



HP Thin Client Management Getting Started Guide

White Paper

March 7, 2007

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Altiris, Inc. is a pioneer of IT lifecycle management software that allows IT organizations to easily manage desktops, notebooks, thin clients, handhelds, industry-standard servers, and heterogeneous software including Windows, Linux, and UNIX. Altiris automates and simplifies IT projects throughout the life of an asset to reduce the cost and complexity of management. Altiris client and mobile, server, and asset management solutions natively integrate through a common Web-based console and repository. For more information, visit www.altiris.com.

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INTRODUCTION

This guide walks you through installing Altiris® Deployment Solution™ software to manage HP* Thin Client computers.

- [Requirements](#)
- [Deployment Solution Installation](#)
- [Post-Installation Tasks](#)
- [Configuration Tasks](#)
- [Thin Client Management](#)

REQUIREMENTS

Server Requirements

- A dedicated server-class computer running Windows 2003 or 2000 to host your Deployment Server.
- A static IP address.
- .NET 1.1 Framework.
- MDAC 2.7.

Database Requirements

- Microsoft SQL Server 2000 or 2005, or the MSDE run-time version to host the database.
- TCP/IP enabled on SQL Server 2005 (TCP/IP is enabled by default on SQL Server 2000). See <http://kb.altiris.com/article.asp?article=27262&p=3>

Installing the Deployment Database on the same computer as your Deployment Server simplifies installation and provides increased performance, but is not required.

In smaller installations, you can use the MSDE database engine, which is the free run-time version of SQL Server. This is not recommended for advanced users due to the lack of database management tools.

An MSDE Web installer is included with Deployment Solution; see [Installing MSDE](#) in Appendix A for instructions.

Step 1: Prepare an Administrator Account to Install the Software

The account you use to install Deployment Solution must be a Windows Administrator and must possess System Administrator rights on the SQL Server.

System Administrator database rights can be granted temporarily to this account and then revoked after the installation completes. These rights are used to create the database on the SQL Server.

Step 2: Create a Services Account

Create a new local account to run the Deployment server services and connect to the database. For security reasons, we don't recommend using an existing administrator account which might possess rights beyond those needed by Deployment Server. This account should not be tied to a user, should not be part of any group, and should not possess interactive login privileges.

If your SQL Server is on another computer, make this a domain-level account or create another local account on the computer hosting SQL Server with the same credentials.

Step 3: Download the Software

On the server you selected to host Deployment Solution, download:

- Deployment Solution for HP Thin Clients from Altiris (<http://www.altiris.com/download.aspx?product=510>)
- FreeDOS (http://altirisdl.com/BDCgpl_6.8.8297.frm). FreeDOS is required to manage computers in preboot.

Step 4: Run the Installation

Note: If your SQL Server is located on another computer, see [Installing Deployment Solution Using a Remote SQL Server](#) for installation instructions.

1. Run the Deployment Solution for HP Thin Clients installation you downloaded in [Step 3: Download the Software](#), and then select **Extract & Execute**.
2. Select **Thin Client Install**, and then select **Include PXE Server**.
3. Click **Install**.

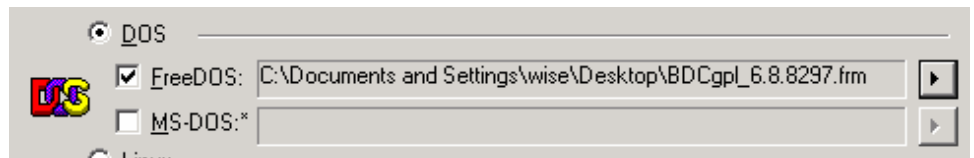
4. Provide the credentials for the services account you created in [Step 2: Create a Services Account](#).



Service user name: dsadmin

Service password: [masked]

5. Select **DOS**, and then select **FreeDOS**. Provide the path to the BDCgpl*.frm file you downloaded in [Step 3: Download the Software](#).



DOS

FreeDOS: C:\Documents and Settings\wise\Desktop\BDCgpl_6.8.8297.frm

MS-DOS:*

6. Click **Next**, and then **Install**.

POST-INSTALLATION TASKS

When the installation completes, a few additional tasks are required before configuration.

Step 1: Grant Services Account Database Rights

The services account requires ownership of the database created during installation.

1. Open Enterprise Manager and connect to your SQL Server.
2. Browse to **Security > Logins**.
3. Double-click the account you are using to run the Deployment server services. If the login is not listed, add it.
4. Click the **Database Access** tab, select the eXpress database, and enable the db_owner role.
5. Click **OK**, and verify that the change was successful.

