NotesBench Disclosure Report
for
IBM Netfinity 5500 (RAID-1 / RAID-5)
with
Lotus Domino 4.61 for Windows NT 4.0
May 29, 1998

IBM Corporation
Table of Contents

Executive Summary
Benchmarking Objectives
Test Methodologies
Data
Analysis
Conclusions
Statement by Auditor
Appendix A: Overall Test Setup and Software Versions
Appendix B: System Configurations
Appendix C: Operating System Parameters Values
Appendix D: Notes Parameters (NOTES.INI file)
Appendix E: Network Configuration File(s)
Appendix F: Guidelines for Information Usage
Appendix G: Pricing
Appendix H: Optional (vendor-defined information)
Edition Notice
Executive Summary

Performance measurements using NotesBench were conducted with the IBM Netfinity 5500 (Model 8660-1RU) running Lotus Domino Server Release 4.61 on Microsoft Windows NT Server Version 4.0 with Service Pack 3. Results for the IBM Netfinity 5500 are based on the NotesBench Mail-only workload run on a RAID-1 and a RAID-5 configuration. The results are summarized in the following table.

<table>
<thead>
<tr>
<th>Test Script</th>
<th>Maximum Users</th>
<th>NotesMark (tpm)</th>
<th>Ave. Response Time (sec)</th>
<th>$/User</th>
<th>$/NotesMark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mail-Only - RAID-1</td>
<td>3,100</td>
<td>4,128</td>
<td>0.104</td>
<td>$9.33</td>
<td>$7.00</td>
</tr>
<tr>
<td>Mail-Only - RAID-5</td>
<td>2,400</td>
<td>3,114</td>
<td>1.653</td>
<td>$12.05</td>
<td>$9.28</td>
</tr>
</tbody>
</table>

The IBM Netfinity 5500, configured with two 350MHz Intel Pentium II processors, 1GB of memory, and thirteen 4.51GB 10K-rpm hard disk drives (configured alternately as a RAID-1 and a RAID-5 array), supported a Mail-only workload of 3,100 and 2,400 active mail users, respectively (see price/performance results above).

In addition to the IBM Netfinity 5500 system under test (SUT), the benchmarked configuration used four destination servers, 12 to 16 client driver systems, and one controller system. All systems were connected to the SUT through two 100Mbps Ethernet LAN segments, using the TCP/IP network protocol. Configuration details are provided in Appendix A: Overall Test Setup and Software Versions.

IBM’s Server Performance Laboratory in Research Triangle Park, NC, conducted the benchmark in May, and KMDS Technical Associates, Inc., audited the results in June 1998.

NotesBench provides an objective method for evaluating the performance of different platforms running Lotus Domino Server Release 4.6x. NotesBench generates a transactions-per-minute (tpm) throughput metric, called a NotesMark, for each test, along with a value for the maximum capacity (number of users) supported, and the average response time.

Benchmarking Objectives

The benchmark objective was to provide customers with information on the number of Lotus Domino Server Release 4.61 Mail-only users supported on a high-end RAID-1 and RAID-5 configuration of the IBM Netfinity 5500 Model 8660-1RU, which ships with one 350MHz Pentium II processor. Performance measurements on IBM Netfinity servers using NotesBench for the Domino Server Release 4.6x are ongoing.
Test Methodologies

Test Setup and Hardware/Software Configuration

The IBM Netfinity 5500 system under test used two 350MHz Pentium II processors (512KB of L2 write-back cache); 1GB of memory, and thirteen 4.51GB 10K-rpm Wide Ultra SCSI hard disks. The integrated ServeRAID II Ultra SCSI PCI controller was used for this test; the integrated 100/10Mbps Ethernet controller was disabled and not used for this test.

Two 100Mbps Ethernet LAN segments were used. The system under test, the destination servers, and the driver systems were connected to the SUT through two 100Mbps Ethernet LAN segments, using the TCP/IP network protocol. An IBM PC Server 325 system was used as the source driver (parent) system; IBM PC 365 systems were used as the client drivers. Four IBM PC Server 330 systems were used as destination servers. Destination mail addresses were distributed across these four destination servers.

