Lecture 2: iDRAC

Integrated Dell Remote Access Controller

Firmware and Remote Access

- Enterprise computers usually have a way of remotely performing tasks you would normally have to sit in front of the computer to accomplish, e.g. turning it on and off again, changing the BIOS settings, etc.

- When you have thousands of machines its not practical to go to each physical machine in person.

- We are using Dell Poweredge R620 blade servers so we will use iDRAC to configure them.

- iDRAC is a little Linux installation running in **firmware** on separately from the operating system or BIOS on memory chip (not harddrive).

Privacy error

Not secure | https://129.24.245.21/login.html

Your connection is not private

Attackers might be trying to steal your information from **129.24.245.21** (for example, passwords, messages, or credit cards). Learn more

NET::ERR_CERT_AUTHORITY_INVALID

To get Chrome's highest level of security, turn on enhanced protection

Hide advanced   Back to safety

This server could not prove that it is **129.24.245.21**; its security certificate is not trusted by your computer's operating system. This may be caused by a misconfiguration or an attacker intercepting your connection.

Proceed to 129.24.245.21 (unsafe)

chrome-error://chromewebdata/#

viewer (2).jnlp   viewer (1).jnlp   Show all

Privacy error - Chromium

idrac-6R3SLV1 - iDRAC7

Not secure | https://129.24.245.18/index.html?ST1=d8454d8e8d19ef0e968bedca9524fae5,ST2=f1bda37a5ee2343c5d5d9725f23d8ffb

DELL | Integrated Dell Remote Access Controller 7 　　　Enterprise　　　　　　　Support | Dell TechCenter | About | Logout

System
PowerEdge R620
root , Admin

- Overview
  - **Server**
    - Logs
    - Power / Thermal
    - Virtual Console
    - Alerts
    - Setup
    - Troubleshooting
    - Licenses
    - Intrusion
  - iDRAC Settings
  - Hardware
  - Storage
  - Host OS

Properties　　Attached Media　　vFlash　　Service Module　　Job Queue

Summary　　Details　　System Inventory

System Summary

Server Health

☑	Batteries	☑	Temperatures
☑	Fans	☑	Voltages
☑	Intrusion		
☑	Power Supplies		
☑	Removable Flash Media		

Virtual Console Preview

> Settings
> Refresh
> Launch

Server Information

Power State	ON
System Model	PowerEdge R620
System Revision	I
System Host Name	localhost
Operating System	
Operating System Version	
Service Tag	6R3SLV1
Express Service Code	14699654317
BIOS Version	1.2.6
Firmware Version	2.65.65.65
IP Address(es)	129.24.245.18
iDRAC MAC Address	24:B6:FD:F6:2E:3C
DNS Domain Name	
Lifecycle Controller Firmware	2.65.65.65
IDSDM Firmware Version	N/A
Location	
License	Enterprise

Quick Launch Tasks

- Power ON / OFF
- Power Cycle System (cold boot)
- System ID LED ON/OFF 🔵
- View Logs
- Update and Rollback
- Reset iDRAC

viewer (1).jnlp

Show all

idrac-6R3SLV1 - iDRAC7 - Summary...

idrac-6R3SLV1 - iDRAC7

idrac-6R3SLV1, PowerEdge R620, User: root - Chromium

Not secure | https://129.24.245.18/

Not secure | https://129.24.245.18/virtualconsolehtml5.html?ipAddr=129.24.245.18&kvmPort=5900&vmPriv=true&title=idrac-6R3SLV1,%...

Chat   Keyboard   Sc...   Disconnect Viewer   Console Controls

DELL   Integrated Dell Remote
        Access Controller 7

Support | Dell TechCenter | About | Logout

129.24.245.18 says

Turn off your pop-up blocker and try again!

