

# LCCM Compatibility and Configuration Guide for Non-IBM Systems

IBM LANClient Control Manager  
Version 2.5.1  
With Service Pack 3 and Patch 1

August 30, 2000

## **Table of Contents**

Introduction .....	3
About This Document .....	3
LCCM Environment .....	3
LCCM License.....	3
LCCM Technical Support .....	3
Forum.....	4
Disclaimer .....	4
This Guide as a World Wide Web Resource .....	5
This Guide as a Hardcopy Reference .....	5
Live Web Link.....	5
Additional Web links .....	5
Network Operating System Details and Information .....	6
Windows NT Server (on which LCCM is installed) .....	6
Routers (for routed network environments).....	6
Supported Systems and Required BIOS Levels.....	7
Test Matrix for Non-IBM Systems .....	7
Test Matrix for Non-IBM Servers.....	8
NETWORK.LST Update: .....	8
Using LCCM to Deploy Non-IBM Systems.....	9
Compaq Systems.....	9
Dell Systems .....	10
Gateway Systems .....	11
Hewlett Packard Systems .....	13
L440 GX server boards .....	14
Dell Power Edge2450 .....	15

## **Introduction**

### **About This Document**

This document includes information about non-IBM hardware and software that IBM LANClient Control Manager (LCCM) supports. You will find tables that detail which non-IBM systems are supported as LCCM clients.

### **LCCM Environment**

To use LCCM to deploy a client computer, you need to have a supported built-in or add-on LAN adapter. Systems and network adapters for LCCM clients should adhere to the Wired for Management (WfM) baseline Version 2.0 specifications.

Network adapters should support Preboot eXecute Environment (PXE) 1.0 specified in the NetPC Hardware Design Guidelines Version 1.0b or PXE 2.0, or later, specified by Intel Corporation (12/98).

It is recommended that you use Wake-on-LAN®. This helps to simplify deployment by enabling remote systems management without user intervention to power the system on.

### **LCCM License**

#### **Proof of Entitlement**

IBM LANClient Control Manager is a part of the IBM System Installation Tool Kit, which is released as an Option By IBM. You must have a valid Proof of Entitlement (POE) licenses to use LCCM on non-IBM client systems. POE for non-IBM client systems are available for a fee from IBM Business Partners or direct from IBM. You must have a valid POE license for each non-IBM client system that utilizes LCCM. To order additional IBM System Installation Tool Kit POE licenses, use the following part numbers:

<b>Part Number</b>	<b>Description</b>
19K0985	Basic License CD, includes 20 Client POE (including a CD with deployment tools)
19K0986	Additional License 20 Client POE Certificate
19K0987	Additional License 100 Client POE Certificate
19K0988	Additional License 1,000 Client POE Certificate

### **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.

## Disclaimer

The enclosed disclaimer governs information contained on this document as well as trademark information.

© Copyright IBM Corporation 2000

IBM Personal Systems Group

3039 Cornwallis Road

Research Triangle Park, NC 27709

Produced in the United States of America

3-00

All rights reserved

THIS PUBLICATION MAY INCLUDE TYPOGRAPHICAL ERRORS AND TECHNICAL INACCURACIES AND MAY BE CHANGED OR WITHDRAWN AT ANY TIME. THE CONTENT IS PROVIDED AS IS, WITHOUT WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SOME JURISDICTIONS DO NOT ALLOW DISCLAIMER OF EXPRESS OR IMPLIED WARRANTIES IN CERTAIN TRANSACTIONS, THEREFORE THIS DISCLAIMER MAY NOT APPLY TO YOU.

References in this publication to IBM products or services do not imply that IBM intends to make them available in all countries in which IBM operates. IBM reserves the right to change specifications or other product information without notice.

IBM®, the IBM striped logo, IBM Global Network™, AIX®, AIX/6000®, Alert on LAN™, Aptiva®, AS/400®, DB2®, ClusterProven™, HelpCenter®, IntelliStation®, MQSeries®, Mwave®, Netfinity®, Netfinity Manager, OS/2®, OS/390®, OS/400®, PC 300®, PowerPC™, RS/6000®, S/390®, ScrollPoint™, ServeRAID™, ThinkPad®, TrackPoint®, UltraBay™, Ultrastar™, ViaVoice™, Wake on LAN®, and WorkPad® are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries.

Compaq is a registered trademark of Compaq Computer Corporation.

Alpha and AlphaServer are registered with the U.S. Patent and Trademark Office.

Intel®, Celeron™, MMX™, Pentium®, and Xeon™, are trademarks or registered trademarks of Intel Corporation.

