OpenStack

Command-Line Interface Reference

current (March 10, 2015)

OpenStack Command-Line Interface Reference

current (2015-03-10)
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This guide documents the OpenStack command-line clients.

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Preface

Conventions

The OpenStack documentation uses several typesetting conventions.

Notices

Notices take these forms:

Note

A handy tip or reminder.

Important

Something you must be aware of before proceeding.

Warning

Critical information about the risk of data loss or security issues.

Command prompts

$ prompt   Any user, including the `root` user, can run commands that are prefixed with the `$` prompt.

 # prompt   The `root` user must run commands that are prefixed with the `#` prompt. You can also prefix these commands with the **sudo** command, if available, to run them.

Document change history

This version of the guide replaces and obsoletes all earlier versions.

The following table describes the most recent changes:

Revision Date	Summary of Changes
October 15, 2014	• For the Juno release, this guide has been updated for all integrated command-line clients. The additional chapters for the Juno release include the OpenStack client, the Data processing client, and the trove-manage command.
September 6, 2014	• Document OpenStack client.
April 16, 2014	• For the Icehouse release, updated documentation for clients, add trove options, document neutron-debug, document Image Service property keys.
January 29, 2014	• Initial version.
March 14, 2014	• Added documentation for the neutron-debug command.

1. OpenStack command-line clients

Overview

Each OpenStack project provides a command-line client, which enables you to access the project API through easy-to-use commands. For example, the Compute service provides a nova command-line client.

You can run the commands from the command line, or include the commands within scripts to automate tasks. If you provide OpenStack credentials, such as your user name and password, you can run these commands on any computer.

Internally, each command uses cURL command-line tools, which embed API requests. Open-Stack APIs are RESTful APIs, and use the HTTP protocol. They include methods, URIs, media types, and response codes.

OpenStack APIs are open-source Python clients, and can run on Linux or Mac OS X systems. On some client commands, you can specify a **debug** parameter to show the underlying API request for the command. This is a good way to become familiar with the OpenStack API calls.

The following table lists the command-line client for each OpenStack service with its package name and description.

Table 1.1. OpenStack services and clients

Service	Client	Package	Description
Block Storage	**cinder**	python-cinderclient	Create and manage volumes.
Compute	**nova**	python-novaclient	Create and manage images, instances, and flavors.
Database Service	**trove**	python-troveclient	Create and manage databases.
Identity	**keystone**	python-keystoneclient	Create and manage users, tenants, roles, endpoints, and credentials.
Image Service	**glance**	python-glanceclient	Create and manage images.
Networking	**neutron**	python-neutronclient	Configure networks for guest servers. This client was previously called **quantum**.
Object Storage	**swift**	python-swiftclient	Gather statistics, list items, update metadata, and upload, download, and delete files stored by the Object Storage service. Gain access to an Object Storage installation for ad hoc processing.
Orchestration	**heat**	python-heatclient	Launch stacks from templates, view details of running stacks including events and resources, and update and delete stacks.
Telemetry	**ceilometer**	python-ceilometer-client	Create and collect measurements across OpenStack.
Data Processing	**sahara**	python-saharaclient	Creates and manages Hadoop clusters on OpenStack.
Common client	**openstack**	python-openstack-client	Common client for the OpenStack project.

Install the OpenStack command-line clients

Install the prerequisite software and the Python package for each OpenStack client.

Install the prerequisite software

Most Linux distributions include packaged versions of the command-line clients that you can install directly, see the section called "Installing from packages" [5].

If you need to install the command-line packages source packages, the following table lists the software that you need to have to run the command-line clients, and provides installation instructions as needed.

Table 1.2. Prerequisite software

Prerequisite	Description
Python 2.7 or later	Currently, the clients do not support Python 3.
setuptools package	Installed by default on Mac OS X.
	Many Linux distributions provide packages to make setuptools easy to install. Search your package manager for setuptools to find an installation package. If you cannot find one, download the setuptools package directly from http://pypi.python.org/pypi/setuptools.
	The recommended way to install setuptools on Microsoft Windows is to follow the documentation provided on the setuptools website. Another option is to use the unofficial binary installer maintained by Christoph Gohlke (http://www.lfd.uci.edu/~gohlke/pythonlibs/#setuptools).
pip package	To install the clients on a Linux, Mac OS X, or Microsoft Windows system, use pip. It is easy to use, ensures that you get the latest version of the clients from the Python Package Index, and lets you update or remove the packages later on.
	Since the installation process compiles source files, this requires the related Python development package for your operating system and distribution.
	Install pip through the package manager for your system:
	MacOS.
	`# easy_install pip`
	Microsoft Windows. Ensure that the `C:\Python27\Scripts` directory is defined in the `PATH` environment variable, and use the **easy_install** command from the setuptools package:
	`C:\>easy_install pip`
	Another option is to use the unofficial binary installer provided by Christoph Gohlke (http://www.lfd.uci.edu/~gohlke/pythonlibs/#pip).
	Ubuntu and Debian.
	`# apt-get install python-dev python-pip`
	Note that extra dependencies may be required, per operating system, depending on the package being installed, such as is the case with Tempest.
	Red Hat Enterprise Linux, CentOS, or Fedora. A packaged version enables you to use yum to install the package:
	`# yum install python-devel python-pip`

Prerequi-site	Description

	There are also packaged versions of the clients available in RDO that en-able yum to install the clients as described in the section called "Installing from packages" [5].
	
	SUSE Linux Enterprise Linux 11. A packaged version available in the Open Build Service enables you to use or zypper to install the package. First, add the Open Build Service repository:
	
	`# zypper addrepo -f obs://Cloud:OpenStack:Icehouse/SLE_11_SP3`
	` Icehouse`
	
	Then install pip and use it to manage client installation:
	
	`# zypper install python-devel python-pip`
	
	There are also packaged versions of the clients available that enable zypper to install the clients as described in the section called "Installing from pack-ages" [5].
	
	openSUSE. You can install pip and use it to manage client installation:
	
	`# zypper install python-devel python-pip`
	
	There are also packaged versions of the clients available that enable zypper to install the clients as described in the section called "Installing from pack-ages" [5]

Install the clients

When following the instructions in this section, replace *PROJECT* with the lowercase name of the client to install, such as **nova**. Repeat for each client. The following values are valid:

- `ceilometer` - Telemetry API

- `cinder` - Block Storage API and extensions

- `glance` - Image Service API

- `heat` - Orchestration API

- `keystone` - Identity service API and extensions

- `neutron` - Networking API

- `nova` - Compute API and extensions

- `sahara` - Database Processing API

- `swift` - Object Storage API

- `trove` - Database Service API

- `openstack` - Common OpenStack client supporting multiple services

The following example shows the command for installing the nova client with **pip**.

```
# pip install python-novaclient
```

Installing with pip

Use pip to install the OpenStack clients on a Linux, Mac OS X, or Microsoft Windows system. It is easy to use and ensures that you get the latest version of the client from the Python Package Index. Also, pip enables you to update or remove a package.

Install each client separately by using the following command:

• For Mac OS X or Linux:

```
# pip install python-PROJECTclient
```

• For Microsoft Windows:

```
C:\>pip install python-PROJECTclient
```

Installing from packages

RDO, openSUSE and SUSE Linux Enterprise have client packages that can be installed without pip.

On Red Hat Enterprise Linux, CentOS, or Fedora, use **yum** to install the clients from the packaged versions available in RDO:

```
# yum install python-PROJECTclient
```

For openSUSE, use zypper to install the clients from the distribution packages Service:

```
# zypper install python-PROJECT
```

For SUSE Linux Enterprise Server, use zypper to install the clients from the distribution packages in the Open Build Service. First, add the Open Build Service repository:

```
# zypper addrepo -f obs://Cloud:OpenStack:Icehouse/SLE_11_SP3 Icehouse
```

Then you can install the packages:

```
# zypper install python-PROJECT
```

Upgrade or remove clients

To upgrade a client, add the `--upgrade` option to the **pip install** command:

```
# pip install --upgrade python-PROJECTclient
```

To remove the a client, run the **pip uninstall** command:

```
# pip uninstall python-PROJECTclient
```

What's next

Before you can run client commands, you must create and source the `PROJECT-openrc.sh` file to set environment variables. See the section called "Set environment variables using the OpenStack RC file" [7].

Discover the version number for a client

Run the following command to discover the version number for a client:

```
$ PROJECT --version
```

For example, to see the version number for the **nova** client, run the following command:

```
$ nova --version
```

The version number (2.15.0 in the example) is returned.

```
2.15.0
```

Set environment variables using the OpenStack RC file

To set the required environment variables for the OpenStack command-line clients, you must create an environment file called an OpenStack rc file, or `openrc.sh` file. If your OpenStack installation provides it, you can download the file from the OpenStack dashboard as an administrative user or any other user. This project-specific environment file contains the credentials that all OpenStack services use.

When you source the file, environment variables are set for your current shell. The variables enable the OpenStack client commands to communicate with the OpenStack services that run in the cloud.

> **Note**
>
> Defining environment variables using an environment file is not a common practice on Microsoft Windows. Environment variables are usually defined in the **Advanced** tab of the System Properties dialog box.

Download and source the OpenStack RC file

1. Log in to the OpenStack dashboard, choose the project for which you want to download the OpenStack RC file, and click **Access & Security**.

2. On the API Access tab, click **Download OpenStack RC File** and save the file. The filename will be of the form *PROJECT*-`openrc.sh` where *PROJECT* is the name of the project for which you downloaded the file.

3. Copy the *PROJECT*-`openrc.sh` file to the computer from which you want to run OpenStack commands.

   For example, copy the file to the computer from which you want to upload an image with a **glance** client command.

4. On any shell from which you want to run OpenStack commands, source the *PROJECT*-`openrc.sh` file for the respective project.

   In the following example, the `demo-openrc.sh` file is sourced for the demo project:

   ```
   $ source demo-openrc.sh
   ```

5. When you are prompted for an OpenStack password, enter the password for the user who downloaded the *PROJECT*-`openrc.sh` file.

Create and source the OpenStack RC file

Alternatively, you can create the *PROJECT*-`openrc.sh` file from scratch, if for some reason you cannot download the file from the dashboard.

1. In a text editor, create a file named *PROJECT*-`openrc.sh` file and add the following authentication information:

```
export OS_USERNAME=username
export OS_PASSWORD=password
export OS_TENANT_NAME=projectName
export OS_AUTH_URL=https://identityHost:portNumber/v2.0
# The following lines can be omitted
export OS_TENANT_ID=tenantIDString
export OS_REGION_NAME=regionName
export OS_CACERT=/path/to/cacertFile
```

2. On any shell from which you want to run OpenStack commands, source the `PROJECT-openrc.sh` file for the respective project. In this example, you source the `admin-openrc.sh` file for the `admin` project:

```
$ source admin-openrc.sh
```

Note

You are not prompted for the password with this method. The password lives in clear text format in the `PROJECT-openrc.sh` file. Restrict the permissions on this file to avoid security problems. You can also remove the `OS_PASSWORD` variable from the file, and use the `--password` parameter with OpenStack client commands instead.

Note

You must set the OS_CACERT environment variable when using the https protocol in the OS_AUTH_URL environment setting because the verification process for the TLS (HTTPS) server certificate uses the one indicated in the environment. This certificate will be used when verifying the TLS (HTTPS) server certificate.

Override environment variable values

When you run OpenStack client commands, you can override some environment variable settings by using the options that are listed at the end of the **help** output of the various client commands. For example, you can override the `OS_PASSWORD` setting in the `PROJECT-openrc.sh` file by specifying a password on a **keystone** command, as follows:

```
$ keystone --os-password PASSWORD service-list
```

Where `PASSWORD` is your password.

Keyring support

Keyring is a password management system available in OpenStack. You can install it using the following command:

```
$ pip install keyring
```

Note

Keyring is used only if `--os-use-keyring` is specified or if the environment variable `OS_USE_KEYRING=true` is defined.

A user specifies their username and password credentials to interact with OpenStack, using any client command. These credentials can be specified using various mechanisms, namely, the environment variable, or command line argument. It is not safe to specify the password using either of these methods.

For example, when you specify your password using the command-line client with the `--os-password` argument, anyone with access to your computer can view it in plain text with the `ps` field.

To avoid storing the password in plain text, you can prompt for the OpenStack password interactively. Then, the keyring can store the password and the user can safely retrieve it from their keyring. The encrypted password is stored in the `~/.openstack-keyring.cfg` file.

2. Bare metal command-line client

The **ironic** client is the command-line interface (CLI) for the Bare metal and its extensions. This chapter documents **ironic** version `0.4.1`.

For help on a specific **ironic** command, enter:

```
$ ironic help COMMAND
```

ironic usage

```
usage: ironic [--version] [--debug] [-v] [--cert-file OS_CERT]
              [--key-file OS_KEY] [--ca-file OS_CACERT]
              [--os-username OS_USERNAME] [--os-password OS_PASSWORD]
              [--os-tenant-id OS_TENANT_ID] [--os-tenant-name OS_TENANT_NAME]
              [--os-auth-url OS_AUTH_URL] [--os-region-name OS_REGION_NAME]
              [--os-auth-token OS_AUTH_TOKEN] [--ironic-url IRONIC_URL]
```

```
                [--ironic-api-version IRONIC_API_VERSION]
                [--os-service-type OS_SERVICE_TYPE] [--os-endpoint OS_ENDPOINT]
                [--os-endpoint-type OS_ENDPOINT_TYPE] [--insecure]
                [--os-cacert <ca-certificate>] [--os-cert <certificate>]
                [--os-key <key>] [--timeout <seconds>]
                [--os-user-domain-id OS_USER_DOMAIN_ID]
                [--os-user-domain-name OS_USER_DOMAIN_NAME]
                [--os-project-id OS_PROJECT_ID]
                [--os-project-name OS_PROJECT_NAME]
                [--os-project-domain-id OS_PROJECT_DOMAIN_ID]
                [--os-project-domain-name OS_PROJECT_DOMAIN_NAME]
                <subcommand> ...
```

Subcommands

chassis-create	Create a new chassis.
chassis-delete	Delete a chassis.
chassis-list	List chassis.
chassis-node-list	List the nodes contained in the chassis.
chassis-show	Show a chassis.
chassis-update	Update a chassis.
node-create	Register a new node with the Ironic service.
node-delete	Unregister a node from the Ironic service.
node-get-boot-device	Get the current boot device.
node-get-console	Return the connection information for the node's console, if enabled.
node-get-supported-boot-devices	Get the supported boot devices.
node-list	List nodes which are registered with the Ironic service.
node-port-list	List the ports associated with the node.
node-set-boot-device	Set the boot device for a node.
node-set-console-mode	Enable or disable serial console access for this node.
node-set-maintenance	Enable or disable maintenance mode for this node.
node-set-power-state	Power the node on or off or reboot.
node-set-provision-state	Provision, rebuild or delete an instance.
node-show	Show detailed information for a node.
node-update	Update information about a registered node.
node-validate	Validate the node driver interfaces.

node-vendor-passthru	Call a vendor-passthru extension for a node.
port-create	Create a new port.
port-delete	Delete a port.
port-list	List ports.
port-show	Show a port.
port-update	Update a port.
driver-list	List of enabled drivers.
driver-properties	Get properties of the driver.
driver-show	Show a driver.
driver-vendor-passthru	Call a vendor-passthru extension for a driver.
bash-completion	Prints all of the commands and options for bash- completion.
help	Display help about this program or one of its subcommands.

ironic optional arguments

–version	show program's version number and exit
–debug	Defaults to `env[IRONICCLIENT_DEBUG]`
-v, –verbose	Print more verbose output
–cert-file OS_CERT	*DEPRECATED!* Use –os-cert.
–key-file OS_KEY	*DEPRECATED!* Use –os-key.
–ca-file OS_CACERT	*DEPRECATED!* Use –os-cacert.
–os-username OS_USERNAME	Defaults to `env[OS_USERNAME]`
–os-password OS_PASSWORD	Defaults to `env[OS_PASSWORD]`
–os-tenant-id OS_TENANT_ID	Defaults to `env[OS_TENANT_ID]`
–os-tenant-name OS_TENANT_NAME	Defaults to `env[OS_TENANT_NAME]`
–os-auth-url OS_AUTH_URL	Defaults to `env[OS_AUTH_URL]`
–os-region-name OS_REGION_NAME	Defaults to `env[OS_REGION_NAME]`
–os-auth-token OS_AUTH_TOKEN	Defaults to `env[OS_AUTH_TOKEN]`

–ironic-url IRONIC_URL	Defaults to `env[IRONIC_URL]`
–ironic-api-version IRONIC_API_VERSION	Defaults to `env[IRONIC_API_VERSION]` or 1
–os-service-type OS_SERVICE_TYPE	Defaults to `env[OS_SERVICE_TYPE]` or "baremetal"
–os-endpoint OS_ENDPOINT	Specify an endpoint to use instead of retrieving one from the service catalog (via authentication). Defaults to `env[OS_SERVICE_ENDPOINT]`.
–os-endpoint-type OS_ENDPOINT_TYPE	Defaults to `env[OS_ENDPOINT_TYPE]` or "publicURL"
–insecure	Explicitly allow client to perform "insecure" TLS (https) requests. The server's certificate will not be verified against any certificate authorities. This option should be used with caution.
–os-cacert <ca-certificate>	Specify a CA bundle file to use in verifying a TLS (https) server certificate. Defaults to `env[OS_CACERT]`.
–os-cert <certificate>	Defaults to `env[OS_CERT]`.
–os-key <key>	Defaults to `env[OS_KEY]`.
–timeout <seconds>	Set request timeout (in seconds).
–os-user-domain-id OS_USER_DOMAIN_ID	Defaults to `env[OS_USER_DOMAIN_ID]`.
–os-user-domain-name OS_USER_DOMAIN_NAME	Defaults to `env[OS_USER_DOMAIN_NAME]`.
–os-project-id OS_PROJECT_ID	Another way to specify tenant ID. This option is mutually exclusive with --os-tenant-id. Defaults to `env[OS_PROJECT_ID]`.
–os-project-name OS_PROJECT_NAME	Another way to specify tenant name. This option is mutually exclusive with --os-tenant-name. Defaults to `env[OS_PROJECT_NAME]`.
–os-project-domain-id OS_PROJECT_DOMAIN_ID	Defaults to `env[OS_PROJECT_DOMAIN_ID]`.
–os-project-domain-name OS_PROJECT_DOMAIN_NAME	Defaults to `env[OS_PROJECT_DOMAIN_NAME]`.

ironic chassis-create

```
usage: ironic chassis-create [-d <description>] [-e <key=value>]
```

Create a new chassis.

Optional arguments

-d <description>, --description <description>	Free text description of the chassis
-e <key=value>, --extra <key=value>	Record arbitrary key/value metadata. Can be specified multiple times

ironic chassis-delete

```
usage: ironic chassis-delete <chassis id> [<chassis id> ...]
```

Delete a chassis.

Positional arguments

<chassis id>	UUID of chassis

ironic chassis-list

```
usage: ironic chassis-list [--detail] [--limit <limit>] [--marker <marker>]
                           [--sort-key <sort_key>] [--sort-dir <sort_dir>]
```

List chassis.

Optional arguments

--detail	Show detailed information about chassis.
--limit <limit>	Maximum number of chassis to return per request, 0 for no limit. Default is the maximum number used by the Ironic API Service.
--marker <marker>	Chassis UUID (e.g of the last chassis in the list from a previous request). Returns the list of chassis after this UUID.
--sort-key <sort_key>	Chassis field that will be used for sorting.
--sort-dir <sort_dir>	Sort direction: one of "asc" (the default) or "desc".

ironic chassis-node-list

```
usage: ironic chassis-node-list [--detail] [--limit <limit>]
                                [--marker <marker>] [--sort-key <sort_key>]
                                [--sort-dir <sort_dir>]
                                <chassis id>
```

List the nodes contained in the chassis.

Positional arguments

<chassis id>	UUID of chassis

Optional arguments

–detail	Show detailed information about nodes.
–limit <limit>	Maximum number of nodes to return per request, 0 for no limit. Default is the maximum number used by the Ironic API Service.
–marker <marker>	Node UUID (e.g of the last node in the list from a previous request). Returns the list of nodes after this UUID.
–sort-key <sort_key>	Node field that will be used for sorting.
–sort-dir <sort_dir>	Sort direction: one of "asc" (the default) or "desc".

ironic chassis-show

```
usage: ironic chassis-show <chassis id>
```

Show a chassis.

Positional arguments

<chassis id>	UUID of chassis

ironic chassis-update

```
usage: ironic chassis-update <chassis id> <op> <path=value> [<path=value> ...]
```

Update a chassis.

Positional arguments

<chassis id>	UUID of chassis
<op>	Operations: 'add', 'replace' or 'remove'
<path=value>	Attributes to add/replace or remove (only PATH is necessary on remove)

ironic driver-list

```
usage: ironic driver-list
```

List of enabled drivers.

ironic driver-properties

```
usage: ironic driver-properties <driver name>
```

Get properties of the driver.

Positional arguments

<driver name>	name of a driver

ironic driver-show

```
usage: ironic driver-show <driver_name>
```

Show a driver.

Positional arguments

<driver_name>   Name of the driver

ironic driver-vendor-passthru

```
usage: ironic driver-vendor-passthru [--http_method <http_method>]
                                     <driver_name> <method>
                                     [<arg=value> [<arg=value> ...]]
```

Call a vendor-passthru extension for a driver.

Positional arguments

<driver_name>   Name of the driver

<method>   vendor-passthru method to be called

<arg=value>   arguments to be passed to vendor-passthru method

Optional arguments

--http_method <http_method>   The HTTP method to use in the request. Valid HTTP
                                    methods are: 'POST', 'PUT', 'GET', 'DELETE', 'PATCH'. De-
                                    faults to 'POST'.

ironic node-create

```
usage: ironic node-create [-c <chassis uuid>] [-d <driver>] [-i <key=value>]
                          [-p <key=value>] [-e <key=value>] [-u <uuid>]
```

Register a new node with the Ironic service.

Optional arguments

**-c <chassis uuid>, --chassis_uuid
<chassis uuid>**   UUID of the chassis that this node belongs to

-d <driver>, --driver <driver>   Driver used to control the node [REQUIRED]

**-i <key=value>, --driver_info
<key=value>**   Key/value pairs used by the driver, such as out-of- band
                                managementcredentials. Can be specified multiple
                                times

**-p <key=value>, --properties
<key=value>**   Key/value pairs describing the physical characteristics
                                of the node. This is exported to Nova and used by the
                                scheduler. Can be specified multiple times

-e <key=value>, –extra <key=value>	Record arbitrary key/value metadata. Can be specified multiple times
-u <uuid>, –uuid <uuid>	Unique UUID for the node

ironic node-delete

```
usage: ironic node-delete <node id> [<node id> ...]
```

Unregister a node from the Ironic service.

Positional arguments

<node id>   UUID of node

ironic node-get-boot-device

```
usage: ironic node-get-boot-device <node uuid>
```

Get the current boot device.

Positional arguments

<node uuid>   UUID of node

ironic node-get-console

```
usage: ironic node-get-console <node uuid>
```

Return the connection information for the node's console, if enabled.

Positional arguments

<node uuid>   UUID of node

ironic node-get-supported-boot-devices

```
usage: ironic node-get-supported-boot-devices <node uuid>
```

Get the supported boot devices.

Positional arguments

<node uuid>   UUID of node

ironic node-list

```
usage: ironic node-list [--limit <limit>] [--marker <marker>]
                        [--sort-key <sort_key>] [--sort-dir <sort_dir>]
                        [--maintenance <maintenance>] [--associated <assoc>]
                        [--detail]
```

List nodes which are registered with the Ironic service.

Optional arguments

–limit <limit>	Maximum number of nodes to return per request, 0 for no limit. Default is the maximum number used by the Ironic API Service.
–marker <marker>	Node UUID (e.g of the last node in the list from a previous request). Returns the list of nodes after this UUID.
–sort-key <sort_key>	Node field that will be used for sorting.
–sort-dir <sort_dir>	Sort direction: one of "asc" (the default) or "desc".
–maintenance <maintenance>	List nodes in maintenance mode: 'true' or 'false'
–associated <assoc>	List nodes by instance association: 'true' or 'false'
–detail	Show detailed information about nodes

ironic node-port-list

```
usage: ironic node-port-list [--detail] [--limit <limit>] [--marker <marker>]
                             [--sort-key <sort_key>] [--sort-dir <sort_dir>]
                             <node id>
```

List the ports associated with the node.

Positional arguments

<node id>	UUID of node

Optional arguments

–detail	Show detailed information about ports.
–limit <limit>	Maximum number of ports to return per request, 0 for no limit. Default is the maximum number used by the Ironic API Service.
–marker <marker>	Port UUID (e.g of the last port in the list from a previous request). Returns the list of ports after this UUID.
–sort-key <sort_key>	Port field that will be used for sorting.
–sort-dir <sort_dir>	Sort direction: one of "asc" (the default) or "desc".

ironic node-set-boot-device

```
usage: ironic node-set-boot-device [--persistent] <node uuid> <boot device>
```

Set the boot device for a node.

