



Installation Guide

AWS Elemental Live



AWS Elemental Live: Installation Guide

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About this guide

This guide describes how to install AWS Elemental 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 Live Upgrade Guide](#).)

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

Phase 1 of installation


This guide describes how to install AWS Elemental Live software for the first time. The following table identifies the guide to read for the type of hardware you have obtained.

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

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

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

Phase 2 is configuration of the software and is addressed in [AWS Elemental Live Configuration Guide](#)

 **Note**

For assistance with your AWS Elemental appliances and software products, see the [AWS Elemental Support Center](#).

Installing Elemental Live on qualified hardware

This section is for IT administrators who perform the first-time installation of AWS Elemental Live software on a hardware unit that is considered *qualified hardware*. For information about hardware that AWS Elemental considers to be qualified hardware, contact your AWS Elemental Sales representative or contact AWS Elemental Support through the [AWS Elemental Support Center](#).

To install Elemental Live, you work on two systems:

- A Windows, macOS, or Linux *workstation* that has access to the public internet.
- The *hardware unit* (Elemental Live node) that you are setting up. This unit doesn't need access to the internet. In fact, we recognize that usually this unit won't have access.

Prerequisite knowledge

We assume that you know how to do the following:

- Log in to the AWS Elemental hardware unit over Secure Shell (SSH) in order to run install commands via the command line interface.
- Use Windows Share (on a Windows workstation), Samba (on a macOS workstation), or a utility such as SCP (on a Linux workstation) to move files.
- Access recently downloaded files on your workstation.

Note

In this procedure, we show how to install version 2.25.4 of the Elemental Live. Wherever an instruction shows 2.25.4, modify your commands to specify the version that you are installing.

Topics

- [Step A: Prepare hardware and download files](#)
- [Step B: Install \(kickstart\) the operating system software](#)

- [Step C: Install the Elemental Live software](#)
- [Step D: Set up licenses](#)
- [Step E: Complete node configuration](#)

Step A: Prepare hardware and download files

Prepare hardware and network

To prepare your hardware and network, make sure the following steps are complete:

- You have physically installed (racked) the hardware unit.
- You have set up the unit as a node on your organization's network.
- You have configured network cards and ensured that they're able to reach other machines on the network.
- You have set up a method, such as SCP, for transferring files between your workstation and 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 Elemental Live software on more than one hardware unit, 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 hardware unit, but you cannot use the same code on more than one.

Download installation files

Download the installation files for Elemental Live.

To download installation files

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

You need the following files for Elemental 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 hardware unit. If you're downloading the kickstart file for several products, make a note of which file belongs to which product. Files are not interchangeable across products.

- An installation (.run) file for the Elemental Live software itself. For example:

```
elemental_production_live_2.25.4.12345.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 [this knowledge base article](#).

Step B: Install (kickstart) the operating system software

Install the operating system on the node. This action is known as *kickstarting* the system.

To kickstart the system

1. Insert the USB thumb drive into the hardware unit.
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 live-01 or live-chicago-01 . Do not use localhost as the hostname.

Menu Option	Instructions
	Do not use periods or underscores in the hostname.
Disk layout: Auto-detect	Keep 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.

- At the Press return to quit prompt, press **Enter** to reboot the system.

Step C: Install the Elemental Live software

Perform these steps on each AWS Elemental Live hardware unit, either directly at the hardware unit or from your workstation via SSH.

Topics

- [About Installer Options](#)
- [Setting up OCR Conversion in Versions 2.22.0 to 2.23.0](#)
- [Setting up OCR Conversion in Versions 2.23.1 and later](#)
- [Installing the Software](#)

About Installer Options

To install Elemental Live, you run the installer. The installer has options that control the way the installer works:

- Action options* instruct the installer to perform an action. For example, `--cleandb` instructs the installer to clean out the database.
- Skip options* instruct the installer to omit specific prompts. For example, `--skip-tz` instructs the installer to skip the timezone prompt.

To display built-in help about all the options, log in with the *elemental* user credentials, then enter this command at the Linux command line:

```
[elemental@hostname ~]$ sudo sh ./elemental_live_cpu_2.25.4.12345.run --help
```

The skip-all Installer Option

The installer has a `--skip-all` option that skips all the prompts and performs the default choice for all options.

You should only use this option after you have followed the following procedure, and you have read the built-in help carefully.

The `--skip-all` option means that the installer won't present prompts. It will perform some actions using default information.

Setting up OCR Conversion in Versions 2.22.0 to 2.23.0

The installer for Elemental Live versions 2.22.0 to 2.23.0 includes an option to set up the feature to convert captions using OCR conversion. (For information about the OCR feature, see [Support for OCR Conversion](#) in the *AWS Elemental Live User Guide*.)

To set up this feature

Note

The Elemental Live node must have a connection to the internet. It needs this connection because the installer must download the OCR libraries from the internet. These libraries are language dictionaries used in the conversion.

If the node doesn't have an internet connection, consider upgrading to a version after version 2.23.0. Newer versions of Elemental Live include more options for installing the OCR feature.

Run the installer with these options:

- With the `--install-ocr` option. You won't be presented with prompts to set up OCR. Instead, the installer will automatically set it up.
- You can include or omit the `--skip-all` option, depending on whether you want to be presented with prompts for other features.

To omit the feature

If you don't want to set up this feature, run the installer with these options:

- Without the `--install-ocr` option. The installer won't set up the OCR feature.
- You can include or omit the `--skip-all` option.

Setting up OCR Conversion in Versions 2.23.1 and later

The installer for Elemental Live version 2.23.1 and later includes several options to set up the feature to convert captions using OCR conversion. (For information about the OCR feature, see [Support for OCR Conversion](#) in the *AWS Elemental Live User Guide*.)

Setting up this feature involves three steps:

- Downloading the OCR libraries from the internet. These libraries are language dictionaries that are used in the captions conversion.
- Installing the libraries on the node.
- Enabling the OCR feature.

To set up the feature on a node with access to the internet

Run the installer with these options:

- With the `--install-ocr` option. The installer will download the libraries from the internet, install them on the node, and enable the OCR feature. You won't be presented with prompts to set up OCR.
- You can include or omit the `--skip-all` option, depending on whether you want to be presented with prompts for other features.

To set up the feature on a node without internet access

1. Download the OCR libraries file [live-ocr-tesseract-data.zip](#).

Keep the file zipped.

2. Use a method such as SCP to move the zipped file to a location on the Elemental Live node that you are setting up. For example, move to this location:

```
/home/live-ocr-tesseract-data.zip
```

3. Run the installer with these options:

- With the `--install-ocr-zip` option. This option includes a parameter for the folder where you copied the libraries file. For example:

```
-- install-ocr-zip /home/live-ocr-tesseract-data.zip
```

You won't be presented with prompts to set up OCR.

- You can include or omit the `--skip-all` option, depending on whether you want to be presented with prompts for other features.

To omit the feature

If you don't want to set up this feature, run the installer with these options:

- Without the `--install-ocr` option. The installer won't install or enable the OCR feature.
- With the `--skip-ocr` option. If you don't include this option, you will be presented with prompts to install OCR, even though you didn't include the `--install-ocr` option.
- You can include or omit the `--skip-all` option, depending on whether you want to be presented with prompts for other features.

Installing the Software

To install the software

1. At the Linux command line, log in with the *elemental* user credentials.
2. Decide which options you want to include with the installer. You can include options in the command to automate some of the installation. To display built-in help about all the options, enter this command:

```
[elemental@hostname ~]$ sudo sh ./elemental_live_cpu_2.25.4.12345.run --help
```

3. Run the installer as follows. Use the actual file name of your `.run` file, rather than the example below.

For GPU and CPU versions of the software.

```
[elemental@hostname ~]$ sudo sh ./elemental_production_live_2.25.4.12345.run
  options
```

For CPU-only versions of the software.

