2020

Razberi Core Manual and Getting Started Guide

razberi technologies

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Table of Contents

Table of Figures

List of Tables

Package Contents

Razberi Core Server (V8, V12, V14, A8) cartons will contain the following items.

- Core Server (1)
- Core Server Front Bezel (1)
- Rack Ready Rail Kit 1 Set (1LH & 1RH)
- Power Cords (2) NEMA 5-15P to C13 Wall Plug, 125 Volt, 15 AMP, 10 Feet (3m), Power Cord, North America
- Installation Guide (1)
- Technical Support Bulletin (1)
- Factory Burn-in test results (1)
- Operating System Activation Instructions (1)

V8 Overview

Front View of Server

Figure 1. Front View of V8

Table 1. Front View of V8

Item	Ports, panels, and slots	Description
1	Left control panel	Contains the system health and system ID, status LED, and the iDRAC Quick Sync 2 (wireless) indicator. **NOTE: The iDRAC Quick Sync 2 indicator is available only on certain configurations.** Status LED: Enables you to identify any failed hardware components. There are up to five status LEDs and an overall system health LED (Chassis health and system ID) bar. For more information, see the Status LED indicators section. Quick Sync 2 (wireless): Indicates a Quick Sync enabled system. The Quick Sync feature is optional. This feature enables management of the system by using mobile devices. This feature aggregates hardware or firmware inventory and various system level diagnostic and error information that can be used in troubleshooting the system.
2	Drive slots	Enable you to install drives that are supported on your system. For more information about drives, see the Technical specifications section.
3	Optical drive (optional)	One optional slim SATA DVD-ROM drive or DVD+/-RW drive.
4	Right control panel	Contains the power button, USB ports, iDRAC Direct (Micro-AB USB), VGA port.
5	Information tag	The Information Tag is a slide-out label panel that contains system information such as Service Tag, NIC, MAC address, and so on. If you have opted for the secure default access to iDRAC, the Information tag also contains the iDRAC secure default password.

Rear View of Server

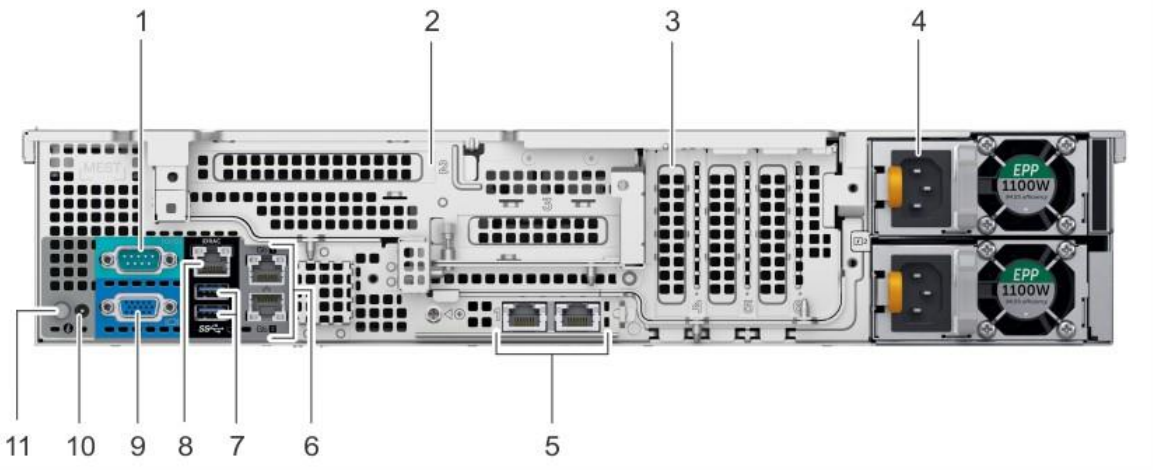

Figure 2. Rear View of V8

Table 2. Rear View of V8

Item	Features	Icon	Description
1	Serial port		Use the serial port to connect a serial device to the system. For more information about the supported serial port, see the technical specifications section.
2	Butterfly riser slot	N/A	Use the card slots to connect full-height PCIe expansion cards on the butterfly riser.
3	PCIe slot (3)	N/A	Use the card slots to connect up to three half-height PCIe expansion cards on the system board.
4	Power supply unit (PSU)	N/A	For information about supported PSUs, see the technical specifications section.
5	LOM riser ports		Use the Ethernet or SFP+ ports to connect Local Area Networks (LANs) to the system. For more information about the supported Ethernet or SFP+ ports, see the Technical specifications section.
6	Ethernet ports (2)		Use the Ethernet ports to connect Local Area Networks (LANs) to the system. For more information about the supported Ethernet ports, see the Technical specifications section.
7	USB 3.0 port		Use the USB 3.0 port to connect USB devices to the system. These ports are 4-pin, USB 3.0-compliant.
8	iDRAC9 dedicated network port		Use the iDRAC9 dedicated network port to securely access the embedded iDRAC on a separate management network.

Item	Features	Icon	Description
1	Serial port		Use the serial port to connect a serial device to the system. For more information about the supported serial port, see the technical specifications section.
9	VGA port		Use the VGA port to connect a display to the system. For more information about the supported VGA port, see the technical specifications section.
10	Status indicator cable port	N/A	Enables you to connect the status indicator cable and view system status when the CMA is installed.
11	System identification button		Press the system ID button: • To locate a particular system within a rack. • To turn the system ID on or off. • To reset iDRAC, press and hold the button for more than 15 seconds. • To reset iDRAC using system ID, ensure that the system ID button is enabled in the iDRAC setup. • If the system stops responding during POST, press and hold the system ID button (for more than five seconds) to enter the BIOS progress mode.

Left Control Panel View

Figure 3. Left Control Panel without optional iDRAC Quick Sync 2.0 indicator

Figure 4. Left control panel with optional iDRAC Quick Sync 2.0 indicator

Table 3. Left Control Panel View

Item	Indicator, button, or connector	Icon	Description
1	Status LED indicators	N/A	Indicate the status of the system. For more information, see the Status LED indicators on page 12 section.
2	System health and system ID indicator		Indicates the system health.
3	iDRAC Quick Sync 2 wireless indicator (optional)		Indicates if the iDRAC Quick Sync 2 wireless option is activated. The Quick Sync 2 feature allows management of the system using mobile devices. This feature aggregates hardware/firmware inventory and various system level diagnostic/error information that can be used in troubleshooting the system. You can access system inventory, Lifecycle Controller logs or system logs, system health status, and also configure iDRAC, BIOS, and networking parameters. You can also launch the Virtual Keyboard, Video, and Mouse (KVM) viewer and virtual Kernel-based Virtual Machine (KVM), on a supported mobile device

Right Control Panel View

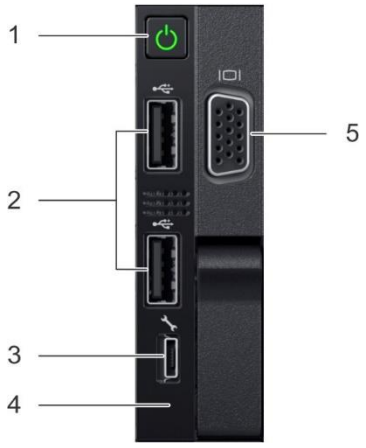

Figure 5. Right Control Panel

Table 4. Left Control Panel View

Item	Indicator, button, or connector	Icon	Description
1	Power button		Indicates if the system is powered on or off. Press the power button to manually power on or off the system. **NOTE:** *Press the power button to gracefully shut down an ACPI-compliant operating system.*
2	USB port		The USB ports are 4-pin, 2.0-compliant. These ports enable you to connect USB devices to the system.
3	iDRAC Direct (Micro-AB USB)		The iDRAC Direct (Micro-AB USB) port enables you to access the iDRAC Direct (Micro-AB) features.
4	iDRAC Direct (Micro-AB USB) LED	N/A	The iDRAC Direct (Micro-AB USB) LED indicator lights up to indicate that the iDRAC Direct port is connected. For more information, see the technical specifications section.
5	VGA port		Enables you to connect a display device to the system. For more information, see the technical specifications section.

Drive Indicator Codes

Each drive carrier has an activity LED indicator and a status LED indicator. The indicators provide information about the current status of the drive. The activity LED indicator indicates whether the drive is currently in use or not. The status LED indicator indicates the power condition of the drive.

Figure 6. Drive Indicators

Drive Indicator Codes

1. Drive activity LED indicator
2. Drive status LED indicator
3. Drive capacity label

NOTE: If the drive is in the Advanced Host Controller Interface (AHCI) mode, the status LED indicator does not turn on.

Table 5. Drive Indicators

Drive status indicator code	Condition
Flashes green twice per second	Identifying drive or preparing for removal.
Off	Drive ready for removal. **NOTE: The drive status indicator remains off until all drives are initialized after the system is turned on. Drives are not ready for removal during this time.**
Flashes green, amber, and then turns off	Predicted drive failure.
Flashes amber four times per second	Drive failed.
Flashes green slowly	Drive rebuilding.
Solid green	Drive online.
Flashes green for three seconds, amber for three seconds, and then turns off after six seconds	Rebuild stopped.

NIC Indicator Codes

Each NIC on the back of the system has indicators that provide information about the activity and link status. The activity LED indicator indicates if data is flowing through the NIC, and the link LED indicator indicates the speed of the connected network.

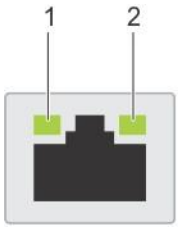

Figure 7. NIC Indicator Diagram

NIC Indicator codes

1. link LED indicator
2. activity LED indicator

Table 6. NIC Indicator Diagram

Status	Condition
Link and activity indicators are off	The NIC is not connected to the network.
Link indicator is green and activity indicator is blinking green	The NIC is connected to a valid network at its maximum port speed and data is being sent or received.
Link indicator is amber and activity indicator is blinking green	The NIC is connected to a valid network at less than its maximum port speed and data is being sent or received.
Link indicator is green and activity indicator is off	The NIC is connected to a valid network at its maximum port speed and data is not being sent or received.
Link indicator is amber and activity indicator is off	The NIC is connected to a valid network at less than its maximum port speed and data is not being sent or received.
Link indicator is blinking green and activity is off	NIC identity is enabled through the NIC configuration utility.

PSU Indicator Codes

AC power supply units (PSUs) have an illuminated translucent handle that serves as an indicator. The DC PSUs have an LED that serves as an indicator.

The indicator shows whether power is present or if a power fault has occurred

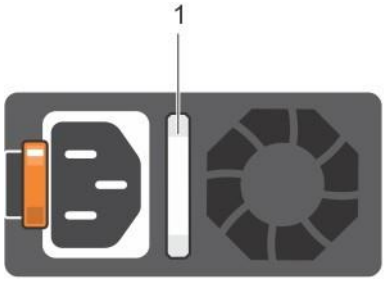

Figure 8. PSU Indicator Diagram

1. AC PSU status indicator/handle

Table 7. PSU Indicator Diagram

Power indicator codes	Condition
Green	A valid power source is connected to the PSU and the PSU is operational.
Blinking amber	Indicates a problem with the PSU
Not illuminated	Power is not connected to the PSU.
Blinking green	When the firmware of the PSU is being updated, the PSU handle blinks green. **CAUTION: Do not disconnect the power cord or unplug the PSU when updating firmware. If firmware update is interrupted, the PSUs do not function.**

Power indicator codes	Condition
Blinking green and turns off	When hot-plugging a PSU, the PSU handle blinks green five times at a rate of 4 Hz and turns off. This indicates a PSU mismatch with respect to efficiency, feature set, health status, or supported voltage. CAUTION: If two PSUs are installed, both the PSUs must have the same type of label; for example, Extended Power Performance (EPP) label. Mixing PSUs from previous generations of PowerEdge servers is not supported, even if the PSUs have the same power rating. This results in a PSU mismatch condition or failure to turn the system on. CAUTION: When correcting a PSU mismatch, replace only the PSU with the blinking indicator. Swapping the PSU to make a matched pair can result in an error condition and unexpected system shutdown. To change from a high output configuration to a low output configuration or vice versa, you must turn off the system. **CAUTION: AC PSUs support both 240 V and 120 V input voltages with the exception of Titanium PSUs, which support only 240 V. When two identical PSUs receive different input voltages, they can output different wattages and trigger a mismatch.** **CAUTION: If two PSUs are used, they must be of the same type and have the same maximum output power.** **CAUTION: Combining AC and DC PSUs is not supported and triggers a mismatch.**

LCD Panel

The LCD panel provides system information, status, and error messages to indicate if the system is functioning correctly or requires attention. The LCD panel can also be used to configure or view the system's iDRAC IP address.

The LCD panel is available only on the optional front bezel. The optional front bezel is hot-pluggable. The statuses and conditions of the LCD panel are outlined here:

- The LCD backlight is white during normal operating conditions.
- When the system needs attention, the LCD backlight turns amber and displays an error code followed by descriptive text. NOTE: If the system is connected to a power source and an error is detected, the LCD turns amber regardless of whether the system is turned on or off.
- When the system turns off and there are no errors, LCD enters the standby mode after five minutes of inactivity. Press any button on the LCD to turn it on.
- If the LCD panel stops responding, remove the bezel and reinstall it.

If the problem persists, see Getting help.

- The LCD backlight remains off if LCD messaging is turned off using the iDRAC utility, the LCD panel, or other tools.

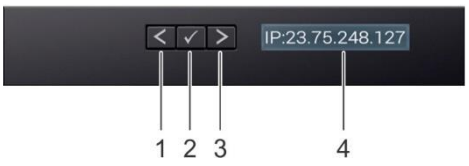

Figure 9. LCD Panel Diagram

Table 8. LCD Panel Diagram

Item	Button or display	Description
1	Left	Moves the cursor back in one-step increments.
2	Select	Selects the menu item highlighted by the cursor.
3	Right	Moves the cursor forward in one-step increments. During message scrolling: • Press and hold the right button to increase scrolling speed. • Release the button to stop. ⓘ **NOTE: The display stops scrolling when the button is released. After 45 seconds of inactivity, the display starts scrolling.**
4	Display	Displays system information, status, and error messages or iDRAC IP address.

System Information Label

You can identify your system using the unique Express Service Code and Service Tag. Pull out the information tag in front of the system to view the Express Service Code and Service Tag. Alternatively, the information may be on a sticker on the chassis of the system. The mini Enterprise Service Tag (EST) is found on the back of the system. Technical Support uses this information to route support calls to the appropriate personnel.

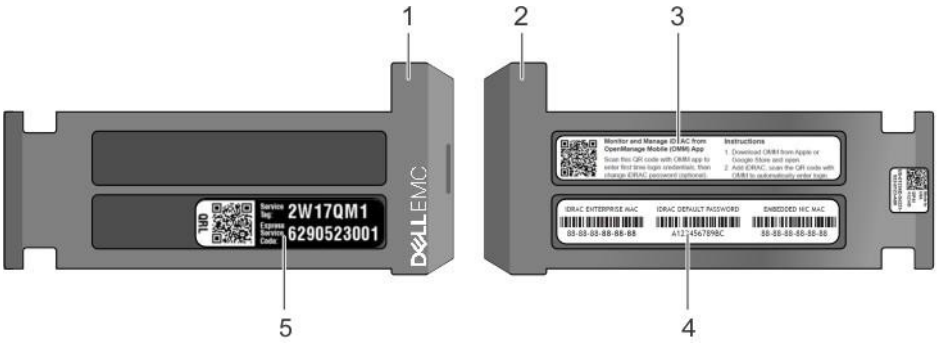

Figure 10. Service Tag Diagram

1. Information Tag (front view)
2. Information Tag (back view)
3. OpenManage Mobile (OMM) label

4. iDRAC MAC address and iDRAC secure password label
5. Service Tag

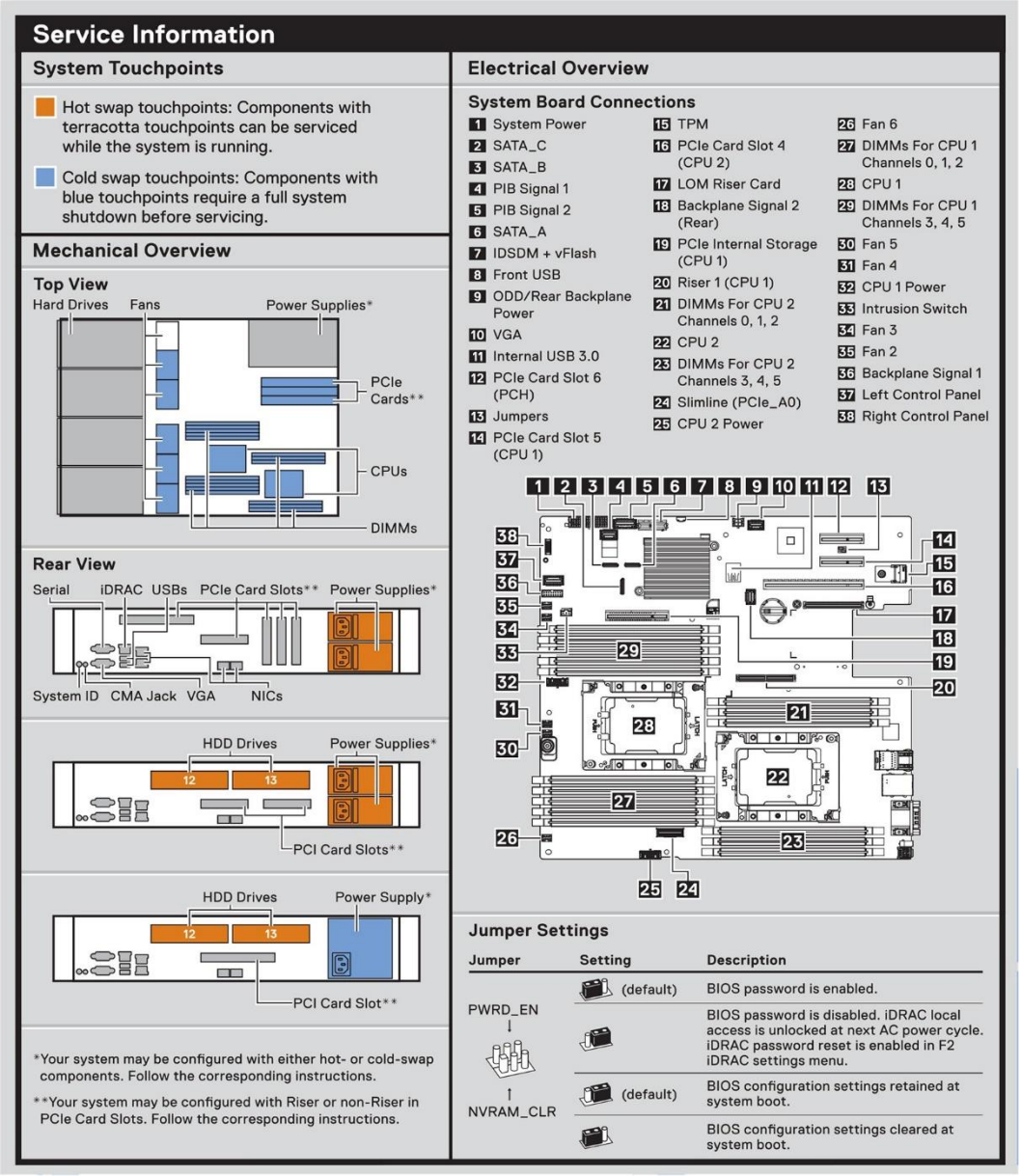

Figure 11. Service Information Panel with Touchpoints

V12 Overview

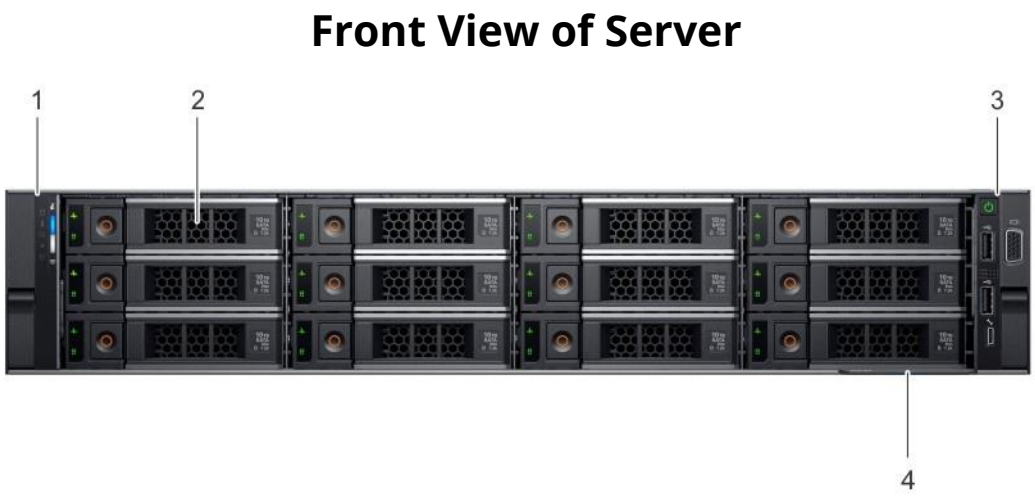

Figure 12. Front View of V12

Table 9. Front View of V12

Item	Ports, panels, and slots	Icon	Description
1	Left control panel	N/A	Contains the system health and system ID, status LED, and the iDRAC Quick Sync 2 (wireless) indicator. **NOTE: The iDRAC Quick Sync 2 indicator is available only on certain configurations** Status LED: Enables you to identify any failed hardware components. There are up to five status LEDs and an overall system health LED (Chassis health and system ID) bar. For more information, see the Status LED indicators section. Quick Sync 2 (wireless): Indicates a Quick Sync enabled system. The Quick Sync feature is optional. This feature enables management of the system by using mobile devices. This feature aggregates hardware or firmware inventory and various system level diagnostic and error information that can be used in troubleshooting the system. For more information,
2	Drive slots	N/A	Enable you to install drives that are supported on your system. For more information about drives, see the Technical specifications section.
3	Right control panel	N/A	Contains the power button, USB ports, iDRAC Direct (Micro-AB USB), VGA port.
4	Information tag	N/A	The Information Tag is a slide-out label panel that contains system information such as Service Tag, NIC, MAC address, and so on. If you have opted for the secure default access to iDRAC, the Information tag also contains the iDRAC secure default password.

Rear View of Server

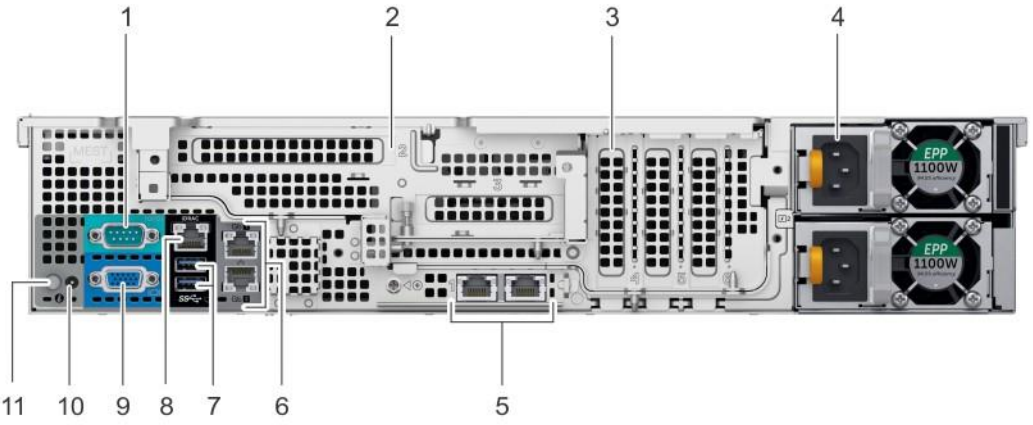

Figure 13. Rear View of V12

Table 10. Rear View of V12

Item	Features	Icon	Description
1	Serial port		Use the serial port to connect a serial device to the system. For more information about the supported serial port, see the technical specifications section.
2	Butterfly riser slot	N/A	Use the card slots to connect full-height PCIe expansion cards on butterfly riser.
3	PCIe slot (3)	N/A	Use the card slots to connect up to three half-height PCIe expansion cards on the system board.
4	Power supply unit (PSU)	N/A	For information about supported PSUs, see the technical specifications section.
5	LOM riser ports		Use the Ethernet or SFP+ ports to connect Local Area Networks (LANs) to the system. For more information about the supported Ethernet or SFP+ ports, see the Technical specifications section.
6	Ethernet ports (2)		Use the Ethernet ports to connect Local Area Networks (LANs) to the system. For more information about the supported Ethernet ports, see the Technical specifications section.
7	USB 3.0 port		Use the USB 3.0 port to connect USB devices to the system. These ports are 4-pin, USB 3.0-compliant.
8	iDRAC9 dedicated network port		Use the iDRAC9 dedicated network port to securely access the embedded iDRAC on a separate management network,
9	VGA port		Use the VGA port to connect a display to the system. For more information about the supported VGA port, see the technical specifications section.

Item	Features	Icon	Description
10	Status indicator cable port	N/A	Enables you to connect the status indicator cable and view system status when the CMA is installed.
11	System identification button		Enables you to connect the status indicator cable and view system status when the CMA is installed. Press the system ID button: • To locate a particular system within a rack. • To turn the system ID on or off. To reset iDRAC, press and hold the button for more than 15 seconds. **NOTE** • **To reset iDRAC using system ID, ensure that the system ID button is enabled in the iDRAC setup.** • **If the system stops responding during POST, press and hold the system ID button (for more than five seconds) to enter the BIOS progress mode.**

Left Control Panel View

Figure 14. Left control panel without optional iDRAC Quick Sync 2.0 indicator

Figure 15. Left control panel with optional iDRAC Quick Sync 2.0 indicator

Table 11. Left Control Panel View

Item	Indicator, button, or connector	Icon	Description
1	Status LED indicators	N/A	Indicate the status of the system. For more information, see the Status LED indicators.
2	System health and system ID indicator		Indicates the system health.
3	iDRAC Quick Sync 2 wireless indicator (optional)		Indicates if the iDRAC Quick Sync 2 wireless option is activated. The Quick Sync 2 feature allows management of the system using mobile devices. This feature aggregates hardware/firmware inventory and various system level diagnostic/error information that can be used in troubleshooting the system. You can access system inventory, Lifecycle Controller logs or system logs, system health status, and also configure iDRAC, BIOS, and networking parameters. You can also launch the Virtual Keyboard, Video, and Mouse (KVM) viewer and virtual Kernel-based Virtual Machine (KVM), on a supported mobile device.

Right Control Panel View

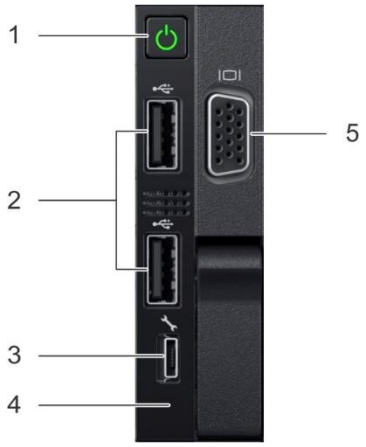

Figure 16. Right Control Panel

Table 12. Right Control Panel

Item	Indicator, button, or connector	Icon	Description
1	Power button		Indicates if the system is powered on or off. Press the power button to manually power on or off the system. NOTE: *Press the power button to gracefully shut down an ACPI-compliant operating system.*
2	USB port		The USB ports are 4-pin, 2.0-compliant. These ports enable you to connect USB devices to the system.
3	iDRAC Direct (Micro-AB USB)		The iDRAC Direct (Micro-AB USB) port enables you to access the iDRAC Direct (Micro-AB) features.

Item	Indicator, button, or connector	Icon	Description
4	iDRAC Direct (Micro-AB USB) LED	N/A	The iDRAC Direct (Micro-AB USB) LED indicator lights up to indicate that the iDRAC Direct port is connected.
5	VGA port		Enables you to connect a display device to the system. For more information, see the technical specifications section.

NIC Indicator Codes

Each NIC on the back of the system has indicators that provide information about the activity and link status. The activity LED indicator indicates if data is flowing through the NIC, and the link LED indicator indicates the speed of the connected network.

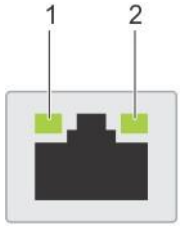

Figure 17. NIC Indicator Code Diagram

NIC indicator codes

1. link LED indicator
2. activity LED indicator

Table 13. NIC Indicator Code Diagram

Status	Condition
Link and activity indicators are off	The NIC is not connected to the network.
Link indicator is green and activity indicator is blinking green	The NIC is connected to a valid network at its maximum port speed and data is being sent or received.
Link indicator is amber and activity indicator is blinking green	The NIC is connected to a valid network at less than its maximum port speed and data is being sent or received.
Link indicator is green and activity indicator is off	The NIC is connected to a valid network at its maximum port speed and data is not being sent or received.
Link indicator is amber and activity indicator is off	The NIC is connected to a valid network at less than its maximum port speed and data is not being sent or received.
Link indicator is blinking green and activity is off	NIC identity is enabled through the NIC configuration utility.

PSU Indicator Codes

AC power supply units (PSUs) have an illuminated translucent handle that serves as an indicator. The DC PSUs have an LED that serves as an indicator.

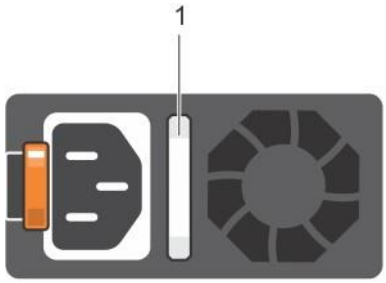

Figure 18. PSU Indicator Diagram

The indicator shows whether power is present or if a power fault has occurred.

