Intel® Deployment Manager 3.3

by VERITAS OpForce™

Installation Guide for Microsoft Windows

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Preface

Intel® Deployment Manager by VERITAS OpForce™ automates administrative tasks involved with controlling, provisioning, and updating Intel Server Compute Blades within sophisticated, heterogeneous IT environments. These tasks include discovering and recording hardware and software inventory, tracking software licenses, provisioning blade servers, setting up networks and storage, and setting up administrative and user access.

Typically, each of these activities is handled by a different functional group within an organization. As each task is completed, there is a hand-off to another group which then starts the next set of activities, and so on, until servers, networking, storage, operating systems, and applications are ready for use. Intel Deployment Manager closes the gaps in the way computers, networks, and storage are managed and helps you eliminate the manual hand-off between groups within the enterprise by automating and streamlining IT administration activities.

About this Document

This installation guide provides you with the information you need to install Intel Deployment Manager for Microsoft® Windows®.

Audience

This installation guide is intended for use by system engineers, system administrators, network engineers, network administrators, data center operators, and IT engineers.

What's in this Guide?

This installation guide provides you with the information you need to perform a new installation of Intel Deployment Manager for Windows. It includes the following sections:

◆ "Introduction to Intel Deployment Manager" on page 1 provides an overview of Intel Deployment Manager features and the Intel Deployment Manager installation process.

◆ "Prerequisites for Installation" on page 3 describes the system and network requirements that you need to satisfy before installing Intel Deployment Manager.

◆ "Installing Intel Deployment Manager" provides a step-by-step procedure for installing the database, and Intel Deployment Manager for Windows.

◆ "Getting Started" tells you how to log in to the user interface, and describes the administration console.

◆ "Intel Deployment Manager Port Numbers" lists all the port numbers that are used by Intel Deployment Manager.

◆ "SSL Certificates" provides information about generating and installing an SSL certificate signed by a known Certificate Authority.

◆ "Third Party Software License Agreements" lists all of the Third-Party Software License Agreements.

Related Documents

The Intel Deployment Manager documentation set includes this guide and the:

◆ *Intel Deployment Manager by VERITAS OpForce Release Notes*

◆ *Intel Deployment Manager by VERITAS OpForce Installation Guide for Red Hat Linux*

◆ *Intel Deployment Manager by VERITAS OpForce User's Guide*

◆ *Online Help*

Conventions

Typeface	Usage	Examples
monospace	Computer output, files, directories, account names, roles, permissions, events, event types, workspaces, software elements such as command options, function names, and parameters	Read tunables from the `/etc/vx/tunefstab` file. You must have the `Full Control` permission.
monospace (bold)	User input	#`mount - vxfs /h/filesys`
italic	New terms, book titles, emphasis, variables	See the *User's Guide* for details. The variable *vxfs_ninode* determines the value of...
Palatino (Bold)	GUI objects (buttons, labels, categories, field names, selections)	Click **OK**. Enter the IP address in the **IP Address** field.
*	Indicates required field	**IP Address** *
$	Bourne/Korn/Bash shell prompt	
#	Superuser prompt (all shells)	
[ ]	In a command synopsis, brackets indicates an optional argument	`ls [-a]`
|	In a command synopsis, a vertical bar separates mutually exclusive arguments	`mount [suid | nosuid ]`
blue text	Indicates an active hypertext link. In PDF and HTML files, click links to move to the specified location	http://www.veritas.com

Introduction to Intel Deployment Manager 1

Intel Deployment Manager enables you to optimize utilization of your existing IT infrastructure by implementing on-demand computing services. With Intel Deployment Manager, you can easily perform any of the following operations:

◆ Auto-discover your Intel Server Compute Blades in the bare-metal state (no OS available), as well as in the deployed state.

◆ Create server pools that can be shared among multiple network segments.

◆ Rapidly deploy and provision servers in a multi-network environment.

◆ Create system snapshots that contain a complete software environment (OS, applications, data, network settings and personalization information) for your servers.

◆ Manage your server snapshots with built-in powerful cataloging and profiling capabilities.

◆ Remotely access and manage your Intel Server Chassis, Intel Server Compute Blades.

◆ Deploy applications, OS patches, and quickly upgrade BIOS, Firmware, and Hardware RAID configurations on multiple systems.

◆ Standardize on an integrated provisioning tool for your Linux and Microsoft Windows environments.

In addition, Intel Deployment Manager provides you with a hardware inventory of chassis, and blades and provides reports and detailed event logs. Moreover, its role-based administration capabilities enable you to divide and compartmentalize server management tasks among your system administrators.

The Intel Deployment Manager server can run on Linux or Windows platforms, and supports deployment, provisioning and configuration of Intel Server Chassis and Intel Server Compute Blades.

Prerequisites for Installation 2

Before you install Intel Deployment Manager, verify that you can meet or exceed the system requirements. You should also gather the information required for network configuration, and be aware of any restrictions that might affect your installation.

This chapter includes the following sections:

System Requirements

Requirements are provided in the following sections for the Intel Deployment Manager server, database, system storage servers, managed computing devices, required network information, and the administration console.

Intel Deployment Manager Server

The Intel Deployment Manager server is the machine that runs Intel Deployment Manager. The Intel Deployment Manager server *must* use a fixed IP address.

Intel Deployment Manager Server Requirements

Component	Details
Hardware	**Intel Server Compute Blades**
Supported OS	- Microsoft® Windows® 2000 Server with Service Pack 3 - Microsoft Windows 2000 Advanced Server with Service Pack 3 - Microsoft Windows Server 2003 Enterprise Edition
RAM	- Minimum of 512 MB - Recommended 1 GB or higher
CPU Speed	Recommended 1 GHz or faster
Hard Disk	4 GB (minimum) required for the installation of Intel Deployment Manager and PostgreSQL database.

Note Additional disk space is needed to store snapshots, software, and server log files.

Database Requirement

PostgreSQL Database 7.2.1 is required for installation of Intel Deployment Manager on Windows.

We recommend that the database server be installed on the same machine as the Intel Deployment Manager server. If it is installed on a separate machine, the database requires manual configuration (recommended only for advanced users).

System Storage Servers

One or more system storage servers can be used to store snapshots and software managed by Intel Deployment Manager. The storage server must be an Intel® Xeon™ processor family machine.

If your Intel Deployment Manager server is running on a Windows system, your storage server can run Linux with Samba, or Windows with CIFS. Running Linux with NFS is not supported.

Managed Computing Device Requirements

The system requirements for the managed computing devices are as follows:

System Requirements

	Red Hat® Linux® and SuSE®	Microsoft® Windows®
Processor	◆ Intel Xeon processor family ◆ Intel Xeon processor family with Intel Extended Memory 64 Technology	◆ Intel Xeon processor family ◆ Intel Xeon processor family with Intel Extended Memory 64 Technology
RAM (Minimum)	128 MB	128 MB
Network Card	At least one PXE 2.0 Build 072 (or higher) with Intel Boot Agent.	At least one PXE 2.0 Build 072 (or higher) with Intel Boot Agent.
BIOS Boot Order	Network (PXE NIC) before Hard Drive	Network (PXE NIC) before Hard Drive

Note For specific versions of supported operating systems, see "Supported Operating Systems" on page 6

Supported Operating Systems

Intel® Xeon™ Processor Family

◆ Microsoft Windows 2000 Advanced Server with Service Pack 3

◆ Microsoft Windows Server 2003 Enterprise Edition

◆ Red Hat Enterprise Linux 3.0 AS Update 3

◆ SuSE® Linux Enterprise Server 9.0

Intel® Xeon™ Processor Family with Intel Extended Memory 64 Technology

◆ Microsoft Windows Server 2003 Enterprise Edition

◆ Red Hat Enterprise Linux 3.0 AS Update 3

◆ SuSE Linux Enterprise Server 9.0

Supported File Systems

Intel Deployment Manager supports the following File Systems:

◆ Red Hat Linux - EXT2, EXT3, SWAP, LVM

◆ Microsoft Windows - NTFS, FAT16, FAT32

◆ SuSE Linux - LVM, ReiserFS

Required Network Information

You need to know the IP addresses for:

◆   the Intel Deployment Manager server

◆   computing devices to be managed by Intel Deployment Manager

◆   the external router/gateway to the internet, if applicable

◆   the LDAP (Lightweight Directory Access Protocol) server if you are using LDAP authentication (you'll also need the LDAP user name and password)

Administration Console

To access the Intel Deployment Manager administration console, you need:

◆   a web URL for Intel Deployment Manager

◆   a user ID and password

You can use the following web browsers:

◆   Internet Explorer 6.0 (or higher)

◆   Netscape 6.2.3 (or higher)

◆   Mozilla 1.0 (or higher)

Upgrade Requirements

You can only upgrade to Intel Deployment Manager 3.3 from an English version of Intel Deployment Manager 3.2 or 3.2 Update 3. Upgrading from a localized version of Intel Deployment Manager is not supported.

Restrictions

It is important to observe the following restrictions when installing Intel Deployment Manager:

◆ Generally, avoid running applications or services that use ports required by Intel Deployment Manager. See "Intel Deployment Manager Port Numbers" on page 45 for a list of ports used by Intel Deployment Manager.

