations for BSC lines, SS lines, or SDLC links.

address space

A set of addresses used to uniquely identify network accessible units, sessions, adjacent link stations, and links in a node for each network in which the node participates. A type 2.1 node has one address space for intranode routing and one for each transmission group on which it can send message units.

ADP

Automatic data processing.

advanced peer-to-peer networking (APPN) end node

A type 2.1 node that provides full SNA end-user services and supports sessions between its local control point (CP) and the CP in an adjacent network node, to dynamically register its resources with the adjacent CP (its network node server), to send and receive directory search requests, and to obtain management services; it can also attach to a subarea network as a peripheral node.

advanced peer-to-peer networking (APPN) network

An SNA network consisting of APPN network nodes, APPN end nodes, and, optionally, LEN end nodes.

advanced peer-to-peer networking (APPN) network node

A type 2.1 node that, besides offering full SNA end-user services, provides intermediate routing services within a type 2.1 network and network services to its local LUs and attached type 2.1 end nodes in its domain; it can also attach to a subarea network as a peripheral node.

advanced peer-to-peer networking (APPN) node

An APPN network node or an APPN end node.

advanced peer-to-peer networking (APPN)

An extension to SNA featuring (a) greater distributed network control that avoids critical hierarchical dependencies, thereby isolating the effects of single points of failure, (b) dynamic exchange of network topology information to foster ease of connection and reconfiguration, adaptive route selections, and simplified network definition, and (c) automated resource registration and directory lookup. APPN extends the LU 6.2 peer orientation for end-user services to network control; APPN also uses LU 6.2 protocols on its own control point sessions that provide the network control.

advanced program-to-program communication (APPC)

An implementation of the SNA/SDLC LU6.2 protocol that allows interconnected systems to communicate and share the processing of programs.

agent

Reports to the managing process, such as a network control station, on the status of managed network elements and performs actions on these elements as directed by the managing process. Examples of network elements are devices such as hosts, routers, and terminal servers.

alert

(1) A message sent to a management services focal point in a network to identify a problem or an impending problem. (2) In the NetView program, a high priority event that warrants immediate attention. A database record is generated for certain event types that are defined by user-constructed filters.

alert condition

A problem or impending problem for which some or all of problem determination, diagnosis, or resolution is expected at a collection point or a system problem determination focal point.

alias address

An address used by a gateway NCP and a gateway system services control point (SSCP) in one network to represent a logical unit (LU) or SSCP in another network.

alias name

A name unique within one of two or more interconnected networks that is assigned by a gateway SSCP and is used in that subnetwork to represent an NAU that resides in another subnetwork. Alias names must be predefined within a gateway SSCP; if an alias is not provided, it is assumed to be the same as the real name.

APF

(1) Authorized program facility. (2) Application processing function.

APPC

See *advanced program-to-program communication*.

APPL

Application program.

application identifier (APPLID)

The name of an application as defined to VTAM.

APPLID

Application ID.

APPN

Advanced peer-to-peer networking.

APPN network

See *advanced peer-to-peer networking network*.

APPN network node

See *advanced peer-to-peer networking (APPN) network node*.

APPN node

See *advanced peer-to-peer networking (APPN) node*.

B**base collection interval**

The primary unit, in seconds or minutes, which NPM uses to calculate the span of time in which data is collected.

bracket protocol

In SNA, a data flow control protocol in which exchanges between two session partners are achieved through the use of brackets, with one partner designated at session activation as the first speaker and the other as the bidder. The bracket protocol involves bracket initiation and termination rules.

buffer pool

(1) An area of storage in which all buffers of a program are kept. (2) In ACF/TCAM, a group of buffers having the same size. A buffer pool is established at initialization time in the message control program. The buffers are built in extents chained together.

C**cache**

(1) An optional part of the directory database in network nodes where frequently used directory information may be stored to speed directory searches. (2) To place, hide, or store in a cache.

collection interval

In NPM, a user-specified value that controls the time at which performance data is transmitted.

command list (CLIST)

A list of commands and statements designed to perform a specific function for the user.

command procedure (PROC)

In the NetView program, either a command list or a command processor.

Communications storage manager (CMS).

A component of VTAM that enables host applications to share data with VTAM and other CSM users without having to physically copy the data.

CSM

Communications storage manager.

D**DSN**

data set name.

dump

(1) To record, at a particular instant, the contents of all or part of one storage device in another storage device. Dumping is usually for the purpose of debugging. (2) Data that has been dumped. (3) To copy data in a readable format from main or auxiliary storage onto an external medium such as tape, diskette, or printer. (4) To copy the contents of all or part of virtual storage for the purpose of collecting error information.

E**EXEC**

(1) In a VM operating system, a user-written command file that contains CMS commands, other user-written commands, and execution control statements, such as branches. (2) In NPM, a user-written command file that contains NPM commands that can be run at NPM startup, online, or through the console. Also called NPM EXEC.

F**fast path**

In SAA Basic Common User Access[®] architecture, a method of doing something more directly and quickly than the usual way; for example, pressing a function key is faster than typing a command.

flow control

In SNA, the process of managing the rate at which data traffic passes between components of the network. The purpose of flow control is to optimize the rate of flow of message units with minimum congestion in the network; that is, to neither overflow the buffers at the receiver or at intermediate routing nodes, nor leave the receiver waiting for more message units.

frame

(1) The unit of transmission in some local area networks, including the IBM Token-Ring Network. It includes delimiters, control characters, information, and checking characters. (2) In SDLC, the vehicle for every command, every response, and all information that is transmitted using SDLC procedures.

FSB

File service buffer.

FST

File service task.

G**gateway**

A functional unit that interconnects two computer networks with different network architectures. A gateway connects networks or systems of different architectures. A bridge interconnects networks or systems with the same or similar architectures.

generation

The process of assembling and link editing definition statements so that resources can be identified to all the necessary programs in a network.

GTF

Generalized trace facility.

H**half-duplex (HD, HDX)**

In data communication, pertaining to transmission in only one direction at a time.

historical data

Indicates that the data displayed in the HISTORICAL DataView window was requested within a specified time span in the past from the NPM host VSAM data files. The performance data collection is not currently active. No data forwarding is required.

I**IPX**

Internetwork package exchange

ISTATUS

In VTAM and NCP, a definition specification method for indicating the initial status of resources.

J**JCL**

Job control language.

JES

Job entry subsystem (MVS).

job control language (JCL)

A control language used to identify a job to an operating system and to describe the job's requirements.

K**keyword**

(1) A name or symbol that identifies a parameter. (2) The part of a command operand that consists of a specific character string (such as DSNAME=).

KSDS

Key-sequenced data set.

L**line**

The portion of a data circuit, external to data circuit-terminating equipment (DCE), that connects the DCE to a data switching exchange (DSE), that connects a DCE to one or more other DCEs, or that connects a DSE to another DSE. Synonymous with *channel* and *circuit*.

line speed

The number of binary digits that can be sent over a telecommunication line in one second, expressed in bits per second (bps).

link

In SNA, the combination of the link connection and the link stations joining network nodes, for example a System/370™ channel and its associated protocols or a serial-by-bit connection under the control of Synchronous Data Link Control (SDLC). A link connection is the physical medium of transmission. A link, however, is both logical and physical. Synonymous with *data link*.

load module

All or part of a computer program in a form suitable for loading into main storage for execution. A load module is usually the output of a linkage editor.

logical unit (LU)

(1) A type of network accessible unit that enables end users to gain access to network resources and communicate with each other. (2) In SNA, a port through which an end user accesses the SNA network and the functions provided by system services control points (SSCPs). An LU can support at least two sessions, one with an SSCP and one with another LU, and may be capable of supporting many sessions with other LUs.

logical unit (LU) 6.2

A type of logical unit that supports general communication between programs in a distributed processing environment. LU 6.2 is characterized by (a) a peer relationship between session partners, (b) efficient utilization of a session for multiple transactions, (c) comprehensive end-to-end error processing, and (d) a generic application program interface (API) consisting of structured verbs that are mapped into a product implementation.

LPA

Link pack area.

LRECL

Logical record length.

LU

Logical unit.

LU group

In the NetView Performance Monitor (NPM), a file containing a list of related or unrelated logical units. The LU group is used to help simplify data collection and analysis.

LU type

The classification of an LU in terms of the specific subset of SNA protocols and options it supports for a given session, namely:

- The mandatory and optional values allowed in the session activation request
- The usage of data stream controls, function management headers (FMHs), request unit parameters, and sense data values
- Presentation services protocols such as those associated with FMH usage

LU types 0, 1, 2, 3, 4, 6.1, 6.2, and 7 are defined.

LU type 6.2 (LU 6.2)

A type of logical unit that supports general communication between programs in a distributed processing environment. LU 6.2 is characterized by (a) a peer relationship between session partners, (b) efficient utilization

of a session for multiple transactions, (c) comprehensive end-to-end error processing, and (d) a generic application program interface consisting of structured verbs that are mapped into a product implementation.

LU 6.2

Logical unit 6.2.