1. AC PSU status indicator/handle

Table 14. PSU Indicator Code Diagram

Power indicator codes	Condition
Green	A valid power source is connected to the PSU and the PSU is operational
Blinking amber	Indicates a problem with the PSU
Not illuminated	Power is not connected to the PSU.
Blinking green	When the firmware of the PSU is being updated, the PSU handle blinks green. **CAUTION: Do not disconnect the power cord or unplug the PSU when updating firmware. If firmware update is interrupted, the PSUs do not function.**
Blinking green and turns off	When hot-plugging a PSU, the PSU handle blinks green five times at a rate of 4 Hz and turns off. This indicates a PSU mismatch with respect to efficiency, feature set, health status, or supported voltage. CAUTION: If two PSUs are installed, both the PSUs must have the same type of label; for example, Extended Power Performance (EPP) label. Mixing PSUs from previous generations of PowerEdge servers is not supported, even if the PSUs have the same power rating. This results in a PSU mismatch condition or failure to turn the system on. CAUTION: When correcting a PSU mismatch, replace only the PSU with the blinking indicator. Swapping the PSU to make a matched pair can result in an error condition and unexpected system shutdown. To change from a high output configuration to a low output configuration or vice versa, you must turn off the system. **CAUTION: AC PSUs support both 240 V and 120 V input voltages with the exception of Titanium PSUs, which support only 240 V. When two identical PSUs receive different input voltages, they can output different wattages, and trigger a mismatch.** **CAUTION: If two PSUs are used, they must be of the same type and have the same maximum output power.** **CAUTION: Combining AC and DC PSUs is not supported and triggers a mismatch.**

LCD Panel

The LCD panel provides system information, status, and error messages to indicate if the system is functioning correctly or requires attention. The LCD panel can also be used to configure or view the system's iDRAC IP address.

The LCD panel is available only on the optional front bezel. The optional front bezel is hot-pluggable. The statuses and conditions of the LCD panel are outlined here:

- The LCD backlight is white during normal operating conditions.
- When the system needs attention, the LCD backlight turns amber and displays an error code followed by descriptive text. NOTE: If the system is connected to a power source and an error is detected, the LCD turns amber regardless of whether the system is turned on or off.
- When the system turns off and there are no errors, LCD enters the standby mode after five minutes of inactivity. Press any button on the LCD to turn it on.
- If the LCD panel stops responding, remove the bezel and reinstall it.

If the problem persists, see Getting help.

- The LCD backlight remains off if LCD messaging is turned off using the iDRAC utility, the LCD panel, or other tools.

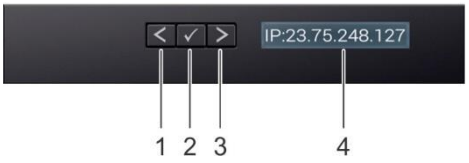

Figure 19. LCD Panel Diagram

Table 15. LCD Panel Diagram

Item	Button or display	Description
1	Left	Moves the cursor back in one-step increments.
2	Select	Selects the menu item highlighted by the cursor.
3	Right	Moves the cursor forward in one-step increments. During message scrolling: • Press and hold the right button to increase scrolling speed. • Release the button to stop. **NOTE: The display stops scrolling when the button is released. After 45 seconds of inactivity, the display starts scrolling.**
4	Display	Displays system information, status, and error messages or iDRAC IP address.

System Information Label

You can identify your system using the unique Express Service Code and Service Tag. Pull out the information tag in front of the system to view the Express Service Code and Service Tag. Alternatively, the information may be on a sticker on the chassis of the system. The mini Enterprise Service Tag (EST) is found on the back of the system. Razberi Technologies uses this information to route support calls to the appropriate personnel.

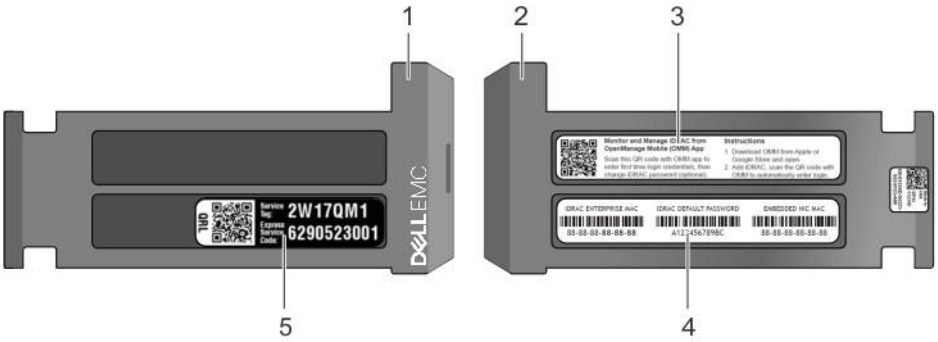

Figure 20. Service Tag Diagram

1. Information tag (front view)
2. Information tag (back view)
3. OpenManage Mobile (OMM) label
4. iDRAC MAC address and iDRAC secure password label
5. Service Tag

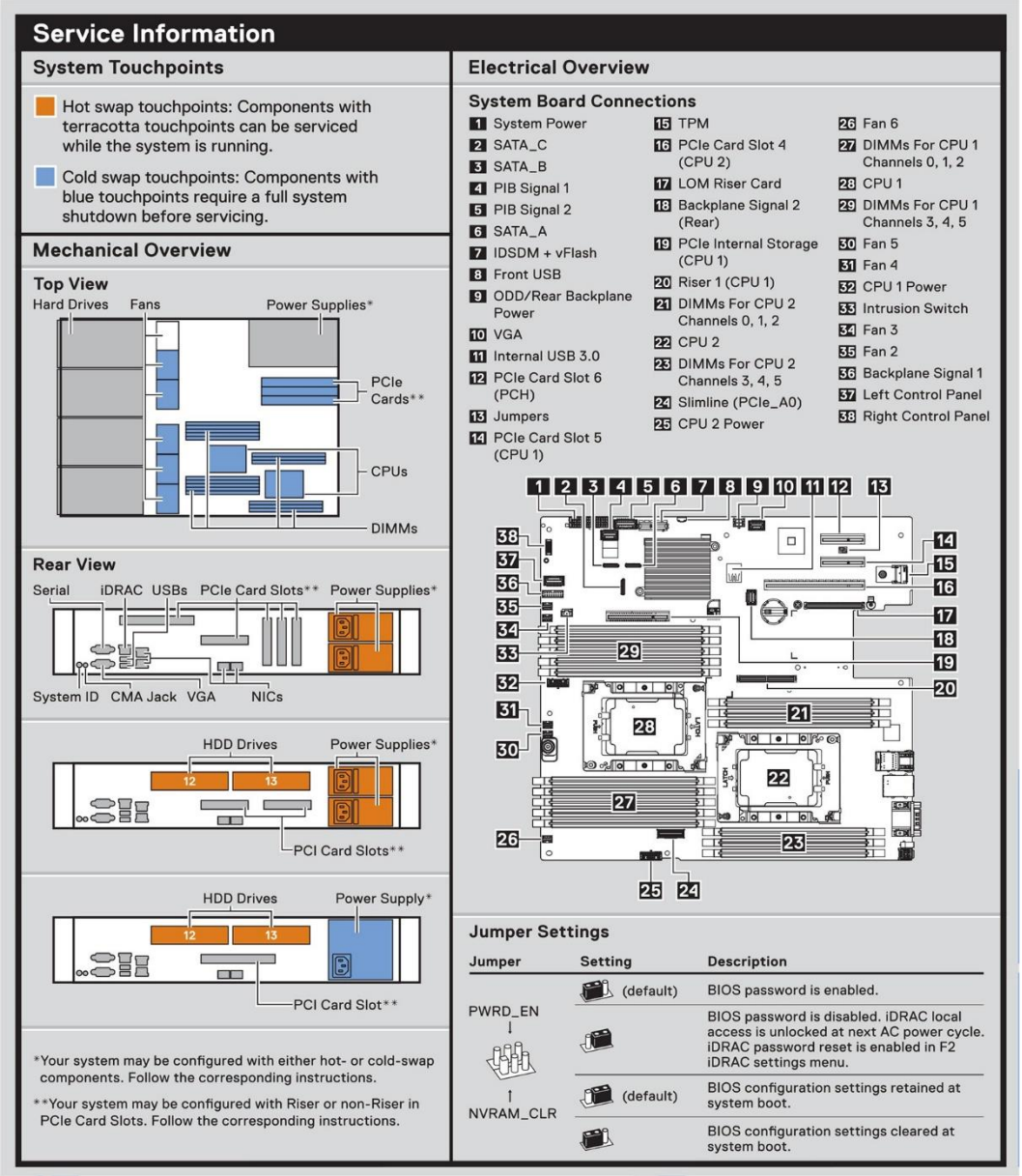

Figure 21. Service Information with System Touch Points

V14 Overview

Front View of Server

Figure 22. Front View of V14

Table 16. Front View of V14

Item	Ports, panels, and slots	Icon	Description
1	Left control panel	N/A	Contains the system health and system ID, status LED, and the iDRAC Quick Sync 2 (wireless) indicator. **NOTE: The iDRAC Quick Sync 2 indicator is available only on certain configurations** Status LED: Enables you to identify any failed hardware components. There are up to five status LEDs and an overall system health LED (Chassis health and system ID) bar. For more information, see the Status LED indicators section. Quick Sync 2 (wireless): Indicates a Quick Sync enabled system. The Quick Sync feature is optional. This feature enables management of the system by using mobile devices. This feature aggregates hardware or firmware inventory and various system level diagnostic and error information that can be used in troubleshooting the system. For more information, see the Technical specifications section.
2	Drive slots	N/A	Enable you to install drives that are supported on your system. For more information about drives, see the Technical specifications section.
3	Right control panel	N/A	Contains the power button, USB ports, iDRAC Direct (Micro-AB USB), VGA port.

Item	Ports, panels, and slots	Icon	Description
4	Information tag	N/A	The Information Tag is a slide-out label panel that contains system information such as Service Tag, NIC, MAC address, and so on. If you have opted for the secure default access to iDRAC, the Information tag also contains the iDRAC secure default password.

Rear View of Server

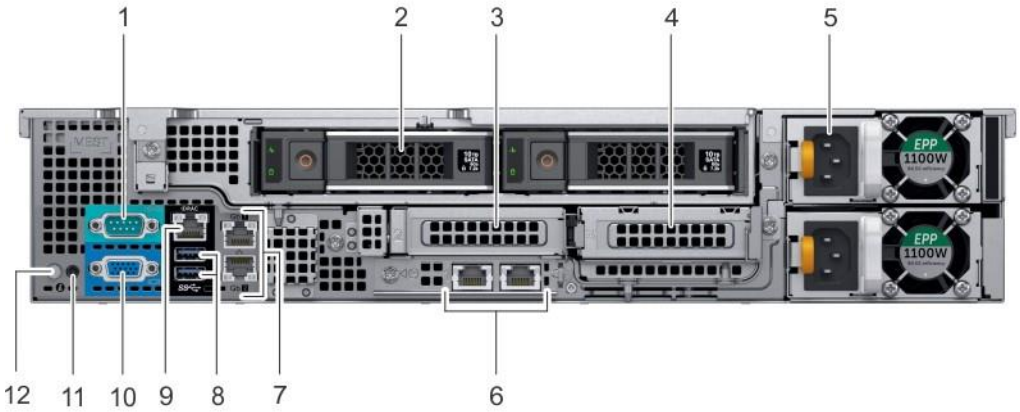

Figure 23. Rear View of V14

Table 17. Rear View of V14

Item	Features	Icon	Description
1	Serial port		Use the serial port to connect a serial device to the system. For more information about the supported serial port, see the Technical specifications section.
2	Drive (2)	N/A	Two optional rear drives supported for 12 x 3.5 -inch system.
3	Low profile riser right slot	N/A	Use the card slot to connect half-height PCIe expansion card on low profile riser.
4	Low profile riser left slot	N/A	Use the card slot to connect half-height PCIe expansion card on low profile riser.
5	Power supply unit (PSU) (2)	N/A	For information about supported PSUs, see the technical specifications section.
6	LOM riser port (2)		Use the Ethernet or SFP+ ports to connect Local Area Networks (LANs) to the system. For more information about the supported Ethernet or SFP+ ports, see the Technical specifications section
7	Ethernet port (2)		Use the Ethernet ports to connect Local Area Networks (LANs) to the system. For more information about the supported Ethernet ports, see the Technical specifications section.

Item	Features	Icon	Description
8	USB 3.0 port (2)		Use the USB 3.0 port to connect USB devices to the system. These ports are 4-pin, USB 3.0-compliant.
9	iDRAC9 dedicated network port		Use the iDRAC9 dedicated network port to securely access the embedded iDRAC on a separate management network
10	VGA port		Use the VGA port to connect a display to the system. For more information about the supported VGA port, see the technical specifications section
11	System status indicator cable port	N/A	Enables you to connect the status indicator cable and view system status when the CMA is installed.
12	System identification button		Enables you to connect the status indicator cable and view system status when the CMA is installed. Press the system ID button: • To locate a particular system within a rack. • To turn the system ID on or off. To reset iDRAC, press and hold the button for more than 15 s. **NOTE:** • **To reset iDRAC using system ID, ensure that the system ID button is enabled in the iDRAC setup.** • **If the system stops responding during POST, press and hold the system ID button (for more than five seconds) to enter the BIOS progress mode.**

Left Control Panel View

Figure 24. Left control panel without optional iDRAC Quick Sync 2.0 indicator

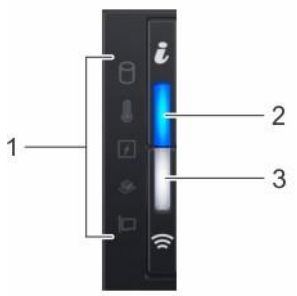

Figure 25. Left control panel with optional iDRAC Quick Sync 2.0 indicator

Table 18. Left Control Panel View

Item	Indicator, button, or connector	Icon	Description
1	Status LED indicators	N/A	Indicate the status of the system. For more information, see the Status LED indicators on page 12 section.
2	System health and system ID indicator		Indicates the system health.
3	iDRAC Quick Sync 2 wireless indicator (optional)		Indicates if the iDRAC Quick Sync 2 wireless option is activated. The Quick Sync 2 feature allows management of the system using mobile devices. This feature aggregates hardware/firmware inventory and various system level diagnostic/error information that can be used in troubleshooting the system. You can access system inventory, Lifecycle Controller logs or system logs, system health status, and also configure iDRAC, BIOS, and networking parameters. You can also launch the Virtual Keyboard, Video, and Mouse (KVM) viewer and virtual Kernel-based Virtual Machine (KVM), on a supported mobile device.

Right Control Panel View

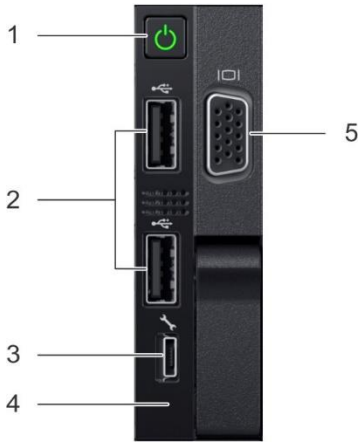

Figure 26. Right Control Panel

Table 19. Right Control Panel View

Item	Indicator, button, or connector	Icon	Description
1	Power button		Indicates if the system is powered on or off. Press the power button to manually power on or off the system. NOTE: *Press the power button to gracefully shut down an ACPI-compliant operating system.*
2	USB port		The USB ports are 4-pin, 2.0-compliant. These ports enable you to connect USB devices to the system.
3	iDRAC Direct (Micro-AB USB)		The iDRAC Direct (Micro-AB USB) port enables you to access the iDRAC Direct (Micro-AB) features.
4	iDRAC Direct (Micro-AB USB) LED	N/A	The iDRAC Direct (Micro-AB USB) LED indicator lights up to indicate that the iDRAC Direct port is connected.
5	VGA port		Enables you to connect a display device to the system. For more information, see the technical specifications section.

Drive Indicator Codes

Each drive carrier has an activity LED indicator and a status LED indicator. The indicators provide information about the current status of the drive. The activity LED indicator indicates whether the drive is currently in use or not. The status LED indicator indicates the power condition of the drive.

Figure 27. Drive indicators

Drive indicator codes

1. Drive activity LED indicator
2. Drive status LED indicator
3. Drive capacity label

NOTE: If the drive is in the Advanced Host Controller Interface (AHCI) mode, the status LED indicator does not turn on.

Table 20. Drive Indicators

Drive status indicator code	Condition
Flashes green twice per second	Identifying drive or preparing for removal.
Off	Drive ready for removal. **NOTE: The drive status indicator remains off until all drives are initialized after the system is turned on. Drives are not ready for removal during this time.**
Flashes green, amber, and then turns off	Predicted drive failure.
Flashes amber four times per second	Drive failed.
Flashes green slowly	Drive rebuilding.
Solid green	Drive online.
Flashes green for three seconds, amber for three seconds, and then turns off after six seconds	Rebuild stopped.

NIC Indicator Codes

Each NIC on the back of the system has indicators that provide information about the activity and link status. The activity LED indicator indicates if data is flowing through the NIC, and the link LED indicator indicates the speed of the connected network.

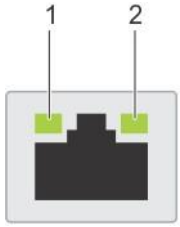

Figure 28. NIC Indicator Diagram

NIC indicator codes

1. Link LED indicator
2. Activity LED indicator

Table 21. NIC Indicator Diagram

Status	Condition
Link and activity indicators are off	The NIC is not connected to the network.
Link indicator is green and activity indicator is blinking green	The NIC is connected to a valid network at its maximum port speed and data is being sent or received.
Link indicator is amber and activity indicator is blinking green	The NIC is connected to a valid network at less than its maximum port speed and data is being sent or received.
Link indicator is green and activity indicator is off	The NIC is connected to a valid network at its maximum port speed and data is not being sent or received.
Link indicator is amber and activity indicator is off	The NIC is connected to a valid network at less than its maximum port speed and data is not being sent or received.
Link indicator is blinking green and activity is off	NIC identity is enabled through the NIC configuration utility.

PSU Indicator Codes

AC power supply units (PSUs) have an illuminated translucent handle that serves as an indicator. The DC PSUs have an LED that serves as an indicator.
The indicator shows whether power is present or if a power fault has occurred.

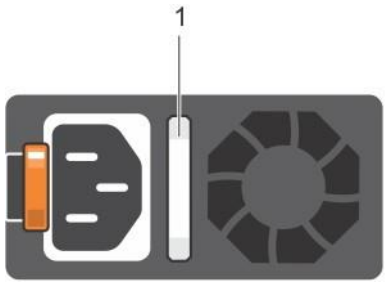

Figure 29. PSU Indicator Diagram

1. AC PSU status indicator/handle

Table 22. PSU Indicator Diagram

Power indicator codes	Condition
Green	A valid power source is connected to the PSU and the PSU is operational
Blinking amber	Indicates a problem with the PSU
Not illuminated	Power is not connected to the PSU.
Blinking green	When the firmware of the PSU is being updated, the PSU handle blinks green. **CAUTION: Do not disconnect the power cord or unplug the PSU when updating firmware. If firmware update is interrupted, the PSUs do not function.**

Power indicator codes	Condition
Blinking green and turns off	When hot-plugging a PSU, the PSU handle blinks green five times at a rate of 4 Hz and turns off. This indicates a PSU mismatch with respect to efficiency, feature set, health status, or supported voltage. CAUTION: If two PSUs are installed, both the PSUs must have the same type of label; for example, Extended Power Performance (EPP) label. Mixing PSUs from previous generations of PowerEdge servers is not supported, even if the PSUs have the same power rating. This results in a PSU mismatch condition or failure to turn the system on. CAUTION: When correcting a PSU mismatch, replace only the PSU with the blinking indicator. Swapping the PSU to make a matched pair can result in an error condition and unexpected system shutdown. To change from a high output configuration to a low output configuration or vice versa, you must turn off the system. **CAUTION: AC PSUs support both 240 V and 120 V input voltages with the exception of Titanium PSUs, which support only 240 V. When two identical PSUs receive different input voltages, they can output different wattages, and trigger a mismatch.** **CAUTION: If two PSUs are used, they must be of the same type and have the same maximum output power.** **CAUTION: Combining AC and DC PSUs is not supported and triggers a mismatch.**

LCD Panel

The LCD panel provides system information, status, and error messages to indicate if the system is functioning correctly or requires attention. The LCD panel can also be used to configure or view the system's iDRAC IP address.

The LCD panel is available only on the optional front bezel. The optional front bezel is hot-pluggable. The statuses and conditions of the LCD panel are outlined here:

- The LCD backlight is white during normal operating conditions.
- When the system needs attention, the LCD backlight turns amber and displays an error code followed by descriptive text. NOTE: If the system is connected to a power source and an error is detected, the LCD turns amber regardless of whether the system is turned on or off.
- When the system turns off and there are no errors, LCD enters the standby mode after five minutes of inactivity. Press any button on the LCD to turn it on.
- If the LCD panel stops responding, remove the bezel and reinstall it.

If the problem persists, see Getting help.

- The LCD backlight remains off if LCD messaging is turned off using the iDRAC utility, the LCD panel, or other tools.

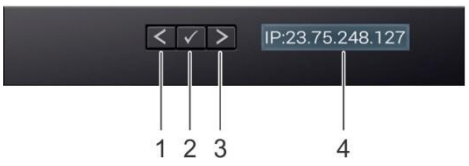

Figure 30. LCD Panel Diagram

Table 23. LCD Panel Diagram

Item	Button or display	Description
1	Left	Moves the cursor back in one-step increments.
2	Select	Selects the menu item highlighted by the cursor.
3	Right	Moves the cursor forward in one-step increments. During message scrolling: • Press and hold the right button to increase scrolling speed. • Release the button to stop. ⓘ **NOTE: The display stops scrolling when the button is released. After 45 seconds of inactivity, the display starts scrolling.**
4	Display	Displays system information, status, and error messages or iDRAC IP address.

System Information Label

You can identify your system using the unique Express Service Code and Service Tag. Pull out the information tag in front of the system to view the Express Service Code and Service Tag. Alternatively, the information may be on a sticker on the chassis of the system. The mini Enterprise Service Tag (EST) is found on the back of the system. Razberi Technologies uses this information to route support calls to the appropriate personnel.

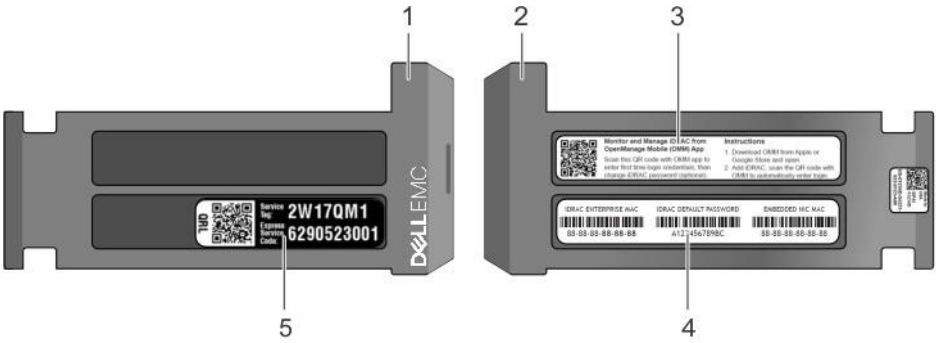

Figure 31. Service Tag Diagram

1. Information tag (front view)
2. Information tag (back view)

3. OpenManage Mobile (OMM) label
4. iDRAC MAC address and iDRAC secure password label
5. Service Tag

A8 Overview

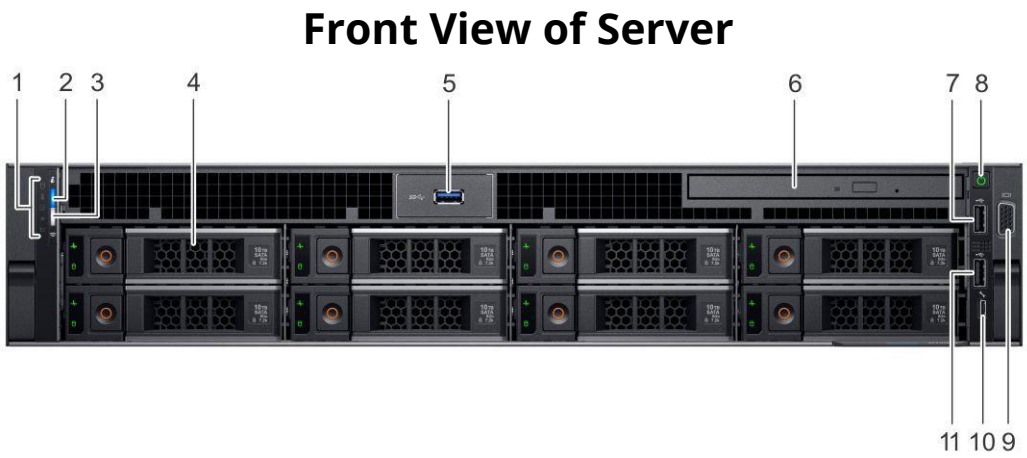

Figure 32. Front View of A8

Table 24. Front View of A8

1	System Status Indicator	2	System health and system ID
3	iDRAC Quick Sync 2 wireless indicator	4	Hard drive (x8)
5	USB 3.0 connector	6	Optical drive (optional)
7	USB 2.0 connector	8	Power button/Power light
9	VGA connector	10	USB management port/iDRAC Direct
11	USB 2.0 connector		

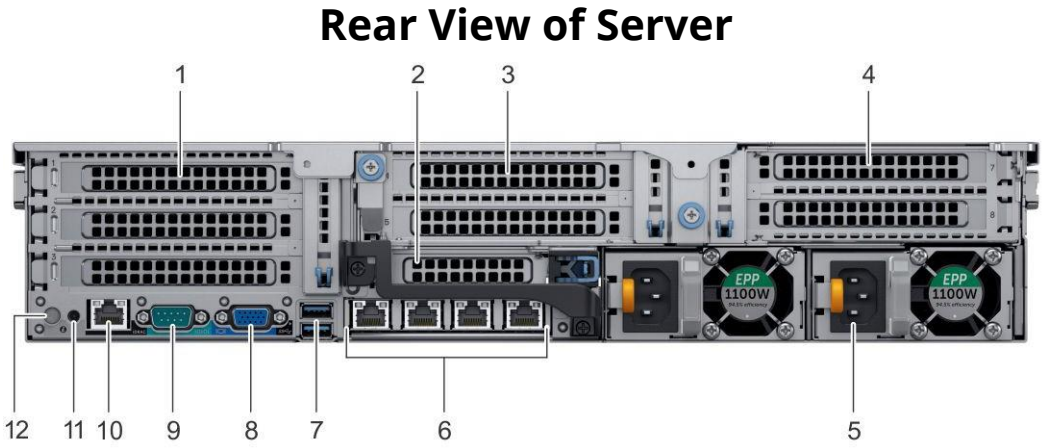

Figure 33. Rear View of A8

Table 25. Rear View of A8

1	PCIe expansion card slots	2	PCIe expansion card slots
3	PCIe expansion card slots	4	PCIe expansion card slots
5	Power supply (x2)	6	Network connectors (x4)
7	USB 3.0 connectors (x2)	8	VGA connector
9	Serial connector	10	iDRAC9 Enterprise Network connector
11	System identification connector	12	System identification button

Drive Indicator Codes

Each drive carrier has an activity LED indicator and a status LED indicator. The indicators provide information about the current status of the drive. The activity LED indicator indicates whether the drive is currently in use or not. The status LED indicator indicates the power condition of the drive.

Figure 34. Drive indicators

Drive indicator codes

1. Drive activity LED indicator
2. Drive status LED indicator
3. Drive capacity label

NOTE: If the drive is in the Advanced Host Controller Interface (AHCI) mode, the status LED indicator does not turn on.

Table 26. Drive indicators

Drive status indicator code	Condition
Flashes green twice per second	Identifying drive or preparing for removal.

Drive status indicator code	Condition
Off	Drive ready for removal. **NOTE: The drive status indicator remains off until all drives are initialized after the system is turned on. Drives are not ready for removal during this time.**
Flashes green, amber, and then turns off	Predicted drive failure.
Flashes amber four times per second	Drive failed.
Flashes green slowly	Drive rebuilding.
Solid green	Drive online.
Flashes green for three seconds, amber for three seconds, and then turns off after six seconds	Rebuild stopped

NIC Indicator Codes

Each NIC on the back of the system has indicators that provide information about the activity and link status. The activity LED indicator indicates if data is flowing through the NIC, and the link LED indicator indicates the speed of the connected network.

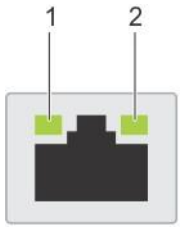

Figure 35. NIC Indicator Diagram

NIC indicator codes

1. Link LED indicator
2. Activity LED indicator

Table 27. NIC Indicator Diagram

Status	Condition
Link and activity indicators are off	The NIC is not connected to the network.
Link indicator is green and activity indicator is blinking green	The NIC is connected to a valid network at its maximum port speed and data is being sent or received.
Link indicator is amber and activity indicator is blinking green	The NIC is connected to a valid network at less than its maximum port speed and data is being sent or received.
Link indicator is green and activity indicator is off	The NIC is connected to a valid network at its maximum port speed and data is not being sent or received.

Status	Condition
Link indicator is amber and activity indicator is off	The NIC is connected to a valid network at less than its maximum port speed and data is not being sent or received.
Link indicator is blinking green and activity is off	NIC identity is enabled through the NIC configuration utility.

PSU Indicator Codes

AC power supply units (PSUs) have an illuminated translucent handle that serves as an indicator. The DC PSUs have an LED that serves as an indicator.
The indicator shows whether power is present or if a power fault has occurred

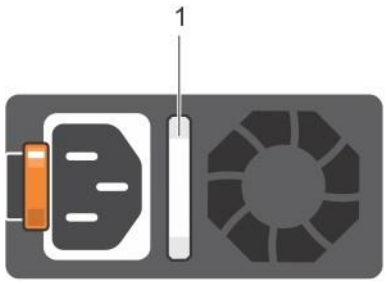

Figure 36. PSU Indicator Diagram

1. AC PSU status indicator/handle

Table 28. PSU Indicator Diagram

Power indicator codes	Condition
Green	A valid power source is connected to the PSU and the PSU is operational
Blinking amber	Indicates a problem with the PSU
Not illuminated	Power is not connected to the PSU.
Blinking green	When the firmware of the PSU is being updated, the PSU handle blinks green **CAUTION: Do not disconnect the power cord or unplug the PSU when updating firmware. If firmware update is interrupted, the PSUs do not function.**
Blinking green and turns off	When hot-plugging a PSU, the PSU handle blinks green five times at a rate of 4 Hz and turns off. This indicates a PSU mismatch with respect to efficiency, feature set, health status, or supported voltage CAUTION: If two PSUs are installed, both the PSUs must have the same type of label; for example, Extended Power Performance (EPP) label. Mixing PSUs from previous generations of PowerEdge servers is not supported, even if the PSUs have the same power rating. This results in a PSU mismatch condition or failure to turn the system on. CAUTION: When correcting a PSU mismatch, replace only the PSU with the blinking indicator. Swapping the PSU to make a matched pair can result in an error condition and unexpected system shutdown. To change from a

Power indicator codes	Condition
	high output configuration to a low output configuration or vice versa, you must turn off the system. **CAUTION: AC PSUs support both 240 V and 120 V input voltages with the exception of Titanium PSUs, which support only 240 V. When two identical PSUs receive different input voltages, they can output different wattages, and trigger a mismatch.** **CAUTION: If two PSUs are used, they must be of the same type and have the same maximum output power.** **CAUTION: Combining AC and DC PSUs is not supported and triggers a mismatch.**

LCD Panel

The LCD panel provides system information, status, and error messages to indicate if the system is functioning correctly or requires attention. The LCD panel can be used to configure or view the system's iDRAC IP address.

