



Lenovo XClarity Provisioning Manager Lite User Guide



Server Models

Following are server models supported by LXPM Lite:

- Lenovo ThinkSystem: ST50 and ST50 V2

Fifth Edition (March 2021)

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Chapter 1. Overview

This chapter provides an overview of the Lenovo XClarity Provisioning Manager Lite (LXPM Lite) program, including program introduction, program startup, main interface, buttons displayed on the program interfaces, keyboard navigation, and how to download the useful information.

Notes:

1. Before launching LXPM Lite, ensure that the boot mode of your server is set to UEFI.
2. Some specific information might be different from what is displayed in the example interfaces.

Introduction

LXPM Lite enables you to configure Redundant Array of Independent Disks (RAID), and updating firmware. It also enables you to install the supported operating systems and associated device drivers, and run diagnostics.

LXPM Lite has the following features:

- Easy-to-use, language-selectable interface
- Integrated help system
- Automatic hardware detection
- Ability to install an operating system and device drivers in an unattended mode or manually
- Ability to clone the settings in one server to other similarly configured Lenovo servers
- RAID setup support
- Firmware update support
- Diagnostics for memory test, disk drive test (HDD test), and RAID log collection

Creating the bootable USB storage drive


Before launching LXPM Lite, create a bootable USB storage drive first.

Notes:

- The USB storage drive must have a minimum of 500 MB of storage space.
- The USB storage drive will be formatted during the creation. Back up all data on it before the creation.

To create the bootable USB storage drive, do the following:

1. Download the LXPM Lite package from <http://datacentersupport.lenovo.com/> and save the package into a new folder on the computer. Unzip the package.
2. Connect the USB storage drive to your computer.
3. Download rufus-2.18.exe from <http://rufus.ie/> and then double-click rufus-2.18.exe.
4. In the **Device** drop-down list box, select the USB storage drive.
5. In the **Partition scheme and target system type** drop-down list box, select **MBR partition scheme for UEFI**.
6. In the **New volume label** text box, input LXPMLITE.
7. In the **Create a bootable disk using** drop-down list box, select **ISO Image**.

8. Click the browse button  and select the .iso file in the unzipped folder.
9. Click **Start**. When prompted, click **OK** to continue.
10. After **Copying ISO files** finishes, click **Close**. The bootable USB storage drive for LXPM Lite is created.

Lenovo XClarity Provisioning Manager Lite startup

Note: LXPM Lite only supports the UEFI mode. Ensure that the UEFI mode is enabled before using the program.

To start LXPM Lite, do the following:

1. Connect the LXPM Lite bootable USB storage drive to your server.
2. Turn on the server. Press F12 to enter the boot menu.
3. In the boot menu, select the bootable USB storage drive you created. Then, press Enter.
4. Wait for several seconds. LXPM Lite opens.

Main interface

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

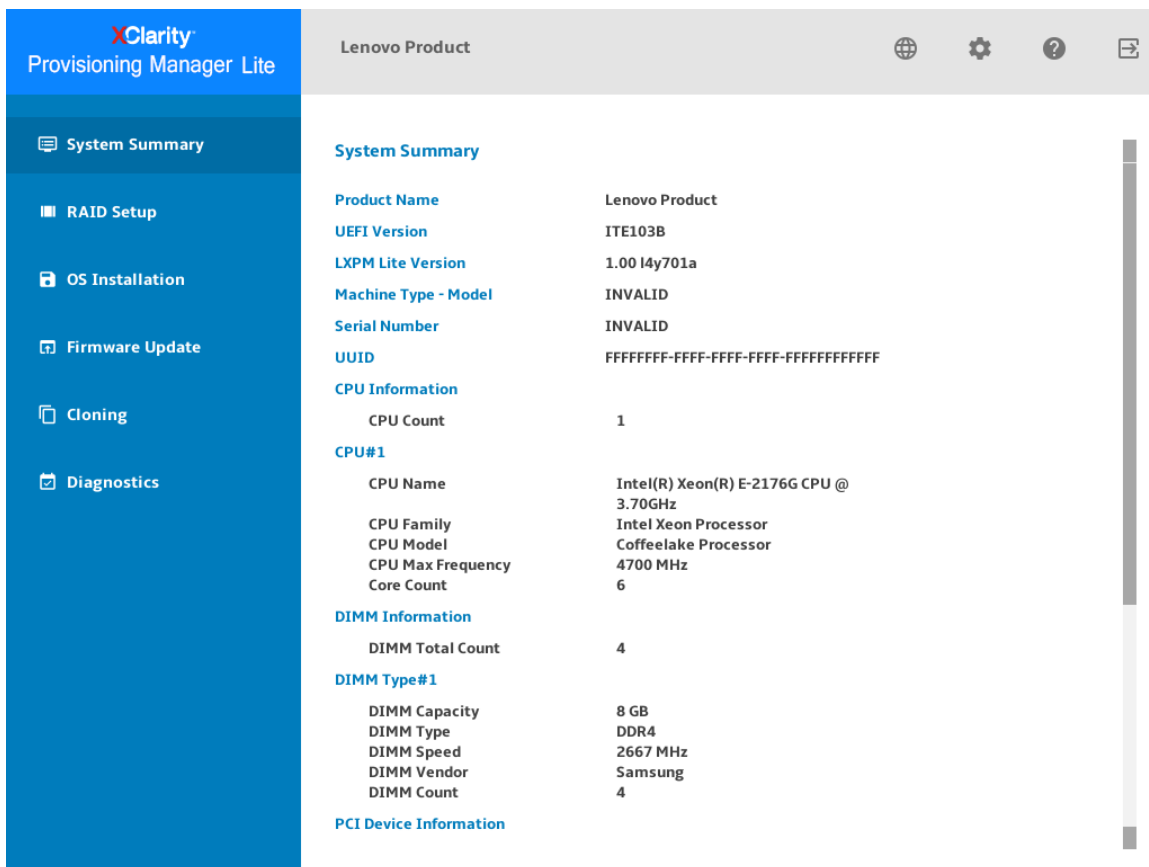


Figure 1. Lenovo XClarity Provisioning Manager Lite main interface







Tabs in the left pane of the main interface

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

- **System Summary:** View basic information about your server, such as CPU, DIMM, and PCI devices.
- **RAID Setup:** Configure RAID and disk settings.
- **OS Installation:** Follow the wizard to install an operating system and associated device drivers.
- **Firmware Update:** Update UEFI firmware.
- **Cloning:** Export RAID settings to response files and import RAID and operating system installation settings from response files.
- **Diagnostics:** Diagnostics for memory test, disk drive test, and RAID log collection.

Buttons on the Lenovo XClarity Provisioning Manager Lite interfaces

The following table provides information about the buttons appear on the LXPM Lite interfaces.

Button	Description
	Select the language to be displayed. LXPM Lite supports 10 languages, including: Brazilian Portuguese, English, French, German, Italian, Japanese, Korean, Simplified Chinese, Spanish, and Traditional Chinese.
	Display the Network Settings window. For details, refer to “Configuring network settings” on page 5 .
	Click this button to display the following items: <ul style="list-style-type: none">• Help: View context-sensitive help information for each interface.• HotKey: View keyboard navigation information.• License Agreement: View Lenovo license agreement.• Third-party Licenses: View the third-party licenses.• About: View the LXPM Lite version, copyright, and trademark information.
	Exit LXPM Lite
	Return to the previous step.
	Go to the next step.

Keyboard navigation

LXPM Lite 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.

Chapter 2. Using Lenovo XClarity Provisioning Manager Lite

This chapter provides information about using LXPM Lite.

Configuring network settings

To configure the network settings, do the following:

1. Click  on the top right corner of the LXPM Lite main interface. The following Network Settings window is displayed.

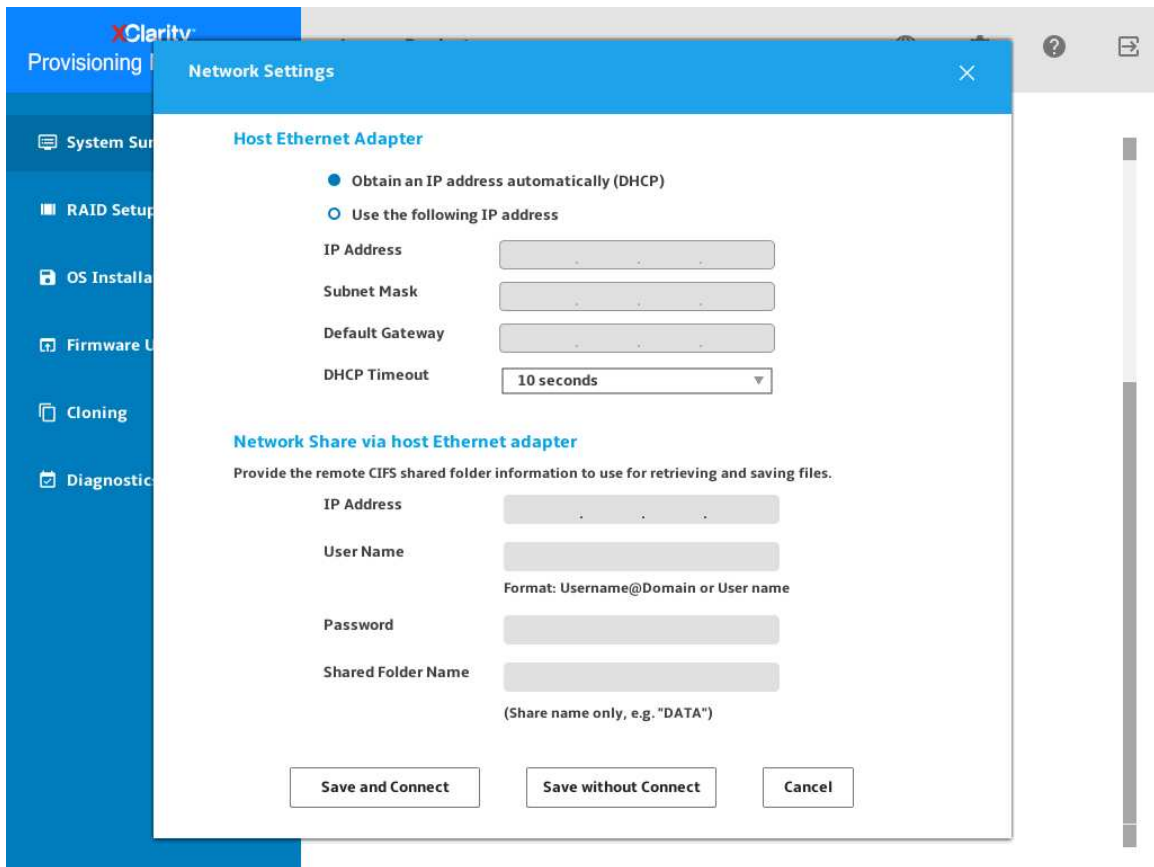


Figure 2. Network Settings window

2. Follow the instructions on the screen to configure the network settings.
3. After configuring the network settings, click one of the following buttons 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 connecting, or click **Cancel** to go back to the Network Settings window.
 - **Cancel:** Discard the changes and exit the Network Settings window.

System Summary

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

- Product name
- UEFI, and LXPM Lite version information
- Machine type and serial number
- Universally Unique Identifier (UUID)
- CPU information
- DIMM information
- PCI device information
- Disk drive information

The screenshot shows the XClarity Provisioning Manager Lite interface. The top bar includes the XClarity logo and 'Provisioning Manager Lite' on the left, and 'Lenovo Product' on the right with icons for globe, settings, help, and refresh. The left sidebar has a menu with 'System Summary' selected. The main content area is titled 'System Summary' and displays the following information:

Product Name	Lenovo Product
UEFI Version	ITE103B
LXPM Lite Version	1.00 I4y701a
Machine Type - Model	INVALID
Serial Number	INVALID
UUID	FFFFFFFF-FFFF-FFFF-FFFF-FFFFFFFFFFFFFF
CPU Information	
CPU Count	1
CPU#1	
CPU Name	Intel(R) Xeon(R) E-2176G CPU @ 3.70GHz
CPU Family	Intel Xeon Processor
CPU Model	Coffeelake Processor
CPU Max Frequency	4700 MHz
Core Count	6
DIMM Information	
DIMM Total Count	4
DIMM Type#1	
DIMM Capacity	8 GB
DIMM Type	DDR4
DIMM Speed	2667 MHz
DIMM Vendor	Samsung
DIMM Count	4
PCI Device Information	

Figure 3. System Summary interface

Notes:

- The Non-Volatile Memory express (NVMe) SSDs are recognized as PCIe devices and listed in the PCI device information section.
- If the Intel® Volume Management Device (VMD) feature for the PCI root port is enabled, the NVMe SSDs and NVMe switch adapters will not be displayed in the PCI device information section.
- For a running server, device changes will not be displayed in the System Summary interface in real time. To view the latest device information, you need to restart the server.

- If the disk drive information cannot be displayed, go to UEFI Setup, disable CSM setting, and then restart the server.

RAID Setup

Click the **RAID Setup** tab in the left pane to enter the wizard for configuring RAID and disk settings for the installed RAID adapters. The following is the first interface for the wizard.

Note: If there is no supported RAID adapter found on your server, a warning message is displayed. For supported RAID adapters, go to:

<http://www.lenovo.com/us/en/serverproven/index.shtml>.