LU 6.2 session

A session that is initiated by VTAM on behalf of a logical unit (LU) 6.2 application program, or a session initiated by a remote LU in which the application program specifies that VTAM is to control the session by using the APPCCMD macroinstruction.

LU 6.2 verb

A syntactical unit in the LU 6.2 application program interface representing an operation.

M

MIB

Management information base.

module

A program unit that is discrete and identifiable with respect to compiling, combining with other units, and loading; for example, the input to or output from an assembler, compiler, linkage editor, or executive routine.

monitor

In the IBM Token-Ring Network, the function required to initiate the transmission of a token on the ring and to provide soft-error recovery in case of lost tokens, circulating frames, or other difficulties. The capability is present in all ring stations.

monitor event message

A message created in response to a value that has exceeded a user-defined threshold.

monitor resolution message

A message created when a value that has exceeded a user-defined threshold falls into normal range.

MVS

(1) Multiple virtual storage. Implies MVS/370, the MVS/XA™ product, and the MVS/ESA™ product. (2) Multiple Virtual Storage, consisting of MVS/System Product Version 1 and the MVS/370 Data Facility Product operating on a System/370 processor.

MVS/ESA product

Multiple Virtual Storage/Enterprise Systems Architecture.

MVS/XA product

Multiple Virtual Storage/Extended Architecture product, consisting of MVS/System Product Version 2 and the MVS/XA Data Facility Product, operating on a System/370 processor in the System/370 extended architecture mode.

MWA

Message work area.

N

NCP

Network Control Program.

NCP/token ring interconnect (NTRI)

An NCP function that allows a communication controller to attach to the IBM Token-Ring Network and that provides both subarea and peripheral node DLC services in the SNA network.

NCP/EP definition facility (NDF)

A program that is part of System Support Programs (SSP) and is used to generate a partitioned emulation program (PEP) load module or a load module for a Network Control Program (NCP) or for an Emulation Program (EP).

NCP/Token Ring interconnect (NTRI)

An NCP function that allows a communication controller to attach to the IBM Token-Ring Network and that provides both subarea and peripheral node data link control (DLC) services in the SNA network.

NEO

Network extension option.

NEOPU

Network extension option physical unit.

NetView Performance Monitor (NPM)

An IBM-licensed program that collects, monitors, analyzes, and displays data relevant to the performance of a VTAM telecommunication network. It runs as an online VTAM application program.

NetView Program

An IBM-licensed program used to monitor a network, manage it, and diagnose its problems.

Network Control Program (NCP)

An IBM-licensed program that provides communication controller support for single-domain, multiple-domain, and interconnected network capability.

network gateway accounting (NGA)

The NetView Performance Monitor (NPM) subsystem that receives traffic information from the gateway NCP for sessions that flow throughout a network.

network node (NN)

Synonym for *APPN network node*. A node that offers full SNA end-user services and that can provide the following to its local LUs and client end nodes:

- Distributed directory services
- Intermediate routing services within an APPN network
- Network services

The APPN network node cooperates with other network nodes to maintain a network topology database, which is used to select optimal routes for LU-LU sessions based on requested classes of service. An APPN network node can also attach to a subarea network as a peripheral node or to other end nodes.

network session accounting (NSA)

The NetView Performance Monitor (NPM) subsystem that receives session accounting information from the NCP for sessions that flow throughout a network.

network transit time

In the NetView Performance Monitor (NPM), the average time (in seconds) that all transactions spend in the network.

NGA

Network gateway accounting.

node type

A designation of a node according to the protocols it supports and the network accessible units that it can contain. Five types are defined: 1, 2.0, 2.1, 4, and 5. Within a subarea network, type 1, type 2.0, and type 2.1 nodes are peripheral nodes, while type 4 and type 5 nodes are subarea nodes.

non-BC

Non-broadcast.

NPALU

Network performance analysis logical unit.

NPM

NetView Performance Monitor.

NPM log

In NPM, a data set in which NPM data can be stored.

NPM security profile

In NPM, a data set that can be created to restrict operator access to data and functions.

O**octet**

(1) A byte that consists of 8 bits. (2) A byte composed of 8 binary elements.

ODAI

Origin destination assignment indicator.

ODLC

Outboard data link control.

operand

(1) An entity on which an operation is performed. (2) That which is operated upon. An operand is usually identified by an address part of an instruction. (3) Information entered with a command name to define the data on which a command processor operates and to control the execution of the command processor. (4) An expression to whose value an operator is applied.

operator transit time

In the NetView Performance Monitor (NPM), the sum of host and network transit times.

OS/390 operating system

An IBM licensed program that not only includes and integrates functions previously provided by many IBM software products (including the MVS operating system) but also (a) is an open, secure operating system for the IBM S/390 family of enterprise servers, (b) complies with industry standards, (c) is Year 2000 ready and enabled for network computing and e-business, and (d) supports technology advances in networking server capability, parallel processing, and object-oriented programming.

P**partitioned data set (PDS)**

A data set in direct access storage that is divided into partitions, called members, each of which can contain a program, part of a program, or data.

path information unit (PIU)

A message unit consisting of a transmission header (TH) alone, or a TH followed by a basic information unit (BIU) or a BIU segment.

PDS

Partitioned data set.

PDU

Protocol data unit.

pending active session

In VTAM, the state of an LU-LU session recorded by the system services control point (SSCP) when it finds both logical units (LUs) available and has sent a CINIT request to the primary logical unit (PLU) of the requested session.

PEP

Partitioned emulation programming.

physical unit (PU)

The component that manages and monitors the resources (such as attached links and adjacent link stations) associated with a node, as requested by an SSCP via an SSCP-PU session. An SSCP activates a session with the physical unit in order to indirectly manage, through the PU, resources of the node such as attached links. This term applies to type 2.0, type 4, and type 5 nodes only.

PIU

Path information unit.

PLU

Primary logical unit.

poll

(1) To determine whether any remote device on a telecommunication line is ready to transmit data. (2) To execute a polling sequence.

polling

(1) On a multipoint connection or a point-to-point connection, the process whereby data stations are invited, one at a time, to transmit. (2) Interrogation of devices for such purposes as to avoid contention, to determine operational status, or to determine readiness to send or receive data.

positive poll

A positive response to polling in a binary synchronous terminal.

positive response

In SNA, a response indicating that a request was received and processed.

protocol data unit (PDU)

A unit of data in a network. For SDLC protocols, a PDU is a path information unit. For token-ring protocols, a PDU is an I-frame.

PST

(1) Process scheduling table. (2) Program scheduling table.

PU

Physical unit.

PU type

(1) Deprecated term for *node type*. (2) The type of physical unit in a node.

Q**QCB**

Queue control block.

R**RACF**

Resource Access Control Facility.

real-time data

Indicates an active data forwarding collection. The performance information is current, and the data is displayed online in a REAL-TIME DataView window.

Real-time performance data is collected at regular intervals and the DataView is refreshed automatically, as soon as the data arrives.

refresh interval

The interval at which NPM displays the most recent data collected from VTAM.

resolution message

A message created when a value that has exceeded a user-defined threshold falls into normal range.

Resource Access Control Facility (RACF)

An IBM-licensed program that provides for access control by identifying and verifying the users of the system, by authorizing access to protected resources, by logging the detected unauthorized attempts to enter the system, and by logging the detected accesses to protected resources.

resource table

In ACF/TCAM extended networking, a main-storage table that associates each resource identifier with an external logical unit (LU) or application program.

resource types

In the NetView program, a concept to describe the organization of panels. Resource types are defined as central processing unit, channel, control unit, and I/O device for one category; and communication controller, adapter, link, cluster controller, and terminal for another category. Resource types are combined with data types and display types to describe display organization.

response time monitor (RTM)

A feature available with certain hardware devices to allow measurement of response times, which may be collected and displayed by NetView.

RNR

Receive not ready.

router

(1) A computer that determines the path of network traffic flow. The path selection is made from several paths based on information obtained from specific protocols, algorithms that attempt to identify the shortest or best path, and other criteria such as metrics or protocol-specific destination addresses. (2) An attaching device that connects two LAN segments, which use similar or different architectures, at the reference model network layer. (3) In OSI terminology, a function that determines a path by which an entity can be reached.

routing

(1) The process of determining the path to be used for transmission of a message over a network. (2) The assignment of the path by which a message will reach its destination.

S**sampling interval**

The interval at which NPM updates its own counters. This updated data is not displayed until the next refresh interval. If a sampling interval is set higher than a refresh interval, the sampling interval is automatically reset to the refresh interval.

SDLC

Synchronous Data Link Control.

secondary logical unit (SLU)

In SNA, the logical unit (LU) that contains the secondary half-session for a particular LU-LU session. An LU may contain secondary and primary half-sessions for different active LU-LU sessions.

segment

In the IBM Token-Ring Network, a section of cable between components or devices. A segment may consist of a single patch cable, several patch cables that are connected, or a combination of building cable and patch cables that are connected.

service point (SP)

An entry point that supports applications that provide network management for resources not under the direct control of itself as an entry point. Each resource is either under the direct control of another entry point or not under the direct control of any entry point. A service point accessing these resources is not required to use SNA sessions (unlike a focal point). A service point is needed when entry point support is not yet available for some network management function.

session collection

The NPM subsystem that collects, monitors, and displays data collected in the host for analysis.

session data

Data about sessions collected by NPM.

session monitor

The component of the NetView program that collects and correlates session-related data and provides online access to this information.

session partner

In SNA, one of the two network accessible units (NAUs) having an active session.

session trace

In NetView, the function that collects session trace data for sessions involving specified resource types or involving a specific resource.

