

# EUCALYPTUS

## Eucalyptus 4.0.2 User Console Guide

2014-11-05 Eucalyptus Systems

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# User Console Overview

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Welcome to the Eucalyptus User Console Guide. The Eucalyptus User Console is an easy to use web-based interface that allows you to manage your Eucalyptus cloud.

You can do many things with the Eucalyptus User Console, including:

- Get a high-level overview of your cloud with the dashboard
- Create, manage, and delete instances
- Create volumes and snapshots
- Create and import key pairs
- Create and manage security groups
- Create and manage Auto Scaling groups
- Create and manage Elastic Load Balancers
- Manage your Amazon Web Services cloud
- Create and manage IAM users and groups
- Work with Elastic IP addresses

## What's In This Guide

This guide contains information on how to install and configure the Eucalyptus User Console, as well as a section on how to navigate and use the screens and dialogs contained in the user console:

Section	Description
<i><a href="#">Installing the Eucalyptus User Console</a></i>	Contains instructions on how to install the Eucalyptus User Console.
<i><a href="#">Configuring the Eucalyptus User Console</a></i>	Describes how to locate and configure the console configuration file, as well as each setting in the configuration file.
<i><a href="#">Working with the Eucalyptus User Console</a></i>	Discusses how to get started using the Eucalyptus User Console and how to navigate and use the screens and dialog boxes in the console.

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# Install the Eucalyptus User Console

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This section covers how to install the Eucalyptus User Console.

## Install on Centos / RHEL 6.3

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**Note:** The Eucalyptus User Console package is installed with the Eucalyptus repositories. The following instruction assumes that you're installing the console on a server that's already running Eucalyptus. If you're installing the console on a stand-alone machine, please see the [Eucalyptus Installation Guide](#) to set up the Eucalyptus repositories before following the instructions below.



**Note:** The version of the user console you're running should be the same as the version of Eucalyptus you're running. Running a user console against a Eucalyptus installation with a different version is unsupported.



**Note:** The Eucalyptus User Console package will only install on 64-bit architectures.

To install the Eucalyptus Console from packages on Centos and RHEL 6.3:

Run the following command to install the Eucalyptus User Console:

```
yum install eucaconsole
```

Your installation is now complete.

You are now ready to [configure the Eucalyptus User Console](#).

## Configure the Eucalyptus User Console

---

This section covers how to configure the Eucalyptus Console.

### Things You Need to Do to Get the Console Running

In order to get the console working for your cloud, you will need to do the following:

- Modify the configuration file, as detailed in this section. At minimum, you must specify the *front end address*, and the *UI port*. You should also be sure to specify the *administrative support URL* and the *support URL*.
- Create the user accounts using the Eucalyptus Administrative Console. For more information see the *Administration Guide*.
- Make sure that any images that you would like users to be able to launch instances from are installed in your cloud; users can't add images from the Eucalyptus Console.
- Communicate the URL for your Eucalyptus Console installation to the users, and instruct them to use their account name, user name, and password to log in.

## Locate and Edit the Console Configuration File

---

The Eucalyptus Console configuration settings are stored in the `console.ini` file.

For Centos and RHEL installations from packages, this file is located in `/etc/eucaconsole/console.ini`.



#### Note:

You should always start (or restart) the console when you make changes to the console configuration.

You can start the console using the following command:

```
service eucaconsole start
```

You can restart the console using the following command:

```
service eucaconsole restart
```

## Configure Account Credentials

---

Accounts that log in to the user console must have a password and access credentials assigned.



**Note:** You can find instructions to do this with the administrative console in the *Eucalyptus Administration Guide*.

To create a user account using the `euare` command line tools:

1. Create a user account using the `euare-accountcreate` command line tool. For example:

```
euare-accountcreate -a exampleaccount
```

2. Create a password for the newly created account by adding a login profile using the `euare-useraddloginprofile` command line tool. For example:

```
euare-useraddloginprofile --as-account exampleaccount -u admin -p  
examplepassword
```

## Set the Cloud Front End IP Address

To set the IP address or DNS name of your cloud front end:

Modify the `clchost` entry in the `[app:main]` section of the configuration file. For example:

```
clchost=127.0.0.1
```

## Configure the UI Port

To set the port that the console will listen on:

Modify the `port` entry in the `[server:main]` section of the configuration file. For example:

```
port=8888
```

## Configure and Enable SSL for the User Console

You can use secure HTTP for your console.

To run your console over Secure HTTP:

1. Install `nginx` on your console server with the following command:

```
yum install nginx
```

2. Overwrite the default `nginx.conf` file with the template provided in `/usr/share/doc/eucaconsole-4.0.2/nginx.conf`.

```
cp /usr/share/doc/eucaconsole-4.0.2/nginx.conf /etc/nginx/nginx.conf
```

3. Uncomment the 'listen' directive and uncomment/modify the SSL certificate paths in `/etc/nginx/nginx.conf` (search for "SSL configuration"). For example:

```
# SSL configuration
# SSL configuration
ssl_protocols TLSv1 TLSv1.1 TLSv1.2;
listen 443 ssl;
ssl_certificate <path to euca console cert file>;
#EXAMPLE:
#ssl_certificate /etc/eucaconsole/console.crt;
ssl_certificate_key <path to euca console key file>;
#EXAMPLE:
#ssl_certificate_key /etc/eucaconsole/console.key;

# end of SSL configuration
```



**Tip:** For more information on generating self-signed SSL certificates, go to [http://www.akadia.com/services/ssh\\_test\\_certificate.html](http://www.akadia.com/services/ssh_test_certificate.html).

4. Restart `nginx` using the following command:

```
service nginx restart
```

5. Edit the `/etc/eucaconsole/console.ini` file, locate the `session.secure = false` parameter, change `false` to `true`, then add the `sslcert` and `sslkey` lines immediately following, per this example:

```
session.secure = true
sslcert=/etc/eucaconsole/eucalyptus.com.chained.crt
sslkey=/etc/eucaconsole/eucalyptus.com.key
```



## Set the Administrator Support URL

---

To set administrator URL or email address displayed in the console:

Modify the `support.url` entry in the `[app:main]` section of the configuration file. For example:

```
support.url=mailto:help@example.com
```

...or...

```
support.url=http://you-cloud.example.com/support
```

## Set the Locale

---

To optionally set the default locale that you want the console to use for localization:

Modify the `pyramid.default_locale_name` entry in the `[app:main]` section of the configuration file with a Linux-compliant locale name. For example:

```
pyramid.default_locale_name = en
```

## Set the Help Page URL

---

To configure the help page URL for the console:

Modify the `help.url` entry in the `[app:main]` section of the configuration file. For example:

```
help.url=https://example.com/help-me
```

This URL will open when the console user selects the **Help** menu item from the console dashboard.

## Configure Session Timeouts

---

To set the session timeouts in the User Console:

Modify the `session.timeout` and `session.cookie_expires` entries in the `[app:main]` section of the configuration file. The `session.timeout` value defines the number of seconds before an idle session is timed out. The `session.cookie_expires` is the maximum length that any session can be active before being timed out. All values are in seconds:

```
session.timeout=1800
```

```
session.cookie_expires=43200
```

## Configure Workers

---

To set the number of worker processes used by the console:

In the `[server:main]` section of the configuration file, modify the `workers` setting. For example:

```
workers=9
```



**Note:** As a general rule, you should configure the number of workers to be twice the number of CPU cores, plus one. For more information, see the [Gunicorn documentation](#).

## Enable AWS Login

---

You can enable or disable Amazon Web Services (AWS) login with the Eucalyptus User Console.

To enable or disable AWS login:

Modify the `aws.enabled` entry in the `[app:main]` section of the configuration file with `True` to enable AWS login or `False` to disable AWS login. For example:

```
[aws.enabled=True]
```

# Work with the Eucalyptus User Console

---

This section covers how to navigate and use the various screens and dialogs in the Eucalyptus User Console.

## Get Started with the Eucalyptus User Console

---

This section covers how to connect to the console, login, and use the main navigation screen.

### Browser Support

As of this writing, the Eucalyptus User Console has been tested to support the latest stable releases of:

- Google Chrome
- Apple Safari
- Mozilla Firefox
- Microsoft Internet Explorer 10 or later

Other browsers that are not listed here may work; the list above only represents browsers that have been tested and confirmed to work with the Eucalyptus User Console.

### Console Login

This screen allows you to log in to the Eucalyptus User Console with either your Eucalyptus or your Amazon Web Services account. If you've forgotten your password, don't have login credentials, or do not know the URL for the Eucalyptus User Console for your Eucalyptus account, please contact your system administrator.

1. Navigate to the Eucalyptus User Console by typing the URL of the User Console into your browser's navigation bar. The URL of the Eucalyptus User Console depends on how the console was installed in your cloud; see your system administrator for the specific URL for your installation.
2. Follow the appropriate instructions below for logging into either your Eucalyptus or your Amazon Web Services cloud.


#### Log in to your Eucalyptus cloud

This area of the login dialog allows you to log in to your Eucalyptus cloud.

1. Click the **Log in to Eucalyptus** tab.
2. Type your account name into the **Account name** text box.
3. Type your user name into the **User name** text box.
4. Type your password into the **Password** text box.
5. Click the **Log in to Eucalyptus** button.

#### Log in to your Amazon Web Services cloud

This area of the login dialog allows you to log in to your Amazon Web Services cloud.

1. Click the **Log in to AWS** tab.
2.  **Note:** To obtain your AWS security credentials, go to Amazon's [Your Security Credentials](#) page.

Enter your AWS access key ID into the **Access key ID** text box.

3. Enter your AWS secret access key into the **Secret access key** text box.
4. Click the **Log in to AWS** button.

## Navigate the Dashboard

The dashboard is your starting point for using the Eucalyptus console. From the Dashboard, you can access landing pages for instances, scaling groups, storage items (volumes, and snapshots), IAM users and groups, and networking and security objects (key pairs, security groups, and IP addresses).

### Basic Dashboard Navigation

You can navigate to specific resource management dialogs in two ways: using the navigation icons at the top of the screen or clicking directly on a resource label or count in the Dashboard screen.

1. You can click directly on a resource name at the top of the main console page to navigate directly to a resource management screen or back to the main console screen.
2. You can also navigate to a resource management screen by clicking directly on a resource icon or count in the main dashboard window.
3. The dashboard shows resources in all availability zones by default. You can filter by availability zone by selecting an availability zone from the **Availability Zones** drop-down listbox at the top of the page.

### Instances

The dashboard allows you to see how many instances are running and to access the **Instances** screen.

1. Click the **Running Instances** or **Stopped Instances** icon in the dashboard to display the **Manage Instances** screen.
2. You can launch a new instance by clicking the **Launch instance** button at the top of the page to display the **Launch new instance** wizard.

