

AWS ELEMENTAL MEDIA LIVE ANYWHERE QUICKSTART GUIDE

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INTRODUCTION/OVERVIEW

This QuickStart Guide shows you how to deploy and configure AWS Elemental MediaLive Anywhere (EML-A), a solution for live video transcoding from any global location. The guide focuses specifically on SDI input to Multicast output configurations on local nodes. For comprehensive details, please consult the [AWS MediaLive User Guide](#).

TERMINOLOGY

- **Network** - A logical representation of your on-premises network infrastructure where MediaLive Anywhere operates
- **Cluster** - A logical grouping of compute instances that work together. Examples include Development, Pre-Production, Production, or location-based clusters (e.g., PDX or IAD)
- **Logic Interface** - A named interface mapping used to associate physical network interfaces with specific network functions (management, input, output)
- **Node** - An individual compute instance within a cluster that runs a specific channels placement group
- **Physical Interface** - The actual network interface on the hardware (e.g., eno8303, eno12399)
- **SDI Source** - A physical input source connected to the SDI card on the hardware node
- **Channel Placement Group** - A logical collection of channels designed to operate together on the same physical hardware/instances
- **Channel** - A configuration that defines how input video is processed and output
- **Input** - The configuration that defines how source content enters the MediaLive workflow
- **Output Group** - The configuration that defines how processed content is delivered (e.g., UDP multicast)

MEDIALIVE ANYWHERE READY HARDWARE

AWS Elemental MediaLive Ready Hardware can be procured from AWS Partner Network Partners or other third parties. AWS Elemental is not responsible or liable for the underlying hardware running AWS Elemental MediaLive Anywhere.

Existing L8xxAE or L9xxAE series Live appliance have been tested for reuse as AWS Elemental MediaLive Anywhere nodes. **Important Note:** This [article](#) includes a script to backup important files before reinstalling the appliance.

Instructions for using Dell iDRAC to install an Operating system can be found [here](#).

HARDWARE PRE-REQUISISTES

1. Disable Secure Boot & Enable SR-IOV (typically in BIOS/System settings accessed during hardware boot)
2. Install Red Hat Enterprise Linux (RHEL) 9.6 DVD (Minimal, Server, or Server with GUI environments with no additional software needed)
 - [Get started with Red Hat](#)
 - [How to Create a New Red Hat Login ID and Account](#)
 - [Use RedHat's Dell Service Tag activation tool](#)
 - [RHEL 9 – Installing RHEL](#)
3. After OS installation, subscribe to Red Hat services and configure Extended Update Support (EUS) for RHEL 9.6
 - [How to register and subscribe a RHEL system using Red Hat Subscription-Manager](#)
 - [RHEL EUS Overview - How to Access EUS](#)
4. Note the physical interface names and their intended use (e.g., management, input and output ports)
 - [Red Hat's ip Command Cheat Sheet](#)

ADDITIONAL REFERENCES

- Allow outbound HTTPS (port 443) and established connections from the management, internet-connected interface on hardware to register and manage node.
- [Configuring an Ethernet connection](#)
- [Configuring a static route](#)

STEP BY STEP EXAMPLE INSTRUCTIONS

For this the purpose of this QuickStart, example names will be used for easier referencing when following the document.

CREATE NETWORKS

1. Sign into AWS Console and navigate to MediaLive service. Ensure the region is correct for where you want to create your channel on the top right
2. Under the **MediaLive Anywhere** section of the MediaLive console select **Networks**
3. Create new networks based on your requirements (e.g., management, inputs, outputs) by providing required name field
 - Example
 - management
 - outputs

