Amazon AWS Quick Start Guide

Haivision Gateway 3.7 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.

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), which is already licensed for your use. 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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Step 1: Choose an An AMI is a template that contain	Amazon Machine the software configuration (op	mage (AMI) rating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or	Cancel and Exit r the AWS Marketplace; or you can select one of your own AMIs.
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Quick Start (0)			IK < 1 to 4 of 4 Products > >
My AMIs (0)	Halvision Halvisi	n SRT Gateway (PAYG)	Select
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	Halvision More inf	IRT Gateway on AWS uses Amazon's cloud infrastructure and the public Internet to transport secure, high-quality live HD video to multiple locations for broadcas	st distribution.

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

🔒 Note

- Only instances built on the Nitro system are supported. Please see the following link for a list of compatible instances: https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ instance-types.html#ec2-nitro-instances
- For high bandwidth streams or critical viewing requirements, we recommend using Compute Optimized C5 Instances (e.g. c5.xlarge, c5.2xlarge, etc.) tiers, as they are optimized for compute-intensive workloads and have high-performance network I/O.

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	c5		c5.4xlarge	16	32	EBS only	Yes	Up to 10 Gigabit	Yes
	c5		c5.9xlarge	36	72	EBS only	Yes	10 Gigabit	Yes
	c5		c5.12xlarge	48	96	EBS only	Yes	12 Gigabit	Yes
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7. Modify your Instance Details as needed, and then click Next: Add Storage:

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1. Choose AM Z. Choose Instance Type	3. Configure Instance 4. Add Storage 5. Add Tags 5. Configure Security Group 7. Review	
Step 3: Configure Instance Configure the instance to suit your require instance, and more.	Details crit. You can bunch multiple instances from the same AML request Spot instances to take advantage of the lower p	ricing, assign an access management role to the
Number of Instances	1 Launch into Auto Scaling Group (j)	
Purchasing option) 🗏 Request Spot instances	
Network	vpc-f100bc96 (default) C Create new VPC	
Subnet	No preference (default subnet in any Availability Zoni * Create new subnet	
Auto assign Public IP	Use submet setting (Ensble)	
IAM role	None Create new IAM role	
Shutdown behavior) Stop •	
Enable termination protection	E Protect against appidental termination	
Monitoring	Enable CloudWatch detailed monitoring Additional charges sppty	
Tenancy	Shared - Run a shared hardware instance Additional charges will apply for dedicated tenancy.	
 Advanced Details 		
	Cancel	revious 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**:

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1. Choose AMI	2. Choose In	stance Type	3. Configure Instance	4. Add Storage	5. Add Taga	5. Configure Security Group	7. Review					
Step 4: Add Your instance will edit the settings or storage options in	d Stora be launcheo f the root vo Amazon EC	ge d with the follow dume. You can C2.	ving storage device s also attach additiona	ettings. You car I EBS volumes a	attach additional EB Ifter launching an ins	S volumes and instance stor lance, but not instance store	e volumes to yo volumes. Learn	ur instance, or more about				Â
Volume Type (Device (j)	Snapshot (j)		Size (GiB) (i	Volume Type (i)		IOPS ()	Throughput (MB/s) i	Delete on Termination (i)	Encrypted (j)	
Root		/dev/sda1	snap-03f05ac6	08a95eae2	20	General Purpose SSD (g	2) •	100 / 3000	N/A	2	Not Encrypted	
Instance Store 0	• (/dev/sdb 🔻	N/A		40	SSD		N/A	N/A	N/A	Not Encrypted	8
Instance Store 1	1 🔻	/dev/sdc *	N/A		40	SSD		N/A	N/A	N/A	Not Encrypted	\otimes
Add New Volum	ne											-
									Cancel Previ	ious Review an	d Launch Next: Ad	ld Tags

\rm A 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.
- 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**:

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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	me 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: Configu	ire 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.

1. Choose AMI	2. Choose Instance Type 3. Co	onfigure Instance 4. Add Storage 5.	Add Tags 6. Configure Security Group 7. Revie	ew	
tep 6: Cor security group is ernet traffic to n curity groups.	nfigure Security Gr a set of firewall rules that com each your instance, add rules t	OUD trol the traffic for your instance. On this hat allow unrestricted access to the HT	page, you can add rules to allow specific traffic to TP and HTTPS ports. You can create a new securi	o reach your instance. For example, if you want to set up a web se ity group or select from an existing one below. Learn more about	rver and allov Amazon EC2
	Assign a security group:	Create a new security group			
		Select an existing security group			
	Security group name:	Haivision Media Gateway -BYOL-1-1	-AutogenByAWSMP-		
	Description:	This security group was generated b	y AWS Marketplace and is based on recomm		
ype ①		Protocol (j)	Port Range ①	Source (j)	
TTPS	*	TCP	443	Custom • 0.0.0.0/0	e
TP	٣	TCP	80	Custom • 0.0.0.0/0	¢
н	٣	TCP	22	Custom • 0.0.0.0/0	e
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A Warni	ing		We arrest a stress of the second stress of the seco	II was a familia was 10 a da a a a bi	
Rules v	with source of 0.0.0.0/0 allow a	III IP addresses to access your instance	, we recommend setting security group rules to a	now access from known in addresses only.	
				Cancel Previous Review	and Launch

