LifeSize® Video Center 2200 Installation Guide

LifeSize Video Center 2200 Components

LifeSize Video Center 2200 ships with the following components:

- 1U (44.45 mm, 1.75") rack-mountable LifeSize Video Center 2200 server
- Face plate and key
- Rack rail hardware
- Power cord

For best performance, use a Category 6 Ethernet cable (not included) to connect LifeSize Video Center 2200 to your network. At minimum, use a Category 5e cable.

NOTE   For current product information, refer to the release notes for LifeSize Video Center at lifesize.com/support.

Deployment Considerations

Choose a clean, dust-free, well-ventilated location near a grounded power outlet. Avoid areas where heat, electrical noise, and electromagnetic fields are generated. If you intend to mount the server in a new or existing rack, refer to Installing LifeSize Video Center 2200 into a Rack.

LifeSize recommends that you install the server on a non-lossy gigabit Ethernet network for optimal performance. The server's network location determines who can access the server and how you must configure your firewall. Refer to Network Considerations for a discussion of firewall implications.

LifeSize Video Center 2200 Installation

Before you install LifeSize Video Center 2200, read *LifeSize Video Center Safety and Regulatory Notices* for important safety information. The document is available on the documentation CD and from lifesize.com/support.

1. Remove all components from the product packaging and place them in the desired position in your environment.
2. If you are installing the server in a rack, refer to Installing LifeSize Video Center 2200 into a Rack and complete those instructions before continuing.
3. Insert the network cable into the left network port as you face the back panel of the server (refer to the figure in step 5).

NOTE   The right network port is reserved for future use.

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4. Insert the other end of the network cable directly into a computer you will use to configure the server network settings.

5. Insert one end of the power cord into the back of the server and the other end into a power outlet on the wall.

6. Press the power button on the front of the server. Refer to Power and Reboot.

7. Attach the face plate:

    a. Fit the left side of the face plate into the slots on the front of the server.

    b. Press and hold the release button, place the right side of the face plate against the front of the server, and release the button to lock the face plate into the slots.

    c. Lock the face plate to the chassis with the key.

8. Complete the steps in Configuring Network Settings.

Installing LifeSize Video Center 2200 into a Rack

Use the included rack rail hardware to install LifeSize Video Center 2200 into your rack. The rack mounting procedure may vary based on the type of rack. Refer to the installation instructions included with your rack in conjunction with these instructions.

Consider the following as you plan the rack installation:

|	
Rack Stability	Ensure that the leveling jacks on the bottom of the rack are fully extended to the floor with the full weight of the rack resting on them. In a single rack installation, attach stabilizers to the rack. In multiple rack installations, couple the racks together.
Air Flow and Access	Leave approximately 63.5 centimeters (25 inches) of clearance in front of the rack, and approximately 76 centimeters (30 inches) of clearance in back of the rack to allow for sufficient airflow and ease in servicing.
Ambient Operating Temperature	If you install LifeSize Video Center 2200 in a closed or multi-unit rack assembly, the operating temperature of the rack environment may be greater than the ambient temperature of the room. The maximum operating temperature is 35 degrees Celsius.
Circuit Overloading	Consider the connection of this equipment to the power supply circuitry and the effect that might have on overcurrent protection and power supply wiring. Give appropriate consideration to equipment nameplate ratings when addressing this concern.
Reliable Ground	Because a reliable ground must be maintained at all times, ensure that the rack itself is grounded. Pay particular attention to power supply connections other than the direct connections to the branch circuit (the use of power strips, for example).

LifeSize Video Center 2200 ships with the following rack rail hardware:

- Two front inner rails (attached to the server chassis)
- Two rear inner rails for the chassis
- Two rails for the rack
- One bag of brackets and screws

You must attach the rear inner rails to the server chassis, and the rack rails to the rack.

