

# Viz Now User Guide

Version 1.5





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#### **Antivirus Considerations**

Vizrt advises customers to use an AV solution that allows for custom exclusions and granular performance tuning to prevent unnecessary interference with our products. If interference is encountered:

- **Real-Time Scanning:** Keep it enabled, but exclude any performance-sensitive operations involving Vizrt-specific folders, files, and processes. For example:
  - C:\Program Files\[Product Name]
  - C:\ProgramData\[Product Name]
  - Any custom directory where [Product Name] stores data, and any specific process related to [Product Name].
- **Risk Acknowledgment:** Excluding certain folders/processes may improve performance, but also create an attack vector.
- Scan Scheduling: Run full system scans during off-peak hours.
- **False Positives:** If behavior-based detection flags a false positive, mark that executable as a trusted application.

#### **Technical Support**

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#### **Created on**

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# 1 Introduction to Viz Now

Viz Now is a powerful tool for automating deployment and configuration of Cloud production workflows.

This guide presents the following topics:

- Security Overview
- Working with Deployed Apps
- Working with Users
- Working with Spaces
- Feedback & Support

## 1.1 Related Documents

See the Vizrt documentation center for documentation for related products, including:

- TriCaster Vectar \*
- Media Service
- Graphic Hub
- Viz Trio
- Media Sequencer
- Viz Engine
- Pilot Data Server\*
- Viz Libero\*
- Viz Arena\*

A Note: Documentation marked \* is available to customers with a valid Support Agreement, from Vizrt Support. Please contact your Account Manager.

# 2 Security Overview

# 2.1 Introduction

The deployment of cloud-based live production workflows using Viz Now involves the automated provisioning of various AWS resources, such as EC2 instances, security groups, IAM roles, VPCs, and storage components. These resources are created directly in your AWS account, enabling and maintaining full customer control and ownership.

While Viz Now provides a strong foundation and starting point in terms of security posture, it is ultimately the responsibility of you, the customer, to ensure that these resources are properly secured according to organizational security policies and operational needs.

We **strongly recommend** referring to AWS security best practices and documentation for each service involved in a Viz Now deployment. Customers should review and, if necessary, adapt the configurations post-deployment, to align with their internal security standards, compliance frameworks, and threat models.

## 2.1.1 Our Commitment to Secure Defaults

Viz Now is being continuously improved to offer:

- More secure-by-default templates for deployments.
- Optional security configurations during setup.
- Transparent documentation of ports, protocols, IAM permissions, and network exposure.

#### This section presents

- Viz Now IAM Role Setup & Permissions Guide
- Network Security and Default Port Configuration

It provides:

- A detailed list of network ports and protocols opened by default.
- An overview of IAM permissions used by Viz Now roles.
- Important warnings about manual changes that may be overwritten during redeployment.
- Suggestions for **enhancing your security posture** based on your infrastructure setup and use case.

We will continue to evolve this section with updated recommendations, configurable options, and integration best practices.

Note: If you have specific security requirements or constraints, we encourage you to contact our team to discuss how Viz Now can best be configured for your environment.

## 2.2 Viz Now IAM Role Setup & Permissions Guide

This section guides you through management of AWS IAM roles needed for operating Viz Now with your AWS account.

Secure, reliable operations are ensured by first clarifying permissions and adopting these best practices.

- Overview
- Prerequisites
- Update Existing IAM Roles
  - IAM Roles
    - To update an IAM role in Viz Now
- Create New IAM Roles
  - Defining a new IAM Role
    - To define an IAM role in Viz Now
- Permissions Explained
  - Deploy Role (viz-now-deploy-infra)
  - Manage Role (viz-now-manage)
    - Key Tasks Enabled by Manage Role
  - Additional Resources

### 2.2.1 Overview

Viz Now requires *two* IAM roles:

IAM Role Name	Purpose	Used By
viz-now-deploy-infra	Provisions infrastructure via Terraform	Deployment Agent
viz-now-manage	Manages deployed instances	Control Plane

These roles are assumed using AWS STS (Security Token Service), and their ARNs are stored securely in Viz Now.

## 2.2.2 Prerequisites

- An active AWS account.
- IAM Administrator access to AWS.
- Administrator access to the Viz Now platform.

## 2.2.3 Update Existing IAM Roles

If your AWS account already has Viz Now IAM roles defined, follow these guidelines to update them.

**Note**: If your AWS account has no Viz Now IAM roles defined, first see section Create New IAM Roles.

#### IAM Roles

You will update both the Deploy and Management IAM roles and their associated inline policies.

#### To update an IAM role in Viz Now

This procedure assumes that your Viz Now user details are already setup in AWS. See the **Note** above.

- 1. Log in to your AWS Management Console with IAM Administrator permissions. Keep this tab active in your browser.
- Log in to the Viz Now and navigate to the panel Organization > Infrastructure tab > Manage IAM Roles. You'll see a screen like the one below, where you can define the IAM Role ARNs for the Deploy and Control Plane functionality.

Viz Now Early Access Davide Live Produn *	₩ Spaces 🔞 Core 🏕 Users 🔆 Organization	🔒 Admin English 🕴 🕐 📧		
Organization Here you can edit Name, Company logo and Cloud provider settings for your Organizatic				
Se Identity △ Infrastructure ○ Tags				
Cloud Provider This tool helps you pick and sort deployment areas in "Viz Now". You can put your preferred regions first and choose the amount of regions you want to your preferred regions first your diagning them up and down. Click "Arrange Best Zones" to automatically arrange them by ping.	Manage CIDR Blocks why.dol.need.this? CIDR block range used in AWS. Maximum of 63 Spaces can be added of 64. 10.10.00 / 16 63 10.10.00 / 16 63	Manage IAM Roles         If you need to update the IAM Roles associated with your organization in AWS, you can enter them below.         Deploy Role         annaxesiam::::::::::::::::::::::::::::::::::::		
© 2025 Vizit Group. All rights reserved. Privacy Policy v1.5.0				

Keep this tab active in your browser.