CREATE AN ON-PREMISE CLUSTER

1. In the AWS MediaLive dashboard, on the left side of the page, click **Clusters** under the **MediaLive Anywhere** section
2. At the bottom, click **Create Cluster**
3. Under **Cluster settings > Cluster name**, Provide a name for the cluster
 - Example
 - quickstart-nonprod
4. Under **Service Access** and for the first time only, it will prompt to create Instance and Access roles
5. Leave **Instance role ARN** on **Create and use a new service role**
6. Click **Create IAM role**
7. Click **Choose channel roles** and select **MediaLiveAccessRole**
8. Review Instance role name and click **Create Instance Role**
9. Under **Service Access > Use an existing service role**, click Choose IAM role and select the **MediaLiveAnywhereInstanceRole_region_Default**
 - Note the InstanceRole is needed per region
10. Under **Network Settings > Interface mappings**, provide a logical interface name pairing with associated Networks created previously. Clicking **Add interface mappings** for additional interfaces
 - Example

<u>Logical interface name</u>	<u>Network name</u>
node1-mgmt1	management
node1-output1	outputs
11. Under **Network Settings > Default interface**, select the internet-connected logical interface
12. At the bottom, click **Create Cluster**
13. The new page is the newly created cluster's dashboard. Under **Details > State**, wait for **Active** and then proceed to next step

CREATE A NODE

1. Under the **Nodes** tab within newly created cluster, click **Create node**
 2. Under **Node settings > Name**, provide the node a name
 - Example:


```
node1
```
 3. Under **Node settings > Node interface mappings**, click **Add mapping**
 4. Select each logical interface (e.g., node1-mgmt1, node1-input1, node1-output1) created previously and give a name to matching associated physical interface (e.g., eno8303, eno12399, etc.) on the hardware node. Clicking **Add mappings** for additional interface maps
 - Example
- | | | |
|----|--------------------------|----------------------------|
| 5. | <u>Logical interface</u> | <u>Physical interface*</u> |
| 6. | node1-mgmt1 | eno8303 |
| 7. | node1-output1 | eno12399 |
- Note the exact physical interface will vary depending on what is physically connected to the node. Please refer to Pre-requisites Step 3 on determining physical interface names
8. At the bottom, click **Create**
 9. The new page is the newly created node's dashboard. The top green banner has the script to copy in the node's terminal to register in Step 4c

ACTIVATE HARDWARE NODE

1. Log into the on-premise node via SSH to access terminal
2. Alternative through hardware console and launching **Terminal** application
3. Elevate terminal privileges to root by entering `sudo su -`
4. Back in the AWS console, in the green banner at the top of the node's dashboard page, click the **Copy script**
5. Paste and execute script into the terminal window for the on-premise node. There are two prompts during installation. One for SDI drivers if appropriate card is detected and another for enabling SMPTE 2110 on the Intel E810 interfaces. Entire script maybe takes 10-15 minutes before it initiates a reboot
6. If SDI drivers are installed a cold power cycle must be performed by fully disconnecting power or through iDRAC console
7. Under **Details**, the **State** should change to **Active** from **Registering**. Be aware the registration process may take up to 5-15 minutes, depending on the AWS region

CREATE SDI SOURCE

1. In the AWS MediaLive dashboard, on the left side of the page, click **SDI sources** under the **MediaLive Anywhere** section
2. At the bottom, click **Create SDI source**
3. Under **SDI source settings > Name**, provide SDI source a name
 - Example
`node1-card1-port1`
4. At the bottom, click **Create**

ADD SDI MAPPING

5. In the AWS MediaLive dashboard, on the left side of the page, click **Nodes** under the **MediaLive Anywhere** section
6. Under **Nodes > Name**, click **node1**
7. At the top right, click **Edit**
8. Under **Node settings > SDI source mappings**, click **Add mapping**
 - a. For **SDI source**, select **node1-card1-port1**
 - b. For **Card number**, enter **1**
 - c. For **Channel number**, enter **1**
 - Note that on AWS Elemental MediaLive Anywhere Ready server hardware, card 1 is the furthest top right card and it enumerates to the left
9. At the bottom, click **Save changes**

