

The background of the slide features a large, stylized orange graphic resembling a gear or a series of overlapping triangles, with a blue rectangular area containing the word "Lenovo" positioned in the upper right corner.

Lenovo

# Changes to ThinkSystem tools

Details of the April 2019 changes to ThinkSystem tools

## UEFI option changes



Click each number in turn to see more information about **UEFI option changes**.

- 1
- 2
- 3
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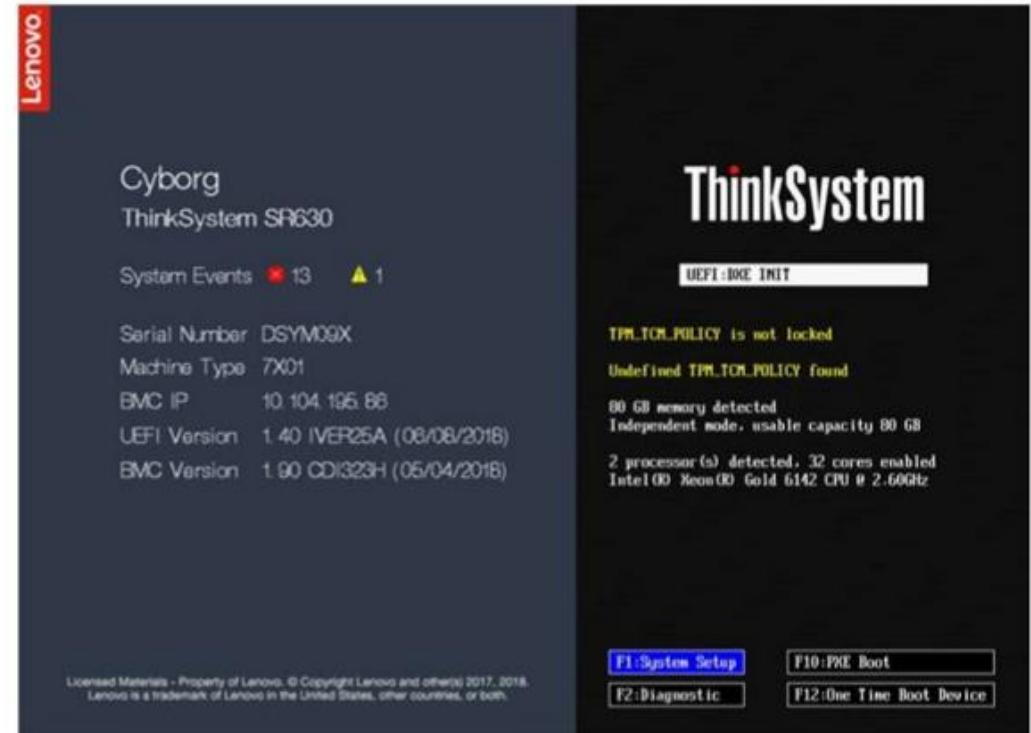
# UEFI option changes

## New options in boot menu

The latest version of LXPM supports two new options in the system boot menu:

- F2: Diagnostic
  - Press F2 to access the LXPM diagnostic menu
- F10: PXE boot

Click the image to enlarge.



## UEFI option changes

### No boot device and no bootable OS messages

If the system cannot find a boot device or bootable OS, the UEFI will display a **No boot device** message.

Click the buttons to see screenshots.

No boot device

No bootable OS





## ThinkSystem SR650

System Events ✖ 1 ▲ 1

Serial Number LSIT1810

Machine Type 7X05

BMC IP 10.104.197.116

UEFI Version 1.30 IVER350 (02/12/2019)

BMC Version 2.40 CDI333D (11/07/2018)

## ThinkSystem

UEFI : POST END

Undefined TPM\_TCM\_POLICY found

32 GB memory detected  
Independent mode, usable capacity 32 GB2 processor(s) detected, 36 cores enabled  
Intel(R) Xeon(R) Gold 6240C CPU @ 2.60GHzRecalibrating System Power...  
No boot device is available, and the system will  
reboot in about 5 seconds.



No boot device is available, and the system will reboot in about 3 seconds.

# UEFI option changes

## VLAN configuration in Network Boot settings

In the past, the VLAN configuration options were listed on the Network page. In the latest UEFI, the VLAN configuration options are listed on the Network Boot Settings page.

Click [HERE](#) to see screenshots.



# Past

Network

- ▶ iSCSI Settings
- ▶ Network Stack Settings
- ▶ Network Boot Settings

Network Device List

- ▶ Slot 1: Emulex 10G NIC: Bus:Dev:Func 2F:0:0 - 00:90:FA:A2:0B:E2
- ▶ Slot 1: VLAN Configuration (MAC:0090FAA20BE2)
- ▶ Slot 1: Emulex 10G NIC: Bus:Dev:Func 2F:0:1 - 00:90:FA:A2:0B:EA
- ▶ Slot 1: VLAN Configuration (MAC:0090FAA20BEA)
- ▶ Slot 4: Broadcom NX-E PCIe 10Gb 2-Port Base-T Ethernet Adapter - 00:0A:F7:B0:EB:B0
- ▶ Slot 4: VLAN Configuration (MAC:000AF7B0EBB0)
- ▶ Slot 4: Broadcom NX-E PCIe 10Gb 2-Port Base-T Ethernet Adapter - 00:0A:F7:B0:EB:B1
- ▶ Slot 4: VLAN Configuration (MAC:000AF7B0EBB1)
- ▶ Slot 4: VLAN Configuration (MAC:000AF7B0EBB3)
- ▶ Slot 4: VLAN Configuration (MAC:000AF7B0EBB5)
- ▶ Slot 4: VLAN Configuration (MAC:000AF7B0EBB7)
- ▶ Slot 3: QLogic QL41262 25Gb Eth
- ▶ Slot 3: VLAN Configuration (MAC

▲ Configure the iSCSI parameters.