Positional arguments

<node uuid>   UUID of node

<boot device>   Supported boot devices: 'pxe', 'disk', 'cdrom', 'bios', 'safe'

Optional arguments

--persistent   Make changes persistent for all future boots

ironic node-set-console-mode

```
usage: ironic node-set-console-mode <node uuid> <enabled>
```

Enable or disable serial console access for this node.

Positional arguments

<node uuid>   UUID of node

<enabled>   Enable or disable the console access. Supported options are: 'true' or
                   'false'

ironic node-set-maintenance

```
usage: ironic node-set-maintenance [--reason <reason>]
                                   <node id> <maintenance mode>
```

Enable or disable maintenance mode for this node.

Positional arguments

<node id>   UUID of node

<maintenance mode>   Supported states: 'true' or 'false'; 'on' or 'off'

Optional arguments

--reason <reason>   The reason for setting maintenance mode to "true" or "on"; not
                           valid when setting to "false" or "off".

ironic node-set-power-state

```
usage: ironic node-set-power-state <node id> <power state>
```

Power the node on or off or reboot.

Positional arguments

<node id>   UUID of node

<power state>   Supported states: 'on' or 'off' or 'reboot'

ironic node-set-provision-state

```
usage: ironic node-set-provision-state [--config-drive <config drive>]
                                       <node id> <provision state>
```

Provision, rebuild or delete an instance.

Positional arguments

<node id>   UUID of node

<provision state>   Supported states: 'active' or 'deleted' or 'rebuild'

Optional arguments

–config-drive <config drive>   A gzipped base64 encoded config drive string or the
                                 path to the config drive file; Only valid when setting
                                 provision state to "active".

ironic node-show

```
usage: ironic node-show [--instance] <id>
```

Show detailed information for a node.

Positional arguments

<id>   ID, UUID or instance UUID of node

Optional arguments

–instance   The id is an instance UUID

ironic node-update

```
usage: ironic node-update <node id> <op> <path=value> [<path=value> ...]
```

Update information about a registered node.

Positional arguments

<node id>   UUID of node

<op>   Operations: 'add', 'replace' or 'remove'

<path=value>   Attributes to add/replace or remove (only PATH is necessary on remove)

ironic node-validate

```
usage: ironic node-validate <node uuid>
```

Validate the node driver interfaces.

Positional arguments

<node uuid>   UUID of node

ironic node-vendor-passthru

```
usage: ironic node-vendor-passthru [--http_method <http_method>]
                                   <node id> <method>
                                   [<arg=value> [<arg=value> ...]]
```

Call a vendor-passthru extension for a node.

Positional arguments

<node id>   UUID of node

<method>   vendor-passthru method to be called

<arg=value>   arguments to be passed to vendor-passthru method

Optional arguments

–http_method <http_method>   The HTTP method to use in the request. Valid HTTP
                                  methods are: 'POST', 'PUT', 'GET', 'DELETE', 'PATCH'. De-
                                  faults to 'POST'.

ironic port-create

```
usage: ironic port-create -a <address> -n <node uuid> [-e <key=value>]
```

Create a new port.

Optional arguments

-a <address>, –address <ad-   MAC Address for this port
dress>

-n <node uuid>, –node_uuid   UUID of the node that this port belongs to
<node uuid>

-e <key=value>, –extra   Record arbitrary key/value metadata. Can be specified
<key=value>   multiple times

ironic port-delete

```
usage: ironic port-delete <port id> [<port id> ...]
```

Delete a port.

Positional arguments

<port id>   UUID of port

ironic port-list

```
usage: ironic port-list [--detail] [--address <macaddress>] [--limit <limit>]
                        [--marker <marker>] [--sort-key <sort_key>]
                        [--sort-dir <sort_dir>]
```

List ports.

Optional arguments

–detail	Show detailed information about ports.
–address <macaddress>	MAC address of port, to get the port which has this address.
–limit <limit>	Maximum number of ports to return per request, 0 for no limit. Default is the maximum number used by the Ironic API Service.
–marker <marker>	Port UUID (e.g of the last port in the list from a previous request). Returns the list of ports after this UUID.
–sort-key <sort_key>	Port field that will be used for sorting.
–sort-dir <sort_dir>	Sort direction: one of "asc" (the default) or "desc".

ironic port-show

```
usage: ironic port-show [--address] <port id>
```

Show a port.

Positional arguments

<port id>	UUID of port

Optional arguments

–address	Get the port by it's MAC address instead of UUID.

ironic port-update

```
usage: ironic port-update <port id> <op> <path=value> [<path=value> ...]
```

Update a port.

Positional arguments

<port id>	UUID of port
<op>	Operations: 'add', 'replace' or 'remove'
<path=value>	Attributes to add/replace or remove (only PATH is necessary on remove)

3. Block Storage command-line client

The **cinder** client is the command-line interface (CLI) for the OpenStack Block Storage API and its extensions. This chapter documents **cinder** version `1.1.1`.

For help on a specific **cinder** command, enter:

```
$ cinder help COMMAND
```

cinder usage

```
usage: cinder [--version] [--debug] [--os-auth-system <auth-system>]
              [--service-type <service-type>] [--service-name <service-name>]
              [--volume-service-name <volume-service-name>]
              [--endpoint-type <endpoint-type>]
              [--os-volume-api-version <volume-api-ver>] [--retries <retries>]
              [--os-auth-strategy <auth-strategy>]
              [--os-username <auth-user-name>] [--os-password <auth-password>]
              [--os-tenant-name <auth-tenant-name>]
              [--os-tenant-id <auth-tenant-id>] [--os-auth-url <auth-url>]
              [--os-user-id <auth-user-id>]
              [--os-user-domain-id <auth-user-domain-id>]
              [--os-user-domain-name <auth-user-domain-name>]
              [--os-project-id <auth-project-id>]
              [--os-project-name <auth-project-name>]
              [--os-project-domain-id <auth-project-domain-id>]
              [--os-project-domain-name <auth-project-domain-name>]
              [--os-cert <certificate>] [--os-key <key>]
              [--os-region-name <region-name>] [--os-token <token>]
              [--os-url <url>] [--os-cacert <ca-certificate>]
              <subcommand> ...
```

Subcommands

absolute-limits   Lists absolute limits for a user.

availability-zone-list   Lists all availability zones.

backup-create   Creates a volume backup.

backup-delete   Removes a backup.

backup-list   Lists all backups.

backup-restore   Restores a backup.

backup-show   Show backup details.

create   Creates a volume.

credentials	Shows user credentials returned from auth.
delete	Removes one or more volumes.
encryption-type-create	Creates encryption type for a volume type. Admin only.
encryption-type-delete	Deletes encryption type for a volume type. Admin only.
encryption-type-list	Shows encryption type details for volume types. Admin only.
encryption-type-show	Shows encryption type details for volume type. Admin only.
endpoints	Discovers endpoints registered by authentication service.
extend	Attempts to extend size of an existing volume.
extra-specs-list	Lists current volume types and extra specs.
force-delete	Attempts force-delete of volume, regardless of state.
list	Lists all volumes.
metadata	Sets or deletes volume metadata.
metadata-show	Shows volume metadata.
metadata-update-all	Updates volume metadata.
migrate	Migrates volume to a new host.
qos-associate	Associates qos specs with specified volume type.
qos-create	Creates a qos specs.
qos-delete	Deletes a specified qos specs.
qos-disassociate	Disassociates qos specs from specified volume type.
qos-disassociate-all	Disassociates qos specs from all associations.
qos-get-association	Gets all associations for specified qos specs.
qos-key	Sets or unsets specifications for a qos spec.
qos-list	Lists qos specs.
qos-show	Shows a specified qos specs.
quota-class-show	Lists quotas for a quota class.
quota-class-update	Updates quotas for a quota class.
quota-defaults	Lists default quotas for a tenant.

quota-delete	Delete the quotas for a tenant.
quota-show	Lists quotas for a tenant.
quota-update	Updates quotas for a tenant.
quota-usage	Lists quota usage for a tenant.
rate-limits	Lists rate limits for a user.
readonly-mode-update	Updates volume read-only access-mode flag.
rename	Renames a volume.
reset-state	Explicitly updates the volume state.
service-disable	Disables the service.
service-enable	Enables the service.
service-list	Lists all services. Filter by host and service binary.
set-bootable	Update bootable status of a volume.
show	Shows volume details.
snapshot-create	Creates a snapshot.
snapshot-delete	Remove one or more snapshots.
snapshot-list	Lists all snapshots.
snapshot-metadata	Sets or deletes snapshot metadata.
snapshot-metadata-show	Shows snapshot metadata.
snapshot-metadata-update-all	Updates snapshot metadata.
snapshot-rename	Renames a snapshot.
snapshot-reset-state	Explicitly updates the snapshot state.
snapshot-show	Shows snapshot details.
transfer-accept	Accepts a volume transfer.
transfer-create	Creates a volume transfer.
transfer-delete	Undoes a transfer.
transfer-list	Lists all transfers.
transfer-show	Show transfer details.
type-create	Creates a volume type.
type-delete	Deletes a specified volume type.

type-key	Sets or unsets extra_spec for a volume type.
type-list	Lists available 'volume types'.
upload-to-image	Uploads volume to Image Service as an image.
bash-completion	Prints arguments for bash_completion.
help	Shows help about this program or one of its subcommands.
list-extensions	Lists all available os-api extensions.

cinder optional arguments

--version	show program's version number and exit
--debug	Shows debugging output.
--os-auth-system <auth-system>	Defaults to `env[OS_AUTH_SYSTEM]`.
--service-type <service-type>	Service type. For most actions, default is volume.
--service-name <service-name>	Service name. Default=`env[CINDER_SERVICE_NAME]`.
--volume-service-name <volume-service-name>	Volume service name. Default=`env[CINDER_VOLUME_SERVICE_NAME]`.
--endpoint-type <endpoint-type>	Endpoint type, which is publicURL or internalURL. Default=nova `env[CINDER_ENDPOINT_TYPE]` or publicURL.
--os-volume-api-version <volume-api-ver>	Block Storage API version. Valid values are 1 or 2. Default=`env[OS_VOLUME_API_VERSION]`.
--retries <retries>	Number of retries.
--os-auth-strategy <auth-strategy>	Authentication strategy (Env: OS_AUTH_STRATEGY, default keystone). For now, any other value will disable the authentication
--os-username <auth-user-name>	OpenStack user name. Default=`env[OS_USERNAME]`.
--os-password <auth-password>	Password for OpenStack user. Default=`env[OS_PASSWORD]`.
--os-tenant-name <auth-tenant-name>	Tenant name. Default=`env[OS_TENANT_NAME]`.
--os-tenant-id <auth-tenant-id>	ID for the tenant. Default=`env[OS_TENANT_ID]`.
--os-auth-url <auth-url>	URL for the authentication service. Default=`env[OS_AUTH_URL]`.

–os-user-id <auth-user-id>	Authentication user ID (Env: OS_USER_ID)
–os-user-domain-id <auth-us-er-domain-id>	OpenStack user domain ID. Defaults to `env[OS_USER_DOMAIN_ID]`.
–os-user-domain-name <auth-user-domain-name>	OpenStack user domain name. Defaults to `env[OS_USER_DOMAIN_NAME]`.
–os-project-id <auth-project-id>	Another way to specify tenant ID. This option is mutually exclusive with –os-tenant-id. Defaults to `env[OS_PROJECT_ID]`.
–os-project-name <auth-project-name>	Another way to specify tenant name. This option is mutually exclusive with –os-tenant-name. Defaults to `env[OS_PROJECT_NAME]`.
–os-project-domain-id <auth-project-domain-id>	Defaults to `env[OS_PROJECT_DOMAIN_ID]`.
–os-project-domain-name <auth-project-domain-name>	Defaults to `env[OS_PROJECT_DOMAIN_NAME]`.
–os-cert <certificate>	Defaults to `env[OS_CERT]`.
–os-key <key>	Defaults to `env[OS_KEY]`.
–os-region-name <region-name>	Region name. Default=`env[OS_REGION_NAME]`.
–os-token <token>	Defaults to `env[OS_TOKEN]`
–os-url <url>	Defaults to `env[OS_URL]`
–os-cacert <ca-certificate>	Specify a CA bundle file to use in verifying a TLS (https) server certificate. Defaults to `env[OS_CACERT]`

Block Storage API v1 commands

cinder absolute-limits

```
usage: cinder absolute-limits
```

Lists absolute limits for a user.

cinder availability-zone-list

```
usage: cinder availability-zone-list
```

Lists all availability zones.

cinder backup-create

```
usage: cinder backup-create [--container <container>]
                            [--display-name <display-name>]
```

```
                                        [--display-description <display-description>]
                                        <volume>
```

Creates a volume backup.

Positional arguments

<volume>   Name or ID of volume to back up.

Optional arguments

–container <container>   Backup container name. Default=None.

–display-name <display-name>   Backup name. Default=None.

–display-description <dis-   Backup description. Default=None.
play-description>

cinder backup-delete

```
usage: cinder backup-delete <backup>
```

Removes a backup.

Positional arguments

<backup>   Name or ID of backup to delete.

cinder backup-list

```
usage: cinder backup-list
```

Lists all backups.

cinder backup-restore

```
usage: cinder backup-restore [--volume-id <volume>] <backup>
```

Restores a backup.

Positional arguments

<backup>   ID of backup to restore.

Optional arguments

–volume-id <volume> ID   or name of backup volume to which to restore.
                                                 Default=None.

cinder backup-show

```
usage: cinder backup-show <backup>
```

Show backup details.

Positional arguments

<backup>   Name or ID of backup.

cinder create

```
usage: cinder create [--snapshot-id <snapshot-id>]
                     [--source-volid <source-volid>] [--image-id <image-id>]
                     [--display-name <display-name>]
                     [--display-description <display-description>]
                     [--volume-type <volume-type>]
                     [--availability-zone <availability-zone>]
                     [--metadata [<key=value> [<key=value> ...]]]
                     <size>
```

Creates a volume.

Positional arguments

<size>   Volume size, in GBs.

Optional arguments

--snapshot-id <snapshot-id>	Creates volume from snapshot ID. Default=None.
--source-volid <source-volid>	Creates volume from volume ID. Default=None.
--image-id <image-id>	Creates volume from image ID. Default=None.
--display-name <display-name>	Volume name. Default=None.
--display-description <dis-play-description>	Volume description. Default=None.
--volume-type <volume-type>	Volume type. Default=None.
--availability-zone <availabili-ty-zone>	Availability zone for volume. Default=None.
--metadata [<key=value> [<key=value> ...]]	Metadata key and value pairs. Default=None.

cinder credentials

```
usage: cinder credentials
```

Shows user credentials returned from auth.

cinder delete

```
usage: cinder delete <volume> [<volume> ...]
```

Removes one or more volumes.

Positional arguments

<volume>   Name or ID of volume to delete. Separate multiple volumes with a space.

cinder encryption-type-create

```
usage: cinder encryption-type-create [--cipher <cipher>]
                                     [--key_size <key_size>]
                                     [--control_location <control_location>]
                                     <volume_type> <provider>
```

Creates encryption type for a volume type. Admin only.

Positional arguments

<volume_type>   Name or ID of volume type.

<provider>   The class that provides encryption support. For example, a volume driver class path.

Optional arguments

--cipher <cipher>   The encryption algorithm and mode. For example, aes-xts-plain64. Default=None.

--key_size <key_size>   Size of encryption key, in bits. For example, 128 or 256. Default=None.

--control_location <control_location>   Notional service where encryption is performed. Valid values are "front-end" or "back-end." For example, front-end=Nova. Default is "front-end."

cinder encryption-type-delete

```
usage: cinder encryption-type-delete <volume_type>
```

Deletes encryption type for a volume type. Admin only.

Positional arguments

<volume_type>   Name or ID of volume type.

cinder encryption-type-list

```
usage: cinder encryption-type-list
```

Shows encryption type details for volume types. Admin only.

cinder encryption-type-show

```
usage: cinder encryption-type-show <volume_type>
```

Shows encryption type details for volume type. Admin only.

Positional arguments

<volume_type>   Name or ID of volume type.

cinder endpoints

```
usage: cinder endpoints
```

Discovers endpoints registered by authentication service.

cinder extend

```
usage: cinder extend <volume> <new-size>
```

Attempts to extend size of an existing volume.

Positional arguments

<volume>   Name or ID of volume to extend.

<new-size>   Size of volume, in GBs.

cinder extra-specs-list

```
usage: cinder extra-specs-list
```

Lists current volume types and extra specs.

cinder force-delete

```
usage: cinder force-delete <volume> [<volume> ...]
```

Attempts force-delete of volume, regardless of state.

Positional arguments

<volume>   Name or ID of volume to delete. Separate multiple volumes with a space.

cinder list

```
usage: cinder list [--all-tenants [<0|1>]] [--display-name <display-name>]
                   [--status <status>]
                   [--metadata [<key=value> [<key=value> ...]]]
```

Lists all volumes.

Optional arguments

--all-tenants [<0|1>]   Shows details for all tenants. Admin only.

--display-name <display-name>   Filters list by a volume display name. Default=None.

| –status <status> | Filters list by a status. Default=None. |
| –metadata [<key=value> [<key=value> ...]] | Filters list by metadata key and value pair. Default=None. |

cinder list-extensions

```
usage: cinder list-extensions
```

Lists all available os-api extensions.

cinder metadata

```
usage: cinder metadata <volume> <action> <key=value> [<key=value> ...]
```

Sets or deletes volume metadata.

Positional arguments

<volume>   Name or ID of volume for which to update metadata.

<action>   The action. Valid values are 'set' or 'unset.'

<key=value>   The metadata key and pair to set or unset. For unset, specify only the key. Default=[].

cinder metadata-show

```
usage: cinder metadata-show <volume>
```

Shows volume metadata.

Positional arguments

<volume>   ID of volume.

cinder metadata-update-all

```
usage: cinder metadata-update-all <volume> <key=value> [<key=value> ...]
```

Updates volume metadata.

Positional arguments

<volume>   ID of volume for which to update metadata.

<key=value>   Metadata key and value pair or pairs to update. Default=[].

cinder migrate

```
usage: cinder migrate [--force-host-copy <True|False>] <volume> <host>
```

Migrates volume to a new host.

Positional arguments

\<volume\>   ID of volume to migrate.

\<host\>   Destination host.

Optional arguments

--force-host-copy \<True|False\>   Enables or disables generic host-based force- migration, which bypasses driver optimizations. Default=False.

cinder qos-associate

```
usage: cinder qos-associate <qos_specs> <volume_type_id>
```

Associates qos specs with specified volume type.

Positional arguments

\<qos_specs\>   ID of QoS specifications.

\<volume_type_id\>   ID of volume type.

cinder qos-create

```
usage: cinder qos-create <name> <key=value> [<key=value> ...]
```

Creates a qos specs.

Positional arguments

\<name\>   Name of new QoS specifications.

\<key=value\>   Specifications for QoS.

cinder qos-delete

```
usage: cinder qos-delete [--force <True|False>] <qos_specs>
```

Deletes a specified qos specs.

Positional arguments

\<qos_specs\>   ID of QoS specifications.

Optional arguments

--force \<True|False\>   Enables or disables deletion of in-use QoS specifications. Default=False.

cinder qos-disassociate

```
usage: cinder qos-disassociate <qos_specs> <volume_type_id>
```

Disassociates qos specs from specified volume type.

Positional arguments

<qos_specs>   ID of QoS specifications.

<volume_type_id>   ID of volume type.

cinder qos-disassociate-all

```
usage: cinder qos-disassociate-all <qos_specs>
```

Disassociates qos specs from all associations.

Positional arguments

<qos_specs>   ID of QoS specifications.

cinder qos-get-association

```
usage: cinder qos-get-association <qos_specs>
```

Gets all associations for specified qos specs.

Positional arguments

<qos_specs>   ID of QoS specifications.

cinder qos-key

```
usage: cinder qos-key <qos_specs> <action> key=value [key=value ...]
```

Sets or unsets specifications for a qos spec.

Positional arguments

<qos_specs>   ID of QoS specifications.

<action>   The action. Valid values are 'set' or 'unset.'

key=value   Metadata key and value pair to set or unset. For unset, specify only the key.

cinder qos-list

```
usage: cinder qos-list
```

Lists qos specs.

cinder qos-show

```
usage: cinder qos-show <qos_specs>
```

Shows a specified qos specs.

Positional arguments

<qos_specs>   ID of QoS specifications.

cinder quota-class-show

```
usage: cinder quota-class-show <class>
```

Lists quotas for a quota class.

Positional arguments

<class>   Name of quota class for which to list quotas.

cinder quota-class-update

```
usage: cinder quota-class-update [--volumes <volumes>]
                                 [--snapshots <snapshots>]
                                 [--gigabytes <gigabytes>]
                                 [--volume-type <volume_type_name>]
                                 <class>
```

Updates quotas for a quota class.

Positional arguments

<class>   Name of quota class for which to set quotas.

Optional arguments

--volumes <volumes>	The new "volumes" quota value. Default=None.
--snapshots <snapshots>	The new "snapshots" quota value. Default=None.
--gigabytes <gigabytes>	The new "gigabytes" quota value. Default=None.
--volume-type <volume_type_name>	Volume type. Default=None.

cinder quota-defaults

```
usage: cinder quota-defaults <tenant_id>
```

Lists default quotas for a tenant.

Positional arguments

<tenant_id>   ID of the tenant for which to list default quotas.

cinder quota-delete

```
usage: cinder quota-delete <tenant_id>
```

Delete the quotas for a tenant.

Positional arguments

<tenant_id>   UUID of tenant to delete the quotas for.

cinder quota-show

```
usage: cinder quota-show <tenant_id>
```

Lists quotas for a tenant.

Positional arguments

<tenant_id>   ID of the tenant for which to list quotas.

cinder quota-update

```
usage: cinder quota-update [--volumes <volumes>] [--snapshots <snapshots>]
                           [--gigabytes <gigabytes>]
                           [--volume-type <volume_type_name>]
                           <tenant_id>
```

Updates quotas for a tenant.

Positional arguments

<tenant_id>   ID of the tenant for which to set quotas.

Optional arguments

–volumes <volumes>   The new "volumes" quota value. Default=None.

–snapshots <snapshots>   The new "snapshots" quota value. Default=None.

–gigabytes <gigabytes>   The new "gigabytes" quota value. Default=None.

–volume-type   Volume type. Default=None.
<volume_type_name>

cinder quota-usage

```
usage: cinder quota-usage <tenant_id>
```

Lists quota usage for a tenant.

Positional arguments

<tenant_id>   ID of the tenant for which to list quota usage.

cinder rate-limits

```
usage: cinder rate-limits
```

Lists rate limits for a user.

cinder readonly-mode-update

```
usage: cinder readonly-mode-update <volume> <True|true|False|false>
```

Updates volume read-only access-mode flag.

Positional arguments

<volume>   ID of volume to update.

<True|true|False|false>   Enables or disables update of volume to read-only access
                                mode.

cinder rename

```
usage: cinder rename [--display-description <display-description>]
                     <volume> [<display-name>]
```

Renames a volume.

Positional arguments

<volume>   Name or ID of volume to rename.

<display-name>   New display name for volume.

Optional arguments

--display-description <dis-   Volume description. Default=None.
play-description>

cinder reset-state

```
usage: cinder reset-state [--state <state>] <volume> [<volume> ...]
```

Explicitly updates the volume state.

Positional arguments

<volume>   Name or ID of volume to modify. Separate multiple volumes with a space.

Optional arguments

--state <state>   The state to assign to the volume. Valid values are "available," "er-
                       ror," "creating," "deleting," or "error_deleting." Default is "available."

cinder service-disable

```
usage: cinder service-disable [--reason <reason>] <hostname> <binary>
```

Disables the service.

Positional arguments

<hostname>   Host name.

<binary>   Service binary.

Optional arguments

–reason <reason>   Reason for disabling service.

cinder service-enable

```
usage: cinder service-enable <hostname> <binary>
```

Enables the service.

Positional arguments

<hostname>   Host name.

<binary>   Service binary.

cinder service-list

```
usage: cinder service-list [--host <hostname>] [--binary <binary>]
```

Lists all services. Filter by host and service binary.

Optional arguments

–host <hostname>   Host name. Default=None.

–binary <binary>   Service binary. Default=None.

cinder set-bootable

```
usage: cinder set-bootable <volume> <True|true|False|false>
```

Update bootable status of a volume.

Positional arguments

<volume>   ID of the volume to update.

<True|true|False|false>   Flag to indicate whether volume is bootable.

cinder show

```
usage: cinder show <volume>
```

Shows volume details.

Positional arguments

<volume>   Volume name or ID.

cinder snapshot-create

```
usage: cinder snapshot-create [--force <True|False>]
                              [--display-name <display-name>]
                              [--display-description <display-description>]
                              <volume>
```

Creates a snapshot.

Positional arguments

<volume>   Name or ID of volume to snapshot.

Optional arguments

–force <True|False>	Allows or disallows snapshot of a volume when the volume is attached to an instance. If set to True, ignores the current status of the volume when attempting to snapshot it rather than forcing it to be available. Default=False.
–display-name <display-name>	The snapshot name. Default=None.
–display-description <display-description>	The snapshot description. Default=None.

cinder snapshot-delete

```
usage: cinder snapshot-delete <snapshot> [<snapshot> ...]
```

Remove one or more snapshots.