### Scaling Groups

The **Instances in Scaling Groups** icon allows you to access the **Scaling groups** screen.

1. Click the **In Scaling Groups** icon to display the **Scaling Groups** screen.
2. You can create a new scaling group by clicking the **Create scaling group** link beneath the **In Scaling Groups** icon.

### Storage

The **Volumes** and **Snapshots** icons allow you to see at a glance how many storage objects are running and directly access the storage object management screens.

1. To access the **Volumes** screen, click the **Volumes** icon.  
You can create a new volume by clicking the **Create volume** link beneath the **Volumes** icon.
2. To access the **Snapshots** screen, click the **Snapshots** icon.  
You can create a new snapshot by clicking the **Create snapshot** link beneath the **Snapshot** icon.

### Network and Security

The dashboard allows you to see at a glance the number of security groups, key pairs, and elastic IP addresses in your Eucalyptus cloud, and to navigate to management screens for each type of object.

1. To access the **Security Groups** screen, click the **Security Groups** icon.  
You can create a new security group by clicking the **Create security group** link beneath the **Security Groups** icon.
2. To access the **Key Pairs** screen, click the **Key Pairs** icon.  
You can create a new key pair by clicking the **Create key pair** link beneath the **Key Pairs** icon.
3. To access the **Elastic IPs** screen, click the **Elastic IPs** icon.  
You can create a new elastic IP address by clicking the **Allocate elastic IPs** link beneath the **Elastic IPs** icon.

### Miscellaneous Console Functions

Clicking on your account ID in the upper-right corner of the console window displays a drop-down menu showing options to change your password, get help from the Eucalyptus Engage web site, get information about your cloud, and log out of the console.

1. To get help from the Eucalyptus support web site, select **Help** from the drop-down menu.

2. To change your password, select **Change password** from the drop-down menu.



**Note:** You can only change your Eucalyptus cloud password using the Eucalyptus console. To change your AWS password, use the [AWS Security Credentials page](#).

3. To show a dialog box with information about your cloud, click **About your cloud** from the drop-down menu.
4. To log out of the Eucalyptus console, select **Log out** from the drop-down menu.
5. When logged into your AWS account, you can change your region by clicking on the drop-down menu next to the account menu in the upper right corner of the dashboard page. The Eucalyptus console will remember your last selected region.

## Change Password

This page allows you to change your password.

### Change Your Password

1. Type your current password into the **Current password** text box.
2. Type your new password into the **New password** text box.
3. Type your new password into the **Confirm password** text box to ensure that you've typed the new password correctly.
4. Click the **Change password** button.

## Work with Key Pairs

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This section covers how to navigate and use the key pair screens and dialogs in the Eucalyptus User Console.

### Manage Key Pairs

This screen allows you to view a list of your key pairs, create new key pairs, and delete key pairs. You can page through the list of key pairs by clicking the navigation buttons at the bottom of the screen.

#### Changing the View

You can toggle between the table view and the grid view by clicking the appropriate icon next to the **View** label at the top right of the screen.

#### Sorting the Key Pairs List

Sort the key pairs list by selecting a sort order using the **Sort by** drop-down list box.

#### Searching and Filtering the Key Pairs List

To perform a simple search/filter, type some search text into the search text box at the top right of the page.

#### Creating a Key Pair

Click the **Create New Key Pair** button. The **Create new key pair** page will appear.

#### Importing Key Pairs

Click the **Import Public Key** button. The **Import key pair** page will appear.

#### Actions

Each entry in the key pairs list has a context menu, accessible in the **Actions** column. Clicking the action icon brings up a menu of actions that you can perform on the selected image.

The following context menu actions are available:

##### Delete key

This item will bring up the key pair delete confirmation dialog box.

## Create a Key Pair

Eucalyptus uses cryptographic key pairs to verify access to instances. Before you can run an instance, you must create a key pair. Creating a key pair generates two keys: a public key (saved within Eucalyptus) and a corresponding private key (output to the user as a character string). To enable this private key you must save it to a file and set appropriate access permissions (using the `chmod` command), as shown in the example below.

When you create a VM instance, the public key is then injected into the VM. Later, when attempting to login to the VM instance using SSH, the public key is checked against your private key to verify access. Note that the private key becomes obsolete when the public key is deleted.

### Create Key Pairs with the Console

1. From the main dashboard screen, click the **Key Pairs** icon, or select the **Network and Security** menu at the top of the dashboard. The **Manage Keypairs** screen will appear.
2. On the **Key Pairs** screen, click the **Create New Key Pair** link. The **Create new key pair** page will appear.
3. Type a name for the new key pair into the **Name** text box.
4. Click the **Create and Download** button. The private half of the key pair is saved to the default download location for your browser.



**Note:** Keep your private key file in a safe place. If you lose it, you will be unable to access instances created with the key pair.

5. Change file permissions to enable access to the private key file in the local directory. For example, on a Linux or Mac OS X system:

```
chmod 0600 <keypair_name>.private
```

## Import a Public Key

This page allows you import an existing public key. Use this if you have an existing SSH key on your system you want to use with your Eucalyptus instances.

1. Enter a name for the key pair in the **Name** text box.
2. Paste the contents of your SSH key into the **SSH key contents** text box, or click on the **Browse...** link to read the contents of an existing SSH key file.
3. Click the **Import** button.

## Delete Key Pair

This dialog box allows you to confirm or cancel a key pair delete operation.

### Verify Key Pair Deletion

1. To verify that you wish to delete the selected key pair(s), click the **Yes, Delete** button.
2. To cancel the delete operation, click the **x** button in the upper right corner of the dialog box.

## Work with Security Groups

This section covers how to navigate and use the security group screens and dialogs in the Eucalyptus User Console.

### Manage Security Groups

This screen allows you to view a list of your security groups and create, modify and delete security groups. You can page through the list of security groups by clicking the navigation buttons at the bottom of the screen.

## Changing the View

You can toggle between the table view and the grid view by clicking the appropriate icon next to the **View** label at the top right of the screen.

## Sorting the Security Groups List

Sort the security groups list by selecting a sort order using the **Sort by** drop-down list box.

## Searching and Filtering the Security Groups List

1. To perform a simple search/filter, type some search text into the search text box at the top right of the page.
2. For more precise filtering and searching, you can add one or more filters by clicking one of the available filters in the **Filter by** section on the right side of the page.

## Creating a Security Group

Click the **Create New Security Group** button. The **Create Security Group** page will appear.

## Viewing Details of a Security Group

You can expand a security group in the list to see details about the security group, including tags and rules associated with the security group.

Click the name of the security group in the list of security groups.

The details page for the selected security group will open.

## Actions

Each entry in the security group list has a context menu, accessible in the **Actions** column. Clicking the action icon brings up a menu of actions that you can perform on the selected security group.

The following context menu actions are available:

### View details

This item will bring up the security group detail page.

### Delete security group

This item allows you to delete the security group.

## Create a Security Group

Eucalyptus enables you to control access to your cloud using security groups. A security group contains a group of rules that control inbound traffic to instances in the group for the specified protocols and ports.

### Security Group section

1. Enter a name for your security group in the **Name** text box.
2. Enter a description for your security group in the **Description** text box.

### Inbound Rules section

You can optionally create one or more rules for the security group. A *rule* grants a specified range of IP addresses inbound access to your instances for a protocol or custom port range. Rules for many of the most popular protocols are pre-defined and available for selection in the drop-down list box, or you can define your own rule.



**Important:** You should specify at least one rule for your security group.

- a) Select a protocol for the rule from the **Protocol** drop-down list box, or select a custom protocol.
- b) If you've selected a custom protocol, enter a port range for the rule in the **Port range** text box.
- c) Select the type of inbound traffic for the rule using the radio buttons:

To grant access to an IP address or range of IP addresses, select the **IP Address** radio button and enter a CIDR range in the text box.



**Note:** For more information on CIDR notation, please see the [CIDR notation Wikipedia article](#).

To grant access to another security group, select the **Other security group** radio button and enter the name of the security group in the text box.

- d) Click the **Add Rule** button.
- e) Repeat as needed to add more rules.

### Add tags

To help you manage your cloud's instances, images, and other Eucalyptus resources, you can optionally assign your own metadata to resources in the form of tags. You can use tags to create user-friendly names, make resource searching easier, and improve coordination between multiple users. You can optionally add tags by performing the following steps:

To add new tags:

1. Type the key name for your tag into the **name...** text box.



**Note:** Tags cannot start with "euca:" or "aws:".

2. Type the value for your tag into the **value...** text box.
3. Click the **Add Tag** button.
4. If you wish to add additional tags, repeat the preceding steps.

To delete one or more tags:

Move your mouse over the tag you wish to delete and click the **X** button.

### Save Your Work

Click the **Create** button to save your work, or click the **Cancel** button to cancel the operation.

## Security Group Details

This page allows you to view details, add/edit rules, or delete a security group.

### Add Security Group Rules

You can optionally create one or more rules for the security group. A rule grants a specified range of IP addresses inbound access to your instances for a protocol or custom port range. Rules for many of the most popular protocols are pre-defined and available for selection in the drop-down list box, or you can define your own rule.

1. Select a protocol for the rule from the **Protocol** drop-down list box.
2. Enter a port range for the rule in the **Port range** text box.
3. Select the type of inbound traffic for the rule using the radio buttons:

To grant access to an IP address or range of IP addresses, select the **IP Address** radio button and enter a CIDR range in the text box.



**Note:** For more information on CIDR notation, please see the [CIDR notation Wikipedia article](#).

To grant access to another security group, select the **Security group** radio button and enter the name of the security group in the text box.

4. Click the **Add Rule** button.

### Delete Security Group Rules

Click the **X** on the existing rule you want to delete.



## Add tags

To help you manage your cloud's instances, images, and other Eucalyptus resources, you can optionally assign your own metadata to resources in the form of tags. You can use tags to create user-friendly names, make resource searching easier, and improve coordination between multiple users. You can optionally add tags by performing the following steps:

To add new tags:

1. Type the key name for your tag into the **name...** text box.



**Note:** Tags cannot start with "euca:" or "aws:".

2. Type the value for your tag into the **value...** text box.
3. Click the **Add Tag** button.
4. If you wish to add additional tags, repeat the preceding steps.

To delete one or more tags:

Move your mouse over the tag you wish to delete and click the **X** button.

## Saving Your Changes

Once you're satisfied with the edits to your security group, click the **Save changes** button.

## Actions

Clicking the **Actions** button brings up a menu of actions that you can perform on the selected security group.

The following context menu actions are available:

### Delete security group

Selecting this item will display the delete security group confirmation dialog box.

## Delete Security Group

This dialog box allows you to confirm or cancel a security group delete operation.

### Verify Security Group Deletion

1. To verify that you wish to delete the selected security group(s), click the **Yes, Delete** button.
2. To cancel the delete operation, click the **X** button in the upper right corner of the confirmation dialog box.