#### Deploy role

- 3. Update the inline policy:
  - a. Switch to the AWS console **IAM > Roles** and from the **Permissions** tab, you can search for required inline policy.

This is the same as in the Viz Now UI:



Р	ermissions	Trust relationships Tag	gs Las	Accessed Revok	e sessions		
F	ermission	I <b>s policies (1)</b> Info up to 10 managed policies.			C Simular	te [ 🖸 🛛 Remove	Add permissions 🔻
				Filter by Type			
	<b>Q</b> Search			All types			< 1 > 🕸
	Policy	/ name [ 2	▲   ту	)e	▼	Attached entities	
	□ 🗉	viz-now-deploy-infra-inline-policy	Cu	stomer inline			

Click it to open.

b. Go back to Viz Now and in the **Manage IAM Roles** panel, next to **Deploy Role**, click the **Question mark** icon ②.



and then Copy inline policy.

To create the Deploy IAM Role, click here
Copy trust policy
Copy inline policy

(This saves the policy details to the clipboard).

- c. Switch back to the AWS Console Policy editor and click the JSON button.
   Modify permissions in viz-now-deploy-infra-inline-policy Info Add permissions by selecting services, actions, resources, and conditions. Build permission statements using the JSON editor.
   Policy editor
- d. In the **Policy editor**, paste-in the inline policy from the clipboard.

Policy	editor	Visual JSON Actions V
1 - (	"Non-i	Edit statement
2	"Statement": [	
4.4		
	"Sid": "VisNowDeployInfra0"	
	"Effect": "Allow",	
7.*	"Action":	
	"iom:"",	Select a statement
10	"kms:**,	Select an existing statement in the policy
	"route53:*",	and a new statement
		and a new statement.
		+ Add new statement
14	"tag:*",	
	"logs:*"	
18		
19		

- e. Click Next and then click Save changes.
- f. <u>A confirmation message is displayed.</u>

**O** Policy viz-now-deploy-infra-inline-policy updated.

#### **Management Role**

You now repeat the same steps for the Management role.

4. In Viz Now, next to the input field Management Role, click the Question mark icon ②.

Management Role 🤇	<b>D</b>	
arn:aws:iam:::::::::	+\$4:role/viz-now-manag	e-sas
	Cancel	Update Roles

- a. From the pop-up, click **Copy inline policy**. **To create the Management IAM Role, click here Copy inline policy**
- b. In the AWS Console, search for the required *manage* role, in this example, *viz-now-manage*, and click on it to display a **Summary** page.

viz-now-manage-sas Info		Delete
Summary		Edit
<b>Creation date</b> May 16, 2025, 12:03 (UTC+01:00)	ARN arr:aws:iam::248967558014:role/viz-now- manage-sas	Link to switch roles in console https://signin.aws.amazon.com/switchrole? roleName=viz-now-manage- sas&account=viznowtest
Last activity O 4 hours ago	Maximum session duration 1 hour	
Permissions Trust relationships Tags	Last Accessed Revoke sessions	
Permissions policies (1) Info You can attach up to 10 managed policies.	C Simu	llate [2] Remove Add permissions V
	Filter by Type	
Q Search	All types 🔹	< 1 > 😵
Policy name [2]	▲ Type マ	Attached entities 🗸 🗸
viz-now-manage-inline-policy	Customer inline	

c. Select the **Permissions** tab and then its contained policy. The **Policy editor** page opens:

Modi Add pern	fy permissions in viz-now-manage-inline-polic issions by selecting services, actions, resources, and conditions. Build permissio	<b>Y</b> Info n statements using the JSON editor.
Poli	cy editor	Visual JSON Actions V
1 ▼ 2 3 ▼	{ "Version": "2012-10-17", "Statement": [	<ul> <li>Edit statement Remove</li> <li>VizNowManage0</li> </ul>
4 ▼ 5 6 7 ▼	<pre>{     "Sid": "VizNowManage0",     "Effect": "Allow",     "Action": []     "jam:*",</pre>	Add actions Choose a service Q. Filter services
9 10 11 12	"kms:*", "route53:*", "servicequotas:*", "s3:*",	Included CloudWatch Logs
13 14 15 16	"ec2:*", "tag:*", "sts:*", "logs:*" Q	EC2 IAM KMS
17 ▲ 18 19 20 ▼ 21	<pre>[],     "Resource": "*" }, {     "Sid": "AllowSSMDocumentsForSendCommand",</pre>	Resource Group Tagging       Route 53       S3
22	"Effect": "Allow", "Action": "ssm:SendCommand".	STS

- d. Paste-in the *inline policy* that you copied to your clipboard, to update the JSON code. For an example, see the code below.
- e. Click Save changes.
- 5. Validate IAM Role in Viz Now:
  - a. Click Cancel.
  - b. In Viz Now Manage IAM Roles panel, click Validate Roles.



c. A confirmation message is displayed.



## 2.2.4 Create New IAM Roles

If you have not defined any IAM roles for Viz Now, follow these guidelines.

A Note: If you have already have Viz Now IAM roles defined for your AWS account, see to Update Existing IAM Roles below.

#### Defining a new IAM Role

You will create both a *Deploy* role and a *Management* role, and associate customized Viz Now trust relationships and policies.

