Amazon AWS Quick Start Guide

Haivision Gateway 3.3 on Amazon AWS



This quick start guide describes how to create and configure a virtual Media Gateway/SRT Gateway server on Amazon Web Service (AWS). For detailed configuration and operation information, please refer to the User's Guide. For the default credentials, refer to the *Important Notice* document (shipped with the appliance or available on the Haivision Support Portal).

About Amazon AWS

Amazon AWS is a collection of remote computing services that make up a cloud computing platform for building, deploying and managing applications and services through a network of datacenters across several geographical regions. Amazon AWS allows you to deploy and manage your Haivision Media Gateway/SRT Gateway instances in this global network. For more information, please visit:

https://aws.amazon.com

About Media Gateway/SRT Gateway

The Haivision Media Gateway/SRT Gateway serves as a bridge between video infrastructures, and is used to distribute live video to multiple sites, or to aggregate live video from multiple remote locations. Powered by Haivision's SRT (Secure Reliable Transport) technology, the Haivision Media Gateway/SRT Gateway is ideal for transporting high-quality, secure live video across public and private networks.

Before You Start

You must have an active Amazon AWS account to sign in to the AWS management portal. For evaluation purposes you can subscribe to AWS for a 12-month trial period. For more information, please visit: https://aws.amazon.com

With Amazon AWS, you can choose from different licensing options for Media Gateway/SRT Gateway. You may "bring your own license" (BYOL) or "pay as you go" (PAYG). For BYOL, please contact your Haivision representative to discuss your options. See Licensing Your Server for details.

Creating a Virtual Server

Signing in to AWS

- 1. Sign in to your AWS account: https://console.aws.amazon.com
- 2. After you have successfully logged in to the AWS portal, click Services > EC2.



Creating a Virtual Instance

- 1. On the EC2 Dashboard, click Launch Instance.
- 2. Click AWS Marketplace.
- 3. Type "Haivision" in the search box and press **Enter** to find the Media Gateway/SRT Gateway image.
- 4. Click the **Select** button corresponding to the version of the Amazon Machine Image (AMI) you wish to use, PAYG or BYOL.

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1. Choose AMI 2. Choose Inst Step 1: Choose an An AMI is a template that conta the AWS Marketplace; or you ca	Amazon Ma	guration (operating system, application server, and applications)		Cancel and Exit n select an AMI provided by AWS, our user community, or
Quick Start	Q, haivision	×		$ \langle \langle 1 \text{ to 2 of 2 Products } \rangle \rangle $
AWS Marketplace	Ha ivision Media	Haivision Media Gateway (PAYG) 余余水水水(0)11.11 Sold by Haivision		Select
Community AMIs	Gateway	\$0.548 to \$1.37/hr for software + AWS usage fees Linux/Unix, CentOS 6.6 I 64-bit Amazon Machine Image (AMI) I Updated: 9/3/	15	
 Categories All Categories Business Software (2) 		Haivision Media Gateway on AWS Marketplace is Ideal for transpo broadcast distribution and More info	rting high quality, low-latency video to multij	ple locations around the world for
 Operating System Clear Filter 	Ha ivision Media Gateway	Haivision Media Gateway (BYOL) ★★★★★ (0):1.1:Sold by Halvision Bring Your Own License - AWS usage fees		Select
 All Linux/Unix CentOS (2) 		Linux/Unix, CentOS 6.6 64-bit Amazon Machine Image (AMI) Updated: 9/3/ Haivision Media Gateway on AWS Marketplace is ideal for transpo broadcast distribution and		ple locations around the world for
 Software Pricing Plans Hourly (1) 		Mare Info		

- 5. Review the product and pricing details, and then click **Continue**.
- 6. Choose an Instance Type, and then click **Next: Configure Instance Details**:

azon EC		stance types optimized t			ervers that can run applications. T arn more about instance types ar		
er by:	All instance types 💙	Current generation	Show/Hide Column	ns			
	selected: m4.xlarge (13 ECUs, 4 vendor recommends using a m						
	Family	- Туре -	vCPUs (j)	Memory (GiB) -	Instance Storage (GB) -	EBS-Optimized Available (i) -	Network Performance (i)
ð	General purpose	t2.nano	1	0.5	EBS only		Low to Moderate
0	General purpose	12.micro Free tier eligible	1	1	EBS only		Low to Moderate
0	General purpose	t2.small	1	2	EBS only		Low to Moderate
	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate
	General purpose	t2.large	2	8	EBS only		Low to Moderate
0	General purpose	t2.xlarge	4	16	EBS only		Moderate
0	General purpose	t2.2xlarge	8	32	EBS only		Moderate
Ď	General purpose	m4.large	2	8	EBS only	Yes	Moderate
	General purpose	m4.xlarge	4	16	EBS only	Yes	High
	General purpose	m4.2xlarge	8	32	EBS only	Yes	High
	General purpose	m4.4xlarge	16	64	EBS only	Yes	High
0	General purpose	m4.10xlarge	40	160	EBS only	Yes	10 Gigabit

1 Note

We do not recommend using tiers with low CPU resources, because the resulting performance of your server will be inadequate.

Important

For high bandwidth streams or critical viewing requirements, we recommend using c4.xlarge or c4.2xlarge tiers, as they are optimized for compute-intensive workloads and have high-performance network I/O.

7. Modify your Instance Details as needed, and then click Next: Add Storage:

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1. Choose AMI Z. Choose Instance Type	3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Hextew	
Step 3: Configure Instan Configure the instance to suit your require instance, and more.	e Details nexts. You can launch multiple instances from the same AMI, request Spot instances to take adventage of the lower pri-	icing, assign an access management role to the
Number of instances	Launch into Auto Scaling Group (i)	
Purchasing option	(i) = Request Spot instances	
Network	vpe-f100bc96 (default) Create new VPC	
Subnet	No preference (default subnet in any Availability Zons Create new subnet	
Auto-assign Public IP	() Use subriet setting (Enable)	
IAM role	None T Create new IAM role	
Shutdown behavior	() Stop *	
Enable termination protection	 Protect against accidental termination 	
Monitoring	Enable CloudWatch detailed monitoring Additional charges apply	
Tenancy	Shared - Run a shared hardware instance Additional charges will apply for dedicated tenancy.	
 Advanced Details 		
	Cancel Pre	rrious Review and Launch Next. Add Storage

🕕 Note

You may wish to choose Enable under Auto-assign Public IP to give your server an IP address reachable from any location.

8. Set the amount of storage space you wish to make available to the server, and then click **Next: Add Tags**:

aws	Services ~	Resource Groups 🗸	*				4	•	Oregon + Suppor	t •
1. Choose AMI	2. Choose Instance Ty	pe 3. Configure Instance	4. Add Storage	5. Add Taga	6. Configure Security Group 7. Review					
	be launched with the the root volume. Ye				BS volumes and instance store volumes stance, but not instance store volumes.					
Volume Type 🕕	Device	(i) Snapshot (D	Size (GiB) 🕕	Volume Type ()	IOPS (j	Throughput (MB/s) i	Delete on Termination (i)	Encrypted (j)	
Root	/dev/sd	a1 snap-03f05a	c608a95eae2	20	General Purpose SSD (gp2)	• 100 / 30	10 N/A		Not Encrypted	
Instance Store 0	/dev/s	db 🔻 N/A		40	SSD	N/A	N/A	N/A	Not Encrypted	8
Instance Store 1	 /dev/s 	dc 🔻 N/A		40	SSD	N/A	N/A	N/A	Not Encrypted	8
Add New Volume	8						Cancel Pre	evious Review a	nd Launch Next: A	dd Tags

🕕 Note

The default storage is sufficient for most Media Gateway/SRT Gateway operations. However, if you intend to use Media Gateway/SRT Gateway in conjunction with a video server (such as using Media Gateway with Haivision Media Platform), having additional storage allows you to benefit from local caching on the virtual server.

🕕 Note

You may wish to choose Delete on Termination to have the storage space automatically removed if you cancel your subscription for the server instance.