OK

System
PowerEdge R620
root , Admin

Properties   Attached M

Summary   Details

- Overview
  - Server
    - Logs
    - Power / Thermal
    - Virtual Console
    - Alerts
    - Setup
    - Troubleshooting
    - Licenses
    - Intrusion
  - iDRAC Settings
  - Hardware
  - Storage
  - Host OS

System Summ

Server Health

- ☑ Batter
- ☑ Fans
- ☑ Intrus
- ☑ Powe
- ☑ Remo

Server Information

- Power State
- System Model
- System Revision
- System Host Name
- Operating System
- Operating System Ve
- Service Tag
- Express Service Cod
- BIOS Version
- Firmware Version
- IP Address(es)
- iDRAC MAC Address
- DNS Domain Name
- Lifecycle Controller F
- IDSDM Firmware Ver
- Location

Settings

Refresh

Launch

viewer (1).jnlp

Show all

idrac-6R3SLV1 - iDRAC7 - Summary...   idrac-6R3SLV1, PowerEdge R620, ...

Applications   Places   Chromium Web Browser   Sun 19:43

idrac-6R3SLV1 - iDRAC7

idrac-6R3SLV1, PowerEdge R620, User: root - Chromium

Not secure | https://129.24.245.18/

Not secure | https://129.24.245.18/virtualconsolehtml5.html?ipAddr=129.24.245.18&kvmPort=5900&vmPriv=true&title=idrac-6R3SLV1,%...

Chat   Keyboard   Screen Capture   Refresh   Full Screen   Connect Virtual Media   Disconnect Viewer   Console Controls

Pop-ups were blocked on this page.

DELL   Integrated Dell Remote
Access Controller 7

Support | Dell TechCenter | About | Logout

System
PowerEdge R620
root , Admin

Properties   Attached M
Summary   Details

- Overview
  - **Server**
    - Logs
    - Power / Thermal
    - Virtual Console
    - Alerts
    - Setup
    - Troubleshooting
    - Licenses
    - Intrusion
  - iDRAC Settings
  - Hardware
  - Storage
  - Host OS

System Summ

Server Health

☑ Batter
☑ Fans
☑ Intrus
☑ Powe
☑ Remo

Settings
Refresh
Launch

Server Information

Power State
System Model
System Revision
System Host Name
Operating System
Operating System Ve
Service Tag
Express Service Cod
BIOS Version
Firmware Version
IP Address(es)
iDRAC MAC Address
DNS Domain Name
Lifecycle Controller F
IDSDM Firmware Ver
Location

viewer (1).jnlp

idrac-6R3SLV1 - iDRAC7 - Summary...   idrac-6R3SLV1, PowerEdge R620, ...

Show all

idrac-6R3SLV1 - iDRAC7

idrac-6R3SLV1, PowerEdge R620, User: root - Chromium

Not secure | https://129.24.245.18/

Not secure | https://129.24.245.18/virtualconsolehtml5.html?ipAddr=129.24.245.18&kvmPort=5900&vmPriv=true&title=idrac-6R3SLV1,%...

Chat   Keyboard   Screen Capture   Refresh   Full Screen   Connect Virtual

Pop-ups blocked:

• https://129.24.2....18:5900/index.html

○ Always allow pop-ups and redirects from https://129.24.245.18

● Continue blocking

Manage   Done

Integrated Dell Remote Access Controller 7

Support | Dell TechCenter | About | Logout

System
PowerEdge R620
root , Admin

Properties | Attached M...
Summary | Details

- Overview
  - **Server**
    - Logs
    - Power / Thermal
    - Virtual Console
    - Alerts
    - Setup
    - Troubleshooting
    - Licenses
    - Intrusion
  - iDRAC Settings
  - Hardware
  - Storage
  - Host OS

System Summ...