◆ The Intel Deployment Manager web server uses standard port assignments, port 80 for HTTP and port 443 for HTTPS. We recommend that you accept these defaults and not run other web servers like Microsoft IIS on the Intel Deployment Manager server. If you must run other web servers on the Intel Deployment Manager server, reassign the ports used by the other web servers, or reassign the ports used by Intel Deployment Manager.

◆ Intel Deployment Manager runs its own TFTP and DHCP servers. You should not run other TFTP or DHCP servers on the Intel Deployment Manager server because of potential port conflicts. If you are currently running a TFTP server you must stop it before you begin the Intel Deployment Manager installation. (Click **Control Panel** > **Administrative Tools** > **Services** > **TFTP**, and click **Stop**.)

◆ Cisco VPN could cause malfunction of OpForce on Windows. If Cisco VPN is installed on the computer, use the setMTU tool to set the MTU value to default for all network interfaces. If the MTU value is set to 1300, TFTP packets get fragmented, and as a result, PXE boot fails.

◆ Do not install Cygwin or use Cygwin tools on the Intel Deployment Manager server.

◆ Do not install PostgreSQL in the Intel Deployment Manager folder. Do not install multiple instances of PostgreSQL on the Intel Deployment Manager server.

◆ Close all other applications and windows when installing or removing Intel Deployment Manager, especially the Windows Services panel. Verify that you are not running a Cisco VPN client, an SQL server, or virus protection software.

◆ You can access the Intel Deployment Manager administration console from beyond a firewall, but the Intel Deployment Manager server, its system storage server(s), and the machines Intel Deployment Manager manages must all be on the same side of the firewall. Placing a firewall between your Intel Deployment Manager server and the system storage server(s) causes severe performance degradation! (This configuration is not supported.)

◆ If you have a host-based firewall enabled on a managed server or server asset neither the Intel Deployment Manager server nor an ITAP agent will be able to contact the managed resource unless you configure the firewall to let traffic from Intel Deployment Manager ports through.See "Intel Deployment Manager Port Numbers" on page 45 for a list of ports used by Intel Deployment Manager.

◆ If you are performing an upgrade to Intel Deployment Manager 3.3 from a previous version of Intel Deployment Manager, note that you cannot upgrade to or from a beta or localized version. You can only upgrade from an English version of Intel Deployment Manager 3.2 or 3.2 Update 3.

Installing Intel Deployment Manager 3

Use the information in this chapter to install a database, and to install, upgrade, or uninstall Intel Deployment Manager.

This chapter includes the following topics:

Installation Overview

To install Intel Deployment Manager, you must first install a database, and then run the Intel Deployment Manager installer.

You will need to supply the following information during the installation:

◆ database name, database port number, database user name and password

◆ IP address, user name, and password of the LDAP server (if you use LDAP authentication)

◆ web server port numbers (if different from the defaults)

Please review the requirements and restrictions in "Prerequisites for Installation" on page 3 before beginning the installation.

Installing the Database

▼ **To install the PostgreSQL database used by Intel Deployment Manager:**

Note The default entries supplied for the database installation match those supplied for the Intel Deployment Manager installation screens. If you change any defaults during the database installation, you need to make the same changes during the Intel Deployment Manager installation.

1. Insert the Intel Deployment Manager installation CD into the CD Drive of the machine assigned to be the Intel Deployment Manager server.

2. Change directory to the `install\Postgres` directory on the CD.

3. Run `setup.exe`.

4. Click **Yes** to accept the license agreement.

5. On the **Customer Information** screen, enter your user name and company name.

6. On the **Database Name** screen, enter the name you want to use for the database. The default is **provdb**.

7. On the **Database User** screen, enter a database user name. This is the user name that Intel Deployment Manager uses to communicate with the database. The default is **dbuser**.

8. On the **Database Password** screen, enter and confirm a database password. The default password is `dbpasswd`. You should change this password immediately in order to maintain security.

9. On the **Choose Destination Location** screen you can accept the default location, or browse for a different location to install the database in.

10. On the **Start Copying Files** screen, review the settings you have chosen. Click **Next** to start copying files, or **Back** if you want to change settings before continuing.

11. If you clicked **Next**, a **Setup Status** screen appears. The progress of the installation is displayed on the screen.

12. When the database installation is completed, an **InstallShield Completed** screen is displayed. Click **Finish** to complete the database installation. The database daemon starts automatically after PostgreSQL is installed.

Note You can start or stop the PostgreSQL database using the options installed under **Start** > **Programs** > **PostgreSQL**.

Updating the Database Configuration File

> **Note** The following information is only needed if you enter an absolute IP address during the Intel Deployment Manager installation (see).

During the Intel Deployment Manager installation you are asked to enter the IP address of the database server. If you enter an absolute IP address (for example, 192.168.1.1), you must modify the database configuration file to enable Intel Deployment Manager to communicate with the database.

▼ **To modify the database configuration file**

1. Stop PostgreSQL and Intel Deployment Manager if they are running.

2. Edit the *systemdrive*:\postgres\data\pg_hba.conf file that resides on the server running the database

   where *systemdrive*:\postgres is the default PostgresSQL directory.

   For example, if your Intel Deployment Manager server IP address was entered as 192.168.1.1, add the following line to the file:

   ```
   host all 192.168.1.1 255.255.255.255 password passwd
   ```

Uninstalling the Database

If it is necessary to uninstall PostgreSQL you can use any one of the following methods to remove it:

- Click **Start** > **Postgres** > **Uninstall Postgres**.
- Re-run the setup.exe program in the Postgres folder. It will detect and offer to remove the installed database.
- You can use the Windows **Add/Remove Programs** utility to remove PostgreSQL.

Installing the Intel Deployment Manager Server

Intel Deployment Manager only runs properly if it is installed to a local partition. An error message is displayed if you attempt to install Intel Deployment Manager on a mapped network drive. If you ignore the error message, the installation may appear to complete successfully, but you will not be able to start Intel Deployment Manager services.

The following files and folders in the Intel Deployment Manager folder are required for installation:

- ◆ 409/splash.bmp

- ◆ Data1.cab

- ◆ Readme.English.html

- ◆ setup.exe

- ◆ VERITAS(TM) OpForce(TM) v3.3msi

Use the following step-by-step procedure to install Intel Deployment Manager on Windows 2000 Server or Advanced Server. You *must* install the database (see "Installing the Database" on page 12) before you install Intel Deployment Manager. Note that the installation should always be performed from the C locale.

▼ **To install Intel Deployment Manager**

> **Note** The Intel Deployment Manager installer suggests optimal default entries for your installation, including those that match database installation defaults. If you changed defaults during the database installation, you need to make the same changes during the Intel Deployment Manager installation. Accepting default values for both the database and Intel Deployment Manager installations makes installation easy and results in a properly configured Intel Deployment Manager server.

1. Insert the Intel Deployment Manager CD into the CD Drive of the machine assigned to be the Intel Deployment Manager server.

2. Change directory to the install\Intel Deployment Manager directory on the CD.

3. Click the **Setup** icon to start the installation.

4. The **Welcome to the Installation Wizard** screen is displayed.

Welcome to the Installation Wizard Screen
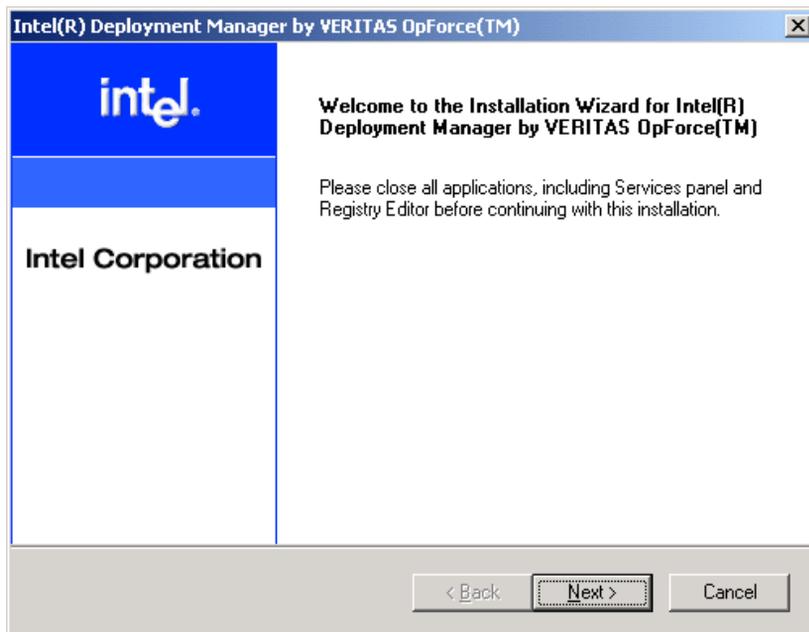
Click **Next**.

