

DELL

Dell™ OptiPlex™ FX160 Thin Client System Management

END-TO-END COMPUTING

Dell | Flexible Computing Solutions



THIS WHITE PAPER IS FOR INFORMATIONAL PURPOSES ONLY, AND MAY CONTAIN TYPOGRAPHICAL ERRORS AND TECHNICAL INACCURACIES. THE CONTENT IS PROVIDED AS IS, WITHOUT EXPRESS OR IMPLIED WARRANTIES OF ANY KIND.

Dell, the *Dell* logo, and *OptiPlex* are trademarks of Dell Inc; *Microsoft* and *Windows* are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries; *SUSE* is a registered trademark of Novell, Inc., in the United States and other countries; *Citrix* is a trademark of Citrix Systems, Inc.

Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Dell disclaims proprietary interest in the marks and names of others.

©Copyright 2008 Dell Inc. All rights reserved. Reproduction in any manner whatsoever without the express written permission of Dell Inc. is strictly forbidden. For more information, contact Dell.

Information in this document is subject to change without notice.

Table of Contents

INTRODUCTION 5

INITIAL DEPLOYMENT 5

BIOS MANAGEMENT 5

IMAGE MANAGEMENT 6

HOW TO OBTAIN ALTIRIS DEPLOYMENT SOLUTION FOR THIN CLIENTS 7

ADDITONAL RESOURCES 8

AUTHOR..... 8

INTRODUCTION

The Dell™ OptiPlex™ FX160 is a low cost, low maintenance thin client device for organizations that want to enable users to perform tasks or access programs using a browser or virtual desktop solution such as Citrix™ Xen Desktop. Users can range from administrative assistants and data entry workers to users accessing systems from kiosk locations commonly found in call centers or health care environments. Dell OptiPlex FX160 thin clients provide users with a reliable server-based environment without the complexity or maintenance of a PC.

The Dell OptiPlex FX160 thin client connects to any Internet Protocol (IP) network and can be managed from a centralized location using the Altiris Deployment Solution for Dell Thin Clients. Dell OptiPlex FX160 thin clients do not contain any moving parts (if the thin client has a hard disk drive there is a cooling fan) and the operating system is stored in non-volatile RAM (NVRAM), which increases the thin client's manageability, security, and reliability.

Altiris Deployment Solution (DS) software helps reduce the cost of deploying thin clients from a centralized location in your environment. Deployment Solution is an easy-to-use, automated solution that offers OS deployment, configuration, PC "personality" migration, and software deployment.

INITIAL DEPLOYMENT

Altiris Deployment Solution software (Version 6.9 SP1 and above) is auto-licensed to use with your FX160 system. No licenses need to be purchased to manage Dell Thin Clients. DS agents are pre-installed in the images provided from Dell enabling zero touch management of FX160 systems.

On startup the DS agent on the FX160 thin client contacts the nearest available deployment server using multicast. The deployment server automatically recognizes and manages new thin clients without requiring additional setup.

BIOS MANAGEMENT

System administrators can manage the FX160 thin client BIOS settings remotely on a one-to-many basis. Remote management on a one-to-many basis eliminates the traditionally time-consuming effort of updating critical BIOS settings by "touching" all client systems.

For ease-of-management sample BIOS jobs are provided in the **Dell Thin Clients** folder under the **Samples** folder. Using these sample jobs, system administrators can manage BIOS settings remotely.

The following are examples of the BIOS jobs provided in the **Dell Thin Clients** folder:

1. Disable USB ports in BIOS for enhanced security.
2. Enable Wake On LAN in BIOS for efficient energy management.

3. Set Embedded NIC as the first boot device to boot to the PXE server for patch deployment/image management.
4. Specify boot order. Sample jobs are provided for one shot boot order changes (such as setting a NIC as the first device in the boot order) and full boot order (setting the boot order for all devices, for example, network first, hard drive second, and so on).

The sample jobs are applicable to both SUSE® Linux Enterprise Thin Client and Win XPE operating systems. Sample jobs that require user modification are tagged with “*”. Instructions on required modifications are provided in the job.

