aws

Installation Guide

AWS Elemental Conductor Live

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AWS Elemental Conductor Live: Installation Guide

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About this guide

This guide describes how to install AWS Elemental Conductor Live software for the first time. (To perform a kickstart and fresh install on a node that you have already deployed, see the AWS Elemental Conductor Live Upgrade Guide.)

Supported versions

This guide applies to all versions of the software that are currently available for download from AWS Elemental.

Phase 1 of installation

The following table lists the reference documents for the different types of installation.

Type of hardware	Description	Section in this guide
AWS Elemental appliance	You obtained an AWS Elemental appliance. This hardware comes with the software and the appropriate licenses already installed. You don't need to perform any installation. Instead, you need to complete setup of the appliance. See AWS Elemental Conductor Live Configuration Guide.	None
Qualified hardware	You're installing software and licenses for each qualified hardware that's running AWS Elemental software.	*Installing on qualified hardware* in this guide
Virtual machine (VM)	You're installing software and licenses for each VM guest	*Installing on a VM* in this guide

Type of hardware	Description	Section in this guide
	that's running AWS Elemental software.	

The procedures in this guide get you through phase 1 of the software installation process:

- The preconfigured operating system is installed.
- The software is installed, eth0 is configured, and licenses are installed.

Phase 2 covers configuration of the software. See AWS Elemental Conductor Live Configuration Guide.

Note

For assistance with your AWS Elemental appliances and software products, see the AWS Elemental Support Center.

Installing Conductor Live on qualified hardware

This section is for IT administrators who perform the first-time installation of AWS Elemental Conductor Live software on an appliance that is considered qualified hardware.

For information about hardware that AWS Elemental has qualified, contact your AWS Elemental Sales representative contact AWS Elemental Support through your company's Private Space in AWS Elemental Support Center.

Prerequisite Knowledge

It is assumed that you know how to:

- Log in to the Conductor Live appliance over SSH to work via the command line interface.
- Use Windows Share (on a Windows computer), Samba (on a Mac workstation), or a utility such as scp (on a Linux workstation) to move files.
- Access recently downloaded files on your workstation.

> **Note**
>
> In the following steps, we show how to install version 3.25.4. Modify your commands to specify the version that applies for you.

Topics

Step A: Prepare the hardware and download files

Prepare the hardware and network

To prepare your hardware and network, make sure you have done the following:

- Physically installed the appliance.
- Set up the unit as a node on your network.
- Configured network cards and ensured that they're able to reach other machines on the network.
- Set up a method, such as SCP, for transferring files from your workstation to the node.

Note your activation code

You should have received an email with your activation code. You need this number for the installation.

If you're installing Conductor Live software on more than one appliance, you received an activation code for each instance. Decide which activation code you will use for each unit, and make a note. The codes are not tied ahead of time to any specific appliance, but you cannot use the same code on more than one.

Download files

Download the installation files for Conductor Live.

To download installation files

1. Log in to AWS Elemental Support Center Activations. For detailed steps to download installation files, see Downloading AWS Elemental Conductor Live software.
2. Download your files.

   You need the following files for Conductor Live:

   - A kickstart file (`.iso`) file for creating a USB boot drive. For example, `centos-20161028T12270-production-usb.iso`.

     You use this file to put a preconfigured installation of your operating system on your physical appliance.If you're downloading the kickstart file for several products, make a note of which file belongs to which AWS Elementalproduct. Files are not interchangeable across products.
   - An installation (`.run`) file for the Conductor Live software itself. For example:

     `elemental_production_conductor_live_3.25.4.12345.run`.

Create bootable kickstart

At your workstation, use a third-party utility (such as PowerISO or ISO2USB) to create a bootable USB drive from the `.iso` file. For help, see the knowledge base article Creating Bootable Recovery (kickstart) Media.

Step B: Install (Kickstart) the operating system software

To kickstart the system

1. Insert the USB thumb drive into the appliance.
2. Restart the system using the following command.

```
[elemental@hostname ~]$ sudo reboot
```

3. Use the arrow keys to select each option and complete the field, using the instructions in the following table as a guide.

Menu Option	Instructions
`Set Hostname`	Change the hostname to a useful name such as **`conductor-live-3-01`** or **`conductor-live-3-chicago-01`** . Do not use localhost as the hostname! Do not use periods or underscores in the hostname.
`Disk layout: Auto-detect`	Leave this set at Auto-detect.
`Set Key`	Arrow down to skip this option.
`Install and configure base operating system`	Press Enter to begin the OS installation.

