Lenovo ThinkServer Deployment Manager User Guide
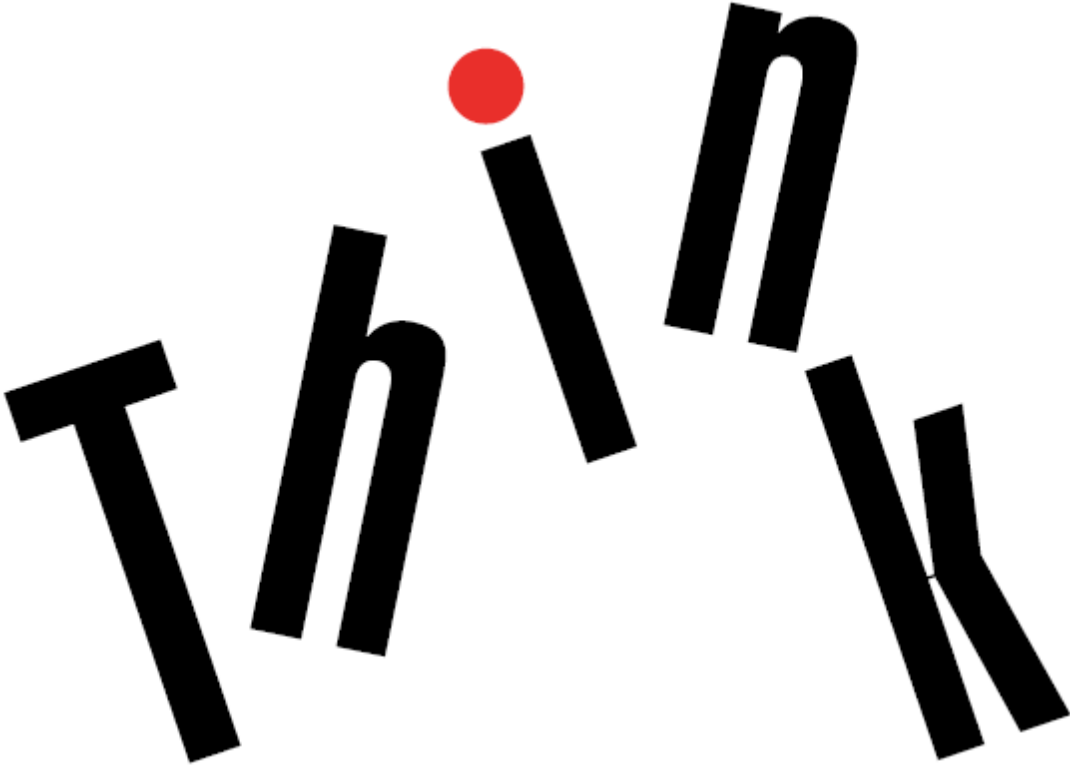
Contents

Chapter 1. Overview

This chapter provides an overview of the Lenovo® ThinkServer® Deployment Manager program (hereinafter referred to as TDM). This chapter contains information about TDM introduction, TDM startup, main interface, keyboard navigation, and how to download useful information.

1.1 TDM introduction

TDM combines the functions of configuring basic input/output system (BIOS), configuring Redundant Array of Independent Disks (RAID), and updating applications and firmware. It also enables you to automate the process of installing the supported Windows® or Linux® operating systems and associated device drivers.

TDM has the following features:

- Easy-to-use, language-selectable interface
- Integrated help system
- Automatic hardware detection
- Supports BIOS configuration
- Supports firmware and applications update
- Contains RAID configuration utility
- Ability to install the operating system and device drivers in an unattended mode to save time
- Ability to create a reusable response file that can be used with similarly configured Lenovo servers to make future installations even faster
- Contains diagnostic utility

1.2 TDM startup

To start TDM, do the following:

1. Launch TDM through one of the following methods:
   - Turn on the server. Press F10 as soon as you see the logo screen. Then, wait for several seconds. TDM opens.
   - Turn on the server. Press F1 as soon as you see the logo screen. Then, wait for several seconds. The Setup Utility program opens. Select **Boot Manager** → **Launch TDM**. TDM opens.
2. Read and accept the license agreement if prompted.
3. Select the language in which you want to view the program. Then, you can start to use the program.

1.3 Main interface

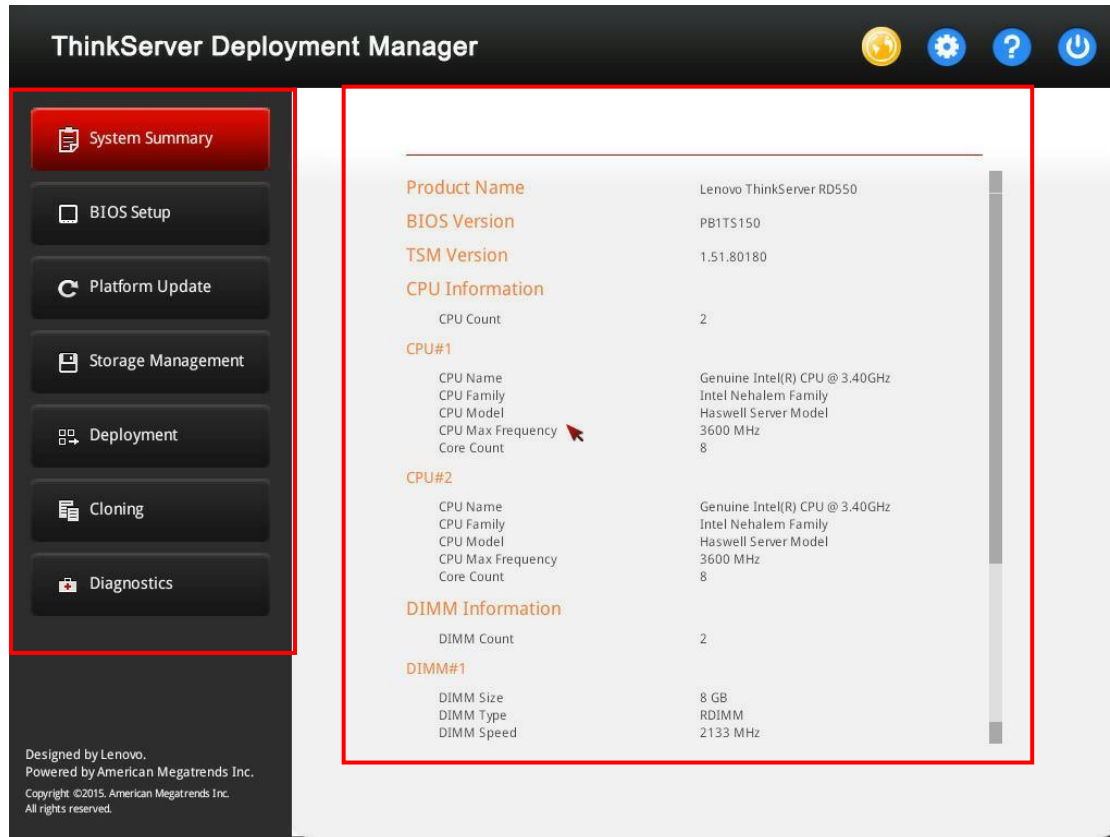The TDM main interface is divided into two panes. Click the tabs in the left pane to enter corresponding interfaces in the right pane.

Figure 1-1 TDM main interface

1.3.1 Tabs in the left pane of the main interface

The following list provides information about each tab in the left pane of the TDM main interface:

- **System Summary**: View basic information about your server, such as CPU, memory, and PCI devices.
- **BIOS Setup**: View and change the settings in the Setup Utility program of your server.
- **Platform Update**: Update applications and firmware for your server.
- **Storage Management**: Configure RAID and disk settings.
- **Deployment**: Follow the wizard to install an operating system.
- **Cloning**: Clone BIOS, RAID, or operating system installation settings saved in response files to your server.
- **Diagnostics**: Launch the Lenovo ThinkServer Diagnostics program.

1.3.2 Buttons

The following table provides information about the buttons appear on the TDM interfaces:

Button	Name	Description
	Language	Select the language to be displayed. TDM supports 12 languages, including: Brazilian Portuguese, Danish, Dutch, English, French, German, Italian, Japanese, Russian, Simplified Chinese, Spanish, and Turkish.
	Settings	Display the Network Settings window. For details, refer to 2.1 Configuring network settings.
	Help	View the help information. The help information might include TDM overview, compatibility notes, help messages about how to use TDM, and TDM version and copyright information.
	Power	Turn off or restart the server.
	Previous Values	Discard changes and load previous values.
	Optimized Defaults	Load the optimized default values.
	Back	Return to the previous interface.
	Save & Reset or Save & Exit	Save changes and then continue with further configuration; or save changes and exit.
	Close	Exit the setup process and return to the main interface.
	Previous	Return to the previous step.
	Next	Go to the next step.

1.4 Keyboard navigation

TDM supports navigation by using either mouse or keyboard. The following are the keys used for keyboard navigation:

- Ctrl+Tab: Switch between the left pane and the right pane.
- Tab: Move forward to the next selectable item in the active pane.
- Shift+Tab: Move backward to the previous selectable item in the active pane.
- Space: Same as a click when a button is active.
- Up arrow: Scroll up.
- Down arrow: Scroll down.

1.5 Downloading useful information

You can download the TDM update bundle file, Linux driver bundle file, or Windows driver bundle file from the Lenovo support Web site at:

http://www.lenovo.com/drivers

Chapter 2. Using TDM

This chapter provides information about using TDM.

2.1 Configuring network settings
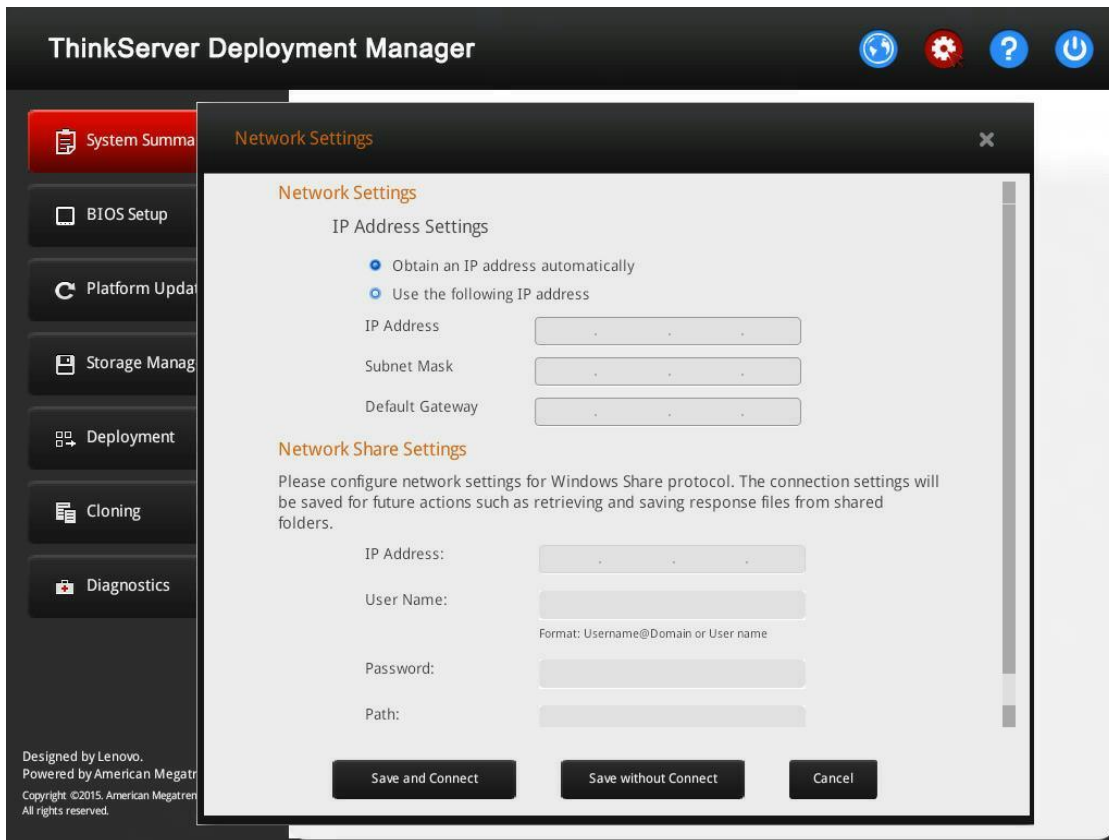
Figure 2-1 Network Settings window

To configure network settings, do the following:

1. Click the Settings button ⚙ on the top right corner of the TDM main interface. The Network Settings window is displayed. The window includes two sections: **Network Settings** and **Network Share Settings**.
2. Follow the instructions on the screen to configure the local IP address for your server in the **Network Settings** section, and configure the shared network in the **Network Share Settings** section.
   Note: You can save the update bundle files downloaded from the Web site or response files to the shared network for future use.
3. After configuring the network settings, click the correct button according to your needs:

- **Save and Connect**: Save the settings and connect to the shared network. If the network cannot be connected, an error message will be displayed.
- **Save without Connect**: Save the settings without connecting to the shared network. When you click the button, a confirmation window is displayed. Click **Continue** to save the settings without connect, or click **Cancel** to go back to the Network Settings window.
- **Cancel**: Discard the changes and exit the Network Settings window.