11. Click Review and Launch.

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

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Choose AMI 2. Choose Ir	nstance Type	3. Configure Instance	4. Add Storage	5. Add Tegs	6. Configure Security Group	7. Review				
ep 7: Review In ase review your instance I	stance La aunch details. Yo	unch ou can go back to	edit changes for ear	sh section. Click	Launch to assign a key pair	to your instance and complete th	ie launch pr	rocess.		
A Improve your Your Instances m You can also oper	instances' se ay be accessible n additional ports	curity. Your se from any IP addre a in your security g	curity group, H ss. We recommend roup to facilitate ac	aivision Med that you update cess to the app	ia Gateway -BYOL-1-1 s your security group rules to lication or service you're run	-AutogenByAWSMP-, is op allow access from known IP add ning, e.g., HTTP (80) for web serv	pen to the Iresses only ers. Edit se	e world. /. curity groups		
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Haivision M Haivision M Root Device Type Hourly Software cha By launching End User Lio	edia Gateway (e: ebs Virusizato vare Fees: \$0.00 arges will begin o this product, you ense Agreement	(BYOL) in type: hvm per hour on t2.me noe you launch thi u will be subscribe	dium Instance (Add is AMI and continue d to this software a	itional taxes ma until you termin nd agree that yo	iy apply.) late the Instance. ur use of this software is sui	oject to the pricing terms and the	seller's			
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Instance Type	ECUs	vCPUs	Memory (GiB)	Instan	ce Storage (GB)	EBS-Optimized Available		Network Perfor	mance	
t2.medium	Variable	2	4	EBS on	ly	-		Low to Moderat	e	
Security Groups									Edit secur	ity group
Security group name Description	Haivision This sec	n Media Gateway urity group was ge	BYOL-1-1-Autogen enerated by AWS Ma	ByAWSMP- irketplace and is	s based on recommended se	ttings for Haivision Media Gatew	ay (BYOL) v	version 1.1 provide	d by Haivision	n
Туре 🕕		Prote	() loo		Port Range ()		Source (D		
HTTPS		TCP			443		0.0.0.0/0			
нттр		TCP			80		0.0.0.0/0			
SSH		TCP			22		0.0.0.0/0			
Custom UDP Rule		UDP			7500		0.0.0.0/0			
Instance Details									Edit instan	ice detai
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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**:

key pair	consists of a public key th	t AWS stores, and a private key file that you store. To securely. For Windows AMIs, the private key file is rea	gether, they uired to
btain the	password used to log into	our instance. For Linux AMIs, the private key file allow	/s you to
ecurely S	SH into your instance.		
oto: Tho	colocted key pair will be ad	had to the set of keys authorized for this instance. Lea	in more
bout rem	oving existing key pair will be ad	n a public AML.	ininore
Croate	a now koy pair	And a second second second	T
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L		Dowpload K	ou Pair
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	You have to download th	private key file (*.pem file) before you can continue.	Store it
	in a secure and accessi	le location. You will not be able to download the file a	igain
	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:

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Launch Status				
Eddhorf Otdtuo				
 Your instances are now launching 				
The following instance launches have been in	tiated: I-0823bba7b2dtc7a11 View launch log			
A constitued of entire test shows				
 Get notified of estimated charges Create billing alerts to get an email notificati 	on when estimated charges on your AWS bill exceed an amount you define (for (axample, if you exceed the free usa	ge tier).	
How to connect to your instances				
Your instances are launching, and it may take a few minu until you stop or terminate your instances. Click View Instances to monitor your instances' status.	ies until they are in the running state, when they will be ready for you to use. Use	age hours on your new instances w Instances screen. Find out how to	connect to your in:	ly and continue to accrue stances.
 Getting started with your software 				
To get started withHaivision Media Gateway (BYOL)	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	I charges may apply)			
Manage security groups				
				View Instance

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.

	e instances?	e you sure you want to rebo
i-0823bba7b2dfc7a11 (Media Gateway Demo)	ay Demo)	0823bba7b2dfc7a11 (Medi

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 v	Statu~	Alarm St	Public DNS	Public IP 🔹	Key Na
Media Gateway Demo	i-0823bba7b2dfc7a11	t2.medium	us-west-2c	🥥 running	2 /2	None 🍗	#2/8/101	80.002.76.0F	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

🔒 Note

Internet Explorer is no longer supported. We recommend using Microsoft Edge or Google Chrome.

- 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.
- 2. 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.)



The Instance ID is the initial password for all user accounts.



- 3. Click the **Sign In** button.
 - For BYOL instances, a License Required modal appears. See Licensing Your Server to obtain a license.
 - For PAYG instances, the Route List screen appears.

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

Accessing the Console UI

You can log in to virtual server's Console UI via a Secure Shell (SSH) client (e.g. Terminal in Mac OS X or PuTTY on Windows).

\rm A 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. Change settings as necessary.

\rm A 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.

\rm \rm Note

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

To obtain a license:

1. On the Licensing page that appears after clicking the **Add License** button, copy the server's MAC Address.



- 2. 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.

- 3. After you receive your license, sign back in to the virtual server. You should be prompted with a License Required message. Click **Add License**.
- 4. Copy and paste the license for your server into the New License field.
- 5. Click Update License.

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

You can stop and deallocate your server instance, while keeping all configurations active. After the instance is stopped, no further running charges are applied.

🔥 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.



🔥 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

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	International 1 (514) 334-5445
	<i>and choose from the following:</i> 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