Positional arguments

<snapshot>   Name or ID of the snapshot(s) to delete.

cinder snapshot-list

```
usage: cinder snapshot-list [--all-tenants [<0|1>]]
                            [--display-name <display-name>]
                            [--status <status>] [--volume-id <volume-id>]
```

Lists all snapshots.

Optional arguments

–all-tenants [<0|1>]	Shows details for all tenants. Admin only.
–display-name <display-name>	Filters list by a display name. Default=None.

| **–status <status>** | Filters list by a status. Default=None. |
| **–volume-id <volume-id>** | Filters list by a volume ID. Default=None. |

cinder snapshot-metadata

```
usage: cinder snapshot-metadata <snapshot> <action> <key=value>
                                [<key=value> ...]
```

Sets or deletes snapshot metadata.

Positional arguments

<snapshot>	ID of snapshot for which to update metadata.
<action>	The action. Valid values are 'set' or 'unset.'
<key=value>	The metadata key and value pair to set or unset. For unset, specify only the key.

cinder snapshot-metadata-show

```
usage: cinder snapshot-metadata-show <snapshot>
```

Shows snapshot metadata.

Positional arguments

| **<snapshot>** | ID of snapshot. |

cinder snapshot-metadata-update-all

```
usage: cinder snapshot-metadata-update-all <snapshot> <key=value>
                                           [<key=value> ...]
```

Updates snapshot metadata.

Positional arguments

| **<snapshot>** | ID of snapshot for which to update metadata. |
| **<key=value>** | Metadata key and value pair or pairs to update. Default=[]. |

cinder snapshot-rename

```
usage: cinder snapshot-rename [--display-description <display-description>]
                              <snapshot> [<display-name>]
```

Renames a snapshot.

Positional arguments

| **<snapshot>** | Name or ID of snapshot. |

<display-name>   New display name for snapshot.

Optional arguments

–display-description <dis-   Snapshot description. Default=None.
play-description>

cinder snapshot-reset-state

```
usage: cinder snapshot-reset-state [--state <state>]
                                   <snapshot> [<snapshot> ...]
```

Explicitly updates the snapshot state.

Positional arguments

<snapshot>   Name or ID of snapshot to modify.

Optional arguments

–state <state>   The state to assign to the snapshot. Valid values are "available," "er-
                           ror," "creating," "deleting," or "error_deleting." Default is "available."

cinder snapshot-show

```
usage: cinder snapshot-show <snapshot>
```

Shows snapshot details.

Positional arguments

<snapshot>   Name or ID of snapshot.

cinder transfer-accept

```
usage: cinder transfer-accept <transfer> <auth_key>
```

Accepts a volume transfer.

Positional arguments

<transfer>   ID of transfer to accept.

<auth_key>   Authentication key of transfer to accept.

cinder transfer-create

```
usage: cinder transfer-create [--display-name <display-name>] <volume>
```

Creates a volume transfer.

Positional arguments

<volume>   Name or ID of volume to transfer.

Optional arguments

--display-name <display-name>   Transfer name. Default=None.

cinder transfer-delete

```
usage: cinder transfer-delete <transfer>
```

Undoes a transfer.

Positional arguments

<transfer>   Name or ID of transfer to delete.

cinder transfer-list

```
usage: cinder transfer-list
```

Lists all transfers.

cinder transfer-show

```
usage: cinder transfer-show <transfer>
```

Show transfer details.

Positional arguments

<transfer>   Name or ID of transfer to accept.

cinder type-create

```
usage: cinder type-create <name>
```

Creates a volume type.

Positional arguments

<name>   Name for the volume type.

cinder type-delete

```
usage: cinder type-delete <id>
```

Deletes a specified volume type.

Positional arguments

<id>   ID of volume type to delete.

cinder type-key

```
usage: cinder type-key <vtype> <action> [<key=value> [<key=value> ...]]
```

Sets or unsets extra_spec for a volume type.

Positional arguments

<vtype>   Name or ID of volume type.

<action>   The action. Valid values are 'set' or 'unset.'

<key=value>   The extra specs key and value pair to set or unset. For unset, specify only
                     the key. Default=None.

cinder type-list

```
usage: cinder type-list
```

Lists available 'volume types'.

cinder upload-to-image

```
usage: cinder upload-to-image [--force <True|False>]
                              [--container-format <container-format>]
                              [--disk-format <disk-format>]
                              <volume> <image-name>
```

Uploads volume to Image Service as an image.

Positional arguments

<volume>   Name or ID of volume to upload to an image.

<image-name>   The new image name.

Optional arguments

–force <True|False>   Enables or disables upload of a volume that is attached
                                       to an instance. Default=False.

–container-format <contain-   Container format type. Default is bare.
er-format>

–disk-format <disk-format>   Disk format type. Default is raw.

Block Storage API v2 commands

You can select an API version to use by adding the `--os-volume-api-version` option
or by setting the corresponding environment variable:

```
$ export OS_VOLUME_API_VERSION=2
```

cinder absolute-limits (v2)

```
usage: cinder --os-volume-api-version 2 absolute-limits
```

Lists absolute limits for a user.

cinder availability-zone-list (v2)

```
usage: cinder --os-volume-api-version 2 availability-zone-list
```

Lists all availability zones.

cinder backup-create (v2)

```
usage: cinder --os-volume-api-version 2 backup-create [--container
 <container>] [--name <name>]
                              [--description <description>]
                              <volume>
```

Creates a volume backup.

Positional arguments

<volume>   Name or ID of volume to backup.

Optional arguments

--container <container>   Backup container name. Default=None.

--name <name>   Backup name. Default=None.

--description <description>   Backup description. Default=None.

cinder backup-delete (v2)

```
usage: cinder --os-volume-api-version 2 backup-delete <backup>
```

Removes a backup.

Positional arguments

<backup>   Name or ID of backup to delete.

cinder backup-export (v2)

```
usage: cinder --os-volume-api-version 2 backup-export <backup>
```

Export backup metadata record.

Positional arguments

<backup>   ID of the backup to export.

cinder backup-import (v2)

```
usage: cinder --os-volume-api-version 2 backup-import <backup_service>
 <backup_url>
```

Import backup metadata record.

Positional arguments

<backup_service>   Backup service to use for importing the backup.

<backup_url>   Backup URL for importing the backup metadata.

cinder backup-list (v2)

```
usage: cinder --os-volume-api-version 2 backup-list
```

Lists all backups.

cinder backup-restore (v2)

```
usage: cinder --os-volume-api-version 2 backup-restore [--volume <volume>]
 <backup>
```

Restores a backup.

Positional arguments

<backup>   ID of backup to restore.

Optional arguments

–volume <volume>   Name or ID of volume to which to restore. Default=None.

cinder backup-show (v2)

```
usage: cinder --os-volume-api-version 2 backup-show <backup>
```

Shows backup details.

Positional arguments

<backup>   Name or ID of backup.

cinder cgsnapshot-create (v2)

```
usage: cinder --os-volume-api-version 2 cgsnapshot-create [--name <name>] [--
description <description>]
                                <consistencygroup>
```

Creates a cgsnapshot.

Positional arguments

<consistencygroup>   Name or ID of a consistency group.

Optional arguments

–name <name>   Cgsnapshot name. Default=None.

–description <description>   Cgsnapshot description. Default=None.

cinder cgsnapshot-delete (v2)

```
usage: cinder --os-volume-api-version 2 cgsnapshot-delete <cgsnapshot>
 [<cgsnapshot> ...]
```

Removes one or more cgsnapshots.

Positional arguments

<cgsnapshot>   Name or ID of one or more cgsnapshots to be deleted.

cinder cgsnapshot-list (v2)

```
usage: cinder --os-volume-api-version 2 cgsnapshot-list [--all-tenants [<0|
1>]] [--status <status>]
                               [--consistencygroup-id <consistencygroup_id>]
```

Lists all cgsnapshots.

Optional arguments

–all-tenants [<0|1>]   Shows details for all tenants. Admin only.

–status <status>   Filters results by a status. Default=None.

–consistencygroup-id   Filters results by a consistency group ID. Default=None.
<consistencygroup_id>

cinder cgsnapshot-show (v2)

```
usage: cinder --os-volume-api-version 2 cgsnapshot-show <cgsnapshot>
```

Shows cgsnapshot details.

Positional arguments

<cgsnapshot>   Name or ID of cgsnapshot.

cinder consisgroup-create (v2)

```
usage: cinder --os-volume-api-version 2 consisgroup-create [--name <name>] [--
description <description>]
                               [--availability-zone <availability-zone>]
                               <volume-types>
```

Creates a consistency group.

Positional arguments

<volume-types>   Volume types.

Optional arguments

–name <name>   Name of a consistency group.

–description <description>   Description of a consistency group. Default=None.

**–availability-zone <availabili-   Availability zone for volume. Default=None.
ty-zone>**

cinder consisgroup-delete (v2)

```
usage: cinder --os-volume-api-version 2 consisgroup-delete [--force]
                            <consistencygroup> [<consistencygroup> ...]
```

Removes one or more consistency groups.

Positional arguments

<consistencygroup>   Name or ID of one or more consistency groups to be deleted.

Optional arguments

–force   Allows or disallows consistency groups to be deleted. If the consistency group is
empty, it can be deleted without the force flag. If the consistency group is not
empty, the force flag is required for it to be deleted.

cinder consisgroup-list (v2)

```
usage: cinder --os-volume-api-version 2 consisgroup-list [--all-tenants [<0|
1>]]
```

Lists all consistencygroups.

Optional arguments

–all-tenants [<0|1>]   Shows details for all tenants. Admin only.

cinder consisgroup-show (v2)

```
usage: cinder --os-volume-api-version 2 consisgroup-show <consistencygroup>
```

Shows details of a consistency group.

Positional arguments

<consistencygroup>   Name or ID of a consistency group.

cinder create (v2)

```
usage: cinder --os-volume-api-version 2 create [--consisgroup-id
 <consistencygroup-id>]
                     [--snapshot-id <snapshot-id>]
                     [--source-volid <source-volid>]
```

```
                        [--source-replica <source-replica>]
                        [--image-id <image-id>] [--name <name>]
                        [--description <description>]
                        [--volume-type <volume-type>]
                        [--availability-zone <availability-zone>]
                        [--metadata [<key=value> [<key=value> ...]]]
                        [--hint <key=value>]
                        [<size>]
```

Creates a volume.

Positional arguments

<size>   Size of volume, in GBs. (Required unless snapshot-id /source-volid is specified).

Optional arguments

–consisgroup-id <consistency-group-id>	ID of a consistency group where the new volume belongs to. Default=None.
–snapshot-id <snapshot-id>	Creates volume from snapshot ID. Default=None.
–source-volid <source-volid>	Creates volume from volume ID. Default=None.
–source-replica <source-replica>	Creates volume from replicated volume ID. Default=None.
–image-id <image-id>	Creates volume from image ID. Default=None.
–name <name>	Volume name. Default=None.
–description <description>	Volume description. Default=None.
–volume-type <volume-type>	Volume type. Default=None.
–availability-zone <availability-zone>	Availability zone for volume. Default=None.
–metadata [<key=value> [<key=value> ...]]	Metadata key and value pairs. Default=None.
–hint <key=value>	Scheduler hint, like in nova.

cinder credentials (v2)

```
usage: cinder --os-volume-api-version 2 credentials
```

Shows user credentials returned from auth.

cinder delete (v2)

```
usage: cinder --os-volume-api-version 2 delete <volume> [<volume> ...]
```

Removes one or more volumes.

Positional arguments

<volume>   Name or ID of volume or volumes to delete.

cinder encryption-type-create (v2)

```
usage: cinder --os-volume-api-version 2 encryption-type-create [--cipher
 <cipher>]
                                    [--key_size <key_size>]
                                    [--control_location <control_location>]
                                    <volume_type> <provider>
```

Creates encryption type for a volume type. Admin only.

Positional arguments

<volume_type>   Name or ID of volume type.

<provider>   The class that provides encryption support. For example, LuksEncryp-
                      tor.

Optional arguments

–cipher <cipher>   The encryption algorithm or mode. For example, aes-
                               xts-plain64. Default=None.

–key_size <key_size>   Size of encryption key, in bits. For example, 128 or 256.
                               Default=None.

–control_location   Notional service where encryption is performed. Valid
<control_location>   values are "front-end" or "back-end." For example, front-
                               end=Nova. Default is "front-end."

cinder encryption-type-delete (v2)

```
usage: cinder --os-volume-api-version 2 encryption-type-delete <volume_type>
```

Deletes encryption type for a volume type. Admin only.

Positional arguments

<volume_type>   Name or ID of volume type.

cinder encryption-type-list (v2)

```
usage: cinder --os-volume-api-version 2 encryption-type-list
```

Shows encryption type details for volume types. Admin only.

cinder encryption-type-show (v2)

```
usage: cinder --os-volume-api-version 2 encryption-type-show <volume_type>
```

Shows encryption type details for a volume type. Admin only.

Positional arguments

<volume_type>   Name or ID of volume type.

cinder endpoints (v2)

```
usage: cinder --os-volume-api-version 2 endpoints
```

Discovers endpoints registered by authentication service.

cinder extend (v2)

```
usage: cinder --os-volume-api-version 2 extend <volume> <new_size>
```

Attempts to extend size of an existing volume.

Positional arguments

<volume>   Name or ID of volume to extend.

<new_size>   New size of volume, in GBs.

cinder extra-specs-list (v2)

```
usage: cinder --os-volume-api-version 2 extra-specs-list
```

Lists current volume types and extra specs.

cinder force-delete (v2)

```
usage: cinder --os-volume-api-version 2 force-delete <volume> [<volume> ...]
```

Attempts force-delete of volume, regardless of state.

Positional arguments

<volume>   Name or ID of volume or volumes to delete.

cinder list (v2)

```
usage: cinder --os-volume-api-version 2 list [--all-tenants [<0|1>]] [--name
 <name>] [--status <status>]
                    [--metadata [<key=value> [<key=value> ...]]]
                    [--marker <marker>] [--limit <limit>]
                    [--sort_key <sort_key>] [--sort_dir <sort_dir>]
```

Lists all volumes.

Optional arguments

–all-tenants [<0|1>]   Shows details for all tenants. Admin only.

–name <name>   Filters results by a name. OPTIONAL: Default=None.

–status <status>	Filters results by a status. OPTIONAL: Default=None.
–metadata [<key=value> [<key=value> ...]]	Filters results by a metadata key and value pair. OPTIONAL: Default=None.
–marker <marker>	Begin returning volumes that appear later in the volume list than that represented by this volume id. OPTIONAL: Default=None.
–limit <limit>	Maximum number of volumes to return. OPTIONAL: Default=None.
–sort_key <sort_key>	Key to be sorted, should be (`id`, `status`, `size`, `availability_zone`, `name`, `bootable`, `created_at`). OPTIONAL: Default=None.
–sort_dir <sort_dir>	Sort direction, should be `desc` or `asc`. OPTIONAL: Default=None.

cinder list-extensions (v2)

```
usage: cinder --os-volume-api-version 2 list-extensions
```

Lists all available os-api extensions.

cinder manage (v2)

```
usage: cinder --os-volume-api-version 2 manage [--source-name <source-name>]
 [--source-id <source-id>]
                      [--name <name>] [--description <description>]
                      [--volume-type <volume-type>]
                      [--availability-zone <availability-zone>]
                      [--metadata [<key=value> [<key=value> ...]]] [--bootable]
                      <host> [<key=value> [<key=value> ...]]
```

Manage an existing volume.

Positional arguments

<host>	Cinder host on which the existing volume resides
<key=value>	Driver-specific reference to the existing volume as key=value pairs

Optional arguments

–source-name <source-name>	Name of the volume to manage (Optional)
–source-id <source-id>	ID of the volume to manage (Optional)
–name <name>	Volume name (Optional, Default=None)
–description <description>	Volume description (Optional, Default=None)
–volume-type <volume-type>	Volume type (Optional, Default=None)

–availability-zone <availability-zone>	Availability zone for volume (Optional, Default=None)
–metadata [<key=value> [<key=value> ...]]	Metadata key=value pairs (Optional, Default=None)
–bootable	Specifies that the newly created volume should be marked as bootable

cinder metadata (v2)

```
usage: cinder --os-volume-api-version 2 metadata <volume> <action> <key=value>
 [<key=value> ...]
```

Sets or deletes volume metadata.

Positional arguments

<volume>	Name or ID of volume for which to update metadata.
<action>	The action. Valid values are 'set' or 'unset.'
<key=value>	Metadata key and value pair to set or unset. For unset, specify only the key.

cinder metadata-show (v2)

```
usage: cinder --os-volume-api-version 2 metadata-show <volume>
```

Shows volume metadata.

Positional arguments

| **<volume>** | ID of volume. |

cinder metadata-update-all (v2)

```
usage: cinder --os-volume-api-version 2 metadata-update-all <volume> <key=
value> [<key=value> ...]
```

Updates volume metadata.

Positional arguments

| **<volume>** | ID of volume for which to update metadata. |
| **<key=value>** | Metadata key and value pair or pairs to update. |

cinder migrate (v2)

```
usage: cinder --os-volume-api-version 2 migrate [--force-host-copy <True|
False>] <volume> <host>
```

Migrates volume to a new host.

Positional arguments

<volume>   ID of volume to migrate.

<host>   Destination host.

Optional arguments

–force-host-copy <True|False>   Enables or disables generic host-based force- migration, which bypasses driver optimizations. Default=False.

cinder qos-associate (v2)

```
usage: cinder --os-volume-api-version 2 qos-associate <qos_specs>
 <volume_type_id>
```

Associates qos specs with specified volume type.

Positional arguments

<qos_specs>   ID of QoS specifications.

<volume_type_id>   ID of volume type with which to associate QoS specifications.

cinder qos-create (v2)

```
usage: cinder --os-volume-api-version 2 qos-create <name> <key=value> [<key=
value> ...]
```

Creates a qos specs.

Positional arguments

<name>   Name of new QoS specifications.

<key=value>   QoS specifications.

cinder qos-delete (v2)

```
usage: cinder --os-volume-api-version 2 qos-delete [--force <True|False>]
 <qos_specs>
```

Deletes a specified qos specs.

Positional arguments

<qos_specs>   ID of QoS specifications to delete.

Optional arguments

–force <True|False>   Enables or disables deletion of in-use QoS specifications. Default=False.

cinder qos-disassociate (v2)

```
usage: cinder --os-volume-api-version 2 qos-disassociate <qos_specs>
 <volume_type_id>
```

Disassociates qos specs from specified volume type.

Positional arguments

<qos_specs>   ID of QoS specifications.

<volume_type_id>   ID of volume type with which to associate QoS specifications.

cinder qos-disassociate-all (v2)

```
usage: cinder --os-volume-api-version 2 qos-disassociate-all <qos_specs>
```

Disassociates qos specs from all its associations.

Positional arguments

<qos_specs>   ID of QoS specifications on which to operate.

cinder qos-get-association (v2)

```
usage: cinder --os-volume-api-version 2 qos-get-association <qos_specs>
```

Lists all associations for specified qos specs.

Positional arguments

<qos_specs>   ID of QoS specifications.

cinder qos-key (v2)

```
usage: cinder --os-volume-api-version 2 qos-key <qos_specs> <action> key=value
 [key=value ...]
```

Sets or unsets specifications for a qos spec.

Positional arguments

<qos_specs>   ID of QoS specifications.

<action>   The action. Valid values are 'set' or 'unset.'

key=value   Metadata key and value pair to set or unset. For unset, specify only the key.

cinder qos-list (v2)

```
usage: cinder --os-volume-api-version 2 qos-list
```

Lists qos specs.

cinder qos-show (v2)

```
usage: cinder --os-volume-api-version 2 qos-show <qos_specs>
```

Shows qos specs details.

Positional arguments

<qos_specs>   ID of QoS specifications to show.

cinder quota-class-show (v2)

```
usage: cinder --os-volume-api-version 2 quota-class-show <class>
```

Lists quotas for a quota class.

Positional arguments

<class>   Name of quota class for which to list quotas.

cinder quota-class-update (v2)

```
usage: cinder --os-volume-api-version 2 quota-class-update [--volumes
 <volumes>]
                                    [--snapshots <snapshots>]
                                    [--gigabytes <gigabytes>]
                                    [--volume-type <volume_type_name>]
                                    <class-name>
```

Updates quotas for a quota class.

Positional arguments

<class-name>   Name of quota class for which to set quotas.

Optional arguments

–volumes <volumes>	The new "volumes" quota value. Default=None.
–snapshots <snapshots>	The new "snapshots" quota value. Default=None.
–gigabytes <gigabytes>	The new "gigabytes" quota value. Default=None.
–volume-type <volume_type_name>	Volume type. Default=None.

cinder quota-defaults (v2)

```
usage: cinder --os-volume-api-version 2 quota-defaults <tenant_id>
```

Lists default quotas for a tenant.

Positional arguments

<tenant_id>   ID of tenant for which to list quota defaults.

cinder quota-delete (v2)

```
usage: cinder --os-volume-api-version 2 quota-delete <tenant_id>
```

Delete the quotas for a tenant.

Positional arguments

<tenant_id>   UUID of tenant to delete the quotas for.

cinder quota-show (v2)

```
usage: cinder --os-volume-api-version 2 quota-show <tenant_id>
```

Lists quotas for a tenant.

Positional arguments

<tenant_id>   ID of tenant for which to list quotas.

cinder quota-update (v2)

```
usage: cinder --os-volume-api-version 2 quota-update [--volumes <volumes>] [--
snapshots <snapshots>]
                                  [--gigabytes <gigabytes>]
                                  [--volume-type <volume_type_name>]
                                  <tenant_id>
```

Updates quotas for a tenant.

Positional arguments

<tenant_id>   ID of tenant for which to set quotas.

Optional arguments

–volumes <volumes>   The new "volumes" quota value. Default=None.

–snapshots <snapshots>   The new "snapshots" quota value. Default=None.

–gigabytes <gigabytes>   The new "gigabytes" quota value. Default=None.

–volume-type   Volume type. Default=None.
<volume_type_name>

cinder quota-usage (v2)

```
usage: cinder --os-volume-api-version 2 quota-usage <tenant_id>
```

Lists quota usage for a tenant.

Positional arguments

<tenant_id>   ID of tenant for which to list quota usage.

cinder rate-limits (v2)

```
usage: cinder --os-volume-api-version 2 rate-limits
```

Lists rate limits for a user.

cinder readonly-mode-update (v2)

```
usage: cinder --os-volume-api-version 2 readonly-mode-update <volume> <True|
true|False|false>
```

Updates volume read-only access-mode flag.

Positional arguments

<volume>   ID of volume to update.

<True|true|False|false>   Enables or disables update of volume to read-only access
                                       mode.

cinder rename (v2)

```
usage: cinder --os-volume-api-version 2 rename [--description <description>]
 <volume> [<name>]
```

Renames a volume.

Positional arguments

<volume>   Name or ID of volume to rename.

<name>   New name for volume.

Optional arguments

--description <description>   Volume description. Default=None.

cinder replication-promote (v2)

```
usage: cinder --os-volume-api-version 2 replication-promote <volume>
```

Promote a secondary volume to primary for a relationship.

Positional arguments

<volume>   Name or ID of the volume to promote.

cinder replication-reenable (v2)

```
usage: cinder --os-volume-api-version 2 replication-reenable <volume>
```

Sync the secondary volume with primary for a relationship.

Positional arguments

<volume>   Name or ID of the volume to reenable replication.

cinder reset-state (v2)

```
usage: cinder --os-volume-api-version 2 reset-state [--state <state>] <volume>
 [<volume> ...]
```

Explicitly updates the volume state.

Positional arguments

<volume>   Name or ID of volume to modify.

Optional arguments

–state <state>   The state to assign to the volume. Valid values are "available," "er-
                              ror," "creating," "deleting," and "error_deleting." Default=available.

cinder retype (v2)

```
usage: cinder --os-volume-api-version 2 retype [--migration-policy <never|on-
demand>]
                         <volume> <volume-type>
```

Changes the volume type for a volume.

Positional arguments

<volume>   Name or ID of volume for which to modify type.

<volume-type>   New volume type.

Optional arguments

–migration-policy <never|on-de-   Migration policy during retype of volume.
mand>

cinder service-disable (v2)

```
usage: cinder --os-volume-api-version 2 service-disable [--reason <reason>]
 <hostname> <binary>
```

Disables the service.

Positional arguments

<hostname>   Host name.

<binary>   Service binary.

Optional arguments

–reason <reason>   Reason for disabling service.

cinder service-enable (v2)

```
usage: cinder --os-volume-api-version 2 service-enable <hostname> <binary>
```

Enables the service.

Positional arguments

<hostname>   Host name.

<binary>   Service binary.

cinder service-list (v2)

```
usage: cinder --os-volume-api-version 2 service-list [--host <hostname>] [--
binary <binary>]
```

Lists all services. Filter by host and service binary.

Optional arguments

–host <hostname>   Host name. Default=None.