The LCD panel is available only on the optional LCD bezel. The optional LCD bezel is hot-pluggable.

The statuses and conditions of the LCD panel are outlined here:

- The LCD backlight is white during normal operating conditions.
- When the system needs attention, the LCD backlight turns amber and displays an error code followed by descriptive text.

NOTE: If the system is connected to a power source and an error is detected, the LCD turns amber regardless of whether the system is turned on or off.

- When the system turns off and there are no errors, LCD enters the standby mode after five minutes of inactivity. Press any button on the LCD to turn it on.
- If the LCD panel stops responding, remove the bezel and reinstall it. If the problem persists, see the Getting help section.
- The LCD backlight remains off if LCD messaging is turned off using the iDRAC utility, the LCD panel, or other tools.
- LCD messaging is turned off using the iDRAC utility, the LCD panel, or other tools.

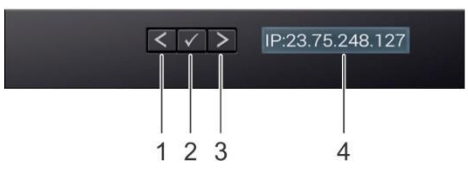

Figure 37. LCD Panel Diagram

Table 29. LCD Panel Diagram

Item	Button or display	Description
1	Left	Moves the cursor back in one-step increments.
2	Select	Selects the menu item highlighted by the cursor.
3	Right	Moves the cursor forward in one-step increments. During message scrolling: • Press and hold the right button to increase scrolling speed. • Release the button to stop. **NOTE: The display stops scrolling when the button is released. After 45 seconds of inactivity, the display starts scrolling.**
4	Display	Displays system information, status, and error messages or iDRAC IP address.

View Home Screen

The Home screen displays user-configurable information about the system. This screen is displayed during normal system operation when there are no status messages or errors. When the system turns off and there are no errors, LCD enters the standby mode after five minutes of inactivity. Press any button on the LCD to turn it on.

1. To view the Home screen, press one of the three navigation buttons (Select, Left, or Right).
2. To navigate to the Home screen from another menu, complete the following steps: a Press and hold the navigation button till the up arrow is displayed.
   a. Navigate to the Home icon using the up arrow .
   b. Select the Home icon.
3. On the Home screen, press the Select button to enter the main menu

Setup Menu

NOTE: When you select an option in the Setup menu, you must confirm the option before proceeding to the next action.

Table 30. Setup Menu

Option	Description
iDRAC	Select DHCP or Static IP to configure the network mode. If Static IP is selected, the available fields are IP, Subnet (Sub), and Gateway (Gtw). Select Setup DNS to enable DNS and to view domain addresses. Two separate DNS entries are available.

Option	Description
Set error	Select SEL to view LCD error messages in a format that matches the IPMI description in the SEL. This enables you to match an LCD message with an SEL entry. Select Simple to view LCD error messages in a simplified user-friendly description.
Set home	Select the default information to be displayed on the Home screen. See View menu section for the options and option items that can be set as the default on the Home screen.

View Menu

NOTE: When you select an option in the View menu, you must confirm the option before proceeding to the next action.

Table 31. View Menu

Option	Description
iDRAC IP	Displays the IPv4 or IPv6 addresses for iDRAC9. Addresses include DNS (Primary and Secondary), Gateway, IP, and Subnet (IPv6 does not have Subnet).
MAC	Displays the MAC addresses for iDRAC, iSCSI, or Network devices.
Name	Displays the name of the Host, Model, or User String for the system.
Number	Displays the Asset tag or the Service tag for the system.
Power	Displays the power output of the system in BTU/hr or Watts. The display format can be configured in the Set home submenu of the Setup menu.
Temperature	Displays the temperature of the system in Celsius or Fahrenheit. The display format can be configured in the Set home submenu of the Setup menu.

System Information Label

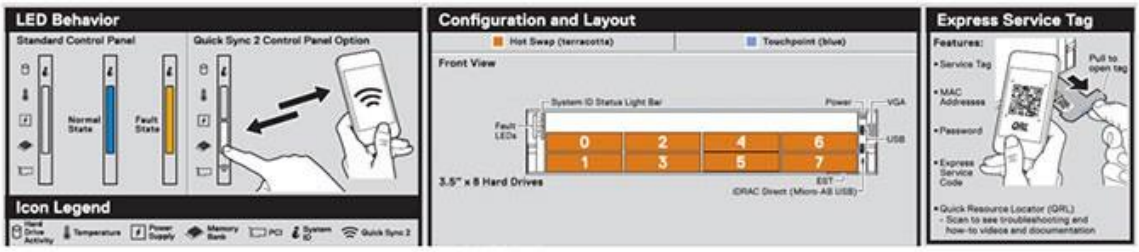

Figure 38. LED Behavior, Express Service Tag, Configuration and Layout

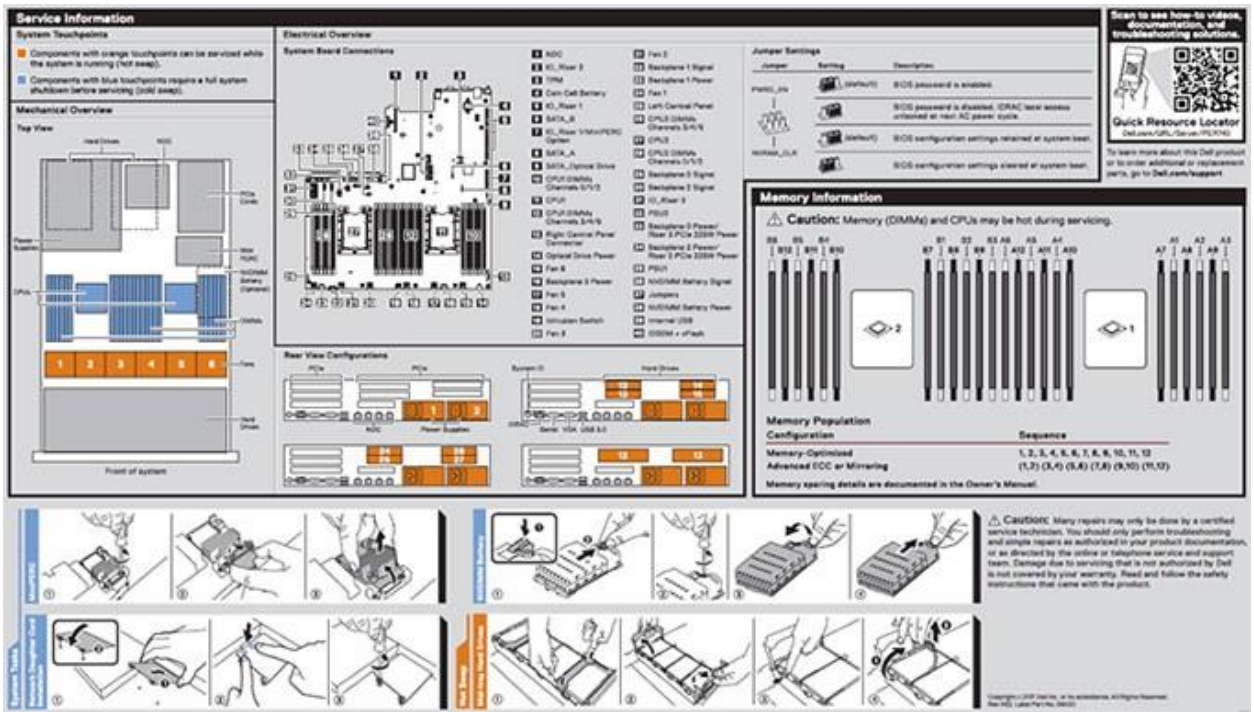

Figure 39. System touchpoint, electrical overview, jumper settings, and memory information

M4 Overview

Front View of Server

Figure 40. Front View of M4

1. Left control panel
2. Optical drive (optional)
4. Right control panel
5. Information tag
6. Drives (4)

Rear View of Server

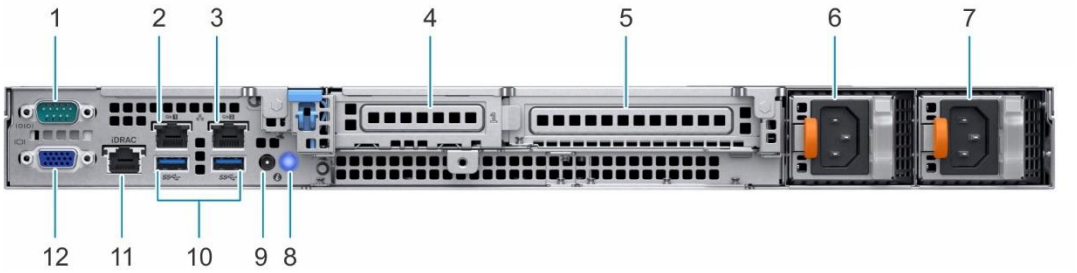

Figure 41. Rear View of M4

Table 32. Rear View of M4

1. Serial port	2. NIC port (GB 1)
3. NIC port (GB 2)	4. Half-height PCIe expansion card slot
5. Full-height PCIe expansion card slot	6. Power supply unit 1
7. Power supply unit 2	8. System identification button
9. System status indicator cable port (CMA)	10. USB 3.0 port (2)
11. iDRAC9 dedicated network port	12. VGA port

Left Control Panel View

Figure 42. Left Control Panel

Left control panel codes

1. System health and system ID indicator

Right Control Panel View

Figure 43. Right Control Panel

Right control panel codes

1. Power button
2. USB 2.0-compliant port
3. iDRAC direct Micro USB port

Drive Indicator Codes

The LEDs on the drive carrier indicates the state of each drive. Each drive carrier in your system has two LEDs: an activity LED (green) and a status LED (bicolor, green/amber). The activity LED flashes whenever the drive is accessed.

Figure 44. Drive Carrier Layout

1. Drive activity LED indicator
2. Drive status LED indicator
3. Drive capacity label

NOTE: If the drive is in the Advanced Host Controller Interface (AHCI) mode, the status LED indicator does not turn on.

Drive indicator codes

Drive status indicator code	Condition
Flashes green twice persecond	Identifying drive or preparing for removal.
Off	Drive ready for removal. **NOTE: The drive status indicator remains off until all drives are initialized after the system is turned on. Drives are not**
Flashesgreen,amber,andthenturns off Flashes amber four times per second Flashes green slowly	Predicted drive failure. Drive failed. Drive rebuilding.
Solid green	Drive online.
Flashes green for three seconds, amber for three	

NIC Indicator Codes

Each NIC on the back of the system has indicators that provide information about the activity and link status. The activity LED indicator indicates if data is flowing through the NIC, and the link LED indicator indicates the speed of the connected network.

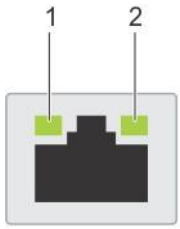

Figure 45. NIC Indicator Lights

NIC indicator codes

1. link LED indicator
2. activity LED indicator

Table 33. NIC Indicator Lights

Status	Condition
Link and activity indicators are off	The NIC is not connected to the network.
Link indicator is green and activity indicator is blinking green	The NIC is connected to a valid network at its maximum port speed and data is being sent or received.
Link indicator is amber and activity indicator is blinking green	The NIC is connected to a valid network at less than its maximum port speed and data is being sent or received.
Link indicator is green and activity indicator is off	The NIC is connected to a valid network at its maximum port speed and data is not being sent or received.
Link indicator is amber and activity indicator is off	The NIC is connected to a valid network at less than its maximum port speed and data is not being sent or received.
Link indicator is blinking green and activity is off	NIC identity is enabled through the NIC configuration utility.

PSU Indicator Codes

AC power supply units (PSUs) have an illuminated translucent handle that serves as an indicator. The DC PSUs have an LED that serves as an indicator.

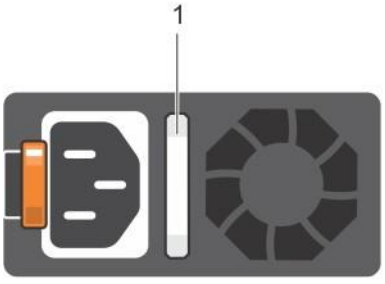

Figure 46. PSU Indicator

The indicator shows whether power is present or if a power fault has occurred

1. AC PSU status indicator/handle

Table 34. PSU Indicator

Power indicator codes	Condition
Green	A valid power source is connected to the PSU and the PSU is operational.
Blinking amber	Indicates a problem with the PSU
Not illuminated	Power is not connected to the PSU.
Blinking green	When the firmware of the PSU is being updated, the PSU handle blinks green. **CAUTION: Do not disconnect the power cord or unplug the PSU when updating firmware. If firmware update is interrupted, the PSUs do not function.**
Blinking green and turns off	When hot-plugging a PSU, the PSU handle blinks green five times at a rate of 4 Hz and turns off. This indicates a PSU mismatch with respect to efficiency, feature set, health status, or supported voltage CAUTION: If two PSUs are installed, both the PSUs must have the same type of label; for example, Extended Power Performance (EPP) label. Mixing PSUs from previous generations of PowerEdge servers is not supported, even if the PSUs have the same power rating. This results in a PSU mismatch condition or failure to turn the system on. CAUTION: When correcting a PSU mismatch, replace only the PSU with the blinking indicator. Swapping the PSU to make a matched pair can result in an error condition and unexpected system shutdown. To change from a high output configuration to a low output configuration or vice versa, you must turn off the system. **CAUTION: AC PSUs support both 240 V and 120 V input voltages with the exception of Titanium PSUs, which support only 240 V. When two identical PSUs receive different input voltages, they can output different wattages, and trigger a mismatch.** **CAUTION: If two PSUs are used, they must be of the same type and have the same maximum output power.** **CAUTION: Combining AC and DC PSUs is not supported and triggers a mismatch.**

System Information Label

Your system is identified by a unique Express Service Code and Service Tag number. You can view the Express Service Code and Service Tag by pulling out the information tag located on the front of the system. Alternatively, the information may be on the Mini Enterprise Service Tag (MEST) label on the chassis, on the rear of the system. This information is used by Razberi Technologies to route support calls to the appropriate personnel.

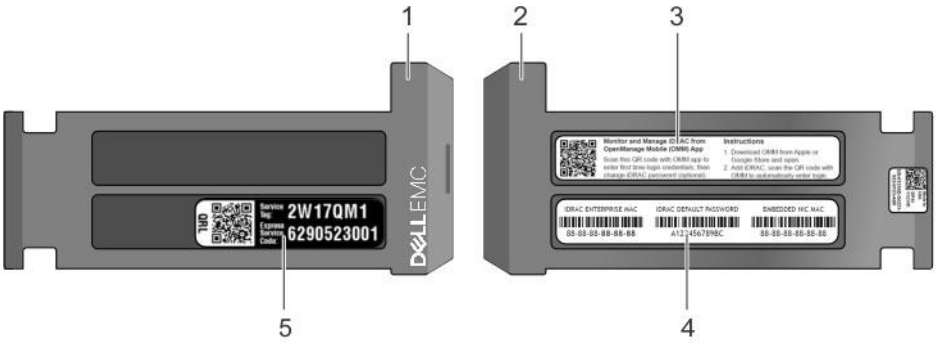

Figure 47. Service Tag

1. Information tag (front view)
2. Information tag (back view)
3. OpenManage Mobile (OMM) label secure password label
4. iDRAC MAC address and iDRAC
5. Service Tag, Express Service Code, QRL label

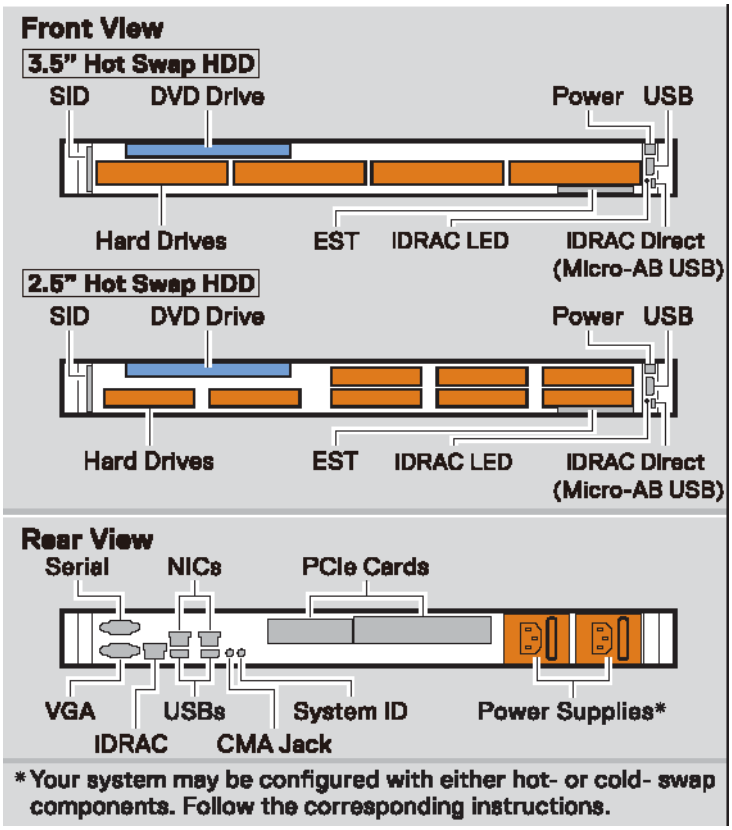

Figure 48. Front and Rear Touchpoints for M4

Specifications

System Dimensions

V8, 12, 14

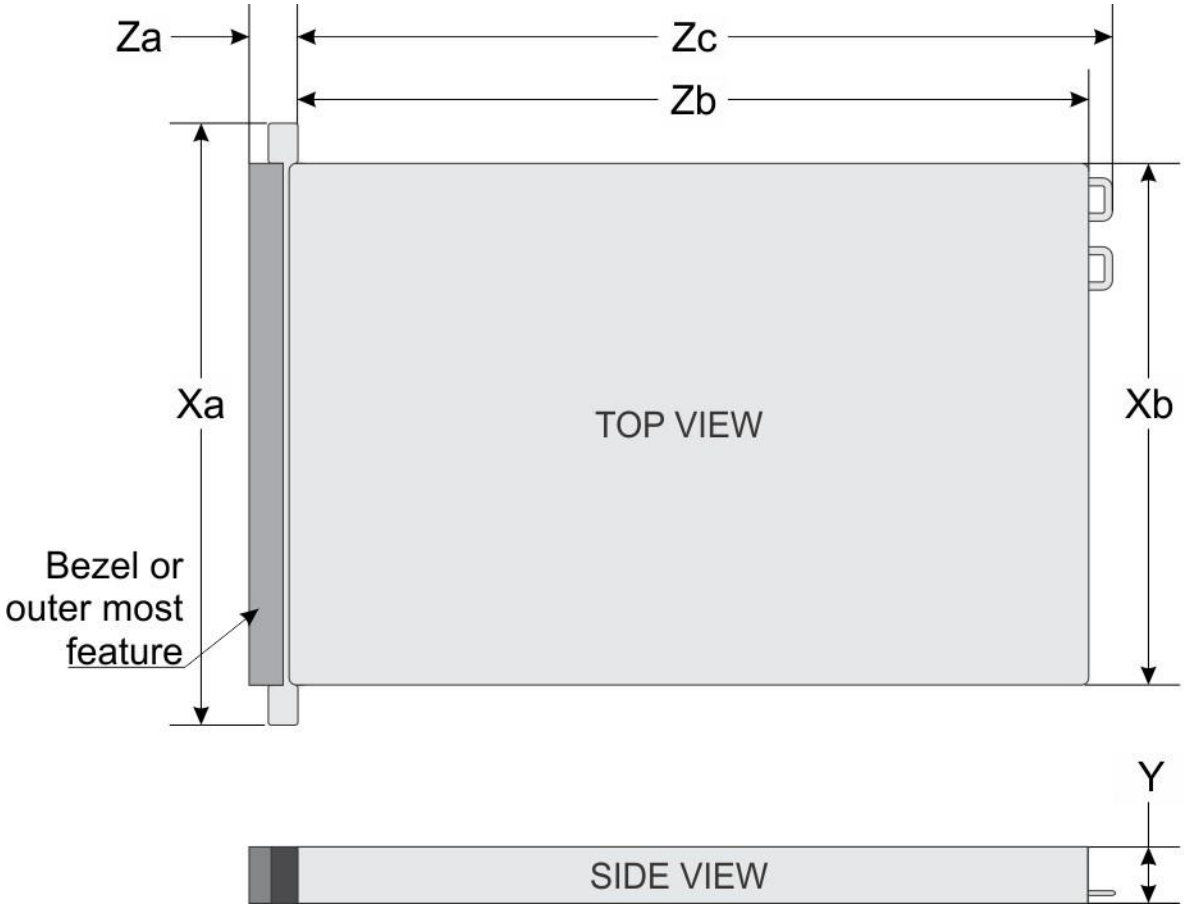

Figure 49. System Dimensions for V8, V12, and V14

Table 35. System Dimensions for V8, V12, and V14

Xa	Xb	Y	Za (with bezel)	Za (without bezel)	Zb	Zc
482.0 mm (18.97 inches)	434.0 mm (17.08 inches)	86.8 mm (3.41 inches)	35.84 mm (1.41 inches)	22 mm (0.87 inches)	647.07 mm (25.47 inches)	681.755 mm (26.84 inches)

A8

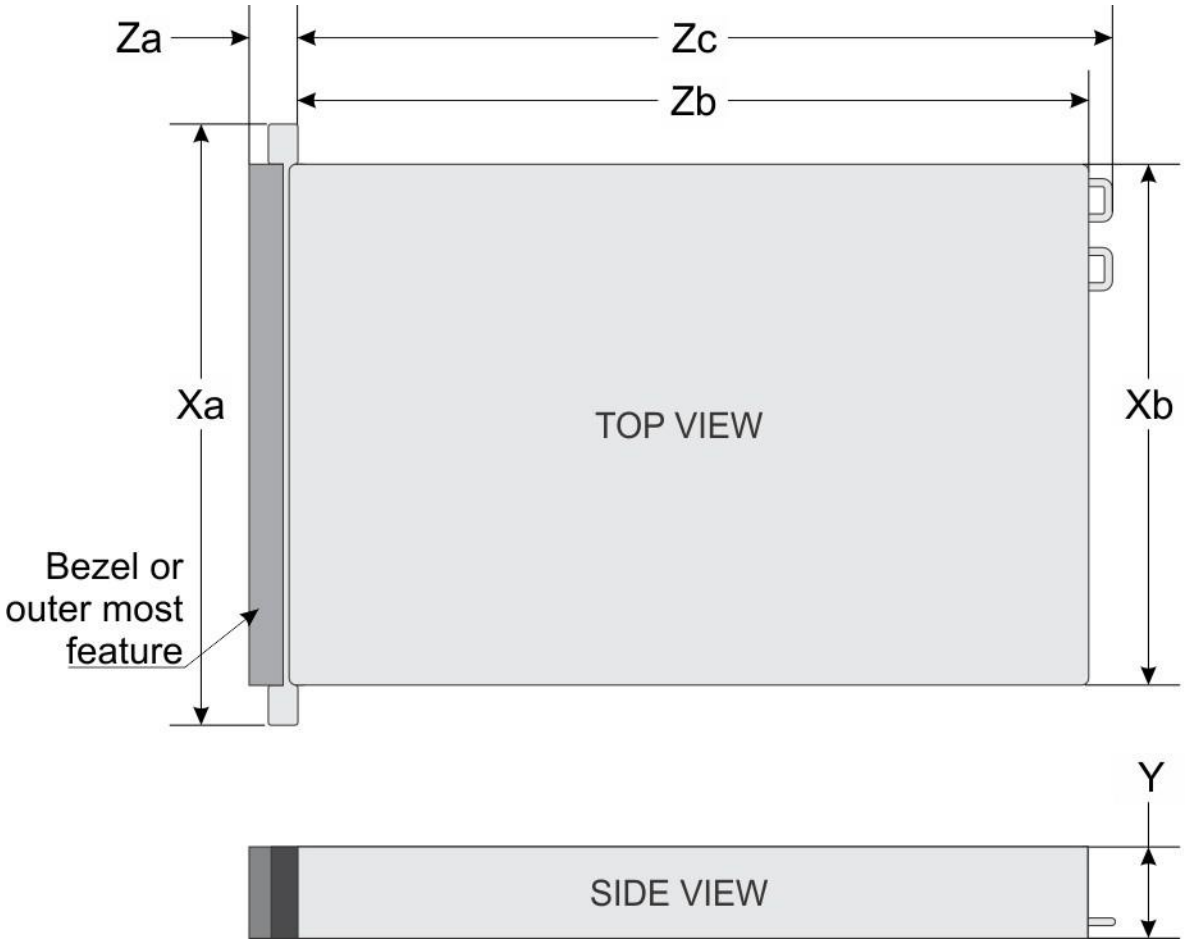

Figure 50. Dimensions for A8

Table 36. Dimensions for A8

Xa	Xb	Y	Za (with bezel)	Za (without bezel)	Zb	Zc
482.0 mm (18.98 inches)	434.0 mm (17.09 inches)	86.8 mm (3.42 inches)	35.84 mm (1.41 inches)	22.0 mm (0.87 inches)	678.8 mm (26.72 inches)	715.5 mm (28.17 inches)

M4

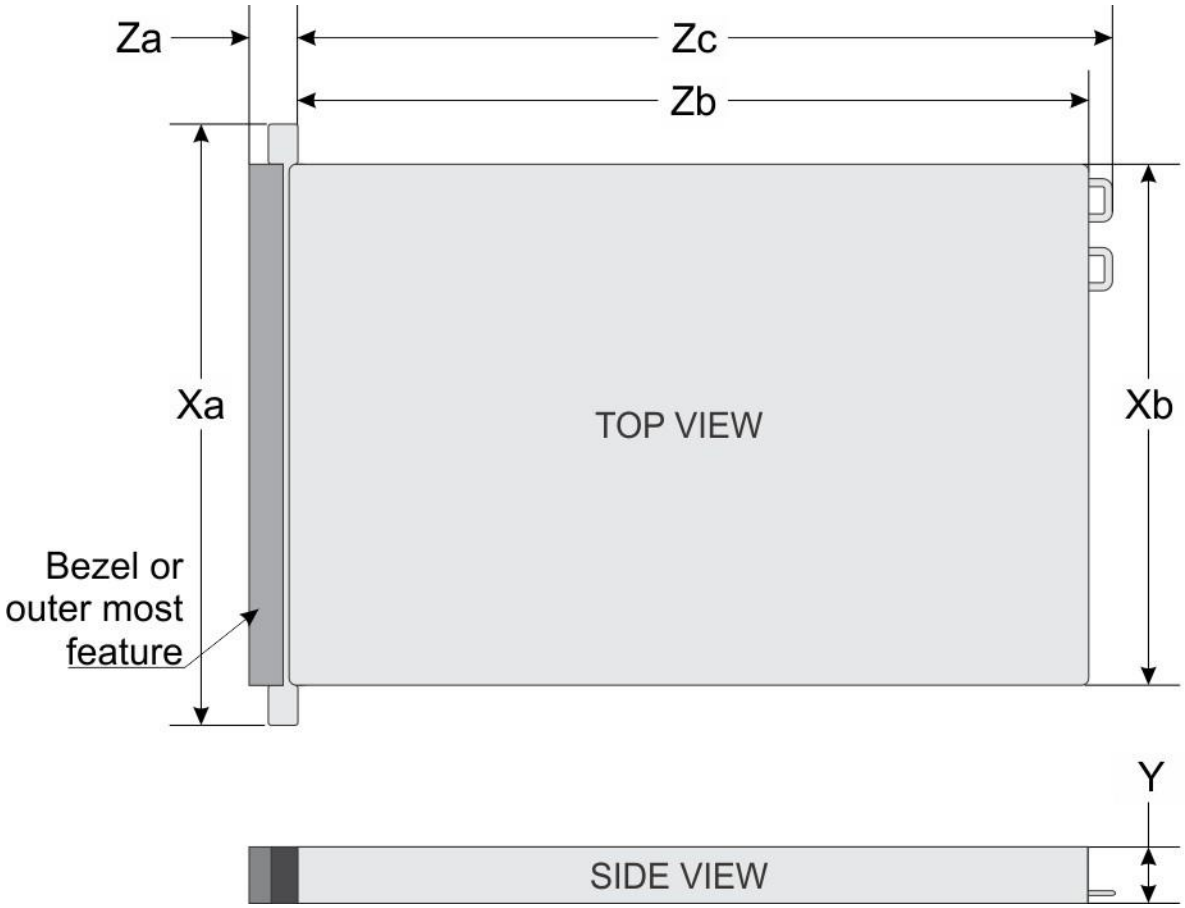

Figure 51. Dimensions for M4

Table 37. Dimensions for M4

Xa	Xb	Y	Za	Zb		Zc	
482.0 mm (18.98 inches)	434.0 mm (17.08 inches)	42.8 mm (1.68 inches)	**With bezel:** 35.64 mm (1.4 inches) **Without bezel:** 22.0 mm (0.87 inches)	8 x 2.5 inch configuration	483.72 mm (19.04 inches)	8 x 2.5 inch configuration	522.85 mm (20.58 inches)
				4 x 3.5 inch configuration	534.5 mm (21.04 inches)	4 x 3.5 inch configuration	573.6 mm (22.58 inches)

Weight

V8,12,14

System	Maximum weight (with all drives/SSDs)
8 x 3.5 inch	25.4 kg (55.99 lb)
12 x 3.5 inch	29.68 kg (65.43 lb)

A8

System	Maximum weight (with all hard drives/SSDs)
3.5 inch hard drive systems	28.6 kg (63.05 lb)

M4

System configuration	Maximum weight (with all drives/SSDs)
8 x 2.5-inch configuration	12 kg (26.5 lb)
4 x 3.5-inch configuration	13.6 kg (29.98 lb)

Processor Specifications

The Razberi Core Appliance supports up to two Intel Xeon Scalable processors, up to 20 cores per processor.

