

# LCCM Compatibility and Configuration Guide for IBM Systems

IBM LANClient Control Manager  
Version 2.5.1  
with Service Pack 4

February 26, 2001

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## ***Introduction***

### **About This Document**

This document includes information about the hardware and software that IBM LANClient Control Manager (LCCM) supports. You will find tables that detail which IBM systems are supported as LCCM clients. Supported network interface cards (NICs) are listed here as well. LCCM requires certain levels of firmware for both client hardware and network adapter to function properly. Please check the tables for proper BIOS levels.

### **LCCM License**

LCCM is licensed and available at no charge for use on IBM client systems. You must purchase the System Installation Tool Kit to obtain a license to use LCCM on non-IBM client systems.

### **LCCM Technical Support**

Technical support for IBM LANClient Control Manager is available for supported systems (IBM and non-IBM) through e-mail or fee-based telephone support. Telephone support is not available in all countries. For more information about the fee-based telephone support, please visit:

<http://www.ibm.com/support>

or

<http://service.software.ibm.com/supportline.html>

For more information about the e-mail support, please visit:

<http://www.pc.ibm.com/us/desktop/lccm/esupport.html>

### **Forum**

Information and answers to selected questions are also available on one of our on-line discussion forums. Please visit our online discussion forum at:

<http://www7.pc.ibm.com/~UMS/>

IBM may enhance, alter or withdraw the support for this product without prior notice.

### **This Guide as a World Wide Web Resource**

If you are viewing this guide through the Adobe Acrobat Reader, you will have access to hypertext links. Upon activation, these links will not only carry you through the pages within this guide, but also open up new URL links inside your Web browser. Also, there are hypertext links that will download specific files.

The hypertext links are underlined for your convenience. The Adobe Acrobat cursor will display the difference between a link to another page within this guide and one that will send your browser to another URL. For example, below is a hypertext link that will send the LCCM download page URL to your browser when you click on it.

## **This Guide as a Hardcopy Reference**

When you use this guide as a hardcopy reference, all hypertext links are gone. Instead, material is organized and referenced according to sections. Above is the Table of Contents, which shows the different sections and corresponding page numbers. Underlined characters show that within the Adobe Acrobat reader, this content is a hypertext link.

## **Live Web Link**

[Download LCCM](#)

## ***Network Operating System Details and Information***

### **Windows NT Server (on which LCCM is installed)**

Minimum Server requirements:

- A minimum of 128MB of RAM and an equal size paging file.
- PCI network adapter.
- Windows NT Server 4.0.
- Windows NT Service Pack 4 or higher.
- Using all IBM Servers with on-board AMD Ethernet requires the latest AMD Ethernet device driver.

### **Routers (for routed network environments)**

Minimum Router requirements:

- Latest level of router software.
- Proxy Address Resolution Protocol (ARP) must be enabled.
- BOOTP or DHCP forwarding must be enabled with the LCCM server IP address configured as the destination.
- Subnet-directed broadcast must be enabled.
- Spanning tree protocol for client ports must be disabled.

## Supported Client Operating Systems

Operating System	Unattended Installation	Image Clone
Windows 95	N*	Y
Windows 95 OSR2	N*	Y
Windows 95 OSR2.5	N*	Y
Windows 98 plus optional service packs	Y	Y
Windows 98 Second Edition	Y	Y
Windows NT Workstation 4.0 plus optional service packs	Y	N
Windows NT Server 4.0 plus optional service packs	Y	N
Windows 2000 Professional	Y	N
Windows 2000 Server	Y	N
Windows 2000 Advanced Server	Y	N

\* Systems that were supported with this operating system in LCCM Service Pack 3 are still supported. However, this operating system is not supported on new systems.

It may be possible to use an imaging tool (like PowerQuest's DriveImage or Symantec's Ghost) in conjunction with LCCM and Microsoft's Sysprep utility to clone Windows NT and 2000.

## Supported Systems and Required BIOS Levels

The following information is a comprehensive listing of all IBM computers supported as clients by LCCM version 2.5.1 with Service Pack 4. The BIOS level shown in the matrices indicate the levels that were used in testing LCCM 2.5.1 + Service Pack 4. It is recommended that you update your systems to the most recent BIOS level using LCCM.