## Work with Volumes

---

This section covers how to navigate and use the volume screens and dialogs in the Eucalyptus User Console.

## Manage Volumes

Eucalyptus offers persistent storage that you can attach to a running instance. These Eucalyptus block storage (EBS) volumes persist autonomously from the running life of an instance. After you attach a block volume to an instance, you can use it like any other physical hard drive. This screen allows you to view a list of your volumes, create new volumes, attach and detach volumes to a running instance, and delete volumes. You can page through the list of volumes by clicking the navigation buttons at the bottom of the screen.

### Changing the View

You can toggle between the table view and the grid view by clicking the appropriate icon next to the **View** label at the top right of the screen.

### Sorting the Volumes List

Sort the volumes list by selecting a sort order using the **Sort by** drop-down list box.

## Searching and Filtering the Volumes List

1. To perform a simple search/filter, type some search text into the search text box at the top right of the page.
2. For more precise filtering and searching, you can add one or more filters by clicking one of the available filters in the **Filter by** section on the right side of the page.

## Creating a Volume

Click the **Create New Volume** button. The **Create new volume** page will appear.

## Viewing Details of a Volume

Several items in the volume list allow you to click on them to see more detailed information.

To see more details about a volume, or an object associated with an image:

1. Click the name/ID in the list of volumes to display detailed information about the selected volume.
2. Click an instance ID to see to see detailed information about the instance associated with the selected volume.
3. Click the number of snapshots to see a detailed list of all of the snapshots associated with the selected volume.

## Actions

Each entry in the image list has a context menu, accessible in the **Actions** column. Clicking the action icon brings up a menu of actions that you can perform on the selected image.

The following context menu actions are available:

### View details

This item will bring up the volume detail page.

### Manage snapshots

This item brings up a page that allows you to view, add, and delete snapshots for a volume.

### Attach to instance

This item allows you to attach the volume to a running instance.



**Note:** This menu item will not appear if the volume is already attached to an instance.

### Detach a Volume from a Running Instance

This item allows you to detach the volume from a running instance.



**Note:** This menu item will not appear if the volume is not attached to an instance.

## Deleting Volumes

This item allows you to delete a volume.



**Note:** This menu item will not appear if the volume is attached to an instance.

## Create a Volume

Eucalyptus offers persistent storage that you can attach to a running instance. These Eucalyptus block storage (EBS) volumes persist autonomously from the running life of an instance. After you attach a block volume to an instance, you can use it like any other physical hard drive.

### Enter volume information

Add the details of your new volume:

1. Type the name of your volume in the **Name** text box.

2. If you would like to create a volume from an existing snapshot, select the snapshot from the **Create from snapshot?** drop-down listbox.
3. Enter the size of the volume in gigabytes in the **Volume size (GB)** text box.



**Note:** If you're creating a volume from a snapshot, you can't enter a volume size that's smaller than the original snapshot you've selected.

4. Select an availability zone from the **Availability zone** drop-down list box.



**Note:** You can only attach a volume to an instance in the same availability zone.

### Add tags

To help you manage your cloud's instances, images, and other Eucalyptus resources, you can optionally assign your own metadata to resources in the form of tags. You can use tags to create user-friendly names, make resource searching easier, and improve coordination between multiple users. You can optionally add tags by performing the following steps:

To add new tags:

1. Type the key name for your tag into the **name...** text box.



**Note:** Tags cannot start with "euca:" or "aws:".

2. Type the value for your tag into the **value...** text box.
3. Click the **Add Tag** button.
4. If you wish to add additional tags, repeat the preceding steps.

To delete one or more tags:

Move your mouse over the tag you wish to delete and click the **X** button.

### Save Your Work

Click the **Create volume** button to save your work, or click the **Cancel** button to cancel the operation.

## Volume Detail - General

This page shows you the details for a volume.

### General

This section allows you to view general details about the volume, rename the volume, and add tags.

#### Rename the volume

Type the new name of the volume in the **Name** text field.

### Add tags

To help you manage your cloud's instances, images, and other Eucalyptus resources, you can optionally assign your own metadata to resources in the form of tags. You can use tags to create user-friendly names, make resource searching easier, and improve coordination between multiple users. You can optionally add tags by performing the following steps:

To add new tags:

1. Type the key name for your tag into the **name...** text box.



**Note:** Tags cannot start with "euca:" or "aws:".

2. Type the value for your tag into the **value...** text box.
3. Click the **Add Tag** button.
4. If you wish to add additional tags, repeat the preceding steps.

To delete one or more tags:

Move your mouse over the tag you wish to delete and click the **X** button.

### Saving Your Changes

Once you're satisfied with the edits to your volume, click the **Save changes** button.

### Action menu

Clicking the **Actions** button brings up a menu of actions that you can perform on the selected volume.

The following context menu actions are available:

#### Attach to instance

This item allows you to attach the volume to a running instance.



**Note:** This menu item will not appear if the volume is already attached to an instance.

#### Detach from instance

This item allows you to detach the volume from a running instance.



**Note:** This menu item will not appear if the volume is not attached to an instance.

### Deleting Volumes

This item allows you to delete a volume.



**Note:** This menu item will not appear if the volume is attached to an instance.

## Volume Detail - Snapshots

This page shows you the details for a volume's snapshots.

### Snapshots

This section allows you to view and manage snapshots associated with the volume.

#### Create a new snapshot

Click the **Create a snapshot** icon to display the **Create snapshot from volume** dialog.

#### Context menu actions

Each tile in the snapshots list has a context menu. Clicking the action icon in the upper right corner of a volume tile brings up a menu of actions that you can perform on the selected snapshot.

The following context menu actions are available:

#### View details

This item will bring up the snapshot detail page.

#### Register as image

This item allows you to register the selected snapshot as an image in your cloud, if it was created from a volume containing a root file system. The image can then be used to launch EBS-backed instances.

#### Delete snapshot

This item allows you to delete a snapshot.

## Delete Volume

This dialog box allows you to confirm or cancel a volume delete operation.

### Verify Volume Deletion

1. To verify that you wish to delete the selected volume(s), click the **Yes, Delete** button.

2. To cancel the delete operation, click the **X** button in the upper right corner.

## Attach a Volume

This dialog box lets you attach an EBS volume to an instance running in the same availability zone.

1. Start typing the identifier of the volume to attach into the **Volume** text box (the volume is already in the text box if you navigated to this dialog from the **Manage Volumes** screen). A list of matching volumes will appear; select the volume from the list.
2. Start typing the instance identifier into the **Instance** text box (this instance is pre-selected for you if you navigated to this dialog from the **Manage Instances** screen). A list of matching instances will appear; select the instance from the list.
3. To optionally specify a device name to use for the attached volume, type the device name into the **Attach as device** text box.
4. Click the **Attach Volume** button.

## Detach Volumes

This dialog box lets you verify that you wish to detach one or more volumes from running instance(s).

1. Verify that you want to detach the listed volume(s).
2. Click the **Yes, Detach Volume** button.

## Work with Instances

---

This section covers how to work with the instance dialogs and screens in the Eucalyptus User Console.

### Manage Instances

This page allows you to view a list of your instances, create new instances, and perform actions on your instances. You can page through the list of instances by clicking the navigation buttons at the bottom of the screen.

#### Changing the View

You can toggle between the table view and the grid view by clicking the appropriate icon next to the **View** label at the top right of the screen.

#### Sorting the Instances List

Sort the instance list by selecting a sort order using the **Sort by** drop-down list box.

#### Searching and Filtering the Instance List

1. To perform a simple search/filter, type some search text into the search text box at the top right of the page.
2. For more precise filtering and searching, you can add one or more filters by clicking one of the available filters in the **Filter by** section on the right side of the page.

#### Launch an Instance

Click the **Launch new instance** button. The **Launch Instance** wizard will appear.

#### Viewing Details of an Instance

Several items in the instance list allow you to click on them to see more detailed information.

To see more details about an instance, or an object associated with an instance:

1. Click the name/ID in the list of instances to display detailed information about the selected instance.
2. Click an image ID to see to see detailed information about the image used to launch the selected instance.
3. Click a key name to see detailed information about the security key used to launch the instance.

- Click a security group name to see detailed information about the security group used to launch the instance.

### Actions

Each entry in the instance list has a context menu, accessible in the **Actions** column. Clicking the action icon brings up a menu of actions that you can perform on the selected instance.

The following context menu actions are available:

#### View details

This item will bring up the instance detail page.

#### Connect to instance

Selecting this menu will display a dialog with instructions detailing how to connect to the selected instance.

#### Launch more like this

Selecting this menu will display a dialog that allows you to create and customize one or more instances like the selected instance.

#### Create launch configuration

A launch configuration is used to define the parameters for new instances that are launched as part of your auto scaling group. Selecting this menu displays the **Create new launch configuration** wizard.



**Note:** For more information on Auto Scaling, please see *Using Auto Scaling* in the *Eucalyptus User Guide*.

#### View console output

Selecting this menu will display a dialog box showing the selected instance's console output.

#### Manage volumes

This menu item allows you to show the volume management page that will allow you to attach and detach volumes for the selected instance.

#### Associate IP address

Select **Associate IP address** from the **Actions** menu to to associate an elastic IP address with the selected instance.

#### Stop

Select this item to stop the selected EBS-backed instance.

#### Start

Select this item to start the selected EBS-backed instance.

#### Reboot

Select this item to reboot the selected EBS-backed instance.

#### Terminate

Select this to terminate the selected instance.



**Note:** A terminated instance can't be restarted.

## Instance Detail - General

This page shows you the details for an instance.

### General

This tab allows you to view general details about the instance, rename the instance, and add tags.

## Rename the instance

Type the new name of the volume in the **Name** text field.

## Add tags

To help you manage your cloud's instances, images, and other Eucalyptus resources, you can optionally assign your own metadata to resources in the form of tags. You can use tags to create user-friendly names, make resource searching easier, and improve coordination between multiple users. You can optionally add tags by performing the following steps:

To add new tags:

1. Type the key name for your tag into the **name...** text box.



**Note:** Tags cannot start with "euca:" or "aws:".

2. Type the value for your tag into the **value...** text box.
3. Click the **Add Tag** button.
4. If you wish to add additional tags, repeat the preceding steps.

To delete one or more tags:

Move your mouse over the tag you wish to delete and click the **X** button.

## Saving Your Changes

Once you're satisfied with the edits to your instance, click the **Save changes** button.

## Action menu

Clicking the **Actions** button brings up a menu of actions that you can perform on the selected instance.

The following context menu actions are available:

### Connect to instance

Selecting this menu will display a dialog with instructions detailing how to connect to the selected instance.

### Launch more like this

Selecting this menu will display a dialog that allows you to create and customize one or more instances like the selected instance.

