Eucalyptus 3.2.2 User Console Guide

2013-04-01 Eucalyptus Systems

Contents

Welcome

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
- Manage security groups
- Allocate, associate/disassociate, and deallocate 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
Installing the Eucalyptus User Console	Contains instructions on how to install the Eucalyptus User Console.
Configuring the Eucalyptus User Console	Describes how to locate and configure the console configuration file, as well as each setting in the configuration file.
Working with the Eucalyptus User Console	Discusses how to get started using the Eucalyptus User Console and how to navigate and use the screens and dialog boxes in the console.

Installing the Eucalyptus User Console

This section covers how to install the Eucalyptus User Console.

Install on Centos / RHEL 6.3

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.

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 eucalyptus-console
```

Your installation is now complete.

You are now ready to *configure the Eucalyptus User Console*.

Configuring 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 *Eucalyptus 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.

Locating and Editing 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/eucalyptus-console/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 eucalyptus-console start
```

You can restart the console using the following command:

```
service eucalyptus-console restart
```

Configuring 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 testusername
```

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 --delegate testusername -u testadminaccount - p
mysecretpassword
```

3. Generate a new key for the account with the `euare-useraddkey` command line tool. For example:

```
euare-useraddkey --delegate testusername -u testadminaccount
```

Setting the Front End Address

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

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

```
clchost: 127.0.0.1
```

Configuring the UI Port

To set the port that the console will listen on:

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

```
uiport: 8888
```

Disabling Automatic SSL Certificate Generation

When the user console service is run for the first time, it will generate a self-signed certificate and key which will be put into `/etc/eucalyptus-console/`. If you do not want to have a certificate and key generated and would like to use your own, you can disable automatic generation of the certificate and key.

To disable automatic generation of the console certificate and key:

Add the following line to `/etc/sysconfig/eucalyptus-console`:

```
GENERATE_CERT=NO
```

Note:

If you choose not to use the default SSL certificate and key, you must provide your own. For more information on generating self-signed SSL certificates, go to *http://www.akadia.com/services/ssh_test_certificate.html*.

For information on configuring SSL certificate and key paths for your own certificate and key, see *Configuring SSL Certificate Paths*.

Configuring SSL Certificate Paths

If you've chosen not to use the self-signed certificate and key that are provided by the User Console, you will need to provide your own.

To optionally specify an SSL certificate to run your console over Secure HTTP:

Modify the `sslcert` and `sslkey` entries in the `[server]` section of the configuration file with paths to your SSL certificate and key files. For example:

```
sslcert: /example/path/server.crt
sslkey: /example/path/server.key
```

Note:

For more information on generating self-signed SSL certificates, go to *http://www.akadia.com/services/ssh_test_certificate.html*.

Setting the Administrator Support URL

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

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

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

...or...

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

Setting the Locale

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

Modify the `language` entry in the `[server]` section of the configuration file with a Linux-compliant locale name. For example:

```
language: en_US
```

Setting the Help Page URL

To configure the help page URL for the console:

Modify the `help.url` entry in the `[server]` 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.

Configuring Supported Instance Types

You can customize the available instance types that are listed in the console for your cloud. To do this:

Modify the `[instance_type]` section of the console configuration file. Each instance type has a property for number of CPUs, memory (in megabytes), and disk size (in gigabytes). The default configuration file that is installed with the console is pre-populated with common instance types:

```
[instance_type]
m1.small.cpu: 1
m1.small.mem: 512
m1.small.disk: 5
c1.medium.cpu: 2
c1.medium.mem: 512
c1.medium.disk: 10
```

```
m1.large.cpu: 2
m1.large.mem: 1024
m1.large.disk: 15
m1.xlarge.cpu: 2
m1.xlarge.mem: 2048
m1.xlarge.disk: 20
c1.xlarge.cpu: 4
c1.xlarge.mem: 4096
c1.xlarge.disk: 20
```

Note: This configuration setting should be modifed to match if the default instance types are changed in the CLC configuration.

