

Meghna Cloud All Services User Manual

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1. What is Meghna Cloud?

1.1 Getting to Know Meghna Cloud

In today's digital age, cloud computing stands at the forefront of technological evolution, shaping the way businesses and individuals operate and interact. Amidst a landscape dotted with numerous cloud service providers, Meghna Cloud emerges as a beacon of innovation and reliability. A prestigious joint venture between, [GenNext Technologies](#) and [BDCCL](#), Meghna Cloud is more than just a service – it's a commitment to technological excellence, a step into the future.

1.2 Diverse Service Offerings for Varied Needs

Recognizing the diverse demands of modern-day computing, Meghna Cloud offers an extensive range of services tailored to cater to both budding startups and established enterprises. From high-performance CPU and expansive storage solutions to Virtual Machines (VMs) designed for seamless operations, Meghna Cloud ensures that every digital need is addressed with precision.

1.3 State-of-the-Art Datacenter at Gazipur

Meghna Cloud's commitment to ensuring uninterrupted, high-quality service is further emphasized by its state-of-the-art datacenter located in Gazipur. Not just any datacenter, but a Tier 4 datacenter – the pinnacle of datacenter tiers, offering the highest level of redundancy and reliability. This ensures that Meghna Cloud's services are not just efficient but also consistently available, minimizing downtime and ensuring businesses run smoothly.

1.4 A Center of Excellence

Meghna Cloud houses a Center of Excellence, specially designed for cutting-edge research in areas like cloud computing, data science, AI, neural networks, and more. We collaborate with both local and international academics to drive innovation and push the boundaries of knowledge.

1.5 Forging a Brighter Technological Future

Meghna Cloud represents the promise of a brighter tomorrow, powered by technology, data, AI, and machine learning. We're dedicated to propelling Bangladesh beyond its current technological boundaries, paving the way for a future where innovation knows no bounds.

2. Meghna Cloud Modules

Within the framework of Meghna Cloud, we have three essential modules to empower your cloud computing journey. The 'Authorization Module' serves as the guardian of data security, ensuring that only authorized users access the platform. In the 'Dashboard Module,' you gain centralized control and real-time insights into your cloud resources, simplifying management. However, the heart of Meghna Cloud lies in our comprehensive 'Cloud Services.' This suite offers a wide range of advanced tools and resources, from scalable infrastructure to cutting-edge data processing, machine learning, and AI capabilities. Our Cloud Services rival global industry leaders, all while safeguarding your data within the borders of Bangladesh. With Meghna Cloud Services, you can embrace innovation, agility, and efficiency in pursuit of your cloud computing goals.

2.1 Authorization

The Authorization Module is the gatekeeper to your Meghna Cloud experience. It ensures that only authorized users gain access to the platform, guaranteeing the security and privacy of your data. With state-of-the-art security protocols and user management features, you can control who can interact with your cloud resources, maintaining the highest level of data protection.

2.1.1 What are the Authorization Process?

2.1.1.1 Registration

This guide provides instructions for setting up Meghna Cloud accounts within your organization. It's essential to have **two key pieces of information** on hand for creating your Meghna Cloud account.

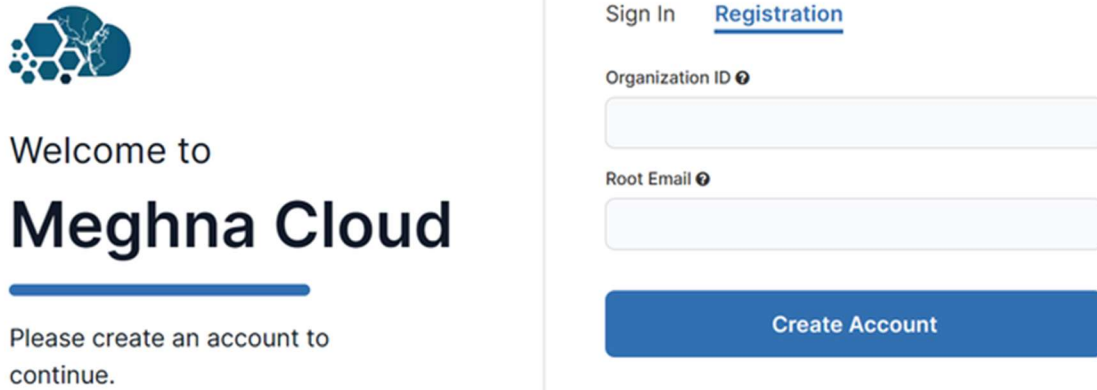
1. **Organization ID:** Organization ID is high-level container for projects, users and groups. As such, they can be used to centrally manage all identity components. With the introduction of account domains, server, storage and other resources can now be logically grouped into multiple projects which can themselves be grouped under a master account-like container. In addition, multiple users can be managed within an account domain and assigned roles that vary for each project.

Users of different Organization ID may be represented in different authentication back ends and even have different attributes that must be mapped to a single set of roles and privileges, that are used in the policy definitions to access the various service resources.

2. **Root Email Address:** A root email is the email address under which your Meghna Cloud is created. While multiple users can be associated with the same root email, it's important to note that having two accounts with the same Organization ID and Root Email Address is not allowed.

Step 1: Sign Up for Meghna Cloud

1. Visit [Registration - Meghna Cloud](#).



2. Insert your “**Organization ID**”.

IMPORTANT: Please make sure that your Organization ID follows these few rules:

- ID must not contain any type of white spaces.
- No special characters, only “-” (dash) and “_” (underscore) are allowed.
- Numeric characters are allowed (must not start with a numeric character).
- ID must not exceed 64-character limit.

3. Please input the “**Root Email**” address. For example: [xyz@company.com](#).

WARNING:

1. Remember your Organization ID for future authorization.
2. Your Meghna Cloud account depends on your registered email; losing access to it means losing account access.

4. After filling up all the information click “**Create**”.

NOTE: Upon clicking “**Create**,” existing users will be prompted to log in. However, new users will receive a **verification link** at their 'Root Email' address for authentication. By clicking this link, you'll be directed to a new tab to complete the remaining steps of your account registration.

IMPORTANT:

1. The verification link expires after some time. If you don't receive an email within the next five minutes, check your Spam folder.
2. If the link doesn't work when you click it, you can manually copy and paste the link from the email into your web browser.

Step 2: Continue Registration



Please Complete the steps to continue.


[Learn More](#)


Complete Registration


Organization ID

Root Email

User Name 

Password 

Confirm Password 

Full name 

Billing Address 

Complete Registration

1. Once you open the link your “Organization ID” and “Root Email” will be pre-filled. Please go through the rest of the form and fill up the information.
2. Select a username for your account.

WARNING: Usernames are restricted to lowercase letters, digits, underscores, and hyphens, with a character length requirement ranging from 3 to 32 characters (*i.e., user 456*).

3. Please enter a password.

IMPORTANT: Please make sure that your password follows these few rules:

- Must contain at-least 8 characters.
- At least 1 special character (*i.e. @ # \$...*)
- At least 1 numeric character.
- At least 1 Block (Capital) letter.
- Example: `Abc@1234`

4. Please input the same password again for confirmation.

5. Please enter your full name.

WARNING: Your name must not contain any symbols and numeric characters (*i.e., John Doe*).

6. Enter your valid billing address.

IMPORTANT: You might need to wait for us to verify your billing address in order to complete registration.

7. Click Complete Registration.

NOTE: If your information is valid, it will redirect you to the login page.

2.1.1.3 Login

1. Visit [Meghna Cloud](#) first, in order to sign in.
2. Only registered users can sign in. If you haven't signed up yet, please sign up first, from [Registration - Meghna Cloud](#).
3. In the sign form you need to input 3 information:
 - Enter the registered **Organization ID** for Meghna Cloud account.
 - Enter the registered **Username** of your account.
 - Enter your **Password**.



Welcome back to
Meghna Cloud

Please sign in to your account
to continue.


[Learn More](#)

[Sign In](#) Registration

Organization ID 

testnadif

User Name 

Password 

Remember Me

Sign In

[Forgot Password?](#)

Do not have an account? [Create Account](#)

4. Click the **Sign In** button.

If everything is okay, you will be redirected to the **Meghna Cloud Dashboard**.

WARNING: If the system does not find any match for the provided Organization ID, username, or password in our database, you will receive an error message. This indicates that either you haven't registered with Meghna Cloud or the information you provided is incorrect. In such a situation, you will receive a notification advising you to sign up before proceeding.

5. If you are already signed up but forgot your password, please [click here](#).

2.1.1.5 Forgot Password?


Step 1: Get a Verification Email using Organization ID and Username

1. Click on **Forgot Password?** under the **Sign In** button or [click here](#).
2. Once clicked, it will redirect you to the forgot password module. From here it is simple:
 - Enter the **Organization ID** associated with your Meghna Cloud account.
 - Enter the **username**.



Enter your organization ID & username to get a link to reset your password.

Forgot Password

Organization ID 

Username 

Send Link To Email

WARNING: If either the **username** or the **organization ID** is not found in the database, you will receive an error message. This signifies that you either haven't registered with Meghna Cloud or the information you provided is incorrect.

4. Click “**Send Link To Email**” button.

NOTE: A verification link will be sent to the root email address associated with your Meghna Cloud account, make sure to verify your account within 1 hour. After an hour has passed the verification link will become invalid and you will have to start again from the beginning.


Step 2: Verify and Reset Password


1. Check your root email inbox, open the email from Meghna Cloud, and click the **verification link**.

NOTE: Clicking the verification link opens a new tab, allowing the user to proceed with the second step of the password reset process.



Reset Your Password to continue.

New Password 

Confirm Password 

Reset Password

2. Input a new password.
3. Enter your password once more to confirm the new password.
4. Click "**Reset Password**".

IMPORTANT: Please follow our password creation guidelines for account security. Your new password should meet our criteria and not match your old password. If you encounter any issues, an error message will be displayed. For more information, consult the Sign-Up Guide.

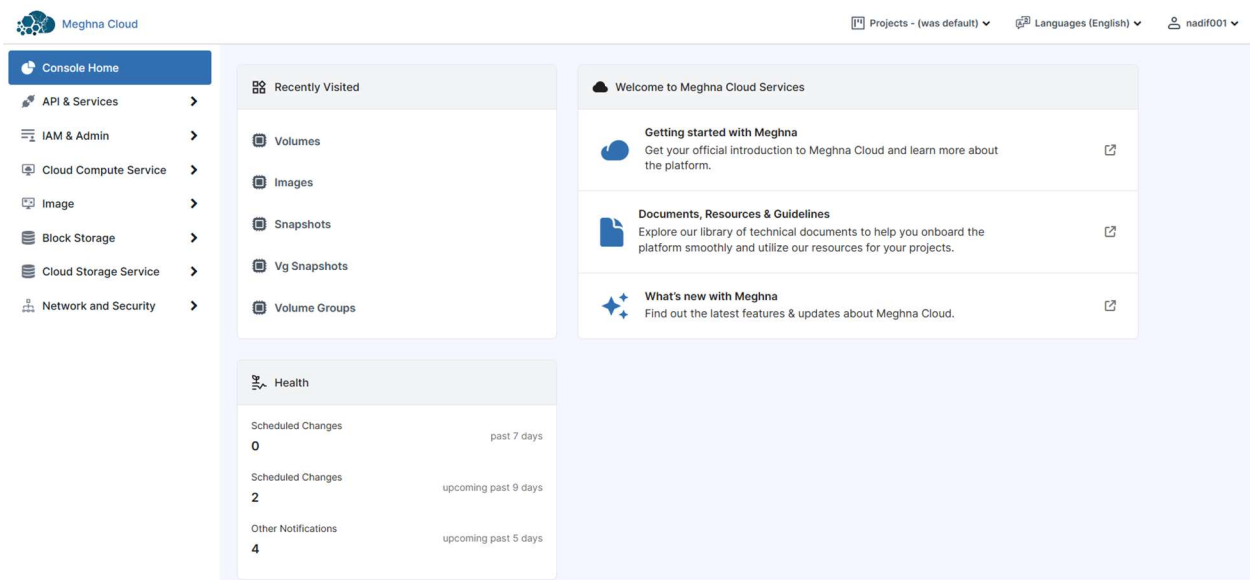
NOTE: If everything is done successfully then after clicking submit you will receive a successful notification and also be redirected to the login page.

2.2 Dashboard


Upon a successful login, the user will be redirected to the dashboard, which serves as a gateway to a range of tasks within Meghna Cloud. This dashboard is designed to be straightforward, offering a user-friendly interface where users can access various features with ease.

On the left-hand side, a navigation panel allows users to explore API & Services, Cloud Computing Services, Image details, Block Storage details, and Network & Security. Meanwhile, the right-hand side of the dashboard provides users with quick access to recently visited areas, the status of their account, special offers from Meghna Cloud, and a helpful getting started guide.

The overarching aim in designing this interface is to simplify the user experience for a wide audience, making the graphical user interface as intuitive as possible.



IMPORTANT: Moving forward, in multiple sections, users will come across lists with highlighted list-items (e.g., Name, Flavor, Group, etc.) in blue. Clicking on these titles will take users to dedicated overview pages for each item. Here, users can find comprehensive details about the item. Depending on the item type, users may also navigate to additional tabs for direct access to information and updates. For example, users can check if a "Volume" has snapshots and modify snapshot details by clicking on the "Volume Name" and navigating to the "Snapshots" tab.

<input type="checkbox"/>	Instance Name	Image Name	IP Address	Flavor	Key Pair	Status	Availability Zone
<input type="checkbox"/>	PORT TESTING	-	testnetwork 192.168.233.91, fd70:614b:38b0:1::e1 shared 192.168.233.173	m1.tiny	Test	Active	 nova

PORT TESTING (cirros-0.6.1-x86_64-disk)

[Overview](#) [Interfaces](#) [Log](#) [Console](#) [Action Log](#)

General

Name	PORT TESTING
ID	f1705ac8-4192-4c26-9297-4a897b13ec1b
Description	-
Project ID	7617c1353aa347a5b79618403baf2982
Status	Active

Specs

Flavor Name	m1.tiny
Flavor ID	1
RAM	512MB
VCPUs	1 VCPU
Disk	1GB

2.3 Project

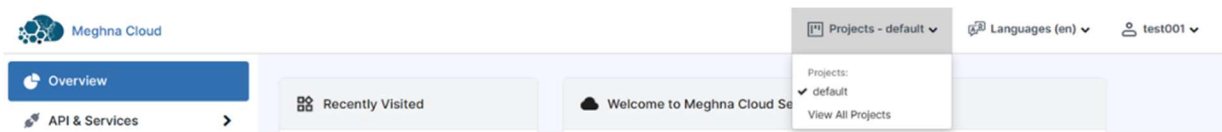
In cloud computing, "projects" are organizational units that group and manage related resources like instances, storage, and networking components. They provide a systematic way to allocate resources, manage permissions, and control configurations. Projects enhance resource efficiency, access control, and collaboration in cloud environments, streamlining their operation.

When a user clicks on "**View All Projects**" from the "Projects" dropdown or upon creating a new project, they will be redirected to the project page. Here, the user can access and manage all the available and newly created projects. Users have a range of options for interacting with these projects, including filtering, deleting, and exercising individual control over each project through "Actions".

2.3.1. Create Project

Step 1: Go to Projects Page

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. From the navbar at top, click on the “Projects-default” dropdown.
3. Click “**View All Projects**”.

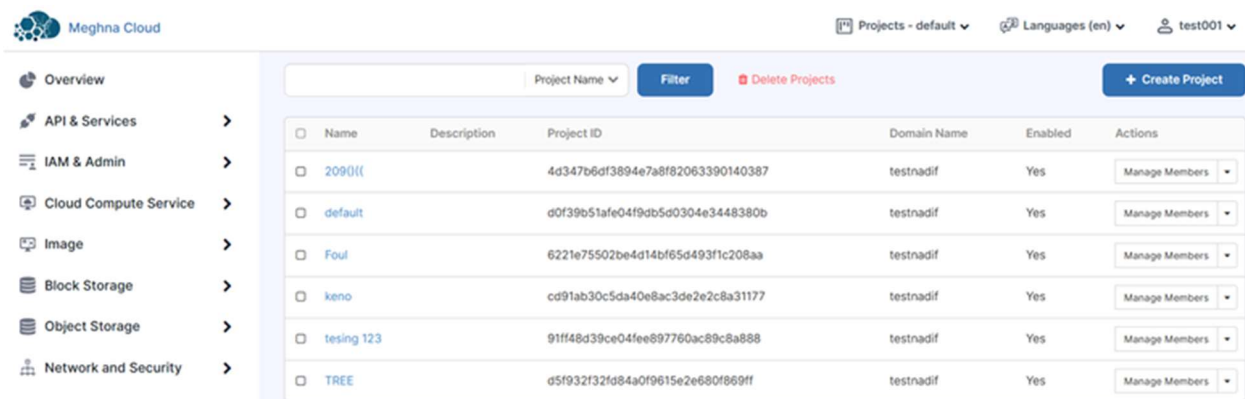


Step 2: Create a Project

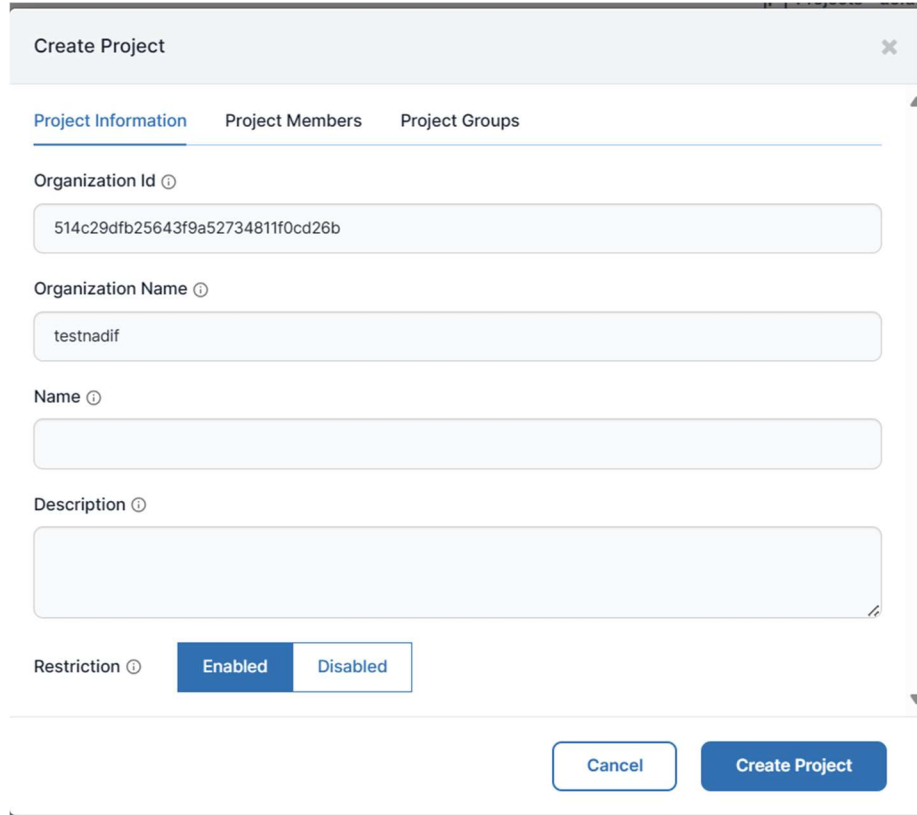
1. Click “**Create Project**”.

NOTE: Clicking “Create Project” will pop up a new module. Her user can see three tabs in this module.

1. **Project Information:** In this tab user will update information such as “name” and “details”.
2. **Project Members:** In this tab user can add or remove any members form the project.
3. **Project Groups:** In this tab user can add or remove any associated group form the project.



Step 3: Update Project Information



Create Project

Project Information Project Members Project Groups

Organization Id ⓘ
514c29dfb25643f9a52734811f0cd26b

Organization Name ⓘ
testnadif

Name ⓘ

Description ⓘ

Restriction ⓘ Enabled Disabled

Cancel Create Project

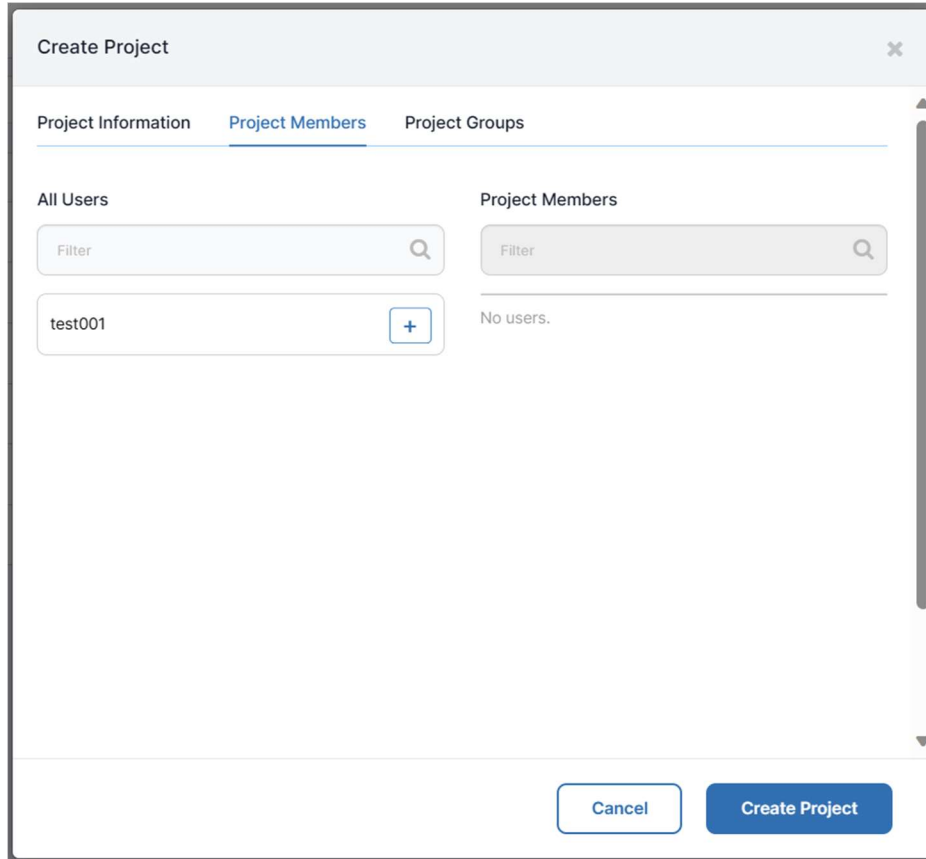
1. Insert a name for the new project.

WARNING: User must provide a name in order to create a project. A project name must be unique, as this name is used to uniquely identify the project across the cloud service, for each user.

2. Provide a “Description” for the new project inside the description box.
3. Click “**Create Project**”.

NOTE: Users can create a new project instantly with a unique name. It's not mandatory to fill in the description box or edit member and group details during project creation. However, it's recommended that users go through steps 3 to 5 before clicking "Create Project."

Step 4: Update Members and their Roles



Within the "**Project Members**" tab, you will find two distinct sections:

1. **All Users:** In this section, users can view a list of all available users that can be assigned to the project.
2. **Project Members:** This section displays a list of members that are presently assigned to this project.

Step 4.1: Assign or Remove a Member

1. Click on the **“Plus”** icon to assign a member to this project.
2. Click on the **“Minus”** icon to remove a member from the project.

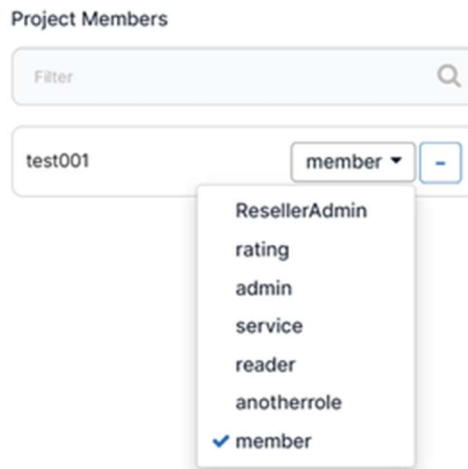
NOTE: Members assigned to the project, will be relocated to the "Project Members" section. Upon their removal, they will be transferred back to the "All Users" category.

3. Enter the username in the filter field to isolate a specific user from the list.

NOTE: The filter function operates automatically, responding to the keywords entered by the user.

(For example, if a user inputs "john," all usernames containing "john" will be displayed in the list.)

Step 4.2: Selecting Role for a Member



1. Click on the dropdown menu for a member.

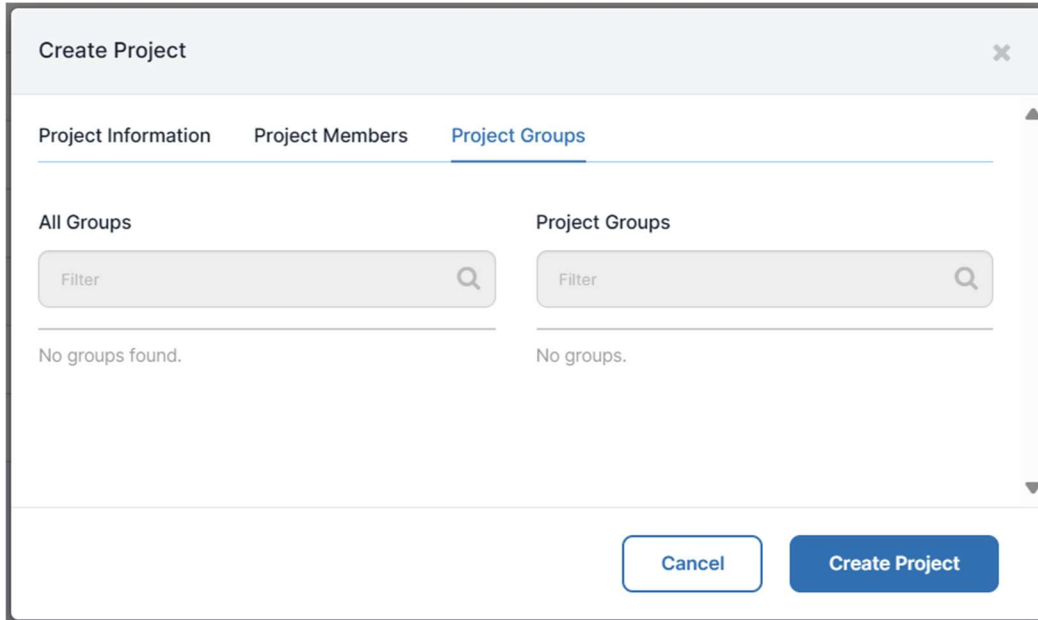
NOTE: Roles may only be assigned to users who have been allocated to a project. By default, all allocated users will be designated as members, unless a specific role is selected for individual users.

2. Select any role from the dropdown list.

IMPORTANT: A user can be assigned to a project with the following options:

1. **Multi-Roles:** To assign multiple roles to a user, simply select the desired roles from the dropdown.
2. **No-Roles:** To remove a user from any and all roles, ensure that you uncheck all roles from the dropdown.

Step 5: Update Groups and their Roles



Within the "**Project Groups**" tab, you will find two distinct sections:

1. **All Groups:** In this section, users can view a list of all available groups that can be assigned to the project.
2. **Project Groups:** This section displays a list of groups that are presently assigned to this project.

IMPORTANT: Groups can only be seen in the list, if they are created previously from “Groups - Meghna Cloud”.

Step 5.1: Assign or Remove a Group

1. Click on the “**Plus**” icon to assign a group to this project.
2. Click on the “**Minus**” icon to remove a group from the project.

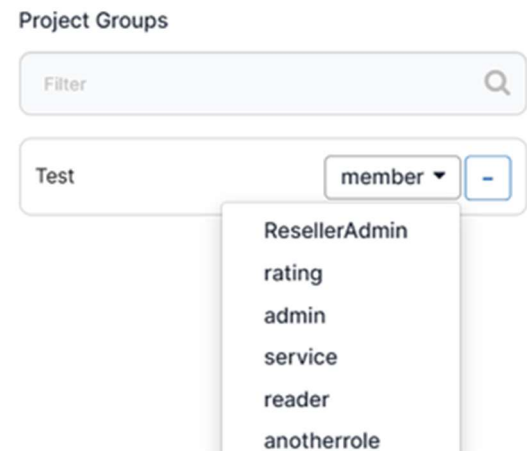
NOTE: Groups assigned to the project, will be relocated to the "Project Groups" section. Upon their removal, they will be transferred back to the "All Groups" category.

3. Enter the group name in the filter field to isolate a specific group from the list.

NOTE: The filter function operates automatically, responding to the keywords entered by the user.

(For example, if a user inputs "john," all usernames containing "john" will be displayed in the list.)

Step 5.2: Selecting Role for a Group



1. Click on the dropdown menu for the group.

NOTE: Roles may only be assigned to users who have been allocated to a project. By default, all allocated users will be designated as members, unless a specific role is selected for individual users.

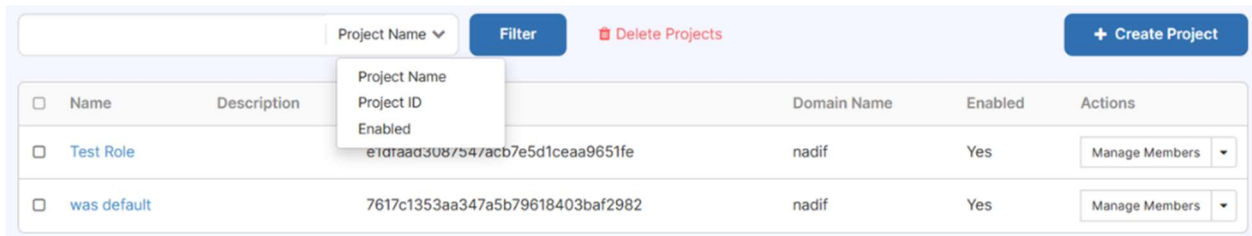
2. Select any role from the dropdown list.

IMPORTANT: A group of users can be assigned to a project with the following options:

1. **Multi-Roles:** To assign multiple roles to a group, simply select the desired roles from the dropdown.
2. **No-Roles:** To remove a group from any and all roles, ensure that you uncheck all roles from the dropdown.

2.3.2. Filter or Delete Projects

2.3.2.1 Filter Projects



The screenshot shows a web interface for managing projects. At the top, there is a search bar with a dropdown menu labeled 'Project Name'. To the right of the search bar are buttons for 'Filter' (in blue), 'Delete Projects' (in red), and '+ Create Project' (in blue). Below the search bar is a table with the following columns: Name, Description, Domain Name, Enabled, and Actions. Two projects are listed in the table:

Name	Description	Domain Name	Enabled	Actions
<input type="checkbox"/> Test Role		nadif	Yes	Manage Members
<input type="checkbox"/> was default		nadif	Yes	Manage Members

A dropdown menu is open over the 'Project Name' search bar, showing three options: 'Project Name', 'Project ID', and 'Enabled'.

1. Select filtering category from the dropdown.

NOTE: Users can choose a specific filtering category from "Name," "ID," and "Enabled." This feature empowers users to distinctly identify, and filter projects based on their preferred criteria:

- **Name:** This category corresponds to the name of the project used during its creation.
- **ID:** The Project ID is a unique identifier assigned to each project.
- **Enabled:** Users can apply this filter to see which projects are currently enabled.

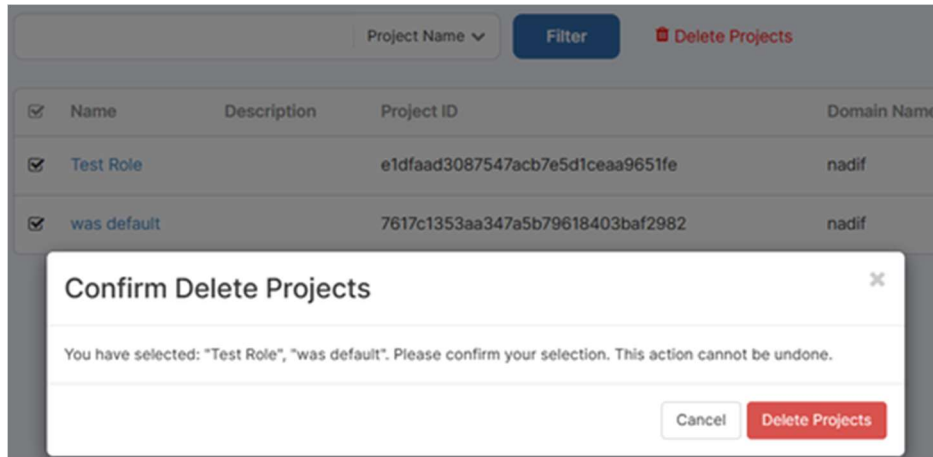
2. Enter your filtering keywords in the input field and then click "**Filter**".
3. To view the full list again, clear the filter field and click "Filter" once more.

2.3.2.2 Delete Projects

1. Mark the checkboxes next to the projects you wish to delete.
2. Click on "**Delete Projects**" located at the top.

IMPORTANT: Users can delete multiple projects simultaneously by using the "Delete Projects" button. However, the button will remain inactive until a user clicks the checkbox for at least one project.

NOTE: When a user selects "Delete Projects" from the dropdown list, a pop-up will appear. This pop-up module is designed to ensure that the user is making a conscious decision to delete a project. The project will only be deleted after the user confirms their intent. This process minimizes the risk of accidental project deletion.



3. In the confirmation pop-up module, choose "**Delete Projects**" to confirm the deletion of the project.
4. Click "**Cancel**" to terminate the deletion process.

2.3.3. Project Actions

If a user initially created a project with just a name and later wants to update information, view usage data, set quotas, or delete the project, they can use the options available under the "**Actions**" column for each project in the list. In the "Actions" section, there's a direct button for managing members, and the user can find other options to update project details, check usage summaries, and more in a user-friendly dropdown menu. This "Actions" section gives users full control over their projects.

2.3.3.1 Manage Members Involved in a Project

To update members, and their roles for a specific project:

1. Select the "**Manage Members**" button under the "Actions" column.
2. Once the "**Project Members**" tab pops up, **go to step 4 of "Create Project"** and follow the instructions.
3. Click "**Save**".

2.3.3.2 Modify Groups Involved in a Project

To update the groups, and their roles for a specific project:

1. Select the "**Modify Groups**" under the "Actions" dropdown.
2. Once the "**Project Groups**" tab pops up, **go to step 5 of “Create Project”** and follow the instructions.
3. Click "**Save**".

2.3.3.3 Update Project Information

To update basic info of any project:

1. Select the "**Edit Projects**" under the "Actions" dropdown.
2. Once the "**Project Information**" tab pops up, **go to step 3 of “Create Project”** and follow the instructions.
3. Click "**Save**".

2.3.3.4 See and Download Project Usage Summary

Usage Summary

Select a period of time to query its usage

Starting date:

End date:

- Active Instances: : 0
- Active RAM: : 0B
- This Period's VCPU-Hours: : 0.00
- This Period's GB-Hours: : 0.00
- This Period's RAM-Hours: : 0.00

Usage

Instance Name	VCPU	Disk	RAM	Age
No items to display.				

1. Select "**View Usage**" under the "Actions" dropdown to open the “Usage Summary” page.
2. Select the “**Starting Date**” and “**End Date**” and click “**Submit**”.

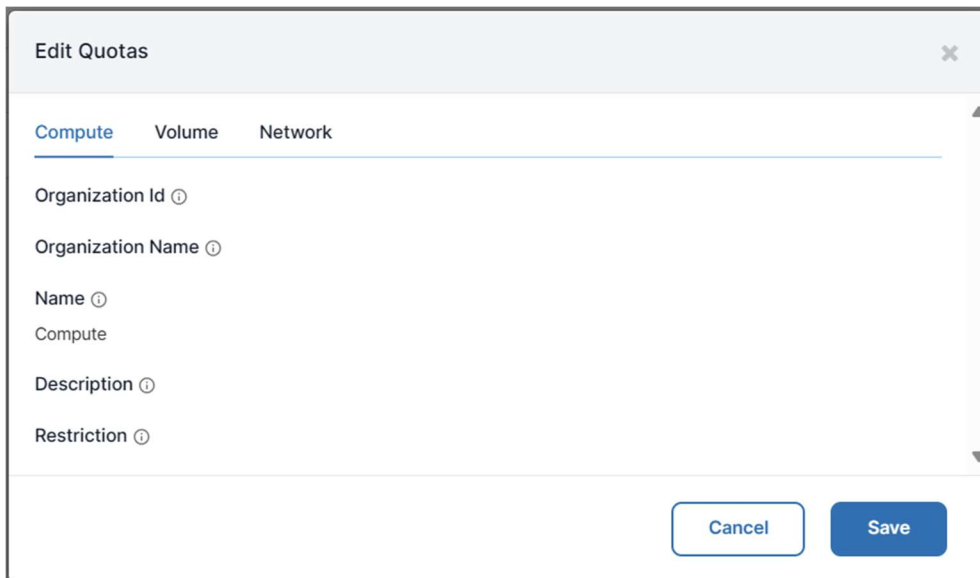
NOTE: To view the summary for a specific timeframe, users will need to select a starting and ending date. This allows users to specify the exact period for which they want to access the summary, ensuring that the information presented is tailored to their specific needs.

3. Click the "**Download CSV Summary**" under the "Actions" dropdown to obtain the summary as a downloadable CSV file.

IMPORTANT: After clicking the "Download CSV Summary" button, the local device's file system will appear. Users have the option to modify the file name before saving, and they must click "Save" to store the CSV file on their local device.

2.3.3.5 Modify Project Quotas

IMPORTANT: Project quotas are currently being maintained by Admin.

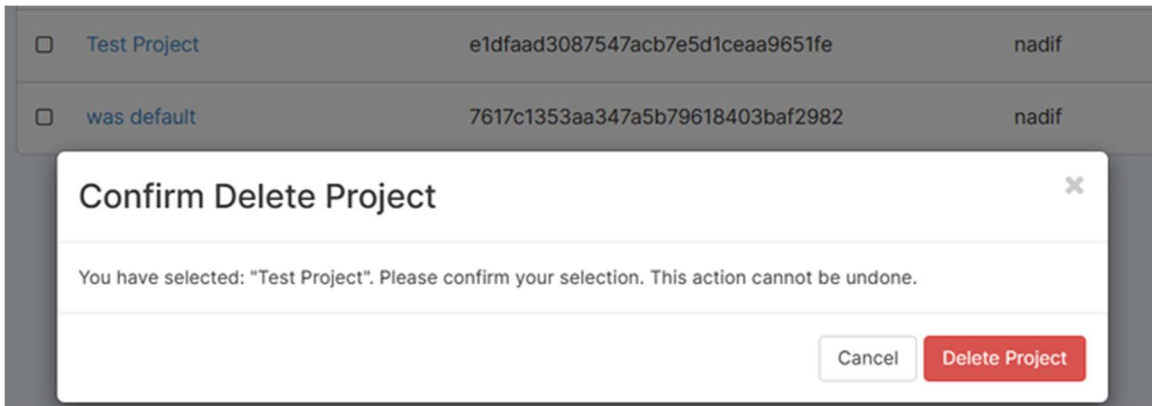


2.3.3.6 Delete a Project

If a user chooses to delete a project, they can do so directly from the project list.

1. Select "**Delete Project**" under the "Actions" dropdown.

NOTE: When a user selects "**Delete Project**" from the dropdown list, a pop-up will appear. This pop-up module is designed to ensure that the user is making a conscious decision to delete a project. The project will only be deleted after the user confirms their intent. This process minimizes the risk of accidental project deletion.



2. In the confirmation pop-up module, choose "**Delete Project**" to confirm the deletion of the project.
3. Click "**Cancel**" to terminate the deletion process.

2.4 Services:

2.4.1 Compute Service

2.4.1.1 Overview

Step 1: Visit the Overview Page

Creating a Linux-based instance on Meghna Cloud is easy. Follow these simple steps which includes a few dropdown menus and clicks.

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**Cloud Compute Service**" for its dropdown menu.
3. Select "**Overview**" from the menu to be redirected to the instance overview page.

NOTE: Upon entering the overview page, users can view a comprehensive usage status of all the components they are utilizing, including Compute, Volume, and Network. This encompasses details such as the number of Instances, VCPUs, and RAM for **Compute**; Volume, Volume Snapshots, and Volume Storage for **Volume**; and Floating IPs, Security Groups, Security Group Rules, Networks, Ports, and Routers for **Network**. This information is presented in both numerical and pie-chart formats (excluding Network). Additionally, users have access to a usage summary for a quick overview.

Step 2: See Usage Summary of a Specific Time

1. Input **Starting** and **Ending** date.

NOTE: Users have the flexibility to input dates manually or choose dates from the pop-up calendar. To define a specific timeline, it is necessary for the user to provide both the starting and ending dates.

2. Click “**Submit**”.

Step 3: Download Usage Summary as a CSV File

1. Click “**Download CSV Summary**”.

NOTE: Upon clicking the button, users can seamlessly download the overall summary in a CSV file. The download process initiates automatically for user convenience.

A CSV (Comma-Separated Values) file is a plain text file format that uses commas to separate values. It represents tabular data, where each line corresponds to a row, and the values within each row are separated by commas. CSV files are commonly used for storing and exchanging structured data between different programs. A common use case for CSV files is in data interchange between spreadsheet software (like Microsoft Excel or Google Sheets) and databases.