### Supported Desktop Systems

Computer			Maintenance				Unattended Install					Clone Install		
Type	Model	Tested BIOS Level	BIOS Update	CMOS Update	Password Update	Asset ID Support	NT 4.0 WS (SP4-SP6a)	Win 2000 Prof	Win 95	Win 95 OSR2	Win 98	Win 98 SE	Win 95 & 95 OSR2	Win 98 & SE
*6867	IntelliEPro	NWKT44A	Y	Y	Y	N/A	Y <sup>4</sup>	Y <sup>4</sup>	N	N	N	N	N	N
*6893	IntelliEPro	NVKT49A	Y	Y	Y	Y	Y <sup>4</sup>	Y <sup>4</sup>	N	N	N	N	N	N
*6846	IntelliEPro	EXE124A	N	Y	Y	N/A	Y	Y	N	N	N	N	N	N
*6868	IntelliMPro	PLKT25A	Y	Y	Y	N/A	Y	Y	N	N	N	N	N	N
*6898	IntelliMPro	NGKT35A	Y	Y	Y	N/A	Y	Y	N	N	N	N	N	N
6849	IntelliMPro	PGJT05A	Y	Y	Y	N/A	Y	Y	N	N	N	N	N	N
*6865	IntelliZPro	NYJT30A	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N
*6866	IntelliZPro	PFKT31A	Y	Y	Y	Y	Y	Y <sup>5</sup>	N	N	N	N	N	N
*6899	IntelliZPro	NEKT17A	Y	Y	Y	N/A	Y	N	N	N	N	N	N	N
6344, 6345	PC 300 <sup>8</sup>	PUJT09A	Y	Y	Y	N/A	Y	N	N	N	Y	Y	N	Y
*6562, 6592	PC 300PL	NMKT22A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y
*6564, *6563, 6574, 6573	PC 300GL	PJKT29A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y
*6565	PC 300PL	PMKT13A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
6584, *6594	PC 300PL	NWKT44A	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
*6588	PC 300XL	NEKT17A	Y	Y	Y	N/A	Y	Y	Y	Y	Y <sup>2</sup>	Y <sup>2</sup>	Y	Y
*6862, 6892	PC 300PL	NVKT50A	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
6268, *6278, 6288	PC 300GL	NXKT30A	Y	Y	Y	N/A	Y	Y	N	Y	Y	Y	Y	Y
*6272, *6282	PC 300GL <sup>4</sup>	NDJT34A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y
*6275, 6285	PC 300GL	PDKT29A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y
6287, *6277	PC 300GL	NHKT37A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y
*6561, 6591	PC 300GL	NZKT40A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y
*6577, 6587	PC 330 PC 350	LVJT37A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y
*6589	PC 365	LUJT37A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y
*6877	PC 730	LQKT46A	N/A	N/A	N/A	N/A	Y	Y <sup>3</sup>	Y	Y	Y	Y	Y	Y

Computer			Maintenance				Unattended Install					Clone Install		
Type	Model	Tested BIOS Level	BIOS Update	CMOS Update	Password Update	Asset ID Support	NT 4.0 WS (SP4-SP6a)	Win 2000 Prof	Win 95	Win 95 OSR2	Win 98	Win 98 SE	Win 95 & 95 OSR2	Win 98 & SE
6887	PC 750	LQKT46A	N/A	N/A	N/A	N/A	Y <sup>6</sup>	Y <sup>3</sup>	Y	Y	Y <sup>6</sup>	Y	Y	Y
*6269	NetVista A20 <sup>8</sup>	PTJT10A	Y	Y	Y	N/A	N	N	N	N	Y	Y	N	Y
6266, *6270, *6344	NetVista A20 <sup>8</sup>	PUJT10A	Y	Y	Y	N/A	N	Y	N	N	N	N	N	N
6276	NetVista A20i <sup>8</sup>	PUJT10A	Y	Y	Y	N/A	N	Y	N	N	N	N	N	N
6058, *6568, 6578, *6648, 6830, *6831, 6840	NetVista A40	PIJT22A	Y	Y	Y	N/A	Y	Y	N	N	Y	Y	Y	Y
6059, *6569, *6579, 6649, 6841	NetVista A40p	PIJT22A	Y	Y	Y	N/A	Y	Y	N	N	Y	Y	Y	Y
6837, *6847	NetVista A40p	LFJT20A	Y	Y	Y	N/A	Y	Y	N	N	Y	Y	Y	Y
*6838	NetVista A60	PGJT08A	Y	Y	Y	N/A	Y	Y	N	N	N	N	N	N
6848	NetVista A60i	PGJT08A	Y	Y	Y	N/A	Y	Y	N	N	N	N	N	N
*6644, 6645	NetVista S40	WOJT12A	Y	Y	Y	N/A	N	Y	N	N	N	N	N	N
6646	NetVista S40p	WOJT12A	Y	Y	Y	N/A	N	Y	N	N	N	N	N	N
6643	NetVista X40	PRJT51A	Y <sup>7</sup>	Y	Y	N/A	N	Y	N	N	Y	Y	N	Y

**Notes:**

Y => Yes, passed.