5. The **License Agreement screen is displayed.**

License Agreement Screen
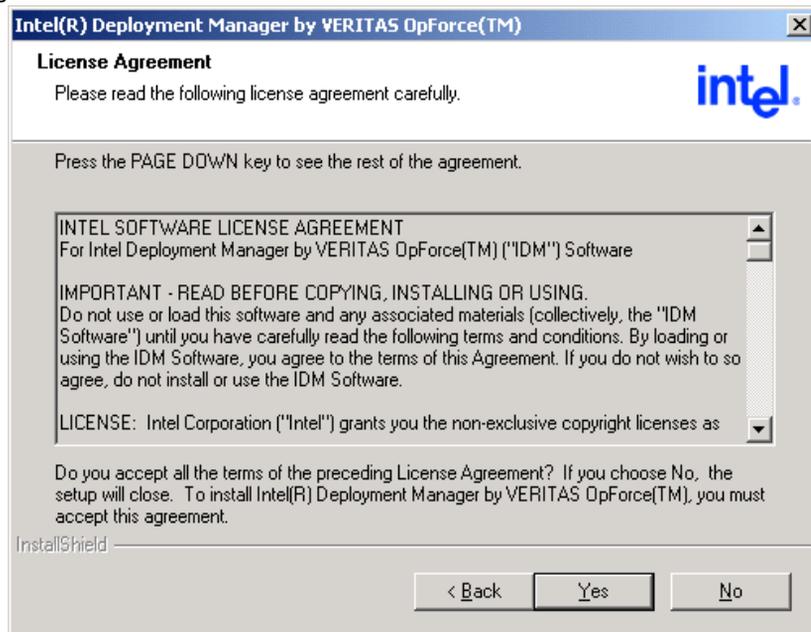
Click **Yes** to accept the license agreement. Intel Deployment Manager can be installed only if you accept the agreement.

6. The **Customer Information** screen is displayed.

Customer Information Screen
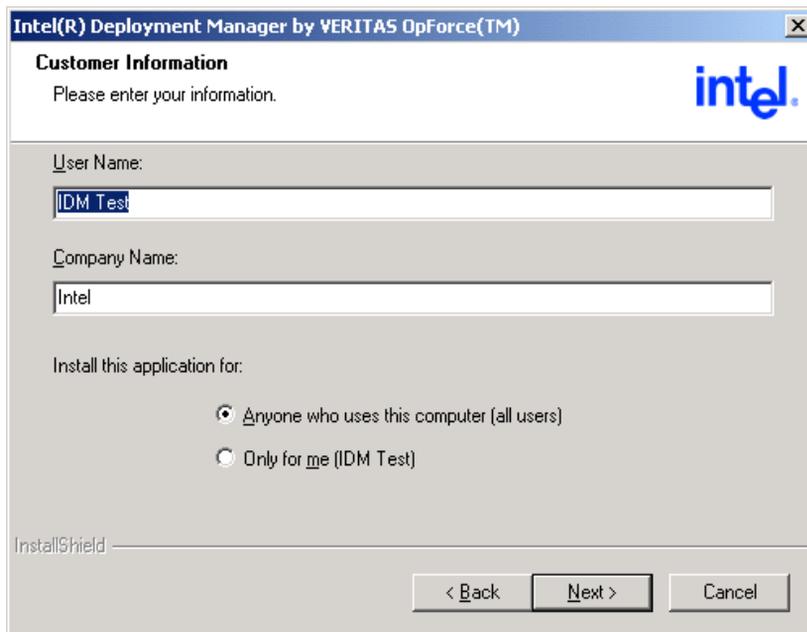
The installer attempts to automatically detect and enter your user name and company name. You can change these entries if you want to.

Install this application for:

◆ Select **Anyone who uses this computer** to allow access to Intel Deployment Manager for any user who logs on to this computer.

◆ Select **Only for me** to set up Intel Deployment Manager exclusively for one user. You'll see the user name displayed next to the **Only for me** option. The installation process gets this name from the **User Name** field.

Click **Next**.

Caution   If you install Intel Deployment Manager with the **Only for me** option, no other user can see Intel Deployment Manager from the **Start** > **Programs** menu.

7. The **Database Type** screen is displayed.

Database Type Screen
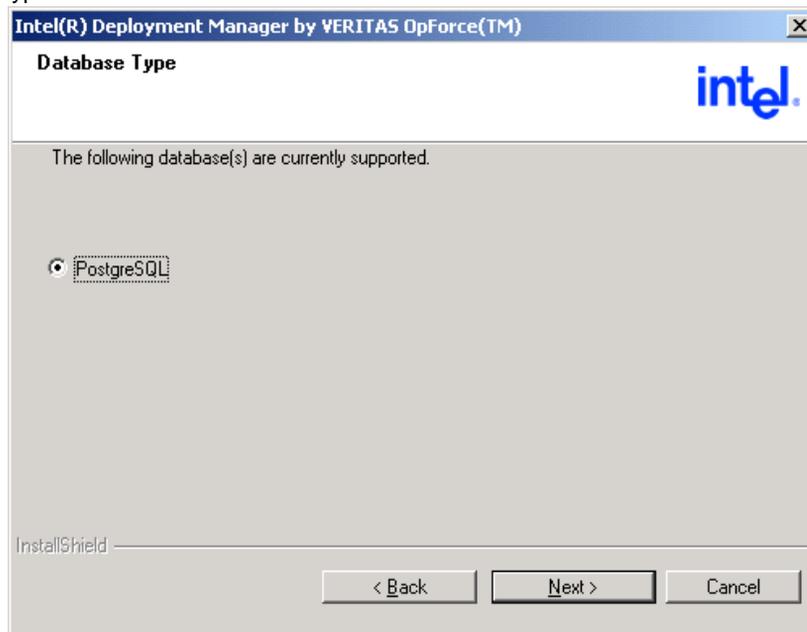
Only the PostgreSQL database is supported for Intel Deployment Manager running on Windows. PostgreSQL is selected by default.

Click **Next**.

8. The **Database Server IP Address** screen is displayed.

Database Server IP Address Screen
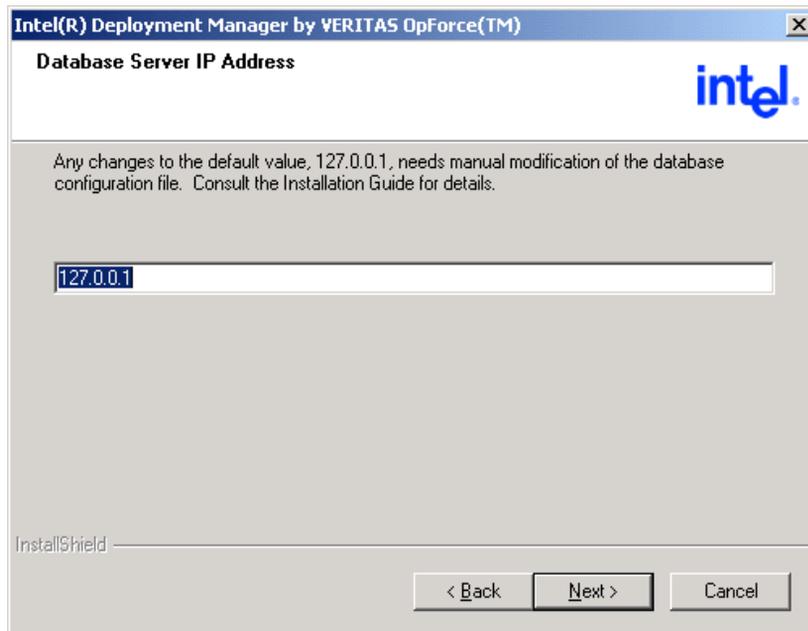
◆ Enter the IP address of the database server. The IP localhost address `127.0.0.1` is the default and recommended entry assuming that PostgreSQL and Intel Deployment Manager are on the same machine, because it always works even if the host name or absolute IP address changes.

◆ If PostgreSQL and Intel Deployment Manager are on different machines you must enter the absolute IP address of the database server (for example, 192.168.1 2). You might enter an absolute address even if the database and Intel Deployment Manager are on the same machine. In either case, you must update the database configuration file to enable Intel Deployment Manager to communicate with the database. See "Updating the Database Configuration File" on page 14.

Click **Next**.

9. The **Database Server Port** screen is displayed.

Database Server Port Screen
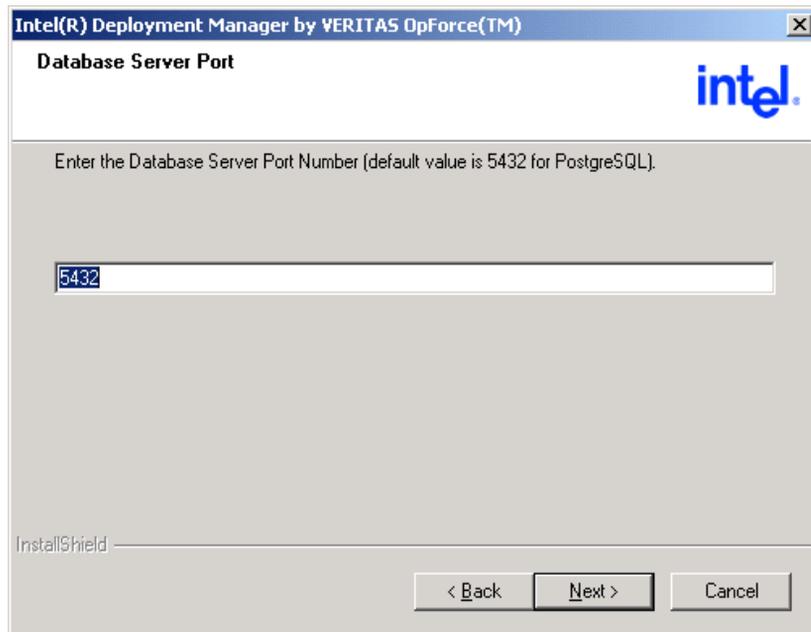
Enter the port number for PostgreSQL. The default entry is **5432**. We strongly recommend that you *not* change this port assignment.

