

Management tools

BMC, UEFI, and update tools

SR645 management tools overview

Unlike AMD-based 1-socket ThinkSystem models (the SR635 and SR655), the SR645 uses the Intel-based ThinkSystem management tools, as shown in the following table.

Scroll down for more information.

| Tool name | SR645 | SR635 / SR655 |
|---|---|--|
| Lenovo XClarity Controller (XCC, for BMC use) | Fully supported | Not supported. The SR635 and SR655 use ThinkSystem System Manager (TSM) instead. |
| Lenovo XClarity Provisioning Manager (LXPM) | Fully supported | LXPM Lite version supported – UEFI graphic mode is not supported |
| Lenovo Capacity Planner | Fully supported | |
| XClarity Energy Manager | The power capping function is not supported | |
| Lenovo Business Vantage (for PRC only) | Not supported | Supports the following functions only: <ul style="list-style-type: none">• Data Safe• Sure Erase• Smart USB Protection• D31 USB Data Safe• For the SR635 with Nation Z TPM models: hardware encryption/decryption is not |

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| | | |
|--------------------------------------|--|---|
| | | hardware encryption/decryption is not supported |
| Lenovo XClarity Administrator (LXCA) | Supported, except that Configuration Pattern does not support RAID configurations on the rear 7 mm NVMe drives and M.2 NVMe drives | Only the inventory and hardware status monitoring function is supported |
| Lenovo XClarity Mobile | Fully supported | <ul style="list-style-type: none">• Only the inventory and hardware status monitoring function is supported• Front USB connection is not supported |
| OneCLI | Most OneCLI functions are supported – see the following slides for limitation details | Only inventory and log collection functions are supported |
| Bootable Media Creator (BoMC) | Fully supported | Use of the UXSP system pack for platform for firmware upgrades is supported |
| UpdateXpress | Fully supported | Not supported |

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|--------------------------------------|---|---|
| Lenovo XClarity Administrator (LXCA) | Pattern does not support RAID configurations on the rear 7 mm NVMe drives and M.2 NVMe drives | Only the inventory and hardware status monitoring function is supported |
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| OneCLI | Most OneCLI functions are supported – see the following slides for limitation details | Only inventory and log collection functions are supported |
| Bootable Media Creator (BoMC) | Fully supported | Use of the UXSP system pack for platform for firmware upgrades is supported |
| UpdateXpress | Fully supported | Not supported |
| UpdateXpress System Pack (UXSP) | Fully supported | Limited support – only the system pack for platform is supported |

7 mm drive names in XCC

In the **Inventory** → **Storage Device** section in XCC, users will find the 7 mm drives marked as 7MM - 0 and 7MM - 1.

| Storage Device | | | | | ? |
|---|------------------|----------------|-------------|------------|---|
| Bay | Type | Serial Number | Part Number | FRU Number | |
| 7MM - 0 | 960GB NVMe SSD | S4ZVNX0MA00514 | SSS7A43234 | 02JG527 | > |
| 7MM - 1 | 960GB NVMe SSD | S4ZVNX0MA00497 | SSS7A43234 | 02JG527 | > |
| Drive 4 | 3.20TB NVMe SSD | 79J0A00DT01G | SSS7A23333 | 01PE228 | > |
| | | | | | |
| Array Configuration: 1 Virtual Disks, 894.190GB | | | | | ? |
| Name | Physical Drives | | RAID Level | Capacity | |
| 123 | 7MM - 0, 7MM - 1 | | RAID 1 | 894.190GB | |

UEFI layout

The SR645 UEFI options layout is based on the Intel-based ThinkSystem. Click the buttons to see comparisons.

SR645 and the Intel-based
ThinkSystem

SR645 and the SR635 / SR655
(AMD 1-socket ThinkSystem)

SR645 and the Intel-based ThinkSystem



The image displays two side-by-side screenshots of BIOS/UEFI setup utilities. The top of each screen features a dark blue header with icons for Media, Recording, Keyboard, Mouse, and Screen Mode. The left screen is titled 'SR645' and the right screen is titled 'Intel-based ThinkSystem', both in orange-outlined boxes. The right screen also includes the 'Lenovo' logo. Both screens show a 'System Configuration and Boot Management' menu with options like 'Select Language' (English), 'Launch Graphical System Setup', 'System Information', 'System Settings', 'Date and Time', 'Start Options', 'Boot Manager', 'BMC Settings', 'System Event Logs', 'User Security', 'Save Settings', 'Discard Settings', 'Load Default Settings', and 'Exit Setup Utility'. The right screen includes an additional instruction: 'Change the language for the current system.' The bottom of each screen shows navigation instructions: '↑=Move Highlight', '<Enter>=Select Entry', and '<ESC>=Exit Setup Utility'.

Media Recording Keyboard Mouse Screen Mode

SR645

System Configuration and Boot Management

Select Language English

Launch Graphical System Setup

▶ System Information

▶ System Settings

▶ Date and Time

▶ Start Options

▶ Boot Manager

▶ BMC Settings

▶ System Event Logs

▶ User Security

Save Settings

Discard Settings

Load Default Settings

Exit Setup Utility

↑=Move Highlight <Enter>=Select Entry

Media Recording Keyboard Mouse Screen Mode

Intel-based ThinkSystem

Lenovo

System Configuration and Boot Management

Select Language English

Launch Graphical System Setup

▶ System Information

▶ System Settings

▶ Date and Time

▶ Start Options

▶ Boot Manager

▶ BMC Settings

▶ System Event Logs

▶ User Security

Save Settings

Discard Settings

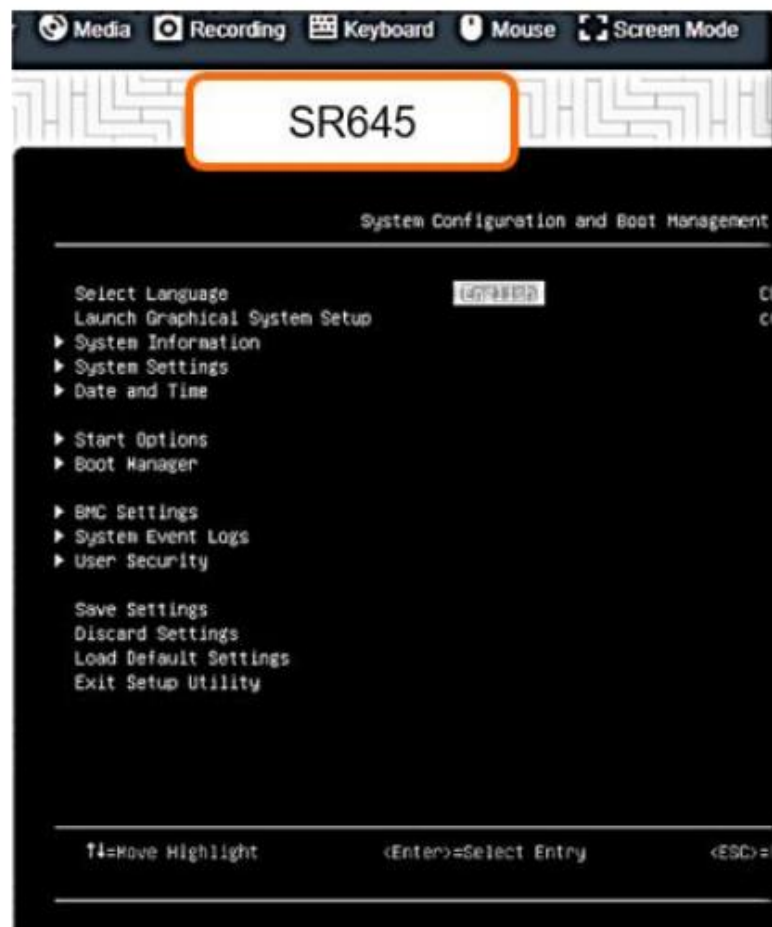
Load Default Settings

Exit Setup Utility

Change the language for the current system.