Server Health

☑ Batter
☑ Fans
☑ Intrus
☑ Powe
☑ Remo

› Settings
› Refresh
› Launch

Server Information

Power State
System Model
System Revision
System Host Name
Operating System
Operating System Ve
Service Tag
Express Service Cod
BIOS Version
Firmware Version
IP Address(es)
iDRAC MAC Address
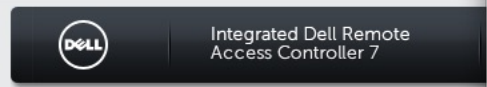DNS Domain Name
Lifecycle Controller F
IDSDM Firmware Ve
Location

viewer (1).jnlp

Show all

idrac-6R3SLV1 - iDRAC7 - Summary...   idrac-6R3SLV1, PowerEdge R620, ...

Sun 19:43

idrac-6R3SLV1 - iDRAC7

Not secure | https://129.24.245.18/

Not secure | https://129.24.245.18/virtualconsolehtml5.html?ipAddr=129.24.245.18&kvmPort=5900&vmPriv=true&title=idrac-6R3SLV1,%20...

Chat   Keyboard   Screen Capture   Refresh   Full Screen   Connect Virtual Media   Disconnect Viewer   Console Controls

Integrated Dell Remote
Access Controller 7

Support | Dell TechCenter | About | Logout

System
PowerEdge R620
root , Admin

Properties   Attached M

Summary   Details

System Summ

- Overview
  - Server
    - Logs
    - Power / Thermal
    - Virtual Console
    - Alerts
    - Setup
    - Troubleshooting
    - Licenses
    - Intrusion
  - iDRAC Settings
  - Hardware
  - Storage
  - Host OS

Server Health

☑ Batter
☑ Fans
☑ Intrus
☑ Powe
☑ Remo

Settings
Refresh
Launch

Server Information

Power State
System Model
System Revision
System Host Name
Operating System
Operating System Ve
Service Tag
Express Service Cod
BIOS Version
Firmware Version
IP Address(es)
iDRAC MAC Address
DNS Domain Name
Lifecycle Controller F
IDSDM Firmware Ver
Location

viewer (1).jnlp

Show all

idrac-6R3SLV1 - iDRAC7 - Summary...   idrac-6R3SLV1, PowerEdge R620, ...

idrac-6R3SLV1 - iDRAC7

Not secure | https://129.24.245.18/index.html?ST1=d8454d8e8d19ef0e968bedca9524fae5,ST2=f1bda37a5ee2343c5d5d9725f23d8ffb

Integrated Dell Remote Access Controller 7

Enterprise

Support | Dell TechCenter | About | Logout

System
PowerEdge R620
root , Admin

- Overview
  - **Server**
    - Logs
    - Power / Thermal
    - Virtual Console
    - Alerts
    - Setup
    - Troubleshooting
    - Licenses
    - Intrusion
  - iDRAC Settings
  - Hardware
  - Storage
  - Host OS

Properties | Attached Media | vFlash | Service Module | Job Queue

Summary | Details | System Inventory

System Summary

Server Health

☑	Batteries	☑	Temperatures
☑	Fans	☑	Voltages
☑	Intrusion		
☑	Power Supplies		
☑	Removable Flash Media		

Virtual Console Preview

- Settings
- Refresh
- Launch

Server Information

Power State	ON
System Model	PowerEdge R620
System Revision	I
System Host Name	localhost
Operating System	
Operating System Version	
Service Tag	6R3SLV1
Express Service Code	14699654317
BIOS Version	1.2.6
Firmware Version	2.65.65.65
IP Address(es)	129.24.245.18
iDRAC MAC Address	24:B6:FD:F6:2E:3C
DNS Domain Name	
Lifecycle Controller Firmware	2.65.65.65
IDSDM Firmware Version	N/A

Quick Launch Tasks

- Power ON / OFF
- Power Cycle System (cold boot)
- System ID LED ON/OFF ⬤
- View Logs
- Update and Rollback
- Reset iDRAC

https://129.24.245.18/sysSummaryData.html#

viewer (1).jnlp   Show all

idrac-6R3SLV1 - iDRAC7 - Summary...