Installing the Rear Inner Rails

1. Beginning with the rail for the right side of the chassis as you face the chassis, align the two square holes on the rail against the hooks on the right side of the chassis.
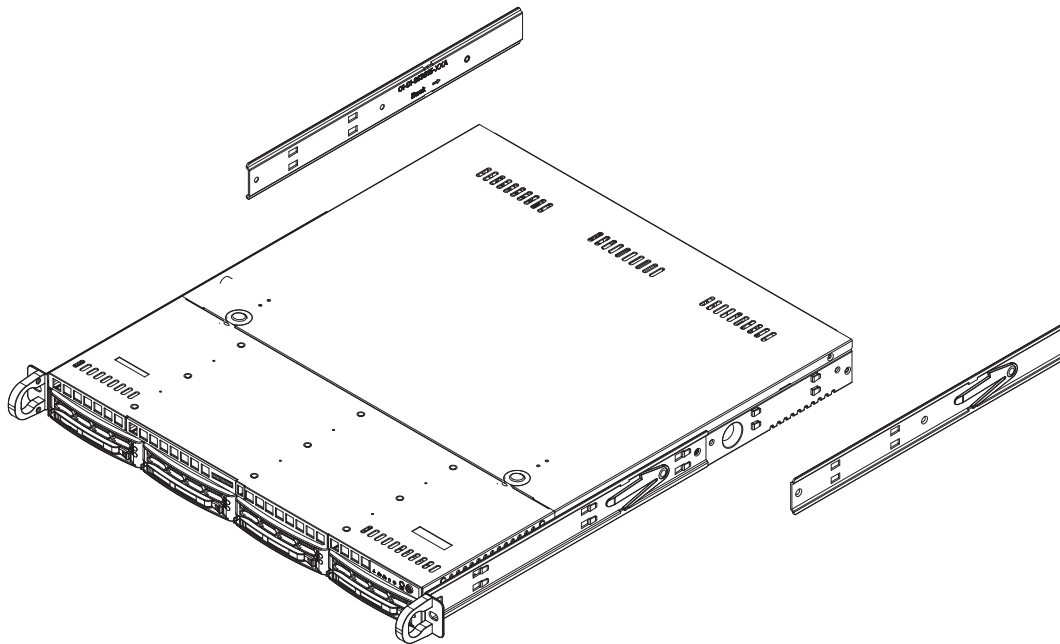
2. Securely attach the rail to the chassis with the flat head screws provided.

3. Repeat these steps to install the left rear inner rail to the left side of the chassis.

The chassis rails have locking tabs that lock the server into place when it is pushed fully into the rack (its normal operating position). These tabs also lock the server in place to prevent the server from coming completely out of the rack when you extend it for servicing.

Installing the Rack Rails in Non-Telco Racks

1. Position a chassis rail guide (rack rail) in the desired location in the rack. Keep the sliding rail guide facing the inside of the rack.

2. With screws appropriate for the rack, attach the assembly securely to the rack using the brackets provided with the rack rails.

3. Attach the other assembly to the opposite side of the rack. Ensure that both assemblies are at the same height and that their rail guides face inward.

Installing the Rack Rails in Telco Racks

Use two of the provided L-shaped brackets on either side of the rack (four total) to attach the rack rails to a telco-type rack.

1. Using screws appropriate for the rack, attach a bracket to the front and rear of one side of the rack at the same height.
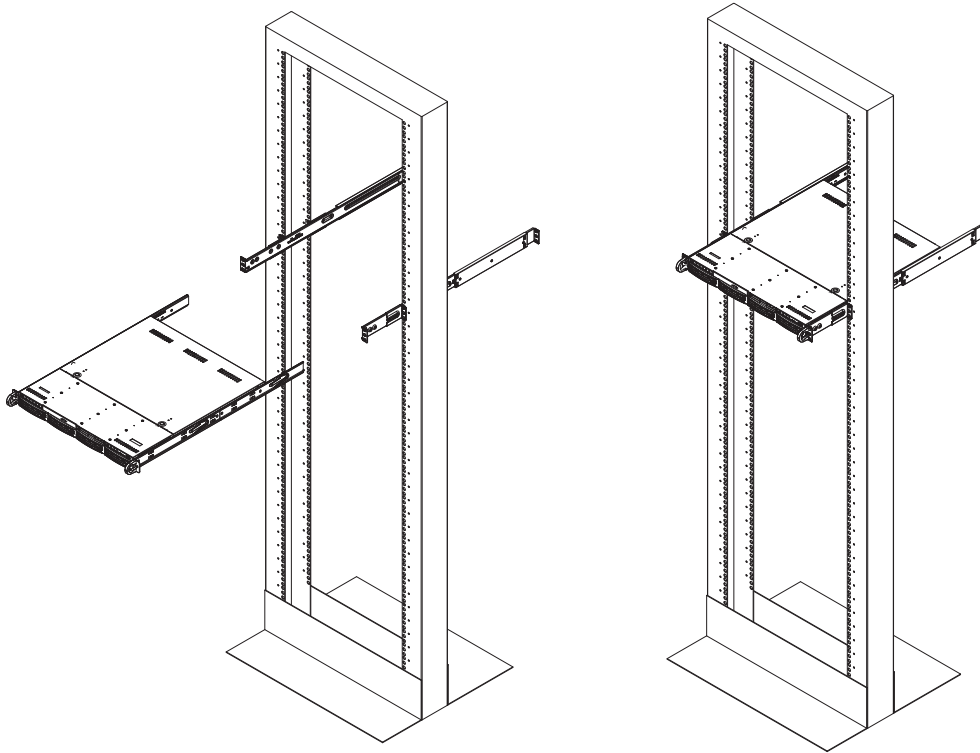
2. Position the rail for one side of the rack so that the server will be stable when locked into place. Keep the sliding rail guide facing the inside of the rack.