The IBM Netfinity 5500 system under test ran Microsoft Windows NT Server Version 4.0 and Domino Server Release 4.61. The Name and Address Book in all the clients contained person documents for 4,000 mail recipients who were randomly selected by each active Mail user. The server under test contained mail files for 3,100 Mail users for the RAID-1 configuration and 2,400 Mail users for the RAID-5 configuration. The public Name and Address Book contained 4,000 mail-recipient person documents and each of the four destination servers contained mail files for 1,000 recipients.

The following NOTES.INI parameters were modified as recommended in the NotesBench operator’s manual:

<table>
<thead>
<tr>
<th>Mail-Only Workload - RAID-1</th>
<th>Mail-Only Workload - RAID-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOG_MAILROUTING=20</td>
<td>LOG_MAILROUTING=10</td>
</tr>
<tr>
<td>MAILLOGTOEVENTSONLY=1</td>
<td>MAILLOGTOEVENTSONLY=1</td>
</tr>
<tr>
<td>MAILUSEPROCESS=0</td>
<td>MAILUSEPROCESS=0</td>
</tr>
<tr>
<td>MAILUSETHEREADS=1</td>
<td>MAILUSETHEREADS=1</td>
</tr>
<tr>
<td>MAILMAXTHREADS=4</td>
<td>MAILMAXTHREADS=4</td>
</tr>
<tr>
<td>SERVER_SHOW_PERFORMANCE=1</td>
<td>SERVER_SHOW_PERFORMANCE=1</td>
</tr>
</tbody>
</table>

The following parameters were added to suppress database activity logging after long runs and to capture server console output:

```
NO_FORCE_ACTIVITY_LOGGING=1
DEBUG_OUTFILE=_\nbfstb2\astraun\SUTINFO.log
```

All Domino server tasks were disabled except Replica, Router and Update.

All Domino data files were located on the D - partition. The Domino executables were placed on the C - partition.
**Test Procedures**

For the run using RAID-1, 16 child drivers were used. The number of users simulated in child drivers 1 through 16 were, respectively: 230, 230, 230, 220, 220, 220, 210, 210, 210, 200, 190, 180, 170, 160, 150 and 70. The number of child drivers used and the number of users simulated by each child driver are defined by the “NumClientsN” parameters in the parent’s NOTES.INI file. For each child driver, users’ start times were staggered. Numerically by child driver they were, respectively, 2, 2, 2, 3, 3, 3, 4, 4, 4, 5, 5, 5, 6, 6, 6 and 7 seconds, as defined in the “ThreadStagger” parameter for each child driver. The start time of each child driver was staggered to allow sufficient time for all users simulated by each child driver to be connected at the SUT and to allow the SUT to settle for at least 5 minutes before releasing the users from the next child drivers.

For the run using RAID-5, 12 child drivers were used. The number of users simulated in child drivers 1 through 12 were, respectively: 230, 230, 230, 220, 220, 220, 210, 210, 210, 200, 140 and 80. For each child driver, users’ start times were staggered. Numerically by child driver they were, respectively, 3, 3, 4, 4, 5, 5, 6, 6, 6, 7, 7 and 7 seconds. The start time of each child driver was staggered for the same reason as explained for the RAID-1 run.

Our experience shows that ramp-up time increases non-linearly as a function of the number of users simulated by a child driver. This effect becomes even more pronounced as we approach the capacity of the server. Since the NotesBench audit rules do not put any restriction on ramp-up time, and we had a limited number of child drivers, the attempt to minimize ramp-up time was only carried far enough to ensure adequate benchmarking productivity. During the test runs, the tools used to determine steady state included Windows NT’s PERFMON, the Notes Server SHOW command, and the child driver RES files. To confirm steady state, we monitored the number of users, the number of transactions per minute, and pending mail at the SUT. We confirmed steady state when:

- The SUT Domino Server console sustained the peak user load
- Pending mail did not become backlogged, as verified by:
  - Inspection of the mail-routing log at the SUT after the test run ended
  - Server Mail statistics collected every thirty minutes throughout the test run.