↑=Move Highlight <Enter>=Select Entry <ESC>=Exit Setup Utility

SR645 and the SR635 / SR655 (AMD 1-socket ThinkSystem)



AMD-based ThinkSystem UEFI options path comparison

The SR645 UEFI system setting options are different to those of other AMD-based ThinkSystem models (the SR635 and SR655). Click the buttons to see comparisons.

System event logs

BMC network setting

Change UEFI password

Memory speed

Date and time

Operating modes

IOMMU

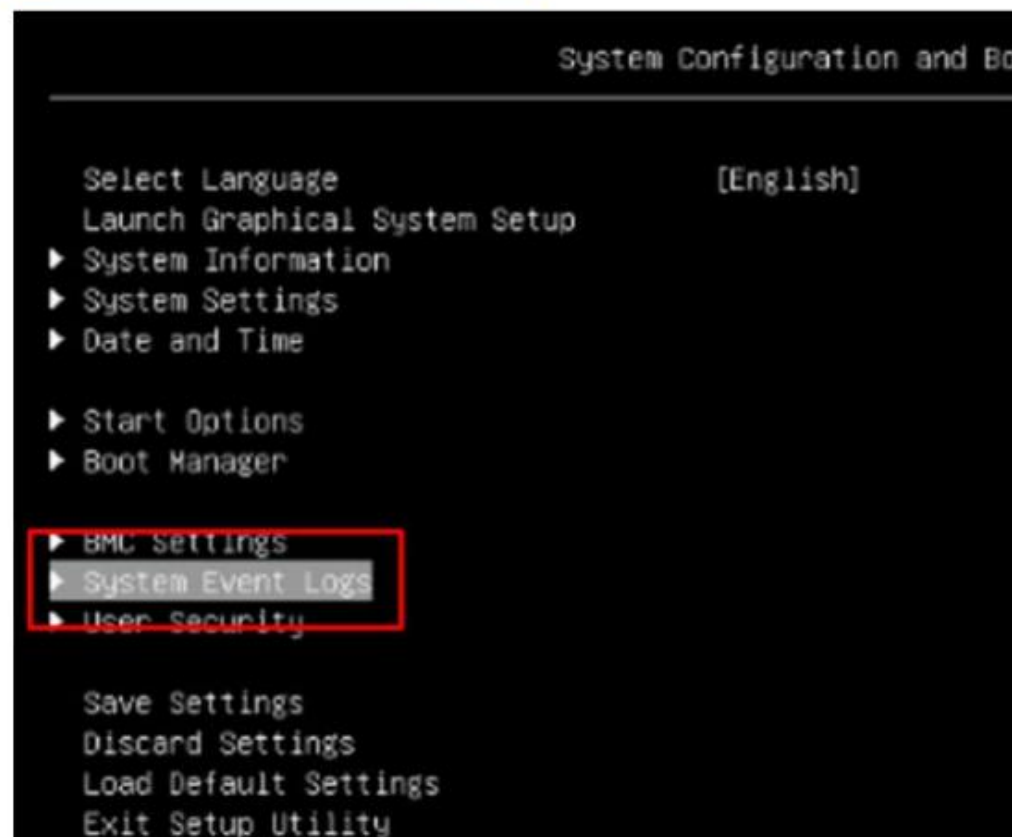
Save and exit

Option ROM

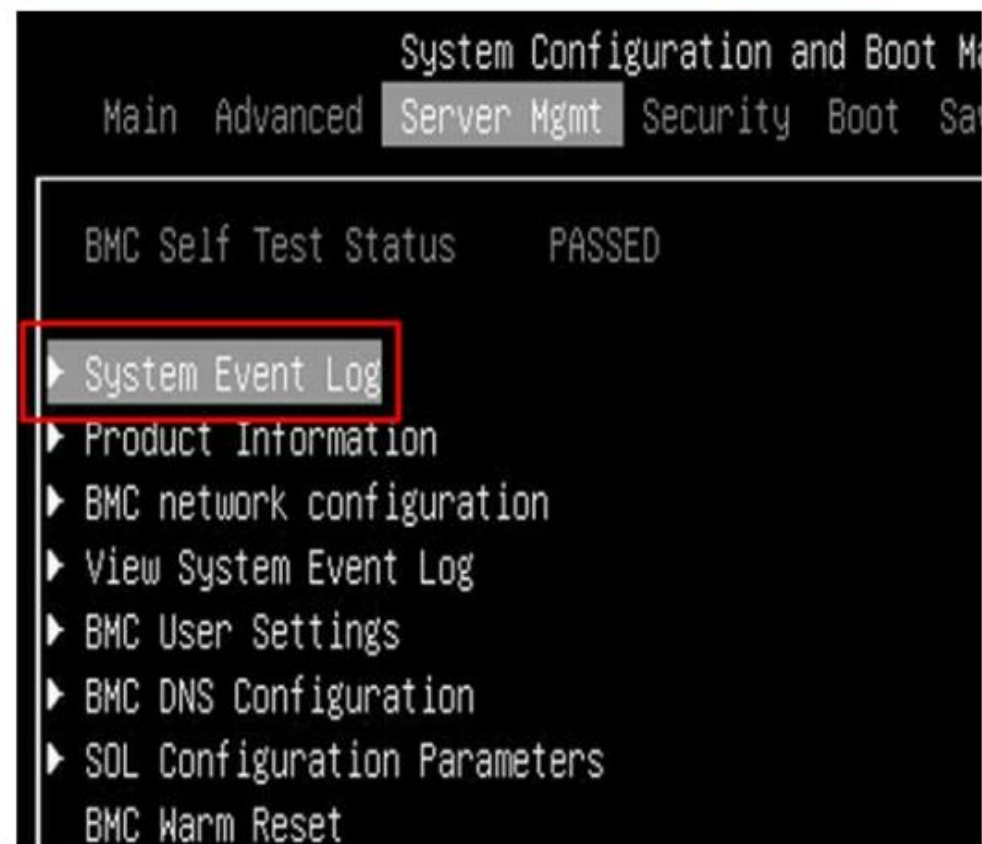
System event logs



