WHITE PAPER

CONTENTS

Compaq Guide to PC Deployment

Network Installation of Microsoft Windows 95 Using LANDesk Configuration Manager on Compaq Deskpro EP and Deskpro EN Series of Personal Computers

This paper provides information useful to departments charged with initial deployment of Microsoft Windows 95 over the network to Compaq Deskpro EP and Deskpro EN client systems using network boot firmware and an LCM server using the Configuration Service Manager (CSM) application within Intel's LANDesk Configuration Manager (LCM) suite.

This paper and other relevant documents may be located at http://www.compaq.com/im/change.

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NOTICE

The information in this publication is subject to change without notice.

Compaq Guide to PC Deployment
Network Installation of Microsoft Windows 98
Using LANDesk Configuration Manager on
Compaq Deskpro EP and Deskpro EN
Series of Personal Computers

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ASSUMPTIONS

The following assumptions are made in this paper:

- You know how to create operating system installation services within the CSM application.

- You understand or can locate information on how to configure the non-hardware specific portions of Microsoft Windows 95 for your specific installation (i.e., networking configuration, optional components, etc.)

- You know what hardware must be supported.

- You know how to access the Web and download the appropriate SoftPAQs containing the device driver software.

- The deployment team has access to the *Microsoft Windows 95 Resource Kit*.

CONVENTIONS

The notation \\SERVER_NAME\… refers to the network shares that are created by LCM. For example, in this document, \\SERVER_NAME\PROGRAMS refers to the D:\ProgramFiles\Intel\lcm\server\public\programs directory on the LCM server. (Actual mapping of the shares depends on the installation options selected during LCM server setup.)

REFERENCES TO COMPAQ, INTEL AND MICROSOFT DOCUMENTATION

Use the following resources to help you deploy Microsoft Windows 95 on Compaq Deskpro EP or Deskpro EN Series client systems:

- The Compaq Guide to PC Deployment white paper entitled "Network Installation of Microsoft Windows 95 on Compaq Deskpro EP and Deskpro EN Series of Personal Computers Using Microsoft Tools."

- The Intel support page for LANDesk Configuration Manager, located on the Web at http://support.intel.com/support/landesk/configmgr/index.htm. It contains FAQ's, technical notes, and a troubleshooting guide.

- The *Microsoft Windows 95 Resource Kit*. It is very useful for understanding the deployment strategies described in this paper. It gives specific information on the options used to automate the installation of Windows 95.

- Microsoft's Knowledge Base, located on the Web at http://support.microsoft.com/support, contains articles describing known installation issues and solutions.

- SETUP.TXT from the Windows 95 CD provides useful information about setting up Windows 95 and describes some known installation issues.

Hardware Preparation

Ensure that all factory-installed Compaq hardware is properly connected in each target computer. Refer to the *Guide to Features & Upgrades* included with the Compaq Deskpro EP Series and Deskpro EN Series computers if you have any questions regarding how the hardware is installed in the system.

LCM SUPPORT UTILITIES

This section describes utilities provided by Compaq to enhance the LANDesk Configuration Manager's ability to set up and maintain Compaq Deskpro EP and Deskpro EN Series Personal Computer systems.

The LCM ROM Flash Tools

This section describes the procedure for creating a CSM service to upgrade the ROM on Compaq Deskpro EN or EP Series Personal Computers. The DOS-based Remote ROM Flash Utility will be used for this procedure. To illustrate, the following steps will assume that the client system to be flashed is a Compaq Deskpro EN Series, Small Form Factor.

> NOTE: The only difference between the steps described for the Compaq Deskpro EN Series, SFF, and other systems, is that you must obtain the SoftPAQ appropriate for the computer, then change the name of the directory and service created by this procedure to match that system.

1. Obtain the latest version of the Remote ROM Flash Utilities for Deskpro EN Series SFF (686T5 ROM) from the Compaq Software Support pages, located on the Web at http://www.compaq.com/support.

2. Create a directory under the \\SERVER_NAME\PROGRAMS share on the LCM server named for the client system containing the ROM you will be flashing. For this example, we'll use **686T5**.

3. Copy all the files from the Remote ROM Flash Utilities for Deskpro EN Series SFF SoftPAQ to the newly created **686T5** directory on the LCM server.

4. Start the LCM Configuration Services Manager console and create a service that has only the "Setup Applications and Run Programs" option selected.

5. The ROM for Compaq Deskpro EN and EP Series Personal Computers includes a ROM-based F10 Setup. A Language Module option allows the user to select a language other than English that can be used in F10 Setup. Languages that are supported include: Danish, Dutch, Finnish, French, German, Italian, Norwegian, Portuguese, Spanish, or Swedish. Language modules are flashed separately from the main ROM flash. In order to flash both the main ROM image and the language option, you will need to add two program entries to the current flash service.

   – To update the main ROM, the program to run is \\SERVER_NAME\PROGRAMS\686T5\flshlite.exe. The associated command line is:

      /f flsh.cpu default

   – To update the F10 Setup language option, the program to run is \\SERVER_NAME\PROGRAMS\686T5\flshlite.exe. The associated command line is:

      /l:*ln* /f lang.opt default

      where the supported values for ln are the following:

FR	French
GR	German
IT	Italian
SP	Spanish
NL	Dutch

SE	Swedish
DK	Danish
FI	Finnish
NO	Norwegian
PT	Portuguese

Creating and Formatting the Operating System OS Partition

This section describes the procedure for creating a CSM service that will create and format an operating system partition on Compaq Deskpro EN or EP Series client computers using the Operating System Installation Readiness Utility for EN/EP/SB Systems.