N => No, failed.

\* => Models tested in the LCCM lab.

1. An empty box => not tested yet.
2. Not supported with PCI token ring cards.
3. Very slow install with LCCM.
4. Not supported in Service Pack 4 with on-board Ethernet. You must install a supported network adapter.
5. Wake on LAN becomes disabled after normal operating system shut down on this system.
6. When the system is scanned in RPL mode and assigned to a profile, at the end of the process, the system will shut down as if the process has completed; however, LCCM displays that it is resyncing the client. Power the client on and the installation will complete successfully.
7. When the BIOS is flashed, the boot sequence resets to the default settings. You will need to go into the system's setup and change the boot sequence so that "Network" is the First Startup Device.
8. Not supported in Service Pack 4 with on-board 10/100 Ethernet NIC from Accton. If the system has this adapter, you will need to install a supported network adapter.

## Supported ThinkPad Systems

Computer				Maintenance				Unattended Install						Cloned Install	
Type	Docking Station	Model	Tested BIOS Level	BIOS Update	CMOS Update	Pass Update	Asset ID Support	NT 4.0 WS (SP4-SP6a)	Win 2000 Prof	Win 95 <sup>4</sup>	Win 95 OSR2 <sup>4</sup>	Win 98 <sup>4</sup>	Win 98 SE <sup>4</sup>	Win 95 and 95 OSR2	Win 98 and 2 <sup>nd</sup> Edition
9548,	C	TP770	IDET20W	Y	Y	N	N/A	Y	Y	N	N	N	N	Y	Y
9549	A	TP770	IDET20W	Y	Y	N	N/A	Y <sup>6</sup>	Y	Y	Y	Y	Y	Y	Y
9548,	C	TP770ED	IDET34W	Y	Y	N	N/A	Y	Y	N	N	N	N	Y	Y
9549	A	TP770ED	IDET34W	Y	Y	N	N/A	Y <sup>6</sup>	Y	Y	Y	Y	Y	Y	Y
9544,	C	TP770X	IJET35WW	Y	Y	N	Y <sup>5</sup>	Y	Y	N	N	N	N	Y	Y
9549	A	TP770X	IJET35WW	Y	Y	N	Y <sup>5</sup>	Y <sup>6</sup>	Y	Y	Y	Y	Y	Y	Y
9544,	C	TP770Z	IOET22WW	Y	Y	N	Y <sup>5</sup>	Y	Y	N	N	N	N	Y	Y
9549	A	TP770Z	IOET22WW	Y	Y	N	Y <sup>5</sup>	Y <sup>6</sup>	Y	Y	Y	Y	Y	Y	Y
2645,	C	TP600	IBET37WW	Y	Y	N	N/A	Y	Y <sup>8</sup>	N	N	N	N	Y	Y
2646	A	TP600	IBET37WW	Y	Y	N	N/A	Y <sup>6</sup>	Y	Y	Y	Y	Y	Y	Y
2645,	C	TP600E	IHET38WW	Y	Y	N	Y <sup>5</sup>	Y	Y <sup>8</sup>	N	N	N	N	Y	Y
2646	A	TP600E	IHET38WW	Y	Y	N	Y <sup>5</sup>	Y <sup>6</sup>	Y <sup>8</sup>	Y	Y	Y	Y	Y	Y
2645,	C	TP600E	INET29WW	Y	Y	N	Y <sup>5</sup>	Y	Y <sup>8</sup>	N	N	N	N	Y	Y
2646	A	TP600E	INET29WW	Y	Y	N	Y <sup>5</sup>	Y <sup>6</sup>	Y <sup>8</sup>	Y	Y	Y	Y	Y	Y
2645,	C	TP600X	ITET44WW	Y	Y	N	Y <sup>5</sup>	Y	Y <sup>8</sup>	N	N	N	N	Y	Y
2646	A	TP600X	ITET44WW	Y	Y	N	Y <sup>5</sup>	Y <sup>6</sup>	Y <sup>8</sup>	Y	Y	Y	Y	Y	Y
2643,	C	TP570 <sup>12</sup>	IMET54WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y <sup>8</sup>	N	N	N	N	Y	Y
2644	B	TP570	IMET54WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y <sup>8</sup>	Y	Y	Y	Y	Y	Y
2643,	C	TP570E <sup>12</sup>	IUET17WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y <sup>8</sup>	N	N	N	N	Y	Y
2644	B	TP570E	IUET17WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y <sup>8</sup>	N	N	Y	Y	Y	Y
2640,	C	TP560Z	IEET27WW	Y	Y	N	N/A	Y	Y <sup>8</sup>	N	N	N	N	Y	Y
2641	B	TP560Z	IEET27WW	Y	Y	N	N/A	Y	Y <sup>8</sup>	Y	Y	Y	Y	Y	Y
2624,	B	TP390	V1.0 R01-C3	Y <sup>9</sup>	N	N	N/A	Y	Y <sup>8</sup>	Y	Y	Y	Y	Y	Y
2624,	C	TP390E <sup>12</sup>	R01-A7	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	N	N	N	N	N	Y	Y