SR645: On the main page



SR635 / SR655: Under the Server Mgmt tab



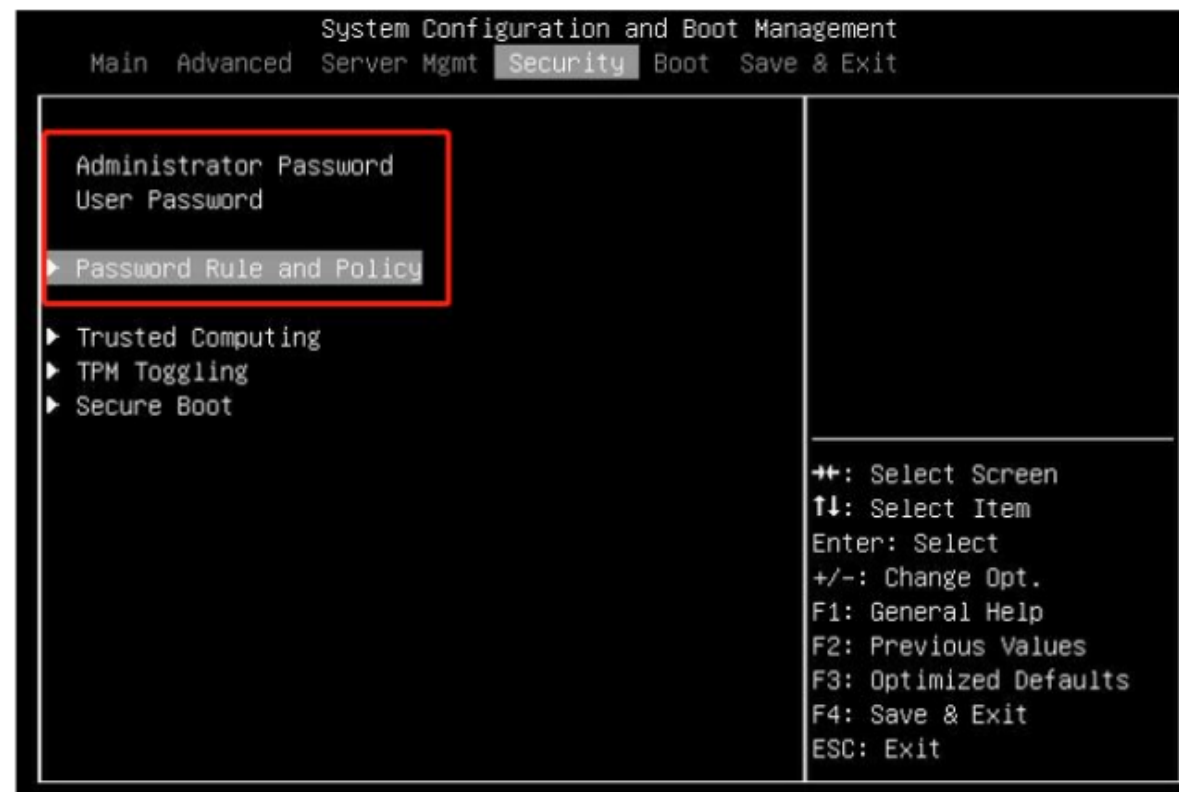
Change UEFI password



SR645: On the main page → User security page



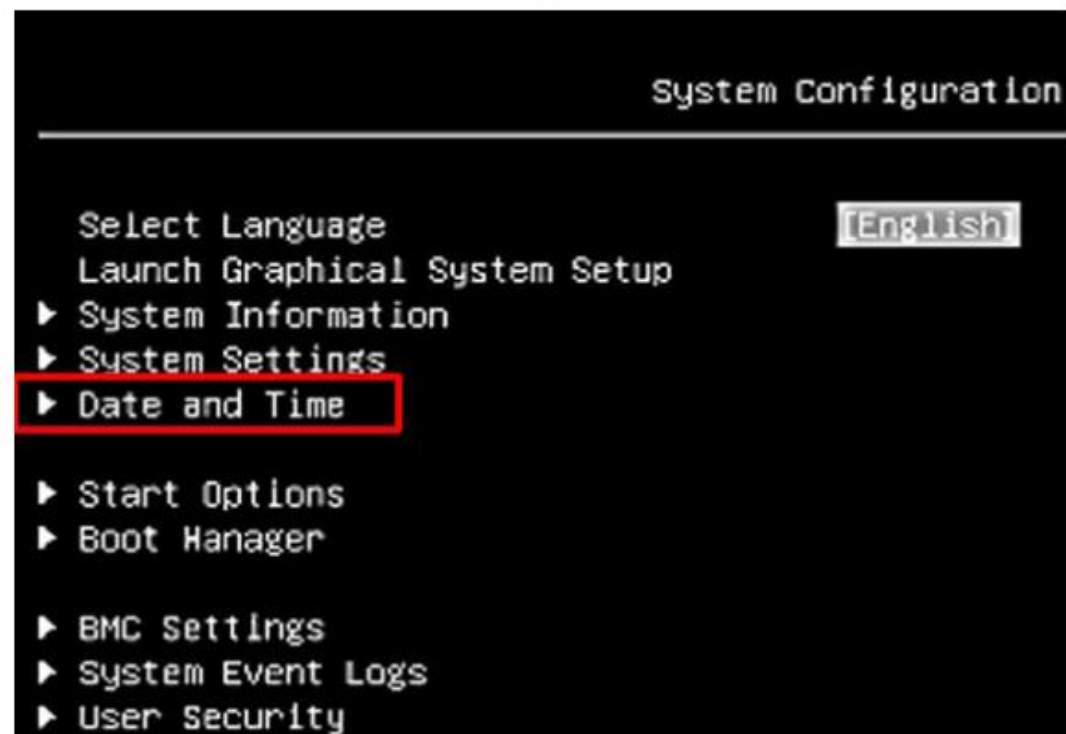
SR635 / SR655: Under the Security tab



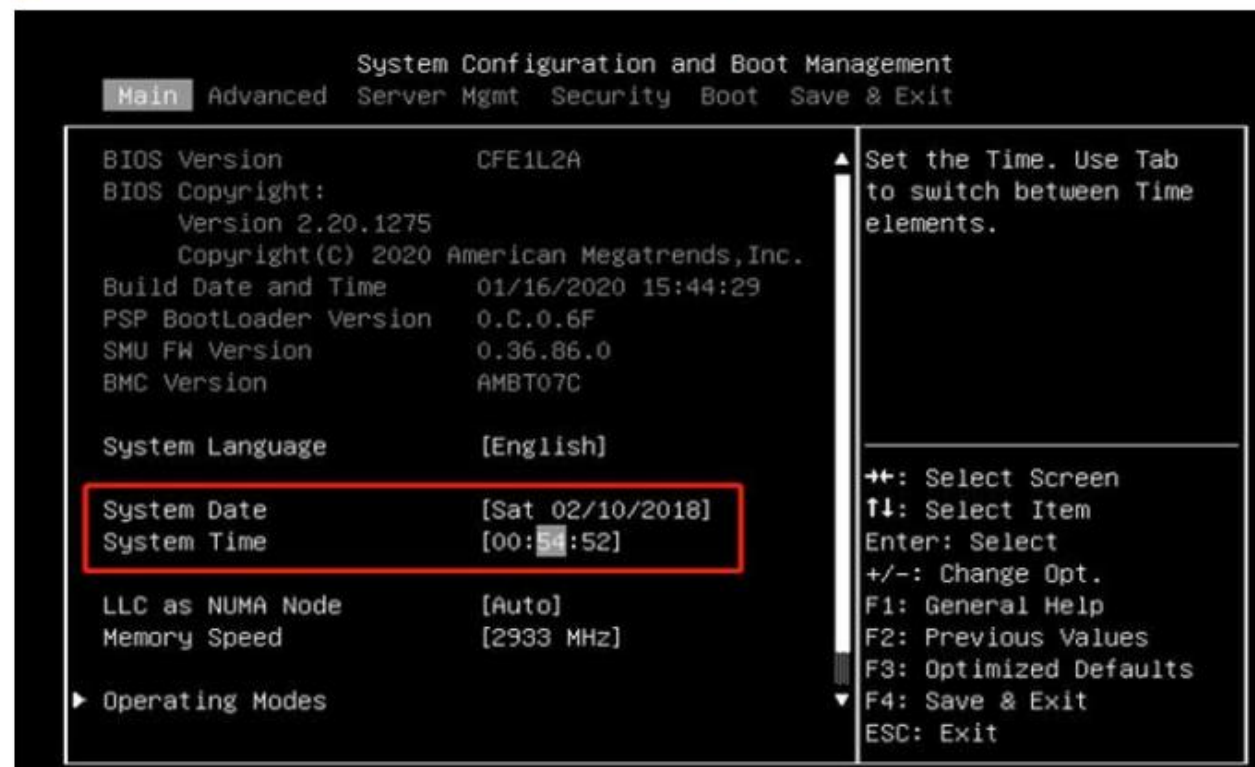
Date and time



SR645: On the main page



SR635 / SR655: Under the Main tab



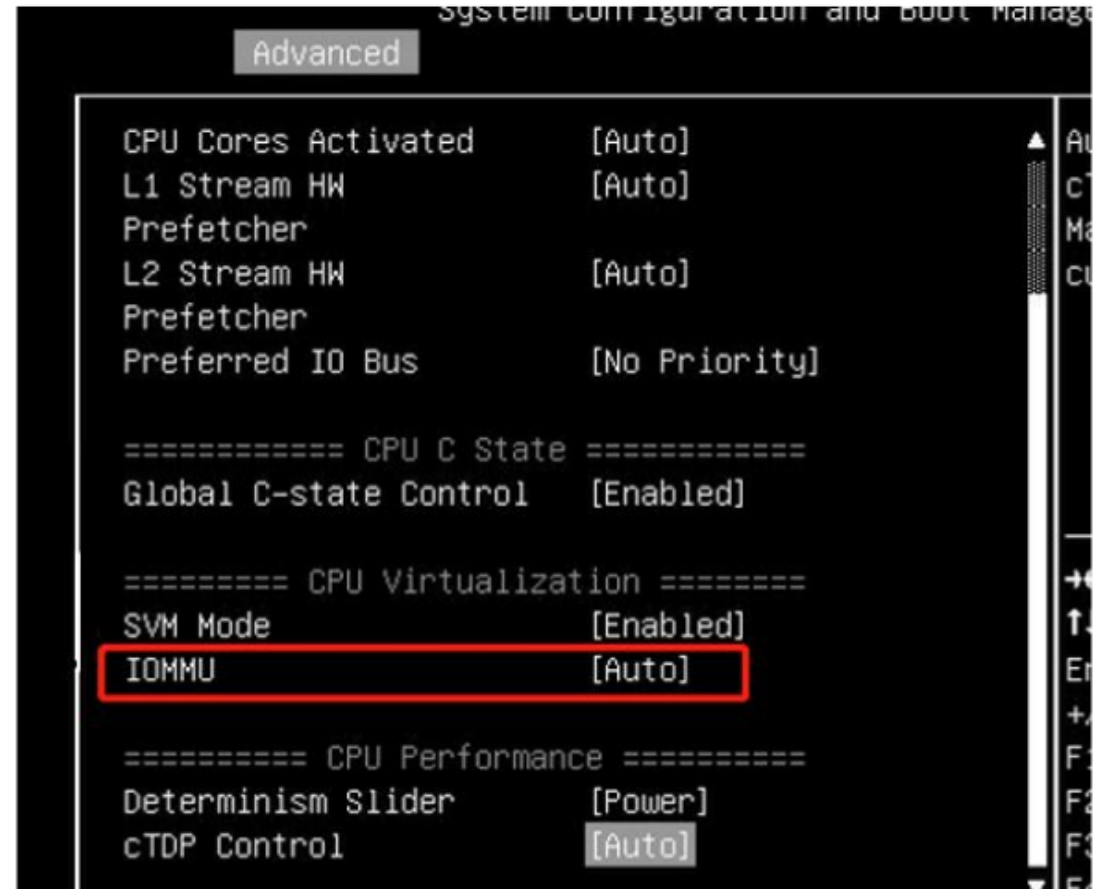
IOMMU



SR645: On the System settings → Device and I/O ports page



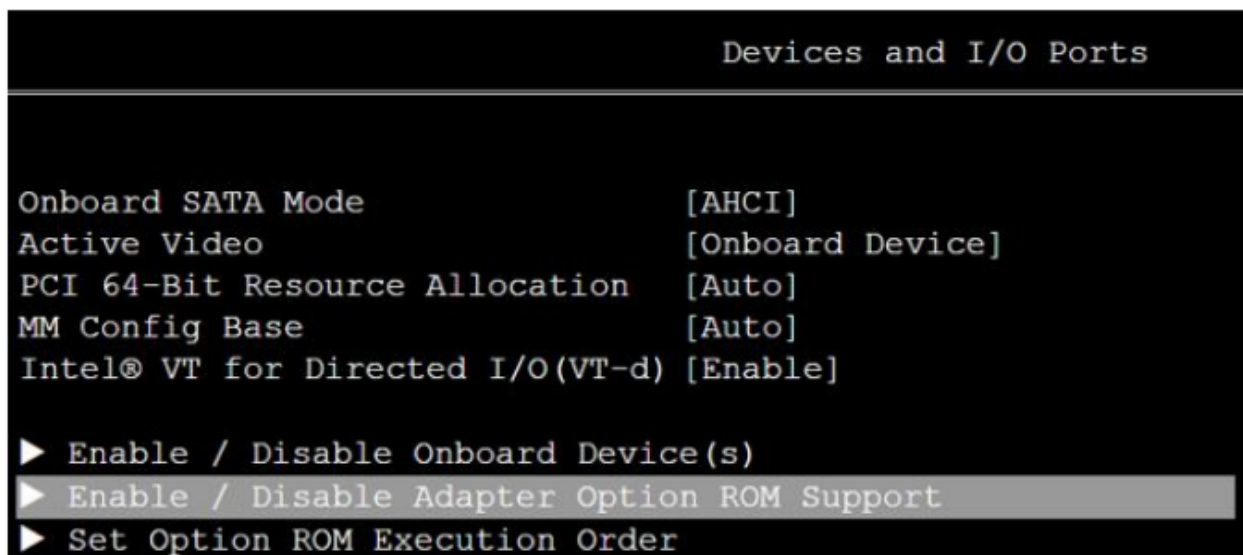
SR635 / SR655: On the Advanced → CPU configuration page



