LCCM Compatibility and Configuration Guide
for IBM Systems

IBM LANClient Control Manager 2.5.1 with Service Pack 4

Updated June 19, 2001

Table of Contents

1. About the Guide

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 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.

Although one of the features of LCCM is to distribute software to client computers across a LAN, the terms and conditions of the IBM International Program License Agreement for LCCM do not grant any license to install, copy, or use any application software or operating system software not provided with LCCM. This includes, but is not limited to, Microsoft Windows 3.1, Windows 95, Windows 95 OSR2, Windows 98, Windows NT, Windows 2000 Professional, Windows 2000 Server and Advanced Server, and DOS. Always ensure that you have obtained suitable licenses for any software you intend to use with LCCM.

1.1. How to Find Your Way Around

This guide is organized in numbered chapters and sections. The Table of Contents above lists the different sections and corresponding page numbers. If you are viewing the guide on-line with Acrobat Reader, you can easily navigate the document by clicking the hyperlinked text in the Table of Contents as well as the references to the World Wide Web. You will notice that the cursor changes when you move it above hyperlinked text.

1.2. Further Reference

In addition to this guide, there are various other sources that you can consult on LCCM:

- ▶ Context-sensitive help provided with LCCM. From the main window, select the **Help** menu and click the **Help Index**

- ▶ The LCCM home page is http://www.pc.ibm.com/us/desktop/lccm/index.html

- ▶ The User's Guide is available at http://www.pc.ibm.com/us/desktop/lccm/docs.html

- ▶ Last minute updates and changes are given in ReadMe files. Please visit http://www.pc.ibm.com/us/desktop/lccm/download.html

- ▶ Hints and Tips are given at http://www.pc.ibm.com/us/desktop/lccm/hints.html

- ▶ Subscribe to the LCCM Users Forum to discuss problems and solutions with fellow users. Please see http://www7.pc.ibm.com/~UMS/

- ▶ Get technical support. Support 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, see http://www.ibm.com/support or http://service.software.ibm.com/supportline.html. For more information about e-mail support, please visit http://www.pc.ibm.com/us/desktop/lccm/esupport.html

- ▶ To purchase the System Installation Tool Kit to use LCCM on non-IBM client systems, please visit http://www.pc.ibm.com/ww/solutions/lcc/sit.html

2. Supported Computers

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 plus Service Pack 4. It is recommended that you update your systems to the most recent BIOS level.

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.

2.1. Desktop Computers

Computer			Maintenance				Unattended Install						Clone Install	
Type	Model	Tested BIOS Level	BIOS Update	CMOS Update	Pass-word 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 [4]	Y [4]	N	N	N	N	N	N
*6893	IntelliEPro	NVKT49A	Y	Y	Y	Y	Y [4]	Y [4]	N	N	N	N	N	N
*6836 *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	N [9]	N [9]	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 [5]	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 [8]	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 [2]	Y [2]	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[4]	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

Computer			Maintenance				Unattended Install						Clone Install	
Type	Model	Tested BIOS Level	BIOS Update	CMOS Update	Pass-word 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
*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 [3]	Y	Y	Y	Y	Y	Y
6887	PC 750	LQKT46A	N/A	N/A	N/A	N/A	Y [6]	Y [3]	Y	Y	Y [6]	Y	Y	Y
*6269	NetVista A20 [8]	PTJT10A	Y	Y	Y	N/A	N	N	N	N	Y	Y	N	Y
6266 *6270 *6344	NetVista A20 [8]	PUJT10A	Y	Y	Y	N/A	N	Y	N	N	N	N	N	N
6276	NetVista A20i [8]	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	N [9]	N [9]	Y	N/A	Y	Y	N	N	N	N	N	N
6848	NetVista A60i	PGJT08A	N [9]	N [9]	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 [7]	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 re-synchronizing 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.
9. Starting with BIOS PGJT21A, it is possible to update the BIOS or CMOS on this computer with LCCM. Please read the comments in the LCCMREAD.TXT file on the BIOS diskette for more information.