```
[elemental@hostname ~]$ sudo sh ./
elemental_production_live_cpu_2.25.4.12345.run options
```

4. Follow the prompts. This table specifies the prompts that appear when you don't include any options for the installer.

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 hardware unit. For example, live-01
Would you like to configure eth1	If you 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?	If you type No you can set up the firewall in the next phase of the configuration
Is this machine a part of or intended to be a part of a Conductor Live 3 cluster?	Type Yes or No
Will this machine require use of SNMP alerts?	Type Yes or No

Prompt	Action
Will this machine be ingesting RTMP?	Type Yes or No
Will this machine ingest MPEG-TS over UDP (ports 5000-5100)	Type Yes or No
Will this machine serve files using Windows file-sharing (Samba/CIFS)?	Type Yes or No
Will this machine be an NTP server?	Type Yes or No
Enable conversion of eligible captions using OCR technology?	Type Yes or No . For information about requirements for this feature, see the section called "Setting up OCR Conversion in Versions 2.23.1 and later" .
Select time zone ('n' for more)	Enter the time zone you want to show on the web interface of the nodes. This setting does not affect activity via SSH or via the REST API.
Do you wish to enable authentication?	Type Yes or No if you want to set up so that users must log in to use Elemental Live
For security purposes, we require that you change the default password.	<p>This prompt is shown if you are still using the default password.</p> <p>We recommend that you create a strong password:</p> <ul style="list-style-type: none"> • Minimum 8 characters • At least one uppercase letter, at least one lowercase letter, at least one number, and at least one symbol.

Prompt	Action
Would you like to start the Elemental service now?	Type Yes

When the software install is complete, this message appears:

```
Installation and configuration complete!
```

5. Start a web browser and start the Elemental 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 (Elemental Live) that you purchased. At each Elemental Live hardware unit, you use one activation code to generate a key file. The key file incorporates the specific activation code and the specific hostname of the hardware unit. The key file works only with this activation code's product (Elemental 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 (Elemental Live) and this specific hardware unit.
- After you generate the license file, you copy it to the hardware unit that it belongs to, and use the CLI to install the license.

Topics

- [Organize your activation codes](#)
- [Generate a key file](#)
- [Generate a license](#)
- [Install the license files](#)

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 Elemental Live software instance that you have purchased. The activation code looks like this:

LVE-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, each activation code specifies the hardware configuration that the code applies to. For example, it specifies that the code is for hardware that is comparable to an L820 appliance.

Identify the hardware unit that applies for each access code. For example, identify the hardware unit (and its hostname) that is comparable to the L820 appliance. Make a note of the assignments. For example, you might assign as follows:

LVE-111-222-333 with the hardware unit that has the hostname SystemA.

LVE-111-222-444 with the hardware unit 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 hardware unit.

To generate a key file

Perform this step at each Elemental Live hardware unit.

1. Using an SSH client such as PuTTY, log in to the hardware unit 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 hardware unit 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 Elemental Live hardware unit. Make sure that you use a different activation code on each hardware unit.

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:

```
LxxxPNL LVE-111-222-333 Live product 2021-11-01
```

```
LxxxPNL LVE-111-222-444 Live 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 Elemental 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 hardware unit

- Use a method such as SCP to move the license file (the `.tgz` file) from your workstation to a location on the Elemental Live hardware unit. 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 hardware unit. The license only works on a specific hardware unit.

To install the license on the hardware unit

On each hardware unit, you must set up Elemental Live to use the license file.

1. Using an SSH client such as PuTTY, log in to the hardware unit 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 Elemental Live service:

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

Step E: Complete node configuration

You have now installed and performed the basic initial configuration of Elemental Live. Use the following table to determine which guide to use to complete the node configuration.

Scenario	Guide
Elemental Live in a stand-alone configuration. Elemental Live is not managed by AWS Elemental Conductor Live.	AWS Elemental Live Configuration Guide
Multiple Elemental Live nodes managed by AWS Elemental Conductor Live.	AWS Elemental Conductor Live Configuration Guide

Installing AWS Elemental Live on a virtual machine (VM)

This section is for IT administrators who will perform the first-time installation of AWS Elemental Live software on a virtual machine (VM).