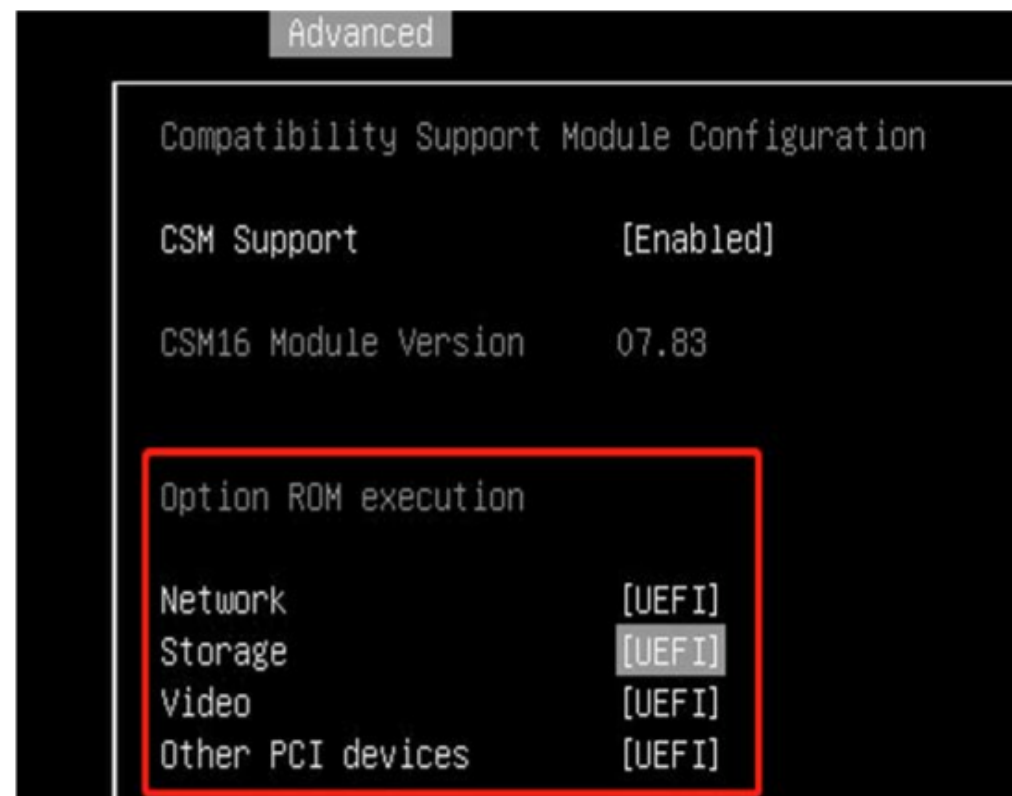
Option ROM



SR645: On the System settings → Device and I/O ports page



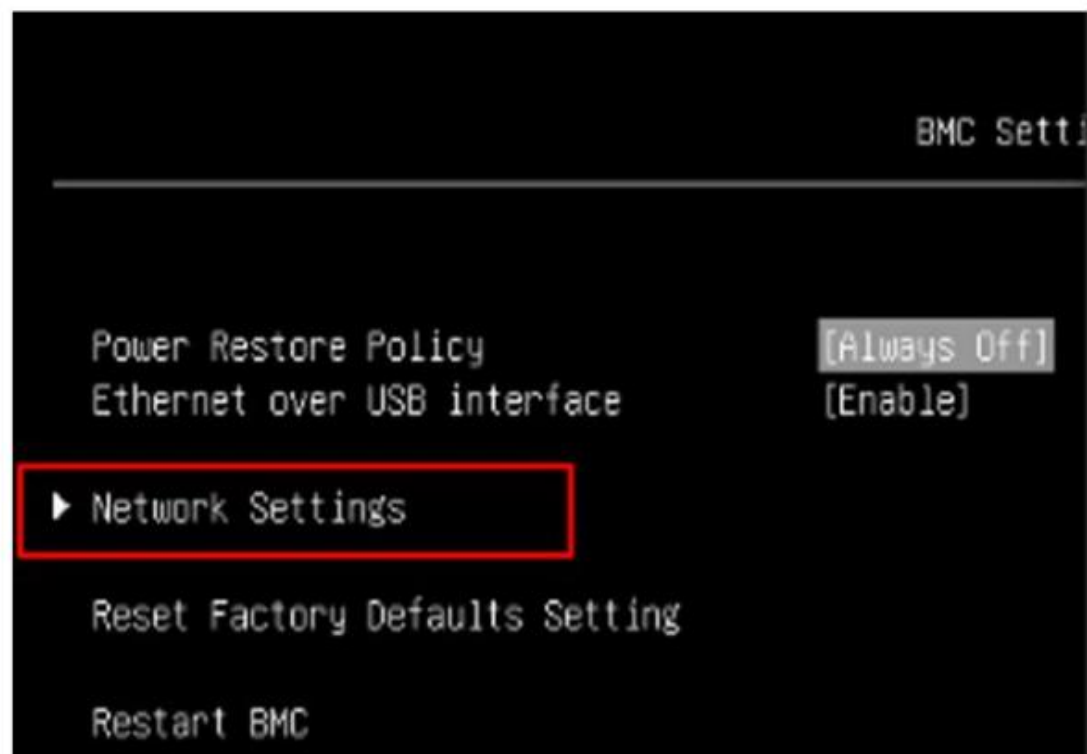
SR635 / SR655: On the Advanced → CSM configuration page



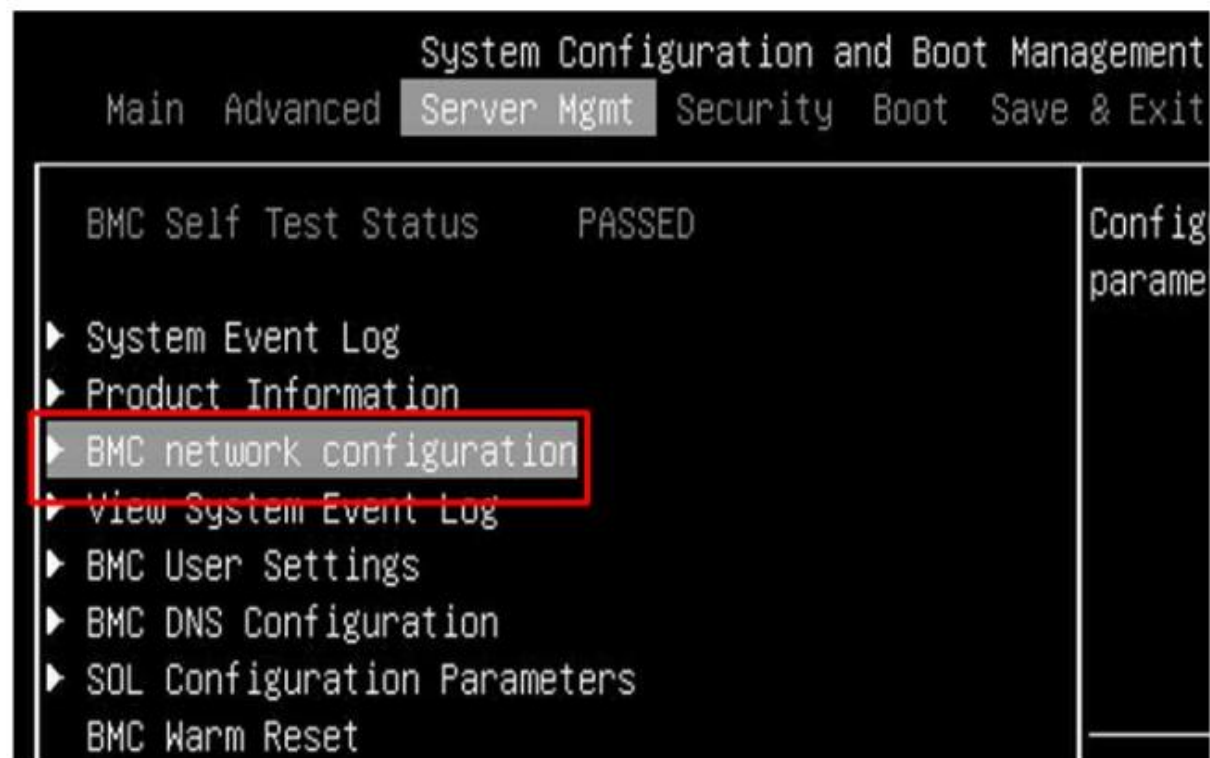
BMC network setting



SR645: On the main page → BMC settings → Network Settings



SR635 / SR655: Under the Security tab → BMC network configuration



Memory speed



SR645: On the System settings → Memory page

| Memory | |
|-------------------------|-------------------|
| ▶ System Memory Details | |
| Total Memory Size | 48 GB |
| Memory Speed | [Max Performance] |
| Memory Power Management | [Disable] |