### Create launch configuration

A launch configuration is used to define the parameters for new instances that are launched as part of your auto scaling group. Selecting this menu displays the **Create new launch configuration** wizard.



**Note:** For more information on Auto Scaling, please see *Using Auto Scaling* in the *Eucalyptus User Guide*.

### View console output

Selecting this menu will display a dialog box showing the selected instance's console output.

### Associate IP address

Select **Associate IP address** from the **Actions** menu to show the volume management page that will allow you to attach and detach volumes for the selected instance.

### Stop

Select this item to stop the selected EBS-backed instance.

### Start

Select this item to start the selected EBS-backed instance.

## Reboot

Select this item to reboot the selected instance.

## Terminate

Select this to terminate the selected instance.



**Note:** A terminated instance can't be restarted.

## Instance Detail - Volumes

This page shows you the details for a volume.

### Volumes

This tab allows you to view and manage the volumes attached to the selected instance.

#### Attach a volume

Click the **Attach a volume** icon to display the **Attach volume** dialog.

#### Context menu actions

Each tile in the volume list has a context menu. Clicking the action icon in the upper right corner of a volume tile brings up a menu of actions that you can perform on the selected volume.

The following context menu actions are available:

#### Detach volume

Select this item to detach the selected volume from the instance.

## Launch a New Instance

This screen allows you create a new instance.

### Select an Image

This panel allows you to select a base image to use for creating your instance.

1. There are two ways to specify a base image:

- Type an image name directly into the **Enter an image ID** text box
- Select an image from the list of images on the panel.



**Note:** You can filter the list of images by typing some filter text into the search textbox, or by selected one or more filters in the **Filter by** section to the left of the image list.

2. Click the **Next** button to proceed to the **Details** panel.

### Details

This panel allows you to specify the names, tags, instance size, number of instances, and the availability zone of your new instance(s).

1. Enter the number of new instances to create in the **Number of instances** text box.
2. You can optionally enter one or more names for your new instance(s) in the **Name(s)** text box(es).
3. Select an instance type from the **Instance type** drop-down list box..



**Note:** Information about the instance size is displayed when you click the instance size link.

4. If you want to specify an availability zone other than the default, select an availability zone using the **Availability zone** drop-down list box.



5. To help you manage your cloud's instances, images, and other Eucalyptus resources, you can optionally assign your own metadata to each resource in the form of tags. You can use tags to create user-friendly names, make resource searching easier, and improve coordination between multiple users. To add tags to this resource:
  - a) Type the key name for your tag into the **name...** text box.
  - b) Type the value for your tag into the **value...** text box.
  - c) To add this tag, click the **Add Tag** button.
  - d) If you wish to delete a tag that you've already entered, click the **x** button to the right of the tag.
6. Click the **Next** button to proceed to the **Security** panel.

## Security

This panel allows you to specify the key pair and security group that will be used by your new instance(s). **NOTE:** if you create a key pair or security group in this section, they will automatically be selected for use in your new instance.

1. Select a key pair using the **Key name** drop-down list box.



**Note:** You can also create a new key pair by clicking the **Create key pair** link.

2. Select a security group using the **Security group** drop-down list box.



**Note:** You can also create a new security group by clicking the **Create security group** link.



**Note:** If you select the default security group, make sure that you've added rules to the default security group so that you can access your instances.

3. You can optionally specify an IAM role using the **Role** drop-down list box.



**Note:** If you select a role, make sure that the correct permissions are defined for that role so that the appropriate level of access is applied to your instance.

4. You can optionally specify advanced options by clicking the **Select advanced options** link and refer to the next section for further details.
5. Click the **Launch instance(s)** button.

## Specify Advanced Options

This panel allows you to specify advanced options for your new instance(s). You can add user data, override the kernel and RAM disk IDs, specify private networking, and add additional storage.

1. Specify custom user data by typing it into the **User data** text box or by attaching a file by selecting Upload file then clicking the **Choose File...** button to browse for the file.
2. You can override the kernel ID in the selected image with the **Kernel ID** drop-down list box.
3. You can override the RAM disk ID in the selected image with the **RAM disk ID (RAMFS)** drop-down list box.
4. Click the **Enable monitoring** check box to specify that detailed CloudWatch metric gathering should be enabled for your new instance(s).
5. Click the **Use private addressing only** check box to specify that your new instance should use private addressing only. Private addresses cannot connect directly to the Internet and must go through a NAT (Network Address Translation) device or an elastic IP address mapped to the instance.
6. The Storage section will only display if you have an EBS-backed image. If this is the case, you can configure additional storage for your instance:
  - a) Select a volume type using the **Volume** drop-down list box.
  - b) Type the desired mapping for the storage into the **Mapping** text box (for example: `/dev/sdb`).
  - c) If you want to create the storage from an existing snapshot, specify it in the **Create from snapshot** drop-down list box.
  - d) Type the size of the attached storage in gigabytes into the **Size (GB)** text box.

- e) Select the **Delete on termination** check box if you would like the attached storage to be deleted when the instance is terminated.
- f) Click the **Add device** button to add this storage.
- g) You can delete storage you've already added by clicking the minus button on the right side of the storage list item.

7. Click the **Launch Instance** button to launch your new instance(s).

## Stop Instance

This dialog box allows you to confirm or cancel a stop instance operation.

### Verify Stop Instance

1. To verify that you wish to stop the selected instance(s), click the **Yes, Stop Instance** button.
2. To cancel the stop operation, click the **x** button in the upper right corner of the dialog box.

## Reboot Instance

This dialog box allows you to confirm or cancel a reboot instance operation.

### Verify Reboot Instance

1. To verify that you wish to reboot the selected instance(s), click the **Yes, Reboot** button.
2. To cancel the reboot operation, click the **x** button in the upper right corner of the dialog box.

## Get Console Output

This dialog box displays the console output of the selected instance.

Click the **x** button in the upper right corner of the dialog box to dismiss the console output dialog box.

## Launch More Instances Like This

This page allows you create one or more new instances that have the same characteristics as an instance you've already created.

### Specify the Number of Instances

This panel allows you to specify the number of new instances to launch.

1. Enter the number of instances you'd like to launch into the **Instances** text box.
2. You can optionally type the name(s) of your new instances in the **Names** text box.
3. You can optionally specify advanced options by clicking the **Select advanced options** link.
4. Click the **Launch Instance** button to launch your new instances.

### Specify Advanced Options

This panel allows you to specify advanced options for your new instance(s). You can add user data, override the kernel and RAM disk IDs, specify private networking, and add additional storage.

1. Specify custom user data by typing it into the **User data** text box or by attaching a file by clicking the **Browse...** button.
2. You can override the kernel ID in the selected image with the **Kernel ID** drop-down list box.
3. You can override the RAM disk ID in the selected image with the **RAM disk ID (RAMFS)** drop-down list box.
4. Click the **Enable monitoring** check box to specify that detailed CloudWatch metric gathering should be enabled for your new instance(s).
5. Click the **Use private addressing only** check box to specify that your new instance should use private addressing only. Private addresses cannot connect directly to the Internet and must go through a NAT (Network Address Translation) device or an elastic IP address mapped to the instance.
6. You can configure additional storage for your instance in the Storage section:

- a) Select a volume type using the **Volume** drop-down list box.
- b) Type the desired mapping for the storage into the **Mapping** text box (for example: `/dev/sdb`).
- c) If you want to create the storage from an existing snapshot, specify it in the **Create from snapshot** drop-down list box.
- d) Type the size of the attached storage in gigabytes into the **Size (GB)** text box.
- e) Select the **Delete on termination** check box if you would like the attached storage to be deleted when the instance is terminated.
- f) Click the **Add device** button to add this storage.
- g) You can delete storage you've already added by clicking the minus button on the right side of the storage list item.

7. Click the **Launch Instance** button to launch your new instance(s).

## Terminate Instance

This dialog box allows you to confirm or cancel a terminate instance operation.

### Verify Instance Termination

1. Verify that you wish to terminate the selected instance(s).
2. If you are being prompted to terminate more than one instance and want to remove an instance from the list, you may click the **x** button on the instance ID to remove the instance from the list of instances to be deleted.
3. To terminate the instance(s), click the **Yes, Terminate** button.
4. To cancel the terminate operation, click the **x** button in the upper right corner of the dialog box.

## Work with Auto Scaling Groups

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This section covers how to work with the auto scaling groups in the Eucalyptus User Console.

### Manage Scaling Groups

This page allows you to view a list of your scaling groups, create new scaling groups, and edit existing scaling groups. You can page through the list of scaling groups by clicking the navigation buttons at the bottom of the screen.

#### Changing the View

You can toggle between the table view and the grid view by clicking the appropriate icon next to the **View** label at the top right of the screen.

#### Sorting the Scaling Groups List

Sort the scaling groups list by selecting a sort order using the **Sort by** drop-down list box.

#### Searching and Filtering the Scaling Groups List

1. To perform a simple search/filter, type some search text into the search text box at the top right of the page.
2. For more precise filtering and searching, you can add one or more filters by clicking one of the available filters in the **Filter by** section on the right side of the page.

#### Create a New Scaling Group

Click the **Create New Scaling Group** button. The **Create New Scaling Group** wizard will appear.

#### Actions

Each entry in the image list has a context menu, accessible in the **Actions** column. Clicking the action icon brings up a menu of actions that you can perform on the selected image.

The following context menu actions are available:

### View details

This item will bring up the scaling group detail page.

### Manage instances

This will bring up a list of the instances in the auto scaling group.

### Manage policies

This item brings up a page that allows manage scaling policies for your auto scaling group.

### Deleting scaling group

This item allows you to delete a scaling group.

## Create a Scaling Group

This page allows you to create a scaling group. An Auto Scaling group defines the parameters for the Eucalyptus instances that are used for scaling, as well as the minimum, maximum, and (optionally) the desired number of instances to use for Auto Scaling your application. For more information on Auto Scaling, please see *Using Auto Scaling* in the *Eucalyptus User Guide*.

### General

This section is where you specify the basic configuration of your new auto scaling group.

1. Type the name of your new auto scaling group in the **Name** textbox.
2. Select a launch configuration from the **Launch Configuration** drop-down list box. A launch configuration defines the properties of the instances that are launched as part of your auto scaling group.

### Capacity

This section is where you specify the minimum, maximum, and average number of instances for your scaling group.

1. Select the maximum number of instances you want running in your autoscaling group using the **Maximum** control.
2. Specify the minimum number of instances you want running using the **Minimum** control.
3. Specify the desired number of instance you want running using the **Desired** control.

### Tags

A tag is a key/value pair containing data that you can attach to resources in your cloud. This section of the **Create Scaling Group** wizard allows you to define tags for for your scaling group and for instances that run in your scaling group.