2.4.1.2 Instance → Launch an Instance

"Instance" typically refers to a virtual computing environment created from a predefined template, often known as an image. In cloud computing, an instance represents a virtual machine or server running in the cloud infrastructure, providing computational resources for various applications and services.

Step 1: Setup a Network and Add Interface to a Router

1. Create a **Router** if there are no available routers.
(Go to section **2.8.17 Routers** → **Create Router** for specific instructions)
2. Create a **Network** if there are no available networks.
(Go to section **2.8.1 Network Interface** → **Create Network** for specific instructions)

Network and Security > Routers

Router Name ▼ Filter Delete Routers

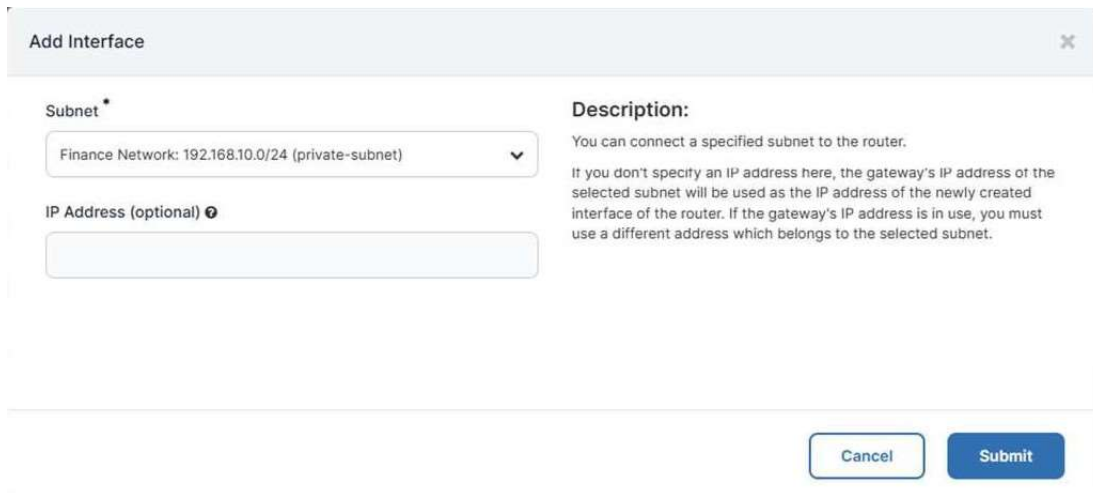
<input type="checkbox"/>	Name	Status	External Network	Admin State	Availability Zones
<input type="checkbox"/>	Test Router 01	Active	-	UP	-

3. Visit **Routers** under **Network and Security** again, and click on the name of any specific “Router” on which the network will be attached.

Upon clicking the name, the “**Overview**” tab will be opened for that specific router.

<u>Overview</u>	Interfaces	Static Routes
Name	Test Router 01	
ID	18ad113a-a47c-40f7-a026-93045d8ce88e	
Description		
Project ID	7632c1695b67423f87e71332290495ee	
Status	Active	
Admin State	UP	
External Gateway	None	

4. From the top, click on **Interface** in order to open the “Interface” tab.
5. Click on **Add Interface** in order to attach a new “Network Interface” to the router.



- Once the Add Interface tab pops up, select a **Subnet** from the dropdown.

NOTE: Available **Subnets** for a **Network Interface** will be shown in the **Subnet** dropdown.

- Provide an **IP Address** if needed.

NOTE: If no specific IP address is provided, the gateway IP address from the chosen subnet will be automatically assigned to the newly created router interface. In case the designated gateway IP is already in use, the user must select an alternative address within the same subnet for the new interface.

- Click **Submit** in order to add interface to the router.
- Click **Cancel** in order to cancel the process.

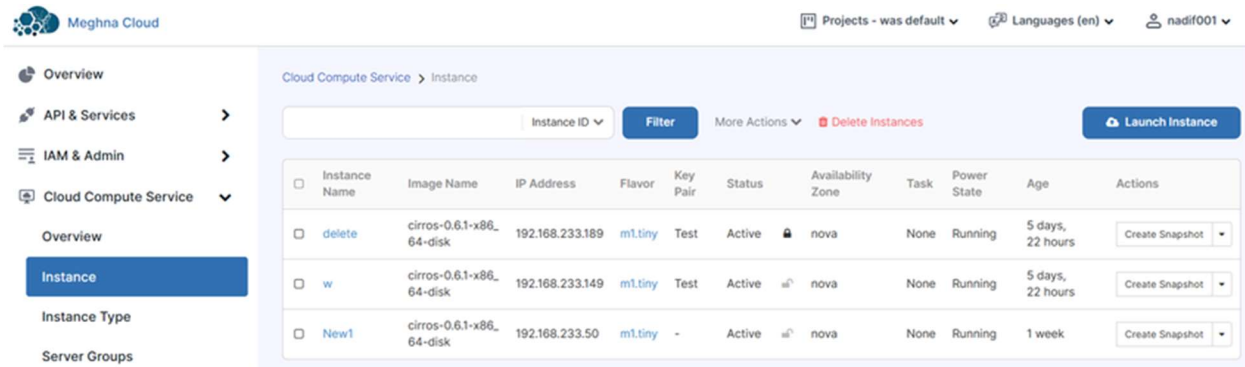
IMPORTANT: Newly added interfaces will be shown in a list in the **Interface** tab. Users can delete any added interfaces any time they want. A confirmation will be required from the user side in order to proceed with the deleting process.

Step 2: Visit Launch an Instance Page

Creating a Linux-based instance on Meghna Cloud is easy. Follow these simple steps which includes a few dropdown menus and clicks.

- Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
- Locate the left-side Navigation Bar from the dashboard; click "**Cloud Compute Service**" for its dropdown menu.
- Select "**Instance**" from the menu to be redirected to the instance page.

NOTE: Users can view details of previously created instances from the Instances page.



Cloud Compute Service > Instance

Instance ID Filter More Actions

Instance Name	Image Name	IP Address	Flavor	Key Pair	Status	Availability Zone	Task	Power State	Age	Actions
<input type="checkbox"/> delete	cirros-0.6.1-x86_64-disk	192.168.233.189	m1.tiny	Test	Active	nova	None	Running	5 days, 22 hours	Create Snapshot
<input type="checkbox"/> w	cirros-0.6.1-x86_64-disk	192.168.233.149	m1.tiny	Test	Active	nova	None	Running	5 days, 22 hours	Create Snapshot
<input type="checkbox"/> New1	cirros-0.6.1-x86_64-disk	192.168.233.50	m1.tiny	-	Active	nova	None	Running	1 week	Create Snapshot

4. Click the "**Launch an Instance**" button at the top-right of the page to create new instances.

Successful click will automatically redirect you to the "**Launch an Instance**" page.

Within the "**Project Members**" tab, you will find two distinct sections:

3. **All Users:** In this section, users can view a list of all available users that can be assigned to the project.
4. **Project Members:** This section displays a list of members that are presently assigned to this project.

Step 3: Input Name and Details

Enter the initial host name for the instance, choose the deployment availability zone, and specify the instance count. If creating multiple instances with the same settings, increase the count accordingly. Follow these steps:

1. Input the name of your new instance.
2. A description to convey what would be this instance for (*specifications, use-case, purpose etc.*).
3. Select the **Availability Zone** (*default will be Nova*).
4. If you want multiple instances under similar name then, increase the count. You can do it either by typing manually or adjust the quantity using the **increment / decrement** button.

Launch an instance [Read More](#)

Create a new instance by filling up the following details

Name & Details ▼

Instance Name* ⓘ

Description Availability Zone

 nova ▼

Count*

IMPORTANT: You must provide a unique instance name for identification in the dashboard. If you are choosing an availability zone and planning to 'boot from volume' in the Source step, ensure the selected availability zone matches the one where your bootable volume resides.

Step 4: Select Boot Source

Instance source is the template used to create an instance. You can use an image, a snapshot of an instance (image snapshot), a volume or a volume snapshot (if enabled). You can also choose to use persistent storage by creating a new volume.

Source ▼

Select Boot Source* ⓘ

Create New Volume Yes No

Volume Size (GB)

Delete volume on instance delete Yes No

Available Images 2

test			
Last Update	Size	Format	Visibility
10/19/23 09:12 AM	393	ami	Public

1. In the dropdown menu **Image** will be selected by default.
2. Prior to selecting your preferred image, configure whether to create a **New Volume** by selecting either "Yes" or "No".
3. For new volume, include **Volume Size** (in Gigabytes).

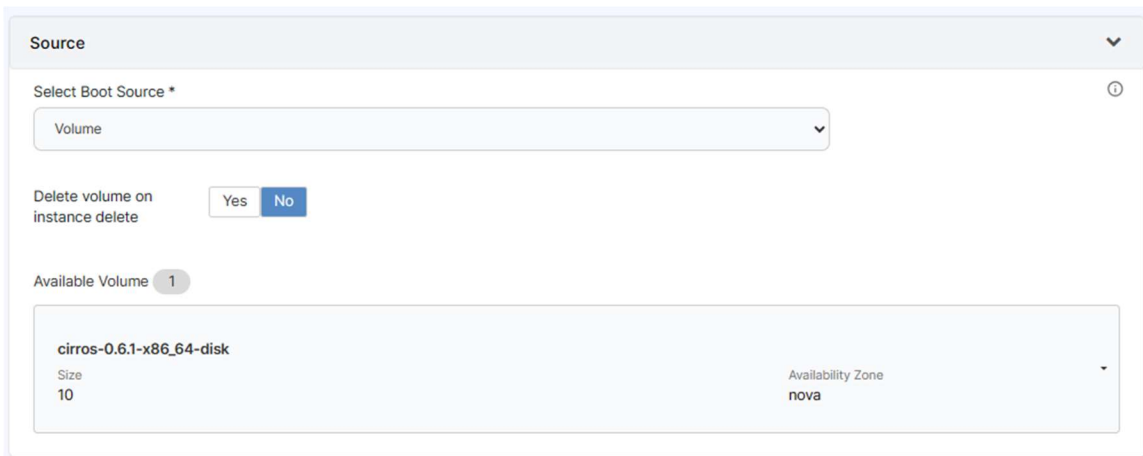
IMPORTANT: By default, the option will be selected for **Yes** and **1GB** of volume will be automatically selected unless the user select **No**. Size can be adjusted, either by **typing manually** or through the **increment / decrement** button.

4. Select (*Yes/No*), whether the created volume should be retained or deleted upon instance deletion.

IMPORTANT: By default, the option will be selected for **No** as it is very crucial that the user data is backed-up even if the instances remain discontinued. Unless the user does not wish to keep a backup, they can select **Yes**.

5. Select the **Image (OS)** of your choice from **Available Images** (*i.e., Ubuntu 18, Ubuntu 20, CentOS etc.*).

Step 4.1: Select Volume as Boot Source



The screenshot shows a configuration window titled 'Source'. At the top, there is a dropdown menu currently showing 'Volume'. Below this, there is a section for 'Delete volume on instance delete' with two buttons: 'Yes' and 'No', where 'No' is selected. Underneath, it says 'Available Volume' with a count of '1'. A table lists the available volume:

Volume Name	Size	Availability Zone
cirros-0.6.1-x86_64-disk	10	nova

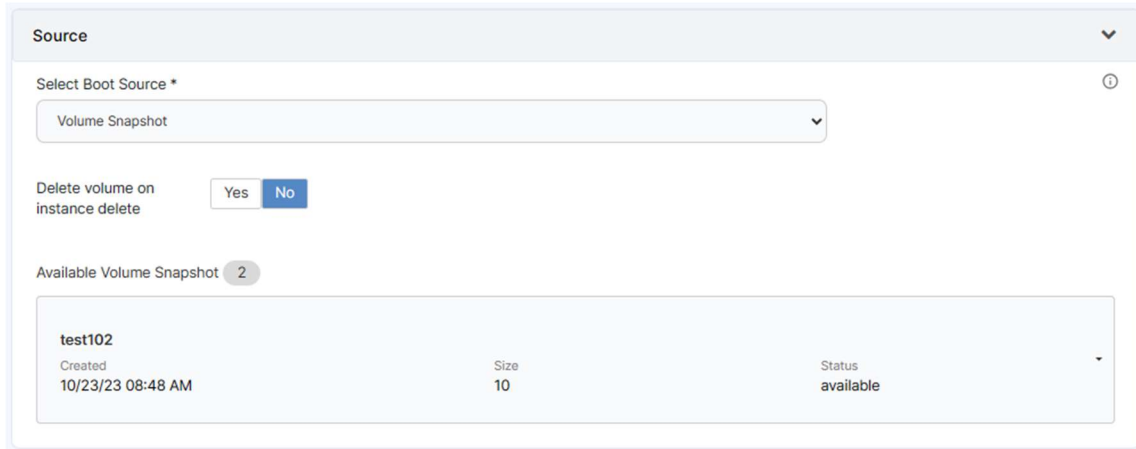
1. Select boot source as **Volume** from the dropdown.
2. Select (*Yes/No*), whether the created volume should be retained or deleted upon instance deletion.

IMPORTANT: The initial option provides the choice to safeguard the volume in case of instance deletion. By default, it is set to **NO**, indicating that the volume won't be deleted unless you manually select **YES**.

3. Select a **Volume** from the dropdown.

NOTE: In the dropdown menu, you'll find a list of your saved volumes.

Step 4.2: Select Volume Snapshot as Boot Source



Source

Select Boot Source *

Volume Snapshot

Delete volume on instance delete Yes No

Available Volume Snapshot 2

test102	Size	Status
Created 10/23/23 08:48 AM	10	available

1. Select **Volume Snapshot** to launch an instance from a pre-saved Volume Snapshot.
2. Select *(Yes/No)*, whether the created volume should be retained or deleted upon instance deletion.

IMPORTANT: The initial option provides the choice to safeguard the volume in case of instance deletion. By default, it is set to **NO**, indicating that the volume won't be deleted unless you manually select **YES**.

3. Select a **Volume Snapshot** from the dropdown.

NOTE: In the dropdown menu, you'll find a list of your saved volumes-snapshots. Volume snapshots are used to create consistent backups, preserving data integrity, and are especially useful for critical workloads like large databases or file systems spanning multiple Elastic Block Store (EBS) volumes.

IMPORTANT: When creating an instance, you have the flexibility to select a boot source that suits your storage needs. Consider the following options:

For Ephemeral Storage (Data Lost on Instance Deletion):

1. **Image:** Use an image to boot the instance.
2. **Instance Snapshot:** Use an instance snapshot to boot the instance.

For Persistent Storage (Data Saved on Instance Deletion):

4. **Image (with 'Create New Volume' checked):** Utilize an image to boot the instance and create a new volume to store instance data. You can specify the volume size and whether to delete the volume when the instance is deleted.
5. **Volume:** Select an existing volume for instance storage. You can choose whether to delete the volume upon instance deletion.
(**Note:** Only one instance can be launched with this option)
6. **Volume Snapshot:** Use a volume snapshot to boot the instance, while also creating a new volume to preserve instance data. You can choose whether to delete the volume when the instance is deleted.

Choose the option that best aligns with your storage and data preservation requirements when setting up your instance.

Step 5: Choose a Flavor

1. Select a **Flavor** from the dropdown.

Flavor						
Available Flavor 12						
m1.tiny						
VCPUS	RAM	Total Disk	Root Disk	Ephemeral Disk	Public	
1	512 MB	1 GB	1 GB	0 GB	Yes	

NOTE: Flavors determine the size of your instance, including compute, memory, and storage capacity. In this section, choose specific hardware features for your instance, such as VCPUs, RAM, and Disk Size. Ensure the selected flavor meets your workload requirements. Flavors with insufficient resources are marked with a warning icon. Contact your administrator for custom flavors tailored to your project.

Step 6: Choose a Network

1. Select a **Network** from the dropdown.

NOTE: In the initial step (*Step 1: Network Setup and Interface Attachment*), users need to establish a network interface and link it to a router. To ensure a successful instance launch, users should choose the designated network interface, such as "Testing-01," from the dropdown menu or opt for any previously created interface. This decision is crucial for the seamless execution of the instance.

Networks

Available Networks 3

Testing-01

Search Networks

	Subnets Associated	Shared	Admin State	Status
<input type="checkbox"/>	shared-subnet	Yes	UP	ACTIVE
<input checked="" type="checkbox"/>	Testing-01 Public	Yes	UP	ACTIVE
<input type="checkbox"/>	private-subnet	No	UP	ACTIVE

Network Types and Key Features

Networks provide the communication channels for instances in the cloud. You can select ports instead of networks or a mix of both. In the network section user can select whether they want to launch their instance via **public** / **private network** or both. In our cloud environment, these are network types to consider:

Public Networks:

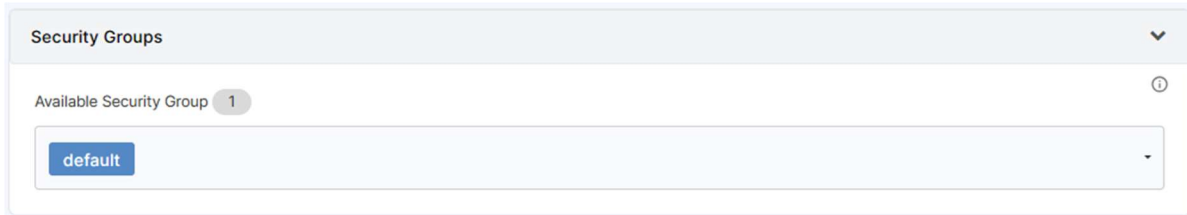
- **Provider Networks:** Admin-created networks tied to physical data center resources.
- **External Networks:** Admins set up networks for external communication with the data center.
- **Floating IPs:** Allow instances to be accessible from external networks.

Shared Networks:

- **Project Networks:** User-created, isolated networks for individual projects.
- **Subnet:** Defines sub-sections within a network.
- **Shared Networks:** Offer network access to all project users.
- **Admin State:** Set to Up for network availability, down to restrict access.
- **Status:** Reflects the network's active connection for assessing availability.

Step 7: Choose a Security Group

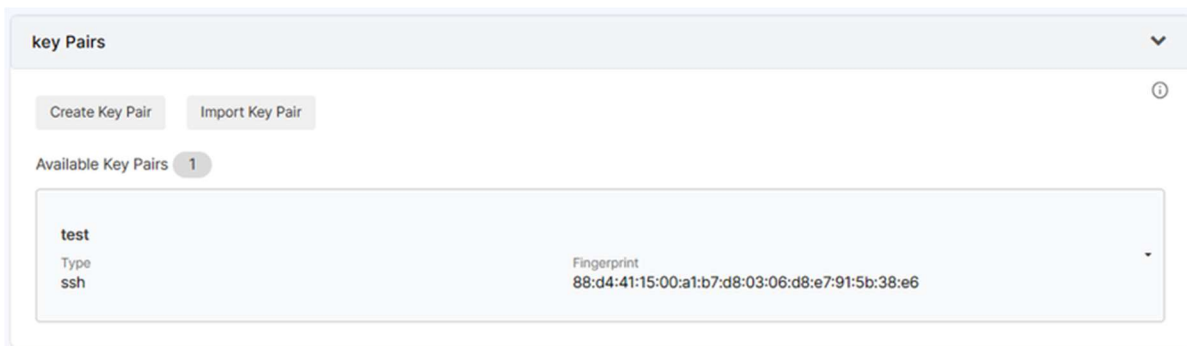
1. Select a **Security Group** from the dropdown.



The screenshot shows a 'Security Groups' panel with a dropdown menu. The dropdown is open, showing a single option labeled 'default'. Above the dropdown, it says 'Available Security Group 1'.

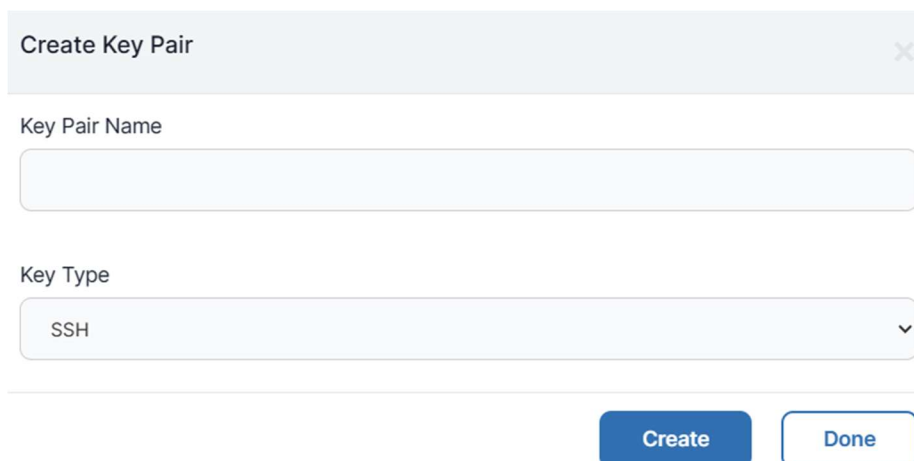
NOTE: Choose the security groups for launching the instance. Select your desired group from the dropdown menu. Security groups manage network traffic and consist of IP filter rules. Additional rules can be added in the Network | Security Groups view. Each project has specific security groups, not shareable across projects. Associate a security group before launch for full post-deployment access, otherwise, access may be limited to a VNC console.

Step 8: Choose Key Pairs



The screenshot shows a 'key Pairs' panel with two buttons: 'Create Key Pair' and 'Import Key Pair'. Below the buttons, it says 'Available Key Pairs 1'. A dropdown menu is open, showing a single key pair named 'test' with a type of 'ssh' and a fingerprint of '88:d4:41:15:00:a1:b7:d8:03:06:d8:e7:91:5b:38:e6'.

Step 8.1: Create Key Pair



The screenshot shows a 'Create Key Pair' dialog box. It has a title bar with a close button. Below the title bar, there are two input fields: 'Key Pair Name' and 'Key Type'. The 'Key Type' dropdown is set to 'SSH'. At the bottom right, there are two buttons: 'Create' and 'Done'.

1. Input **Key Pair Name**.
2. Select **Key Type** from the dropdown.
3. Click **Create** button in order to proceed.

Create Key Pair
✕

Key Pair Name

Key Type

SSH
▼

Private Key

```
-----BEGIN RSA PRIVATE KEY-----
MIIeOwIBAAKCAQEAzLoHsw9KG2LbtglruoROQ/QK21oprTCUnhSZUICATTBFj1d6
ccBZiH12CCthCHtilNpffW/g+joUqI xv6yUeEBb/00VS/mUuBYt3TYkZTNEQYFWU
izbjjoyqDHzcWSKqu9vD4deeWtm5SEgiAC1w0e8Y95yce/PJeC8yeG7Bh936VjU4
J8tQzWoOZSvZIEphJQr8DYIt+fDIYWHEXnNduw62+n303a0ekrVu85azNBTmo7u1
```

Create

Copy

Done

IMPORTANT: Once user clicks on **Create**, a “Private Key” will be given to the user. User must keep a copy of this key as this key is deeply associated with the created **Key Pair**.

4. Click **Copy** in order to copy the “Private Key”.
5. Click **Done** to close the module, once everything is done.

WARNING: Once the module is closed user will not be able to access the “Private Key” again. User must copy the public key and store it somewhere safe.

Step 8.2: Import Key Pair

1. Input **Key Pair Name**.
2. Select the **Key Type** from the dropdown.
3. Click on the **Browse** icon in order to **select** and **load** the public key from the local device.

4. **Copy** and **Paste** the “Public Key” in the description box below.
5. Click **Submit** in order to import the “Key Pair”.
6. Click **Close** in order to cancel the importing process.

Import Key Pair ✕

Key Pair Name

Key Type
SSH ▾

Load Public key from a file

Public key

Step 8.3: Select an Existing Key Pair

NOTE: Users can see the available “Key Pairs” in the dropdown menu. For “Create” and “Import” action the specific key pair will automatically be added on the dropdown and remain selected.

1. Click on the dropdown to select any available “Key Pairs” from the list.

Generating Key Pairs

To create key pairs, you have two options:

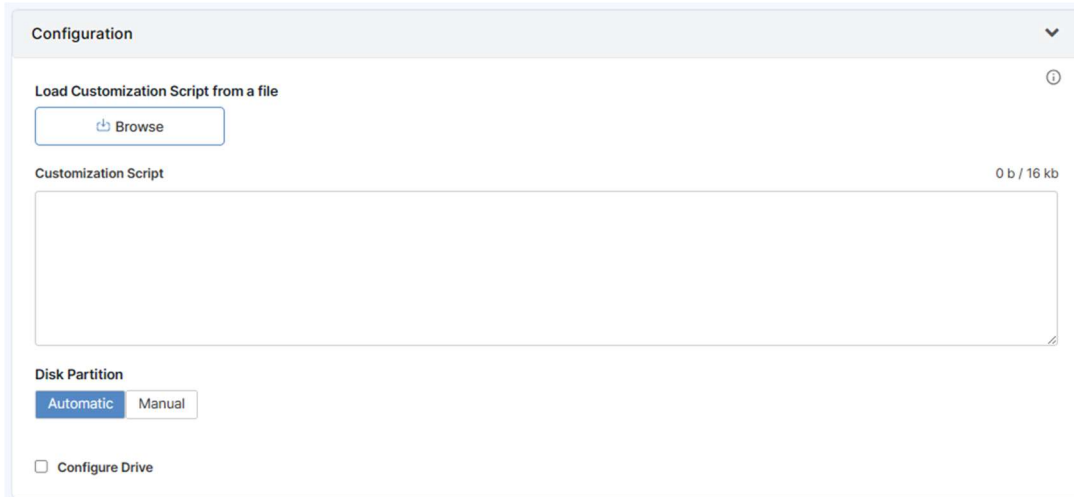
Linux System: Generate a key pair using the `ssh-keygen` command, like this: `ssh-keygen -t rsa -f cloud.key`. This command produces a private key (`cloud.key`) and its corresponding public key (`cloud.key.pub`).

Windows System: If you're using Windows, use **PuTTYGen** to create private/public keys. Launch the PuTTY Key Generator, save the keys, and copy the public key from the red-highlighted box into your `.ssh/authorized_keys` file.

Step 9: Configuration

You can customize your instance after it has launched using a **Customized Script**.

1. You can either upload a script manually or type a customized script in the description box (*under 16 kb*).
2. You can select if you want the **Disk Partition** to be done either automatically or you want to don it manually. By default, it will be selected as automatic.
3. Click on the [checkbox](#) below to **configure drive**.



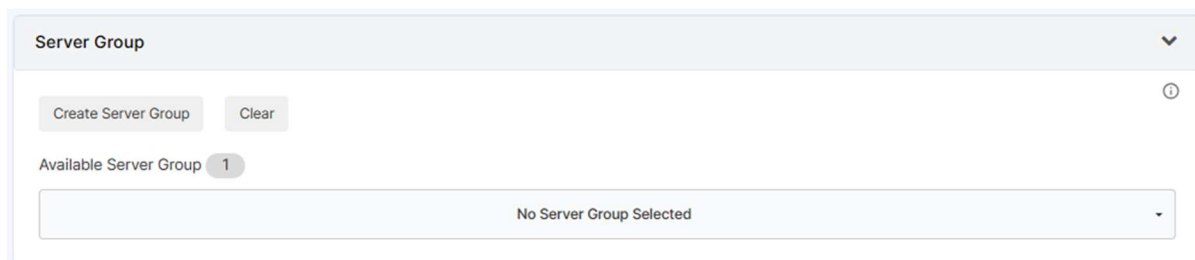
The screenshot shows the 'Configuration' panel with the following elements:

- Configuration** (dropdown menu)
- Load Customization Script from a file** (with an information icon)
- Browse** button
- Customization Script** (text area, 0 b / 16 kb)
- Disk Partition** (with **Automatic** and **Manual** buttons)
- Configure Drive**

NOTE: Custom scripts can be attached to instances for specific actions upon launch, such as adding a public key to a user account. You can type your script directly or load it from a file if your browser supports the HTML5 File API, with a file size limit of 16 KB. Additionally, when launching an instance, choose between "Automatic" for a single partition on the resized disk or "Manual" to create multiple partitions. To write metadata to a special configuration drive, simply check the "Configuration Drive" box; the instance will access the metadata upon boot.

Step 10: Server Group

1. Choose the **server group** to launch the instance.
2. Select an existing group from the "**dropdown**" menu.
3. Create a new server group with the "**Create Server Group**" button.
4. To clear a group, select an existing one, and click "**Clear**".



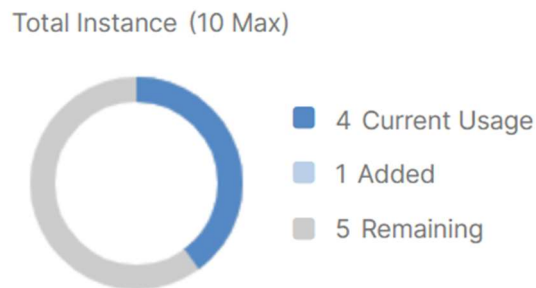
The screenshot shows the 'Server Group' panel with the following elements:

- Server Group** (dropdown menu)
- Create Server Group** and **Clear** buttons
- Available Server Group** 1 (count)
- No Server Group Selected** (dropdown menu)

NOTE: Server groups define collections of VM's so that the entire collection can be given specific properties. For example, the policy of a server group may specify that VM's in this group should not be placed on the same physical hardware due to availability requirements. Server groups are project-specific and cannot be shared across projects.

Step 11: Launch the Instance

Once you are okay with everything click on the **Launch Instance** button in order to create your new instance. Once everything is okay it will redirect you to the **Instances** page. Here you can see a new instance being created.



IMPORTANT: Make sure you are going through all the options with **asterisk (*)** marking. Server groups, Configuration, key Pairs are optional for instance creation as user can update them later. Once you are done with all these steps, make sure to look for the creation summary at the right-hand side of the screen.

IMPORTANT: Users have the ability to generate a maximum of **10** instances, and the available slots are visually displayed through a doughnut chart for easy comprehension.

2.4.1.3 Instance → Actions → Create Snapshot

"Create Snapshot" refers to capturing a point-in-time copy of a system, such as a virtual machine or storage volume, for backup and replication purposes.

1. Go to **Instance** page.
2. Click on the **“Create Snapshot”** button associated with each instance available on the list.

After successful creation user will be redirected to the **Image** page.

Image > Images

Project (3) Non-Public from Other Projects (3) Public (2) Delete Images Create Image

<input type="checkbox"/>	Image Name	Type	Visibility	Status	Public	Protected	Format	Size	Actions
<input type="checkbox"/>	Jhinku	Snapshot	private	Active	No	No	QCOW2	0 bytes	Launch ▾
<input type="checkbox"/>	ShotNull	Snapshot	private	Active	No	No	QCOW2	0 bytes	Launch ▾
<input type="checkbox"/>	Tha Da	Snapshot	private	Active	No	No	QCOW2	0 bytes	Launch ▾

NOTE: If there are no item available on the list, then “**Launch an Instance**” first.

2.4.1.4 Instance → Actions (Dropdown) → Associate Floating IP

"Associate Floating IP" refers to the process of connecting a floating IP address with a specific computing instance in a network. This action enables the instance to be accessed externally, providing a way for users to connect to the instance from the internet. It is commonly used in cloud computing environments to enhance accessibility and communication with instances.

Step 1: Open the “Manage Floating IP” Tab

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Associate Floating IP**”.

Manage Floating IP Associations ✕

IP Address ^{*}

Select an IP address ▾ +

Port to be associated ^{*}

PORT TESTING: 192.168.233.91 ▾

Select the IP address you wish to associate with the selected instance or port.

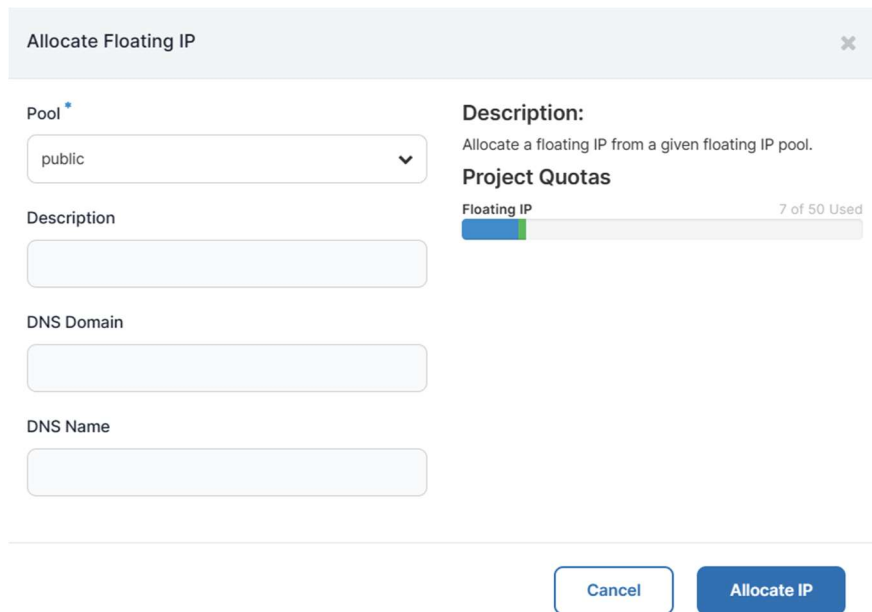
Cancel Associate

Step 2: Create or Select New IP

1. Click on the “**Plus**” icon.

NOTE: If there no IP to choose from the **dropdown**, click on the “**plus**” icon and it pop-up the “**Allocate Floating IP**” tab.

2. Select a **Pool** from the dropdown menu.
3. Input “**Description, DNS Domain & DNS Name**”.
4. Click “**Allocate IP**”.



NOTE: IP can be created with only “**Pool**” selection and it will redirect user back to the “**Manage Floating IP**” tab. Click “**Cancel**” if you don’t want to allocate IP.

5. Select an IP address from the “**IP Address**” dropdown.
6. Select a port from “**Port to be Associated**” dropdown.
7. Click “**Associate**”.
8. Click “**Cancel**” if you don’t want to associate IP.

Port to be associated *

PORT TESTING: 192.168.233.91 ▼

Select a port
 PORT TESTING: 192.168.233.173
 PORT TESTING: 192.168.233.91

2.4.1.5 Instance → Actions (Dropdown) → Attach Interface

"Attach Interface" involves connecting or associating a network interface with a computing instance. This action is typically performed to enable communication, manage network configurations, or enhance connectivity for the instance within a cloud computing environment.

Step 1: Open the “Attach Interface” Tab

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, **“Attach Interface”**.

Attach Interface
✕

The way to specify an interface *

by Network (and IP address) ▼

Network *

Select Network ▼

Fixed IP Address ⓘ

Description:

Select the network for interface attaching.

Cancel

Attach Interface

Step 2: Attach a New Interface

1. Select **“The Way to Specify an Interface”** from the dropdown.
2. Select a **“Network”** from the dropdown.
3. Input **“Fixed IP Address”** in the input field.
4. Click **“Attach Interface”**.
5. Click **“Cancel”** if you don't want to attach any interface.

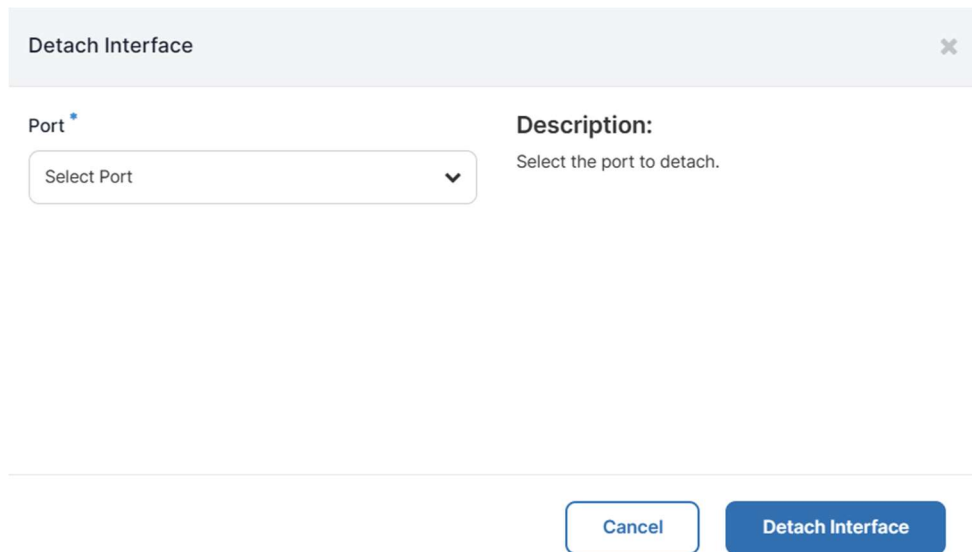
IMPORTANT: Only networks created from the "**Network Interface**" page under "**Network and Security**" will appear in the dropdown.

2.4.1.6 Instance → Actions (Dropdown) → Detach Interface

"Detach Interface" refers to the action of disconnecting or disassociating a network interface from a computing instance. This is often done to modify network configurations, update settings, or manage network resources efficiently.

Step 1: Open the “Detach Interface” Tab

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Detach Interface**”.



The screenshot shows a dialog box titled "Detach Interface" with a close button (X) in the top right corner. Below the title bar, there are two main sections. On the left, under the label "Port *", there is a dropdown menu with the text "Select Port" and a downward arrow. On the right, under the label "Description:", there is the text "Select the port to detach.". At the bottom of the dialog, there are two buttons: a light blue "Cancel" button and a dark blue "Detach Interface" button.

Step 2: Detach an Interface

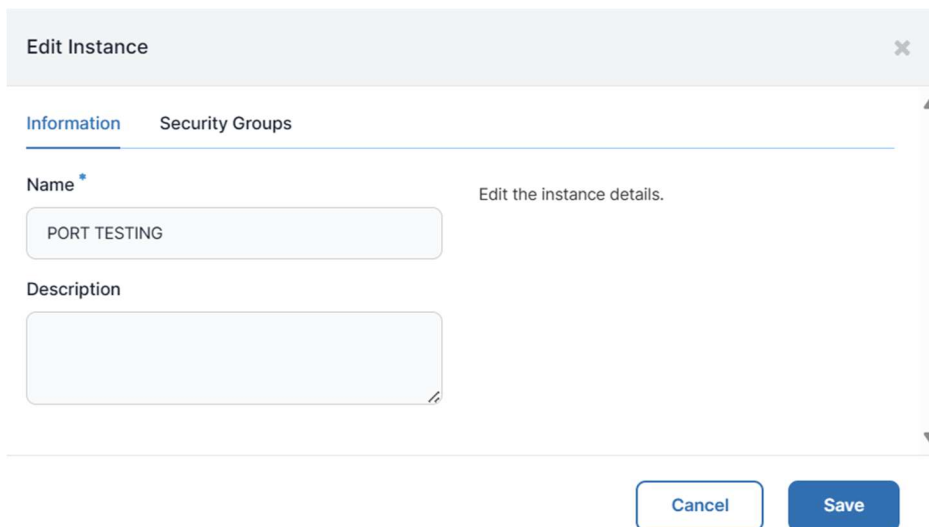
1. Select a “**Port**” to detach, from the dropdown.
2. Click “**Detach Interface**”.
3. Click “**Cancel**” if you don’t want to attach any interface.

2.4.1.7 Instance → Actions (Dropdown) → Edit Instance

To change details for an instance, like its "**Name**" and "**Description**", use this module. Make sure to give correct information, especially in the "Name" field, as it's essential for properly identifying the instance.

Step 1: Open “Information” under Edit Instance Tab

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Edit Instance**”.



Step 2: Edit Information

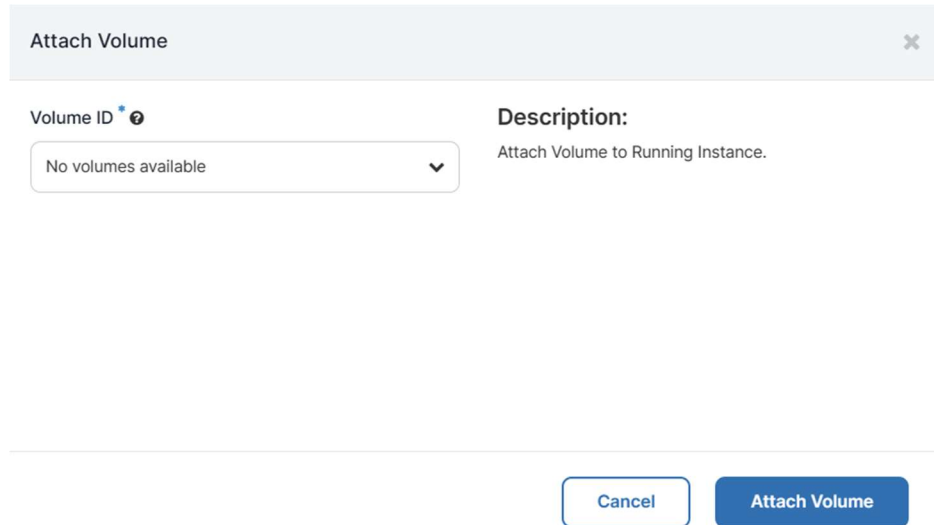
1. Input a new “**Name**”.
2. Update the “**Description**”.
3. Click “**Save**”.
4. Click “**Cancel**” if you don’t want to edit information.