9. Apply one or more tags (such as a Name) to the server, and then click **Next: Configure Security Group**:

👕 Services 🗸 Resource Groups 🖌 🛧	<u>Д</u> + оп	egon + Support +
1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags	6. Configure Security Group 7. Review	
Step 5: Add Tags A tag consists of a case-sensitive key value pair. For example, you could define a tag with key = Nar	ne and value = Webserver. Learn more about tagging your Amazon EC2 resources.	
Key (127 characters maximum)	Value (255 characters maximum)	
Name	Media Gateway Demo	8
Add another tag (Up to 50 tags maximum)		
	Cancel Previous Review and Launch Next: Conf	figure Security Group

- 10. Create a new security group, or select from a list of existing groups. Make sure you have the following ports open:
 - Port 443 for HTTPS access to the web interface
 - Port 22 for SSH access to the Console UI interface
 - A custom port to allow incoming UDP traffic, such as SRT streams (use Custom UDP Rule). See SRT for more information.

security group is a		trol the traffic for your instance. On th			nple, if you want to set up a web server and al ting one below. Learn more about Amazon Ei
	Assign a security group:	Create a new security group			
		Oselect an existing security group			
	Security group name:	Haivision Media Gateway -BYOL	1-1-AutogenByAWSMP-		
	Description:	This security group was generated	d by AWS Marketplace and is based on reco	mmo	
ype ①		Protocol (j)	Port Range (i)	Source ()	
TTPS	Ŧ	TCP	443	Custom •	0.0.0.0/0
TTP	٣	TCP	80	Custom 🔻	0.0.0.0/0
SH	Ŧ	TCP	22	Custom 🔻	0.0.0.0/0
ustom UDP Rule	٣	UDP	7500	Custom 🔻	0.0.0.0/0
					1
Warnin Rules wit	J	all IP addresses to access your instan	ice. We recommend setting security group	rules to allow access from known IP add	Iresses only.

11. Click Review and Launch.

12. Review your settings, and make any necessary corrections or changes. When you are satisfied, click **Launch**:

ep 7: Review In			a add changes for each s	ection. Click Launch to accion a key pair t	to your instance and complete the launch p	20255
A Improve your in Your Instances ma	nstances' se w be accessible	curity. Your s	security group, Haiv ress. We recommend that	ision Media Gateway -BYOL1-1- It you update your security group rules to a	AutogenByAWSMP-, is open to the allow access from known IP addresses only ing. e.g., HTTP (80) for web servers. Edit se	e world.
AMI Details						Edit AM
Halvision M	edia Gateway (BYOL)				
Gabrway Root Device Type	ebs Virtualizatio	n type: hvm				
	this product, you anse Agreement	will be subscrib	ed to this software and a	agree that your use of this software is subj	ject to the pricing terms and the seller's	Edit instance typ
Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
Instance Type t2.medium	ECUs Variable	vCPUs 2	Memory (GiB)	EBS only	EBS-Optimized Available	Network Performance
t2.medium					EBS-Optimized Available	Low to Moderate
t2.medium	Variable	2 Media Gateway	4 y-BYOL-1-1-AutogenByA	EBS only WSMP-	EBS-Optimized Available - tings for Haivisian Media Gateway (BYOL) v	Low to Moderate Edit security group
t2.medlum Security Groups Security group name	Variable	2 Media Gateway urity group was (4 y-BYOL-1-1-AutogenByA	EBS only WSMP-	-	Low to Moderate Edit security group version 1.1 provided by Haivision
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12.medium Security Groups Security group name Description Type ()	Variable	2 Media Gateway urity group was (Pro	4 y-BYOL-1-1-AutogenByA generated by AWS Marke	EBS only WSMP- tplace and is based on recommended set	tings for Haivision Media Gateway (BYOL) v	Low to Moderate Edit security group version 1.1 provided by Haivision
12 medium Security Groups Security group name Description Type () HTTPS	Variable	2 Media Gateway urity group was (Pro TCP	4 y-BYOL-1-1-AutogenByA generated by AWS Marke	EBS only WSMP- tplace and is based on recommended set Port Range () 443	tings for Haivision Media Gateway (BYOL) v	Low to Moderate Edit security group version 1.1 provided by Haivision
t2 medum Security Groups Security group name Description Type () HTTPS HTTP	Variable	2 Media Gateway urity group was (Pro TCP TCP	4 y-BYOL-1-1-AutogenByA generated by AWS Marke	EBS only WSMP- tplace and is based on recommended set Port Range () 443 80	tings for Haivision Media Gateway (BYOL) v Source (0.0.0.0/0 0.0.0.0/0	Low to Moderate Edit security group version 1.1 provided by Haivision
12 medium Security Groups Security group name Description Type () HTTPS HTTP SSH Custom UDP Rule	Variable	2 Media Gateway urity group was (Pro TCP TCP TCP	4 y-BYOL-1-1-AutogenByA generated by AWS Marke	EBS only WSMP tplace and is based on recommended set Port Range () 443 80 22	tings for Haivision Media Gateway (BYOL) v Source (0.0.0.0/0 0.00.0/0 0.0.0.0/0	Low to Moderate Edit security group version 1.1 provided by Haivision
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13. When prompted, select or create a public/private RSA key pair that is used to authenticate SSH sessions, and then click **Launch Instances**:

Select	an existing key pair or create	a new key pair	3
allow you obtain the	consists of a public key that AWS stores, and to connect to your instance securely. For Win password used to log into your instance. For SH into your instance.	dows AMIs, the private key file is require	ed to
	selected key pair will be added to the set of k	eys authorized for this instance. Learn r	more
	noving existing key pairs from a public AMI.		
	e a new key pair		•
Key p	air name		
<u>.</u>		Download Key	Pair
	You have to download the private key file (in a secure and accessible location. You v after it's created.		

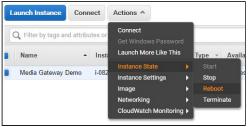
🕕 Note

SSH access to the Console UI is only allowed via SSH public key.

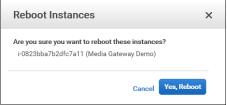
14. In a few moments, a Launch Status page appears, informing you that your instance is in the process of launching. Creating your server instance can take up to several minutes. At any time, click **View Instances** to see more details:

🎁 Services 🗸 Resource Groups 🗸 🛧 Oregon 🖌 Sup	port 🛩
Launch Status	
Your instances are now launching	
The following instance launches have been initiated: I-0823bba7b2dfc7a11 View launch log	
Get notified of estimated charges Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).	
Create uning areas to get an emain rouncation when estimated charges on your Arts un exceed an amount you denine (or example, in you exceed the nee usage tes).	
How to connect to your instances	
Your instances are launching, and it may take a few minutes until they are in the running state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to a	ccrue
until you stop or terminate your instances. Click View Instances to monitor your instances' status. Once your instances are in the running state, you can connect to them from the Instances screen. Find out how to connect to your instances.	
▼ Getting started with your software	
To get started withHaivision Media Gateway (BYDL) To manage your software subscription	
View Usage Instructions Open Your Software on AWS Marketplace	
Here are some helpful resources to get you started How to connect to your Linux instance Amazon EC2: User Guide	
Learn about AWS Free Usage Tier Amazon EC2: Discussion Forum	
While your instances are launching you can also	
Create status check alarms to be notified when these instances fail status checks. (Additional charges may apply) Create and attach additional EBS volumes (Additional charges may apply)	
Create and attach admitchal Eds volumes (Additional charges may apply) Manade security or cours	
View Int	tances

15. After the Instance State changes to "running", reboot the virtual server by selecting it in the AWS View Instances page and clicking **Actions > Instance State > Reboot**.



16. Confirm rebooting in the confirmation dialog box.



17. Return to the AWS View Instances page. In the row corresponding to your server, take note of the Public IP address and Instance ID assigned by AWS to your instance. The Instance ID is the default password for signing into web interface.

Name -	Instance ID	Instance Type 👻	Availability Zone ~	Instance State ~	Statu~	Alarm St	Public DNS	Public IP	- Key Na
Media Gateway Demo	i-0823bba7b2dfc7a11	t2.medium	us-west-2c	🥚 running	O 2/2	None 🍗	#210-T01.	80.002.004	MG AV

At this point, your virtual server is up and running!

- If you have created a BYOL instance, before continuing you need to license your server. See Licensing Your Server.
- If you have created a PAYG instance, you are ready to sign in and begin using your server. See Signing in to Media Gateway.

Signing in to Your Gateway

Accessing the Web Interface

- 1. Open a web browser, and enter the public IP Address of the virtual server. See Step #17 in Creating a Virtual Media Gateway Server to find the assigned IP address. A message may appear warning that the connection to the server is untrusted. This is normal, and you can safely continue.
- Sign in to the Web Interface, using the haiadmin username and password. (By default, the password is the Instance ID of the virtual server. See Step #17 in Creating a Virtual Media Gateway Server.)

Hai vision Gateway
Username
Password
Sign In

3. Click the **Sign In** button. The Browse Routes screen appears.

For more details, refer to Accessing the Web Interface in the User's Guide.