#### To define an IAM role in Viz Now

1. Log in to Viz Now and navigate to **Organization > Infrastructure** tab **> Manage IAM Roles**.

Viz Now Early Access sasatest •	📕 Spaces   🕨 LaunchPad	🐣 Users 🔅 Organization	1	Admin English	÷ ?
Organization					
Here you can edit Name, Company logo and Cloud provider settings for y	our Organization.				
🕸 Identity 🗘 Infrastructure 🛇 Tags					
Cloud Provider	Manage CIDR Blocks why		Manage IAM Role	es <sup>3</sup>	
This tool helps you pick and sort deployment areas in "Viz Now". You can put your preferred regions first and choose the	CIDR block range used in AWS. Maximum of 42 Spaces can be	added of 64.	If you need to update to organization in AWS, y	the IAM Roles associated with your rou can enter them below.	ĺ
priority by dragging them up and down. Click "Arrange Best Zones" to automatically arrange them by ping.	10.10.0.0 / 16	42	Deploy Role arn:aws:iam::2-0 sasnew	14:role/viz-now-deploy-infra-	Ē
AWS × 4 ×	10.10.0.0	16 ▼ Add	Management Role arn:aws:iam::2	4:role/viz-now-manage-sasne	~ <b>©</b>

2. You'll see a screen like the one below, where you define the IAM Roles ARNs needed for a Deploy role.

Manage IAM Role	25	
If you need to update the IAM Roles associated with your organization in AWS, you can enter them below.		
Deploy Role		
arn:aws:iam::9	role/davide-stg-viz-now-deploy-infra	
Management Role		
arn:aws:iam::94	े :role/davide-stg-viz-now-manage ।	
	Edit Roles Validate Roles	
( <i>i</i> ) How to update IAM	1 Roles?	

#### **Deploy Role**

The role viz-now-deploy-infra allows deploying infrastructure in your AWS Account.

- 3. Log in to the AWS Management Console with IAM Administrator rights.
- 4. Back in Viz Now, click **Edit Roles**.

	Edit Roles	Validate Roles

5. Next to the **Deploy Role** input field, click the ⑦ icon.



6. From the pop-up, follow the link **click here** to open the AWS console.



7. The AWS console opens in a new tab (if not logged-in, you will need to authenticate).

		0 0
Step 1	Select trusted entity Info	
Step 2 Add permissions	Trusted entity type	
Step 1 Name, review, and create	Allow AVS service     Allow AVS service	
	An AWS account Allow entities in other AWS accounts belonging to you or a 3rd party to perform actions in this account. O This account (2008/6755014) C Another AWS account Account ID Identifies of the account that can use this note 3248018/1712	

8. Click **Next** twice to skip the **Add permissions** step and arrive at **Name, review, and create**. **Role Name** is pre-populated as: *viz-now-deploy-infra*.

Role details							
<b>Role name</b> Enter a meaningful name to identify	his role.						
viz-now-deploy-infra							
Maximum 64 characters. Use alphanu	meric and '+=,.@' charac	ters.					
Description Add a short explanation for this role.							
Maximum 1000 characters. Use letter	s (A-Z and a-z), numbers (i	0-9), tabs, new lines	, or any of the fo	llowing characters:	 \$%^*();;"'``		

9. Click Create Role.

A confirmation message is displayed.

**Note**: If a warning indicates that the name already exists, update it by adding a suffix, for example: *viz-now-deploy-infra-something else*.

8. Click View role, AWS opens with the Summary page of the new role:

viz-now-deploy-infra-sas Info		Delete
Summary		Edit
<b>Creation date</b> May 16, 2025, 10:50 (UTC+01:00)	ARN arn.aws:iam::25	Link to switch roles in console The https://signin.aws.amazon.com/switchrole? roleName=viz-now-deploy-infra- sas&account=viznowtest
Last activity -	Maximum session duration 1 hour	
Permissions Trust relationships Tags	Last Accessed Revoke sessions	
Permissions policies (0) Info You can attach up to 10 managed policies.	C Sim	alate [2] Remove Add permissions V

#### Update the Trust Policy

9. Back in Viz Now, click **Copy trust policy**.

View role



10. Switching back to the AWS console, on the tab Trust relationships, click Edit trust policy.

rusted entities	licy
ntities that can assume this role under specified conditions.	

- 11. Paste the trust policy and click **Update Policy**.
- 12. The JSON code, shown below and which you can copy, is verified.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Principal": {
        "AWS": "arn:aws:iam::324880187172:root"
      },
      "Action": "sts:AssumeRole",
      "Condition": {
        "StringLike": {
          "sts:ExternalId": "SpaceliftIntegration@*"
        }
      }
    }
  ]
}
```

Code	Explanation
Princip al	Allows the Deployment Agent's AWS account (here 324880187172 ) to assume the role.
Conditi on	Ensures the external ID starts with SpaceliftIntegration@.

13. Continue in the AWS console by clicking the role's name in the breadcrumbs to reach the role's **Summary** page:



14. From the **Permissions** tab, click **Add permissions > Create inline policy**.

Permissions	Trust relationships	Tags	Last Accessed	Revoke	sessions		
Permissions	policies (0) Info				C Sim	ulate [ 🛛 🛛 Remove	Add permissions
You can attach up	o to 10 managed policies.						Attach policies
			Filter I	by <b>Т</b> уре			Create inline policy
Q Search			) ( All ty	ypes			< 1 > 段

15. Go back to Viz Now, and from the input field **Deploy Role**, click **Copy inline policy**.

To create the Deploy IAM Role, click her	e
Copy trust policy	
Copy inline policy	

16. Back to the AWS console, in the **Policy editor**, click the **JSON** button and then paste the inline policy into the **Policy editor**.

<b>Specify permissions</b> Info Add permissions by selecting services, actions, resources, and	conditions. Build permission statements using the JSON editor.
Policy editor	Visual JSON Actions V
1 v { 2 "Version": "2012-10-17", 3 v "Statement": [	Edit statement

17. The pasted JSON looks like:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "VizNowDeployInfra0",
      "Effect": "Allow",
      "Action": [
        "iam:*",
        "s3:*",
        "kms:*",
        "route53:*",
        "sts:*",
        "ec2:*",
        "tag:*",
        "logs:*"
      ],
      "Resource": "*"
    }
  ]
}
```

18. Click **Next**, and in the input field **Policy name**, name the policy (for example *use*, *viz-now-deploy-infra-inline-policy*) and click **Create policy**.