2.2. ThinkPad Computers

Computer				Maintenance				Unattended Install						Clone Install	
Type	Docking Station	Model	Tested BIOS Level	BIOS Update	CMOS Update	Pass-word Update	Asset ID Support	NT 4.0 WS (SP4-SP6a)	Win 2000 Prof	Win 95[4]	Win 95 OSR2 [4]	Win 98[4]	Win 98 SE[4]	Win 95 and 95 OSR2	Win 98 and 2nd 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 [6]	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 [6]	Y	Y	Y	Y	Y	Y	Y
9544	C	TP770X	IIET35WW	Y	Y	N	Y [5]	Y	Y	N	N	N	N	Y	Y
9549	A	TP770X	IIET35WW	Y	Y	N	Y [5]	Y [6]	Y	Y	Y	Y	Y	Y	Y
9544	C	TP770Z	IOET22WW	Y	Y	N	Y [5]	Y	Y	N	N	N	N	Y	Y
9549	A	TP770Z	IOET22WW	Y	Y	N	Y [5]	Y [6]	Y	Y	Y	Y	Y	Y	Y
2645	C	TP600	IBET37WW	Y	Y	N	N/A	Y	Y [8]	N	N	N	N	Y	Y
2646	A	TP600	IBET37WW	Y	Y	N	N/A	Y [6]	Y	Y	Y	Y	Y	Y	Y
2645	C	TP600E	IHET38WW	Y	Y	N	Y [5]	Y	Y [8]	N	N	N	N	Y	Y
2646	A	TP600E	IHET38WW	Y	Y	N	Y [5]	Y [6]	Y [8]	Y	Y	Y	Y	Y	Y
2645	C	TP600E	INET29WW	Y	Y	N	Y [5]	Y	Y [8]	N	N	N	N	Y	Y
2646	A	TP600E	INET29WW	Y	Y	N	Y [5]	Y [6]	Y [8]	Y	Y	Y	Y	Y	Y
2645	C	TP600X	ITET44WW	Y	Y	N	Y [5]	Y	Y [8]	N	N	N	N	Y	Y
2646	A	TP600X	ITET44WW	Y	Y	N	Y [5]	Y [6]	Y [8]	Y	Y	Y	Y	Y	Y
2643	C	TP570 [12]	IMET54WW	Y [9]	Y	N	Y [5]	Y	Y [8]	N	N	N	N	Y	Y
2644	B	TP570	IMET54WW	Y [9]	Y	N	Y [5]	Y	Y [8]	Y	Y	Y	Y	Y	Y
2643	C	TP570E [12]	IUET17WW	Y [9]	Y	N	Y [5]	Y	Y [8]	N	N	N	N	Y	Y
2644	B	TP570E	IUET17WW	Y [9]	Y	N	Y [5]	Y	Y [8]	N	N	Y	Y	Y	Y
2640	C	TP560Z	IEET27WW	Y	Y	N	N/A	Y	Y [8]	N	N	N	N	Y	Y
2641	B	TP560Z	IEET27WW	Y	Y	N	N/A	Y	Y [8]	Y	Y	Y	Y	Y	Y
2624 2626	B	TP390	V1.0 R01-C3	Y [9]	N	N	N/A	Y	Y [8]	Y	Y	Y	Y	Y	Y
2624	C	TP390E [12]	R01-A7	Y [9]	Y	N	Y [5]	Y	N	N	N	N	N	Y	Y
2626	B	TP390E	R01-A7	Y [9]	Y	N	Y [5]	Y	Y [8]	Y	Y	Y	Y	Y	Y
2624	C	TP390X [12]	ISB053WW	Y [9]	Y	N	Y [5]	Y	Y	N	N	N	N	Y	Y
2626	D	TP390X	ISB053WW	Y [9]	Y	N	Y [5]	Y	Y [8]	Y	Y	Y	Y	Y	Y
2635	C	TP380Z	IGET30WW	Y	Y	N	N/A	Y	Y [8]	N	N	N	N	Y	Y
2636	B	TP380Z	IGET30WW	Y	Y	N	N/A	Y	Y [8]	Y	Y	Y	Y	Y	Y
2609	D	TP240Z	11ET09WW	Y [9]	Y	N	Y [5]	Y	Y	N	N	Y	Y	Y	Y
2629	C	TP A20P [12]	IVET55WW	Y [9]	Y	N	Y [5]	Y	Y	N	N	N	N	Y	Y
2629	D	TP A20P	IVET55WW	Y [9]	Y	N	Y [5]	Y	Y	N	N	Y	Y	Y	Y
2629	E	TP A20P	IVET55WW	Y [9]	Y	N	Y [5]	Y [10]	Y	N	N	Y [14]	Y [11]	Y	Y
2628 2633	C	TP A20M [12]	IWET48WW	Y [9]	Y	N	Y [5]	Y	Y	N	N	N	N	Y	Y
2628 2633	D	TP A20M	IWET48WW	Y [9]	Y	N	Y [5]	Y	Y	N	N	Y	Y	Y	Y
2628 2633	E	TP A20M	IWET48WW	Y [9]	Y	N	Y [5]	Y [10]	Y	N	N	Y [14]	Y [11]	Y	Y
2628	C	TP A21E [12]	KUET22WW	Y [9]	Y	N	Y [5]	Y	Y	N	N	N	N	Y	Y
2628	D	TP A21E	KUET22WW	Y [9]	Y	N	Y [5]	Y	Y	N	N	Y [13]	Y	Y	Y
2655	C	TP A21E [16]	10ET19WW	Y [9]	Y	N	Y [5]	Y [15]	Y	N	N	N	N	Y	Y
2655	D [21]	TP A21E	10ET19WW	Y [9]	Y	N	Y [5]	Y	Y	N	N	Y [13]	Y [18]	Y	Y