Click **Next**.

10. The **Database Name** screen is displayed.

Database Name Screen
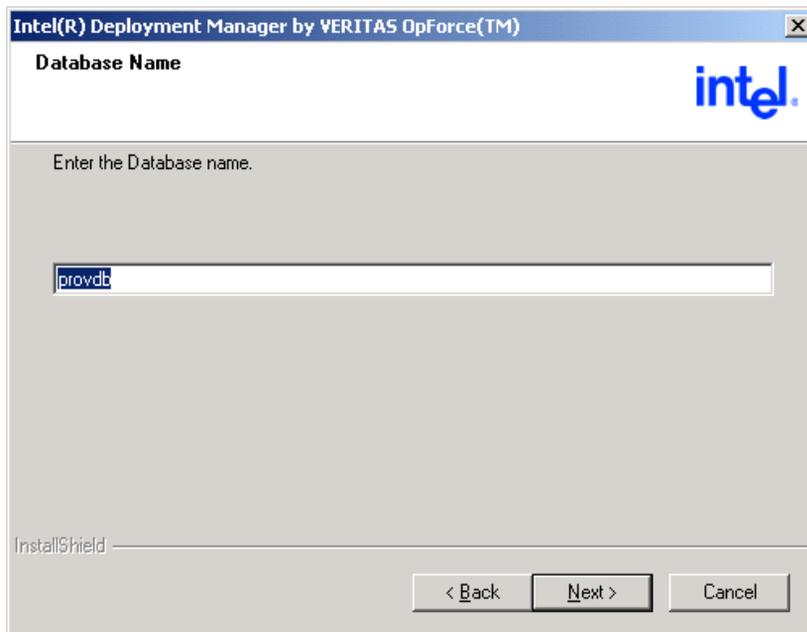
Enter a database name for the database. This database name must be the same as the database name you assigned when you installed the database. The default is **opfdb.**

Click **Next**.

11. The **Database User** screen is displayed.

Database User Screen
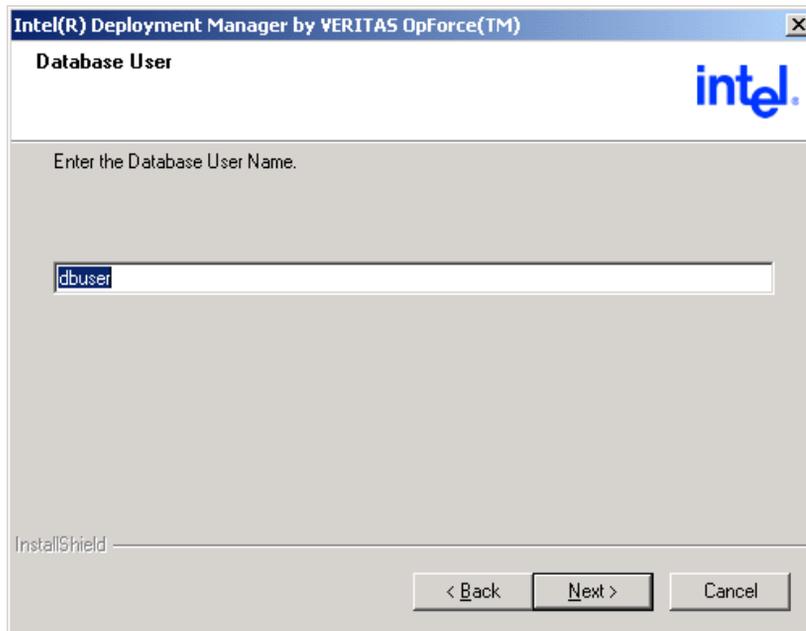
Enter a user name for the database user. This user name is used by Intel Deployment Manager when it accesses the database. The user name you enter here must match the user name you assigned when you installed the database. The default name is **dbuser**.

Click **Next**.

12. The **Database User Password** screen is displayed.

Database User Password Screen
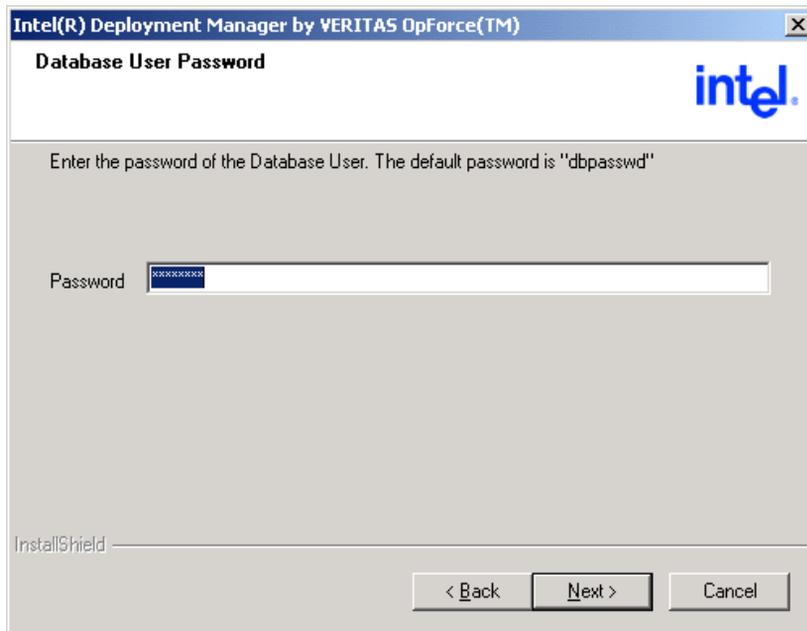
Enter a password for the database user. The default password is `dbpasswd`, but you should change it immediately to maintain security. The password you enter here must match the password you assigned when you installed the database.

Click **Next**

13. When the **Database User Password** screen reappears, re-enter the password for the database user, and click **Next**.

14. The **LDAP Authentication** screen is displayed.

> **Note** LDAP (Lightweight Directory Access Protocol) defines a protocol for updating and searching directories running over TCP/IP. An LDAP directory entry is a set of attributes with a name, called a distinguished name (DN). Each of the attributes has a type and one or more values. Types are strings like "cn" for common name. The values depend on the type. LDAP directory entries are arranged in a hierarchy. There are many books about LDAP—you might want to refer to one if you are not familiar with this protocol.

LDAP Authentication Screen
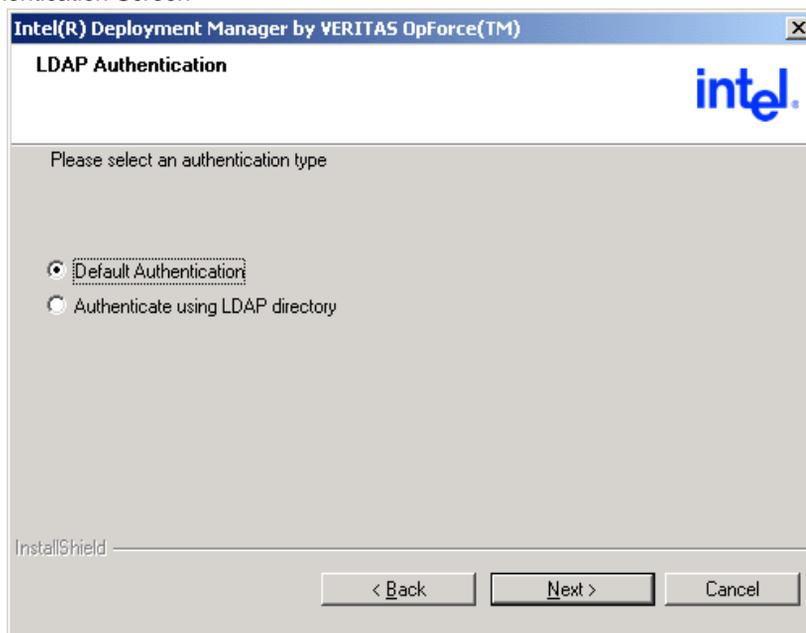
Select an authentication type:

◆ **Default Authentication** uses the built-in Intel Deployment Manager user database for authentication. If you select **Default Authentication**, go to Step 20 on page 30 and follow the instructions from that step on.

◆ Select **Authenticate using LDAP directory** if you want to use LDAP authentication to log in to Intel Deployment Manager. If you want to use LDAP authentication, you must have an LDAP directory server set up on your network. Continue following this procedure beginning with step 15.

Click **Next**.