2.2 System Summary

Click the **System Summary** tab in the left pane to view the following system information in the right pane:

- Product name
- BIOS version
- ThinkServer System Manager (TSM) version
- CPU information
- Memory information
- PCI device information

Figure 2-2 System Summary interface

2.3 BIOS Setup

Click the **BIOS Setup** tab in the left pane to enter the BIOS Setup interface. In the BIOS Setup interface, you can view and change the settings in the Setup Utility program of your server. After you change the settings, you can save the settings as a response file for future use.
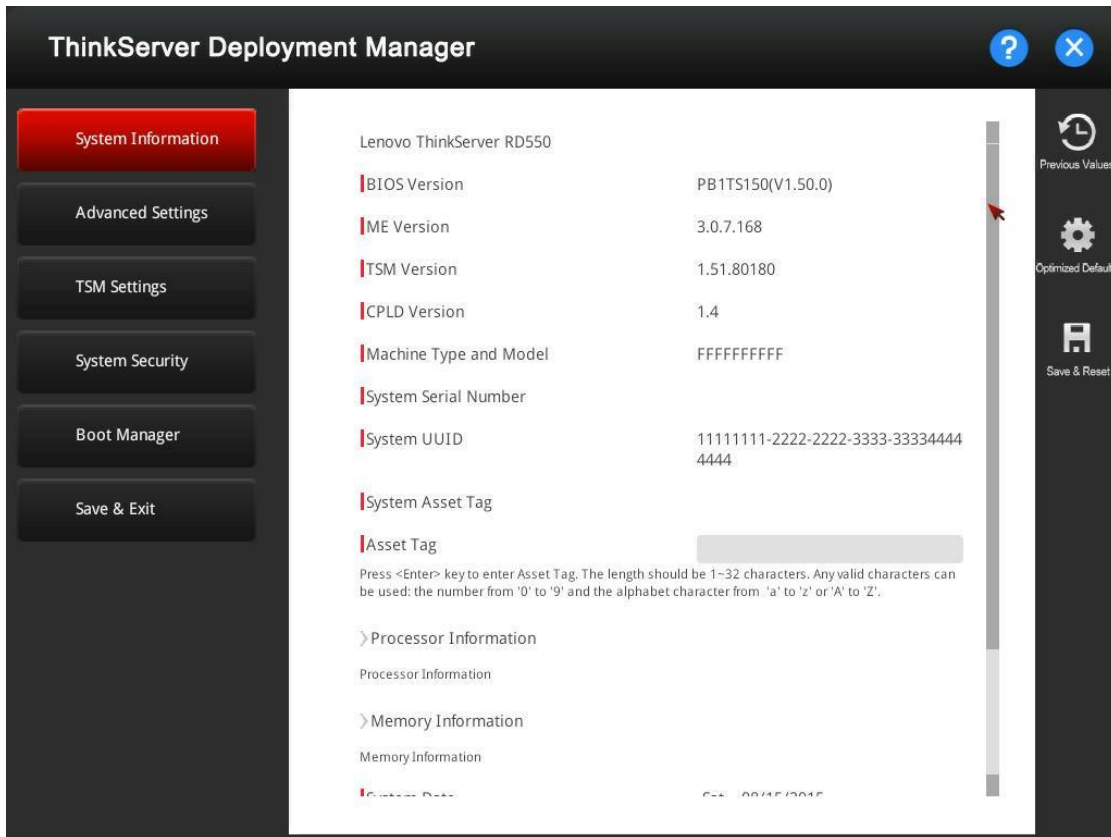
Figure 2-3 BIOS Setup interface

2.3.1 Setting BIOS parameters

The BIOS Setup interface consists of the following subinterfaces. Click the tab in the left pane to display the corresponding subinterface in the right pane.

- **System Information**: View basic information about your server, such as BIOS version, microprocessor type, memory, and system date and time.
- **Advanced Settings**: View and change the settings of various server components.
- **TSM Settings**: View and change the event log settings and Baseboard Management Controller (BMC) settings.
- **System Security**: Set passwords and configure the Trusted Platform Module (TPM) function.

- **Boot Manager**: View and change the server startup options, including the startup sequence and boot priority for various devices.
- **Save & Exit**: Choose a desired action (save changes, discard changes, or load default values) and exit the interface.

The settings in the BIOS Setup interface are the same as settings in the Setup Utility program. For detailed information, refer to "Using the Setup Utility program" in the system *User Guide and Hardware Maintenance Manual*. You can get the document from the documentation DVD that comes with your server or from the Web site at:

http://www.lenovo.com/UserManuals

2.3.2 Creating a BIOS response file

After you finish the settings, you can save the BIOS settings in a response file. Later, you can clone the BIOS settings in this response file to other similarly configured Lenovo servers.

To create a BIOS response file, do the following:

1. Attach a USB memory key to the server or connect your server to a shared network. For instructions on how to connect to a shared network, refer to 2.1 Configuring network settings.
2. Click **Save & Exit → Save Changes and Reset** or click the **Save & Reset** button ![save icon] on the right side directly. A confirmation window is displayed.
3. Click **Yes**. Another confirmation window is displayed, asking if you want to save a response file.
4. Click **Yes**. The Save Response File window is displayed.
5. Select the location to save the response file, and input a file name.
   Notes:
   - The maximum length of the file name is 226 characters.
   - Do not include the following symbols in the file name: \ / : * ? " < > |
6. Click **Save**. Wait for several minutes until the saving process is completed.

2.4 Platform Update

Click the **Platform Update** tab in the left pane to enter the Platform Update interface. You can update applications and firmware for your server in the Platform Update interface. To download the update bundle files, go to:

http://www.lenovo.com/drivers
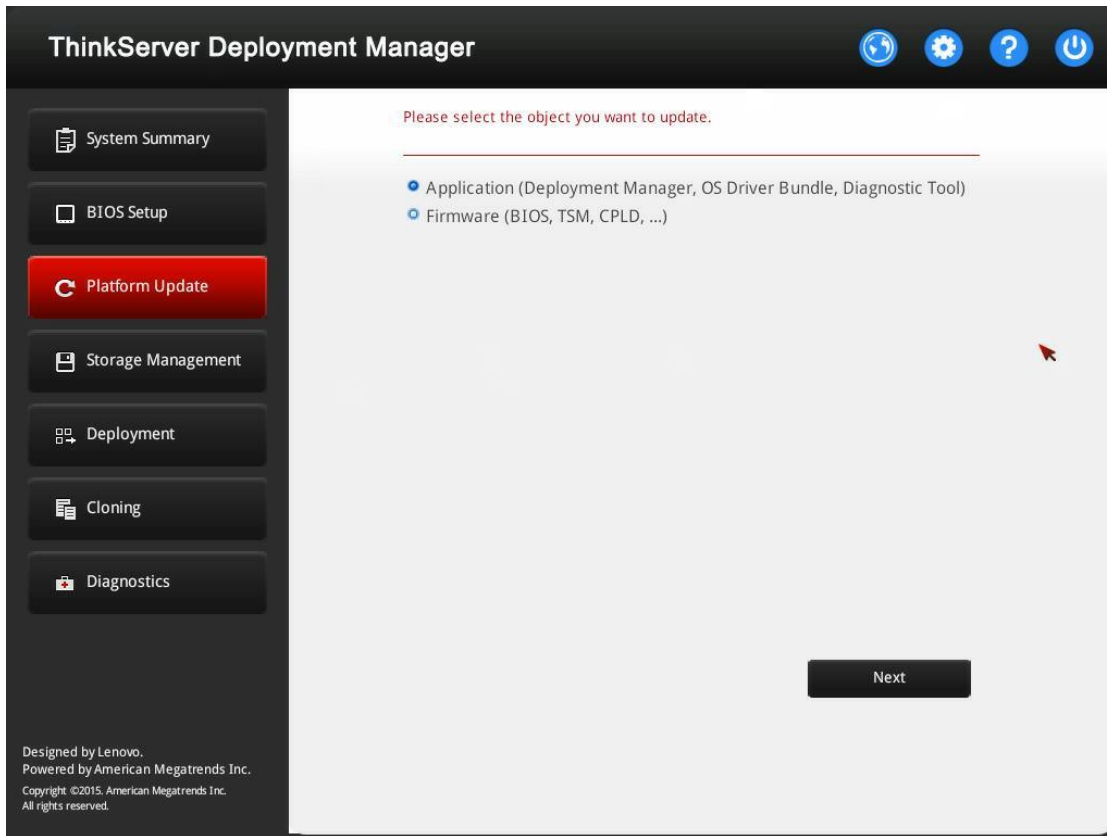
Figure 2-4 Platform Update interface

2.4.1 Updating applications

The applications you can update include TDM, Windows drivers, Linux drivers, and the Lenovo ThinkServer Diagnostics program.
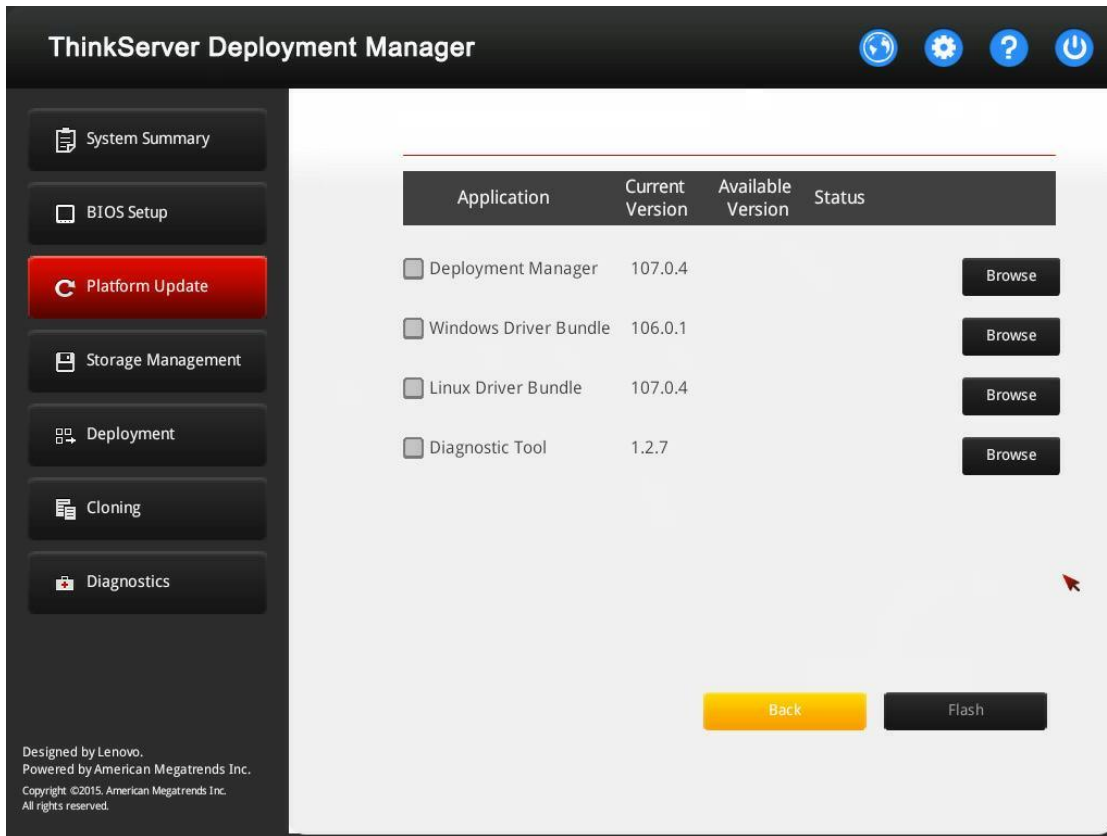
Figure 2-5 Applications update interface

To update applications, do the following:

1. Select **Application** on the Platform Update interface and click **Next**. A list of applications will be displayed.
2. If the update bundle file is stored on a USB memory key, insert the USB memory key to the server. If the update bundle file is stored in a shared network folder, ensure that you have configured the network settings. For instructions on how to configure the network settings, refer to 2.1 Configuring network settings.
3. Click the **Browse** button for the application you want to update. The Select File window is displayed.
4. Select the corresponding update bundle file and click **OK**. The version information is displayed in the **Available Version** column and the check box is selected automatically.
   Note: If the available version is earlier than the current version, a confirmation window will be displayed. Click **Yes** to continue or click **No** to exit and reselect an update bundle file.
5. Repeat step 3 to step 4 to prepare all the applications you want to update.