Microsoft®, Windows®, Windows NT®, and the Windows logo are trademarks or registered trademarks of Microsoft Corporation.

All other company, products and services names may be trademarks or service marks of others.

## **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, on this page 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](#)

## **Additional Web links**

For the latest information and updates about:

- The tool kit, see: <http://www.pc.ibm.com/ww/solutions/enterprise/lccare/sit.html>
- LANClient Control Manager, see: <http://www.pc.ibm.com/us/desktop/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.

### **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.
- Spanning tree protocol for client ports must be disabled.
- Subnet-directed broadcast must be enabled.

## Supported Systems and Required BIOS Levels

The following information is a list of all of the non-IBM computers tested as clients with LCCM version 2.5.1 with Service Pack 3 and Patch 1. The BIOS levels shown in the matrices indicate the levels that were used in testing. It is recommended that you update your systems to the most recent BIOS level using LCCM. Other systems, not listed here, may also work with LCCM.

### Test Matrix for Non-IBM Systems

Computer			Maintenance						Unattended Install					Clone Install	
Type	Model	Tested BIOS Level	WOL	BIOS Update	CMOS Update	Password Update	Asset ID Support	NT 4.0 WS (SP4-SP6a)	Win 2000	Win 95	Win 95 OSR2	Win 98	Win 98 SE	Win 95 & 95 OSR2	Win 98 & SE
Dell OptiPlex GX110	DCM	PhoenixBIOS Revision A02	N	N	N	N	N/A	Y	Y	N/A	N/A	Y <sup>1,2</sup>	Y <sup>1,2</sup>	Y	Y
Dell OptiPlex GX300	MMP	PhoenixBIOS Revision A03	N	N	N	N	N/A	Y	Y	N/A	N/A	Y <sup>1,2</sup>	Y <sup>1,2</sup>	Y	Y
HP Vectra VL18 DT	Vectra VL18 DT	PhoenixBIOS 4.0 Release 6.0	N	N	N	N	N/A	Y	Y	N/A	N/A	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y
HP Vectra VL600 DT	Vectra VL600 DT	PhoenixBIOS 4.0 Release 6.0	N	N	N	N	N/A	Y	Y	N/A	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y
Gateway E-4400	VHA E-4400-733	FB82010A.15A.006.P04	N	N	N	N	N/A	Y	Y	N/A	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y
Gateway E-3200 <sup>3</sup>	MAV E-3200-550	PhoenixBIOS 4.0 Release 6.0	N	N	N	N	N/A	Y	Y	N/A	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y
Compaq iPAQ	C500/810e	686J5 v1.09	Y	N	N	N	N/A	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A
Compaq iPAQ Legacy-Free	C500/810e	686J5 v1.09	Y	N	N	N	N/A	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A

1. You must manually install the drivers for the on board network interface card or chipset.
2. System hangs intermittently during the Windows 98 /98 SE GUI setup.
3. E3200 may hang during scan. If this happens you must create the client manually. This system also intermittently hangs after FDISK and you will have to reboot the client manually.

## Test Matrix for Non-IBM Servers

Computer			Maintenance					Unattended Install	
Type	Model	Tested BIOS Level	WOL	BIOS Update	CMOS Update	ASM Cfg.	RAID Cfg.	NT 4.0 Server	Windows 2000 Server & Advanced Server
Servers Based on L440 GX Server boards		PhoenixBIOS 4.0 Release 6.0	N/A	N	N	Y <sup>1</sup>		Y	Y
Dell Power Edge 2450/600	SMP	PhoenixBIOS Revision A03	N/A	N	N	Y <sup>2</sup>	Y	Y	Y

1. You must assign a model number to the scanned client and then create an LCA file for it in the C:\LCCM\CLNTFILE\DEFAULT directory. L440 GX server boards have Adaptec 7896 SCSI Chipset.
2. Video is unknown. You must assign a model number to the scanned client and then create an LCA file for it in the C:\LCCM\CLNTFILE\DEFAULT directory. PowerEdge has Adaptec 7899 SCSI Chipset.

On-board Ethernet doesn't support PXE or RPL. Therefore, 3COM 3C905C based Adapter and Intel Pro/100+ adapter were used for testing.

### **NETWORK.LST Update:**

For LCCM to recognize an adapter that is not included on its list, you need to edit the file called NETWORK.LST. Unless you do this, LCCM won't be able to identify your adapter during the scan process. Modify NETWORK.LST with the update below for the non-IBM systems listed in the following pages. NETWORK.LST can be found in the directory in which LCCM is installed (for example, C:\LCCM). For more information about modifying NETWORK.LST, refer to the *LCCM Training and Procedures Guide*, Chapter 4.