# New

Network Boot Settings

- ▶ MAC:00:10:9B:36:C6:EA Slot3 PFA AF:0:0
- ▶ MAC:00:10:9B:36:C6:F2 Slot3 PFA AF:0:1

VLAN Configuration List:

- ▶ VLAN Configuration (MAC:00109B36C6EA)
- ▶ VLAN Configuration (MAC:00109B36C6F2)

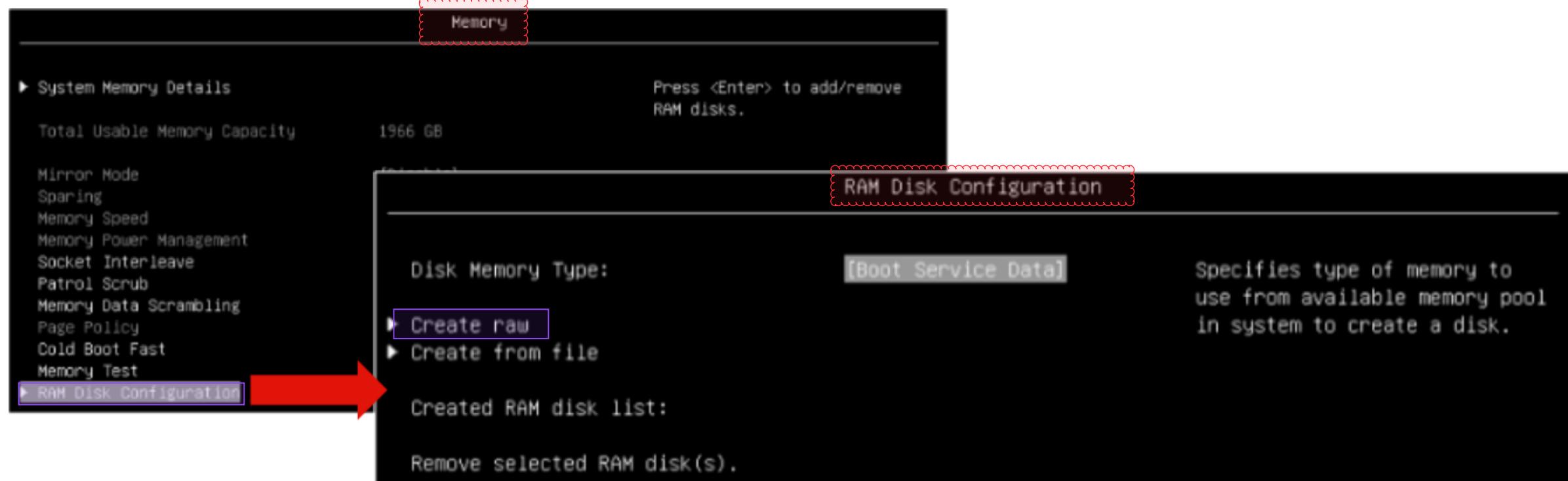
Set the boot configuration parameters on MAC 00:10:9B:36:C6:EA

PCI Function Address: Bus AF:Dev 0:Func 0

# UEFI option changes

## RAW disk function

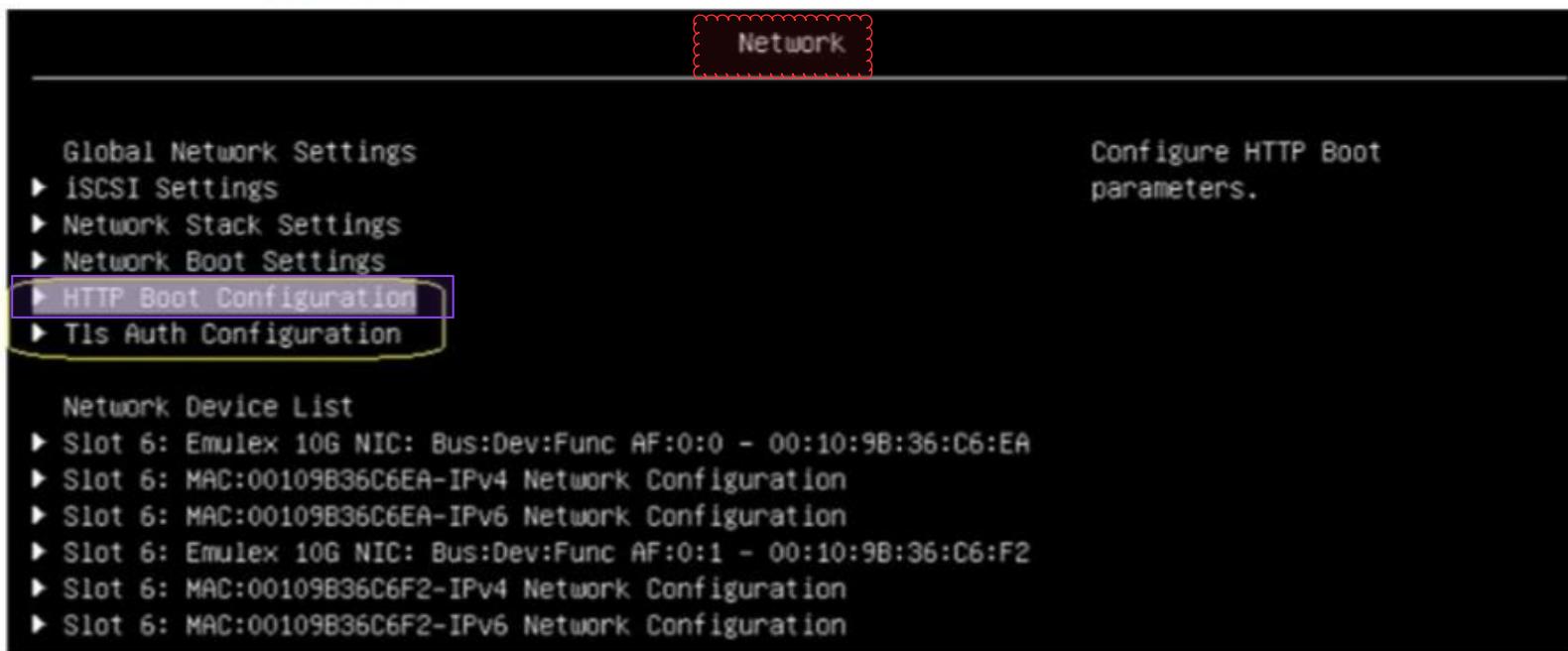
Users can now set up their RAW disk configuration through the UEFI. The RAW Disk Configuration option is listed on the Memory page.