Applications   Places   Chromium Web Browser

Sun 19:44

idrac-6R3SLV1 - iDRAC7

idrac-6R3SLV1, PowerEdge R620, User: root - Chromium

Not secure | https://129.24.245.18/

Not secure | https://129.24.245.18/virtualconsolehtml5.html?ipAddr=129.24.245.18&kvmPort=5900&vmPriv=true&title=idrac-6R3SLV1,%20...

Chat   Keyboard   Screen Capture   Refresh   Full Screen   Connect Virtual Media   Disconnect Viewer   Console Controls

Integrated Dell Remote
Access Controller 7

Support | Dell TechCenter | About | Logout
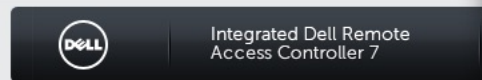
System
PowerEdge R620
root , Admin

Properties   Attached M

Summary   Details

System Summ

Overview
  Server
    Logs
    Power / Thermal
    Virtual Console
    Alerts
    Setup
    Troubleshooting
    Licenses
    Intrusion
  iDRAC Settings
  Hardware
  Storage
  Host OS

Rocky Linux 9.3 (Blue Onyx)
Kernel 5.14.0-362.8.1.el9_3.x86_64 on an x86_64

localhost login: [25.683307] block dm-0: the capability attribute has been deprecated.

Server Health

☑ Batter
☑ Fans
☑ Intrus
☑ Powe
☑ Remo

Settings
Refresh
Launch

Server Information

Power State
System Model
System Revision
System Host Name
Operating System
Operating System Ve
Service Tag
Express Service Cod
BIOS Version
Firmware Version
IP Address(es)
iDRAC MAC Address
DNS Domain Name
Lifecycle Controller F
IDSDM Firmware Ver

https://129.24.245.18/sysSummaryData.html#

viewer (1).jnlp

Show all

idrac-6R3SLV1 - iDRAC7 - Summary...   idrac-6R3SLV1, PowerEdge R620, ...

idrac-6R3SLV1 - iDRAC7

Not secure | https://129.24.245.18/index.html?ST1=d8454d8e8d19ef0e968bedca9524fae5,ST2=f1bda37a5ee2343c5d5d9725f23d8ffb

DELL   Integrated Dell Remote
Access Controller 7   Enterprise   Support | Dell TechCenter | About | Logout

System
PowerEdge R620
root , Admin

- Overview
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    - Power / Thermal
    - Virtual Console
    - Alerts
    - Setup
    - Troubleshooting
    - Licenses
    - Intrusion
  - iDRAC Settings
  - Hardware
    - Batteries
    - Fans
    - CPU
    - Memory
    - **Front Panel**
    - Network Devices
    - Power Supplies
    - Removable Flash Media
  - Storage
  - Host OS

Front Panel

Front Panel

Jump to: Live Front Panel Feed | LCD Settings | System ID LED Settings

Live Front Panel Feed

Instructions: This is a live feed of the current display on the Front Panel. Use this section to hide or unhide the current error messages from the LCD screen (this does not prevent future error messages from appearing on the LCD).

System ID LED: ⬤   LCD Screen: Gibbs24

[Unhide Errors]   [Hide Current Errors]

LCD Settings   ▲ Back to Top

Instructions: Use this section to set the LCD home message.