2626	B	TP390E	R01-A7	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y <sup>8</sup>	Y	Y	Y	Y	Y	Y
2624,	C	TP390X <sup>12</sup>	ISB053WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	N	N	Y	Y
2626	D	TP390X	ISB053WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y <sup>8</sup>	Y	Y	Y	Y	Y	Y
2635,	C	TP380Z	IGET30WW	Y	Y	N	N/A	Y	Y <sup>8</sup>	N	N	N	N	Y	Y
2636	B	TP380Z	IGET30WW	Y	Y	N	N/A	Y	Y <sup>8</sup>	Y	Y	Y	Y	Y	Y
2609	D	TP240Z	11ET09WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	Y	Y	Y	Y
2629	C	TP A20P <sup>12</sup>	IVET55WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	N	N	Y	Y
	D	TP A20P	IVET55WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	Y	Y	Y	Y
	E	TP A20P	IVET55WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y <sup>10</sup>	Y	N	N	Y <sup>14</sup>	Y <sup>11</sup>	Y	Y
2628,	C	TP A20M <sup>12</sup>	IWET48WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	N	N	Y	Y
	2633	D	TP A20M	IWET48WW	Y <sup>9</sup>	Y	Y <sup>5</sup>	Y	Y	N	N	Y	Y	Y	Y
	E	TP A20M	IWET48WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y <sup>10</sup>	Y	N	N	Y <sup>14</sup>	Y <sup>11</sup>	Y	Y
2628	C	TP A21E <sup>12</sup>	KUET22WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	N	N	Y	Y
	D	TP A21E	KUET22WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	Y <sup>13</sup>	Y	Y	Y
2628,	C	TP A21M <sup>12</sup>	KXET20WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	N	N	Y	Y
	2633	D	TP A21M	KXET20WW	Y <sup>9</sup>	Y	Y <sup>5</sup>	Y	Y	N	N	Y <sup>13</sup>	Y	Y	Y
	E	TP A21M	KXET20WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y <sup>10</sup>	Y	N	N	Y <sup>13,14</sup>	Y <sup>11</sup>	Y	Y
2629	C	TP A21P <sup>12</sup>	KYET21WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	N	N	Y	Y

Computer				Maintenance				Unattended Install						Cloned Install	
Type	Docking Station	Model	Tested BIOS Level	BIOS Update	CMOS Update	Pass Update	Asset ID Support	NT 4.0 WS (SP4-SP6a)	Win 2000 Prof	Win 95 <sup>4</sup>	Win 95 OSR2 <sup>4</sup>	Win 98 <sup>4</sup>	Win 98 SE <sup>4</sup>	Win 95 and 95 OSR2	Win 98 and 2 <sup>nd</sup> Edition
2629	D	TP A21P	KYET21WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	Y <sup>13</sup>	Y	Y	Y
	E	TP A21P	KYET21WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y <sup>10</sup>	Y	N	N	Y <sup>13,14</sup>	Y <sup>11</sup>	Y	Y
2647,	C	TP T20 <sup>12</sup>	IYET37WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	N	N	Y	Y
2648,	D	TP T20	IYET37WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	Y	Y	Y	Y
2649	E	TP T20	IYET37WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y <sup>10</sup>	Y	N	N	Y <sup>14</sup>	Y <sup>11</sup>	Y	Y
2647, 2648	C	TP T21 <sup>12</sup>	KZET16WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	N	N	Y	Y
	D	TP T21	KZET16WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	Y <sup>13</sup>	Y	Y	Y
	E	TP T21	KZET16WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y <sup>10</sup>	Y	N	N	Y <sup>13,14</sup>	Y <sup>11</sup>	Y	Y
2660,	C	TP X20 <sup>12</sup>	IZET56WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y <sup>15</sup>	Y	N	N	N	N	Y	Y
2661,	D	TP X20	IZET56WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y	Y	N	N	Y	Y	Y	Y
2662	E	TP X20	IZET56WW	Y <sup>9</sup>	Y	N	Y <sup>5</sup>	Y <sup>10</sup>	Y	N	N	Y <sup>14</sup>	Y <sup>11</sup>	Y	Y