To ensure that the test results were reproducible, the tests were repeated, and the results were compared and found to be consistent.
Data

IBM Netfinity 5500 NotesMark Value for Mail-Only Test

The Mail workload was run for 9 hours, including ramp-up and steady state. The IBM Netfinity 5500 system configured with RAID-1 and RAID-5 demonstrated that it can support 3,100 and 2,400 concurrent active users, respectively. The NotesMark throughput value was 4,128 and 3,114, respectively. Average response time was 0.104 and 1.653 seconds, respectively. For the RAID-5 run, one error occurred before steady state. The system recovered and ran error-free for approximately 7-1/2 hours.

The Mail workload executes Notes transactions that model a server for mail users at sites that rely only on mail for communication. The resulting capacity metric for a mail-only server is the maximum number of users that can be supported before the average user response time becomes unacceptable.

The mail-only test script models an active user who is reading and sending mail. The script contains an average of 15 minutes of waiting; thus, the average user would execute this script a maximum of four times each hour. For each iteration of the test script, there are 5 documents read, 2 documents updated, 2 documents deleted, 1 view scrolling operation, 1 database opened and closed, 1 view opened and closed, and some miscellaneous operations. In sending messages, each user sends a mail message to NumMessageRecipients no more frequently than every 90 minutes.
NotesNum Output for Mail-Only Test (RAID-1 and RAID-5)

Min Start Time = 05/19/98 02:13:22 PM    Max Stop Time = 05/19/98 11:07:28 PM
Total Test Errors = 0
Total Test Time = 32040 sec
Test Run: Users = 3100    NotesMark = 4128    Response Time = 104 msec (05/19/98 07:43:00 PM to 05/19/98 10:46:00 PM)

Min Start Time = 05/28/98 03:04:57 PM    Max Stop Time = 05/29/98 03:36:30 AM
Total Test Errors = 1
Total Test Time = 45120 sec
Test Run: Users = 2400    NotesMark = 3114    Response Time = 1653 msec (05/28/98 07:53:00 PM to 05/29/98 03:21:00 AM)

Mail-Only Workload - Average Response Time
IBM Netfinity 5500

Mail-Only Workload - Users
IBM Netfinity 5500
Analysis

PERFMON data was collected for a shorter run when the system was ramped up for about three hours. Ramp-up through shutdown the RAID-1 run is shown in the screen capture below. Steady-state statistics for both runs at a similar range of concurrent users are shown in the table on page 9.

<table>
<thead>
<tr>
<th>Steady State Values</th>
<th>Domino Date in RAID-1</th>
<th>Domino Data in RAID-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Concurrent Mail Users</td>
<td>3,100</td>
<td>2,400</td>
</tr>
<tr>
<td>Average CPU Utilization</td>
<td>48.7%</td>
<td>56.3%</td>
</tr>
<tr>
<td>Average Memory Used *</td>
<td>925MB</td>
<td>1018.8MB</td>
</tr>
<tr>
<td>Average Pagefile Usage</td>
<td>1.6%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Average Physical Disk Q Length</td>
<td>17.3</td>
<td>5.8</td>
</tr>
</tbody>
</table>

*Average Memory Used is computed by subtracting the Average Available Bytes of Memory measured by PERFMON from the installed memory of 1GB. In both cases, the available memory bytes would be used as disk cache, helping to provide acceptable user response time at the respective concurrent-users level. Because of the significant system overhead required, PERFMON was not enabled or used for the audit run. For the RAID-1 run, all users ran error-free for more than 6-1/2 hours before the controller client performed an orderly stop of the run. For the RAID-5 run, all users ran error-free for approximately 7-1/2 hours before the controller client performed an orderly stop of the run.
Conclusions

These NotesBench results demonstrate that the IBM Netfinity 5500 (Model 8660-1RU) can support 3,100 Mail-only users if RAID-1 is used for the Domino data directory or 2,400 Mail-only users if RAID-5 is used. Although it may be possible to use fewer drives in a RAID-1 configuration and achieve lower price/performance, we used the same configuration for both RAID-1 and RAID-5 to enable customers to make a side-by-side comparison of the server’s peak capacity with the identical configurations.