# UEFI option changes

## HTTP Boot

The **HTTP boot** configuration and **TLS authorization** configuration options are listed on the **Network** page. Users can **enable or disable HTTP boot** on the **Network → Network Stacking Configuration** page. Click [HERE](#) to see a screenshot.





### Network Stack Settings

Network Stack	[Enable]	Enable IPv4 HTTP Boot Support.
IPv4 PXE Support	[Enable]	If disabled IPv4 HTTP boot
<b>IPv4 HTTP Support</b>	<b>[Disable]</b>	option will not be created
IPv6 PXE Support	[Enable]	
IPv6 HTTP Support	[Disable]	
IPSEC Certificate	[Enable]	
PXE boot wait time	0	
Media detect count	1	



## Network Stack Settings

Network Stack	[Enable]	Enable IPv4 HTTP Boot Support.
IPv4 PXE Support	[Enable]	If disabled IPv4 HTTP boot
IPv4 HTTP Support	[Disable]	option will not be created
IPv6 PXE Support	[Enable]	
IPv6 HTTP Support	[Disable]	
IPSEC Certificate	[Enable]	
PXE boot wait time	0	
Media detect count	1	

# XCC changes

The latest version of XCC only supports inventory information for DCPMMs. Users cannot perform any other configuration actions on DCPMMs, such as changing operating mode or security states, through the XCC.

The screenshot shows the XCC interface with the following details:

**System name:** CG\_Cyborg

**DIMM: 3/24 Installed**

Slot	Type	Capacity	Part Number
DMM 5	DDR4	32 GB	M333A4K43BB2-CTD
DMM 6	Intel Optane DCPMM	512 GB	NMAMX8D512UQS
DMM 20	DDR4	32 GB	M333A4K43BB2-CTD

**Inventory Details for DMM 6:**

Description	Value	Description	Value
FRU Serial Number	000022EE	Manufacturer	Intel
Type	Intel Optane DCPMM	Manufacture Date	3418 (July)
Max Speed	2666 MHz	Configured Memory Clock Speed	2666 MHz
Ecc Bits	16	Module Supported Voltage	1.2V
Raw Capacity	502.5 GB	Memory Capacity	0 B
App Direct Capacity	0 B	Unconfigured Capacity	0 B
Inaccessible Capacity	502 GB	Reserved Capacity	61.3 MB
Firmware Version	01.00.00.5127		

# Lenovo XClarity Essentials changes

Click the buttons to see the changes for each XClarity Essentials tool.

UpdateXpress

## UpdateXpress

- Supports firmware updates for ThinkSystem servers with second-generation Xeon Scalable processors
- Supports DCPMM firmware updates

BoMC

OneCLI

Lenovo XClarity Essentials UpdateXpress

Active Machine Type: 7021 OS: win2016

Updates Location

You can ensure that you have the latest updates by checking the Lenovo support web site. You will be able to select which updates you want before they are downloaded. Once downloaded, updates will be stored in the local directory indicated below.

Check the Lenovo support web site  
Download the appropriate updates automatically from the Lenovo support site.

Look in a local directory  
Specify a directory on the local file system containing specific individual updates. The directory should have been populated before.  
C:\tools\Invgy\_utl\_lxce\_ux\_2.0.0\_windows\_i386\working\_folder [Browse...](#)

\*All new updates for installed drivers and firmware will be installed. The updates for unknown devices or drivers that are not running will not be installed.

1. Welcome

2. update Task

3. update Location

4. Update Type

5. Update Corruption

6. Update Execution

7. Finish

# Lenovo XClarity Essentials changes

Click the buttons to see the changes for each XClarity Essentials tool.