6. When all the applications you want to update are checked, click **Flash**.
7. The update process takes several minutes. When the **Status** for all the applications are shown as **Success**, restart the server.
8. Launch TDM and select **Platform Update** → **Application** to check if the **Current Version** for the applications are updated.

2.4.2 Updating firmware

Three types of firmware can be updated in the Platform Update interface, including BIOS, TSM, and Complex Programmable Logic Device (CPLD).

Note: CPLD can be updated only by Lenovo service technicians.
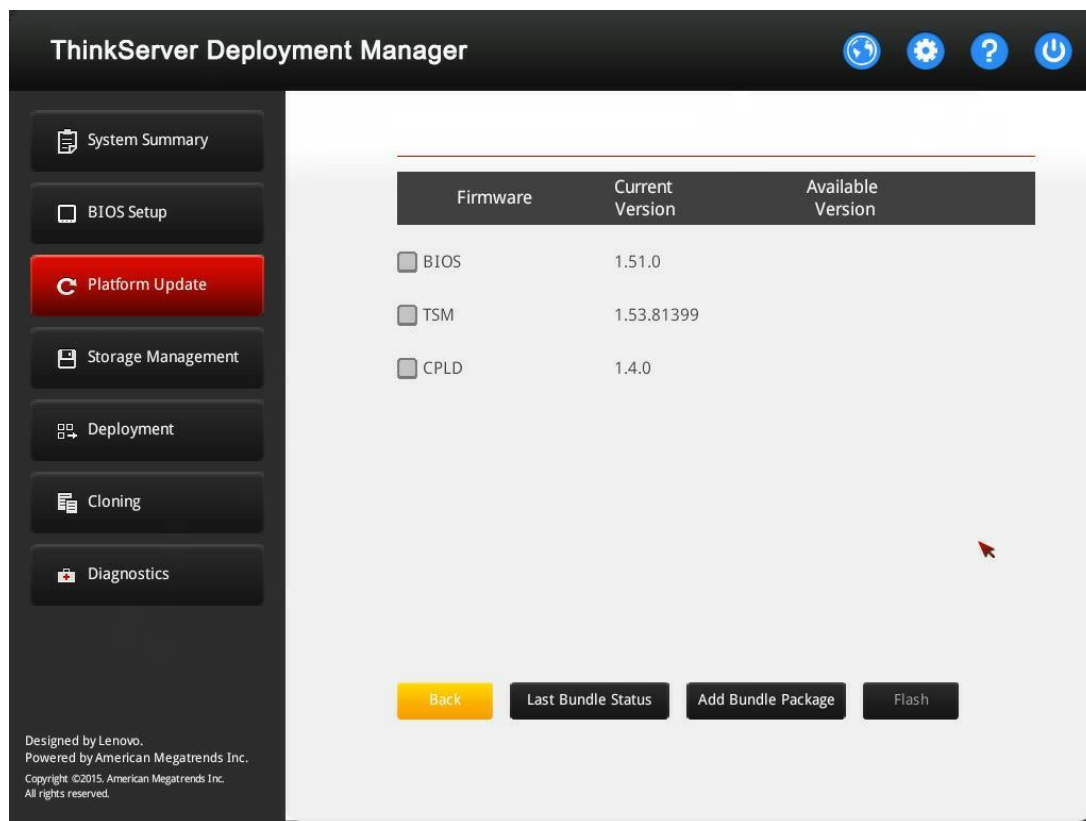
Figure 2-6 Firmware update interface

To update firmware, do the following:

1. Select **Firmware** in the Platform Update interface and click **Next**. A list of firmware is displayed.
   Note: The firmware cannot be updated in batches. The update steps are the same for each firmware.
2. If the update bundle file is stored on a USB memory key, insert the USB memory key to the server. If the update bundle file is stored in a shared network folder,

ensure that you have configured the network settings. For instructions on how to configure the network settings, refer to <u>2.1 Configuring network settings</u>.
3. Click **Add Bundle Package**. The Select File window is displayed.
4. Select the corresponding update bundle file and click **OK**. The version information is displayed in the **Available Version** column and the check box is selected automatically.

   Notes:
   - If the available version is earlier than the current version, a confirmation window will be displayed. Click **Yes** to continue or click **No** to exit and reselect an update bundle file.
   - You can view the last update information by clicking **Last Bundle Status**. If it is the first time to update this firmware, the **Last Bundle Status** button is disabled.
5. Click **Flash**. The update process starts. Ensure that the server is connected to an ac power source during the whole process.
6. Wait until the server restarts automatically. Then, launch TDM and select **Platform Update → Firmware**. Click **Last Bundle Status** to verify if the update is successful.

2.5 Storage Management

Click the **Storage Management** tab in the left pane to open the Storage Management interface. In the Storage Management interface, you can configure RAID and disk settings. You also can save the configuration as a response file for future use.
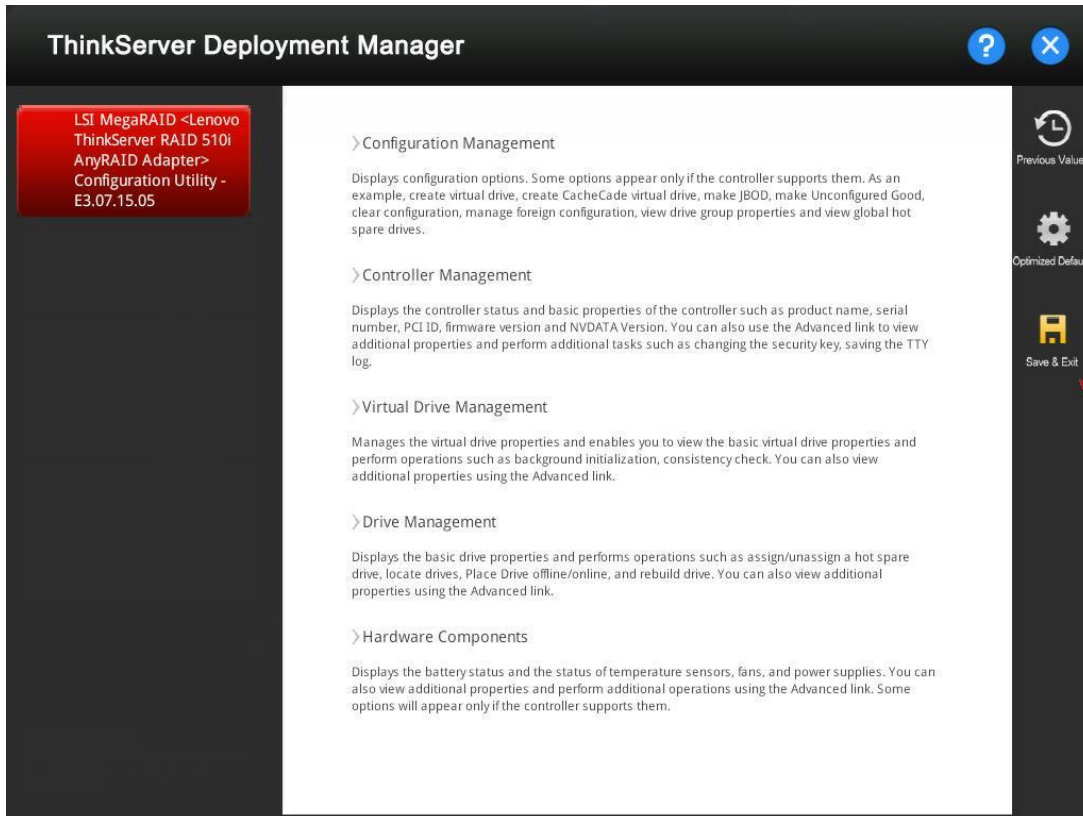
Figure 2-7 Storage Management interface

2.5.1 Configuring RAID

The configurations in the Storage Management interface are the same as configurations in the ThinkServer MegaRAID SAS Software. For detailed information, refer to the *MegaRAID SAS Software User Guide* on the documentation DVD that comes with your server. This document also is available at:

http://www.lenovo.com/UserManuals

This document provides information about RAID and how to configure, monitor, and maintain your server RAID and related devices. This document is in English only.

Note: If you are configuring RAID, ensure that **Boot Mode** is set to **UEFI Only** or **Auto** in the BIOS Setup interface. Go to **BIOS Setup → Boot Manager → Boot Mode**, and then select **UEFI Only** or **Auto**.

2.5.2 Clearing the RAID configuration

To clear the RAID configuration, do the following:

1. In the Storage Management interface, click **Configuration Management** → **Clear Configuration**. A confirmation window is displayed.
2. Click **Yes** to clear the configuration.

2.5.3 Creating a RAID response file

After you finish the RAID configuration, you can save the RAID configuration as a response file. Later, you can clone the RAID configuration in this response file to other similarly configured Lenovo servers.

To create a RAID response file, do the following:

1. Attach a USB memory key to the server or connect your server to a shared network. For instructions on how to connect to a shared network, refer to 2.1 Configuring network settings.
2. Click the **Save & Exit** button ![icon]. A confirmation window is displayed.
3. Click **Yes**. Another confirmation window is displayed, asking if you want to save a response file.
4. Click **Yes**. The Save Response File window is displayed.
5. Select the location to save the response file, and input the file name.
   Notes:
   - The maximum length of the file name is 226 characters.
   - Do not include the following symbols in the file name: \ / : * ? " < > |
6. Click **Save**. Wait for several minutes until the saving process is completed.

2.6 Deployment

Click the **Deployment** tab in the left pane to open the Deployment interface. The Deployment interface provides a configuration wizard for installing an operating system and saving a response file for future use.

Notes:

1. To check the operating systems supported by TDM, click the help button ![help icon] in the TDM main interface, and click **Compatibility Notes**.
2. If the operating system you want to install is not supported by TDM, refer to the documentation that comes with the operating system for installation instructions.
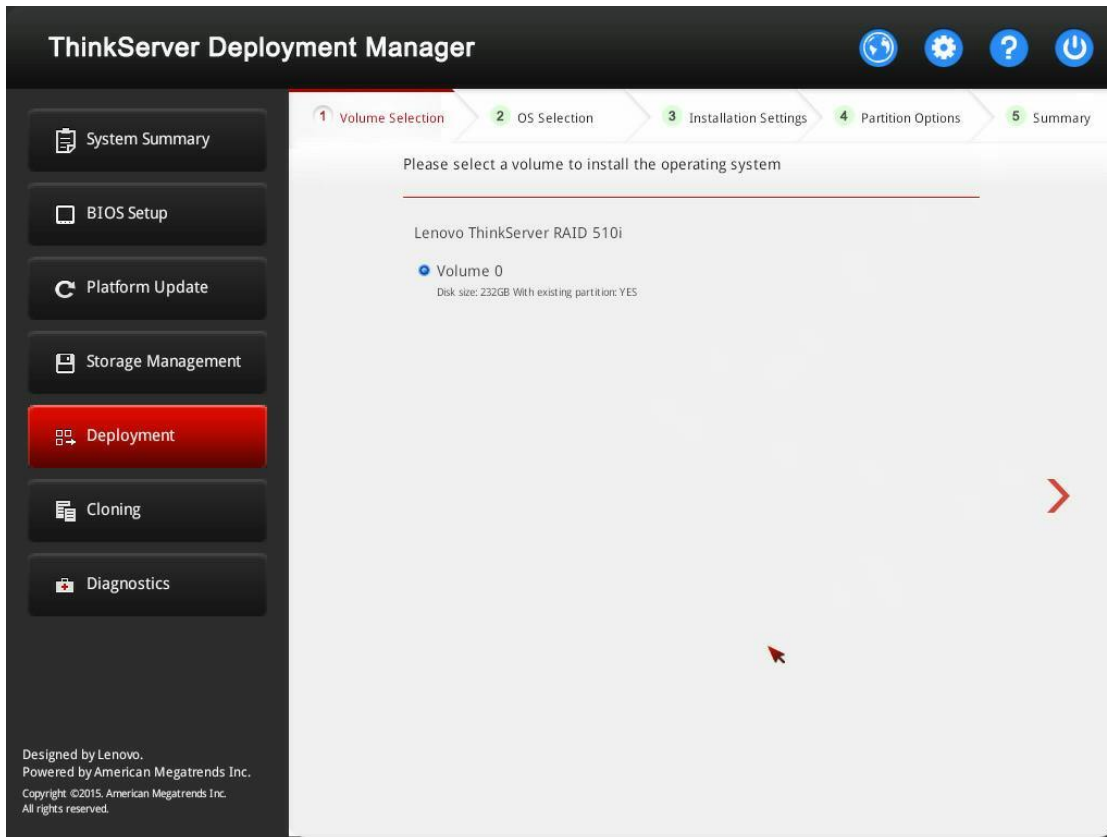
Figure 2-8 Deployment interface

2.6.1 Prerequisites

Before installing an operating system, ensure that the following requirements are met:

1. **Boot Mode** is set to **UEFI Only** or **Auto** in the BIOS Setup interface. Go to **BIOS Setup** → **Boot Manager** → **Boot Mode** and select **UEFI Only** or **Auto**.
2. At least one RAID controller is configured in the Storage Management interface.
3. The operating system installation files are prepared in one of the following forms:
- CD or DVD
  Ensure that the disc is clean and the version and architecture of the operating system are correct.
- USB memory key
  To create a USB installation medium, refer to the documentation at:
  http://cn.download.lenovo.com/ibmdl/pub/pc/pccbbs/thinkservers/how_to_create_usb_os_installation_media.pdf
- Shared network
  Ensure that the system management port is active and can connect to the specified IP address.