Computer				Maintenance				Unattended Install						Clone Install	
Type	Docking Station	Model	Tested BIOS Level	BIOS Update	CMOS Update	Pass-word Update	Asset ID Support	NT 4.0 WS (SP4-SP6a)	Win 2000 Prof	Win 95[4]	Win 95 OSR2[4]	Win 98[4]	Win 98 SE[4]	Win 95 and 95 OSR2	Win 98 and 2nd Edition
2628 2633	C	TP A21M [12]	KXET20WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	N	N	Y	Y
	D	TP A21M	KXET20WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	Y[13]	Y	Y	Y
	E	TP A21M	KXET20WW	Y[9]	Y	N	Y[5]	Y[10]	Y	N	N	Y[13,14]	Y[11]	Y	Y
2629	C	TP A21P [12]	KYET21WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	N	N	Y	Y
2629	D	TP A21P	KYET21WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	Y[13]	Y	Y	Y
	E	TP A21P	KYET21WW	Y[9]	Y	N	Y[5]	Y[10]	Y	N	N	Y[13,14]	Y[11]	Y	Y
2628 2633	C	TP A22m [16]	KXET60WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	N	N	Y	Y
	D[21]	TP A22m	KXET60WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	Y[13]	Y[18]	Y	Y
	E	TP A22m	KXET60WW	Y[9]	Y	N	Y[5]	Y[10]	Y	N	N	Y[13,14,19,20]	Y[11,18,19,20]	Y	Y
2628	C	TP A22m [12]	13ET11WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	N	N	Y	Y
	D[21]	TP A22m	13ET11WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	Y[13]	Y	Y	Y
	E	TP A22m	13ET11WW	Y[9]	Y	N	Y[5]	Y[10]	Y	N	N	Y[13,14,19,20]	Y[11,19,20]	Y	Y
2629	C	TP A22p [12]	KYET59WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	N	N	Y	Y
	D[21]	TP A22p	KYET59WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	Y[13]	Y	Y	Y
	E	TP A22p	KYET59WW	Y[9]	Y	N	Y[5]	Y[10]	Y	N	N	Y[13,14,19,20]	Y[11,19,20]	Y	Y
2647 2648 2649	C	TP T20 [12]	IYET37WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	N	N	Y	Y
	D	TP T20	IYET37WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	Y	Y	Y	Y
	E	TP T20	IYET37WW	Y[9]	Y	N	Y[5]	Y[10]	Y	N	N	Y[14]	Y[11]	Y	Y
2647 2648	C	TP T21 [12]	KZET16WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	N	N	Y	Y
	D	TP T21	KZET16WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	Y[13]	Y	Y	Y
	E	TP T21	KZET16WW	Y[9]	Y	N	Y[5]	Y[10]	Y	N	N	Y[13,14]	Y[11]	Y	Y
2647 2648	C	TP T22 [12]	16ET14WW	Y[9]	Y	N	Y[5]	Y[15]	Y	N	N	N	N	Y	Y
	D[21]	TP T22	16ET14WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	Y[13]	Y[18]	Y	Y
	E	TP T22	16ET14WW	Y[9]	Y	N	Y[5]	Y[10]	Y	N	N	Y[13,14,20]	Y[11,18,20]	Y	Y
2660 2661 2662	C	TP X20 [12]	IZET56WW	Y[9]	Y	N	Y[5]	Y[15]	Y	N	N	N	N	Y	Y
	D	TP X20	IZET56WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	Y	Y	Y	Y
	E	TP X20	IZET56WW	Y[9]	Y	N	Y[5]	Y[10]	Y	N	N	Y[14]	Y[11]	Y	Y
2660 2662	C	TP X21 [16]	IZET86WW	Y[9]	Y	N	Y[5]	Y[15]	Y	N	N	N	N	Y	Y
	D[21]	TP X21	IZET86WW	Y[9]	Y	N	Y[5]	Y	Y	N	N	Y[13]	Y[18]	Y	Y
	E	TP X21	IZET86WW	Y[9]	Y	N	Y[5]	Y[10]	Y	N	N	Y[13,14,20]	Y[11,18,20]	Y	Y