3COM 3C905B based Adapter (Dell);44;44;LC3COM;OS2;BBLOCK\NDIS\EL90X.dos;10280092;00B0D02=1;XN2S;

3COM 3C905B based Adapter or NLX Riser (Gateway);45;45;LC3COM;OS2;BBLOCK\NDIS\EL90X.dos;107B7056;00E0B8=1;XN2S;

3COM 3C905B Fast EtherLink XL or NLX Riser (Gateway) ;46;46;LC3COM;OS2;BBLOCK\NDIS\EL90X.dos;107B4400;0050DA5=1;XN2S;

3COM 3C905B based Adapter (Dell) ;47;47;LC3COM;OS2;BBLOCK\NDIS\EL90X.dos;102800B4;00B0D04=1;XN2S;

3COM 3C905B based Adapter or NLX Riser (HP) ;48;48;LC3COM;OS2;BBLOCK\NDIS\EL90X.dos;10B79055;00504D=1;XN2S;



## Using LCCM to Deploy Non-IBM Systems

This section describes the procedure for setting up the non-IBM systems for LCCM use and to make the systems known to the LCCM server.

### Compaq Systems

**Models: iPAQ (with legacy ports) C500/810e**

**iPAQ (Legacy-Free) C500/810e**

1. Modify NETWORK.LST as described in the '[NETWORK.LST Update](#)' section above.
2. Close and reopen LCCM server to enable the new NETWORK.LST.
3. Change the client system BIOS settings to boot to the network in order to scan the client into LCCM:
  - a. To access the system's set-up interface, boot the system and press **F10**. Select the **Storage** tab. In the Options menu select **Boot Order**. The two default options are displayed:  
Default Boot Sequence: Hard Drive (1)  
Intel Ethernet controller (2)
  - b. Set the boot sequence to the following. Select the →, to make the change:  
Boot Sequence: Hard Drive (2)  
Intel Ethernet controller (1)
  - c. Select the **Security** tab and choose the **Network Service Boot** option. Make sure this option is set to **Enable**, which is the default setting.
  - d. Select the **Advanced** tab and choose the **Power-on** option. Scroll down to **Remote Wakeup Boot Source** and change the default setting option from Local Hard Drive to **Remote Server** - use the → to make the change. There is an arrow in front of First. The right arrow key toggles the sequence.
  - e. Press **F10** to save the settings.
4. Click the **Scan** button on the LCCM server.
5. Power on the client system to scan in the client.
6. The client system should appear in the left panel of LCCM.

## Dell Systems

**Models:      Dell OptiPlex GX110**  
**Dell OptiPlex GX300**

1. Modify NETWORK.LST as described in the '[NETWORK.LST Update](#)' section above.
2. Close and reopen LCCM server to enable the new NETWORK.LST.
3. Change the client system BIOS settings to boot to the network in order to scan the client into LCCM:
  - a. To access system's set-up interface, boot the system and press **F2**. At the main menu, select the **Boot Sequence** option and press Enter. The default boot-up selections are displayed as follows:
    - 1) Disk Drive
    - 2) Hard Drive C:
    - 3) IDE CD-ROM device
    - 4) MBA UNDI
  - b. Change the default boot sequence to the following (select the -, or + to make the changes):
    - 1) Disk Drive
    - 2) MBA UNDI
    - 3) Hard Disk C:
    - 4) IDE CD-ROM Device
  - c. Scroll down the main menu, select the option **Integrated Devices** - press Enter. The Network Interface controller should be set to **ON w/ MBA** instead of **ON**.
4. Click the **Scan** button on the LCCM server.
5. Power on the client system to scan in the client.
6. The client system should appear in the left panel of LCCM.

This system does not support Wake-on-LAN.

## Gateway Systems

### Model            Gateway E4400

1. Modify NETWORK.LST as described in the '[NETWORK.LST Update](#)' section above.
2. Close and reopen LCCM server to enable the new NETWORK.LST.
3. Change the client system BIOS settings to boot to the network in order to scan the client into LCCM:
  - a. To access the system's set-up interface, boot the systems and press **F1**. Select the **Boot** tab at the top of the main menu. (1<sup>st</sup> Boot Device – 4<sup>th</sup> Boot Device will appear near the bottom of the screen). The default boot-up selections are displayed as follows:
    - 1) Floppy
    - 2) IDE-HDD
    - 3) ATAPI CD-ROM
    - 4) MBA UNDI
  - b. Change the default boot sequence to the following (highlight the device and press Enter to make the changes):
    - 1) Floppy
    - 2) MBA UNDI
    - 3) IDE-HDD
    - 4) ATAPI CD-ROM
4. Click the **Scan** button on the LCCM server.
5. Power on the client system to scan in the client.
6. The client system should appear in the left panel of LCCM.