Configuring Session Timeouts

To set the session timeouts:

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

```
session.idle.timeout: 1800
```

```
session.abs.timeout: 43200
```

Configuring Polling Frequency

Tip: If there are going to be a lot of console users, increasing the `pollfreq` values can help reduce the load on the Cloud Controller by limiting the number of times that updates are requested for users' resources.

To configure the polling frequency for console updates from the CLC:

1. Modify the `pollfreq` entry in the `[server]` section of the configuration file with a polling value in seconds. For example:

```
pollfreq: 20
```

2. You can optionally override the main polling frequency value specified in `pollfreq` by adding an entry in the form `pollfreq.<resouce_name>`. Valid resource name values are: `images`, `instances`, `keypairs`, `groups`, `addresses`, `volumes`, and `snapshots`. For example:

```
pollfreq.images: 60
pollfreq.snapshots: 10
pollfreq.instances: 5
pollfreq.groups: 20
pollfreq.addresses: 30
pollfreq.volumes: 30
pollfreq.keypairs: 60
```

Working with the Eucalyptus User Console

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

Getting 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 following browsers:

- Google Chrome 22
- Apple Safari 6
- Mozilla Firefox 15
- Microsoft Internet Explorer versions 9 and 10

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. If you've forgotten your password, don't have login credentials, or do not know the URL for the Eucalyptus User Console, please contact your system administrator.

Login to the Console

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. 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 **Login** 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, storage items (volumes, and snapshots), 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 on one of the icons at the top of the dashboard 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 label or count in the main dashboard window.

Instances

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

1. Click the **Running** or **Stopped** labels or counts in the **Instances** section of the dashboard to display the **Manage Instances** screen.

Note: Your initial view in the **Manage instances** screen will be filtered by running or stopped instances, depending on which label you clicked. To see all running and stopped instances, be sure to change the the value of the **Filter by** drop-down list on the **Manage instances** screen to `All instances`.

2. You can filter the instances list by availability zone by selecting an availability zone in the drop-down list box.
3. You can launch a new instance by clicking the **Launch instance** link to display the **Create new instance** screen.

Storage

The **Storage** section allows you to see at a glance how many storage objects are running and access the various storage object management screens.

1. To access the **Manage Volumes** screen, click the **Volumes** label or count.
2. To access the **Manage Snapshots** screen, click the **Snapshots** label or count.

Network and Security

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

1. To access the **Manage Security Groups** screen, click the **Security Groups** label or count.
2. To access the **Manage Key Pairs** screen, click the **Key Pairs** label or count.
3. To access the **Manage IP Addresses** screen, click the **IP Addresses** label or count.

Working with Key Pairs

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.

Sorting the Key Pair List

Click on the **Name** column header to toggle sorting the list of key pairs in ascending or descending order.

Searching the Key Pair List

Type some search text into the **Search** text box to filter the list of key pairs.

Creating Key Pairs

Click the **Create new key pair** button. The **Create Key Pair** dialog box will appear.

Importing Key Pairs

Click the **Import key pair** button. The **Import key pair** dialog box will appear.

Deleting Key Pairs

1. Click the checkbox next to the key pair.
2. Click the **More actions** button at the top of the list and and select **Delete** from the drop-down menu . The **Delete Key Pair** dialog box will appear.

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** link in the **Network and Security** section, or select the Network and Security submenu from the Manage Resources navigation menu. The **Manage Keypairs** screen will appear.
2. On the **Manage Key Pairs** screen, click the **Create new key pair** link. The **Create New Key Pair** dialog 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 Key Pair

This dialog box allows you import an existing key pair.

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 to file** 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 **Cancel** button.

Working 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.

Sorting the Security Group List

Click on any column header to toggle sorting the list of security groups in ascending or descending order by the selected column.

Searching the Security Group List

Type some search text into the **Search** text box to filter the list of security groups.

Creating a Security Group

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

Deleting Security Groups

1. Click the checkbox next to the security group you wish to delete.
2. Right-click in the security group list and select **Delete** from the context menu. The **Delete Security Group** dialog box will appear.

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.

Create a Security Group with the Console

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.
3. 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.