Figure 1: Sample BIOS Jobs

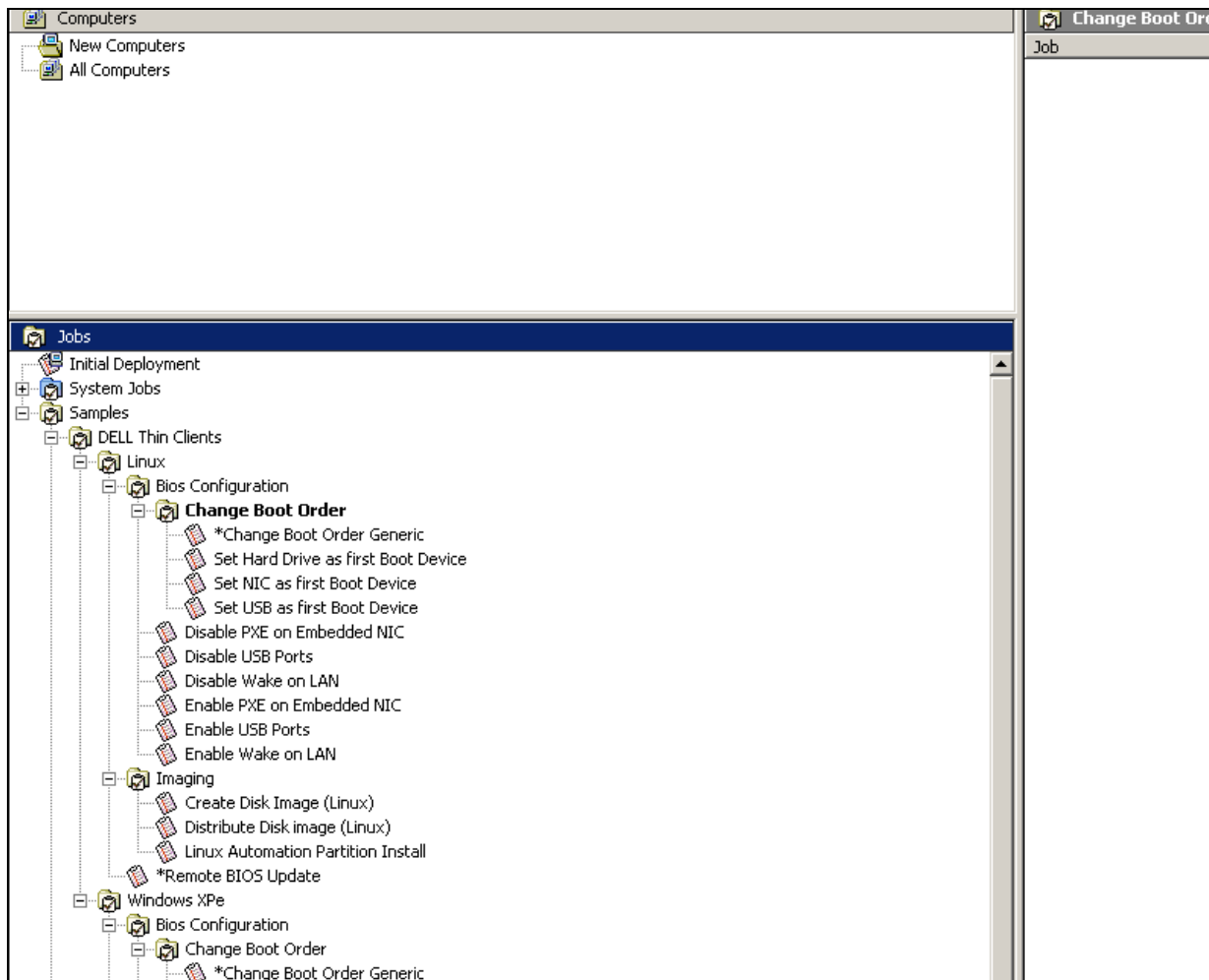


IMAGE MANAGEMENT

For added security Dell recommends the installation of an automation partition on the FX160 thin client for use in imaging.

Dell OptiPlex FX160 provides an easily deployable Linux install partition methodology. On other systems, installation of the Linux automation partition requires a visit to the system with an automation boot disk or USB key.

For Dell thin clients, system administrators can deploy the automation partition to SUSE Linux Enterprise using the sample job provided in the **Samples->Dell Thin Clients->Linux->Imaging** folder. This eliminates the “one touch” requirement.

The following steps are required for prepping the FX160 system for imaging using DS:

1. Choose the Automation partition OS (Automation Environment). Dell recommends DOS/Linux for Microsoft® Windows® XPE production systems and Linux for SUSE Linux Enterprise Thin Client production systems.
2. Install the Automation partition on FX160 systems. For Windows XPE systems this can be accomplished by using the right click menu. For SUSE Linux Enterprise Thin Client production systems a job for automation partition install is provided in the sample folder.

Your FX160 thin client is now ready for imaging. Please refer to the Altiris documentation for more information on the various imaging options available.

If you prefer to use PXE based imaging this option is available. Use the BIOS configuration job provided in the sample job folder to enable PXE on the FX160.

HOW TO OBTAIN ALTIRIS DEPLOYMENT SOLUTION FOR THIN CLIENTS

The deployment server is available on the Symantec website at the following link. Altiris is a subsidiary of Symantec.

<http://www.symantec.com/business/deployment-solution>

To download the deployment server:

Locate the webpage for downloading trial versions.

1. Download the deployment server install file and the .FRM file. For your convenience the .FRM file contains a precompiled Linux Automation Environment.
2. Double click on the install file to start the installation.
3. Select the **Thin Client Install** option. You are not required to purchase an additional license to manage Dell Thin clients. FX160 is auto licensed for your use in Deployment Server SP1.

After the install is finished, the thin client view is displayed. To access the sample jobs, switch to the regular console view by unchecking the **Thin Client View** from the **View** menu.

ADDITIONAL RESOURCES

Additional information is available from the following sources.

- support.dell.com
- <http://www.altiris.com/Support/Documentation.aspx>
- <https://kb.altiris.com/>

AUTHOR

Rohit Sharma is an engineer in the Dell OpenManage Software development organization. He has a bachelor's degree in Engineering from the University of Mumbai in India and a Master's In Computer Science from North Carolina State University.