VM guest requirements

AWS Elemental software can run only on a 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:

- You have a basic understanding of server virtualization.
- You have installed and know how to use VMware Center and the VMware vSphere client interface, including Open Console.
- You know how to move files from a VM guest to other systems over the network. We recommend using a utility such as SCP.
- You know how to locate recently downloaded files.

Note

In this procedure, we show how to install version 2.25.4 of the software. Modify your commands to specify the version that you are installing.

Topics

- [Step A: Prepare hardware and download files](#)
- [Step B: Deploy the VM](#)
- [Step C: Install the Elemental Live software](#)
- [Step D: Set up licenses](#)

- [Step E: Complete node configuration](#)

Step A: Prepare hardware and download files

Prepare hardware and network

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

- Physically installed the hardware unit.
- 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 installation 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 Elemental Live software](#).
2. Download your files.

You need the following files for Elemental Live.

- 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 Elemental Live software itself. For example:

```
elemental_production_live_2.25.4.12345.run
```

Make sure that you download the right version of software for the processing architecture that you need, either CPU-only or GPU-enabled.

Step B: Deploy the VM

Perform these steps from your workstation.

1. Place the OVA image in a convenient location 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 configure these settings later in the Elemental 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 of the VM instances.

Step C: Install the Elemental Live software

Topics

- [About Installer Options](#)
- [Setting up OCR Conversion in Versions 2.22.0 to 2.23.0](#)
- [Setting up OCR Conversion in Versions 2.23.1 and later](#)
- [The Install Procedure](#)

About Installer Options

To install Elemental Live, you run the installer. The installer has options that control the way the installer works:

- *Action options* instruct the installer to perform an action. For example, `--cleandb` instructs the installer to clean out the database.
- *Skip options* instruct the installer to omit specific prompts. For example, `--skip-tz` instructs the installer to skip the timezone prompt.

To display built-in help about all the options, log in with the *elemental* user credentials, then enter this command at the Linux command line:

```
[elemental@hostname ~]$ sudo sh ./elemental_live_cpu_2.25.4.12345.run --help
```

The skip-all Installer Option

The installer has a `--skip-all` option that skips all the prompts and performs the default choice for all options.

You should only use this option after you have followed the following procedure, and you have read the built-in help carefully.

The `--skip-all` option means that the installer won't present prompts. It will perform some actions using default information.

Setting up OCR Conversion in Versions 2.22.0 to 2.23.0

The installer for Elemental Live versions 2.22.0 to 2.23.0 includes an option to set up the feature to convert captions using OCR conversion. (For information about the OCR feature, see [Support for OCR Conversion](#) in the *AWS Elemental Live User Guide*.)

To set up this feature

Note

The Elemental Live node must have a connection to the internet. It needs this connection because the installer must download the OCR libraries from the internet. These libraries are language dictionaries used in the conversion.

If the node doesn't have an internet connection, consider upgrading to a version after version 2.23.0. Newer versions of Elemental Live include more options for installing the OCR feature.

Run the installer with these options:

- With the `--install-ocr` option. You won't be presented with prompts to set up OCR. Instead, the installer will automatically set it up.
- You can include or omit the `--skip-all` option, depending on whether you want to be presented with prompts for other features.

To omit the feature

If you don't want to set up this feature, run the installer with these options:

- Without the `--install-ocr` option. The installer won't set up the OCR feature.
- You can include or omit the `--skip-all` option.

Setting up OCR Conversion in Versions 2.23.1 and later

The installer for Elemental Live version 2.23.1 and later includes several options to set up the feature to convert captions using OCR conversion. (For information about the OCR feature, see [Support for OCR Conversion](#) in the *AWS Elemental Live User Guide*.)

Setting up this feature involves three steps:

- Downloading the OCR libraries from the internet. These libraries are language dictionaries used in the conversion
- Installing the libraries on the node
- Enabling the OCR feature

To set up the feature on a node with access to the internet

Run the installer with these options:

- With the `--install-ocr` option. The installer will download the libraries from the internet, install them on the node, and enable the OCR feature. You won't be presented with prompts to set up OCR.
- You can include or omit the `--skip-all` option, depending on whether you want to be presented with prompts for other features.