      Note: To specify a security group in another account, use the format "userid/groupname".

   d) Click the **Add another rule** button.
4. Click the **Create group** button.

Manage Security Group Rules

This dialog allows you to edit the rules for 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 **Other security group** radio button and enter the name of the security group in the text box.

Note: To specify a security group in another account, use the format "userid/groupname".

4. Click the **Save Changes** button.

Delete Security Group Rules

Click the **Delete** link next to the existing rule you want to delete.

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 **Cancel** button.

Working 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.

Sorting the Volume List

Click on any column header to toggle sorting the list of volumes in ascending or descending order by the selected column.

Searching the Volume List

Type some search text into the **Search** text box to filter the list of volumes.

Creating a Volume

Click the **Create new volume** button. The Create Volume dialog box will appear.

Attach a Volume to a Running Instance

1. Right-click on the unattached volume you wish to attach to a running instance.
2. Select **Attach to instance** from the context menu. The **Attach volume to instance** dialog box will appear.

Note: You can also click on a volume and click the **More actions** link at the top of the list.

Detach a Volume from a Running Instance

1. Right-click on the attached volume you wish to detach from a running instance.
2. Select **Detach from instance** from the context menu. The **Detach volumes** dialog box will appear.

Note: You can also click on a volume and click the **More actions** link at the top of the list.

Create a Snapshot from a Volume

1. Right-click on the volume that you wish to use as the source of a new snapshot.
2. Select **Create snapshot from volume** from the context menu. The **Create snapshot from volume** dialog box will appear.

Deleting Volumes

1. Click the checkbox next to the volume.

Note: You can't delete a volume that is attached to an instance.

2. Right-click in the volume list and select **Delete** from the context menu. The **Delete Volume** dialog box will appear.

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.

Create a Volume with the Console

1. Click the **Create Volume** link at the top of the **Manage Volumes** screen. The **Create Volume** dialog box will appear.
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.

5. Click the **Create Volume** button.

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 **Cancel** button.

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** 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** button.

Working with Instances

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

Manage Instances

This screen allows you to view a list of your instances, create new instances, and connect to, reboot, stop, terminate, and delete instances. You can page through the list of instances by clicking the navigation buttons at the bottom of the screen.

Sorting the Instances List

Click on any column header to toggle sorting the list of instances in ascending or descending order by the selected column.

Searching the Instance List

Type some search text into the **Search** text box to filter the list of instances.

Filtering the Instances List

You can filter the list of instances by selecting the filtering criteria from the filtering drop-down list boxes.

Launch an Instance

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

Connect to an Instance

Select the instance and then select **Connect** from the **More actions** menu at the top of the list. The **Connect to instance** dialog box will appear with further instructions.

Reboot an Instance

Select the instance and then select **Reboot** from the **More actions** menu at the top of the list. The **Reboot instance** dialog box will appear.

Stop an Instance

Select the instance and then select **Stop** from the **More actions** menu at the top of the list. The **Stop instance** dialog box will appear.

Terminate an Instance

Select the instance and then select **Terminate** from the **More actions** menu at the top of the list. The **Terminate instance** dialog box will appear.

More Actions

The **More actions** button at the top of the **Manage instances** window contains additional actions you can perform on one or more instances.

1. Select **Launch more like this** displays a dialog that allows you to create and customize an instance like the selected instance.
2. Select **Get console output** to display the console output from the selected instance.
3. Select **Attach volume** to attach a volume to the selected instance.
4. Select **Detach volume** to detach a volume from the selected instance.
5. Select **Associate IP address** to associate an IP address with the selected volume.
6. Select **Disassociate IP address** to disassociate an IP address from the selected volume.

Create Instances

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. Refine your results by selecting filter values using the drop-down list boxes or by typing text into the **Search** text box.
2. Select an image by clicking on the image in the **Select image** list.
3. Click the **Next: Select type** button to proceed to the **Type** panel.