2.4.1.8 Instance → Actions (Dropdown) → Attach Volume

"Attach Volume" refers to the process of connecting or associating a storage volume with a specific instance in a cloud computing environment. This action allows the instance to access and use the attached volume for additional storage capacity or data management.

Step 1: Open the “Attach Volume” Tab

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Attach Volume**”.



Attach Volume

Volume ID ⓘ
No volumes available

Description:
Attach Volume to Running Instance.

Cancel Attach Volume

Step 2: Attach a Volume

1. Select “**Volume ID**” from the dropdown.
2. Click “**Attach Volume**”.
3. Click “**Cancel**” if you don’t want to attach volume.

2.4.1.9 Instance → Actions (Dropdown) → Detach Volume

"Detach Volume" refers to the action of disconnecting or disassociating a storage volume from a computing instance. This is commonly done to make the volume available for use with other instances or to perform maintenance tasks. After detaching, the volume is no longer connected to the specific instance and can be attached to another if needed.

Step 1: Open the “Detach Volume” Tab

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Detach Volume**”.

Detach Volume ✕

Volume ID ^{*} ⓘ

Select a volume ▼

Description:
Detach Volume from Running Instance.

Cancel Detach Volume

Step 2: Attach a Volume

1. Select “**Volume ID**” from the dropdown.
2. Click “**Detach Volume**”.
3. Click “**Cancel**” if you don’t want to attach volume.

2.4.1.10 Instance → Actions (Dropdown) → Update Metadata

"Metadata" in the context of computing typically refers to additional information or data about data. In cloud computing, metadata can include details about instances, resources, or objects, providing essential context and configuration information. It plays a crucial role in managing and organizing various elements within a cloud environment.

Step 1: Open the “Update Instance Metadata” Tab

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Update Metadata**”.

Update Instance Metadata ✕

You can specify resource metadata by moving items from the left column to the right column. In the left column there are metadata definitions from the Glance Metadata Catalog. Use the "Custom" option to add metadata with the key of your choice.

Available Metadata	Existing Metadata
<input type="text" value="Filter"/> <input type="button" value="Q"/>	<input type="text" value="Filter"/> <input type="button" value="Q"/>
<input type="text" value="Custom"/> <input type="button" value="+"/>	<input type="text" value="sw_database_couch..."/> <input type="button" value="-"/>
<input type="button" value="➤ Database Software"/> <input type="button" value="+"/>	<input type="text" value="sw_database_couch..."/> <input type="text" value="5984"/> <input type="button" value="-"/>
<input type="button" value="➤ Runtime Environment"/> <input type="button" value="+"/>	<input type="text" value="sw_database_couch..."/> <input type="button" value="-"/>
<input type="button" value="▼ Web Servers"/> <input type="button" value="+"/>	<input type="text" value="sw_runtime_php_ver..."/> <input type="button" value="-"/>
<input type="button" value="➤ Apache HTTP Server"/> <input type="button" value="+"/>	<input type="text" value="Web Servers > Nginx > HTTP Port"/>
<input type="button" value="➤ IIS"/> <input type="button" value="+"/>	<input type="text" value="sw_webserver_nginx..."/> <input type="text" value="80"/> <input type="button" value="⌵"/> <input type="button" value="-"/>
	<input type="text" value="sw_webserver_nginx..."/> <input type="text" value="443"/> <input type="button" value="-"/>
	<input type="text" value="sw_webserver_nginx..."/> <input type="button" value="-"/>

Nginx

Nginx (pronounced 'engine-x') is an open source reverse proxy server for HTTP, HTTPS, SMTP, POP3, and IMAP protocols, as well as a load balancer, HTTP cache, and a web server (origin server). The nginx project started with a strong focus on high concurrency, high performance and low memory usage. It is licensed under the 2-clause BSD-like license and it runs on Linux, BSD variants, Mac OS X, Solaris, AIX, HP-UX, as well as on other *nix flavors. It also has a proof of concept port for Microsoft Windows. (<http://en.wikipedia.org/wiki/Nginx>)

Step 2: Select from Available Metadata or Create a Custom

All available metadata is displayed in the "Available Metadata" section. Users can also create custom metadata from this section. Any selected/custom metadata will move to the "Existing Metadata" section.

1. Click on the **"Plus"** icon to select any metadata.

NOTE: In each dropdown, there are nested lists. Browse through the dropdown to select specific metadata. To choose all metadata from a particular dropdown, select the parent item from the list (e.g., *Database Software, Runtime Environment & Web Servers*).

2. For **custom metadata**, input a title for the metadata in the input field and click **"Plus"**.

3. Enter specific keywords in the filter field to precisely identify any metadata.

Step 3: Update or Remove Existing Metadata

Selected or custom metadata can be viewed in the "Existing Metadata" section. Upon removal, they will return to the available section. In this section, users can also update metadata information.

1. Hover over each item on the list to identify each metadata.
2. Click on the “**Minus**” icon to remove any selected metadata.
3. For, **Database Software**:
 - Place an admin-user title in the input field for “**Admin User**”.
 - Use increment/decrement button or type manually to update “**Listen Port**”.
 - Include “**Version**” number, in the input field.
4. For, **Runtime Environment**:
 - Include “**Version**” number, in the input field.
5. For, **Web Servers**:
 - Use increment/decrement button or type manually to update “**HTTP Port**”.
 - Use increment/decrement button or type manually to update “**HTTPS Port**”.
 - Include “**Version**” number, in the input field.
6. Enter specific keywords in the filter field to precisely identify any metadata.

Step 4: Confirm Update

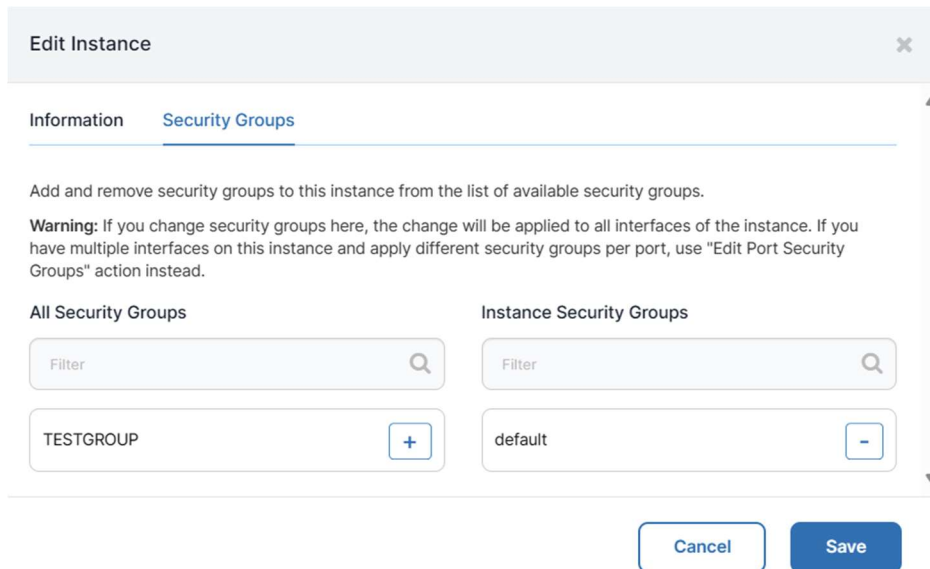
1. Click “**Save**”.
2. Click “**Cancel**” if you don’t want to update metadata.

2.4.1.11 Instance → Actions (Dropdown) → Edit Security Groups

"Security Groups" are sets of IP filter rules that manage inbound and outbound network traffic to and from instances. They serve as a key component in network security, defining the allowed communication and ensuring a secure environment for instances within a project.

Step 1: Open “Security Groups” under Edit Instance Tab

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Edit Security Groups**”.



Edit Instance [Close]

Information **Security Groups**

Add and remove security groups to this instance from the list of available security groups.

Warning: If you change security groups here, the change will be applied to all interfaces of the instance. If you have multiple interfaces on this instance and apply different security groups per port, use "Edit Port Security Groups" action instead.

All Security Groups	Instance Security Groups
Filter [Search]	Filter [Search]
TESTGROUP [+]	default [-]

[Cancel] [Save]

Step 2: Select of Remove a Security Group

1. Use proper keywords to automatically **Filter** any security groups.
2. Click on the “**Plus**” icon to select a security group.
3. Click on the “**Minus**” icon to remove a security group.
4. Click “**Save**”.
5. Click “**Cancel**” if you don’t want to add/remove any security groups.

IMPORTANT: Only security groups created from the "Security Groups" page under "Network and Security" will appear in the dropdown. Security Groups can't be selected unless an interface is attached.

NOTE: Available security groups are shown under "All Security Groups" and move to "Instance Security Groups" upon selection. Conversely, for removing a security group, it moves back to the available section.

2.4.1.12 Instance → Actions (Dropdown) → Edit Port Security Groups

"Port Security Groups" typically refer to a set of rules and configurations applied to network ports to control the flow of traffic and enhance security. In cloud computing or networking, port security groups are commonly used to manage and restrict communication between different instances or services.

Step 1: Open the “Interface” Tab

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, **“Edit Port Security Groups”**.
3. Click “Name” to open the “Overview” tab for each item in the list.

IMPORTANT: Interface list will be empty unless an interface is attached.

NOTE: “Allocated Address Pairs” tab can be accessed once user is in the Overview tab.

PORT TESTING (cirros-0.6.1-x86_64-disk)

Overview Interfaces Log Console Action Log

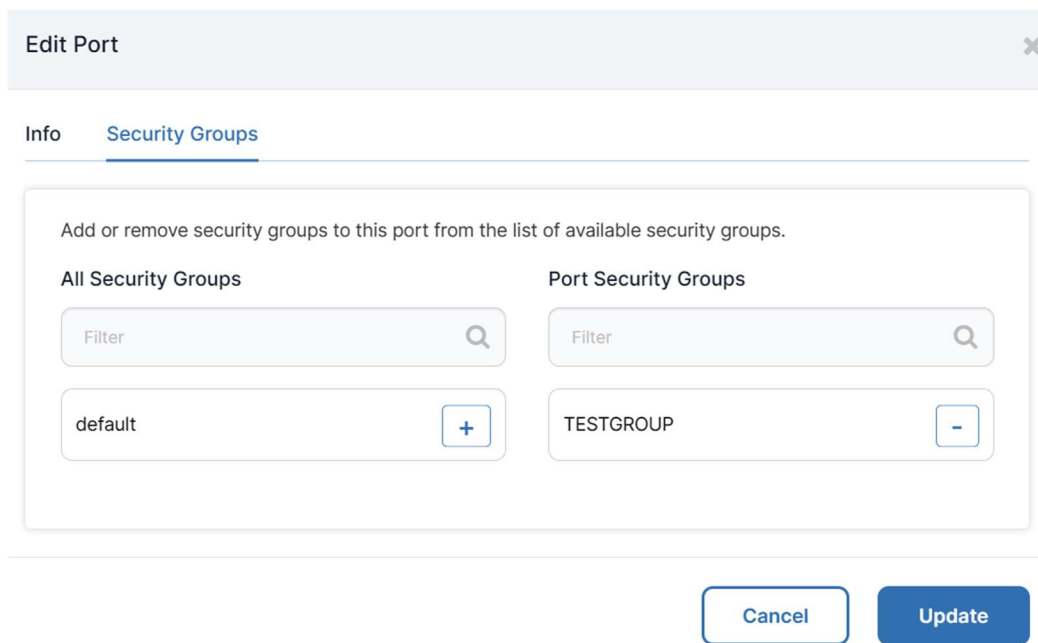
Name	Network	Fixed IPs	MAC Address	Status	Admin State	Actions
(5dd8ec77-40a1)	testnetwork	<ul style="list-style-type: none"> 192.168.233.91 fd70:614b:38b0:1::e1 	fa:16:3e:28:0f:04	Active	UP	Edit Security Groups ▾
(cdcc5f3d-5a2c)	shared	<ul style="list-style-type: none"> 192.168.233.173 	fa:16:3e:66:c5:5d	Active	UP	Edit Security Groups ▾

Step 2: Add/Remove Security Groups for Port

1. Click on **“Edit Security Groups”**.
2. Use proper keywords to automatically **Filter** any security groups.
3. Click on the **“Plus”** icon to select a security group.
4. Click on the **“Minus”** icon to remove a security group.
5. Click **“Save”**.
6. Click **“Cancel”** if you don’t want to add/remove any security groups.

IMPORTANT: Only security groups created from the "Security Groups" page under "Network and Security" will appear in the dropdown.

NOTE: Available security groups are shown under "All Security Groups" and move to "Port Security Groups" upon selection. Conversely, for removing a security group, it moves back to the available section.



Edit Port

Info Security Groups

Add or remove security groups to this port from the list of available security groups.

All Security Groups Port Security Groups

Filter Filter

default TESTGROUP

Cancel Update

Step 3: Update Port Information

1. Click on "Edit Port".
2. Input port "Name" in the input field.
3. Check or uncheck "Enable Admin State" to permit or block the networking service from forwarding packets on the port.
4. Select "Binding: VNIC Type" (*bound to the networking port*) from the dropdown.
5. Check or uncheck "Port Security" to enable or disable anti-spoofing rules for the port.
6. Click "Update".
7. Click "Cancel" if you don't want to add/remove any security groups.

Edit Port ✕

Info
Security Groups

Name

Enable Admin State ⓘ

Binding: VNIC Type

Normal
▼

Port Security

You can edit the properties of your port here.

Enable Admin State
When the admin state of the port is enabled, the networking service forward packets on the port. Otherwise, it does not forward any packets on the port.

Binding: VNIC Type
It specifies the VNIC type bound to the networking port.

Port Security
Enables anti-spoofing rules for the port if enabled. In addition, if port security is disabled, security groups on the port will be automatically cleared. When you enable port security of the port, you may want to associate some security groups on the port.

Security Groups
You can add or remove security groups associated with the port in the next tab (if the port security is enabled for the port).

Cancel

Update

2.4.1.13 Instance → Actions (Dropdown) → Console

The "Console" tab provides direct access to an online console linked to the instance. It serves as a command shell for controlling the instance. However, the user needs to log in with a username and password to utilize this functionality.

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Console**”.
3. Click on the “**Console**” itself, to access it.
4. Input **Username** and press enter.
5. Input **Password** and press enter.
6. Continue using console for your instance.

IMPORTANT: The password field will stay empty for security purposes, even when inputting information.

PORT TESTING (cirros-0.6.1-x86_64-disk)

Overview Interfaces Log **Console** Action Log

Instance Console

If console is not responding to keyboard input: click the grey status bar below. [Click here to show only console](#)
To exit the fullscreen mode, click the browser's back button.

```

Connected to QEMU (instance-0000001d)
[ 0.798329] eun: security.selinux
[ 0.798580] eun: security.SMACK64
[ 0.798690] eun: security.SMACK64EXEC
[ 0.798835] eun: security.SMACK64TRANSMUTE
[ 0.798989] eun: security.SMACK64MMAP
[ 0.791130] eun: security.apparmor
[ 0.791264] eun: security.ina
[ 0.791412] eun: security.capability
[ 0.791584] eun: HWC atfnc: 0x1
[ 0.798313] PM: Magic number: 15:673:470
[ 8.806459] RAS: Correctable Errors collector initialized.
[ 8.844899] Freeing unused decrypted memory: 2036K
[ 8.921206] Freeing unused kernel image (initmem) memory: 3224K
[ 8.922740] Write protecting the kernel read-only data: 30720k
[ 8.923964] Freeing unused kernel image (text/rodata gap) memory: 2036K
[ 8.934373] Freeing unused kernel image (rodata/data gap) memory: 1484K
[ 9.281812] x86/mm: Checked W-X mappings: passed, no W-X pages found.
[ 9.283047] x86/mm: Checking user space page tables
[ 9.617798] x86/mm: Checked W-X mappings: passed, no W-X pages found.
[ 9.618637] Run /init as init process

Further output written to /dev/ttyS0
[ 11.451584] virtio_bk virtio3: [vda] 2097152 512-byte logical blocks (1.07 G
B/1.00 GiB)
[ 11.816863] virtio_gpu virtio0: [drm] drm_plane_enable_fb_damage_clips() not called
[ 11.921371] random: crng init done

login as 'cirros' user. default password: 'gocubsgo'. use 'sudo' for root.
w login:
Password:
$ _
    
```

2.4.1.14 Instance → Actions (Dropdown) → View Log

"View Log" refers to accessing and reviewing the log file associated with an instance. This log provides information about the instance's activities, errors, and events, aiding in troubleshooting and monitoring.

PORT TESTING (cirros-0.6.1-x86_64-disk)

Overview Interfaces **Log** Console Action Log

Instance Console Log

Log Length

```

Nov 13 07:29:48 w daemon.info dhcpcd[242]: eth1: adding route to 192.168.233.0/24
Nov 13 07:29:48 w daemon.info dhcpcd[242]: eth1: adding host route to 169.254.169.254 via 192.168.233.2
Nov 13 07:29:48 w daemon.info dhcpcd[242]: eth1: adding default route via 192.168.233.1
Nov 13 07:29:49 w daemon.info dhcpcd[242]: eth0: leased 192.168.233.91 for 43200 seconds
Nov 13 07:29:49 w daemon.info dhcpcd[242]: eth0: adding route to 192.168.233.0/24
Nov 13 07:29:50 w daemon.info dhcpcd[242]: eth0: adding host route to 169.254.169.254 via 192.168.233.1
Nov 13 07:29:55 w daemon.warn dhcpcd[242]: eth1: no IPv6 Routers available
Nov 13 07:29:56 w daemon.warn dhcpcd[242]: eth0: no IPv6 Routers available
Nov 13 07:30:29 w auth.notice su: = none root: cirros
Nov 13 07:30:36 w authpriv.info dropbear[409]: Running in background
##### debug end #####

  /---\  /---\  /---\  /---\  /---\
 /  /  /  /  /  /  /  /  /  /  /  /
 \  \  \  \  \  \  \  \  \  \  \  \
  ---  ---  ---  ---  ---
http://cirros-cloud.net

login as 'cirros' user. default password: 'gocubsgo'. use 'sudo' for root.
w login:
    
```

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, **“View Log”**.

3. Input “**Log Length**”.
4. Click “**Go**”.

NOTE: The **Log Length** accepts numerical values and based on that, displays the specified number of lines from bottom to top. For reference, if the log length is set to 3, it will show the last three lines of the log.

5. Click “**View Full Log**” to see the complete log.

2.4.1.15 Instance → Actions (Dropdown) → Rescue Instance

The rescue mode is only for emergency purpose, for example in case of a system or access failure. This will shut down your instance and mount the root disk to a temporary server. Then, you will be able to connect to this server, repair the system configuration or recover your data. You may optionally select an image and set a password on the rescue instance server.

Step 1: Open the “Rescue Instance” Tab

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Rescue Instance**”.

Rescue Instance
✕

Select Image *

cirros-0.6.1-x86_64-disk (20.2 MB) ▼

Password

👁

Description:

The rescue mode is only for emergency purpose, for example in case of a system or access failure.

This will shut down your instance and mount the root disk to a temporary server. Then, you will be able to connect to this server, repair the system configuration or recover your data.

You may optionally select an image and set a password on the rescue instance server.

Cancel

Confirm

Step 2: Rescue an Instance

1. Select “**Instance**” from the dropdown.
2. Input **Password**.
3. Click “**Confirm**”.
4. Click “**Cancel**” if you don’t want to rescue any instance.

2.4.1.16 Instance → Actions (Dropdown) → Pause Instance

"Pausing an instance" involves temporarily halting its operation and freezing its current state. This allows for resource optimization and is reversible, allowing the instance to be later resumed from where it was paused.

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Pause Instance**”.

IMPORTANT: Click on **Resume Instance** to run a paused instance.

2.4.1.17 Instance → Actions (Dropdown) → Suspend Instance

"Suspending an instance" involves pausing its current state, temporarily halting its operation, and freeing up resources. This action is reversible, allowing the instance to be later resumed from where it was suspended.

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Suspend Instance**”.

IMPORTANT: Click on **Resume Instance** to start the instance.

2.4.1.18 Instance → Actions (Dropdown) → Shelve Instance

"Shelving an instance" typically refers to a process where the current state of the instance is saved, and it is then taken offline, releasing resources. This allows for cost savings or resource optimization, and the instance can be later unshelved to resume its previous state.

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Shelve Instance**”.

IMPORTANT: Click on **Unshelve Instance** to unshelve the instance.

2.4.1.19 Instance → Actions (Dropdown) → Resize Instance

In this module, users can easily update the flavor size and opt for a new disk partition. This flexibility allows for adjustments to better suit evolving needs or changing requirements.

Step 1: Open the “Resize Instance” Tab

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Resize Instance**”.

×

Flavor Choice
Advanced Options

Old Flavor

m1.tiny

New Flavor * ⓘ

Select a New Flavor

Select a New Flavor
 m1.nano
 m1.micro
 cirros256
 ds512M
 ds1G
 m1.small
 ds2G
 m1.medium
 ds4G
 m1.large
 m1.xlarge

Flavor Details

Name	
VCPUs	
Root Disk	GB
Ephemeral Disk	GB
Total Disk	GB
RAM	MB

Project Limits

Number of Instances	4 of 10 Used
Number of VCPUs	4 of 20 Used
Total RAM	2,048 of 51,200 MB Used

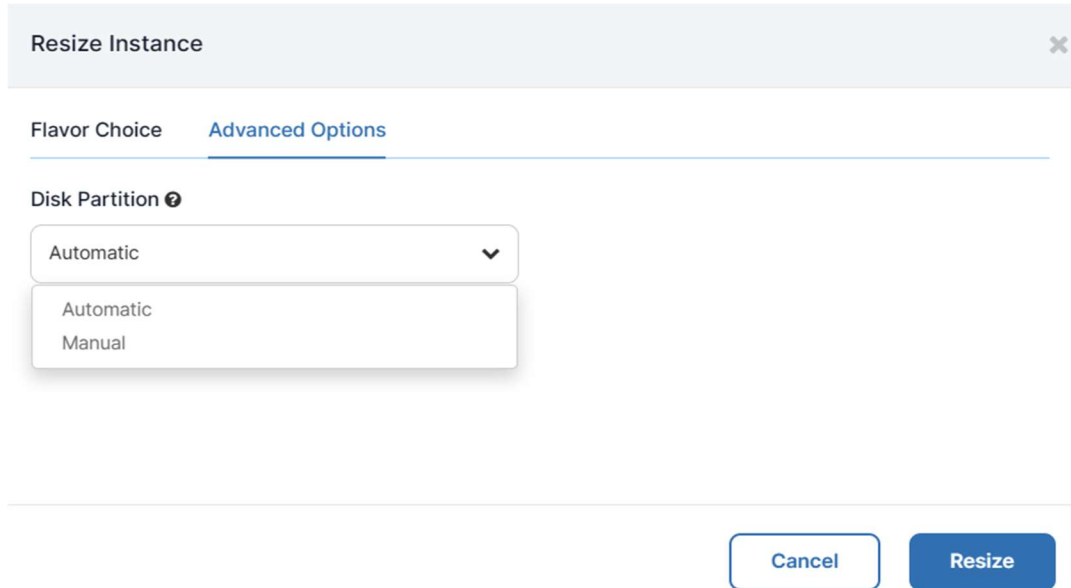
Cancel
Resize

Step 2: Update “Flavor Choice” and “Disk Partition” option.

1. Select a “**New Flavor**” from the dropdown in “**Flavor Choice**” tab.

NOTE: User can see the **Flavor Details** and **Project Limits** (includes “Number of Instances”, “Number of VCPU’s” and “Total RAM” that are being used) in progress bars.

2. Select “Disk Partition” type from the dropdown in “**Advanced Options**” tab.



NOTE: Disk Partition has two options:

- **Automatic:** The entire disk is a single partition and automatically resizes.
- **Manual:** Results in faster build times but requires manual partitioning.

3. Click “**Resize**”.
4. Click “**Cancel**” if you don’t want to rescue any instance.

2.4.1.20 Instance → Actions (Dropdown) → Lock Instance

"Lock Instance" typically refers to restricting access or making an instance temporarily inaccessible for security or administrative reasons. This action prevents any modifications or changes to the instance configuration during the locked state. It is often used to ensure the stability and security of the instance during critical periods.

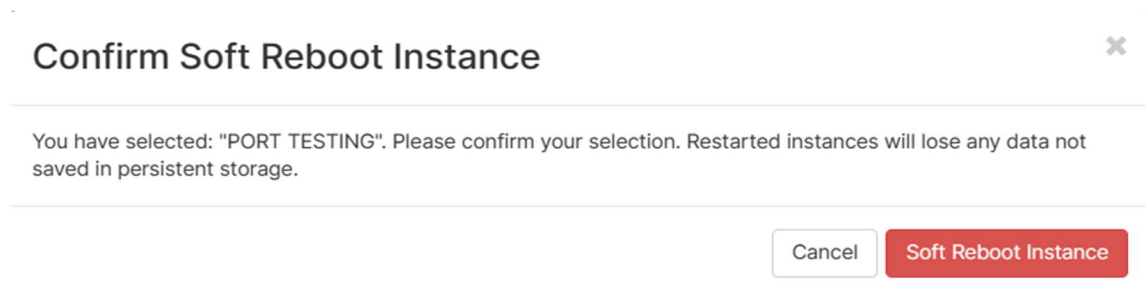
1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Lock Instance**”.

IMPORTANT: Click on **Unlock Instance** to unlock a locked instance.

2.4.1.21 Instance → Actions (Dropdown) → Soft Reboot Instance

A "Soft Reboot Instance" involves restarting the instance in a controlled manner without power-cycling the underlying hardware. This action is performed through software commands, allowing the operating system to gracefully shut down and restart. It is a gentler method compared to a hard reboot, as it aims to minimize disruptions and potential data loss.

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, "**Soft Reboot Instance**".



NOTE: A confirmation module will pop-up, user must confirm to "**Soft Reboot**" any instance.

3. Click "**Soft Reboot Instance**".
4. Click "**Cancel**" if you don't want to soft reboot.

2.4.1.22 Instance → Actions (Dropdown) → Hard Reboot Instance

A "Hard Reboot Instance" involves forcefully restarting the instance by power-cycling the underlying hardware. Unlike a soft reboot, a hard reboot does not rely on the operating system's shutdown procedures. It is a more abrupt method, and while it ensures a restart, it may lead to a less controlled shutdown of the operating system, potentially resulting in data loss or other issues.

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, "**Hard Reboot Instance**".

Confirm Hard Reboot Instance ✕

You have selected: "PORT TESTING". Please confirm your selection. Restarted instances will lose any data not saved in persistent storage.

Cancel

Hard Reboot Instance

NOTE: A confirmation module will pop-up, user must confirm to “**Hard Reboot**” any instance.

3. Click “**Hard Reboot Instance**”.
4. Click “**Cancel**” if you don't want to hard reboot.

2.4.1.23 Instance → Actions (Dropdown) → Shut Off Instance

"Shut Off Instance" refers to the deliberate action of turning off or powering down a computing instance in a controlled manner. This is not a forceful termination like a hard power-off but involves a graceful shutdown, allowing the instance's operating system to complete necessary processes before the shutdown.

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Shut Off Instance**”.

Confirm Shut Off Instance ✕

You have selected: "PORT TESTING". Please confirm your selection. The instance(s) will be shut off.

Cancel

Shut Off Instance

NOTE: A confirmation module will pop-up, user must confirm to “**Shut Off**” any instance.

3. Click “**Shut Off Instance**”.

IMPORTANT: Click “**Start Instance**” to power up any shut-off instance.

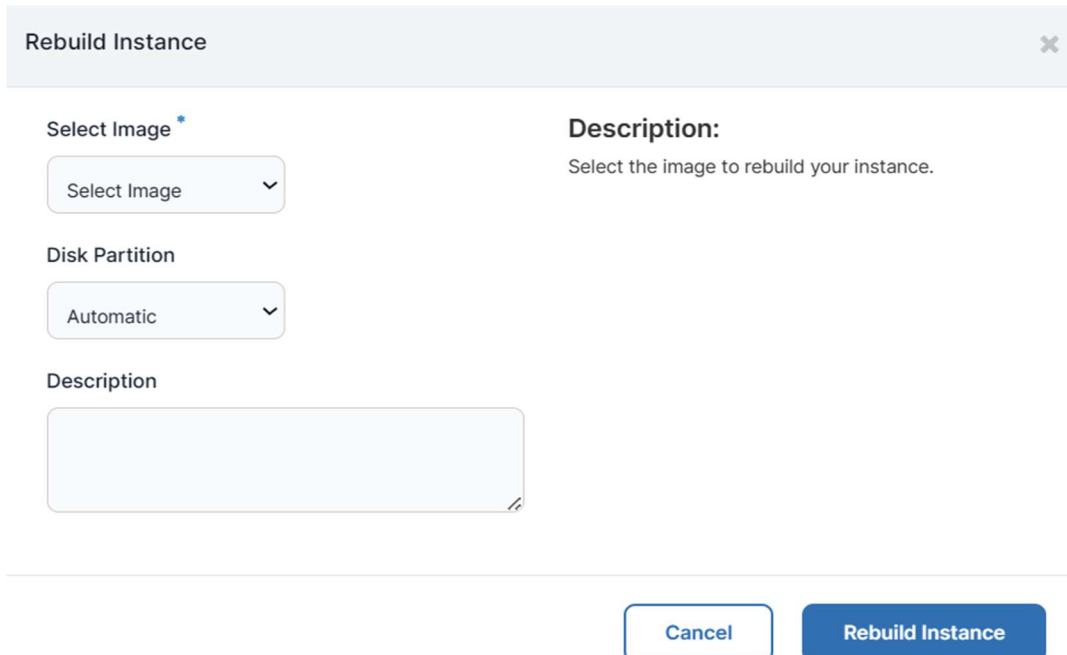
4. Click “**Cancel**” if you don't want to shut-off any instance.

2.4.1.24 Instance → Actions (Dropdown) → Rebuild Instance

"Rebuild Instance" involves recreating or re-provisioning a computing instance, typically from a predefined image or snapshot. This action results in a fresh instance with the specified configurations, discarding any previous changes or modifications made to the original instance. It is useful for restoring an instance to a known and stable state.

Step 1: Open the “Rebuild Instance” Tab

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Rebuild Instance**”.



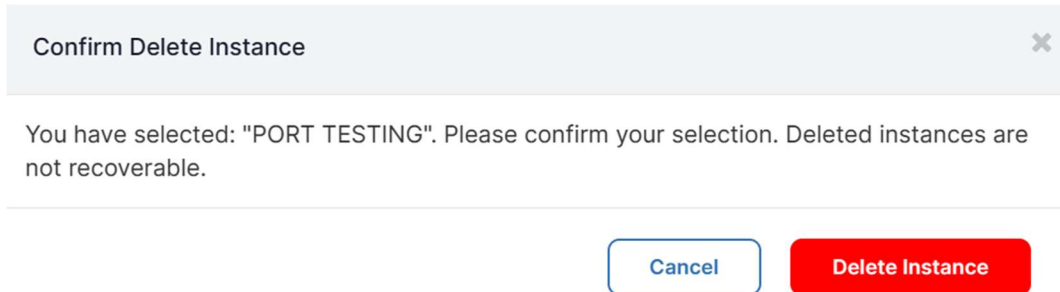
The screenshot shows a modal dialog box titled "Rebuild Instance" with a close button (X) in the top right corner. The dialog contains three main sections: "Select Image" with a dropdown menu showing "Select Image"; "Disk Partition" with a dropdown menu showing "Automatic"; and "Description" with a text input field. To the right of these fields, there is a "Description:" label and a sub-instruction: "Select the image to rebuild your instance." At the bottom of the dialog, there are two buttons: "Cancel" and "Rebuild Instance".

Step 2: Rebuild an Instance

1. Select a “**Image**” from the dropdown.
2. Select “**Disk Partition**” option from the dropdown.
3. Add a **Description** in the description box.
4. Click “**Rebuild Instance**”.
5. Click “**Cancel**” if you don’t want to rescue any instance.

2.4.1.25 Instance → Actions (Dropdown) → Delete Instance

1. Go to **Instance** page.
2. Click on the **dropdown** associated with each instance available on the list and select, “**Delete Instance**”.

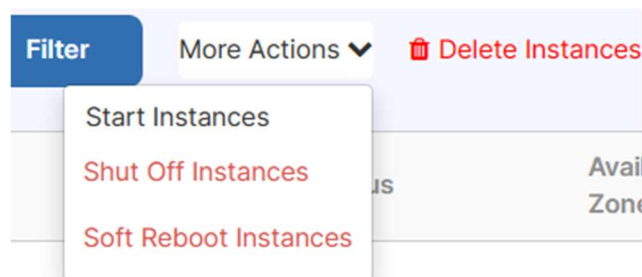


NOTE: A confirmation module will pop-up, user must confirm to “**Delete**” any instance.

3. Click “**Delete Instance**”.
4. Click “**Cancel**” if you don't want to delete any instance.

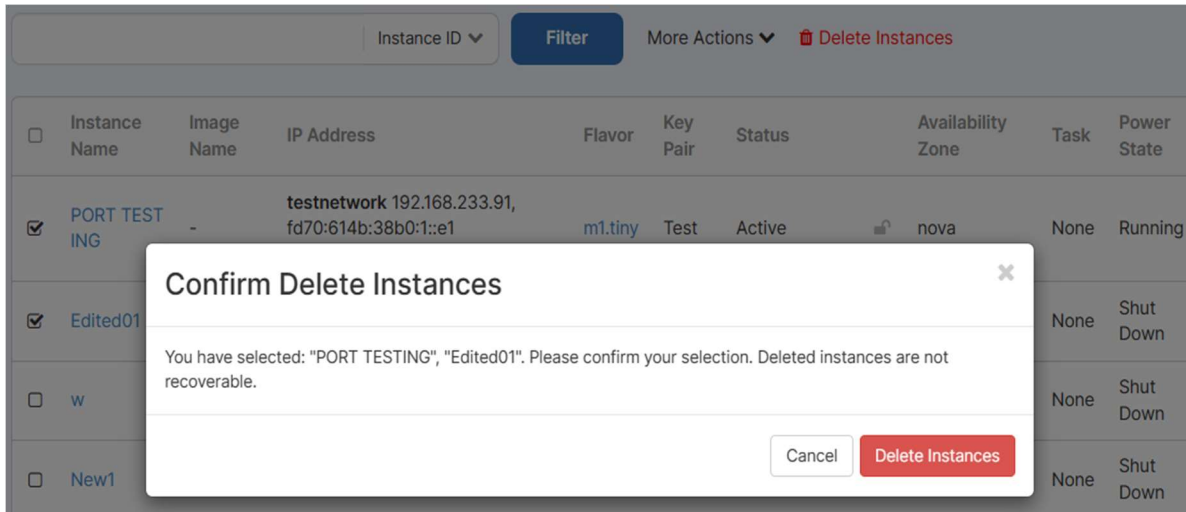
2.4.1.26 Instance → Delete Instances / More Actions

Users can also apply **Start Instances**, **Shut Off Instance** and **Soft Reboot Instance** on multiple instances by from the **More Actions** dropdown. The overall process is similar to **Delete Instances**.



Step 1: Delete Instances

1. Mark **Checkbox** for any/multiple instances that needs to be deleted.
2. Click on “**Delete Instances**” from the top.



The screenshot shows a table of instances with columns: Instance Name, Image Name, IP Address, Flavor, Key Pair, Status, Availability Zone, Task, and Power State. A dialog box titled "Confirm Delete Instances" is overlaid on the table, containing the text: "You have selected: 'PORT TESTING', 'Edited01'. Please confirm your selection. Deleted instances are not recoverable." The dialog has "Cancel" and "Delete Instances" buttons.

Instance Name	Image Name	IP Address	Flavor	Key Pair	Status	Availability Zone	Task	Power State
<input checked="" type="checkbox"/> PORT TESTING	-	testnetwork 192.168.233.91, fd70:614b:38b0:1::e1	m1.tiny	Test	Active	nova	None	Running
<input checked="" type="checkbox"/> Edited01							None	Shut Down
<input type="checkbox"/> w							None	Shut Down
<input type="checkbox"/> New1							None	Shut Down

NOTE: A confirmation module will pop-up, user must confirm to “**Delete**” any instance.

3. Click “**Delete Instances**”.
4. Click “**Cancel**” if you don't want to delete any instance.

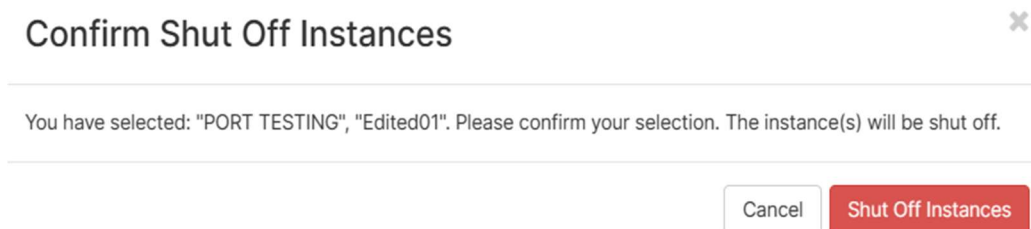
Step 2: More Actions → Start Instances

1. Mark **Checkbox** for any/multiple instances (*shut off*) that needs to be started again.
2. Click on “**More Actions**” dropdown and select **Start Instances**.

NOTE: Upon clicking **Start Instances**, instances that were shut off will initiate the startup process. Users can observe a loading animation for each starting instance within the list.

Step 3: More Actions → Shut Off Instances

1. Mark **Checkbox** for any/multiple instances that needs to be **Shut Off**.
2. Click on “**More Actions**” dropdown and select **Shut Off Instances**.



The screenshot shows a dialog box titled "Confirm Shut Off Instances" with a close button (X) in the top right corner. The text inside reads: "You have selected: 'PORT TESTING', 'Edited01'. Please confirm your selection. The instance(s) will be shut off." At the bottom, there are two buttons: "Cancel" and "Shut Off Instances".

NOTE: A confirmation module will pop-up, user must confirm to “**Shut Off**” any instance.

3. Click “**Shut Off Instances**”.
4. Click “**Cancel**” if you don't want to shut off any instance.

Step 4: More Actions → Soft Reboot Instances

1. Mark **Checkbox** for any/multiple instances to **Soft Reboot**.
2. Click on “**More Actions**” dropdown and select **Soft Reboot Instances**.

Confirm Soft Reboot Instances ✕

You have selected: "PORT TESTING", "Edited01". Please confirm your selection. Restarted instances will lose any data not saved in persistent storage.

Cancel

Soft Reboot Instances

NOTE: A confirmation module will pop-up, user must confirm to “**Soft Reboot**” any instance.

3. Click “**Soft Reboot Instances**”.
4. Click “**Cancel**” if you don't want to soft reboot any instance.

2.4.1.27 Instance → Filter

1. Go to **Instance** page.
2. Select filtering criteria from the dropdown.
3. Input keywords in the input-field.

NOTE: Ensure that the keywords you use align with the selected filtering criteria. For instance, input the Instance ID when the chosen “**Filtering Criteria**” is set to “**Instance ID**”.

Cloud Compute Service > Instance

Instance ID Filter

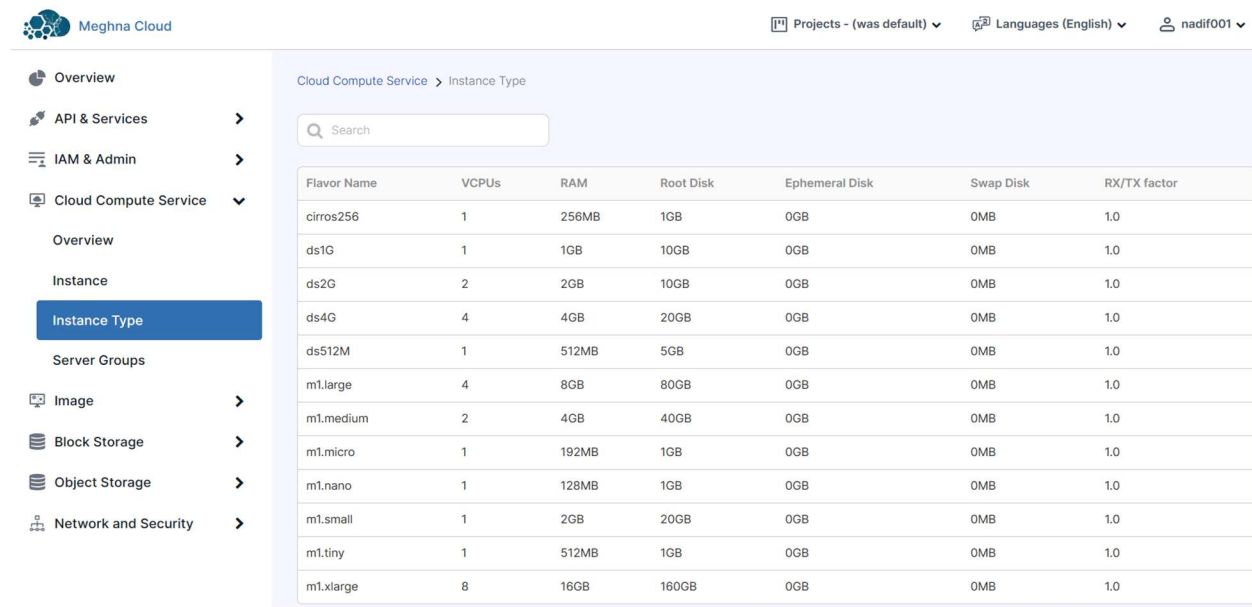
<input type="checkbox"/>	Instance Name	Image Name	IP Address	Key Pair
<input type="checkbox"/>	PORT TESTING	cirros-0.6.1-x86_64-disk	testnetwork 192.168.233.9 fd70:614b:38 shared 192.16	Test
<input type="checkbox"/>	Edited01	cirros-0.6.1-x86_64-disk	192.168.233.2	Test
<input type="checkbox"/>	w	-	192.168.233.1	Test

- Instance ID
- Instance Name
- Image ID
- Image Name
- IPv4 Address
- IPv6 Address
- Flavor ID
- Flavor Name
- Key Pair Name
- Status
- Availability Zone
- Changes Since

2.4.1.28 Instance Type

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**Cloud Compute Service**" for its dropdown menu.
3. Select "**Instance Type**" from the menu to be redirected to the instance page.