Supported Operating Systems

The Razberi Core Appliance supports the following operating systems:

- Red Hat Enterprise Linux
- SUSE Linux Enterprise Server
- Canonical Ubuntu LTS
- Microsoft Windows Server with Hyper-V
- VMware ESXi
- Citrix XenServer

PSU Specifications

PSU	Class	Heat dissipation (maximum)	Frequency	Voltage
1100 W AC	Platinum	4100 BTU/hr	50/60 Hz	100–240 V AC, autoranging
1100 W DC	Platinum	4416 BTU/hr	50/60 Hz	200–380 V DC, autoranging
750 W AC	Platinum	2891 BTU/hr	50/60 Hz	100–240 V AC, autoranging

PSU	Class	Heat dissipation (maximum)	Frequency	Voltage
750 W AC (Mixed Mode)	Platinum	2891 BTU/hr	50/60 Hz	100–240 V AC, autoranging
495 W AC	Platinum	1908 BTU/hr	50/60 Hz	100–240 V AC, autoranging
450 W AC	Bronze	1871 BTU/hr	50/60 Hz	100–240 V AC, autoranging

System Battery

Memory Specifications

DIMM type	DIMM rank	DIMM capacity	Single processor		Dual processors	
			Minimum RAM	Maximum RAM	Minimum RAM	Maximum RAM
RDIMM	Single rank	8 GB	8 GB	80 GB	16 GB	128 GB
RDIMM	Dual rank	16 GB	16 GB	160 GB	32 GB	256 GB
RDIMM	Dual rank	32 GB	32 GB	320 GB	64 GB	512 GB
LRDIMM	Quad rank	64 GB	64 GB	640 GB	128 GB	1024 GB

TPM Specifications

Drive Specifications

The V8 supports:

- Up to 8 x 3.5 inch drives or 2.5 inch drives with drive adapter, internal, hot-swappable SATA SSDs

The V12 supports:

- Up to 12 x 3.5 inch drives or 2.5 inch drives with drive adapter, internal, hot-swappable SAS, SATA, or Nearline SAS drives

Dual SD Module

The Razberi Core Appliance supports two optional flash memory card slots with an internal dual MicroSD module.

NOTE One card slot is dedicated for redundancy.

Ports and Connectors

USB Ports

Front panel	Back panel	Internal USB
• Two USB 2.0-compliant port • One iDRAC Direct (Micro-AB USB) port	• Two USB 3.0-compliant port	• One internal USB 3.0 port

NIC Ports

The Razberi Core system supports two Network Interface Controller (NIC) ports on the back panel, which have two 1 Gbps configuration.

NOTE: You can install up to six PCIe add-on NIC cards.

VGA Ports

The Video Graphic Array (VGA) port enables you to connect the system to a VGA display. The Razberi Core system supports two 15-pin VGA ports

iDRAC Ports

The Razberi Core system supports a single Management Network Interface Controller (NIC) port on the back panel, which has 1 Gbps configuration

Environmental Specifications

Temperature	Specifications
Storage	–40°C to 65°C (–40°F to 149°F)
Continuous operation (for altitude less than 950 m or 3117 ft)	10°C to 35°C (50°F to 95°F) with no direct sunlight on the equipment.
Fresh air	For information about fresh air, see the Expanded Operating Temperature section.
Maximum temperature gradient (operating and storage)	20°C/h (68°F/h)
Relative humidity	Specifications
Storage	5% to 95% RH with 33°C (91°F) maximum dew point. Atmosphere must be non-condensing at all times.

Relative humidity	Specifications
Storage	5% to 95% RH with 33°C (91°F) maximum dew point. Atmosphere must be non-condensing at all times.
Operating	10% to 80% relative humidity with 29°C (84.2°F) maximum dew point.

Maximum vibration	Specifications
Operating	0.26 G_{rms} at 5 Hz to 350 Hz (all operation orientations).
Storage	1.88 G_{rms} at 10 Hz to 500 Hz for 15 min (all six sides tested).

Maximum shock	Specifications
Operating	Six consecutively executed shock pulses in the positive and negative x, y, and z axes of 6 G for up to 11 ms.
Storage	Six consecutively executed shock pulses in the positive and negative x, y, and z axes (one pulse on each side of the system) of 71 G for up to 2 ms.

Maximum altitude	Specifications
Operating	30482000 m (10,0006560 ft)
Storage	12,000 m (39,370 ft)

Operating temperature derating	Specifications
Up to 35°C (95°F)	Maximum temperature is reduced by 1°C/300 m (1°F/547 ft) above 950 m (3,117 ft).
35°C to 40°C (95°F to 104°F)	Maximum temperature is reduced by 1°C/175 m (1°F/319 ft) above 950 m (3,117 ft).
40°C to 45°C (104°F to 113°F)	Maximum temperature is reduced by 1°C/125 m (1°F/228 ft) above 950 m (3,117 ft).

Standard Operating Temperatures

Standard operating temperature	Specifications
Continuous operation (for altitude less than 950 m or 3117 ft)	10°C to 35°C (50°F to 95°F) with no direct sunlight on the equipment.

Expanded Operating Temperatures

Expanded operating temperature	Specifications
Continuous operation	5°C to 40°C at 5% to 85% RH with 29°C dew point. **NOTE: Outside the standard operating temperature (10°C to 40°C), the system can operate continuously in temperatures as low as 5°C and as high as 40°C.** For temperatures between 35°C and 40°C, derate maximum allowable temperature by 1°C per 175 m above 950 m (1°F per 319 ft).

Expanded operating temperature	Specifications
≤ 1% of annual operating hours	–5°C to 45°C at 5% to 90% RH with 29°C dew point. NOTE: Outside the standard operating temperature (10°C to 40°C), the system can operate down to –5°C or up to 45°C for a maximum of 1% of its annual operating hours. For temperatures between 40°C and 45°C, derate maximum allowable temperature by 1°C per 125 m above 950 m (1°F per 228 ft).

NOTE: When operating in the expanded temperature range, system performance may be impacted.

NOTE: When operating in the expanded temperature range, ambient temperature warnings may be reported on the bezel's LCD panel and in the System Event Log.

Expanded operating temperature restrictions

- Do not perform a cold startup below 5°C.
- The operating temperature specified is for a maximum altitude of 3050 m (10,000 ft).
- Redundant power supply configuration is required.
- AEP DIMM is not supported.
- GPGPU card is not supported.
- Rear drive configuration is not supported.
- 12 x 3.5 inch SM configuration with CPU 140 W/130 W/115 W/105 W_4C is not supported.
- LRDIMM is not supported.
- Non-Razberi Core qualified peripheral cards and/or peripheral cards greater than 25 W are not supported.
- Tape backup unit (TBU) is not supported.

Rack Mounting Instructions

- Identifying the Rail Kit Contents
  Locate the components for installing the rail kit assembly:
  - Two B6 ReadyRails II sliding rail assemblies (1)
  - Two hook and loop straps (2)

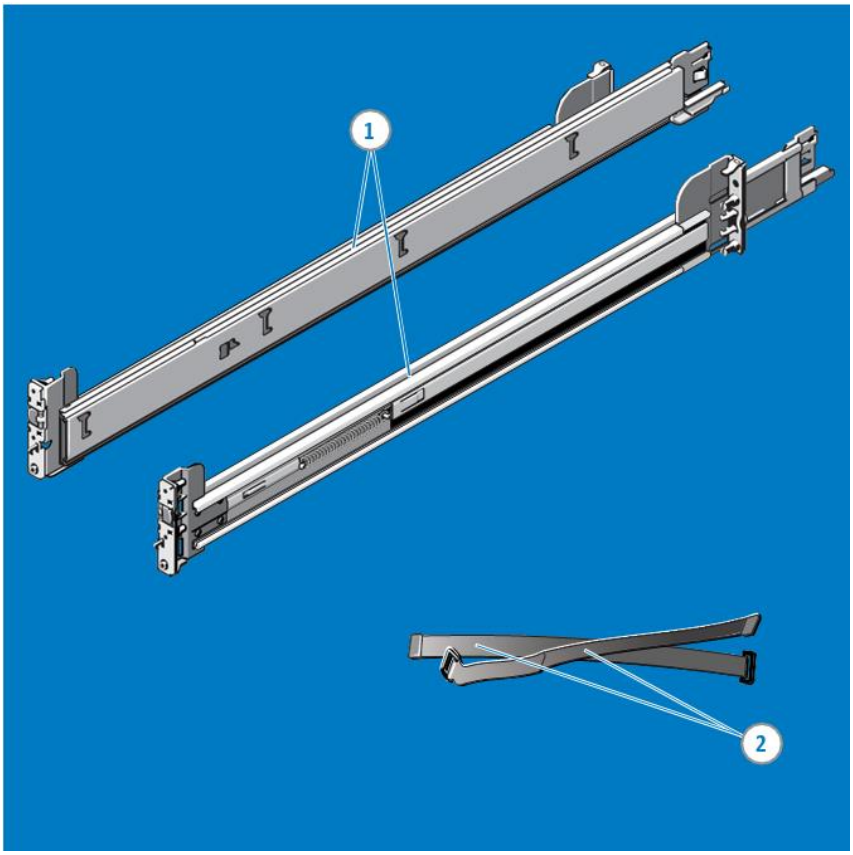

Figure 52. Rail Kit Contents

1. Installing and Removing Tool-less Rails (Square Hole or Round Hole Racks)

Position the left and right rail end pieces labeled FRONT facing inward and orient each end piece to seat in the holes on the front side of the vertical rack flanges (1). Align each end piece in the bottom and top holes of the desired U spaces (2). Engage the back end of the rail until it fully seats on the vertical rack flange, and the latch clicks into place. Repeat these steps to position and seat the front end piece on the vertical rack flange (3). To remove the rails, pull the latch release button on the end piece midpoint and unseat each rail (4).

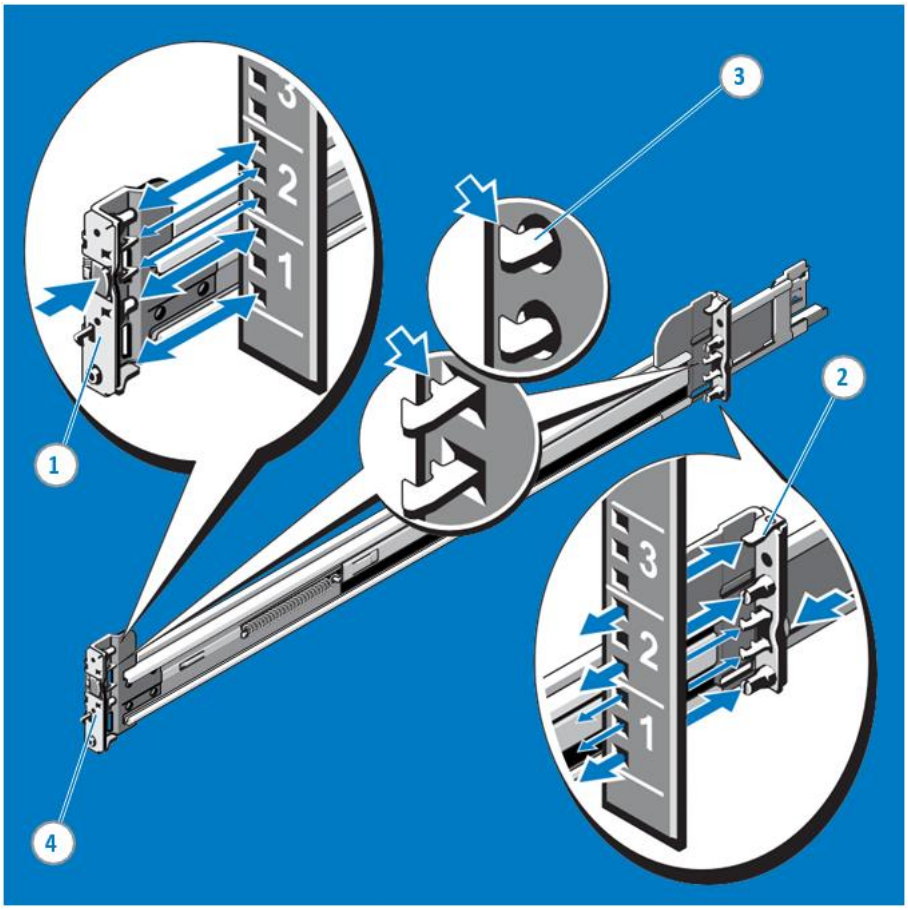

Figure 53. Installing and Removing Tool-Less Rails

2. Installing and Removing Tooled Rails (Threaded Hole Racks)

Remove the pins from the front and rear mounting brackets using a flat-tipped screwdriver (1). Pull and rotate the rail latch subassemblies to remove them from the mounting brackets (2). Attach the left and right mounting rails to the front vertical rack flanges using two pairs of screws (3). Slide the left and right back brackets forward against the rear vertical rack flanges and attach them using two pairs of screws (4).

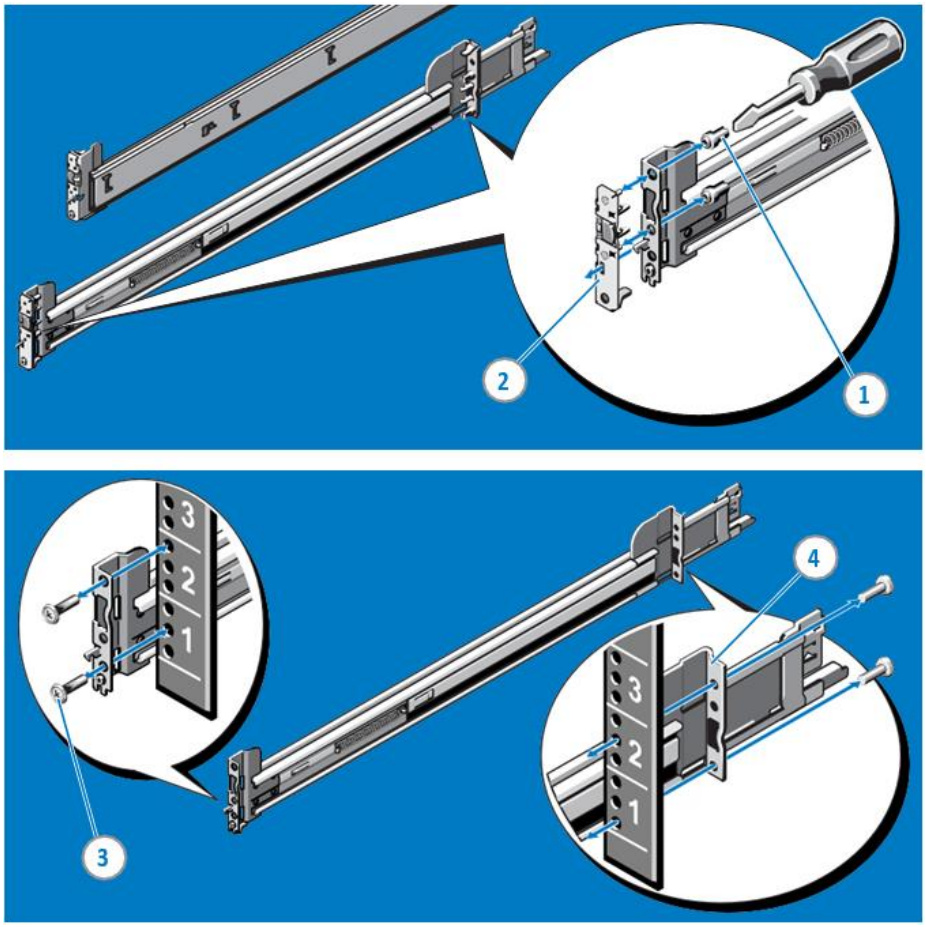

Figure 54. Installing and Removing Tooled Rails

3. Installing the System in a Rack

Pull the inner slide rails out of the rack until they lock into place (1). Locate the rear rail standoff on each side of the system and lower them into the rear J-slots on the slide assemblies (2). Rotate the system downward until all the rail standoffs are seated in the J-slots (3). Push the system inward until the lock levers click into place.

Press the slide-release lock buttons on both rails and slide the system into the rack (4).

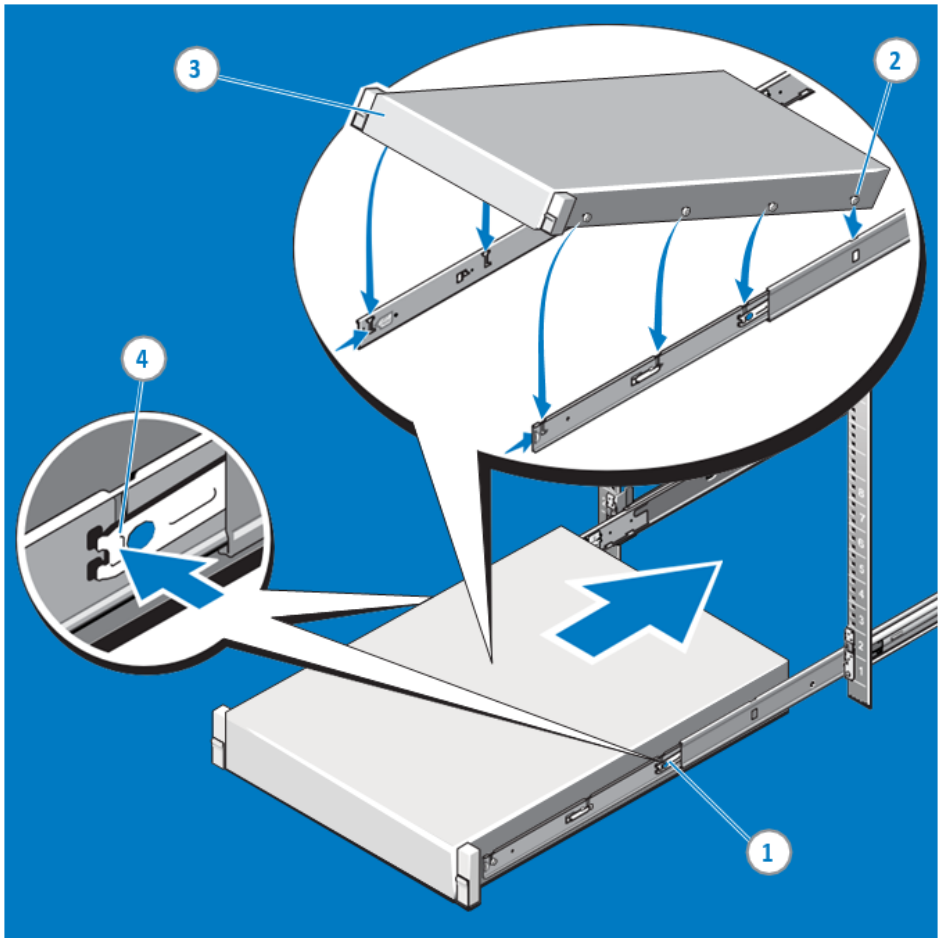

Figure 55. Installing the System in a Rack

4. Removing the System from the rack

Locate the lock levers on the sides of the inner rails (1). Unlock each lever by rotating it up to its release position (2). Grasp the sides of the system firmly and pull it forward until the rail standoffs are at the front of the J-slots. Lift the system up and away from the rack and place it on a level surface (3).

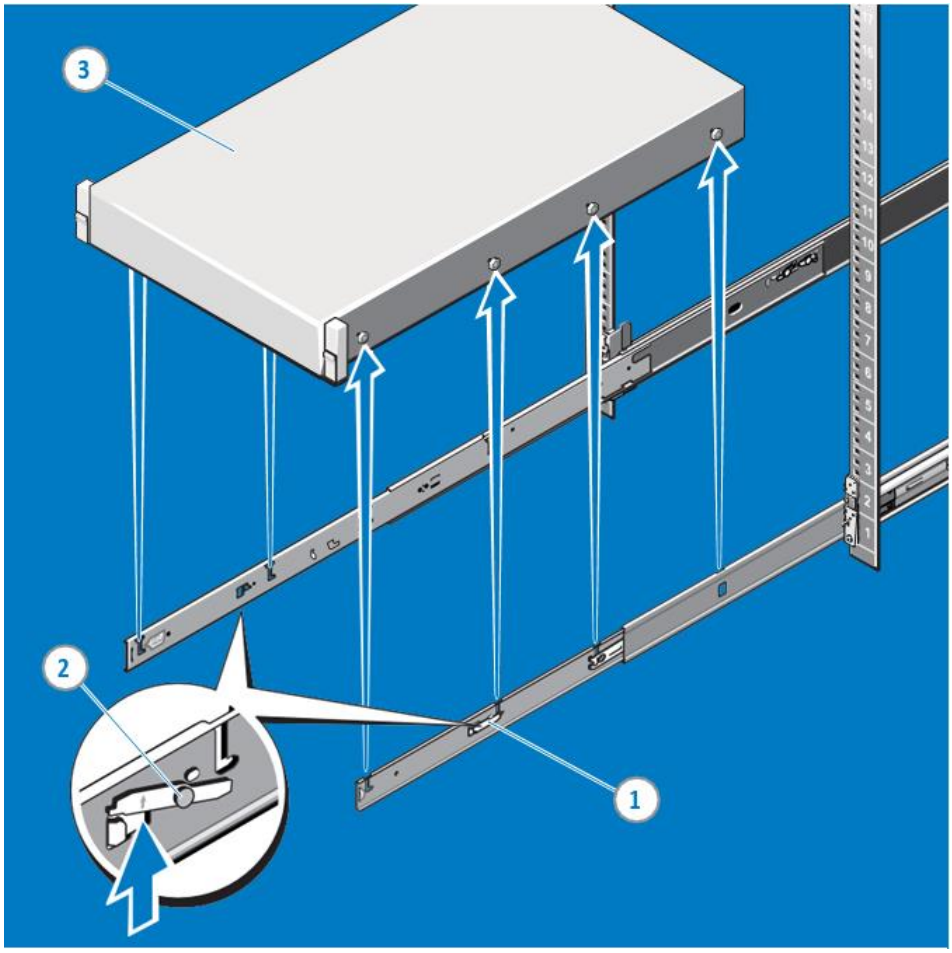

Figure 56. Removing System from the Rack

5. Engaging and Releasing the Slam Latch

NOTE: For systems not equipped with slam latches, secure the system using screws, as described in step 3 of this procedure.

Facing the front, locate the slam latch on either side of the system (1). The latches engage automatically as the system is pushed into the rack and are released by pulling up on the latches (2). To secure the system for shipment in the rack or other unstable environments, locate the hard-mount screw under each latch and tighten each screw with a #2 Phillips screwdriver (3).

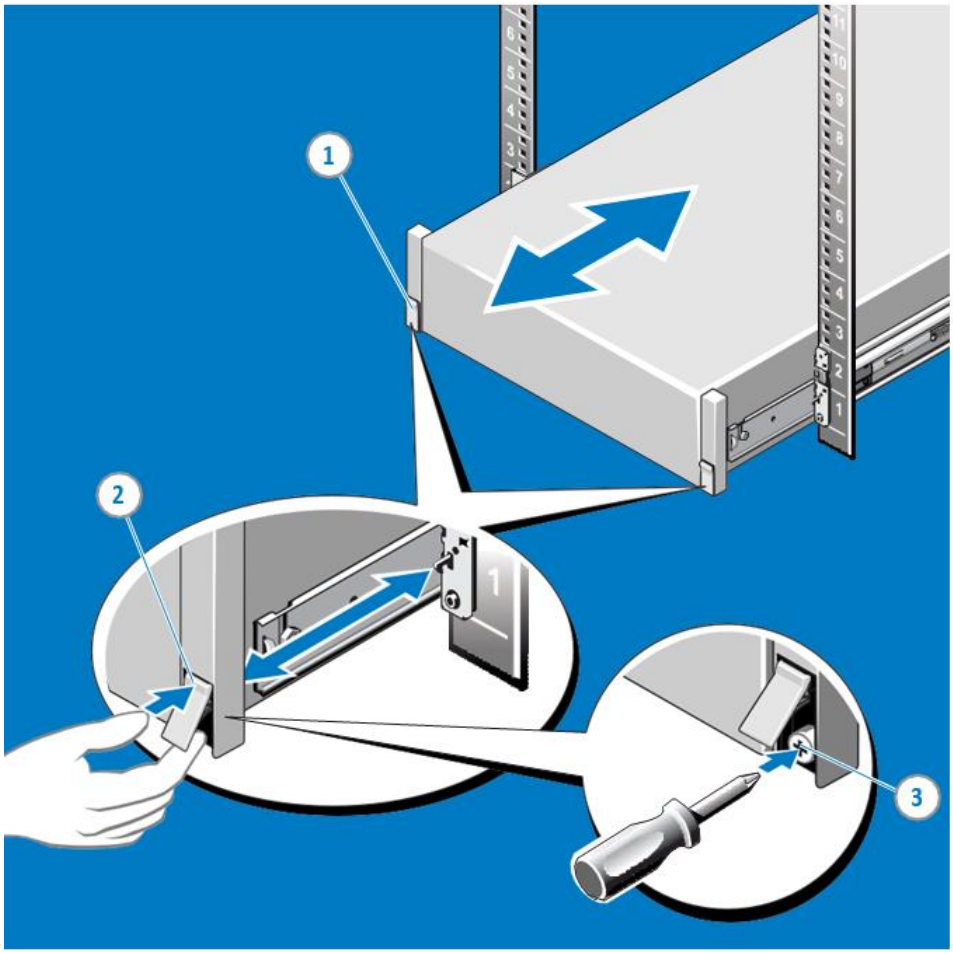

Figure 57. Engaging and Releasing the Slam Latch

6. Routing the Cables

NOTE: If you did not order the optional CMA, use the two hook and loop straps provided in the rail kit to route the cables at the back of your system.

Locate the outer CMA brackets on the interior sides of both rack flanges (1). Bundle the cables gently, pulling them clear of the system connectors to the left and right sides (2). Thread the hook and loop straps through the tooled slots on the outer CMA brackets on each side of the system to secure the cable bundles (3).

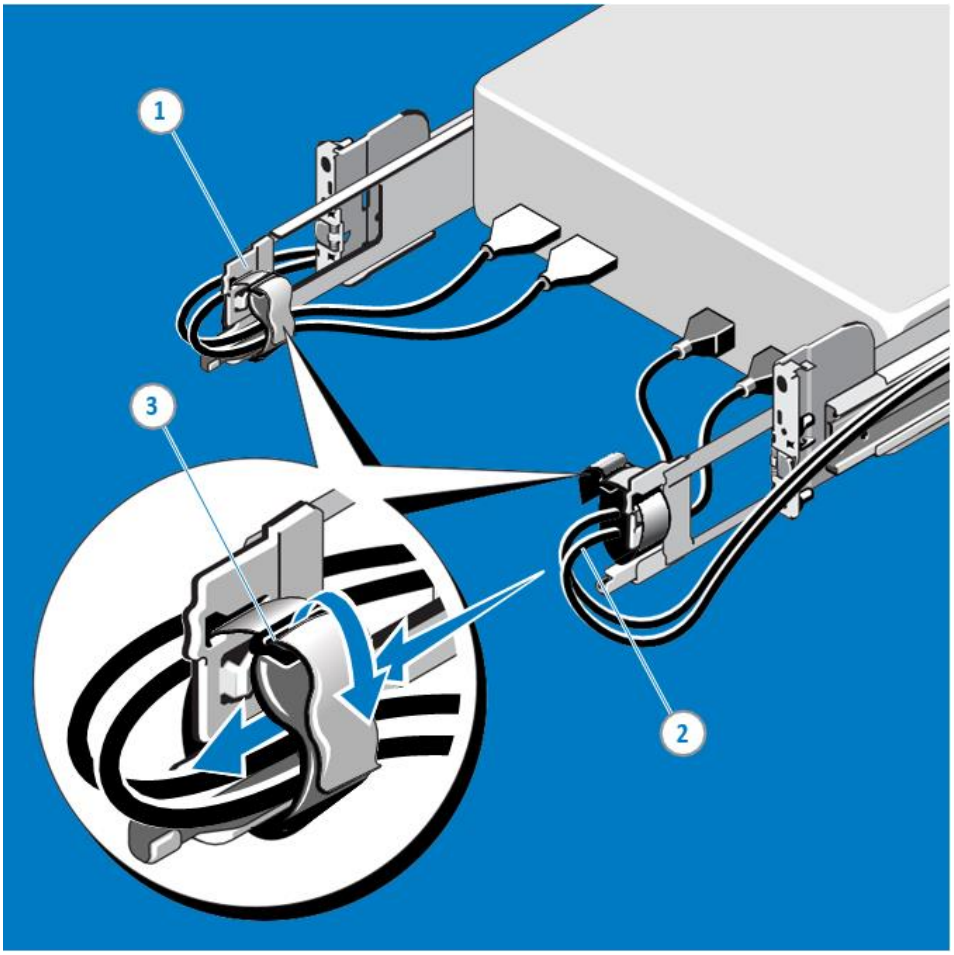

Figure 58. Routing the Cables

Connecting Peripherals and Powering On

It is recommended to connect your server peripherals once you have racked your server.

Connect your KVM or Keyboard, Video Display, and Mouse using the appropriate connections.

- VGA Connection for monitor
- USB for Mouse and Keyboard

Connect your network per your local requirements

- Core LOM Network interfaces are 100/1000Base-T
- Optional Dedicated iDRAC Network Interface (see connecting and configuring iDRAC section)

Powering On System

Connect the Core server to proper utility power; Razberi recommends using a UPS and Surge Protection for added electrical protection and conditioned power.

- Locate and depress the power button on the front right-hand side bezel.

Figure 59. Right Control Panel View

Windows OS First Boot

Booting your server for the first time, you will perform the Out of Box Experience process. Complete the Windows configuration of setting country, keyboard, time zone, account credentials, and agree to the EULA. You may be required to complete the OS activation process, depending on the Operating System you have purchased with your Core Server. Included in the contents of your system is an activation insert. Please review this for your specific OS.