1. If you want to apply the new tag to instances running in the scaling group, select the **Propagate** check box.
2. Type the key name for your tag into the **Key** text box.
3. Type the value for your tag into the **Value** text box.
4. To add this tag, click the **Add Tag** button.
5. If you wish to delete a tag that you've already entered, click the **x** on the tag icon.

### Membership

In this section, you can specify availability zones and health checks for the instances that run in your auto scaling group.

1. Select the type of health check for your auto scaling group from the **Type** drop-down list box. The auto scaling health check uses EC2 instance status checks to determine the health state of each instance in your auto scaling group. If your auto scaling group is using a load balancer, auto scaling will use both EC2 instance status checks and load balancing instance health checks.
2. Type the amount of grace period, in seconds, into the **Grace period** text box. This is the amount of time after a new instance is launched in your auto scaling group before health checks start for the instance.
3. Select one or more availability zones for your new scaling group from the **Availability zones** drop-down list box. You can remove a selected availability zone by clicking on the **x** next to the availability zone's name in the **Availability Zones** field.

## Saving the Scaling Group

Once you're satisfied with the properties you've defined for your scaling group, click the **Create scaling group** button to create your scaling group.

For more information on Auto Scaling, see Eucalyptus User Guide.

## Scaling Group Detail - General

An Auto Scaling group defines the parameters for the Eucalyptus instances that are used for scaling, as well as the minimum, maximum, and desired number of instances to use for Auto Scaling your application. This page allows you to view and edit a scaling group. For more information on Auto Scaling, please see *Using Auto Scaling* in the *Eucalyptus User Guide*.

### Capacity

This tab is where you specify the minimum, maximum, and desired number of instances your scaling group will keep running.

1. Select the maximum number of instances you want running in your auto scaling group using the **Maximum** control.
2. Specify the minimum number of instances you want running using the **Minimum** control.
3. Specify the desired number of instances you want running using the **Desired** control.
4. A termination policy defines how instances that are no longer needed in the scaling group are terminated. Select one or more termination policies from the **Termination policies** drop-down list box. The termination policies will be executed in the order you select them.

### Details

You can change the scaling group's launch configuration, availability zones, and cooldown period here.

1. Select a launch configuration from the **Launch Configuration** drop-down list box. A launch configuration defines the properties of the instances that are launched as part of your auto scaling group.
2. You can update the availability zones for your scaling group using the **Availability zones** drop-down list box. You can remove a selected availability zone by clicking on the **x** next to the availability zone's name in the **Availability Zones** field.
3. The *cooldown period* is the number of seconds after a scaling activity completes before any new scaling activity can start. Use the **Default cooldown period (seconds)** control to select the cooldown period for your auto scaling group.

### Health Check

The auto scaling health check uses EC2 instance status checks to determine the health state of each instance in your auto scaling group. Use this section to change the type of health check used for your scaling group.

1. Select the type of health check for your auto scaling group from the **Type** drop-down list box.
2. Type the amount of grace period, in seconds, into the **Grace period** text box. This is the amount of time after a new instance is launched in your auto scaling group before health checks start for the instance.

### Tags

A tag is a key/value pair containing data that you can attach to resources in your cloud. This section allows you to view, add or delete tags for for your scaling group and for instances that run in your scaling group.

1. If you want to apply the new tag to instances running in the scaling group, select the **Propagate** check box.
2. Type the key name for your tag into the **Key** text box.
3. Type the value for your tag into the **Value** text box.
4. If you wish to add additional tags, click the **Add Tag** button.
5. If you wish to delete a tag that you've already entered, click the **x** on the tag icon.

## Saving Your Changes

Once you're satisfied with the edits you've made to your scaling group, click the **Save changes** button, or click the **x** button in the upper right corner to cancel the updates.

For more information on Auto Scaling, see Eucalyptus User Guide.

## Scaling Group Detail - Policies

An Auto Scaling group defines the parameters for the Eucalyptus instances that are used for scaling, as well as the minimum, maximum, and desired number of instances to use for Auto Scaling your application. This page allows you to view and edit a scaling group. For more information on Auto Scaling, please see *Using Auto Scaling* in the *Eucalyptus User Guide*.

### Policies

This tab allows you to view and manage scaling policies associated with the auto scaling group.

#### Add a policy

Click the **Add a policy** icon to display the **Create scaling policy** dialog.

#### Context menu actions

Each tile in the policies list has a context menu, accessible by clicking on the gear icon, with actions that you can perform on the selected policy.

The following context menu actions are available:

#### Delete policy

This item allows you to delete a policy.

## Scaling Group Detail - Instances

An Auto Scaling group defines the parameters for the Eucalyptus instances that are used for scaling, as well as the minimum, maximum, and desired number of instances to use for Auto Scaling your application. This page allows you to view and edit a scaling group. For more information on Auto Scaling, please see *Using Auto Scaling* in the *Eucalyptus User Guide*.

### Instances

This tab allows you to view and manage instances in the auto scaling group.

#### Context menu actions

Each entry in the policies list has a context menu, accessible by clicking on the gear icon, with actions that you can perform on the selected policy.

The following context menu actions are available:

#### View details

This item allows you to view the details page for the selected instance.

#### Mark unhealthy

This item allows you to mark an instance as unhealthy. This will cause auto scaling to terminate the instance and launch a new instance to replace it.


#### Terminate

This action terminates the selected instance.

## Create Scaling Policy

An Auto Scaling policy defines how to perform scaling actions in response to CloudWatch alarms. Auto scaling policies can either scale-in, which terminates instances in your Auto Scaling group, or scale-out, which will launch new instances in your Auto Scaling group. For more information on Auto Scaling, please see *Using Auto Scaling* in the *Eucalyptus User Guide*.

1. Type a name for the scaling policy in the **Name** text box.
2. Select an action type using the **Action** control. The action specifies what to do when a scaling condition is met.
3. Type the numerical unit for the scaling action in the **Amount** text box. This value is used in conjunction with the value entered in the **Measure** control to determine how many instances to scale for this policy.

4. Select the measure for the scaling action using the **Measure** control. This can be either a number of instances (for example: 'scale up by 2 instances') or a percentage value (for example: 'scale down by 10 percent').
5. The cooldown period is the amount of time after the previous alarm-related scaling activity ends before new alarm-related scaling activities can start. Use the **Cooldown period (seconds)** widget to specify a cooldown period.
6.  **Note:** A CloudWatch alarm cannot be associated with more than 5 scaling policies.

Select a CloudWatch alarm from the **Alarm** control. You can click the **Create Alarm** link to display the **Create Alarm** dialog. Auto Scaling uses CloudWatch alarms to determine when to take scaling actions.

### Saving the Scaling Group

Once you're satisfied with the properties you've defined for your scaling policy, click the **Add Policy** button to save your work, or click the **Cancel** button to cancel.

For more information on Auto Scaling, see Eucalyptus User Guide.

## Delete Scaling Group

This dialog box allows you to confirm or cancel a scaling group delete operation.

### Verify Scaling Group Deletion

1. To verify that you wish to delete the selected scaling group, click the **Yes, delete** button.
2. To cancel the delete operation, click the **x** button in the upper right corner of the dialog box.

## Create CloudWatch Alarm

Auto Scaling uses CloudWatch alarms to trigger scaling actions. An alarm watches a single metric (for example: CPU utilization) over a time period you set, and performs one or more actions based on the value of the metric relative to a given threshold. CloudWatch alarms will not invoke actions just because they are in a particular state. For more information, please see the Eucalyptus CloudWatch documentation in the *Eucalyptus User Guide*.

### To create a CloudWatch alarm

1. Enter the name for your alarm in the **Name** text box.
2. Type a description for your alarm in the **Description** text box.
3. Select a statistic from the first drop-down list box. A statistic is computed aggregation of metric data over a specified period of time; valid values are minimum, maximum, average, sum, and sample count.
4. Select a metric from the next drop-down list box. A metric is a time-ordered set of data points - for example, CPU utilization or volume write ops. You can get metric data from Eucalyptus cloud resources (like instances or volumes), or you can publish your own set of custom metric data points to CloudWatch. You then retrieve statistics about those data points as an ordered set of time-series data.
5. Select trigger dimensions. A dimension is a name-value pair that uniquely identifies a metric; for example: "Scaling group" = "myscalinggroup".
6. Select a comparison operator for the statistic value.
7. Select a trigger threshold value. This is value is used in combination with the comparison operator and the measurement period and time length to determine whether the alarm should be triggered.
8. Select the number of measurement periods and the period lengths using the controls in the **Evaluation** section of the dialog box. Periods define the time period over which the metric value is compared to the trigger threshold, as well as how many consecutive periods the trigger threshold must be breached before the alarm is triggered.
9. To save your new alarm, click the **Create Alarm** button.

For more information on Auto Scaling and CloudWatch, see the Eucalyptus User Guide.

## Work with Launch Configurations

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This section covers how to work with Auto Scaling launch configurations in the Eucalyptus User Console.

### Manage Launch Configurations

This screen allows you to view a list of your launch configurations, create new launch configurations, create new scaling groups based on a launch configuration, and delete existing launch configurations.

#### Changing the View

You can toggle between the table view and the grid view by clicking the appropriate icon next to the **View** label at the top right of the screen.

#### Sorting the Launch Configurations List

Sort the launch configurations list with the **Sort by** drop-down list box.

#### Creating a New Launch Configuration

Click the **Create New Launch Configuration** button. The **Create new launch configuration** wizard will appear.

#### Viewing Details of a Launch Configuration

Several items in the launch configurations list allow you to click on them to see more detailed information.

To see more details about a launch configuration, or an object associated with an image:

1. Click the name of the launch configuration to display detailed information about the selected launch configuration.
2. Click an image ID to see to see detailed information about the image associated with the selected launch configuration.
3. Click the name of a key pair to see to see detailed information about the key pair associated with the selected launch configuration.
4. Click the name of a security group to see to see detailed information about the security group associated with the selected launch configuration.

#### Actions

Each entry in the launch configurations list has a context menu, accessible in the **Actions** column. Clicking the action icon brings up a menu of actions that you can perform on the selected snapshot.

The following context menu actions are available:

##### View details

This item will bring up the launch configuration detail page.

##### Use to create scaling group

Selecting this item will cause the **Create scaling group** dialog box to appear with the launch configuration selection pre-populated with the selected launch configuration.

##### Delete launch configuration

Select this item to delete the selected launch configuration.

### Create Launch Configuration

This screen allows you create a new launch configuration. The launch configuration is used to define the parameters for new instances that are launched as part of your auto scaling group. For more information on Auto Scaling, please see *Using Auto Scaling* in the *Eucalyptus User Guide*.

#### Select an Image

This panel allows you to select a base image to use for creating instances in your auto scaling group.