–binary <binary>   Service binary. Default=None.

cinder set-bootable (v2)

```
usage: cinder --os-volume-api-version 2 set-bootable <volume> <True|true|
False|false>
```

Update bootable status of a volume.

Positional arguments

<volume>   ID of the volume to update.

<True|true|False|false>   Flag to indicate whether volume is bootable.

cinder show (v2)

```
usage: cinder --os-volume-api-version 2 show <volume>
```

Shows volume details.

Positional arguments

<volume>   Name or ID of volume.

cinder snapshot-create (v2)

```
usage: cinder --os-volume-api-version 2 snapshot-create [--force <True|False>]
 [--name <name>]
                              [--description <description>]
```

```
                                                  <volume>
```

Creates a snapshot.

Positional arguments

<volume>   Name or ID of volume to snapshot.

Optional arguments

–force <True|False>   Allows or disallows snapshot of a volume when the
                                           volume is attached to an instance. If set to True, ig-
                                           nores the current status of the volume when attempt-
                                           ing to snapshot it rather than forcing it to be available.
                                           Default=False.

–name <name>   Snapshot name. Default=None.

–description <description>   Snapshot description. Default=None.

cinder snapshot-delete (v2)

```
usage: cinder --os-volume-api-version 2 snapshot-delete <snapshot>
 [<snapshot> ...]
```

Removes one or more snapshots.

Positional arguments

<snapshot>   Name or ID of the snapshot(s) to delete.

cinder snapshot-list (v2)

```
usage: cinder --os-volume-api-version 2 snapshot-list [--all-tenants [<0|1>]]
 [--name <name>]
                                [--status <status>] [--volume-id <volume-id>]
```

Lists all snapshots.

Optional arguments

–all-tenants [<0|1>]   Shows details for all tenants. Admin only.

–name <name>   Filters results by a name. Default=None.

–status <status>   Filters results by a status. Default=None.

–volume-id <volume-id>   Filters results by a volume ID. Default=None.

cinder snapshot-metadata (v2)

```
usage: cinder --os-volume-api-version 2 snapshot-metadata <snapshot> <action>
 <key=value>
```

```
                                              [<key=value> ...]
```

Sets or deletes snapshot metadata.

Positional arguments

<snapshot>   ID of snapshot for which to update metadata.

<action>   The action. Valid values are 'set' or 'unset.'

<key=value>   Metadata key and value pair to set or unset. For unset, specify only the key.

cinder snapshot-metadata-show (v2)

```
usage: cinder --os-volume-api-version 2 snapshot-metadata-show <snapshot>
```

Shows snapshot metadata.

Positional arguments

<snapshot>   ID of snapshot.

cinder snapshot-metadata-update-all (v2)

```
usage: cinder --os-volume-api-version 2 snapshot-metadata-update-all
 <snapshot> <key=value>
                                              [<key=value> ...]
```

Updates snapshot metadata.

Positional arguments

<snapshot>   ID of snapshot for which to update metadata.

<key=value>   Metadata key and value pair to update.

cinder snapshot-rename (v2)

```
usage: cinder --os-volume-api-version 2 snapshot-rename [--description
 <description>]
                                <snapshot> [<name>]
```

Renames a snapshot.

Positional arguments

<snapshot>   Name or ID of snapshot.

<name>   New name for snapshot.

Optional arguments

–description <description>   Snapshot description. Default=None.

cinder snapshot-reset-state (v2)

```
usage: cinder --os-volume-api-version 2 snapshot-reset-state [--state <state>]
                                        <snapshot> [<snapshot> ...]
```

Explicitly updates the snapshot state.

Positional arguments

<snapshot>   Name or ID of snapshot to modify.

Optional arguments

--state <state>   The state to assign to the snapshot. Valid values are "available," "error," "creating," "deleting," and "error_deleting." Default is "available."

cinder snapshot-show (v2)

```
usage: cinder --os-volume-api-version 2 snapshot-show <snapshot>
```

Shows snapshot details.

Positional arguments

<snapshot>   Name or ID of snapshot.

cinder transfer-accept (v2)

```
usage: cinder --os-volume-api-version 2 transfer-accept <transfer> <auth_key>
```

Accepts a volume transfer.

Positional arguments

<transfer>   ID of transfer to accept.

<auth_key>   Authentication key of transfer to accept.

cinder transfer-create (v2)

```
usage: cinder --os-volume-api-version 2 transfer-create [--name <name>]
 <volume>
```

Creates a volume transfer.

Positional arguments

<volume>   Name or ID of volume to transfer.

Optional arguments

--name <name>   Transfer name. Default=None.

cinder transfer-delete (v2)

```
usage: cinder --os-volume-api-version 2 transfer-delete <transfer>
```

Undoes a transfer.

Positional arguments

<transfer>   Name or ID of transfer to delete.

cinder transfer-list (v2)

```
usage: cinder --os-volume-api-version 2 transfer-list
```

Lists all transfers.

cinder transfer-show (v2)

```
usage: cinder --os-volume-api-version 2 transfer-show <transfer>
```

Shows transfer details.

Positional arguments

<transfer>   Name or ID of transfer to accept.

cinder type-create (v2)

```
usage: cinder --os-volume-api-version 2 type-create <name>
```

Creates a volume type.

Positional arguments

<name>   Name of new volume type.

cinder type-delete (v2)

```
usage: cinder --os-volume-api-version 2 type-delete <id>
```

Deletes a volume type.

Positional arguments

<id>   ID of volume type to delete.

cinder type-key (v2)

```
usage: cinder --os-volume-api-version 2 type-key <vtype> <action> <key=value>
 [<key=value> ...]
```

Sets or unsets extra_spec for a volume type.

Positional arguments

<vtype>   Name or ID of volume type.

<action>   The action. Valid values are 'set' or 'unset.'

<key=value>   The extra specs key and value pair to set or unset. For unset, specify only
                     the key.

cinder type-list (v2)

```
usage: cinder --os-volume-api-version 2 type-list
```

Lists available 'volume types'.

cinder unmanage (v2)

```
usage: cinder --os-volume-api-version 2 unmanage <volume>
```

Positional arguments

<volume>   Name or ID of the volume to unmanage.

cinder upload-to-image (v2)

```
usage: cinder --os-volume-api-version 2 upload-to-image [--force <True|False>]
                                [--container-format <container-format>]
                                [--disk-format <disk-format>]
                                <volume> <image-name>
```

Uploads volume to Image Service as an image.

Positional arguments

<volume>   Name or ID of volume to snapshot.

<image-name>   The new image name.

Optional arguments

--force <True|False>   Enables or disables upload of a volume that is attached
                                  to an instance. Default=False.

**--container-format <contain-   Container format type. Default is bare.
er-format>**

--disk-format <disk-format>   Disk format type. Default is raw.

4. Compute command-line client

The **nova** client is the command-line interface (CLI) for the OpenStack Compute API and its extensions. This chapter documents **nova** version 2.22.0.

For help on a specific **nova** command, enter:

```
$ nova help COMMAND
```

nova usage

```
usage: nova [--version] [--debug] [--os-cache] [--timings]
            [--os-auth-token OS_AUTH_TOKEN]
            [--os-tenant-name <auth-tenant-name>]
            [--os-tenant-id <auth-tenant-id>] [--os-region-name <region-name>]
            [--os-auth-system <auth-system>] [--service-type <service-type>]
            [--service-name <service-name>]
            [--volume-service-name <volume-service-name>]
            [--os-endpoint-type <endpoint-type>]
            [--os-compute-api-version <compute-api-ver>]
            [--bypass-url <bypass-url>] [--insecure]
            [--os-cacert <ca-certificate>] [--os-cert <certificate>]
            [--os-key <key>] [--timeout <seconds>] [--os-auth-url OS_AUTH_URL]
            [--os-domain-id OS_DOMAIN_ID] [--os-domain-name OS_DOMAIN_NAME]
            [--os-project-id OS_PROJECT_ID]
            [--os-project-name OS_PROJECT_NAME]
            [--os-project-domain-id OS_PROJECT_DOMAIN_ID]
            [--os-project-domain-name OS_PROJECT_DOMAIN_NAME]
            [--os-trust-id OS_TRUST_ID] [--os-user-id OS_USER_ID]
            [--os-user-name OS_USERNAME]
            [--os-user-domain-id OS_USER_DOMAIN_ID]
            [--os-user-domain-name OS_USER_DOMAIN_NAME]
            [--os-password OS_PASSWORD]
            <subcommand> ...
```

Subcommands

absolute-limits   Print a list of absolute limits for a user

add-fixed-ip   Add new IP address on a network to server.

add-floating-ip   *DEPRECATED*, use floating-ip-associate instead.

add-secgroup   Add a Security Group to a server.

agent-create   Create new agent build.

agent-delete   Delete existing agent build.

agent-list   List all builds.

agent-modify   Modify existing agent build.

aggregate-add-host   Add the host to the specified aggregate.

aggregate-create   Create a new aggregate with the specified details.

aggregate-delete   Delete the aggregate.

aggregate-details   Show details of the specified aggregate.

aggregate-list   Print a list of all aggregates.

aggregate-remove-host   Remove the specified host from the specified aggregate.

aggregate-set-metadata	Update the metadata associated with the aggregate.
aggregate-update	Update the aggregate's name and optionally availability zone.
availability-zone-list	List all the availability zones.
backup	Backup a server by creating a 'backup' type snapshot.
boot	Boot a new server.
clear-password	Clear the admin password for a server.
cloudpipe-configure	Update the VPN IP/port of a cloudpipe instance.
cloudpipe-create	Create a cloudpipe instance for the given project.
cloudpipe-list	Print a list of all cloudpipe instances.
console-log	Get console log output of a server.
credentials	Show user credentials returned from auth.
delete	Immediately shut down and delete specified server(s).
diagnostics	Retrieve server diagnostics.
dns-create	Create a DNS entry for domain, name and IP.
dns-create-private-domain	Create the specified DNS domain.
dns-create-public-domain	Create the specified DNS domain.
dns-delete	Delete the specified DNS entry.
dns-delete-domain	Delete the specified DNS domain.
dns-domains	Print a list of available dns domains.
dns-list	List current DNS entries for domain and IP or domain and name.
endpoints	Discover endpoints that get returned from the authenticate services.
evacuate	Evacuate server from failed host.
fixed-ip-get	Retrieve info on a fixed IP.
fixed-ip-reserve	Reserve a fixed IP.
fixed-ip-unreserve	Unreserve a fixed IP.
flavor-access-add	Add flavor access for the given tenant.
flavor-access-list	Print access information about the given flavor.

flavor-access-remove	Remove flavor access for the given tenant.
flavor-create	Create a new flavor
flavor-delete	Delete a specific flavor
flavor-key	Set or unset extra_spec for a flavor.
flavor-list	Print a list of available 'flavors' (sizes of servers).
flavor-show	Show details about the given flavor.
floating-ip-associate	Associate a floating IP address to a server.
floating-ip-bulk-create	Bulk create floating IPs by range.
floating-ip-bulk-delete	Bulk delete floating IPs by range.
floating-ip-bulk-list	List all floating IPs.
floating-ip-create	Allocate a floating IP for the current tenant.
floating-ip-delete	De-allocate a floating IP.
floating-ip-disassociate	Disassociate a floating IP address from a server.
floating-ip-list	List floating IPs.
floating-ip-pool-list	List all floating IP pools.
get-password	Get the admin password for a server.
get-rdp-console	Get a rdp console to a server.
get-serial-console	Get a serial console to a server.
get-spice-console	Get a spice console to a server.
get-vnc-console	Get a vnc console to a server.
host-action	Perform a power action on a host.
host-describe	Describe a specific host.
host-list	List all hosts by service.
host-update	Update host settings.
hypervisor-list	List hypervisors.
hypervisor-servers	List servers belonging to specific hypervisors.
hypervisor-show	Display the details of the specified hypervisor.
hypervisor-stats	Get hypervisor statistics over all compute nodes.

hypervisor-uptime	Display the uptime of the specified hypervisor.
image-create	Create a new image by taking a snapshot of a running server.
image-delete	Delete specified image(s).
image-list	Print a list of available images to boot from.
image-meta	Set or Delete metadata on an image.
image-show	Show details about the given image.
interface-attach	Attach a network interface to a server.
interface-detach	Detach a network interface from a server.
interface-list	List interfaces attached to a server.
keypair-add	Create a new key pair for use with servers.
keypair-delete	Delete keypair given by its name.
keypair-list	Print a list of keypairs for a user
keypair-show	Show details about the given keypair.
list	List active servers.
list-secgroup	List Security Group(s) of a server.
live-migration	Migrate running server to a new machine.
lock	Lock a server. A normal (non-admin) user will not be able to execute actions on a locked server.
meta	Set or Delete metadata on a server.
migrate	Migrate a server. The new host will be selected by the scheduler.
network-associate-host	Associate host with network.
network-associate-project	Associate project with network.
network-create	Create a network.
network-delete	Delete network by label or id.
network-disassociate	Disassociate host and/or project from the given network.
network-list	Print a list of available networks.
network-show	Show details about the given network.

pause	Pause a server.
quota-class-show	List the quotas for a quota class.
quota-class-update	Update the quotas for a quota class.
quota-defaults	List the default quotas for a tenant.
quota-delete	Delete quota for a tenant/user so their quota will Revert back to default.
quota-show	List the quotas for a tenant/user.
quota-update	Update the quotas for a tenant/user.
rate-limits	Print a list of rate limits for a user
reboot	Reboot a server.
rebuild	Shutdown, re-image, and re-boot a server.
refresh-network	Refresh server network information.
remove-fixed-ip	Remove an IP address from a server.
remove-floating-ip	*DEPRECATED*, use floating-ip-disassociate instead.
remove-secgroup	Remove a Security Group from a server.
rename	Rename a server.
rescue	Reboots a server into rescue mode, which starts the machine from either the initial image or a specified image, attaching the current boot disk as secondary.
reset-network	Reset network of a server.
reset-state	Reset the state of a server.
resize	Resize a server.
resize-confirm	Confirm a previous resize.
resize-revert	Revert a previous resize (and return to the previous VM).
resume	Resume a server.
root-password	Change the admin password for a server.
scrub	Delete networks and security groups associated with a project.
secgroup-add-default-rule	Add a rule to the default security group.

secgroup-add-group-rule	Add a source group rule to a security group.
secgroup-add-rule	Add a rule to a security group.
secgroup-create	Create a security group.
secgroup-delete	Delete a security group.
secgroup-delete-default-rule	Delete a rule from the default security group.
secgroup-delete-group-rule	Delete a source group rule from a security group.
secgroup-delete-rule	Delete a rule from a security group.
secgroup-list	List security groups for the current tenant.
secgroup-list-default-rules	List rules for the default security group.
secgroup-list-rules	List rules for a security group.
secgroup-update	Update a security group.
server-group-create	Create a new server group with the specified details.
server-group-delete	Delete specific server group(s).
server-group-get	Get a specific server group.
server-group-list	Print a list of all server groups.
service-delete	Delete the service.
service-disable	Disable the service.
service-enable	Enable the service.
service-list	Show a list of all running services. Filter by host & binary.
shelve	Shelve a server.
shelve-offload	Remove a shelved server from the compute node.
show	Show details about the given server.
ssh	SSH into a server.
start	Start the server(s).
stop	Stop the server(s).
suspend	Suspend a server.
unlock	Unlock a server.
unpause	Unpause a server.

unrescue	Restart the server from normal boot disk again.
unshelve	Unshelve a server.
usage	Show usage data for a single tenant.
usage-list	List usage data for all tenants.
version-list	List all API versions.
volume-attach	Attach a volume to a server.
volume-create	Add a new volume.
volume-delete	Remove volume(s).
volume-detach	Detach a volume from a server.
volume-list	List all the volumes.
volume-show	Show details about a volume.
volume-snapshot-create	Add a new snapshot.
volume-snapshot-delete	Remove a snapshot.
volume-snapshot-list	List all the snapshots.
volume-snapshot-show	Show details about a snapshot.
volume-type-create	Create a new volume type.
volume-type-delete	Delete a specific volume type.
volume-type-list	Print a list of available 'volume types'.
volume-update	Update volume attachment.
x509-create-cert	Create x509 cert for a user in tenant.
x509-get-root-cert	Fetch the x509 root cert.
bash-completion	Prints all of the commands and options to stdout so that the nova.bash_completion script doesn't have to hard code them.
help	Display help about this program or one of its subcommands.
host-servers-migrate	Migrate all instances of the specified host to other available hosts.
net	*DEPRECATED*, Use tenant-network-show instead.
net-create	*DEPRECATED*, use tenant-network-create instead.

net-delete	*DEPRECATED*, use tenant-network-delete instead.
net-list	*DEPRECATED*, use tenant-network-list instead.
tenant-network-create	Create a tenant network.
tenant-network-delete	Delete a tenant network.
tenant-network-list	List tenant networks.
tenant-network-show	Show a tenant network.
host-evacuate	Evacuate all instances from failed host.
cell-capacities	Get cell capacities for all cells or a given cell.
cell-show	Show details of a given cell.
host-meta	Set or Delete metadata on all instances of a host.
host-evacuate-live	Live migrate all instances of the specified host to other available hosts.
instance-action	Show an action.
instance-action-list	List actions on a server.
baremetal-interface-add	Add a network interface to a baremetal node.
baremetal-interface-list	List network interfaces associated with a baremetal node.
baremetal-interface-remove	Remove a network interface from a baremetal node.
baremetal-node-create	Create a baremetal node.
baremetal-node-delete	Remove a baremetal node and any associated interfaces.
baremetal-node-list	Print list of available baremetal nodes.
baremetal-node-show	Show information about a baremetal node.
migration-list	Print a list of migrations.
force-delete	Force delete a server.
restore	Restore a soft-deleted server.
list-extensions	List all the os-api extensions that are available.

nova optional arguments

–version	show program's version number and exit

–debug	Print debugging output
–os-cache	Use the auth token cache. Defaults to False if `env[OS_CACHE]` is not set.
–timings	Print call timing info
–os-auth-token OS_AUTH_TOKEN	Defaults to `env[OS_AUTH_TOKEN]`
–os-tenant-name <auth-tenant-name>	Defaults to `env[OS_TENANT_NAME]`.
–os-tenant-id <auth-tenant-id>	Defaults to `env[OS_TENANT_ID]`.
–os-region-name <region-name>	Defaults to `env[OS_REGION_NAME]`.
–os-auth-system <auth-system>	Defaults to `env[OS_AUTH_SYSTEM]`.
–service-type <service-type>	Defaults to compute for most actions
–service-name <service-name>	Defaults to `env[NOVA_SERVICE_NAME]`
–volume-service-name <volume-service-name>	Defaults to `env[NOVA_VOLUME_SERVICE_NAME]`
–os-endpoint-type <endpoint-type>	Defaults to `env[NOVA_ENDPOINT_TYPE]`, `env[OS_ENDPOINT_TYPE]` or publicURL.
–os-compute-api-version <compute-api-ver>	Accepts 1.1 or 3, defaults to `env[OS_COMPUTE_API_VERSION]`.
–bypass-url <bypass-url>	Use this API endpoint instead of the Service Catalog. Defaults to `env[NOVACLIENT_BYPASS_URL]`
–insecure	Explicitly allow client to perform "insecure" TLS (https) requests. The server's certificate will not be verified against any certificate authorities. This option should be used with caution.
–os-cacert <ca-certificate>	Specify a CA bundle file to use in verifying a TLS (https) server certificate. Defaults to `env[OS_CACERT]`.
–os-cert <certificate>	Defaults to `env[OS_CERT]`.
–os-key <key>	Defaults to `env[OS_KEY]`.
–timeout <seconds>	Set request timeout (in seconds).
–os-auth-url OS_AUTH_URL	Authentication URL
–os-domain-id OS_DOMAIN_ID	Domain ID to scope to
–os-domain-name OS_DOMAIN_NAME	Domain name to scope to

–os-project-id OS_PROJECT_ID	Project ID to scope to
–os-project-name OS_PROJECT_NAME	Project name to scope to
–os-project-domain-id OS_PROJECT_DOMAIN_ID	Domain ID containing project
–os-project-domain-name OS_PROJECT_DOMAIN_NAME	Domain name containing project
–os-trust-id OS_TRUST_ID	Trust ID
–os-user-id OS_USER_ID	User ID
–os-user-name OS_USERNAME, –os-username OS_USERNAME	Username
–os-user-domain-id OS_USER_DOMAIN_ID	User's domain id
–os-user-domain-name OS_USER_DOMAIN_NAME	User's domain name
–os-password OS_PASSWORD	User's password

nova absolute-limits

```
usage: nova absolute-limits [--tenant [<tenant>]] [--reserved]
```

Print a list of absolute limits for a user

Optional arguments

–tenant [<tenant>]	Display information from single tenant (Admin only).
–reserved	Include reservations count.

nova add-fixed-ip

```
usage: nova add-fixed-ip <server> <network-id>
```

Add new IP address on a network to server.

Positional arguments

<server>	Name or ID of server.
<network-id>	Network ID.

nova add-secgroup

```
usage: nova add-secgroup <server> <secgroup>
```

Add a Security Group to a server.

Positional arguments

<server>   Name or ID of server.

<secgroup>   Name of Security Group.

nova agent-create

```
usage: nova agent-create <os> <architecture> <version> <url> <md5hash>
                         <hypervisor>
```

Create new agent build.

Positional arguments

<os>   type of os.

<architecture>   type of architecture

<version>   version

<url>   url

<md5hash>   md5 hash

<hypervisor>   type of hypervisor.

nova agent-delete

```
usage: nova agent-delete <id>
```

Delete existing agent build.

Positional arguments

<id>   id of the agent-build

nova agent-list

```
usage: nova agent-list [--hypervisor <hypervisor>]
```

List all builds.

Optional arguments

–hypervisor <hypervisor>   type of hypervisor.

nova agent-modify

```
usage: nova agent-modify <id> <version> <url> <md5hash>
```

Modify existing agent build.

Positional arguments

<id>   id of the agent-build

<version>   version

<url>   url

<md5hash>   md5hash

nova aggregate-add-host

```
usage: nova aggregate-add-host <aggregate> <host>
```

Add the host to the specified aggregate.

Positional arguments

<aggregate>   Name or ID of aggregate.

<host>   The host to add to the aggregate.

nova aggregate-create

```
usage: nova aggregate-create <name> [<availability-zone>]
```

Create a new aggregate with the specified details.

Positional arguments

<name>   Name of aggregate.

<availability-zone>   The availability zone of the aggregate (optional).

nova aggregate-delete

```
usage: nova aggregate-delete <aggregate>
```

Delete the aggregate.

Positional arguments

<aggregate>   Name or ID of aggregate to delete.

nova aggregate-details

```
usage: nova aggregate-details <aggregate>
```

Show details of the specified aggregate.

Positional arguments

<aggregate>   Name or ID of aggregate.

nova aggregate-list

```
usage: nova aggregate-list
```

Print a list of all aggregates.

nova aggregate-remove-host

```
usage: nova aggregate-remove-host <aggregate> <host>
```

Remove the specified host from the specified aggregate.

Positional arguments

<aggregate>   Name or ID of aggregate.

<host>   The host to remove from the aggregate.

nova aggregate-set-metadata

```
usage: nova aggregate-set-metadata <aggregate> <key=value> [<key=value> ...]
```

Update the metadata associated with the aggregate.

Positional arguments

<aggregate>   Name or ID of aggregate to update.

<key=value>   Metadata to add/update to aggregate. Specify only the key to delete a
                       metadata item.

nova aggregate-update

```
usage: nova aggregate-update <aggregate> <name> [<availability-zone>]
```

Update the aggregate's name and optionally availability zone.

Positional arguments

<aggregate>   Name or ID of aggregate to update.

<name>   Name of aggregate.

<availability-zone>   The availability zone of the aggregate.

nova availability-zone-list

```
usage: nova availability-zone-list
```

List all the availability zones.

nova backup

```
usage: nova backup <server> <name> <backup-type> <rotation>
```

Backup a server by creating a 'backup' type snapshot.

Positional arguments

<server>   Name or ID of server.

<name>   Name of the backup image.

<backup-type>   The backup type, like "daily" or "weekly".

<rotation>   Int parameter representing how many backups to keep around.

nova baremetal-interface-add

```
usage: nova baremetal-interface-add [--datapath_id <datapath_id>]
                                    [--port_no <port_no>]
                                    <node> <address>
```

Add a network interface to a baremetal node.

Positional arguments

<node>   ID of node

<address>   MAC address of interface

Optional arguments

–datapath_id <datapath_id>   OpenFlow Datapath ID of interface

–port_no <port_no>   OpenFlow port number of interface

nova baremetal-interface-list

```
usage: nova baremetal-interface-list <node>
```

List network interfaces associated with a baremetal node.

Positional arguments

<node>   ID of node

nova baremetal-interface-remove

```
usage: nova baremetal-interface-remove <node> <address>
```

Remove a network interface from a baremetal node.

Positional arguments

<node>   ID of node

<address>   MAC address of interface

nova baremetal-node-create

```
usage: nova baremetal-node-create [--pm_address <pm_address>]
                                  [--pm_user <pm_user>]
                                  [--pm_password <pm_password>]
                                  [--terminal_port <terminal_port>]
                                  <service_host> <cpus> <memory_mb> <local_gb>
                                  <prov_mac_address>
```

Create a baremetal node.