To set up the feature on a node without internet access

1. Download the OCR libraries file [live-ocr-tesseract-data.zip](#)

Don't unzip the file after you download it.

2. Use SCP to move the zipped file to a location on the Elemental Live node that you are setting up. For example, move to this location:

```
/home/live-ocr-tesseract-data.zip
```

3. Run the installer with these options:

- With the `--install-ocr-zip` option. This option includes a parameter for the folder where you copied the libraries file. For example:

```
-- install-ocr-zip /home/live-ocr-tesseract-data.zip
```

You won't be presented with prompts to set up OCR.

- You can include or omit the `--skip-all` option, depending on whether you want to be presented with prompts for other features.

To omit the feature

If you don't want to set up this feature, run the installer with these options:

- Without the `--install-ocr` option. The installer won't install or enable the OCR feature.
- With the `--skip-ocr` option. If you don't include this option, you will be presented with prompts to install OCR, even though you didn't include the `--install-ocr` option.
- You can include or omit the `--skip-all` option, depending on whether you want to be presented with prompts for other features.

The Install Procedure

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

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

3. Decide which options you want to include with the installer. You can include options in the command to automate some of the installation. To display built-in help about all the options, enter this command:

```
[elemental@hostname ~]$ sudo sh ./elemental_live_cpu_2.25.4.12345.run --help
```

4. Run the installer as follows. Use the actual file name of your .run file, rather than the example below.

```
[elemental@hostname ~]$ sudo sh ./elemental_production_live_2.25.4.12345.run
options
```

5. Follow the prompts. This table specifies the prompts that appear when you don't include any options for the installer.

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 hardware unit. For example, live-01
Would you like to configure eth1	If you type No , you can configure eth1 in the next phase of the configuration

Prompt	Action
The firewall for this system is currently disabled. Would you like to enable it?	If you type No you can set up the firewall in the next phase of the configuration
Is this machine a part of or intended to be a part of a Conductor Live 3 cluster?	Type Yes or No
Will this machine require use of SNMP alerts?	Type Yes or No
Will this machine be ingesting RTMP?	Type Yes or No
Will this machine ingest MPEG-TS over UDP (ports 5000-5100)	Type Yes or No
Will this machine serve files using Windows file-sharing (Samba/CIFS)?	Type Yes or No
Will this machine be an NTP server?	Type Yes or No
Enable conversion of eligible captions using OCR technology?	Type Yes or No . For information about requirements for this feature, see the section called "Setting up OCR Conversion in Versions 2.23.1 and later" .
Select time zone ('n' for more)	Enter the time zone you want to show on the web interface of the nodes. This setting does not affect activity via SSH or via the REST API.
Do you wish to enable authentication?	Type Yes or No if you want to set up so that users must log in to use Elemental Live

Prompt	Action
<p>For security purposes, we require that you change the default password.</p>	<p>This prompt is shown if you are still using the default password.</p> <p>We recommend that you create a strong password:</p> <ul style="list-style-type: none"> • Minimum 8 characters • At least one uppercase letter, at least one lowercase letter, at least one number, and at least one symbol.
<p>Would you like to start the Elemental service now?</p>	<p>Type Yes</p>

The software is installed. Finally, this message appears:

```
Installation and configuration complete!
```

6. Take a snapshot of the VM, as described in the CentOS 7 Virtual Manager online help.
7. Start a web browser and start the Elemental 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 VM.