The operating system is installed.

4. For the changes to take effect, reboot the system by pressing **Enter** at the prompt `Press return to quit`.

Step C: Install the Conductor Live software

Perform these on the Conductor Live appliance, either directly at the appliance or from your workstation via SSH.

To install the Conductor Live software

1. At the Linux command line, log in with the *elemental* user credentials.
2. Run the installer with this command. Use the actual file name of your `.run` file rather than the example below.

```
[elemental@hostname ~]$ sudo sh ./
elemental_production_conductor_live247_3.25.4.12345.run -l -z -t
```

   where -l is a letter, not a number.
3. Follow the prompts:

Prompt	Action
`Do you agree to these terms?`	This prompt appears after you have paged through the EULA (End User License Agreement). Enter **`Yes`** or **`No`**. (You must enter Yes to continue.)
`Enter this server's Hostname`	Type the hostname of this appliance. For example, **`conductor-live-3-01`**
`Does eth0 use DHCP to get its IP address?`	Type **`Yes`** to use DHCP or type **`No`** to enter a static IP address.
`Enter eth0's IP address:`	If you chose static, type the IP address for this hardware unit.

Prompt	Action
`Enter eth0's NETMASK:`	If you chose static, type the netmask for this hardware unit.
`Enter eth0's Gateway (or type **none**):`	If you chose static, type **none** or type the gateway for this appliance.
`Keep this configured nameserver?`	Skip; you set up a nameserver in the next phase of configuration.
`Would you like to configure eth1?`	Type **No**; you can configure eth1 in the next phase of the configuration.
`The firewall for this system is currently disabled. Would you like to enable it?`	Skip; you set up the firewall in the next phase of configuration.
`Would you like to start the Elemental service now?`	Type **Yes**.

Then the software is installed. Finally, this message appears:

```
Installation and configuration complete!
Please open a web browser and point it to https://xxx.xxx.xxx.xxx to get to the web
 interface.
Enjoy!
```

4. Start a web browser and start the Conductor Live web interface by typing the following:

```
https://<hostname>
```

Make sure the web interface displays.

Step D: Set up licenses

At this point, the software is installed but it is not yet enabled.

You must now generate and install the license file on each node.

The license generation procedure works as follows:

- You receive an email with activation codes, one for each instance of the product (Conductor Live) that you purchased. At each Conductor Live appliance, you use one activation code to generate a key file. The key file incorporates the specific activation code and the specific hostname of the appliance. The key file works only with this activation code's product (Conductor Live) and with this hardware unit.
- You copy the key file from the node to your workstation. At your workstation, you open the AWS Elemental Support Center console and generate a license using each key file. Like the key file used to generate it, the license file is valid only for this product (Conductor Live) and this specific appliance.
- After you generate the license file, you copy it to the appliance that it belongs to, and use the CLI to install the license.

Topics

Organize your activation codes

To organize the activation codes

1. Locate the email you received from AWS Elemental. This email contains an activation code or codes, one for each Conductor Live software instance that you have purchased. The activation code looks like this:

   ```
   CON-111-222-333
   ```

   If you didn't receive this email or have lost it, contact AWS Elemental Support through the AWS Elemental Support Center.

2. If you have more than one activation code, assign each code to a hardware unit. You can assign any code to any Conductor Live appliance. Make a note of the assignments. For example, you might assign as follows:

   `CON-111-222-333` with the appliance that has the hostname `SystemA`.

   `CON-111-222-444` with the appliance that has the hostname `SystemB`.

Generate a key file

You must generate a key file using a utility that always exists on the operating system of the appliance.

To generate a key file

Perform this step at each Conductor Live appliance.

1. Using an SSH client such as PuTTY, log in to the appliance with the *elemental* user credentials.

   You are logged in at the home directory (`/elemental`).

2. Enter this command:

   ```
   [elemental@hostname ~] ./keygen
   ```

3. At the prompt, enter the activation code that belongs to this hardware unit. The following *key file* is created in the home directory: `activation_<hostname of the system>.key`.

   For example, `activation_SystemA.key`

4. Copy the key file from the appliance to your workstation. We recommend that you copy all the key files to a specific folder on your workstation. Give the folder a suitable name such as `elemental_live_license_keys`. Make a note of the path because you will need it in the next step.

5. Repeat these steps for each Conductor Live appliance. Make sure that you use a different activation code on each appliance.

Generate a license

You must log on to the AWS Elemental Appliances & Software console, and use the key file to generate a license.