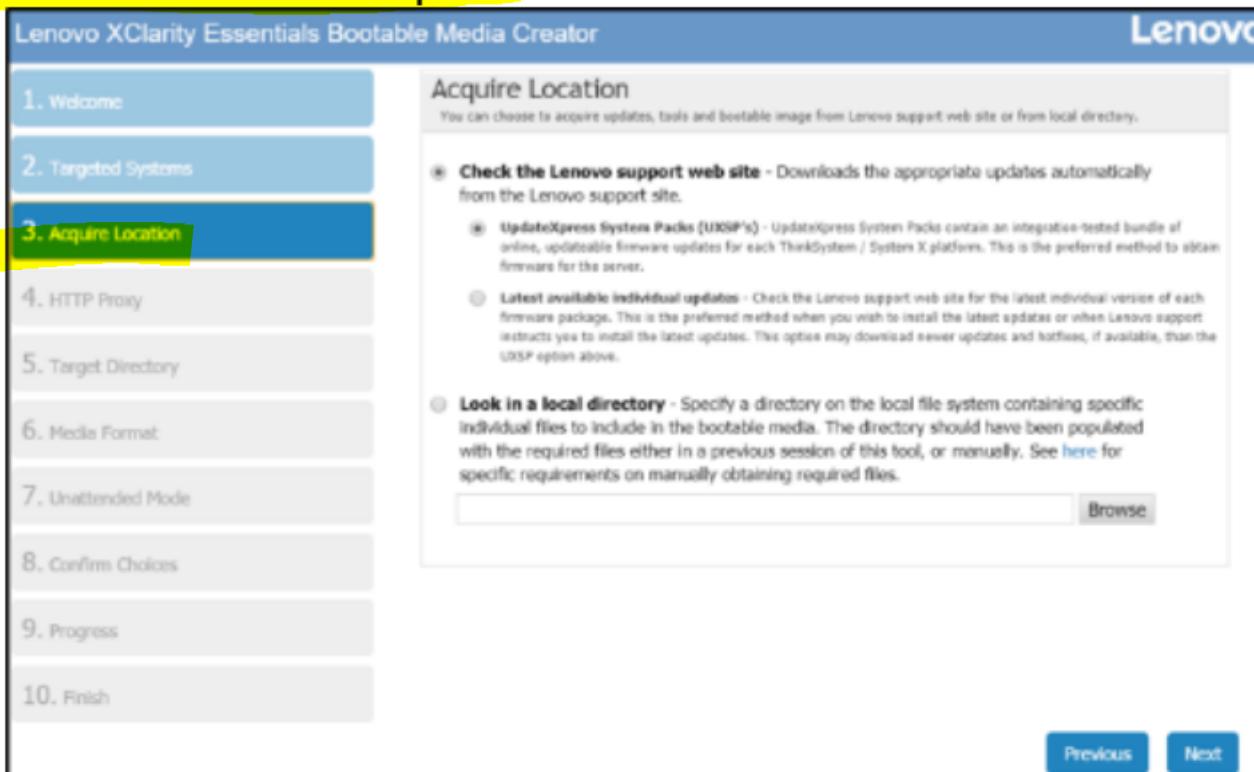
UpdateXpress

BoMC

OneCLI

## BoMC

- Supports ThinkSystem servers with second-generation Xeon Scalable processors
- Supports DCPMM firmware updates



# Lenovo XClarity Essentials changes

Click the buttons to see the changes for each XClarity Essentials tool.

UpdateXpress

BoMC

OneCLI

## OneCLI

- For the latest OneCLI user guide, go to the OneCLI Lenovo Support Web site: <https://datacentersupport.lenovo.com/tw/en/solutions/lvno-tcli>.
- Supports remote batch firmware updates (`multiflash` command). For more information, refer to the *OneCLI User Guide – Updating firmware for multiple BMC servers remotely* section.
- Supports software RAID configuration with Intel RSTe Software on Linux. The software RAID configuration with Intel RSTe Software supports the following commands: `show`, `add`, and `clear`. For more information, refer to the *OneCLI User Guide – raid command* section.
- Supports DCPMM firmware updates and inventory functions. For more information, refer to ES51965 – Introducing the Intel DC Persistent memory module <https://lenovoedu.lenovo.com/course/view.php?idnumber=ES51965>.

# Lenovo XClarity Provisioning Manager changes



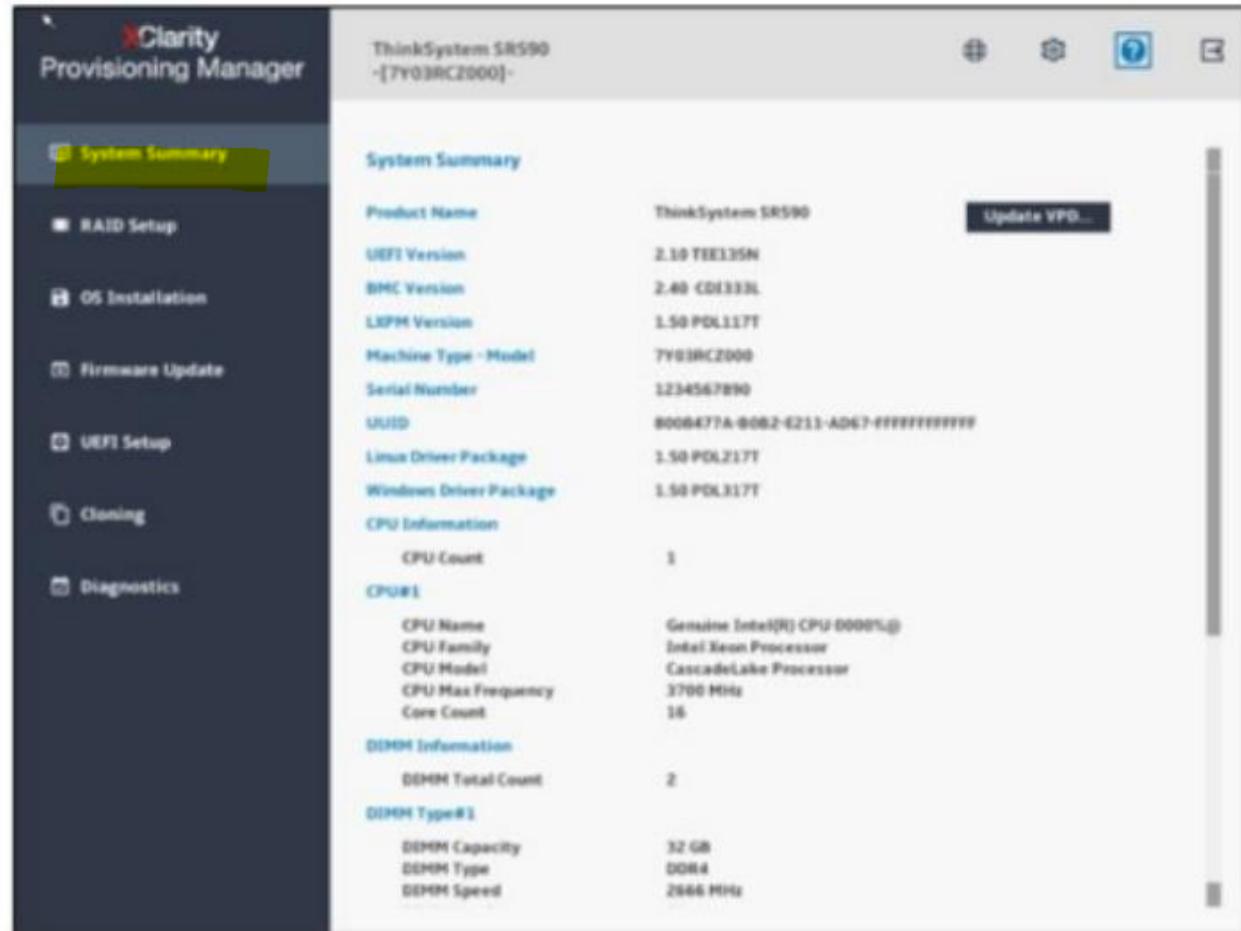
Click each number in turn to see more information about the [Lenovo XClarity Provisioning Manager \(LXPM\) changes](#).