#### 19. Associate the IAM Role in Viz Now:

a. Copy the role's ARN from the AWS Console.

copy the role 3 ANN non the /		
viz-now-deploy-infra Info		Delete
Summary		Edit
Creation date July 06, 2023, 12:14 (UTC+01:00)	ARN m:aws:iam:: fra	Link to switch roles in console Thtps://signin.aws.amazon.com/switchrole? roleName=viz-now-deploy-infra&account=viznowtest
Last activity -	Maximum session duration 1 hour	

b. Over in Viz Now, in Manage IAM Roles, paste the ARN from the clipboard into the field Deploy Role.

Deploy Role 곗				
arn:aws:iam::9	n:aws:jam::9			
Management Role <b>(</b>	0			
			Cancel	Update Roles

(The **Update Roles** button will be enabled only after filling the **Management Role** ARN in the next steps).

#### **Management Role**

The *viz-now-manage* role enables Viz Now to manage deployed instances and perform operational tasks.

20. Still in the Manage IAM Roles menu, click the ⑦ icon next to the input field Management Role.

Deploy Role 📀			
arn:aws:iam:ta	14:role/viz-now-deploy-infra-sas		
Management Role 💿			
	To create the Management IAM Role, click here		
	Copy inline policy		

a. Follow the link **Click here**, the AWS Console opens.

	Trusted entity type			
Step 3 Name, review, and create	AWS service     Allow on AirS service     Lendod, or others to perform     actions in this account.      SAML 2.0 federation     Allow user federated with     SAML 2.0 from accoprate     directory to perform actions in     this account.	Allow enduity in other ANS Allow entitlebranging by your or a 3 dr party to perform actions in this account.     Custom trust policy Crustom trust policy to enable others to perform actions in this account.	More identify     Allow and the identified of the     provider to assume this relation to the     provider to assume this relation to     perform actions in this account.	
	An AWS account Allow entities in other AWS account	s belonging to you or a 3rd party to p		
	An AWS account Allow entities in other AWS account This account (947767449793)	s belonging to you or a 3rd party to p		
	An AWS account Allow entities in other AWS account This account (947767449793) Another AWS account Account ID Identifier of the account that can use this	s belonging to you or a 3rd party to pr role		

b. Click **Next** twice to skip the **Add permissions** step and arrive at the **Name, review, and create** menu. **Role Name** is pre-populated as *viz-now-manage.* 

Name, review, and create	
Role details	
Role name Enter a meaningful name to identify this role.	
viz-now-manage	
Maximum 64 characters. Use alphanumeric and '+=	;.@' characters.

c. Click Create Role.

**Note**: If a warning indicates that the name already exists, update it by adding a suffix, for example: *viz-now-manage-something else.* 

- 21. Add Inline permissions:

a. Switch to the AWS console, and from the role's **Summary** page, click **Permissions** tab **> Add permissions > Create inline policy**.

viz-now-manage-sas Info		Delete
Summary		Edit
Creation date May 16, 2025, 12:03 (UTC+01:00)	ARN	Link to switch roles in console https://signin.aws.amazon.com/switchrole? roleName=viz-now-manage- sas&account=viznowtest
Last activity -	Maximum session duration 1 hour	
Permissions Trust relationships Tag	gs Last Accessed Revoke sessions	
Permissions policies (0) Info You can attach up to 10 managed policies.	© sin	Mulate Add permissions
	Filter by Type	Create inline policy

b. Go back to Viz Now, and next to the input field **Management Role**, click the ⑦ icon, then, **Copy inline policy**.

Management F	Role 🕜		
To create the Management IAM Role, click her			Role, click here
		Copy inline policy	

- c. Switch to the AWS console and click the **JSON** button.
- d. Paste the inline policy into the **Policy editor**.

<b>Specify permissions</b> Info Add permissions by selecting services, actions, resources, and conditions. Build permission statements using the JSON editor.			
Poli	icy editor	Visual	
1 ▼ 2 3 ▼	{ "Version": "2012-10-17", "Statement": [	Edit statement	
4			

e. In the Editor, the pasted-in the JSON code will look like:

{
"Version": "2012-10-17",
"Statement": [
{
"Sid": "VizNowManage0",
"Effect": "Allow",
"Action": [
"iam:*",
"kms:*",
"route53:*",
"servicequotas:*",
"s3:*",
"ec2:*",

```
"tag:*",
        "sts:*",
        "logs:*"
      ],
      "Resource": "*"
   },
    {
      "Sid": "AllowSSMDocumentsForSendCommand",
      "Effect": "Allow",
      "Action": "ssm:SendCommand",
      "Resource": "arn:aws:ssm:*:*:document/*"
   },
    {
      "Sid": "AllowSendCommandToVizNowInstances",
      "Effect": "Allow",
      "Action": ["ssm:SendCommand"],
      "Resource": "arn:aws:ec2:*:*:instance/*",
      "Condition": {
        "StringEquals": {
          "ssm:ResourceTag/VizNow": "true"
        }
     }
   },
    {
      "Sid": "AllowCommandInvocationChecks",
      "Effect": "Allow",
      "Action": ["ssm:ListCommandInvocations", "ssm:GetCommandInvocation"]
,
      "Resource": "*"
   },
    {
      "Sid": "AllowSSMInventoryReadOnly",
      "Effect": "Allow",
      "Action": ["ssm:ListInventoryEntries",
"ssm:DescribeInstanceInformation"],
      "Resource": "*",
      "Condition": {
       "StringEquals": {
          "ssm:ResourceTag/VizNow": "true"
        }
      }
   },
    {
      "Sid": "AllowCreateMediaConnectFlows",
      "Effect": "Allow",
      "Action": ["mediaconnect:CreateFlow"],
      "Resource": "*"
    },
    {
      "Sid": "AllowManageVizNowFlowsByName",
      "Effect": "Allow",
      "Action": [
```



f. Click **Next**, and in **Policy name**, provide an identity for the policy (for example, use: *viz-now-manage-inline-policy*), and then click **Create policy**.



- 22. Associate and update the IAM Role in Viz Now:
  - a. Copy the role's ARN from the AWS Console on the **Summary** page.



b. In Viz Now Manage IAM Roles panel, paste the ARN in Management Role field.

Management Role (	2
arn:aws:iam::246	:

c. To save, click Update Roles.

arn:aws:iam::24	iz-now-deploy	-infra-sas
Management Role 📀		
arn:aws:iam::24% Control (14) role/viz-now-manage-sas		
	Cancel	Update Roles
Now validates the updated roles:		

# 2.2.5 Permissions Explained

IAM Role updated successfully

#### Deploy Role (viz-now-deploy-infra)

d.

The Deploy role grants broad permissions to allow Spacelift to deploy infrastructure using Terraform. All permissions apply to all resources ("Resource": "\*").

Permission	Purpose	Resource Scope
iam:*	Manages IAM roles/users	Scope to specific roles

×

Permission	Purpose	Resource Scope
s3:*	Manages S3 buckets	Scope to specific buckets
kms:*	Manages encryption keys	Scope to specific keys
route53:*	Configures DNS	Scope to specific zones
sts:*	Assumes roles	Necessary for Spacelift
ec2:*	Provisions EC2 resources	Scope to specific VPCs
tag:*	Applies tags	All ( * )
logs:*	Manages CloudWatch logs	Scope to specific log groups

## Manage Role (viz-now-manage)

The *Manage* role enables Viz Now to perform operational tasks on deployed instances. Permissions are scoped to specific resources whenever possible.

Key Tasks Enabled by Manage Role

- Increase service quotas for AWS resources.
- Reserve specific EC2 instance types.
- Create S3 buckets for file storage.
- Manage security groups for IP-based access.
- Handle VPC peering.
- Start, stop, or destroy instances.
- Manage MediaConnect flows for streaming.

Permission	Purpose	Resource Scope
iam:*	Manages IAM configurations	All ( * )
kms:*	Manages encryption keys	All ( * )
route53:*	Updates DNS	All ( * )
servicequotas:*	Increases quotas	All ( * )

Permission	Purpose	Resource Scope
s3:*	Manages S3 buckets	All ( * )
ec2:*	Manages instances	All ( * )
tag:*	Manages tags	All ( * )
sts:*	Assumes roles	All ( * )
logs:*	Manages CloudWatch logs	All ( * )
ssm:SendCommand	Executes commands	SSM documents & tagged EC2 instances (VizNow=true)
<pre>ssm:ListCommandInvocati ons, etc.</pre>	Checks command status	All ( * )
<pre>ssm:ListInventoryEntrie s,etc.</pre>	Retrieves instance details	Tagged resources (VizNow=true)
mediaconnect:CreateFlow	Creates MediaConnect flows	All ( * )
<pre>mediaconnect:* (multiple)</pre>	Manages MediaConnect flows	Flows named VizNow-*
<pre>mediaconnect:ListFlows, etc.</pre>	Lists flows	All ( * )

## Additional Resources

- <u>Spacelift AWS Integration</u>
- AWS IAM Documentation

# 2.3 Network Security and Default Port Configuration

Viz Now automatically sets up secure and functional network environments for your cloud deployments.

This section helps you understand how your instances are protected and what changes are safe with the following topics:

- Viz Now Security Environment
  - Default Open Ports and Services
- Volatility of Manual Changes
  - Recommendations

## 2.3.1 Viz Now Security Environment

Viz Now uses a *layered security model* combining:

- Network Access Control Lists (NACL): Control which ports are open at the subnet level.
- Security Groups: Control which IP addresses can reach each instance.

This dual approach ensures both flexibility and safety:

- NACLs open the ports needed for applications to work.
- Security Groups limit access to specific IPs that *you* define.

### Default Open Ports and Services

Depending on the application and services deployed, Viz Now enables by default the following ports:

Application / Service	Prot ocol( s)	Port(s)	Directi on	Notes
TriCaster Vectar API	ТСР	5951 - 5952	Ingress	For switcher control
Controls Panels	ТСР	5958	Ingress	For Control Surface interface
Amazon DCV	TCP/ UDP	8443	Ingress	For remote desktop access
NDI Bridge	TCP/ UDP	5990	Ingress	For video/audio streaming
Comprimato Live Transcoder	ТСР	1935	Ingress	For RTMP AV streaming

Application / Service	Prot ocol( s)	Port(s)	Directi on	Notes
Comprimato Live Transcoder	TCP / UDP	5960 - 9000	Ingress	For NDI
Comprimato Live Transcoder	UDP	30000	Ingress	For JPEGXS
Telos Infinity VIP	TCP / UDP	7001 - 7016	Ingress	Audio
Harrison Mixbus	TCP / UDP	5004 - 5005	Ingress	RTP MIDI
SRT Streaming protocol	TCP/ UDP	9000 - 9020	Ingress	Secure video transport
Ephemeral Ports	TCP/ UDP	49152 - 65535	Ingress	Dynamic and temporary connections
Ephemeral Ports	TCP/ UDP	1024 - 65535	Egress	Dynamic and temporary connections
ICMP	ICMP	All	Bi- directio nal	For ping and diagnostics

A **Note**: Some ports are opened only if specific services like Comprimato, Telos Infinity, or Mixbus are enabled during deployment.