4. Ensure only SW Raid or HW Raid is configured.

2.6.2 Installing a Windows operating system

The wizard provides a step by step guidance for installing an operating system. Follow the instructions on the screen and the tips listed below to install a Windows operating system.

Attention: If the <Security Boot> is enabled in BIOS Setup, please check if the OS support the <Security Boot> mode.
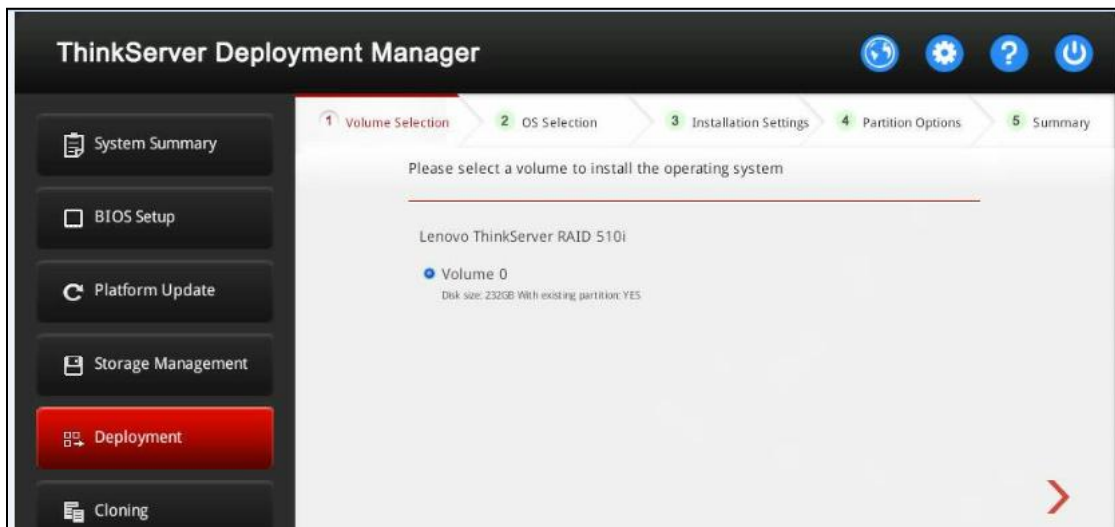
Step 1: Volume Selection

Figure 2-9 Volume Selection step (for Windows)

Attention:

1. The selected RAID controller will be formatted during the installation. Back up all data on it before the installation.

2. If multiple RAID adapters are in the system, TDM only install the RAID driver for the current selected one.
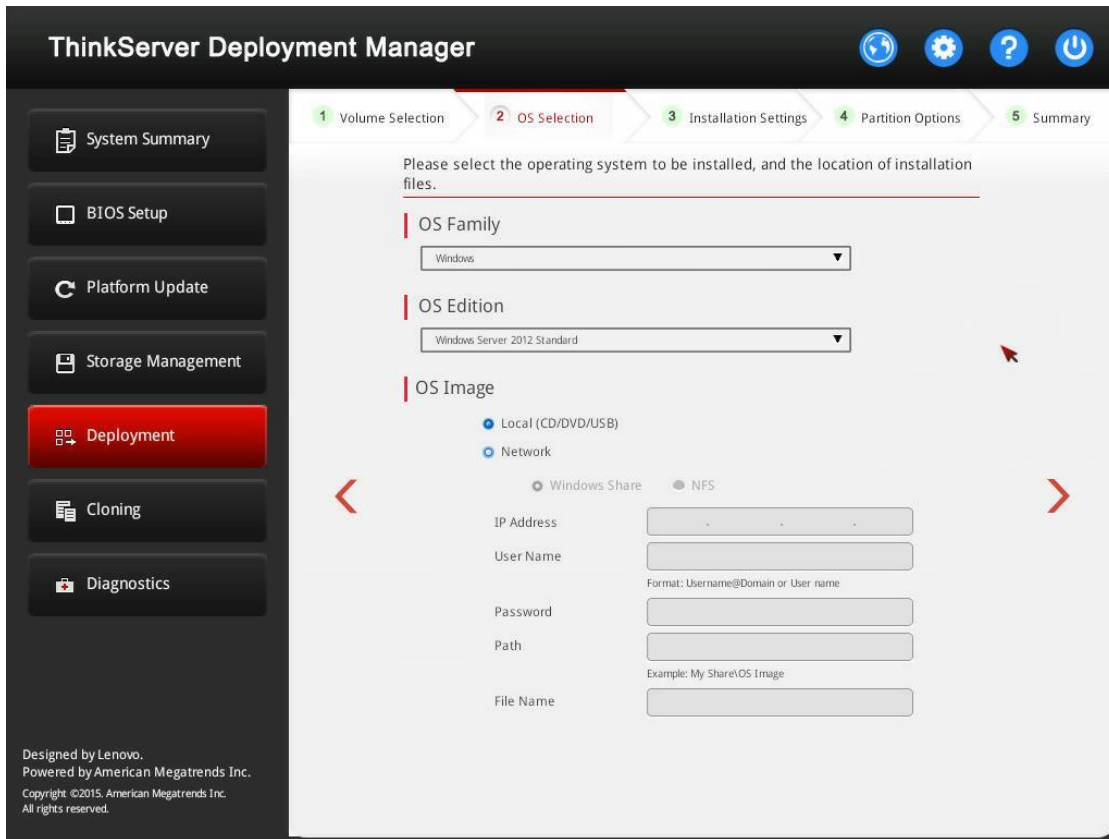
Step 2: OS Selection

Figure 2-10 OS Selection step (for Windows)

The IP address is made up of four parts separated by dots. The following table lists the valid value range for each part.

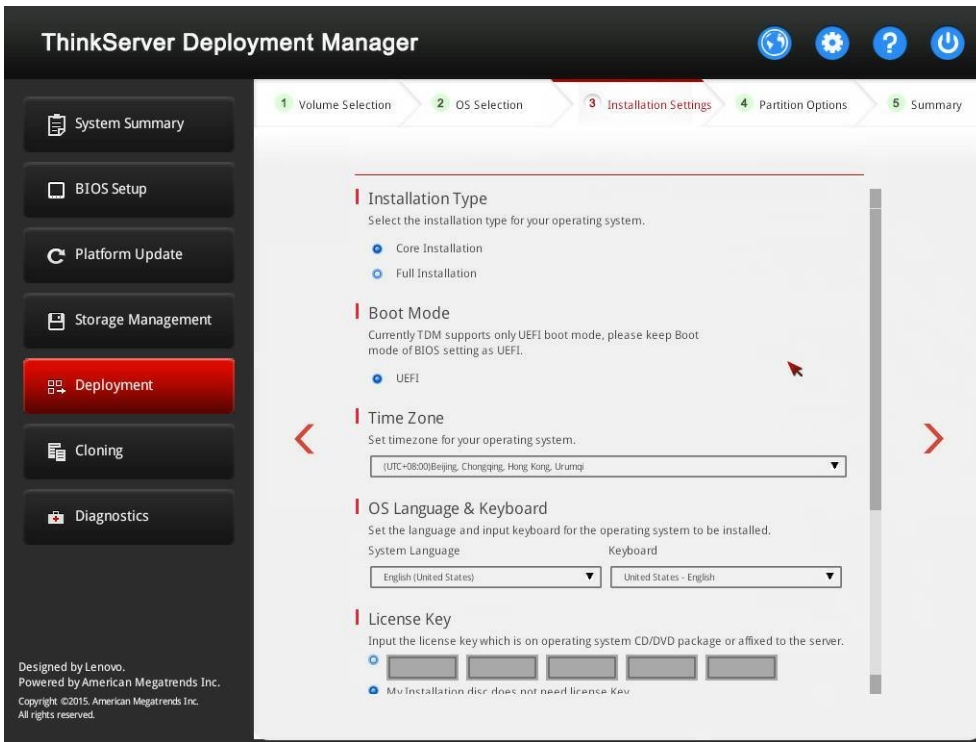| IP Address	Part 1	Part 2	Part 3	Part 4
Valid values	1 – 223	0 – 255	0 – 255	0 – 255

Step 3: Installation Settings

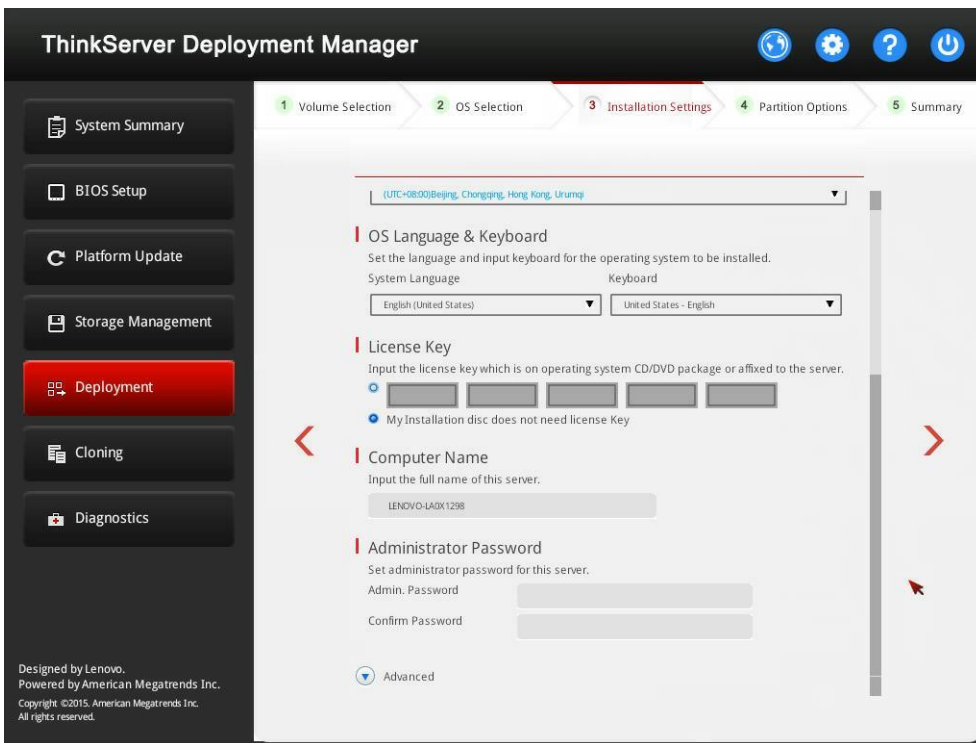Figure 2-11 Installation Setting step – 1 (for Windows)

Figure 2-12 Installation Setting step – 2 (for Windows)

Computer Name: TDM automatically generates a unique computer name for your server. You can change the computer name.
Notes:
- The maximum length of the computer name is 15 characters.
- Do not include any space or symbol in your computer name.

You can change your administrator password later from the operating system.