- 1
- 2
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# Lenovo XClarity Provisioning Manager changes

**System summary:** LXPM can now display Xeon Scalable processor inventory information.

Click the image to enlarge.



# Lenovo XClarity Provisioning Manager changes

**Partition info:** The **LXPM system summary** can also **display system partition** information.

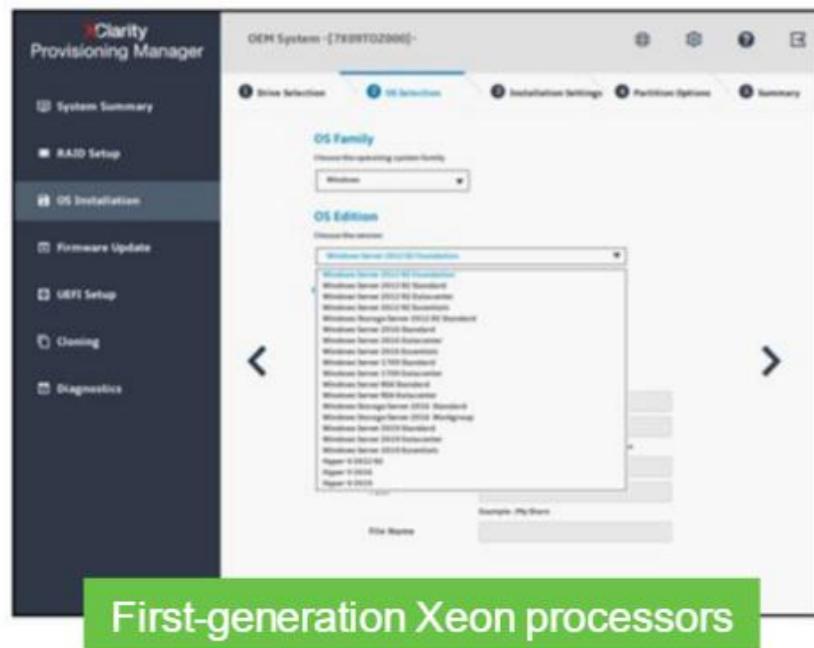
The screenshot shows the XClarity Provisioning Manager interface. On the left, a sidebar lists several options: System Summary (highlighted in yellow), RAID Setup, OS Installation, Firmware Update, UEFI Setup, Cloning, and Diagnostics. The main pane displays system information for a ThinkSystem SR570 (SN: 7Y02RCZ000). A table provides details for five partitions, each highlighted with a yellow box. The columns show Partition Name, Partition Size, and Partition Number. The partitions are labeled Volume 0 through Volume 3, with Volume 0 being a GPT FAT partition and others being GPT.

Partition Type	Partition Name	Partition Size	Partition Number
Partition Type #1	Volume 0	3726 GB	2
Partition Type #2	Volume 1	558 GB	0
Partition Type #3	Volume 2	558 GB	1
Partition Type #4	Volume 3	558 GB	0
Partition Type #5			

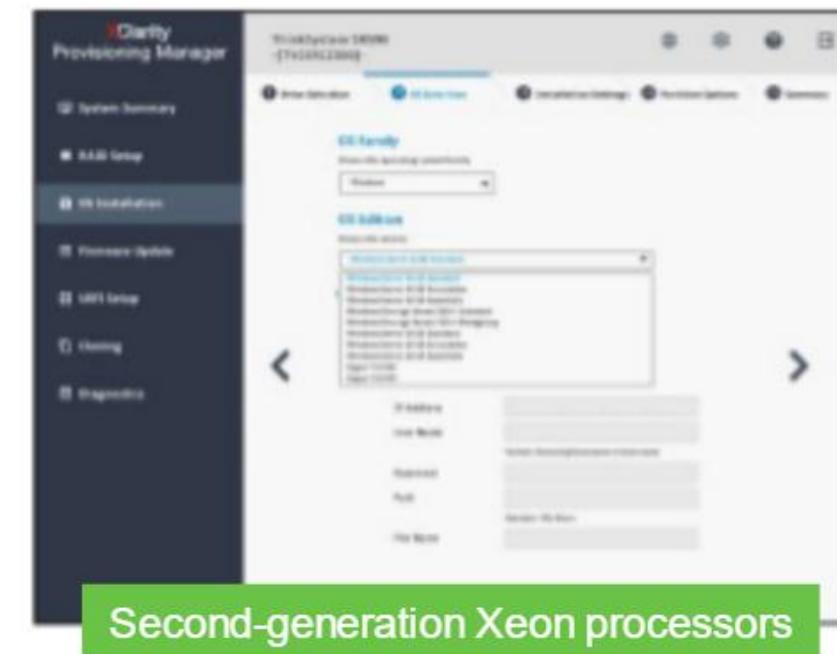


# Lenovo XClarity Provisioning Manager changes

**OS installation:** The latest version of LXPM supports new OSs for ThinkSystem servers with first- and second-generation Xeon processors. Click the images to enlarge.