## 2.3.2 Volatility of Manual Changes

Manual changes may be overwritten!

If you manually add or change firewall rules directly in the AWS Console:

- Viz Now will *not track* those changes.
- If you *redeploy* your space, manual changes may be lost and default settings restored.

#### Recommendations

- Whenever possible, always use the Viz Now UI for managing access.
- If you must make manual changes, document them outside of Viz Now and plan to reapply them after updates or redeployments.

# 3 Working with Deployed Apps

Any user can access the Apps within a Space that they created or are assigned to. There are different ways to interact with an App depending on the defined App properties.

- Region and Availability Zone
- Allowed IP
- Virtual Windows Instance Apps
- Web Apps

# 3.1 Region and Availability Zone

It can be useful to specify region and zone to

- Peer with an internal VPC
- Use a region that is not the default one.

If you have Editor rights, the target Region and Availability Zone for the deployment can be specified before its deployed.

**Note**: Specifying Region and Availability Zone only works for spaces in DRAFT mode.

• If no selection is made, the deployment uses the prioritized list already configured by the administrator.

## 3.1.1 To select a Region and Availability Zone

This is an *optional* procedure.

1. While in DRAFT mode, select a *region* from the **Region** drop-down menu. Region selections are the regions defined by the Organization administrator.

							DRAFT
Region:	Auto	Zone:	Auto			٦ Sp	ace Details
	EU (Ireland)						
Add Apps	EU (Frankfurt) EU (Stockholm)	Allowed I	Ps	L Allowed Users	Dep	loy	

2. If required, also select a zone from the **Zone** the drop-down menu.

Region:	EU (Ireland)	Zone:	Auto	③ Space Details
			eu-west-1a	
			eu-west-1b	
Add Apps	Instructions	 Allowed If	eu-west-1c	Deploy

If no specific Zone is defined the first in the list is used.

# 3.2 Allowed IP

To be able to access any app your public IP must be whitelisted. This should happen automatically when clicking the buttons on the App.

- If you have Editor rights to a Space, the IPs that have been allowed, can be viewed and edited by selecting the **Allowed IP** menu from the Space.
- If an IP is removed, the user behind the IP will no longer have access.

# 3.3 Virtual Windows Instance Apps

Apps that are installed on virtual windows instances (for example, Viz Vectar Plus), require the user to log into the App session, using a third party remote desktop client.

• For AWS, this is Amazon DCV.

ONLINE	0 min
Vectar Plus Vectar Plus	
The next stage of software driven live production has arrived. Open Externa Manual	el .
Instance ID	
	Ō
Public IP	
	D
Username	
Administrator	6
Password	
*****	6
Download	Open

## 3.3.1 Amazon DCV Client Software

The Amazon DCV client software has to be installed on the local machine before the user is able to access the instance. If the software is installed the user can download a small shortcut script that opens the remote session.

1. Click the download button. This will download a *.dcv* shortcut file that can be saved (for example, onto your desktop). If the Amazon DCV client application is installed on your machine, this automatically logs you in. You may rename it to something that makes sense to you.

🕞 Download

**Note**: Keep the .dcv file *secure*, it contains the credentials needed to log into the App.

2. Click **Open file** in the browser (usually upper right corner).

#### Web Browser-based Amazon DCV

Amazon DCV can also be opened in a browser window. You will not get the same low latency benefit with this approach but works well when inspecting Apps.

- 1. Click the **Open** button
- 2. Viz Now will copy the password to your clipboard (you might need to allow this)
- 3. A new browser will be opened
- 4. Paste the password into the Log in menu and connect

## 3.4 Web Apps

For apps that are accessible via a browser, a corresponding link is displayed.

#### See Also

• Amazon DCV | Download (Amazon-dcv.com)

# 4 Working with Users

## 4.1 Assigning Users

When you create a Space it is by default only visible to you and the Administrators, but it is possible to assign other users to your Space.

## 4.1.1 To assign a User to your Space

1. From the selected Space page, click **Allowed Users**.



- 2. You can add and remove other users to let them see and access your installed Apps. If the user is an *Operator*, they can only access the Apps and can not change your Space.
- 3. If the App is marked as *Public Space*, anyone within the organization can see it.

Vectar Plus	
Live Live	Ve Production Production Vision Mixing
C Publi	ic Space

# 5 Working with Spaces

- Space Details
- Creating and Deleting a Space
  - Creating a Space
  - Deleting a Space
- Session Scheduling
  - Start and End Times
  - Auto-Shutdown
- AWS Tags
  - Custom Tags
  - Mandatory Tags
  - Organization Tags
  - Cost Allocation Tags

# 5.1 Space Details

• Details about the displayed space are available from the info icon **Space Details** at the right corner.



A Note: Users with the Editor role can select the desired region to deploy, as described in section Region and Availability Zone.