For advanced configurations, expand the list by clicking the arrow icon next to **Advanced**.
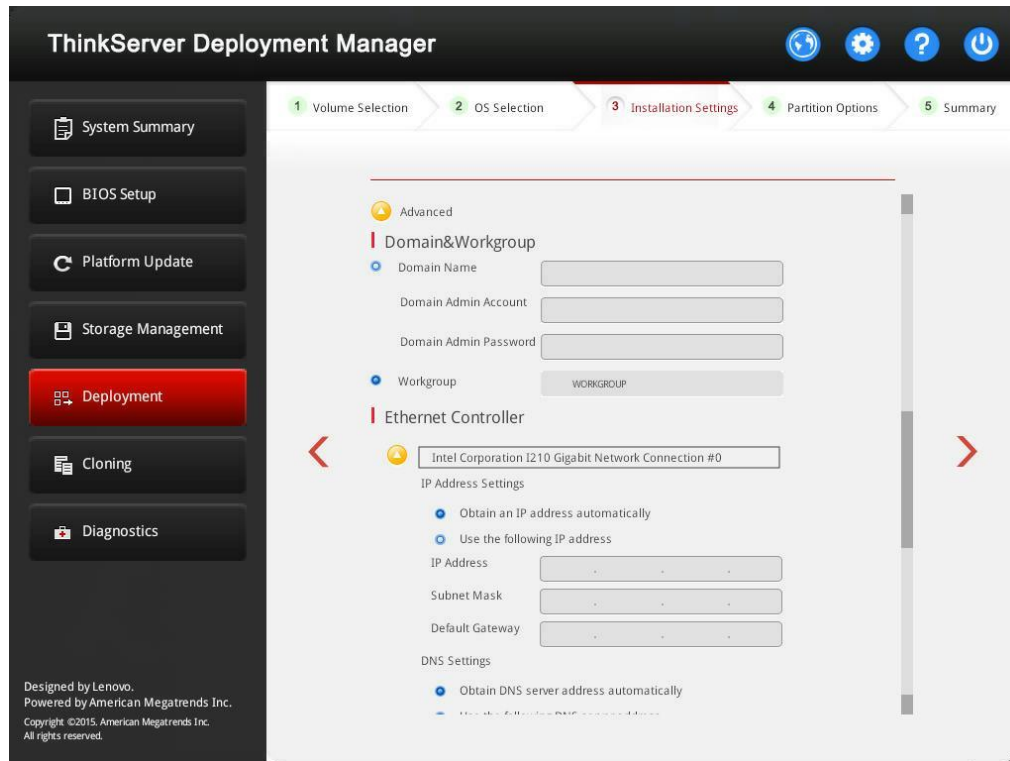

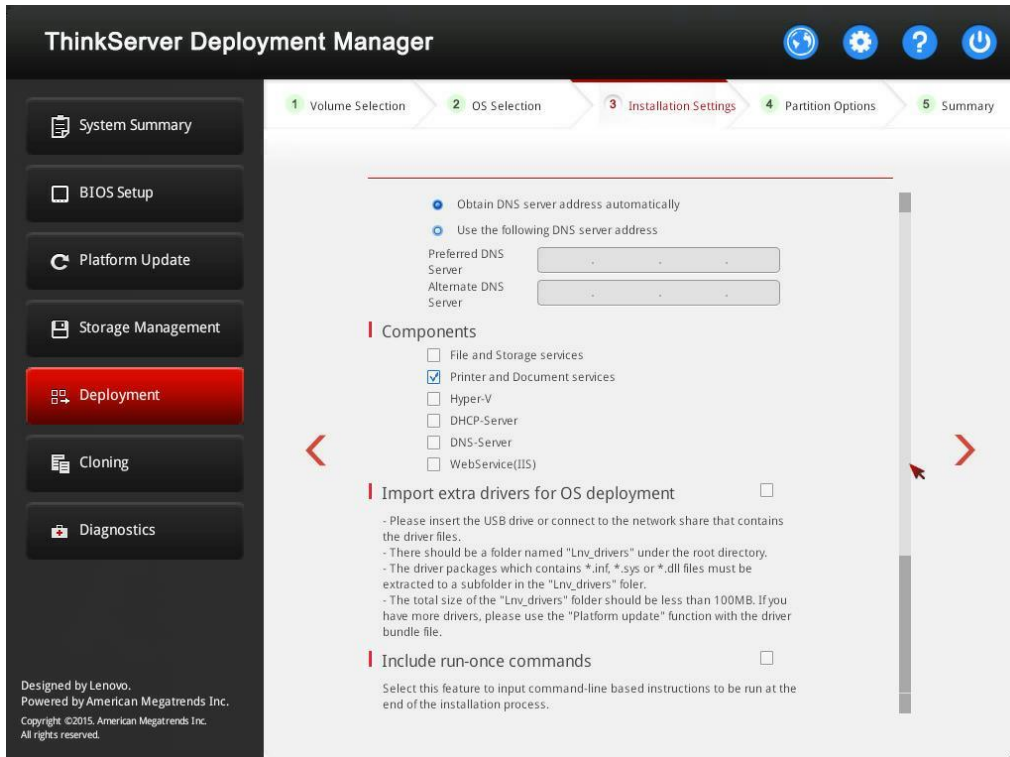Figure 2-13 Installation Settings step – 3 (for Windows)

Figure 2-14 Installation Settings step – 4 (for Windows)

Workgroup is not supported on Windows Small Business Server 2003.

Refer to the following table for the valid values when you input the required address information.

Address	Part 1	Part 2	Part 3	Part 4
IP Address	1 – 126; 128 – 223	0 – 255	0 – 255	1 – 254
Subnet Mask	0 – 255	0 – 255	0 – 255	0 – 255
Default Gateway	0 – 255	0 – 255	0 – 255	0 – 255
Preferred DNS Server	1 – 126; 128 – 223	0 – 255	0 – 255	0 – 255
Alternate DNS Server	1 – 126; 128 – 223	0 – 255	0 – 255	0 – 255

Components: You can select one or more components for installation according to your requirements.

Include run-once commands: If you want to run specified commands at the end of the installation process, select the check box. A command-input area is displayed. Type one command and click **Add**. The command is added to the command list. You can add five commands at most. If you want to remove a certain command, select it and click **Remove**. The commands in the command list will be run one time only and in the order you input them.

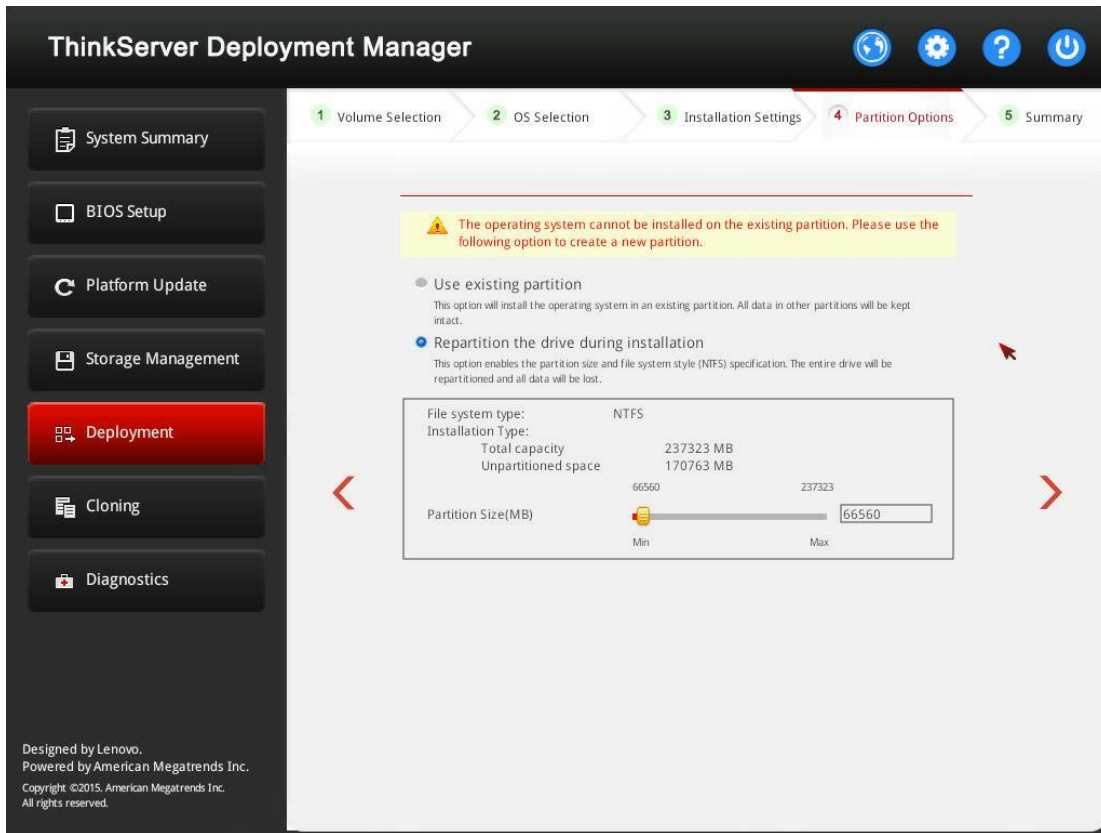**Step 4: Partition Options**

Figure 2-15 Partition Options step (for Windows)

If no existing partition is detected on the drive, choose **Repartition the drive during installation**.
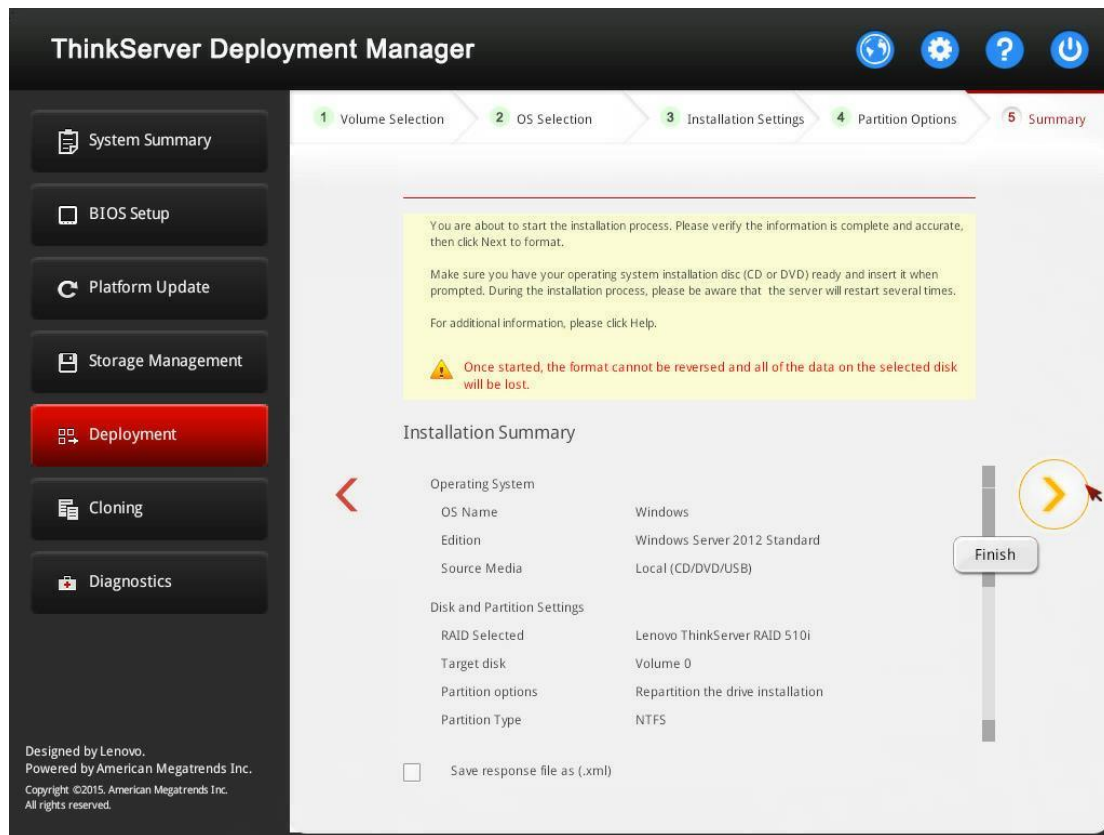
Step 5: Summary

Figure 2-16 Summary step (for Windows)

If you need to change some settings, click ⟨ until you return to the page where you can make the changes.

Click ⟩. The license agreement page for the operating system is displayed. Read and accept the license agreement. Click **Next**. The installation process starts. Wait until the installation finishes.

2.6.3 Installing a Red Hat or SUSE Linux operating system

The wizard provides a step by step guidance for installing an operating system. Follow the instructions on the screen and the tips listed below to install a Red Hat® Linux or SUSE® Linux operating system.