| Patrol Scrub | [Enable] |
| Memory Data Scrambling | [Enable] |
| Cold Boot Fast | [Enable] |
| Memory Test | [Automatic] |

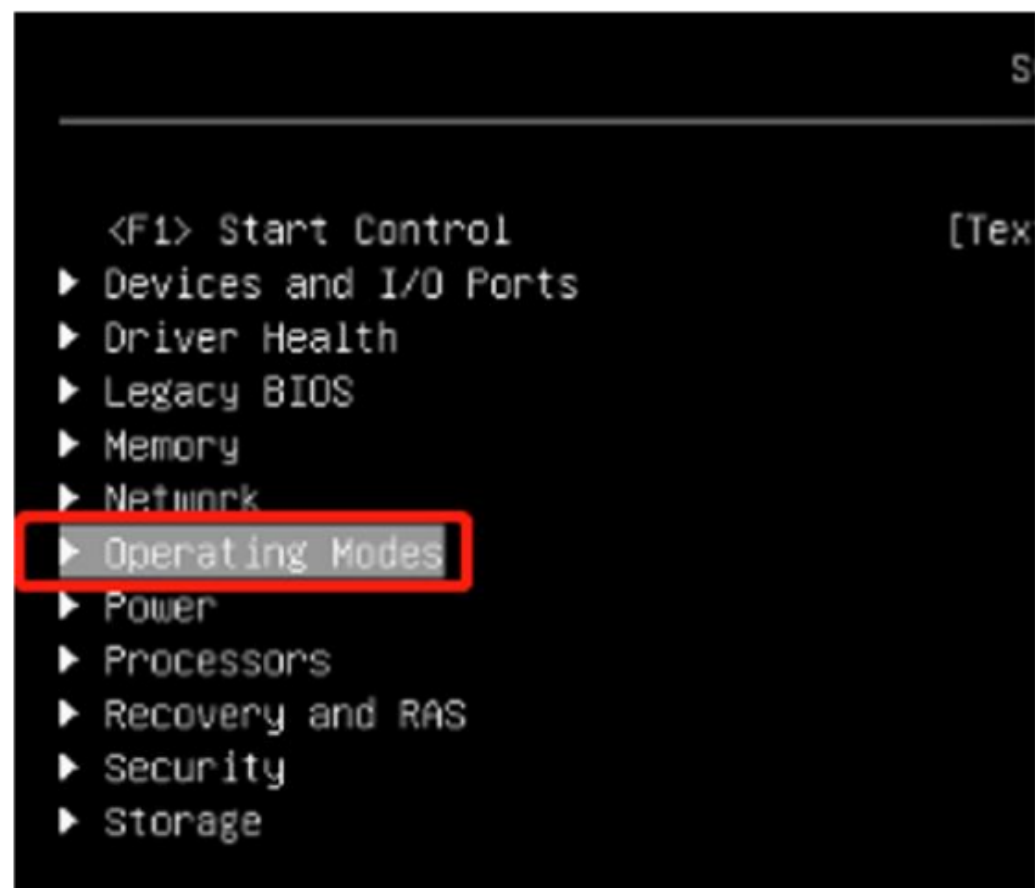
SR635 / SR655: Under the Main tab

| System Configuration and BIOS | |
|--|------------------------------------|
| Main | Advanced Server Mgmt Security Boot |
| Version 2.20.1275 | |
| Copyright(C) 2020 American Megatrends, | |
| Build Date and Time | 01/16/2020 15:44:2 |
| PSP BootLoader Version | 0.C.0.6F |
| SMU FW Version | 0.36.86.0 |
| BMC Version | AMBT07C |
| System Language | [English] |
| System Date | [Thu 02/15/2018] |
| System Time | [08:26:38] |
| LLC as NUMA Node | [Auto] |
| Memory Speed | [2933 MHz] |