Computer				Maintenance				Unattended Install						Clone Install	
Type	Docking Station	Model	Tested BIOS Level	BIOS Update	CMOS Update	Pass-word Update	Asset ID Support	NT 4.0 WS (SP4-SP6a)	Win 2000 Prof	Win 95[4]	Win 95 OSR2[4]	Win 98[4]	Win 98 SE[4]	Win 95 and 95 OSR2	Win 98 and 2nd Edition
2675	C	TP TransNote[16]	KVET22WW	Y[9]	Y	N	Y[5]	N	Y	N	N	N	N	N	Y
	D	TP TransNote	KVET22WW	Y[9]	Y	N	Y[5]	N	Y	N	N	N	Y[17]	N	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 "piixxusb.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:

    a) 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=

    b) Unpack the downloaded package on your hard drive.

    c) 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:

    a) Create a Windows 98 profile in LCCM.

    b) 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
```

   c)   Change the name of the file "`usb.inf`" to a new file name (for example, "`temp1.inf`").

   d)   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"
```

   e)   Copy the file "`temp1.inf`" into the Windows 98 image directory `\LCCM\CLNTFILE\W98\ENG\`

   f)   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].

16.   This machine does not support RPL function of the Token-Ring Auto 16/4 Credit Card Adapter and the Turbo 16/4 TokenRing PC Card. The Turbo 16/4 TokenRing PC Card 2 is supported.

17.   Copy the file ACPI.SYS from the software selection CD to \LCCM\CLNTFILE\W98ED2\ENG directory before installing Windows 98 SE

18.   To install Windows 98 SE with APM mode on machine type 2633/2648/2655/2662 systems, follow these steps:

   a)   Create a directory which has the same name as the machine type (e.g. 2633) into \LCCM\CLNTFILE\W98SE

   b)   Copy the 2628.inf file from \LCCM\CLNTFILE\W98SE\2628 to \LCCM\CLNTFILE\W98SE\2633

   c)   Rename the 2628.inf in \LCCM\CLNTFILE\W98SE\2633 to the 2633.inf

19.   When performing the unattended installation of Windows 98/98SE with PCI adapter/ThinkPad Dock, CMD IDE Controller Driver is needed. To install CMD IDE Controllerl Driver with Windows 98/98SE, follow these steps:

   a)   Customize the Inf file by using the infinst.exe.