First-generation Xeon processors



Second-generation Xeon processors



# Lenovo XClarity Provisioning Manager changes

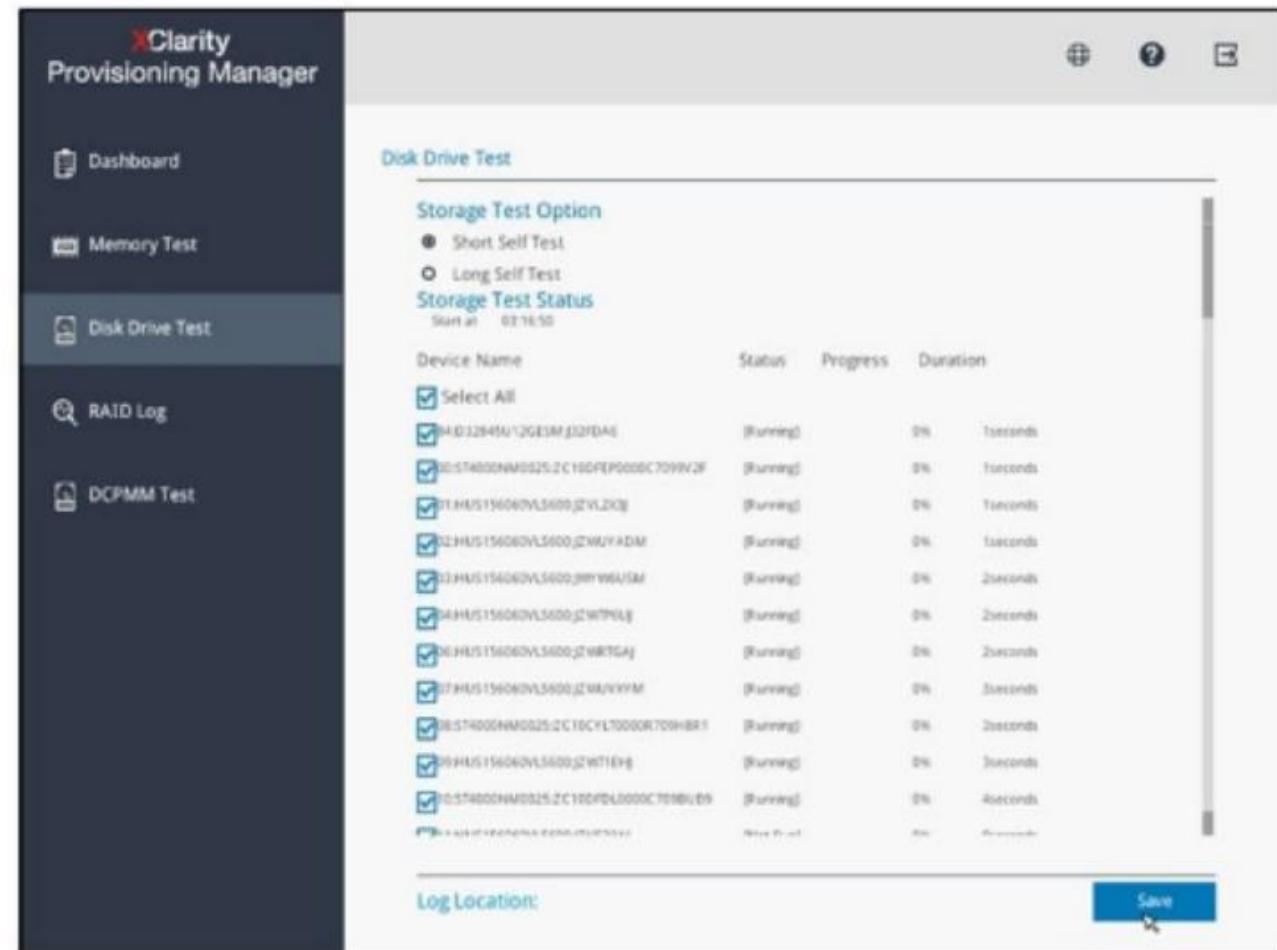
## Disk drive test

LXPM diagnostics now supports the SMART drive test. Users can run the SMART test through the LXPM and then click Save to export the log file.

Click the buttons for disk drive test log result samples.

SAS/SATA drive log

NVMe drive log





Scroll down for more information.

文件(F) 编辑(E) 格式(O) 查看(V) 帮助(H)

===== 01:ST9500620NS:9XF2QTS =====Port=1

== START OF INFORMATION SECTION ==

Device Model: ST9500620NS

Serial Number: 9XF2QTS

LU WWN Device Id: 5 000C50 065FCC31A

Firmware Version: SN03

User Capacity: 500 GB

Sector Size: 512 bytes logical/physical

Rotation Rate: 7200 rpm

Form Factor: 2.5 inches

ATA Version is: ATA8-ACS T13/1699-D revision 4

SATA Version is: SATA 3.0, 6.0 Gb/s (current: 6.0 Gb/s)|

General SMART Values:

Offline data collection status: (0x82) Offline data collection activity  
was completed without error.

Auto Offline Data Collection: Enabled.

Self-test execution status: ( 0) The previous self-test routine completed  
without error or no self-test has ever  
been run.

Total time to complete Offline  
data collection: ( 642) seconds.

Offline data collection  
capabilities: (0x7B) SMART execute Offline immediate.  
Auto Offline data collection on/off support.  
Suspend Offline collection upon new command.  
Offline surface scan supported.  
Calibration suspended.



Scroll down for more information.

Self-test execution status:	( 0) The previous self-test routine completed without error or no self-test has ever been run. was completed without error.
Total time to complete Offline data collection:	( 642) seconds.
Offline data collection capabilities:	(0x7B) SMART execute Offline immediate. Auto Offline data collection on/off support. Suspend Offline collection upon new command. Offline surface scan supported. Self-test supported. Conveyance Self-test supported. Selective Self-test supported.
SMART capabilities:	(0x0003) Saves SMART data before entering power-saving Supports SMART auto save timer.
Error logging capability:	(0x01) Error logging supported. General Purpose Logging supported.
Short self-test routine recommended polling time:	( 1) minutes.
Extended self-test routine recommended polling time:	( 102) minutes.
Conveyance self-test routine recommended polling time:	( 2) minutes.