15. The **LDAP Directory Schema Type** screen is displayed.

LDAP Directory Schema Type Screen
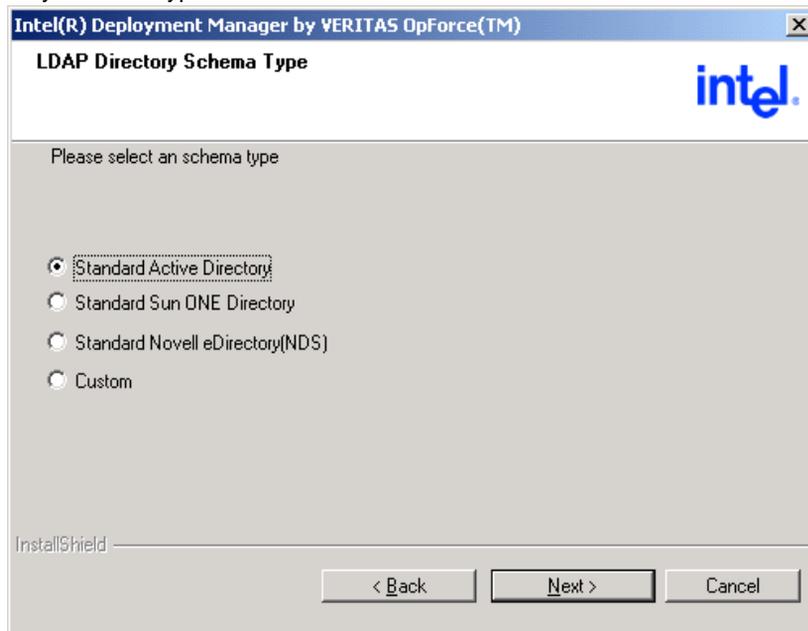
Select one of the following options:

◆ **Standard Active Directory**

◆ **Standard Sun ONE Directory**

◆ **Standard Novell eDirectory (NDS)**

◆ **Custom**

Select the directory schema type applicable to your setup. The first three options use the default schema. If you select **Custom,** a message indicates that you have made changes to your directory schema. When you select the **Custom** option, Intel Deployment Manager creates a file called customLDAP.properties in the directory where Intel Deployment Manager is installed.

Click **Next**.

16. The **LDAP User Information** screen is displayed.

LDAP User Information Screen

Enter the **Provider** and **User DN**.

For **Provider**, you can enter the IP Address or FQDN (Fully Qualified Domain Name) of the LDAP server. You must also include the Base DN (Distinguished Name) of the LDAP server.

The information must be entered in LDAP format; for example:

- **Provider:** `ldap://192.168.6.20/dc=`*`YourCompany`*`,dc=com`

- **User DN:** `cn=Administrator,cn=Users,dc=`*`YourCompany`*`,dc=com`

where *YourCompany* is the name of your company.

Caution	These values are not validated when they are entered. If they are entered incorrectly, you will not be able to log in to Intel Deployment Manager. If this occurs, edit the file *`systemdrive`*`:\veritas\opforce\conf\elemental.properties`, and correct the entries. Then, restart Intel Deployment Manager to activate your changes. (You do not need to stop/restart the database.)

Click **Next**.

17. Another **LDAP User Information** screen is displayed.

LDAP User Information Screen
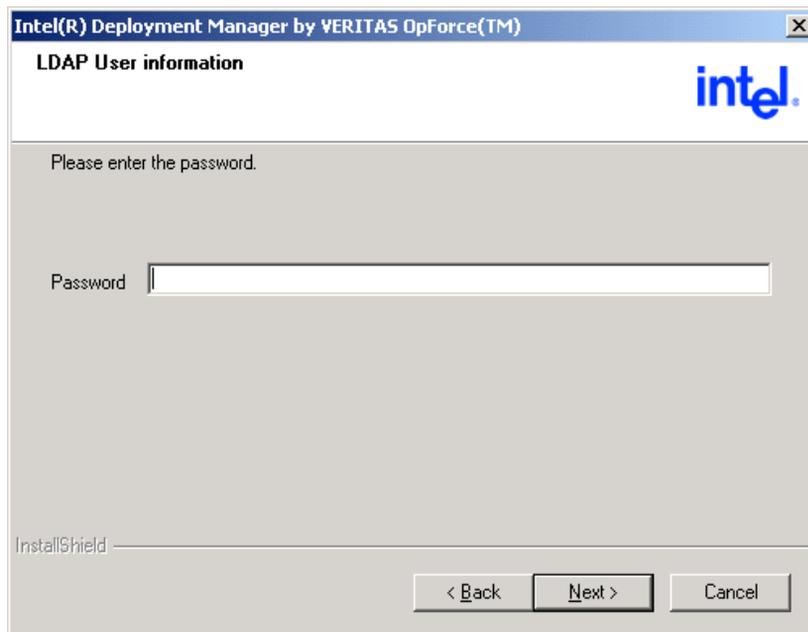
Enter the password for the LDAP directory.

Click **Next**.

18. Re-enter the password for the LDAP directory. Click **Next**.

Before attempting to use LDAP for the first time, contact your LDAP administrator to create users on the LDAP server for Intel Deployment Manager and assign them to groups. Ask the LDAP administrator to:

◆ Create a group named Intel Deployment Manager `Admins` on the LDAP server.

◆ Assign users to the Intel Deployment Manager `Admins` group. Any LDAP user that belongs to this group can log in as an Intel Deployment Manager administrator (using the correct user ID and password).

◆ When creating non-administrative users for Intel Deployment Manager, create a group on the LDAP server, and assign users to this group. Map the group to a role on the Intel Deployment Manager server.

19. Another **LDAP Directory Schema Type** screen is displayed.

LDAP Directory Schema Type/SSL Screen
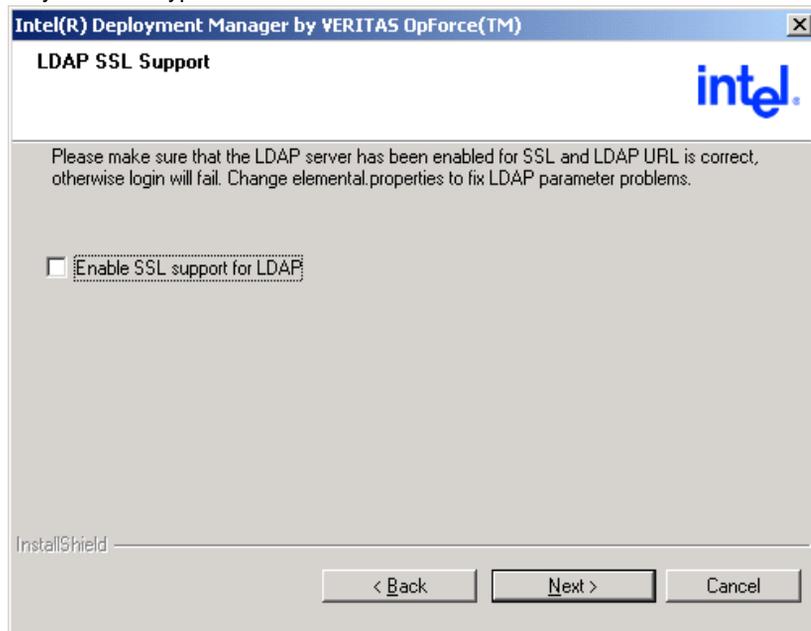
LDAP can use secure or non-secure encryption. If you intend to use SSL (Secure Socket Layer) for communication between LDAP and Intel Deployment Manager, first verify that your LDAP server is configured to support SSL, then check the **Enable SSL Support for LDAP** box. If you do not want to use SSL, leave the box unchecked.

Click **Next**.

20. The **Web Server Port Numbers** screen is displayed.

Web Server Port Numbers Screen
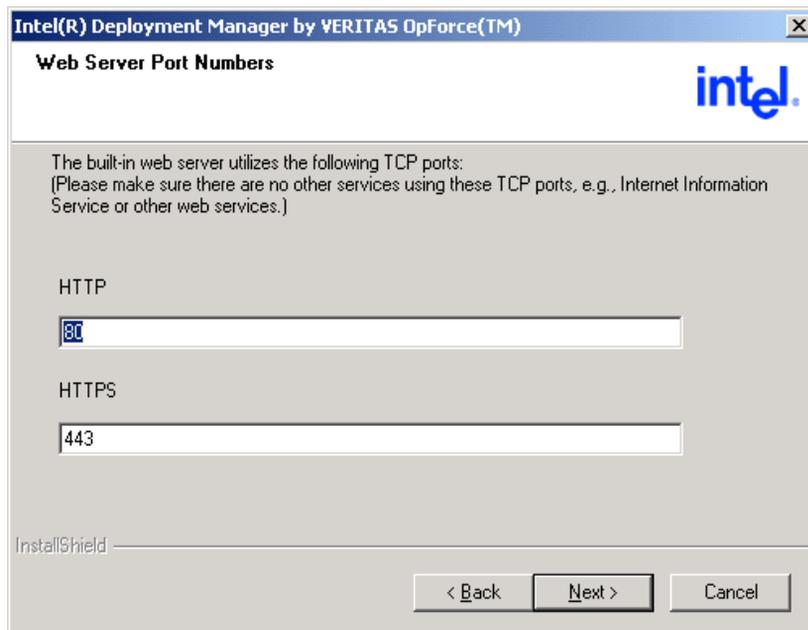
Intel Deployment Manager uses a Tomcat web server. Tomcat uses standard web server port assignments, port 80 for HTTP and port 443 for HTTPS. We recommend that you accept these defaults and not run other web servers on the Intel Deployment Manager server. If you must run other web servers on the Intel Deployment Manager server, you must either reassign the ports used by the other web servers, or reassign the ports used by Tomcat. Click **Next**.