The results obtained are based on running the IBM Netfinity 5500 as a dedicated Domino server; the addition of other application workloads will affect the number of users supported as well as the response time. Achieving optimum performance in a customer environment is highly dependent upon selecting adequate processor power, memory and disk storage as well as balancing the configuration of that hardware and appropriately tuning the operating system and Domino software.
Statement by Auditor

The original “Lotus NotesBench Test Results Report Certification Letter” was signed by Dana M. Thompson, NotesBench Auditor for KMDS Technical Associates, Inc., and is on file at IBM.
Appendix A: Overall Test Setup and Software Versions

Number of Client Systems

Seventeen driver systems were used for the RAID-1 configuration. Sixteen of those systems were configured as child drivers (child 1 through child 16). One system was configured as the parent (source driver).

Thirteen driver systems were used for the RAID-5 configuration. Twelve of those systems were configured as child drivers (child 1 through child 12). One system was configured as the parent (source driver).

The child drivers were IBM PC 365 systems, each configured with one 200MHz Pentium Pro processor. Each child driver was configured with 64MB of memory, one 3.3GB hard disk, and one IBM 100/10 Ethernet PCI Adapter.

The disk configuration used for the child systems is as follows:

- C: Partition (512MB - NTFS) - Windows NT Workstation 4.0
- D: Partition (2GB - NTFS) - Notes 4.61

Number of Server Platforms

One server platform, the IBM Netfinity 5500 with two 350MHz Pentium II processors and 1GB of memory, was benchmarked.

The disk configuration used for the system under test is as follows:

- C: Partition (4GB - NTFS) - Windows NT Server Version 4.0 (boot partition) and Domino 4.61 executables
- D: Partition (18GB - NTFS) - Domino data

The disk configuration used for destination servers 1 through 4 is as follows:

- C: Partition (2GB - NTFS) - Windows NT Server Version 4.0 and Notes executables
- E: Partition (10GB - NTFS) - Domino data
**Network**

Two 100Mbps Ethernet LAN segments were used. One PC Server 325 was configured as a router and used to connect the servers and clients to the LAN segments.

**Software Versions**

Software versions used on the system under test were as follows:

- Microsoft Windows NT Server Version 4.0 and Service Pack 3  
- Lotus Domino Server Release 4.61  
- NotesBench Version 4.61 - Windows/32

Software versions used on the child drivers were as follows:

- Microsoft Windows NT Workstation Version 4.0 and Service Pack 3  
- Lotus Notes Client for Windows NT Release 4.61  
- NotesBench Version 4.61 - Windows/32
**Details of Configuration**

<table>
<thead>
<tr>
<th>System Under Test</th>
<th>Destination Servers 1-4</th>
<th>Child Drivers 1-16</th>
<th>Parent Source Driver</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Netfinity 5500</td>
<td>IBM PC Server 330</td>
<td>IBM PC 365</td>
<td>IBM PC Server 325</td>
</tr>
<tr>
<td>2 x 350MHz Pentium II</td>
<td>1 x 200MHz Pentium Pro</td>
<td>1 x 200MHz Pentium Pro</td>
<td>1 x 200MHz Pentium Pro</td>
</tr>
<tr>
<td>1GB Memory</td>
<td>256MB Memory</td>
<td>64MB Memory</td>
<td>128MB Memory</td>
</tr>
<tr>
<td>13 x 4.51GB Drives</td>
<td>6 x 2.25GB Drives (RAID-0)</td>
<td>1 x 2GB Drive</td>
<td>1 x 4.51GB Drive</td>
</tr>
<tr>
<td>1 x ServeRAID II Ultra</td>
<td>IBM SCSI-2 Fast/Wide Streaming RAID Adapter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCSI Controller</td>
<td>2 x IBM EtherJet 100/10 PCI Adapters</td>
<td>IBM 100/10 Ethernet PCI Adapter</td>
<td>IBM 100/10 Ethernet PCI Adapter</td>
</tr>
<tr>
<td>Windows NT 4.0 and</td>
<td>Windows NT 4.0 and Service Pack 3</td>
<td>Windows NT 4.0 and Service Pack 3</td>
<td>Windows NT 4.0 and Service Pack 3</td>
</tr>
<tr>
<td>Service Pack 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Two 100Mbps Ethernet LAN segments were used. One IBM PC Server 325 was configured as a router and used to connect the servers and clients to the LAN segment.
### Server under Test