Simple Network Management Protocol (SNMP)

In the Internet suite of protocols, a network management protocol that is used to monitor routers and attached networks. SNMP is an application layer protocol. Information on devices managed is defined and stored in the application's Management Information Base (MIB).

SIO

Start I/O.

SLU

Secondary logical unit.

SMF

System management facility.

SNA

Systems Network Architecture.

SNMP

See *Simple Network Management Protocol*.

soft error

(1) An error that occurs sporadically and that may not appear on successive attempts to read data. (2) An intermittent error on a network that requires retransmission.

Note: A soft error by itself does not affect overall reliability of a network, but reliability may be affected if the number of soft errors reaches the ring error limit.

SSCP

System services control point.

subarea

A portion of the SNA network consisting of a subarea node, attached peripheral nodes, and associated resources. Within a subarea node, all network accessible units (NAUs), links, and adjacent link stations (in attached peripheral or subarea nodes) that are addressable within the subarea share a common subarea address and have distinct element addresses.

Systems Network Architecture (SNA)

The description of the logical structure, formats, protocols, and operational sequences for transmitting information units through, and controlling the configuration and operation of, networks.

T**teleprocessing request block (TPRB)**

A function used by NPM to control input/output requests to or from terminals to files.

threshold

(1) In NetView, a percentage value, set for a resource and compared to a calculated error-to-traffic ratio. (2) In NPM, high or low values supplied by the user to monitor data and statistics being collected.

TP

(1) Transmission priority. (2) Transaction program.

TPR

Transaction processing routine.

TPRB

Teleprocessing request block.

transit time

In NPM, transit time is the same as response time.

U**unbind**

In SNA, a request to deactivate a session between two logical units (LUs).

V**Virtual Storage Access Method (VSAM)**

An access method for direct or sequential processing of fixed and variable-length records on direct access devices. The records in a VSAM data set or file can be organized in logical sequence by a key field (key sequence), in the physical sequence in which they are written on the data set or file (entry-sequence), or by relative-record number.

Virtual Telecommunications Access Method (VTAM)

An IBM-licensed program that controls communication and the flow of data in an SNA network. It provides single-domain, multiple-domain, and interconnected network capability.

VSAM

Virtual Storage Access Method.

VTAM

Virtual Telecommunications Access Method.

W**write-to-operator with reply (WTOR)**

An optional user-coded service whereby a message can be written to the system console operator informing the operator of errors and unusual system conditions that may need correcting.

WTOR

Write-to-operator with reply.

Index

A

ABEND command
 example 228
 keywords
 Host 228
 L 228
accounting data collection 7, 203
Accounting panel (FNM02ACC) 203
active NetWare collection 259
Alter Deferred Session panel (FNM05ALD) 94
Alter Session panel (FNM05ALT) 93
altering NPM collections
 for network data (NCPs) 45
 for router resources 47
 for session data 91, 94
 for VTAM data 157, 162
Alternate Program Function Key Definition panel
 (FNM00PF2) 17
archiving data files 391
asterisk, to indicate error 11
authorization 15

B

BACKWARD command 215
binding to remote NPMs 189
books
 feedback xx
 online xx
 ordering xx
BOTTOM command 215
building VSAM KSDS 401

C

changing your NPM password 9
characters
 national 225
 non-US keyboard 226
Clear key 12
CLOCK keyword
 general information 220
coding NPM commands 225
collecting data
 active NetWare collection 259
 data collection option 14
 data types 5
 for accounting 203
 for NetWare resources 175, 218
 overview 5

collection intervals
 example 224
 general information 223
 in LAN bridge data collection 224, 225
 in network data collection 224
 in session data collection 224
color, used in messages 12
Command field 9, 11
console commands,
 ABEND 228
 DISPLAY 229
 EXECUTE 231
 GENERIC 233
 INTERVAL 236
 IPCOLL 237
 LANMGR 243
 LBRGCOLL 245
 LINE 249
 LSEGCOLL 252
 LU 255
 LUGROUP 257
 LWGCOLL 259
 LWGRES 267
 LWGSTOP 269
 NCP 270
 NETCOLL 277
 NGACNTL 295
 NGAMDFY 297
 NOTRACE 300
 NSACNTL 302
 NSAMDFY 304
 NSASOLCT 308
 PU 310
 SEND 313
 SESSCOLL 322
 SMFCNTL 330
 SNAP 332
 SNMPTGT 334
 STOP 336
 TIME 337
 TRACE 338
 VADRCOLL 340
 VAPLCOLL 344
 VAPNCOLL 348
 VARY 351
 VBPCOLL 353
 VCSMOLL 359
 VDEVCOLL 362
 VGBLCOLL 368
 VMNPOLL 374
 VRPCOLL 378
 VVRCOLL 382
online commands,
 BACKWARD 215
 BOTTOM 215

Command field (*continued*)

online commands, (*continued*)

CURSOR 215
DISTRIB 215
DOWN 216
END 216
FORWARD 216
HELP 216
HELPMMSG 216
HOSTID 216
KEYS 216
LEFT 216
LINE 216, 217
LIST 216
LOCATE 216
LOGOFF 216
NATLANG 216
NCP 216
NEXT 217
NPM 217
PANELID 217
PFSHOW 217
PREVIOUS 217
PRINT 217
PROFILE 217
RECONFIG 217
RESHOW 12
RETURN 217
RIGHT 217
SORT 218
SUMMARY 218
TERMINAL 218
TIME 218
TOP 218
TRANSIT 218
UP 218
VOLUME 218
WHO 218

system console commands, 218

Command List panel (FNM03NCL) 29, 37

Command List panel (FNM03VCL) 157

commands,

assigning to PF keys 16

console commands,

SESSAPPL 315

data collection

issuing 219

list of 218

using 11

communication between NPMs 15

control functions

accounting functions 203

binding to NPM 189

displaying NCP detail data 191, 192

displaying performance measurement tables 193

displaying session information 189

displaying SMF record status 198

displaying user information 189

ending NPM 211

executing NPM EXECs 200

managing data files 196

control functions (*continued*)

managing LAN collection 200, 202

managing NPALUs 190

modifying gateway accounting 210

modifying session accounting 206

selecting accounting NCPs 205

sending messages to other NPM users 199

unbinding NPM users 189

control keys

Clear 12

Enter 12

PA2 12

conventions used in this book xxiii

CURSOR command 215

Customer Support xxii

customizing NPM 7

D

dash, to indicate error 11

data analysis option field 14

Data File Display and Management panel (FNM02OFL)

managing data files 197

data files

managing 196

date field 18

Destination Subarea Selection panel (FNM02SS1)

virtual route data

collecting and displaying 145

Direct Commands panel (FNM02CMD) 159

DISPLAY command

example 230

keywords

Host 230

ID 229

L 230

Display Router Information panel (FNM03RSD) 36

Display Router Information panel (FNM03RSY) 36

displaying data

for user session accounting 19

in summary 7

overview 7

DISTRIB command 215

Distribution Interval panel (FNM03D02) 121

Distribution Summary panel (FNM03D02) 121

DOWN command 216

E

e-mail contact xxi

END command 216

ending NPM 210

Enter key 12

entering data

errors in 10

on panels 10

environment, customizing 7, 16

Errors field
 in data entry 10
 messages for 10, 12
 EXECs, running 200
 Execute an NPM Exec panel (FNM02OEX) 200
 EXECUTE command 231
 example 231
 keywords
 Host 231
 L 231
 Member 231
 PR 231

F

fast paths
 using 15
 feedback about publications xxi
 File Services Summary panel (FNM02OPR) 195
 file sorting 401
 FNMGDEF, using 401
 FNMPOINT, using 399
 FNMSEL statement
 example 394
 keywords
 APPL (primary selector) 397
 DATBE 398
 DATSP 398
 HOST 398
 LN (primary selector) 397
 LU (primary selector) 397
 NODE (primary selector) 398
 PRINT 397
 PU (primary selector) 398
 RECTYPE 398
 TIMBE 399
 TIMSP 399
 TPR 399
 VR (primary selector) 398
 primary selectors 394
 rules for coding 394

FNMxxxxx panel IDs

FNM00ACC 20
 FNM00CLF 9
 FNM00LNG 20
 FNM00PF1 17
 FNM00PF2 17
 FNM00PRI 14, 16
 FNM00PRM 16
 FNM00UPB 19
 FNM00VAR 18
 FNM01LAN 125
 FNM01NET 23
 FNM01OMN 187
 FNM01RTM 117
 FNM01SES 87
 FNM01VTM 139
 FNM02ACC 203
 FNM02AS1 152