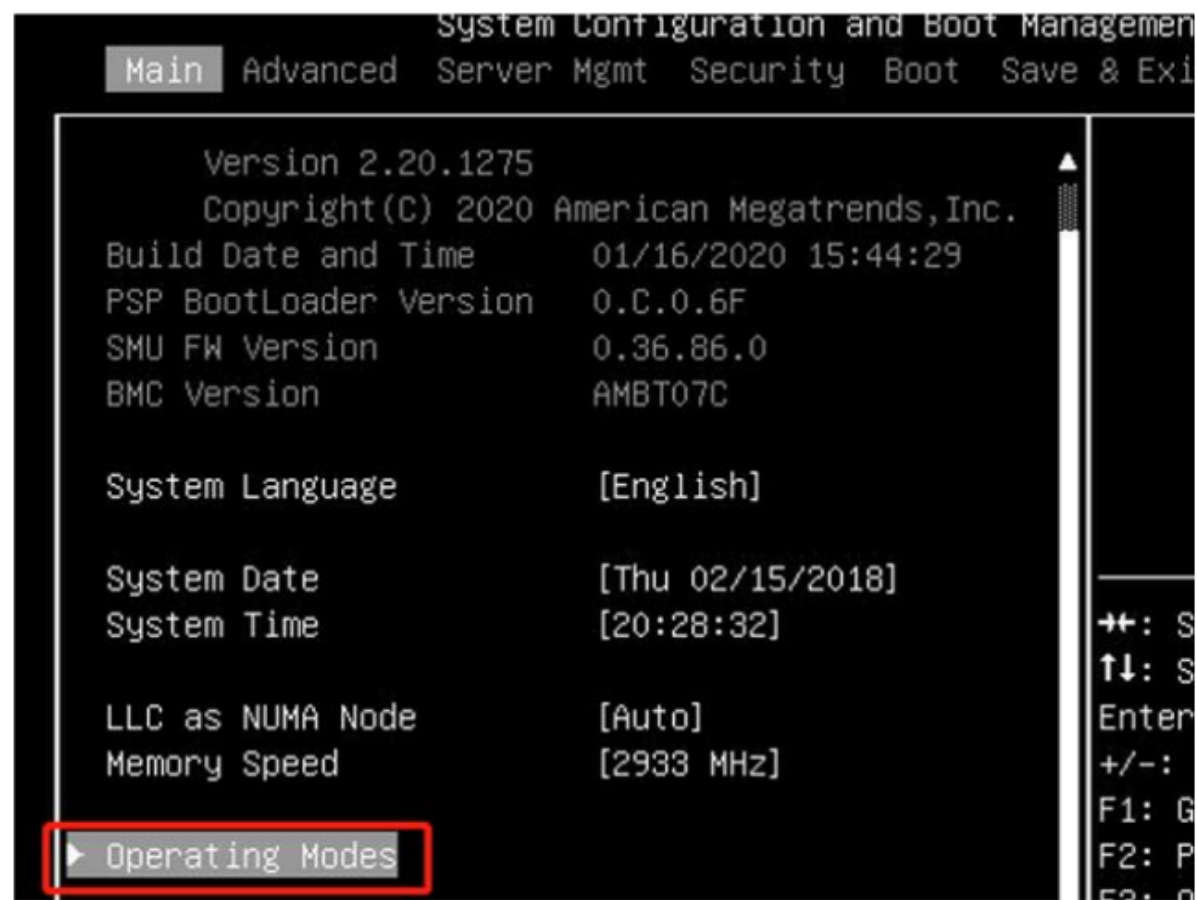
Operating modes



SR645: On the System Settings page



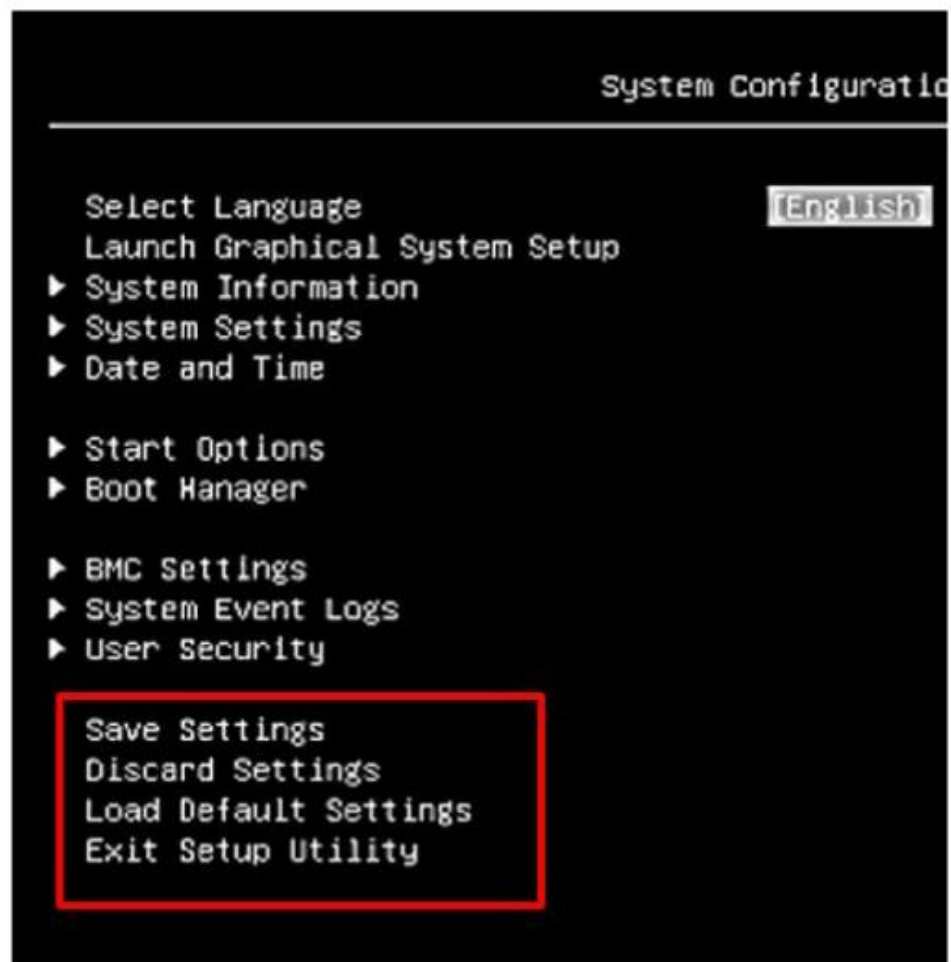
SR635 / SR655: Under the Main tab



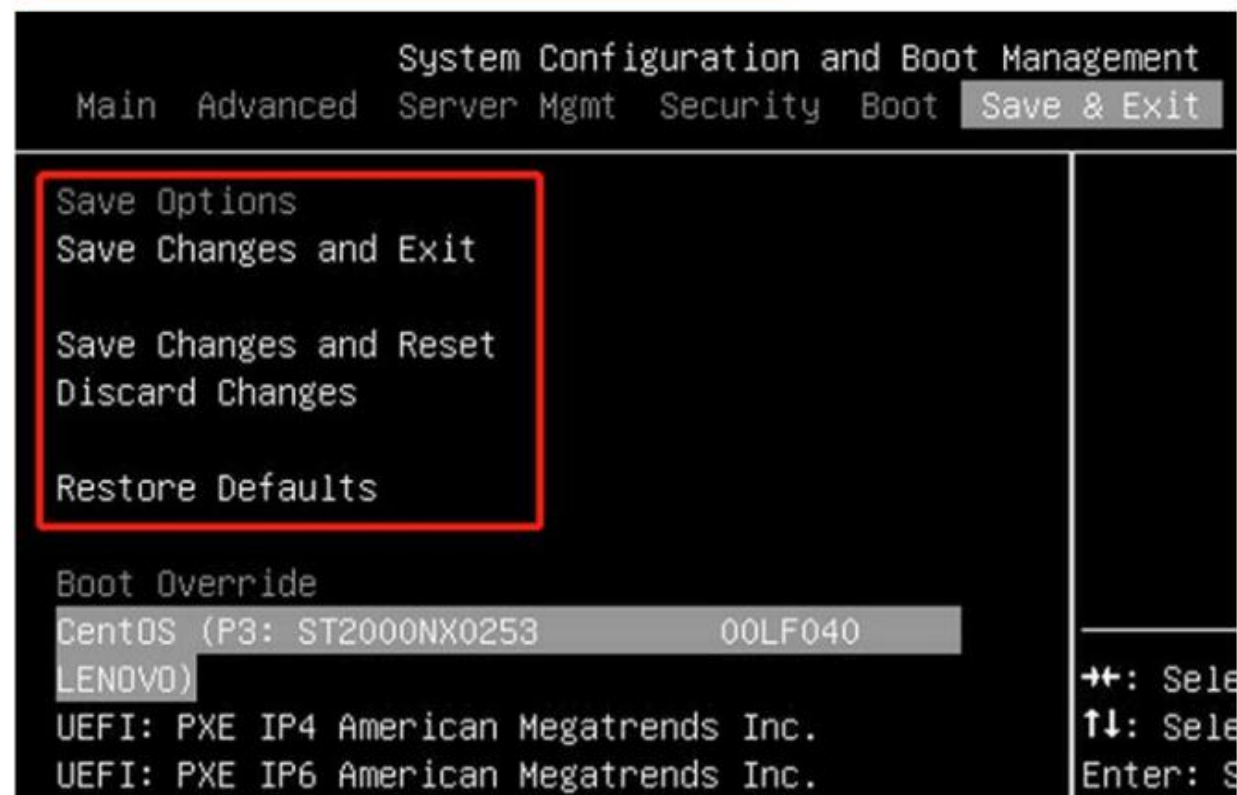
Save and exit



SR645: On the main page



SR635 / SR655: Under Save & Exit tab



OneCLI limitations on the SR645

At present, OneCLI has the following limitations on the SR645:

- Users cannot use OneCLI to update the power supply unit firmware.
- Users can only use OneCLI to update the PCIe NVMe switch adapters, RAID adapters, and NICs in in-band mode.
- In-band and out-of-band RAID array configuration limitations:
 - With Broadcom controller RAID adapters: OneCLI supports both out-of-band and in-band mode
 - With Marvell controller RAID adapters: OneCLI supports out-of-band mode only; in-band mode will be supported with future updates