[No Title]

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Scroll down for more information.

文件(F) 编辑(E) 格式(O) 查看(V) 帮助(H)

===== 00:SSDPE2KE016T7L:BTLE821008EZ1P6CGN ===== Port=0

NVMe ctrl=913940A8

== START OF INFORMATION SECTION ==

Model Number: SSDPE2KE016T7L  
Serial Number: BTLE821008EZ1P6CGN  
Firmware Version: QDV1LV45  
PCI Vendor ID: 0x8086  
PCI Vendor Subsystem ID: 0x1D49  
IEEE OUI Identifier: 0x5CD2E4  
Controller ID: 0

== START OF SMART DATA SECTION ==

SMART overall-health self-assessment test result: PASSED

Critical Warning: 0x00  
Temperature: 47 Celsius  
Available Spare: 100%  
Available Spare Threshold: 10%  
Percentage Used: 0%  
Data Units Read: 1 [512KB]  
Data Units Written: 0  
Host Read Commands: 278  
Host Write Commands: 0  
Controller Busy Time: 0  
Power Cycles: 18  
Power On Hours: 8  
Unsafe Shutdowns: 16  
Media and Data Integrity Errors: 0  
Error Information Log Entries: 0  
Warning Comp. Temperature Time: 0  
Critical Comp. Temperature Time: 0



Scroll down for more information.

SMART overall-health self-assessment test result: PASSED

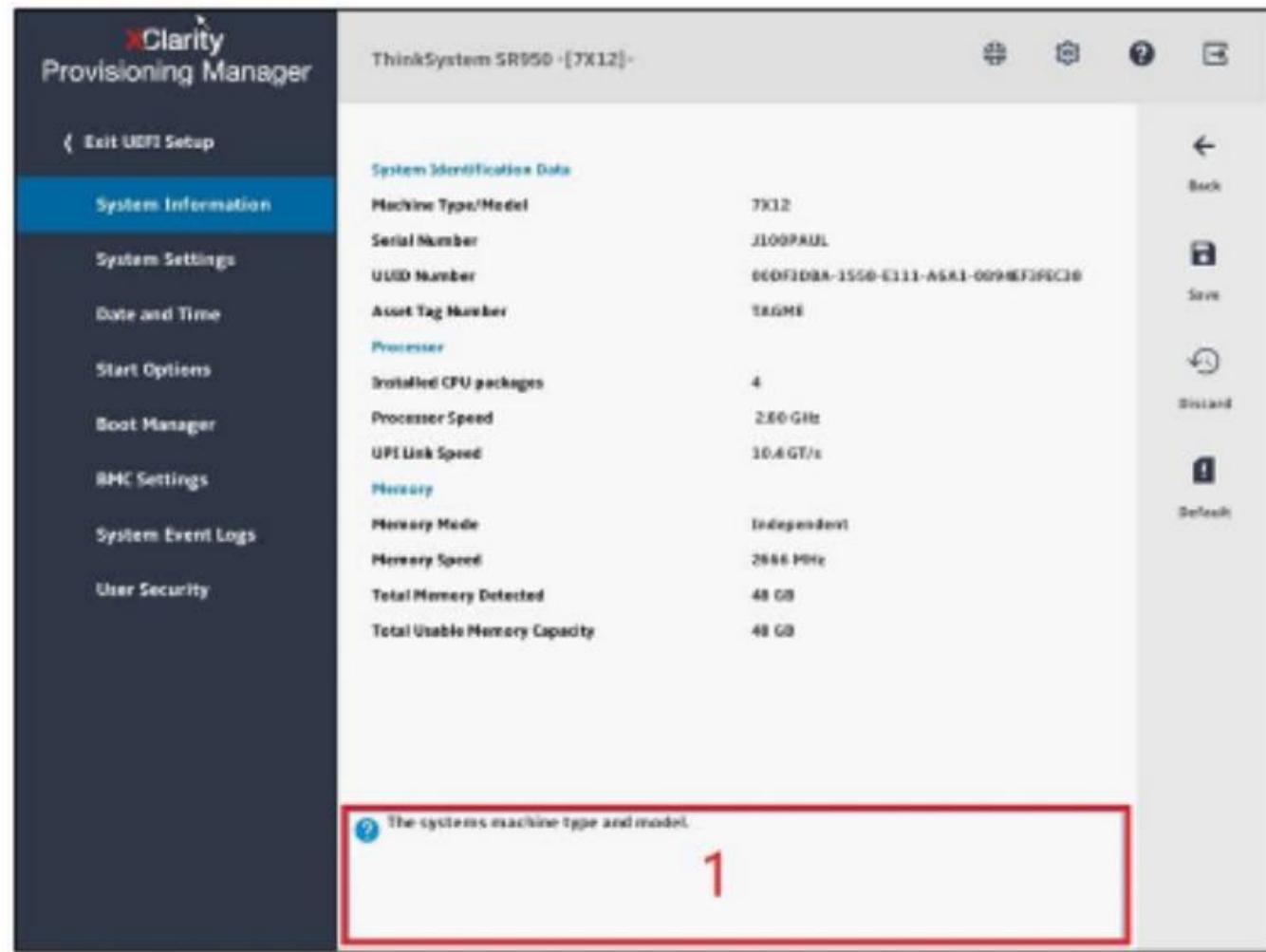
Critical Warning:	0x00
Temperature:	47 Celsius
Available Spare:	100%
Available Spare Threshold:	10%
Percentage Used:	0%
Data Units Read:	1 [512KB]
Data Units Written:	0
Host Read Commands:	278
Host Write Commands:	0
Controller Busy Time:	0
Power Cycles:	18
Power On Hours:	8
Unsafe Shutdowns:	16
Media and Data Integrity Errors:	0
Error Information Log Entries:	0
Warning Comp. Temperature Time:	0
Critical Comp. Temperature Time:	0
Error Information Log Entries:	0
Thermal Temp. 1 Transition Count:	0

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# Lenovo XClarity Provisioning Manager changes

## UEFI setup

In the UEFI setup menu, LXPM can now display a help message for each option. These help messages are the same as the messages in the UEFI setup text mode.