> **Note**
>
> This procedure assumes that an administrator in your organization has set you up as an AWS IAM user, with the permissions that you need to generate licenses. For more information, see AWS Elemental Appliances and Software Service Getting Started Guide. It also assumes that you have your IAM credentials (user name and password). If you don't have these credentials, speak to an administrator in your organization. AWS Elemental can't provide you with these credentials.

To generate a license

Perform this step at your workstation.

1. Open the AWS Elemental Appliances & Software console at https://console.aws.amazon.com/elemental-appliances-software/.
2. On the navigation pane of the AWS Elemental Appliances & Software home page, choose **Activations**. The **Activations List** page appears. Choose the **Ready to license** tab.

   The **Ready to license** tab shows one entry for each product that you purchased. Each product is identified by a product name and a unique activation code. The activation code is the code that you received in the email. Following from our example, you might see two lines:

   ```
   CxxxPNL CON-111-222-333 Conductor product 2021-11-01

   CxxxPNL CON-111-222-444 Conductor product 2021-11-01
   ```
3. Choose the **Generate license** button (at the top-right corner of the tab). The **Generate new license** page appears.
4. On the **Generate new license** page, choose the **Choose files** button, and navigate to the folder that you copied the key files to. For example, `/elemental_live_license_keys`.

   In the dialog box that appears, select all the key files that you generated, then choose **Open**.

   On the **Generate new license** page, one entry appears for each key file. For example:

```
activation_systemA.key
15.39 KB
11/04/2021, 2:02:01 PM

activation_systemB.key
15.39 KB
11/04/2021, 2:32:22 PM
```

5. Choose **Generate license**. A license is generated for each entry. After the **License generated** message appears, the product for each license moves to the **Activations** tab.

Download the license files

1. On the **Activations** tab, choose one of the entries you want to set up. The **Product details** page appears for this product.
2. Choose the **Software** tab and look for the **License file** link.
3. Choose the **License file** link and follow the prompts to download the file.
4. Repeat these steps to download all the license files that you generated.
5. Follow the procedure that applies to your browser to open the folder that contains the downloaded license files. Make a note of the folder where the license files are located.

About the License Files

Each license file is named as follows: `lic-download-<hostname>.tgz`

For example: `lic-download-systemA.tgz`

Each `tgz` license file contains the main license for Conductor Live and licenses for all the add-on packs that you purchased.

The licenses work only with the specific product and the specific hardware unit.

Install the license files

When you downloaded the license files, you should have made a note of the folder where these files were downloaded to on your workstation. You must now transfer each file to its hardware unit and install it.

To transfer the license to the appliance

- Use a method such as SCP to move the license file (the `.tgz` file) from your workstation to a location on the Conductor Live appliance. We recommend that you copy the file to a folder with a name like `elemental_licenses`.

  Make sure that you put the correct license on each appliance. The license only works on a specific appliance.

To install the license on the appliance

On each appliance, you must set up Conductor Live to use the license file.

1. Using an SSH client such as PuTTY, log in to the appliance with the *elemental* user credentials.

   You are logged in at the home directory (`/home/elemental`).
2. Navigate to the directory that contains the license file, and extract the `.lic` files from the `.tgz` file. Place the `.lic` files in these folders:

   `/home/elemental`

   `/opt/elemental_se`
3. Enter the following command to restart the Conductor Live service:

   ```
   [elemental@hostname ~]$ sudo service elemental_se restart
   ```

Step E: Complete cluster configuration

You have now installed and performed basic configuration of Conductor Live. To complete the configuration of the Conductor Live nodes and all the worker nodes in the cluster, refer to the AWS Elemental Conductor Live Configuration Guide.

Installing Conductor Live on a virtual machine (VM)

This section is for IT administrators who perform the first-time installation of AWS Elemental Conductor Live software on a VM .

VM guest requirements

AWS Elemental software can run only on a virtual machine (VM) generated by VMware virtualization software. You must use VMware vCenter Server to create the VM. The vSphere client by itself doesn't work.

For version and system requirements and other information about VMware, see System requirements for virtual machines (VMs).

Prerequisite knowledge

To complete this process, you must have the following knowledge:

- A basic understanding of server virtualization.
- Installing and using VMware Center and the VMware vSphere client interface, including Open Console.
- Moving files from a VM guest to other systems over the network. We recommend using a utility such as SCP.
- Locating recently downloaded files.

> **Note**
>
> In the following steps, we show how to install version 3.25.4 of the software. Modify the commands to specify the version that you are installing.