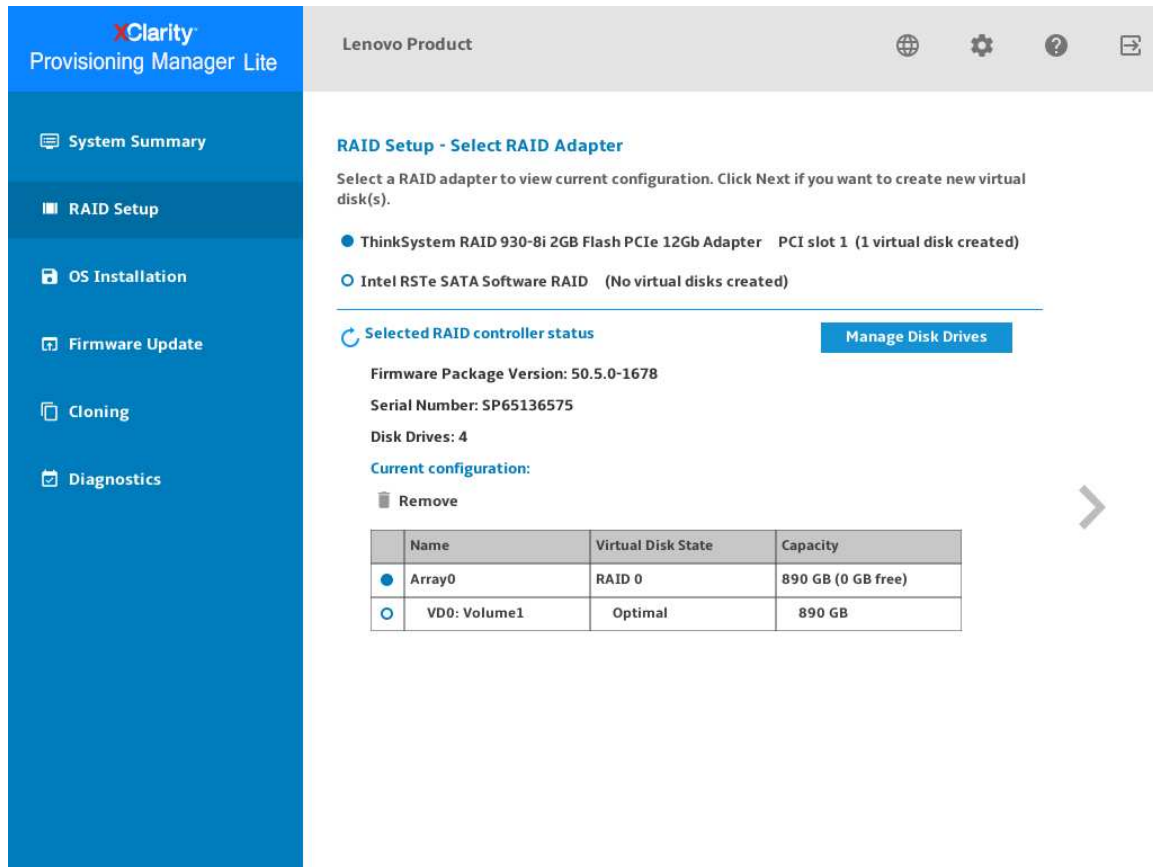






Figure 4. RAID Setup - Select RAID Adapter interface







To configure RAID and disk settings, follow the wizard to do the following:

1. Select the RAID adapter you want to configure. The basic information and current configuration for the selected RAID adapter will be displayed.
2. If you want to delete a disk array or a virtual disk for the selected RAID adapter, select the disk array or virtual disk you want to delete and click **Remove**. Then, follow the instructions on the screen to delete it.
3. If you want to view or change the drive status for the selected RAID adapter, click **Manage Disk Drives** to enter the Manage Disk Drives interface. In this interface, all the drives connected to the selected RAID adapter are listed. You can change the drive status according to your needs. Then, click  and confirm to save changes and return to the “RAID Setup - Select RAID Adapter” interface or click  to discard changes and return to the “RAID Setup - Select RAID Adapter” interface.

Notes:

- If there is no disk drive connected to the selected RAID adapter or there is not enough space for the disk drive connected to the RAID adapter, you cannot enter the “RAID Setup - Select RAID configuration type” interface.
 - If you are configuring the ThinkSystem™ M.2 RAID adapter, you cannot change the drive status, but only can view the drive status in the Manage Disk Drives interface.
4. Click  or click **Start** to enter the “RAID Setup - Select RAID configuration type” interface and do one of the following:
 - Select **Simple configuration** and go to step 5.
 - Select **Advanced configuration** and select **Create new disk array and virtual disk** in the drop-down list box. Then, go to step 6.
 - Select **Advanced configuration** and select **Use free capacity on the existing disk array** in the drop-down list box. Then, go to step 7.
 5. Click  to enter the “RAID Setup - Set RAID level and hot spare” interface. Select the RAID level and choose to select or clear the **Add Hot Spare Drive** check box. If the check box is selected, one of the drives is assigned for dedicated hot spare function. Then, go to step 9.

Notes:

- If you are configuring Intel RSTe RAID adapter or ThinkSystem M.2 RAID adapter, at least two disk drives should be connected to the adapter.
 - If you are configuring Intel RSTe RAID adapter or ThinkSystem M.2 RAID adapter, the **Add Hot Spare Drive** check box will not be displayed.
 - If you are selecting RAID 0 as the RAID level, the **Add hot Spare Drive** check box cannot be selected.
6. Click  to enter the “RAID Setup - Select RAID Level and Select Drives” interface. Select the RAID level and the drives for the new disk array, and set the role for each drive. Then, go to step 8.
 7. Click  to enter the “RAID Setup - Select Disk Array” interface. All the disk arrays that have free space will be displayed. Select a disk array for the new virtual disk.
 8. Click  to enter the “RAID Setup - Create and Edit Virtual Disk” interface. You can create new virtual disks. Then, you can edit or remove the new virtual disks. Follow the instructions on the screen to do the configuration.
 9. Click  to enter the “RAID Setup - Verify settings” interface. Double check the settings and click . A confirmation window is displayed.
 10. Click **Yes** to enter the “RAID Setup - Creating Virtual Disk(s)” interface. The virtual disk creation result is displayed.
 11. Click  to return to the first interface of the wizard and view the current configuration of the selected RAID adapter.

OS Installation

Click the **OS Installation** tab in the left pane to enter the OS Installation interface. The OS Installation interface provides a configuration wizard for installing an operating system.

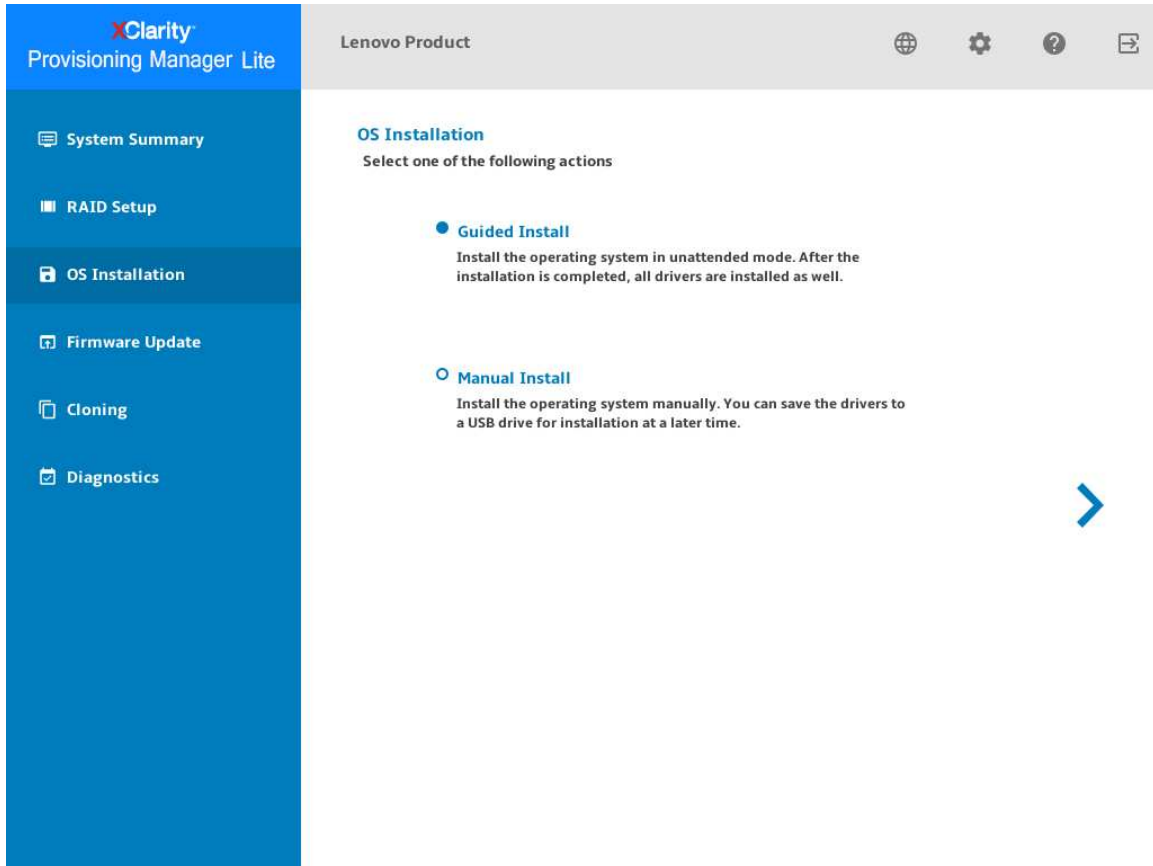


Figure 5. OS Installation interface

There are two types of installation for your selection:

- **Guided Install:** Install an operating system and device drivers in an unattended mode.
- **Manual Install:** Install an operating system and device drivers manually.


Guided installation

Prerequisites

Before performing guided installation:

- Ensure that LXPM Lite bootable USB storage drive is writable, otherwise **Guided Install** cannot be selected.
- If the operating system image file is stored on a USB storage drive, connect the USB storage drive to the server.

Performing guided installation

In the OS Installation interface, select **Guided Install** and click . Refer to one of the following to install an operating system:

- [“Installing a Windows operating system” on page 11](#)
- [“Installing a Linux operating system” on page 18](#)
- [“Installing a VMware operating system” on page 24](#)

Device drivers will be automatically installed during guided installation. It is recommended to reboot the OS after guided installation is completed to make all drivers take effect. You also can export the operating system installation settings to a response file. For more information, refer to [“Exporting an operating-system-installation response file” on page 29](#).

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.

1. Drive Selection

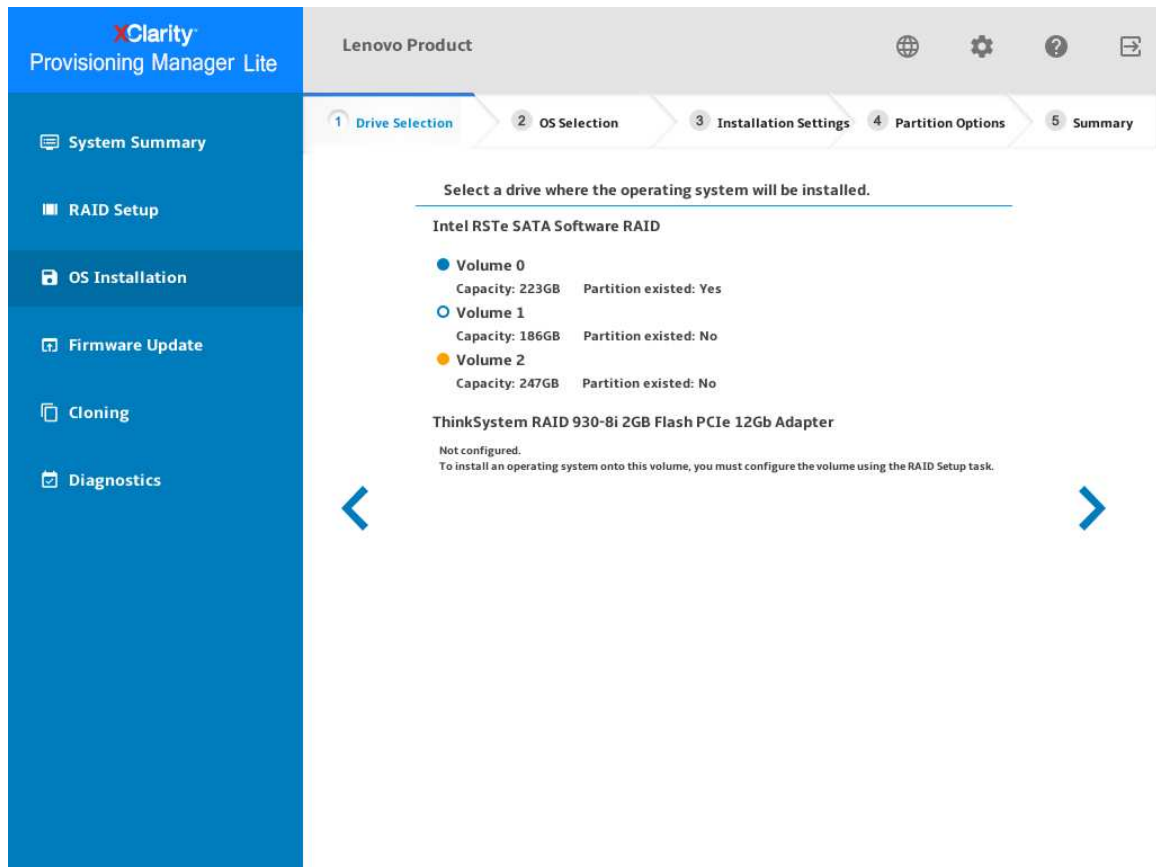


Figure 6. Drive Selection step (for Windows)

Attention: The selected drive will be formatted during the installation. Back up all data on it before the installation.

Note: The drivers will be installed automatically after the OS installation. It is recommended to restart your server to ensure that all installed drivers take effect.

2. OS Selection

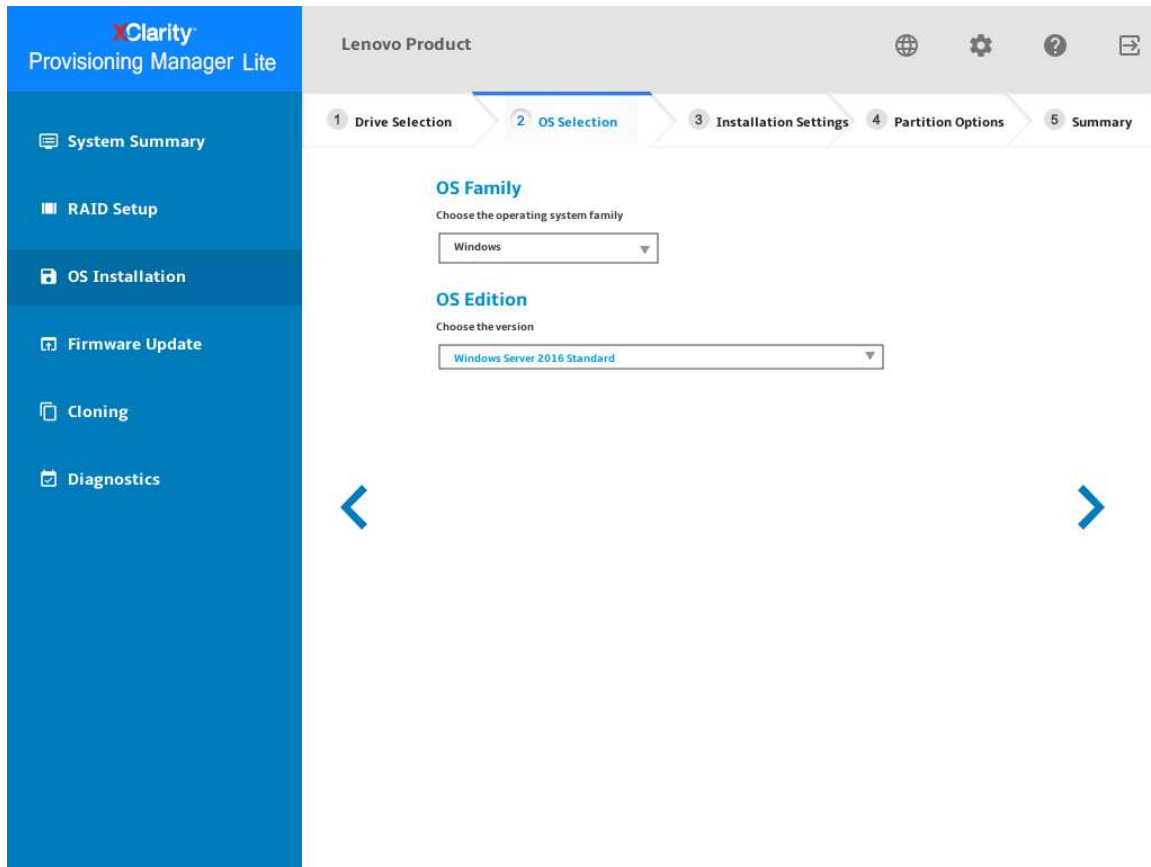


Figure 7. OS Selection step (for Windows)