FNMxxxxx panel IDs (continued)

FNM02AS2 153
 FNM02BS1 144
 FNM02BS2 145
 FNM02CMD 159
 FNM02DNI 98
 FNM02DNM 102
 FNM02DRM 119
 FNM02DS1 148
 FNM02DS2 149
 FNM02DS3 149
 FNM02GS1 141
 FNM02GS2 142
 FNM02GS3 143
 FNM02GS4 143
 FNM02LBB 201
 FNM02LBM 132, 135, 136
 FNM02LBS 126
 FNM02LMC 200
 FNM02LSB 202
 FNM02LSS 129
 FNM02OCC 191
 FNM02OCN 193
 FNM02OCR 191
 FNM02OCS 192
 FNM02OCT 193
 FNM02OEX 200
 FNM02OFL 197
 FNM02OMS 199
 FNM02OPC 196
 FNM02OPM 194
 FNM02OPR 195
 FNM02OPS 194
 FNM02OPV 195
 FNM02OSM 198
 FNM02OSS 189
 FNM02OTR 211
 FNM02OUS 189
 FNM02PDT 107
 FNM02PHA 110
 FNM02PHN 109
 FNM02PLA 111
 FNM02PLP 112
 FNM02PNL 111
 FNM02PPL 113
 FNM02PS1 151
 FNM02PS2 152
 FNM02PSM 108
 FNM02PVL 113
 FNM02RS1 71
 FNM02RSL 25, 39, 42
 FNM02RSR 33, 40
 FNM02RVM 28, 51, 69
 FNM02SAM 114
 FNM02SAN 105
 FNM02SAR 123
 FNM02SL1 38
 FNM02SL2 40
 FNM02SS1 145
 FNM02UPL 41
 FNM03CU0 66

FNMxxxxx panel IDs (continued)

FNM03CU4 66
 FNM03CUL 67
 FNM03D02 121
 FNM03DI1 103
 FNM03DI2 100
 FNM03LB2 134
 FNM03LBC 127
 FNM03LBD 128
 FNM03LBR 133
 FNM03LSC 130
 FNM03LSD 131
 FNM03LSR 135
 FNM03MP1 150
 FNM03MP2 150
 FNM03NCL 29, 37
 FNM03R10 57
 FNM03R11 55
 FNM03RI1 71
 FNM03RI2 72
 FNM03RI3 73
 FNM03RSD 36
 FNM03RSY 36
 FNM03RV1 59
 FNM03RV2 60
 FNM03RV3 62
 FNM03RV4 64
 FNM03RV5 58
 FNM03RV6 69
 FNM03RV7 68
 FNM03RV8 52, 53
 FNM03RV9 54
 FNM03RVA 56
 FNM03RVB 55
 FNM03RVD 52
 FNM03RVE 70, 137
 FNM03RVF 53
 FNM03RVG 57
 FNM03RVH 64
 FNM03RVL 58
 FNM03RVN 61
 FNM03RVO 64
 FNM03RVP 65
 FNM03RVQ 62
 FNM03RVR 60
 FNM03RVS 63
 FNM03RVT 67
 FNM03RVU 56
 FNM03RVV 54
 FNM03RVX 68
 FNM03RVY 59
 FNM03RVZ 52
 FNM03SAE 114
 FNM03SAS 89, 93
 FNM03SMI 101
 FNM03SMN 105, 106
 FNM03SMR 122, 124
 FNM03SSA 91
 FNM03STD 26, 43, 46, 49
 FNM03STE 35, 44, 48, 50
 FNM03STM 27, 30, 37, 43, 46

FNMxxxxx panel IDs (continued)

FNM03TI1 103
 FNM03TI2 120
 FNM03TI3 99
 FNM03V01 104
 FNM03V02 101
 FNM03VAN 156, 165
 FNM03VCL 157
 FNM03VE1 141
 FNM03VS1 146
 FNM03VS2 147
 FNM03VS3 147
 FNM03VT2 155, 158, 161, 163
 FNM03VTC 155, 158, 161, 163
 FNM03VTD 154, 160, 162, 164
 FNM04AD1 172
 FNM04BD1 168
 FNM04CPC 76
 FNM04CPI 77
 FNM04DD1 170
 FNM04DD2 170
 FNM04GD1 166
 FNM04GD2 166
 FNM04GD3 167
 FNM04LTN 106, 107
 FNM04LTR 124
 FNM04MD1 171
 FNM04MEC 77, 78
 FNM04PD1 171
 FNM04SAP 92
 FNM04SSA 91
 FNM04SSD 94
 FNM04VD1 168
 FNM04VD2 169
 FNM05ALD 94
 FNM05ALT 93
 FNM0ABCG 205
 FNM0ABCS 205
 FNM0ABM2 206
 FNM0ABM3 207
 FNM0ABMG 210
 FNM0ABMM 208
 FNM0ABS2 208
 FNM0ABS3 209
 FNM0ABST 209
 FNM0G000 13
 FNMOLLOG 8
 FNM0VMON 173
 FORWARD command 216
 functional variables, modifying 18
 Functional Variables panel (FNM00VAR) 18

G

GENERIC command
 example 235
 keywords
 DNC 233
 Host 234

GENERIC command (*continued*)

keywords (*continued*)

L 234
NAME 233
NCP 234
NPACOLL 234
SESSH 234
SPEED 235

H

help

for messages 13
for panels 13
help facility option 13, 15
using online 13

HELP command 216

HELPMMSG command 216

HOST keyword

on NPMSEL statement 398

HOSTID command 216

I

IDs

for operators 8
for panels 10

INTERVAL command 236

example 236
keywords 236

INTERVAL keyword

general information 223

IP Detail Analysis panel (FNM02DNI) 98

IPCOLL command 237

keywords

CLOCK 238
DAILY 239
DEST 240
DYNAMIC 239
HOST 239
INTERVAL 238
L 239
RESOURCE 238

K

K notation on panels 11

Kb notation on panels 11

key sequence, sorting into 401

KEYS command 216

keywords, for console commands

ADDRESS on LANMGR command 243
AGENT on LWGRES command 268
BACKCONG on NETCOLL command 286
BACKUP on NCP command 271

keywords, for console commands (*continued*)

BC on LBRGCOLL command 246

BRIDGE on LBRGCOLL command 246

BUFUSE on NETCOLL command 286

BVAL on SESSCOLL command 323

BYTE

on NGAMDFY command 297

on NSAMDFY command 304

BYTERAT on NETCOLL command 286

BYTERCVD on NETCOLL command 286

BYTETRAN on NETCOLL command 286

CCUUTIL on NETCOLL command 287

CDRM

on SESSAPPL command 316

CDRM on SESSCOLL command 323

CLASS on SNAP command 332

CLOCK

on IPCOLL command 238

on LBRGCOLL command 247

on LSEGCOLL command 253

on LWGCOLL command 264

on NETCOLL command 282

on NGACNTL command 296

on NGAMDFY command 298

on NSACNTL command 303

on NSAMDFY command 305

on NSASOLCT command 308

on SESSCOLL command 324

on VADRCOLL command 341

on VAPLCOLL command 345

on VAPNCOLL command 349

on VBPLCOLL command 354

on VCSMCOLL command 360

on VDEVCOLL command 364

on VGBLCOLL command 369

on VMNPCOLL command 375

on VRTPCOLL command 379

on VVRCOLL command 383

CODE on SNAP command 332

COMM on SNMPTGT command 334

CONGEST on NETCOLL command 287

DAILY

on IPCOLL command 239

on LBRGCOLL command 247

on LSEGCOLL command 253

on LWGCOLL command 264

on NETCOLL command 283

on NGACNTL command 296

on NGAMDFY command 298

on NSACNTL command 303

on NSAMDFY command 305

on NSASOLCT command 309

on SESSCOLL command 324

on VADRCOLL command 341

on VAPLCOLL command 345

on VAPNCOLL command 349

on VBPLCOLL command 354

on VCSMCOLL command 360

on VDEVCOLL command 364

on VGBLCOLL command 369

on VMNPCOLL command 375

keywords, for console commands *(continued)*

DAILY *(continued)*

- on VRTPCOLL command 379
- on VVRCOLL command 383

DDN on SNAP command 332

DEST

- on IPCOLL command 240
- on LWGCOLL command 262
- on NETCOLL command 284
- on VADRCOLL command 341
- on VAPLCOLL command 345
- on VAPNCOLL command 349
- on VBPLCOLL command 355
- on VCSMCOLL command 360
- on VDEVCOLL command 364
- on VGBLCOLL command 369
- on VMNPCOLL command 375
- on VRTPCOLL command 379
- on VVRCOLL command 384

DESTSA on VVRCOLL command 383

DESTX

- on LWGCOLL command 263
- on NETCOLL command 285
- on VBPLCOLL command 355
- on VDEVCOLL command 365
- on VGBLCOLL command 370
- on VVRCOLL command 384