Topics

Step A: Prepare the hardware and download files

Install the hardware units

Install the Hypervisors according to the procedures for your organization.

> **Important**
>
> All the hypervisor hardware for one Conductor Live cluster must be installed in the same physical location. This means that the hardware that hosts the Conductor Live VM guest or guests, and that hosts the AWS Elemental Live guests must all be in the same physical location.

Prepare the hardware and network

To prepare your hardware and network, make sure you have done the following:

- Physically installed the appliance.
- Set up the unit as a node on your network.
- Configured network cards and ensured that they're able to reach other machines on the network.
- Set up a method, such as SCP, for transferring files from your workstation to the VM guest.

Note Your Activation Code

You should have received an email with your activation code. You need this number for the installation.

If you're installing AWS Elemental software on more than one system, you received an activation code for each system. Decide and note which activation code you will use for each unit. The codes are not tied ahead of time to any specific system, but you cannot use the same code on more than one.

Download Files

Download the installation files for each unique AWS Elemental product that you're using.

To download installation files

1. Log in to AWS Elemental Support Center Activations. For detailed steps to download installation files, see Downloading AWS Elemental Conductor Live software.
2. Download your files.

   You need the following files for each unique piece of AWS Elemental software that you're installing.

   - A kickstart (`.ova`) file for creating a VM instance. For example, `centos-20161028T12270-production-usb.ova`.

     You will use this file to put a preconfigured installation of your operating system on your VM.
   - An installation (`.run`) file for the AWS Elemental software itself. For example, `elemental_production_conductor_live247_3.25.4.12345.run`.

   For example, if you're installing Conductor Live on two systems and AWS Elemental Live on five systems, you need to download two `.iso` files and two `.run` files.

Step B: Deploy the VM

Perform these steps from your workstation.

1. Place the OVA image in a location convenient and accessible to the VM host.
2. Start the VMware vSphere client and choose the option that lets you run the OVF Deploy wizard.
3. Complete the fields in the wizard. Pay special attention to the following settings:
   - For the *source*, enter the location where you saved the OVA file.
   - Ensure that the *hostname* that you assign to the VM guest is unique across all of your AWS Elemental products.
   - For *network settings*, such as DNS servers and eth configuration, leave the fields blank. You will configure these settings later in the Conductor Live installation and configuration process.

   When you finish and save your inputs, the OVA is installed, the guest is created, and the eth0 is configured as specified.
4. Before you proceed, take a snapshot of the VM as described in the VMware vSphere help text.

5. Repeat these steps to install the OVA on all VM instances.

Step C: Install the AWS Elemental Software

1. Use SCP to move each AWS Elemental software installer (`.run` file) to the `/home/elemental` directory on the appropriate virtual machine (VM). Use the *elemental* user credentials.
2. From the VMware vSPhere client, choose **Open Console** and access the VM with the elemental username and default password.

   You are logged in at the home directory (/home/elemental).
3. Run the installer as follows. When you do this use the actual file name of your `.run` file, rather than the file name in the example below.

   ```
   [elemental@hostname ~]$ sudo sh ./<product> -xeula -l -z
   ```

   Where:

   - *<product>* is the file name of the file that you downloaded. For example, `elemental_production_conductor_live247_3.25.4.12345.run`.
   - -l is a letter, not a number.
4. You are prompted as described in the table below.

Prompt	Action
`Enter this server's Hostname`	Accept the suggestion, which is the value that you entered when you installed the OVA.
`Does eth0 use DHCP to get its IP address?`	Accept the suggestion.
`Enter eth0's IP address:`	If the prompt appears, accept the suggestio n.
`Enter eth0's NETMASK:`	If the prompt appears, accept the suggestio n.

Prompt	Action
`Enter eth0's Gateway (or type **none**):`	If the prompt appears, accept the suggestio n.
`Keep this configured nameserve r?`	Skip; you set up a nameserver in the next phase of configuration.
`Would you like to configure eth1?`	Type **No**; you can configure eth1 in the next phase of the configuration.
`The firewall for this system is currently disabled. Would you like to enable it?`	Skip; you set up the firewall in the next phase of configuration.
`For security purposes, we require that you change the default password.`	This prompt is shown if you are still using the default password.
`Would you like to start the Elemental service now?`	Type **Yes**.

The software is installed. This message confirms both installation and configuration are complete:

```
Installation and configuration complete!
Please open a web browser and point it to https://xxx.xxx.xxx.xxx to get to the web
 interface.
Enjoy!
```

5. Take a snapshot of the VM as described in the CentOS 7 Virtual Manager online help.
6. Start a web browser and start the Conductor Live web interface by typing:

```
https://<hostname>
```

Make sure the web interface displays.