NOTE: On this page, users can access a comprehensive list of available instance types, each offering various sizes and specifications. These instances are categorized by Flavor and include details such as VCPUs, RAM, Root Disk, Ephemeral Disk, Swap Disk, and RX/TX Factor.



Cloud Compute Service > Instance Type

Search

Flavor Name	VCPUs	RAM	Root Disk	Ephemeral Disk	Swap Disk	RX/TX factor
cirros256	1	256MB	1GB	0GB	0MB	1.0
ds1G	1	1GB	10GB	0GB	0MB	1.0
ds2G	2	2GB	10GB	0GB	0MB	1.0
ds4G	4	4GB	20GB	0GB	0MB	1.0
ds512M	1	512MB	5GB	0GB	0MB	1.0
m1.large	4	8GB	80GB	0GB	0MB	1.0
m1.medium	2	4GB	40GB	0GB	0MB	1.0
m1.micro	1	192MB	1GB	0GB	0MB	1.0
m1.nano	1	128MB	1GB	0GB	0MB	1.0
m1.small	1	2GB	20GB	0GB	0MB	1.0
m1.tiny	1	512MB	1GB	0GB	0MB	1.0
m1.xlarge	8	16GB	160GB	0GB	0MB	1.0

2.4.1.29 Server Groups → Create Server Group

During instance creation selecting or creating server groups is not mandatory. Therefore, if the user wants to create new server groups later or see the list of server groups currently available for use, they can navigate in this page. Here user can search through the list using the search option and also delete any pre-existing groups. You can access this page conveniently through the navigation panel under "Cloud Compute Service."

Step 1: Open "Create Server Group" Tab

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**Cloud Compute Service**" for its dropdown menu.
3. Select "**Server Groups**" from the menu to be redirected to the instance page.
4. Click "**Create Server Group**".

Create Server Group ✕

Name *

Policy *

Cancel
Submit

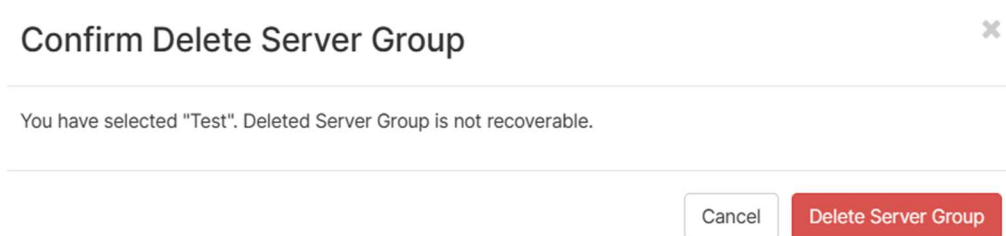
Step 2: Create New Server Group

1. Input **Name** of the Server Group
2. Select **Policy** from the dropdown.
3. Click “**Submit**”.
4. Click “**Cancel**” if you don't want to create Server Group.

2.4.1.30 Server Groups → Delete Server Group

Step 1: Delete Individual Server Group

1. Go to the **Server Group** page.
2. Click “**Delete Server Group**” associated with each item on the list.

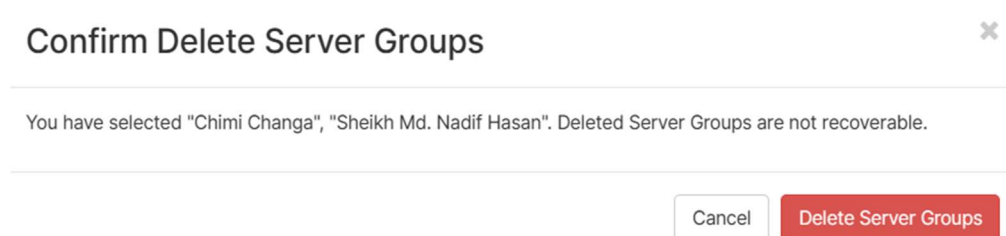


NOTE: A confirmation module will pop-up, user must confirm to “**Delete**” any server group.

3. Click “**Delete Server Group**”.
4. Click “**Cancel**” if you don't want to delete any server group.

Step 2: Delete Multiple Server Group

1. Mark **Checkbox** for any/multiple server group that needs to be deleted.
2. Click on “**Delete Server Groups**” from the top.



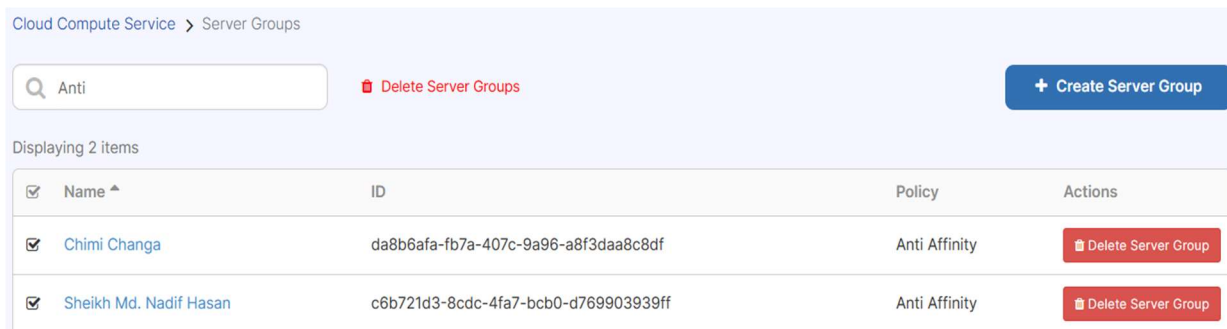
NOTE: A confirmation module will pop-up, user must confirm to “**Delete**” any server group.

3. Click “**Delete Server Groups**”.
4. Click “**Cancel**” if you don't want to delete any server group.

2.4.1.31 Server Groups → Filter

1. Go to **Server Group** page.
2. Input keywords in the input-field.

NOTE: The filtering function operates automatically in response to the input provided. It is essential for the user to input accurate keywords to observe the desired filtering effect.



Cloud Compute Service > Server Groups

Search: Anti Delete Server Groups + Create Server Group

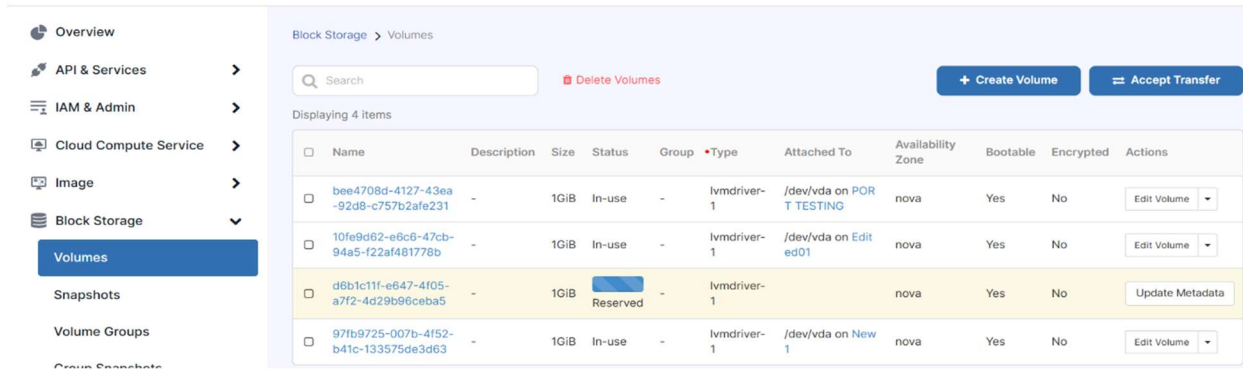
Displaying 2 items

<input checked="" type="checkbox"/>	Name ^	ID	Policy	Actions
<input checked="" type="checkbox"/>	Chimi Changa	da8b6afa-fb7a-407c-9a96-a8f3daa8c8df	Anti Affinity	Delete Server Group
<input checked="" type="checkbox"/>	Sheikh Md. Nadif Hasan	c6b721d3-8cdc-4fa7-bcb0-d769903939ff	Anti Affinity	Delete Server Group

2.4.2 Block Storage Service

In cloud computing, block storage functions as a storage framework that handles data in fixed-size blocks. Each block is managed as an independent hard drive, governed by distinct input/output instructions. In contrast to file storage, which arranges data hierarchically, block storage supplies unprocessed storage volumes accessible to an operating system. Think of it as a virtual hard drive in the cloud—swift and ideal for applications requiring immediate and efficient data access, such as databases.

2.4.2.1 Volume → Create Volume



Block Storage > Volumes

Search Delete Volumes + Create Volume ≡ Accept Transfer

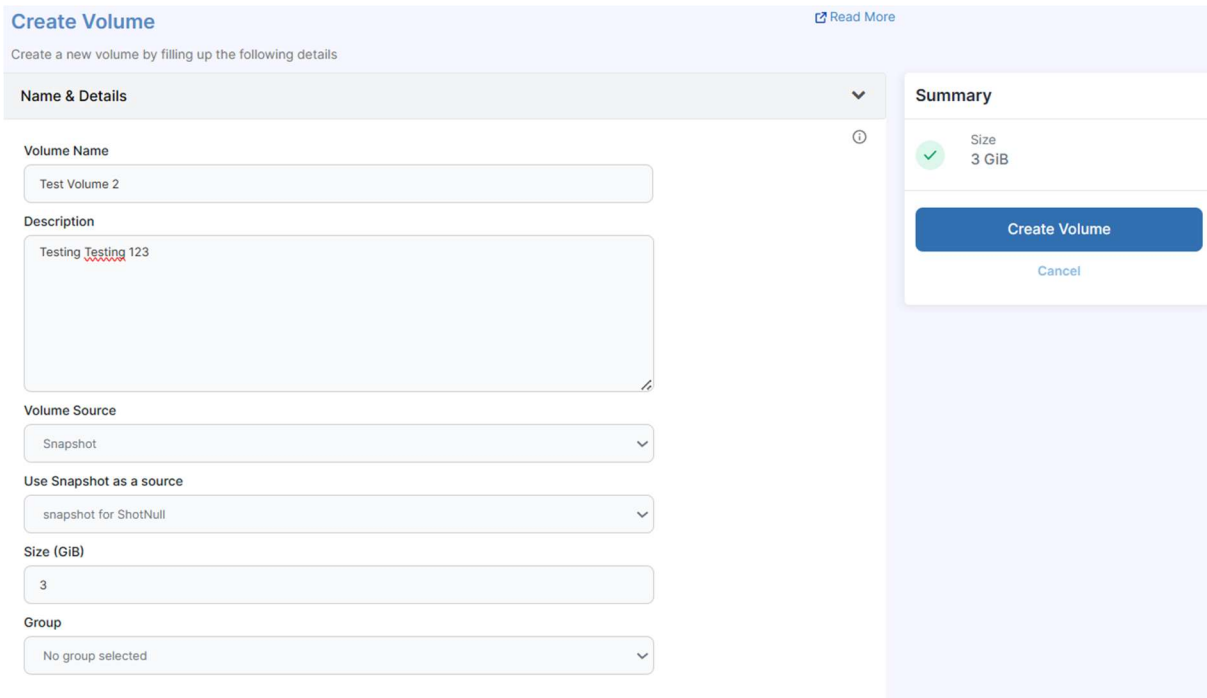
Displaying 4 items

<input type="checkbox"/>	Name	Description	Size	Status	Group	Type	Attached To	Availability Zone	Bootable	Encrypted	Actions
<input type="checkbox"/>	bee4708d-4127-43ea-92d8-c757b2afe231	-	1GiB	In-use	-	lvmdriver-1	/dev/vda on PORT TESTING	nova	Yes	No	Edit Volume
<input type="checkbox"/>	10fe9d62-e6c6-47cb-94a5-f22af481778b	-	1GiB	In-use	-	lvmdriver-1	/dev/vda on Edited01	nova	Yes	No	Edit Volume
<input type="checkbox"/>	d6b1c11f-e647-4f05-a7f2-4d29b96ceba5	-	1GiB	Reserved	-	lvmdriver-1		nova	Yes	No	Update Metadata
<input type="checkbox"/>	97fb9725-007b-4f52-b41c-133575de3d63	-	1GiB	In-use	-	lvmdriver-1	/dev/vda on New1	nova	Yes	No	Edit Volume

Step 1: Open “Create Volume” Page

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**Block Storage**" for its dropdown menu.
3. Select "**Volume**" from the menu to be redirected to the Volume page.
4. Click “**Create Volume**”.

Note: Clicking on the button will redirect the user to the "Create Volume" page, where the **Name and Details** sections become accessible. To create a volume, the user is required to input specific information. If the user wishes to return to the previous dashboard, they can simply click the "**back**" button in the browser.



Create Volume [Read More](#)

Create a new volume by filling up the following details

Name & Details

Volume Name ⓘ

Description

Volume Source

Use Snapshot as a source

Size (GiB)

Group

Summary

✔ Size
3 GiB

Create Volume

[Cancel](#)

Step 2: Create a New Volume

1. Input volume **Name** and **Description** in the respective field.
2. Select **Volume Source** from the dropdown.

NOTE: Choose the type of source you want to use for your volume; the options include image, volume, and snapshot.

3. Select a specific **Source File** from the dropdown, based on the type selected.

IMPORTANT: When a user selects a **Volume Source** from the dropdown, an additional dropdown appears for source file selection based on the chosen source type (**Image**, **Volume**, and **Snapshot**). It's important to note that if a user changes the source type after selecting a source file, the entire process must be restarted from source type selection to source file selection. This is designed to prevent accidental selections.

4. Select the volume **Type** from the dropdown.
5. Input **Volume Size**.

NOTE: The size can be entered manually or adjusted using the increment and decrement buttons.

6. Select **Availability Zone** from the dropdown, by default it will be **Nova**.
7. Choose a **Group** for the volume from the dropdown if you wish to assign it to a specific group.

NOTE: Once everything is selected make sure to check out the summary in order to confirm everything.

8. Click **Create Volume**.
9. Click **Cancel** if you do not want to create volume.

Upon successful volume creation user will be redirected back to the volume page. User can see the new volume in the list.

NOTE: Upon clicking the volume **Name** from the list in volume page, user will be redirected to the **Overview** page for the specific file. From here user can see all the details in one glance, user can also control some of the features like manage **Snapshot** options for the volume.

Block Storage > Volumes

Overview Snapshots Messages

General		Metadata	
Name	4eba9718-1f04-4f52-9997-8514ec06ccc1	Info	None
ID	4eba9718-1f04-4f52-9997-8514ec06ccc1		
Project ID	7617c1353aa347a5b79618403baf2982		
Status	Error		
Group	Clone of Test Group 1		
Specs			
Size	1 GiB		
Type	lvmdriver-1		
Bootable	Yes		
Encrypted	No		
Created	Nov. 22, 2023, 11:13 a.m.		
Attachments			
Attached To	<i>Not attached</i>		

Overview **Snapshots** Messages

🗑 Delete Volume Snapshots

Displaying 2 items

<input type="checkbox"/>	Name	Description	Size	Status	Group Snapshot	Actions
<input type="checkbox"/>	Test Snapshot 02	-	2GiB	Available	Test Snapshot 02	Create Volume ▾
<input type="checkbox"/>	Test Snapshot	-	2GiB	Available	Test Snapshot	Create Volume ▾

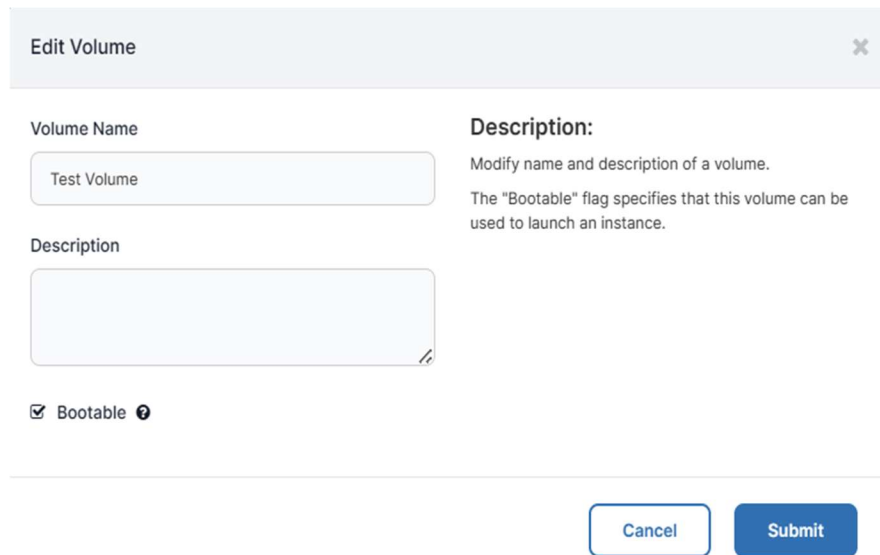
NOTE: For snapshot related Actions please check out from section **2.4.2.22 Snapshots → Actions → Create Volume** to **2.4.2.27 Snapshots → Actions(Dropdown) → Update Metadata**.

2.4.2.2 Volume → Actions → Edit Volume

Edit Volume tab allows user to update basic information such as Name and Description along with bootability.

Step 1: Open Edit Volume Tab

1. Go to **Volume** page.
2. Click on the “**Edit Volume**” button associated with each volume available on the list.



Edit Volume [Close]

Volume Name

Description

Bootable ⓘ

Description:
 Modify name and description of a volume.
 The "Bootable" flag specifies that this volume can be used to launch an instance.

Step 2: Open Edit a Volume

1. Update **Volume Name**.
2. Update **Description**.
3. Mark the **Checkbox** to ensure it is bootable.
4. Click **Submit**.
5. Click **Cancel** if you don't want to edit a volume.

2.4.2.3 Volume → Actions(Dropdown) → Extend Volume

"Extend Volume" allows users to increase the storage capacity of an existing volume, providing flexibility to accommodate growing data needs without creating a new volume. This feature streamlines storage management within the cloud environment.

1. Go to **Volume** page.
2. Click on the **dropdown** associated with each volume available on the list and select, “**Extend Volume**”.

Extend Volume
✕

Volume Name

Current Size (GiB)

New Size (GiB) *

Description:
Extend the size of a volume.

Volume Limits

Total Gibibytes 7 of 1,000 GiB Used

3. Input **New Size**.

NOTE: Users have the option to input the size manually or use the increment/decrement buttons for adjustments.

4. Click **Extend Volume**.
5. Click **Cancel** if you don't want to extend volume size.

2.4.2.4 Volume → Actions(Dropdown) → Launch as Instance

Creating an instance from a volume involves generating a new virtual machine using a designated volume as the source. This approach facilitates the rapid and efficient deployment of instances, leveraging existing volumes for the seamless creation of new computing resources.

1. Go to **Volume** page.
2. Click on the **dropdown** associated with each volume available on the list and select, "**Launch an Instance**".

Launch an instance [Read More](#)

Create a new instance by filling up the following details

Name & Details

Instance Name*

Description Availability Zone

Count*

Total Instance (10 Max)

4 Current Usage
1 Added
5 Remaining

Source

Select Boot Source*

Delete volume on instance delete

Available Volume **3**

Test 3	Availability Zone
Size 1	nova

Summary

- Name & Details Not Defined
- Source Test 3
- Flavor Not Selected
- Networks Not Selected
- Security Group Not Selected

NOTE: Once the user clicks on the “Launch an Instance” button, they will be redirected to the "Launch an Instance" page, where the boot source will be automatically set to the volume selected by the user. The instance launching process remains the same from this point. Refer to section **2.4.1.2 "Instance → Launch an Instance"** for specific instructions.

2.4.2.5 Volume → Actions(Dropdown) → Manage Attachments

"Manage Volume Attachments" enables users to control and configure the attachment of a volume to instances. This feature provides a centralized hub for efficiently handling the association and detachment of volumes from compute instances within the cloud infrastructure.

Step 1: Attach Volume to Instance

1. Go to **Volume** page.
2. Click on the **dropdown** associated with each volume available on the list and select, **“Manage Volume Attachments”**.
3. Select an Instance from the dropdown under **Attach an Instance**.
4. Click **Attach Volume**.
5. Click **Cancel** if you don't want to attach volume.

Manage Volume Attachments
✕

Instance	Device	Actions
No items to display.		

Attach To Instance

Attach to Instance ⓘ

Select an instance ▼

Select an instance
 PORT TESTING (f1705ac8-4192-4c26-9297-4a897b13ec1b)
 New1 (f5e756ad-3903-4785-9574-2f56ae098687)

Cancel
Attach Volume

NOTE: Once the **Volume** is attached to an instance, upon next visit to the **Manage Volume Attachments** tab the **Detach** option will appear.

Step 2: Detach Volume

"Detach Volume" allows users to disconnect a volume from an instance, providing flexibility in managing storage resources within the cloud environment.

1. Go to **Volume** page.
2. Click on the **dropdown** associated with each volume available on the list and select, "**Manage Volume Attachments**".
3. Click **Detach Volume**.

Manage Volume Attachments ✕

Displaying 1 item

<input type="checkbox"/> Instance	Device	Actions
<input type="checkbox"/> PORT TESTING	/dev/vdb	Detach Volume

IMPORTANT: Upon clicking "**Detach Volume**", a confirmation module will appear, requiring user confirmation to proceed with detaching the volume from the instance. This additional step ensures deliberate and accurate actions in the detachment process.

4. Click **Detach Volume** from the confirmation module.
5. Click **Cancel** if you don't want to detach volume.

Confirm Detach Volume ✕

You have selected: "Volume Test Volume on instance PORT TESTING". Please confirm your selection. The data will remain in the volume and another instance will be able to access the data if you attach this volume to it.

Cancel
Detach Volume

2.4.2.6 Volume → Actions(Dropdown) → Create Volume Snapshots

"Create Volume Snapshots" enables users to capture point-in-time copies of volumes, providing data backup and recovery options within the cloud infrastructure. This feature enhances data protection and facilitates the creation of consistent snapshots for various use cases.

Step 1: Open the Create Volume Snapshot Tab

1. Go to **Volume** page.
2. Click on the **dropdown** associated with each volume available on the list and select, "**Create Volume Snapshots**".

Create Volume Snapshot
✕

Snapshot Name

Description:

From here you can create a snapshot of a volume.

Description

Snapshot Limits

Total Gibibytes 14 of 1,000 GiB Used

Number of Snapshots 3 of 10 Used

Cancel
Create Volume Snapshot

Step 2: Create a Snapshot from Volume

1. Input snapshot **Name**.
2. Provide a **Description**.

NOTE: Users can view the limits for both the number and size of creatable snapshots. Additionally, there is a visual progress bar providing a graphical representation of the snapshot creation process.

3. Click **Create Volume Snapshot**.
4. Click **Cancel** if you don't want create a snapshot.

2.4.2.7 Volume → Actions(Dropdown) → Create Backup

In cloud computing, a backup refers to the process of creating and maintaining copies of data or applications stored in the cloud. This practice is crucial for ensuring data resilience, availability, and recovery in case of accidental deletion, data corruption, system failures, or other unforeseen events.

Step 1: Open the Create Volume Backup Tab

1. Go to **Volume** page.
2. Click on the **dropdown** associated with each volume available on the list and select, **“Create Backup”**.

Create Volume Backup
✕

Backup Name *

Description

Bucket Name

Backup Snapshot

No snapshot for this volume
▼

Volume Backup: Volume Backups are stored using one of cinder-backup drivers (object storage service, Ceph, NFS, etc ...). You must have one of these services activated in order to create a backup.

If a snapshot is specified here only the specified snapshot of the volume will be backed up.

If no bucket name is provided, a default bucket named volumebackups will be provisioned for you. Backups will be the same size as the volume they originate from.

Cancel

Create Volume Backup

Step 2: Create Backup for a Volume

1. Input a name for the backup in the “**Backup Name**” field.
2. Provide a suitable description in the “**Description**” field.
3. Input a “**Bucket Name**”, to store the backup in a custom bucket.
4. Select “**Backup Snapshot**”, if user also wants to backup the snapshot associated with the volume.

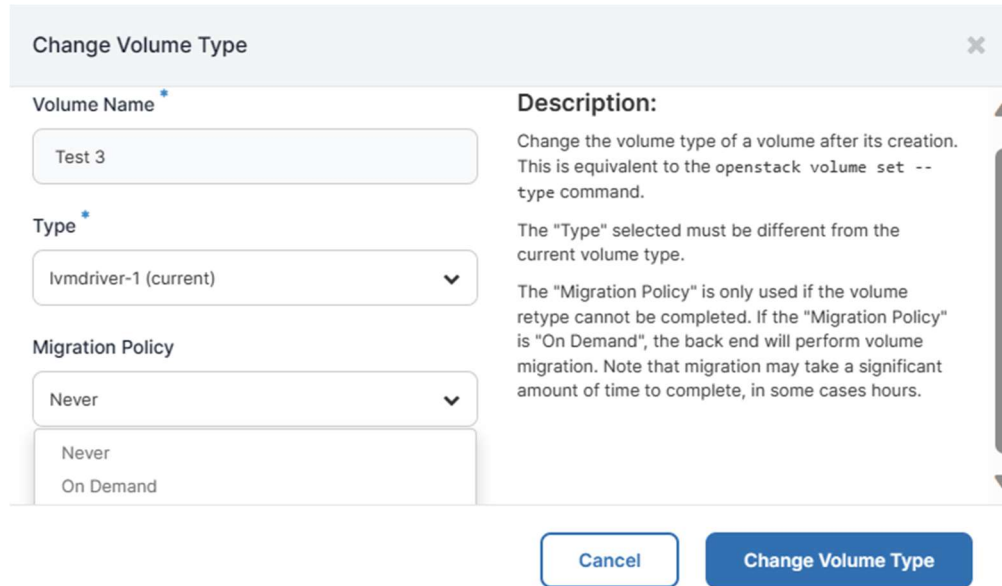
NOTE: Backups are initially stored in a designated bucket. The creation of a customized bucket offers users the convenience of effectively isolating their data. This storage preference is attributed to the bucket serving as a dedicated space within cloud storage, ensuring both secure storage and facile retrieval as needed. Within the custom bucket structure, users can locate a volume folder, and within that, a backup folder identified by a specific date and time. The navigation into the backup folder facilitates the viewing and separate downloading of individual files. The backup process not only ensures the safeguarding of data but also establishes a distinct copy of valuable information. In the event of data failure, users can seamlessly initiate the restart of their virtual machine (VM) using the backup.

2.4.2.8 Volume → Actions(Dropdown) → Change Volume Type

"Change Volume Type" allows users to modify the storage characteristics of a volume, offering flexibility in adapting to different performance and capacity requirements within the cloud environment.

Step 1: Open the Change Volume Type Tab

1. Go to **Volume** page.
2. Click on the **dropdown** associated with each volume available on the list and select, “**Change Volume Type**”.



Change Volume Type [X]

Volume Name *

Type *

Migration Policy

Description:
 Change the volume type of a volume after its creation. This is equivalent to the `openstack volume set --type` command.
 The "Type" selected must be different from the current volume type.
 The "Migration Policy" is only used if the volume retype cannot be completed. If the "Migration Policy" is "On Demand", the back end will perform volume migration. Note that migration may take a significant amount of time to complete, in some cases hours.

Step 2: Change Type for Volume

1. Select a new **Type** from the dropdown.
2. Select the **Migration Policy** from the dropdown.
3. Click **Change Volume Type**.
4. Click **Cancel** if you don't want to change the volume type.

2.4.2.9 Volume → Actions(Dropdown) → Upload Volume to Image

Step 1: Open the Upload Volume to Image Tab

1. Go to **Volume** page.
2. Click on the **dropdown** associated with each volume available on the list and select, “**Upload to Image**”.

Upload Volume to Image
✕

Volume Name *

Image Name *

Disk Format

Raw ▼

QCOW2 - QEMU Emulator

Description:

Upload the volume to the Image Service as an image. This is equivalent to the `cinder upload-to-image` command.

Choose "Disk Format" for the image. The volume images are created with the QEMU disk image utility.

Cancel

Upload

Step 2: Upload a Volume

1. Input an **Image Name** in the input field.
2. Select **Disk Format** from the dropdown.
3. Click **Upload**.
4. Click **Cancel** if you don't want to upload a volume.

NOTE: User can see the list of images in the **Images** page under **Image**, located in the side-navbar.

2.4.2.10 Volume → Actions(Dropdown) → Create Transfer

"Create Transfer" facilitates the initiation of a volume transfer process. By generating a unique ID and Key, users can seamlessly initiate the transfer and provide the necessary credentials for the recipient to accept the volume transfer. This feature streamlines the transfer workflow within the cloud environment.

Step 1: Open the Create Volume Transfer Tab

1. Go to **Volume** page.
2. Click on the **dropdown** associated with each volume available on the list and select, **"Create Transfer"**.
3. Once the floating tab is opened, input **Transfer Name**.

4. Click **Create Volume Transfer**.
5. Click **Cancel** if you don't want to Transfer Volume.

NOTE: Clicking "**Create Volume Transfer**" redirects the user to the next tab, where they can obtain a unique ID and Key necessary for accepting the volume transfer.

Create Volume Transfer ✕

Transfer Name ^{*}

Test Transfer

Description:

Ownership of a volume can be transferred from one project to another. Once a volume transfer is created in a donor project, it then can be "accepted" by a recipient project. This is equivalent to the openstack volume transfer create command.

Cancel Create Volume Transfer

Step 2: Collect Transfer ID and Key

1. Click **Download Transfer Credentials**.
2. Click **Cancel** after the credentials are collected safely.

IMPORTANT: Upon clicking "**Create Volume Transfer**," the volume transfer process is initiated, and the user is provided with a **Transfer ID** and **Authorization Key**. It is crucial for the user to copy or download these credentials as they are essential for the **Accept Transfer** process. Losing the "Transfer ID" and "Authorization Key" will result in a halted transfer process, requiring the user to cancel and restart the transfer.

Volume Transfer

Transfer Name

Transfer ID

Authorization Key

Description:

The Transfer ID and the Authorization Key are needed by the recipient in order to accept the transfer. Please capture both the Transfer ID and the Authorization Key and provide them to your transfer recipient.

The Authorization Key will not be available after closing this page, so you must capture it now or download it, or else you will be unable to use the transfer.

Step 3: Cancel Transfer

1. Click on the “**Cancel Transfer**” button under **Actions** column from the volume page.

Or click on the **dropdown** associated with each volume available on the list and select, “**Cancel Transfer**”.

NOTE: Upon clicking, a confirmation module will appear, requesting user consent for the cancellation process. User confirmation is required to proceed with the cancellation of the transfer process.

2. Click **Cancel Transfer**.
3. Click **Cancel** if you don't want to cancel the transferring process.

Confirm Cancel Transfer ✕

You have selected: "Test 3". Please confirm your selection. This action cannot be undone.

NOTE: To find more about the **Accept Transfer** process please go to “**2.4.2.13 Volume → Accept Transfer**”.

2.4.2.11 Volume → Actions(Dropdown) → Delete Volume

1. Go to **Volume** page.
2. Click on the **dropdown** associated with each volume available on the list and select, **“Delete Volume”**.

NOTE: The **"Delete"** option may not be visible in the dropdown if the volume is currently attached to an interface or if a snapshot has been created using the selected volume.

Confirm Delete Volume ×

You have selected: "Test002". Please confirm your selection. Deleted volumes are not recoverable. All data stored in the volume will be removed.

Cancel

Delete Volume

IMPORTANT: Upon clicking **"Delete Volume"**, a confirmation module will appear, seeking user confirmation to proceed with the deletion process. This additional step ensures deliberate and accurate actions in the deletion process.

3. Click **Delete Volume**.
4. Click **Cancel** if you don't want to delete volume.

2.4.2.12 Volume → Actions(Dropdown) → Update Metadata

"Update Metadata" allows users to modify or enhance metadata associated with a volume, providing flexibility in managing additional information for organizational and categorization purposes within the cloud environment.

Step 1: Open the Update Metadata Tab

1. Go to **Volume** page.
2. Click on the **dropdown** associated with each volume available on the list and select, **“Update Metadata”**.

Update Volume Metadata ✕

You can specify resource metadata by moving items from the left column to the right column. In the left column there are metadata definitions from the Glance Metadata Catalog. Use the "Custom" option to add metadata with the key of your choice.

Available Metadata

- CIM Processor Allocation Setting
- CIM Resource Allocation Setting Data
- Common Operating System Properties
- CPU Pinning
- Database Software
- Guest Memory Backing
- Instance Config Data
- Runtime Environment

Existing Metadata

- CIM_SASD_Access
- CIM_SASD_HostEx...
- CIM_SASD_HostEx...
- CIM_SASD_HostEx...
- CIM_SASD_HostEx...
- CIM_SASD_HostRe...
- CIM_SASD_Limit
- CIM_SASD_OtherH...

CIM Storage Allocation Setting Data

Properties related to the allocation of virtual storage from Common Information Model (CIM) schema (<http://www.dmtf.org/standards/cim>). These properties may be specified to volume, host aggregate and flavor. For each property details, please refer to http://schemas.dmtf.org/wbem/cim-html/2/CIM_StorageAllocationSettingData.html.

Step 2: Add or Remove Metadata

1. Open "Update Metadata" tab.
2. Add metadata; click on the "Plus" icon next to an item in the **Available Metadata** section.

NOTE: Upon clicking "Plus", the item will move from the "Available Metadata" section to "Existing Metadata" section.

IMPORTANT: To generate **Custom Metadata**, users need to input the metadata title in the designated field under "Available Metadata" and then click the "Plus" icon to include the custom metadata in the "Existing Metadata" section.

3. Remove metadata; click on the "**Minus**" icon next to an item in the **Existing Metadata** section.

NOTE: Upon clicking “Minus”, the item will move from the “Existing Metadata” section to “Available Metadata” section.

4. Click **Save**.
5. Click **Cancel** if you don't want to update metadata.

IMPORTANT: To utilize the Filter function, enter keywords in the input field, and the filter will automatically identify metadata that matches the provided keywords.

2.4.2.13 Volume → Accept Transfer

Step 1: Open the Accept Volume Transfer Tab

1. Locate the left-side Navigation Bar from the dashboard; click "**Block Storage**" for its dropdown menu.
2. Select "**Volume**" from the menu to be redirected to the Volume page.
3. Click on **Accept Transfer** located at the top-right of the volume page.

Accept Volume Transfer
×

Transfer ID ^{*}

Authorization Key ^{*}

Description:

Ownership of a volume can be transferred from one project to another. Accepting a transfer requires obtaining the Transfer ID and Authorization Key from the donor. This is equivalent to the openstack volume transfer request accept command.

Cancel
Accept Volume Transfer

Step 2: Accept Volume Transfer with Credentials

1. Input **Transfer ID** in the input field.
2. Input **Authorization ID** in the input field.

3. Click **Accept Volume Transfer**.
4. Click **Cancel** if you don't want to accept the transfer.

IMPORTANT: Valid credentials must be provided by the user for the transfer process to be successful. These credentials are obtained during the transfer creation process.

2.4.2.14 Volume → Search

Block Storage > Volumes

Delete Volumes

+ Create Volume
⇌ Accept Transfer

Displaying 4 Items

<input type="checkbox"/>	Name	Description	Size	Status	Group	Type	Attached To	Availability Zone	Bootable	Encrypted	Actions
<input type="checkbox"/>	Test 3	-	1GiB	Available	-	lvmdriver-1		nova	Yes	No	Edit Volume
<input type="checkbox"/>	Test002	-	1GiB	Available	-	lvmdriver-1		nova	Yes	No	Edit Volume
<input type="checkbox"/>	Test Volume	-	2GiB	Available	-	lvmdriver-1		nova	Yes	No	Edit Volume
<input type="checkbox"/>	bee4708d-4127-43ea-92d8-c757b2afe231	-	1GiB	In-use	-	lvmdriver-1	/dev/vda on PORT TESTING	nova	Yes	No	Edit Volume

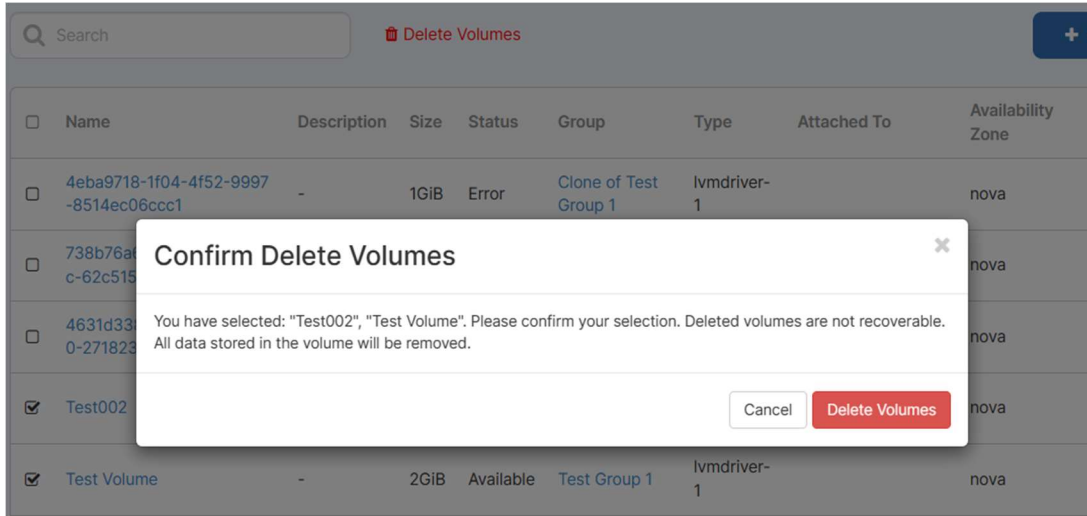
1. Locate the left-side Navigation Bar from the dashboard; click "**Block Storage**" for its dropdown menu.
2. Select "**Volume**" from the menu to be redirected to the Volume page.
3. Input searching keywords in the search field.

NOTE: The search function operates automatically when inputting keywords that match list items. This feature streamlines the identification and retrieval of specific items, enhancing the user's experience by providing a quick and efficient way to locate relevant information within

2.4.2.15 Volume → Delete Volumes

1. Locate the left-side Navigation Bar from the dashboard; click "**Block Storage**" for its dropdown menu.
2. Select "**Volume**" from the menu to be redirected to the Volume page.
3. Choose the volumes you wish to delete from the list, ensuring that the checkboxes are selected.
4. Click **Delete Volumes** located at the top.

IMPORTANT: Upon clicking "**Delete Volumes**", a confirmation module will appear, seeking user confirmation to proceed with the deletion process. This additional step ensures deliberate and accurate actions in the deletion process.



5. Click **Delete Volumes**.
6. Click **Cancel** if you don't want to delete volume.

NOTE: "Snapshots" typically refer to point-in-time copies or backups of data in a computing environment. In cloud computing, snapshots are often used to capture the state of a virtual machine or storage volume at a specific moment, allowing for data recovery, backup, or migration. Snapshots provide a convenient and efficient way to preserve the state of computing resources, aiding in system management and data protection.

2.4.2.16 Backup → Actions → Restore Backup

In the realm of cloud computing, a backup is the fundamental process of generating and managing duplicates of data or applications that reside in the cloud. This practice is paramount for guaranteeing the resilience, accessibility, and recoverability of data in instances of inadvertent deletion, data corruption, system failures, or unexpected events. Backups play a pivotal role in safeguarding against potential loss, enabling businesses to uphold data integrity and adhere to regulatory compliance standards.

Step 1: Open the Restore Volume Backup Tab

1. Locate the left-side Navigation Bar from the dashboard; click "**Block Storage**" for its dropdown menu.
2. Select "**Backup**" from the menu to be redirected to the backup page.
3. Click on the "**Restore Backup**" button under "Actions" column associated with each backup available on the list.