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>IBM Netfinity 5500</td>
</tr>
<tr>
<td>Processor</td>
<td>2 x 350MHz Pentium II Processor</td>
</tr>
<tr>
<td>Memory</td>
<td>1GB</td>
</tr>
<tr>
<td>Cache</td>
<td>512KB L2 Write-Back Cache</td>
</tr>
<tr>
<td>Disk Controller</td>
<td>Integrated ServeRAID II Ultra SCSI Controller</td>
</tr>
<tr>
<td>Disk Drive</td>
<td>13 x 4.51GB</td>
</tr>
<tr>
<td>Network Interface Adapter</td>
<td>2 x IBM EtherJet 100/10 PCI Adapter</td>
</tr>
<tr>
<td>I/O</td>
<td>PCI Bus</td>
</tr>
<tr>
<td>Operating System</td>
<td>Microsoft Windows NT Server 4.0 with Service Pack 3</td>
</tr>
<tr>
<td>Notes</td>
<td>Domino Server for Windows NT Release 4.61</td>
</tr>
</tbody>
</table>

### Clients

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>IBM PC 365</td>
</tr>
<tr>
<td>Processor</td>
<td>1 x 200MHz Pentium Pro Processor</td>
</tr>
<tr>
<td>Memory</td>
<td>64MB</td>
</tr>
<tr>
<td>Disk Drive</td>
<td>1 x 2GB</td>
</tr>
<tr>
<td>Network Interface Adapter</td>
<td>100/10 Ethernet PCI Adapter</td>
</tr>
<tr>
<td>I/O</td>
<td>PCI Bus</td>
</tr>
<tr>
<td>Operating System</td>
<td>Microsoft Windows NT Workstation 4.0</td>
</tr>
<tr>
<td>Notes</td>
<td>Notes Client for Windows NT Release 4.61</td>
</tr>
</tbody>
</table>
Appendix C: Operating System Parameters

The following registry variables were changed from their default values as shown:

HKEY_LOCAL_MACHINE/System/CurrentControlSet/Control/PriorityControl\Win32PrioritySeparation:
REG_DWORD: 0

HKEY_LOCAL_MACHINE/System/CurrentControlSet/Control/SessionManager/MemoryManager/
LargeSystemCache: REG_DWORD: 0
Appendix D: NOTES.INI Settings

NOTES.INI Files for the System under Test

**RAID-1 Configuration**

[Notes]

KitType=2
Directory=d:\notes\data
SETUPDB=SETUP.NSF
USERNAME=Me
COMPANYNAME=MyPlace

; ******************************************
;
; NotesBench parm changes
;
SERVER_SHOW_PERFORMANCE=1
MAILUSEPROCESSES=0
MAILMAXTHREADS=4
MAILLOGTOEVENTSONLY=1
Log_MailRouting=20
No_Force_Activity_Logging=1
DEBUG_OUTFILE=\filesevr\lastrun\sutinfo.txt
DEBUG_OUTFILE=c:\svrdata\sutinfo.txt

; ******************************************

MTATEMP=C:\TEMP
WinNTIconPath=d:\notes\data\W32
$HasLANPort=1
WWWDSP_SYNC_BROWSERCACHE=0
WWWDSP_PREFETCH_OBJECT=0
EnableJavaApplets=1
EnablePlugins=1
Preferences=2146956175
Passthru_LogLevel=0
Console_LogLevel=2