DISABLE

- on NGACNTL command 295
- on NSACNTL command 302

DISDATAG on NETCOLL command 287

DLFRAMES on NETCOLL command 287

DNC

- on GENERIC command 233
- on LINE command 249
- on LU command 255
- on NCP command 271
- on PU command 310
- on SESSAPPL command 316

DYINT on NCP command 272

DYNAMIC

- on IPCOLL command 239
- on LWGCOLL command 266
- on NETCOLL command 283
- on SESSCOLL command 324
- on VADRCOLL command 342
- on VAPLCOLL command 346
- on VDEVCOLL command 365
- on VMNPCOLL command 376
- on VRTPCOLL command 380
- on VVRCOLL command 385

ENABLE

- on NGACNTL command 295
- on NSACNTL command 302

EOT on SESSAPPL command 317

ERRCNTS on NETCOLL command 287

EXIT on SESSAPPL command 317

FORM on SNAP command 332

FREEBUF on NETCOLL command 288

FWDCONG on NETCOLL command 288

keywords, for console commands *(continued)*

GROUP

- on LWGCOLL command 264
- on VAPNCOLL command 348
- on VCSMCOLL command 359

GTF on SESSCOLL command 324

GWSESS on NGAMDFY command 298

H on SESSCOLL command 325

HOST

- on ABEND command 228
- on DISPLAY command 230
- on EXECUTE command 231
- on GENERIC command 234
- on IPCOLL command 239
- on LANMGR command 243
- on LBRGCOLL command 247
- on LINE command 250
- on LSEGCOLL command 253
- on LU command 256
- on LWGCOLL command 262
- on LWGRES command 268
- on LWGSTOP command 269
- on NCP command 272
- on NETCOLL command 283
- on NGACNTL command 296
- on NGAMDFY command 298
- on NOTRACE command 301
- on NSACNTL command 303
- on NSAMDFY command 305
- on NSASOLCT command 309
- on PU command 311
- on SEND command 314
- on SESSCOLL command 325
- on SMFCNTL command 330
- on SNAP command 333
- on STOP command 336
- on TIME command 337
- on TRACE command 338
- on VADRCOLL command 342
- on VAPLCOLL command 346
- on VAPNCOLL command 350
- on VARY command 352
- on VBPLCOLL command 356
- on VCSMCOLL command 361
- on VDEVCOLL command 366
- on VGBLCOLL command 370
- on VMNPCOLL command 376
- on VRTPCOLL command 380
- on VVRCOLL command 385

ID

- on DISPLAY command 229
- on NOTRACE command 300
- on SEND command 313
- on TRACE command 338
- on VARY command 352

IMMED on STOP command 336

INTERVAL

- on IPCOLL command 238
- on LWGCOLL command 262
- on NETCOLL command 282
- on VADRCOLL command 342

keywords, for console commands (*continued*)

INTERVAL (*continued*)

- on VAPLCOLL command 346
 - on VAPNCOLL command 350
 - on VBPLCOLL command 356
 - on VCSMROLL command 361
 - on VDEVCOLL command 366
 - on VGBLCOLL command 371
 - on VMNPCOLL command 376
 - on VRTPCOLL command 380
 - on VVRCOLL command 385
- ISTATUS on NCP command 273

L

- on ABEND command 228
- on DISPLAY command 230
- on EXECUTE command 231
- on GENERIC command 234
- on IPCOLL command 239
- on LANMGR command 243
- on LBRGCOLL command 247
- on LINE command 250
- on LSEGCOLL command 254
- on LU command 256
- on LWGCOLL command 262
- on LWGRES command 268
- on LWGSTOP command 269
- on NCP command 273
- on NETCOLL command 283
- on NGACNTL command 296
- on NGAMDFY command 298
- on NOTRACE command 301
- on NSACNTL command 303
- on NSAMDFY command 305
- on NSASOLCT command 309
- on PU command 311
- on SEND command 314
- on SESSCOLL command 325
- on SMFCNTL command 330
- on SNAP command 333
- on STOP command 336
- on TIME command 337
- on TRACE command 339
- on VARY command 352

LANMGRNM

- on LBRGCOLL command 246
- on LSEGCOLL command 253

LF on LBRGCOLL command 247

LINEUTL on NETCOLL command 288

LUMAP on SNMPTGT command 335

MAXL on NCP command 273

MAXL on SESSAPPL command 317

MAXRUSZ on SESSAPPL command 317

MEMBER on EXECUTE command 231

message_text on SEND command 313

MIN on SESSCOLL command 325

MINRUSZ on SESSAPPL command 318

monitor_data_type on SESSCOLL command 326

MONITOR on LWGCOLL command 265

MORECOLL on NETCOLL command 288

MPC on VDEVCOLL command 366

MPCGROUP on VDEVCOLL command 366

keywords, for console commands (*continued*)

MSGRATE on NETCOLL command 288

NAME

on SESSAPPL command 316

NAME on SNMPTGT command 334

on GENERIC command 233

on LINE command 249

on LU command 255

on LUGROUP command 257

on NCP command 271

on PU command 310

on SMFCNTL command 330

NB on LBRGCOLL command 246

NCP

on GENERIC command 234

on LINE command 250

on LU command 256

on NETCOLL command 282

on PU command 311

ncp_name

on NGACNTL command 295

on NGAMDFY command 297

on NSACNTL command 302

on NSAMDFY command 304

on NSASOLCT command 308

NEGPOLL on NETCOLL command 289

NEOTHRS on NSAMDFY command 305

NETWORK

on LWGRES command 267

on SESSCOLL command 327

NGA on NCP command 273

NNPAMEM on NETCOLL command 289

NNPAUTI on NETCOLL COMMAND 289

NNPCUTIL on NETCOLL command 289

NODEADDR

on LWGRES command 267

NORMAL on STOP command 336

NPACOLL

on GENERIC command 234

on LINE command 250

on LU command 256

on PU command 311

NPALU on NCP command 274

NSA on NCP command 274

NULLDDR on SESSAPPL command 318

OCTET

on NGAMDFY command 297

on NSAMDFY command 304

ONECOLL on NETCOLL command 290

OPERATOR on SESSCOLL command 327

OPTION

on SESSAPPL command 321

OPTION on SNMPTGT command 335

on LANMGR command 243

on LBRGCOLL command 247

on LSEGCOLL command 254

on LUGROUP command 257

on LWGRES command 268

on NCP command 274

on NETCOLL command 285

on VADRCOLL command 343

keywords, for console commands *(continued)*

OPTION on SNMPTGT command *(continued)*

- on VAPLCOLL command 346
- on VAPNCOLL command 350
- on VBPLCOLL command 356
- on VCSMROLL command 361
- on VDEVCOLL command 366
- on VGBLCOLL command 371
- on VMNPCOLL command 377
- on VRTPCOLL command 381
- on VVRCOLL command 386

PDSUTIL on NETCOLL command 290

PDU

- on NGAMDFY command 298
- on NSAMDFY command 306

PDUDS

- on NGAMDFY command 299
- on NSAMDFY command 306

PDURCVD on NETCOLL command 290

PDUSDISC on NETCOLL command 290

PDUTRAN on NETCOLL command 290

PIU

- on NGAMDFY command 298
- on NSAMDFY command 306

PIUDS

- on NGAMDFY command 299
- on NSAMDFY command 306

PLU on NSAMDFY command 306

PORT on SNMPTGT command 335

POSPOLL on NETCOLL command 291

PR on EXECUTE command 231

PROCUTIL on NETCOLL command 291

PUNAME on NCP command 274

QUELEN on NETCOLL command 291

RELOAD on SMFCNTL command 331

REPLNCP on NCP command 275

RESOURCE

- on IPCOLL command 238
- on LWGRES command 268
- on NETCOLL command 281
- on SESSCOLL command 323
- on VADRCOLL command 340
- on VAPLCOLL command 344
- on VBPLCOLL command 354
- on VDEVCOLL command 363
- on VGBLCOLL command 369
- on VMNPCOLL command 374
- on VRTPCOLL command 378

RETRY on SNMPTGT command 335

REXMIT on NETCOLL command 291

REXMITB on NETCOLL command 291

RNRRCVD on NETCOLL command 292

RNRTRAN on NETCOLL command 292

ROUTE on SEND command 313

RSP on SESSAPPL command 318

RTIMEOUT on NETCOLL command 292

RTM on SMFCNTL command 331

SAMPVHI on INTERVAL command 236

SAMPVLW on INTERVAL command 236

SAMPVMD on INTERVAL command 236

SDSUTIL on NETCOLL command 292

keywords, for console commands *(continued)*

SEGMENT on LSEGCOLL command 253

SEGUTIL on LSEGCOLL command 253

SERVER

- on LWGRES command 267

SESSCOLL on NCP command 275

SESSH

- on GENERIC command 234
- on LINE command 250
- on LU command 256
- on PU command 311
- on SESSCOLL command 328