3. Installation Settings

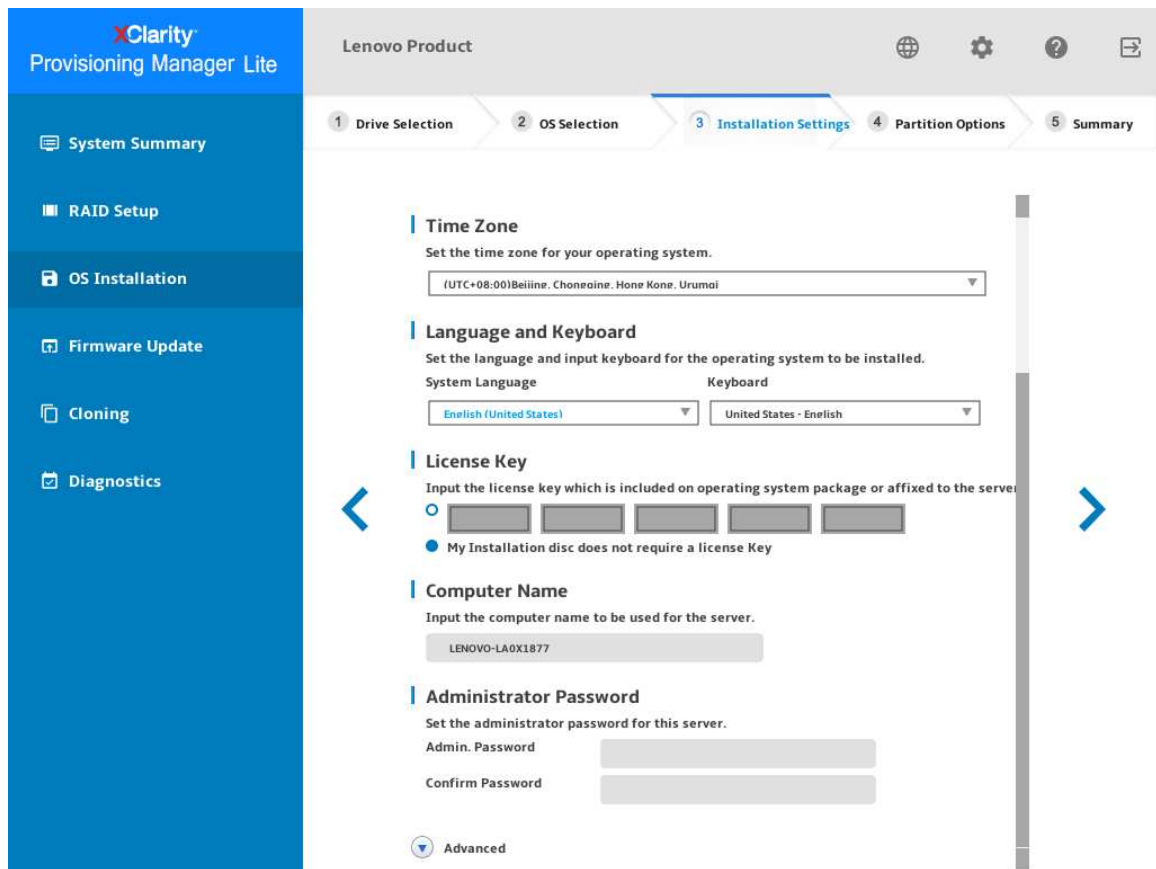


Figure 8. Installation Settings step – 1 (for Windows)

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

If you want to do advanced configurations, expand the list by clicking the arrow icon next to **Advanced**.

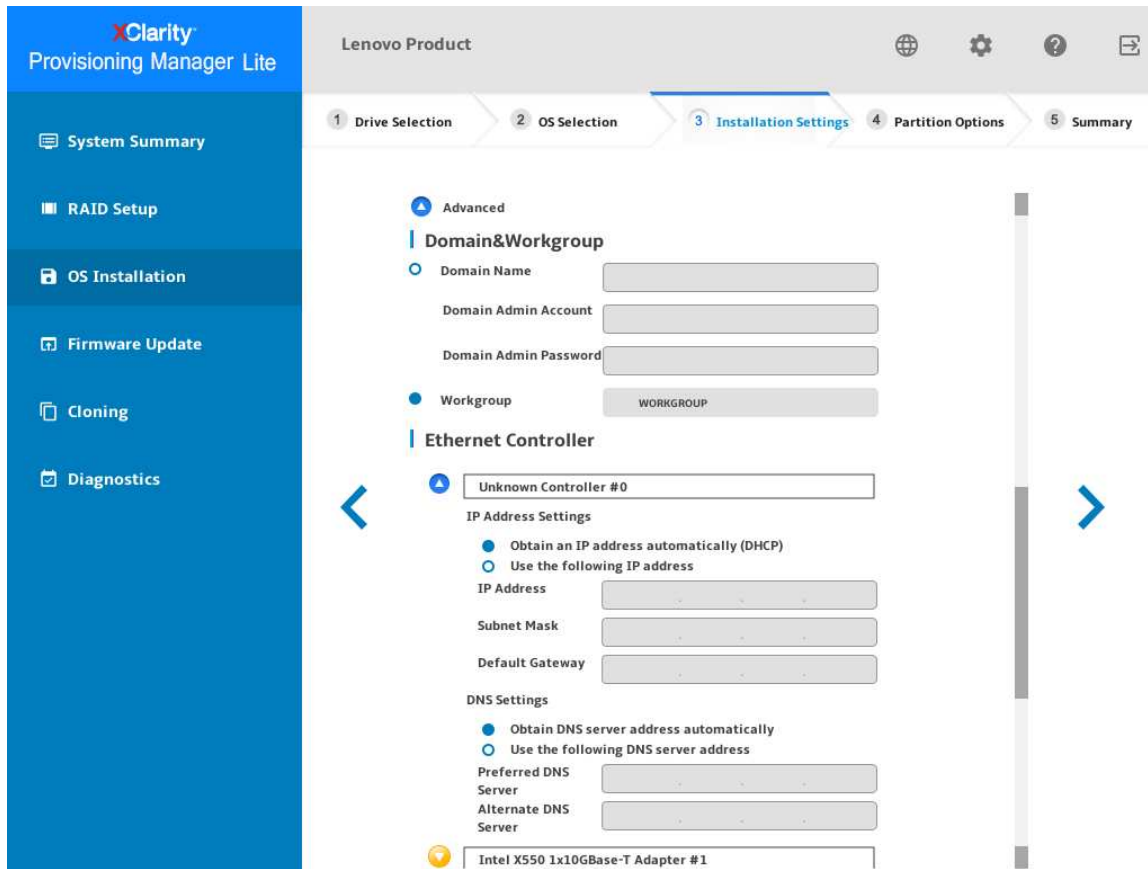


Figure 9. Installation Settings step – 2 (for Windows)

Refer to the following table for the valid values when you type 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

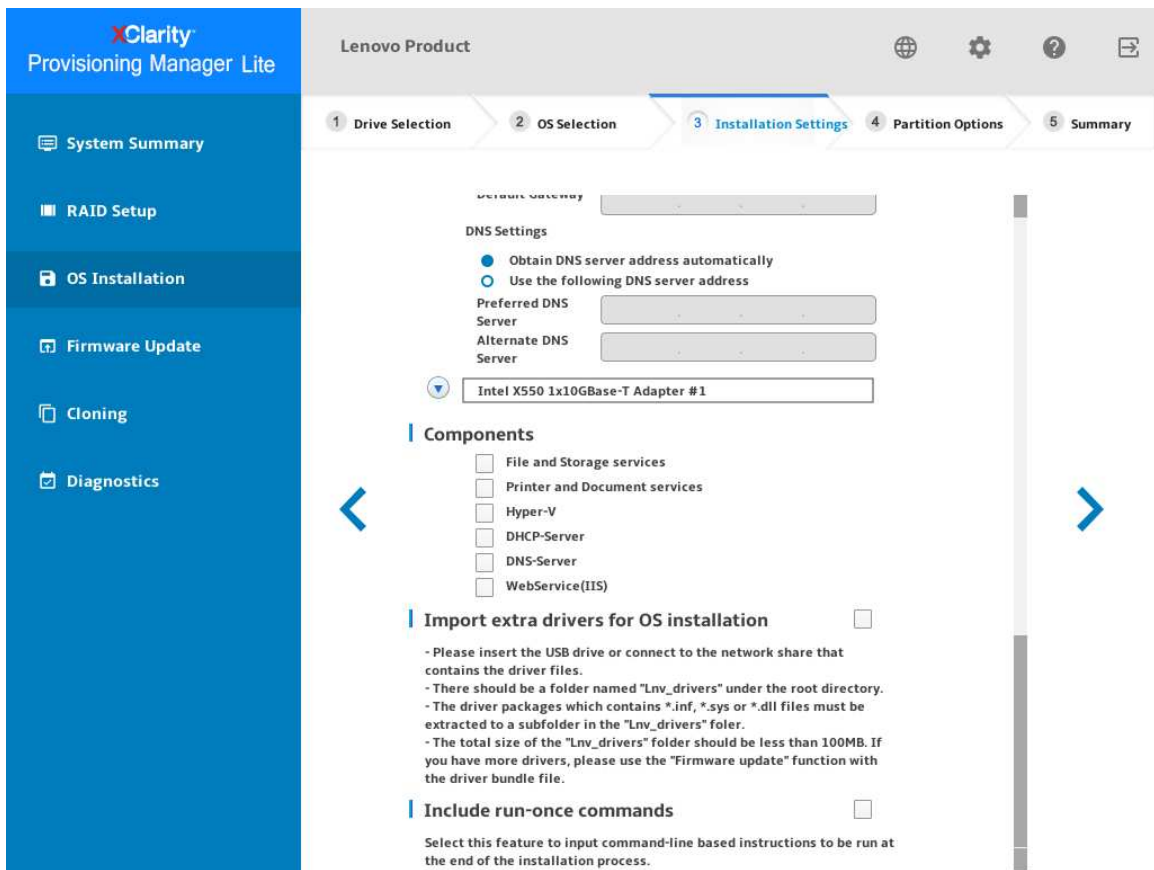


Figure 10. Installation Settings step – 3 (for Windows)

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-type 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 run one time only and in the order you type them.

4. Partition Options

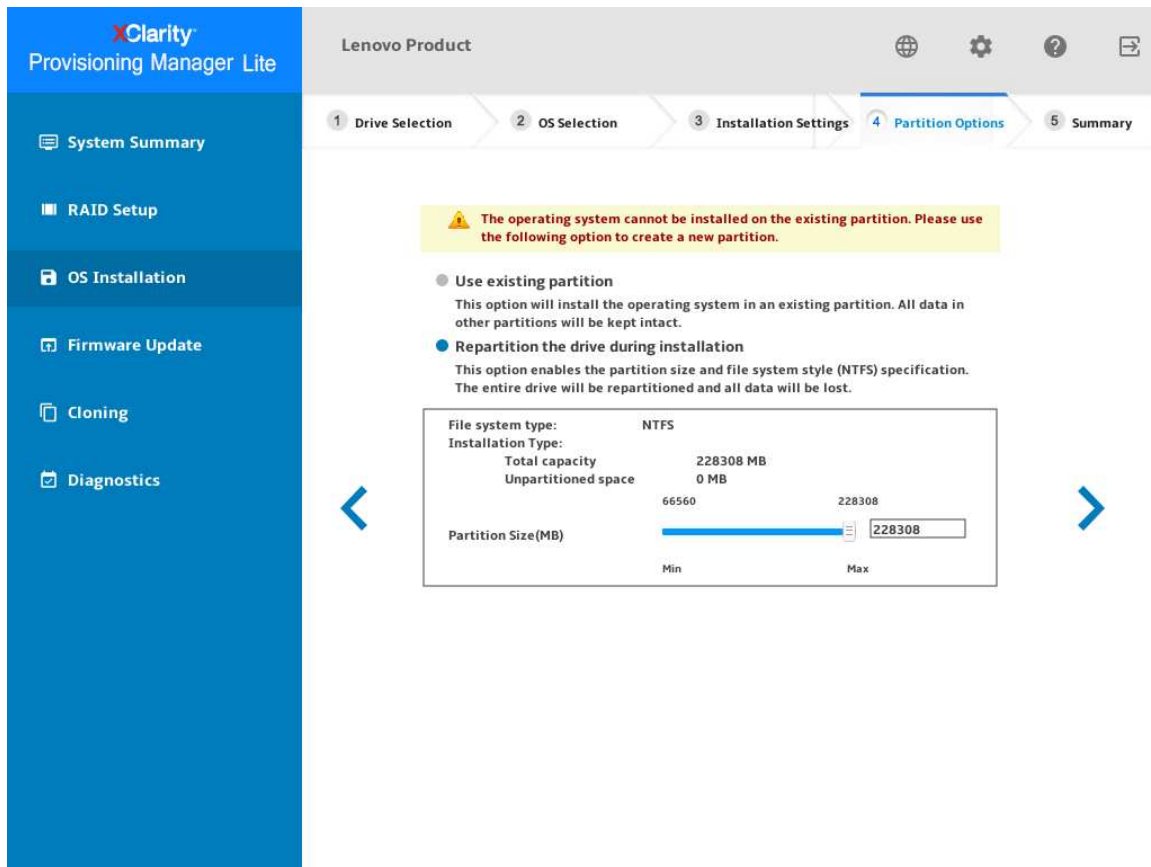


Figure 11. Partition Options step (for Windows)

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

5. Summary

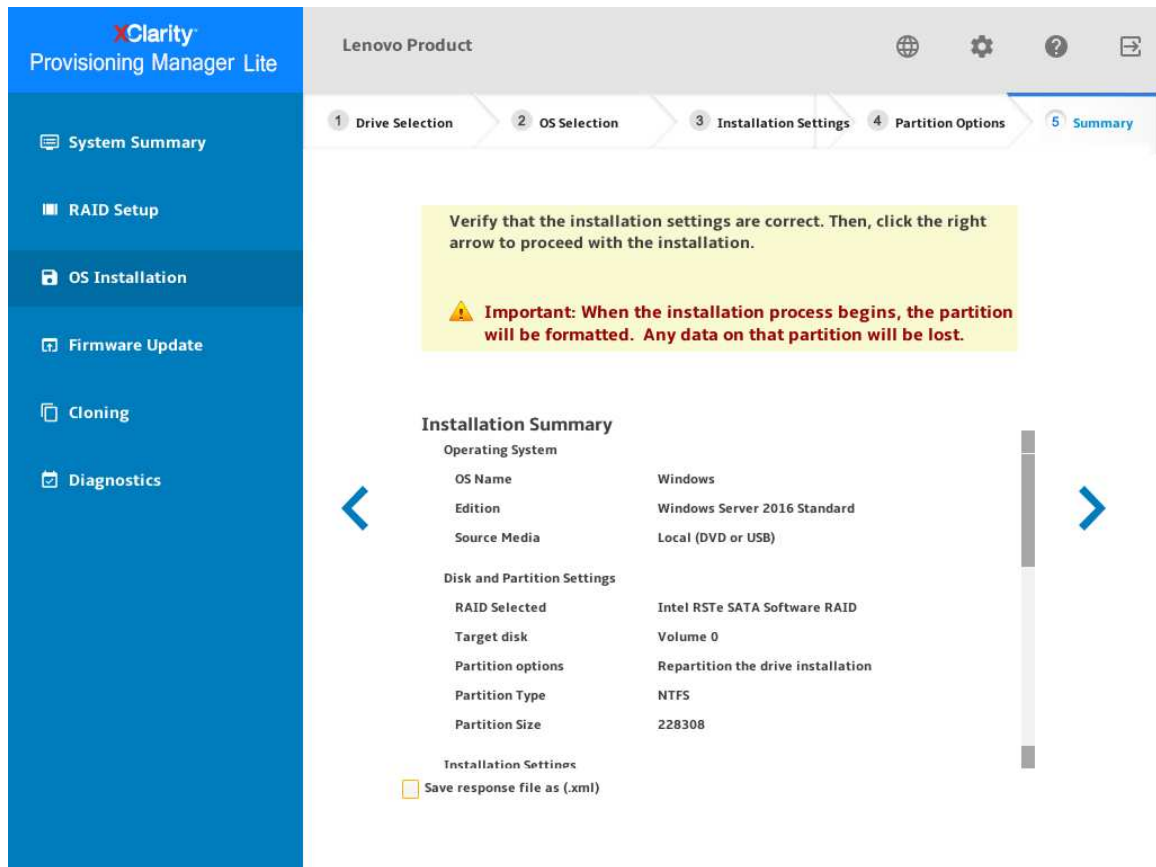




Figure 12. Summary step (for Windows)

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

If you want to export the operating system installation settings to a response file, refer to [“Exporting an operating-system-installation response file”](#) on page 29.