Positional arguments

<service_host>   Name of nova compute host which will control this baremetal node

<cpus>   Number of CPUs in the node

<memory_mb>   Megabytes of RAM in the node

<local_gb>   Gigabytes of local storage in the node

<prov_mac_address>   MAC address to provision the node

Optional arguments

–pm_address <pm_address>   Power management IP for the node

–pm_user <pm_user>   Username for the node's power management

–pm_password <pm_password>   Password for the node's power management

–terminal_port <terminal_port>   ShellInABox port?

nova baremetal-node-delete

```
usage: nova baremetal-node-delete <node>
```

Remove a baremetal node and any associated interfaces.

Positional arguments

<node>   ID of the node to delete.

nova baremetal-node-list

```
usage: nova baremetal-node-list
```

Print list of available baremetal nodes.

nova baremetal-node-show

```
usage: nova baremetal-node-show <node>
```

Show information about a baremetal node.

Positional arguments

<node>   ID of node

nova boot

```
usage: nova boot [--flavor <flavor>] [--image <image>]
                 [--image-with <key=value>] [--boot-volume <volume_id>]
                 [--snapshot <snapshot_id>] [--min-count <number>]
                 [--max-count <number>] [--meta <key=value>]
                 [--file <dst-path=src-path>] [--key-name <key-name>]
                 [--user-data <user-data>]
                 [--availability-zone <availability-zone>]
                 [--security-groups <security-groups>]
                 [--block-device-mapping <dev-name=mapping>]
                 [--block-device key1=value1[,key2=value2...]]
                 [--swap <swap_size>]
                 [--ephemeral size=<size>[,format=<format>]]
                 [--hint <key=value>]
                 [--nic <net-id=net-uuid,v4-fixed-ip=ip-addr,v6-fixed-ip=ip-
addr,port-id=port-uuid>]
                 [--config-drive <value>] [--poll]
                 <name>
```

Boot a new server.

Positional arguments

<name>   Name for the new server

Optional arguments

--flavor <flavor>	Name or ID of flavor (see 'nova flavor-list').
--image <image>	Name or ID of image (see 'nova image-list').
--image-with <key=value>	Image metadata property (see 'nova image- show').
--boot-volume <volume_id>	Volume ID to boot from.
--snapshot <snapshot_id>	Snapshot ID to boot from (will create a volume).
--min-count <number>	Boot at least <number> servers (limited by quota).

–max-count <number>	Boot up to <number> servers (limited by quota).
–meta <key=value>	Record arbitrary key/value metadata to / meta_data.json on the metadata server. Can be specified multiple times.
–file <dst-path=src-path>	Store arbitrary files from <src-path> locally to <dst-path> on the new server. You may store up to 5 files.
–key-name <key-name>	Key name of keypair that should be created earlier with the command keypair-add
–user-data <user-data>	user data file to pass to be exposed by the metadata server.
–availability-zone <availability-zone>	The availability zone for server placement.
–security-groups <security-groups>	Comma separated list of security group names.
–block-device-mapping <dev-name=mapping>	Block device mapping in the format <dev-name>=<id>:<type>:<size(GB)>:<delete-on- terminate>.
–block-device	key1=value1[,key2=value2...] Block device mapping with the keys: id=UUID (image_id, snapshot_id or volume_id only if using source image, snapshot or volume) source=source type (image, snapshot, volume or blank), dest=destination type of the block device (volume or local), bus=device's bus (e.g. uml, lxc, virtio, ...; if omitted, hypervisor driver chooses a suitable default, honoured only if device type is supplied) type=device type (e.g. disk, cdrom, ...; defaults to 'disk') device=name of the device (e.g. vda, xda, ...; if omitted, hypervisor driver chooses suitable device depending on selected bus), size=size of the block device in GB (if omitted, hypervisor driver calculates size), format=device will be formatted (e.g. swap, ntfs, ...; optional), bootindex=integer used for ordering the boot disks (for image backed instances it is equal to 0, for others need to be specified) and shutdown=shutdown behaviour (either preserve or remove, for local destination set to remove).
–swap <swap_size>	Create and attach a local swap block device of <swap_size> MB.
–ephemeral	size=<size>[,format=<format>] Create and attach a local ephemeral block device of <size> GB and format it to <format>.
–hint <key=value>	Send arbitrary key/value pairs to the scheduler for custom use.

–nic <net-id=net-uuid,v4-fixed-ip=ip-addr,v6-fixed-ip=ip-addr,port-id=port-uuid>	Create a NIC on the server. Specify option multiple times to create multiple NICs. net- id: attach NIC to network with this UUID (either port-id or net-id must be provided), v4-fixed-ip: IPv4 fixed address for NIC (optional), v6-fixed-ip: IPv6 fixed address for NIC (optional), port-id: attach NIC to port with this UUID (either port-id or net-id must be provided).
–config-drive <value>	Enable config drive
–poll	Report the new server boot progress until it completes.

nova cell-capacities

```
usage: nova cell-capacities [--cell <cell-name>]
```

Get cell capacities for all cells or a given cell.

Optional arguments

–cell <cell-name>   Name of the cell to get the capacities.

nova cell-show

```
usage: nova cell-show <cell-name>
```

Show details of a given cell.

Positional arguments

<cell-name>   Name of the cell.

nova clear-password

```
usage: nova clear-password <server>
```

Clear the admin password for a server.

Positional arguments

<server>   Name or ID of server.

nova cloudpipe-configure

```
usage: nova cloudpipe-configure <ip address> <port>
```

Update the VPN IP/port of a cloudpipe instance.

Positional arguments

<ip address>   New IP Address.

<port>   New Port.

nova cloudpipe-create

```
usage: nova cloudpipe-create <project_id>
```

Create a cloudpipe instance for the given project.

Positional arguments

<project_id>   UUID of the project to create the cloudpipe for.

nova cloudpipe-list

```
usage: nova cloudpipe-list
```

Print a list of all cloudpipe instances.

nova console-log

```
usage: nova console-log [--length <length>] <server>
```

Get console log output of a server.

Positional arguments

<server>   Name or ID of server.

Optional arguments

--length <length>   Length in lines to tail.

nova credentials

```
usage: nova credentials [--wrap <integer>]
```

Show user credentials returned from auth.

Optional arguments

--wrap <integer>   wrap PKI tokens to a specified length, or 0 to disable

nova delete

```
usage: nova delete <server> [<server> ...]
```

Immediately shut down and delete specified server(s).

Positional arguments

<server>   Name or ID of server(s).

nova diagnostics

```
usage: nova diagnostics <server>
```

Retrieve server diagnostics.

Positional arguments

<server>   Name or ID of server.

nova dns-create

```
usage: nova dns-create [--type <type>] <ip> <name> <domain>
```

Create a DNS entry for domain, name and IP.

Positional arguments

<ip>   IP address

<name>   DNS name

<domain>   DNS domain

Optional arguments

–type <type>   dns type (e.g. "A")

nova dns-create-private-domain

```
usage: nova dns-create-private-domain
                                      [--availability-zone <availability-
zone>]
                                      <domain>
```

Create the specified DNS domain.

Positional arguments

<domain>   DNS domain

Optional arguments

–availability-zone <availabili-ty-zone>   Limit access to this domain to servers in the specified availability zone.

nova dns-create-public-domain

```
usage: nova dns-create-public-domain [--project <project>] <domain>
```

Create the specified DNS domain.

Positional arguments

<domain>   DNS domain

Optional arguments

–project <project>   Limit access to this domain to users of the specified project.

nova dns-delete

```
usage: nova dns-delete <domain> <name>
```

Delete the specified DNS entry.

Positional arguments

<domain>   DNS domain

<name>   DNS name

nova dns-delete-domain

```
usage: nova dns-delete-domain <domain>
```

Delete the specified DNS domain.

Positional arguments

<domain>   DNS domain

nova dns-domains

```
usage: nova dns-domains
```

Print a list of available dns domains.

nova dns-list

```
usage: nova dns-list [--ip <ip>] [--name <name>] <domain>
```

List current DNS entries for domain and IP or domain and name.

Positional arguments

<domain>   DNS domain

Optional arguments

–ip <ip> IP   address

–name <name> DNS   name

nova endpoints

```
usage: nova endpoints
```

Discover endpoints that get returned from the authenticate services.

nova evacuate

```
usage: nova evacuate [--password <password>] [--on-shared-storage]
                     <server> [<host>]
```

Evacuate server from failed host.

Positional arguments

<server>   Name or ID of server.

<host>   Name or ID of the target host. If no host is specified, the scheduler will choose one.

Optional arguments

–password <password>   Set the provided admin password on the evacuated server. Not applicable with on-shared-storage flag

–on-shared-storage   Specifies whether server files are located on shared storage

nova fixed-ip-get

```
usage: nova fixed-ip-get <fixed_ip>
```

Retrieve info on a fixed IP.

Positional arguments

<fixed_ip>   Fixed IP Address.

nova fixed-ip-reserve

```
usage: nova fixed-ip-reserve <fixed_ip>
```

Reserve a fixed IP.

Positional arguments

<fixed_ip>   Fixed IP Address.

nova fixed-ip-unreserve

```
usage: nova fixed-ip-unreserve <fixed_ip>
```

Unreserve a fixed IP.

Positional arguments

<fixed_ip>   Fixed IP Address.

nova flavor-access-add

```
usage: nova flavor-access-add <flavor> <tenant_id>
```

Add flavor access for the given tenant.

Positional arguments

<flavor>   Flavor name or ID to add access for the given tenant.

<tenant_id>   Tenant ID to add flavor access for.

nova flavor-access-list

```
usage: nova flavor-access-list [--flavor <flavor>] [--tenant <tenant_id>]
```

Print access information about the given flavor.

Optional arguments

–flavor <flavor>   Filter results by flavor name or ID.

–tenant <tenant_id>   Filter results by tenant ID.

nova flavor-access-remove

```
usage: nova flavor-access-remove <flavor> <tenant_id>
```

Remove flavor access for the given tenant.

Positional arguments

<flavor>   Flavor name or ID to remove access for the given tenant.

<tenant_id>   Tenant ID to remove flavor access for.

nova flavor-create

```
usage: nova flavor-create [--ephemeral <ephemeral>] [--swap <swap>]
                          [--rxtx-factor <factor>] [--is-public <is-public>]
                          <name> <id> <ram> <disk> <vcpus>
```

Create a new flavor

Positional arguments

<name>   Name of the new flavor

<id>	Unique ID (integer or UUID) for the new flavor. If specifying 'auto', a UUID will be generated as id
<ram>	Memory size in MB
<disk>	Disk size in GB
<vcpus>	Number of vcpus

Optional arguments

–ephemeral <ephemeral>	Ephemeral space size in GB (default 0)
–swap <swap>	Swap space size in MB (default 0)
–rxtx-factor <factor>	RX/TX factor (default 1)
–is-public <is-public>	Make flavor accessible to the public (default true)

nova flavor-delete

```
usage: nova flavor-delete <flavor>
```

Delete a specific flavor

Positional arguments

<flavor>	Name or ID of the flavor to delete

nova flavor-key

```
usage: nova flavor-key <flavor> <action> <key=value> [<key=value> ...]
```

Set or unset extra_spec for a flavor.

Positional arguments

<flavor>	Name or ID of flavor
<action>	Actions: 'set' or 'unset'
<key=value>	Extra_specs to set/unset (only key is necessary on unset)

nova flavor-list

```
usage: nova flavor-list [--extra-specs] [--all]
```

Print a list of available 'flavors' (sizes of servers).

Optional arguments

–extra-specs	Get extra-specs of each flavor.

–all   Display all flavors (Admin only).

nova flavor-show

```
usage: nova flavor-show <flavor>
```

Show details about the given flavor.

Positional arguments

<flavor>   Name or ID of flavor

nova floating-ip-associate

```
usage: nova floating-ip-associate [--fixed-address <fixed_address>]
                                  <server> <address>
```

Associate a floating IP address to a server.

Positional arguments

<server>   Name or ID of server.

<address>   IP Address.

Optional arguments

–fixed-address <fixed_address>   Fixed IP Address to associate with.

nova floating-ip-bulk-create

```
usage: nova floating-ip-bulk-create [--pool <pool>] [--interface <interface>]
                                    <range>
```

Bulk create floating IPs by range.

Positional arguments

<range>   Address range to create

Optional arguments

–pool <pool>   Pool for new Floating IPs

–interface <interface>   Interface for new Floating IPs

nova floating-ip-bulk-delete

```
usage: nova floating-ip-bulk-delete <range>
```

Bulk delete floating IPs by range.

Positional arguments

<range>   Address range to delete

nova floating-ip-bulk-list

```
usage: nova floating-ip-bulk-list [--host <host>]
```

List all floating IPs.

Optional arguments

–host <host>   Filter by host

nova floating-ip-create

```
usage: nova floating-ip-create [<floating-ip-pool>]
```

Allocate a floating IP for the current tenant.

Positional arguments

<floating-ip-pool>   Name of Floating IP Pool. (Optional)

nova floating-ip-delete

```
usage: nova floating-ip-delete <address>
```

De-allocate a floating IP.

Positional arguments

<address>   IP of Floating IP.

nova floating-ip-disassociate

```
usage: nova floating-ip-disassociate <server> <address>
```

Disassociate a floating IP address from a server.

Positional arguments

<server>   Name or ID of server.

<address>   IP Address.

nova floating-ip-list

```
usage: nova floating-ip-list [--all-tenants]
```

List floating IPs.

--all-tenants   Display floatingips from all tenants (Admin only).

nova floating-ip-pool-list

```
usage: nova floating-ip-pool-list
```

List all floating IP pools.

nova force-delete

```
usage: nova force-delete <server>
```

Force delete a server.

Positional arguments

<server>   Name or ID of server.

nova get-password

```
usage: nova get-password <server> [<private-key>]
```

Get the admin password for a server.

Positional arguments

<server>   Name or ID of server.

<private-key>   Private key (used locally to decrypt password) (Optional). When speci-
                        fied, the command displays the clear (decrypted) VM password. When
                        not specified, the ciphered VM password is displayed.

nova get-rdp-console

```
usage: nova get-rdp-console <server> <console-type>
```

Get a rdp console to a server.

Positional arguments

<server>   Name or ID of server.

<console-type>   Type of rdp console ("rdp-html5").

nova get-serial-console

```
usage: nova get-serial-console [--console_type CONSOLE_TYPE] <server>
```

Get a serial console to a server.

Positional arguments

<server>   Name or ID of server.

Optional arguments

--console_type CONSOLE_TYPE   Type of serial console, default="serial".

nova get-spice-console

```
usage: nova get-spice-console <server> <console-type>
```

Get a spice console to a server.

Positional arguments

<server>   Name or ID of server.

<console-type>   Type of spice console ("spice-html5").

nova get-vnc-console

```
usage: nova get-vnc-console <server> <console-type>
```

Get a vnc console to a server.

Positional arguments

<server>   Name or ID of server.

<console-type>   Type of vnc console ("novnc" or "xvpvnc").

nova host-action

```
usage: nova host-action [--action <action>] <hostname>
```

Perform a power action on a host.

Positional arguments

<hostname>   Name of host.

Optional arguments

--action <action> A   power action: startup, reboot, or shutdown.

nova host-describe

```
usage: nova host-describe <hostname>
```

Describe a specific host.

Positional arguments

<hostname>   Name of host.

nova host-evacuate

```
usage: nova host-evacuate [--target_host <target_host>] [--on-shared-storage]
                          <host>
```

Evacuate all instances from failed host.

Positional arguments

<host>   Name of host.

Optional arguments

–target_host <target_host>   Name of target host. If no host is specified the sched-
                                        uler will select a target.

–on-shared-storage   Specifies whether all instances files are on shared stor-
                                        age

nova host-evacuate-live

```
usage: nova host-evacuate-live [--target-host <target_host>] [--block-migrate]
                               [--disk-over-commit]
                               <host>
```

Live migrate all instances of the specified host to other available hosts.

Positional arguments

<host>   Name of host.

Optional arguments

–target-host <target_host>   Name of target host.

–block-migrate   Enable block migration.

–disk-over-commit   Enable disk overcommit.

nova host-list

```
usage: nova host-list [--zone <zone>]
```

List all hosts by service.

Optional arguments

–zone <zone>   Filters the list, returning only those hosts in the availability zone
                          <zone>.

nova host-meta

```
usage: nova host-meta <host> <action> <key=value> [<key=value> ...]
```

Set or Delete metadata on all instances of a host.

Positional arguments

<host>   Name of host.

<action>   Actions: 'set' or 'delete'

<key=value>   Metadata to set or delete (only key is necessary on delete)

nova host-servers-migrate

```
usage: nova host-servers-migrate <host>
```

Migrate all instances of the specified host to other available hosts.

Positional arguments

<host>   Name of host.

nova host-update

```
usage: nova host-update [--status <enable|disable>]
                        [--maintenance <enable|disable>]
                        <hostname>
```

Update host settings.

Positional arguments

<hostname>   Name of host.

Optional arguments

--status <enable|disable>   Either enable or disable a host.

--maintenance <enable|disable>   Either put or resume host to/from maintenance.

nova hypervisor-list

```
usage: nova hypervisor-list [--matching <hostname>]
```

List hypervisors.

Optional arguments

--matching <hostname>   List hypervisors matching the given <hostname>.

nova hypervisor-servers

```
usage: nova hypervisor-servers <hostname>
```

List servers belonging to specific hypervisors.

Positional arguments

<hostname>	The hypervisor hostname (or pattern) to search for.

nova hypervisor-show

```
usage: nova hypervisor-show <hypervisor>
```

Display the details of the specified hypervisor.

Positional arguments

<hypervisor>	Name or ID of the hypervisor to show the details of.

nova hypervisor-stats

```
usage: nova hypervisor-stats
```

Get hypervisor statistics over all compute nodes.

nova hypervisor-uptime

```
usage: nova hypervisor-uptime <hypervisor>
```

Display the uptime of the specified hypervisor.

Positional arguments

<hypervisor>	Name or ID of the hypervisor to show the uptime of.

nova image-create

```
usage: nova image-create [--show] [--poll] <server> <name>
```

Create a new image by taking a snapshot of a running server.

Positional arguments

<server>	Name or ID of server.

<name>	Name of snapshot.

Optional arguments

–show	Print image info.

–poll   Report the snapshot progress and poll until image creation is complete.

nova image-delete

```
usage: nova image-delete <image> [<image> ...]
```

Delete specified image(s).

Positional arguments

<image>   Name or ID of image(s).

nova image-list

```
usage: nova image-list [--limit <limit>]
```

Print a list of available images to boot from.

Optional arguments

–limit <limit>   Number of images to return per request.

nova image-meta

```
usage: nova image-meta <image> <action> <key=value> [<key=value> ...]
```

Set or Delete metadata on an image.

Positional arguments

<image>   Name or ID of image

<action>   Actions: 'set' or 'delete'

<key=value>   Metadata to add/update or delete (only key is necessary on delete)

nova image-show

```
usage: nova image-show <image>
```

Show details about the given image.

Positional arguments

<image>   Name or ID of image

nova instance-action

```
usage: nova instance-action <server> <request_id>
```

Show an action.

Positional arguments

<server>   Name or UUID of the server to show an action for.

<request_id>   Request ID of the action to get.

nova instance-action-list

```
usage: nova instance-action-list <server>
```

List actions on a server.

Positional arguments

<server>   Name or UUID of the server to list actions for.

nova interface-attach

```
usage: nova interface-attach [--port-id <port_id>] [--net-id <net_id>]
                             [--fixed-ip <fixed_ip>]
                             <server>
```

Attach a network interface to a server.

Positional arguments

<server>   Name or ID of server.

Optional arguments

–port-id <port_id>   Port ID.

–net-id <net_id>   Network ID

–fixed-ip <fixed_ip>   Requested fixed IP.

nova interface-detach

```
usage: nova interface-detach <server> <port_id>
```

Detach a network interface from a server.

Positional arguments

<server>   Name or ID of server.

<port_id>   Port ID.

nova interface-list

```
usage: nova interface-list <server>
```

List interfaces attached to a server.

Positional arguments

<server>   Name or ID of server.

nova keypair-add

```
usage: nova keypair-add [--pub-key <pub-key>] <name>
```

Create a new key pair for use with servers.

Positional arguments

<name>   Name of key.

Optional arguments

–pub-key <pub-key>   Path to a public ssh key.

nova keypair-delete

```
usage: nova keypair-delete <name>
```

Delete keypair given by its name.

Positional arguments

<name>   Keypair name to delete.

nova keypair-list

```
usage: nova keypair-list
```

Print a list of keypairs for a user

nova keypair-show

```
usage: nova keypair-show <keypair>
```

Show details about the given keypair.

Positional arguments

<keypair>   Name or ID of keypair

nova list

```
usage: nova list [--reservation-id <reservation-id>] [--ip <ip-regexp>]
                 [--ip6 <ip6-regexp>] [--name <name-regexp>]
                 [--instance-name <name-regexp>] [--status <status>]
                 [--flavor <flavor>] [--image <image>] [--host <hostname>]
                 [--all-tenants [<0|1>]] [--tenant [<tenant>]]
                 [--user [<user>]] [--deleted] [--fields <fields>] [--minimal]
```

```
                    [--sort <key>[:<direction>]]
```

List active servers.

Optional arguments

–reservation-id <reservation-id>	Only return servers that match reservation-id.
–ip <ip-regexp>	Search with regular expression match by IP address.
–ip6 <ip6-regexp>	Search with regular expression match by IPv6 address.
–name <name-regexp>	Search with regular expression match by name
–instance-name <name-regexp>	Search with regular expression match by server name.
–status <status>	Search by server status
–flavor <flavor>	Search by flavor name or ID
–image <image>	Search by image name or ID
–host <hostname>	Search servers by hostname to which they are assigned (Admin only).
–all-tenants [<0|1>]	Display information from all tenants (Admin only).
–tenant [<tenant>]	Display information from single tenant (Admin only). The –all-tenants option must also be provided.
–user [<user>]	Display information from single user (Admin only).
–deleted	Only display deleted servers (Admin only).
–fields <fields>	Comma-separated list of fields to display. Use the show command to see which fields are available.
–minimal	Get only uuid and name.
–sort <key>[:<direction>]	Comma-separated list of sort keys and directions in the form of <key>[:<asc|desc>]. The direction defaults to descending if not specified.

nova list-extensions

```
usage: nova list-extensions
```

List all the os-api extensions that are available.

nova list-secgroup

```
usage: nova list-secgroup <server>
```

List Security Group(s) of a server.

Positional arguments

<server>   Name or ID of server.

nova live-migration

```
usage: nova live-migration [--block-migrate] [--disk-over-commit]
                               <server> [<host>]
```

Migrate running server to a new machine.

Positional arguments

<server>   Name or ID of server.

<host>   destination host name.

Optional arguments

--block-migrate   True in case of block_migration. (Default=False:live_migration)

--disk-over-commit   Allow overcommit.(Default=False)

nova lock

```
usage: nova lock <server>
```

Lock a server. A normal (non-admin) user will not be able to execute actions on a locked server.

Positional arguments

<server>   Name or ID of server.

nova meta

```
usage: nova meta <server> <action> <key=value> [<key=value> ...]
```

Set or Delete metadata on a server.

Positional arguments

<server>   Name or ID of server

<action>   Actions: 'set' or 'delete'

<key=value>   Metadata to set or delete (only key is necessary on delete)

nova migrate

```
usage: nova migrate [--poll] <server>
```

Migrate a server. The new host will be selected by the scheduler.

Positional arguments

<server>   Name or ID of server.

Optional arguments

–poll   Report the server migration progress until it completes.

nova migration-list

```
usage: nova migration-list [--host <host>] [--status <status>]
                           [--cell_name <cell_name>]
```

Print a list of migrations.

Optional arguments

–host <host>   Fetch migrations for the given host.

–status <status>   Fetch migrations for the given status.

–cell_name <cell_name>   Fetch migrations for the given cell_name.

nova net

```
usage: nova net <network_id>
```

DEPRECATED, Use tenant-network-show instead.

Positional arguments

<network_id>   ID of network

nova net-create

```
usage: nova net-create <network_label> <cidr>
```

DEPRECATED, use tenant-network-create instead.

Positional arguments

<network_label>   Network label (ex. my_new_network)

<cidr>   IP block to allocate from (ex. 172.16.0.0/24 or 2001:DB8::/64)

nova net-delete

```
usage: nova net-delete <network_id>
```

DEPRECATED, use tenant-network-delete instead.

Positional arguments

<network_id>   ID of network

nova net-list

```
usage: nova net-list
```

DEPRECATED, use tenant-network-list instead.

nova network-associate-host

```
usage: nova network-associate-host <network> <host>
```

Associate host with network.

Positional arguments

<network>   uuid of network

<host>   Name of host

nova network-associate-project

```
usage: nova network-associate-project <network>
```

Associate project with network.