Attention: TDM *Does Not* support installing Linux operating system when Security Boot is enabled in BIOS Setup.
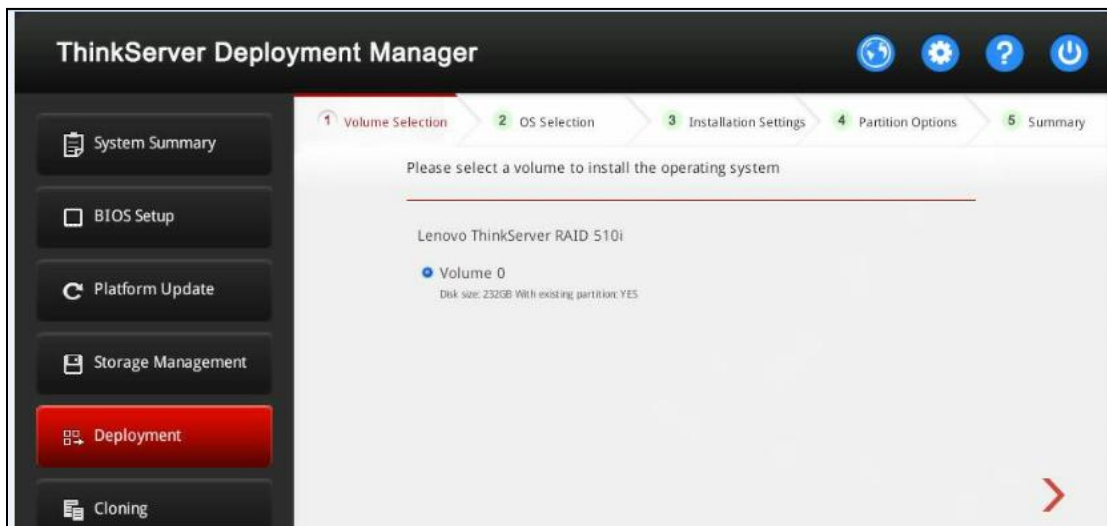
Step 1: Volume Selection

Figure 2-17 Volume Selection step (for Red Hat or SUSE)

Attention: The selected RAID controller will be formatted during the installation. Back up all data on it before the installation.
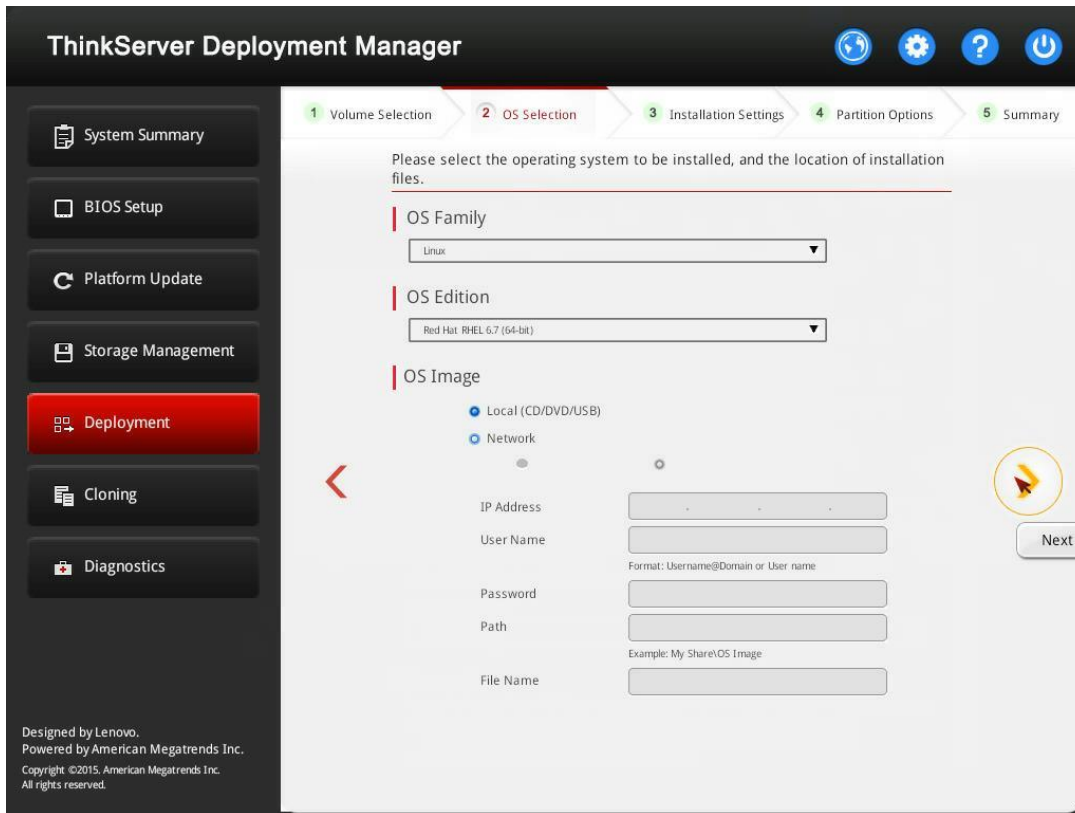
Step 2: OS Selection

Figure 2-18 OS Selection step (for Red Hat or SUSE)

The IP address is made up of four parts separated by dots. The following table lists the valid value range for each part.

IP address	Part 1	Part 2	Part 3	Part 4
Valid values	1 – 223	0 – 255	0 – 255	0 – 255

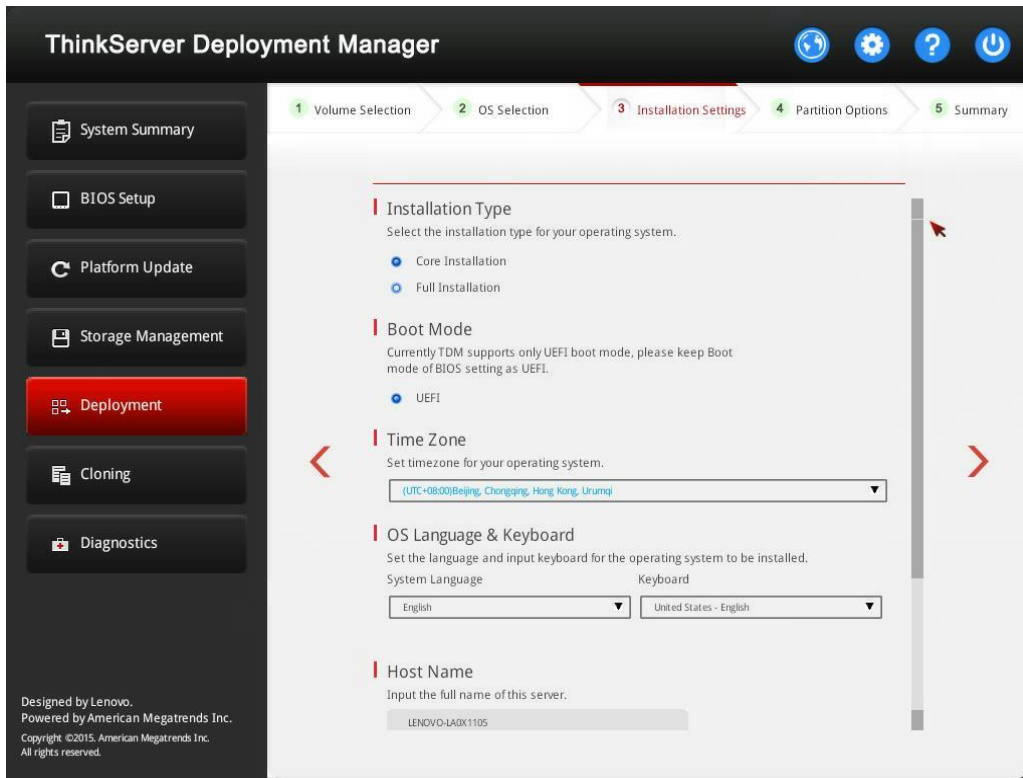**Step 3: Installation Settings**

Figure 2-19 Installation Settings step – 1 (for Red Hat or SUSE)
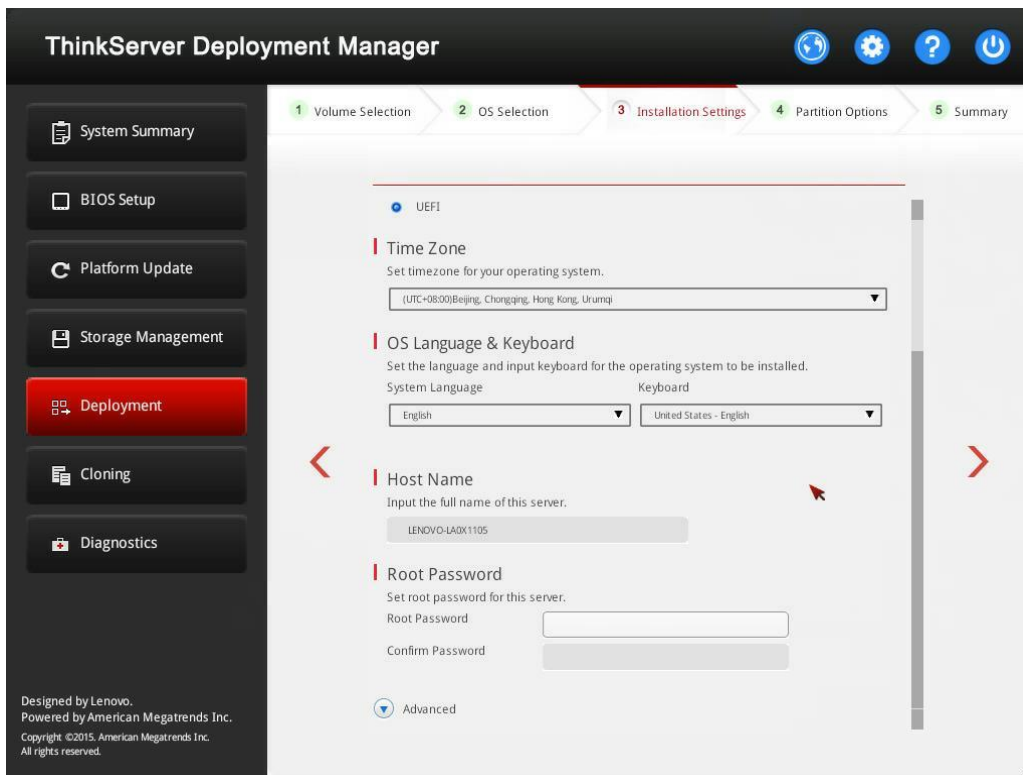

Figure 2-20 Installation Setting step – 2 (for Red Hat or SUSE)

Host Name: TDM automatically generates a unique host name for your server. You can change the host name.

Notes:
- The maximum length of the host name is 15 characters.
- Do not include any space or symbol in your host name.

You can change your administrator password later from the operating system.

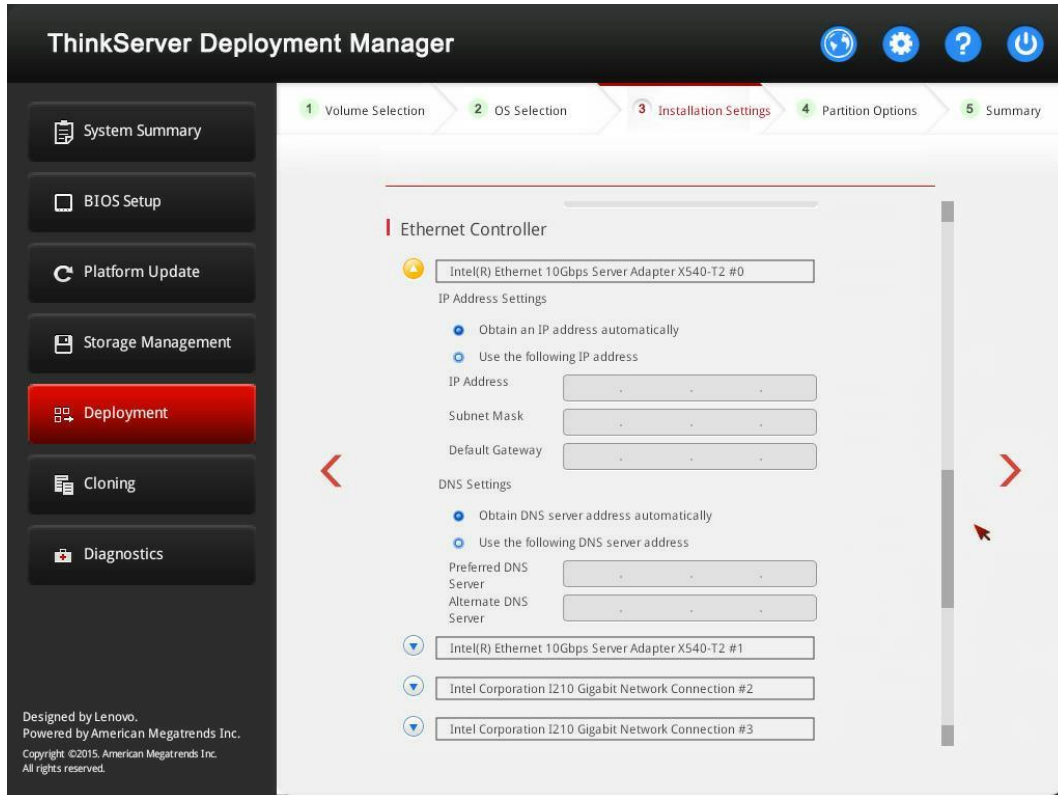For advanced configurations, expand the list by clicking the arrow icon next to **Advanced**.