3. Attach the rack rail to the brackets on the rack, using the screws provided.

4. Repeat the process for the opposite rail.

Placing the Server into the Rack

After you attach rails to both the chassis and the rack unit, place the server into the rack.

1. Line up the rear of the chassis rails with the front of the rack rails.

2. Slide the chassis rails into the rack rails. Keep the pressure even on both sides. (You may have to depress the locking tabs while inserting the rails.)

3. Push the server completely into the rack until you hear the locking tabs click.

Configuring Network Settings

The server has the following default network settings:

IP address : 192.168.1.25

Network Mask : 255.255.255.0

Default Gateway : 192.168.1.1

Configure the server for your network as follows:

1. With the computer connected directly to the server, do the following:

    a. Configure the same network mask as the server.

    b. Set the computer's IP address to an address in the 192.168.1.x network. For example, 192.168.1.2.

2. Open a web browser on the computer and enter the IP address *192.168.1.25*. For a list of compatible browsers, refer to the release notes for LifeSize Video Center.

3. Log in with the following credentials:

    Username: *administrator*

    Password: *admin123*

4. Select **Administer : System Settings**.

5. In **Network Settings**, click **Modify** for **Primary NIC**.

6. Change the settings in the **Edit Network Interface** page to configure your server to work on your network. LifeSize recommends a static IP address.

7. Click **Apply Changes**.

8. Disconnect the Ethernet cable from the computer and reconfigure the computer to work with your network. Connect the server to your network with the Ethernet cable.

9. From a computer on the same network as the server, open a browser and enter the IP address you supplied in step 6 to re-access the server. If you cannot reconnect using the new IP address, access the server console directly. Refer to Using the Console Command Line Interface to Access the Server.

Changing the Default Administrator Password

LifeSize recommends that you change the administrator password after you log in for the first time.

Clicking **administrator** at the top of any page opens the profile for the administrator account. From the profile page, click **Change password**.

Power and Reboot

The face plate covers the reset and power buttons on the server chassis. You must remove the face plate to use these buttons.

The reset button on the front panel reboots the server. The power button controls the main system power. Turning off the system power removes the main power, but standby power continues to be available to the system while it is connected to the power line.

LED Status

The LED indicators on the server indicate the following conditions:

LED	Icon	Indicator
Overheat/Fan Failure		When flashing, indicates a fan failure. When on continuously, the LED indicates the server is overheated, which may be caused by cables obstructing the system airflow or high ambient room temperature. Ensure that the chassis cover is installed securely. This LED remains flashing or on continuously for as long as the condition persists.
NIC2		When flashing, indicates network activity on LAN2. (Reserved for future use.)
NIC1		When flashing, indicates network activity on LAN1.
HDD		Indicates channel activity for all hard disk drives. When flashing, this LED indicates SATA drive activity.
Power		Indicates power is being supplied to the system's power supply unit. This LED is illuminated when the system is operating.

Network Considerations

LifeSize recommends the following for optimal performance:

• Ensure that the recording bit rate for individual recordings is set properly for your network to avoid packet loss. From the web user interface, access the bit rate settings at **Administer : User and Content Management : Global recording properties – Edit**.