SESSINT on INTERVAL command 236

SLOWDOWN on NETCOLL command 292

SLU on NSAMDFY command 306

SNI on NCP command 275

SP

- on LANMGR command 244
- on LWGRES command 267

SPEED

- on GENERIC command 235
- on LINE command 251

SRTSIZE on NCP command 275

SUBAREA on NCP command 276

SYN on SESSAPPL command 318

SYNCOUNT on SESSAPPL command 318

SYNMASK on SESSAPPL command 319

TICUTIL on NETCOLL command 293

TRANSDEF on NETCOLL command 293

TRANSIT on SESSAPPL command 320

TYPE

- on NOTRACE command 300
- on NSASOLCT command 309
- on SESSAPPL command 321
- on TRACE command 338

UPPER on NETCOLL command 284

USER on SNAP command 333

VBUFTHR on VBPLCOLL command 357

VCRPLUSR on VBPLCOLL command 357

VCSA24US on VGBLCOLL command 372

VCSAUS on VGBLCOLL command 371

VDVSLWDN on VDEVCOLL command 367

VIOUSAGE on VBPLCOLL command 357

VIOXPNLM on VBPLCOLL command 357

VLOG on SESSCOLL command 328

VR on VVRCOLL command 383

VTOTPGIN on VGBLCOLL command 372

VVRBLCKD on VVRCOLL command 386

VXPNRATE on VBPLCOLL command 357

XRES

- on LWGCOLL command 264
- on NETCOLL command 286
- on VBPLCOLL command 358
- on VDEVCOLL command 367
- on VGBLCOLL command 372
- on VVRCOLL command 386

L

- LAN Bridge Collection Control panel (FNM03LBC) 127
- LAN Bridge Control panel (FNM02LBB) 201
- LAN bridge data collection,
 - definition 6
 - displaying data
 - displaying configuration data 128
 - monitor event messages 136
 - selecting a LAN bridge 126
 - starting collection 127
- LAN Bridge Detail panel (FNM03LBR) 133
- LAN Bridge Detailed Configuration panel (FNM03LBD) 128
- LAN Bridge Lost Frames Detail panel (FNM03LB2) 134
- LAN Bridge Selection panel (FNM02LBS)
 - starting LAN bridge data collection 126
- LAN Management Control panel (FNM02LMC) 200
- LAN management option 14
- LAN Resource Type Selection panel (FNM01LAN) 125
- LAN Review panel (FNM02LBM) 132, 135, 136
- LAN Segment Collection Control panel (FNM03LSC) 130
- LAN Segment Control panel (FNM02LSB) 202
- LAN segment data collection, 216
 - displaying data 131
- LAN Segment Detail panel (FNM03LSR) 135, 216
- LAN Segment Detailed Configuration panel (FNM03LSD) 8, 14, 15, 131
- LAN Segment Selection panel (FNM02LSS) 8, 129
- LANMGR command
 - example 244
 - keywords
 - ADDRESS 243
 - Host 243
 - L 243
 - OPTION 243
 - SP 244
- LBRGCOLL command
 - example 248
 - keywords
 - BC 246
 - BRIDGE 246
 - CLOCK 247
 - DAILY 247
 - Host 247
 - L 247
 - LANMGRNM 246
 - LF 247
 - NB 246
 - OPTION 247
- LBRGINT keyword
 - on NPM statement 224, 225
- LEFT command 216
- LINE command
 - example 251
 - keywords
 - DNC 249
 - Host 250
 - L 250
 - NAME 249
 - NCP 250
 - NPACOLL 250
 - SESSH 250
 - LINE command (*continued*)
 - keywords (*continued*)
 - SPEED 251
- LINE online command 216, 217
- LIST command 216
- logging collection 259
- logging off of NPM 8
- logging on to NPM 8
- LOGOFF command 8
- LOGOFF panel (FNM00CLF) 9
- LSEGCOLL command
 - example 254
 - keywords
 - CLOCK 253
 - DAILY 253
 - Host 253
 - L 254
 - LANMGRNM 253
 - OPTION 254
 - SEGMENT 253
 - SEGUTIL 253
- LU command
 - example 256
 - keywords
 - DNC 255
 - Host 256
 - L 256
 - NAME 255
 - NCP 256
 - NPACOLL 256
 - SESSH 256
- LU Detail Analysis panel (FNM02DNM) 102
- LUGROUP command
 - example 258
 - keywords
 - NAME 257
 - OPTION 257
- LWGCOLL command
 - example 266
 - stopping collections 263
 - AGENT 260
 - CLOCK 264
 - DAILY 264
 - DEST 262
 - DESTX 263
 - DYNAMIC 266
 - GROUP 264
 - HOST 262
 - INTERVAL 262
 - L 262
 - MONITOR 265
 - NETWORK 260
 - NODEADDR 260
 - SERVER 260
 - SP 260
 - XRES 264
- LWGRES command
 - example 268
 - keywords
 - AGENT 268
 - HOST 268

LWGRES command (*continued*)

keywords (*continued*)

L 268
NETWORK 267
NODEADDR 267
OPTION 268
RESOURCE 268
SERVER 267
SP 267

LWGSTOP command

example 269

keywords

HOST 269
L 269

M

M notation on NPM panels 11

manuals

feedback xx
online xx
ordering xx

Mb notation on NPM panels 11

menus,

primary options 14

messages,

for errors 12
for operator 12
getting help with 13

modifying functional variables 18

monitor type and NetWare counter groups 265

monitoring network data,

event messages 7, 12

monitoring session data,

event messages 7, 12

N

national characters 225

national language, changing 20

National Language Session panel (FNM00LNG) 20

NATLANG command 216

NCP command 270

example 276

keywords

BACKUP 271
DNC 271
DYINT 272
Host 272
ISTATUS 273
L 273
MAXL 273
NAME 271
NGA 273
NPALU 274
NSA 274
OPTION 274

NCP command (*continued*)

keywords (*continued*)

PUNAME 274
REPLNCP 275
SESSCOLL 275
SNI 275
SRTSIZE 275
SUBAREA 276

NCP Detail Display panel (FNM02OCR) 191

NCP Detail Display panel (FNM02OCS) 192

NCP Name Selection panel (FNM02UPL) 41

NCP online command 216

NETCOLL command 277

examples 293

keywords

BACKCONG 286
BUFUSE 286
BYTERAT 286
BYTERCVD 286
BYTETRAN 286
CCUTIL 287
CLOCK 282
CONGEST 287
DAILY 283
DEST 284
DESTX 285
DISDATAG 287
DLFRAMES 287
DYNAMIC 283
ERRCNTS 287
FREEBUF 288
FWDCONG 288
HOST 283
INTERVAL 282
L 283
LINEUTIL 288
MORECOLL 288
MSGRATE 288
NCP 282
NEGPOLL 289
NNPAMEM 289
NNPAUTI 289
NNPCUTIL 289
ONECOLL 290
OPTION 285
PDSUTIL 290
PDURCVD 290
PDUSSDISC 290
PDUTRAN 290
POSPOLL 291
PROCUTIL 291
QUELEN 291
RESOURCE 281
REXMIT 291
REXMITB 291
RNRRCVD 292
RNRTRAN 292
RTIMEOUT 292
SDSUTIL 292
SLOWDOWN 292
TICUTIL 293