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.

Installing a 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 Linux operating system.

1. Drive Selection

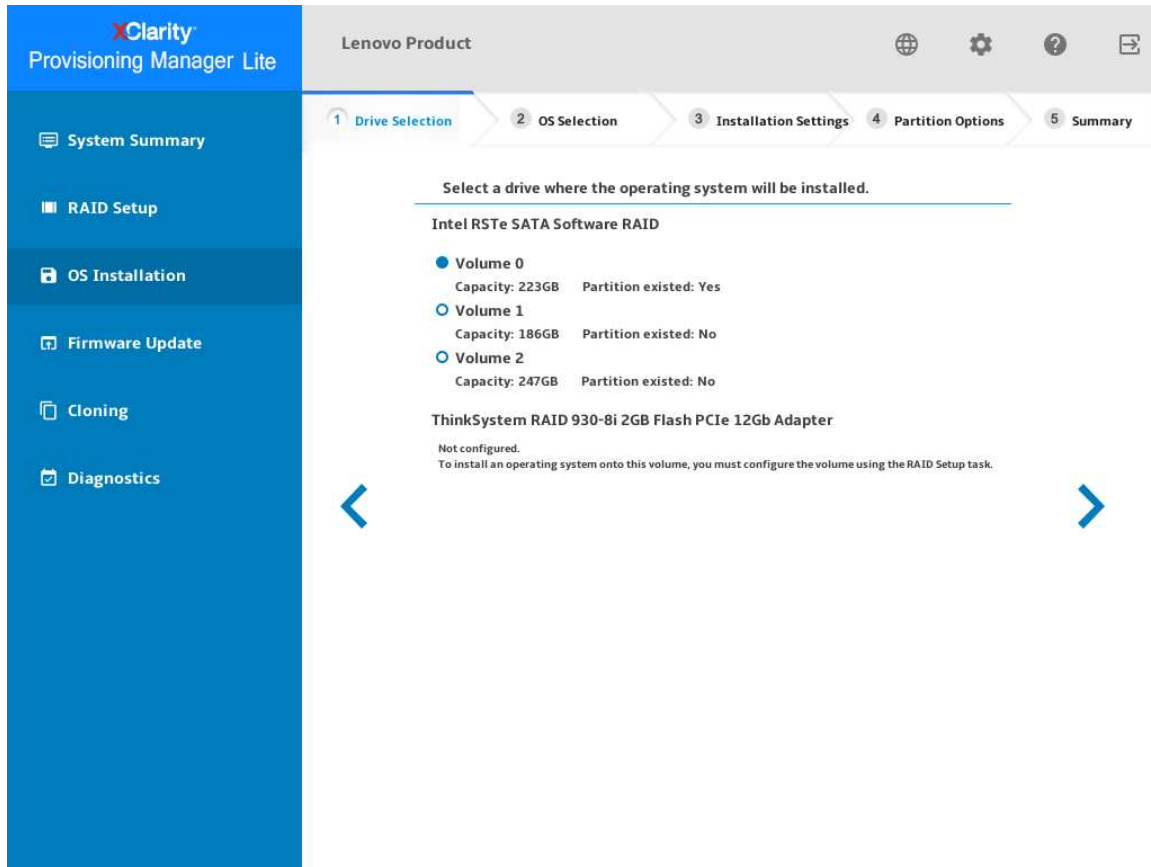


Figure 13. Drive Selection step (for Linux)

Attention: The selected drive will be formatted during the installation. Back up all data on it before the installation.

Note: The drivers will be installed automatically after the OS installation. It is recommended to restart your server to ensure that all installed drivers take effect.

2. OS Selection

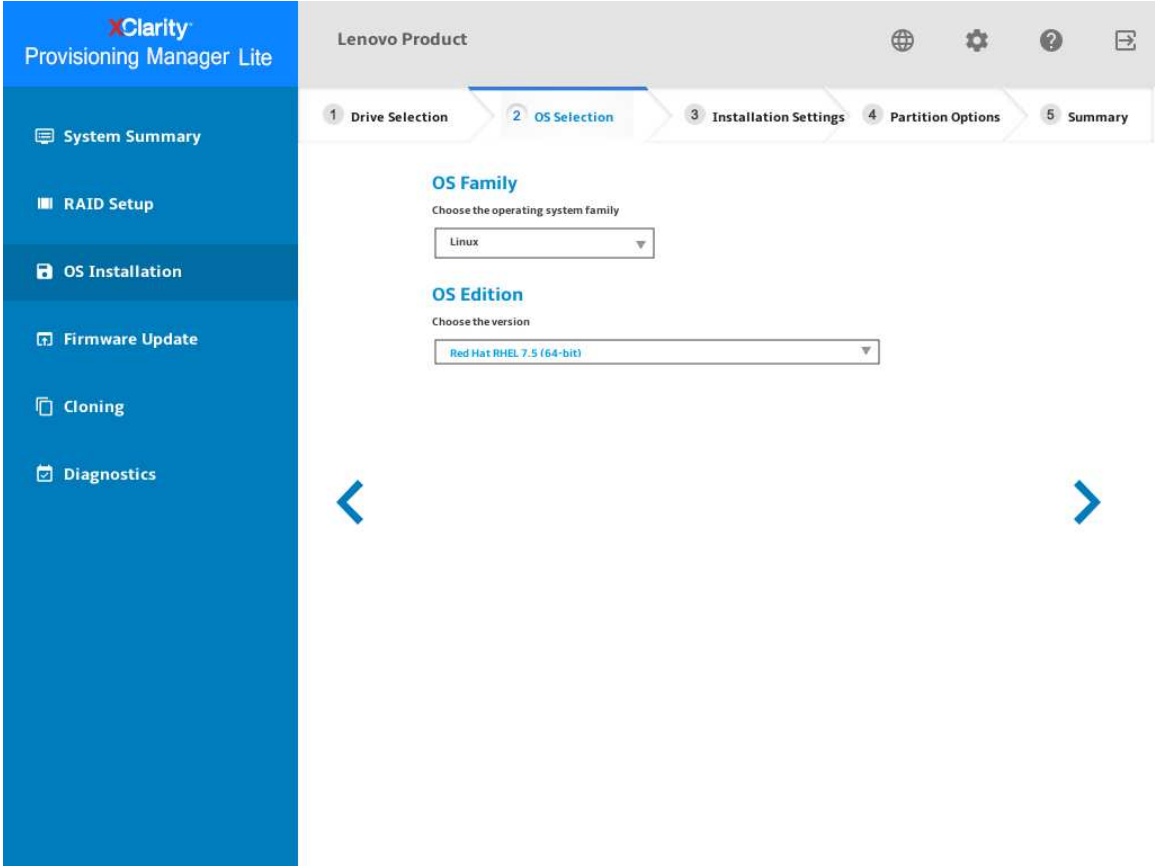


Figure 14. OS Selection step (for Linux)

3. Installation Settings

XClarity Provisioning Manager Lite

Lenovo Product

1 Drive Selection 2 OS Selection 3 **Installation Settings** 4 Partition Options 5 Summary

System Summary
RAID Setup
OS Installation
Firmware Update
Cloning
Diagnostics

Core Installation
 Full Installation

Boot Mode
Select the boot mode for your Operating System.
 UEFI

Time Zone
Set the time zone for your operating system.
Asia/Hong Kong

Language and Keyboard
Set the language and input keyboard for the operating system to be installed.
System Language: English Keyboard: English

Host Name
Input the computer name to be used for the server.
LENOVO-LA0X1877

Root Password
Set root password for this server.
Root Password: [Redacted]
Confirm Password: [Redacted]

Figure 15. Installation Settings step – 1 (for Linux)

Root Password: You can change your root password later from the operating system.

If you want to do advanced configurations, expand the list by clicking the arrow icon next to **Advanced**.

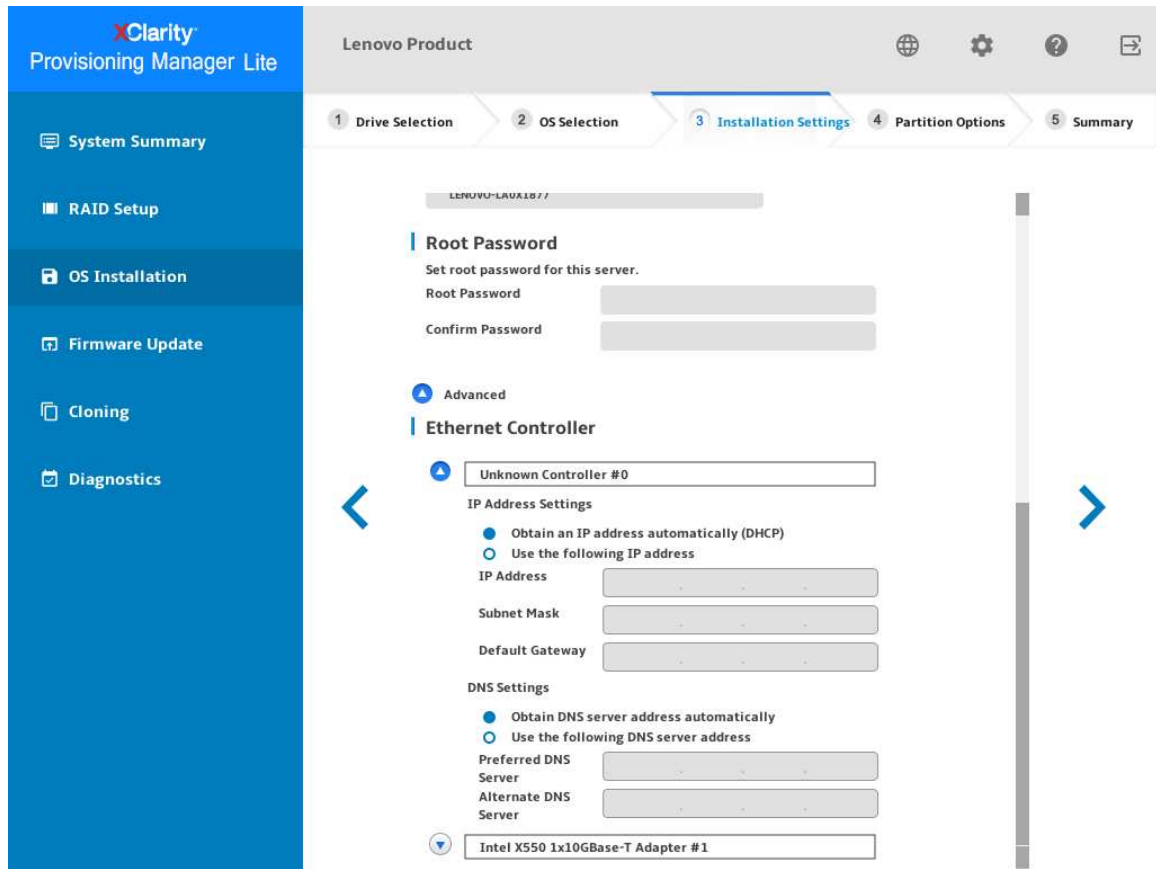


Figure 16. Installation Settings step – 2 (for Linux)

Refer to the following table for the valid values when you type 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

4. Partition Options

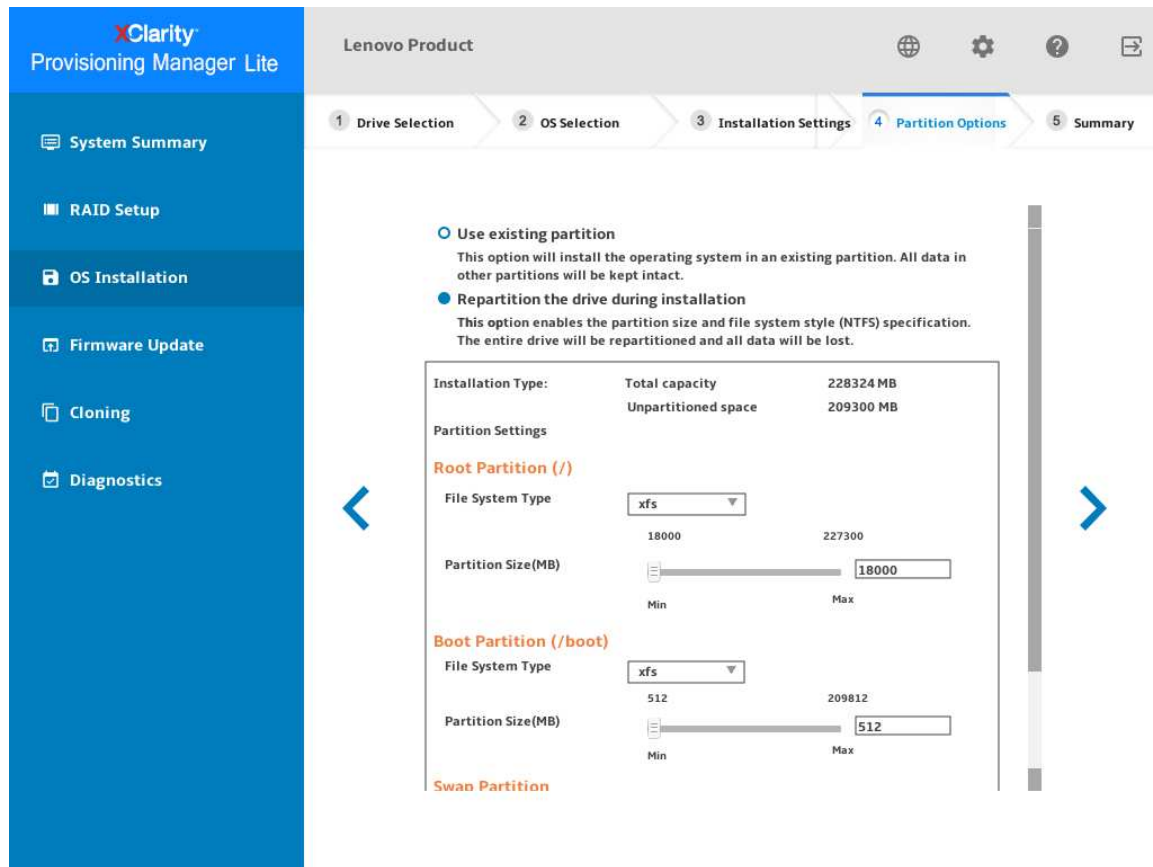


Figure 17. Partition Options step (for Linux)

If no existing partition is detected on the drive, select **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 disk drives, and has slower access speed than RAM.