Set Home Message: [User Defined ▾]   [   ]

Enable Virtual Console Indication   ☐

[Cancel]   [Apply]

System ID LED Settings   ▲ Back to Top

Instructions: Use this section to identify the server by its blinking System ID LED.
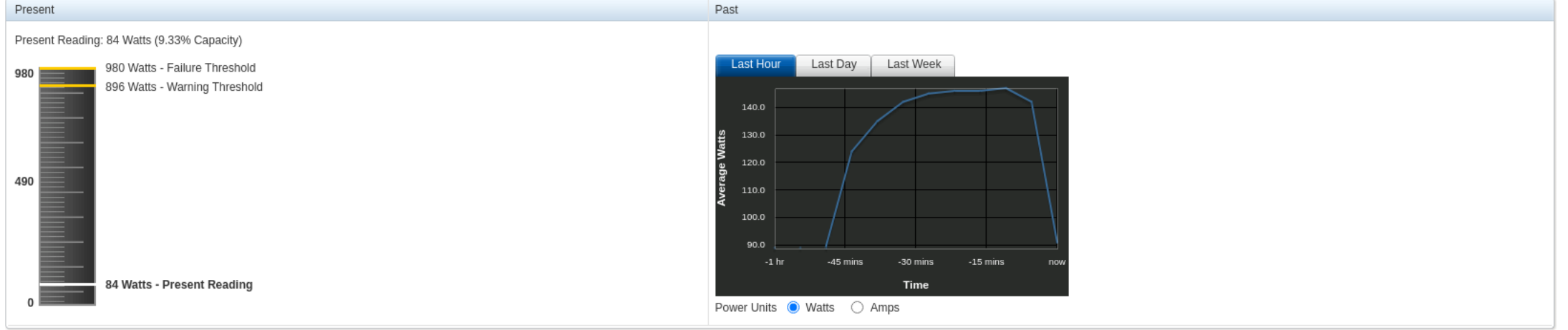
System ID LED: [Actions... ▾]

[Cancel]   [Apply]

viewer (1).jnlp   Show all

idrac-6R3SLV1 - iDRAC7 - Front Pa...

idrac-6R3SLV1 - iDRAC7

Not secure | https://129.24.245.18/index.html?ST1=d8454d8e8d19ef0e968bedca9524fae5,ST2=f1bda37a5ee2343c5d5d9725f23d8ffb

Integrated Dell Remote Access Controller 7   Enterprise

Support | Dell TechCenter | About | Logout

System
PowerEdge R620
root , Admin

- Overview
  - Server
    - Logs
    - **Power / Thermal**
    - Virtual Console
    - Alerts
    - Setup
    - Troubleshooting
    - Licenses
    - Intrusion
  - iDRAC Settings
  - Hardware
  - Storage
  - Host OS

| Power Monitoring | Power Configuration | Voltages | Temperatures |

Power

▲ Back to Top

Present	Past

Present Reading: 84 Watts (9.33% Capacity)

980 980 Watts - Failure Threshold
896 Watts - Warning Threshold

490

84 Watts - Present Reading

0

Last Hour | Last Day | Last Week

Power Units ● Watts ○ Amps

Present Power Reading and Thresholds

▲ Back to Top

Status	Probe Name	Present Reading	Warning Threshold	Failure Threshold
✅	System Board Pwr Consumption	84 W 287 BTU/hr	896 W 3058 BTU/hr	980 W 3345 BTU/hr

Apply

Power Supply Unit Readings

▲ Back to Top

Name	Amps	Volts
PS1	0.6	210

Cumulative Reading

▲ Back to Top

Time	Total Usage

viewer (1).jnlp

Show all

idrac-6R3SLV1 - iDRAC7 - Power M...

idrac-1Y2SLV1 - iDRAC7 -   idrac-2Y2SLV1 - iDRAC7 -

Not secure | https://129.24.245.28/index.html?ST1=2793af565f4e1b2ba969adfb2d95d408,ST2=24a0c5a2f63deea2cecc471cd268617e

Integrated Dell Remote Access Controller 7   Enterprise   Support | Dell TechCenter | About | Logout

System
PowerEdge R620
root , Admin

Properties   Attached Media   vFlash   Service Module   Job Queue

Summary   Details   System Inventory

- Overview
  - **Server**
    - Logs
    - Power / Thermal
    - Virtual Console
    - Alerts
    - Setup
    - Troubleshooting
    - Licenses
    - Intrusion
  - iDRAC Settings
  - Hardware
  - Storage
  - Host OS