Step 2: Grant Services Account File System Rights

Grant the services account full control of the Deployment Share.

1. In Windows Explorer, browse to C:\Program Files\Altiris\eXpress\Deployment Server.
2. Right-click this folder and select **Sharing and Security**.
3. Click the **Security** tab.
4. Click **Add**, browse to the services account, and then grant **Allow Full Control** permissions.

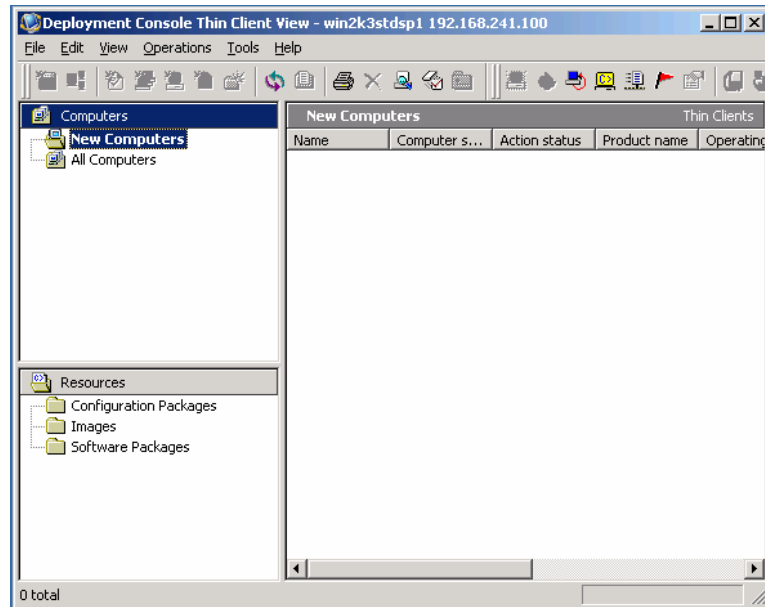
Step 3: Create Domain Join Accounts

The domain join account is used to join or re-join computers to a domain after imaging. This account should not be tied to a user, should not be part of any group, and should not possess interactive login privileges.

1. Create a separate domain-level account for each domain in which you manage computers.
2. Grant only privileges to add computers to a domain.

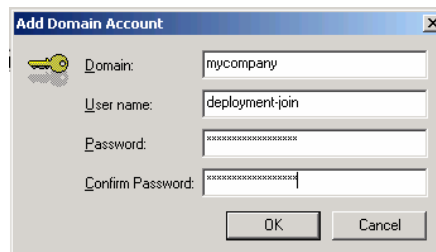
CONFIGURATION TASKS

Most Deployment Solution tasks are performed in the Deployment Console. Open the Deployment Console using the desktop icon or by selecting **Start > Programs > Altiris > Deployment Solution > Console**.



Step 1: Add Domain Join Accounts

1. In the Deployment Console, select **Tools > Options > Domain Accounts**.
2. Click Add, and then provide the domain and credentials.

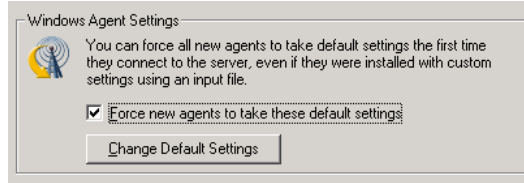


Step 2: Specify Default Agent Settings

This lets you provide default settings for each computer when it initially connects to the Deployment Server.

1. In the Deployment Console, select **Tools > Options > Agent Settings**.

2. Enable **Force new agents to take these default settings**.



3. Click **Change Default Settings** to change other settings, such as enabling remote control or data encryption.

The agent installed on Thin Clients is configured to locate your Deployment Server automatically.

By default, after enabling this option, agents are configured to connect directly to the Deployment Server and no longer locate the server using multicast. This provides additional security.

THIN CLIENT MANAGEMENT

After Deployment Solution is installed, Thin Clients connect and appear in the Deployment Console automatically. After connection, these computers are ready to receive software, disk images, and configuration settings.

This section contains a few additional tasks you might want to perform as you manage Thin Clients.