Step D: Set up licenses

At this point, the software is installed but it is not yet enabled.

You must now generate and install the license file on each VM.

The license generation procedure works as follows:

- You receive an email with activation codes, one for each instance of the product (Conductor Live) that you purchased. At each Conductor Live VM, you use one activation code to generate a key file. The key file incorporates the specific activation code and the specific hostname of the VM. The key file works only with this activation code's product (Conductor Live) and with this VM.
- You copy the key file from the VM to your workstation. At your workstation, you open the AWS Elemental Support Center console and generate a license using each key file. Like the key file used to generate it, the license file is valid only for this product (Conductor Live) and this specific VM.
- After you generate the license file, you copy it to the VM that it belongs to, and use the CLI to install the license.

Topics

Organize your activation codes

To organize the activation codes

1. Locate the email you received from AWS Elemental. This email contains an activation code or codes, one for each Conductor Live software instance that you have purchased. The activation code looks like this:

   ```
   CON-111-222-333
   ```

   If you didn't receive this email or have lost it, contact AWS Elemental Support through the AWS Elemental Support Center.

2. If you have more than one activation code, assign each code to a VM. You can assign any code to any Conductor Live VM. Make a note of the assignments. For example, you might assign as follows:

   `CON-111-222-333` with the appliance that has the hostname `SystemA`.

   `CON-111-222-444` with the appliance that has the hostname `SystemB`.

Generate a key file

You must generate a key file using a utility that always exists on the operating system of the VM.

To generate a key file

Perform this step at each Conductor Live VM.

1. From the VMware vSPhere client, choose **Open Console** and access the VM with the elemental username and default password.

   You are logged in at the home directory (`/elemental`).

2. Enter this command:

   ```
   [elemental@hostname ~] ./keygen
   ```

3. At the prompt, enter the activation code that belongs to this VM. The following *key file* is created in the home directory: `activation_<hostname of the system>.key`.

   For example, `activation_SystemA.key`

4. Copy the key file from the VM to your workstation. We recommend that you copy all the key files to a specific folder on your workstation. Give the folder a suitable name such as `elemental_live_license_keys`. Make a note of the path because you will need it in the next step.

5. Repeat these steps for each Conductor Live VM. Make sure that you use a different activation code on each VM.

Generate a license

You must log on to the AWS Elemental Appliances & Software console, and use the key file to generate a license.

> **Note**
>
> This procedure assumes that an administrator in your organization has set you up as an AWS IAM user, with the permissions that you need to generate licenses. For more information, see AWS Elemental Appliances and Software Service Getting Started Guide. It also assumes that you have your IAM credentials (user name and password). If you don't have these credentials, speak to an administrator in your organization. AWS Elemental can't provide you with these credentials.

To generate a license

Perform this step at your workstation.

1. Open the AWS Elemental Appliances & Software console at https://console.aws.amazon.com/elemental-appliances-software/.
2. On the navigation pane of the AWS Elemental Appliances & Software home page, choose **Activations**. The **Activations List** page appears. Choose the **Ready to license** tab.

   The **Ready to license** tab shows one entry for each product that you purchased. Each product is identified by a product name and a unique activation code. The activation code is the code that you received in the email. Following from our example, you might see two lines:

   ```
   CxxxPNL CON-111-222-333 Conductor product 2021-11-01

   CxxxPNL CON-111-222-444 Conductor product 2021-11-01
   ```
3. Choose the **Generate license** button (at the top-right corner of the tab). The **Generate new license** page appears.
4. On the **Generate new license** page, choose the **Choose files** button, and navigate to the folder that you copied the key files to. For example, `/elemental_live_license_keys`.

   In the dialog box that appears, select all the key files that you generated, then choose **Open**.

   On the **Generate new license** page, one entry appears for each key file. For example:

```
activation_systemA.key
15.39 KB
11/04/2021, 2:02:01 PM

activation_systemB.key
15.39 KB
11/04/2021, 2:32:22 PM
```

5. Choose **Generate license**. A license is generated for each entry. After the **License generated** message appears, the product for each license moves to the **Activations** tab.

Download the license files

1. On the **Activations** tab, choose one of the entries you want to set up. The **Product details** page appears for this product.
2. Choose the **Software** tab and look for the **License file** link.
3. Choose the **License file** link and follow the prompts to download the file.
4. Repeat these steps to download all the license files that you generated.
5. Follow the procedure that applies to your browser to open the folder that contains the downloaded license files. Make a note of the folder where the license files are located.