   b)   Copy the customized Inf file and driver files to LCCM server (\lccm\clntfile\)

20.   When performing the unattended installation of Windows 98/98SE with IBM 16/4 PCI TokenRing Adapter and IBM 16/4 PCI TokenRing Adapter 2 with ThinkPad Dock, we needed to modify the netibm2.inf file as follows:

   a)   Add following line into [version] section
      Layoutfile = layou.inf, layout1.inf, layout2.inf

   b)   Delete [Source Disks Files] and [Source Disks Names] sections.

21.   When using 'Intel PRO/100 SP Mobile Combo adapter, download LCTP.exe from LCCM web site below, and follow the instructions. http://www.pc.ibm.com/us/desktop/lccm/house2.html

2.3. IBM 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 3000	8476	NTJT17A	Y	Y	Y	Y	Y	Y[3]
Netfinity 3500	8644	NNJT35A	Y	Y	Y	Y	Y	Y
Netfinity 3500 M10	6889	PKKT09A	Y	N	Y	Y	Y	Y
Netfinity 3500 M20 [9]	8657	HQJT09A	Y [7]	N	Y [5]	Y	Y	Y
Netfinity 4000R [9]	8652	TRJT05A [4]	Y	N	Y [6]	Y	Y	Y
Netfinity 4500R [8,9]	8656	ILJT14A	Y	N	Y [5]	Y	Y	Y
Netfinity 5000 [8,9]	8659	MOKT41A	Y	N	Y	Y	Y	Y
Netfinity 5100 [8,9]	8658	ILJT14A	Y	N	Y [5]	Y	Y	Y
Netfinity 5500 [8,9]	8660	KIJT76A	Y	N	Y	Y	Y	Y
Netfinity 5500 M10 [8,9]	8661	KIJT76A	Y	N	Y	Y	Y	Y
Netfinity 5500 M20 [8,9]	8662	KQET16A	Y	N	Y	Y	Y	Y
Netfinity 5600 [8,9]	8664	TPKT23A	Y	N	Y	Y	Y	Y
Netfinity 6000R [8,9]	8582	ARJT09A	Y [7]	N	Y [5]	Y	Y	Y
Netfinity 7000 [8,9]	8651	CKKT13A	N	N	Y	Y	Y	N
Netfinity 7000 M10 [8,9]	8680	OSE134A	Y	N	Y	Y	Y	Y
Netfinity 7100 [8,9]	8666	MWJT14A	Y [7]	N	Y [5]	Y	Y	Y
Netfinity 7600 [8,9]	8655	MWJT14A	Y [7]	N	Y	Y	Y	Y
Netfinity 8000 [8,9]	8681	MMKT26A	Y	N	Y	Y	Y	Y
Netfinity 8500R [8,9]	8681	MMKT31A	Y	N	Y	Y	Y	Y
eServer xSeries 200	8478	EXJT28A	Y	N	Y	Y	Y	Y
eServer xSeries 220 [10]	8645	TUJT08A	Y	Y	Y	Y	Y	Y
eServer xSeries 330 [9]	8654	TTJT15A	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.
8. Supported only if you install a supported PCI network adapter.
9. Does not support Wake-on-LAN.
10. Supports Wake-on-LAN only if you install a supported PCI network adapter.