The license generation procedure works as follows:

- You receive an email with activation codes, one for each instance of the product (Elemental Live) that you purchased. At each Elemental 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 (Elemental 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 (Elemental 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](#)
- [Generate a key file](#)
- [Generate a license](#)
- [Install the license files](#)

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 Elemental Live software instance that you have purchased. The activation code looks like this:

```
LVE-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, each activation code specifies the resource configuration that the code applies to. For example, it specifies that the code is for a VM that is comparable to an L820 appliance.

Identify the virtual machine that applies for each access code. For example, identify the virtual machine (and its hostname) that is comparable to the L820 appliance. Make a note of the assignments. For example, you might assign as follows:

```
LVE-111-222-333 with the virtual machine that has the hostname SystemA.
```

LVE-111-222-444 with the virtual machine 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 Elemental 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 Elemental 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:

```
LxxxPNL LVE-111-222-333 Live product 2021-11-01
```

```
LxxxPNL LVE-111-222-444 Live 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 Elemental Live and licenses for all the add-on packages 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 Elemental 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 Elemental 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 Elemental Live service:

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

Step E: Complete node configuration

You have now installed and performed the basic initial configuration of Elemental Live. Use the following table to determine which guide to use to complete the node configuration.

Scenario	Guide
Elemental Live in a stand-alone configuration. Elemental Live is not managed by AWS Elemental Conductor Live.	AWS Elemental Live Configuration Guide
Multiple Elemental Live nodes managed by AWS Elemental Conductor Live.	AWS Elemental Conductor Live Configuration Guide

Downloading Elemental Live software

These are the detailed steps for downloading AWS Elemental 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.

On **Your Entitlements**, your orders are listed from newest to oldest.

4. In the **Activation Key** column, choose the link for the product that you're downloading.
5. On **Order Detail**, expand the order details using the + sign.
6. In the expanded details, choose the product and version to download, then choose the file to download.
7. On **Product Download**, select the check box next to the file you want to download. Then click **Download Selected Files**.
8. If you are prompted to install the NetSession Interface download manager, click **download the installer** and run the executable.
9. 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 Live 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 virtual machine per host hardware.

Recommended hardware requirements

The resources that you have available impact your performance. 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.

- 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

Minimum hardware requirements

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

- 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

Compatible hardware platform

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

Sample install

Following is a screen printout of a typical install for AWS Elemental Live. It shows the prompts and possible responses.

```
[elemental@hostname ~] sudo sh ./elemental_production_live_2.25.4.12345.run -z -t
Verifying archive integrity... All good.
Uncompressing Elemental Installer 100%
/tmp/selfgz142612827/elemental_system_update/rpms /tmp/selfgz142612827
/tmp/selfgz142612827
Stopping Services
..
.
Checking Elemental System Update
Starting system update
New system update version: 2152005
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 AJA Driver
Installing Deltacast Driver
Installing DekTec Driver
'./elemental_system_update/configuration/60-dektec-net.rules' -> '/etc/udev/rules.d/60-
dektec-net.rules'

Installing MOTD
Installing /etc/issue
.....
.....
Reload the systemd manager configuration
.
Installing gems...
Installation of passenger failed, please check the log for details

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
Installing Elemental Live 2.25.4.12345
Welcome to the product installation and configuration utility!
Welcome to the product installation utility!
Version information:
  Elemental Live (CPU) 2.25.4.12345
  -----
  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're 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 and update the password.

```
Enter this server's Hostname: [elemental@hostname ~]live-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]
For security purposes, we require that you change the default password.
```

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 AWS Elemental 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://10.24.34.2> to get to the web interface.

Enjoy!

Document history for Installation Guide

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

- **API version: 2.25 and later 2.25**
- **Release notes:** [current Release Notes](#)

The following table describes the documentation for this release of AWS Elemental 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.	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 16, 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 in several sections to include a recommendation to set always set a strong password.	December 21, 2021
Setting up licenses	The sections on setting up licenses on AWS Elemental Live hardware units and on VMs has been revised	December 21, 2021

to fix several errors in the procedure.

[New options for enabling the OCR conversion feature](#)

The installer now includes more options for enabling this feature, specifically to support setup on a node that doesn't have access to the internet.

December 6, 2021

[Enabling the OCR conversion feature](#)

The guide has been revised to include information about enabling the OCR conversion feature, on both qualified hardware and on a VM.

November 19, 2021

[Cross-version release of the guide](#)

This guide has been modified so that it isn't for a specific version of Elemental Live. The installation procedure doesn't change from version to version.

November 2, 2021