Positional arguments

<network>   uuid of network

nova network-create

```
usage: nova network-create [--fixed-range-v4 <x.x.x.x/yy>]
                           [--fixed-range-v6 CIDR_V6] [--vlan <vlan id>]
                           [--vlan-start <vlan start>] [--vpn <vpn start>]
                           [--gateway GATEWAY] [--gateway-v6 GATEWAY_V6]
                           [--bridge <bridge>]
                           [--bridge-interface <bridge interface>]
                           [--multi-host <'T'|'F'>] [--dns1 <DNS Address>]
                           [--dns2 <DNS Address>] [--uuid <network uuid>]
                           [--fixed-cidr <x.x.x.x/yy>]
                           [--project-id <project id>] [--priority <number>]
                           [--mtu MTU] [--enable-dhcp <'T'|'F'>]
                           [--dhcp-server DHCP_SERVER]
                           [--share-address <'T'|'F'>]
                           [--allowed-start ALLOWED_START]
                           [--allowed-end ALLOWED_END]
                           <network_label>
```

Create a network.

Positional arguments

<network_label>   Label for network

Optional arguments

–fixed-range-v4 <x.x.x.x/yy>   IPv4 subnet (ex: 10.0.0.0/8)

–fixed-range-v6   CIDR_V6 IPv6 subnet (ex: fe80::/64

–vlan <vlan id>   The vlan ID to be assigned to the project.

–vlan-start <vlan start>   First vlan ID to be assigned to the project. Subsequent vlan IDs will be assigned incrementally.

–vpn <vpn start>   vpn start

–gateway GATEWAY   gateway

–gateway-v6   GATEWAY_V6 IPv6 gateway

–bridge <bridge>   VIFs on this network are connected to this bridge.

–bridge-interface <bridge interface>   The bridge is connected to this interface.

–multi-host <'T'|'F'>   Multi host

–dns1 <DNS Address>   First DNS

–dns2 <DNS Address>   Second DNS

–uuid <network uuid>   Network UUID

–fixed-cidr <x.x.x.x/yy>   IPv4 subnet for fixed IPs (ex: 10.20.0.0/16)

–project-id <project id>   Project ID

–priority <number>   Network interface priority

–mtu MTU MTU   for network

–enable-dhcp <'T'|'F'>   Enable dhcp

–dhcp-server DHCP_SERVER   Dhcp-server (defaults to gateway address)

–share-address <'T'|'F'>   Share address

–allowed-start ALLOWED_START   Start of allowed addresses for instances

–allowed-end ALLOWED_END   End of allowed addresses for instances

nova network-delete

```
usage: nova network-delete <network>
```

Delete network by label or id.

Positional arguments

<network> uuid or label of network

nova network-disassociate

```
usage: nova network-disassociate [--host-only [<0|1>]]
                                 [--project-only [<0|1>]]
                                 <network>
```

Disassociate host and/or project from the given network.

Positional arguments

<network> uuid of network

Optional arguments

–host-only [<0|1>]

–project-only [<0|1>]

nova network-list

```
usage: nova network-list [--fields <fields>]
```

Print a list of available networks.

Optional arguments

–fields <fields> Comma-separated list of fields to display. Use the show command to see which fields are available.

nova network-show

```
usage: nova network-show <network>
```

Show details about the given network.

Positional arguments

<network> uuid or label of network

nova pause

```
usage: nova pause <server>
```

Pause a server.

Positional arguments

<server>   Name or ID of server.

nova quota-class-show

```
usage: nova quota-class-show <class>
```

List the quotas for a quota class.

Positional arguments

<class>   Name of quota class to list the quotas for.

nova quota-class-update

```
usage: nova quota-class-update [--instances <instances>] [--cores <cores>]
                               [--ram <ram>] [--floating-ips <floating-ips>]
                               [--fixed-ips <fixed-ips>]
                               [--metadata-items <metadata-items>]
                               [--injected-files <injected-files>]
                               [--injected-file-content-bytes <injected-file-
content-bytes>]
                               [--injected-file-path-bytes <injected-file-
path-bytes>]
                               [--key-pairs <key-pairs>]
                               [--security-groups <security-groups>]
                               [--security-group-rules <security-group-rules>]
                               [--server-groups <server-groups>]
                               [--server-group-members <server-group-members>]
                               <class>
```

Update the quotas for a quota class.

Positional arguments

<class>   Name of quota class to set the quotas for.

Optional arguments

–instances <instances>   New value for the "instances" quota.

–cores <cores>   New value for the "cores" quota.

–ram <ram>   New value for the "ram" quota.

–floating-ips <floating-ips>   New value for the "floating-ips" quota.

–fixed-ips <fixed-ips>   New value for the "fixed-ips" quota.

**–metadata-items <metada-
ta-items>**   New value for the "metadata-items" quota.

–injected-files <injected-files> New value for the "injected-files" quota.

–injected-file-content-bytes <in-jected-file-content-bytes>	New value for the "injected-file-content- bytes" quota.
–injected-file-path-bytes <inject-ed-file-path-bytes>	New value for the "injected-file-path-bytes" quota.
–key-pairs <key-pairs>	New value for the "key-pairs" quota.
–security-groups <securi-ty-groups>	New value for the "security-groups" quota.
–security-group-rules <securi-ty-group-rules>	New value for the "security-group-rules" quota.
–server-groups <server-groups>	New value for the "server-groups" quota.
–server-group-members <serv-er-group-members>	New value for the "server-group-members" quota.

nova quota-defaults

```
usage: nova quota-defaults [--tenant <tenant-id>]
```

List the default quotas for a tenant.

Optional arguments

–tenant <tenant-id> ID	of tenant to list the default quotas for.

nova quota-delete

```
usage: nova quota-delete --tenant <tenant-id> [--user <user-id>]
```

Delete quota for a tenant/user so their quota will Revert back to default.

Optional arguments

–tenant <tenant-id> ID	of tenant to delete quota for.
–user <user-id> ID	of user to delete quota for.

nova quota-show

```
usage: nova quota-show [--tenant <tenant-id>] [--user <user-id>]
```

List the quotas for a tenant/user.

Optional arguments

–tenant <tenant-id> ID	of tenant to list the quotas for.
–user <user-id> ID	of user to list the quotas for.

nova quota-update

```
usage: nova quota-update [--user <user-id>] [--instances <instances>]
                         [--cores <cores>] [--ram <ram>]
                         [--floating-ips <floating-ips>]
                         [--fixed-ips <fixed-ips>]
                         [--metadata-items <metadata-items>]
                         [--injected-files <injected-files>]
                         [--injected-file-content-bytes <injected-file-
content-bytes>]
                         [--injected-file-path-bytes <injected-file-path-
bytes>]
                         [--key-pairs <key-pairs>]
                         [--security-groups <security-groups>]
                         [--security-group-rules <security-group-rules>]
                         [--server-groups <server-groups>]
                         [--server-group-members <server-group-members>]
                         [--force]
                         <tenant-id>
```

Update the quotas for a tenant/user.

Positional arguments

<tenant-id>   ID of tenant to set the quotas for.

Optional arguments

--user <user-id> ID	of user to set the quotas for.
--instances <instances>	New value for the "instances" quota.
--cores <cores>	New value for the "cores" quota.
--ram <ram>	New value for the "ram" quota.
--floating-ips <floating-ips>	New value for the "floating-ips" quota.
--fixed-ips <fixed-ips>	New value for the "fixed-ips" quota.
--metadata-items <metadata-items>	New value for the "metadata-items" quota.
--injected-files <injected-files>	New value for the "injected-files" quota.
--injected-file-content-bytes <injected-file-content-bytes>	New value for the "injected-file-content- bytes" quota.
--injected-file-path-bytes <injected-file-path-bytes>	New value for the "injected-file-path-bytes" quota.
--key-pairs <key-pairs>	New value for the "key-pairs" quota.
--security-groups <security-groups>	New value for the "security-groups" quota.

–security-group-rules <securi- ty-group-rules>	New value for the "security-group-rules" quota.
–server-groups <server-groups>	New value for the "server-groups" quota.
–server-group-members <serv- er-group-members>	New value for the "server-group-members" quota.
–force	Whether force update the quota even if the already used and reserved exceeds the new quota

nova rate-limits

```
usage: nova rate-limits
```

Print a list of rate limits for a user

nova reboot

```
usage: nova reboot [--hard] [--poll] <server>
```

Reboot a server.

Positional arguments

<server>   Name or ID of server.

Optional arguments

–hard   Perform a hard reboot (instead of a soft one).

–poll   Poll until reboot is complete.

nova rebuild

```
usage: nova rebuild [--rebuild-password <rebuild-password>] [--poll]
                    [--minimal] [--preserve-ephemeral] [--name <name>]
                    [--meta <key=value>] [--file <dst-path=src-path>]
                    <server> <image>
```

Shutdown, re-image, and re-boot a server.

Positional arguments

<server>   Name or ID of server.

<image>   Name or ID of new image.

Optional arguments

–rebuild-password <re- build-password>	Set the provided admin password on the rebuilt server.
–poll	Report the server rebuild progress until it completes.

–minimal	Skips flavor/image lookups when showing servers
–preserve-ephemeral	Preserve the default ephemeral storage partition on re-build.
–name <name>	Name for the new server
–meta <key=value>	Record arbitrary key/value metadata to / meta_data.json on the metadata server. Can be speci-fied multiple times.
–file <dst-path=src-path>	Store arbitrary files from <src-path> locally to <dst-path> on the new server. You may store up to 5 files.

nova refresh-network

```
usage: nova refresh-network <server>
```

Refresh server network information.

Positional arguments

<server>   Name or ID of a server for which the network cache should be refreshed from neutron (Admin only).

nova remove-fixed-ip

```
usage: nova remove-fixed-ip <server> <address>
```

Remove an IP address from a server.

Positional arguments

<server>   Name or ID of server.

<address>   IP Address.

nova remove-secgroup

```
usage: nova remove-secgroup <server> <secgroup>
```

Remove a Security Group from a server.

Positional arguments

<server>   Name or ID of server.

<secgroup>   Name of Security Group.

nova rename

```
usage: nova rename <server> <name>
```

Rename a server.

Positional arguments

<server>   Name (old name) or ID of server.

<name>   New name for the server.

nova rescue

```
usage: nova rescue [--password <password>] [--image <image>] <server>
```

Reboots a server into rescue mode, which starts the machine from either the initial image or a specified image, attaching the current boot disk as secondary.

Positional arguments

<server>   Name or ID of server.

Optional arguments

–password <password>   The admin password to be set in the rescue environment.

–image <image>   The image to rescue with.

nova reset-network

```
usage: nova reset-network <server>
```

Reset network of a server.

Positional arguments

<server>   Name or ID of server.

nova reset-state

```
usage: nova reset-state [--active] <server> [<server> ...]
```

Reset the state of a server.

Positional arguments

<server>   Name or ID of server(s).

Optional arguments

–active   Request the server be reset to "active" state instead of "error" state (the default).

nova resize

```
usage: nova resize [--poll] <server> <flavor>
```

Resize a server.

Positional arguments

<server>   Name or ID of server.

<flavor>   Name or ID of new flavor.

Optional arguments

–poll   Report the server resize progress until it completes.

nova resize-confirm

```
usage: nova resize-confirm <server>
```

Confirm a previous resize.

Positional arguments

<server>   Name or ID of server.

nova resize-revert

```
usage: nova resize-revert <server>
```

Revert a previous resize (and return to the previous VM).

Positional arguments

<server>   Name or ID of server.

nova restore

```
usage: nova restore <server>
```

Restore a soft-deleted server.

Positional arguments

<server>   Name or ID of server.

nova resume

```
usage: nova resume <server>
```

Resume a server.

Positional arguments

<server>   Name or ID of server.

nova root-password

```
usage: nova root-password <server>
```

Change the admin password for a server.

Positional arguments

<server>   Name or ID of server.

nova scrub

```
usage: nova scrub <project_id>
```

Delete networks and security groups associated with a project.

Positional arguments

<project_id>   The ID of the project.

nova secgroup-add-default-rule

```
usage: nova secgroup-add-default-rule <ip-proto> <from-port> <to-port> <cidr>
```

Add a rule to the default security group.

Positional arguments

<ip-proto>   IP protocol (icmp, tcp, udp).

<from-port>   Port at start of range.

<to-port>   Port at end of range.

<cidr>   CIDR for address range.

nova secgroup-add-group-rule

```
usage: nova secgroup-add-group-rule <secgroup> <source-group> <ip-proto>
                                    <from-port> <to-port>
```

Add a source group rule to a security group.

Positional arguments

<secgroup>   ID or name of security group.

<source-group>   ID or name of source group.

<ip-proto>   IP protocol (icmp, tcp, udp).

<from-port>   Port at start of range.

<to-port>   Port at end of range.

nova secgroup-add-rule

```
usage: nova secgroup-add-rule <secgroup> <ip-proto> <from-port> <to-port>
                              <cidr>
```

Add a rule to a security group.

Positional arguments

<secgroup>   ID or name of security group.

<ip-proto>   IP protocol (icmp, tcp, udp).

<from-port>   Port at start of range.

<to-port>   Port at end of range.

<cidr>   CIDR for address range.

nova secgroup-create

```
usage: nova secgroup-create <name> <description>
```

Create a security group.

Positional arguments

<name>   Name of security group.

<description>   Description of security group.

nova secgroup-delete

```
usage: nova secgroup-delete <secgroup>
```

Delete a security group.

Positional arguments

<secgroup>   ID or name of security group.

nova secgroup-delete-default-rule

```
usage: nova secgroup-delete-default-rule <ip-proto> <from-port> <to-port>
                                         <cidr>
```

Delete a rule from the default security group.

Positional arguments

<ip-proto>   IP protocol (icmp, tcp, udp).

<from-port>   Port at start of range.

<to-port>   Port at end of range.

<cidr>   CIDR for address range.

nova secgroup-delete-group-rule

```
usage: nova secgroup-delete-group-rule <secgroup> <source-group> <ip-proto>
                                       <from-port> <to-port>
```

Delete a source group rule from a security group.

Positional arguments

<secgroup>   ID or name of security group.

<source-group>   ID or name of source group.

<ip-proto>   IP protocol (icmp, tcp, udp).

<from-port>   Port at start of range.

<to-port>   Port at end of range.

nova secgroup-delete-rule

```
usage: nova secgroup-delete-rule <secgroup> <ip-proto> <from-port> <to-port>
                                 <cidr>
```

Delete a rule from a security group.

Positional arguments

<secgroup>   ID or name of security group.

<ip-proto>   IP protocol (icmp, tcp, udp).

<from-port>   Port at start of range.

<to-port>   Port at end of range.

<cidr>   CIDR for address range.

nova secgroup-list

```
usage: nova secgroup-list [--all-tenants [<0|1>]]
```

List security groups for the current tenant.

Optional arguments

--all-tenants [<0|1>]   Display information from all tenants (Admin only).

nova secgroup-list-default-rules

```
usage: nova secgroup-list-default-rules
```

List rules for the default security group.

nova secgroup-list-rules

```
usage: nova secgroup-list-rules <secgroup>
```

List rules for a security group.

Positional arguments

<secgroup>   ID or name of security group.

nova secgroup-update

```
usage: nova secgroup-update <secgroup> <name> <description>
```

Update a security group.

Positional arguments

<secgroup>   ID or name of security group.

<name>   Name of security group.

<description>   Description of security group.

nova server-group-create

```
usage: nova server-group-create <name> [<policy> [<policy> ...]]
```

Create a new server group with the specified details.

Positional arguments

<name>   Server group name.

<policy>   Policies for the server groups ("affinity" or "anti-affinity")

nova server-group-delete

```
usage: nova server-group-delete <id> [<id> ...]
```

Delete specific server group(s).

Positional arguments

<id>   Unique ID(s) of the server group to delete

nova server-group-get

```
usage: nova server-group-get <id>
```

Get a specific server group.

Positional arguments

<id>   Unique ID of the server group to get

nova server-group-list

```
usage: nova server-group-list
```

Print a list of all server groups.

nova service-delete

```
usage: nova service-delete <id>
```

Delete the service.

Positional arguments

<id>   Id of service.

nova service-disable

```
usage: nova service-disable [--reason <reason>] <hostname> <binary>
```

Disable the service.

Positional arguments

<hostname>   Name of host.

<binary>   Service binary.

Optional arguments

–reason <reason>   Reason for disabling service.

nova service-enable

```
usage: nova service-enable <hostname> <binary>
```

Enable the service.

Positional arguments

<hostname>   Name of host.

<binary>   Service binary.

nova service-list

```
usage: nova service-list [--host <hostname>] [--binary <binary>]
```

Show a list of all running services. Filter by host & binary.

Optional arguments

–host <hostname>   Name of host.

–binary <binary>   Service binary.

nova shelve

```
usage: nova shelve <server>
```

Shelve a server.

Positional arguments

<server>   Name or ID of server.

nova shelve-offload

```
usage: nova shelve-offload <server>
```

Remove a shelved server from the compute node.

Positional arguments

<server>   Name or ID of server.

nova show

```
usage: nova show [--minimal] <server>
```

Show details about the given server.

Positional arguments

<server>   Name or ID of server.

Optional arguments

–minimal   Skips flavor/image lookups when showing servers

nova ssh

```
usage: nova ssh [--port PORT] [--address-type ADDRESS_TYPE]
                [--network <network>] [--ipv6] [--login <login>] [-i IDENTITY]
```

```
                [--extra-opts EXTRA]
                <server>
```

SSH into a server.

Positional arguments

<server>   Name or ID of server.

Optional arguments

–port PORT	Optional flag to indicate which port to use for ssh. (Default=22)
–address-type ADDRESS_TYPE	Optional flag to indicate which IP type to use. Possible values includes fixed and floating (the Default).
–network <network>	Network to use for the ssh.
–ipv6	Optional flag to indicate whether to use an IPv6 address attached to a server. (Defaults to IPv4 address)
–login <login>	Login to use.
-i IDENTITY, –identity IDENTITY	Private key file, same as the -i option to the ssh command.
–extra-opts EXTRA	Extra options to pass to ssh. see: man ssh

nova start

```
usage: nova start <server> [<server> ...]
```

Start the server(s).

Positional arguments

<server>   Name or ID of server(s).

nova stop

```
usage: nova stop <server> [<server> ...]
```

Stop the server(s).

Positional arguments

<server>   Name or ID of server(s).

nova suspend

```
usage: nova suspend <server>
```

Suspend a server.

Positional arguments

<server>   Name or ID of server.

nova tenant-network-create

```
usage: nova tenant-network-create <network_label> <cidr>
```

Create a tenant network.

Positional arguments

<network_label>   Network label (ex. my_new_network)

<cidr>   IP block to allocate from (ex. 172.16.0.0/24 or 2001:DB8::/64)

nova tenant-network-delete

```
usage: nova tenant-network-delete <network_id>
```

Delete a tenant network.

Positional arguments

<network_id>   ID of network

nova tenant-network-list

```
usage: nova tenant-network-list
```

List tenant networks.

nova tenant-network-show

```
usage: nova tenant-network-show <network_id>
```

Show a tenant network.

Positional arguments

<network_id>   ID of network

nova unlock

```
usage: nova unlock <server>
```

Unlock a server.

Positional arguments

<server>   Name or ID of server.

nova unpause

```
usage: nova unpause <server>
```

Unpause a server.

Positional arguments

<server>   Name or ID of server.

nova unrescue

```
usage: nova unrescue <server>
```

Restart the server from normal boot disk again.

Positional arguments

<server>   Name or ID of server.

nova unshelve

```
usage: nova unshelve <server>
```

Unshelve a server.

Positional arguments

<server>   Name or ID of server.

nova usage

```
usage: nova usage [--start <start>] [--end <end>] [--tenant <tenant-id>]
```

Show usage data for a single tenant.

Optional arguments

–start <start>	Usage range start date ex 2012-01-20 (default: 4 weeks ago)
–end <end>	Usage range end date, ex 2012-01-20 (default: tomorrow)
–tenant <tenant-id> UUID	of tenant to get usage for.

nova usage-list

```
usage: nova usage-list [--start <start>] [--end <end>]
```

List usage data for all tenants.

Optional arguments

--start <start>   Usage range start date ex 2012-01-20 (default: 4 weeks ago)

--end <end>   Usage range end date, ex 2012-01-20 (default: tomorrow)

nova version-list

```
usage: nova version-list
```

List all API versions.

nova volume-attach

```
usage: nova volume-attach <server> <volume> [<device>]
```

Attach a volume to a server.

Positional arguments

<server>   Name or ID of server.

<volume>   ID of the volume to attach.

<device>   Name of the device e.g. /dev/vdb. Use "auto" for autoassign (if supported)

nova volume-create

```
usage: nova volume-create [--snapshot-id <snapshot-id>]
                          [--image-id <image-id>]
                          [--display-name <display-name>]
                          [--display-description <display-description>]
                          [--volume-type <volume-type>]
                          [--availability-zone <availability-zone>]
                          <size>
```

Add a new volume.

Positional arguments

<size>   Size of volume in GB

Optional arguments

--snapshot-id <snapshot-id>   Optional snapshot id to create the volume from. (Default=None)

--image-id <image-id>   Optional image id to create the volume from. (Default=None)

--display-name <display-name>   Optional volume name. (Default=None)

--display-description <display-description>   Optional volume description. (Default=None)

–volume-type <volume-type>   Optional volume type. (Default=None)

–availability-zone <availabili-   Optional Availability Zone for volume. (Default=None)
ty-zone>

nova volume-delete

```
usage: nova volume-delete <volume> [<volume> ...]
```

Remove volume(s).

Positional arguments

<volume>   Name or ID of the volume(s) to delete.

nova volume-detach

```
usage: nova volume-detach <server> <volume>
```

Detach a volume from a server.

Positional arguments

<server>   Name or ID of server.

<volume>   ID of the volume to detach.

nova volume-list

```
usage: nova volume-list [--all-tenants [<0|1>]]
```

List all the volumes.

Optional arguments

–all-tenants [<0|1>]   Display information from all tenants (Admin only).

nova volume-show

```
usage: nova volume-show <volume>
```

Show details about a volume.

Positional arguments

<volume>   Name or ID of the volume.

nova volume-snapshot-create

```
usage: nova volume-snapshot-create [--force <True|False>]
```

```
                                        [--display-name <display-name>]
                                        [--display-description <display-
description>]

                                        <volume-id>
```

Add a new snapshot.

Positional arguments

<volume-id>   ID of the volume to snapshot

Optional arguments

–force <True|False>   Optional flag to indicate whether to snapshot a volume
                                     even if its attached to a server. (Default=False)

–display-name <display-name>   Optional snapshot name. (Default=None)

–display-description <dis-   Optional snapshot description. (Default=None)
play-description>

nova volume-snapshot-delete

```
usage: nova volume-snapshot-delete <snapshot>
```

Remove a snapshot.

Positional arguments

<snapshot>   Name or ID of the snapshot to delete.

nova volume-snapshot-list

```
usage: nova volume-snapshot-list
```

List all the snapshots.

nova volume-snapshot-show

```
usage: nova volume-snapshot-show <snapshot>
```

Show details about a snapshot.

Positional arguments

<snapshot>   Name or ID of the snapshot.

nova volume-type-create

```
usage: nova volume-type-create <name>
```

Create a new volume type.

Positional arguments

<name>   Name of the new volume type

nova volume-type-delete

```
usage: nova volume-type-delete <id>
```

Delete a specific volume type.

Positional arguments

<id>   Unique ID of the volume type to delete

nova volume-type-list

```
usage: nova volume-type-list
```

Print a list of available 'volume types'.

nova volume-update

```
usage: nova volume-update <server> <attachment> <volume>
```

Update volume attachment.

Positional arguments

<server>   Name or ID of server.

<attachment>   Attachment ID of the volume.

<volume>   ID of the volume to attach.

nova x509-create-cert

```
usage: nova x509-create-cert [<private-key-filename>] [<x509-cert-filename>]
```

Create x509 cert for a user in tenant.

Positional arguments

<private-key-filename>   Filename for the private key [Default: pk.pem]

<x509-cert-filename>   Filename for the X.509 certificate [Default: cert.pem]

nova x509-get-root-cert

```
usage: nova x509-get-root-cert [<filename>]
```

Fetch the x509 root cert.

Positional arguments

<filename>   Filename to write the x509 root cert.

5. Identity service command-line client

The **keystone** client is the command-line interface (CLI) for the OpenStack Identity API and its extensions. This chapter documents **keystone** version `1.2.0`.