Accessing the Console UI

🕕 Note

You must have the private RSA key corresponding to the public key with which the virtual server was configured. See Step #13 in Creating a Virtual Media Gateway Server.

1. In a terminal window, enter the following command:

ssh -i ~/.ssh/<public-key_rsa> hvroot@<public-ip-address>

For instructions on specifying a public key on PuTTY for Windows, see the AWS documentation at: http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/putty.html . The Console UI appears.

2. In the navigation sidebar, use the ↑↓ (up and down arrow) keys to highlight menu items, and then press the **Enter** key.

3.

Important

Network configuration settings are controlled by Amazon AWS. Do not change them using the Haivision Console UI.

- 4. Press the **Enter** key to save your changes and return to the main screen.
- 5. Select Log Out and then press the **Enter** key to exit the Console UI.

For more details, refer to Using the Console UI with Haivision Hardware.

Licensing Your Server

For **BYOL** instances, before creating routes in your virtual server, you must obtain a license from Haivision.

🕕 Note

Without a valid license key, you can sign in, but you cannot create or edit routes.

To obtain a license:

- 1. Sign into the Media Gateway/SRT Gateway as described in Signing in to Media Gateway.
- 2. Click the \equiv icon and click Administration.
- 3. Click **System Settings** in the admin toolbar, and click **Network** in the sidebar.
- 4. Copy the server's MAC Address.

Interfaces	
eth0 BOND I	
Addressing	○ None ④ Static ○ DHCP
IP Address 🔹	10.69.12.156
Subnet Mask *	255.255.254.0
Gateway	10.69.12.1
МТО	1500
MAC Address	00:0c:29:2e:75:78
Link	Auto Manual

- 5. To request a license for your product:
 - a. Log in to the Haivision Support Portal (https://support.haivision.com).
 - b. After logging in, click License Requests.
 - c. Click the **New** button.
 - d. Select the appropriate device type and click the **Next** button.
 - e. Fill in the form with the appropriate information, and click **Save**.

Your license request is submitted and you will be contacted by a Haivision representative shortly with a license key for your product.

🕕 Note

The license you receive is bound only to the instance corresponding to the MAC address you submit.

- 6. After you receive your license, sign back in to the virtual server. You should be prompted with a License Required message. (Otherwise, click the = icon, click Administration, click System Settings in the admin toolbar, and click Licensing in the sidebar). Click Add License.
- 7. Copy and paste the license for your server into the License field.

8. Click Add.

Your virtual server is now licensed and available. For more information on licensing, please refer to the User's Guide.

SRT

Your virtual server can be used to receive and redistribute SRT streams. You must first verify that the Security Group is set to your network configuration, and you must open a UDP port for your network if you want to use SRT Listener mode. This was completed in Step #10 in Creating a Virtual Media Gateway Server when setting up your AWS resource.

🕕 Note

For more information on SRT, please refer to the User's Guide and the SRT Deployment Guide.

Stopping the Instance

Important

Please be aware that simply *shutting down* your server via the Console UI does not deallocate your instance, and you will continue to be charged for the running instance. To avoid unwanted charges, you must stop the AWS virtual machine.

To stop your server instance:

- 1. Navigate to the AWS View Instances page.
- 2. Find and select your server, then click **Actions > Instance State > Stop**.

Q Filter by tags an	d attributes c	Connect		
		Get Windows Pass		
Name	*	Launch More Like 1	his	ce Type 👻
Media Gateway Demo	D	Instance State		
	iy Demo	Instance Settings		
		Image		Reboot
		Networking	•	Terminate

Important

It is possible that shutting down an AMI instance results in a change in the MAC address the next time it is started, which causes the existing BYOL license to expire. If this happens, contact Haivision with the new MAC address to obtain a replacement license.

Obtaining Documentation

This document was generated from the Haivision InfoCenter. To ensure you are reading the most up-todate version of this content, access the documentation online at https://doc.haivision.com. You may generate a PDF at any time of the current content. See the footer of the page for the date it was generated.

Getting Help

General Support	North America (Toll-Free) 1 (877) 224-5445	
	International 1 (514) 334-5445	
	and choose from the following: Sales - 1, Cloud Services - 3, Support - 4	
Managed Services	U.S. and International 1 (512) 220-3463	
Fax	1 (514) 334-0088	
Support Portal	https://support.haivision.com	
Product Information	info@haivision.com	