1. Refine and filter your results by typing search criteria into the **Search** text box or using the **Filter by** section on the left side of the page.



2. Type an image ID into the **Enter an Image ID** text box, or select an image by clicking on the image in the list.
3. Click the **Next** button to proceed to the **Details** panel.

### Details

This panel allows you to specify the instance size for new instance in your auto scaling group.

1. Type the name of your launch configuration into the **Name** text box.
2. Select an instance size from the **Instance type** drop-down list..



**Note:** Information about the instance size is displayed when you click the instance size link.

3. Click the **Next** button to proceed to the **Security** panel.

### Specify Security

This panel allows you to specify the key pair and security group that will be used by the new instances in your auto scaling group NOTE: if you create a key pair or security group in this section, they will automatically be selected for use in your new instances.

1. Select a key pair using the **Key name** drop-down list box.



**Note:** You can also create a new key pair by clicking the **Create new key pair** link to display the **Create new key pair** dialog box.

2. Select a security group using the **Security group** drop-down list box.



**Note:** You can also create a new security group by clicking the **Create new security group** link to display the **Create new security group** dialog box.



**Note:** If you select the default security group, make sure that you've added rules to the default security group so that you can access your instances.

3. You can optionally choose to create a new auto scaling group based on this launch configuration by selecting the **Create scaling group using this launch configuration** check box. When this is selected, the **New Scaling Group** dialog will display after you've clicked the **Create launch configuration** button, with the Launch configuration field pre-populated with the name of your new launch configuration.
4. You can optionally specify advanced options by clicking the **Select advanced options** link.

### Specify Advanced Options

This panel allows you to specify advanced options for the new instance in your auto scaling group. You can add user data, override the kernel and RAM disk IDs, specify private networking, and add additional storage.

1. Specify custom user data by typing it into the **User data** text box or by attaching a file by clicking the **Choose file** button.
2. You can override the kernel ID in the selected image with the **Kernel ID** drop-down list box.
3. You can override the RAM disk ID in the selected image with the **RAM disk ID** drop-down list box.
4. You can configure additional storage for your instance in the Storage section:
  - a) Select a volume type using the **Volume** drop-down list box.
  - b) Type the desired mapping for the storage into the **Mapping** text box (for example: `/dev/sdb`).
  - c) If you want to create the storage from an existing snapshot, specify it in the **Create from snapshot** drop-down list box.
  - d) Type the size of the attached storage in gigabytes into the **Size (GB)** text box.
  - e) Select the **Delete on termination** check box if you would like the attached storage to be deleted when the instance is terminated.
  - f) Click the **Add device** button to add this storage.
  - g) You can delete storage you've already added by clicking the minus button on the right side of the storage list item.

5. Click the **Create launch configuration** button.

For more information on Auto Scaling, see Eucalyptus User Guide.

## View Launch Configuration Details

This page displays details for a launch configuration.

### Actions

Each entry in the snapshots list has a context menu, accessible in the **Actions** column. Clicking the action icon brings up a menu of actions that you can perform on the selected launch configuration.

The following context menu actions are available:

#### *Use to create scaling group*

Selecting this item will cause the **Create scaling group** dialog box to appear with the launch configuration selection pre-populated with the selected launch configuration.

#### *Delete launch configuration*

Select this item to delete the selected launch configuration.

## Delete Launch Configuration

This dialog box allows you to confirm or cancel a launch configuration delete operation.

### Verify Launch Configuration Deletion

1. To verify that you wish to delete the selected launch configuration, click the **Yes, delete** button.
2. To cancel the delete operation, click the **Cancel** button.

## Work with Snapshots

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This section covers how to work with the snapshot dialogs and screens in the Eucalyptus User Console.

## Manage Snapshots

This screen allows you to view a list of your snapshots, create new snapshots, and delete snapshots.

### Changing the View

You can toggle between the table view and the grid view by clicking the appropriate icon next to the **View** label at the top right of the screen.

### Sorting the Snapshots List

Sort the snapshots list by selecting a sort order using the **Sort by** drop-down list box.

### Searching and Filtering the Volumes List

1. To perform a simple search/filter, type some search text into the search text box at the top right of the page.
2. For more precise filtering and searching, you can add one or more filters by clicking one of the available filters in the **Filter by** section on the right side of the page.

### Creating a Snapshot

Click the **Create New Snapshot** button. The **Create new snapshot** page will appear.

### Viewing Details of a Snapshot

Several items in the snapshot list allow you to click on them to see more detailed information.

To see more details about a snapshot, or an object associated with an image:

1. Click the name in the list of snapshots to display detailed information about the selected snapshot.

2. Click a volume ID to see to see detailed information about the volume associated with the selected snapshot.

### Actions

Each entry in the snapshots list has a context menu, accessible in the **Actions** column. Clicking the action icon brings up a menu of actions that you can perform on the selected snapshot.

The following context menu actions are available:

#### View details

This item will bring up the snapshot detail page.

#### Create volume from snapshot

This item brings up a page that allows you to create a volume from the selected snapshot.

#### Register as image

This item allows you to register the selected snapshot as an image in your cloud, if it was created from a volume containing a root file system. The image can then be used to launch EBS-backed instances.

#### Deleting snapshot

This item allows you to delete a snapshot.

## Create a Snapshot

A snapshot is a backup of a volume. You can use snapshots to create new volumes to be used with your instances.

### Snapshot

Add the details of your snapshot:

1. Enter a name for the snapshot in the **Name** text box.
2. Select the volume that you would like to use to create the snapshot from the **Create from volume** drop-down listbox.
3. Enter a description for the snapshot in the **Description** text box.
4. Click the **Create** button to create your new snapshot, or click the **Cancel** button to cancel the operation.

### Add tags

To help you manage your cloud's instances, images, and other Eucalyptus resources, you can optionally assign your own metadata to resources in the form of tags. You can use tags to create user-friendly names, make resource searching easier, and improve coordination between multiple users. You can optionally add tags by performing the following steps:

To add new tags:

1. Type the key name for your tag into the **name...** text box.



**Note:** Tags cannot start with "euca:" or "aws:".

2. Type the value for your tag into the **value...** text box.
3. Click the **Add Tag** button.
4. If you wish to add additional tags, repeat the preceding steps.

To delete one or more tags:

Move your mouse over the tag you wish to delete and click the **X** button.

### Save Your Work

Click the **Save Changes** button to save your work, or click the **Cancel** button to cancel the operation.

## Snapshot Details

This page allows you to view details and perform actions on the selected snapshot .

## Rename the snapshot

Type the new name for the snapshot into the **Name** text box.

### Add tags

To help you manage your cloud's instances, images, and other Eucalyptus resources, you can optionally assign your own metadata to resources in the form of tags. You can use tags to create user-friendly names, make resource searching easier, and improve coordination between multiple users. You can optionally add tags by performing the following steps:

To add new tags:

1. Type the key name for your tag into the **name...** text box.



**Note:** Tags cannot start with "euca:" or "aws:".

2. Type the value for your tag into the **value...** text box.
3. Click the **Add Tag** button.
4. If you wish to add additional tags, repeat the preceding steps.

To delete one or more tags:

Move your mouse over the tag you wish to delete and click the **X** button.

## Save Your Work

Click the **Create snapshot** button to save your work, or click the **Cancel** button to cancel the operation.

### Context menu actions

Clicking the **Action** button brings up a menu of actions that you can perform on the selected snapshot.

The following actions are available:

#### View details

This item will bring up the snapshot detail page.

#### Create volume from snapshot

This item brings up a page that allows you to create a volume from the selected snapshot.

#### Register as image

This item allows you to register the selected snapshot as an image in your cloud, if it was created from a volume containing a root file system. The image can then be used to launch EBS-backed instances.

#### Delete snapshot

This item allows you to delete a snapshot.

## Register a Snapshot as an Image

A snapshot is a block level storage volume that is created by copying an existing volume and is backed by persistent storage. You can register a snapshot as an image if it the snapshot was created from a volume containing a root file system. Once registered, this image can then be used to launch EBS-backed instances.

1. Enter a name for the image in the **Name** text box.
2. Enter a description for the image in the **Description** text box.
3. Click the **Register** button.
4. Select the **Delete on terminate** checkbox if you want the image to delete on termination.
5. Select the **Register as a Windows OS image** checkbox if you're registering a Windows image.
6. Click the **Register as Image** button.

## Delete Snapshot

This dialog box allows you to confirm or cancel a snapshot delete operation.

### Verify Snapshot Deletion

1. To verify that you wish to delete the selected snapshot(s), click the **Yes, delete** button.
2. To cancel the delete operation, click the **Cancel** button.

## Work with Images

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This section covers how to work with the image screens and dialogs in the the Eucalyptus User Console.

### Manage Images

This screen allows you to view a list of your images and launch images from an image. You can page through the list of images by clicking the navigation buttons at the bottom of the screen.

#### Changing the View

You can toggle between the table view and the grid view by clicking the appropriate icon next to the **View** label at the top right of the screen.

#### Sorting the Instances List

Sort the images list by selecting a sort order using the **Sort by** drop-down list box.

#### Searching and Filtering the Images List

1. To perform a simple search/filter, type some search text into the search text box at the top right of the page.
2. For more precise filtering and searching, you can add one or more filters by clicking one of the available filters in the **Filter by** section on the right side of the page.

#### Viewing Details of an Image

Several items in the image list allow you to click on them to see more detailed information.

To see more details about an image, or an object associated with an instance:

Click the name/ID in the list of images to display detailed information about the selected image.

#### Actions

If an image is available and not in the process of being created (status "pending"), each entry in the image list has a context menu, accessible in the **Actions** column. Clicking the action icon brings up a menu of actions that you can perform on the selected image.

The following context menu actions are available:

##### View details

This option is available whether the image is available or in the process of being created.

This item will bring up the image detail page.

##### Launch instance

This option is only available if the image is available.

Selecting this menu will display a dialog that allows you to launch an instance using the selected image.

##### Create launch configuration

This option is only available if the image is available.

A launch configuration is used to define the parameters for new images that are launched as part of your auto scaling group. Selecting this menu displays the **Create new launch configuration** wizard.



**Note:** For more information on Auto Scaling, please see *Using Auto Scaling* in the *Eucalyptus User Guide*.

### Remove from cloud

The Remove from cloud option is used to clean up images that are no longer needed. Once removed, it will become de-registered but can be re-registered if its snapshot has not been deleted. This option is only available if the image is available.

1. Selecting this menu displays the **Remove image from cloud** confirmation window.
2. To confirm, click **Yes, Remove Image from the Cloud**.

## Image Detail

This screen shows you the details for an image. From this page, you can add tags to an image, launch an instance based on this image, or create a launch configuration based on this image.

### Actions

Clicking the **Actions** button brings up a menu of actions that you can perform on the selected image.