VIEWIMP1=Lotus 1-2-3 Worksheet,0,_IWKSV,,.WKS,.WK1,.WR1,.WRK,.WK3,.WK4,.4,
VIEWIMP3=Structured Text,0,_ISTR,.LTR,.CGN,.STR,,1,
VIEWIMP4=Tabular Text,0,_ITAB,.PRN,.RPT,.TXT,.TAB,,4,
VIEWEXP1=Lotus 1-2-3 Worksheet,0_XWKS,.WK1,.WR1,.WRK,.WK3,.WK4,.4,
VIEWEXP3=Structured Text,0_XSTR,.LTR,.CGN,.STR,,1,
VIEWEXP4=Tabular Text,1_XTAB,.LTR,.RPT,.CGN,.TAB,,4,
EDITIMP1=ASCII Text,0,_ITEXT,.TXT,.PRN,.C,.H,.RIP,,1,
EDITIMP2=MicrosoftWord RTF,0,_IRTF,.DOC,.RTF,,2,
EDITIMP3=Lotus 1-2-3 Worksheet,0_IWKSE,.WK1,.WR1,.WRK,.WK3,.WK4,.4,
EDITIMP4=Lotus PIC,0,_IPC,.PIC,,8,
EDITIMP5=CGM Image,0,_IFL,.GMF,.CGM,,8,
EDITIMP6=TIFF 5.0 Image,0_.TIFF,.TIFF,,18,
EDITIMP7=BMP Image,0_.BMP,.BMP,,18,
EDITIMP8=Ami Pro,0_.W4W,W4W3F/V0,.SAM,,2,
EDITIMP17=WordPerfect 5.x,0_.W4W,W4W0F/V1,.DOC,,2,
EDITIMP22=PCX Image,0_.PCX,.PCX,,18,
EDITIMP28=Binary with Text,0_.ISTRNGS,.*,1,
EDITIMP29=WordPerfect 6.0/6.1,0_.W4W,W4W3F/V0_WPD,.WPT,.DOC,,2,
EDITIMP30=Excel 4.0/5.0/0_.W4W,W4W2F/V4C,.XLS,,4,
EDITIMP31=Word for Windows 6.0/0_.W4W,W4W49F/V0,.DOC,,2,
EDITIMP32=GIF Image,0_.GIF,.GIF,,18,
EDITIMP33=JPEG Image,0_.JPEG,.JPEG,,18,
EDITEXP1=ASCII Text,2_.XTXT,.TXT,.PRN,.C,.H,.RIP,,1,
EDITEXP2=MicrosoftWord RTF,2_.XRTF,.DOC,.RTF,,4,
**RAID-5 Configuration**

[Notes]

KitType=2
Directory=d:\notes\data
SETUPDB=SETUP.NSF
USERNAME=Me
COMPANYNAME=MyPlace

; ******************************************
; NotesBench parm changes
; ******************************************
SERVER_SHOW_PERFORMANCE=1
MAILUSEPROCESSES=0
MAILUSETHREADS=1
MAILMAXTHREADS=4
MAILLOGTOEVENTSONLY=1
Log_MailRouting=10
No_Force_Activity_Logging=1
DEBUG_OUTFILE=\filesevr\lastrun\sutinfo.txt

; ******************************************
MTATEMP=C:\TEMP
WinNTIconPath=d:\notes\data\W32
$$HasLANPort=1
WWWDSP_SYNC_BROWSERCACHE=0
WWWDSP_PREFETCH_OBJECT=0
EnableJavaApplets=1
EnablePlugins=1
Preferences=2146956175
Passthru_LogLevel=0
Console_LogLevel=2