About the License Files

Each license file is named as follows: `lic-download-<hostname>.tgz`

For example: `lic-download-systemA.tgz`

Each `tgz` license file contains the main license for Conductor Live and licenses for all the add-on packs that you purchased.

The licenses work only with the specific product and the specific VM.

Install the license files

When you downloaded the license files, you should have made a note of the folder where these files were downloaded to on your workstation. You must now transfer each file to its VM and install it.

To transfer the license to the VM

- Use a method such as SCP to move the license file (the `.tgz` file) from your workstation to a location on the Conductor Live VM. We recommend that you copy the file to a folder with a name like `elemental_licenses`.

  Make sure that you put the correct license on each VM. The license only works on a specific VM.

To install the license on the VM

On each VM, you must set up Conductor Live to use the license file.

1. Using an SSH client such as PuTTY, log in to the VM with the *elemental* user credentials.

   You are logged in at the home directory (`/home/elemental`).
2. Navigate to the directory that contains the license file, and extract the `.lic` files from the `.tgz` file. Place the `.lic` files in these folders:

   `/home/elemental`

   `/opt/elemental_se`
3. Enter the following command to restart the Conductor Live service:

   ```
   [elemental@hostname ~]$ sudo service elemental_se restart
   ```

Step E: Complete cluster configuration

You have now installed and performed basic configuration of Conductor Live. To complete the configuration of the Conductor Live nodes and all the worker nodes in the cluster, refer to the AWS Elemental Conductor Live Configuration Guide.

Downloading AWS Elemental Conductor Live software

These are the detailed steps for downloading software files from the AWS Elemental Support Center.

1. Log in to the AWS Elemental Support Center with the email address that you used to receive your activation email and your password.
2. From the home page, click **Software and Licenses** on the right.
3. From the **Download Central Home**, choose **Your Entitlements** from the **Software & Entitlements** menu.
4. On **Your Entitlements**, your orders are listed from newest to oldest. In the **Activation Key** column, choose the link for the product that you're downloading.
5. On **Order Detail**, choose the plus sign for the package listed in the **Product Description** column to expand the order details.
6. In the expanded details, choose the product and version that you wish to download.
7. In the list of available files, choose the file you wish to download.
8. On **Product Download**, select the check box next to the file you want to download. Then click **Download Selected Files**.
9. If you are prompted to install the NetSession Interface download manager, click **download the installer** and run the executable.
10. Select a location and save the files. Note the file location for later.

System requirements for virtual machines (VMs)

This section describes the system requirements for AWS Elemental Conductor Live and worker nodes if you're using a virtual machine (VM).

Constraints with VMs

The VMs must be deployed on on-premise hardware. Cloud-based VMs are not supported. To implement video transcoding in the cloud, see AWS Elemental MediaLive.

Required software

This is the software that you need when using a VM.

- VMware vSphere Hypervisor (ESXi) version 6 or higher, installed onto bare-metal hardware.
- VMware vCenter Server, required to install the AWS Elemental OVA.
- VMware vSphere web client or desktop client.

> **Important**
>
> Do not use the free versions of these products; they do not include all the required features.

Guests per host hardware

We recommend one AWS Elemental Conductor Live virtual machine per host hardware.

Recommended hardware requirements

The resources that you have available impact your performance. For encoders, the resources determine the speed for encoding assets and the number of streams, bitrate, and type of encoding that's possible. We recommend the following hardware specifications for optimum performance.

For Conductor Live

- RAM: 16 GB
- Disk space: 500 GB
- CPU cores: 12
- Processor speed: 2.3 GHz or more

  The processor must support Page Address Extension

  Comparable to an Intel Xeon 6250 processor, or to an AMD EPYC2 7302P processor

For Elemental Live

- RAM: 32 GB
- Disk space: 500 GB
- CPU cores: 32
- Processor speed: 2.3 GHz or more

  The processor must support Page Address Extension

  Comparable to an Intel Xeon 6250 processor, or to an AMD EPYC 7502P processor

For Elemental Statmux

- RAM: 32 GB
- Disk space: 500 GB
- CPU cores: 16
- Processor speed: 3.0 GHz or more, boostable

  The processor must support Page Address Extension

  Comparable to an Intel Xeon 6250 processor, or to an AMD EPYC2 7302P processor

Minimum hardware requirements

The following minimum host hardware resource levels are not for performance testing. You can use them to run Conductor Live, AWS Elemental Live, and AWS Elemental Statmux for functional testing, or for integrating with the AWS Elemental software API.