• If necessary for your network, set aggregate bit rate limits at **Administer : System Settings : Bandwidth limits – Edit**. These settings determine the total allowed simultaneous recordings and live streams. Refer to the *LifeSize Video Center Administrator Guide* for more information about global recording properties and bandwidth limits.

• If any content viewers or recording-enabled LifeSize video communications systems reside outside the LAN or DMZ in which the LifeSize Video Center resides, you must adjust firewall and VPN settings to ensure proper operation. Refer to Deploying LifeSize Video Center in Your Network for more information.

Deploying LifeSize Video Center in Your Network

Depending on the placement of LifeSize Video Center in your environment relative to those viewing streams from it or recording streams to it, you may need to open certain ports on your firewalls. If all recording devices and viewers are within the same LAN as LifeSize Video Center, no action is necessary.

| NOTE | If viewers or recorders use VPN from the internet or use a site-to-site VPN tunnel, ensure your VPN bandwidth can accommodate the maximum number of viewers or recorders at one time. |

Following are common network deployments that require you to open ports in your firewall:

LifeSize Video Center Location	Viewer and Recorder Location	Firewall implications
In the LAN	Viewers in the Internet.	The internal and external firewall must allow incoming access to the following ports: • 80 (HTTP) • 443 (HTTPS/SSL) And outgoing access to the following port: • 1935 (RTMP, Apple HTTP live streaming)
	Recorders in the Internet.	Both the internal and external firewall must allow incoming access to the following ports: • 443 (HTTPS/SSL) • 554 (RTSP) • UDP: 50,000 to 52,000
Hosted in a Third Party data center	Viewers within the LAN.	The internal and external firewall must allow outgoing access to the following ports: • 80 (HTTP) • 443 (HTTPS/SSL) And incoming access to the following port: • 1935 (RTMP, Apple HTTP live streaming)
	Recorders within the LAN.	The internal and external firewall must allow outgoing access to the following ports: • 443 (HTTPS/SSL) • 554 (RTSP) • UDP: 50,000 to 52,000
	Recorder in the DMZ.	The external firewall must allow the DMZ recorders outgoing access to the following ports: • 443 (HTTPS/SSL) • 554 (RTSP) • UDP: 50,000 to 52,000

LifeSize Video Center Location	Viewer and Recorder Location	Firewall implications
In the DMZ	Viewers within the LAN.	The internal firewall must allow the outgoing access to the following ports: • 80 (HTTP) • 443 (HTTPS/SSL) And incoming access to the following port: • 1935 (RTMP, Apple HTTP live streaming)
	Recorders within the LAN.	The internal firewall must allow outgoing access to the following ports: • 443 (HTTPS/SSL) • 554 (RTSP) • UDP: 50,000 to 52,000
	Viewers in the Internet.	The external firewall must allow incoming access to the following ports: • 80 (HTTP) • 443 (HTTPS/SSL) And outgoing access to the following port: 1935 (RTMP, Apple HTTP live streaming)
	Recorders in the Internet.	The external firewall must allow incoming access to the following ports: • 443 (HTTPS/SSL) • 554 (RTSP) • UDP: 50,000 to 52,000

SIP Dial Out Recording

If you use SIP dial out recording to a video communication system outside the network in which your LifeSize Video Center resides, ensure the following UDP ports on your firewalls have incoming access:

• 5060 to 5100

Troubleshooting

Using the Console Command Line Interface to Access the Server

Follow this procedure if you cannot access the server through the web interface:

1. Connect a monitor directly to the VGA output on the back of the server.

2. Connect a keyboard directly to the server with USB or PS/2 connectors.

3. When prompted, enter the following credentials:

   Username : administrator

   Password : admin123

NOTE	The console username and password cannot be changed. This ensures that you can always access the server when you are locked out of the web interface. Consider the physical security implications for your organization.

   A command line interface opens. Enter `help` for a list of commands:

   ```
   network

   ssh-access

   reboot

   shutdown

   reset-password

   help
   ```

   Enter `help` *command* for help using the command.

Modifying the Network Settings

If you changed the default network settings for the server, but cannot access it on the LAN with the IP address supplied when you made the changes, you can view and modify the settings with the `network` command.