Figure 2-21 Installation Settings step – 3 (for Red Hat or SUSE)

Refer to the following table for the valid values when you input the required address information.

Address	Part 1	Part 2	Part 3	Part 4
IP Address	1 – 126; 128 – 223	0 – 255	0 – 255	1 – 254
Subnet Mask	0 – 255	0 – 255	0 – 255	0 – 255
Default Gateway	0 – 255	0 – 255	0 – 255	0 – 255
Preferred DNS Server	1 – 126; 128 – 223	0 – 255	0 – 255	0 – 255

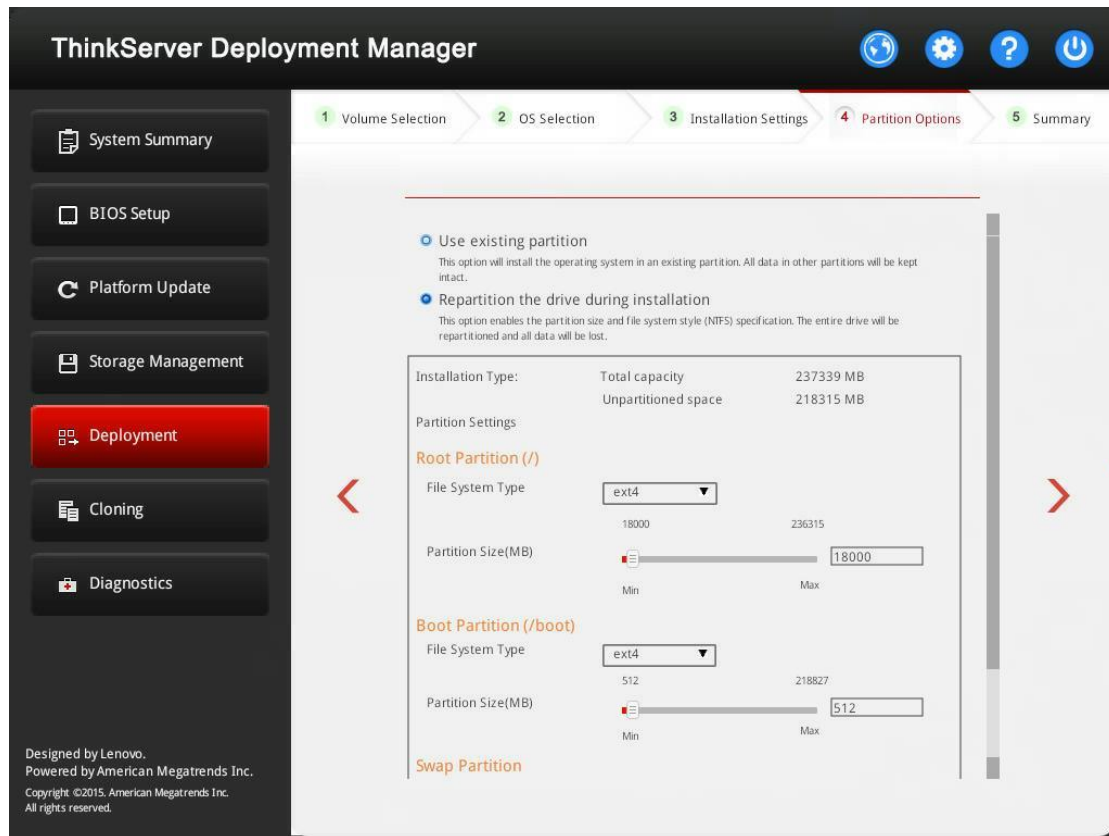| Alternate DNS Server	1 – 126; 128 – 223	0 – 255	0 – 255	0 – 255

Step 4: Partition Options

Figure 2-22 Partition Options step (for Red Hat or SUSE)

If no existing partition is detected on the drive, choose **Repartition the drive during installation**.

Root Partition: The root partition size depends on the space required for the operating system and applications.

Boot Partition: This partition contains files required to start the operating system.

Swap Partition: Swap partition is the virtual memory in Linux. When the Random Access Memory (RAM) is full, data will be stored on the swap partition temporarily. Although swap partition can be used to store data, it should not be considered as a replacement for RAM. It is located on hard disks, and has slower access speed than RAM.
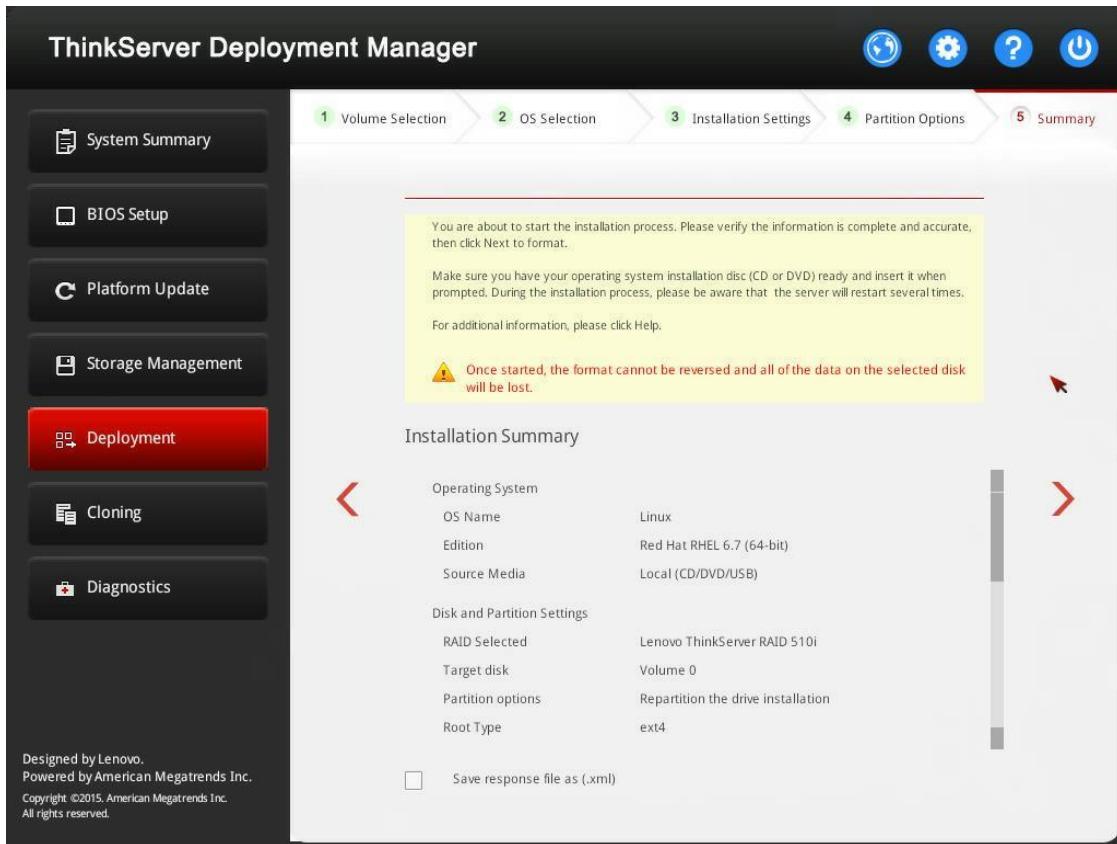
Step 5: Summary

Figure 2-23 Summary step (for Red Hat or SUSE)

If you need to change some settings, click ⟨ until you return to the page where you can make the changes.

Click ⟩ . The license agreement page for the operating system is displayed. Read and accept the license agreement. Click **Next**. The installation process starts. Wait until the installation finishes.

2.6.4 Installing a VMware operating system

The wizard provides a step by step guidance for installing an operating system. Follow the instructions on the screen and the tips listed below to install a VMware® operating system.

Attention: If the <Security Boot> is enabled in BIOS Setup, please check if the operating system supports the <Security Boot> mode, for example only the latest version V6.5 supports this mode.
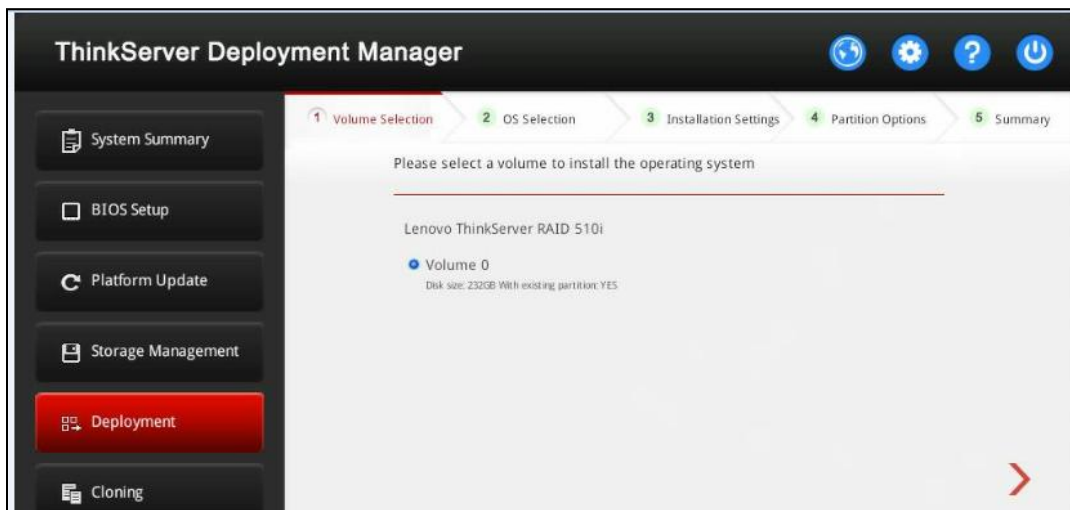
Step 1: Volume Selection

Figure 2-24 Volume Selection step (for VMware)

Attention: The selected RAID controller will be formatted during the installation. Back up all data on it before the installation.
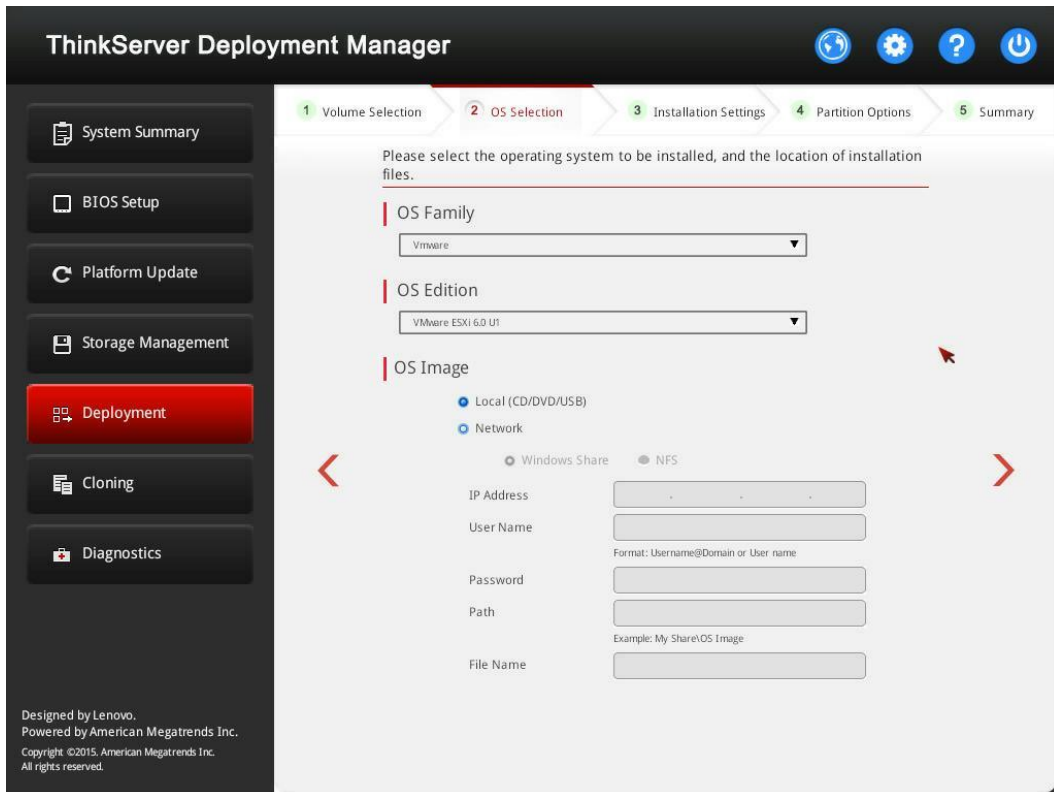
Step 2: OS Selection

Figure 2-25 OS Selection step (for VMware)

The IP address is made up of four parts separated by dots. The following table lists the valid value range for each part.