RAID Storage

Razberi Core Server V8, V12, and V14 Factory Boot Drive and Storage RAID Configuration

Boot Drive Factory Configuration

Core Model	Boot Drive RAID	Stripe Size	Format	Bytes per Sector	Bytes per Physical Sector	Bytes per Cluster
V8	1	64K	4K	512	4096	4096
V12	1	64K	4K	512	4096	4096
V14	1	64K	4K	512	4096	4096

Storage Drive Factory Configuration

Core Model	Storage	Stripe Size	Format	Bytes per Sector	Bytes per Physical Sector	Bytes per Cluster
V8	6	1M	64K	512	512	65,536
V12	6	1M	64K	512	512	65,536
V14	6	1M	64K	512	512	65,536

Razberi Core Server M4 Factory Boot Drive and Storage RAID Configuration

Boot Drive Factory Configuration

Core Model	Boot Drive RAID	Stripe Size	Format	Bytes per Sector	Bytes per Physical Sector	Bytes per Cluster
M4	1	64K	4K	512	4096	4096

Storage Drive Factory Configuration

Core Model	Storage	Stripe Size	Format	Bytes per Sector	Bytes per Physical Sector	Bytes per Cluster
M4	10	1M	64K	512	4096	65,536

Razberi Core Server A8 Factory Boot Drive and Storage RAID Configuration

Boot Drive Factory Configuration

Core Model	Boot Drive RAID	Stripe Size	Format	Bytes per Sector	Bytes per Physical Sector	Bytes per Cluster
A8	1	64K	4K	512	512	4096

Storage Drive Factory Configuration

Core Model	Storage	Stripe Size	Format	Bytes per Sector	Bytes per Physical Sector	Bytes per Cluster
A8	5	1M	64K	512	512	65,536

Altering your Factory RAID to match your requirements

Razberi recommends using the BIOS to manage or change your RAID. To enter the BIOS hit F2 during a system boot.

Click or Choose Device Settings:

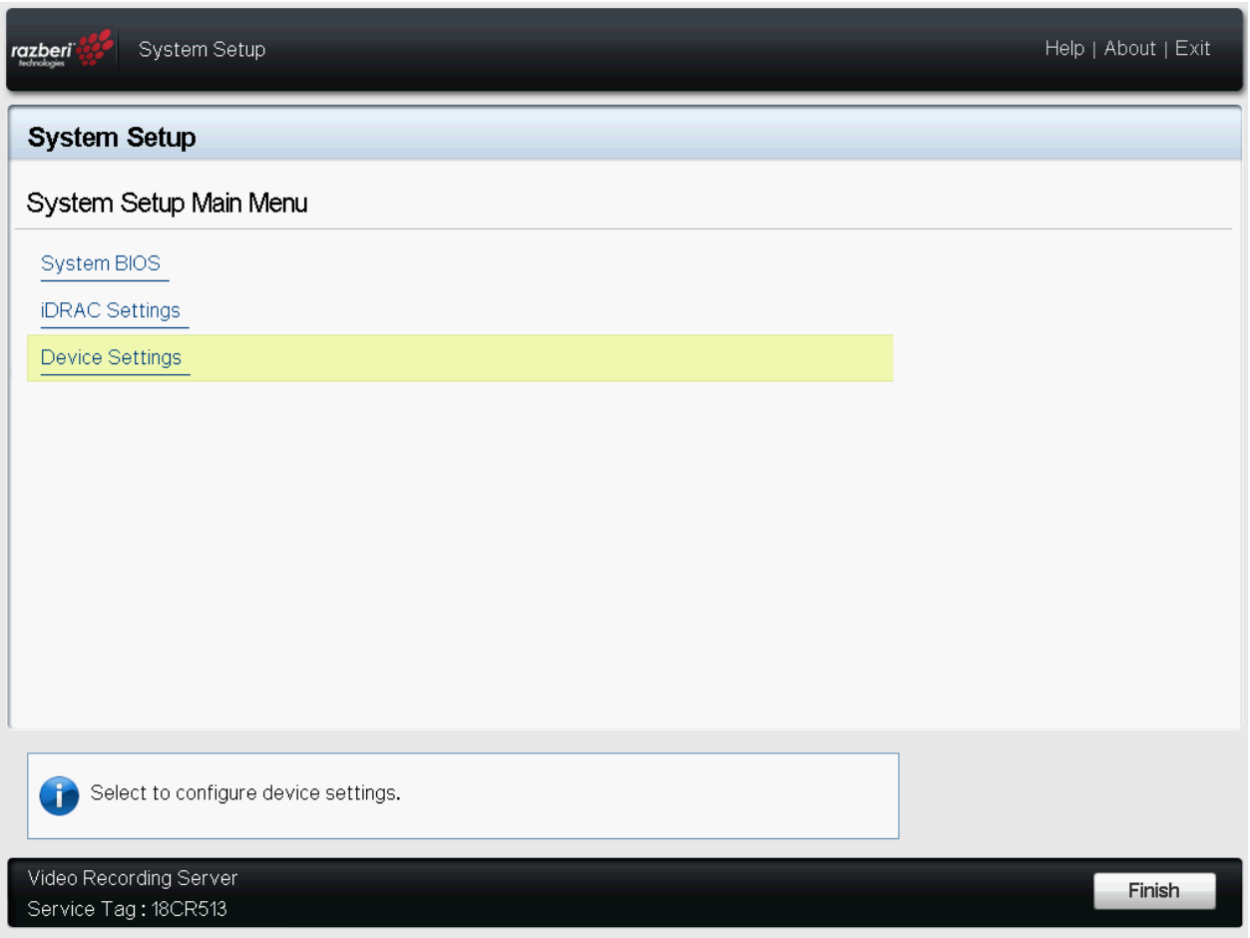

Figure 60. BIOS System Setup Main Menu

Click or Choose Integrated RAID Controller 1

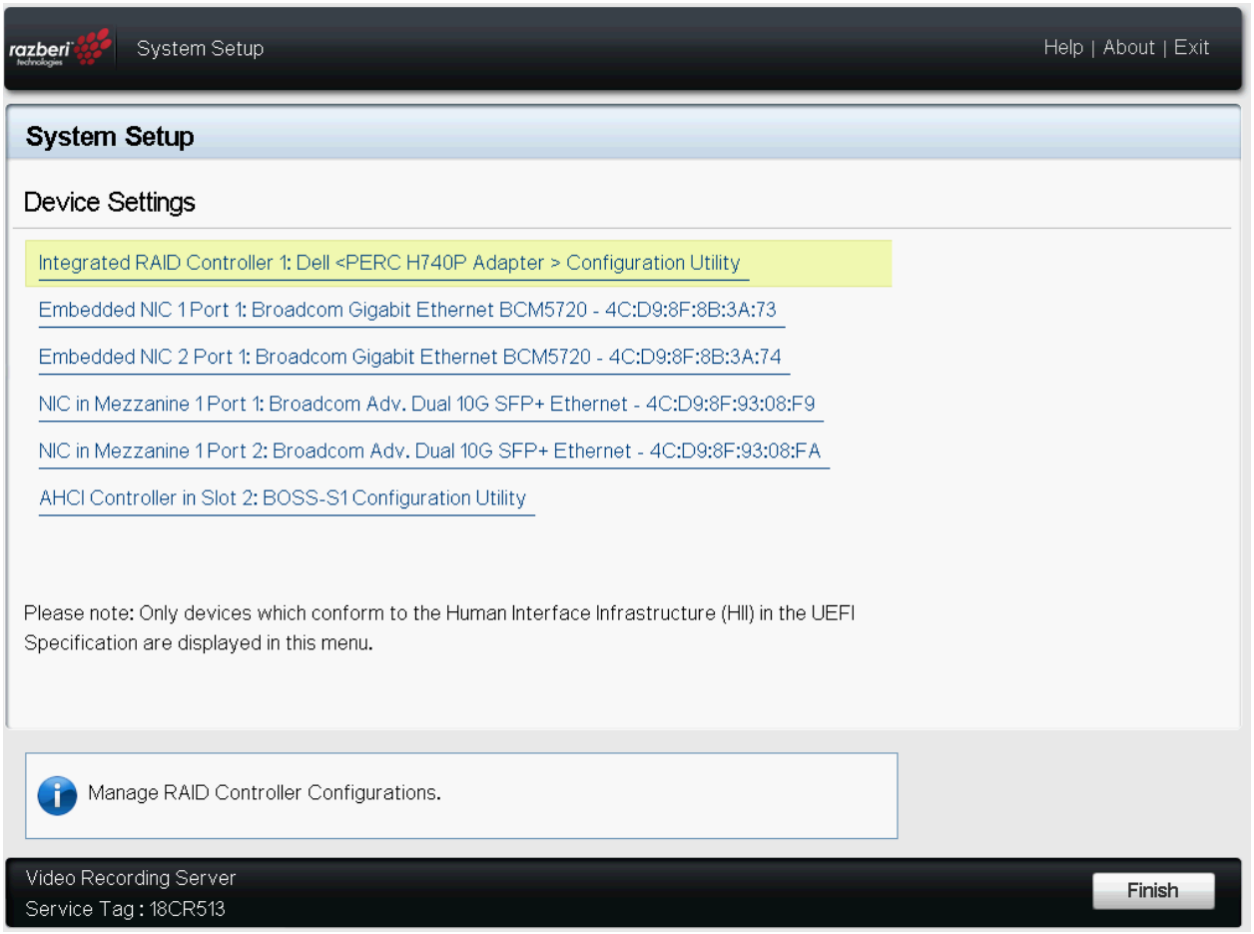

Figure 61. BIOS Device Settings Menu

Scroll down and select View Server Profile

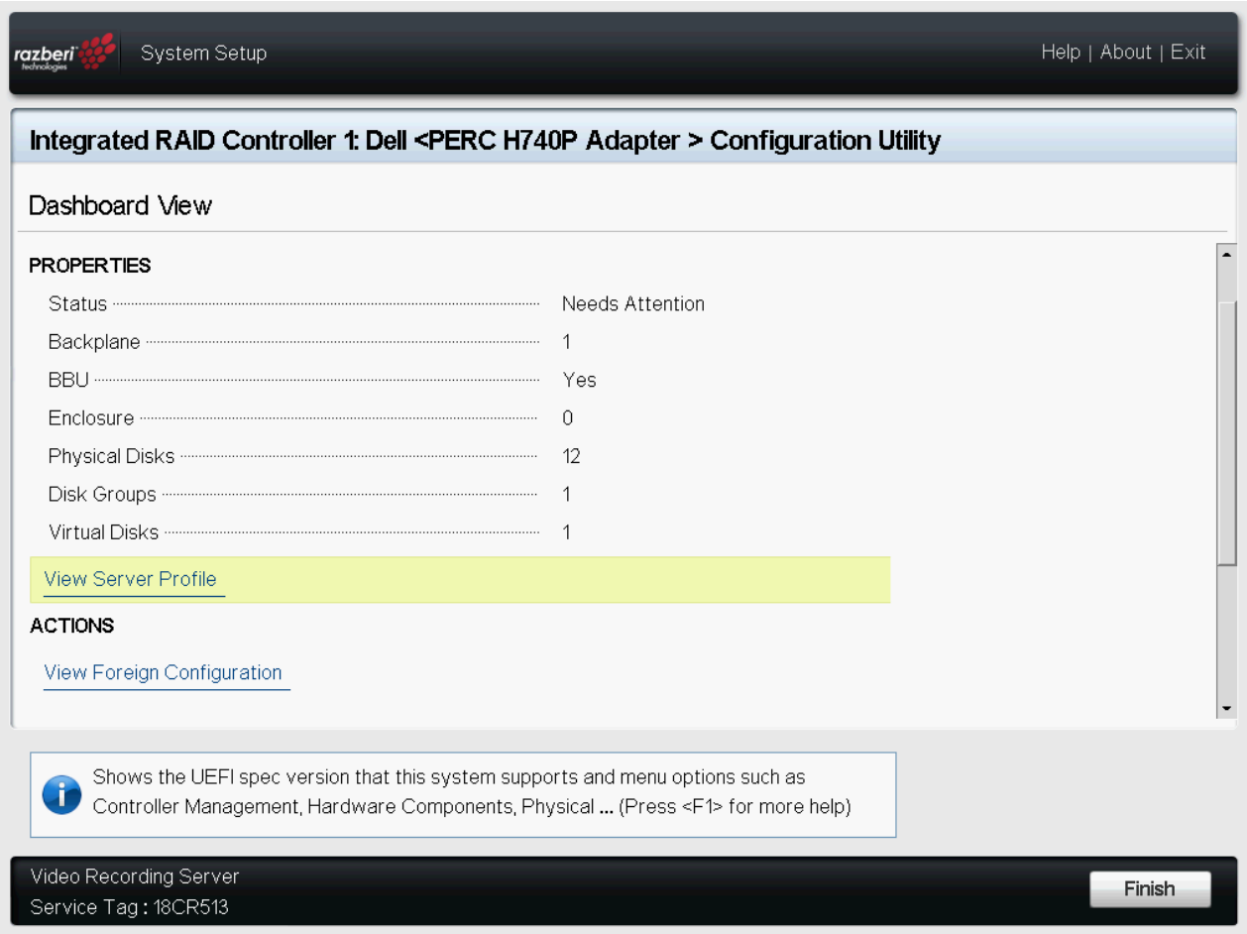

Figure 62. PERC Adaptor Configuration Utility: Main Dashboard

Select Virtual Disk Management

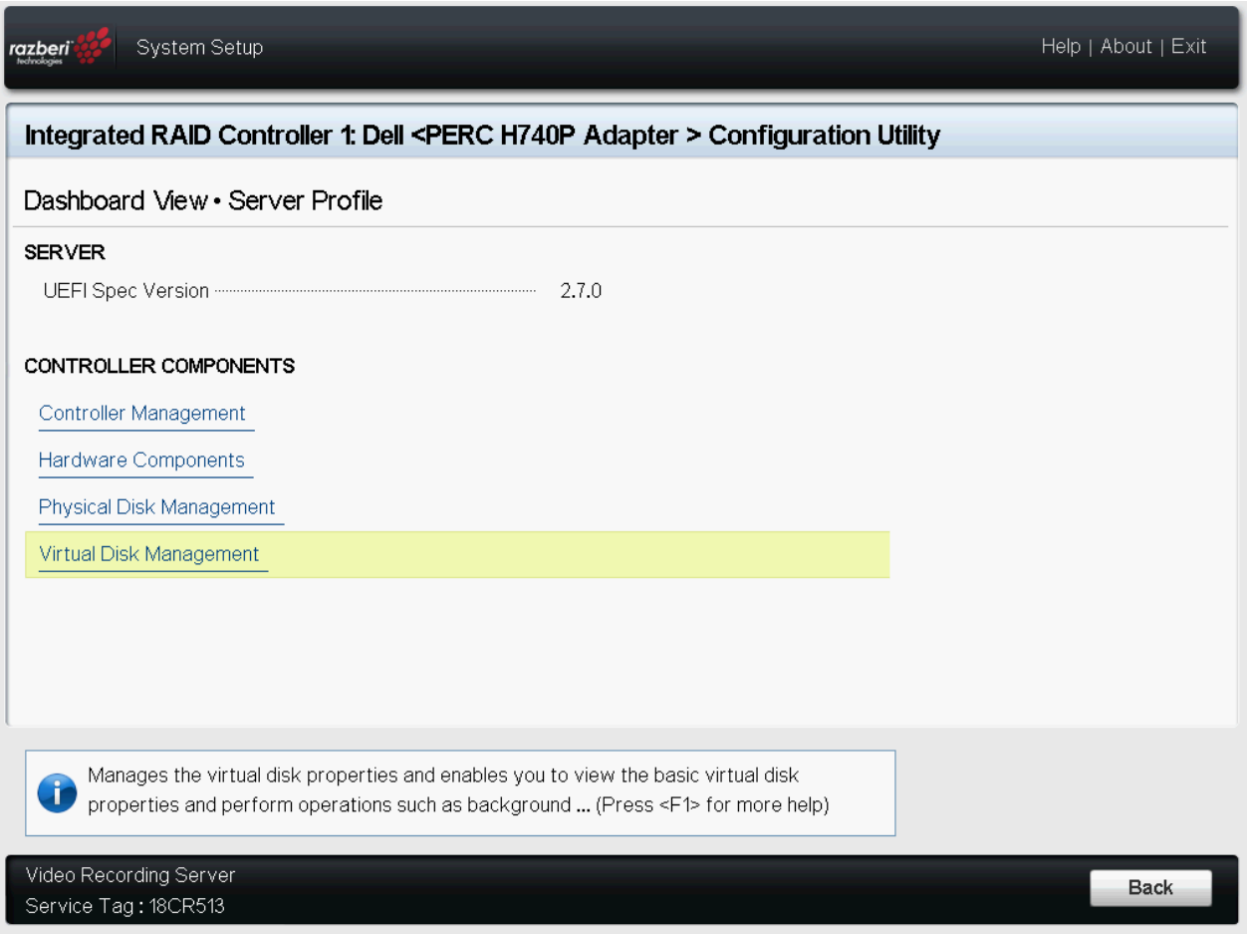

Figure 63. PERC Adapter: Server Profile View

Select the Virtual Disk you wish to change (by default there will only be one Virtual Disk available)

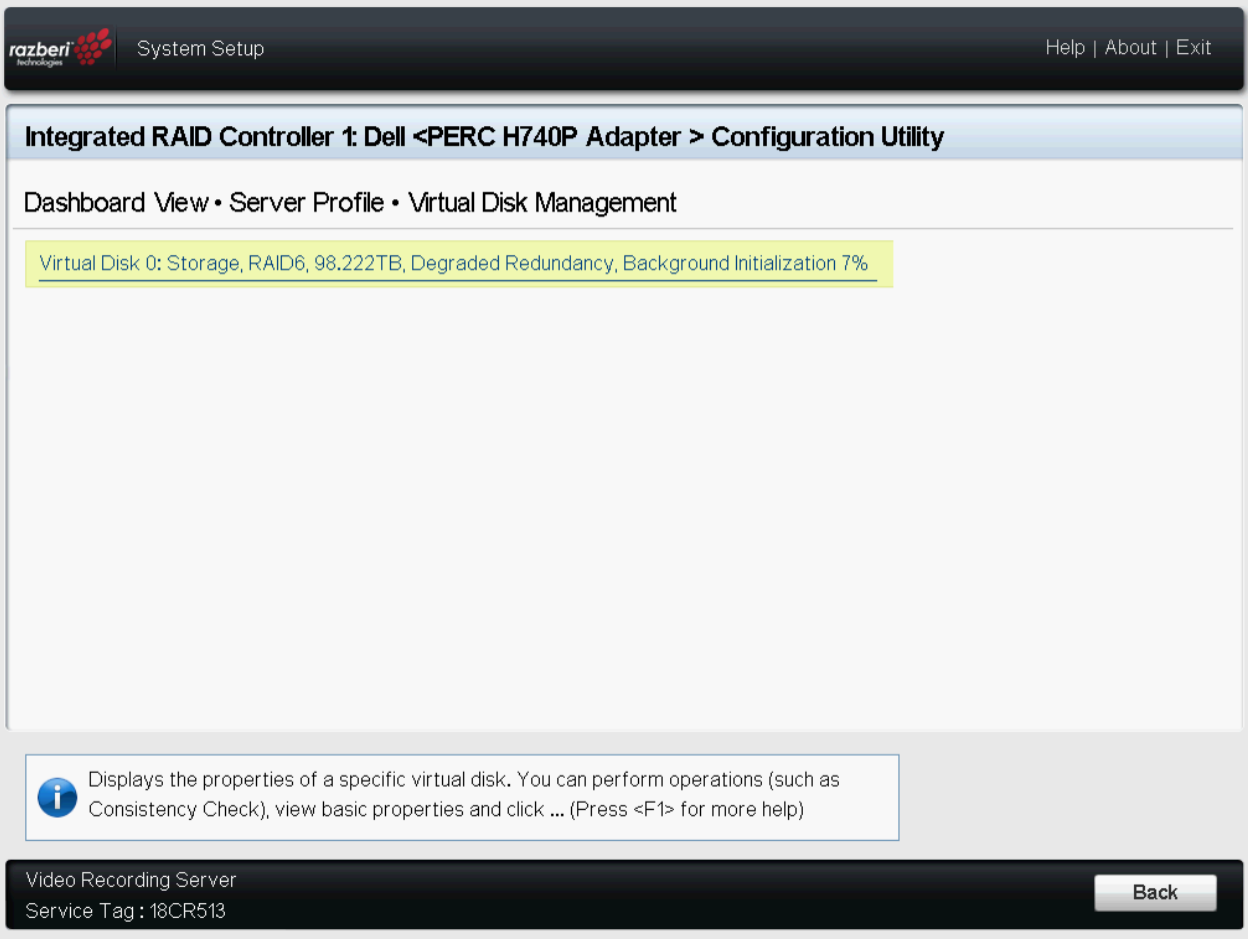

Figure 64. PERC Adapter: Virtual Disk Management

Under Operation, choose Delete Virtual Disk:

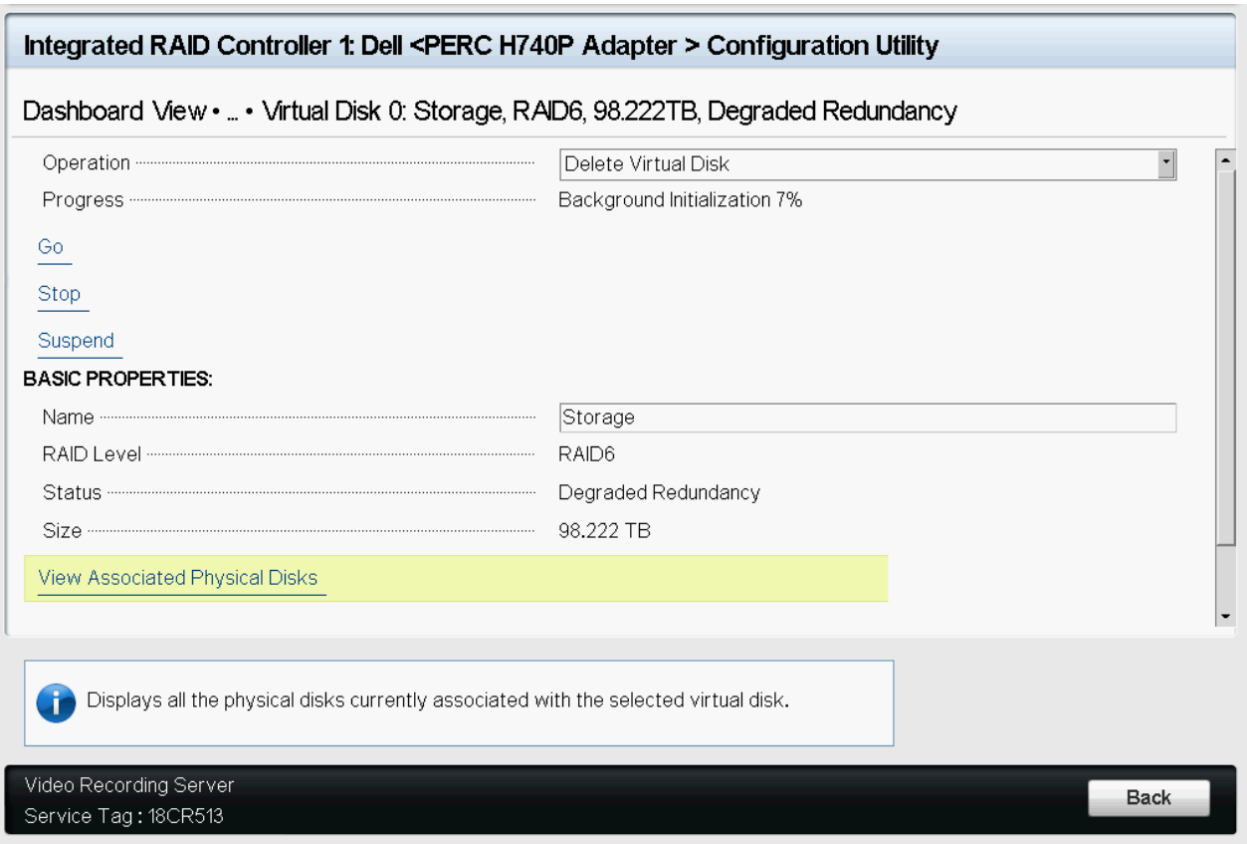

Figure 65. Virtual Disk Management

Select Go

And Confirm that you want to Delete

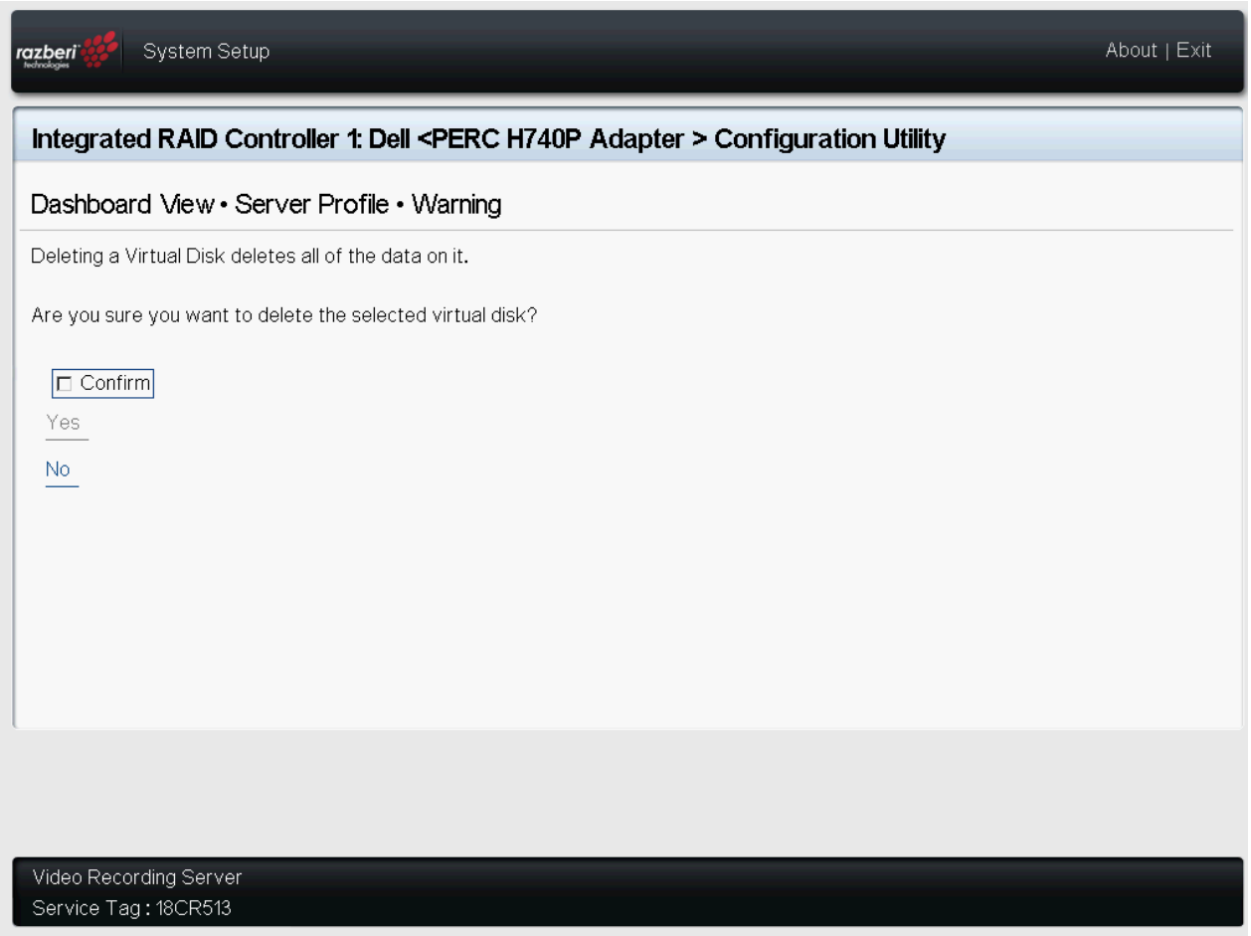

Figure 66. Virtual Disk Management Confirmation

Once the operation has been completed, click OK:

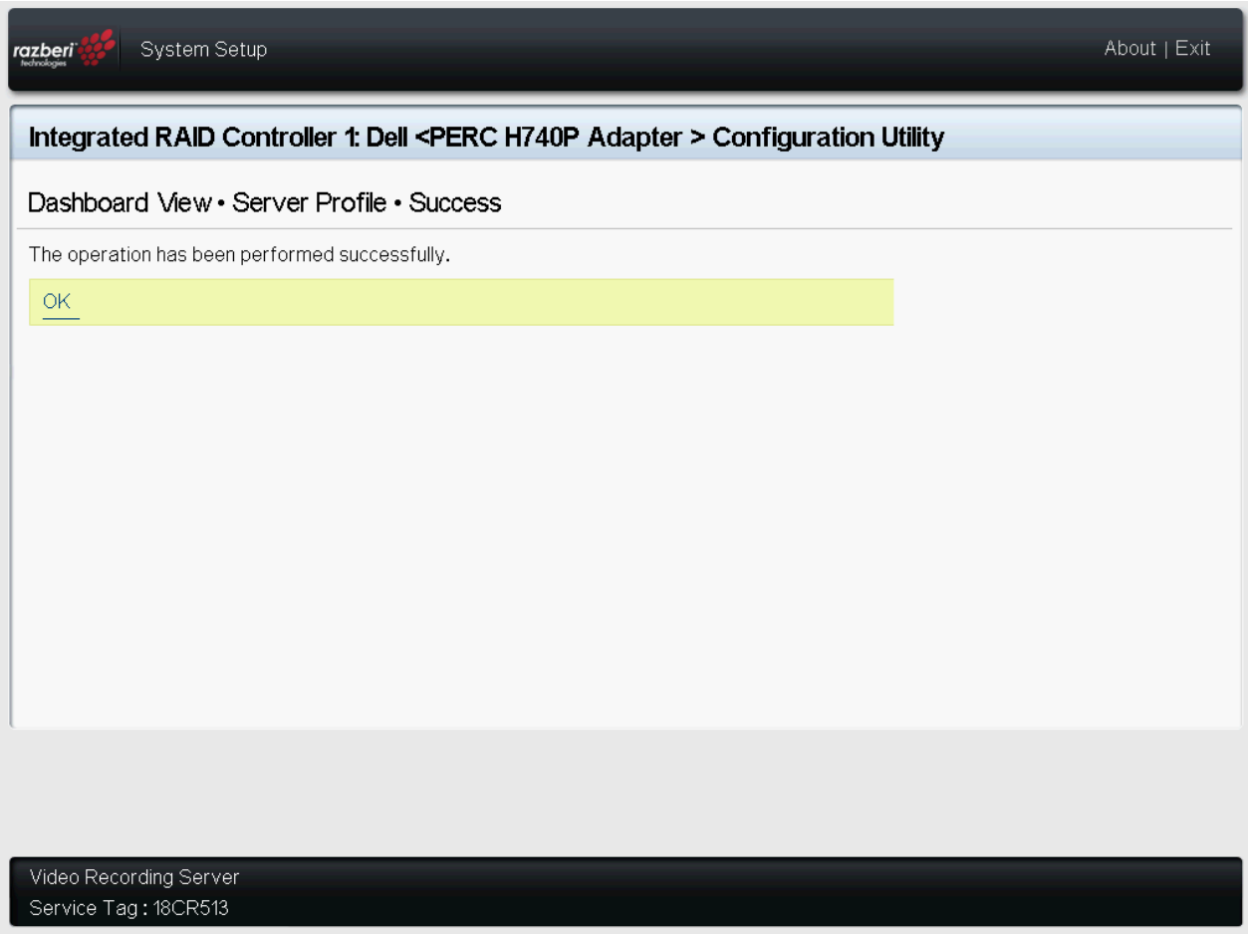

Figure 67. Virtual Disk Management, Job Complete

Go Back to the Main Menu and Select Configuration Management

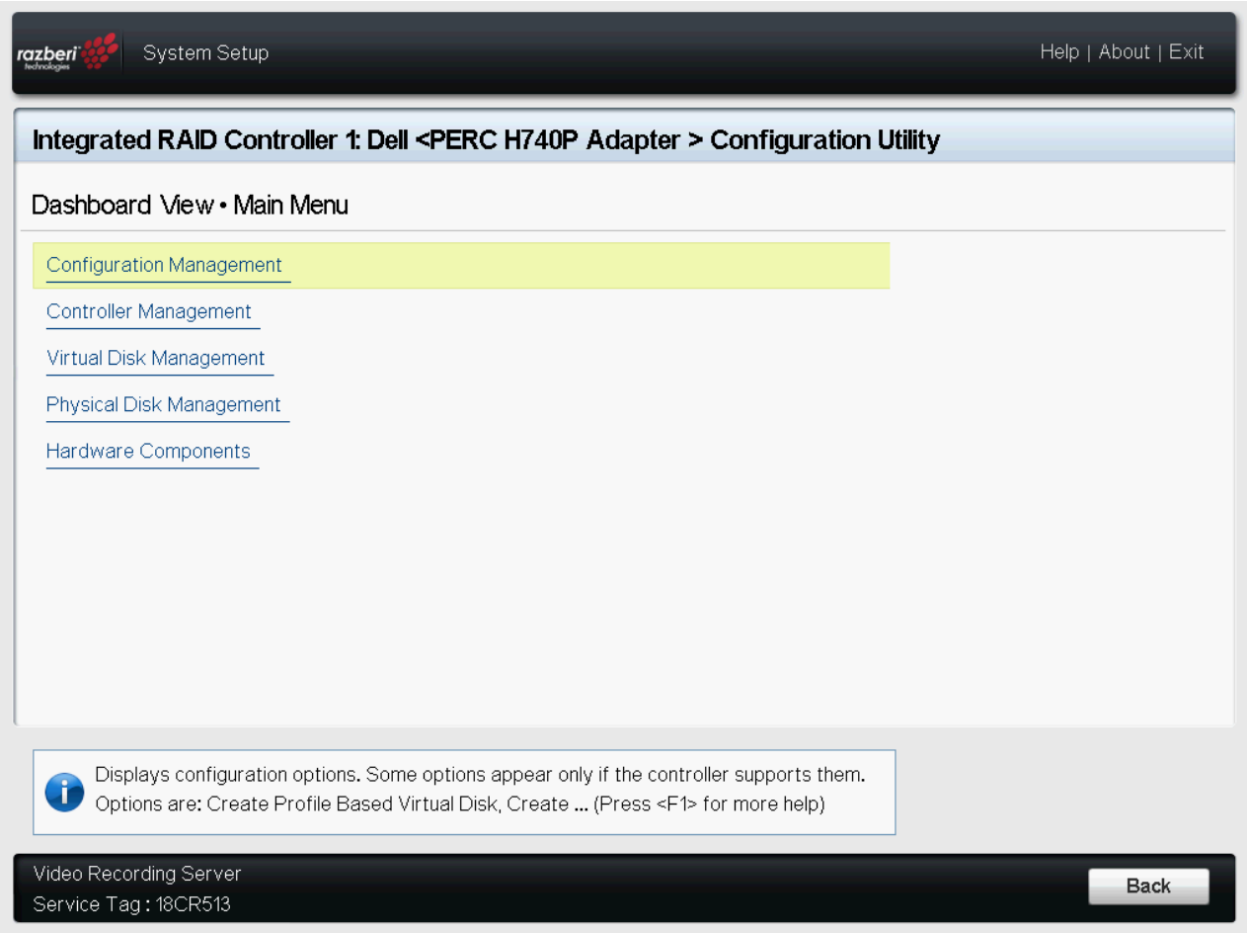

Figure 68. Configuration Management

Select Create Virtual Disk

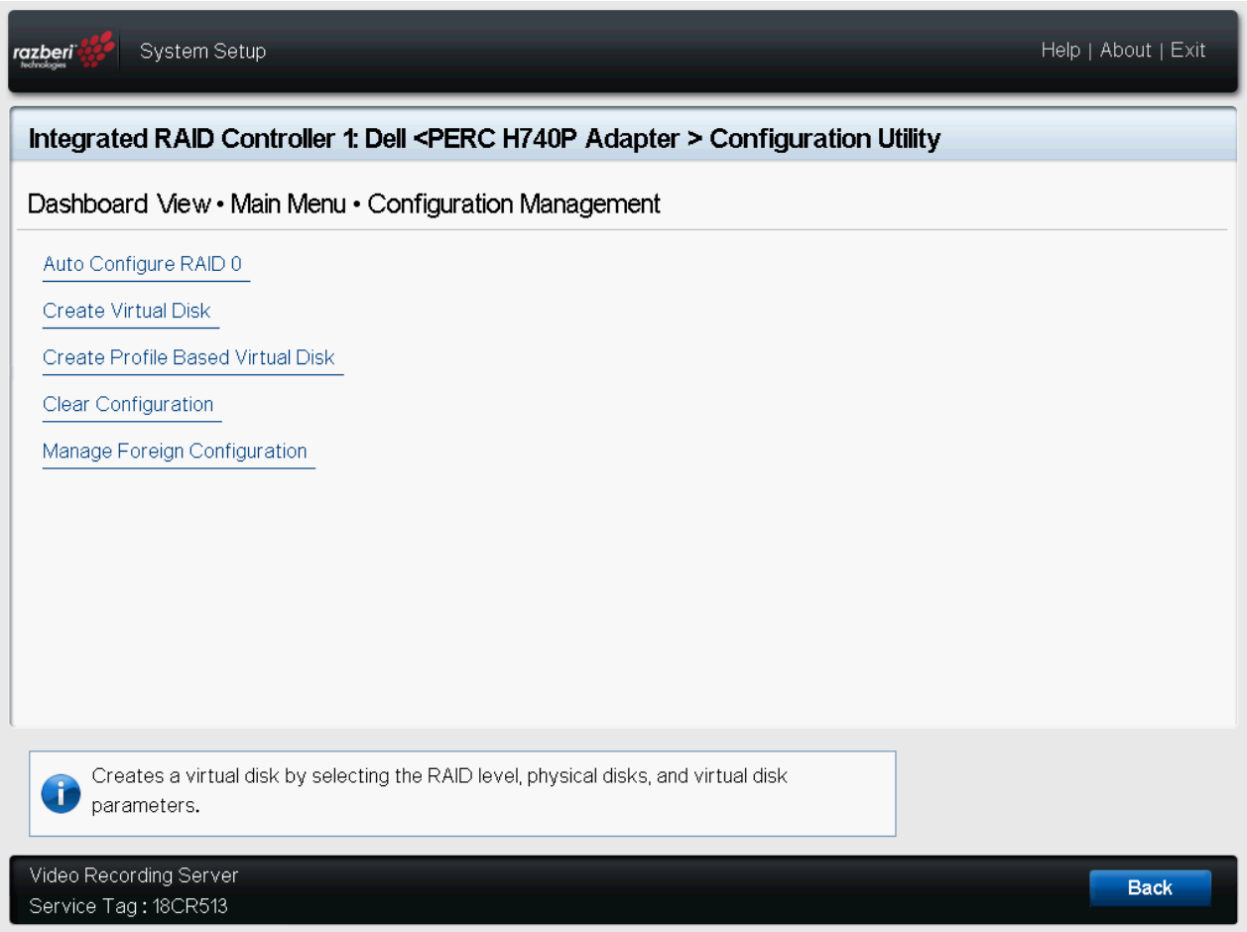

Figure 69. Create Virtual Disk

Select RAID level

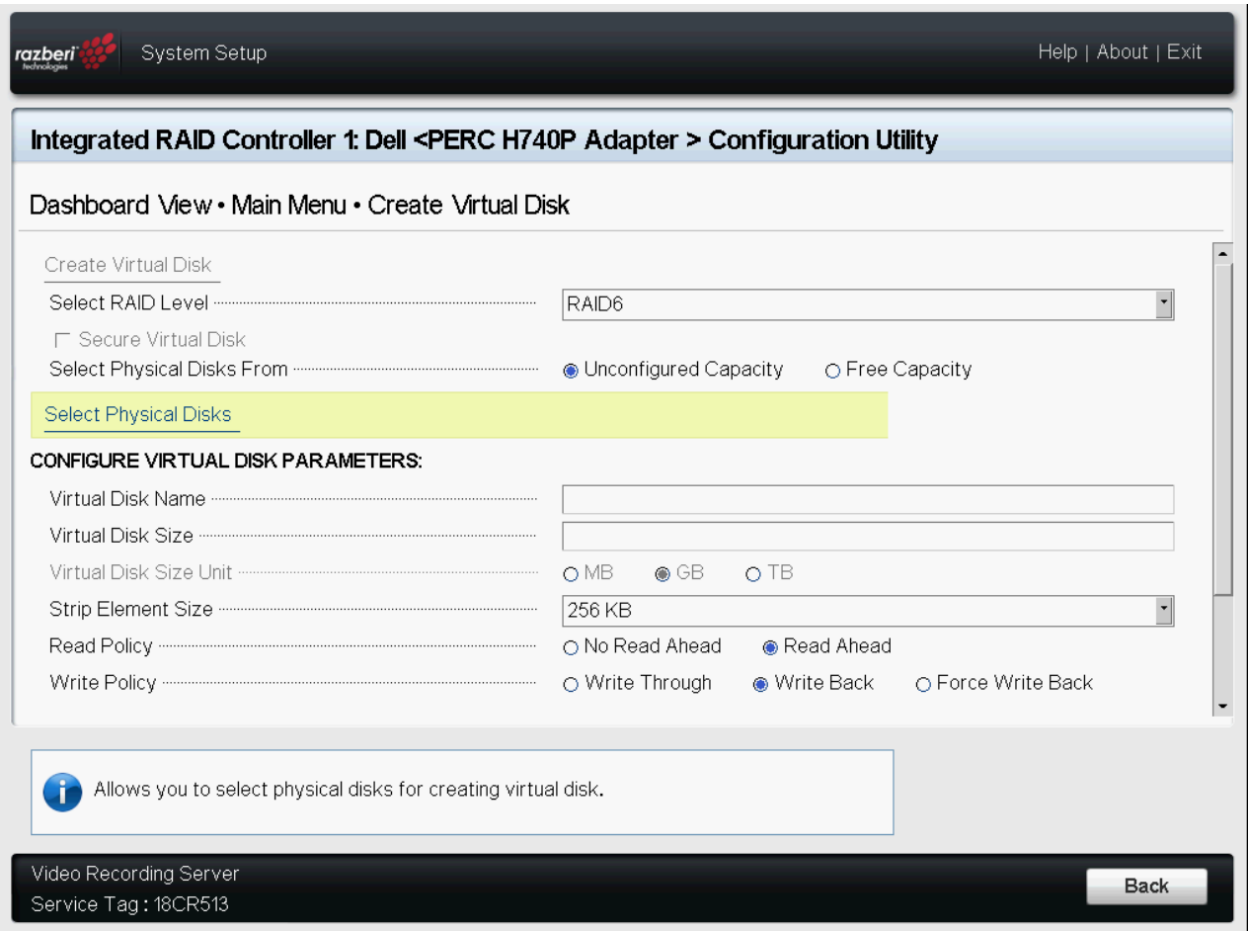

Figure 70. Select RAID Type

Select Physical Disks

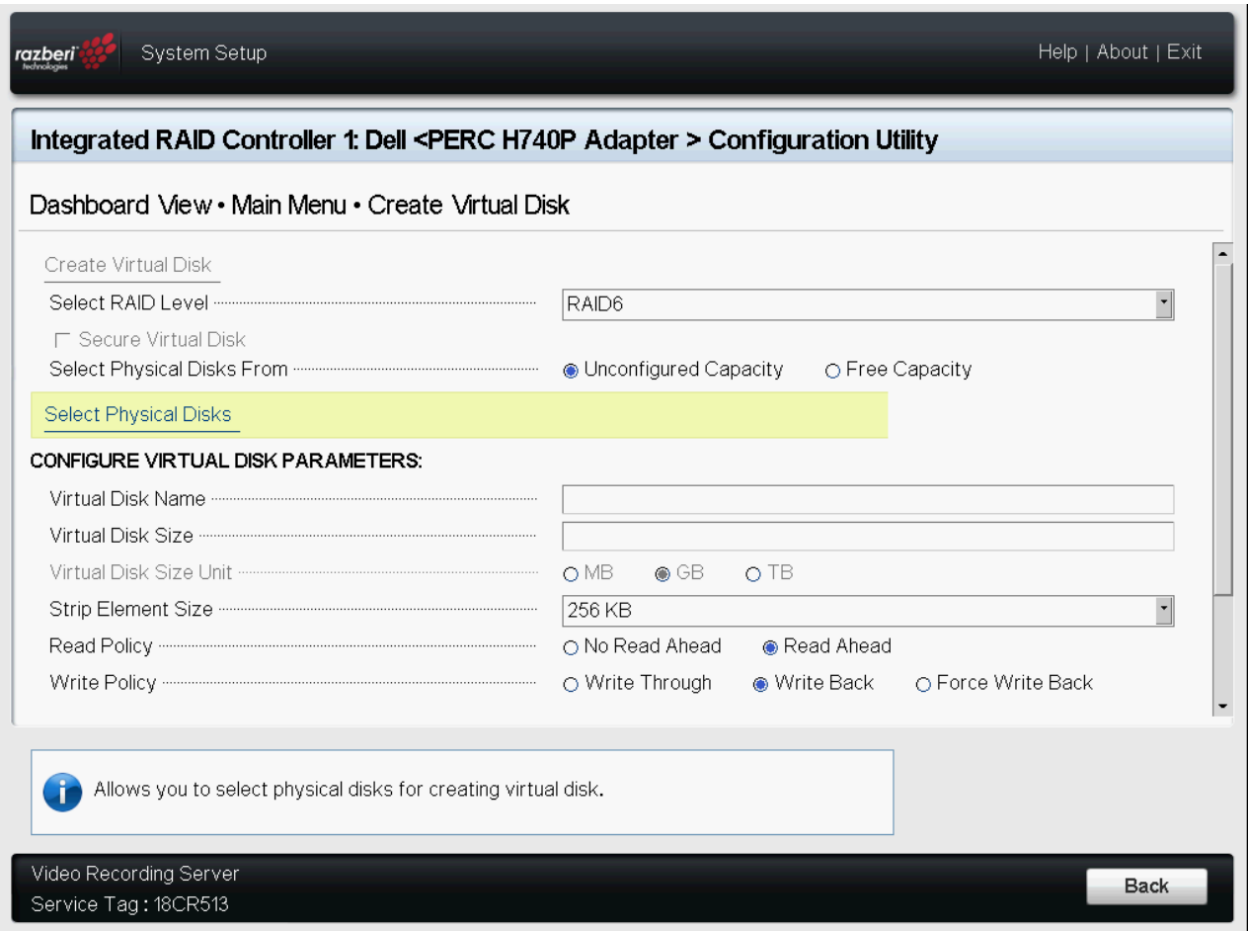

Figure 71. Select Physical Disks

If you are going to utilize all available disks, scroll down and choose Check All. If you are going to designate some disks for Hot Spare, only select the disks that you would like to be included in the RAID.

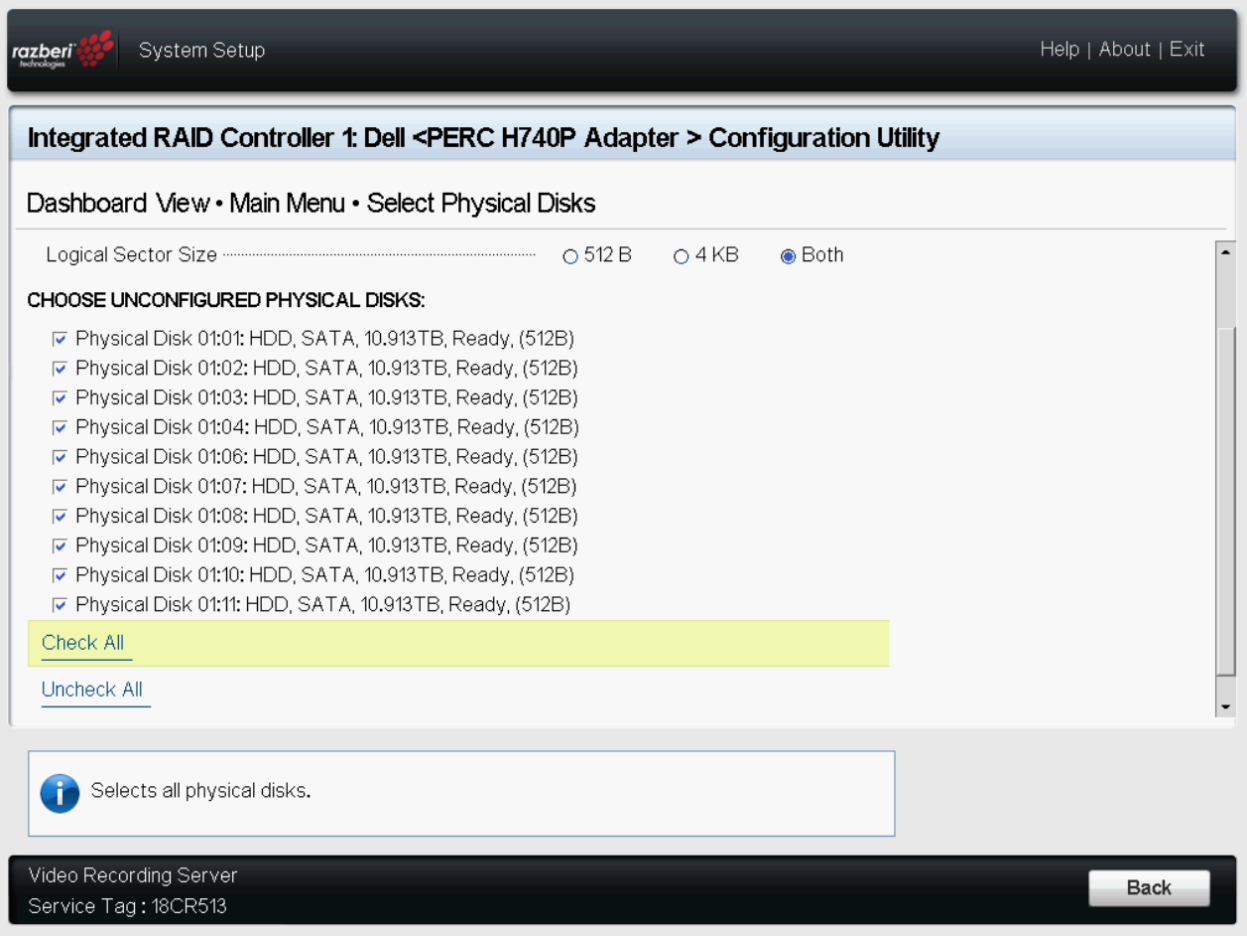

Figure 72. Physical Disk Selection

Scroll up and Click Apply Changes

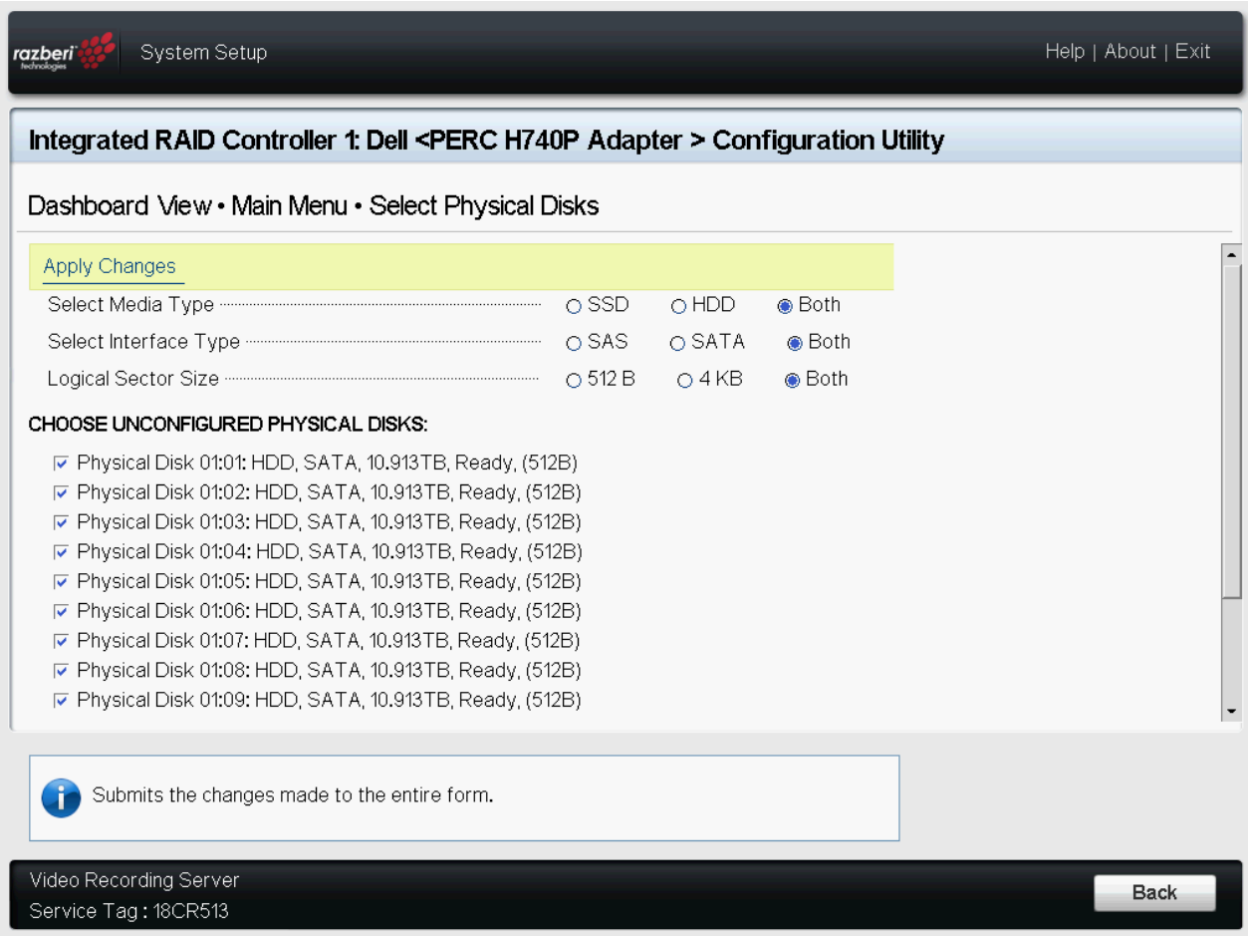

Figure 73. Apply Changes

Select OK

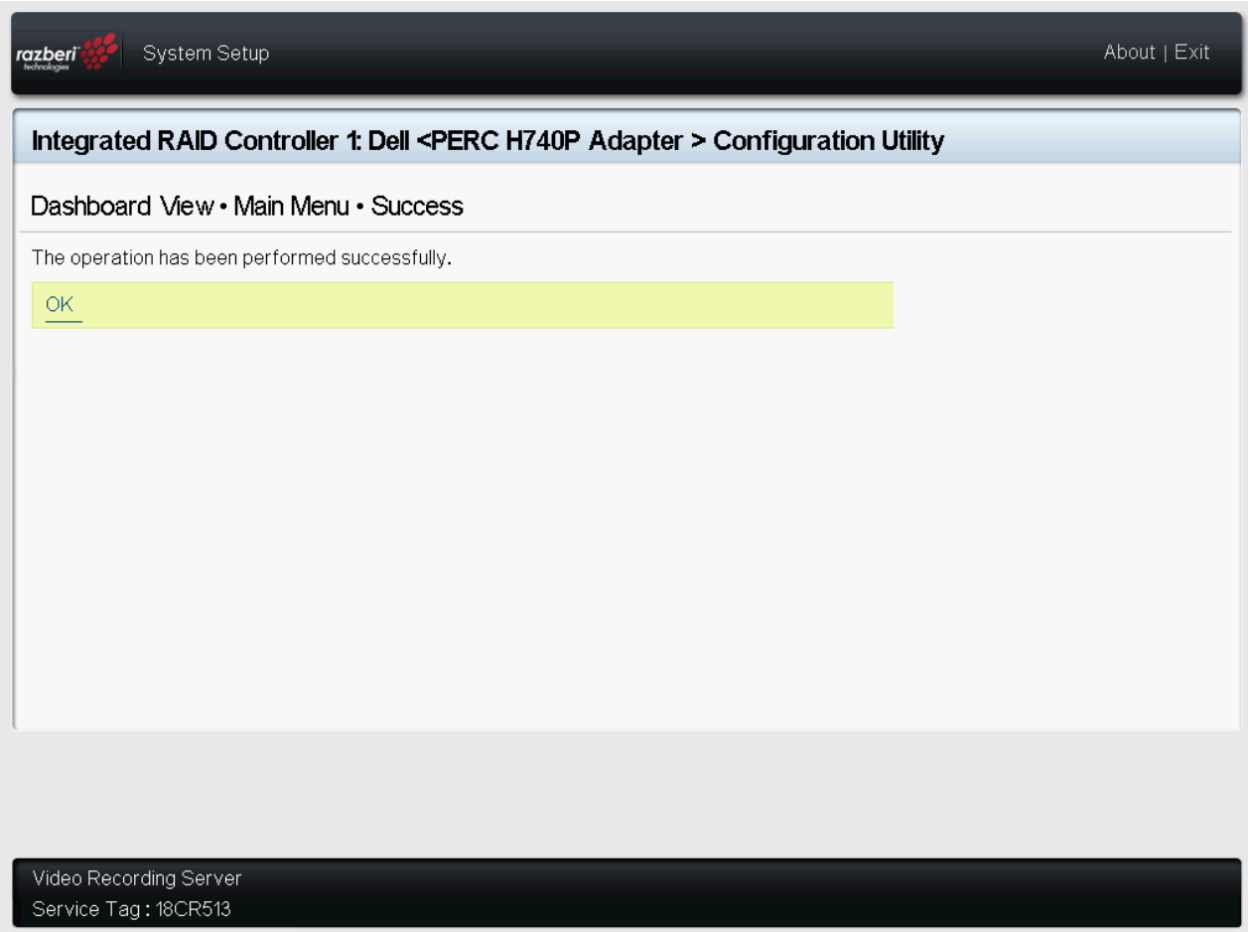

Figure 74. Confirm Completion

Set your desired Disk Size if you do want to utilize the full available capacity of the selected disks along with Strip Element Size. By default, Razberi is utilizing the full disk capacity and using a 1024/1MB strip element. Razberi recommends setting Default Initialization to Fast so that the disk is ready to access immediately. Razberi leaves all other settings Default