 - With Intel RSTe: OneCLI supports in-band mode only

Note: Use OneCLI version 2.8 or later for the SR645.

New effortless features in LXPM

For the ThinkSystem SR645 and SR665, LXPM provides the following new effortless features. Click the buttons to see more information.

Effortless installation

Effortless diagnostics

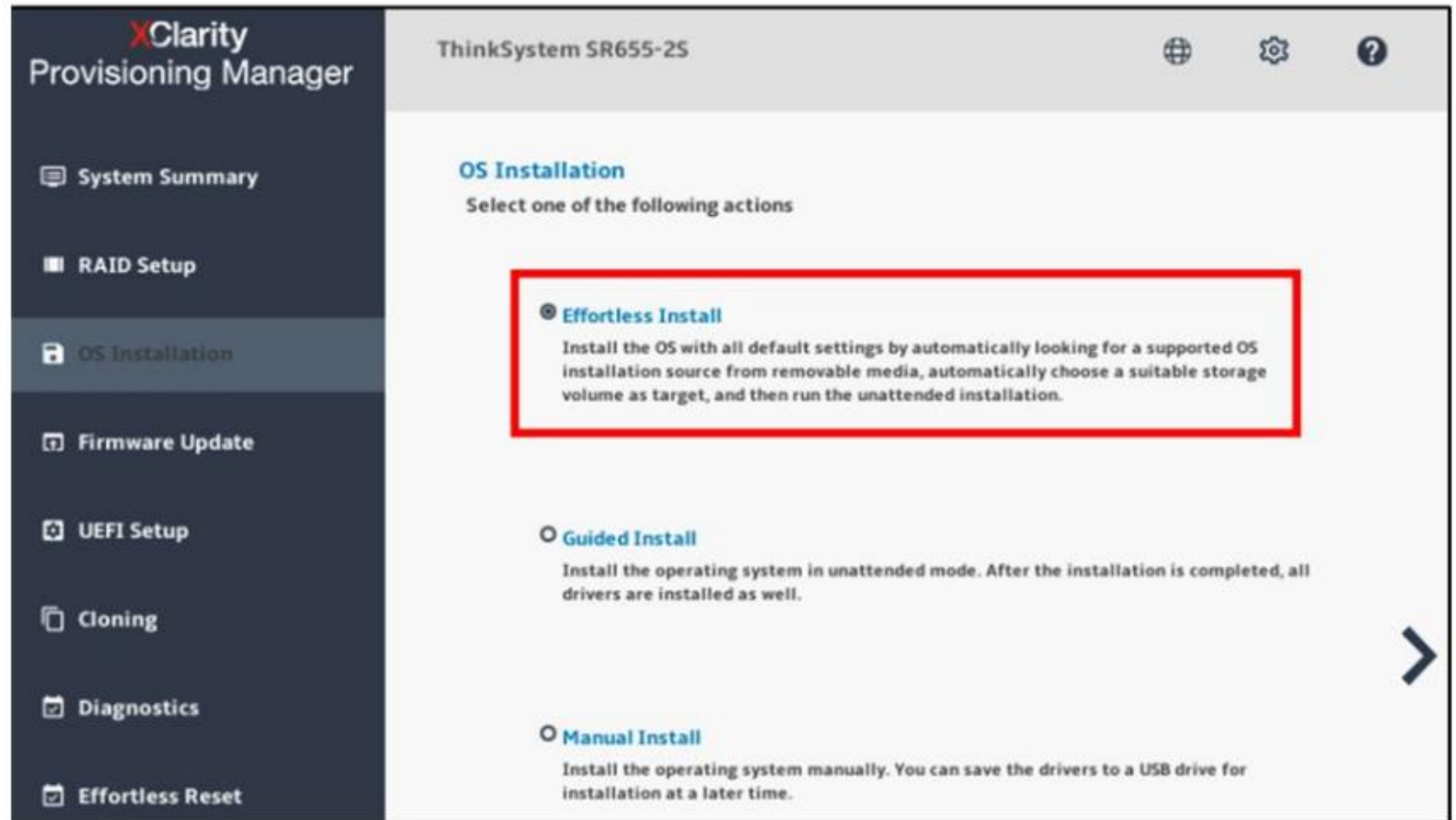
Effortless reset

Note: At present, Intel-based ThinkSystem models (those released before 2020) do not support these effortless features in LXPM.

Effortless installation

In the Effortless Install interface, users can install the OS with default settings by automatically looking for a supported OS installation resource from removable media and then automatically installing the OS on the system.