Note After you click **Next**, Intel Deployment Manager checks to see if the default ports are busy. You are notified if another web server like IIS is installed on this computer, even if it is not running. If the ports are busy, you must reassign ports for Tomcat or the other web server, or remove the conflicting web server.

21. The **Installation Folder** screen is displayed.

Installation Folder Screen
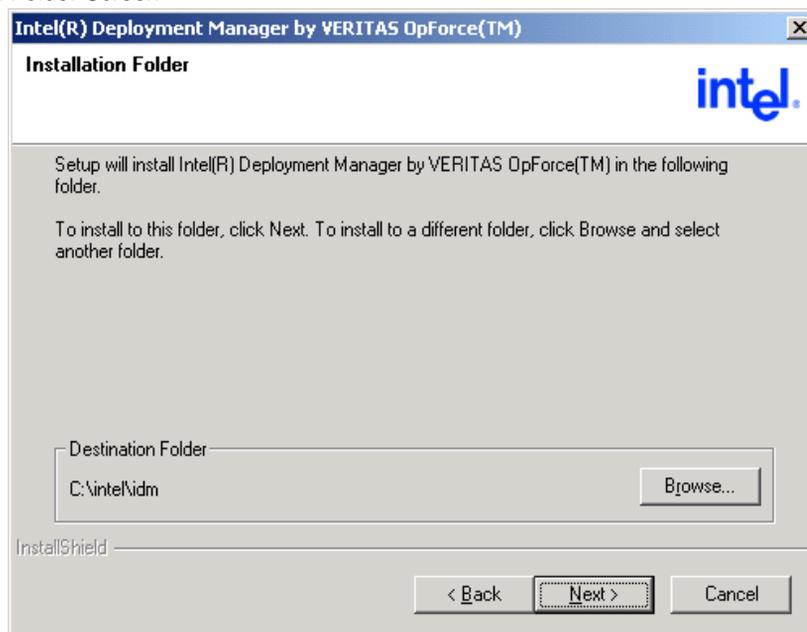
Select an installation folder:

◆ If the default destination folder is acceptable, click **Next**. If the destination folder does not already exist, a dialog pops up asking if Setup should create it for you. Click **Yes**.

◆ If you want to install Intel Deployment Manager in a different folder, click **Browse**, select a folder, and click **Next**.

Caution Do *not* install Intel Deployment Manager in a folder that has spaces in its folder name. For example, don't use *systemdrive*:\Program Files\Intel Deployment Manager.

22. The **Start Copying Files** screen is displayed.

Start Copying Files Screen
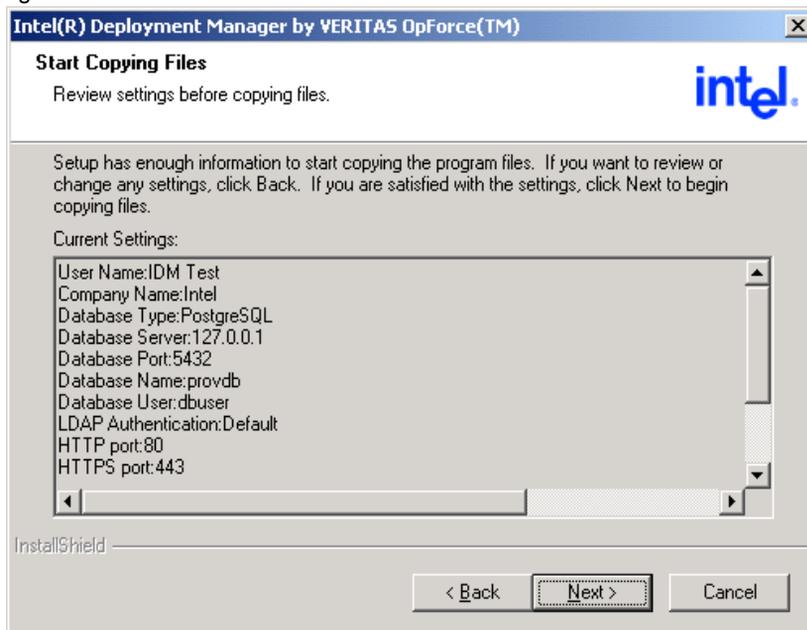
Review the settings you entered.

◆ If you want to change any of the settings, click **Back** until you reach the screen where you want to make changes.

◆ If you are satisfied with your selections, click **Next**.

23. The **Select Folder** screen is displayed.

Select Folder Screen
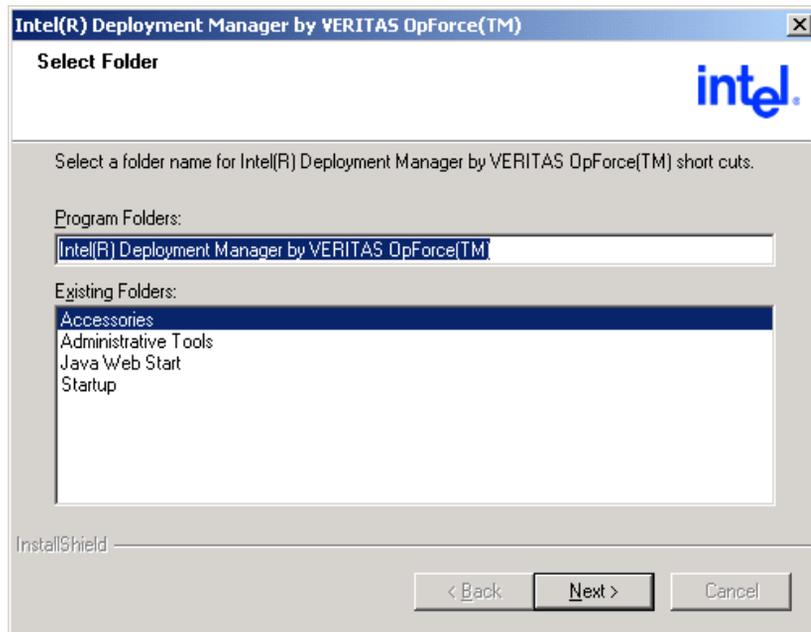
Select a folder where you want to store the Intel Deployment Manager shortcuts, and click **Next**. Files are then copied onto the Intel Deployment Manager server.

24. The **Important Information** screen is displayed.

Important Information Screen
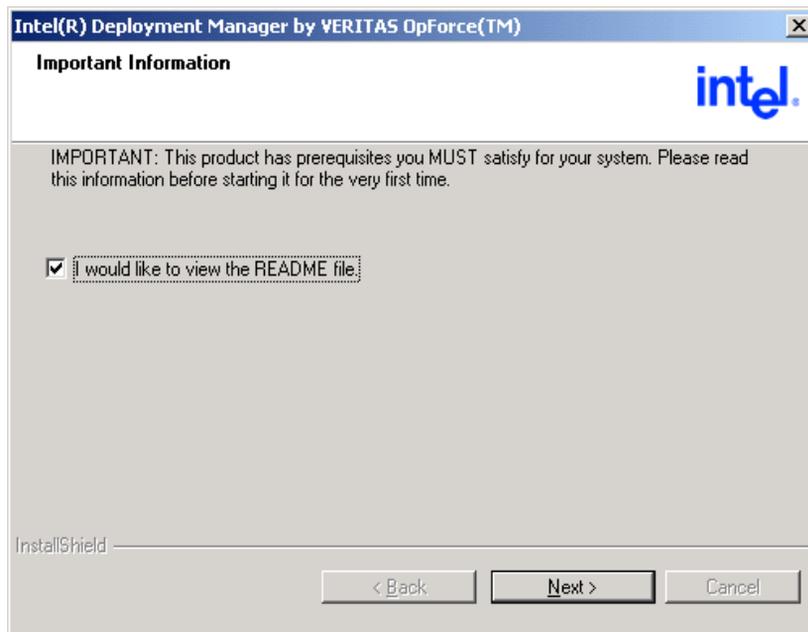
We recommend that you read the `Readme.txt` file to learn about any last minute changes or updates. Click **Next**.