# 5.2 Creating and Deleting a Space

## 5.2.1 Creating a Space

#### To create a new Space

- 1. Either
  - a. Click the blue button + New Space button on the top right of the Space list page

Spaces					= 📰 + New Space
	O DEPLOYED OFFLINE		DRAFT		
Live Production % Live Production Vision Mising Vector Plus, NDI Discovery, NDI Brid Vector Plus, NDI Discovery, NDI Brid	ige everything <b>ON</b>	Windows Group Core, Empty Windows, Empty Windows, E , Empty Windows, Empty Windows, E	nvs, Empty Windows Empty Windows	÷	

or

- b. Click on the big + (**Plus sign**) within a box if you are using the *box* view.
- 2. Choose your template.

The template determines which apps can be deployed.

🛕 Not	: <b>e</b> : Refer to the	Viz Now Administrator Guide	for more details about <i>Templat</i>	es.
Please, selec	t a template to cre	ate a new space.		
				<b>Q</b> Start typing to search
				Click to open Workspace instructions
Vectar 9	Trio 3	No description	Vectar, Trio, Mosart	0
libero 3	artist 1	Live Production		0
Bridge 1	ndi 1	No description	Vectar	
Artist 1	DEV 2			

- 3. Click the **Question mark** (2) to open instructions for the template.
- 4. When the Space is created select which apps should be part of the Space by clicking the **Add Apps** menu.
- 5. From the popup menu the available apps can be selected.
- 6. When the all required apps are selected, click **Deploy**. This starts the building the application on your account.



7. The operation takes 10-15 minutes.

## 5.2.2 Deleting a Space

A space that has been created and deployed incurs costs. Instances that are *running* are much more costly than when they are off. However there are *still* charges for instances that are off, especially if they have large disks.

It is therefore recommended that instances are destroyed when they are no longer in use.



- **Delete all:** All virtual instances that Viz Now has deployed are deleted from the Cloud Account. All configurations are lost but the space itself is not yet deleted from Viz Now database.
- **Delete:** The space is deleted from the Viz Now database.

#### To delete all content deployed in a Space

This removes all virtual machines and storage. Make sure you have saved any work elsewhere before doing this.

- 1. Open the space you want to delete (must be *Deployed*).
- 2. From the **Three dots** menu, select *Delete all*.



3. A popup box warns about permanent actions. Type in the requested keywords to confirm the action.



#### To delete a Space

1. To completely delete the Space references from Viz Now, select **Delete** (available if the Space is in *Draft* mode).



## 5.3 Session Scheduling

Viz Now users with *Editor* or *Administrator* roles can define their spaces' up-time. This feature ensures that the apps are accessible during specific hours on designated days and helps prevent unexpected costs that may arise from users forgetting to turn off their apps.

This feature covers *all* apps within a space, it does address the individual apps in a space.

Cancel

Both assigned users and the space owner receive a notification 30 minutes prior to Viz Now forcibly shutting down the apps.

This advance notice is intended to provide users with ample time to manually shut down their systems, the recommended course of action.

## 5.3.1 Start and End Times

By predetermining the activation and deactivation time of a space, users can plan in advance exactly when the space should be operational or not available.

#### To schedule space start time and end time

- 1. Navigate to the target Viz Now Space for scheduling.
- From the Scheduler settings menu, fill-in the checkbox Schedule session. Select Start time and End time by clicking the Calendar icon. The estimated shutdown time is displayed.

Scheduler setting	gs					×
Schedule ses You can prog so it goes off	<b>sion</b> gram a start date line.	so the	e space go	oes onli	ine automatically and an end date	
Start time	07 Nov 2024	Ö	13:00	Q	07 Nov 2024, 12:00 UTC	
End time	07 Nov 2024	Ö	16:00	Q	07 Nov 2024, 15:00 UTC	
Enable auto- Auto-shutdou after the peri	shutdown wn helps you cor iod defined.	ntrol y	our infras	tructur	e cost. The service will go offline	
<b>1</b> Estimated	shutdown: <b>Afte</b>	r 3h O	min of up	time		
					Cancel Confi	rm

3. Click **Confirm** to apply your settings.

## 5.3.2 Auto-Shutdown

An unused space that is still running, generates unnecessary operating costs on the users' AWS account. Autoshutdown provides an optional safeguard to autonomously place unused resources offline.

Users can:

- Specify the duration that a Space is expected to remain active.
- Optionally enable the advanced auto-detect feature *Shutdown only when inactivity is detected over 30 minutes*, for added security.

When this feature is activated, the instance remains operational until there is no outgoing data detected for 30 minutes.

- If there are no active streams or remote connections to the app within this timeframe, the system will automatically shut down.
- This helps ensure that the instance does not power-off while still in use.

#### To schedule auto-shutdown

Users that will only run Apps for a certain amount of hours, can configure the Auto-shutdown feature. This feature initiates a stopwatch after the last App is turned on and then turns off everything after the chosen time elapses.

- 1. Navigate to the target Viz Now space.
- 2. From the **Scheduler settings** menu, fill-in the checkbox **Enable auto-shutdown**.

Scheduler setting	gs					×
Schedule ses You can prog so it goes off	<b>sion</b> gram a start date line.	so the	e space go	es onli	ne automatically and an end date	
Start time	07 Nov 2024	Ö	13:00	©	07 Nov 2024, 12:00 UTC	
End time	07 Nov 2024	Ö	16:00	Q	07 Nov 2024, 15:00 UTC	
Enable auto-s Auto-shutdov after the peri	shutdown wn helps you co iod defined.	ntrol y	our infrast	tructur	e cost. The service will go offline	
Estimated	shutdown: <b>Afte</b>	r 3h 0i	min of up	time		
					Cancel Confi	rm

3. In section **Shutdown after** *n:nn* **hrs of uptime**, use the slider to specify how many hours your space is expected to run.