View the current network settings:

```
network show eth0
```

Change the network settings:

```
network set eth0 static <ip-address> <network-mask> <network> <broadcast-ip>
      <gateway-ip> [mtu]
```

To reset the server to factory defaults, enter the following:

```
network set eth0 static 192.168.1.25 255.255.255.0 192.168.1.0 192.168.1.255
      192.168.1.1 1500
```

Resetting the Default Web Interface Administrator Password

Use the `reset-password` command to reset the administrator password in the web user interface to `admin123`.

Replacing Faulty Drives

The server stores videos on two SATA drives in Linux MD RAID10 (RAID 10) array configuration, so that the data is mirrored on the drives. If one drive fails, the remaining drive contains a copy so that no data is lost.

The SATA drives are mounted in drive carriers to simplify installation and removal from the chassis, and to promote proper airflow for the system. All carriers, whether they house drives or not, must remain in the chassis during operation.

If **RAID State** in the web user interface dashboard indicates a faulty drive, back up the remaining drive immediately to prevent data loss. Refer to the *LifeSize Video Center Administrator Guide* for information about maintenance mode and backing up videos and settings.

Replace a faulty drive by contacting your authorized LifeSize Partner or LifeSize Technical Services for an RMA (returned merchandise authorization) and replacement drive, depending on your service plan.

> NOTE   Use only authorized LifeSize replacement drives. LifeSize Video Center 2200 does not support larger capacity drives or more than two drives.

De-registering a Drive

After backing up the drives, de-register the faulty disk from the RAID array.

1. Click the **Administer** tab in the web user interface.

2. In the **Storage** section, click **View RAID Details**.

3. Locate the faulty disk and click **Remove Disk** to de-register the disk from the RAID array. Verify that the drive state is **Removed** in all RAID devices.

4. Power off the server. Refer to the *LifeSize Video Center Administrator Guide* for instructions.

Removing the Face Plate

1. Unlock the face plate on the chassis with the key.



2. Press the release button.

3. Remove the face plate.

Removing a Drive Carrier

Before physically removing the faulty drive, you must de-register the drive in the RAID array. Refer to De-registering a Drive. After the faulty drive is de-registered from the RAID array, use the power button to shut down the server before attempting to remove the drive.

> NOTE   The server may take a few minutes to shut down as it cycles through a series
>   of steps to ensure that it shuts down safely.

1. To remove a carrier, press the release button beside the drive LEDs. A handle releases from its locked position.
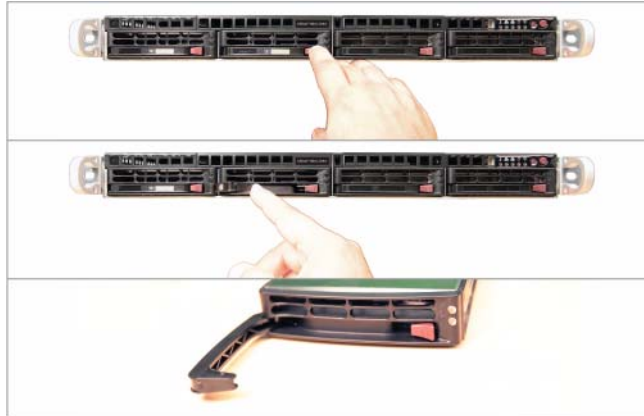
2. Swing the handle out and use it to pull the unit straight out.

NOTE   Do not touch the SATA backplane with metal objects and ensure that no ribbon cables touch the backplane.

Installing a Drive Carrier

CAUTION   Ensure that the functioning drive is in the left-most slot of the server as you face it. The new drive should be in the second slot from the left.

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1. Insert the carrier into the carrier slot and press it into place in the SATA backplane.

2. Swing the handle closed until it locks into place with an audible click.

3. Ensure that LifeSize Video Center 2200 is plugged in, and use the power button to restore power. Replace the face plate. (Refer to step 7 of LifeSize Video Center 2200 Installation.)

4. Use the following procedure to register the newly installed drive in the RAID 10 array.

Registering a Drive

After you replace the faulty drive, restart the server. Register the new drive in the RAID array.

1. Click the **Administer** tab in the web user interface.

2. In the **Storage** section, click **View RAID Details**.

3. Locate the new disk, which is listed as **Removed**, and click **Add Drive**. After the drive has successfully been partitioned and added to the RAID array, the drive's state changes to **Synchronizing** as it is populated with the data from the other drive.

   Synchronizing the drive may take several hours. When finished, the drive's state changes to **OK**.

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