#### Docking Stations:

- A: SelectaDock III - PC Card Enabler with advanced Etherjet, supports PXE 1.0 LSA 0.99n
- B: Port Replicator with Advanced Etherjet, supports PXE 1.0 LSA 0.99n
- C: None (PC Card)
- D: None (built-in NIC)
- E: ThinkPad Dock

#### Notes:

1. Y = Yes, passed
2. N = No, failed
3. Windows 2000, Windows 98 Second Edition, Windows 98 Service Pack1 unattended install require LCCM 2.5.1 Service Pack 3 or higher.
4. When managing ThinkPads with LCCM using IBM Token-Ring PC or PCMCIA cards, unattended install of Windows 95, 95 OSR2, 98, and 98 Second Edition are not supported. Cloning of these operating systems is supported.
5. Asset ID support for ThinkPads requires LCCM 2.5.1 Service Pack 3 or higher.
6. When performing an unattended installation of Windows NT 4.0 with an IBM 10/100 EtherJet PCI adapter, the latest driver version for the adapter (version 3.7.2) must be used.
7. Disable Power On password option in ThinkPads to work with LCCM.
8. Works in RPL Mode only and not under PXE.
9. System must be powered off after Flash over LAN.
10. Copy the file HAL.DLL from Windows NT 4.0 Service Pack 6 or higher to the \LCCM\CLNTFILE\NT4WKS\ENG directory before performing the unattended installation of Windows NT 4.0 with an IBM 10/100 EtherJet PCI adapter.
11. Advanced Power Management only. Unattended installation of Windows 98 SE with the IBM ThinkPad Dock will result in this message: "This wizard searches for new drivers for Generic USB Hub. A device driver is a software program that makes a hardware device work." The following workaround is for Windows 98 SE:  
Remove the following lines from the file "piixusb.inf"  

```
%PCI\VEN_8086&DEV_7112.DeviceDesc%=UniversalHCD.Dev,PCI\VEN_8086&DEV_7112 <- [Intel.Section] section
PCI\VEN_8086&DEV_7112.DeviceDesc="Intel(r) 82371AB/EB/MB PCI to USB Universal Host Controller" <- [Strings]
section
```
12. This machine does not support RPL function of the Token-Ring Auto 16/4 Credit Card Adapter. However, the Turbo Token-Ring PC Card and the Turbo Token-Ring PC Card 2 are supported.
13. To install Windows 98 with APM mode on this ThinkPad, follow these steps:
  1. Download the "Supplement Files for Windows 98" package from this web site:  
[http://www.pc.ibm.com/qtechinfo/MIGR-4K4PWX.html?lang=en\\_US&page=brand&brand=IBM+ThinkPad&family=IBM+ThinkPad%7CThinkPad+A21e&machineType=IBM+ThinkPad%7CThinkPad+A21e%7C2628&doctype=Downloadable+files&subtype=Windows+98&up=](http://www.pc.ibm.com/qtechinfo/MIGR-4K4PWX.html?lang=en_US&page=brand&brand=IBM+ThinkPad&family=IBM+ThinkPad%7CThinkPad+A21e&machineType=IBM+ThinkPad%7CThinkPad+A21e%7C2628&doctype=Downloadable+files&subtype=Windows+98&up=)
  2. Unpack the downloaded package on your hard drive.
  3. Copy the file "Machine.inf" from the downloaded files to the \LCCM\CLNTFILE\W98\ENG directory before performing the unattended installation of Windows 98.
14. Unattended installation of Windows 98 with the IBM ThinkPad Dock will result in this message: "This wizard searches for new drivers for Generic USB Hub. A device driver is a software program that makes a hardware device work." To avoid this problem, follow these steps:

1. Create a Windows 98 profile in LCCM.
2. Use the EXTRACT command to copy the file "usb.inf" from the file "precopy2.cab". Both "extract.exe" and "precopy2.cab" are located in the Windows 98 image directory, \LCCM\CLNTFILE\W98\ENG\  
At the command line type:  
extract precopy2.cab usb.inf /L c:\temp
3. Change the name of the file "usb.inf" to a new file name (for example, "temp1.inf").
4. Add the following lines to each of these sections in the file "temp1.inf":

```
[GenericHub.Section]
%USB\VID_03EB&PID_3312.DeviceDesc%=StandardHub.Dev,USB\VID_03EB&PID_3312
```

```
[Strings]
%USB\VID_03EB&PID_3312.DeviceDesc="Generic USB Hub"
```

5. Copy the file "temp1.inf" into the Windows 98 image directory, \LCCM\CLNTFILE\W98\ENG\  
6. Modify the file "custom.inf" in the Windows 98 directory to include the new file "temp1.inf" by adding the following information to "custom.inf":

```
[PreCopyFiles]
temp1.inf
```

```
[InfCopyFiles]
temp1.inf
```

15. To install Windows NT 4.0 with a PC Card, you must disable the USB BIOS support by going into the BIOS Setup Utility, USB section, and under "USB BIOS Support" select [Disabled].

## Supported Netfinity Servers

Computer			Maintenance				Unattended Install	
Model	Type	Tested BIOS Level	BIOS Update	CMOS Update	ASM Cfg.	RAID Cfg.	NT 4.0 Server	Windows 2000 Server & Advanced Server
Netfinity 8000	8681	MMKT26A	Y	N	Y	Y	Y	Y
Netfinity 7000 M10	8680	OSE134A	Y	N	Y	Y	Y	Y
Netfinity 7000	8651	CKKT13A	Y	N	Y	Y	Y	N
Netfinity 5600	8664	TPKT23A	Y	N	Y	Y	Y	Y
Netfinity 5500 M20	8662	KQET16A	Y	N	Y	Y	Y	Y
Netfinity 5500 M10	8661	KJTT76A	Y	N	Y	Y	Y	Y
Netfinity 5500	8660	KJTT76A	Y	N	Y	Y	Y	Y
Netfinity 5000	8659	MOKT41A	Y	N	Y	Y	Y	Y
Netfinity 4000R	8652	TRJT05A <sup>4</sup>	Y	N	Y <sup>6</sup>	Y	Y	Y
Netfinity 3500 M10	6889	PKKT09A	Y	N	Y	Y	Y	Y
Netfinity 3500	8644	NNJT35A	Y	Y	Y	Y	Y	Y
Netfinity 3000	8476	NTJT17A	Y	Y	Y	Y	Y	Y <sup>3</sup>
Netfinity 4500R	8656	ILJT14A	Y	N	Y <sup>5</sup>	Y	Y	Y
Netfinity 5100	8658	ILJT14A	Y	N	Y <sup>5</sup>	Y	Y	Y
Netfinity 3500 M20	8657	HQJT09A	Y <sup>7</sup>	N	Y <sup>5</sup>	Y	Y	Y
Netfinity 7100	8666	MWJT14A	Y <sup>7</sup>	N	Y <sup>5</sup>	Y	Y	Y
Netfinity 7600	8655	MWJT14A	Y <sup>7</sup>	N	Y	Y	Y	Y
Netfinity 6000R	8582	ARJT09A	Y <sup>7</sup>	N	Y <sup>5</sup>	Y	Y	Y
IBM xSeries 220	8645	TUJT08A	Y	Y	Y	Y	Y	Y
IBM xSeries 330	8654	TTJT15A	Y	N	Y	Y	Y	Y
Netfinity 8500R	8681	MMKT31A	Y	N	Y	Y	Y	Y
eServer xSeries 200	8478	EXJT28A	Y	N	Y	Y	Y	Y

### Notes:

1. Y = Yes, passed
2. N = No, failed
3. Wake on LAN becomes disabled after normal operating system shut down on this system.
4. If the system has the AMI BIOS, then you must update the BIOS manually to this BIOS level or later prior to managing with LCCM.
5. You must create an LCA file in order to install the SCSI drivers.
6. Supported with Adaptec SCSI Adapter only. You must create an LCA file in order to install the SCSI drivers.
7. Intermittent problem with server hanging while flashing BIOS. If this happens, you will have to recover the BIOS using a BIOS Flash diskette. The recovery process will involve moving a jumper or setting a switch, updating the BIOS with the diskette, and then moving the jumper or switch back to its original setting. Please consult your server documentation (e.g., Hardware Information) for recovery details.