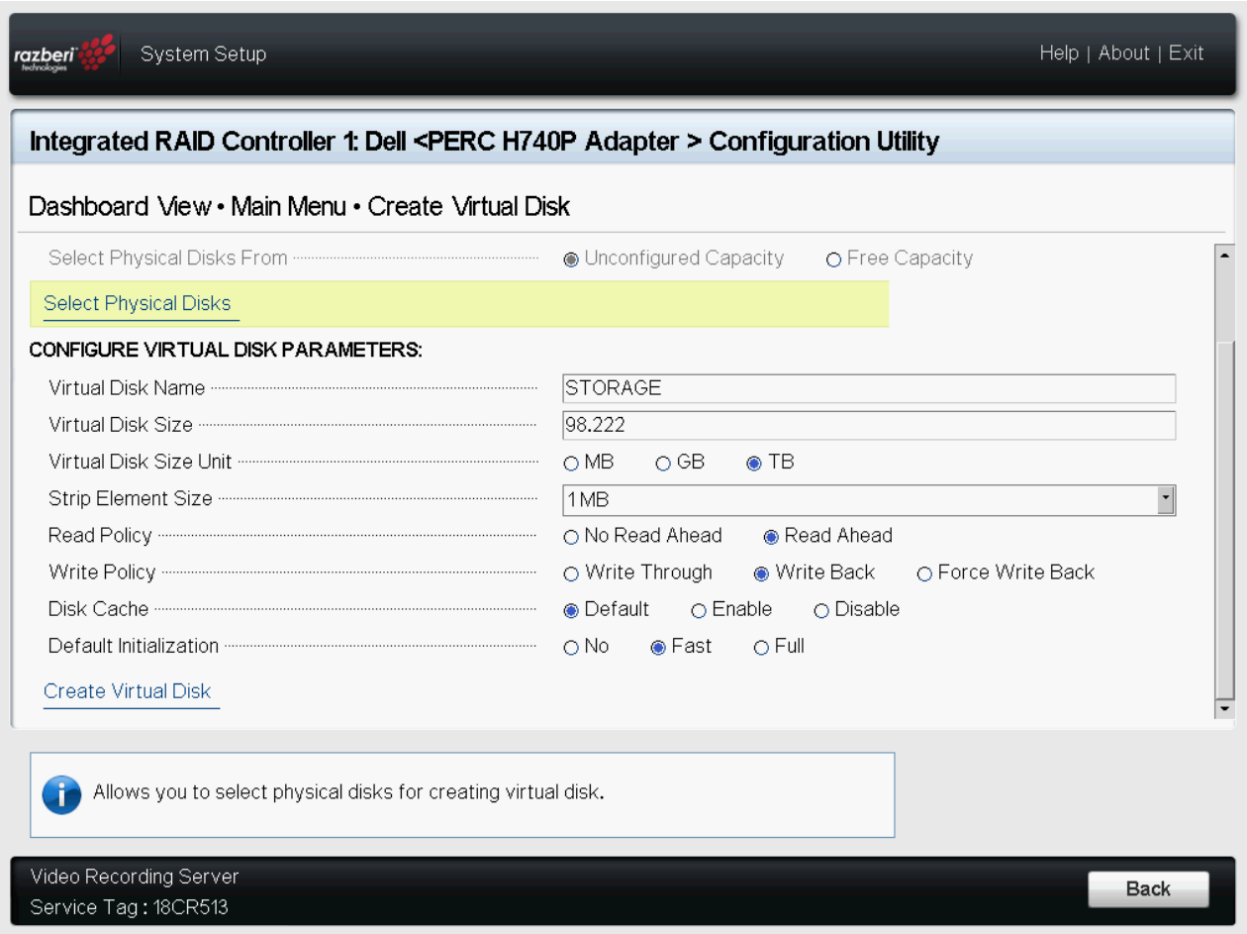

Figure 75. RAID Settings

Once you have completed your settings, click Create Virtual Disk

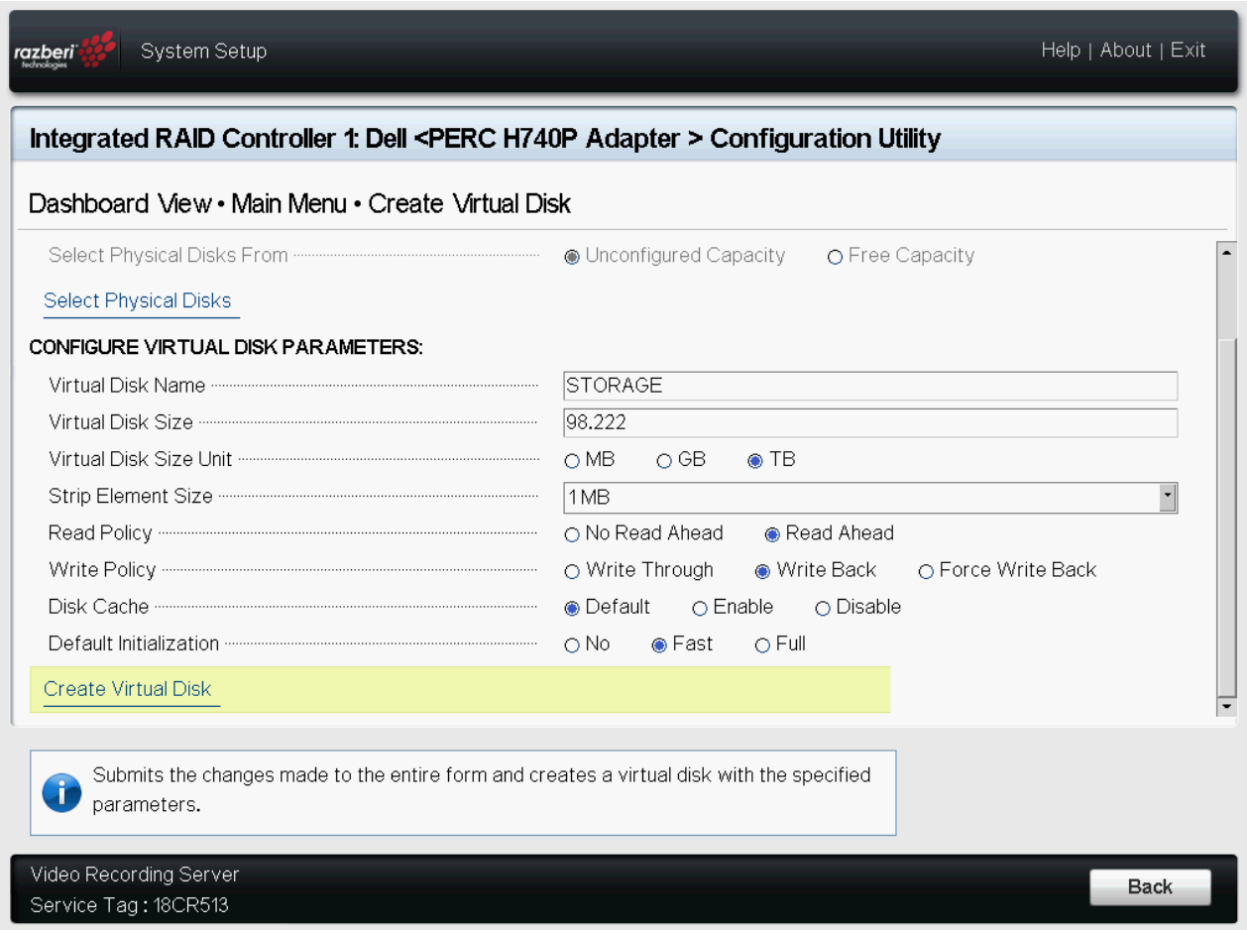

Figure 76. Create Virtual Disk

Confirm and Click Yes

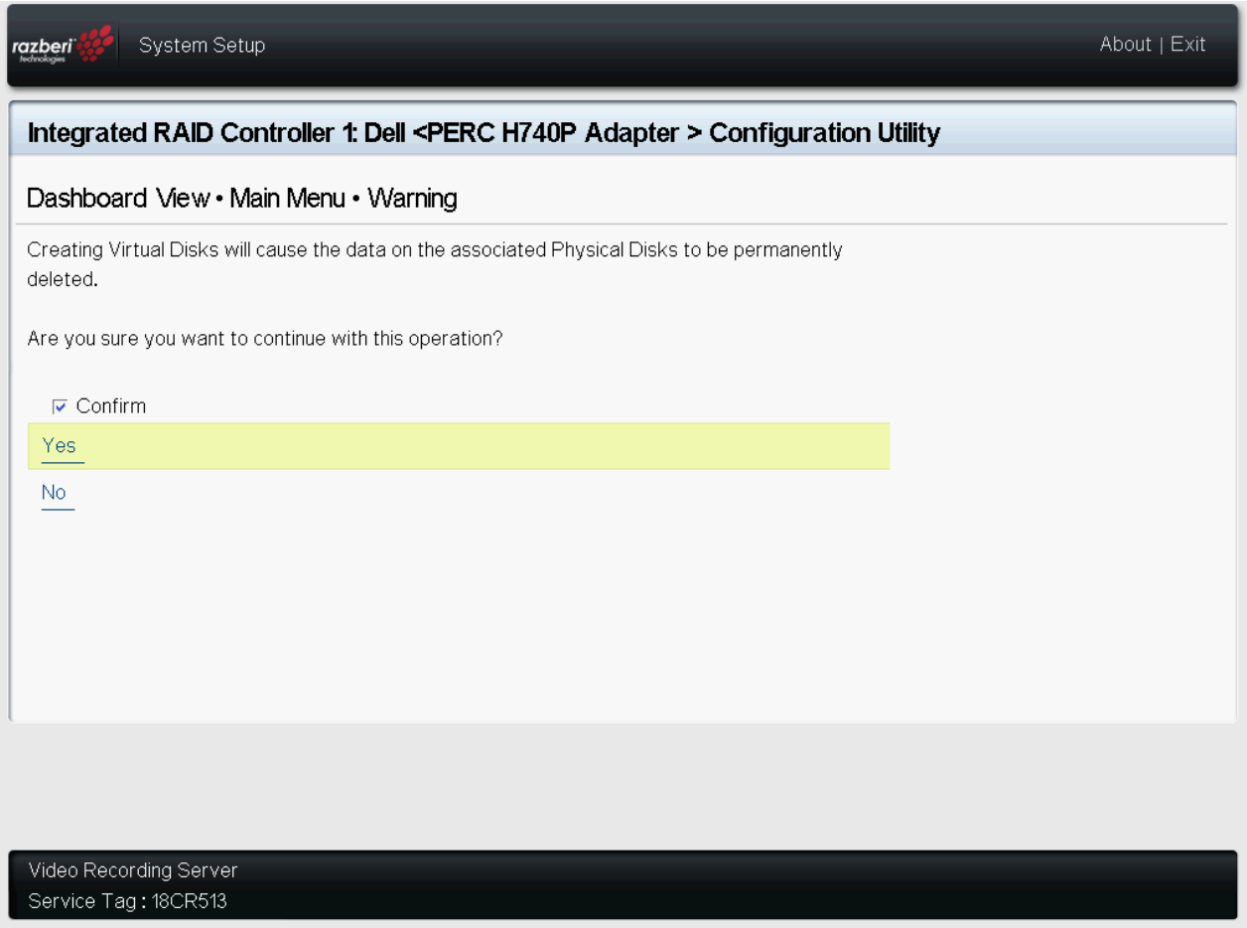

Figure 77. Confirm Operation

When Prompted Click OK

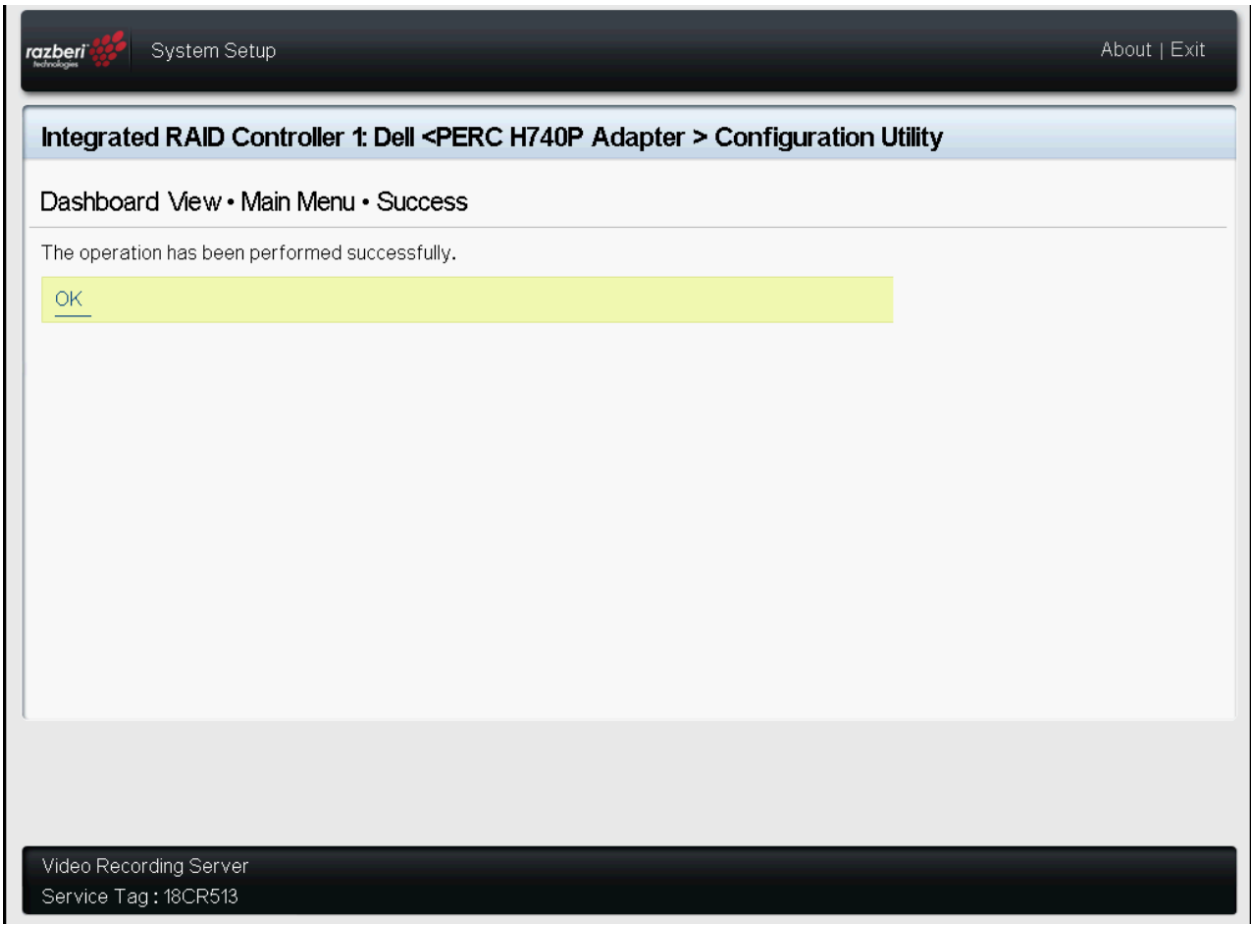

Figure 78. Confirm Completion

Exit the BIOS and boot into Windows. Once in Windows, we will need to Initialize and Partition the Virtual Disk we created above. To do that, go into Disk Management.

You will be prompted to Initialize the Disk. Razberi recommends using GPT for the Partition.

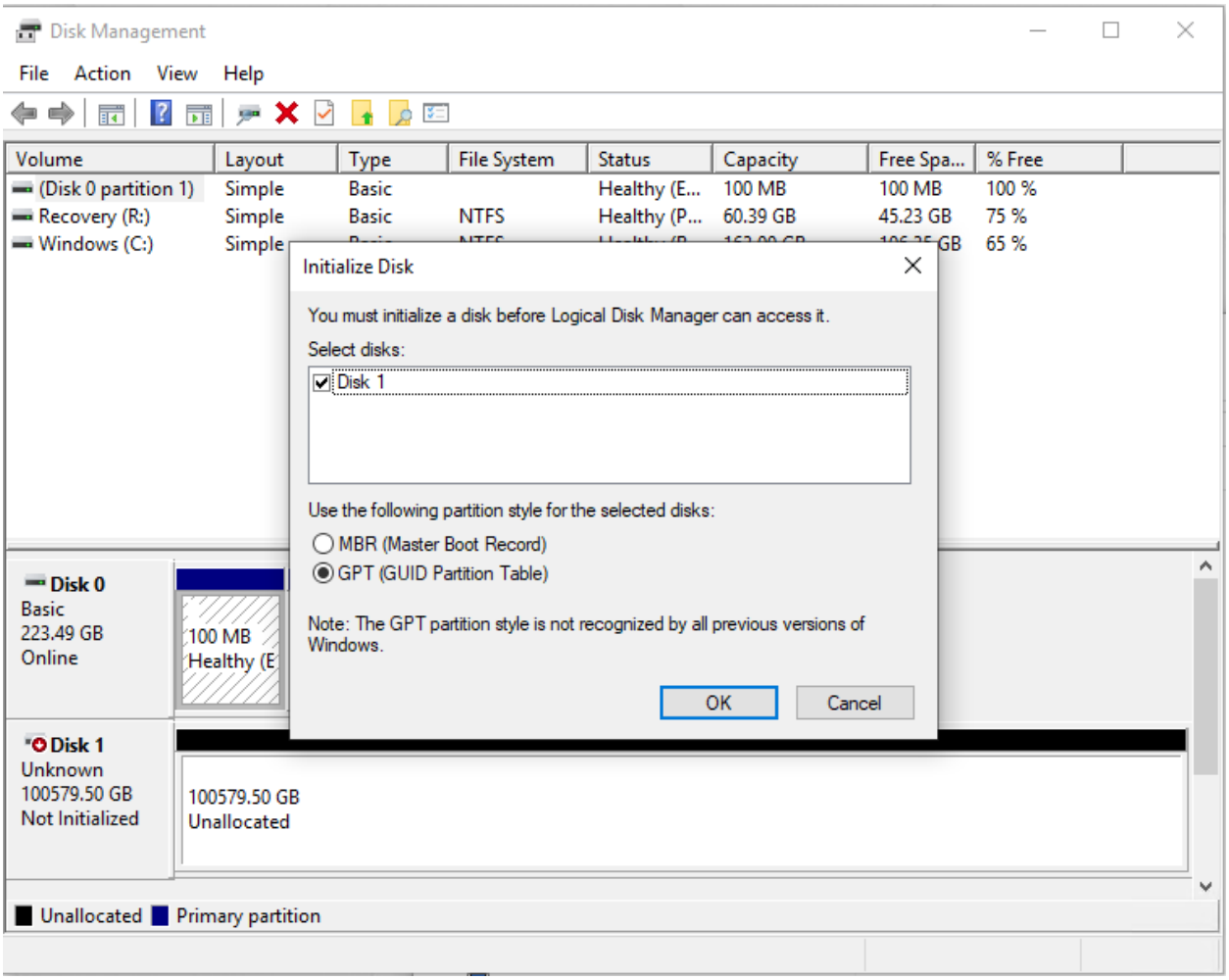

Figure 79. Windows Disk Initialization

Click OK and then Right Click on Disk 1 and choose New Simple Volume

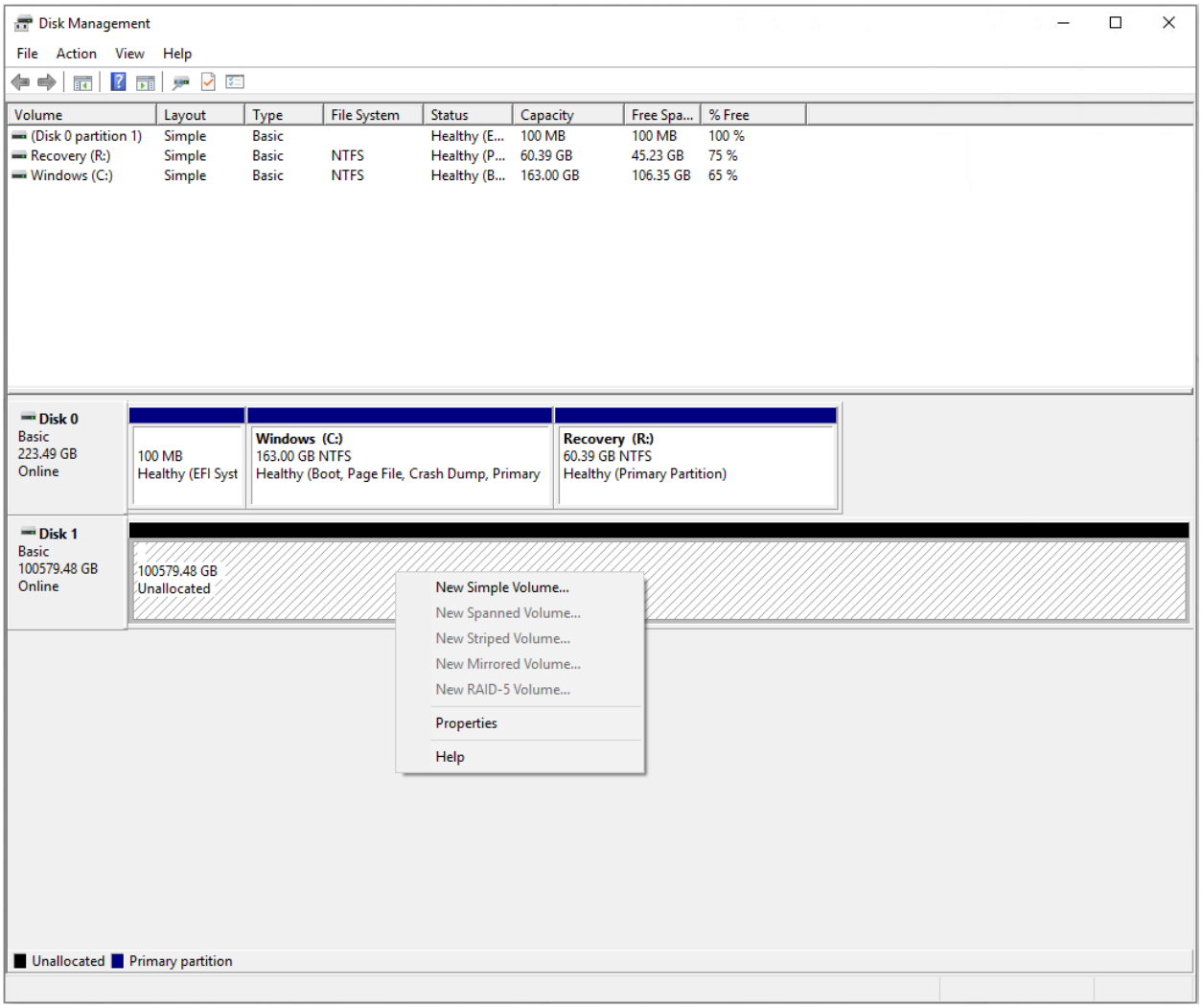

Figure 80. Create New Simple Volume

Click through the New Simple Volume Wizard so that the new disk will be accessible and usable in Windows. Choose the desired volume

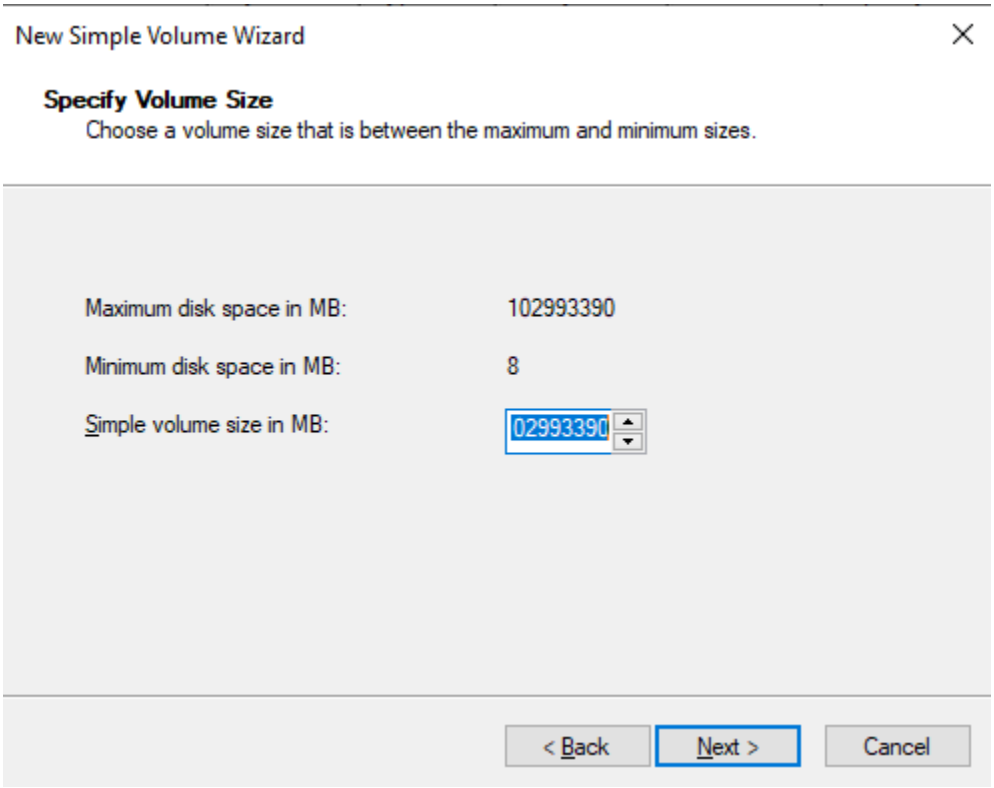

Figure 81. Simple Volume Size

Assign a Drive Letter. By default, Razberi will use D for all video storage drives

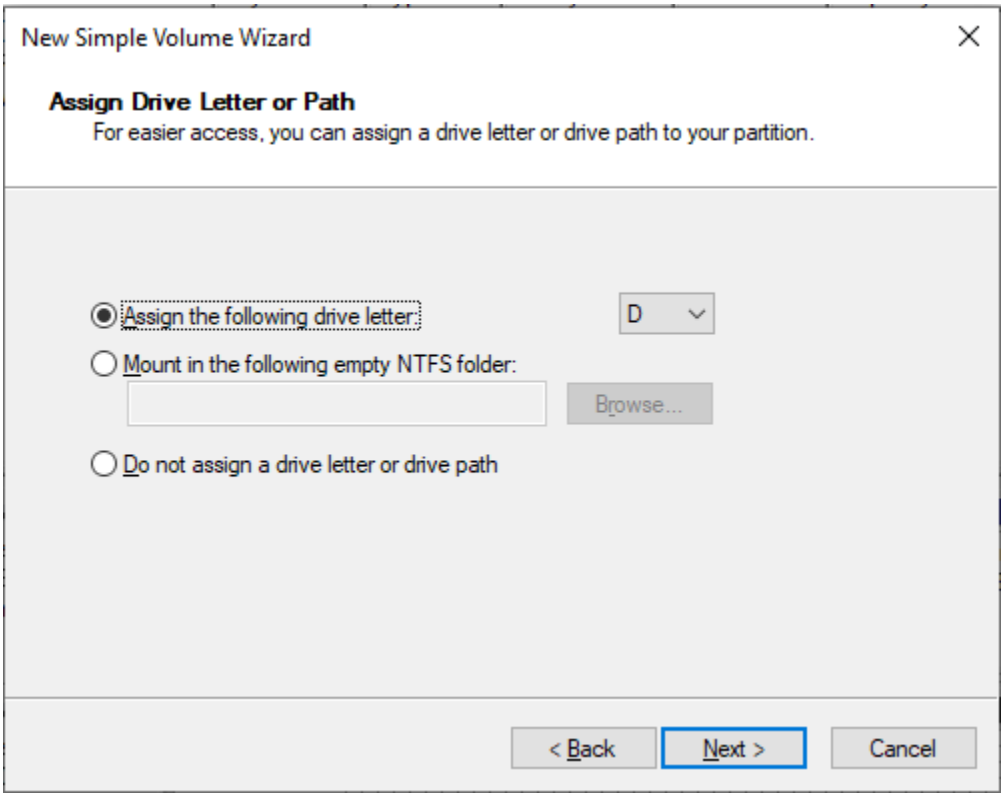

Figure 82. Simple Volume Drive Letter

Format the Partition. Razberi defaults using NTFS with an Allocation Unit Size of 64K but recommends following the Best Practice recommendations of the VMS. Razberi also recommends Performing a quick format.