System Summary

Server Health

✅	Batteries	✅	Temperatures
✅	Fans	✅	Voltages
✅	Intrusion		
✅	Power Supplies		
✅	Removable Flash Media		

Virtual Console Preview

> Settings
> Refresh
> Launch

Server Information

Power State	ON
System Model	PowerEdge R620
System Revision	I
System Host Name	localhost
Operating System	
Operating System Version	
Service Tag	2Y2SLV1
Express Service Code	6414108589
BIOS Version	1.2.6
Firmware Version	2.65.65.65
IP Address(es)	129.24.245.28
iDRAC MAC Address	24:B6:FD:F6:79:B6
DNS Domain Name	
Lifecycle Controller Firmware	2.65.65.65
IDSDM Firmware Version	N/A
Location	
Licenses	✅ Enterprise

Quick Launch Tasks

Power ON / OFF

Power Cycle System (cold boot)

System ID LED ON/OFF ⚫

View Logs

Update and Rollback

Reset iDRAC

Work Notes

https://129.24.245.28/sysSummaryData.html#

idrac-2Y2SLV1 - iDRAC7 - Summary...

idrac-1Y2SLV1 - iDRAC7 - | idrac-2Y2SLV1 - iDRAC7 - | +

← → ⟳   ⚠ Not secure | https://129.24.245.28/index.html?ST1=2793af565f4e1b2ba969adfb2d95d408,ST2=24a0c5a2f63deea2cecc471cd268617e

DELL   Integrated Dell Remote   Enterprise   Support | Dell TechCenter | About | Logout
Access Controller 7

System
PowerEdge R620
root , Admin

Properties   Attached Media   vFlash   Service Module   Job Queue

Summary   Details   System Inventory

- Overview
  - Server
    - Logs
    - Power / Thermal
    - Virtual Console
    - Alerts
    - Setup
    - Troubleshooting
    - Licenses
    - Intrusion
  - iDRAC Settings
  - Hardware
  - Storage
  - Host OS

System Summary

129.24.245.28 says

You are about to execute a server control action. Are you
sure you want to continue?

Cancel   OK

Server Health

☑ Batteries   ☑ Temperatures

☑ Fans   ☑ Voltages

☑ Intrusion

☑ Power Supplies

☑ Removable Flash Media

Virtual Console Preview

> Settings
> Refresh
> Launch

Server Information

Power State	ON
System Model	PowerEdge R620
System Revision	I
System Host Name	localhost
Operating System	
Operating System Version	
Service Tag	2Y2SLV1
Express Service Code	6414108589
BIOS Version	1.2.6
Firmware Version	2.65.65.65
IP Address(es)	129.24.245.28
iDRAC MAC Address	24:B6:FD:F6:79:B6
DNS Domain Name	
Lifecycle Controller Firmware	2.65.65.65
IDSDM Firmware Version	N/A
Location	
Licenses	☑ Enterprise

Quick Launch Tasks

Power ON / OFF

Power Cycle System (cold boot)

System ID LED ON/OFF 🔵

View Logs

Update and Rollback

Reset iDRAC

Work Notes

https://129.24.245.28/sysSummaryData.html#

idrac-2Y2SLV1 - iDRAC7 - Summary...

Rocky Linux 9.3

Install Rocky Linux 9.3
Test this media & install Rocky Linux 9.3

Troubleshooting   >
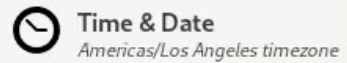
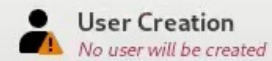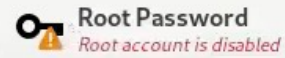Press Tab for full configuration options on menu items.

WELCOME TO ROCKY LINUX 9.3.