Restore Volume Backup
✕

Select Volume

Test Volume 01
▼

Restore Backup: Select a volume to restore to.
Optionally, you may choose to create a new volume.

Cancel

Restore Backup to Volume

Step 2: Restore a Backup

1. Select in which volume to restore the backup from the dropdown.

NOTE: By default, the volume will be preselected based on which the backup was created, but users can restore the backup to any existing volume using the dropdown. Users also have the option to create a new volume during the restoring process.

2. Click "**Restore Backup to Volume**" in order proceed with restoration.
3. Click "**Cancel**" to cancel the restoring process.

2.4.2.17 Backup → Actions(Dropdown) → Delete Volume Backup

1. Go to **Backups** page.
2. Click on the **dropdown** associated with each backup available on the list and select, "**Delete Volume Backup**".

Confirm Delete Volume Backup ✕

You have selected: "Test Backup 01". Please confirm your selection. Deleted volume backups are not recoverable.

Cancel

Delete Volume Backup

IMPORTANT: Upon clicking "**Delete Volume Backup**", a confirmation module will appear, seeking user confirmation to proceed with the deletion process. This additional step ensures deliberate and accurate actions in the deletion process.

5. Click **Delete Volume Backup** to proceed with deletion.
6. Click **Cancel** if you don't want to delete backup.

2.4.2.18 Backup → Delete Volume Backups

1. Go to **Backups** page.
2. Mark all the backups that needs to be deleted.
3. Click on the "**Delete Volume Backups**" button located at the top of the page.

Confirm Delete Volume Backups ✕

You have selected: "Test Backup 02", "Test Backup 01". Please confirm your selection. Deleted volume backups are not recoverable.

Cancel

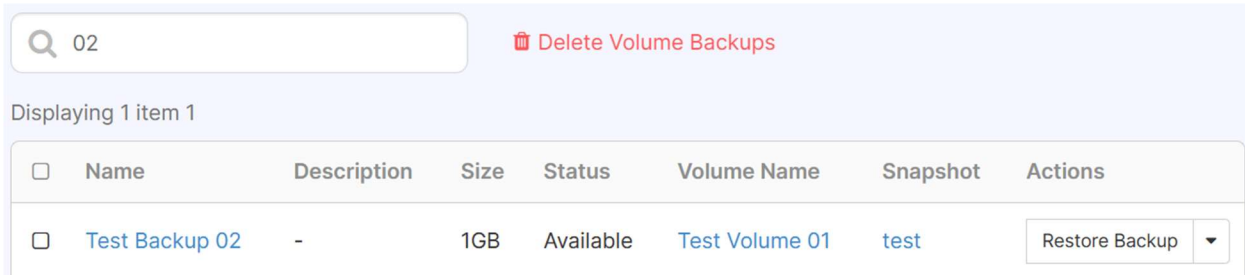
Delete Volume Backups

IMPORTANT: Upon clicking "**Delete Volume Backup**", a confirmation module will appear, seeking user confirmation to proceed with the deletion process. This additional step ensures deliberate and accurate actions in the deletion process.

4. Click **Delete Volume Backups** to proceed with deletion.
5. Click **Cancel** if you don't want to delete backup.

2.4.2.19 Backup → Search

1. Go to **Backups** page.
2. Input searching keywords in the search field.



The screenshot shows a search interface for backups. At the top, there is a search input field containing the text "02" and a red button labeled "Delete Volume Backups". Below the search field, it says "Displaying 1 item 1". A table lists the search results:

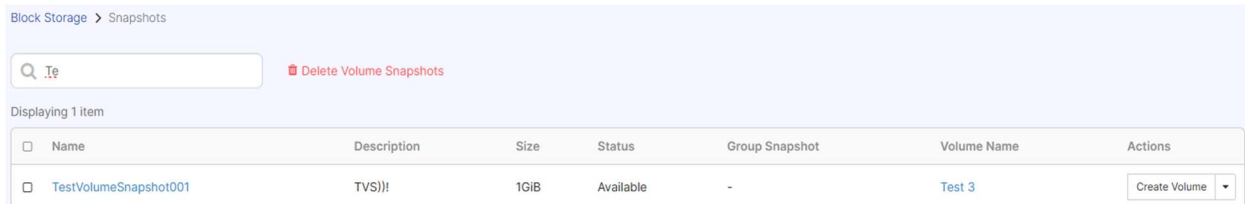
<input type="checkbox"/>	Name	Description	Size	Status	Volume Name	Snapshot	Actions
<input type="checkbox"/>	Test Backup 02	-	1GB	Available	Test Volume 01	test	Restore Backup ▼

NOTE: The search function operates automatically when inputting keywords that match list items. This feature streamlines the identification and retrieval of specific items, enhancing the user's experience by providing a quick and efficient way to locate relevant information within the list.

2.4.2.20 Snapshots → Search

NOTE: "Snapshots" typically refer to point-in-time copies or backups of data in a computing environment. In cloud computing, snapshots are often used to capture the state of a virtual machine or storage volume at a specific moment, allowing for data recovery, backup, or migration. Snapshots provide a convenient and efficient way to preserve the state of computing resources, aiding in system management and data protection.

1. Locate the left-side Navigation Bar from the dashboard; click "**Block Storage**" for its dropdown menu.
2. Select "**Snapshot**" from the menu to be redirected to the snapshots page.
3. Input searching keywords in the search field.



The screenshot shows the Snapshots search interface. At the top, there is a search input field containing the text ".te" and a red button labeled "Delete Volume Snapshots". Below the search field, it says "Displaying 1 item". A table lists the search results:

<input type="checkbox"/>	Name	Description	Size	Status	Group Snapshot	Volume Name	Actions
<input type="checkbox"/>	TestVolumeSnapshot001	TVS)!!	1GiB	Available	-	Test 3	Create Volume ▼

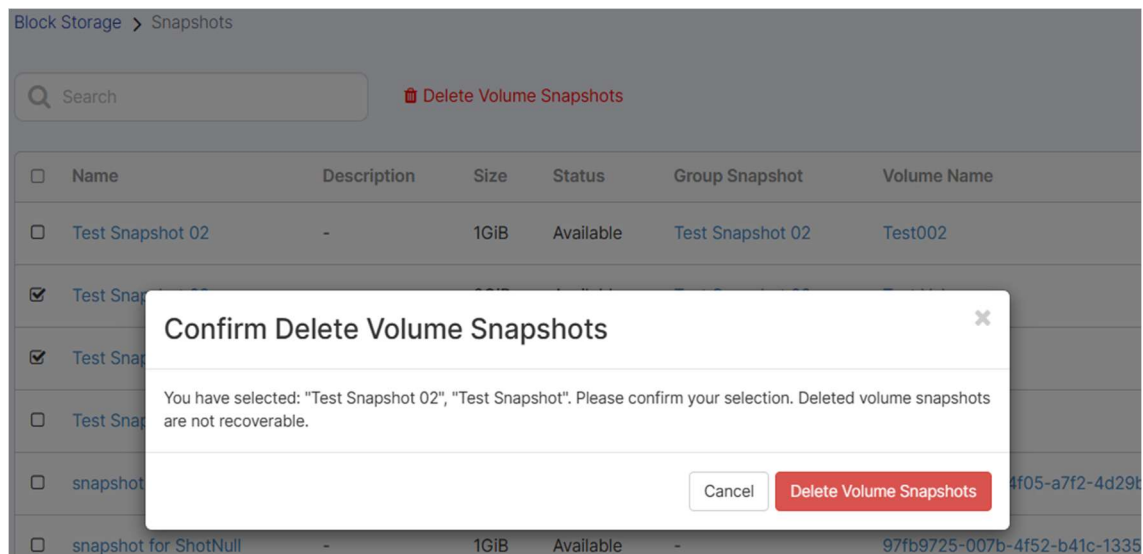
NOTE: The search function operates automatically when inputting keywords that match list items. This feature streamlines the identification and retrieval of specific items, enhancing the user's experience by providing a quick and efficient way to locate relevant information within the list.

2.4.2.21 Snapshots → Delete Volume Snapshots

NOTE: User can delete multiple snapshots together.

1. Locate the left-side Navigation Bar from the dashboard; click "**Block Storage**" for its dropdown menu.
2. Select "**Snapshot**" from the menu to be redirected to the snapshots page.
3. Choose the snapshots you wish to delete from the list, ensuring that the checkboxes are selected.
4. Click **Delete Volume Snapshots** located at the top.

IMPORTANT: Upon clicking "**Delete Volume Snapshots**", a confirmation module will appear, seeking user confirmation to proceed with the deletion process. This additional step ensures deliberate and accurate actions in the deletion process.



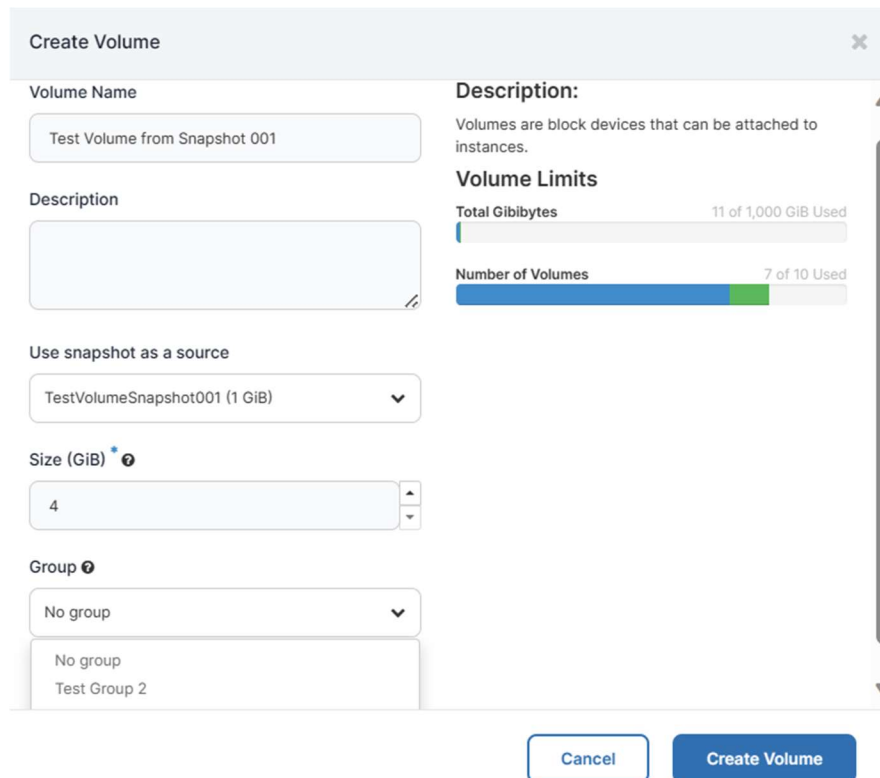
5. Click **Delete Volume Snapshot**.
6. Click **Cancel** if you don't want to delete any snapshot.

2.4.2.22 Snapshots → Actions → Create Volume

In computing, a "volume" typically refers to a storage unit or logical partition where data is stored. In the context of cloud computing, a volume could be associated with additional features such as scalability, snapshots, and backup capabilities. Volumes provide a flexible way to manage and allocate storage resources within a cloud environment.

Step 1: Open the Create Volume Tab

1. Go to **Snapshots** page.
2. Click on the **Create Volume** button, associated with each snapshot available on the list.



Create Volume [X]

Volume Name
Test Volume from Snapshot 001

Description
[Empty text area]

Use snapshot as a source
TestVolumeSnapshot001 (1 GiB) [v]

Size (GiB) ⓘ
4 [Increment/Decrement buttons]

Group ⓘ
No group [v]
No group
Test Group 2

Description:
Volumes are block devices that can be attached to instances.

Volume Limits

Total Gibibytes 11 of 1,000 GiB Used
[Progress bar]

Number of Volumes 7 of 10 Used
[Progress bar]

[Cancel] [Create Volume]

Step 2: Create Volume from a Snapshot

1. Update the **Volume Name** field.
2. Provide a supporting **Description** in the description box.
3. Specify the size of the volume.

NOTE: You can input the size directly in the field by typing, or you can adjust it using the increment/decrement buttons.

NOTE: The user can observe the number of volumes that can be created and the allocated storage in both a progress bar and numerical values.

4. Click **Create Volume**.
5. Click **Cancel** if you don't want to create volume.

2.4.2.23 Snapshots → Actions(Dropdown) → Launch an Instance

Launching an instance from a snapshot allows you to create a new virtual machine using a saved snapshot as the source. This enables quick and efficient deployment of instances based on existing snapshots, streamlining the process of creating new computing resources.

4. Go to **Snapshots** page.
5. Click on the **dropdown** associated with each snapshot available on the list and select, **“Launch an Instance”**.

Launch an instance
[Read More](#)

Create a new instance by filling up the following details

Name & Details ⌵

Instance Name* ⓘ

Description Availability Zone

nova ⌵

Count*

Total Instance (10 Max)

■ 4 Current Usage
■ 1 Added
■ 5 Remaining

Summary

✔ Name & Details
Not Defined

✔ Source
TestingSnapshot

✔ Flavor
Not Selected

✔ Networks
Not Selected

✔ Security Group
Not Selected

Launch Instance

Cancel

Source ⌵

Select Boot Source* ⓘ

Volume Snapshot
⌵

Delete volume on instance delete

Yes

No

Available Volume Snapshot 4

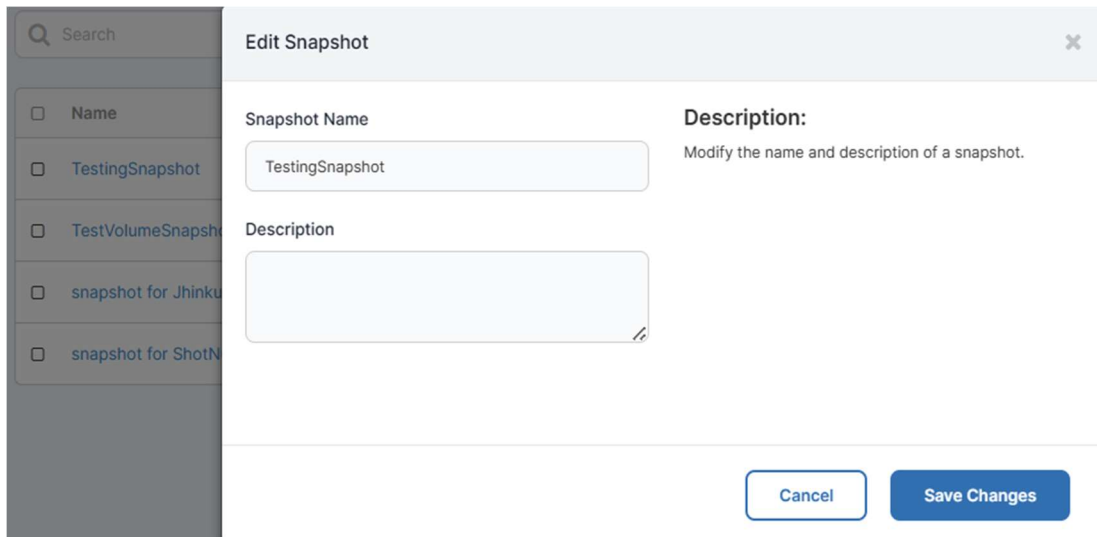
TestingSnapshot	Created	Size	Status
	11/21/23 12:09 PM	1	available

NOTE: Once the user clicks on the “Launch an Instance” button, they will be redirected to the "Launch an Instance" page, where the boot source will be automatically set to the snapshot selected by the user. The instance launching process remains the same from this point. Refer to section **2.4.1.2 "Instance → Launch an Instance"** for specific instructions.

2.4.2.24 Snapshots → Actions(Dropdown) → Edit Snapshot

Step 1: Open the Create Volume Tab

1. Go to **Snapshots** page.
2. Click on the **dropdown** associated with each snapshot available on the list and select, “**Edit Snapshot**”.



Search

Edit Snapshot

Snapshot Name

TestingSnapshot

Description:

Modify the name and description of a snapshot.

Description

Cancel

Save Changes

Step 2: Edit Snapshot Information

1. Update the **Snapshot Name** in the name field.
2. Update description.
3. Click **Save Changes**.
4. Click **Cancel** if you don't want to edit snapshot information.

2.4.2.25 Snapshots → Actions(Dropdown) → Delete Volume Snapshot

1. Go to **Snapshots** page.
2. Click on the **dropdown** associated with each snapshot available on the list and select, “**Delete Volume Snapshot**”.

Confirm Delete Volume Snapshot ✕

You have selected: "TestingSnapshot". Please confirm your selection. Deleted volume snapshots are not recoverable.

IMPORTANT: Upon clicking "**Delete Volume Snapshot**", a confirmation module will appear, seeking user confirmation to proceed with the deletion process. This additional step ensures deliberate and accurate actions in the deletion process.

3. Click **Delete Volume Snapshot**.
4. Click **Cancel** if you don't want to delete the volume snapshot.

2.4.2.26 Snapshots → Actions(Dropdown) → Create Backup

1. Go to **Snapshots** page.
2. Click on the **dropdown** associated with each snapshot available on the list and select, "**Create Backup**".

Create Volume Backup
✕

Backup Name *

Description

Bucket Name

Backup Snapshot

Incremental ?

Volume Backup: Volume Backups are stored using one of cinder-backup drivers (object storage service, Ceph, NFS, etc ...). You must have one of these services activated in order to create a backup.

If a snapshot is specified here only the specified snapshot of the volume will be backed up.

If no bucket name is provided, a default bucket named volumebackups will be provisioned for you. Backups will be the same size as the volume they originate from.

Step 2: Create a Backup from Snapshot

1. Input “**Backup Name**” in the name field.
2. Provide a suitable “**Description**” in the description box.
3. Input a “**Bucket Name**” in order to create a custom bucket to store the backup.
4. Click “**Create Volume Backup**” in order to proceed with the backup creation.
5. Click “**Cancel**” in order to cancel the backup creation process.

2.4.2.27 Snapshots → Actions(Dropdown) → Update Metadata

"Update Metadata" allows users to modify or enhance metadata associated with a volume snapshot, providing flexibility in managing additional information for organizational and categorization purposes within the cloud environment.

Step 1: Open the Update Volume Snapshot Metadata Tab

1. Go to **Snapshots** page.
2. Click on the **dropdown** associated with each snapshot available on the list and select, “**Update Metadata**”.

Update Volume Snapshot Metadata
✕

You can specify resource metadata by moving items from the left column to the right column. In the left column there are metadata definitions from the Glance Metadata Catalog. Use the "Custom" option to add metadata with the key of your choice.

Available Metadata
Filter

Custom

+

No available metadata

Existing Metadata
Filter

Test Metadata
-

Test Metadata (Test Metadata)

Cancel
Save

Step 2: Add or Remove Metadata

1. Open “Update Metadata” tab.
2. Add metadata; click on the "**Plus**" icon next to an item in the **Available Metadata** section.

NOTE: Upon clicking “Plus”, the item will move from the “Available Metadata” section to “Existing Metadata” section.

IMPORTANT: To generate **Custom Metadata**, users need to input the metadata title in the designated field under "Available Metadata" and then click the "Plus" icon to include the custom metadata in the "Existing Metadata" section.

3. Remove metadata; click on the "**Minus**" icon next to an item in the **Existing Metadata** section.

NOTE: Upon clicking “Minus”, the item will move from the “Existing Metadata” section to “Available Metadata” section.

4. Click **Save**.
5. Click **Cancel** if you don’t want to update metadata.

2.4.2.28 Volume Groups → Create Group

Volume Groups provide a way to organize and manage related volumes within a cloud computing environment. By grouping volumes together, users can streamline administration tasks, implement consistent configurations, and facilitate efficient resource management. This organizational structure enhances the overall management and control of storage resources in the cloud.

Step 1: Open the Create Group Tab

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**Block Storage**" for its dropdown menu.
3. Select "**Volume Groups**" from the menu to be redirected to the Volume Groups page.
4. Click **Create Groups**.

Create Group
✕

Group Information
Manage Volume Types

Name *

Volume groups provide a mechanism for creating snapshots of multiple volumes at the same point-in-time to ensure data consistency

Description

A volume group can support more than one volume type, but it can only contain volumes hosted by the same back end.

Group Type *

Select group type
▼

Availability Zone

nova
▼

Cancel

Create Group

Step 2: Insert Group Information

1. Input “Group Name” in the **Name** field.
2. Provide a suitable **Description** in the description field.
3. Select a **Group Type** from the dropdown.
4. Select the **Availability Zone** from the dropdown.

Create Group
✕

Group Information
Manage Volume Types

Add volume types to this group. Multiple volume types can be added to the same group only if they are associated with same back end.

All available volume types

🔍

lvmdriver-1	+
__DEFAULT__	+

Selected volume types

🔍

No volume types selected.

Cancel

Create Group

Step 3: Manage Volume Types

1. Select a volume type; click on the "**Plus**" icon next to an item in the **All Available Volume Types** section.

NOTE: Upon clicking “Plus”, the item will move from the “All Available Volume Types” section to “Selected Volume Types” section.

2. Remove a volume type; click on the "**Minus**" icon next to an item in the **Selected Volume Types** section.

NOTE: Upon clicking “Minus”, the item will move from the “Selected Volume Types” section to “All Available Volume Types” section.

3. Click **Create Group**.
4. Click **Cancel** if you don't want to create volume groups.

IMPORTANT: User must provide **Name**, **Group Type** and also select **Volume Type** in order to create “Volume Groups”.

2.4.2.29 Volume Groups → Actions → Create Snapshot

Step 1: Open the Create Group Snapshot Tab

1. Go to the **Volume Groups** page.
2. Click on **Create Snapshot** from the dropdown under “**Actions**”, associated with each item in the list.

Create Group Snapshot
✕

Snapshot Name *

Create a snapshot for each volume contained in the Group.

Snapshots can only be created for Groups that contain volumes.

Description

Description:

From here you can create a snapshot of a volume.

Snapshot Limits

Total Gibibytes 12 of 1,000 GiB Used

Number of Snapshots 4 of 10 Used

Cancel
Create Snapshot

Step 2: Create Group Snapshot

1. Input **Snapshot Name** in the name field.
2. Provide a suitable **Description** in the description box.
3. Click **Create Snapshot**.
4. Click **Cancel** if you don't want to create any snapshot.

IMPORTANT: Creating group snapshots is only possible when volumes are assigned to the group.

NOTE: Users can generate a maximum of 10 snapshots, and the creation limit is visually represented through a progress bar and numerical display.

2.4.2.30 Volume Groups → Actions(Dropdown) → Manage Volumes

Step 1: Open the Add/Remove Group Volumes Tab

1. Go to the **Volume Groups** page.
2. Click on **Manage Volumes** from the dropdown under “**Actions**”, associated with each item in the list.

×
 Add/Remove Group Volumes

Add/remove volumes to/from this group. Only volumes associated with the volume type(s) assigned to this group will be available for selection.

All available volumes

10fe9d62-e6c6-47cb-94a5-f22af481778b	+
97fb9725-007b-4f52-b41c-133575de3d63	+
bee4708d-4127-43ea-92d8-c757b2afe231	+
d6b1c11f-e647-4f05-a7f2-4d29b96ceba5	+

Selected volumes

Test 3	-
Test Volume	-
Test002	-

Cancel
Submit

Step 2: Add or Remove Volumes from the Group

1. Add a volume; click on the **"Plus"** icon next to an item in the **All Available Volumes** section.

NOTE: Upon clicking “Plus”, the item will move from the “All Available Volumes” section to “Selected Volumes” section.

3. Remove a volume; click on the **"Minus"** icon next to an item in the **Selected Volumes** section.

NOTE: Upon clicking “Minus”, the item will move from the “Selected Volumes” section to “All Available Volumes” section.

2.4.2.31 Volume Groups → Actions(Dropdown) → Edit Group

Step 1: Open the Edit Group Tab

1. Go to the **Volume Groups** page.
2. Click on **Edit Group** from the dropdown under **“Actions”**, associated with each item in the list.

Edit Group ✕

Name ^{*} Modify the name and description of a volume group.

Test Group 2

Description

Cancel Submit

Step 2: Update Group Information

1. Update group **Name**.
2. Update group **Description**.
3. Click **Submit**.
4. Click **Cancel** if you don't want to edit group information.

2.4.2.32 Volume Groups → Actions(Dropdown) → Clone Group

Step 1: Open the Edit Group Tab

1. Go to the **Volume Groups** page.
2. Click on **Clone Group** from the dropdown under “**Actions**”, associated with each item in the list.

Clone Group
✕

Group Name *

Clone each of the volumes in the source Group, and then add them to a newly created Group.

Description

Volume Limits

Total Gibibytes (16 GiB) 1,000 GiB Available

Number of Volumes (7) 10 Available

Use a group as source

Step 2: Create a Clone

1. Provide a name of cloned group in the **Group Name** input-field.
2. Provide a suitable description in the **Description** box.
3. Click **Clone Group**.
4. Click **Cancel** if you don't want to clone a group.

NOTE: Users can generate a maximum of 10 volume, and the creation limit is visually represented through a progress bar and numerical display.

2.4.2.33 Volume Groups → Actions(Dropdown) → Remove Volume from Groups

1. Go to the **Volume Groups** page.
2. Click on **Remove Volume from Groups** from the dropdown under “**Actions**”, associated with each item in the list.
3. Click **Submit**.
4. Click **Cancel** if you don't want to remove volumes.

Remove Volumes from Group ✕

This action will unassign all volumes that are currently contained in this group.

Cancel

Submit

WARNING: Clicking "Remove Volume from Groups" will detach all volumes currently associated with this group.

2.4.2.34 Volume Groups → Actions(Dropdown) → Delete Group

Step 1: Open the Delete Group Tab

1. Go to the **Volume Groups** page.
2. Click on **Delete Group** from the dropdown under "Actions", associated with each item in the list.

Delete Group ✕
 Delete Volumes

Volume groups can not be deleted if they contain volumes.

Check the "Delete Volumes" box to also delete any volumes associated with this group.

Note that a volume can not be deleted if it is "attached" or has any dependent snapshots.

Cancel

Delete Group

Step 2: Delete a Group

3. Click **Delete Group**.
4. Click **Cancel** if you don't want to delete the group.

NOTE: The "Delete" option may not be visible in the dropdown if a **Group Snapshot** has been created using the selected **Volume Group**.

IMPORTANT: To delete all associated volumes during group deletion, mark the "Delete Volumes" checkbox.

WARNING: Volume groups cannot be deleted if they still contain volumes. Also, keep in mind that a volume cannot be deleted if it is currently "attached" or has associated snapshots.

2.4.2.35 Group Snapshots → Search

NOTE: "Snapshots" typically refer to point-in-time copies or backups of data in a computing environment. Group Snapshots enable users to capture the collective state of multiple volumes at a specific point in time. This facilitates efficient data management and backup strategies for multiple volumes within a designated group.

Block Storage > Group Snapshots

Q 01 Delete Snapshots

Displaying 1 item

<input type="checkbox"/>	Name	Description	Status	Group	Actions
<input type="checkbox"/>	Search Snapshot 01		Available	Test Group 1	Create Group ▾

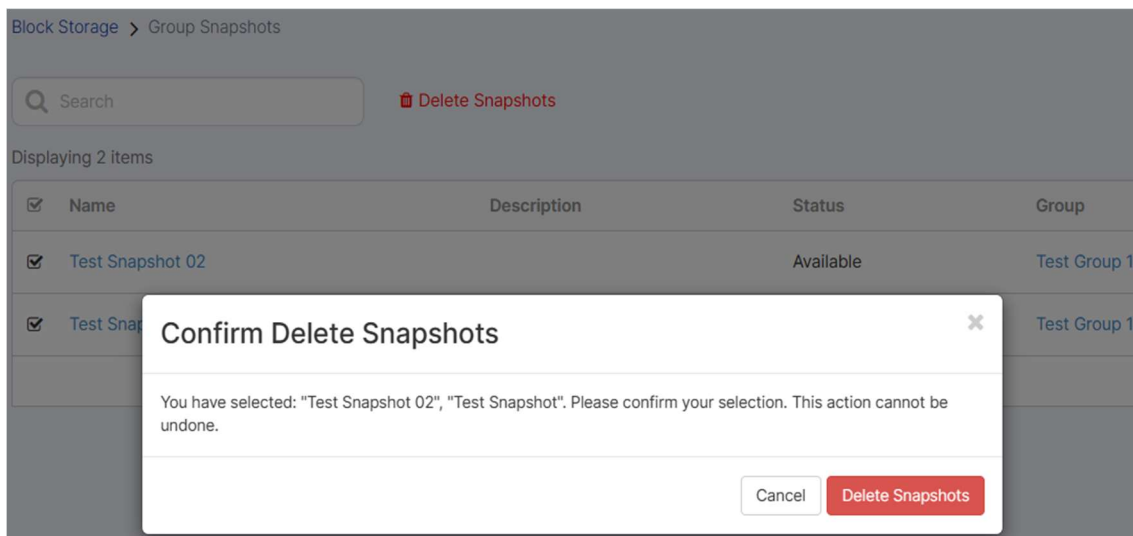
1. Locate the left-side Navigation Bar from the dashboard; click "**Block Storage**" for its dropdown menu.
2. Select "**Group Snapshot**" from the menu to be redirected to the group snapshots page.
3. Input searching keywords in the search field.

NOTE: The search function operates automatically when inputting keywords that match list items. This feature streamlines the identification and retrieval of specific items, enhancing the user's experience by providing a quick and efficient way to locate relevant information within the list.

2.4.2.36 Group Snapshots → Delete Snapshots

1. Locate the left-side Navigation Bar from the dashboard; click "**Block Storage**" for its dropdown menu.
2. Select "**Group Snapshot**" from the menu to be redirected to the group snapshots page.
3. Choose the snapshot groups you wish to delete from the list, ensuring that the checkboxes are selected.
4. Click **Delete Snapshots** located at the top.

IMPORTANT: Upon clicking "**Delete Snapshots**", a confirmation module will appear, seeking user confirmation to proceed with the deletion process. This additional step ensures deliberate and accurate actions in the deletion process.



5. Click **Delete Snapshot**.
6. Click **Cancel** if you don't want to delete any group snapshot.

2.4.2.37 Group Snapshots → Actions → Create Group

Step 1: Open the Create Volume Group Tab

1. Go to the **Group Snapshots** page.
2. Click on **Create Group** under "**Actions**", associated with each item in the list.

Create Volume Group
✕

Group Name *

Description

Use snapshot as a source

Test Snapshot
▼

Create a Group that will contain newly created volumes cloned from each of the snapshots in the source Group Snapshot.

Volume Limits

Total Gibibytes (22 GiB) 1,000 GiB Available

Number of Volumes (10) 10 Available

Cancel

Submit

Step 2: Create Group from Group Snapshot

1. Input Group Name in the name field.
2. Provide a suitable **Description** in the description field.
3. Click **Submit**.
4. Click **Cancel** if you don't want to create any volume group.

NOTE: Users can generate a maximum of 10 volume, and the creation limit is visually represented through a progress bar and numerical display.

2.4.2.38 Group Snapshots → Actions(Dropdown) → Delete Snapshot

1. Go to **Group Snapshots** page.
2. Click on the **dropdown** associated with each snapshot available on the list and select, **“Delete Snapshot”**.

Delete Snapshots

	Name	Description	Status	Group
<input type="checkbox"/>	Search Snapshot 01		Available	Test Group 1
<input type="checkbox"/>	Test Snapshot		Available	Updated Test Group 2

Confirm Delete Snapshot ✕

You have selected: "Test Snapshot". Please confirm your selection. This action cannot be undone.

Cancel

Delete Snapshot

IMPORTANT: Upon clicking "**Delete Snapshot**", a confirmation module will appear, seeking user confirmation to proceed with the deletion process. This additional step ensures deliberate and accurate actions in the deletion process.

3. Click **Delete Snapshot**.
4. Click **Cancel** if you don't want to delete the group snapshot.

2.4.3 Cloud Storage Service

Cloud storage refers to a digital storage solution that allows users to store and access data over the internet. It provides scalable and flexible storage space, enabling users to save and retrieve files, documents, and other digital assets from anywhere with an internet connection. Cloud storage eliminates the need for physical storage devices, offering convenience, accessibility, and the ability to scale storage resources based on specific needs.

2.4.3.1 Buckets → Create Container

Step 1: Open "Create Container" Tab

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**Cloud Storage Service**" for its dropdown menu.
3. Select "**Buckets**" from the menu to be redirected to the Volume page.
4. Click "**Create Container**."

Create Container
✕

Container Name *

Container name must not contain '/'.

Storage Policy *

Standard
▾

Container Access

Public

Not Public

A Public Container will allow anyone with the Public URL to gain access to your objects in the container

Cancel

Submit

Step 2: Create a Container

1. Input a **Container Name** in the name field.
2. Select **Standard Policy** from the dropdown.
3. Select **Container Access**.

NOTE: Choose the access permissions as either public or not-public. A public container grants access to anyone with the public URL, allowing them to retrieve objects stored in the container.

4. Click **Submit**.
5. Click **Cancel** if you don't want to create a container.

2.4.3.2 Buckets → Container → Create Folder / Folder Options

Bucket

▼ Container Information

Total Storage	Object count	Average object size
34.11 KB	3	11.37 KB

Displaying 2 items

Q Search + Create Container

Name	Size	Creation Date	Actions
Test001	34.11 KB	23 Nov, 2023 - 10:48 AM	Public ▼
TestContainer002	0 bytes	23 Nov, 2023 - 11:09 AM	Private ▼

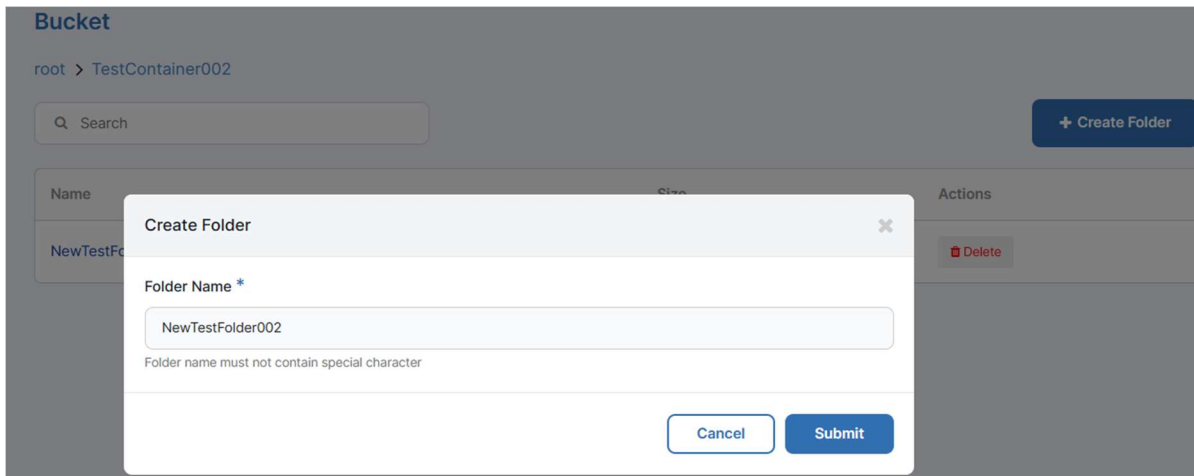
Step 1: Create New Folder

1. Click on the container's **Name** where you wish to create a folder.
2. Once you are inside the container, click on **Create Folder**.
3. Input **Folder Name** in the name field.

IMPORTANT: Folder names should not contain any whitespaces, and the use of symbols or special characters is also prohibited.

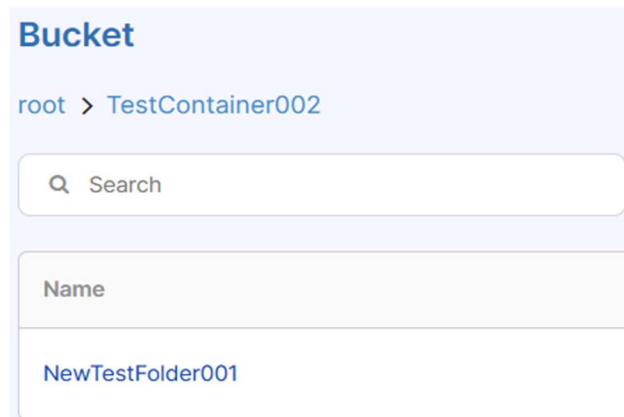
4. Click on **Submit**.
5. Click **Cancel** if you don't want to create new folder.

NOTE: Users have the flexibility to create nested folders within their storage space. This allows for a hierarchical organization of data, facilitating a structured and systematic arrangement of files and subfolders.



Upon successful creation, the new folder will be visible in the list inside the container/parent-folder.

Step 2: Navigate to Different Folders



1. **Navigate back to parent folder;** form the directory above, click on respective parent folder (*i.e., TestContainer002 is the parent folder of NewTestFolder001*).
2. **Go to Container Page;** form the directory above, click on **root**.

Step 3: Delete a Folder

1. Click on the **Delete** icon next to the folder you wish to remove from the container list.

IMPORTANT: Empty folders will be promptly deleted; however, if the parent folder contains files or subfolders, direct deletion is not possible. In such cases, it is necessary to clear the parent folder before proceeding with deletion.

Confirm Delete
✕

Are you sure you want to permanently delete "NewTestFolder001"?

⚠ Warning : This action can not be undone. This folder may not empty.

Cancel
Delete

IMPORTANT: A confirmation module will popup, user must confirm in order to proceed with folder deletion. This method is designed to prevent accidental deletion without user consent.

2. Click **Delete Folder**.
3. Click **Cancel** if you don't want to delete a folder.

2.4.3.3 Buckets → Container → Upload/ Uploaded File Options

Bucket

▼ Container Information

Total Storage	Object count	Average object size
34.11 KB	3	11.37 KB

Displaying 2 Items

+ Create Container

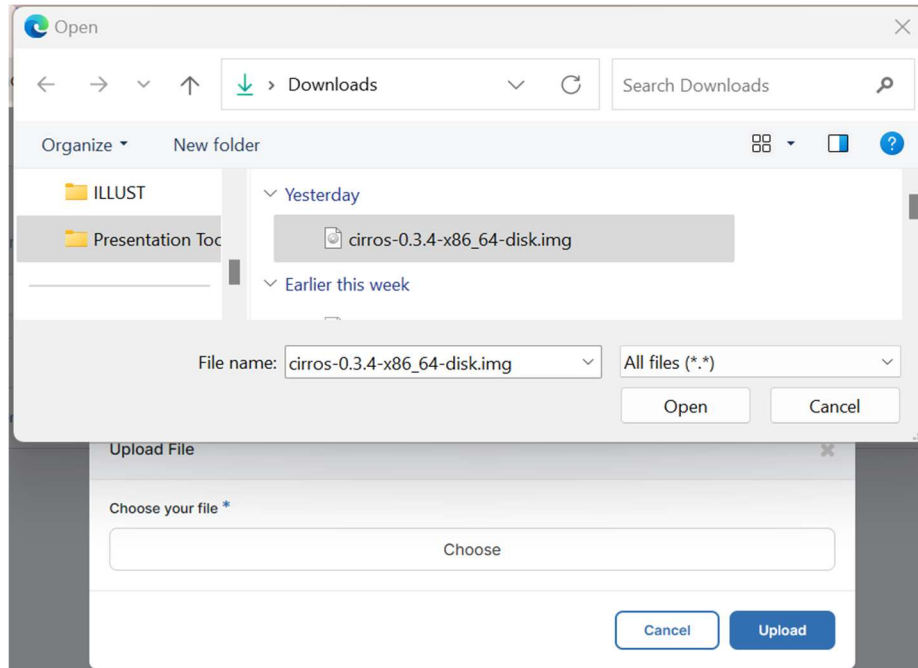
Name	Size	Creation Date	Actions
Test001	34.11 KB	23 Nov, 2023 - 10:48 AM	Public ▼
TestContainer002	0 bytes	23 Nov, 2023 - 11:09 AM	Private ▼

Step 1: Upload a File

1. Click on the container's **Name** where you wish to create a folder.
2. Once you are inside the container, click on **Upload**.
3. Click on **Choose**.

NOTE: When the user clicks "**Choose**," a local file system tab will appear. Select a specific file and click "**Open**" to choose the file for uploading. Clicking "**Cancel**" will close the local file system tab.

4. Once the file is selected, click "**Upload**" to initiate the upload process.
5. Click **Cancel** if user don't want to upload a file.



Upon successful upload, the new file will be visible in the list inside the parent folder.

Step 2: Actions → Download a File

1. Go inside the parent folder where the file you want to delete is located.
2. From the dropdown under **Actions** select **Download**.

NOTE: After clicking "**Download**", the download will commence automatically in the background. Depending on the browser settings, user may see a download notification.

Step 3: Actions → View Details of a File

1. Go inside the parent folder where the file you want to delete is located.
2. From the dropdown under **Actions** select **View Details**.
3. Click **Cancel** if user wants to close the popup.

NOTE: Upon clicking, a details tab will appear, displaying information such as Name, Size, Type, and Creation Time.

Object Details	
Name	Frame 1 (1).png
Size	14.44 KB
Type	image/png
Created	23 Nov, 2023 - 06:35 AM

[Cancel](#)

Step 4: Actions → Delete a File

1. Go inside the parent folder where the file you want to delete is located.
2. From the dropdown under **Actions** select **Delete**.