25. The **Installation Complete** screen is displayed.

Installation Complete Screen
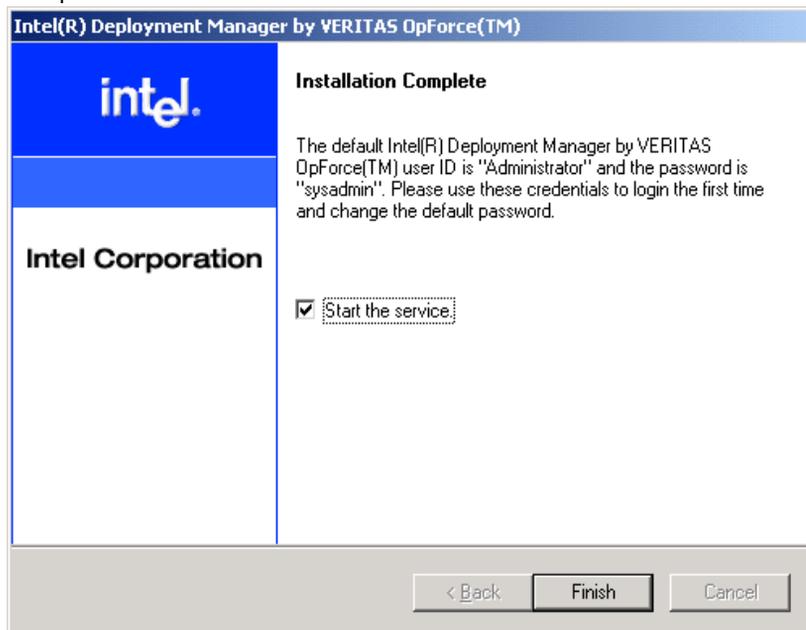
You can select the **Start Intel Deployment Manager v3.3** option to run Intel Deployment Manager immediately after installation is complete. A **Welcome to Intel Deployment Manager** screen is displayed after you start the Intel Deployment Manager service.

The following shortcuts are installed under the Windows **Start** > **Programs** > **Intel Deployment Manager** menu:

- ◆ **Start Intel Deployment Manager**

- ◆ **Stop Intel Deployment Manager**

- ◆ **Start Intel Deployment Manager Client GUI**

- ◆ **Uninstall Intel Deployment Manager**

- ◆ **Open readme**

Verify that the database is running before you start Intel Deployment Manager. If the database is not running, a connection failure occurs. Error messages are directed to the event log.

Uninstalling Intel Deployment Manager

If it is necessary to uninstall Intel Deployment Manager, you can use the Windows **Add/Remove Programs** utility to remove it. Alternatively, you can click **Start** > **Programs** > **Intel Deployment Manager Suite v3.3** > **Uninstall**. All Intel Deployment Manager components are removed except for the license keys.

Troubleshooting Removal Problems

If Intel Deployment Manager does not completely uninstall due to a problem with the Windows installer program or the Windows registry, any subsequent attempt to re-install Intel Deployment Manager will fail.

For example, perhaps OpForce was installed on a machine and it did not get uninstalled properly. The next installation of OpForce will fail. This happens because the new OpForce installation thinks that the old OpForce is still present, and tries to do an upgrade. The upgrade fails because it assumes that the product is installed correctly on the system, which is not the case. There are a couple of ways to recover from this situation.

◆ Download `MsiZap.exe` from Microsoft, and use it to completely remove Intel Deployment Manager. When you are prompted for the GUID, use: 351AC3F6-26EF-456C-A9FC-D110CA15A967. Then, you can re-install Intel Deployment Manager.

◆ Search the registry for GUID 351AC3F6-26EF-456C-A9FC-D110CA15A967 and remove all references to it. Then, re-install Intel Deployment Manager.

▼ **You may try a combination of both methods as follows**

1. OpForce 3.3 uses GUID key: 351AC3F6-26EF-456C-A9FC-D110CA15A967. Try using the `msizap` utility by typing:

   msizap.exe TA! {351AC3F6-26EF-456C-A9FC-D110CA15A967}

   This is the Microsoft recommended method, but, does not always work. You may have to manually delete the GUID keys as follows:

2. Search the windows registry for the above GUID, and delete all keys containing it. Also try searching for the GUID key without the dashes and the braces. Any occurrences should be removed.

3. Look for the inverted GUID key for the product: 6F3CA153FE62C6549ACF1D01AC519A76 is the inverted GUID for OpForce 3.3. Delete the following keys, and any other occurrences of the inverted GUID.

   `HKEY_CLASSES_ROOT\Installer\Products\6F3CA153FE62C6549ACF1D01AC519`
   `A76`

```
HKEY_LOCAL_MACHINE\SOFTWARE\Classes\Installer\Products\6F3CA153FE6
2C6549ACF1D01AC519A76
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Unins
tall\6F3CA153FE62C6549ACF1D01AC519A76
```

This removes the GUID key from Windows.

Upgrading Intel Deployment Manager

You can upgrade to Intel Deployment Manager 3.3 from an English version of Intel Deployment Manager 3.2 or 3.2 Upgrade 3. Upgrading from a localized version of Intel Deployment Manager is not supported. When you perform an upgrade, your existing configuration and data are preserved. Note that upgrades should always be performed from the C locale.

Upgrading the Database

If you have a PostgreSQL database already installed, there is no need to reinstall it or install a newer version.

Upgrading Intel Deployment Manager

▼ **To upgrade Intel Deployment Manager**

   1. Insert the Intel Deployment Manager CD into the CD Drive of the Intel Deployment Manager server.

   2. Change directory to the `install\Intel Deployment Manager` directory on the CD.

   3. Click the **Setup** icon to start the upgrade.

   The setup program recognizes that a previous version of Intel Deployment Manager is installed and starts an upgrade. Continue the upgrade installation with

Getting Started 4

This chapter describes how to get started using Intel Deployment Manager. It points to installation resources, shows you how to obtain a product key, and talks about how to log in to the administration console (user interface). The administration console is described in detail.

This chapter includes the following topics:

- ◆ "Installation Resources" on page 40
- ◆ "Getting a Product Key for Intel Deployment Manager" on page 40
- ◆ "Setting Up Intel Deployment Manager" on page 44

Installation Resources

Select an appropriate system to install the Intel Deployment Manager server on. In a simple setup the server should be on the same LAN as the Intel Server Chassis and Intel Server Compute Blades.

◆ If you want to install Intel Deployment Manager on a Windows system see the *Intel Deployment Manager by VERITAS OpForce Installation Guide for Windows* (this guide) for system requirements and the installation procedure.

◆ If you want to install Intel Deployment Manager on a Red Hat Linux system see the *Intel Deployment Manager by VERITAS OpForce Installation Guide for Red Hat Linux* for system requirements and the installation procedure.

Getting a Product Key for Intel Deployment Manager

A product key is required for each platform Intel Deployment Manager runs on: Windows or Red Hat Linux. This product key is required to log in to Intel Deployment Manager for the first time.

To get a product key to manage chassis and any number of blades, go to http://www.veritas.com/opforcelicense and provide your contact information. A product key will be e-mailed to you within a few minutes.

Logging into Intel Deployment Manager

You can use one of the following web browsers to display the administration console:

◆ Internet Explorer 6.0 (or higher)

◆ Netscape 6.2.3 (or higher)

◆ Mozilla 1.0 (or higher)

▼ **To log in to the administration console:**

1. Bring up your browser and enter the URL for the Intel Deployment Manager server. Use the fully qualified domain name or IP address. For example: `http://`Intel Deployment Manager`server.yourcompany.com`.

Note If you reassigned the Intel Deployment Manager web server port numbers during the installation process, you need to specify the port number in the URL. For example: `http://yourserver.yourcompany.com:8080`

2. If you have not yet licensed Intel Deployment Manager, the **Product Key** page is displayed.

You can enter a product key and click **Add and Done**. Then, the Intel Deployment Manager login screen is displayed.

> **Note** When adding product keys, you can avoid typos by copying and pasting the provided key string.

3. If a security certificate is presented, accept the certificate for an HTTPS secure session.

4. Log in with a valid user ID and password. The user ID and password are case-sensitive.

◆ If you are using default authentication you can log in as `Administrator`. The default password is `sysadmin`. You should change the `Administrator` password right away to maintain security.

◆ If you are using LDAP (Lightweight Directory Access Protocol) server for authentication, enter the LDAP user ID and password. Contact you system administrator if you do not have an LDAP user ID and password.

5. The administration console appears upon successful login.

Note The default session timeout value is one hour.

Understanding the Administration Console

The administration console is divided into the following areas: the Header, Navigation Area, and Display Area. In the following figure, the administration console is shown with the **Resources** section open.