For Conductor Live

- RAM: 8 GB
- Disk space: 400 GB
- CPU cores: 6
- Processor speed: 2.3 GHz or more

  Comparable to an Intel Xeon E-2276G processor, or to an AMD Opteron 1352 processor

For Elemental Live

- RAM: 16 GB
- Disk space: 400 GB
- CPU cores: 6
- Processor speed: 2.3 GHz or more

  Comparable to an Intel Xeon E-2276G processor, or to an AMD Opteron 1352 processor

For Elemental Statmux

- RAM: 8 GB
- Disk space: 400 GB
- CPU cores: 16
- Processor speed: 2.3 GHz or more

  Comparable to an Intel Xeon E-2276G processor, or to an AMD Opteron 1352 processor

Compatible hardware platform

The host hardware platform must be compatible with the VMware platform. For information, contact your AWS Elemental Sales Team.

Sample install of AWS Elemental Conductor Live

Following is a screen printout of a typical install of AWS Elemental Conductor Live, showing the prompts and possible responses.

```
[elemental@hostname ~] sudo sh ./
elemental_production_conductor_live247_3.25.4.4.12345.run -l -z -t
Verifying archive integrity... All good.
Uncompressing Elemental Installer  100%
/tmp/selfgz1160911216/elemental_system_update/rpms /tmp/selfgz1160911216
Non-fatal POSTIN scriptlet failure in rpm package 1:logstash-6.5.4-1.noarch
/tmp/selfgz1160911216
Stopping Services
..
.
Checking Elemental System Update
Starting system update
New system update version: 3150008
System packages are now being updated and modified!
Please DO NOT interrupt the installer after this point!
.

Initializing RPM repo......
Cleaning up old kernels
...

Installing RPMs.....................................................
..
Installing MOTD
Installing /etc/issue
..........................
..........................
Reload the systemd manager configuration
.
Installing logstash-forwarder plugin for logstash
Installing gems.....................................................................
Running scripts.....................................................................
Starting plat-api.
.Created symlink from /etc/systemd/system/multi-user.target.wants/plat-api.service to /
usr/lib/systemd/system/plat-api.service.

Initializing postgres
```

```
The files belonging to this database system will be owned by user "postgres".
This user must also own the server process.

The database cluster will be initialized with locale "en_US.UTF-8".
The default database encoding has accordingly been set to "UTF8".
The default text search configuration will be set to "english".

Data page checksums are disabled.

fixing permissions on existing directory /data/pgsql/data94 ... ok
creating subdirectories ... ok
selecting default max_connections ... 100
selecting default shared_buffers ... 128MB
selecting dynamic shared memory implementation ... posix
creating configuration files ... ok
creating template1 database in /data/pgsql/data94/base/1 ... ok
initializing pg_authid ... ok
initializing dependencies ... ok
creating system views ... ok
loading system objects' descriptions ... ok
creating collations ... ok
creating conversions ... ok
creating dictionaries ... ok
setting privileges on built-in objects ... ok
creating information schema ... ok
loading PL/pgSQL server-side language ... ok
vacuuming database template1 ... ok
copying template1 to template0 ... ok
copying template1 to postgres ... ok
syncing data to disk ... ok

WARNING: enabling "trust" authentication for local connections
You can change this by editing pg_hba.conf or using the option -A, or
--auth-local and --auth-host, the next time you run initdb.

Success. You can now start the database server using:

    /usr/pgsql-9.4/bin/postgres -D /data/pgsql/data94
or
    /usr/pgsql-9.4/bin/pg_ctl -D /data/pgsql/data94 -l logfile start

Setting up config files
Starting the database service
```

```
Created symlink from /etc/systemd/system/multi-user.target.wants/postgresql-9.4.service
 to /usr/lib/systemd/system/postgresql-9.4.service.
Setting password for default user 'postgres'
ALTER ROLE
Tightening Postgres access security
Reloading Postgres
Redirecting to /bin/systemctl reload postgresql-9.4.service
Welcome to the product installation utility!
Version information:
   Conductor Live 3.25.0.12345
   -------------------------
    ruby 2.3.7p456 (2018-03-28 revision 63024) [x86_64-linux]
    Rails 3.2.22.5
    psql (PostgreSQL) 9.4.19
    Elemental Git revision 0290c91c
```