This system does not support Wake-on-LAN.

### Model            Gateway E3200

1. Modify NETWORK.LST as described in the '[NETWORK.LST Update](#)' section above.
2. Close and reopen LCCM server to enable the new NETWORK.LST.
3. Change the client system BIOS settings to boot to the network in order to scan the client into LCCM:
  - a. To access the system's set-up interface, boot the system and press **F1**. Select the **Boot** tab at the top of the main menu. (1<sup>st</sup> Boot Device – 5<sup>th</sup> Boot Device will appear near the bottom of the screen). The default boot-up selections are displayed as follows:
    - 1) Removable Devices
    - 2) Hard Drive
    - 3) ATAPI CD-ROM

- 4) Network Boot
- 5) MBA
- b. Change the default boot sequence to the following (highlight the device and press Enter to make the changes):
  - 1) Removable Devices
  - 2) Network Boot
  - 3) MBA
  - 4) Hard Drive
  - 5) CD-ROM
4. Click the **Scan** button on the LCCM server.
5. Power on the client system to scan in the client.
6. The client system should appear in the left panel of LCCM.

This system does not support Wake-on-LAN.

## Hewlett Packard Systems

**Model**            **Vectra Li8 DT D9771T #ABA**  
                      **Vectra VL 600 DT D9469T #ABA**

1. Modify NETWORK.LST as described in the '[NETWORK.LST Update](#)' section above.
2. Close and reopen LCCM server to enable the new NETWORK.LST.
3. Change the client system BIOS settings to boot to the network in order to scan the client into LCCM:
  - a. To access the system's set-up interface, boot the system and press **F2**. From the main menu select the **Security** tab. In the options select **Boot Devices Security**. Make sure that **Start from Network** is enabled.
  - b. Select the **Boot** tab. In the boot tab option menu select **Boot Device Priority**. The default boot-up selections are displayed as follows:
    - 1) Removable Devices
    - 2) Hard Drive
    - 3) ATAPI CD-ROM
    - 4) Managed PC Boot Agent [MBA]
  - c. Change the default boot sequence to the following (select the -, or + to make the changes):
    - 1) Disk Drive
    - 2) Managed PC Boot Agent [MBA]
    - 3) Hard Drive
    - 4) ATAPI CD-ROM
4. Click the **Scan** button on the LCCM server.
5. Power on the client system to scan in the client.
6. The client system should appear in the left panel of LCCM.

This System does not support Wake-on-LAN.

## L440 GX server boards

(Servers based on L440 GX server boards Part # VAR-101679)

1. Modify NETWORK.LST as described in the '[NETWORK.LST Update](#)' section above.
2. Close and reopen LCCM server to enable the new NETWORK.LST.
3. Change the client system BIOS settings to boot to the network in order to scan the client into LCCM.
  - a. To access the system's set-up interface, boot the system and press **F2**. Select the **Boot** tab, scroll down and select the **Boot Device Priority** option and press Enter. The default boot sequence is displayed as follows:
    - 1) Removable Devices
    - 2) Hard Drive
    - 3) CD-ROM
    - 4) LANDesk ® Service Agent II
  - b. To scan into LCCM, change the default boot sequence to the following (select the -, or + to make the changes):
    - 1) Removable Devices
    - 2) LANDesk ® Service Agent II
    - 3) Hard Drive
    - 4) CD-ROM
4. Click the **Scan** button on the LCCM server.
5. Power on the client system to scan in the client.
6. The client system should appear in the left panel of LCCM.

## Dell Power Edge2450

1. Modify NETWORK.LST as described in the '[NETWORK.LST Update](#)' section above.
2. Close and reopen the LCCM server to enable the new NETWORK.LST.
3. Change the client system BIOS settings to boot to the network in order to scan the client into LCCM:
  - a. To access the system's set-up interface, boot the system and press **F2**. When the main menu appears, press **Alt + P** - this will take you to the **Boot Device Priority** selection. The default boot sequence is displayed as follows:
    - 1) Diskette Drive A:
    - 2) CD-ROM device
    - 3) Hard Drive C:
  - b. To scan into LCCM, change the default boot sequence to the following (select the Control + Up arrow or the down arrow to make the changes):
    - 1) Diskette Drive A:
    - 2) MBA UNDI
    - 3) Hard Drive C:
    - 4) CD-ROM
4. Click the **Scan** button on the LCCM server.
5. Power on the client system to scan in the client.
6. The client system should appear in the left panel of LCCM.