CREATE A CHANNEL PLACEMENT GROUP

1. At the top of the page, click **quickstart-nonprod** to navigate back to the cluster dashboard
2. In the middle of the page, to the right of the active **Nodes** tab, click the **Channel placement groups** tab
3. On the right side, click **Create**
4. Under **Channel placement group settings > Name** provide the channel placement group a name
 - Example
`node1-cpg1`
5. Under **Channel placement group settings > Node**, select the **node** you would like to associate with the channel group
6. At the bottom, click **Create**

CREATE INPUT

1. In the AWS MediaLive dashboard, on the left side of the page, select **Inputs**
2. At the bottom, click **Create Input**
3. Under **Input details > Input name**, provide the input a name
 - Example
`node1-card1-port1`
4. Under **Input details > Input type**, select **SDI**
5. Under **SDI source > Source**, select **node1-card1-port1**
6. At the bottom, click **Create input**

CREATE A CHANNEL

7. In the AWS MediaLive dashboard, on the left side of the page, click **Channels**
8. At the bottom, click **Create channel**
9. In the middle of page, under **Channel and input details > Channel name**, provide the channel a name
 - Example
`quickstart-test`
10. Under **Channel and input details > IAM role > Use existing role**, select **MediaLiveAccessRole**
11. Under **Channel and input details > MediaLive Anywhere settings > Cluster**, select **quickstart-nonprod**
12. Under **Channel and input details > MediaLive Anywhere settings > Channel placement group**, select **grp1**
13. At the top of the page, under **Channel > Input attachments**, click **Add**
14. In the middle section of the page, under **Attach input > Input**, select **node1-card1-port1**
15. At the bottom right, click **Confirm**
16. At the top of the page, under **Channel > Output groups**, click **Add**
17. In the middle section of the page, under **Add output group > Choose output group type**, select **UDP**
18. At the bottom right, click **Confirm**
19. In the new middle section of the page, under **1. UDP group > UDP destinations > Destination A**, provide UDP output destination
 - Example
`udp://224.0.0.1:5001`
20. Ensure multicast address is available on your network. Alternatively, it can be set to `localhost` to not broadcast over the local network
21. In the middle section of the page, under **1. UDP group > MediaLive Anywhere settings > Logical interface name**, select **node1-output1**
22. In the middle section of the page, under **1. UDP group > UDP outputs > Actions** column, click **Settings** for **Output 1**:
23. In the new middle section of the page, under **Output 1 > Stream Settings > Video > Width**, enter a width for stream
 - Example
`1280`
24. In the new middle section of the page, under **Output 1 > Stream Settings > Video > Height**, enter a height for stream
 - Example
`720`
25. In the new middle section of the page, under **Output 1 > Stream Settings > Video > Codec Settings**, select **H264**
26. At the top of the page, under **Channel**, click **Create channel**
27. In the new channel dashboard page, under **Status > Channel state**, channel is ready to start when it changes to **Idle**
28. At the top right of the page, click **Start**
29. A thumbnail of the SDI ingest content will appear to show channel is running

GETTING SUPPORT FOR ELEMENTAL MEDIALIVE ANYWHERE

Where to Start

Step 1: Always contact AWS Premium Support first.

Step 2: If the issue is hardware or OS-related, AWS will direct you to Dell ProSupport.

Step 3: For SDI-specific hardware issues unresolved by Dell, escalate to AJA Support.

About AWS Premium Support

Dedicated assistance for all AWS Cloud Services.

24/7/365 access to cloud engineering expertise.

Enterprise-grade technical support.

[Learn more about AWS Premium Support](#) (Note: Requires active AWS Premium Support plan).

[Open Ticket with AWS Premium Support](#)

About Dell Hardware & RHEL Operating System Support

Dell ProSupport with integrated Red Hat Premium Support, available in 3-year or 5-year plans.

24/7/365 comprehensive technical support.

Single point of contact for Dell hardware and RHEL OS.

Advanced troubleshooting services.

[Learn more about Dell Support](#)

[Open Ticket with Dell Support](#)

About AJA SDI Card Support

Advanced support through AJA Technologies.

5-year advanced replacement warranty.

[Learn more about AJA Support](#)

[Open Ticket with AJA Support](#)