5. Summary

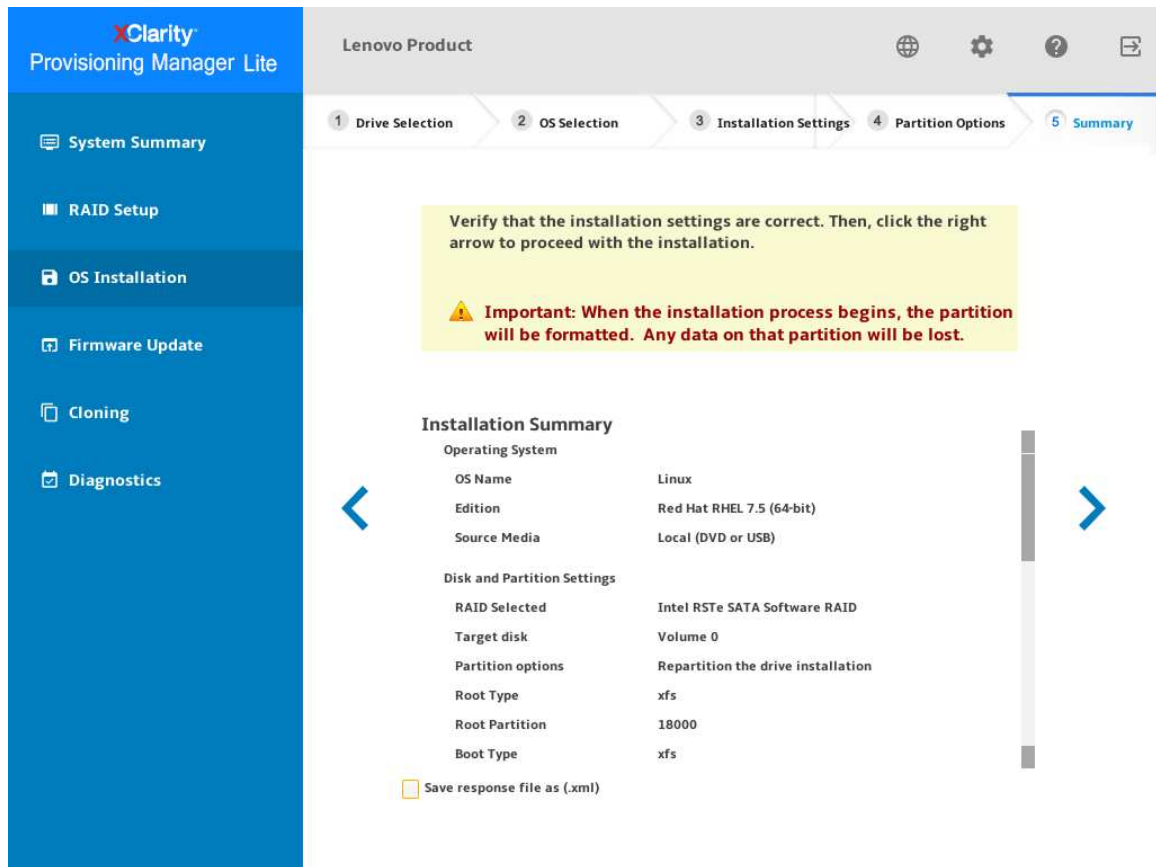



Figure 18. Summary step (for Linux)

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

If you want to export the operating system installation settings to a response file, refer to [“Exporting an operating-system-installation response file”](#) on page 29.

Click . The installation process starts. Wait until the installation finishes.

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.

1. Drive Selection

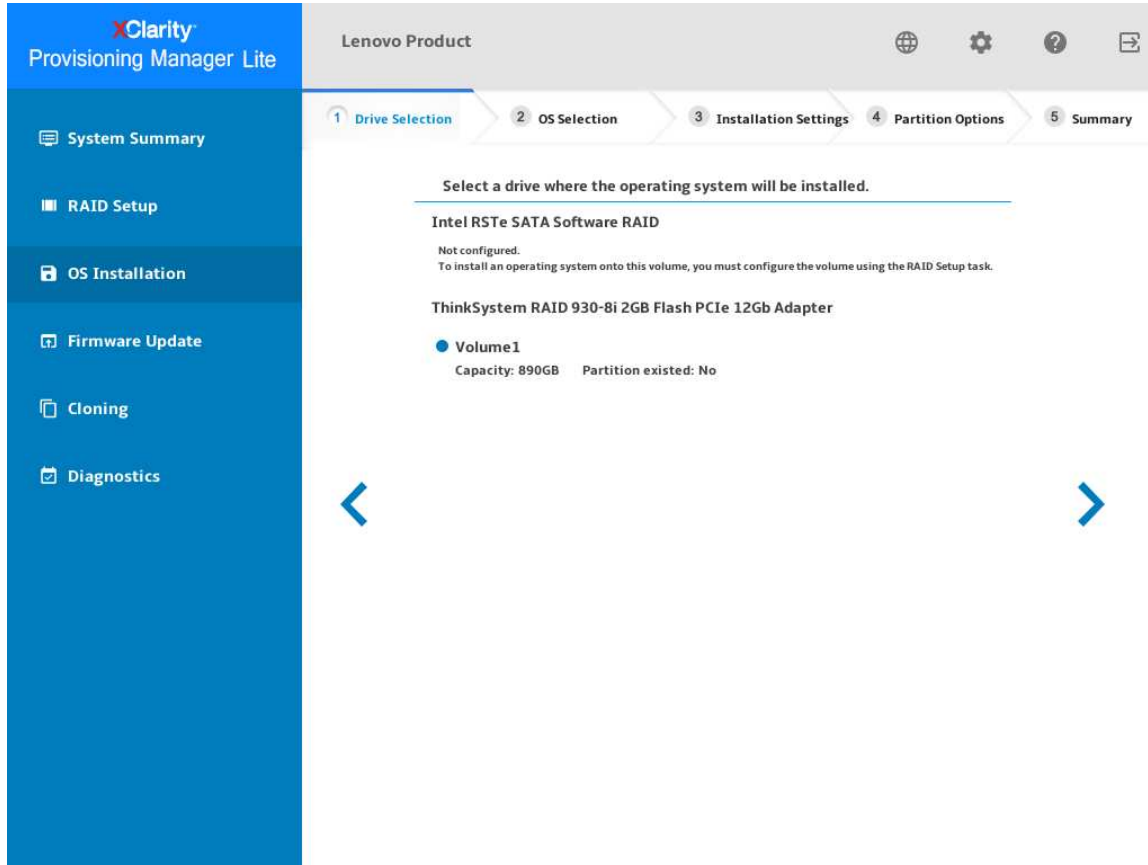


Figure 19. Drive Selection step (for VMware)

Attention: The selected drive will be formatted during the installation. Back up all data on it before the installation.

Note: The drivers will be installed automatically after the OS installation. It is recommended to restart your server to ensure that all installed drivers take effect.

2. OS Selection

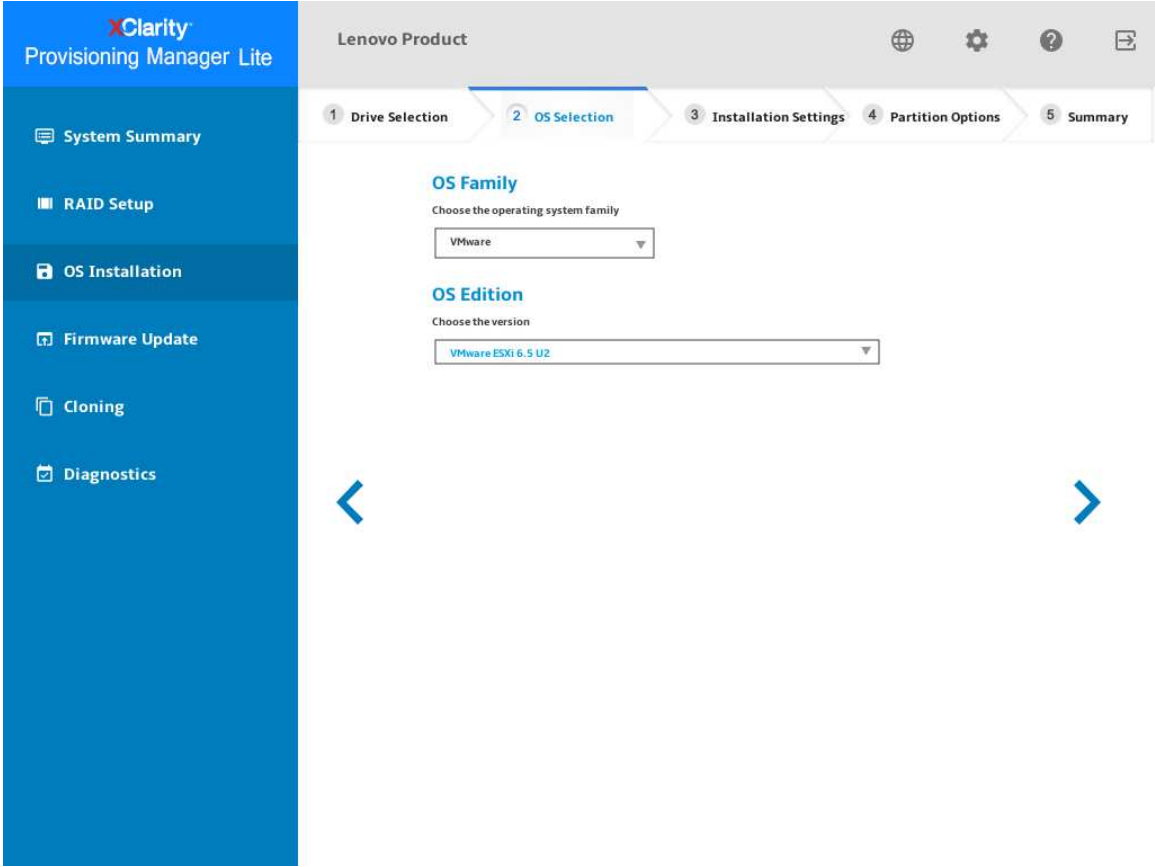


Figure 20. OS Selection step (for VMware)

3. Installation Settings

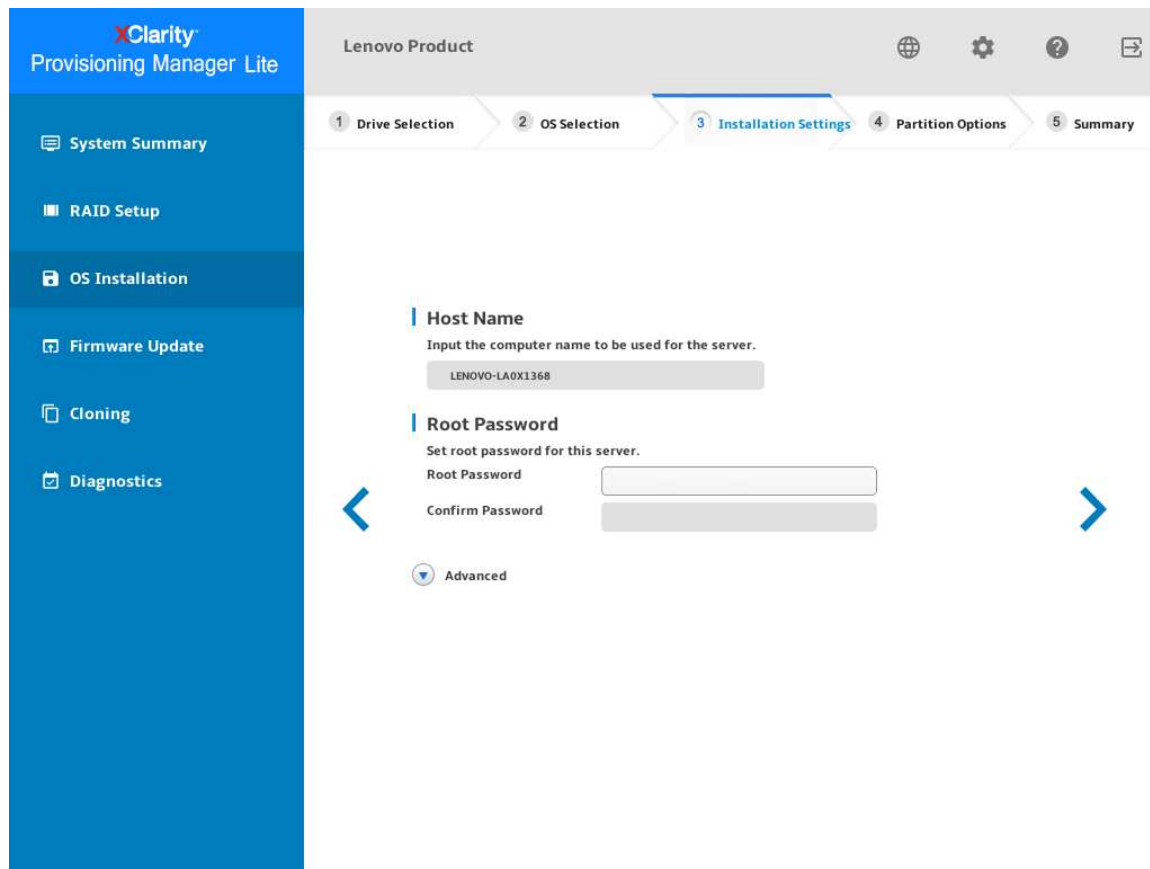


Figure 21. Installation Settings step – 1 (for VMware)

Root Password: You can change your root password later from the operating system.

If you want to do advanced configurations, expand the list by clicking the arrow icon next to **Advanced**.