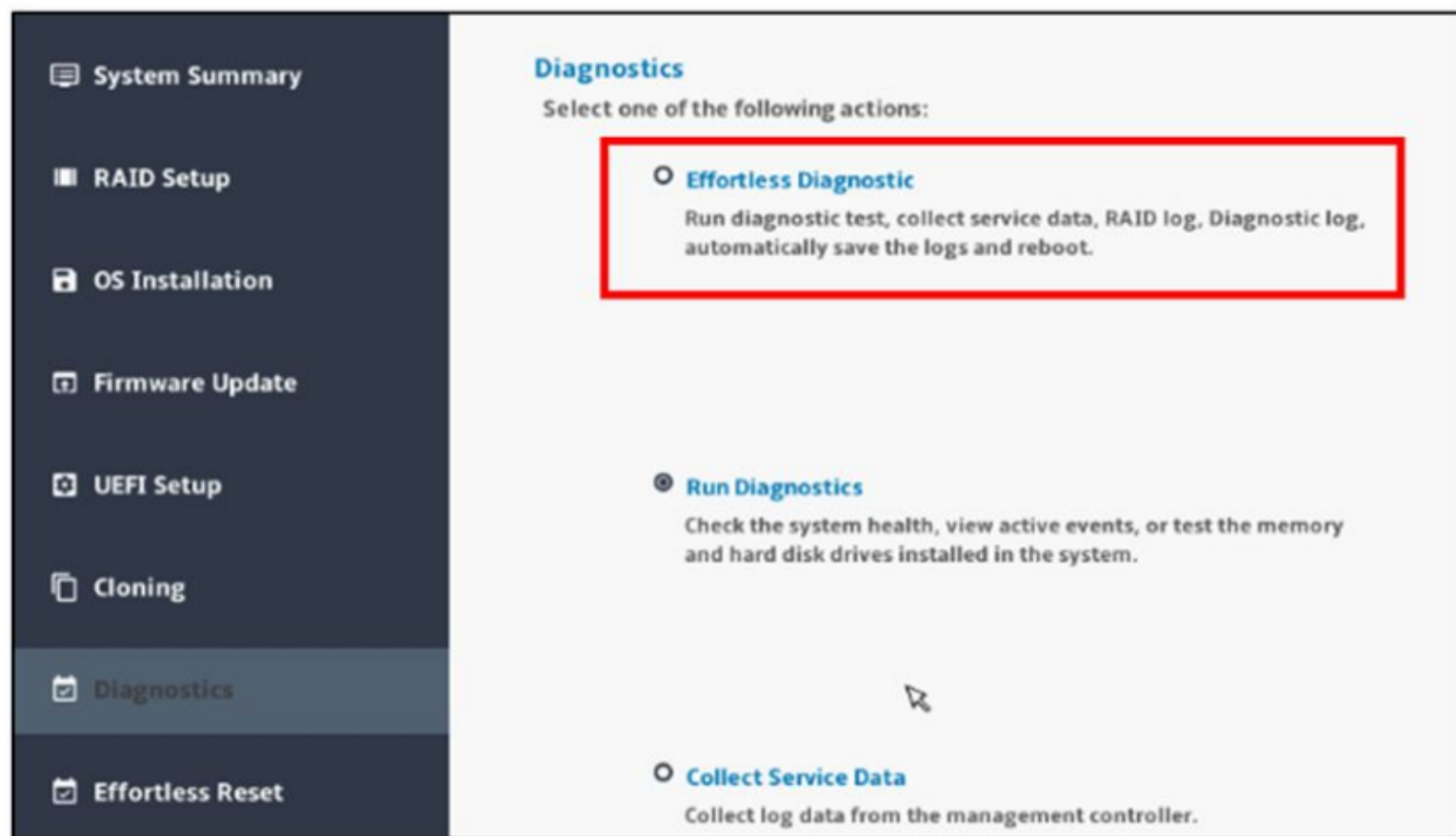
For complete instructions about how to use effortless installation to install the OS, refer to LXPM V3 documentation on [Systems Management Documentation](#) Web site.



Effortless diagnostics

Use effortless diagnostics to collect logs for problem escalation. The effortless log package includes FFDC logs, RAID adapter logs, disk drive test reports, and memory test reports.

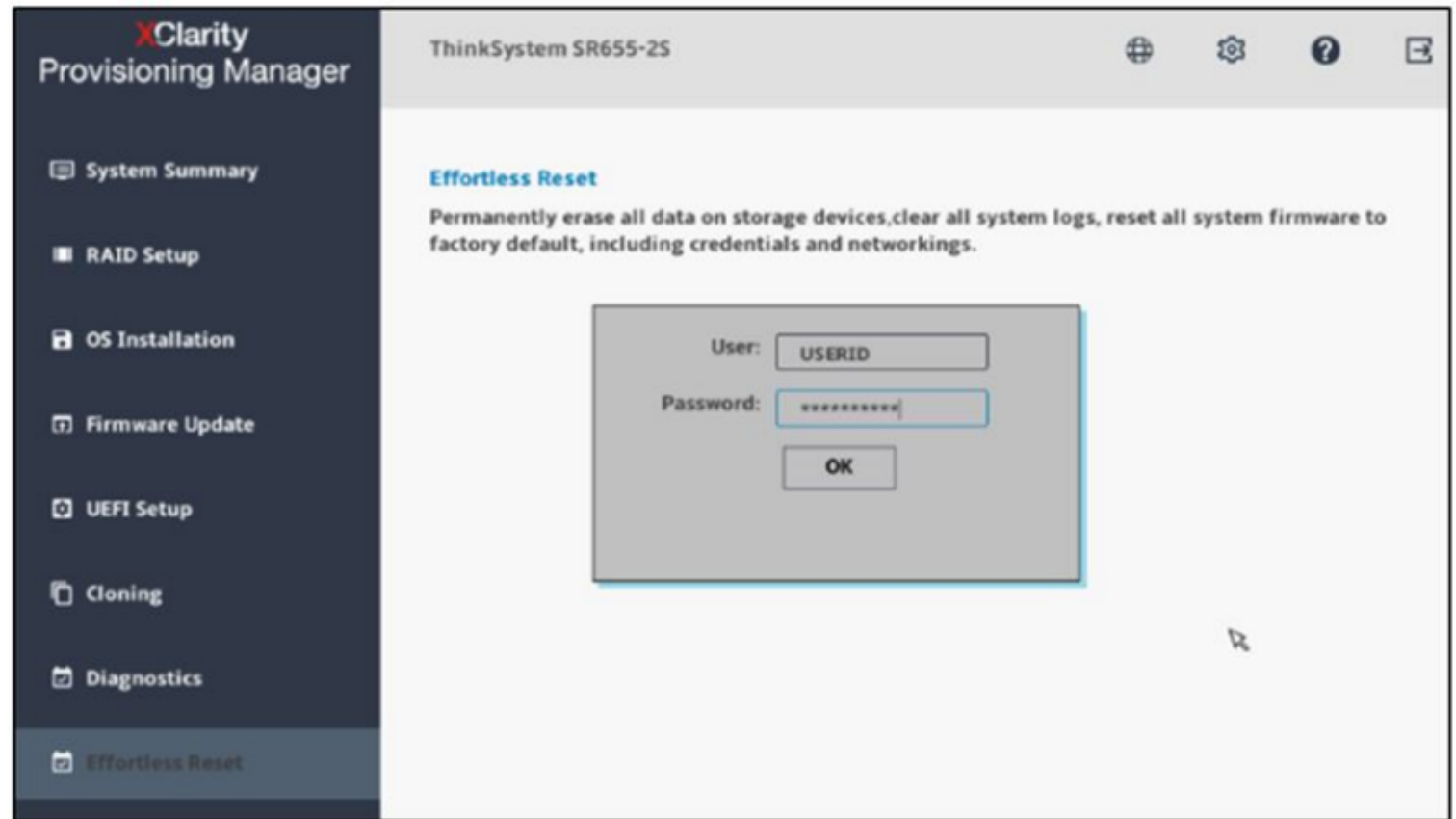
For complete instructions about how to use effortless diagnostics, refer to LXPM V3 documentation on [Systems Management Documentation](#) Web site.



Note: Effortless diagnostics can only collect RAID adapter logs with the Broadcom RAID controller.

Effortless reset

Use effortless reset to permanently erase all data on storage devices, clear all system logs, and reset the whole system to factory default, including credentials and networkings. For complete instructions about how to use effortless reset, refer to [LXPM V3 documentation on Systems Management Documentation](#) Web site.



Note: Effortless reset can only erase the data on the internal drives of the system.