Confirm Delete ✕

Are you sure you want to permanently delete "Screenshot from 2023-11-20 15-58-48.png"?

[Cancel](#)
[Delete](#)

IMPORTANT: A confirmation module will popup, user must confirm in order to proceed with file deletion. This method is designed to prevent accidental deletion without user consent.

2. Click **Delete**.
3. Click **Cancel** if you don't want to delete a file.

2.5 API and Services

2.5.1 API Access

Step 1: Visit the API Access Page

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**API and Services**" for its dropdown menu.
3. Select "**API Access**" from the menu to be redirected to the following page.

NOTE: Upon visiting, users can access a comprehensive list of available "Services" and corresponding "Service Endpoints." This overview also includes details on credentials and offers a convenient download function for various "OpenStack" files. This platform streamlines user access, providing essential information and facilitating seamless file retrieval for an enhanced experience.

In cloud computing, API Services delineate specific functionalities or resources accessible through an API, dictating communication rules. Acting as access points, Service Endpoints offer URLs for connecting to these services, enabling seamless integration and configuration through the Command Line Interface (CLI). Leveraging Service Endpoints empowers users to efficiently interact with diverse cloud services, directly initiating commands and operations for effective system management.

API & Services > API Access

Download OpenStack RC File ▼ View Credentials

Service	Service Endpoint
Alarming	http://103.69.149.69:8042
Block Storage	http://103.69.149.69/volume/v3/7617c1353aa347a5b79618403baf2982
Compute	http://103.69.149.69/compute/v2.1
Compute_Legacy	http://103.69.149.69/compute/v2/7617c1353aa347a5b79618403baf2982
Dns	http://103.69.149.69/dns
Identity	http://103.69.149.69/identity
Image	http://103.69.149.69/image
Network	http://103.69.149.69:9696/networking
Object Store	http://103.69.149.69:8080/v1/AUTH_7617c1353aa347a5b79618403baf2982
Placement	http://103.69.149.69/placement
Rating	http://103.69.149.69:8889/
Volumev3	http://103.69.149.69/volume/v3/7617c1353aa347a5b79618403baf2982

Step 2: Open the View Credential Tab

1. Go to the **API Access** page.
2. Click on **View Credentials**.

NOTE: Upon clicking "View Credentials," a tab will appear, displaying credential details including User Name, User ID, Project Name, Project ID, and Authentication URL.

3. Click **Close** to close the tab.

User Credentials Details ✕

User Name

User ID

Project Name

Project ID

Authentication URL

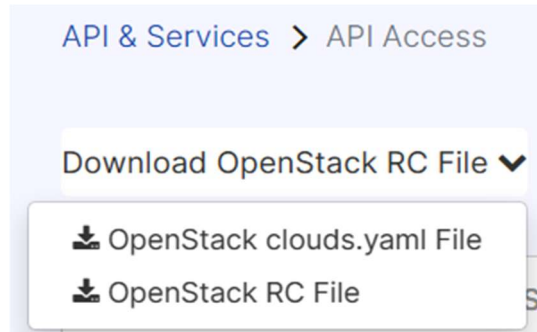
[Close](#)

Step 3: Download OpenStack Files

1. Go to the **API Access** page.
2. Click on the **Download** dropdown on the top-left to access different items from the dropdown list.
3. Click on the specific **OpenStack** file to download.

NOTE: Upon clicking, the download will commence promptly, and users may observe a download notification based on their browser settings. User can download between two types of files:

1. **OpenStack clouds.yaml File:** A YAML file is a human-readable data serialization format commonly used for configuration files. The clouds.yaml file, in the context of OpenStack, typically contains information about cloud resources, such as authentication details, endpoints, and other settings. It plays a crucial role in configuring OpenStack environments, providing a structured and readable format for defining cloud-related parameters.
2. **OpenStack RC File:** An OpenStack RC (Run Commands) file is a shell script containing environment variables that allow users to interact with OpenStack services using the command-line interface (CLI). When sourced, it sets the necessary environment variables like authentication credentials, project details, and endpoint URLs, enabling users to execute OpenStack commands seamlessly from the terminal.



2.5.2 Application Credentials → Create Application Credentials

Step 1: Open Create Application Credentials Tab

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "API and Services" for its dropdown menu.
3. Select "Application Credentials" from the menu to be redirected to the following page.
4. Click **Create Application Credentials** to open the popup tab.

Create Application Credential
✕

Name *

Description

Secret

Expiration Date

Expiration Time

Roles

reader

admin

member

Access Rules

Unrestricted (dangerous)

Description:

Create a new application credential.

The application credential will be created for the currently selected project.

Secret: You may provide your own secret, or one will be generated for you. Once your application credential is created, the secret will be revealed once. If you lose the secret, you will have to generate a new application credential.

Expiration Date/Time: You may give the application credential an expiration. The expiration will be in UTC. If you provide an expiration date with no expiration time, the time will be assumed to be 00:00:00. If you provide an expiration time with no expiration date, the date will be assumed to be today.

Roles: You may select one or more roles for this application credential. If you do not select any, all of the roles you have assigned on the current project will be applied to the application credential.

Access Rules: If you want more fine-grained access control delegation, you can create one or more access rules for this application credential. The list of access rules must be a JSON- or YAML-formatted list of rules each containing a service type, an HTTP method, and a URL path, for example:

```
[
  {
    "service": "compute",
    "method": "POST",
    "path": "/v2.1/servers"
  }
]
or:
- service: compute
  method: POST
  path: /v2.1/servers
```

Unrestricted: By default, for security reasons, application credentials are forbidden from being used for creating additional application credentials or keystone trusts. If your application credential needs to be able to perform these actions, check "unrestricted".

Cancel
Create Application Credential

Step 2: Create new Application Credential

1. Input **Name** to identify new credential.
2. Provide a suitable **Description** of the credential.
3. Input a **Secret** for the credential.

IMPORTANT: A "secret" in the context of an application credential is a confidential piece of information used for authentication. Users can either provide their own secret during the creation of an application credential, or a system-generated one will be assigned. Once an application credential is generated, its secret will be disclosed only once. If the secret is lost, users will need to create a new application credential to obtain a new secret.

4. Input **Expiration Date** and **Expiration Time**.

NOTE: Users have the option to manually input the date and time or utilize the convenient popup calendar and time-selector. By clicking on the respective "Calendar" icon for the date and "Clock" icon for the time, a user-friendly interface will appear, facilitating easy selection

5. Specify **Roles** for the application credentials.

NOTE: Roles in the context of application credentials represent specific sets of permissions or access levels granted to the associated credentials. Choose one or more roles for this application credential. If no roles are selected, all the roles assigned to your current project will be applied to the application credential.

6. Provide **Access Rules**.

NOTE: For more precise control over access delegation, you can establish one or more access rules for this application credential. The access rules should be presented as a JSON- or YAML-formatted list, each containing details such as service type, HTTP method, and URL path. For example:

json:

```
[
  {"service": "compute",
   "method": "POST",
   "path": "/v2.1/servers"}
]
```

yaml:

```
- service: compute
  method: POST
  path: /v2.1/servers
```

IMPORTANT: There is also an option to enable the "Unrestricted" checkbox. By default, for security reasons, application credentials are restricted from being used to create additional application credentials or Keystone trusts. If your application credential requires the ability to perform these actions, select "Unrestricted."

7. Click **Create Application Credential**.

After entering all the required information and clicking "Create Application Credential," user will be redirected to a new tab where user can download the credential file in either RC or YAML format.

8. Click **Cancel** if user doesn't want to create application credentials.

Step 3: Download Application Credential File

ID *

Name *

Secret *

Your application credential

Please capture the application credential ID and secret in order to provide them to your application.

The application credential secret will not be available after closing this page, so you must capture it now or download it. If you lose this secret, you must generate a new application credential.

1. Click on **Download OpenRC File** or **Download clouds.yaml**.

NOTE: Upon clicking, the download will commence automatically. Users may receive a notification based on their browser settings.

OpenStack clouds.yaml File:

A YAML file is a human-readable data serialization format widely used for configuration files. In the context of OpenStack, **clouds.yaml** contains vital information about cloud resources, including authentication details, endpoints, and other settings. It serves as a key configuration file for OpenStack environments, offering a structured and readable format for defining essential parameters.

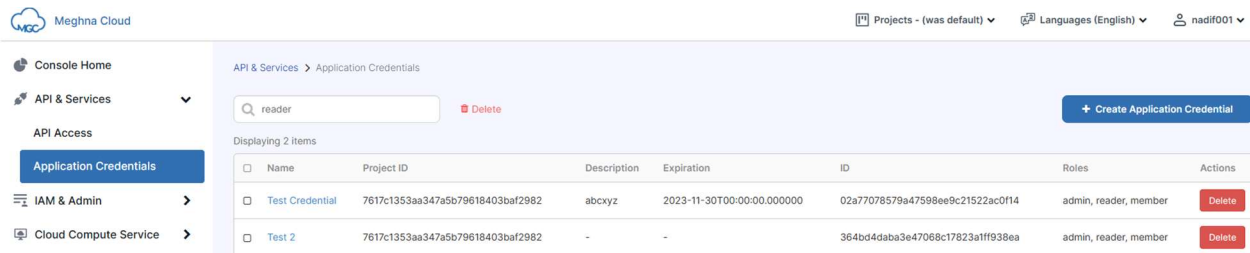
OpenStack RC File:

The **OpenStack RC** (Run Commands) file is a shell script featuring environment variables that empower users to interact with OpenStack services via the command-line interface (CLI). When sourced, it configures crucial environment variables such as authentication credentials, project details, and endpoint URLs. This enables users to seamlessly execute OpenStack commands directly from the terminal.

IMPORTANT: The application credential ID and secret will not be available after closing this page, so be sure to capture a screenshot and download the information in respective RC or YAML file. Losing the secret will require generating new credentials.

2. Click **Close** in order to close the tab.

After user successfully creates a new credentials, they will be moved back to the “Application Credential” page.



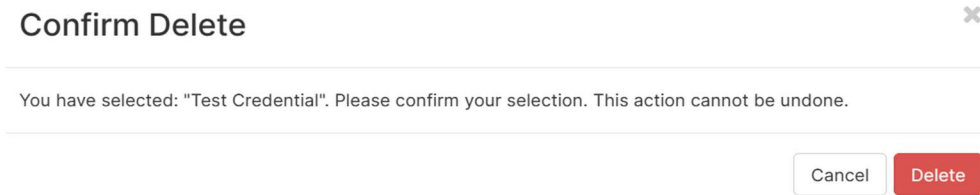
Name	Project ID	Description	Expiration	ID	Roles	Actions
Test Credential	7617c1353aa347a5b79618403baf2982	abxyz	2023-11-30T00:00:00.000000	02a77078579a47598ee9c21522ac0f14	admin, reader, member	Delete
Test 2	7617c1353aa347a5b79618403baf2982	-	-	364bd4daba3e47068c17823a1ff938ea	admin, reader, member	Delete

NOTE: Newly created Application Credentials will be displayed in a list on the "Application Credentials" page along with the old ones. Users will also encounter options to create new application credentials, delete or bulk delete credentials, and perform searches.

2.5.3 Application Credentials → Actions → Delete

1. Go to the **Application Credentials** page.
2. Click **Delete** under the **Actions** column, for each individual list item.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.

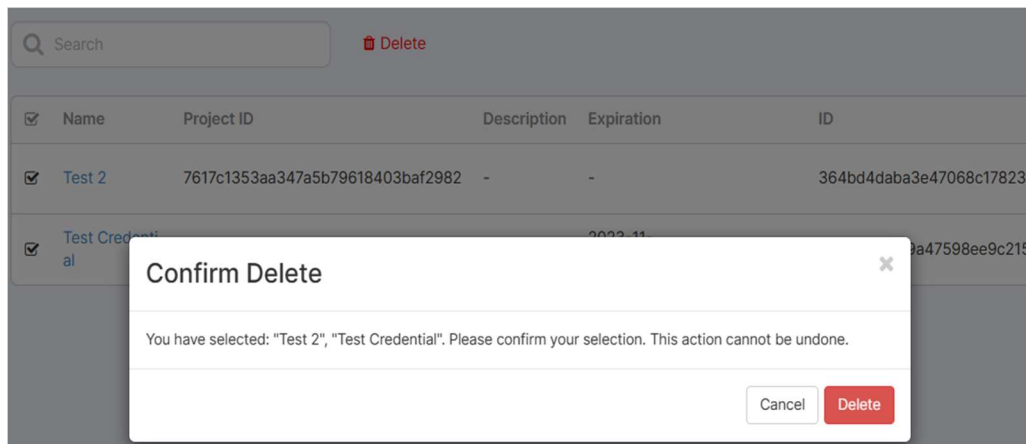


3. Click **Delete** from the confirmation module.
4. Click **Cancel** if user does not wish to proceed with the deletion process.

2.5.4 Application Credentials → Delete

1. Go to the **Application Credentials** page.
2. Mark all the credentials that needs to be deleted.
3. Click **Delete** located at top of the page.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.

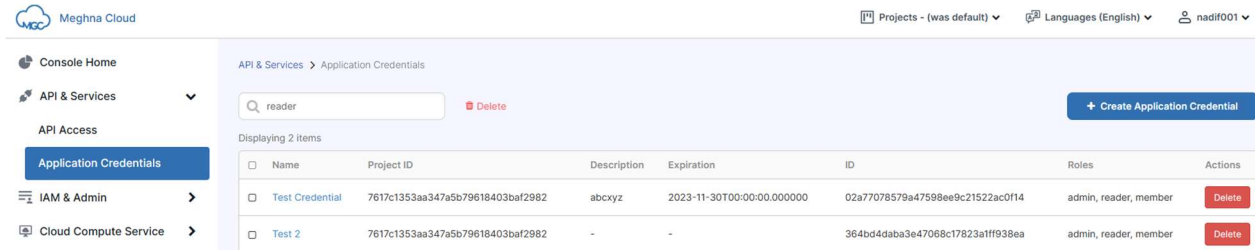


4. Click **Delete** from the confirmation module.
5. Click **Cancel** if user does not wish to proceed with the deletion process.

2.5.5 Application Credentials → Application Credentials Overview

1. Go to the **Application Credentials** page.

NOTE: If users have previously created Application Credentials, they will be displayed in a list on the "Application Credentials" page.



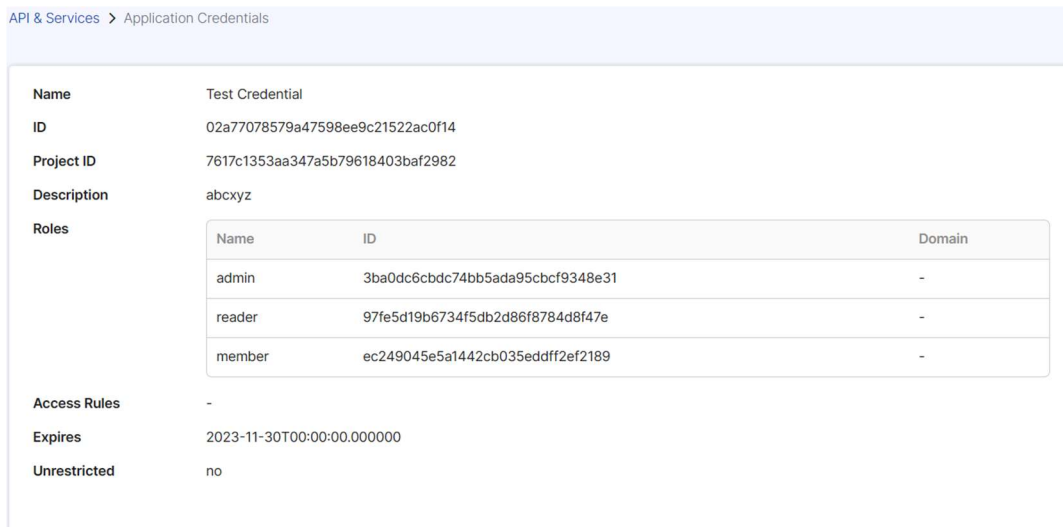
API & Services > Application Credentials

Search: reader Delete + Create Application Credential

Displaying 2 items

Name	Project ID	Description	Expiration	ID	Roles	Actions
Test Credential	7617c1353aa347a5b79618403baf2982	abcxyz	2023-11-30T00:00:00.000000	02a77078579a47598ee9c21522ac0f14	admin, reader, member	Delete
Test 2	7617c1353aa347a5b79618403baf2982	-	-	364bd4daba3e47068c17823a1ff938ea	admin, reader, member	Delete

2. Click on the **Name** to open the Overview page.



API & Services > Application Credentials

Name: Test Credential

ID: 02a77078579a47598ee9c21522ac0f14

Project ID: 7617c1353aa347a5b79618403baf2982

Description: abcxyz

Roles:

Name	ID	Domain
admin	3ba0dc6cbdc74bb5ada95cbcf9348e31	-
reader	97fe5d19b6734f5db2d86f8784d8f47e	-
member	ec249045e5a1442cb035eddf2ef2189	-

Access Rules: -

Expires: 2023-11-30T00:00:00.000000

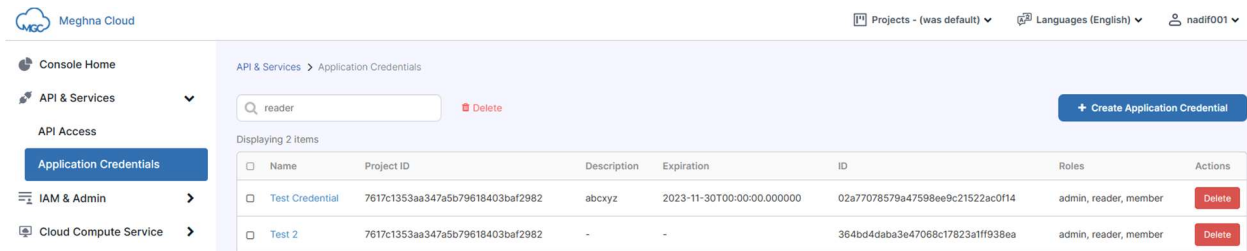
Unrestricted: no

3. Click on the **Back** button of the **Browser** to go back to the "Application Credentials" page.

2.5.6 Application Credentials → Search Application Credentials

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "API and Services" for its dropdown menu.
3. Select "Application Credentials" from the menu to be redirected to the following page.
4. Input search keywords in the **Search** field.

NOTE: The search function operates automatically, isolating items from the list based on what the user types, ensuring a dynamic filtering based on the input.



The screenshot shows the Meghna Cloud console interface. The left sidebar contains navigation options: Console Home, API & Services, API Access, IAM & Admin, and Cloud Compute Service. The main content area is titled 'API & Services > Application Credentials'. It features a search bar with the text 'reader' and a 'Delete' button. A '+ Create Application Credential' button is located in the top right. Below the search bar, it says 'Displaying 2 items' and shows a table with the following data:

Name	Project ID	Description	Expiration	ID	Roles	Actions
Test Credential	7617c1353aa347a5b79618403baf2982	abcxyz	2023-11-30T00:00:00.000000	02a77078579a47598ee9c21522ac0f14	admin, reader, member	Delete
Test 2	7617c1353aa347a5b79618403baf2982	-	-	364bd4daba3e47068c17823a1ff938ea	admin, reader, member	Delete

2.6 IAM and Admin

IAM (Identity and Access Management) and Admin functionalities encompass the management of users, roles, and groups within the cloud environment. Users are individual entities granted access to resources, roles define permissions and responsibilities, while groups provide a collective framework for organizing and applying access policies. This suite of tools ensures streamlined control over user authentication, authorization, and group-based access management, fostering efficient administration and security in the cloud infrastructure.

2.6.1 Users → Create User

Step 1: Open the Create Users Tab

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**IAM and Admin**" for its dropdown menu.
3. Select "**Users**" from the menu to be redirected to the following page.
4. Click on **Create User**.

Step 2: Create a New User

1. Input **User Name**.

WARNING: Usernames must adhere to the following restrictions: they can only include lowercase letters, digits, underscores, and hyphens, with a character length requirement ranging from 3 to 32 characters (e.g., user_456). Additionally, ensure that there are no whitespaces in the username.

2. Provide **Full Name** of the user.
3. Provide a valid **Billing Address** of the user.
4. Provide a suitable "Description" about the user.
5. Input a valid **Email** address for the user.

6. Input a **Password** for the user to authenticate.
7. Confirm the password, by inputting the same password in the **Confirm Password** field.

NOTE: Click on the “Eye” icon to make the password visible.

8. Assign the new user to a **Project**.

IMPORTANT: Assigning a new user to a project is crucial. To assign a user to a **New Project**, simply click on the "**Plus**" icon linked with the project field to create a new project. Follow **2.3.1. Create Project** for project creation guidelines.

9. Select the **Role** for the new user from the dropdown menu.

IMPORTANT: The "**Enabled**" checkbox is marked by default, indicating that the new user is enabled for the specific project. To disable the new user from the project, simply uncheck "Enable." Likewise, to revoke authentication access for the new user, mark the "**Lock Password**" checkbox.

Create User ✕

Domain ID	Description:
<input type="text" value="e2dafe7a08d4493cb415d6c50cd64da9"/>	Create a new user and set related properties including the Primary Project and Role.
Domain Name	
<input type="text" value="nadif"/>	
User Name *	
<input type="text" value="testUser"/>	
Full Name	
<input type="text" value="Random Test User"/>	
Billing Address	
<input type="text" value="Home, Road, Area, Province"/>	
Description	
<input type="text"/>	

Email

Password *

Confirm Password *

Primary Project

Role

Enabled

Lock password

10. Click **Create User**.

11. Click **Cancel** in order to cancel the user creation process.

2.6.2 Users → Actions → Edit

Step 1: Open the Edit Tab

1. Go to the **Users** page.
2. Click on **Edit** under **Actions** column associated with each list item.

Update User
✕

Domain ID

Description:
Edit the user's details, including the Primary Project.

Domain Name

User Name *

Full Name

Billing Address

Description

Email

Primary Project

Test Project
▼

Lock password

Cancel

Update User

Step 2: Update User Information

IMPORTANT: Only re-input data into the fields that need to be updated.

1. Update the **User Name**.

WARNING: Usernames must adhere to the following restrictions: they can only include lowercase letters, digits, underscores, and hyphens, with a character length requirement ranging from 3 to 32 characters (e.g., user_456). Additionally, ensure that there are no whitespaces in the username.

2. Update the **Full Name** of user.
3. Update the **Billing Address** of user.
4. Update user **Description**.
5. Change the **Email** address associated with the user.
6. Assign user to a new **Project**.

IMPORTANT: Assigning a new user to a project is crucial. To assign a user to a new project, simply click on the "Plus" icon linked with the project field to create a new project. Follow **2.3.1. Create Project** for project creation guidelines.

7. To revoke authentication access of the user, mark the **Lock Password** checkbox.
8. Click **Update User** to confirm update.
9. Click **Cancel** to cancel the updating process.

2.6.3 Users → Actions(Dropdown)→ Change Password

Step 1: Open the Change Password Tab

1. Go to the **Users** page.
2. Click on **Change Password** from the associated dropdown under **Actions** column.

Change Password ✕

Password *

Description:

Change user's password. We highly recommend you create a strong one.

Confirm Password *

User Name

Cancel Save

Step 2: Create a New Password

1. Input a new **Password** in the password field.
2. Confirm the password, by inputting the same password in the **Confirm Password** field.

NOTE: Click on the **Eye** icon to make the password visible.

3. Click **Save** to ensure the new password is associated with the user account.
4. Click **Cancel** to cancel the password changing process.

IMPORTANT: Newly created users will have additional options in the dropdown, allowing administrators to "Enable/Disable" users within a project and "Delete" users as needed. This provides flexibility in managing user access and maintaining an organized user base within the cloud environment.

2.6.4 Users → Actions(Dropdown) → Disable/Enable User

Enabling or disabling a user indicates whether the user is currently allocated to or removed from a specific project. This feature provides a quick and direct way to manage user access and participation within projects. Users can easily toggle between enabled and disabled states to control their involvement in various projects.

1. Go to the **Users** page.
2. Click on **Disable/Enable User** from the associated dropdown under **Actions** column.

NOTE: If the user is currently enabled, "**Disable User**" will be shown in the dropdown; similarly, "**Enable User**" will be shown for disabled users.

2.6.5 Users → Actions(Dropdown) → Delete User

1. Go to the **Users** page.
2. Click on **Delete User** from the associated dropdown under **Actions** column, for the "User" that needs to be deleted.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.

Confirm Delete User ×

You have selected: "testUser". Please confirm your selection. This action cannot be undone.

Cancel

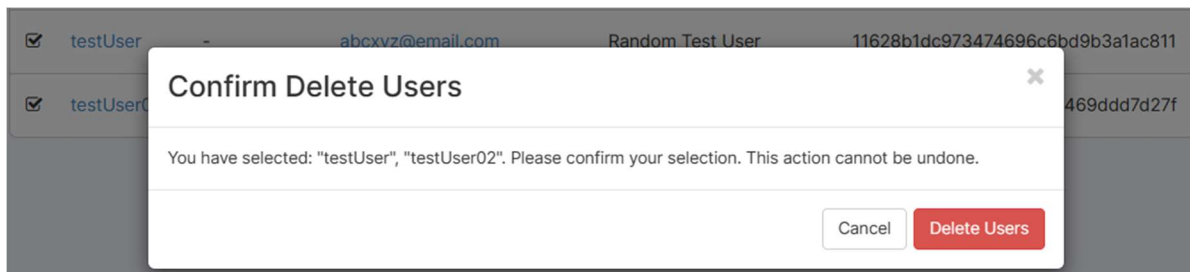
Delete User

3. Click **Delete User** from the confirmation module.
4. Click **Cancel** if user does not wish to proceed with the deletion process.

2.6.6 Users → Delete Users

1. Go to the **Users** page.
2. Mark all the users that need to be deleted.
3. Click on **Delete Users**.

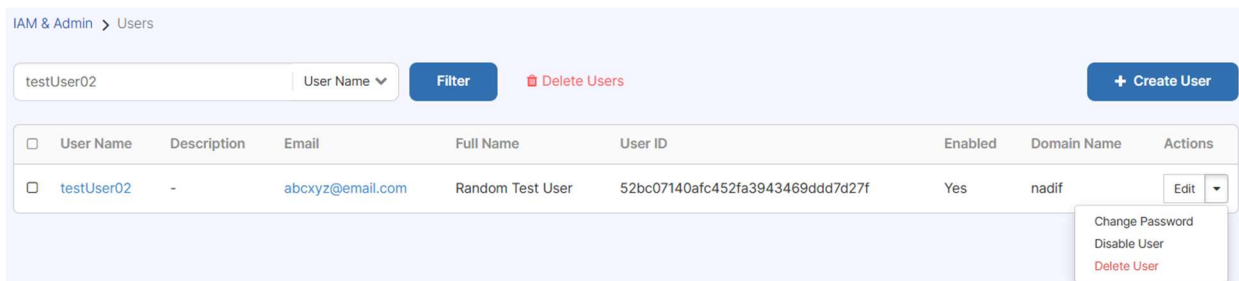
IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.



4. Click **Delete Users** from the confirmation module.
5. Click **Cancel** if user does not wish to proceed with the deletion process.

2.6.7 Users → Filter

1. Go to the **Users** page.
2. Select **Filtering Criteria** from the associated **Dropdown**.
3. Input specific **Keywords** based on the selected filtering criteria.
4. Click **Filter** button.
5. Clear the “filter field” and click **Filter** again to go back to the original list.



2.6.8 Role → Create Role

Step 1: Open the Create Role Tab

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**IAM and Admin**" for its dropdown menu.
3. Select "**Role**" from the menu to be redirected to the following page.

4. Click on **Create Role**.

Create Role ✕

Role Name *

Description:

Create a new role.

Cancel Create Role

Step 2: Create a New Role

1. Input a new role title, in the **Role Name** field.
2. Click **Create Role** to proceed with new role creation.
3. Click **Cancel** in order to cancel the role creation process.

2.6.9 Role → Actions → Edit

Step 1: Open the Update Role Tab

1. Go to the **Role** page.
2. Click on **Edit** under **Actions** column, for individual list item that needs to be edited.

Update Role ✕

Role Name *

Description:

Edit the role's details.

Cancel Update Role

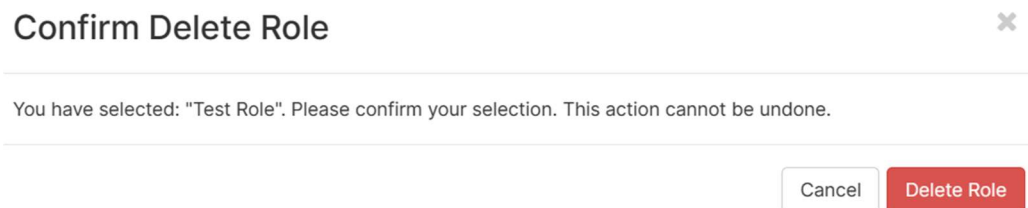
Step 2: Create a New Role

1. Update or input role title, in the **Role Name** field.
2. Click **Update Role** to proceed with updating role.
3. Click **Cancel** in order to cancel the role updating process.

2.6.10 Role → Actions(Dropdown) → Delete Role

1. Go to the **Role** page.
2. Click on **Delete Role** from the associated dropdown under **Actions** column, for the “Role” that needs to be deleted.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.

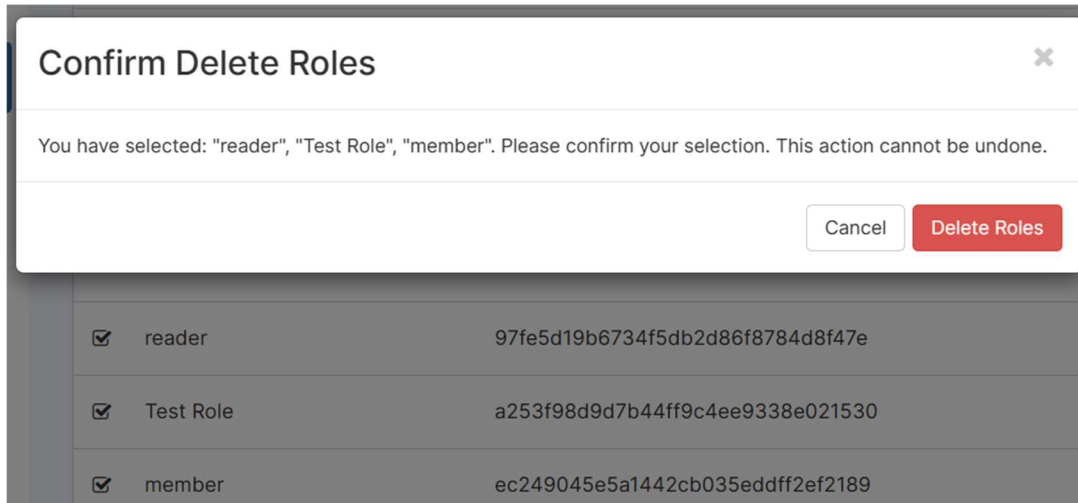


3. Click **Delete Role** from the confirmation module.
4. Click **Cancel** if user does not wish to proceed with the deletion process.

2.6.11 Role → Delete Roles

1. Go to the **Role** page.
2. **Mark** all the roles that need to be deleted.
3. Click on **Delete Roles** located at the top of the page.

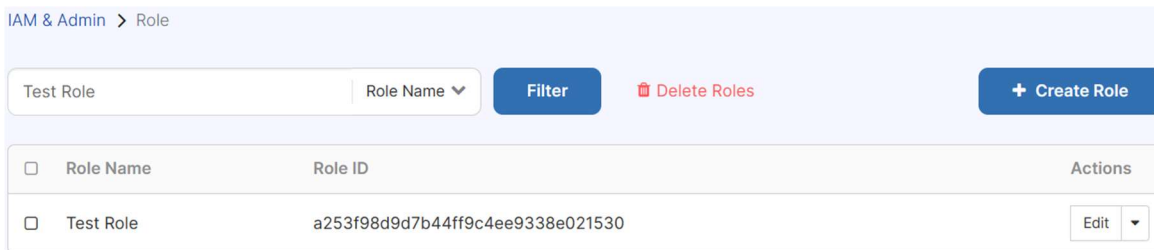
IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.



4. Click **Delete Roles** from the confirmation module.
5. Click **Cancel** if user does not wish to proceed with the deletion process.

2.6.12 Role → Filter

1. Go to the **Role** page.
2. Select **Filtering Criteria** from the associated **Dropdown**.
3. Input specific **Keywords** based on the selected filtering criteria.
4. Click **Filter** button.
5. Clear the “filter field” and click **Filter** again to go back to the original list.



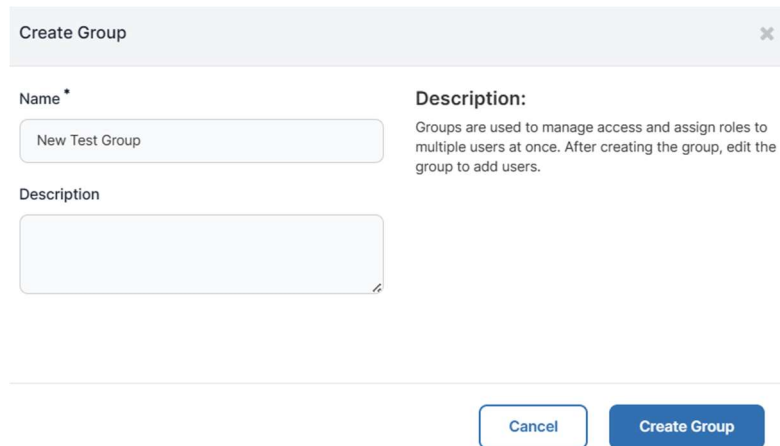
2.6.13 Groups → Create Groups

In cloud computing, a user group refers to a collection or association of users who share common attributes, roles, or permissions within the cloud platform. These groups are created to simplify user management and access control by allowing administrators to assign permissions or policies

to an entire group rather than individual users. User groups help streamline the process of granting or revoking access rights, ensuring efficient management of resources and security protocols.

Step 1: Open the Create Group Tab

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**IAM and Admin**" for its dropdown menu.
3. Select "**Groups**" from the menu to be redirected to the following page.
4. Click **Create Groups** located at the top.



The screenshot shows a 'Create Group' form with the following fields and controls:

- Name ***: A text input field containing 'New Test Group'.
- Description**: A larger text area for providing a description.
- Description:** A heading followed by a short paragraph: 'Groups are used to manage access and assign roles to multiple users at once. After creating the group, edit the group to add users.'
- Buttons**: 'Cancel' and 'Create Group' buttons at the bottom right.

Step 2: Create a New Group

1. Input name for the new group in the **Name** field.
2. Provide a suitable description for the group.
3. Click **Create Group** to proceed with group creation process.
4. Click **Cancel** in order to cancel the group creation process.

2.6.14 Groups → Actions → Manage Members

Step 1: Visit the Manage Members Page

1. Go to the **Groups** page.
2. Click on "**Manage Members**" under **Actions** column, to manage members for any individual "Group".

NOTE: After clicking "Manage Members," you will be directed to a new page where you can allocate users to the group as members. This page provides a convenient interface for managing the group's membership and ensuring that users are appropriately associated with the group.

Step 2: Add Users to a Group

Add Group Assignment
✕

+ Add Users

Displaying 3 items

<input type="checkbox"/>	User Name	Email	User ID	Enabled
<input type="checkbox"/>	nadif001	sheikh.nadif@gennext.net	5def3a31853d4c6db886bfa622ff7ddd	Yes
<input checked="" type="checkbox"/>	testUser	abcxyz@email.com	11628b1dc973474696c6bd9b3a1ac811	Yes
<input checked="" type="checkbox"/>	testUser02	abcxyz@email.com	52bc07140afc452fa3943469ddd7d27f	Yes

Cancel

1. **Mark** all the users that need to be allocated to the group.
2. Click **Add Users** in order to add users to the group.

Newly added members will be shown in a list.

NOTE: Utilize the automatic search function to efficiently navigate through an extensive list of users. This feature operates seamlessly, responding dynamically to user input and ensuring a smooth and effective search experience.

3. Click **Cancel** in order to cancel the member adding process.

Step 3: Remove Users from a Group

1. **Mark** all the users that need to be removed from the Group.
2. Click **Remove Users** in order to proceed with removal operation.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the removing process. User must confirm the removal action to avoid accidental removing of any user.

<input checked="" type="checkbox"/>	testUser	abcxyz@email.com	Random Test User	11628b1dc973474696c6bd9b3a1ac811
<input checked="" type="checkbox"/>	testUser02	abcxyz@email.com	Random Test User	52bc07140afc452fa3943469ddd7d27f

Confirm Delete Users
✕

You have selected: "testUser", "testUser02". Please confirm your selection. This action cannot be undone.

Cancel

Delete Users

3. Click **Remove Users** form the confirmation module to confirm removal action.

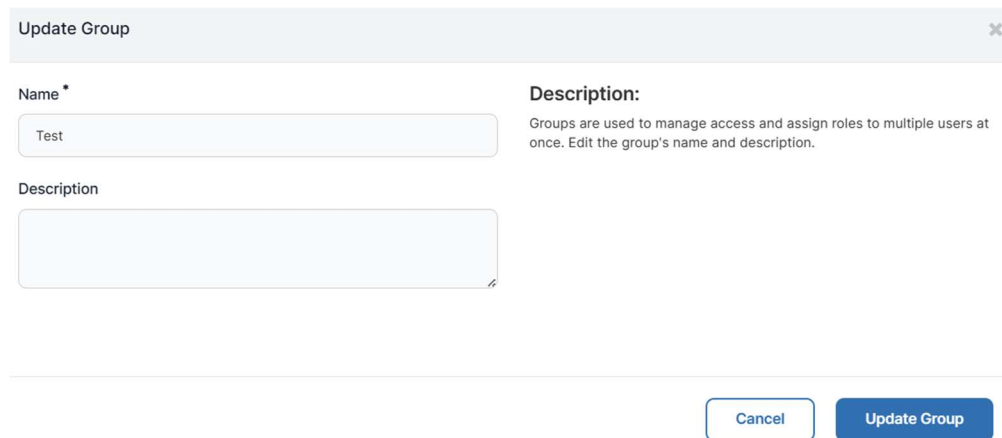
4. Click **Cancel** in order to cancel the member removal operation.

NOTE: User can also utilize the automatic search function located at the top, to efficiently navigate through an extensive list of users. This feature operates seamlessly, responding dynamically to user input and ensuring a smooth and effective search experience.

2.6.15 Groups → Actions(Dropdown) → Edit Groups

Step 1: Open the Update Group Tab

1. Go to the **Groups** page.
2. Select "**Edit Groups**" from the associated dropdown under **Actions** column.



Update Group

Name *

Test

Description

Description:

Groups are used to manage access and assign roles to multiple users at once. Edit the group's name and description.

Cancel Update Group

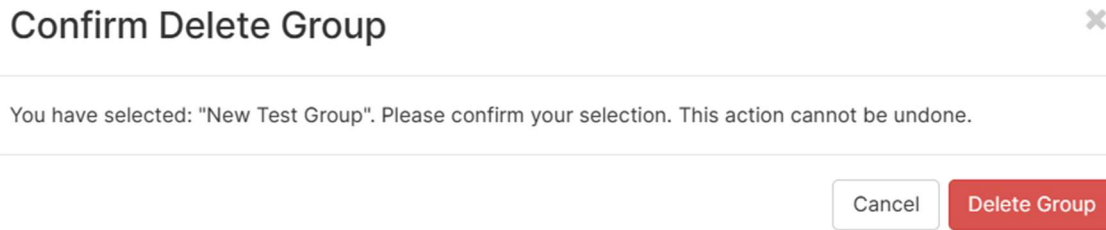
Step 2: Update Group Information

1. Update or input a new **Name** for the Group.
2. Update Group "Description".
3. Click **Update Group** in order to confirm update.
4. Click **Cancel** in order to cancel the updating process.

2.6.16 Groups → Actions(Dropdown) → Delete Group

1. Go to the **Groups** page.
2. Select "**Delete Group**" from the associated dropdown under **Actions** column.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.

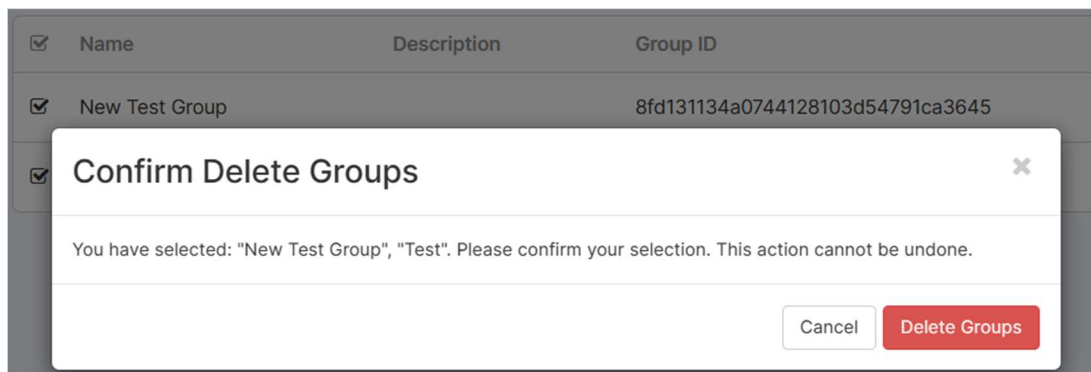


3. Click **Delete Group** from the confirmation module to confirm deletion.
4. Click **Cancel** in order to cancel the deletion process.