You are prompted to read and accept the EULA.

```
Checking license files.
IMPORTANT INFORMATION
.
.
.
Continue? [Y] y
.
.
.
Continue? [Y] y
.
.
.
Continue? [Y] y
.
.
.
Do you agree to these terms? [N] y
```

You are prompted to configure the network.

```
Enter this server's Hostname: [elemental@hostname ~]live-3-01
Detected 2 ethernet devices
Configuring eth0
```

```
Does eth0 use DHCP to get its IP address? [Y]
Would you like to configure eth1? [N]
The firewall for this system is currently enabled. Would you like to disable it? [N]
```

Services are stopped (note that actually no services are running) and interfaces are shut down.

```
Stopping services...
Restarting network services
Redirecting to /bin/systemctl start postgresql-9.4.service
Creating user 'elemental'
Creating database 'web_production'
Granting all privileges on 'web_production' to user 'elemental'
```

Interfaces are configured with the new information.

```
Bringing up loopback interface:    [  OK  ]
Bringing up interface eth0:
Determining IP information for eth0... done.
   [  OK  ] Bringing up interface eth1:
Determining IP information for eth1... done.
  [  OK  ]
```

The Conductor Live software is configured.

```
Creating/Updating database...
Running migrations - this could take a while.
Database creation complete!
Loading Rails environment...
Adding node to database...
Saving settings...
Adding cluster stat monitors...
Adding node stat monitors...
Adding cluster scheduled tasks...
Adding node scheduled tasks...
Adding licensing scheduled tasks...
Hardware and license check complete
Creating default directory structures and data
```

You are prompted for the time zone and user authentication.

```
Configuring time zone...
...
Select time zone ('n' for more) [Pacific Time (US & Canada)]
Selected: Pacific Time (US & Canada)
Do you wish to enabled authentication [N]
```

The installation continues.

```
Changing permissions and ownership...
Cleaning elemental_ipc...
Removing tmp...
Removing cached files
Configuring Apache...
Adding Elemental service...
Configuring log rotation...
Configuring apache...

..Configuring SNMP...
Configuring dynamic libraries...
Configuring NTP...
Setting sysctl configuration and adding to /etc/rc.local...
Shutting down SMB services: [60G[[0;32m  OK  [0;39m]
Starting SMB services: [60G[[0;32m  OK  [0;39m]

Configuring RabbitMQ.........

Setting CPU scaling governor
Starting services...
Starting system logger: [60G[[0;32m  OK  [0;39m]
Starting httpd: httpd.worker: Could not reliably determine the server's fully qualified
 domain name, using ::1 for ServerName
[60G[[0;32m  OK  [0;39m]
Starting ntpd:
Starting snmpd: [60G[[0;32m  OK  [0;39m]
```

You are prompted to start elemental_se.

```
Would you like to start the Elemental service now? [Y]
Starting elemental_se:     [  OK  ]
Starting elemental-motd:   [60G[[0;32m  OK  [0;39m]
Starting elemental-issue:  [  OK  ]
```

```
Installation and configuration complete!
Please open a web browser and point it to https://xxx.xxx.xxx.xxx to get to the web
 interface.
Enjoy!
```

Document History for Installation Guide

The following table describes the documentation for this release of AWS Elemental Conductor Live.

- **API version:**
- **Release notes:** current Release Notes

The following table describes the documentation for this release of Conductor Live. For notification about updates to this documentation, you can subscribe to an RSS feed.

Change	Description	Date
VM hardware	This section has been updated with the newest requirements for minimum hardware and recommended hardware for AWS Elemental Conductor Live, AWS Elemental Live, and AWS Elemental Statmux.	June 24, 2022
Cloud-based VMs are not supported	The guide has been updated to clarify that you can't deploy any AWS Elemental product on a cloud-based VM.	June 15, 2022
System requirements for VMs	The section on system requirements has been revised with the latest recommendations.	March 16, 2022
Strong passwords	The guide has been updated to include a recommendation to set always set a strong password.	December 21, 2021
Setting up licenses	The section on setting up licenses has been revised	December 21, 2021

	to fix several errors in the procedure.	
Setting up licenses	The section on setting up licenses in a VM deployment has been revised to fix several errors in the procedure.	December 21, 2021
Cross-version release of the guide	This guide has been modified so that it isn't for a specific version of AWS Elemental Conductor Live. The installat ion procedure doesn't change from version to version.	November 11, 2021
Pooled licenses	AWS Elemental Conductor Live no longer supports pooled licenses. This guide no longer includes informati on about installing with this option.	July 27, 2021
Version 3.22 release	First release of the 3.22 software version.	February 6, 2021