2.4. IBM Point of Sale Computers

Computer		Maintenance				Unattended Install						Clone Install	
Name and Model Number	Tested BIOS Level	BIOS Update	CMOS Update	Pass-word Update	Asset ID Support	NT 4.0 WS (SP4-SP6a)	Win 2000 Prof	Win 95	Win 95 OSR 2	Win 98	Win 98 SE	Win 95 & 95 OSR2	Win 98 & SE
SurePOS 4694, model 206 SurePOS 4694, model 246	E13	Not tested	N	N	N/A	Y	Y	Not tested	Y	Y	Y	Not tested	Not tested
*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

Notes:

Y = Yes, passed

N = No, failed

* Models tested in the LCCM lab

3. Supported Network Adapters

LCCM will automatically scan, configure, and recognize supported network cards. The following information is a comprehensive listing of all network cards supported by LCCM version 2.5.1. If you are using unsupported cards, you must make the necessary entries into NETWORK.LST, add driver files to LCCM's default directory, and create or modify some LCCM control files. For more information, see the User's Guide.

Use the following links for flash updates and other networking information:

- ▶ IBM Auto Wake ISA Token-Ring Adapter flash. This is required for IntelliStation M Pro -- 6898

- ▶ IBM PCI Wake On LAN Token-Ring Adapter flash. This is required to support a DHCP boot environment

- ▶ For IBM adapters, please refer to either the IBM Networking Hardware Division web page at http://www.networking.ibm.com/support/

- ▶ For Intel adapters, please visit http://www.intel.com

IMPORTANT: For IBM 2210 Nways Multiprotocol Router and Multiprotocol Routing Services (MRS V2.2), a flash update is required for LCCM 2.5.1. Use flash lavel EPTF04 or higher. Please visit http://www.networking.ibm.com/support/code.nsf/2210oper?OpenView

3.1. 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[1]	Y	Y	Y	Y
08L2565 08L2567	08L2566	IBM 10/100 EtherJet PCI Adapter with Wake-on-LAN[1]	Y	Y	Y	Y
85H9921 85H9930	85H9928	IBM 10/100 EtherJet PCI Adapter with Wake-on-LAN[1]	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 [2]	Y	N	Y	N
09N3609	09N3609	10/100 EtherLink PCI Management Adapter by 3Com [2]	Y	N	Y	N

Notes:

Y   = Yes, passed

N   = No, failed

1. Should you want to utilize the IBM 10/100 EtherJet PCI Adapter with Wake-on-LAN in Docking Stations, then you must re-flash the adapter with the latest ETPFLSH2.EXE V3.10 boot disk. This updated microcode can be obtained from the World Wide Web at http://www.networking.ibm.com/support and is located under 'IBM 10/100 Etherjet PCI Management Adapter'. We recommend that you update your Thinkpad systems to the latest BIOS level with microcode obtained from the ETPFLSH2.EXE V3.10 page.

2. Intermittent slow performance with this adapter

3.2. 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 083	Y	Intel Boot Agent V4.0.17	Y
08K3124	08K3125	IBM 10/100 EtherJet miniPCI adapter with 56K modem (Intel current card)	PXE 2.0 build 083	Y	Intel Boot Agent V4.0.17	Y
09N9774	00N8117	IBM 10/100 EtherJet miniPCI adapter with 56K modem by 3Com	PXE V2.41	Y	Managed PC Boot Agent V4.31	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
06P3801	06P3809	Intel PRO/100 SP Mobile Combo adapter	PXE 2.0 build 083	N	Intel Boot Agent V4.0.17	Y

Notes:

Y   = Yes, passed

N   = No, failed

3.3. 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

Notes:

Y   = Yes, passed

N   = No, failed

3.4. 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

Part Number	FRU Number	Adapter Title	Remoteboot Protocol			WOL
			PXE 2.0	PXE 1.0	RPL	
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[1]	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 [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

Notes:

Y = Yes, passed

N = No, failed

1. If you are using an ISA network adapter card and you are going to use Windows 95, Windows 95 OSR2 or Windows 98 with LCCM you must set the BIOS for Plug 'n' Play. To access the Configuration/Setup Utility program (BIOS settings) on many IBM computers, press **F1** while the computer is starting up. From **Advanced Setup** select **Plug and Play control** and enable **Plug and Play OS**. It is recommended that you install supported PCI network adapter cards in the uppermost available expansion slot and ISA network adapter cards in the lowermost available expansion slot.

2. Not supported on Windows 98 or Windows 98 SE

4. IBM RAID Adapters

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

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