The following menu actions are available:

#### Launch instance

Selecting this menu will display a dialog that allows you to launch an instance using the selected image.

#### Create launch configuration

A launch configuration is used to define the parameters for new images that are launched as part of your auto scaling group. Selecting this menu displays the **Create new launch configuration** wizard.



**Note:** For more information on Auto Scaling, please see *Using Auto Scaling* in the *Eucalyptus User Guide*.

## Work with IP Addresses

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This section covers how to work with the IP address screens and dialogs in the Eucalyptus User Console.

### Manage Elastic IP Addresses

Your Eucalyptus cloud can offer elastic IP addresses that you can associate with your running instances. This page allows you to view a list of your available elastic IP addresses, allocate new elastic IP addresses, associate and disassociate elastic IP addresses with running instances, and release elastic IP addresses.

#### Changing the View

You can toggle between the table view and the grid view by clicking the appropriate icon next to the **View** label at the top right of the screen.

#### Sorting the Elastic IPs List

Sort the list of elastic IPs by selecting a sort order using the **Sort by** drop-down list box.

#### Searching and Filtering the Elastic IP List

1. To perform a simple search/filter, type some search text into the search text box at the top right of the page.
2. For more precise filtering and searching, you can add one or more filters by clicking one of the available filters in the **Filter by** section on the right side of the page.

#### Allocate an Elastic IP Address

Click the **Allocate Elastic IP Addresses** button to allocate one or more elastic IP addresses.

## Viewing Details of a IP Address

Several items in the snapshot list allow you to click on them to see more detailed information.

To see more details about an IP address or associated object:

1. Click the IP address to display detailed information.
2. If there's an instance associated with an IP address, you can click on the instance ID to display detailed information about the instance.

### Actions

Each entry in the eips list has a context menu, accessible in the **Actions** column. Clicking the action icon brings up a menu of actions that you can perform on the selected IP address.

The following context menu actions are available:

#### Associate with instance

This selection allows you to associate the selected IP address with a running instance.

#### Disassociate from instance

This selection allows you to disassociate the IP address from an instance.

#### Release to cloud

This item releases the selected IP address back to the cloud.

## Elastic IP Address Detail

This screen shows you the details for an elastic IP address. From this page, you can associate an IP address with an instance, disassociate an IP address from an instance, or release an IP address back to the cloud.

### Actions

Clicking the **Actions** button brings up a menu of actions that you can perform on the selected elastic IP address.

The following context menu actions are available:

#### Associate with instance

This selection allows you to associate the selected IP address with a running instance.

#### Disassociate from instance

This selection allows you to disassociate the IP address from an instance.

#### Release to cloud

This item releases the selected IP address back to the cloud.

## Allocate IP Addresses

This dialog box lets you allocate IP addresses for your cloud.

1. Type the number of IP addresses you want to allocate into the text box.



**Note:** This operation may not allocated all the requested addresses if the number of addresses you entered exceeds the number of addresses you're allowed by administrative policy. For more information, refer to your system administrator.

2. Click the **Associate addresses from cloud** button.

## Release IP Addresses

This dialog box allows you to confirm or cancel an IP address release operation.

1. To verify that you wish to release the selected IP address(es), click the **Yes, release** button.
2. To cancel the delete operation, click the **x** button.

## Associate an Elastic IP Address with an Instance

This dialog box lets you associate an elastic IP address with a running instance.

1. Start typing the ID of an instance and then select the instance from the drop-down list box.
2. Click the **Associate Address** button.

## Disassociate an Elastic IP Address from an Instance

This dialog box lets you verify that you wish to disassociate one or more elastic IP addresses from running instance(s).

1. Verify that you want to disassociate the listed IP addresses.
2. Click the **Yes, disassociate** button.

## Work with Tags

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This section covers how to work with resource tags in the Eucalyptus User Console.

### Add tags

To help you manage your cloud's instances, images, and other Eucalyptus resources, you can optionally assign your own metadata to resources in the form of tags. You can use tags to create user-friendly names, make resource searching easier, and improve coordination between multiple users. You can optionally add tags by performing the following steps:

To add new tags:

1. Type the key name for your tag into the **name...** text box.



**Note:** Tags cannot start with "euca:" or "aws:".

2. Type the value for your tag into the **value...** text box.
3. Click the **Add Tag** button.
4. If you wish to add additional tags, repeat the preceding steps.

To delete one or more tags:

Move your mouse over the tag you wish to delete and click the **X** button.

## Work with IAM

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This section covers how to work with IAM resources in the Eucalyptus User Console.

### Manage IAM Users

Eucalyptus allows you to manage user permissions using IAM users and groups. This page allows you to manage IAM users.

#### Changing the View

You can toggle between the table view and the grid view by clicking the appropriate icon next to the **View** label at the top right of the screen.

#### Sorting the User List

Sort the user list by selecting a sort order using the **Sort by** drop-down list box.

#### Searching and Filtering the User List

To perform a search/filter, type some search text into the search text box at the top right of the page.



## Creating a User

Click the **Create New Users** button. The **Create new users** page will appear.

## Viewing Details of a User

Several items in the user list allow you to click on them to see more detailed information.

To see more details about a user or associated object:

Click the name/ID in the list of the user to display detailed information about the selected user.

## Actions

Each entry in the image list has a context menu, accessible in the **Actions** column. Clicking the action icon brings up a menu of actions that you can perform on the selected user.

The following context menu actions are available:

### View details

This item will bring up the user detail page.

### Disable

This item deletes a user's password and creates an IAM access "deny all actions" policy that prevents them from executing any actions against the cloud. The user's other information, including active access keys, is maintained until you either make the user active again or delete them.

### Enable

This action enables a previously disable user and removes the IAM "deny all actions" policy. You will need to create a new password to allow the user to login.

### Delete

This item allows you to delete a user.



**Note:** This menu item deletes a user and all keys, passwords and permissions associated with that user.

## Create IAM Users

Eucalyptus allows you to manage user permissions using IAM users and groups. This page allows you to add IAM users to your cloud.

### Create new users

Add the details of your new user:

1. Type the name of your new user.
2. Click **Add User** to add the user to the list of users to create.
3. If you want to remove a user from the list of users to create, click the minus icon next to the user in the list.
4. Select from the following options:



**Note:** These options apply to all the users you want to create. Only apply policies if you do not intend to manage user access with IAM groups.

- **Create and download random password.**
- **Create and download access keys.**
- **Allow read/write access to all resources except users and groups.**

### Quotas

In this section, you can define limits on what resources your users can create.

Expand the section for each service that you want to specify limits for, and type in the maximum number of that resource that the user is allowed to create in the text field. Leaving a text field blank means no limit is assigned to that resource.

### Advanced

In this section...

The **Advanced** section allows you to specify a path for the new user. For more information, see [IAM Identifiers](#).

### Save Your Work

Click the **Create Users** button to save your work, or click the **Cancel** button to cancel the operation.

## IAM User Detail - General

This page allows you to view and edit the details for an IAM user.

### General tab

This tab lets you rename a user, add a user to groups, and add a policy for the user.

#### Rename a user

To rename a user:

1. Type the name into the **Name** text field.
2. Click the **Save Changes** button to save your work, or click the **Cancel** button to abandon your changes.

#### Change the path

1. Use the **Path** text field to change the path for the user. For more information, see [IAM Identifiers](#).
2. Click the **Save Changes** button to save your work, or click the **Cancel** button to abandon your changes.

#### Add a user to a group

To add a user to a group:

1. Select the group from the **Select a group...** drop-down list box.
2. Click the **Add User to Group** button.

#### Remove the user from a group

To remove the user from a group:

1. Click on the gear icon in the group tile. A context menu will appear.
2. Select **Remove user** from the context menu.

#### Add user policies

An IAM access policy allows you to explicitly define permissions over what your users and groups can access.

To add a policy:



**Note:** As a best practice, you should use group policies instead of creating individual policies for each user.

Click on the **Add Policy** button to bring up the **Add Access Policy** page.

#### Delete a policy

An IAM access policy allows you to explicitly define permissions over what your users and groups can access.

To delete a policy:

Click on the **Remove policy** icon (a minus sign in a circle) next to a policy to delete that policy.

#### View/edit a policy

An IAM access policy allows you to explicitly define permissions over what your users and groups can access.

To view or edit a policy:

Click on the **View/edit** icon (a pencil) next to a policy to view or edit the text of that policy.

### Actions menu

Clicking the **Actions** button brings up a menu of actions that you can perform on the selected image.

The following context menu actions are available:

#### Disable

This item deletes a user's password and creates an IAM access "deny all actions" policy that prevents them from executing any actions against the cloud. The user's other information, including active access keys, is maintained until you either make the user active again or delete them.

#### Delete

This item allows you to delete a user.



**Note:** This menu item deletes a user and all keys, passwords and permissions associated with that user.

## IAM User Detail - Security

This page allows you to view and edit the details for an IAM user.

### Security credentials tab

This tab lets you create or modify a password and generate access keys for a user.

#### Generate a random password

To generate a random password for the user:

1. Click the **Generate Random Password** button. The system will set a random password for the selected user, and a dialog box will appear, prompting you to save the generated password, which is delivered in a comma-separated values (CSV) file.
2. Save the CSV file in a secure place.

#### Manually enter a password

To manually create a password:

1. Type a password in the **New password** text box. Note that an indicator will appear under the text box as you type, indicating how strong the password is.
2. Verify the password by typing it again into the **Confirm new password** text box.
3. Click the **Save Password** button.
4. A **Change Password** dialog box will appear, prompting you to enter your password to continue.
5. Type your password into the Your password text box.
6. Click the **OK** button. A dialog box will appear, prompting you to save the new password, which is delivered in a comma-separated values (CSV) file. Save the file in a secure place.

#### Delete a password

If a password is set for the user, the word "Yes" will appear next to the Password set? label. You can delete this password.

To delete a password:



**Note:** Deleting the password will disable console access for the user.

1. Click the **Delete password** link on the screen. A dialog box asking you to verify the password deletion appears.
2. Click the **Yes, Delete Password** button to delete the password, or dismiss the dialog box by clicking the **x** in the upper right corner to cancel the delete operation.

#### Generate access keys

To access to the cloud through Eucalyptus or other third party tools, the user will need a set of access keys.

To generate access keys:

1. Click the **Generate Access Keys** button. A dialog box will appear, prompting you to save the comma-separated value file containing the access keys.
2. Save the generated key file in a secure place.

The generated access key will appear in the list of access keys.

### Manage access keys

Each access key associated with the selected user is shown in a list in the **Access keys** section of the page. The list shows the access key ID, and a status of either *Active* or *Inactive*. Each entry in the list of access keys has a context menu, accessible in the **Actions** column. Clicking the action icon brings up a menu of actions that you can perform on the selected instance.