-
- NETCOLL command (*continued*)
 - keywords (*continued*)
 - TRANSDEF 293
 - UPPER 284
 - XRES 286
 - NetView Performance Monitor Logon panel (FNMOLLOG) 8
 - NetWare counters
 - usage on LWGCOLL command 265
 - Network Accounting Display panel (FNM02OCN) 193
 - Network Accounting Status panel (FNM0ABS2) 208
 - Network Accounting Threshold Display panel (FNM02OCT) 193
 - Network Accounting Threshold Status panel (FNM0ABS3) 209
 - Network Alter panel (FNM03STD) 46
 - Network Alter panel (FNM03STE) 48
 - Network Alter panel (FNM03STM) 30, 37, 46
 - network data collection,
 - altering 29, 37
 - displaying collected data 29, 37
 - displaying information for a specific router 36
 - displaying monitor event messages 69
 - displaying router collected data 71, 72, 73, 76, 77, 78
 - general information 5
 - starting 26
 - starting for router 35
 - stopping 29, 37
 - stopping for router 38
 - Network Gateway Accounting Modification panel (FNM0ABMG) 210
 - Network Gateway Accounting NCP Selection panel (FNM0ABCG) 205
 - Network Resource Type Selection panel (FNM01NET) 23
 - Network Review Data for Ethernet Resources panel (FNM03RV7) 68
 - Network Review Data for Ethernet Resources panel (FNM03RVT) 67
 - Network Review Data for Frame Relay Resources panel (FNM03R10) 57
 - Network Review Data for Frame Relay Resources panel (FNM03R11) 55
 - Network Review Data for Frame Relay Resources panel (FNM03RV9) 54
 - Network Review Data for Frame Relay Resources panel (FNM03RVA) 56
 - Network Review Data for Frame Relay Resources panel (FNM03RVB) 55
 - Network Review Data for Frame Relay Resources panel (FNM03RVF) 53
 - Network Review Data for Frame Relay Resources panel (FNM03RVU) 56
 - Network Review Data for Frame Relay Resources panel (FNM03RVV) 54
 - Network Review Data for NEO Resources panel (FNM03RV5) 58
 - Network Review Data for NEO Resources panel (FNM03RVG) 57
 - Network Review Data for NTRI Resources panel (FNM03RV3) 62
 - Network Review Data for NTRI Resources panel (FNM03RV4) 64
 - Network Review Data for NTRI Resources panel (FNM03RVH) 64
 - Network Review Data for NTRI Resources panel (FNM03RVN) 61
 - Network Review Data for NTRI Resources panel (FNM03RVO) 64
 - Network Review Data for NTRI Resources panel (FNM03RVQ) 62
 - Network Review Data for NTRI Resources panel (FNM03RVS) 63
 - Network Review Data for ODLC LAN Resources panel (FNM03RV8) 52, 53
 - Network Review Data for ODLC LAN Resources panel (FNM03RVD) 52
 - Network Review Data for ODLC LAN Resources panel (FNM03RVZ) 52
 - Network Review Data for X.25 Resources panel (FNM03RV6) 69
 - Network Review Data for X.25 Resources panel (FNM03RVX) 68
 - Network Review Data panel (FNM03CU0) 66
 - Network Review Data panel (FNM03CU4) 66
 - Network Review Data panel (FNM03CUL) 67
 - Network Review Data panel (FNM03RV1) 59
 - Network Review Data panel (FNM03RV2) 60
 - Network Review Data panel (FNM03RVL) 58
 - Network Review Data panel (FNM03RVP) 65
 - Network Review Data panel (FNM03RVR) 60
 - Network Review Data panel (FNM03RVY) 59
 - Network Review panel (FNM02RVM) 28, 51, 69
 - Network Session Accounting CCU Selection panel (FNM0ABCS) 205
 - Network Session Accounting Modification panel (FNM0ABM2) 206
 - Network Session Accounting Modification panel (FNM0ABMM) 208
 - Network Session Accounting Status panel (FNM0ABST) 209
 - Network Session Accounting Threshold Modification panel (FNM0ABM3) 207
 - Network Start panel (FNM03STD) 26, 43
 - Network Start panel (FNM03STE) 35, 44
 - Network Start panel (FNM03STM) 27, 43
 - Network Stop panel (FNM03STD) 49
 - Network Stop panel (FNM03STE) 50
 - NEXT command 217
 - NGACNTL command
 - example 296
 - keywords
 - CLOCK 296
 - DAILY 296
 - DISABLE 295
 - ENABLE 295
 - Host 296
 - L 296
 - ncp_name 295
 - NGAMDFY command
 - example 299
 - keywords
 - BTYE 297
 - CLOCK 298
 - DAILY 298
-

NGAMDFY command (*continued*)

keywords (*continued*)

GWSESS 298
Host 298
L 298
ncp_name 297
OCTET 297
PDU 298
PDUDS 299
PIU 298
PIUDS 299

non-US keyboard characters 226

notations used on NPM panels 11

NOTRACE command

example 301

keywords

Host 301
ID 300
L 301
TYPE 300

NPALU, binding to NPM 190

NPALU Display and Management panel (FNM02OCC) 191

NPM (NetView Performance Monitor)

overview 5

NPM command 217

NPM control option 14

NPM Help Facility panel (FNM0G000) 13

NPM report generation 7

NPM Session Analysis Summary - Application panel
(FNM03SMN) 105, 106

NPM Session Analysis Summary - IP Address
(FNM03SMI) 101

NPM Session Summary LU List - Application panel
(FNM04LTN) 106

NPM Session Summary LU List - Node panel
(FNM04LTN) 107

NPM-to-NPM communication 15

NPMARCHV

sample 391

step 0, archiving the file 394

step 1, selecting records 394

step 2, adding pointers 399

step 3, sorting indexed file 401

step 4, building VSAM KSDS 401

NPMSEL statement

APPL keyword 397

DATSP keyword 398

LN keyword 397

NODE keyword 398

PRINT keyword 397

PU keyword 398

RECTYPE keyword 398

TIMBE keyword 399

TIMSP keyword 399

TPR keyword 399

VR keyword 398

NSACNTL command

example 303

keywords

CLOCK 303
DAILY 303

NSACNTL command (*continued*)

keywords (*continued*)

DISABLE 302
ENABLE 302
Host 303
L 303
ncp_name 302

NSAMDFY command

example 306

keywords

BYTE 304
CLOCK 305
DAILY 305
Host 305
L 305
ncp_name 304
NEOTHRSH 305
OCTET 304
PDU 306
PDUDS 306
PIU 306
PIUDS 306
PLU 306
SLU 306

NSASOLCT command

example 309

keywords

CLOCK 308
DAILY 309
Host 309
L 309
ncp_name 308
TYPE 309

O

online help 13

online publications xxi

operator profile

assigning PF keys 16

changing national language 20

changing password 9

modifying variable functions 18

Option field 11

OPTION keyword

general information 221

options,

primary 14

selecting on panels 10

ordering publications xxi

P

PA◀(program access) keys 12

PA2 key 12

PANELID command 10, 217

panels,
 ID, displaying 10
 symbols and notations 11
 using 10, 15

passwords
 changing 9
 using 8

Performance Measurement Table Display panel
 (FNM02OPM) 194

Performance Status - Host/Applications panel
 (FNM02PHA) 110

Performance Status - Line/Application panel
 (FNM02PLA) 111

Performance Status - Line/Session Volumes panel
 (FNM02PVL) 113

Performance Status - Lines panel (FNM02PNL) 111

Performance Status - Logical Unit panel (FNM02PPL) 113

Performance Status - Nodes panel (FNM02PHN) 109

Performance Status - Physical Unit panel (FNM02PLP) 112

Performance Status Analysis panel (FNM02PDT) 107

Performance Status Host Selection panel (FNM02PSM) 108

PF (program function) keys
 assigning 16
 displaying 12

PFSHOW command 217

pointer report 400

pointers, adding to data files 399

PREVIOUS command 217

primary options 14

Primary Options panel (FNM00PRI) 14, 16

PRINT command 217

problem determination,
 menu option 15

PROFILE command 217

Profile field 8

Program Function Key Definition panel (FNM00PF1) 17

PU command
 example 311
 keywords
 DNC 310
 Host 311
 L 311
 NAME 310
 NCP 311
 NPACOLL 311
 SESSH 311

publications
 feedback xx
 online xx
 ordering xx

Q

question mark, to indicate error 11

R

reassigning PF keys 16

rebuilding data files,
 adding pointer records 399
 building key sequenced file 401
 general information 391
 selecting records from archived file 394
 sorting indexed file 401

RECONFIG command 217

REFRESH command 10

REPRO function, using 401

RESHOW command 12

Resource List panel (FNM02RS1) 71

Resource List panel (FNM02RSL) 25, 39, 42

Resource List panel (FNM02RSR) 33, 40

Response Time/Interval panel (FNM03TI2) 120

Response Times Management panel (FNM01SES) 87

RETURN command 217

Review Monitor Event Messages panel (FNM03RVE) 70, 137

RIGHT command 217

RTM (response time monitor)
 definition 6

RTM data collection,
 determining collection status 119
 disabling RTM collection 118
 enabling RTM collection 118
 performing LU detail analysis, 119
 LU response time distribution by interval 120
 LU response time distribution summary 121
 LU response time summary 122
 LU response times by interval 120
 performing session analysis 123

RTM LU Detail Analysis panel (FNM02DRM) 119

RTM Management panel (FNM01RTM) 117

RTM Session Analysis Summary - Application panel
 (FNM03SMR) 122, 124

RTM Session Analysis Summary panel (FNM02SAR) 123

RTM Session Summary LU List - Virtual Route
 (FNM04LTR) 124

rules for coding NPM commands 225

S

scrolling, changing the default 18

security, understanding 9, 18

Security Profile panel (FNM00UPB) 19

Select and List panel (FNM02SL1) 38

Select and List panel (FNM02SL2) 40

Select Option field 9

selecting records from archived files, 394

SEND command
 example 314
 keywords
 Host 314
 ID 313
 L 314
 message_text 313
 ROUTE 313