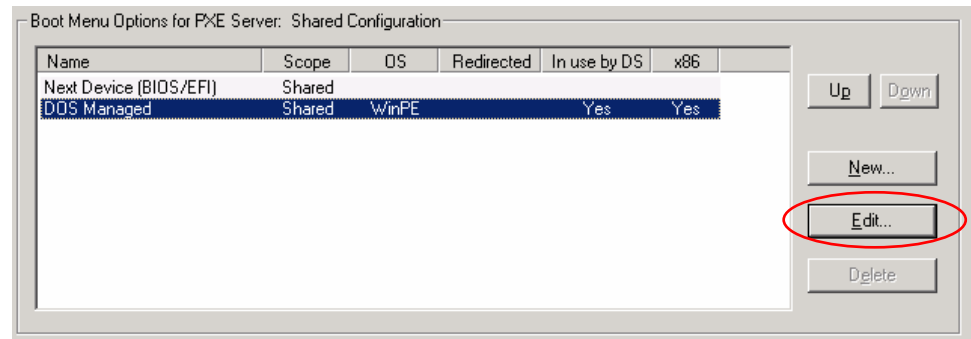
Add Support for Multicasting

Multicast greatly reduces bandwidth and server load when imaging multiple computers.

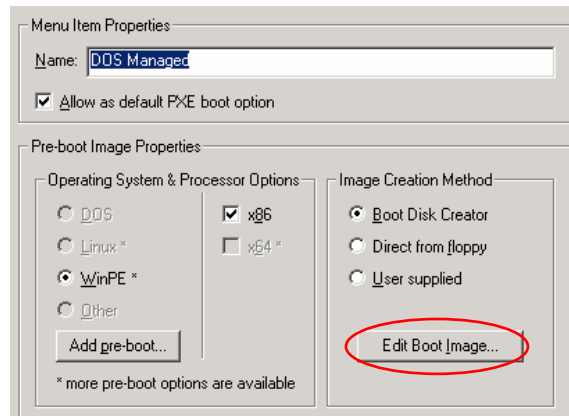
However, the Intel* UNDI universal network driver that PXE uses by default does not support multicast.

To enable multicast, add the specific network drivers used by your Thin Clients to the DOS boot configuration in the PXE Configuration Utility by completing the following instructions:

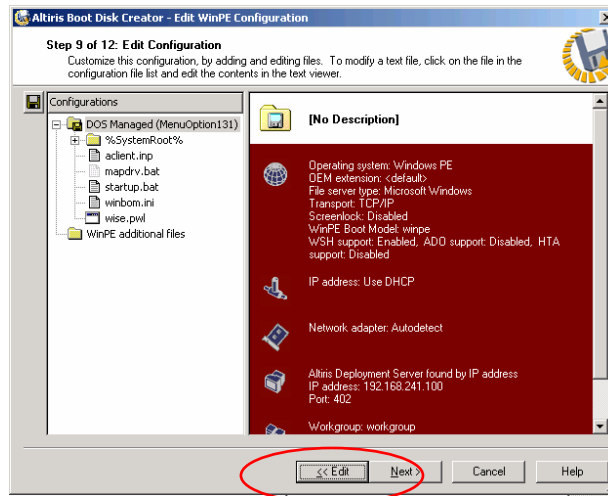
1. On your Deployment Server, select **Start > Programs > Altiris > PXE Services > PXE Configuration Utility**.
2. Select **DOS Managed** and then click **Edit**.



3. Click **Edit Boot Image**.

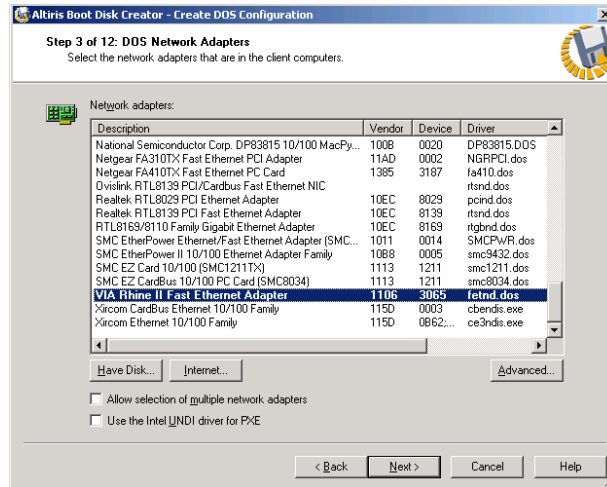


4. Click **Edit**.

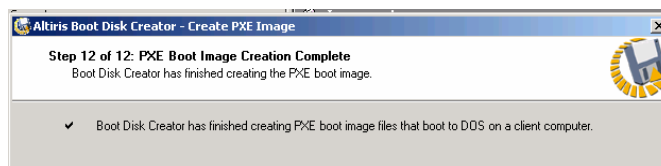


5. Click **Next** to step 3, and then deselect **Use the Intel UNDI driver for PXE**. This needs to be replaced with the specific driver for your hardware types.