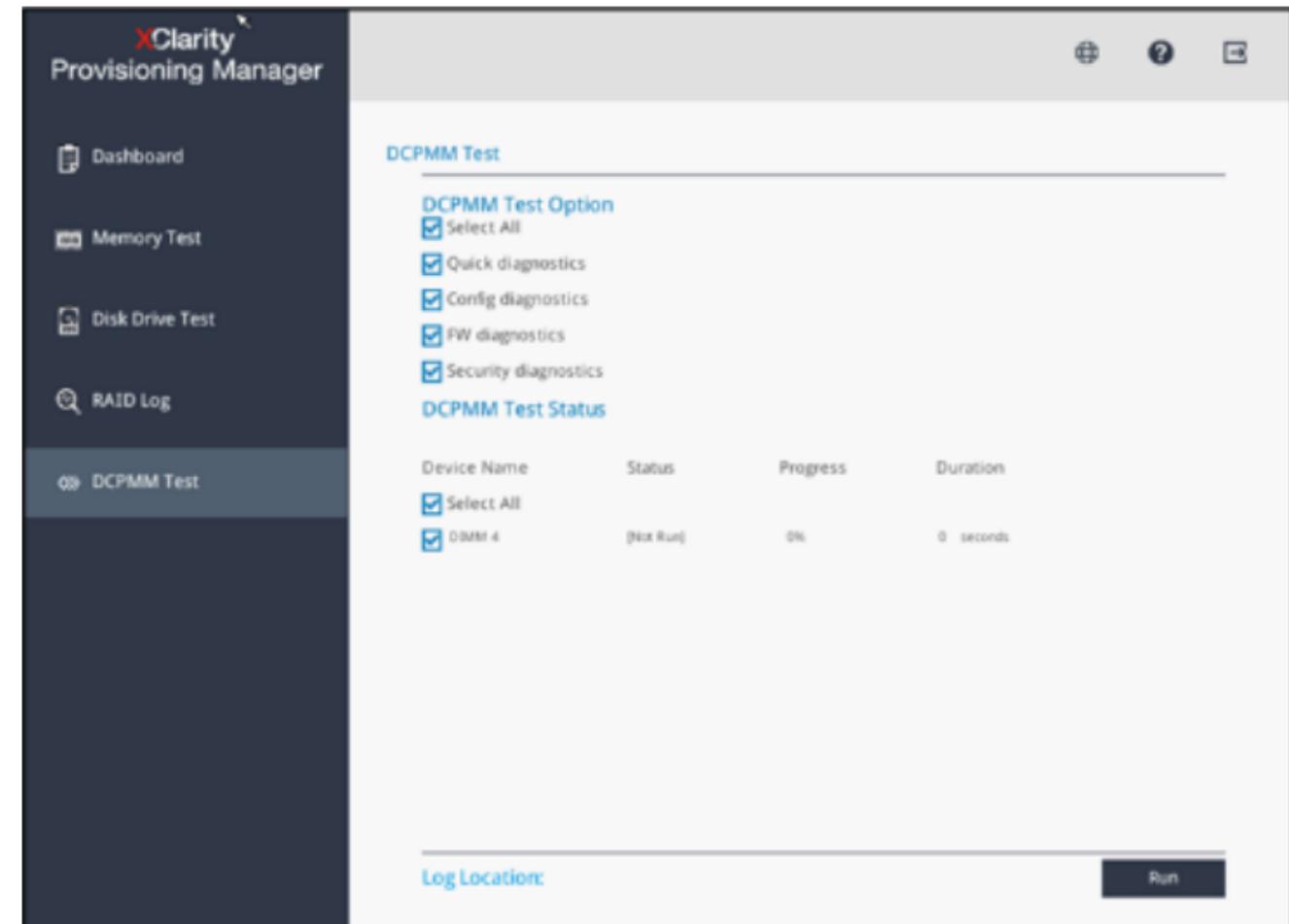
# Lenovo XClarity Provisioning Manager changes

## DCPMM test

If the DCPMMs on the system are set to App Direct mode or Mixed Memory mode, users can run a DCPMM test for DCPMM hardware diagnostics.

If the DCPMMs are provisioned for Memory mode, use a Memory Test for both DIMM and DCPMM hardware diagnostics. For more information, refer to ES51965 – Introducing the Intel DC Persistent memory module

<https://lenovoedu.lenovo.com/course/view.php?idnumber=ES51965>.



# Lenovo XClarity Administrator changes

The latest version of XClarity Administrator supports DCPMM inventory monitoring and security operation settings. For more information, refer to ES51965 – Introducing the Intel DC Persistent memory module <https://lenovoedu.lenovo.com/course/view.php?idnumber=ES51965>.

The screenshot shows the XClarity Administrator interface with the following details:

- Power Supplies:** (2) Installed
- Memory:** (4) Installed
- Memory Details:**

Bay Number	Size	Speed	Type
5	256 GB	2666 MT/s	Intel Optane DC...
6	16 GB	2666 MT/s	DDR4
7	16 GB	2666 MT/s	DDR4
8	16 GB	2666 MT/s	DDR4
- Intel Optane Summary (for Bay 5):**

Intel Optane Summary	
Memory Direct Capacity	252 GB
Memory Inaccessible Capacity	448 MB
Memory Capacity	0 MB
Firmware Name	AEP DIMM firmware
Firmware Version	01.02.00.5318
Firmware Status	Active
- Manufacturer List:** Intel, Micron Technology, Samsung, Samsung

# Summary

This course enabled you to:

- Describe the features of Intel second-generation Xeon Scalable processors
- Describe the updated ThinkSystem server specifications
- Describe the updated ThinkSystem tool features