1. Obtain the latest version of the Operating System Installation Readiness Utility for EN/EP Series Products from the Compaq Software Support pages, located on the Web at http://www.compaq.com/support.

2. Create a directory under the \\SERVER_NAME\PROGRAMS share on the LCM server named **OSIRU98**.

3. Copy all the files from the Operating System Installation Readiness Utility SoftPAQ to the **OSIRU98** subdirectory that you just created.

4. Start the LCM Configuration Services Manager console and create a new service that only has the "Setup Applications and Run Programs" option selected. The program to run should be \\SERVER_NAME\PROGRAMS\OSIRU98\osiru98.exe and the command line options should be:

       -p 1000 FAT

5. Refer to the documentation that is delivered with the Operating System Installation Readiness Utility to understand what these options mean and which are appropriate for your installation. **NOTE:** The OSIRU98 utility supports the creation of FAT32 partitions; however, this option cannot be used with the current version of LCM. Installing to FAT32 partitions is currently not supported by the CSM application. Please contact your LCM supplier to find out when FAT32 support will be added to the CSM application.

6. Complete the definition of the service through the CSM console. This service can now be utilized to partition and format the hard drive.

LCM SERVER MODIFICATIONS

Modifying LCM Server to Download the Proper NDIS2 Drivers for Windows 95 Installations

As part of its Windows 95 client installation process, CSM will download NDIS2 DOS drivers to the client system to ensure that the client will maintain access to the LCM server throughout the entire operating system installation process. Your LCM server will require some modifications to correctly handle downloading the drivers for the Compaq Fast Ethernet network controller during a client boot. The procedures are:

1. Edit \\SERVER_NAME\OS\drivers\drvtable.ini in a text editor and add the following lines:

   [PCI-8086-1229-020000-05]
   Directory=n100
   Driver=n100.dos

2. Create a directory named \\SERVER_NAME\OS\drivers\n100 if it does not already exist.

3. Obtain the latest version of the "Deskpro EP, SB, and EN Series Drivers for Compaq 10/100 TX PCI Intel UTP Controller and NC3121 Fast Ethernet NIC" from the Compaq Software Support pages.

4. Copy N100.DOS from the NDIS\DOS directory that is a part the Fast Ethernet NIC SoftPAQ to the \\SERVER_NAME\OS\drivers\netflx3 directory.

5. Copy the PROTOCOL.INI file from the \\SERVER_NAME\OS\drivers\e100b\ directory to the\SERVER_NAME\OS\drivers\n100 directory.

6. Edit \\SERVER_NAME\OS\drivers\n100\protocol.ini file and change the [ms$e100b] section to:

[ms$e100b]
DriverName=N100$

NOTE: For more information about this topic please check the Intel support site on the Internet. Specifically, refer to http://support.intel.com/support/landesk/configmgr/24259.htm, a document that discusses the DRVTABLE.INI file.

WINDOWS 95 CLIENT INSTALLATION

This white paper details CSM-unique changes from the general network installation process described in the Compaq Guide to PC Deployment white paper entitled "Network Installation of Microsoft Windows 95 on Compaq Deskpro EP and Deskpro EN Series of Personal Computers Using Microsoft Tools" (network installation white paper). The following sections will describe the necessary changes to the LCM server and a CSM Windows 95 installation service to accomplish a Compaq-style network installation.

Operating System File Layout

The Microsoft Windows 95 setup files should be placed on the LCM server within the \\SERVER_NAME\OS\drivers\netflx3 share in the Windows 95 directory. The Compaq drivers and software should be integrated into this same installation share. For illustration, the following section assumes that Compaq-supplied drivers will be copied to individual subdirectories underneath the \\SERVER_NAME\OS\Win95 directory and that Compaq software will be copied to individual subdirectories underneath the \\SERVER_NAME\OS\Compaq directory. Refer to the network installation white paper for instructions on obtaining the necessary Compaq SoftPAQs and expanding them onto the LCM server.

Installation Files Related Changes

- The network installation white paper describes the adding of RunOnce\Setup registry entry using the MSBATCH.INF file. For example:

[CPQ.App.Setup]
HKLM,%KEY_RUNONCE_SETUP%,"IM Agents",,"N:\IM\Setup.exe -s"
HKLM,%KEY_RUNONCE_SETUP%,"Remote Services",,"N:\Remote\Setup.exe -s"

Under LCM and using the directory assumed by this example those lines should look like:

[CPQ.App.Setup]
HKLM,%KEY_RUNONCE_SETUP%,
"IM Agents",,"\SERVER_NAME\OS\Compaq\IM\Setup.exe -s"
HKLM,%KEY_RUNONCE_SETUP%,

"Remote Services",,"\SERVER_NAME\OS\Compaq\Remote\Setup.exe -s"

- The MSBATCH.INF file that was created by the processes described in the network installation white paper needs to be copied to the \\SERVER_NAME\OS\AnsFiles directory. This file also needs to be selected as the answer file for the Windows 95 installation service using the "Windows 95 Answer File" page of the service wizard.