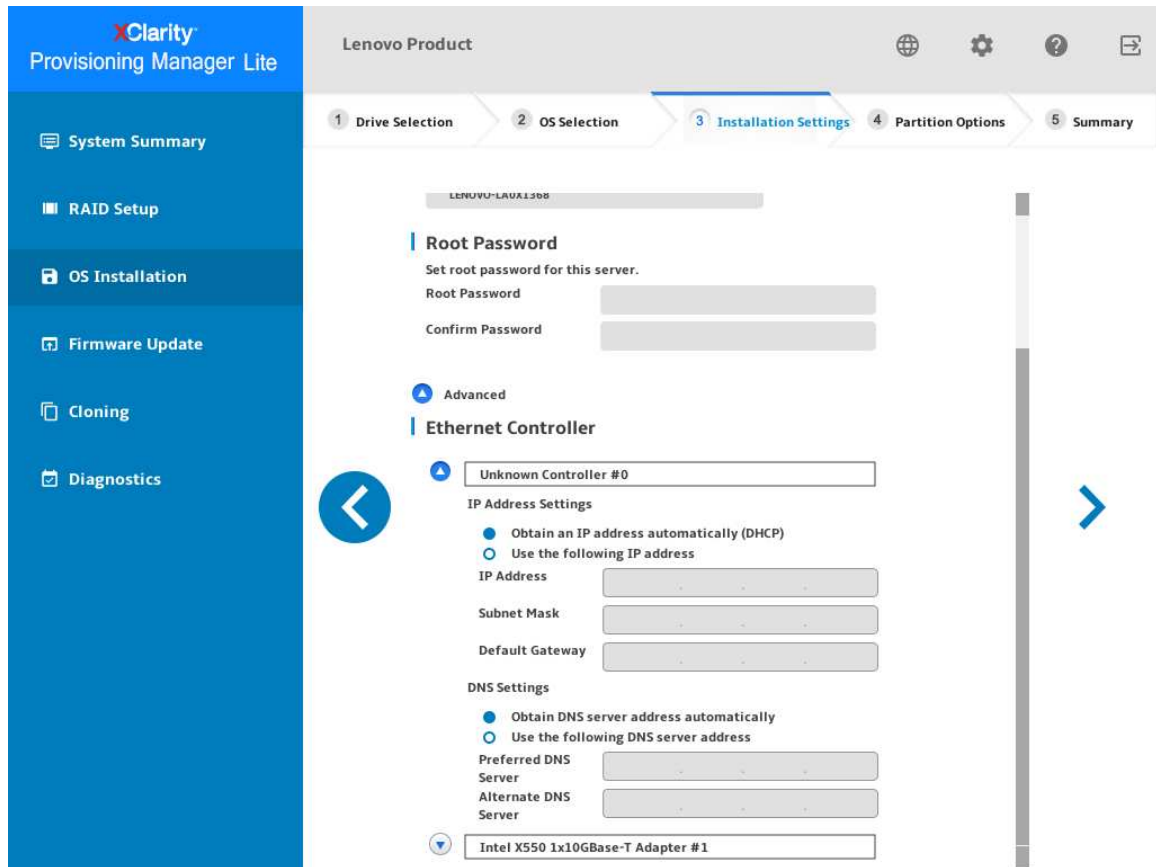


Figure 22. Installation Settings step – 2 (for VMware)

Refer to the following table for the valid values when you type 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

4. Summary

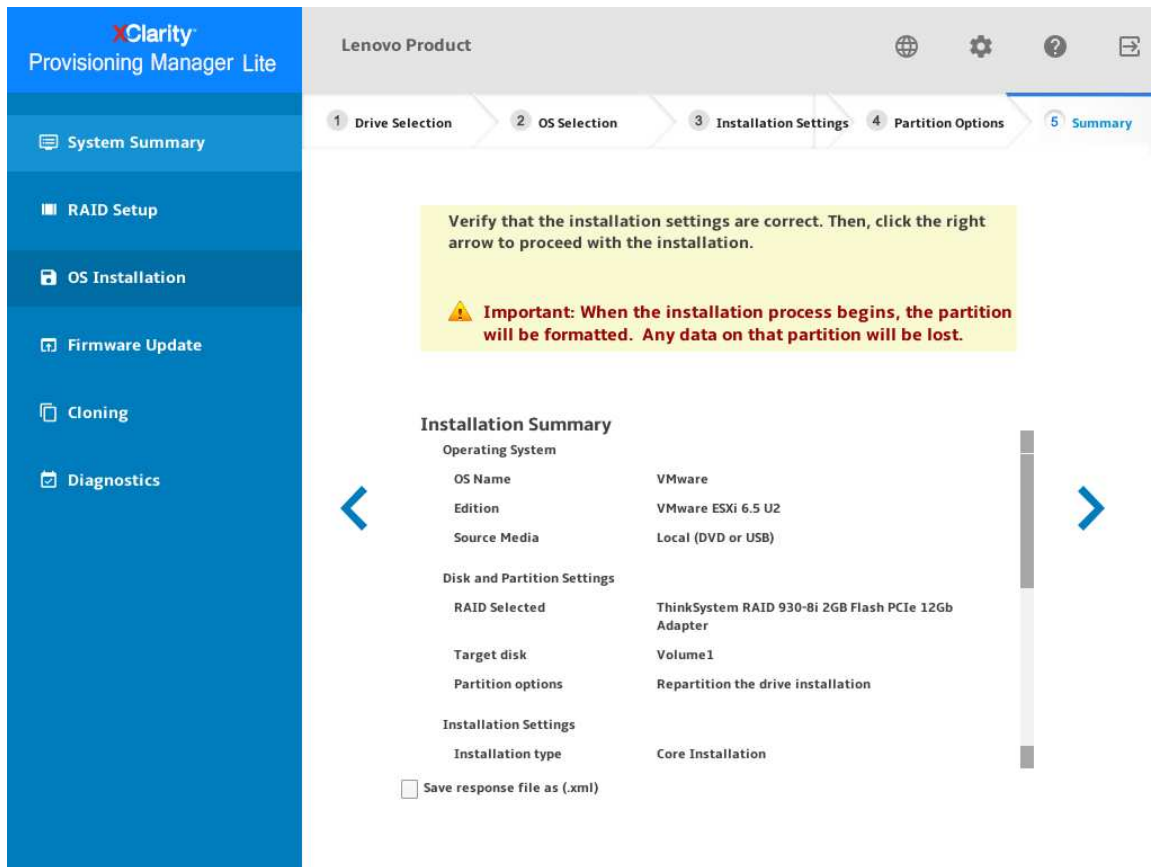



Figure 23. Summary step (for VMware)

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

If you want to export the operating system installation settings to a response file, refer to [“Exporting an operating-system-installation response file”](#) on page 29.

Click . The installation process starts. Wait until the installation finishes.


Exporting an operating-system-installation response file

You can export the operating system installation settings to a response file. Later, you can clone the settings in this response file to other similarly configured Lenovo servers.

To export an operating-system-installation response file, do the following:

1. Attach a USB storage drive to the server or connect your server to a shared network. For instructions on how to connect to a shared network, refer to “[Configuring network settings](#)” on page 5.

Note: The USB storage drive should include an FAT32 partition.

2. Follow the wizard to go through the Drive Selection, OS Selection, Installation Settings, Partition Options, and Summary steps.
3. In the Summary step, select the **Save response file as (.xml)** check box, and click . The Save Response File window is displayed.
4. Select the location to save the response file and input a file name.
5. Click **Save**. Wait for several minutes until the saving process is completed.

Manual installation

Prerequisites

Before installing an operating system manually, ensure that the operating system installation files are prepared in one of the following forms:

- CD or DVD

Note: Ensure that the disc is clean and the version and architecture of the operating system are correct.

- USB storage drive

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

Installing an operating system manually

In the OS Installation interface, select **Manual Install** and click . The following interface is displayed.

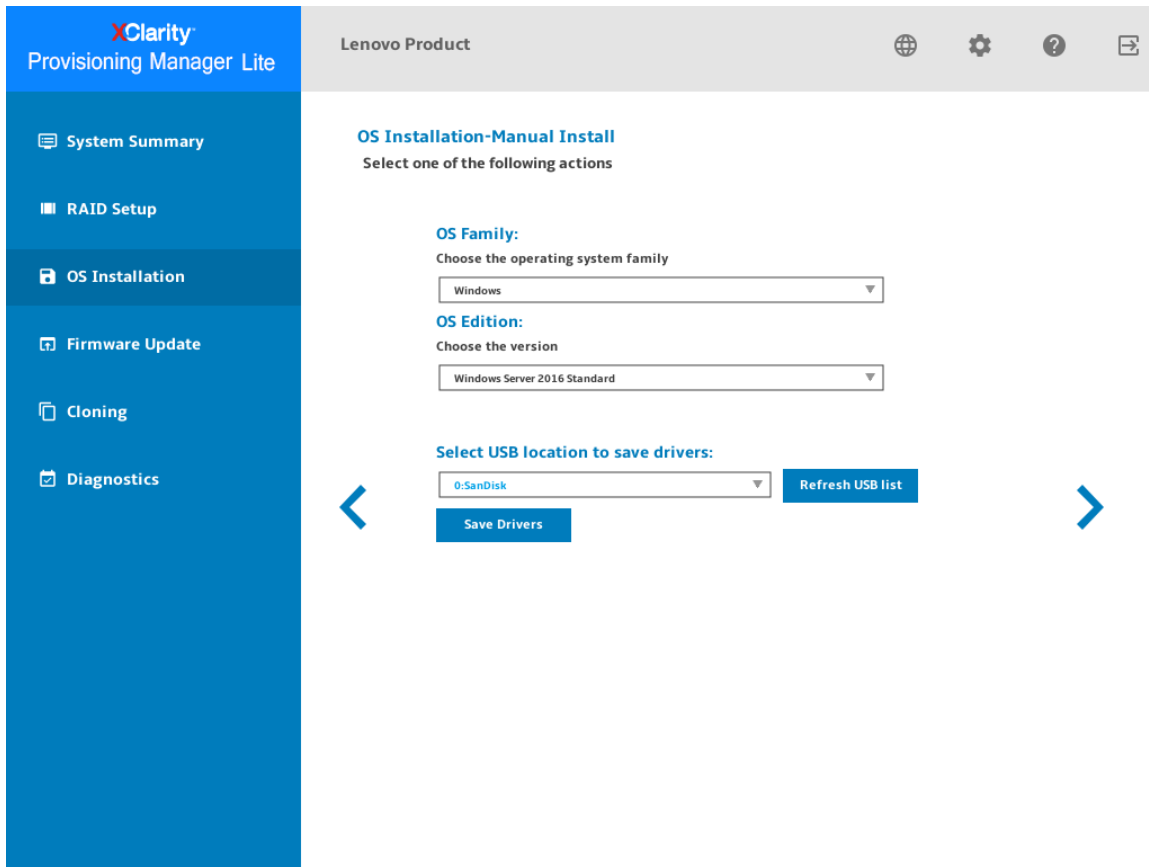




Figure 24. Manual Install interface

Do the following to install an operating system manually:

1. Select the operating system you want to install, select a location to save the drivers, and click .

Note: If no USB storage drive is detected, the **Save Drivers** button is dimmed.

2. Select **Begin the installation** and click . The server will boot from the operating system medium and the operating system installation process starts.

Note: You also can select **Reboot system** to restart the server if you want to do other configuration.

3. Install the operating system manually. To get instructions on how to install a specific operating system manually, do the following:
 - a. Go to <http://datacentersupport.lenovo.com> and navigate to the support page for your server.
 - b. Click **How-tos & Solutions**.
 - c. Select an operating system and the installation instructions will be displayed.
4. After the operating system installation process is completed, install the drivers saved in step 1 by yourself.

Firmware Update

Click the **Firmware Update** tab in the left pane to enter the Firmware Update interface. You can update the UEFI firmware for your server in the Firmware Update interface. To download the update packages, go to: <http://datacentersupport.lenovo.com>

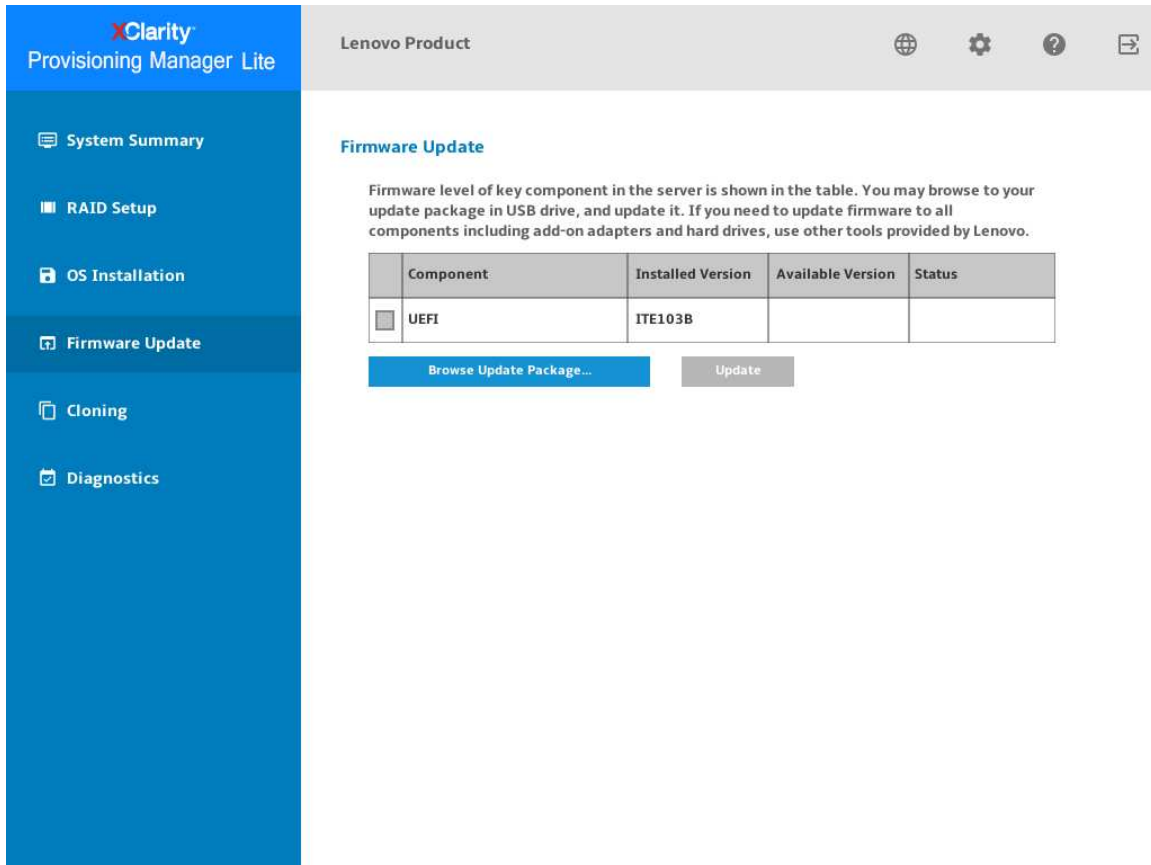


Figure 25. Firmware Update interface

To update firmware, do the following:

1. Insert the USB storage drive into the server.
2. Click **Browse Update Package....** The Select File window is displayed.
3. Select the UEFI firmware file and click **OK**. The check box will be enabled and the version information will be displayed in the **Available Version** column.