6. On this screen, select or provide the DOS drivers for your network adapters.



7. Click **Next**, accepting the default values until you complete step 12 of 12, and then click **Finish**.



In-Depth Management

The standard Deployment Solution interface provides additional management functionality, including an advanced imaging engine, scripted operating system installations, remote script execution, and personality migration.

To view the standard interface, In the Deployment Console select **View >** and then deselect **Show Thin Client View**.

For details on the features of Deployment Solution, select **Help > Product Guide** in the Deployment Console.

Manage More Computers

In addition to Thin Clients, Deployment Solution can manage:

- Windows, Linux, and Mac desktops, including Windows Vista
- Windows and Linux servers
- Server Blades
- 64-bit AMD, Intel, and Itanium computers.

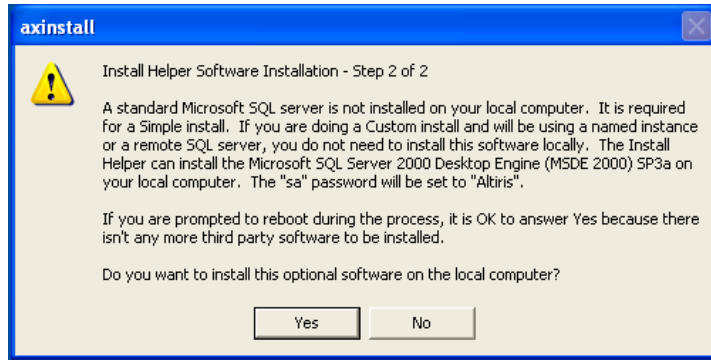
Visit www.altiris.com for information on licensing.

APPENDIX A: SUPPLEMENTAL TASKS

This section contains instructions on using the MSDE database engine, installing Deployment Solution using a remote SQL Server, and a list of the network ports used by Deployment Solution.

Installing MSDE

1. Run the Deployment Solution for HP Thin Clients installation you downloaded in [Step 3: Download the Software](#), and then select **Extract & Execute**.
2. Select **Simple Install Helper**. When prompted, click **Yes** to install MSDE. An internet connection is required.



3. When the MSDE installation completes, restart the computer and install according to the instructions in [Step 4: Run the Installation](#).

Installing Deployment Solution Using a Remote SQL Server

1. Run the Deployment Solution for HP Thin Clients installation you downloaded in [Step 3: Download the Software](#), and then select **Extract & Execute**.
2. Select **Custom Install**, and then click **Install**.
3. Provide the credentials for the services account you created in [Step 2: Create a Services Account](#).

Service user name:	Service password:
<input type="text" value="dsadmin"/>	<input type="password" value="*****"/>

4. Provide the SQL Server instance, port, and database name.

Select the Microsoft SQL Server Instance where you would like your Deployment Database to be installed. You can override the SQL port number if you select a Named Instance. You can also change the default database name.

SQL Port Number:

Database Name:

If Microsoft SQL Server is not installed, cancel this installation and install the Microsoft SQL Server Desktop Engine (MSDE). Then restart this installation.

5. If the account you are using to install has System Administrator rights on the SQL Server, select Windows NT Authentication. Otherwise, select SQL Server authentication and provide credentials.
6. Select **FreeDOS**, and then provide the path to the BDCgpl*.frm file you downloaded in [Step 3: Download the Software](#).

DOS

FreeDOS:

MS-DOS:*

7. Complete the remaining prompts, accepting the default settings and then click **Install**.

Network Ports

Deployment Solution uses the network ports in the following table.

Port	Protocol	Where is this port opened?
402	UDP	<ul style="list-style-type: none"> • Deployment Server • Deployment Agent <p>The Deployment Server and each Thin Client you want to manage needs to accept data on this port.</p>
505	TCP	<ul style="list-style-type: none"> • Remote SQL Server <p>This is the standard port where SQL Server accepts TCP traffic.</p> <p>If your SQL Server is on the same computer as your Deployment Server you do not need to configure this port.</p>

The Altiris PXE Server uses the network ports in the following table. Ensure that traffic on these ports is allowed on your network.

Port	Protocol	Where is this port opened?
67	UDP	<ul style="list-style-type: none">• PXE Server
68		<ul style="list-style-type: none">• PXE Client
4011		These are the industry standard ports used by PXE to remotely boot clients and locate PXE servers.
69	UDP	<ul style="list-style-type: none">• PXE Server
1758		<ul style="list-style-type: none">• PXE Client
1759		These are the industry standard ports used by PXE to send boot files using TFTP.

Additional network port information is contained in the *Deployment Solution Product Guide* (select Help > Product Guide in the Deployment Console).