2.6.17 Groups → Delete Groups

1. Go to the **Groups** page.
2. **Mark** all the groups that need to be deleted.
3. Select "**Delete Groups**" located at the top of page.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.



4. Click **Delete Groups** from the confirmation module to confirm deletion.
5. Click **Cancel** in order to cancel the deletion process.

2.6.18 Groups → Filter

1. Go to the **Groups** page.
2. Select **Filtering Criteria** from the associated **Dropdown**.
3. Input specific **Keywords** based on the selected filtering criteria.
4. Click **Filter** button.
5. Clear the “filter field” and click **Filter** again to go back to the original list.

IAM & Admin > Groups

8fd131134a0744128103d54791ca3645 Group ID

<input type="checkbox"/>	Name	Description	Group ID	Actions
<input type="checkbox"/>	New Test Group		8fd131134a0744128103d54791ca3645	<input type="button" value="Manage Members"/>

2.7 Image

2.7.1 Images → Create Image

In cloud computing, an "image" refers to a pre-configured and encapsulated snapshot or template of a virtual machine (VM) or server. This image contains the operating system, software, configurations, and data necessary for the VM's functionality. Images serve as a foundation for creating multiple instances of identical virtual machines, streamlining the deployment and scaling processes. They provide a consistent environment for applications and facilitate rapid provisioning, ensuring efficiency and consistency in cloud infrastructure management.

Step 1: Visit the Images Page

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**Image**" for its dropdown menu.
3. Select "**Images**" from the menu to be redirected to the following page.
4. Click **Create Image** from the top right of the “Images” page.

NOTE: The images created by a user will be displayed in both the "**Project**" and "**Public**" sections, unless the user specifies the image as "Private" during the project creation. In the "Public" section, all public images and default public images that are accessible to every user can be found. Images that are associated with a different project will be listed in the "**Non-Public from Other Project**" section.

Project (3)		Non-Public from Other Projects (0)		Public (3)		Delete Images		+ Create Image	
<input type="checkbox"/>	Image Name	Type	Visibility	Status	Public	Protected	Format	Size	Actions
<input type="checkbox"/>	New UV2I 01	Image	shared	Active	No	No	VHDX	72.0 MB	Launch ▾
<input type="checkbox"/>	Test Image 01	Image	public	Active	Yes	No	Raw	12.7 MB	Launch ▾
<input type="checkbox"/>	Test Image 02	Image	private	Active	No	No	QCOW2	12.7 MB	Launch ▾

Step 2: Input Image Details

1. Input name for the new image in the **Image Name** field.
2. Provide a suitable description in the **Description Box** that matches with the image specification.

Image Details
▾

Image Name* (i)

Image Description

A test description

Step 3: Select Image Source and Format Type

1. Click on the **Browse** button to select the **Source File** from the local file system.

NOTE: Clicking "Browse" opens the local file system, enabling users to navigate and select a specific file as the image source. The selected source filename will be displayed on the browse button.

2. Click on the dropdown and select a file **Format** from the dropdown menu.

Image Source
▼

File* (i)

📎
cirros-0.3.4-x86_64-disk.img

Format*

QCOW2 - QEMU Emulator
▼

Step 4: Provide Image Requirements

1. Choose a **Kernel** from the dropdown menu.

The kernel is the core of an operating system, managing system resources and facilitating communication between software and hardware. It handles critical tasks like process scheduling and memory management, ensuring the overall functionality and stability of the system.

2. Select an Image for **RAM Disk** from the dropdown menu.

NOTE: An image can function as a RAM disk by utilizing a virtual disk drive created within the computer's random-access memory (RAM). This configuration allows for swift data storage and retrieval in the high-speed RAM, enhancing performance for certain applications. However, it's crucial to note that data stored in a RAM disk is volatile and may be lost when the system is powered off or restarted, as RAM is a form of temporary storage.

3. Provide **Architecture** details in the input field.

In the context of computing, "architecture" refers to the overall structure and design of a system or network. It encompasses the arrangement of components, the relationships between them, and the principles guiding their interactions. In cloud computing, architecture often involves the design of distributed systems, data storage, networking, and the allocation of computing resources to meet specific goals. The architecture of a cloud system influences its performance, scalability, security, and overall functionality.

4. Input **Minimum Disk** size for the image.
5. Input **Minimum RAM** size for the image.

IMPORTANT: Users have to input numerical values for both “**Disk**” and “**RAM**” size during image creation. For example, entering “**1**” in the “Minimum Disk” field signifies a requirement of **1 Gigabyte** of minimum disk space for the image.

Image Requirements
▼

ⓘ

Kernel

Choose an kernel
▼

Ram Disk

Choose an image
▼

Architecture

Minimum Disk (GB)

Minimum RAM (GB)

Step 5: Select Image Sharing Options

1. Select if the image will be protected or not by clicking **Yes** or **No**.

IMPORTANT: A protected image in cloud computing refers to an image that is safeguarded against accidental deletion. Marking an image as protected helps prevent critical data loss and ensures the preservation of the specified image configuration and contents. This protective measure is particularly valuable for important or frequently used images, minimizing the risk of unintentional removal and maintaining system stability.

2. Select if the visibility of the image will be **Public** or **Private**.

IMPORTANT: In cloud computing, a “**Public Image**” is one that is accessible and visible to all users within the cloud platform. It can be shared openly across different projects and users. On the other hand, a “**Private Image**” is restricted in access and visibility, typically limited to the user or project that created it. Private images offer a more controlled and secure environment, ensuring that sensitive configurations and data are only available to authorized users or projects.

Image Sharing
▼

ⓘ

Protected

Yes

No

Visibility

Public

Private

Step 6: View Summary and Confirm Image Creation

1. Ensure to review the summary displayed on the right-hand side to verify and confirm essential features of the image.
2. Click **Create Image** in order to proceed with image creation.
3. Click **Cancel** in order to cancel the image creation process.

Summary

✓ Name
Test Image 03

✓ File
cirros-0.3.4-x86_64-disk.img

✓ Format
qcow2

Create Image

Cancel

Upon successful image creation, the user will be redirected to the "Images" page, where the newly created image will be displayed in the list. Public and Private images will be visible in their respective sections.

2.7.2 Images → Actions → Launch

1. Go to **Images** page.
2. Click **Launch** under the **Actions** column to “Launch an Instance” from any specific Image.

NOTE: Clicking "**Launch**" will redirect the user to the "**Launch an Instance**" page, where the source will be automatically set to the chosen image. The user needs to complete the required sections to successfully launch an instance from the selected image. For a detailed guide on launching an instance, please refer to section "**2.4.1.2 Instance → Launch an Instance**".

2.7.3 Images → Actions(Dropdown) → Create Volume

1. Go to **Images** page.
2. Select **Create Volume** from the associated dropdown under Actions column for any specific image.

NOTE: Clicking "**Create Volume**" will redirect the user to the "**Create Volume**" page, where the volume source will be automatically set to the chosen image. The user needs to complete the required sections to successfully create volume from the selected image. For a detailed guide on volume creation, please refer to section "**2.4.2.1 Volume → Create Volume**".

2.7.4 Images → Actions(Dropdown) → Update Image

1. Go to **Images** page.
2. Select **Update Image** from the associated dropdown under Actions column, to update any specific image information.

IMPORTANT: Updating an image follows a process similar to image creation. Users need to navigate through the same flow, updating only the necessary information from their perspective. To update an image, please refer to the image creation process outlined in section "**2.7.1 Images → Create Image**".

3. Click **Update Image** in order to update images information.
4. Click **Cancel** to cancel the updating process.

2.7.5 Images → Actions(Dropdown) → Update Metadata

Step 1: Open the Update Metadata Page

1. Go to **Images** page.
2. Select **Update Metadata** from the associated dropdown under Actions column, for the specific image that needs to be updated.

Update Image Metadata ✕

You can specify resource metadata by moving items from the left column to the right column. In the left column there are metadata definitions from the Glance Metadata Catalog. Use the "Custom" option to add metadata with the key of your choice.

Available Metadata

- Custom
- ▶ CIM Processor Allocation Setting
- ▶ Cinder Volume Type
- ▶ Common Operating System Properties
- ▶ CPU Mode
- ▶ CPU Pinning
- ▶ Database Software
- ▶ Emulated Virtual TPM
- ▶ Guest Memory Backing

Existing Metadata

hw_rng_model	virtio	-
os_hash_algo	sha512	-
os_hash_value	11731044c6e1e...	-
os_hidden	false	-
owner_specified.ope...		-
owner_specified.ope...	images/cirros-0...	-
owner_specified.ope...		-

Click each item to get its description here.

Step 2: Add Metadata/Custom Metadata to the Image

1. Click on the **"Plus"** icon next to any metadata listed under the **"Available Metadata"** section to add that metadata to the image.

IMPORTANT: Within the "Available Metadata" section, every list item is a nested dropdown itself. Clicking the **"Plus"** icon for a parent item, will automatically select all the child items under it. To choose a specific child item as metadata, users must navigate through the parent dropdown menu.

Custom Metadata:

2. To add custom metadata, enter a title in the input field corresponding to the custom option and click on the **"Plus"** icon.

NOTE: Selected metadata will be displayed as individual items in the "Existing Metadata" section

NOTE: Users can efficiently locate metadata using the automatic **Search** function positioned at the top. This function dynamically responds to user input, instantly isolating metadata items that match the provided input.

Step 3: Remove Metadata from the Image

1. Click on the "**Minus**" icon next to any metadata listed under the "**Existing Metadata**" section to remove that metadata from the image.

NOTE: Hover over the metadata in the “Existing Metadata” section in order to see basic details about the metadata.

NOTE: Users can efficiently locate metadata using the automatic **Search** function positioned at the top. This function dynamically responds to user input, instantly isolating metadata items that match the provided input.

Step 4: Confirm Update

1. Click **Save** in order to save the current selection of metadata for the Image.
2. Click **Cancel** in order to cancel the metadata updating process.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.

2.7.6 Images → Actions(Dropdown) → Delete Image

1. Go to **Images** page.
2. Select **Delete** from the associated dropdown under Actions column, for the specific image that needs to be deleted.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.

Confirm Delete Image ✕

You have selected: "New UV2I 01". Please confirm your selection. Deleted images are not recoverable.

Cancel

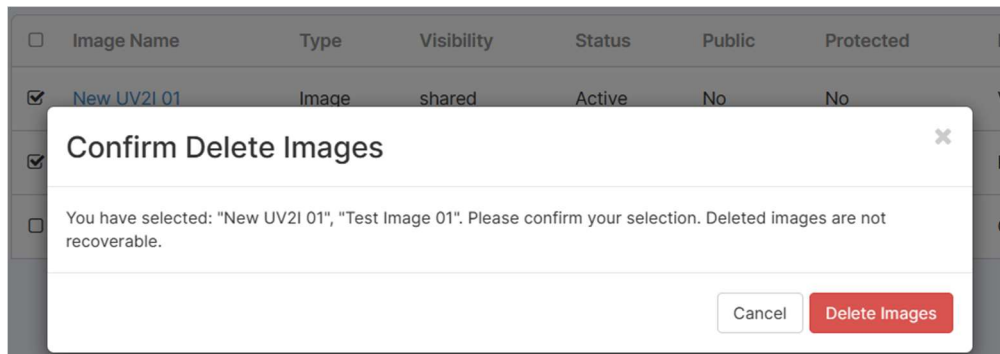
Delete Image

3. Click **Delete Image** from the confirmation module to confirm deletion.
4. Click **Cancel** in order to cancel the deletion process.

2.7.7 Images → Delete Images

1. Go to **Images** page.
2. **Mark** all the images that need to be deleted.
3. Click **Delete Images** in order to proceed with the deletion process.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.



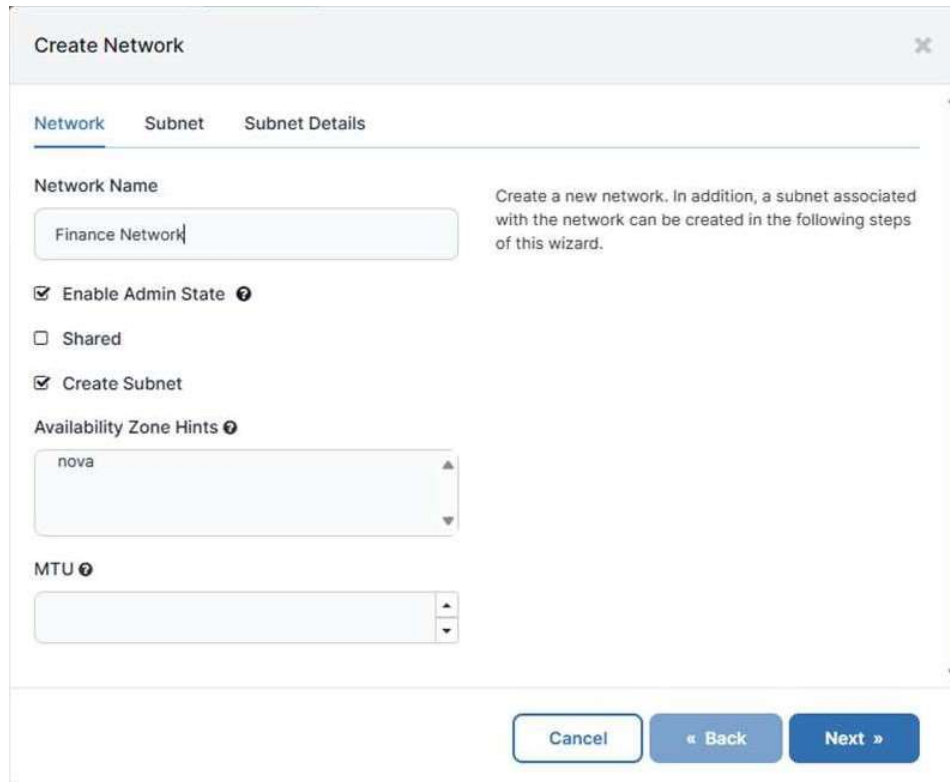
4. Click **Delete Images** from the confirmation module to confirm deletion.
5. Click **Cancel** in order to cancel the deletion process.

2.8 Network and Security

2.8.1 Network Interface → Create Network

Step 1: Open the Create Network Tab

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**Network and Security**" for its dropdown menu.
3. Select "**Network Interface**" from the menu to be redirected to the following page.
4. Click on **Create Network** located at the top right of the page.



Create Network

Network Subnet Subnet Details

Network Name
Finance Network

Create a new network. In addition, a subnet associated with the network can be created in the following steps of this wizard.

Enable Admin State ⓘ

Shared

Create Subnet

Availability Zone Hints ⓘ
nova

MTU ⓘ

Cancel « Back Next »

Step 2: Input Network Information

1. Input **Network Name**.
2. Mark checkbox to **Enable Admin State**.

In the context of a network, "Enable Admin State" typically refers to the ability to activate or deactivate the administrative status of the network. When the admin state is enabled, the network is active and operational, allowing data transmission. Conversely, when the admin state is disabled, the network is inactive, and data transmission is halted. This feature provides administrators with control over the network's operational status for maintenance or other purposes.

3. Mark checkbox to select if the network is **Shared**.

A "shared network" in the context of cloud computing or networking refers to a network that is accessible and usable by multiple users or tenants within a cloud environment. Unlike a network that is dedicated to a specific user or project, a shared network allows for the pooling of network resources, enabling multiple users or projects to utilize the same network infrastructure. This promotes resource efficiency and collaboration within a shared computing environment.

4. Mark checkbox to **Create Subnet** for the network.

A "subnet," short for subnetwork, is a division of an IP network. It allows a larger network to be logically segmented into smaller, more manageable parts. Subnets are defined by a range of IP

addresses and can include multiple devices or hosts. Each subnet has its own unique subset of IP addresses and typically represents a smaller section of a larger network. Subnetting is commonly used for network organization, security, and resource optimization in computer networks.

5. Input **Availability Zone Hints**.

NOTE: Availability zones are where the DHCP agents may be scheduled. Leaving this unset is equivalent to selecting all availability zones.

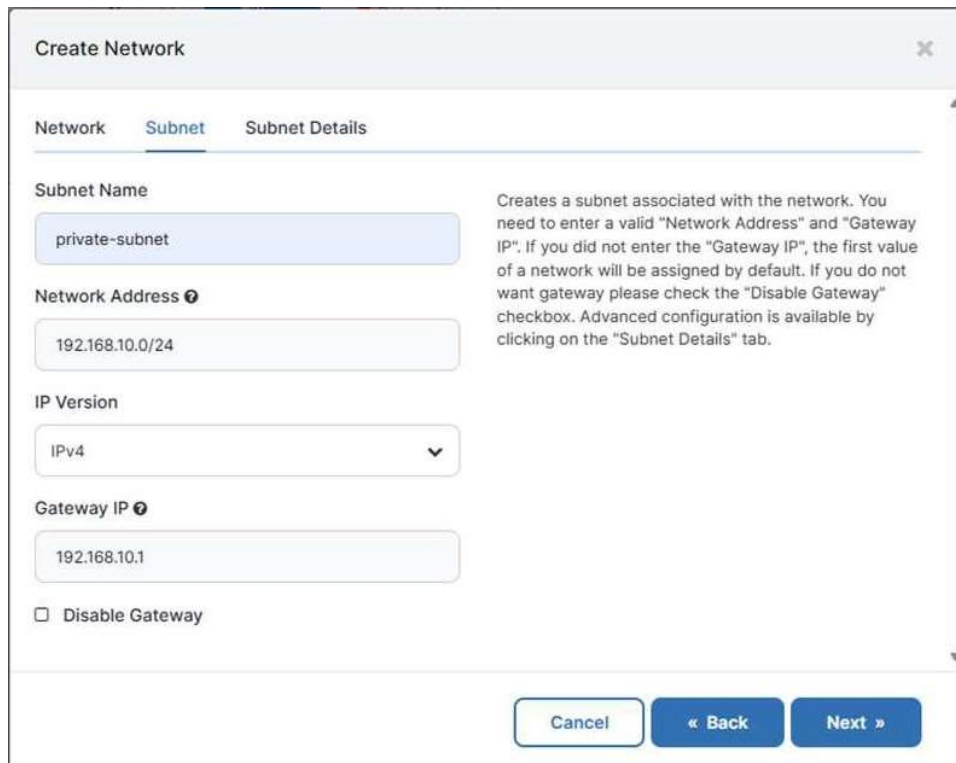
6. Input **MTU** for the network, adjust the quantity by typing manually or using the increment/decrement buttons.

NOTE: MTU stands for **Maximum Transmission Unit**. Minimum requirement is 68 bytes for the IPv4 subnet and 1280 bytes for the IPv6 subnet.

7. Click **Next** to proceed to the next step.
8. Click **Cancel** if you don't want to create a network.

Step 3: Input Subnet Information

Creates a subnet associated with the network. You need to enter a valid "Network Address" and "Gateway IP". If you did not enter the "Gateway IP", the first value of a network will be assigned by default. If you do not want gateway, please check the "Disable Gateway" checkbox. Advanced configuration is available by clicking on the "Subnet Details" tab.



The screenshot shows a 'Create Network' dialog box with three tabs: 'Network', 'Subnet', and 'Subnet Details'. The 'Subnet' tab is active. The form contains the following fields and controls:

- Subnet Name:** A text input field containing 'private-subnet'.
- Network Address:** A text input field containing '192.168.10.0/24'.
- IP Version:** A dropdown menu set to 'IPv4'.
- Gateway IP:** A text input field containing '192.168.10.1'.
- Disable Gateway:** An unchecked checkbox.

At the bottom right, there are three buttons: 'Cancel', '« Back', and 'Next »'. A help icon is visible next to the 'Network Address' and 'Gateway IP' labels. A descriptive text block on the right side of the form explains the requirements for creating a subnet.

1. Input the **Subnet Name**.
2. Provide a **Network Address** (for example: 192.168.10.0/24).

NOTE: The "/24" in a network address specifies the subnet size, indicating that the first 24 bits are for the network, and the remaining 8 bits are for host addresses. Other common notations include "/8" (network: 24 bits, host: 8 bits), "/16" (network: 16 bits, host: 16 bits), and "/32" for a single host. The choice depends on the network size and requirements.

3. Select **IP Version** from the dropdown.

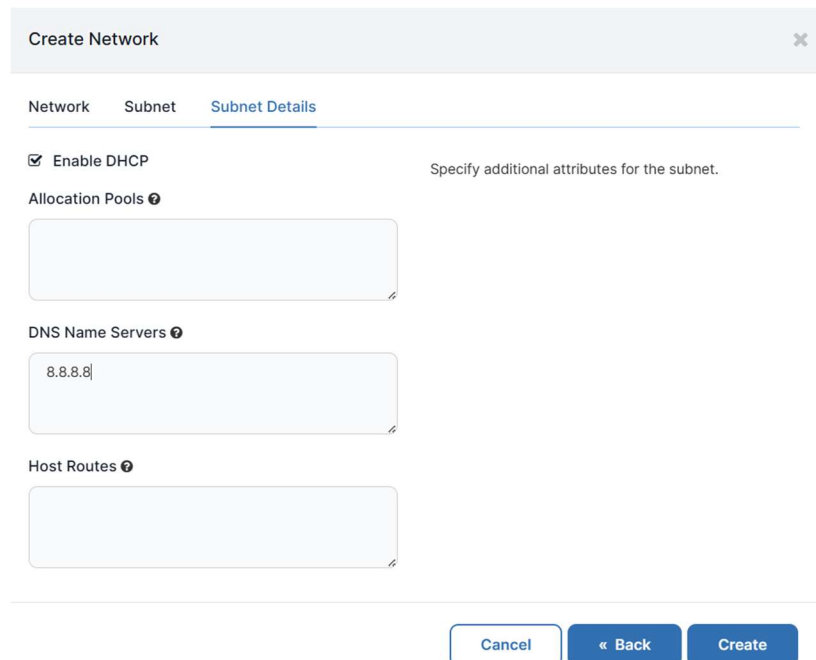
NOTE: IPv4 and IPv6 are internet protocol standards for addressing and routing data on the Internet. IPv4 uses 32-bit addresses, expressed as four sets of numbers separated by periods (e.g., 192.168.1.1). IPv6 uses 128-bit addresses, represented in hexadecimal format (e.g., 2001:0db8:85a3:0000:0000:8a2e:0370:7334). IPv6 was introduced to address the exhaustion of IPv4 addresses and provide a larger address space.

4. Provide a **Gateway IP** for the network.

NOTE: Default Gateway IP Address is automatically set as the initial IP address within the network. For instance, in a network with the address 192.168.10.0/24, the default gateway will be 192.168.10.1. If you decide not to utilize a gateway, please check the 'Disable Gateway' option below.

6. Click **Next** to proceed to the next step of network creation process.

Step 4: Input Subnet Details Information for the Network



The screenshot shows a 'Create Network' dialog box with three tabs: 'Network', 'Subnet', and 'Subnet Details'. The 'Subnet Details' tab is active. It contains the following fields and options:

- Enable DHCP
- Specify additional attributes for the subnet.
- Allocation Pools (empty text area)
- DNS Name Servers (8.8.8.8)
- Host Routes (empty text area)

At the bottom of the dialog box, there are three buttons: 'Cancel', '« Back', and 'Create'.

1. Mark the checkbox to **Enable DHCP**.

Enabling DHCP (Dynamic Host Configuration Protocol) allows the network to automatically assign and manage IP addresses for devices within the specified range. When DHCP is enabled, devices connecting to the network receive IP addresses, subnet masks, and other configuration parameters dynamically, simplifying network setup and management.

3. Input **Allocation Pool** details.

NOTE: This section is for defining IP address allocation pools. Each entry should be in the format: `start_ip_address, end_ip_address` (e.g., 192.168.1.100,192.168.1.120), with one entry per line.

4. Input **DNS (Domain Name Servers)** for the network (*for example: 8.8.8.8*).

DNS Name Servers translate human-readable domain names into IP addresses for computers on a network. They are vital in the DNS, ensuring seamless communication online. Servers like 8.8.8.8 (Google DNS) and 1.1.1.1 (Cloudflare DNS) offer public domain resolution services, converting domain names to IP addresses quickly and reliably. Users prefer them for speed, reliability, and enhanced security, often configuring their devices to use these servers over default ISP DNS servers.

5. Input **Host Router** information.

A "Host Router" typically refers to a router that serves as the primary networking device within a local area network (LAN) or home network. It acts as a gateway, directing data traffic between devices within the network and facilitating communication with external networks, such as the internet. The host router manages the routing of data packets, assigns local IP addresses to devices, and often includes additional features like firewall capabilities and wireless connectivity. In essence, the host router plays a central role in network management and connectivity for devices within a specific environment.

Step 4: Confirm Creation

1. After step 1,2 and 3 is completed, click **Create** in order to confirm network creation.
2. Click **Cancel** to cancel the network creation process.

2.8.2 Network Interface → Actions → Edit Network

Step 1: Open the Edit Network Tab

1. Go to the "**Network Interface**" page.

2. Click on **Edit Network** under “**Actions**” column, for the specific network from the list that needs to be edited.

Edit Network ✕

Name

Description:
You may update the editable properties of your network here.

Enable Admin State ⓘ

Shared

Cancel Save Changes

Step 2: Edit Network Information

1. Update network **Name** in the name field.
2. Click to check or uncheck **Enable Admin State** to activate or deactivate the network.
3. Click to check or uncheck **Shared**, to make sure if the network is shareable or non-shareable.
4. Click **Save Changes** in order to save updated information.
5. Click **Cancel** in order to cancel the information updating process.

2.8.3 Network Interface → Actions(Dropdown) → Create Subnet

1. Go to the "Network Interface" page.
2. Select **Create Subnet** for a network from the dropdown under “**Actions**” column.

Create Subnet
✕

Subnet
Subnet Details

Subnet Name

Create a subnet associated with the network. Advanced configuration is available by clicking on the "Subnet Details" tab.

Network Address Source

Enter Network Address manually
▼

Network Address * ?

IP Version

IPv4
▼

Gateway IP ?

Disable Gateway

Cancel

« Back

Next »

IMPORTANT: The process of creating a subnet is similar to the subnet creation in "Create Network" process. Please follow **Step 3** and **Step 4** of section “**2.8.1 Network Interface → Create Network**” for specific guidelines.

3. Click **Create** in order to create subnet.
4. Click **Cancel** to cancel the process of subnet creation.

2.8.4 Network Interface → Actions(Dropdown) → Delete Network

1. Go to the "Network Interface" page.
2. Select **Delete Network** from the dropdown under “**Actions**” column, for the specific network that needs to be deleted.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.

Confirm Delete Network ✕

You have selected: "Network108". Please confirm your selection. This action cannot be undone.

Cancel

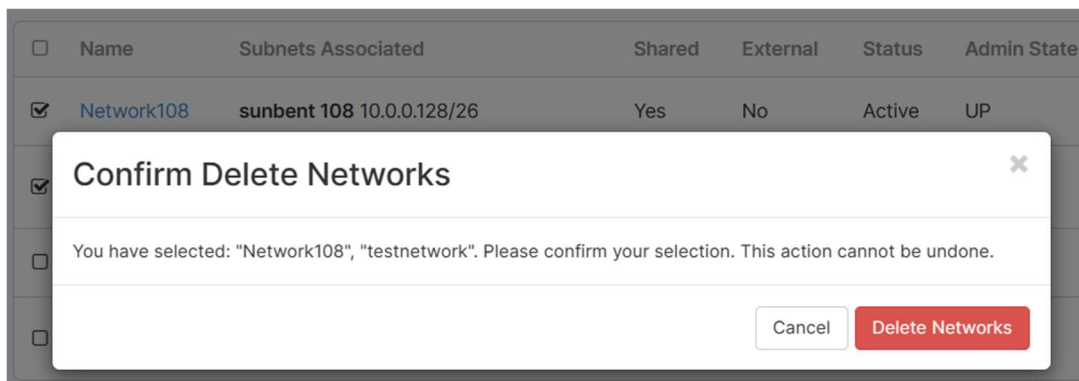
Delete Network

3. Click **Delete Network** from the confirmation module to confirm deletion.
4. Click **Cancel** in order to cancel the deletion process.

2.8.5 Network Interface → Delete Networks

1. Go to the "Network Interface" page.
2. **Mark** all the networks that need to be deleted.
3. Select **Delete Networks** located at the top of the page.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.



4. Click **Delete Networks** from the confirmation module to confirm deletion.
5. Click **Cancel** in order to cancel the deletion process.

2.8.6 Network Interface → Filter

1. Go to the **Network Interface** page.
2. Select **Filtering Criteria** from the associated **Dropdown**.
3. Input specific **Keywords** based on the selected filtering criteria.

4. Click **Filter** button.
5. Clear the “filter field” and click **Filter** again to go back to the original list.

Network and Security > Network Interface

Yes Shared

<input type="checkbox"/>	Name	Subnets Associated	Shared	External	Status	Admin State	Availability Zones	Actions
<input type="checkbox"/>	Network108	sunbent 108 10.0.0.128/26	Yes	No	Active	UP	-	<input type="button" value="Edit Network"/>
<input type="checkbox"/>	testnetwork	test 192.168.233.0/24 subnet2 fd70:614b:38b0:1::/64	Yes	No	Active	UP	-	<input type="button" value="Edit Network"/>
<input type="checkbox"/>	shared	shared-subnet 192.168.233.0/24	Yes	No	Active	UP	-	<input type="button" value="Edit Network"/>

2.8.7 IP Address Management → Allocate IP to Project

Step 1: Open the Allocate Floating IP Tab

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**Network and Security**" for its dropdown menu.
3. Select "**IP Address Management**" from the menu to be redirected to the following page.
4. Click **Allocate IP to Project** in order to proceed with IP allocation.

Allocate Floating IP ✕

Pool *

public

Description

DNS Domain

DNS Name

Description:

Allocate a floating IP from a given floating IP pool.

Project Quotas

Floating IP 7 of 50 Used

Step 2: Allocate Floating IP

1. Select **Pool** between “Public” or “Shared”.
2. Provide a suitable description.
3. Input a **Domain Name** that is **FQDN** approved.

A Fully Qualified Domain Name (FQDN) is a domain name that specifies its exact position in the DNS (Domain Name System) hierarchy. It includes both the host name and the top-level domain (TLD), providing the complete path to a specific location on the internet.

4. Input a **DNS Name**.
5. Click **Allocate IP** in order to allocate new floating IP.

NOTE: Newly created IPs will be shown in the list in the “**IP Address Management**” page. Users have the flexibility to allocate up to 50 floating IPs per project. The graphical visualization in the "Allocate Floating IP" tab provides a clear representation of the available quota, ensuring easy monitoring and management of floating IP resources.

6. Click **Cancel** in order to cancel the IP creation process.

2.8.8 IP Address Management → Actions → Associate

Step 1: Open the Manage Floating IP Associations Tab

1. Go to the "**IP Address Management**" page.
2. Select **Associate** for an IP under “**Actions**” column, in order to associate the floating IP.

Manage Floating IP Associations
✕

IP Address *

▼
+

Select the IP address you wish to associate with the selected instance or port.

Port to be associated *

▼

Cancel

Associate

Step 2: Associate a Floating IP

1. Make sure the specific IP is selected in the **IP Address** field.

NOTE: Clicking "Associate" for a specific IP automatically selects it as the default IP address for the association process. However, users have the flexibility to choose a different IP address from the dropdown if needed. Additionally, users can allocate a new floating IP address by clicking on the "Plus" icon, which opens the Allocate Floating IP tab. For detailed instructions on allocating a new floating IP, please refer to section "**2.8.7 IP Address Management → Allocate IP to Project**".

2. Select a **Port** from the dropdown to associate with the IP.
3. Click **Associate** in order to proceed with the IP association.
4. Click **Cancel** in order to cancel the IP association process.

2.8.9 IP Address Management → Actions(Dropdown) → Release Floating IP

1. Go to the "**IP Address Management**" page.
2. Select **Release Floating IP** from the dropdown under "**Actions**" column, for the specific IP that needs to be released from the project.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the releasing process. User must confirm the release action to avoid accidental release.

Confirm Release Floating IP ×

You have selected: "172.24.4.183". Please confirm your selection. Once a floating IP is released, there is no guarantee the same IP can be allocated again.

Cancel

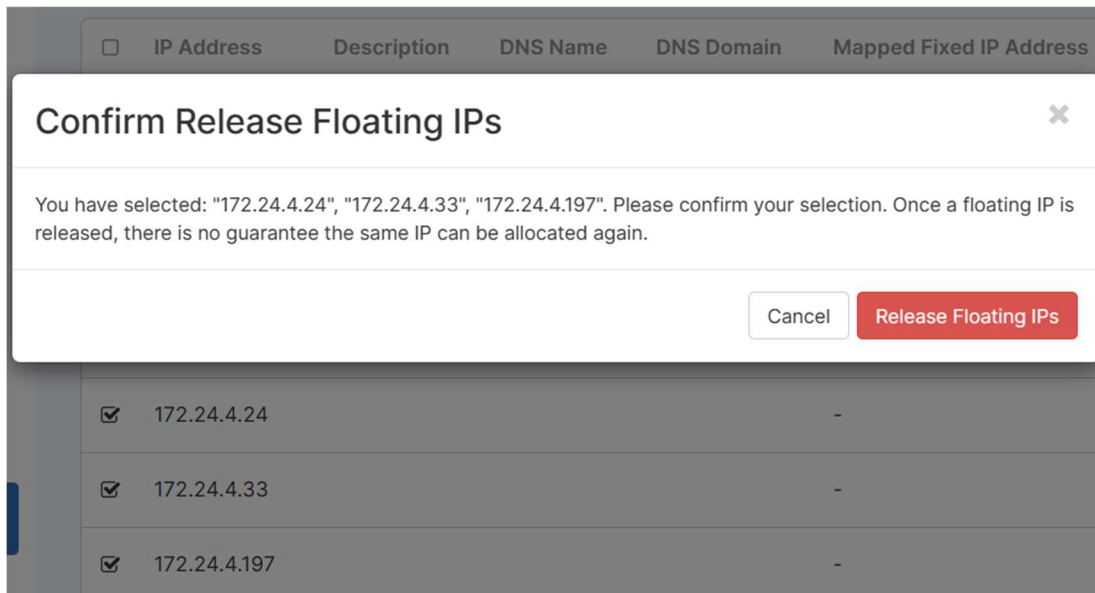
Release Floating IP

3. Click **Release Floating IP** from the confirmation module to confirm release.
4. Click **Cancel** in order to cancel the IP release process.

2.8.10 IP Address Management → Release Floating IPs

1. Go to the "**IP Address Management**" page.
2. **Mark** all the IPs that need to be released from the project.
3. Select **Release Floating IPs** located at the top of the page.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the releasing process. User must confirm the release action to avoid accidental release.



4. Click **Release Floating IPs** from the confirmation module to confirm release.
5. Click **Cancel** in order to cancel the IP release process.

2.8.11 IP Address Management → Filter

1. Go to the **IP Address Management** page.
2. Select **Filtering Criteria** from the associated **Dropdown**.
3. Input specific **Keywords** based on the selected filtering criteria.
4. Click **Filter** button.
5. Clear the "filter field" and click **Filter** again to go back to the original list.

Network and Security > IP Address Management

Down | Status ▾ | Filter | Allocate IP To Project | Release Floating IPs

<input type="checkbox"/>	IP Address	Description	DNS Name	DNS Domain	Mapped Fixed IP Address	Pool	Status	Actions
<input type="checkbox"/>	172.24.4.183				-	public	Down	Associate ▾
<input type="checkbox"/>	172.24.4.170				-	public	Down	Associate ▾
<input type="checkbox"/>	172.24.4.228				-	public	Down	Associate ▾

2.8.12 Security Groups → Create Security Group

Step 1: Open the Create Security Group Tab

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**Network and Security**" for its dropdown menu.
3. Select "**Security Groups**" from the menu to be redirected to the following page.
4. Click **Create Security Group**.

Create Security Group ✕

Name *

Description

Description:

Security groups are sets of IP filter rules that are applied to network interfaces of a VM. After the security group is created, you can add rules to the security group.

Step 2: Provide Security Group Information

1. Input name of the security group in the **Name** field.
2. Provide a suitable for the security group.
3. Click **Create Security Group** button in order to proceed with the group creation.
4. Click **Cancel** to cancel the group creation process.

2.8.13 Security Groups → Actions → Manage Rules

Step 1: Visit the Manage Rules Page

1. Go to the "Security Groups" page.
2. Click **Manage Rules** under "Actions" column, to manage rule for a specific group.

Network and Security > Security Groups

[Delete Rules](#) [+ Add Rule](#)

Displaying 2 items

<input type="checkbox"/>	Direction	Ether Type	IP Protocol	Port Range	Remote IP Prefix	Remote Security Group	Description	Actions
<input type="checkbox"/>	Egress	IPv4	Any	Any	0.0.0.0/0	-	-	Delete Rule
<input type="checkbox"/>	Egress	IPv6	Any	Any	::/0	-	-	Delete Rule

Step 2: Add a New Rule

Add Rule ✕

Rule *

Custom TCP Rule ▼

Description ⓘ

Direction

Ingress ▼

Open Port *

Port ▼

Port* ⓘ

Remote * ⓘ

CIDR ▼

CIDR* ⓘ

0.0.0.0/0

Description:

Rules define which traffic is allowed to instances assigned to the security group. A security group rule consists of three main parts:

Rule: You can specify the desired rule template or use custom rules, the options are Custom TCP Rule, Custom UDP Rule, or Custom ICMP Rule.

Open Port/Port Range: For TCP and UDP rules you may choose to open either a single port or a range of ports. Selecting the "Port Range" option will provide you with space to provide both the starting and ending ports for the range. For ICMP rules you instead specify an ICMP type and code in the spaces provided.

Remote: You must specify the source of the traffic to be allowed via this rule. You may do so either in the form of an IP address block (CIDR) or via a source group (Security Group). Selecting a security group as the source will allow any other instance in that security group access to any other instance via this rule.

[Cancel](#) [Add](#)

1. Click on “**Add Rule**” to add custom rules.
2. Select a new “**Rule**” from the dropdown.

NOTE: These are the rules that can be selected from the dropdown:

1. **Custom TCP Rule:** User-defined rule for allowing or blocking Transmission Control Protocol (TCP) traffic based on specified criteria.
2. **Custom UDP Rule:** User-defined rule for allowing or blocking User Datagram Protocol (UDP) traffic based on specified criteria.
3. **Custom ICMP Rule:** User-defined rule for allowing or blocking Internet Control Message Protocol (ICMP) traffic, commonly used for network diagnostics.
4. **Other Protocol:** Rule for a specific protocol not covered by predefined categories, allowing customization for various network protocols.
5. **All ICMP:** Permits or blocks all types of ICMP traffic, including ping requests and error messages.
6. **All TCP:** Allows or blocks all Transmission Control Protocol (TCP) traffic, providing broad control over TCP-based communication.
7. **All UDP:** Allows or blocks all User Datagram Protocol (UDP) traffic, offering comprehensive control over UDP-based communication.
8. **DNS:** Permits Domain Name System (DNS) traffic, facilitating domain resolution and name-to-IP address mapping.
9. **HTTP:** Enables Hypertext Transfer Protocol (HTTP) traffic, allowing web browsing and communication with web servers.
10. **HTTPS:** Permits secure Hypertext Transfer Protocol Secure (HTTPS) traffic, ensuring encrypted communication for secure web transactions.
11. **IMAP:** Allows Internet Message Access Protocol (IMAP) traffic, facilitating retrieval of emails from a mail server.
12. **IMAPS:** Permits secure IMAP traffic, ensuring encrypted communication for secure email retrieval.
13. **LDAP:** Enables Lightweight Directory Access Protocol (LDAP) traffic, commonly used for accessing and managing directory information.
14. **MS SQL:** Permits traffic for Microsoft SQL Server, facilitating communication with SQL databases.

15. **MYSQL:** Allows traffic for MySQL databases, supporting communication with MySQL server instances.
16. **POP3:** Permits Post Office Protocol version 3 (POP3) traffic, facilitating the retrieval of emails from a mail server.
17. **POP3S:** Allows secure POP3 traffic, ensuring encrypted communication for secure email retrieval.
18. **RDP:** Enables Remote Desktop Protocol (RDP) traffic, allowing remote access to desktop environments.
19. **SMTP:** Permits Simple Mail Transfer Protocol (SMTP) traffic, facilitating the sending of emails.
20. **SMTPS:** Allows secure SMTP traffic, ensuring encrypted communication for secure email transmission.
21. **SSH:** Permits Secure Shell (SSH) traffic, providing secure access to remote systems.

3. Provide a suitable “**Description**” (if needed).
4. Select the “**Direction**” (flow or orientation of data traffic within a network) from the dropdown.