For help on a specific **keystone** command, enter:

```
$ keystone help COMMAND
```

keystone usage

```
usage: keystone [--version] [--debug] [--os-username <auth-user-name>]
                [--os-password <auth-password>]
```

```
                    [--os-tenant-name <auth-tenant-name>]
                    [--os-tenant-id <tenant-id>] [--os-auth-url <auth-url>]
                    [--os-region-name <region-name>]
                    [--os-identity-api-version <identity-api-version>]
                    [--os-token <service-token>]
                    [--os-endpoint <service-endpoint>] [--os-cache]
                    [--force-new-token] [--stale-duration <seconds>] [--insecure]
                    [--os-cacert <ca-certificate>] [--os-cert <certificate>]
                    [--os-key <key>] [--timeout <seconds>]
                    <subcommand> ...
```

Subcommands

catalog	List service catalog, possibly filtered by service.
ec2-credentials-create	Create EC2-compatible credentials for user per tenant.
ec2-credentials-delete	Delete EC2-compatible credentials.
ec2-credentials-get	Display EC2-compatible credentials.
ec2-credentials-list	List EC2-compatible credentials for a user.
endpoint-create	Create a new endpoint associated with a service.
endpoint-delete	Delete a service endpoint.
endpoint-get	Find endpoint filtered by a specific attribute or service type.
endpoint-list	List configured service endpoints.
password-update	Update own password.
role-create	Create new role.
role-delete	Delete role.
role-get	Display role details.
role-list	List all roles.
service-create	Add service to Service Catalog.
service-delete	Delete service from Service Catalog.
service-get	Display service from Service Catalog.
service-list	List all services in Service Catalog.
tenant-create	Create new tenant.
tenant-delete	Delete tenant.
tenant-get	Display tenant details.
tenant-list	List all tenants.

tenant-update	Update tenant name, description, enabled status.
token-get	Display the current user token.
user-create	Create new user.
user-delete	Delete user.
user-get	Display user details.
user-list	List users.
user-password-update	Update user password.
user-role-add	Add role to user.
user-role-list	List roles granted to a user.
user-role-remove	Remove role from user.
user-update	Update user's name, email, and enabled status.
discover	Discover Keystone servers, supported API versions and extensions.
bootstrap	Grants a new role to a new user on a new tenant, after creating each.
bash-completion	Prints all of the commands and options to stdout.
help	Display help about this program or one of its subcommands.

keystone optional arguments

--version	Shows the client version and exits.
--debug	Prints debugging output onto the console, this includes the curl request and response calls. Helpful for debugging and understanding the API calls.
--os-username <auth-user-name>	Name used for authentication with the OpenStack Identity service. Defaults to `env[OS_USERNAME]`.
--os-password <auth-password>	Password used for authentication with the OpenStack Identity service. Defaults to `env[OS_PASSWORD]`.
--os-tenant-name <auth-tenant-name>	Tenant to request authorization on. Defaults to `env[OS_TENANT_NAME]`.
--os-tenant-id <tenant-id>	Tenant to request authorization on. Defaults to `env[OS_TENANT_ID]`.
--os-auth-url <auth-url>	Specify the Identity endpoint to use for authentication. Defaults to `env[OS_AUTH_URL]`.

–os-region-name <region-name>	Specify the region to use. Defaults to `env[OS_REGION_NAME]`.
–os-identity-api-version <identity-api-version>	Specify Identity API version to use. Defaults to `env[OS_IDENTITY_API_VERSION]` or 2.0.
–os-token <service-token>	Specify an existing token to use instead of retrieving one via authentication (e.g. with username & password). Defaults to `env[OS_SERVICE_TOKEN]`.
–os-endpoint <service-endpoint>	Specify an endpoint to use instead of retrieving one from the service catalog (via authentication). Defaults to `env[OS_SERVICE_ENDPOINT]`.
–os-cache	Use the auth token cache. Defaults to `env[OS_CACHE]`.
–force-new-token	If the keyring is available and in use, token will always be stored and fetched from the keyring until the token has expired. Use this option to request a new token and replace the existing one in the keyring.
–stale-duration <seconds>	Stale duration (in seconds) used to determine whether a token has expired when retrieving it from keyring. This is useful in mitigating process or network delays. Default is 30 seconds.
–insecure	Explicitly allow client to perform "insecure" TLS (https) requests. The server's certificate will not be verified against any certificate authorities. This option should be used with caution.
–os-cacert <ca-certificate>	Specify a CA bundle file to use in verifying a TLS (https) server certificate. Defaults to `env[OS_CACERT]`.
–os-cert <certificate>	Defaults to `env[OS_CERT]`.
–os-key <key>	Defaults to `env[OS_KEY]`.
–timeout <seconds>	Set request timeout (in seconds).

keystone bootstrap

```
usage: keystone bootstrap [--user-name <user-name>] --pass <password>
                          [--role-name <role-name>]
                          [--tenant-name <tenant-name>]
```

Grants a new role to a new user on a new tenant, after creating each.

Arguments

–user-name <user-name>	The name of the user to be created (default="admin").
–pass <password>	The password for the new user.

–role-name <role-name>   The name of the role to be created and granted to the user (default="admin").

–tenant-name <tenant-name>   The name of the tenant to be created (default="admin").

keystone catalog

```
usage: keystone catalog [--service <service-type>]
```

List service catalog, possibly filtered by service.

Arguments

–service <service-type>   Service type to return.

keystone discover

```
usage: keystone discover
```

Discover Keystone servers, supported API versions and extensions.

keystone ec2-credentials-create

```
usage: keystone ec2-credentials-create [--user-id <user-id>]
                                       [--tenant-id <tenant-id>]
```

Create EC2-compatible credentials for user per tenant.

Arguments

–user-id <user-id>   User ID for which to create credentials. If not specified, the authenticated user will be used.

–tenant-id <tenant-id>   Tenant ID for which to create credentials. If not specified, the authenticated tenant ID will be used.

keystone ec2-credentials-delete

```
usage: keystone ec2-credentials-delete [--user-id <user-id>] --access
                                       <access-key>
```

Delete EC2-compatible credentials.

Arguments

–user-id <user-id>   User ID.

–access <access-key>   Access Key.

keystone ec2-credentials-get

```
usage: keystone ec2-credentials-get [--user-id <user-id>] --access
```

```
                                    <access-key>
```

Display EC2-compatible credentials.

Arguments

–user-id <user-id>   User ID.

–access <access-key>   Access Key.

keystone ec2-credentials-list

```
usage: keystone ec2-credentials-list [--user-id <user-id>]
```

List EC2-compatible credentials for a user.

Arguments

–user-id <user-id>   User ID.

keystone endpoint-create

```
usage: keystone endpoint-create [--region <endpoint-region>] --service
                                <service> --publicurl <public-url>
                                [--adminurl <admin-url>]
                                [--internalurl <internal-url>]
```

Create a new endpoint associated with a service.

Arguments

–region <endpoint-region>   Endpoint region.

–service <service>, –service-id   Name or ID of service associated with endpoint.
<service>, –service_id <service>

–publicurl <public-url>   Public URL endpoint.

–adminurl <admin-url>   Admin URL endpoint.

–internalurl <internal-url>   Internal URL endpoint.

keystone endpoint-delete

```
usage: keystone endpoint-delete <endpoint-id>
```

Delete a service endpoint.

Arguments

<endpoint-id>   ID of endpoint to delete.

keystone endpoint-get

```
usage: keystone endpoint-get --service <service-type>
                             [--endpoint-type <endpoint-type>]
                             [--attr <service-attribute>] [--value <value>]
```

Find endpoint filtered by a specific attribute or service type.

Arguments

–service <service-type>	Service type to select.
–endpoint-type <end-point-type>	Endpoint type to select.
–attr <service-attribute>	Service attribute to match for selection.
–value <value>	Value of attribute to match.

keystone endpoint-list

```
usage: keystone endpoint-list
```

List configured service endpoints.

keystone password-update

```
usage: keystone password-update [--current-password <current-password>]
                                [--new-password  <new-password>]
```

Update own password.

Arguments

–current-password <cur-rent-password>	Current password, Defaults to the password as set by –os-password or `env[OS_PASSWORD]`.
–new-password <new-pass-word>	Desired new password.

keystone role-create

```
usage: keystone role-create --name <role-name>
```

Create new role.

Arguments

–name <role-name>	Name of new role.

keystone role-delete

```
usage: keystone role-delete <role>
```

Delete role.

Arguments

<role>   Name or ID of role to delete.

keystone role-get

```
usage: keystone role-get <role>
```

Display role details.

Arguments

<role>   Name or ID of role to display.

keystone role-list

```
usage: keystone role-list
```

List all roles.

keystone service-create

```
usage: keystone service-create --type <type> [--name <name>]
                               [--description <service-description>]
```

Add service to Service Catalog.

Arguments

–type <type>	Service type (one of: identity, compute, network, image, object-store, or other service identifier string).
–name <name>	Name of new service (must be unique).
–description <service-description>	Description of service.

keystone service-delete

```
usage: keystone service-delete <service>
```

Delete service from Service Catalog.

Arguments

<service>   Name or ID of service to delete.

keystone service-get

```
usage: keystone service-get <service>
```

Display service from Service Catalog.

Arguments

<service>   Name or ID of service to display.

keystone service-list

```
usage: keystone service-list
```

List all services in Service Catalog.

keystone tenant-create

```
usage: keystone tenant-create --name <tenant-name>
                              [--description <tenant-description>]
                              [--enabled <true|false>]
```

Create new tenant.

Arguments

–name <tenant-name>	New tenant name (must be unique).
–description <tenant-descrip-tion>	Description of new tenant. Default is none.
–enabled <true|false>	Initial tenant enabled status. Default is true.

keystone tenant-delete

```
usage: keystone tenant-delete <tenant>
```

Delete tenant.

Arguments

<tenant>   Name or ID of tenant to delete.

keystone tenant-get

```
usage: keystone tenant-get <tenant>
```

Display tenant details.

Arguments

<tenant>   Name or ID of tenant to display.

keystone tenant-list

```
usage: keystone tenant-list
```

List all tenants.

keystone tenant-update

```
usage: keystone tenant-update [--name <tenant_name>]
                              [--description <tenant-description>]
                              [--enabled <true|false>]
                              <tenant>
```

Update tenant name, description, enabled status.

Arguments

–name <tenant_name>	Desired new name of tenant.
–description <tenant-description>	Desired new description of tenant.
–enabled <true|false>	Enable or disable tenant.
<tenant>	Name or ID of tenant to update.

keystone token-get

```
usage: keystone token-get [--wrap <integer>]
```

Display the current user token.

Arguments

–wrap <integer>	Wrap PKI tokens to a specified length, or 0 to disable.

keystone user-create

```
usage: keystone user-create --name <user-name> [--tenant <tenant>]
                            [--pass [<pass>]] [--email <email>]
                            [--enabled <true|false>]
```

Create new user.

Arguments

–name <user-name>	New user name (must be unique).
–tenant <tenant>, –tenant-id <tenant>	New user default tenant.
–pass [<pass>]	New user password; required for some auth backends.
–email <email>	New user email address.
–enabled <true|false>	Initial user enabled status. Default is true.

keystone user-delete

```
usage: keystone user-delete <user>
```

Delete user.

Arguments

\<user\>   Name or ID of user to delete.

keystone user-get

```
usage: keystone user-get <user>
```

Display user details.

Arguments

\<user\>   Name or ID of user to display.

keystone user-list

```
usage: keystone user-list [--tenant <tenant>]
```

List users.

Arguments

–tenant \<tenant\>, –tenant-id   Tenant; lists all users if not specified.
\<tenant\>

keystone user-password-update

```
usage: keystone user-password-update [--pass <password>] <user>
```

Update user password.

Arguments

–pass \<password\>   Desired new password.

\<user\>   Name or ID of user to update password.

keystone user-role-add

```
usage: keystone user-role-add --user <user> --role <role> [--tenant <tenant>]
```

Add role to user.

Arguments

–user \<user\>, –user-id \<user\>, –   Name or ID of user.
user_id \<user\>

–role <role>, –role-id <role>, –   Name or ID of role.
role_id <role>

–tenant <tenant>, –tenant-id   Name or ID of tenant.
<tenant>

keystone user-role-list

```
usage: keystone user-role-list [--user <user>] [--tenant <tenant>]
```

List roles granted to a user.

Arguments

–user <user>, –user-id <user>   List roles granted to specified user.

–tenant <tenant>, –tenant-id   List only roles granted on specified tenant.
<tenant>

keystone user-role-remove

```
usage: keystone user-role-remove --user <user> --role <role>
                                 [--tenant <tenant>]
```

Remove role from user.

Arguments

–user <user>, –user-id <user>, –   Name or ID of user.
user_id <user>

–role <role>, –role-id <role>, –   Name or ID of role.
role_id <role>

–tenant <tenant>, –tenant-id   Name or ID of tenant.
<tenant>

keystone user-update

```
usage: keystone user-update [--name <user-name>] [--email <email>]
                            [--enabled <true|false>]
                            <user>
```

Update user's name, email, and enabled status.

Arguments

–name <user-name>   Desired new user name.

–email <email>   Desired new email address.

–enabled <true|false>   Enable or disable user.

<user>   Name or ID of user to update.

6. Image Service command-line client

The **glance** client is the command-line interface (CLI) for the OpenStack Image Service API and its extensions. This chapter documents **glance** version `0.16.1`.

For help on a specific **glance** command, enter:

```
$ glance help COMMAND
```

glance usage

```
usage: glance [--version] [-d] [-v] [--get-schema] [--timeout TIMEOUT]
              [--no-ssl-compression] [-f] [--os-image-url OS_IMAGE_URL]
              [--os-image-api-version OS_IMAGE_API_VERSION] [-k]
              [--os-cert OS_CERT] [--cert-file OS_CERT] [--os-key OS_KEY]
              [--key-file OS_KEY] [--os-cacert <ca-certificate-file>]
              [--ca-file OS_CACERT] [--os-username OS_USERNAME]
              [--os-user-id OS_USER_ID]
              [--os-user-domain-id OS_USER_DOMAIN_ID]
              [--os-user-domain-name OS_USER_DOMAIN_NAME]
              [--os-project-id OS_PROJECT_ID]
              [--os-project-name OS_PROJECT_NAME]
              [--os-project-domain-id OS_PROJECT_DOMAIN_ID]
              [--os-project-domain-name OS_PROJECT_DOMAIN_NAME]
              [--os-password OS_PASSWORD] [--os-tenant-id OS_TENANT_ID]
              [--os-tenant-name OS_TENANT_NAME] [--os-auth-url OS_AUTH_URL]
              [--os-region-name OS_REGION_NAME]
              [--os-auth-token OS_AUTH_TOKEN]
              [--os-service-type OS_SERVICE_TYPE]
              [--os-endpoint-type OS_ENDPOINT_TYPE]
              <subcommand> ...
```

Subcommands

image-create   Create a new image.

image-delete   Delete specified image(s).

image-download   Download a specific image.

image-list   List images you can access.

image-show   Describe a specific image.

image-update   Update a specific image.

member-create   Share a specific image with a tenant.

member-delete   Remove a shared image from a tenant.

member-list   Describe sharing permissions by image or tenant.

bash-completion   Prints arguments for bash_completion.

help   Display help about this program or one of its subcommands.

glance optional arguments

–version   show program's version number and exit

-d, –debug   Defaults to `env[GLANCECLIENT_DEBUG]`.

-v, –verbose   Print more verbose output

–get-schema   Ignores cached copy and forces retrieval of schema that generates portions of the help text. Ignored with API version 1.

–timeout TIMEOUT   Number of seconds to wait for a response

–no-ssl-compression   Disable SSL compression when using https.

-f, –force   Prevent select actions from requesting user confirmation.

–os-image-url OS_IMAGE_URL   Defaults to `env[OS_IMAGE_URL]`. If the provided image url contains a a version number and `–os-image-api-version` is omitted the version of the URL will be picked as the image api version to use.

–os-image-api-version OS_IMAGE_API_VERSION   Defaults to `env[OS_IMAGE_API_VERSION]` or 1.

-k, –insecure   Explicitly allow glanceclient to perform "insecure SSL" (https) requests. The server's certificate will not be verified against any certificate authorities. This option should be used with caution.

–os-cert OS_CERT   Path of certificate file to use in SSL connection. This file can optionally be prepended with the private key.

–cert-file OS_CERT   *DEPRECATED!* Use –os-cert.

–os-key OS_KEY   Path of client key to use in SSL connection. This option is not necessary if your key is prepended to your cert file.

–key-file OS_KEY   *DEPRECATED!* Use –os-key.

–os-cacert <ca-certificate-file>   Path of CA TLS certificate(s) used to verify the remote server's certificate. Without this option glance looks for the default system CA certificates.

–ca-file OS_CACERT   *DEPRECATED!* Use –os-cacert.

–os-username OS_USERNAME	Defaults to `env[OS_USERNAME]`.
–os-user-id OS_USER_ID	Defaults to `env[OS_USER_ID]`.
–os-user-domain-id OS_USER_DOMAIN_ID	Defaults to `env[OS_USER_DOMAIN_ID]`.
–os-user-domain-name OS_USER_DOMAIN_NAME	Defaults to `env[OS_USER_DOMAIN_NAME]`.
–os-project-id OS_PROJECT_ID	Another way to specify tenant ID. This option is mutually exclusive with --os-tenant-id. Defaults to `env[OS_PROJECT_ID]`.
–os-project-name OS_PROJECT_NAME	Another way to specify tenant name. This option is mutually exclusive with --os-tenant-name. Defaults to `env[OS_PROJECT_NAME]`.
–os-project-domain-id OS_PROJECT_DOMAIN_ID	Defaults to `env[OS_PROJECT_DOMAIN_ID]`.
–os-project-domain-name OS_PROJECT_DOMAIN_NAME	Defaults to `env[OS_PROJECT_DOMAIN_NAME]`.
–os-password OS_PASSWORD	Defaults to `env[OS_PASSWORD]`.
–os-tenant-id OS_TENANT_ID	Defaults to `env[OS_TENANT_ID]`.
–os-tenant-name OS_TENANT_NAME	Defaults to `env[OS_TENANT_NAME]`.
–os-auth-url OS_AUTH_URL	Defaults to `env[OS_AUTH_URL]`.
–os-region-name OS_REGION_NAME	Defaults to `env[OS_REGION_NAME]`.
–os-auth-token OS_AUTH_TOKEN	Defaults to `env[OS_AUTH_TOKEN]`.
–os-service-type OS_SERVICE_TYPE	Defaults to `env[OS_SERVICE_TYPE]`.
–os-endpoint-type OS_ENDPOINT_TYPE	Defaults to `env[OS_ENDPOINT_TYPE]`.

Image Service API v1 commands

glance image-create

```
usage: glance image-create [--id <IMAGE_ID>] [--name <NAME>] [--store <STORE>]
                           [--disk-format <DISK_FORMAT>]
                           [--container-format <CONTAINER_FORMAT>]
                           [--owner <TENANT_ID>] [--size <SIZE>]
                           [--min-disk <DISK_GB>] [--min-ram <DISK_RAM>]
```

```
                                 [--location <IMAGE_URL>] [--file <FILE>]
                                 [--checksum <CHECKSUM>] [--copy-from <IMAGE_URL>]
                                 [--is-public {True,False}]
                                 [--is-protected {True,False}]
                                 [--property <key=value>] [--human-readable]
                                 [--progress]
```

Create a new image.

Optional arguments

–id <IMAGE_ID> ID	of image to reserve.
–name <NAME>	Name of image.
–store <STORE>	Store to upload image to.
–disk-format <DISK_FORMAT>	Disk format of image. Acceptable formats: ami, ari, aki, vhd, vmdk, raw, qcow2, vdi, and iso.
–container-format <CONTAINER_FORMAT>	Container format of image. Acceptable formats: ami, ari, aki, bare, and ovf.
–owner <TENANT_ID>	Tenant who should own image.
–size <SIZE>	Size of image data (in bytes). Only used with '– location' and '–copy_from'.
–min-disk <DISK_GB>	Minimum size of disk needed to boot image (in giga-bytes).
–min-ram <DISK_RAM>	Minimum amount of ram needed to boot image (in megabytes).
–location <IMAGE_URL>	URL where the data for this image already resides. For example, if the image data is stored in swift, you could specify 'swift+http://tenant%3Aaccount:key@auth_ url/v2.0/container/obj'. (Note: '%3A' is ':' URL encoded.)
–file <FILE>	Local file that contains disk image to be uploaded during creation. Alternatively, images can be passed to the client via stdin.
–checksum <CHECKSUM>	Hash of image data used Glance can use for verification. Provide a md5 checksum here.
–copy-from <IMAGE_URL>	Similar to '–location' in usage, but this indicates that the Glance server should immediately copy the data and store it in its configured image store.
–is-public {True,False}	Make image accessible to the public.
–is-protected {True,False}	Prevent image from being deleted.
–property <key=value>	Arbitrary property to associate with image. May be used multiple times.

–human-readable   Print image size in a human-friendly format.

–progress   Show upload progress bar.

glance image-delete

```
usage: glance image-delete <IMAGE> [<IMAGE> ...]
```

Delete specified image(s).

Positional arguments

<IMAGE>   Name or ID of image(s) to delete.

glance image-list

```
usage: glance image-list [--name <NAME>] [--status <STATUS>]
                         [--container-format <CONTAINER_FORMAT>]
                         [--disk-format <DISK_FORMAT>] [--size-min <SIZE>]
                         [--size-max <SIZE>] [--property-filter <KEY=VALUE>]
                         [--page-size <SIZE>] [--human-readable]
                         [--sort-key {name,status,container_format,
disk_format,size,id,created_at,updated_at}]
                         [--sort-dir {asc,desc}] [--is-public {True,False}]
                         [--owner <TENANT_ID>] [--all-tenants]
```

List images you can access.

Optional arguments

–name <NAME>	Filter images to those that have this name.
–status <STATUS>	Filter images to those that have this status.
–container-format <CONTAINER_FORMAT>	Filter images to those that have this container format. Acceptable formats: ami, ari, aki, bare, and ovf.
–disk-format <DISK_FORMAT>	Filter images to those that have this disk format. Acceptable formats: ami, ari, aki, vhd, vmdk, raw, qcow2, vdi, and iso.
–size-min <SIZE>	Filter images to those with a size greater than this.
–size-max <SIZE>	Filter images to those with a size less than this.
–property-filter <KEY=VALUE>	Filter images by a user-defined image property.
–page-size <SIZE>	Number of images to request in each paginated request.
–human-readable	Print image size in a human-friendly format.
–sort-key {name,status,container_format,disk_format,size,id,created_at,updated_at}	Sort image list by specified field.
–sort-dir {asc,desc}	Sort image list in specified direction.

–is-public {True,False}	Allows the user to select a listing of public or non public images.
–owner <TENANT_ID>	Display only images owned by this tenant id. Filtering occurs on the client side so may be inefficient. This option is mainly intended for admin use. Use an empty string (") to list images with no owner. Note: This option overrides the –is-public argument if present. Note: the v2 API supports more efficient server-side owner based filtering.
–all-tenants	Allows the admin user to list all images irrespective of the image's owner or is_public value.

glance image-show

```
usage: glance image-show [--human-readable] [--max-column-width <integer>]
                         <IMAGE>
```

Describe a specific image.

Positional arguments

<IMAGE>   Name or ID of image to describe.

Optional arguments

–human-readable	Print image size in a human-friendly format.
–max-column-width <integer>	The max column width of the printed table.

glance image-update

```
usage: glance image-update [--name <NAME>] [--disk-format <DISK_FORMAT>]
                           [--container-format <CONTAINER_FORMAT>]
                           [--owner <TENANT_ID>] [--size <SIZE>]
                           [--min-disk <DISK_GB>] [--min-ram <DISK_RAM>]
                           [--location <IMAGE_URL>] [--file <FILE>]
                           [--checksum <CHECKSUM>] [--copy-from <IMAGE_URL>]
                           [--is-public {True,False}]
                           [--is-protected {True,False}]
                           [--property <key=value>] [--purge-props]
                           [--human-readable] [--progress]
                           <IMAGE>
```

Update a specific image.

Positional arguments

<IMAGE>   Name or ID of image to modify.

Optional arguments

–name <NAME>	Name of image.

–disk-format <DISK_FORMAT>	Disk format of image. Acceptable formats: ami, ari, aki, vhd, vmdk, raw, qcow2, vdi, and iso.
–container-format <CONTAINER_FORMAT>	Container format of image. Acceptable formats: ami, ari, aki, bare, and ovf.
–owner <TENANT_ID>	Tenant who should own image.
–size <SIZE>	Size of image data (in bytes).
–min-disk <DISK_GB>	Minimum size of disk needed to boot image (in gigabytes).
–min-ram <DISK_RAM>	Minimum amount of ram needed to boot image (in megabytes).
–location <IMAGE_URL>	URL where the data for this image already resides. For example, if the image data is stored in swift, you could specify 'swift+http://tenant%3Aaccount:key@auth_ url/v2.0/container/obj'. (Note: '%3A' is ':' URL encoded.)
–file <FILE>	Local file that contains disk image to be uploaded during update. Alternatively, images can be passed to the client via stdin.
–checksum <CHECKSUM>	Hash of image data used Glance can use for verification.
–copy-from <IMAGE_URL>	Similar to '–location' in usage, but this indicates that the Glance server should immediately copy the data and store it in its configured image store.
–is-public {True,False}	Make image accessible to the public.
–is-protected {True,False}	Prevent image from being deleted.
–property <key=value>	Arbitrary property to associate with image. May be used multiple times.
–purge-props	If this flag is present, delete all image properties not explicitly set in the update request. Otherwise, those properties not referenced are preserved.
–human-readable	Print image size in a human-friendly format.
–progress	Show upload progress bar.

glance member-create

```
usage: glance member-create [--can-share] <IMAGE> <TENANT_ID>
```

Share a specific image with a tenant.