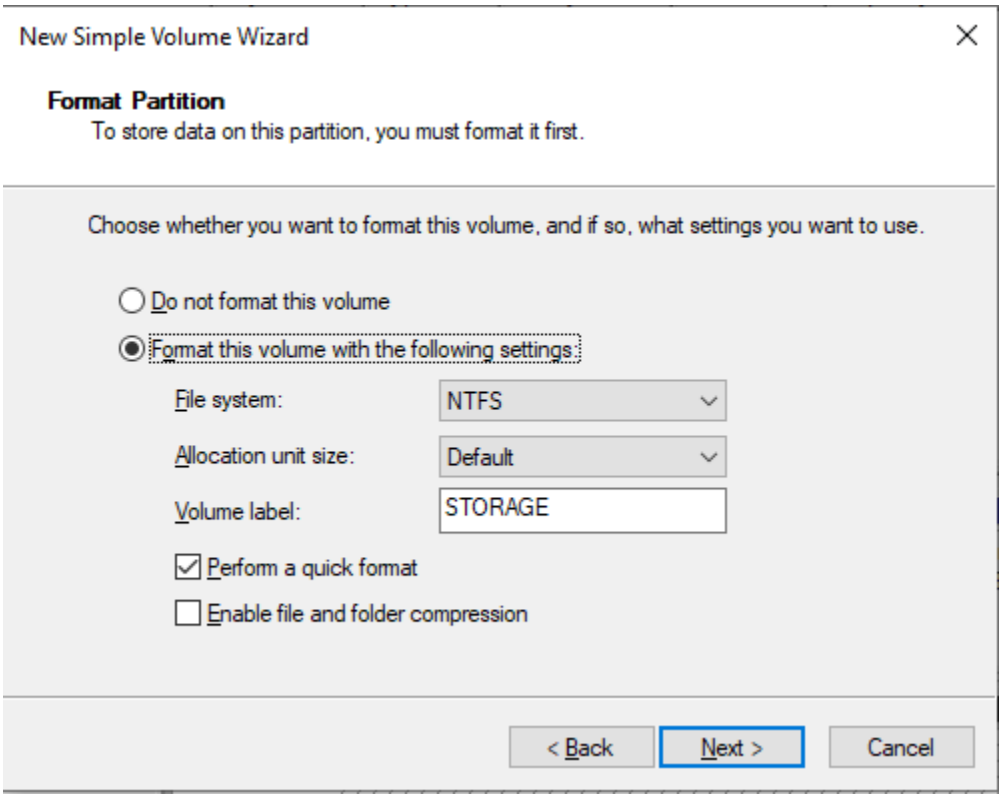

Figure 83. Volume Formatting

Verify all settings and if correct, click Finish

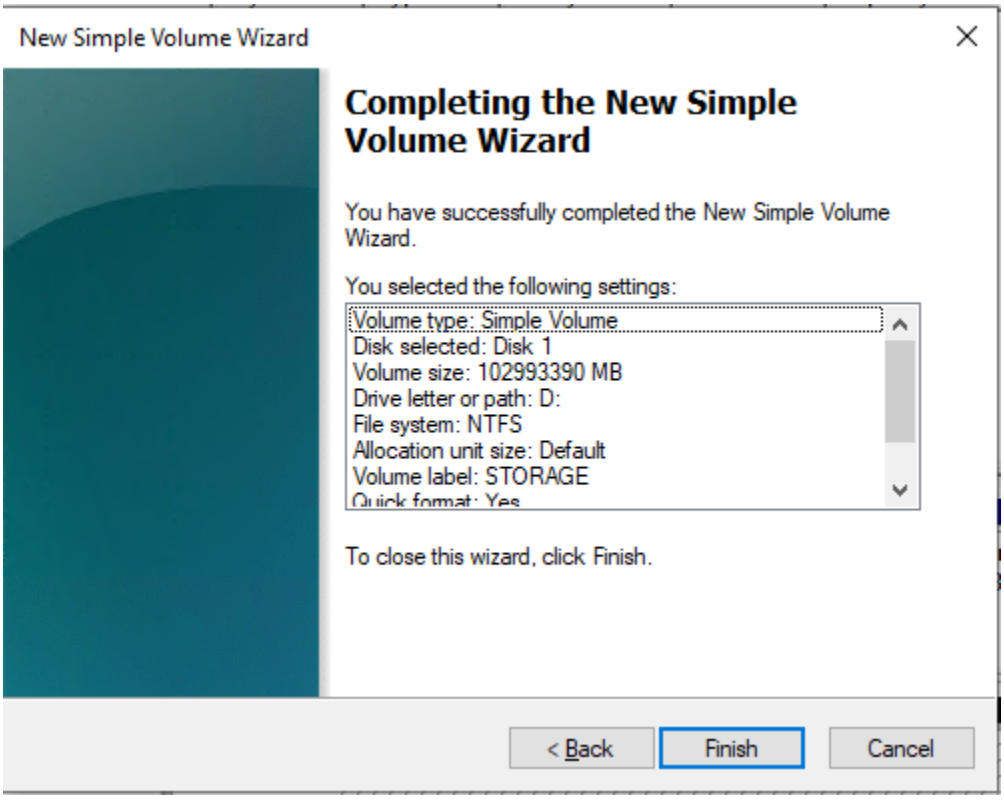

Figure 84. Complete the Wizard

Once the Format has completed, the disk will be ready to use

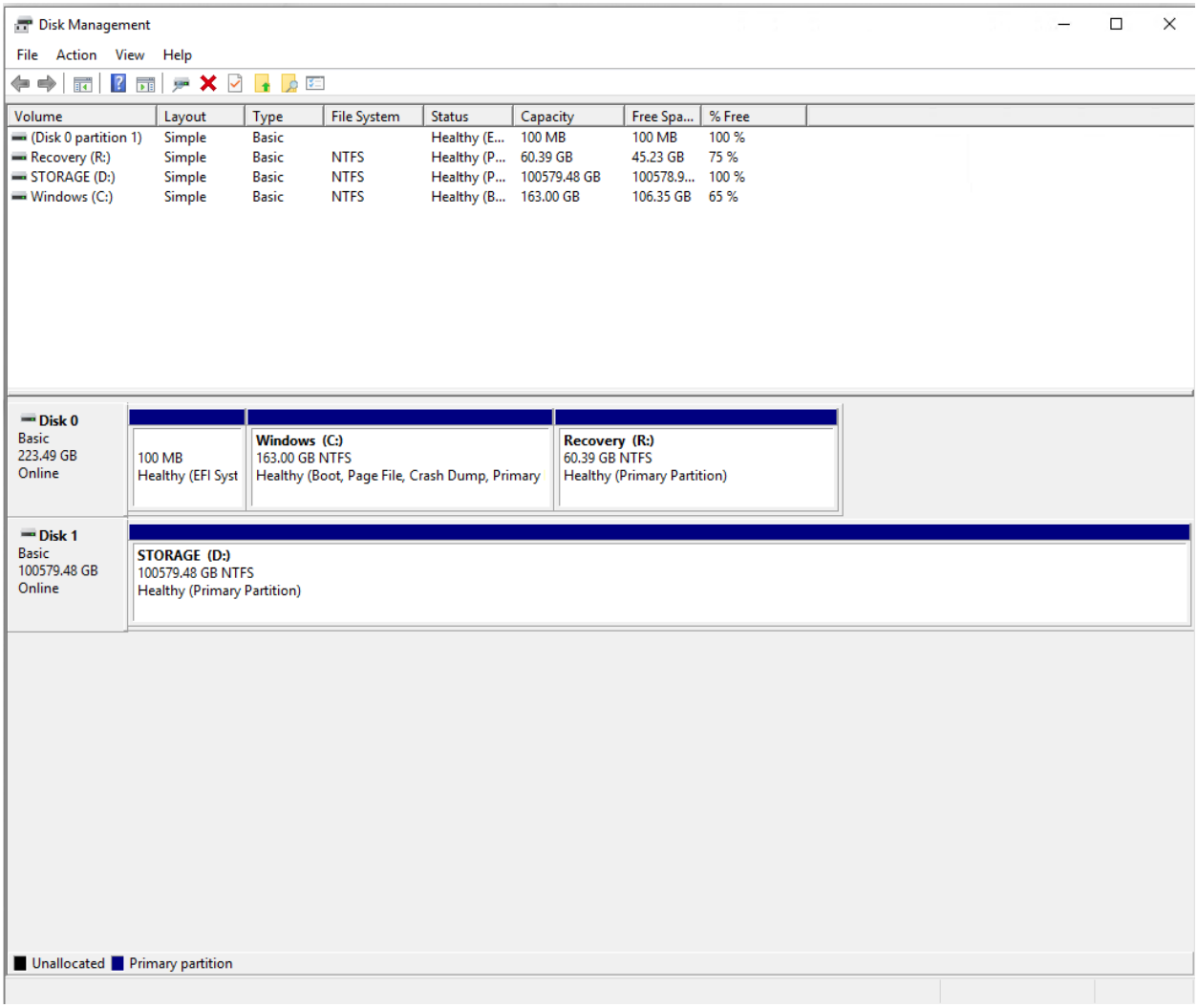

Figure 85. Windows Disk Management Showing Volume Status

Razberi Monitor™

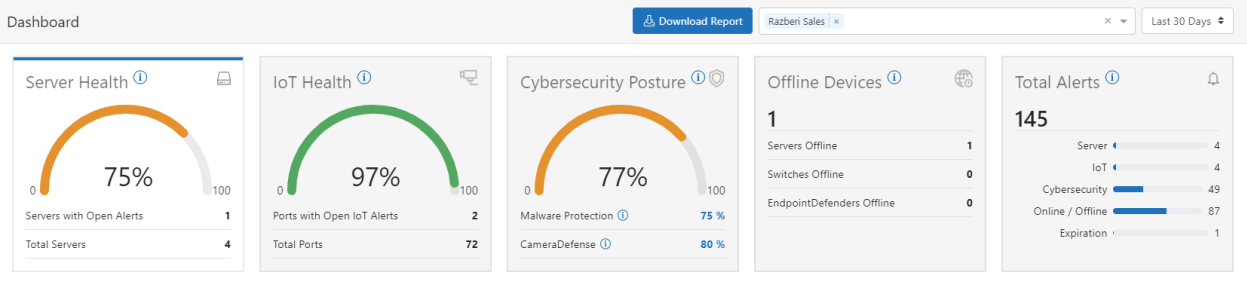

Figure 86. Monitor Dashboard

Razberi Monitor is a software-based platform that provides a top-down view of your physical security network. It is purpose-built for security professionals to securely monitor and provide remote visibility to system availability, performance, and cyber posture of servers, storage, cameras, and other networked security devices.

Razberi Monitor:

- Detects problems with servers, cameras, and other IoT devices
- Identifies and alerts on hard drive and storage issues
- Monitors device's cybersecurity and reports on cyber posture of the security system
- Provides on-demand reporting
- User-driven interactive dashboard and progressive disclosure
- Integrate with 3rd party on-premise VMS and Network Event and Information Management Systems
- Multi-tenant architecture – support all customers with a single sign-on
- Compliance focused audit logging
- Asset and inventory management

How to obtain Razberi Monitor Account

There are a few different ways to request a Razberi Monitor Cloud Account.

1. Razberi Website – go to www.razberi.net and navigate to Products, select Monitor. On the left-hand menu, select Request an Account.

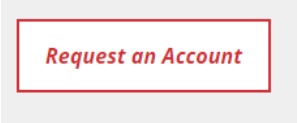

Figure 87. Request Account

Complete the form, and an email will be sent to you with your credentials and instructions to verify your account.

2. On your Razberi System, open Razberi Monitor by clicking on the icon, navigate to Razberi MonitorCloud tab, and click on Create Account.
   Complete the form, and an email will be sent to you with your credentials and instructions to verify your account.
3. Contact via email sales@razberi.net and request an account.

Razberi Monitor Agent

Razberi Monitor is a .NET agent/application that is installed on all Razberi Core Server Appliances. This agent runs as a Windows service and is automatically set to start when the system boots up. To access the User Interface, click on the icon on the desktop labeled Razberi Monitor. This is the interface to use to review system information, manage EndpointDefender Layer 2 switches, register your Razberi system with MonitorCloud, and integration to third party systems like Milestone VMS, Solarwinds, and Syslog messaging servers. Razberi Monitor uses Windows Authentication for access should you be prompted when launching.

Registering Core to Razberi Monitor

To register your Core server to Razberi Monitor, you will need to ensure you have already created a Razberi MonitorCloud account.

1. On the Core server desktop, launch Razberi Monitor by clicking the Razberi Monitor icon.
2. Navigate and click on Razberi MonitorCloud tab.
3. Enter your MonitorCloud credentials, click register.
4. You will be prompted with a dialog box to enter the following
   a. Friendly Name of the system.
   b. Account of the tenant that you want to register the system to.
   c. Location – if locations are created in the Monitor account, you can select a location.
   d. Tag – if Tags are created in the Monitor account, you can apply them here.

   Note: if no Locations or Tags have been created, you can still register the system. It will appear as "no location assigned" you can assign these items later once you are logged into your portal.

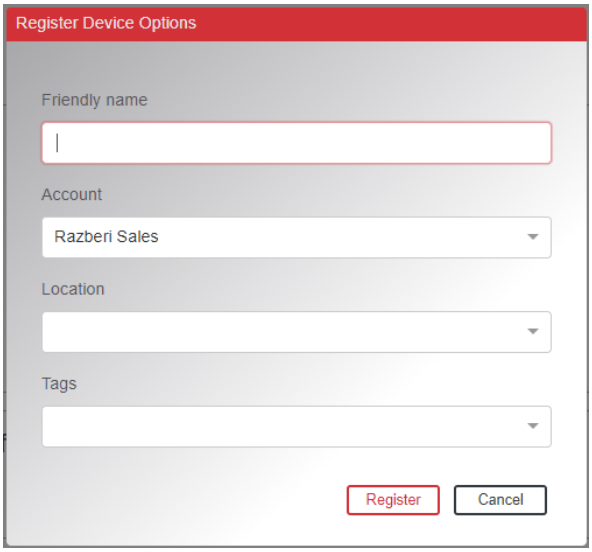

Figure 88. Registering a Device

Once registration is complete, you will receive a message that it has successfully registered with Razberi MonitorCloud.

Trial and Monitor Subscriptions

There are three types of subscriptions: Monitor, Trial, and no subscription.

Paid device subscriptions are device-based and are a monthly fee that will be billed to your account. Subscription terms can be set up in 1, 3, 5 year increments. Custom periods can also be setup.

- Example: You have 10 Core servers. Each Core has an agent installed, and the device count is based on the number of active and subscribed agents. Your subscription will be based on 10 Devices.
- Example: you have 10 Core Servers and 25 EndpointDefender Layer 2 switches connected to the Core Servers. Since the agent does not reside on the EndpointDefender switches, they are not counted as Devices in Monitor. Your subscription will be 10 for the 10 Core Servers that have been registered with MonitorCloud.

Trial subscriptions can be set up for you and your customers. A trial subscription is a full functioning subscription that is free for terms that you select in intervals of 30, 60, or 90 days.

No Subscription: Devices registered to MonitorCloud without a subscription will only provide inventory management functionality. No Dashboard, event and alert notification, reporting, or CSV downloads.

Logging into Razberi MonitorCloud

To login to Razberi MonitoCloud, you can launch the Razberi MonitorCloud by clicking on the icon on the system's desktop or by typing in a browser https://monitor.razberi.net you will be prompted to enter your MonitorCloud credentials.

For more on Razberi Monitor, please visit Razberi website Resource page for the Razberi Monitor Quick Start Guide and User Manual. https://www.razberi.net/resources/razberi-resources

Registering your Unit with Razberi

To receive the latest news and information on your Razberi Product, please register your unit using the Razberi Setup Wizard located on the desktop. Once launched, navigate to Product Registration and complete the form and submit. You must have internet connection to complete this registration process.

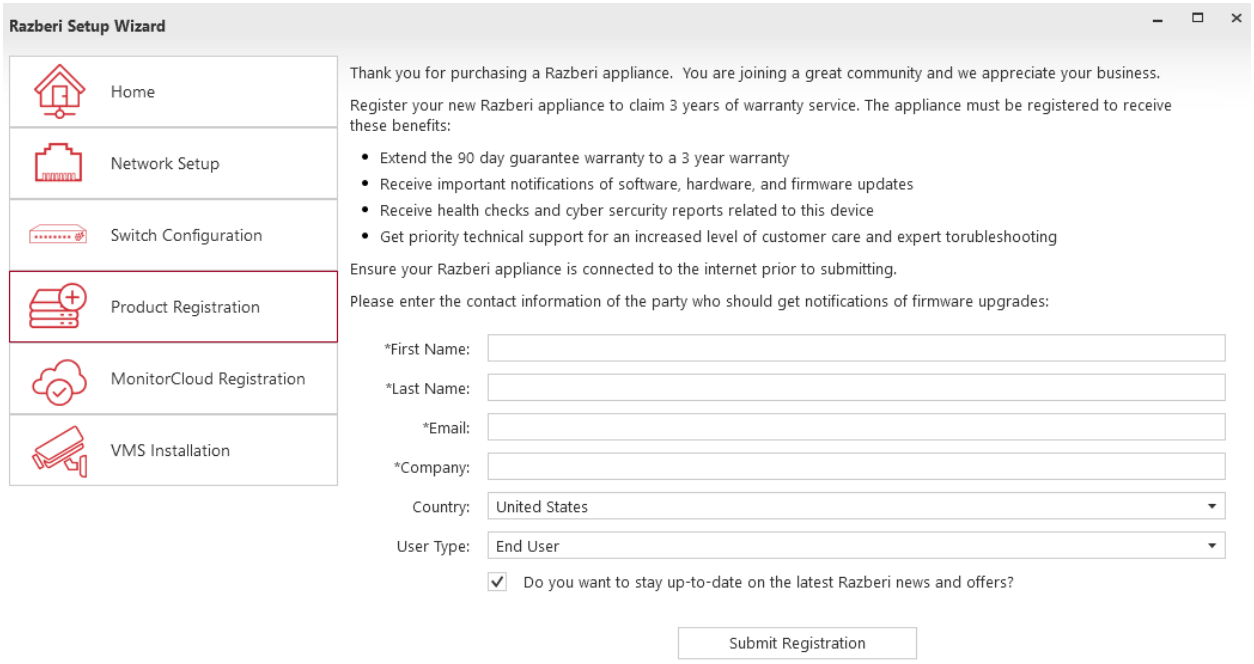

Figure 89. Product Registration

iDRAC Express and Enterprise

iDRAC9 License Level and Features

New Features in Yellow

iDRAC 9 License Levels and Features				
License Type	**Basic**	**Express**	**Express for Blades**	**Enterprise**
Interfaces / Standards				
Redfish	✓	✓	✓	✓
IPMI 2.0	✓	✓	✓	✓
DCMI 1.5	✓	✓	✓	✓
Web-based GUI	✓	✓	✓	✓
Racadm command line (local/remote)	✓	✓	✓	✓
SMASH-CLP (SSH-only)	✓	✓	✓	✓
Telnet	✓	✓	✓	✓
SSH	✓	✓	✓	✓
Serial Redirection	✓	✓	✓	✓
WSMAN	✓	✓	✓	✓
Network Time Protocol		✓	✓	✓
Connectivity				
Shared NIC	✓	✓	N/A	✓1
Dedicated NIC	✓	✓	✓	✓2
VLAN tagging	✓	✓	✓	✓
IPv4	✓	✓	✓	✓
IPv6	✓	✓	✓	✓
DHCP (new default; not static IP)	✓	✓	✓	✓
DHCP with Zero Touch				✓
Dynamic DNS	✓	✓	✓	✓

OS pass-through	✓	✓	✓	✓
iDRAC Direct - Front panel USB	✓	✓	✓	✓
Connection View	✓	✓		✓
NFS v4	✓	✓	✓	✓
SMB3.0 with NTLMv1 and NTLMv2	✓	✓	✓	✓
Security				
Role-based authority	✓	✓	✓	✓
Local users	✓	✓	✓	✓
SSL encryption	✓	✓	✓	✓
IP blocking		✓	✓	✓
Directory services (AD, LDAP)				✓
Two-factor authentication				✓
Single sign-on				✓
PK authentication		✓	✓	✓
Secure UEFI boot -	✓	✓	✓	✓
Lock down mode				✓
Unique iDRAC default password	✓	✓	✓	✓
FIPS 140-2	✓	✓	✓	✓
Customizable Security Policy Banner - login page	✓	✓	✓	✓

iDRAC 9 License Levels and Features

License Type	Basic	Express	Express for Blades	Enterprise
Quick Sync 2.0 - optional auth for read operations	✓	✓	✓	✓
Quick Sync 2.0 - add mobile device number to LCL	✓	✓	✓	✓

System Erase of internal storage devices	✓	✓	✓	✓
Remote Presence				
Power control	✓	✓	✓	✓
Boot control	✓	✓	✓	✓
Serial-over-LAN	✓	✓	✓	✓
Virtual Media			✓	✓
Virtual Folders				✓
Remote File Share				✓
Virtual Console			✓	✓
HTML5 access to Virtual Console			✓	✓
VNC connection to OS				✓
Quality/bandwidth control				✓
Virtual Console collaboration (6 users)2, 3				✓
Virtual Console chat				✓
Virtual Flash partitions				✓
Group Manager				✓
HTTP / HTTPS support along with NFS/CIFS	✓	✓	✓	✓
Power & Thermal				
Real-time power meter	✓	✓	✓	✓
Power thresholds & alerts		✓	✓	✓
Real-time power graphing		✓	✓	✓
Historical power counters		✓	✓	✓
Power Capping				✓

OpenManage Power Center integration (view only)		✓	✓	✓
Temperature monitoring	✓	✓	✓	✓
Temperature graphing		✓	✓	✓
Health Monitoring				
Full agent-free monitoring	✓	✓	✓	✓
Predictive failure monitoring	✓	✓	✓	✓
SNMPv1, v2, and v3 (traps and gets)	✓	✓	✓	✓
Email Alerting		✓	✓	✓
Configurable thresholds	✓	✓	✓	✓
Fan monitoring	✓	✓	✓	✓
Power Supply monitoring	✓	✓	✓	✓
Memory monitoring	✓	✓	✓	✓
CPU monitoring	✓	✓	✓	✓
RAID monitoring	✓	✓	✓	✓
NIC monitoring	✓	✓	✓	✓
HD monitoring (enclosure)	✓	✓	✓	✓
Out of Band Performance Monitoring				✓
Alerts for excessive SSD wear	✓	✓	✓	✓

iDRAC 9 License Levels and Features				
License Type	**Basic**	**Express**	**Express for Blades**	**Enterprise**
Customizable settings for Exhaust Temperature	✓	✓	✓	✓
Update				

Remote agent-free update	✓	✓	✓	✓
Embedded update tools	✓	✓	✓	✓
Sync with repository (scheduled updates)				✓
Auto-update				✓
updates	✓	✓	✓	✓
Deployment & Configuration				
Local Configuration via F10	✓	✓	✓	✓
Embedded OS deployment tools	✓	✓	✓	✓
tools	✓	✓	✓	✓
Auto-Discovery		✓	✓	✓
Remote OS deployment		✓	✓	✓
Embedded driver pack	✓	✓	✓	✓
Full Configuration Inventory	✓	✓	✓	✓
Inventory export	✓	✓	✓	✓
Remote Configuration	✓	✓	✓	✓
Zerotouch Configuration				✓
System Retire/Repurpose	✓	✓	✓	✓
in GUI	✓	✓	✓	✓
Diagnostics, Service & Logging				
Embedded diagnostic tools	✓	✓	✓	✓
Part Replacement		✓	✓	✓
Backup				✓
Restore	✓	✓	✓	✓
Easy Restore (system	✓	✓	✓	✓

Easy Restore Auto Timeout	✓	✓	✓	✓
Health LED / LCD (requires optional bezel)5	✓	✓	N/A	✓
Quick Sync (require NFC bezel, 13G only)				
Quick Sync 2.0 (requires optional BLE/WiFi hardware)	✓	✓	✓	✓
iDRAC Direct (front USB management port)	✓	✓	✓	✓
iDRAC Service Module (iSM) embedded	✓	✓	✓	✓
Alert forwarding via iSM to inband monitoring consoles	✓	✓	✓	✓
Crash screen capture		✓	✓	✓
Crash video capture 4				✓
Boot capture				✓
Manual reset for iDRAC (LCD ID button)	✓	✓	✓	✓
Remote reset for iDRAC (requires iSM)	✓	✓	✓	✓

iDRAC 9 License Levels and Features				
License Type	**Basic**	**Express**	**Express for Blades**	**Enterprise**
Virtual NMI	✓	✓	✓	✓
OS watchdog 4	✓	✓	✓	✓
SupportAssist Report (embedded)	✓	✓	✓	✓
System Event Log	✓	✓	✓	✓
Lifecycle Log	✓	✓	✓	✓
Enhanced Logging in Lifecycle Controller Log	✓	✓	✓	✓
Work notes	✓	✓	✓	✓
Remote Syslog				✓

License management	✓	✓	✓	✓
Improved Customer Experience				
iDRAC -Faster processor, more memory	✓	✓	✓	✓
GUI rendered in HTML5	✓	✓	✓	✓
iDRAC GUI	✓	✓	✓	✓
iDRAC support for SW RAID licensing	✓	✓	✓	✓

iDRAC Initial Setup

1. Turn on the server, during boot sequence press F2 (System Setup)
2. Select iDRAC Settings

Figure 90. iDRAC Settings

3. Select Network

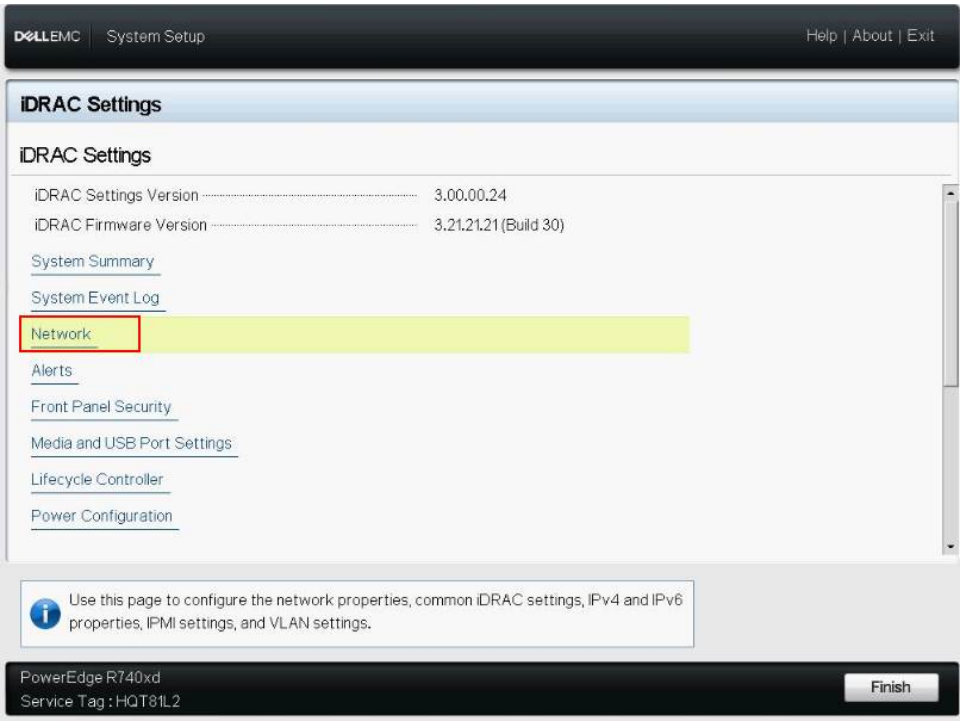

Figure 91. iDRAC Network Settings

4. Ensure Enable NIC is enabled
5. NIC Selection: Dedicated uses the dedicated network interface, Shared LOM 1, 2 will share the NIC of the motherboard. (See the rear-view section in the Overview section of this manual for NIC locations)

6. Set the IPV4 or IPV6 network settings, depending on the local configuration (Static or DHCP)

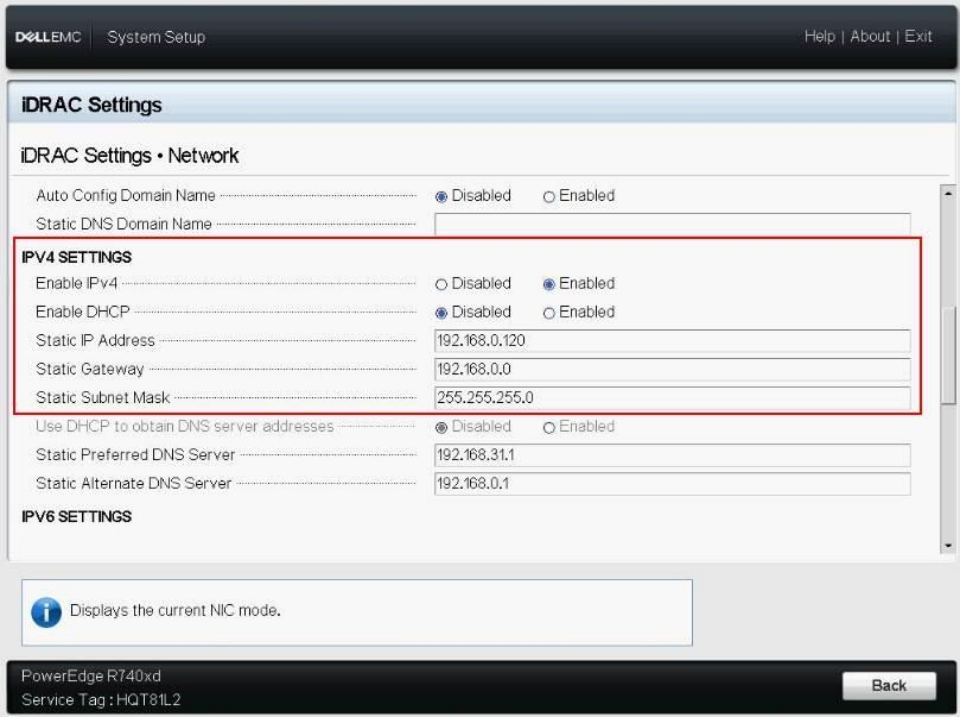

Figure 92.iDRAC IP Settings

7. Click Back, Click Finish, and then click Yes. The network information is saved, and the system reboots.

iDRAC configuration is now completed. The iDRAC Web User Interface can now be reached with any supported browser (Chrome, IE, Firefox, Safari).

Logging into iDRAC

1. Open a browser and type the IP address that you configured for iDRAC. If using DHCP, you can identify the DHCP address within the Server Administrator application. On the desktop, click the Server Administrator icon and log in. The Server Administrator uses windows authentication.
    a. Once logged in, click on Main System Chassis in the left-hand menu
    b. Click on Remote Access
    c. Within this screen, you will see the IP address in the lower section. This is the IP to use to browse to the iDRAC Web Interface Application
2. Login Screen

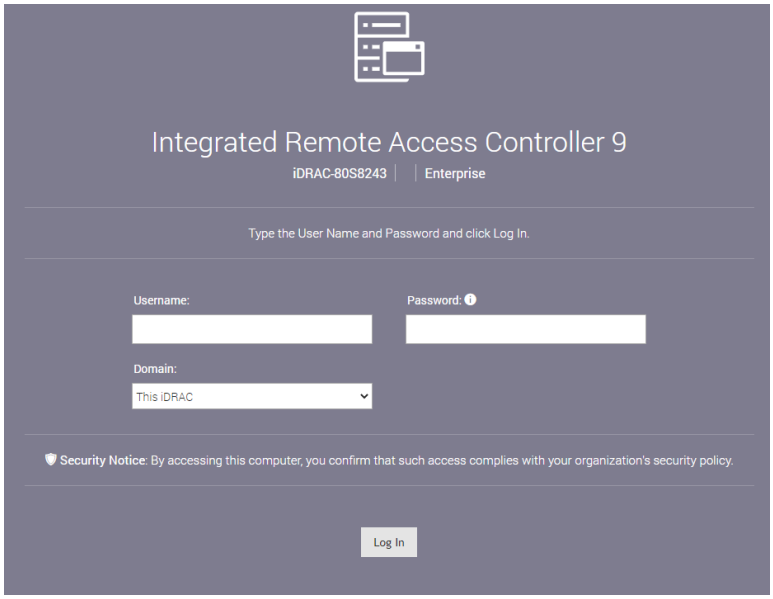

Figure 93. iDRAC Login

3. Default username is *root*
4. The default password is located on the underside of the pull-out plastic service tag card.
5. The first login, you will be asked to change or keep the default.

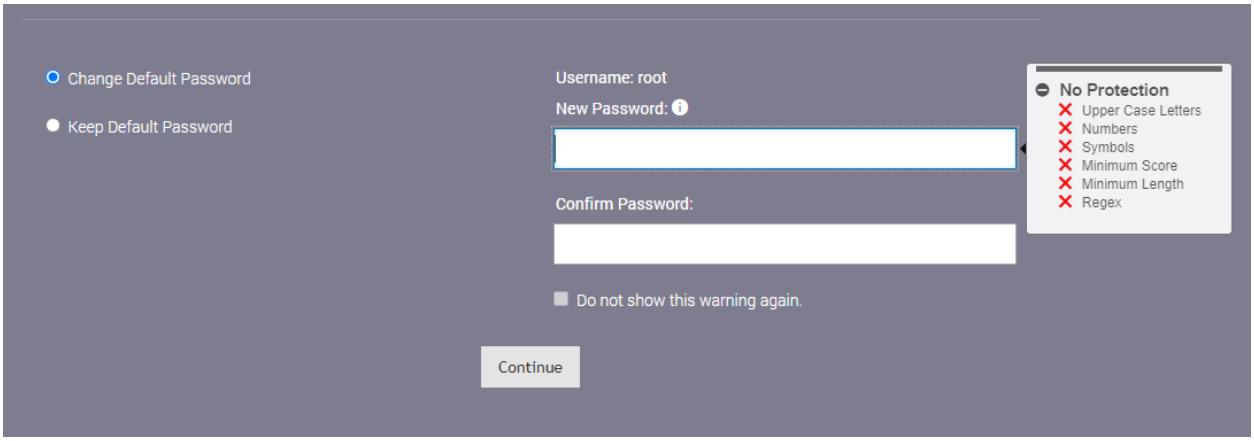

Figure 94. Setting iDRAC Password

6. Keep or change the password as required for your specific installation.
7. Click continue

You are now logged into the iDRAC web interface.

For specifics on Express and Enterprise features, please review the matrix at the beginning of the section.

Applying Enterprise iDRAC License (Purchased Separately)

1. Make sure you have the iDRAC License available on the machine from which you are accessing the web interface.
2. Log in to the iDRAC web interface.
3. Navigate and click Configuration on the top menu.
4. Within the Configuration page click on License
5. Under the License Options, Select Actions, choose Import
6. Browse to the file location, select license file, click upload.
7. Your license has now been imported and activated.

Getting Help

Razberi Technical Support

Razberi Technologies Support Page - https://www.razberi.net/resources/razberi-support

FAQ Page - https://www.razberi.net/knowledge-base

Email Technical Support at technicalsupport@razberi.net

Technical Support Phone Numbers Hours: 8:00 AM to 5:00 PM CT

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