Select a Type

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

1. Select an instance size by clicking the appropriate icon.

   

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

2. You can optionally type the number of instances to launch in the **Number of instances** text box if you want to launch more than one instance.
3. If you want to specify an availability zone other than the default, select an availability zone using the **Availability zone** drop-down list box.
4. Click the **Next: Select security** 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 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 pair** 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 specify advanced options by clicking the **Select advanced options** link.
4. 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 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. Click the **Network** 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.
5. For EBS-backed instances, you can configure the root volume of your instance:
   a) Type the size of the attached storage in gigabytes into the **Size (GB)** text box.
   b) Select the **Delete on termination** check box if you would like the attached storage to be deleted when the instance is terminated.
6. Click the **Launch instance(s)** 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** button.
2. To cancel the delete operation, click the **Cancel** button.

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 delete operation, click the **Cancel** button.

Get Console Output

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

Click the **Close** button to dismiss the console output dialog box.

Launch More Instances Like This

This dialog box 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 specify advanced options by clicking the **Select advanced options** link.
3. Click the **Launch Instance(s)** 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 kernal 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 using the **Attach file** link.
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. Click the **Network** 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.
5. For EBS-backed instances, you can configure the root volume of your instance:
   a) Type the size of the attached storage in gigabytes into the **Size (GB)** text box.
   b) Select the **Delete on termination** check box if you would like the attached storage to be deleted when the instance is terminated.
6. Click the **Launch instance(s)** 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. To verify that you wish to terminate the selected instance(s), click the **Yes, terminate** button.
2. To cancel the delete operation, click the **Cancel** button.

Working with Snapshots

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

Manage Snapshots

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

Sorting the Snapshot List

Click on any column header to toggle sorting the list of snapshots in ascending or descending order by the selected column.

Filtering the Snapshot List

You can filter the list of snapshots by selecting a filtering criteria from the **Filter by** drop-down list box.

Searching the Snapshot List

Type some search text into the **Search** text box to filter the list of snapshots.

Creating a Snapshot

Click the **Create new snapshot** button. The Create Snapshot dialog box will appear.

Deleting Snapshots

1. Click the checkbox next to the snapshot.
2. Right-click in the snapshot list and select **Delete** from the context menu. The **Delete Snapshot** dialog box will appear.

Create a Snapshot

A snapshot is a block level storage volume that is created by copying an existing volume and is backed by persistent storage. You can use snapshots to create new volumes to be used with your instances.

1. Enter a description for the volume in the **Description** text box.
2. Click the **Create** 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.

Working with Images

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 instances from an image. You can page through the list of images by clicking the navigation buttons at the bottom of the screen.

Sorting the Image List

Click on any column header to toggle sorting the list of images in ascending or descending order by the selected column.

Searching the Image List

Type some search text into the **Search** text box to filter the list of images.

Filtering the Image List

You can filter the list of images by selecting filtering criteria from the **Filter by** drop-down list boxes.

Launching an Image

Click the **Launch instance** link next to the image that you wish to use to launch an instance. The **Create Instance** dialog box will appear.

Working with IP Addresses

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 screen 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. You can page through the list of elastic IP addresses by clicking the navigation buttons at the bottom of the screen.

Sorting the IP Address List

Click on any column header to toggle sorting the list of IP addresses in ascending or descending order by the selected column.

Searching the IP Address List

Type some search text into the **Search** text box to filter the list of IP addresses.

Allocate New IP Addresses

Click the **Allocate new IP address** button. The **Allocate IP Addresses** dialog box will appear.

Attach an IP Address to a Running Instance

1. Select an unassociated IP address from the **Manage IP Addresses** window.
2. Click the **More actions** button at the top of the screen and select **Associate with instance** from the drop-down menu.

   The **Assocate IP address with instance** dialog appears.

Disassociate an IP Address from a Running Instance

1. Select one or more attached IP address you wish to disassociate from a running instance.
2. Click the **More actions** link at the top of the screen and select **Disassociate from instance** item from the drop-down menu. The **Disassociate IP addresses from instance** dialog box will appear.

Releasing IP Addresses

1. Select one or more unassociated IP addresses from the list.
2. Select the IP addresses to release and select **Release to cloud** item from the **More actions** menu link at the top of the list. The **Release IP address to cloud** dialog box will appear.

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 **Cancel** 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.