Send Message panel (FNM02OMS) 199

sending messages to an NPM user 199
 SESSAPPL command
 keywords
 CDRM 316
 DNC 316
 EXIT 317
 MAXL 317
 MAXRUSZ 317
 MINRUSZ 318
 NAME 316
 NULLDDR 318
 OPTION 321
 RSP 318
 SYN 318
 SYNCOUNT 318
 SYNMASK 319
 TRANSIT 320
 TYPE 321
 SESSAPPL commands
 keywords
 EOT 317
 SESSCOLL command
 example 328
 keywords
 BVAL 323
 CDRM 323
 CLOCK 324
 DAILY 324
 GTF 324
 H 325
 HOST 325
 L 325
 MIN 325
 monitor_data_type 326
 NETWORK 327
 OPERATOR 327
 RESOURCE 323
 SESSH 328
 VLOG 328
 SESSINT keyword
 examples 223, 224
 session accounting data 19
 Session Accounting Data panel (FNM00ACC) 20
 Session Analysis panel (FNM02SAN) 105
 Session Collection Performance panel (FNM02OPC) 196
 session data collection,
 active collections 91
 altering 91, 94
 deferred collections 94
 definition 6
 displaying, 91, 94
 IP transit time/interval data 98
 LU detail data 102
 performance status information 107
 session analysis summary data 105
 session monitor event messages 114
 starting 88
 stopping 91, 94
 Session Display and Management panel (FNM02OSS) 189
 session file,
 archiving 391
 session file, (*continued*)
 rebuilding 391
 Session Monitor Event Messages panel (FNM03SAE) 114
 Session Monitor Review Menu panel (FNM02SAM) 114
 Session Monitor Selection panel (FNM03SAS) 89, 93
 Session Status/Stop (Active) Details panel (FNM04SSA) 91
 Session Status/Stop (Active) Node Selection panel
 (FNM03SSA) 91
 Session Status/Stop (Active) Resource panel (FNM04SAP) 92
 Session Status/Stop (Deferred) Resource panel
 (FNM04SSD) 94
 SMF records, displaying 198
 SMF User Records Display and Management panel
 (FNM02OSM) 198
 SMFCNTL command
 example 331
 keywords
 Host 330
 L 330
 NAME 330
 RELOAD 331
 RTM 331
 SNAP command
 example 333
 keywords
 CLASS 332
 CODE 332
 DDN 332
 FORM 332
 Host 333
 L 333
 USER 333
 SNMP router data collection 7
 SNMPTGT command
 keywords
 COMM 334
 LUMAP 335
 NAME 334
 OPTION 335
 PORT 335
 RETRY 335
 SORT command 218
 sorting files 401
 special characters 226
 starting NPM collections
 for a LAN bridge 126
 for a LAN segment 129
 for NetWare data 259
 for network data (NCPs) 42
 for router resources 35, 44
 for RTM data 118
 for session data 88
 for VTAM data 154, 160
 address space 152
 application 151
 buffer pool 144
 device 148
 global 141
 virtual route 145
 STOP command
 example 336

STOP command (*continued*)

keywords

Host 336

IMMED 336

L 336

NORMAL 336

stopping NPM collections

for a LAN bridge 127

for a LAN segment 130

for NetWare data 267

for network data (NCPs) 49

for router resources 38, 50

for RTM data 118

for session data 91, 94

for VTAM data 157, 164

SUMMARY command 218

Summary Display panel (FNM02OPS) 194

symbols used on NPM panels 11

syntax diagrams, how to use xxiii

system console,

entering commands 219

SYSUDUMP 394

T

TERMINAL online command 218

Termination panel (FNM02OTR) 211

TIME command

example 337

keywords

Host 337

L 337

Time field

converting zone 18

timing of data collection, specifying 220

Tivoli Customer Support xxii

TOP command 218

TRACE command

example 339

keywords

Host 338

ID 338

L 339

TYPE 338

TRANSIT command 218

Transit Time Distributions/Interval panel (FNM03DI1) 103

Transit Time Distributions/Interval panel (FNM03DI2) 100

Transit Time/Interval panel (FNM03TI1) 103

Transit Time/Interval panel (FNM03TI3) 99

U

unbinding from remote NPMs 189

unbinding users from NPM 189

UP command 218

User ID 8, 16

user information, displaying 189

user profile option 14

User Profile panel (FNM00PRM) 16

Users Display and Management panel (FNM02OUS) 189

V

VADRCOLL command

example 343

keywords

CLOCK 341

DAILY 341

DEST 341

DYNAMIC 342

HOST 342

INTERVAL 342

OPTION 343

RESOURCE 340

VAPLCOLL command

example 347

keywords

CLOCK 345

DAILY 345

DEST 345

DYNAMIC 346

HOST 346

INTERVAL 346

OPTION 346

RESOURCE 344

VAPNCOLL command

example 350

keywords

CLOCK 349

DAILY 349

DEST 349

GROUP 348

HOST 350

INTERVAL 350

OPTION 350

variables, functional 18

VARY command

example 352

keywords

Host 352

ID 352

L 352

VBPCOLL command

example 358

keywords

CLOCK 354

DAILY 354

DEST 355

DESTX 355

HOST 356

INTERVAL 356

OPTION 356

RESOURCE 354

VBUFTHR 357

VCRPLUSR 357

VIOUSAGE 357

VBPCOLL command (*continued*)

keywords (*continued*)

VIOXPNLM 357
VXPNRATE 357
XRES 358

VCSMROLL command

example 361

keywords

CLOCK 360
DAILY 360
DEST 360
GROUP 359
HOST 361
INTERVAL 361
OPTION 361
RESOURCE 359

VDEVCOLL command

example 367

keywords

CLOCK 364
DAILY 364
DEST 364
DESTX 365
DYNAMIC 365
HOST 366
INTERVAL 366
MPC 366
MPCGROUP 366
OPTION 366
RESOURCE 363
VDVSLWDN 367
XRES 367

VGBLCOLL command

example 373

keywords

CLOCK 369
DAILY 369
DEST 369
DESTX 370
HOST 370
INTERVAL 371
OPTION 371
RESOURCE 369
VCSA24US 372
VCSAUS 371
VTOTPGIN 372
XRES 372

View VTAM Environment panel (FNM03VE1) 141
Virtual Route Current Data panel (FNM03VS2) 147
Virtual Route Current Data panel (FNM03VS3) 147
Virtual Route Detail Data panel (FNM04VD1) 168
Virtual Route Detail Data panel (FNM04VD2) 169
Virtual Route Selection panel (FNM03VS1) 146
Virtual Storage Summary Display panel (FNM02OPV) 195

VMNPCOLL command

example 377

keywords

CLOCK 375
DEST 375
DYNAMIC 376
HOST 376

VMNPCOLL command (*continued*)

keywords (*continued*)

INTERVAL 376
OPTION 377
RESOURCE 374

VOLUME command 218

Volumes/Interval panel (FNM03V01) 104

Volumes/Interval panel (FNM03V02) 101

VRTPCOLL command

example 381

keywords

CLOCK 379
DAILY 379
DEST 379
DYNAMIC 380
HOST 380
INTERVAL 380
OPTION 381
RESOURCE 378

VTAM Address Space Current Data panel (FNM02AS2) 153

VTAM Address Space Detail Data panel (FNM04AD1) 172

VTAM Address Space Selection panel (FNM02AS1) 152

VTAM Alter panel (FNM03VT2) 158, 163

VTAM Alter panel (FNM03VTD) 162

VTAM Application Current Data panel (FNM02PS2) 152

VTAM Application Detail Data panel (FNM04PD1) 171

VTAM Application Selection panel (FNM02PS1) 151

VTAM Buffer Pool Current Data panel (FNM02BS2) 145

VTAM Buffer Pool Detail Data panel (FNM04BD1) 168

VTAM Buffer Pool Selection panel (FNM02BS1) 144

VTAM Data Analysis panel (FNM03VAN) 156, 165

VTAM Data Collection panel (FNM03VTC) 155, 158, 161, 163

VTAM Device Current Data panel (FNM02DS2) 149

VTAM Device Current Data panel (FNM02DS3) 149

VTAM Device Current Data panel (FNM03MP2) 150

VTAM Device Detail Data panel (FNM04DD1) 170

VTAM Device Detail Data panel (FNM04DD2) 170

VTAM Device Selection panel (FNM02DS1) 148

VTAM Global Current Data panel (FNM02GS2) 142

VTAM Global Current Data panel (FNM02GS3) 143

VTAM Global Current Data panel (FNM02GS4) 143

VTAM Global Data Selection panel (FNM02GS1) 141

VTAM Global Detail Data panel (FNM04GD1) 166

VTAM Global Detail Data panel (FNM04GD2) 166

VTAM Global Detail Data panel (FNM04GD3) 167

VTAM Monitor Event Messages panel (FNM0VMON) 173

VTAM MPC Device Current Data panel (FNM03MP1) 150

VTAM MPC Device Detail Data panel (FNM04MD1) 171

VTAM Resource Type Selection panel (FNM01VTM) 139

VTAM Start panel (FNM03VT2) 155, 161

VTAM Start panel (FNM03VTD) 154, 160

VTAM statistics data collection,

altering a collection 157

collecting and displaying, 156

global VTAM data 141

VTAM address space data 152

VTAM application data 151

VTAM buffer pool data 144

VTAM device data 148

VTAM virtual route data 145

VTAM statistics data collection, (*continued*)
 displaying environment data 140
 issuing direct commands, 159
 to alter a collection 162
 to display detail data 164
 to display monitor event messages 172
 to start a collection 160
 to stop a collection 164
 starting 154
 stopping a collection 157
VTAM Stop panel (FNM03VTD) 164
VVRCOLL command
 example 386
 keywords
 CLOCK 383
 DAILY 383
 DEST 384
 DESTSA 383
 DESTX 384
 DYNAMIC 385
 HOST 385
 INTERVAL 385
 OPTION 386
 VR 383
 VVRBLCKD 386
 XRES 386

W

WHO command 218



Program Number: 5655-043

Printed in Denmark by IBM Danmark A/S

SH19-6962-06