Notes:

- If the available version is later than the current version, the check box will be selected automatically.
 - Do not modify the UEFI firmware file name after downloading the file.
 - Shared network is not supported to download the UEFI firmware file.
4. Select the **UEFI firmware update** check box.
 5. Click **Update**. The update process takes several minutes. When the **Status** is shown as **Success**, the update process is completed.

Note: After updating UEFI firmware, the server will be restarted automatically.

Cloning

Click the **Cloning** tab in the left pane to enter the Cloning interface. In the Cloning interface, you can clone settings in one server to other similarly configured Lenovo servers. The Cloning interface includes the following two sections:

- **Export:** Used to export RAID settings of the current server to response file and save the response file to a USB storage drive or a shared network folder.
- **Import:** Used to import RAID and operating system installation settings from response files.

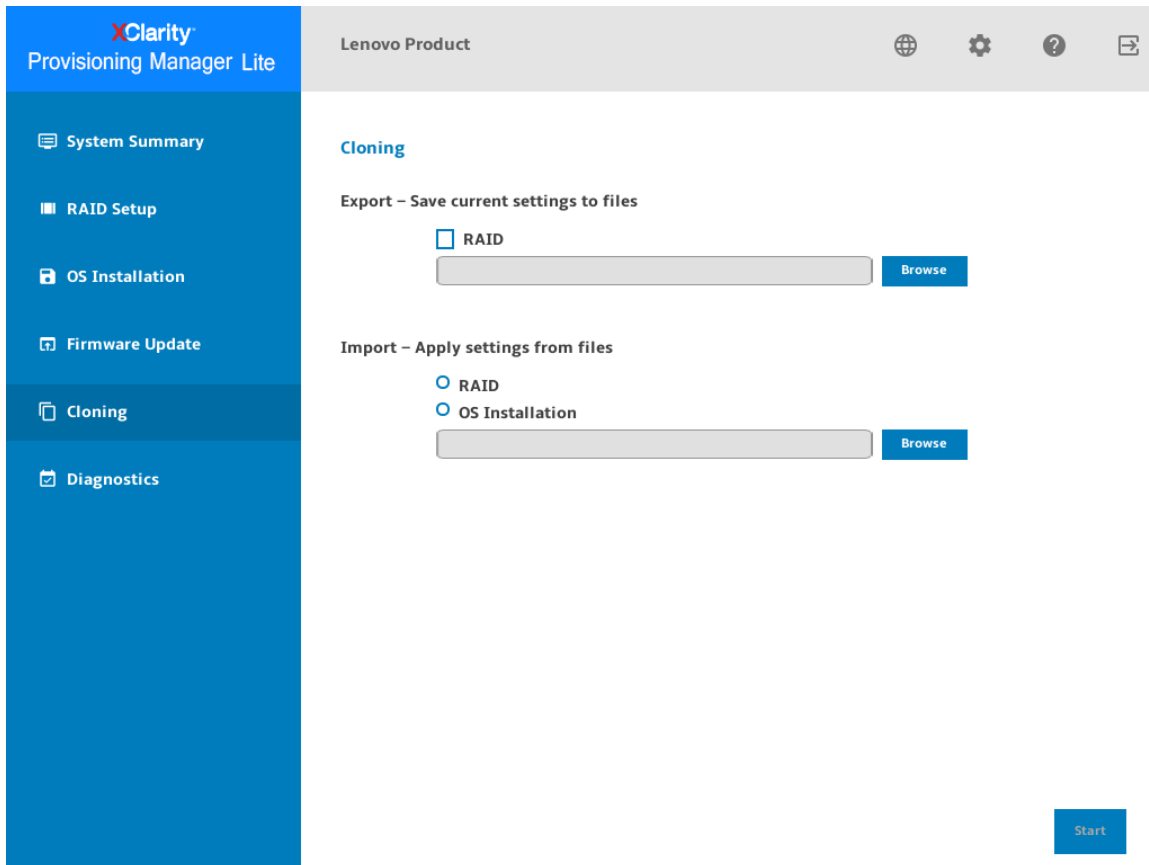


Figure 26. Cloning interface

Exporting response files

To export RAID settings to response file, do the following:

1. Attach a USB storage drive to the server or connect your server to a shared network. For instructions on how to connect to a shared network, refer to [“Configuring network settings” on page 5](#).

Note: The USB storage drive should include an FAT32 partition.

2. In the Export section, click the **Browse** button. The Save Response File window is displayed.
3. Select the location to save the response file and input a file name.
4. Click **Save** to return to the Cloning interface. The check box for RAID export will be selected automatically.
5. Click **Start** and wait for several minutes until the exporting process is completed.

To export operating system installation settings to a response file, refer to [“Exporting an operating-system-installation response file” on page 29](#).

Importing response files

Prerequisites

- Before importing a RAID response file, ensure that the target server and the source server have same RAID configuration.
- Before importing an operating-system-installation response file, ensure that the target server and the source server have the same RAID adapter installed, and the capacity of the disk drive under the RAID adapter for the target server is greater than the partition size in the response file.

To import RAID or operating system installation settings saved in response files to your server, do the following:

1. If the response file is stored on a USB storage drive, insert the USB storage drive into the server. If the response 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 [“Configuring network settings” on page 5](#).
2. In the Import section, click the **Browse** button. The Select File window is displayed.
3. Select the corresponding response file. The selected file name is displayed in the **File Name** field.
4. Click **OK** to return to the Cloning interface. The item you want to import will be selected automatically.
5. If you are importing a RAID response file, click **Start**. The importing process starts. Wait for several minutes until the importing process is completed.

If you are importing an operating-system-installation response file, click **Next**, the Installation Summary page appears. The settings in the operating-system-installation response file are listed in this page. You can edit some settings according to your need. Then, click **Start** to start the operating system installation process. Wait until the installation finishes.

Diagnostics

Click the **Diagnostics** tab in the left pane to enter the Diagnostics interface. In the Diagnostics interface, you can select actions for memory test, disk drive test, and RAID log collection. The Diagnostics interface includes the following three sections:

- **Memory Test:** Run the memory test.
- **HDD Test:** Run the disk drive test.
- **RAID Log:** Collect the logs for the selected RAID adapters.

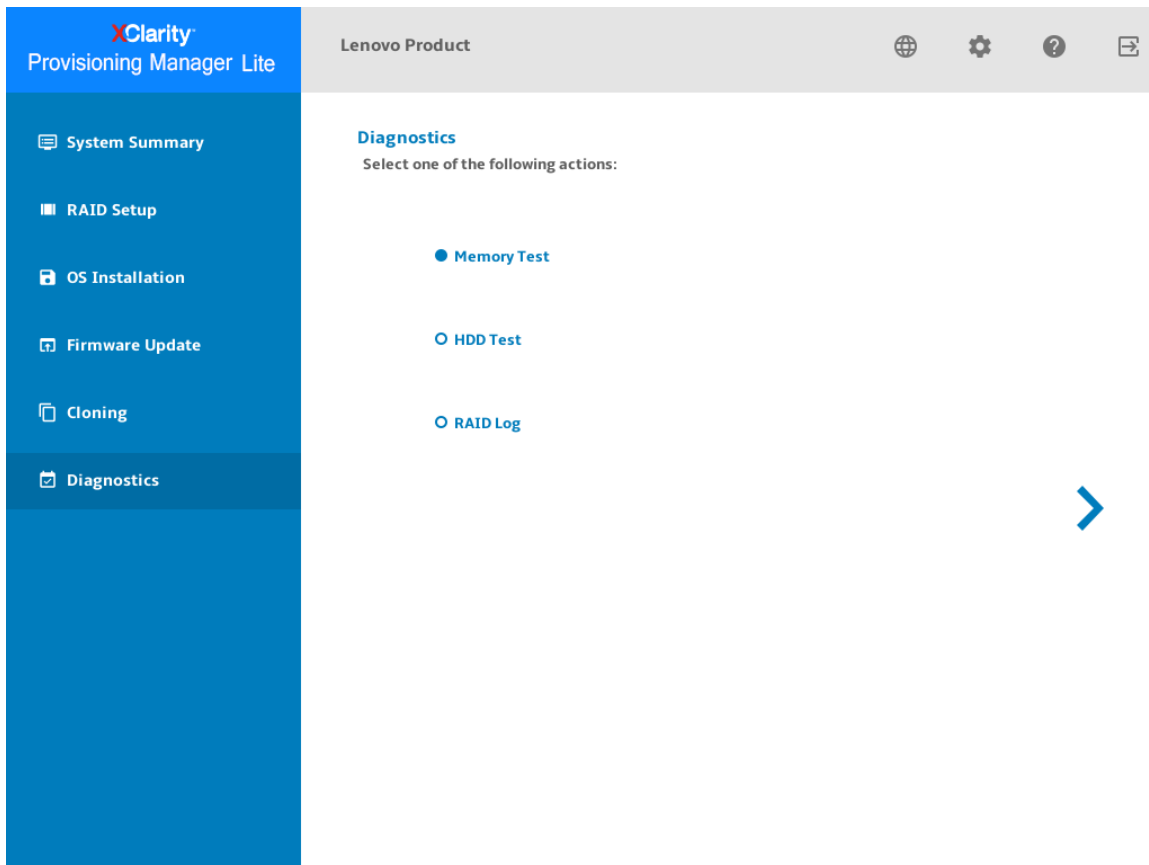


Figure 27. Diagnostics interface

Running memory test

To run memory test, do the following:

1. If you want to save the test result, attach a USB storage drive to the server, or connect your server to a shared network. For instructions on how to connect to a shared network, refer to [“Configuring network settings” on page 5](#).
2. Click the **Memory Test** tab.
3. Select the test options according to your needs, and click **Run Test** to start testing.

Notes:

- You can select **Test by cycles** or **Test by time** according to your needs.
- **Quick Test** is selected as the default test type and it only runs the WriteRead test pattern.

- **Full Test** runs all test patterns and takes a long time to finish.
- The mouse pointer is not active during the test process.
- After the testing process is completed, the test result will be displayed to show you if the test is passed or failed.
- You can press Esc to stop the test.

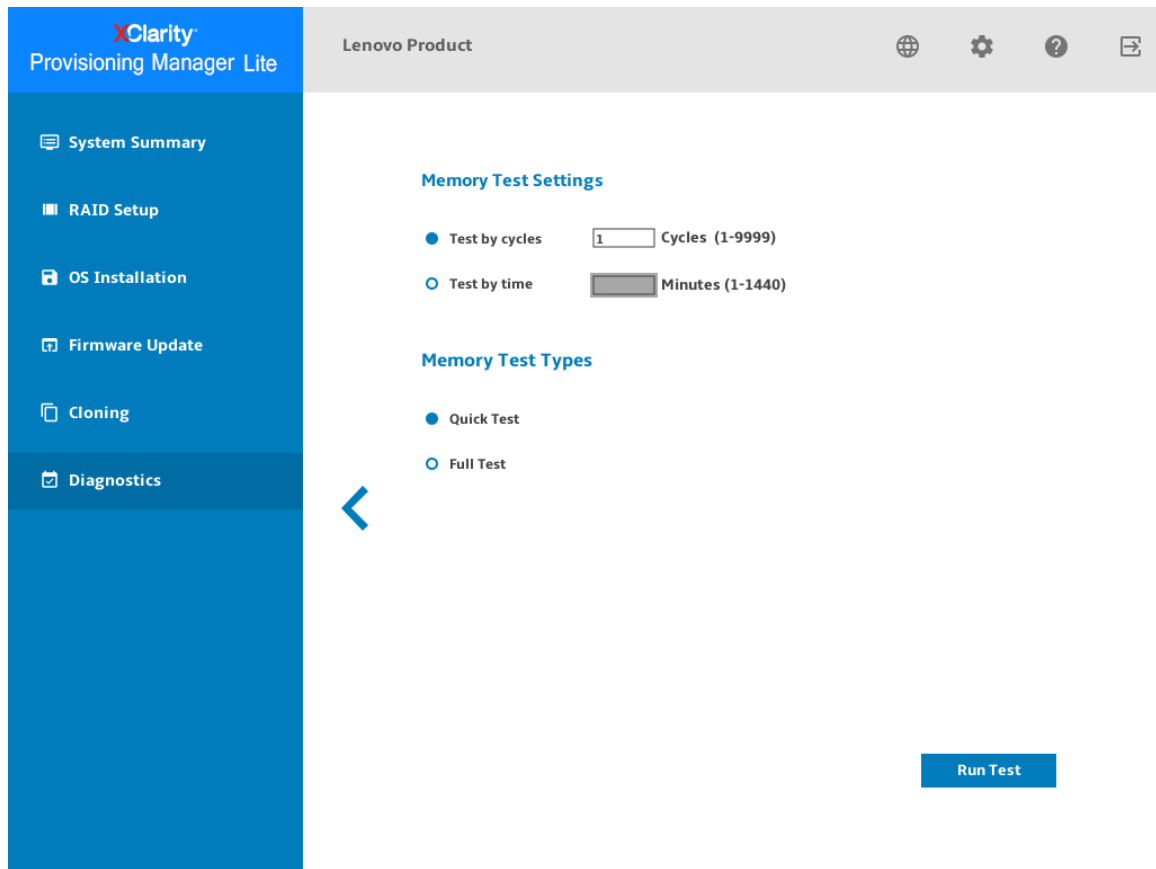


Figure 28. Memory test interface – 1

4. Click **Save** after the testing process is completed if you want to save the test result.

Note: The test result with more details will be saved in a memorylog.txt file in the USB storage drive or the shared network folder. For example, if the memory test fails, you can see the specific number of the fault devices, such as CPU and DIMM in the file.