NOTE: In network security, "direction" typically refers to the flow or orientation of data traffic within a network. There are two main directions relevant to network security: Ingress and Egress:


1. **Ingress:** In networking and security, "Ingress" refers to the incoming data traffic entering a network or a specific computing device. It involves rules and configurations that control and manage the flow of data from external sources into the network or system.
2. **Egress:** "Egress" pertains to outgoing data traffic leaving a network or a specific computing device. It involves rules and settings that regulate the flow of data from the internal network or system to external destinations. Egress controls are crucial for enforcing security policies and preventing unauthorized data exfiltration.

- Select a “**Port**” option from the dropdown

5.1 Open Port: For “Open Port”, input the “**Port**” in the input field.

Open Port *

Port ▼

Port* 

5.2 Port Range: “Port Range” allows user to select a range of ports.

- Input from which port the range will start in the “**From Port**”.
- Input “**To Port**” to in order to specify the end of the range.

Open Port *

Port Range ▼

From Port* 

To Port* 

5.3 All Ports: Select “**All Ports**” if user wants to incorporate all available ports.

Open Port *

All ports ▼

- Specify the source of the traffic, select “**Remote**” (between **CDR** and **Security Groups**) from the dropdown.

NOTE: To enable traffic through this rule, you must indicate the source. This can be achieved by specifying an IP address block using CIDR notation or by selecting a source group, which is a Security Group. Opting for a security group as the source means that any instance within that security group will have access to any other instance through this rule.

6.1 CIDR: If the “**Remote**” is selected as **CIDR**, input an IP address block in the input field.

Remote * ⓘ

CIDR ▼

CIDR* ⓘ

0.0.0.0/0

6.2 Security Groups: If “**Security Groups**” is selected, user must:

- a) Select the “**Security Group**” from the dropdown.
- b) Select “**Ether Type**” from the dropdown.

Security Group*

default ▼

Ether Type

IPv4 ▼

IPv4

IPv6

7. Click “**Add Rule**” to proceed with adding the new rule (after all important fields are selected).
8. Click “**Cancel**” in order to cancel the rule adding process.

Step 3: Delete a Rule

1. Click on **Delete Rule** for a specific rule that needs to be deleted.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.

Confirm Delete Rule ✕

You have selected: "ALLOW IPv4 to 0.0.0.0/0". Please confirm your selection. This action cannot be undone.

Cancel Delete Rule

2. Click **Delete Rule** from the confirmation module to proceed with deletion.
3. Click **Cancel** to cancel the deletion process.

2.8.14 Security Groups → Actions(Dropdown) → Edit Security Group

Step 1: Open the Edit Security Group Tab

1. Go to the "Security Groups" page.
2. Click **Edit Security Groups** from the dropdown under "Actions" column, to edit a specific group information.

Edit Security Group ✕

Name *

Description

Description:
Security groups are sets of IP filter rules that are applied to network interfaces of a VM. You can edit the name and its description of the security group.

Cancel Edit Security Group

Step 2: Update Security Group Information

1. Update **Name** of the security group in the "Name" field.
2. Update **Description** for the security group in the "Description Box".
3. Click **Edit Security Group** to proceed with editing.
4. Click **Cancel** in order to cancel the editing process.

2.8.15 Security Groups → Actions(Dropdown) → Delete Security Group

1. Go to the "Security Groups" page.
2. Select **Delete Security Group** from the dropdown under "Actions" column, for the specific security group that needs to be deleted.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.

Confirm Delete Security Group ✕

You have selected: "TESTGROUP". Please confirm your selection. This action cannot be undone.

Cancel

Delete Security Group

3. Click **Delete Security Group** from the confirmation module to confirm deletion.
4. Click **Cancel** in order to cancel the deletion process.

2.8.16 Security Groups → Delete Security Groups

1. Go to the "Security Groups" page.
2. **Mark** all the security groups that need to be deleted.
3. Select **Delete Security Groups** located at the top of the page.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.

<input type="checkbox"/>	Name	Security Group ID	Description
<input type="checkbox"/>	TESTGROUP	346de39e-32cd-44aa-9b0f-fec28973c982	

Confirm Delete Security Groups ✕

You have selected: "Test Security Group 002", "default". Please confirm your selection. This action cannot be undone.

4. Click **Delete Security Groups** from the confirmation module to confirm deletion.
5. Click **Cancel** in order to cancel the deletion process.

NOTE: Users can efficiently locate security groups using the automatic **Search** function positioned at the top. This function dynamically responds to user input, instantly isolating groups items that match with the provided input.

2.8.17 Routers → Create Router

Step 1: Open the Routers Tab

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**Network and Security**" for its dropdown menu.
3. Select "**Routers**" from the menu to be redirected to the following page.
4. Click on the **Create Router** button located at the top right of the page.

Create Router ✕

Router Name

Enable Admin State ⓘ

External Network

Enable SNAT

Availability Zone Hints ⓘ

Cancel Create Router

Step 2: Create a New Router

1. Input a **Router Name**.
2. Mark **Enable Admin State** to enable the router.

"Admin State" refers to the operational status of a network device or component. When set to "Up," it is active and can send/receive traffic; when set to "Down," it is intentionally disabled, not participating in network communication. This parameter is crucial for managing connectivity and troubleshooting network issues.

3. Select a gateway for the router from the **External Network** dropdown.
4. Mark **Enable SNAT** if an external network is set.

SNAT, or Source Network Address Translation, is a networking technique that modifies the source IP address of outgoing packets. This process helps overcome limitations in the availability of public IP addresses by allowing multiple devices within a private network to share a single public IP address when accessing external resources. SNAT is commonly used in network address translation (NAT) scenarios to enhance connectivity and optimize resource utilization.

5. *Select Availability Zone Hints.*

NOTE: Availability Zones are where the router may be scheduled. Leaving this unset is equivalent to selecting all Availability Zones.

6. Click **Create Router** button to proceed with router creation process.
7. Click **Cancel** to cancel the router creation process.

2.8.18 Routers → Actions(Dropdown) → Set/Clear Gateway

NOTE: Depending on whether the user selected any "External Network" during the router creation process, one of two buttons will appear under the action column: "Clear Gateway" if an external network is selected and "Set Gateway" in case of no selection.

Step 1: Set Gateway

1. Go to the "**Routers**" page.
2. Click **Set Gateway** from the dropdown under "**Actions**" column, for a specific router.

Set Gateway
✕

External Network *

Select network ▼

Enable SNAT

Description:

You can connect a specified external network to the router. The external network is regarded as a default route of the router and the router acts as a gateway for external connectivity.

Cancel

Submit

3. Select a gateway for the router from the **External Network** dropdown.
4. Mark **Enable SNAT** if an external network is set.

SNAT, or Source Network Address Translation, is a networking technique that modifies the source IP address of outgoing packets. This process helps overcome limitations in the availability of public IP addresses by allowing multiple devices within a private network to share a single public IP address when accessing external resources. SNAT is commonly used in network address translation (NAT) scenarios to enhance connectivity and optimize resource utilization.

5. Click **Submit** in order to set gateway for the router.
6. Click **Cancel** to cancel the gateway setup process.

Step 2: Clear Gateway

1. Go to the "**Routers**" page.
2. Select **Clear Gateway** for a specific router under "**Actions**" column, to clear gateway information.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the gateway clearing process. User must confirm the clearing action to avoid accidental removing action.

Confirm Clear Gateway
✕

You have selected: "Test Router 01". Please confirm your selection. You may reset the gateway later by using the set gateway action, but the gateway IP may change.

Cancel

Clear Gateway

3. Click **Clear Gateway** from the confirmation module to confirm clearing action.
4. Click **Cancel** in order to cancel the clearing process.

2.8.19 Routers → Actions → Edit Router

Step 1: Open the Edit Router Tab

1. Go to the "**Routers**" page.
2. Click **Edit Router** from the dropdown under "**Actions**" column, to edit a specific router information.

Edit Router ✕

Name

Description: You may update the editable properties of your router here.

Enable Admin State ?

Cancel Save Changes

Step 2: Edit Router Information

1. Update **Name** of the router in the "Name" field.
2. Click to check or uncheck "**Enable Admin State**" to activate or deactivate the router.

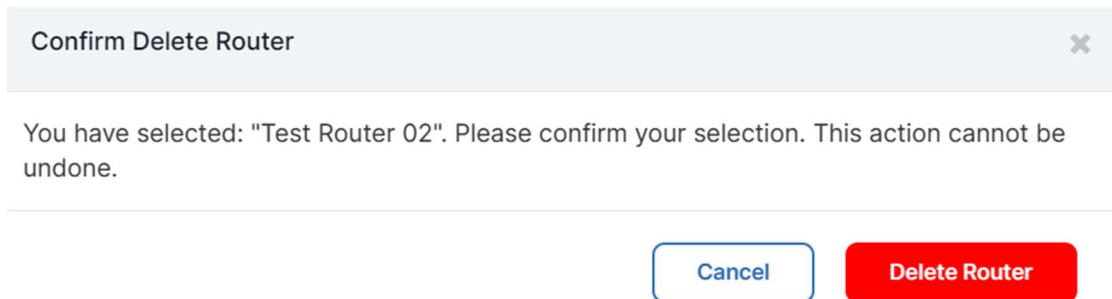
"Admin State" refers to the operational status of a network device or component. When set to "Up," it is active and can send/receive traffic; when set to "Down," it is intentionally disabled, not participating in network communication. This parameter is crucial for managing connectivity and troubleshooting network issues.

3. Click **Save Changes** to save the updated information.
4. Click **Cancel** in order to cancel the editing process.

2.8.20 Routers → Actions(Dropdown) → Delete Router

1. Go to the "**Routers**" page.
2. Select **Delete Router** from the dropdown under “**Actions**” column, for the specific router that needs to be deleted.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.

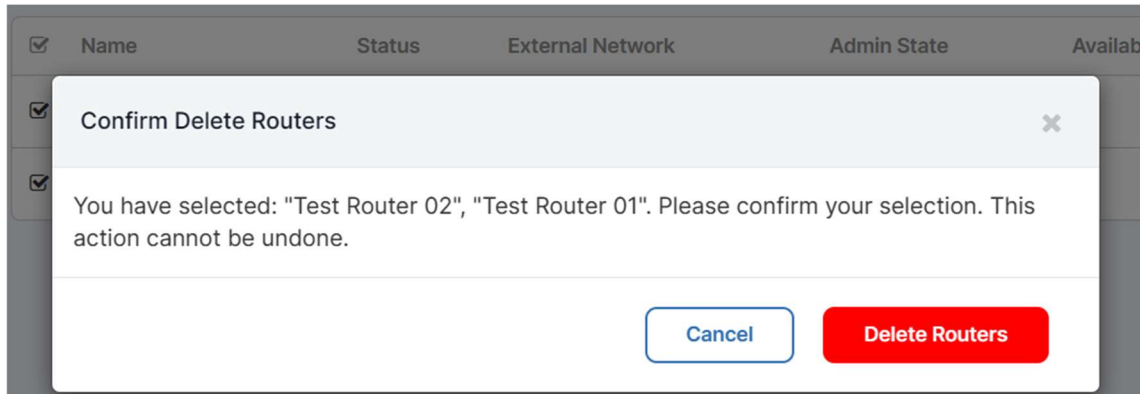


3. Click **Delete Router** from the confirmation module to confirm deletion.
4. Click **Cancel** in order to cancel the deletion process.

2.8.21 Routers → Delete Routers

1. Go to the "**Routers**" page.
2. **Mark** all the routers that need to be deleted.
3. Select **Delete Routers** located at the top of the page.

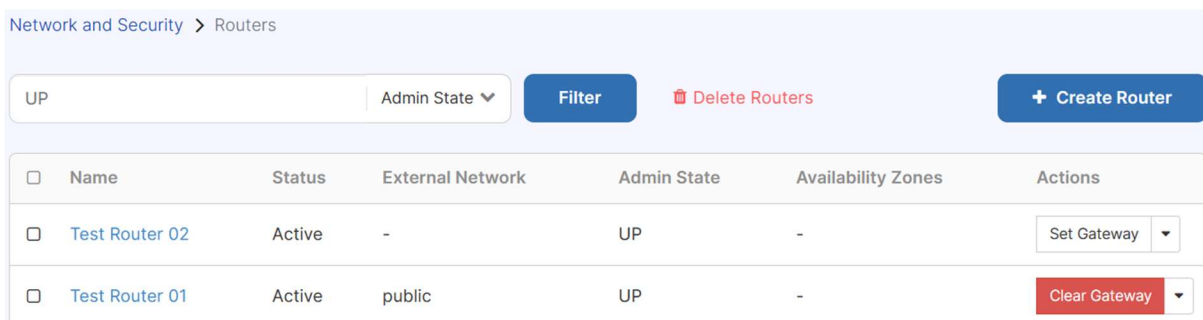
IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.



4. Click **Delete Routers** from the confirmation module to confirm deletion.
5. Click **Cancel** in order to cancel the deletion process.

2.8.22 Routers → Filter

1. Go to the **Routers** page.
2. Select **Filtering Criteria** from the associated **Dropdown**.
3. Input specific **Keywords** based on the selected filtering criteria.
4. Click **Filter** button.
5. Clear the “filter field” and click **Filter** again to go back to the original list.



2.8.23 Key Pairs → Create Key Pair

Step 1: Open the Create Key Pair Tab

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "**Network and Security**" for its dropdown menu.
3. Select "**Key Pairs**" from the menu to be redirected to the following page.
4. Click **Create Key Pair** to open the "Create Key Pair" tab.

Step 2: Create a Key Pair

1. Input **Key Pair Name**.
2. Select **Key Type** from the dropdown.
3. Click **Create Keypair**.

IMPORTANT: Upon clicking **Create Keypair** the tab will expand, and user will be provided with the **Private Key**. User must copy and save the "Private Key" somewhere safe.

Create Key Pair
✕

Key Pairs are how you login to your instance after it is launched. Choose a key pair name you will recognize. Names may only include alphanumeric characters, spaces, or dashes.

Key Pair Name *

Key Type *

X509 Certificate

Private Key

```

MIILKwIBAzCCCeUGCSqGSib3DQEHAaCCcdYEGgnSMIIJzjCCBEIGCSqGSib3DQEHbqCCBDMwggQvAgEA
MIIEKAYJKoZIhvcNAQcBMFkGCsGCSqGSib3DQEFDTBKMCKGCSqGSib3DQEFDDAcBAhAhDdd0Cm2AgICCAAw
DAYIKoZIhvcNAQkFADAdBgIghkgBZQMESoEECYwbSvY92PqG6kia7vbk+CAggPA8Y TktIIgD0h+IH/O3IXFT
ZELJ9EVgYif0sCS2yq3krGDuN8XRHXCIjTMOu/JxAXMw4WaZUO7N/7g0sBCuvShF1eSRErziKJT0zAUCDSLm
b4bcDTOMDE7n/cRYwPGcbItOoLRyilGvrycEW02HLbBm7F0qTqRieCevb7HYtL8jvYAlge8/LgLi8tL24/xCmlc
s9himW/PzOL70uRt7i8X88BH6xAxr2J//uBvLPwDDbOF17hN+LrNV+HTsM9Be6iLzXQHEQST+taxGNj2yuBQ+
pNveaoxBbDloN8x1+D3UabHfgDzYeYnEGrwn99IEM0niHbEIMKolTen95/RyaaVTBzZo8GJF3VVKPUVEYX
p10vui215liuNcqiGruW0BQZNwYmBEZfygMhbx0woVafgUn9D4+NfmECoelf/u7aSOXkiXcA1uYo0jFe0YpjSvj
JGaBUiOOSMamTDGkXjFnelg9HKifihYjicyks+2v9gSxhINtyWffZvHlyj7vmm+iR28MaXmi7W2EaJUK0+hpEJ/
laV5Z4tH7ie68XKWRNBpW5+mTkLh6pg1Z2ox+0l7qAYzOMsP3KmYQjtVcD+vo5lhGzmEI1CQeHuKwQmPN8
xnLLSBxo4qNjIAoMGrXmiQuHEc73B01y7bm9G50g+tDUgATwz/m1+YxfIHxtyiBZjOSDICYq1qBPibTn6qpZHU
B3K6r/Igso/P7stlkCXKD7R3E3rhT0lQGFnyQ+9WxWqVd3R9I70ld2j/sZJ1E2nHeP7+uZrCxHTK2UFpBZJDgU
Nr+Cxe6tCCtX6mUdU5Sf9JM0whO1FHIZSORL/IPXfokqMgCCrOxuVTZ25/Q5VgaojhjosElbV0ov+8lwc2B01
OxBraFSMYSXiLYwpNHtwAJIQ5uwafzcfTL3MhwVAuNjF6Xqg0jHSrChSTE+hhO5Qim8troO91m0wX602Vw1
6bD2PLYTzJt767jKv8K1+CgCCfwPybExnYZxkvgelm2S/pCs2FJ0g0KI+N+A3jt6vJEqpW9waSPidW2Es1cTtg
          
```

Create Keypair

Copy Private Key to Clipboard

Done

4. Click **Copy Private Key to Clipboard** in order copy the “Private Key” effortlessly.
5. Click **Done** to close the tab, once the private key is stored safely.

Newly created “Keypair” will be visible on the list in “Key Pairs” page.

2.8.24 Key Pairs → Import Key Pair

Key Pairs are how you login to your instance after it is launched.

Choose a key pair name you will recognize and paste your SSH public key into the space provided.

SSH key pairs can be generated with the ssh-keygen command:

- `ssh-keygen -t rsa -f cloud.key`

This generates a pair of keys: a key you keep private (cloud.key) and a public key (cloud.key.pub). Paste the contents of the public key file here.

After launching an instance, you login using the private key (the username might be different depending on the image you launched):

- `ssh -i cloud.key <username>@<instance_ip>`

Step 1: Open Import Key Pair Tab

1. Sign in via [Sign In - Meghna Cloud](#) or sign up first from [Registration - Meghna Cloud](#).
2. Locate the left-side Navigation Bar from the dashboard; click "Network and Security" for its dropdown menu.
3. Select "**Key Pairs**" from the menu to be redirected to the following page.
4. Click **Create Key Pair** to open the “Create Key Pair” tab.

Import Key Pair
✕

Key Pair Name *

Key Type *

SSH Key
▼

Public Key *

fzwP7ulBBboCpXRuVYbh9CdihbQeeGjbdX5AuzKFszVINWEqzvfS/
 FGqsJxMSUwIwYJKoZihvcNAQkVMRYEFIQ3Gomo7gDDQKZcp79X
 Ds3DAhIMEEwMTANBgIghkgBZQMEAgEFAAQgV5qbVXxcgBznGz
 Wjf1AxaztGfDHjHjHPwRpnfcBt7aIUeCP80ivR9Su8sAgIIAA==

Key Pairs are how you login to your instance after it is launched.

Choose a key pair name you will recognise and paste your SSH public key into the space provided.

SSH key pairs can be generated with the ssh-keygen command:

ssh-keygen -t rsa -f cloud.key

This generates a pair of keys: a key you keep private (cloud.key) and a public key (cloud.key.pub). Paste the contents of the public key file here.

After launching an instance, you login using the private key (the username might be different depending on the image you launched):

ssh -i cloud.key <username>@<instance_ip>

Cancel

Import Key Pair

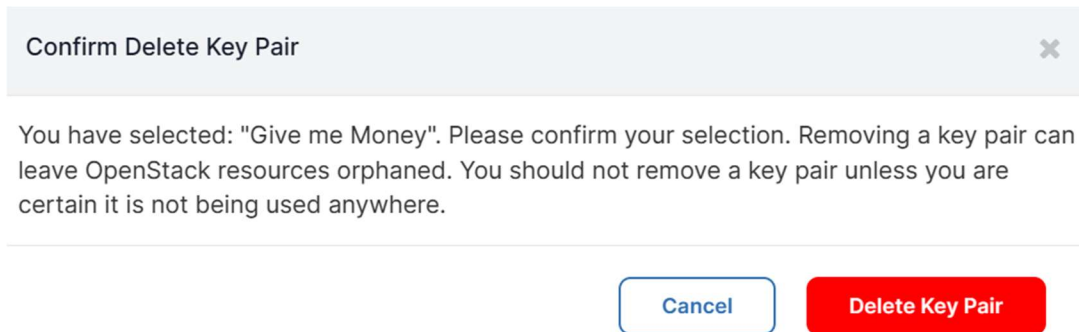
Step 2: Import a Key Pair

1. Input **Key Pair Name**.
2. Select the specific **Key Type**.
3. Copy-Paste the **Public Key** for the imported key pair, into the “Public Key” description box.
4. Click **Import Key Pair** button in order to import the keypair.
5. Click **Cancel** to cancel the importing process.

2.8.25 Key Pairs → Actions → Delete Key Pair

1. Go to the "Key Pairs" page.
2. Select **Delete Key Pair** from the dropdown under “Actions” column, for the specific Keypair that needs to be deleted.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.

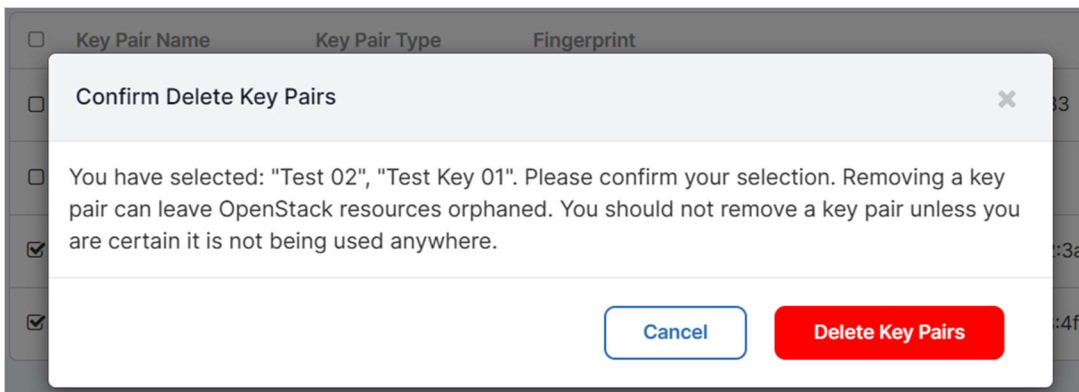


3. Click **Delete Key Pair** from the confirmation module to confirm deletion.
4. Click **Cancel** in order to cancel the deletion process.

2.8.26 Key Pairs → Delete Key Pairs

1. Go to the "**Key Pairs**" page.
2. **Mark** all the Keypairs that need to be deleted.
3. Select **Delete Key Pairs** located at the top of the page.

IMPORTANT: A confirmation module will pop up, requiring user consent to proceed with the deletion process. User must confirm the delete action to avoid accidental deletion.



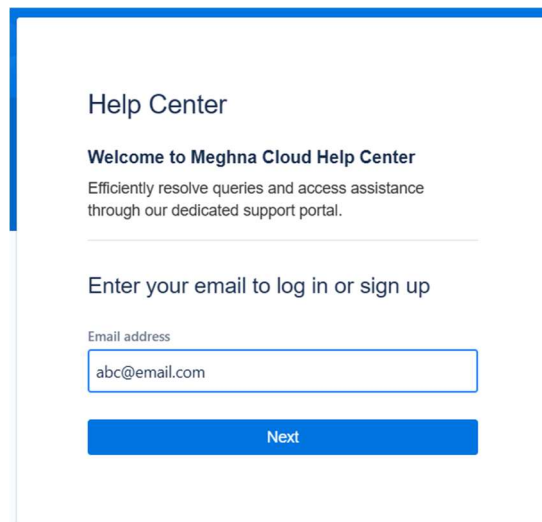
4. Click **Delete Key Pairs** from the confirmation module to confirm deletion.
5. Click **Cancel** in order to cancel the deletion process.

NOTE: Users can efficiently locate Keypairs using the automatic **Search** function positioned at the top. This function dynamically responds to user input, instantly isolating Keypair items that match with the provided input.

3. Support and Solutions (Meghna Cloud Help Center)

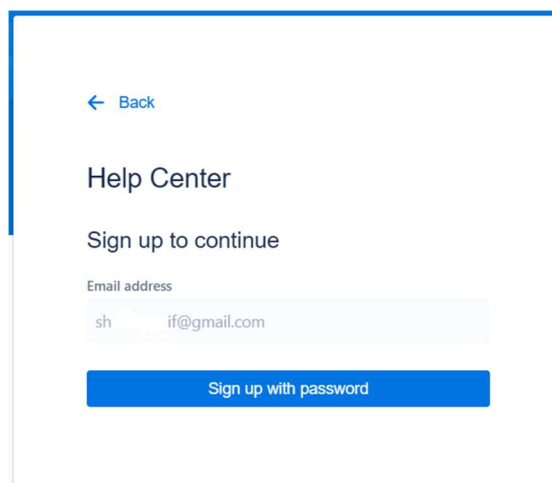
3.1 Sign Up to the Meghna Cloud Help Center

Step 1: Open the Help Center Sign Up Page

A screenshot of the Meghna Cloud Help Center sign-up page. The page has a white background with a blue border. At the top, it says "Help Center". Below that, it says "Welcome to Meghna Cloud Help Center" and "Efficiently resolve queries and access assistance through our dedicated support portal." There is a horizontal line. Below the line, it says "Enter your email to log in or sign up". There is a label "Email address" above an input field containing "abc@email.com". Below the input field is a blue button labeled "Next".

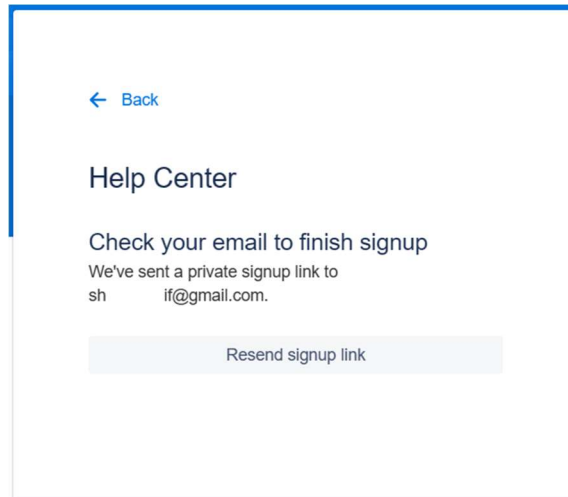
1. Go to the Sign-Up page through <https://gennexttech.atlassian.net/servicedesk>.
2. Enter a valid **Email Address** in the input field.
3. Click **Next** in order to proceed with sign-up.

Step 2: Email Verification and the Next Step of the Registration

A screenshot of the Meghna Cloud Help Center sign-up page. The page has a white background with a blue border. At the top left, there is a blue arrow pointing left and the text "Back". Below that, it says "Help Center". Below that, it says "Sign up to continue". There is a label "Email address" above an input field containing "shif@gmail.com". Below the input field is a blue button labeled "Sign up with password".

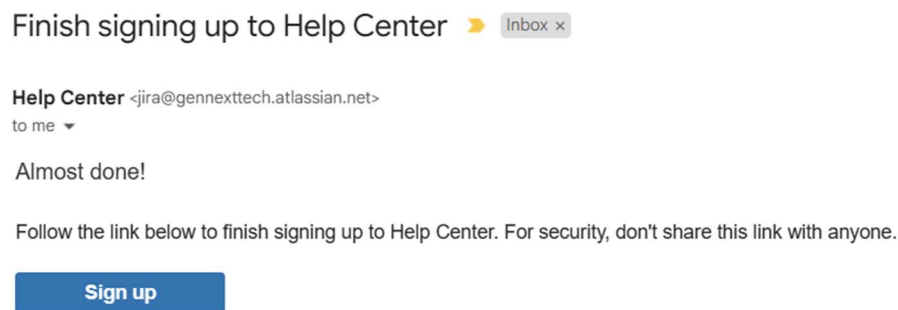
1. Click **Sign up with password** in order to proceed to the next step.

NOTE: Once user clicks **Sign up with password**, they should receive an **Email** to continue with the second step of the registration process. If for some reason the mail failed to reach user in the first place, click **Resend signup link**.



2. Open the email and click on the **Sign up** button associated with the email.

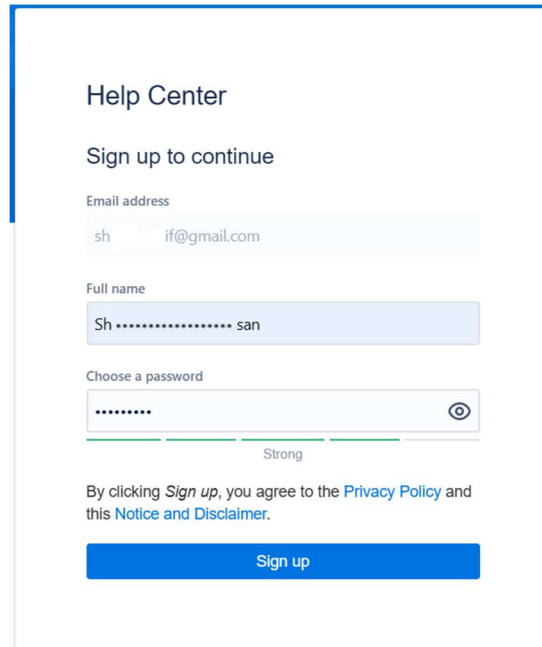
NOTE: Upon clicking the **Sign up** button, user will be redirected to a new tab where user can continue with setting up password and input other details.



3. Input **Full Name** of the user.
4. Input a strong **Password** for secure authentication.

IMPORTANT: User must provide a strong password. The password must be 8 characters long with a combination of uppercase and lowercase letters along with numbers and symbols/special characters. (For example: *Abc@123#*)

NOTE: Click on the “eye” icon in order to make the password visible.

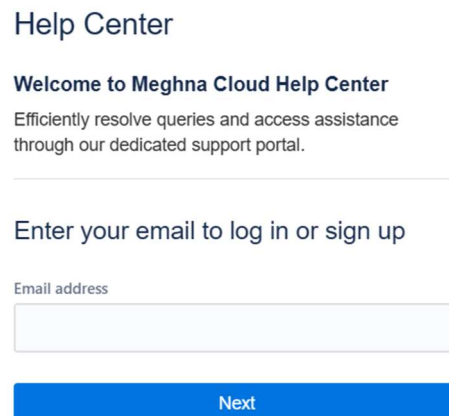
A screenshot of a web form titled "Help Center" with the sub-heading "Sign up to continue". The form contains three input fields: "Email address" with the value "sh...if@gmail.com", "Full name" with the value "Sh san", and "Choose a password" with a masked password "....." and a strength indicator showing "Strong". Below the fields is a blue "Sign up" button. A disclaimer text reads: "By clicking Sign up, you agree to the Privacy Policy and this Notice and Disclaimer." The entire form is enclosed in a blue border.

5. Click **Sign up** to confirm and finish the process.

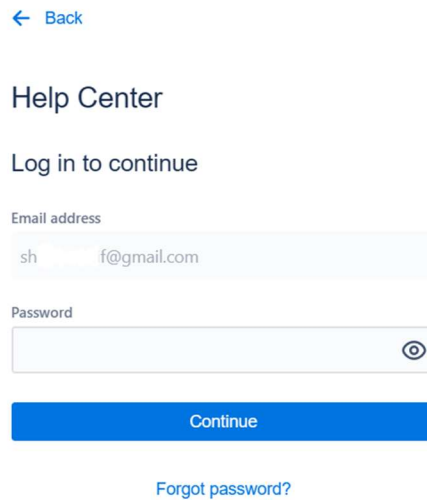
Upon completing the sign-up process successfully, users will be directed to the "Help Center" page, where they can choose specific options to seek the support and solutions they need.

3.2 Login to Help Center

1. Click on [Login - Jira Service Management \(atlassian.net\)](#) in order to go to the login page.

A screenshot of the "Help Center" login page. It features the heading "Help Center" and a sub-heading "Welcome to Meghna Cloud Help Center" followed by the text "Efficiently resolve queries and access assistance through our dedicated support portal." Below this is a section titled "Enter your email to log in or sign up" with an "Email address" input field. At the bottom is a blue "Next" button.

2. Enter **Email** that is associated with Help Center account.
3. Click **Next** to proceed to the next step.

A screenshot of the Help Center login page. At the top left is a blue arrow pointing left with the text "Back". Below that is the heading "Help Center" and the text "Log in to continue". There are two input fields: "Email address" containing "sh f@gmail.com" and "Password" which is empty and has an eye icon on the right. Below the fields is a blue "Continue" button. At the bottom center is a blue link "Forgot password?".

← Back

Help Center

Log in to continue

Email address

Password

Continue

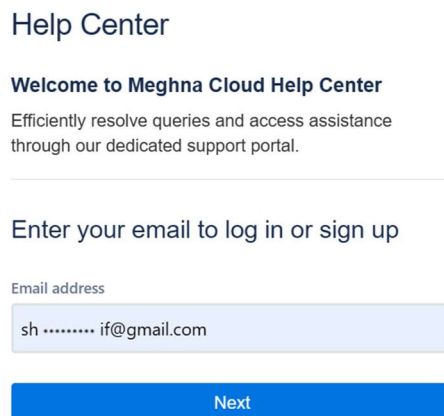
[Forgot password?](#)

4. Input **Password** in the password field. (*Click the “eye” icon to make password visible*)
5. Click **Continue** to proceed with the login process.

3.3 Forgot Password

Step 1: Enter Email Address to Continue

1. Sign up or Login to the help center using [Help Center - Jira Service Management \(atlassian.net\)](#).

A screenshot of the Help Center forgot password page. The heading is "Help Center". Below it is the text "Welcome to Meghna Cloud Help Center" and "Efficiently resolve queries and access assistance through our dedicated support portal." There is a horizontal line. Below that is the text "Enter your email to log in or sign up". There is an "Email address" label above an input field containing "sh if@gmail.com". Below the field is a blue "Next" button.

Help Center

Welcome to Meghna Cloud Help Center

Efficiently resolve queries and access assistance through our dedicated support portal.

Enter your email to log in or sign up


Email address

Next

2. Enter the **Email Address** associated with the account.
3. Click **Next** in order to proceed to the next step.

Step 2: Get a Verification Email to Change Password

Password


[Continue](#)
[Forgot password?](#)

1. Click on **Forgot Password** in order to receive an email with verification link.

NOTE: Upon clicking "Forgot Password," users will receive an email at the registered email address used to open the account in the "Help Center." This email will contain a link to initiate the password recovery process, providing a secure and user-friendly method for resetting passwords.

2. Click "**Resend reset password link**" if the user didn't receive an email or if the link has expired.

[← Back](#)

Help Center

Check your email to reset your password

We've sent a reset password link to
shif@gmail.com

[Resend reset password link](#)

Step 3: Change Password

Help Center

Set a password to continue

Email address

sh . . . if@gmail.com

Password

Confirm

1. Input a new **Password**.

IMPORTANT: The password must be 8 characters long with a combination of uppercase and lowercase letters along with numbers and symbols/special characters. *(For example: Abc@123#)*

NOTE: Click on the “eye” icon in order to make the password visible.

2. Click **Confirm** in order to change the password.

After changing the password successfully, user will be automatically logged in to the “Help Center”.

3.4 Create a New Help Request

Step 1: Select a Category and Open the Issue Creation Tab

1. Sign up or Login to the help center using [Help Center - Jira Service Management \(atlassian.net\)](#).
2. Click on a specific category in order to open that specific “Request Creation” Tab.

What can we help you with?



Technical support

Need help installing, configuring, or troubleshooting? Select this to request assistance.



Product trial questions

Trying out our product and want more information? Select this and we'll be happy to answer your questions.



Report a bug

Tell us the problems you're experiencing.



Licensing and billing questions

Choose this if you have questions about licensing or billing.



Suggest a new feature

Let us know your idea for a new feature.



Suggest improvement

See a place where we can do better? We're all ears.



Other questions

Don't see what you're looking for? Select this option and we'll help you out.



Emailed request

Request received from your email support channel.

NOTE: To ensure user-friendly navigation, all categories open up to a uniform layout, maintaining a consistent and straightforward user interface. This approach aims to keep the user experience simple and minimize errors in most cases.

Step 2: Issue a Request

1. Make sure under "What can we help you with?" dropdown the chosen category is preselected.

NOTE: The category chosen by the user will automatically be preselected in the dropdown menu under "What can we help you with?" But user can change the category as per need from the dropdown menu.

2. Input **Organization ID** in order to prevent “Spam” issue requests.

NOTE: An Organization ID is a unique identifier provided to the user by the organization currently associated with the 'Meghna Cloud' platform. This ID helps in isolating genuine issues from spam requests, allowing responders to provide quick solutions based on urgency.

3. Provide a **Summary** of the issue based on the selected category.
4. Provide clear **Detail** about the issue in the description box.
5. Provide **Attachments** (*such as: Screenshots or Files*) related to the issue.
6. Click **Send** in order to submit the issue.

[Help Center](#) / [Meghna Cloud Support Desk](#)



Meghna Cloud Support Desk

Efficiently resolve queries and access assistance through our dedicated support portal.

What can we help you with?



Technical support

Need help installing, configuring, or troubleshooting? Select this to request...

Enter Organization ID *

Please enter your Organization ID (if already a user)

Summary *

What do you need help with? Provide as much detail as possible *

Normal text ▾ | **B** *I* ... | **A** ▾ | ☰ ☷ | 🔗 @ 😊 📄 <> ⓘ ” + ▾

Attach any relevant files

Drag and drop files, paste screenshots, or browse

Browse

Send

Cancel

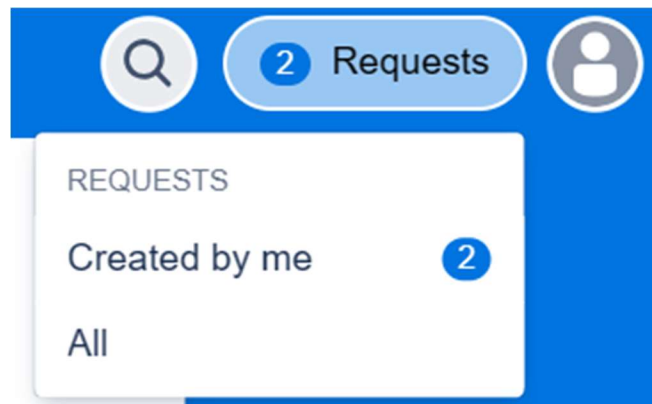
IMPORTANT: Users are required to complete all input fields marked with '*' (**asterisks**). The presence of these asterisks signifies the importance of the corresponding fields, ensuring that all necessary information is provided for the successful submission of a request.

NOTE: Upon successfully creating an issue, users will be able to view the newly generated issue in a new tab. Empowering user with the ability to take action, they can choose to cancel, resolve, or escalate the issue according to their preferences. This functionality provides users with greater control over the management of their submitted concerns.

6. Click **Cancel** to cancel the issue creation procedure.

3.5 View Issued Requests

Step 1: Open an Issue Request Tab





1. From the top-right corner of the page click on the **Request** button.
2. From the dropdown menu:
 - 2.1. Click **Created by me** in order to see all the request created by the user.
 - 2.2. Click **All** to see all the request that users have access to.

NOTE: Upon click user will be redirected to a new page where user can see the list of all the created issues based on the selected category.

Help Center

...

Requests

Type	Reference	Summary	Status	Service project	Requester
	SP-5	New Issue	WAITING FOR SUPPORT	Meghna Cloud Support Desk	Sh an
	SP-4	Test Complain	WAITING FOR SUPPORT	Meghna Cloud Support Desk	Sh an

3. Click on a specific issue to open it.

Step 2: Issue Controls

Help Center / Meghna Cloud Support Desk / SP-5

New Issue



Sh an raised this on Today 5:26 PM

[Hide details](#)

What do you need help with? Provide as much detail as possible





This is a test issue

Activity



Status


WAITING FOR SUPPORT

-  Notifications on
-  Escalate
-  Resolve this issue
-  Cancel request

Request type

 Technical support

Shared with

 Sh an
Creator

1. Resolve this Issue:

Resolve this issue

Please comment with any additional information

Optional comment

Resolve this issue Cancel

1. Write a **Comment** regarding how this issue is resolved.
2. Click **Resolve this issue** in order to proceed with the resolving process.
3. Click **Cancel** in order to cancel the process.

2. Cancel Request:

Cancel request

Please comment with any additional information

Optional comment

Cancel request Cancel

1. Write a **Comment** regarding why the issue is being canceled.
2. Click **Cancel Request** in order to cancel the issue.
3. Click **Cancel** in order to cancel the process.

3. Escalate:

Escalate

Please comment with any additional information

Optional comment

Escalate

Cancel

1. Write a **Comment** regarding why they should be escalated.
2. Click **Escalate** in order to escalate the issue.
3. Click **Cancel** in order to cancel the process.

NOTE: Once an issue is escalated, it indicates an immediate need for remediation. Following escalation, users will no longer have the option to resolve or cancel the issue from their end. This restriction ensures that escalated issues receive prompt attention and appropriate action is taken to address the urgency of the situation.

NOTE: Users can see a comment that the issue is escalated, in the comment section.

4. Click on the **Notifications On/Notifications Off** in order to enable or disable notifications for the issue.
5. Write a comment about the issue in the comment box.
6. Click on the **Help Center** above to go back to the Help Center page.