What language would you like to use during the installation process?

English	*English*	>
العربية	*Arabic*	
Français	*French*	
Deutsch	*German*	
日本語	*Japanese*	
中文	*Mandarin Chinese*	
Русский	*Russian*	
Español	*Spanish*	
Afrikaans	*Afrikaans*	
አማርኛ	*Amharic*	
অসমীয়া	*Assamese*	
Asturianu	*Asturian*	
Беларуская	*Belarusian*	
Български	*Bulgarian*	
বাংলা	*Bangla*	
Català	*Catalan*	
Čeština	*Czech*	
Cymraeg	*Welsh*	
Dansk	*Danish*	
Ελληνικά	*Greek*	
Esperanto	*Esperanto*	
Eesti	*Estonian*	
Euskara	*Basque*	
فارسی	*Persian*	
Suomi	*Finnish*	

English (United States)
English (United Kingdom)
English (India)
English (Australia)
English (Canada)
English (Denmark)
English (Ireland)
English (New Zealand)
English (Nigeria)
English (Hong Kong SAR China)
English (Philippines)
English (Singapore)
English (South Africa)
English (Zambia)
English (Zimbabwe)
English (Botswana)
English (Antigua & Barbuda)
English (Israel)

LOCALIZATION

⌨ **Keyboard**
English (US)

Language Support
English (United States)

🕐 **Time & Date**
Americas/Los Angeles timezone

SOFTWARE

◎ **Installation Source**
Local media

Software Selection
Server with GUI

SYSTEM

Installation Destination
Automatic partitioning selected

🔍 **KDUMP**
Kdump is enabled

⇄ **Network & Host Name**
Connected: enp1s0

🔒 **Security Profile**
Not ready

USER SETTINGS

⚷ **Root Password**
Root account is disabled

User Creation
No user will be created

LOCALIZATION

⌨ **Keyboard**
English (US)

🔤 **Language Support**
English (United States)

🕐 **Time & Date**
Americas/Los Angeles timezone

USER SETTINGS

🔑⚠ **Root Password**
Root account is disabled

👤⚠ **User Creation**
No user will be created

SOFTWARE

💿 **Installation Source**
Local media

📦 **Software Selection**
Server with GUI

SYSTEM

💽⚠ **Installation Destination**
Automatic partitioning selected

🔍 **KDUMP**
Kdump is enabled

↔ **Network & Host Name**
Connected: enp1s0

🔒 **Security Profile**
Not ready

The root account is used for administering the system. Enter a password for the root user.

Root Password:

Too short

Confirm:

☐ Lock root account

☐ Allow root SSH login with password

The root account is used for administering the system. Enter a password for the root user.

Root Password: ●●

Too short

Confirm:

☐ Lock root account

☐ Allow root SSH login with password

LOCALIZATION

⌨ **Keyboard**
English (US)

ᵃ Language Support
English (United States)

🕐 **Time & Date**
Americas/Los Angeles timezone

SOFTWARE

💿 **Installation Source**
Local media

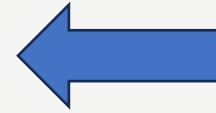**Software Selection**
Server with GUI

SYSTEM

Installation Destination
Automatic partitioning selected

🔍 **KDUMP**
Kdump is enabled

↪ **Network & Host Name**
Connected: enp1s0

🔒 **Security Profile**
Not ready

USER SETTINGS

Root Password
Root account is disabled

User Creation
No user will be created

Device Selection

Select the device(s) you'd like to install to. They will be left untouched until you click on the main menu's "Begin Installation" button.

Local Standard Disks

20 GiB

0x1af4

vda / 20 GiB free

Specialized & Network Disks

Add a disk...

Storage Configuration

◉ Automatic   ○ Custom

☐ I would like to make additional space available.

Encryption

☐ Encrypt my data. *You'll set a passphrase next.*

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