## Supported IBM Point of Sale Systems

Computer		Maintenance				Unattended Install					Clone Install		
Name and Model Number	Tested BIOS Level	BIOS Update	CMOS Update	Password Update	Asset ID Support	NT 4.0 WS (SP4-SP6a)	Win 2000 Prof	Win 95	Win 95 OSR2	Win 98	Win 98 SE	Win 95 & OSR2	Win 98 & SE
*SurePOS 520, model 4840-521 SurePOS 540, model 4840-541 SurePOS 560, model 4840-561	X3JT100	Y	N	N	N/A	Y	Y	N	N	Y	Y	N	Y
SurePOS 730, model 4800-102 *SurePOS 730, model 4800-142	R1JT112	Y	N	N	N/A	Y	Y	N	N	Y	Y	N	Y
*SurePOS 750, model 4800-202 SurePOS 750, model 4800-242	ROKT102	Y	N	N	N/A	Y	Y	N	N	Y	Y	N	Y

\* => Models tested in the LCCM lab.

## Supported Network Adapters

### Options by IBM Ethernet Adapters

Part Number	FRU Number	Adapter Title	Remoteboot Protocol			WOL
			PXE 2.0	PXE 1.0	RPL	
34L4601 (3DES US) 34L4610	34L4609	IBM Netfinity 10/100 Ethernet Security Adapter	Y	N	N	N
34L4701 (DES non-US) 34L4710	34L4709	IBM Netfinity 10/100 Ethernet Security Adapter	Y	N	N	N
34L1501 34L1510	34L1509	IBM Netfinity 10/100 Ethernet Adapter	Y	N	N	N
34L0901 34L0910	30L7583	IBM Netfinity 10/100 Ethernet Adapter	Y	N	N	N
34L4401 (3DES US) 34L4410	34L4409	IBM 10/100 EtherJet Secure Management Adapter	Y	N	Y	Y
34L4501 (DES non-US) 34L4510	34L4509	IBM 10/100 EtherJet Secure Management Adapter	Y	N	Y	Y
34L1101 34L1110	34L1109	IBM 10/100 EtherJet PCI Adapter with Alert on LAN 2	Y	N	Y	Y
34L1201 34L1210	34L1209	IBM 10/100 EtherJet PCI Management Adapter	Y	Y	Y	Y
34L0201 34L0210	30L5929	IBM 10/100 EtherJet PCI Adapter with Wake-on-LAN	Y	Y	Y	Y
08L2565 08L2567	08L2566	IBM 10/100 EtherJet PCI Adapter with Wake-on-LAN	Y	Y	Y	Y
85H9921 85H9930	85H9928	IBM 10/100 EtherJet PCI Adapter with Wake-on-LAN	Y	Y	Y	Y
06P3601	06P3609	IBM 10/100 Ethernet Server Adapter	Y	Y	N	Y
09N9901	09N9901	10/100 EtherLink Server Adapter by 3Com *	Y	N	Y	N
09N3609	09N3609	10/100 EtherLink PCI Management Adapter by 3Com *	Y	N	Y	N

\* Intermittent slow performance with this adapter.

### IBM Mini PCI Adapters

Part Number	FRU Number	Adapter Title	Remoteboot Protocol		Boot Agent	WOL
			PXE	RPL		
Ships with system	N/A	Special miniPCI Ethernet for TP 390X	PXE 2.0 build 071	Y	Intel Boot Agent V2.6 (build 004)	Y
10L1407	10L1423	IBM 10/100 EtherJet miniPCI adapter	PXE 2.0 build 078	Y	Intel Boot Agent V3.0.03	Y
08K3124	08K3125	IBM 10/100 EtherJet miniPCI adapter with 56K modem (Intel current card)	PXE 2.0 build 078	Y	Intel Boot Agent V3.0.03	Y
09N9774	00N8117	IBM 10/100 EtherJet miniPCI adapter with 56K modem by 3Com	PXE V2.2.0	Y	Managed PC Boot Agent V4.12	Y
Ships with system	N/A	IBM 10/100 EtherJet miniPCI adapter with 56K modem by Askey	PXE 2.0 build 078	N	Intel Boot Agent V3.0.03	Y