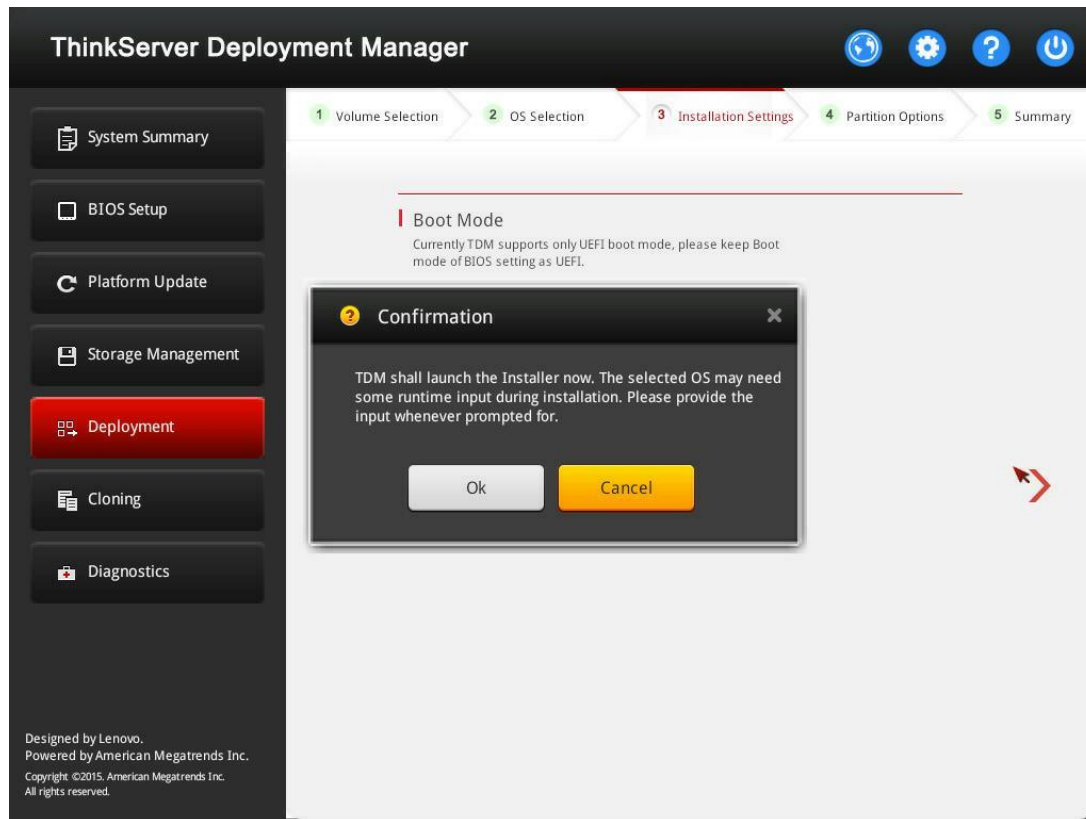| IP Address	Part 1	Part 2	Part 3	Part 4
Valid values	1 – 223	0 – 255	0 – 255	0 – 255

Step 3: Installation Settings

Figure 2-26 Installation Settings step (for VMware)

Select the Boot Mode and click ⟩. A confirmation window will be displayed.

Click **OK**. The installation process starts. When prompted, input the necessary commands. Wait for the installation to be finished.

2.6.5 Creating an operating system response file

If you are installing a Windows operating system, a Red Hat Linux operating system, or a SUSE Linux operating system, you can save the settings as a response file. Later, you can clone the settings in this response file to other similarly configured Lenovo servers.

To create an operating system response file, do the following:

1. Follow the wizard to go through the Volume Selection, OS Selection, Installation Settings, and Partition Options steps. For details, refer to 2.6.2 Installing a Windows operating system and 2.6.3 Installing a Red Hat or SUSE Linux operating system.

2. Click ⟩ to go to the Summary step. If all the settings are complete and accurate, select the **Save response file as (.xml)** check box, and click ⟩. A confirmation window is displayed, asking if you want to save a response file.

3. Click **Yes**. The Save Response File window is displayed.
4. Input the file name.
   Notes:
   - The maximum length of the file name is 226 characters.
   - Do not include the following symbols in the file name: \ / : * ? " < > |
   - The location to save the response file is the location where the installation files are stored. It is preset in the OS Selection step.
5. Click **Save**. Wait for several minutes until the saving process is completed.
   Note: If you are installing a Linux operating system, and the response file is saved on a USB memory key, the USB memory key should include an FAT32 partition.

2.7 Cloning

Click the **Cloning** tab in the left pane to open the Cloning interface. In the Cloning interface, you can clone BIOS, RAID, or operating system installation settings to your server by using response files you have created.
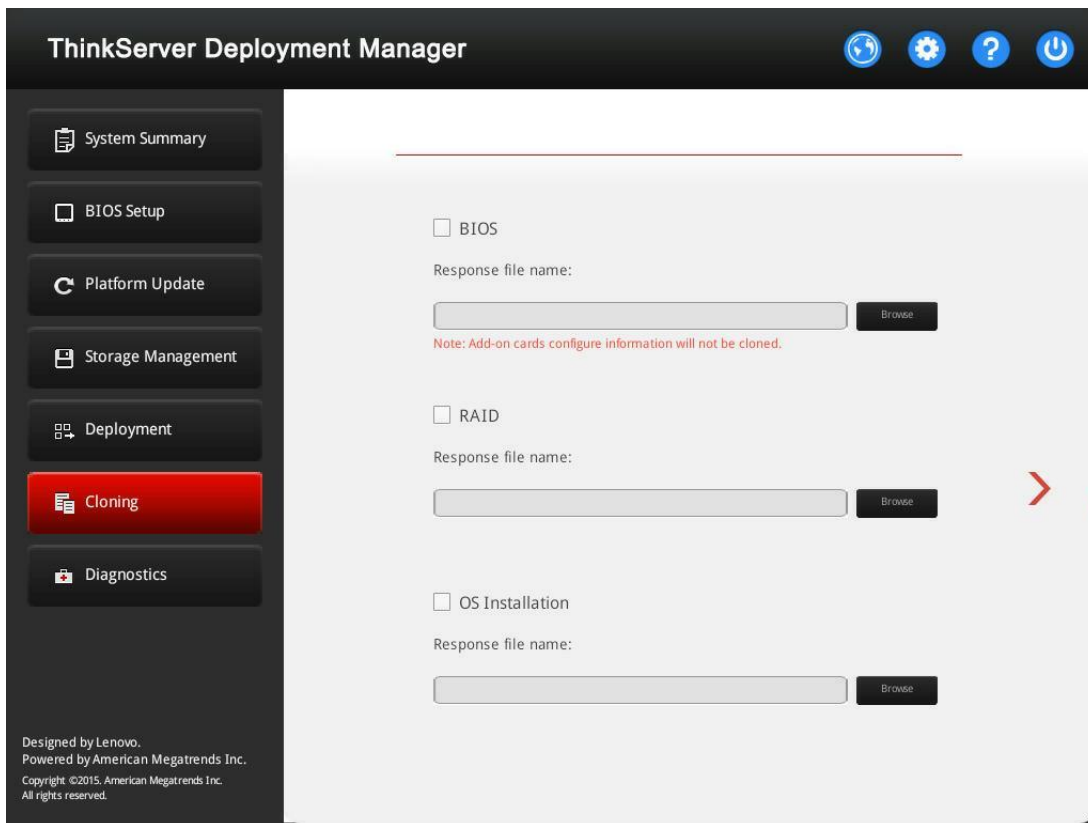

Figure 2-27 Cloning interface

2.7.1 BIOS cloning

To clone BIOS settings in a response file to your server, do the following:

1. Attach the USB memory key where the response file is stored to the server. Alternatively, connect your server to the shared network where the response file is stored. For instructions on how to connect to a shared network, refer to 2.1 Configuring network settings.
2. In the Cloning interface, select the **BIOS** check box. The corresponding **Browse** button is enabled.
3. Click the **Browse** button. The Select File window is displayed.
4. Select the corresponding BIOS response file and click **OK**. The selected file name is displayed in the **Response file name** field.
5. Click ⟩. The BIOS cloning process starts.
6. If the BIOS cloning is successful, a confirmation window will be displayed. Click **OK** to restart your server. The cloning process finishes.

2.7.2 RAID cloning

Note: Before RAID cloning, ensure that no RAID controller has been configured in the Storage Management interface. If any RAID controller is configured, clear the configuration first. For instructions on how to clear the RAID configuration, refer to 2.5.2 Clearing RAID configuration.

To clone RAID configuration in a response file to your server, do the following:

1. Attach the USB memory key where the response file is stored to the server. Alternatively, connect your server to the shared network where the response file is stored. For instructions on how to connect to a shared network, refer to 2.1 Configuring network settings.
2. In the Cloning interface, select the **RAID** check box. The corresponding **Browse** button is enabled.
3. Click the **Browse** button. The Select File window is displayed.
4. Select the corresponding RAID response file and click **OK**. The selected file name is displayed in the **Response file name** field.
5. Click ⟩. The RAID cloning process starts.
6. If the RAID cloning is successful, a Success window will be displayed. Click **OK**. The cloning process finishes.

2.7.3 OS Installation cloning

Note: Before cloning, ensure that you have configured at least one RAID controller in the Storage Management interface. For instructions on how to configure RAID, refer to 2.5.1 Configuring RAID.

To clone operating system installation settings in a response file to your server, do the following:

1. Attach the USB memory key where the response file is stored to the server. Alternatively, connect your server to the shared network where the response file is stored. For instructions on how to connect to a shared network, refer to 2.1

[Configuring network settings](#).

2. In the Cloning interface, select the **OS Installation** check box. The corresponding **Browse** button is enabled.
3. Click the **Browse** button. The Select File window is displayed.
4. Select the corresponding operating system response file and click **OK**. The selected file name is displayed in the **Response file name** field.
5. Click ⊙ . The Installation Summary page appears. All the settings in the operating system response file are listed in this page.
6. Check to see if all the settings are consistent with your requirements.

   1. If all the settings are consistent with your requirements, click ⊙ to start the operating system installation process, and wait for the installation to be finished.
   2. If you want to change some settings, select **Modify the configuration before the OS deployment**. Then, click ⊙ . TDM jumps to the Deployment interface. Then, you can change the settings according to your requirements and follow the wizard to finish configurations and install the operating system.

2.8 Diagnostics

You can click the **Diagnostics** tab to launch the Lenovo ThinkServer Diagnostics program. The program enables you to diagnose server problems, perform some diagnostic tests, and collect system information.

For more information about Lenovo ThinkServer Diagnostics, go to

http://support.lenovo.com/us/en/lenovodiagnosticsolutions/downloads. Locate the **Lenovo ThinkServer Diagnostics** section at the bottom of the Web page. Then, click the link for your program.

Chapter 3. Troubleshooting and diagnostics

This chapter provides information about basic troubleshooting and diagnostic methods to help you solve problems that might occur while using TDM.

If you cannot diagnose and solve a problem by using the information in this chapter, go to the Lenovo Support Web site at http://www.lenovo.com/support for additional troubleshooting resources. You also can get help and information by telephone through the Customer Support Center. The most up-to-date telephone list for Lenovo Support is always available on the Web site at:

http://www.lenovo.com/support/phone

The following table lists typical symptoms you might experience and the suggested actions.

Symptom	Action
The process for installing an operating system continuously loops.	Make more space available on the hard disk drive.
TDM cannot start the operating system medium.	Ensure that the operating system is supported by the TDM version you are using. To view the list of the supported operating systems, click the help button 🔵 in the TDM main interface, and then click **Compatibility Notes**.
No volume is found in **Deployment → Volume Selection**.	Ensure that you have configured a RAID controller for the server in the Storage Management interface. For instructions on how to configure a RAID controller, refer to 2.5.1 Configuring RAID.
When you are deploying an operating system, in the Summary step, when you click 🔴›, an error message "Failed to read License RTF file" is displayed.	Click **OK** to continue the installation.
During the operating system installation process, an error message "Failed to boot to the selected OS, press any key to reboot. Returned Status = 2" is displayed on the blank screen.	1. Press any key to restart the server. 2. Turn off the server. 3. Disconnect the server from the ac power source and reconnect the server to the ac power source. 4. Turn on the server and go to TDM to reinstall the operating system.

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