VIEWIMP1=Lotus 1-2-3 Worksheet,0,_IWKSV,,.WKS,.WK1,.WR1,.WRK,.WK3,.WK4,.4,
VIEWIMP2=Structured Text,0,_ISTR,..LTR,.CON,.STR,.1,
VIEWIMP3=Tabular Text,0,_ITAB,..PRN,.RPT,.TXT,.TAB,.1,
VIEWEXP1=Lotus 1-2-3 Worksheet,0,.._XWKS,..WKS,.WK1,.WR1,.WRK,.4,
VIEWEXP2=Structured Text,0,.._XSTR,..LTR,.CON,.STR,.1,
VIEWEXP3=Tabular Text,0,.._XTAB,..LTR,.RPT,.CON,.TAB,.1,
EDITIMP1=ASCII Text,0,.._ITEXT,..TXT,.PRN,.C,.H,.RIP,.1,
EDITIMP2=Microsoft Word RTF,0,.._RTF,..DOC,..RTF,.2,
EDITIMP3=Lotus 1-2-3 Worksheet,0,.._IWKS,.WKS,.WK1,.WR1,.WRK,.WK3,.WK4,.4,
EDITIMP4=Lotus PIC,0,.._IPIC,..PIC,.8,
EDITIMP5=CGM Image,0,.._IFL,.GMF,.CGM,.8,
EDITIMP6=TIFF 5.0 Image,0,.._TIFF,..TIF,.18,
EDITIMP7=BMP Image,0,.._IBMP,.BMP,.18,
EDITIMP8=Ami Pro,0,.IW4W,.W4W33F/V0,.SAM,.2,
EDITIMP9=WordPerfect 5.x,0,.IW4W,.W4W07F/V1,.DOC,.2,
EDITIMP10=PCL Image,0,.IPCL,.PCX,.18,
EDITIMP11=Binary with Text,0,.ISTRNGS,.1,
EDITIMP12=WordPerfect 6.0,0,.IW4W,.W4W48F/V0,.WPD,.WPT,.DOC,.2,
EDITIMP13=Excel 4.0,0,.IW4W,.W4W21F/V4C,.XLS,.4,
EDITIMP14=Word for Windows 6.0,.IW4W,.W4W49F/V0,.DOC,.2,
EDITIMP15=GIF Image,0,.IGIF,.GIF,.18,
EDITIMP16=JPEG Image,0,.JPEG,.JPG,.18,
WinNTIconCommonConfig=Universal
WinNTIconSize=2
WinNTIconPos=2
WinNTIconHidden=0
WinNTIconRect=-1 -1 641 25
FileDialogDirectory=c:\notes
PhoneLog=2
Log=log.nsf, 1, 0, 7, 40000
CONSOLE_Lotus_Domino_Server=80 25 7 0 44 652 375
Appendix E: Network Configuration

The standard TCP/IP stack provided by Microsoft Windows NT Server 4.0 was used.

In the system under test, the network adapter speed was changed from the default ‘Auto’ to 100Mbps. This forced the Duplex Mode to ‘Half’.

Under the ‘Advanced’ configuration option, the following three parameters were changed from their default values to double the default value:

- Coalesce Buffers
- Receive Buffers
- Transmit Control Block

At the destination servers, under ‘Advanced’ configuration options for the Ethernet adapter, the following three parameters were changed from their default values to double their default values:

- Coalesce Buffers
- Receive Buffers
- Transmit Control Block
Appendix F: Guidelines for Information Usage

This report is intended for IBM Business Partners, customers, and IBM marketing and technical support personnel. The report may be distributed in accordance with the requirements stated in the Edition notice.
Appendix G: Pricing

The table provides the IBM Estimated Reseller Price to end users for the U.S. only. Actual Reseller prices may vary, and prices may also vary by country. Prices are subject to change without notice. For additional information and current prices, contact your local IBM representative.

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Order Number</th>
<th>Qty</th>
<th>IBM Estimated Reseller Unit Price</th>
<th>Extended IBM Estimated Reseller Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Netfinity 5500</td>
<td>8660-1RU</td>
<td>1</td>
<td>$6,499</td>
<td>$6,499</td>
</tr>
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<td><strong>Total System Price</strong></td>
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Appendix H: Optional (Vendor-Defined Information)

None.