## Intel Ethernet Adapters

Part Number	FRU Number	Adapter Title	Remoteboot Protocol			WOL
			PXE 2.0	PXE 1.0	RPL	
22P4501	22P4509	Intel PRO/100S Desktop Adapter	Y	Y	N	Y
22P4701	22P4709	Intel PRO/100S Low Profile Desktop Adapter	Y	Y	N	Y
19K5543		Intel PRO/100 VE Desktop Connection	Y	N	N	Y
19K5282		Intel PRO/100 VE Desktop Connection (riser)	Y	N	N	Y
PILA8460B		Intel PRO/100+ PCI Management Adapter	Y	N	Y	Y

## Options by IBM Token Ring Adapters

Part Number	FRU Number	Adapter Title	Remoteboot Protocol			WOL
			PXE 2.0	PXE 1.0	RPL	
34L0501, 34L0510	30L5980	IBM High-Speed 100/16/4 Token-Ring PCI Adapter	Y	Y	Y	Y
34L0701, 34L0710, 31L3266 Jap	30L6817	IBM 16/4 Token-Ring PCI Adapter 2 with Wake on LAN	Y	Y	Y	Y
34L0601, 34L0610	30L6829	IBM 16/4 Token-Ring PCI Adapter 2	Y	Y	Y	N
86H1880, 86H1886, 86H1887, 08L3340, 08L3294	08L3335	IBM PCI Wake on LAN Token-Ring Adapter	Y	Y	Y	Y
41H8900, 75H9800, 75H9802, 85H3410, 86H1897, 85H3409, 85H3412, 85H3414, 75H9806	41H8874	IBM PCI Token-Ring Adapter	N	N	Y	N
55H6760, 55H6815, 55H6807, 55H6783, 55H6818, 55H6824, 55H6828	55H6810	IBM Auto Wake Token Ring ISA Adapter	N	N	Y	Y
34L1401 sing, 34L1402 Jap, 34L1411cpJa, 34L1410 cp, 73G8315 Baln, 85H3653rj45, 85H3654dsh	34L1409	IBM Turbo 16/4 Token-Ring PC Card 2 *	N	N	Y	N
85H3628, 85H3629, 85H3650, 85H3652, 85H9139, 01L1980, 01L1982, 85H9180, 01L1981, 85H9181, 85H3676, 85H3677	85H3656	Turbo 16/4 PC Card	N	N	Y	N
04H6922, 92G9349, 13H7359	04H6922	Token-Ring Auto 16/4 Credit Card Adapter	N	N	Y	N
34L5001, 34L5010	34L5009	IBM 16/4 Token-Ring PCI Management Adapter	Y	Y	N	Y
34L5201, 34L5210	34L5209	IBM High-Speed 100/16/4 Token-Ring PCI Management Adapter	Y	Y	N	Y
07P2701, 07P2710	07P2709	IBM 16/4 Token-Ring Low Profile PCI Management Adapter	Y	Y	N	Y

\* Not supported on Windows 98 or Windows 98 SE.

# IBM RAID Adapters

<b>Part Number</b>	<b>FRU Number</b>	<b>Adapter Title</b>
37L6889	37L6892	ServeRAID – 4H
37L6080	37L7258	ServeRAID – 4M
37L6091	09N9540	ServeRAID – 4L

## ***BIOS and EEPROM Flash Updates***

### **System BIOS Updates**

To get BIOS updates for the supported models listed within this document, check the support page for a particular system or visit the *Personal Computer File Library* at <http://www.pc.ibm.com/us/stdfiles.html> on your web browser.

### **Network Adapter Firmware Updates**

- [IBM Auto Wake ISA Token-Ring Adapter flash](#) (required for IntelliStation M Pro -- 6898).
- [IBM PCI Wake On LAN Token-Ring Adapter flash](#) (required to support DHCP boot environment). For the rest of the supported adapters, please refer to either the IBM Networking Hardware Division web page, <http://www.networking.ibm.com/support/> or the Intel web page, <http://www.intel.com>.

### **Router Updates Required for LCCM 2.5.1**

- IBM 2210 Nways Multiprotocol Routers (MRS V2.2) – [flash level EPTF04 +or higher](#).