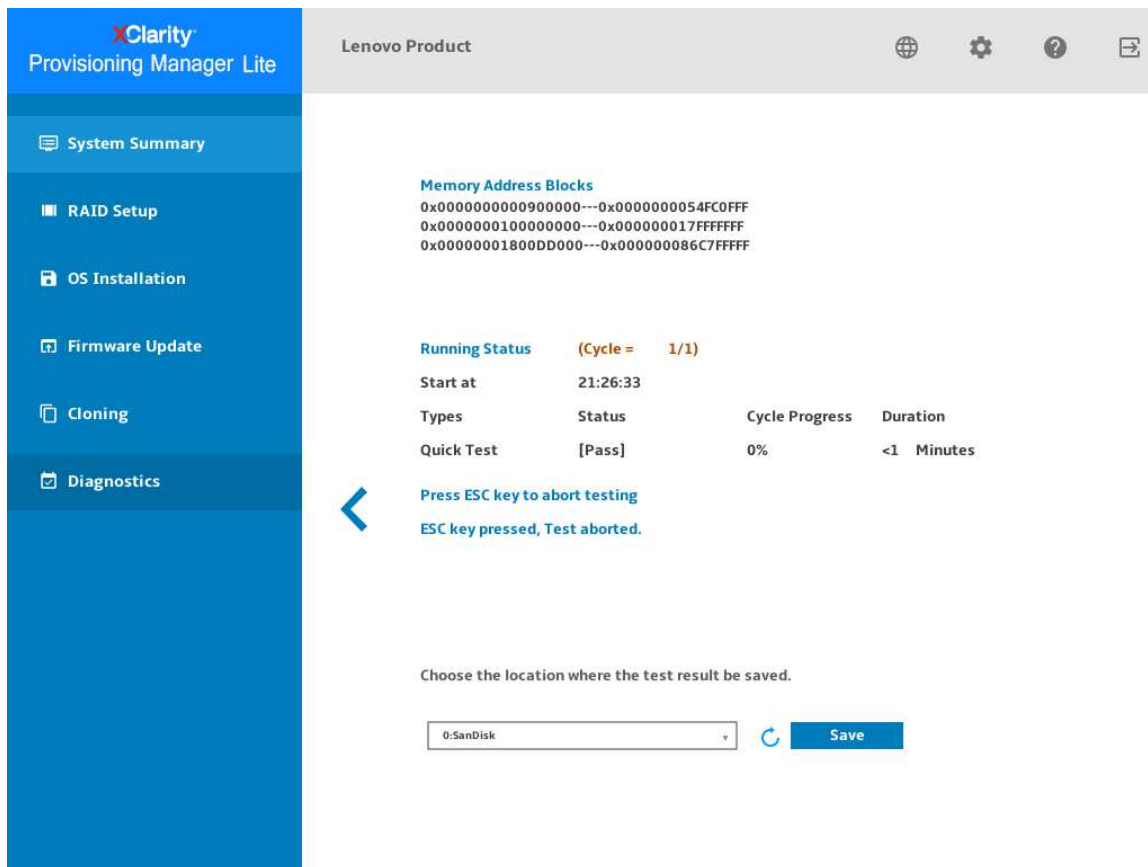


Figure 29. Memory test interface – 2

Running disk drive test

To run disk drive test, do the following:

1. If you want to save the test result, attach a USB storage drive to the server or connect your server to a shared network. For instructions on how to connect to a shared network, refer to [“Configuring network settings” on page 5](#).
2. Click the **Disk Drive Test** tab.
3. Select the test options according to your need, and click **Run** to start testing.

Notes:

- You can select **Short Self Test** or **Long Self Test** according to your needs.
 - **Short Self Test** is selected as the test type by default.
 - The mouse pointer is not active during the testing process.
 - You can press Esc to stop the test.
 - If you are running test for NVMe SSDs, no matter you select **Short Self Test** or **Long Self Test**, the test item only includes the Self-Monitoring, Analysis, and Reporting Technology (SMART) flag status.
 - If there is no disk drive information displayed in System Summary page or Disk Test page, ensure that the boot mode of your server is set to UEFI, and then restart your server.
4. Click **Save** after the testing process is completed if you want to save the test result.

Notes:

- The test result will be saved in a test_hdd.txt file in the USB storage drive or the shared network folder. The file includes more details than the test result displayed on the interface.
- If two M.2 drives are configured as a RAID array, the drives are not supported in the disk drive test. If you want to use disk drive test function to test the M.2 drives, do not configure them as a RAID array.

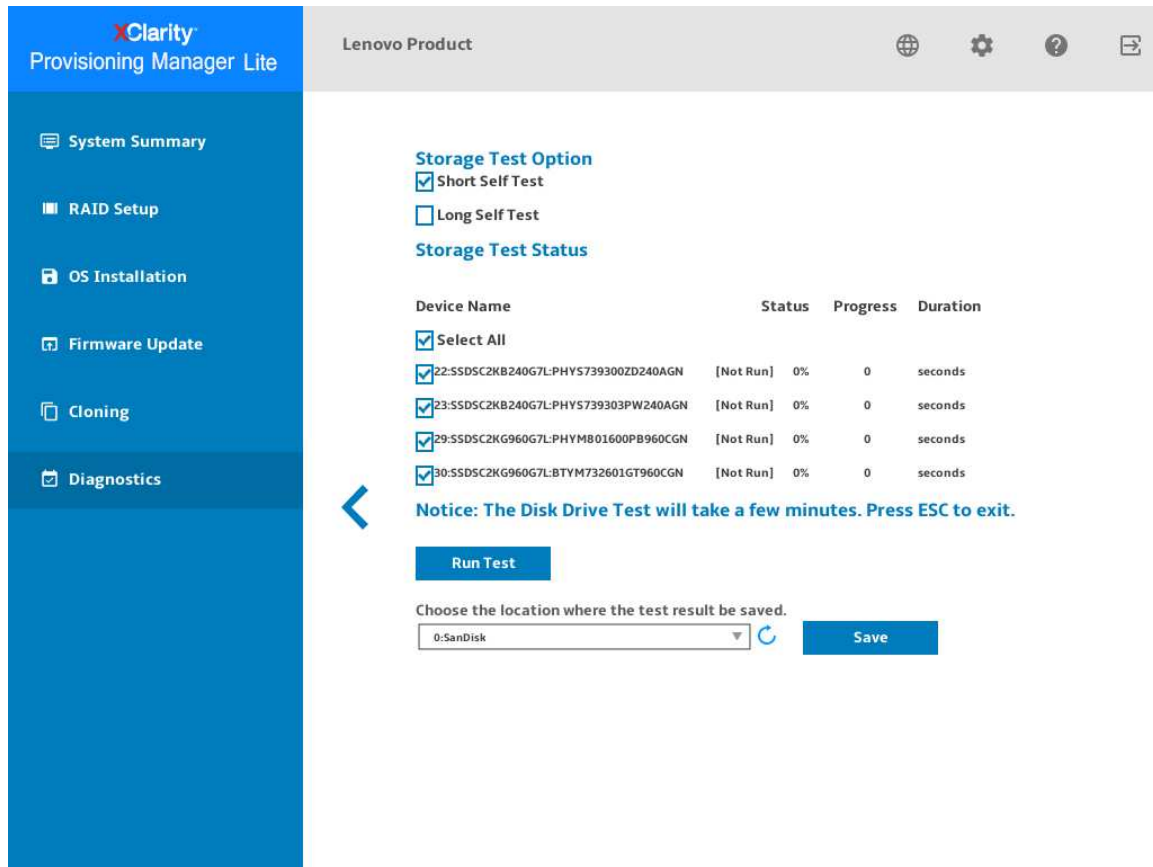


Figure 30. Disk drive test interface

Collecting RAID logs

To collect RAID logs, do the following:

1. If you want to save the logs, attach a USB storage drive to the server or connect your server to a shared network. For instructions on how to connect to a shared network, refer to [“Configuring network settings” on page 5](#).
2. Click the **RAID Log** tab.
3. Select the RAID adapter that you want to collect the logs and click **Collect RAID Log** to start the collection.

Note: The mouse pointer is not active during the collecting process.

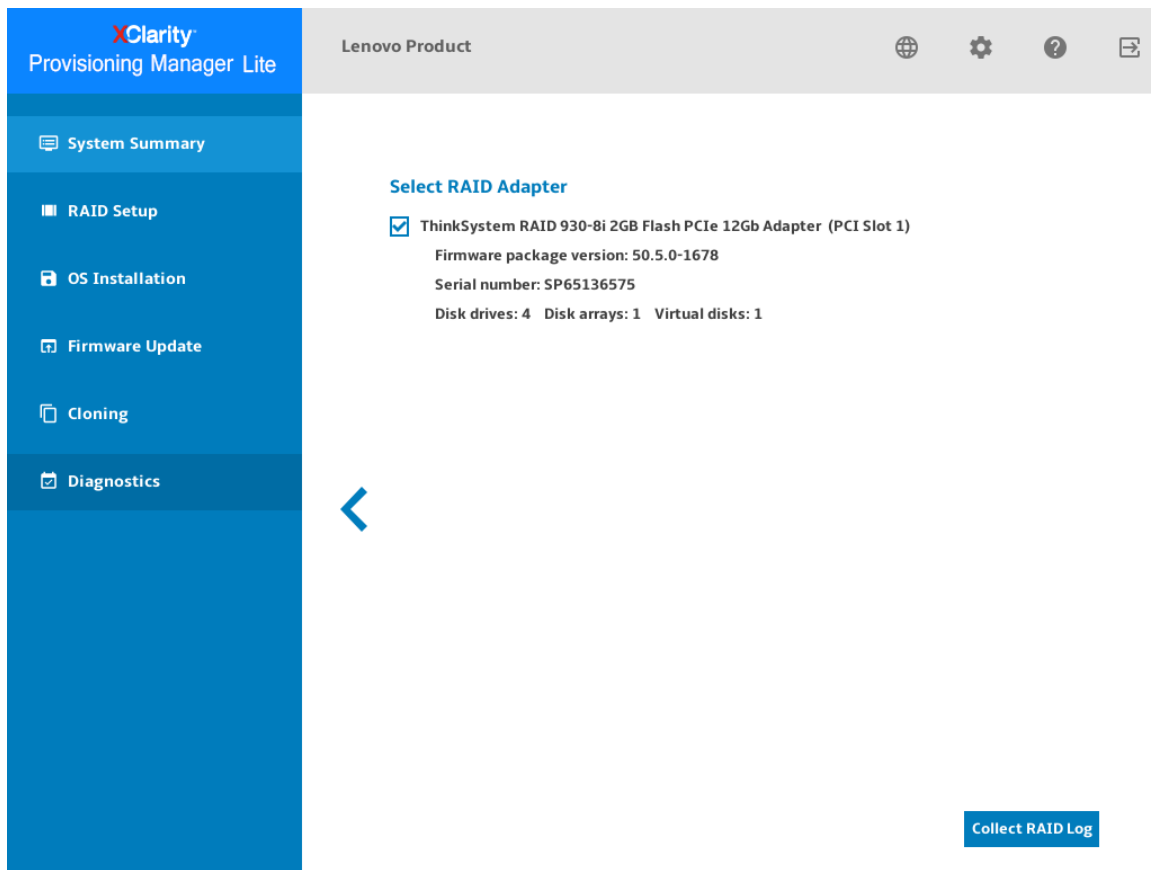


Figure 31. RAID logs collection interface – 1

4. After the collecting process is finished, the summary information for the RAID adapter will be displayed. You can click **View Recent Log** to see the recent logs of the RAID adapter.

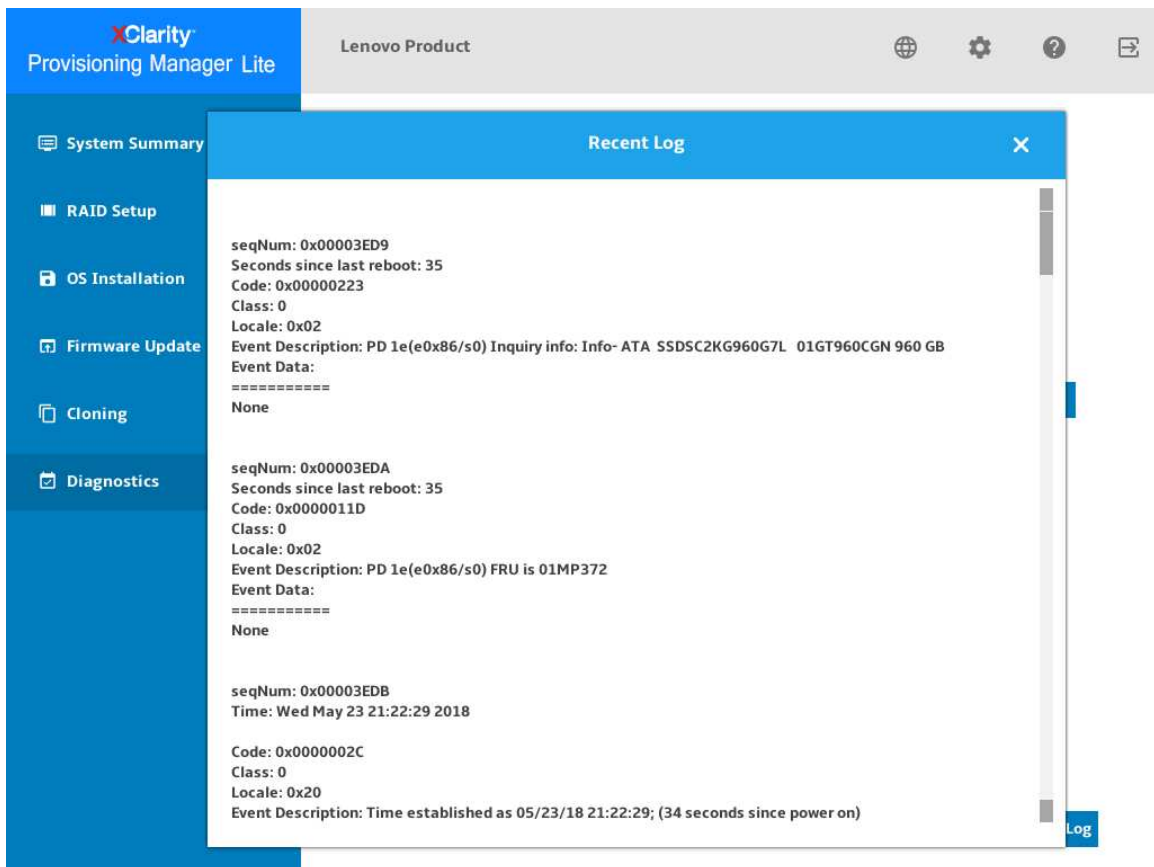


Figure 32. RAID logs collection interface – 2

5. If you want to save the detailed logs, click **Save Detailed Log**. The collected logs will be saved in three TXT files in the USB storage drive or the shared network folder. The three TXT files include the following information respectively:
 - Basic information about the RAID adapter
 - Firmware logs for troubleshooting
 - Event logs for the RAID adapter

Chapter 3. Troubleshooting

This chapter provides information about basic troubleshooting methods to help you solve problems that might occur while using LXPM Lite.

If you cannot diagnose and solve a problem by using the information in this chapter, go to <http://datacentersupport.lenovo.com> 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: <https://datacentersupport.lenovo.com/supportphonenumberlist>

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

Symptom	Action
LXPM Lite cannot be launched successfully	Do one of the following: <ul style="list-style-type: none">• Ensure that the LXPM Lite bootable USB storage drive has created successfully.• Ensure that bootable USB storage drive has no problem. Use another USB storage drive and recreate the bootable USB storage drive. To create bootable USB storage drive, see “Creating the bootable USB storage drive” on page 1.
The process for installing an operating system continuously loops.	Make more space available on the hard disk drive.
LXPM Lite cannot start the operating system medium.	Do one of the following: <ul style="list-style-type: none">• Ensure that the disc has no problem.• Ensure that the USB installation medium is created correctly. Refer to: http://cn.download.lenovo.com/ibmdl/pub/pc/pccbbs/thinkservers/how_to_create_usb_os_installation_media.pdf
No drive is found in OS Installation → Guided Install → Drive Selection.	Ensure that you have configured a RAID adapter for the server in the RAID Setup interface. For instructions on how to configure a RAID adapter, refer to “RAID Setup” on page 7.

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