The following context menu actions are available:

#### *Activate*

Activates the selected access key.

#### *Deactivate*

Deactivates the selected access key.

#### *Delete*

Deletes the selected access key.

### Actions menu

Clicking the **Actions** button brings up a menu of actions that you can perform on the selected user.

The following context menu actions are available:

#### **Disable**

This item deletes a user's password and creates an IAM access "deny all actions" policy that prevents them from executing any actions against the cloud. The user's other information, including active access keys, is maintained until you either make the user active again or delete them.

#### **Delete**

This item allows you to delete a user.



**Note:** This menu item deletes a user and all keys, passwords and permissions associated with that user.

## IAM User Detail - Quotas

This page allows you to view and edit the details for an IAM user.

### Quotas tab

This tab lets you define limits on resources that this user is allowed to create. The quotas you define will be saved as a policy that will appear in the user's policy list.

#### **Quotas**

In this section, you can define limits on what resources your users can create.

1. Expand the section for each service that you want to specify limits for, and type in the maximum number of that resource in the text field. Leaving a text field blank means no limit is assigned to that resource.
2. When you are finished setting quotas, click the **Save Quotas** button to save your work, or click the **Cancel** button to cancel..

### Actions menu

Clicking the **Actions** button brings up a menu of actions that you can perform on the selected user.

The following context menu actions are available:

## Disable

This item deletes the selected user's password and creates an IAM access "deny all actions" policy that prevents them from executing any actions against the cloud. The user's other information, including active access keys, is maintained until you either make the user active again or delete them.

## Delete

This item allows you to delete the specified user.



**Note:** This menu item deletes the selected user and all keys, passwords and permissions associated with that user.

# Manage IAM Groups

## Changing the View

You can toggle between the table view and the grid view by clicking the appropriate icon next to the **View** label at the top right of the screen.

## Sorting the Groups List

Change the sort order of the groups list by with the **Sort by** drop-down list box.

## Searching and Filtering the Groups List

To perform a search/filter, type some search text into the search text box at the top right of the page.

## Creating a New IAM Group

Click the **Create Group** button. The **Create new group** dialog box will appear.

## Viewing Details of a Snapshot

Several items in the snapshot list allow you to click on them to see more detailed information.

To see more details about a group, or objects associated with the group:

Click the name in the list of groups to display detailed information about the selected group.

## Context menu actions

Each entry in the group list has a context menu, accessible in the **Actions** column. Clicking the action icon brings up a menu of actions that you can perform on the selected snapshot.

The following context menu actions are available:

### View details

This item will bring up the group detail/edit page.

### Delete

This item allows you to delete a group.

# Create an IAM Group

Eucalyptus allows you to manage user permissions using IAM users and groups. This page allows you to create an IAM group.

## Create a new IAM group:

Add the details of your new group:

1. Type the name of your group in the **Name** text field.
2. Click the **Advanced** link to expand the advanced options panel.
  - a) The **Advanced** section allows you to specify a path for the new group. For more information, see [IAM Identifiers](#).

## Save Your Work

Click the **Create group** button to save your work, or click the **Cancel** button to cancel the operation.

## IAM Group Details

Eucalyptus allows you to manage user permissions using IAM users and groups. This page allows you to view and edit an IAM group.

### Rename the group

To rename the group:

Type the group name into the **Name** text field.

### Add users to the group

To add a user to a group:

1. Click the **Users** drop-down list box and select a user from the list. An icon with the user's name will appear on the page.
2. Click the **Save Changes** button.

### Remove the user from a group

To remove the user from a group:

Click on the **X** icon to the right of the user icon.

### Add a policy

An IAM access policy allows you to explicitly define permissions over what your users and groups can access.

To add a policy:

Click on the **Add Policy** button to bring up the **Add Access Policy** page.

### Delete a policy

An IAM access policy allows you to explicitly define permissions over what your users and groups can access.

To delete a policy:

Click on the **Remove policy** icon (a minus sign in a circle) next to a policy to delete that policy.

### View/edit a policy

An IAM access policy allows you to explicitly define permissions over what your users and groups can access.

To view or edit a policy:

Click on the **View/edit** icon (a pencil) next to a policy to view or edit the text of a policy.

### Actions menu

Clicking the **Actions** button brings up a menu of actions that you can perform on the selected image.

The following context menu actions are available:

#### Delete

This item allows you to delete the group.



**Note:** This action deletes a group and all permissions associated with the group. Selecting this item will display a confirmation dialog.

## Save Your Work

Click the **Save Changes** button to save your work, or click the **Cancel** button to cancel the operation.

## Add Access Policy

An IAM access policy allows you to explicitly define permissions over what your users and groups can access. The **Add Access Policy** page enables you to select and apply an existing access policy template, or define your own access policies by either using the policy generator or writing a policy directly using the built-in editor.



**Note:** For information on IAM access policies, see [Overview of AWS IAM Policies](#)

### Create a custom policy using the policy generator

The policy generator is an easy-to-use graphical tool that allows you to create a new access policy without having to know IAM's access policy language.

#### Allow actions

You can allow all actions for a specific service

To allow all actions for a service:

Select the check mark icon next to the service name in the Allow/Deny list.

#### Deny all actions

You can deny all actions for a specific service

To deny all actions for a service:

Select the x mark icon next to the service name in the Allow/Deny list.

#### Allow specific actions

You can allow specific actions for a service.

To allow specific actions for a service:

1. Click the + icon to the left of the service to expand the list of available actions for that service.
2. Select the check mark icon next to the action in the Allow/Deny list.

#### Deny specific actions

You can deny specific actions for a service.

To allow specific actions for a service:

1. Click the + icon to the left of a service to expand the list of available actions for that service.
2. Select the x mark icon next to the action in the Allow/Deny list.

#### Allow or deny actions for a specific resource

You can allow or deny actions for a specific resource.

To allow or deny actions for a specific resource:

1. Click the + icon to the left of a service to expand the list of available actions for that service.
2. Click the **Advanced** button next to the action in the Allow/Deny list. The list entry for the action will expand to show drop-down lists for setting up resources and conditionals.
3. From the **Set a specific resource** drop-down list on the left, select a resource. The drop-down list to the right will automatically populate with valid values for the selected resource.
4. From the drop-down list on the right, select the appropriate value for the resource you've selected.
5. Select the check box next to the action entry to allow access to the specified resource, or select the x mark to deny access.
6. Click the **Add Resource** button. Note that the ARN of the resource you've selected will appear in the list, and the results of your selections will appear in the **View/Edit Policy** text box on the right side of the page.



**Note:** To remove a resource you've added, click the - icon next to the ARN in the resource list.

### Conditional permissions

You can allow or deny permissions based on specific conditions, such as user name or image ID.

To add a condition:

1. Click the + icon to the left of a service to expand the list of available actions for that service.
2. Click the **Advanced** button next to the action in the Allow/Deny list. The list entry for the action will expand to show drop-down lists for setting up resources and conditionals.
3. In the **Conditions (optional)** section, from the **Add a condition** drop-down list on the left, select a comparison element. The drop-down list to the right will automatically populate with valid conditional comparisons for the selected element.
4. From the drop-down list on the right, select the appropriate comparison operator for the element you've selected.
5. If appropriate, enter the comparison value in the text field that appears under the drop-down lists.
6. Click the **Add Resource** button. Note that the conditional you've just added will appear in the list, and the results of your selections will appear in the **View/Edit Policy** text box on the right side of the page.



**Note:** To remove a condition that you've added, click the - icon next to the conditional in the list.

### Upload or write a policy

You can use this section to upload an existing policy file or write an access policy directly into the text editor.

1. You can paste or type policy language directly into the View/Edit policy text box on the right side of the screen.
2. To upload an existing policy file: expand the + icon next to the **Upload or write a file (advanced)** label and click the **Browse...** button.

### Select a template

This section allows you to apply a pre-defined access policy template.

Click on **Select** button next to the appropriate template in the list.

### Save Your Work

Click the **Create Policy** button to save your work, or click the **Cancel** button to cancel the operation.

## Create IAM Roles

Roles are used to temporarily allow users or services to access resources without sharing long-term security credentials. Permissions are applied to roles so they not attached to any IAM user or group, allowing applications or services (like Euca2ools) to assume a role that allows them to make programmatic requests to Eucalyptus.

### Create a role

Add the details of your new role:

1. Type the name of your new role.
2. Select the role type from the following options:



**Note:** These options apply to all the users associated with this role.

- **EC2 service** allows EC2 instances to call other services on your behalf.
- **Cross-account access** grants IAM users from another account to access this account. Hover over the (?) icon for more details about choosing this option.

### Advanced

You can also optionally give the role a path that you define to identify which part of the organization it belongs to.

The **Advanced** section allows you to associate a path for the new role. Organize your roles in a way that makes sense to you, but ultimately, a path is not used to define how the role is applied. For more information, go to [IAM Identifiers](#).

### Save Your Work

Click the **Create Role** button to save your work, or click the **Cancel** button to cancel the operation.



A subsequent screen appears, allowing you to add access policies for your newly created role. Refer to its context help for details on completing that operation.

## IAM Role Detail

This page allows you to view, delete, and edit the details of an IAM role, such as defining who can assume the role and when, and set permissions on the role.

### Actions menu

Clicking the gear icon from the **Actions** menu allows you to delete the role.

#### Delete a role

To delete role:

1. Click the **Actions** menu and select **Delete role**.
2. When the confirmation dialog box displays, click the **Yes, Delete Role** button to confirm the deletion. Otherwise, close the confirmation dialog box to cancel.

### Edit the trust relationships

Trust relationships define what type of role it is, who can use it (for service or cross-account access). To edit a policy associated with a trust relationship:

1. Click the **Edit Trust Policy** button to open a free-form text editor window in order to edit each policy defined. For more information, go to [IAM Identifiers](#).
2. Click the **Save Changes** button to save your work, or close the text editor window to cancel.

### Add role policies

An IAM access policy allows you to explicitly define permissions for what each role can access.

To add a policy to a role:

Click on the **Add Policy** button to bring up the **Add access policy** for your role page.

The Add access policy page allows you to add new or edit existing access policies for your role. Refer to its context help for details on completing that operation.

### Delete a role policy

An IAM access policy allows you to explicitly define permissions for what each role can access.

To delete a policy from a role:

1. Click on the **Remove policy** icon (a minus sign in a circle) next to a policy to delete that policy.
2. When the confirmation dialog box displays, click the **Yes, Delete** button to confirm the deletion. Otherwise, close the confirmation dialog box to cancel.

### View/edit a policy

An IAM access policy allows you to explicitly define permissions for what each role can access.

To view or edit a role policy:

1. Click on the **View/Edit policy** icon (a pencil) next to a policy to view or edit the text of that policy.
2. When done, click the **Save Changes** button to save your work, or close the text editor window to cancel.