The estimated shutdown time is displayed.

- 4. Optionally enable the **Shutdown only when inactivity is detected over 30 minutes** safeguard option mentioned above.
- 5. Click **Confirm** to apply your settings.

A **Note**: It is advised to avoid using this option during a live broadcast, to prevent unexpected shutdowns if the show runs longer than anticipated.

## 5.4 AWS Tags

For each Space, it is possible assist Space management by adding *tags*. The various types of tag are described below:

- Custom Tags
- Mandatory Tags
- Organization Tags
- Cost Allocation Tags.

All tags are applied as AWS Tags on all resources deployed by Viz Now.

- AWS Tags are key-value pairs that can be attached to AWS resources, providing a flexible way to manage, organize, and track costs.
- AWS Tags facilitate efficient resource filtering and discovery, enhancing operational efficiency.
- In AWS, *tag policies* enforce consistent tagging across resources, which is crucial for regulatory compliance and effective resource management and cost tracking.

A Note: The Organization Administrator can define *mandatory* Tags to comply with AWS Tag Policies and ensure that specific tags are always included. See the Viz Now Administrator Guide, section Organization.

## 5.4.1 Custom Tags

Adding custom tags to a Space enables distinguishing a particular Space from other resources. It also clarifies what the Space is used for.

#### To add a custom tag

1. In the required Space, click the **Plus** sign above the heading for the Space.



- 2. Enter the Tag name and click 🗹 or press **Enter**.
- 3. (Optional) Provide a value if required.
- 4. To add the new tag, click 🔽 .
- 5. Once the Tag is added, a *redeploy* is required to add the Tag to any existing AWS resources. The Tag is highlighted until this is done.

|--|

## 5.4.2 Mandatory Tags

If your administrator has marked an Organization Tag as mandatory, it will appear in all new Spaces. It is not possible to remove this tag and there is no '**X**' button to remove it. However, you add *values* to it.

To select values for a mandatory Tag

1. <u>Click on the required tag.</u>



2. Enter a value and save by clicking 🔽 or pressing **Enter**.

## 5.4.3 Organization Tags

Organization tags that have been created by an Administrator, appear as selectable suggestions.



## To add organization tags to a Space

• Simply select them from the list to add.

## 5.4.4 Cost Allocation Tags

- Cost allocation tags are labels that you or AWS assign to an AWS resource. Each tag consists of a *key* and a *value*.
- These tags enable you to organize your resources and track costs on a detailed level.

There are two types of cost allocation tags:

**AWS-generated tags**: These are created by AWS or AWS Marketplace ISVs for you and are prefixed with "*aws:*".

User-defined tags: You can add these tags yourself through Viz Now, as described above.

#### Why use Cost Allocation Tags?

**Accountability**: Allocate costs to those responsible for the resource usage. **Financial transparency**: Provide clear visibility into cash allocations toward IT spending. **Informed IT investments**: Track ROI based on projects, applications, or business lines.

#### How Do Cost Allocation Tags Work?

- After activating cost allocation tags, AWS organizes your resource costs on a *cost allocation report*. This report groups your usage and costs based on your active tags.
- You can apply tags that represent business categories (for example, cost centers, application names) to organize costs across services.

#### Example Scenario:

- You tag two Amazon EC2 instances:
  - Cost Center: Engineering
  - Stack: Production
- You have an AWS-generated tag: createdBy (that tracks who created the resource)

The cost allocation report will show costs associated with these tags.

A Note: Cost allocation tags enhance cloud accountability and empower better decision making.
 Activate them to gain insights into your AWS costs.

Read more about this topic here: Using AWS cost allocation tags - AWS Billing (amazon.com)

# 6 Feedback & Support

- How to Access Support and Submit Ideas
- Got an Idea?
- Need Help?

# 6.1 How to Access Support and Submit Ideas

We want Viz Now to serve your production needs in the best possible way. Whether you are seeking help or eager to share ideas, we have made it simple to connect with our support ecosystem.

## 6.1.1 Accessing the Support Portal

- 1. In Viz Now, click ⑦ close to your user icon (top-right corner).
- 2. Select Viz Now Feedback & Support from the dropdown.
- 3. You will be redirected to the Vizrt Global Support page.
- 4. From here, you can log in to the Vizrt Community Portal.

### What You'll Find in the Vizrt Community

Once logged in, you can access:

- Support Portal Submit and manage technical support requests.
- **Documentation** Explore user guides and reference material.
- Viz University Access self-paced training and certification resources.
- License Portal View and manage product licenses.
- Vizrt Customer Ideas Portal Suggest, vote, and track product ideas.

## 6.2 Got an Idea?

At Vizrt, we value your feedback and ideas to shape the future of our products. Whether a small feature request or a big innovation, we want to hear from you!

## 6.2.1 How to Submit an Idea

- 1. Log in to the Vizrt Community Portal.
- 2. From the main menu, click **Ideas**.
- 3. Submit your suggestion, vote on others, and help influence the product roadmap.
- ► Watch this video to learn how it works: https://vimeo.com/766541626/d21a6c6ab5

#### Why Your Input Matters

Your ideas help us:

- Prioritize the right improvements
- Understand evolving workflows
- Build tools that truly support your creativity and efficiency.

# 6.3 Need Help?

If you are having trouble accessing the Vizrt Support Portal or the Vizrt Community:

- In the Viz Now menu, click the top-right ⑦ icon and **Viz Now Feedback & Support**.
- On the Vizrt Global Support page, under the **Visit Support Portal** button and *Do not have Vizrt Support Portal access?*, click **Submit Ticket**.
- Our Support team will assist you in gaining access and resolving your request.