Intel Deployment Manager Administration Console
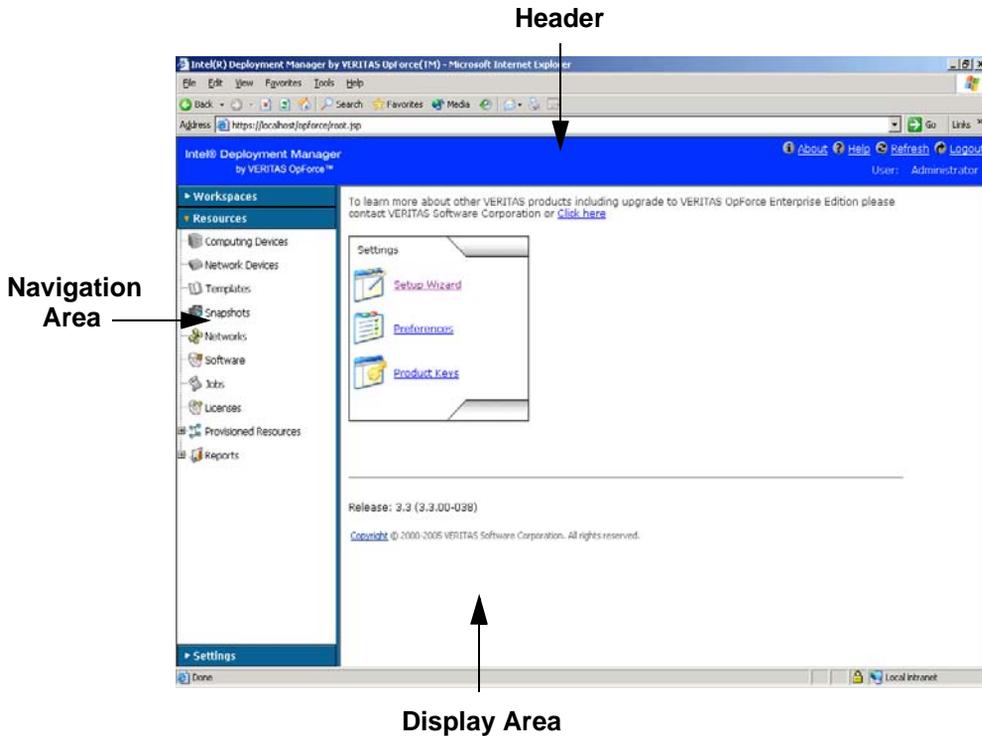
Header

The Header section of the Administration Console displays the Intel Deployment Manager logo and the **About**, **Help**, **Refresh**, and **Logout** buttons. When you click the Intel Deployment Manager logo, it takes you to the main page. The user name that you used when logging in is also displayed in the header.

Navigation Area

The Navigation Area displays three sections: **Workspaces**, **Resources**, and **Settings**. All Intel Deployment Manager options and their respective tasks are divided among these three categories.

The **Workspaces** category defines the various work areas that can be used by different users. Every workspace also holds all the resources assigned to it.

The **Resources** category consists of all the resources that are administered and managed by Intel Deployment Manager. These resources should also be accessible by the user, depending on their permissions. You can also assign or unassign resources to various workspaces using the **Actions** menu within **Resources**.

The **Settings** category allows you to customize Intel Deployment Manager to your requirements. You can

◆ add or delete users and storage

◆ define user roles and access controls

◆ load and unload drivers

◆ set preferences

◆ view the custom log, task manager, and the Intel Deployment Manager product keys

Display Area

The Display Area contains primary category tabs across the top of the area, such as **Discovered**, **Server Assets**, **Blade Server Assets**, and **Chassis Assets**. The menu bar, positioned below the primary category tabs, displays various menus depending on the category you are working with. Selecting an option from one of these menus displays a dialog that enables you to perform an action on system elements, like changing or updating settings.

Tables appear in the Display Area after you click an option in the Navigation Area. You can sort tables by clicking on the column headers. See the chapter, Using Table and Icon Views in the User's Guide for detailed information about manipulating tables.

Setting Up Intel Deployment Manager

The following are tasks you should perform when initially setting up Intel Deployment Manager. See the User's Guide for more detailed information.

1. Add a network.

2. Set up system storage for snapshots, software, and OpScripts.

3. Prepare the Intel Server Chassis and Intel Server Compute Blades for discovery.

4. Define ranges of IP addresses for use by Intel Deployment Manager when provisioning blades.

5. Accept the blades, and power-cycle them so that Intel Deployment Manager can start managing them. When you refresh the page, you'll see the server status change to UPDATE DONE.

6. Take full snapshots of your blades or import existing snapshots.

7. Provision servers using your snapshots.

Optionally, you can perform other setup tasks such as:

◆ Setting up workspaces.

◆ Setting up users, user roles and access controls.

◆ Setting up OpScripts and jobs.

◆ Setting up server templates for use in provisioning.

Intel Deployment Manager Port Numbers   **A**

This appendix lists all of the port numbers that are used by Intel Deployment Manager. Note that all outgoing packets are allowed.

The following topics are included:

Intel Deployment Manager Server Ports

The following is a list of all port numbers and services used by the Intel Deployment Manager server:

Required Port Numbers and Services

Port Number	Services
67/udp	dhcp
69/udp	tftp
80/tcp	http
80/tcp	JXML HTTP server
443 /tcp	https
1099/ tcp	JNDI (not used on Windows systems)
1099/tcp	RMI registry (This runs on Intel Deployment Manager servers and Intel Deployment Manager daemons. The Intel Deployment Manager daemons can be installed on other machines via the multi-host installation process.) This port is not used by Windows systems.
8005/tcp	Tomcat administration port
10001/tcp	Intel Deployment Manager ITAP service. Used by the Intel Deployment Manager device management server to discover live target servers

Database Ports

Port Numbers for the Database

Port Number	Services
5432/tcp	PostgreSQL (for Red Hat Linux)

Managed Server Ports

The following port numbers are used for remote access:

Port Numbers and Services on Managed Server Assets

Port Numbers	Services
5900/tcp	VNC RFB port
6080/tcp	VNC HTTPD port
6090/tcp	Intel Deployment Manager VNC RFB routing port (for inner-nodes in multi-tier setup)
10001/tcp	Intel Deployment Manager ITAP agent (installed on an Intel Deployment Manager managed asset.)

ActiveOS Ports

The following port numbers and services may be used by an ActiveOS:

Port Numbers and Services for ActiveOS

Port Numbers	Services
10000/tcp	BCTPS
11000/tcp	Remote telnet daemon

Boot Daemon Ports

The following port numbers are used by the Intel Deployment Manager DHCP boot daemons:

Port Numbers and Services used for Intel Deployment Manager Boot Daemon

Port Numbers	Services
10000/tcp 10000/udp	First instance of Intel Deployment Manager boot daemon.
[9999/tcp 9999/udp]	Second instance of Intel Deployment Manager boot daemon.
[(10000 - n)/tcp (10000 - n)/udp]	n is the instance of the Intel Deployment Manager boot daemon. n = 0,1,2,3...

SSL Certificates B

▼ **To generate and install an SSL certificate signed by a known Certificate Authority (CA)**

1. Set up the Intel Deployment Manager environment: Issue the following commands on a Windows Intel Deployment Manager server:

```
C:\> set OPFORCE_HOME=opforce_home
C:\> set PATH=%OPFORCE_HOME%\j2sdk1.4.1\bin:%PATH%
```

where, for example, the *opforce_home* directory is `C:\veritas\opforce`.

2. Generate Keys. The syntax for the `keytool` command is:

```
# keytool -genkey -alias tomcat -keyalg RSA \
  -keystore keystore -keypass key_password -storepass \
  <store_password> -dname "CN=Common_Name, \
  OU=Organizational Unit, O=Organization, L=Locality, \
  S=State, C=Country Code"
```

For example,

```
# keytool -genkey -alias tomcat -keyalg RSA \
  -keystore keystore -keypass changeit -storepass changeit \
  -dname "CN=www.veritas.com, OU=VERITAS Intel Deployment Manager,
O=VERITAS, \
  L=Mountain View, S=CA, C=US"
```

The `keytool` command generates a file called `keystore` containing a self-signed certificate.

If Intel Deployment Manager is deployed on the intranet, or if users trust you as a CA, you can copy the generated keystore file to `$OPFORCE_HOME/conf`.

Intel Deployment Manager uses the default key and store password, which is `changeit`. If you changed the key and store password while generating the keys, you must change the following section in `opforce_home/tomcat/conf/server.xml` from:

```
<Factory
  className="org.apache.coyote.tomcat4.CoyoteServerSocketFactory"
```

```
keystoreFile="../conf/keystore"
clientAuth="false" protocol="TLS" />
```

to

```
<Factory
  className="org.apache.coyote.tomcat4.CoyoteServerSocketFactory"
  keystoreFile="../conf/keystore"
  keystorePass="new_password"
  clientAuth="false" protocol="TLS" />21
```

The key and store password must be the same.

3. Generate a certificate request for the CA. The syntax for the `keytool` command is:

```
# keytool -certreq -alias tomcat -keystore keystore \
  -storepass store_password -file cert.req
```

For example,

```
# keytool -certreq -alias tomcat -keystore keystore \
  -storepass changeit -file cert.req
```

This generates a file called `cert.req` which you should send to the CA. After you get a response from the CA (for example, in a file called `cert.cer`) import the certificate file.

4. Import a certificate from the CA. The syntax for the `keytool` command is:

```
# keytool -import -alias tomcat -keystore keystore -file cert.cer \
  -keypass <key_password> -storepass store_password
```

For example,

```
# keytool -import -alias tomcat -keystore keystore -file cert.cer \
  -keypass changeit -storepass changeit
```

This imports the certificate received from the CA into the keystore. Copy the keystore file to `$OPFORCE_HOME/con`.

Third Party Software License Agreements   C

Note Source code for third party software is located on the product CD in the directory: `/thirdParty/sources.`

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Westhawk's Java SNMP Stack

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