Positional arguments

<IMAGE>	Image to add member to.

<TENANT_ID>   Tenant to add as member

Optional arguments

–can-share   Allow the specified tenant to share this image.

glance member-delete

```
usage: glance member-delete <IMAGE> <TENANT_ID>
```

Remove a shared image from a tenant.

Positional arguments

<IMAGE>   Image from which to remove member.

<TENANT_ID>   Tenant to remove as member.

glance member-list

```
usage: glance member-list [--image-id <IMAGE_ID>] [--tenant-id <TENANT_ID>]
```

Describe sharing permissions by image or tenant.

Optional arguments

–image-id <IMAGE_ID>   Filter results by an image ID.

–tenant-id <TENANT_ID>   Filter results by a tenant ID.

Image Service API v2 commands

You can select an API version to use by adding the `--os-image-api-version` option or by setting the corresponding environment variable:

```
$ export OS_IMAGE_API_VERSION=2
```

glance explain (v2)

```
usage: glance --os-image-api-version 2 explain <MODEL>
```

Describe a specific model.

Positional arguments

<MOD-   Name of model to describe.
EL>

glance image-create (v2)

```
usage: glance --os-image-api-version 2 image-create [--property <key=value>]
 [--file <FILE>]
                              [--progress]
                              <unavailable>
```

Create a new image.

Positional arguments

<unavailable>   Please run with connection parameters set to retrieve the schema for generating help for this command

Optional arguments

–property <key=value>   Arbitrary property to associate with image. May be used multiple times.

–file <FILE>   Local file to save downloaded image data to. If this is not specified the image data will be written to stdout.

–progress   Show upload progress bar.

glance image-delete (v2)

```
usage: glance --os-image-api-version 2 image-delete <IMAGE_ID>
```

Delete specified image.

Positional arguments

<IMAGE_ID>   ID of image to delete.

glance image-download (v2)

```
usage: glance --os-image-api-version 2 image-download [--file <FILE>] [--
progress] <IMAGE_ID>
```

Download a specific image.

Positional arguments

<IMAGE_ID>   ID of image to download.

Optional arguments

–file <FILE>   Local file to save downloaded image data to. If this is not specified the image data will be written to stdout.

–progress   Show download progress bar.

glance image-list (v2)

```
usage: glance --os-image-api-version 2 image-list [--limit <LIMIT>] [--page-
size <SIZE>]
                           [--visibility <VISIBILITY>]
                           [--member-status <MEMBER_STATUS>] [--owner <OWNER>]
                           [--property-filter <KEY=VALUE>]
                           [--checksum <CHECKSUM>] [--tag <TAG>]
```

List images you can access.

Optional arguments

–limit <LIMIT>	Maximum number of images to get.
–page-size <SIZE>	Number of images to request in each paginated request.
–visibility <VISIBILITY>	The visibility of the images to display.
–member-status <MEMBER_STATUS>	The status of images to display.
–owner <OWNER>	Display images owned by <OWNER>.
–property-filter <KEY=VALUE>	Filter images by a user-defined image property.
–checksum <CHECKSUM>	Displays images that match the checksum.
–tag <TAG>	Filter images by a user-defined tag.

glance image-show (v2)

```
usage: glance --os-image-api-version 2 image-show [--max-column-width
 <integer>] <IMAGE_ID>
```

Describe a specific image.

Positional arguments

<IMAGE_ID> ID of image to describe.

Optional arguments

–max-column-width <integer> The max column width of the printed table.

glance image-tag-delete (v2)

```
usage: glance --os-image-api-version 2 image-tag-delete <IMAGE_ID> <TAG_VALUE>
```

Delete the tag associated with the given image.

Positional arguments

<IMAGE_ID> ID of the image from which to delete tag.

<TAG_VALUE> Value of the tag.

glance image-tag-update (v2)

```
usage: glance --os-image-api-version 2 image-tag-update <IMAGE_ID> <TAG_VALUE>
```

Update an image with the given tag.

Positional arguments

<IMAGE_ID>   Image to be updated with the given tag.

<TAG_VALUE>   Value of the tag.

glance image-update (v2)

```
usage: glance --os-image-api-version 2 image-update [--property <key=value>]
 [--remove-property key]
                            <IMAGE_ID> <unavailable>
```

Update an existing image.

Positional arguments

<IMAGE_ID>   ID of image to update.

<unavailable>   Please run with connection parameters set to retrieve the schema for
                        generating help for this command

Optional arguments

–property <key=value>   Arbitrary property to associate with image. May be used
                                multiple times.

–remove-property   key Name of arbitrary property to remove from the image.

glance image-upload (v2)

```
usage: glance --os-image-api-version 2 image-upload [--file <FILE>] [--size
 <IMAGE_SIZE>] [--progress]
                            <IMAGE_ID>
```

Upload data for a specific image.

Positional arguments

<IMAGE_ID>   ID of image to upload data to.

Optional arguments

–file <FILE>   Local file that contains disk image to be uploaded. Alternative-
                             ly, images can be passed to the client via stdin.

–size <IMAGE_SIZE>   Size in bytes of image to be uploaded. Default is to get size
                             from provided data object but this is supported in case where
                             size cannot be inferred.

–progress   Show upload progress bar.

glance location-add (v2)

```
usage: glance --os-image-api-version 2 location-add --url <URL> [--metadata
 <STRING>] <ID>
```

Add a location (and related metadata) to an image.

Positional arguments

<ID>   ID of image to which the location is to be added.

Optional arguments

–url <URL> URL   of location to add.

–metadata <STRING>   Metadata associated with the location. Must be a valid JSON
                                object (default: {})

glance location-delete (v2)

```
usage: glance --os-image-api-version 2 location-delete --url <URL> <ID>
```

Remove locations (and related metadata) from an image.

Positional arguments

<ID>   ID of image whose locations are to be removed.

Optional arguments

–url <URL> URL   of location to remove. May be used multiple times.

glance location-update (v2)

```
usage: glance --os-image-api-version 2 location-update --url <URL> [--metadata
 <STRING>] <ID>
```

Update metadata of an image's location.

Positional arguments

<ID>   ID of image whose location is to be updated.

Optional arguments

–url <URL> URL   of location to update.

–metadata <STRING>   Metadata associated with the location. Must be a valid JSON
                                object (default: {})

glance md-namespace-create (v2)

```
usage: glance --os-image-api-version 2 md-namespace-create <NAMESPACE>
 <unavailable>
```

Create a new metadata definitions namespace.

Positional arguments

<NAMESPACE>   Name of the namespace.

<unavailable>   Please run with connection parameters set to retrieve the schema for generating help for this command

glance md-namespace-delete (v2)

```
usage: glance --os-image-api-version 2 md-namespace-delete <NAMESPACE>
```

Delete specified metadata definitions namespace with its contents.

Positional arguments

<NAMES-   Name of namespace to delete.
PACE>

glance md-namespace-import (v2)

```
usage: glance --os-image-api-version 2 md-namespace-import [--file <FILEPATH>]
```

Import a metadata definitions namespace from file or standard input.

Optional arguments

–file <FILEPATH>   Path to file with namespace schema to import. Alternatively, namespaces schema can be passed to the client via stdin.

glance md-namespace-list (v2)

```
usage: glance --os-image-api-version 2 md-namespace-list [--resource-types
 <RESOURCE_TYPES>]
                                    [--visibility <VISIBILITY>]
                                    [--page-size <SIZE>]
```

List metadata definitions namespaces.

Optional arguments

–resource-types   Resource type to filter namespaces.
<RESOURCE_TYPES>

–visibility <VISIBILITY>   Visibility parameter to filter namespaces.

–page-size <SIZE>   Number of namespaces to request in each paginated request.

glance md-namespace-objects-delete (v2)

```
usage: glance --os-image-api-version 2 md-namespace-objects-delete <NAMESPACE>
```

Delete all metadata definitions objects inside a specific namespace.

Positional arguments

<NAMES-   Name of namespace.
PACE>

glance md-namespace-properties-delete (v2)

```
usage: glance --os-image-api-version 2 md-namespace-properties-delete
 <NAMESPACE>
```

Delete all metadata definitions property inside a specific namespace.

Positional arguments

<NAMES-
PACE>   Name of namespace.

glance md-namespace-resource-type-list (v2)

```
usage: glance --os-image-api-version 2 md-namespace-resource-type-list
 <NAMESPACE>
```

List resource types associated to specific namespace.

Positional arguments

<NAMES-
PACE>   Name of namespace.

glance md-namespace-show (v2)

```
usage: glance --os-image-api-version 2 md-namespace-show [--resource-type
 <RESOURCE_TYPE>]

                                    [--max-column-width <integer>]
                                    <NAMESPACE>
```

Describe a specific metadata definitions namespace. Lists also the namespace properties, objects and resource type associations.

Positional arguments

<NAMES-
PACE>   Name of namespace to describe.

Optional arguments

–resource-type   Applies prefix of given resource type associated to a
<RESOURCE_TYPE>   namespace to all properties of a namespace.

–max-column-width <integer>   The max column width of the printed table.

glance md-namespace-update (v2)

```
usage: glance --os-image-api-version 2 md-namespace-update <NAMESPACE>
 <unavailable>
```

Update an existing metadata definitions namespace.

Positional arguments

<NAMESPACE>   Name of namespace to update.

<unavailable>   Please run with connection parameters set to retrieve the schema for
                        generating help for this command

glance md-object-create (v2)

```
usage: glance --os-image-api-version 2 md-object-create --name <NAME> --schema
 <SCHEMA> <NAMESPACE>
```

Create a new metadata definitions object inside a namespace.

Positional arguments

<NAMES-   Name of namespace the object will belong.
PACE>

Optional arguments

–name <NAME>   Internal name of an object.

–schema <SCHEMA>   Valid JSON schema of an object.

glance md-object-delete (v2)

```
usage: glance --os-image-api-version 2 md-object-delete <NAMESPACE> <OBJECT>
```

Delete a specific metadata definitions object inside a namespace.

Positional arguments

<NAMES-   Name of namespace the object belongs.
PACE>

<OBJECT>   Name of an object.

glance md-object-list (v2)

```
usage: glance --os-image-api-version 2 md-object-list <NAMESPACE>
```

List metadata definitions objects inside a specific namespace.

Positional arguments

<NAMES-   Name of namespace.
PACE>

glance md-object-property-show (v2)

```
usage: glance --os-image-api-version 2 md-object-property-show [--max-column-
width <integer>]
                                        <NAMESPACE> <OBJECT> <PROPERTY>
```

Describe a specific metadata definitions property inside an object.

Positional arguments

<NAMES-PACE>   Name of namespace the object belongs.

<OBJECT>   Name of an object.

<PROPERTY>   Name of a property.

Optional arguments

–max-column-width <integer>   The max column width of the printed table.

glance md-object-show (v2)

```
usage: glance --os-image-api-version 2 md-object-show [--max-column-width
 <integer>]
                              <NAMESPACE> <OBJECT>
```

Describe a specific metadata definitions object inside a namespace.

Positional arguments

<NAMES-PACE>   Name of namespace the object belongs.

<OBJECT>   Name of an object.

Optional arguments

–max-column-width <integer>   The max column width of the printed table.

glance md-object-update (v2)

```
usage: glance --os-image-api-version 2 md-object-update [--name <NAME>] [--
schema <SCHEMA>]
                                <NAMESPACE> <OBJECT>
```

Update metadata definitions object inside a namespace.

Positional arguments

<NAMES-PACE>   Name of namespace the object belongs.

<OBJECT>   Name of an object.

Optional arguments

–name <NAME>   New name of an object.

–schema <SCHEMA>   Valid JSON schema of an object.

glance md-property-create (v2)

```
usage: glance --os-image-api-version 2 md-property-create --name <NAME> --
title <TITLE> --schema
                                <SCHEMA>
                                <NAMESPACE>
```

Create a new metadata definitions property inside a namespace.

Positional arguments

<NAMES-PACE>   Name of namespace the property will belong.

Optional arguments

–name <NAME>   Internal name of a property.

–title <TITLE>   Property name displayed to the user.

–schema <SCHEMA>   Valid JSON schema of a property.

glance md-property-delete (v2)

```
usage: glance --os-image-api-version 2 md-property-delete <NAMESPACE>
 <PROPERTY>
```

Delete a specific metadata definitions property inside a namespace.

Positional arguments

<NAMES-PACE>   Name of namespace the property belongs.

<PROPERTY>   Name of a property.

glance md-property-list (v2)

```
usage: glance --os-image-api-version 2 md-property-list <NAMESPACE>
```

List metadata definitions properties inside a specific namespace.

Positional arguments

<NAMES-PACE>   Name of namespace.

glance md-property-show (v2)

```
usage: glance --os-image-api-version 2 md-property-show [--max-column-width
 <integer>]
                                    <NAMESPACE> <PROPERTY>
```

Describe a specific metadata definitions property inside a namespace.

Positional arguments

<NAMES-   Name of namespace the property belongs.
PACE>

<PROPERTY>   Name of a property.

Optional arguments

–max-column-width <integer>   The max column width of the printed table.

glance md-property-update (v2)

```
usage: glance --os-image-api-version 2 md-property-update [--name <NAME>] [--
title <TITLE>]
                                [--schema <SCHEMA>]
                                <NAMESPACE> <PROPERTY>
```

Update metadata definitions property inside a namespace.

Positional arguments

<NAMES-   Name of namespace the property belongs.
PACE>

<PROPERTY>   Name of a property.

Optional arguments

–name <NAME>   New name of a property.

–title <TITLE>   Property name displayed to the user.

–schema <SCHEMA>   Valid JSON schema of a property.

glance md-resource-type-associate (v2)

```
usage: glance --os-image-api-version 2 md-resource-type-associate <NAMESPACE>
 <unavailable>
```

Associate resource type with a metadata definitions namespace.

Positional arguments

<NAMESPACE>   Name of namespace.

<unavailable>   Please run with connection parameters set to retrieve the schema for
                    generating help for this command

glance md-resource-type-deassociate (v2)

```
usage: glance --os-image-api-version 2 md-resource-type-deassociate
 <NAMESPACE> <RESOURCE_TYPE>
```

Deassociate resource type with a metadata definitions namespace.

Positional arguments

<NAMESPACE>   Name of namespace.

<RESOURCE_TYPE>   Name of resource type.

glance md-resource-type-list (v2)

```
usage: glance --os-image-api-version 2 md-resource-type-list
```

List available resource type names.

glance member-create (v2)

```
usage: glance --os-image-api-version 2 member-create <IMAGE_ID> <MEMBER_ID>
```

Create member for a given image.

Positional arguments

<IMAGE_ID>   Image with which to create member.

<MEMBER_ID>   Tenant to add as member.

glance member-delete (v2)

```
usage: glance --os-image-api-version 2 member-delete <IMAGE_ID> <MEMBER_ID>
```

Delete image member.

Positional arguments

<IMAGE_ID>   Image from which to remove member.

<MEMBER_ID>   Tenant to remove as member.

glance member-list (v2)

```
usage: glance --os-image-api-version 2 member-list --image-id <IMAGE_ID>
```

Describe sharing permissions by image.

Optional arguments

–image-id <IMAGE_ID>   Image to display members of.

glance member-update (v2)

```
usage: glance --os-image-api-version 2 member-update <IMAGE_ID> <MEMBER_ID>
 <MEMBER_STATUS>
```

Update the status of a member for a given image.

Positional arguments

<IMAGE_ID>   Image from which to update member.

<MEMBER_ID>   Tenant to update.

<MEMBER_STATUS>   Updated status of member.

7. Image Service property keys

The following keys, together with the components to which they are specific, can be used with the `property` option for both the **glance image-update** and **glance image-create** commands. For example:

```
$ glance image-update IMG-UUID --property architecture=x86_64
```

Note

Behavior set using image properties overrides behavior set using flavors. For more information, refer to *OpenStack Cloud Administrator Guide*

Table 7.1. Property keys

Specific to	Key	Description	Supported values
All	architecture	The CPU architecture that must be supported by the hypervisor. For example, `x86_64`, `arm`, or `ppc64`. Run **uname -m** to get the architecture of a machine. We strongly recommend using the architecture data vocabulary defined by the libosinfo project for this purpose.	• `alpha`—DEC 64-bit RISC • `armv7l`—ARM Cortex-A7 MPCore • `cris`—Ethernet, Token Ring, AXis—Code Reduced Instruction Set • `i686`—Intel sixth-generation x86 (P6 micro architecture) • `ia64`—Itanium • `lm32`—Lattice Micro32 • `m68k`—Motorola 68000 • `microblaze`—Xilinx 32-bit FPGA (Big Endian) • `microblazeel`—Xilinx 32-bit FPGA (Little Endian) • `mips`—MIPS 32-bit RISC (Big Endian) • `mipsel`—MIPS 32-bit RISC (Little Endian) • `mips64`—MIPS 64-bit RISC (Big Endian) • `mips64el`—MIPS 64-bit RISC (Little Endian) • `openrisc`—OpenCores RISC • `parisc`—HP Precision Architecture RISC • `parisc64`—HP Precision Architecture 64-bit RISC • `ppc`—PowerPC 32-bit • `ppc64`—PowerPC 64-bit • `ppcemb`—PowerPC (Embedded 32-bit) • `s390`—IBM Enterprise Systems Architecture/390 • `s390x`—S/390 64-bit • `sh4`—SuperH SH-4 (Little Endian)

Specific to	Key	Description	Supported values
			• sh4eb—SuperH SH-4 (Big Endian)
			• sparc—Scalable Processor Architecture, 32-bit
			• sparc64—Scalable Processor Architecture, 64-bit
			• unicore32—Microprocessor Research and Development Center RISC Unicore32
			• x86_64—64-bit extension of IA-32
			• xtensa—Tensilica Xtensa configurable microprocessor core
			• xtensaeb—Tensilica Xtensa configurable microprocessor core (Big Endian)
All	hypervisor_type	The hypervisor type. Note that qemu is used for both QEMU and KVM hypervisor types.	xen, qemu, lxc, uml, vmware, or hyperv
All	instance_uuid	For snapshot images, this is the UUID of the server used to create this image.	Valid server UUID
All	img_config_drive	Specifies whether the image needs a config drive.	mandatory or optional (default if property is not used).
All	kernel_id	The ID of an image stored in the Image Service that should be used as the kernel when booting an AMI-style image.	Valid image ID
All	os_distro	The common name of the operating system distribution in lowercase (uses the same data vocabulary as the libosinfo project). Specify only a recognized value for this field. Deprecated values are listed to assist you in searching for the recognized value.	• arch—Arch Linux. Do not use archlinux or org.archlinux • centos—Community Enterprise Operating System. Do not use org.centos or CentOS • debian—Debian. Do not use Debian or org.debian • fedora—Fedora. Do not use Fedora, org.fedora, or org.fedoraproject • freebsd—FreeBSD. Do not use org.freebsd, freeBSD, or FreeBSD • gentoo—Gentoo Linux. Do not use Gentoo or org.gentoo • mandrake—Mandrakelinux (MandrakeSoft) distribution. Do not use mandrakelinux or MandrakeLinux • mandriva—Mandriva Linux. Do not use mandrivalinux • mes—Mandriva Enterprise Server. Do not use mandrivaent or mandrivaES • msdos—Microsoft Disc Operating System. Do not use ms-dos • netbsd—NetBSD. Do not use NetBSD or org.netbsd • netware—Novell NetWare. Do not use novell or NetWare

Specific to	Key	Description	Supported values
			• `openbsd`—OpenBSD. Do not use `OpenB-SD` or `org.openbsd`
			• `opensolaris`—OpenSolaris. Do not use `OpenSolaris` or `org.opensolaris`
			• `opensuse`—openSUSE. Do not use `suse`, `SuSE`, or `org.opensuse`
			• `rhel`—Red Hat Enterprise Linux. Do not use `redhat`, `RedHat`, or `com.redhat`
			• `sled`—SUSE Linux Enterprise Desktop. Do not use `com.suse`
			• `ubuntu`—Ubuntu. Do not use `Ubuntu`, `com.ubuntu`, `org.ubuntu`, or `canonical`
			• `windows`—Microsoft Windows. Do not use `com.microsoft.server` or `windoze`
All	os_version	The operating system version as specified by the distributor.	Version number (for example, "11.10")
All	ramdisk_id	The ID of image stored in the Image Service that should be used as the ramdisk when booting an AMI-style image.	Valid image ID
All	vm_mode	The virtual machine mode. This represents the host/guest ABI (application binary interface) used for the virtual machine.	• `hvm`—Fully virtualized. This is the mode used by QEMU and KVM. • `xen`—Xen 3.0 paravirtualized. • `uml`—User Mode Linux paravirtualized. • `exe`—Executables in containers. This is the mode used by LXC.
libvirt API driver	hw_disk_bus	Specifies the type of disk controller to attach disk devices to.	One of `scsi`, `virtio`, `uml`, `xen`, `ide`, or `usb`.
libvirt API driver	hw_rng_model	Adds a random-number generator device to the image's instances. The cloud administrator can enable and control device behavior by configuring the instance's flavor. By default: • The generator device is disabled. • `/dev/random` is used as the default entropy source. To specify a physical HW RNG device, use the following option in the `nova.conf` file: `rng_dev_path=/dev/hwrng`	`virtio`, or other supported device.
libvirt API driver	hw_machine_type	Enables booting an ARM system using the specified machine type. By default, if an ARM image is used and its type is not specified, Compute uses `vexpress-a15` (for ARMv7) or `virt` (for AArch64) machine types.	Libvirt machine type. Valid types can be viewed by using the **virsh capabilities** command (machine types are displayed in the `machine` tag).
libvirt API driver	hw_scsi_model	Enables the use of VirtIO SCSI (virtio-scsi) to provide block device access for compute instances; by default, instances use VirtIO Block (virtio-blk). VirtIO SCSI is a para-virtualized SCSI controller device that provides	`virtio-scsi`

Specific to	Key	Description	Supported values
		improved scalability and performance, and supports advanced SCSI hardware.	
libvirt API driver	hw_serial_port_count	Specifies the count of serial ports that should be provided. If `hw:serial_port_count` is not set in the flavor's `extra_specs`, then any count is permitted. If `hw:serial_port_count` is set, then this provides the default serial port count. It is permitted to override the default serial port count, but only with a lower value.	Integer
libvirt API driver	hw_video_model	The video image driver used.	`vga`, `cirrus`, `vmvga`, `xen`, or `qxl`
libvirt API driver	hw_video_ram	Maximum RAM for the video image. Used only if a `hw_video:ram_max_mb` value has been set in the flavor's `extra_specs` and that value is higher than the value set in `hw_video_ram`.	Integer in MB (for example, '64')
libvirt API driver	hw:watchdog_action	Enables a virtual hardware watchdog device that carries out the specified action if the server hangs. The watchdog uses the i6300esb device (emulating a PCI Intel 6300ESB). If `hw:watchdog_action` is not specified, the watchdog is disabled.	• `disabled`—(default) The device is not attached. Allows the user to disable the watchdog for the image, even if it has been enabled using the image's flavor. • `reset`—Forcefully reset the guest. • `poweroff`—Forcefully power off the guest. • `pause`—Pause the guest. • `none`—Only enable the watchdog; do nothing if the server hangs.
libvirt API driver	os_command_line	The kernel command line to be used by the libvirt driver, instead of the default. For Linux Containers (LXC), the value is used as arguments for initialization. This key is valid only for Amazon kernel, ramdisk, or machine images (aki, ari, or ami).	
libvirt API driver and VMware API driver	hw_vif_model	Specifies the model of virtual network interface device to use.	The valid options depend on the configured hypervisor. • KVM and QEMU: `e1000`, `ne2k_pci`, `pcnet`, `rtl8139`, and `virtio`. • VMware: `e1000`, `e1000e`, `VirtualE1000`, `VirtualE1000e`, `VirtualPCNet32`, `VirtualSriovEthernetCard`, and `VirtualVmxnet`. • Xen: `e1000`, `netfront`, `ne2k_pci`, `pcnet`, and `rtl8139`.
VMware API driver	vmware_adaptertype	The virtual SCSI or IDE controller used by the hypervisor.	`lsiLogic`, `lsiLogicsas`, `busLogic`, `ide`, or `paraVirtual`
VMware API driver	vmware_ostype	A VMware GuestID which describes the operating system installed in the image. This value is passed to the hypervisor when creating a virtual machine. If not specified, the key defaults to `otherGuest`.	See thinkvirt.com.
VMware API driver	vmware_image_version	Currently unused.	1
VMware API driver	quota:cpu_limit	Specifies the upper limit for CPU allocation in MHz. This parameter ensures that a ma-	A numerical value in MHz

Specific to	Key	Description	Supported values
		chine never uses more than the defined amount of CPU time. It can be used to enforce a limit on the machine's CPU performance.	
VMware API driver	quota:cpu_reservation	Specifies the guaranteed minimum CPU reservation in MHz. This means that if needed, the machine will definitely get allocated the reserved amount of CPU cycles.	A numerical value in MHz
VMware API driver	vmware:hw_version	Specifies the hardware version VMware uses to create images. If the hardware version needs to be compatible with a cluster version, for backward compatibility or other circumstances, the `vmware:hw_version` key specifies a virtual machine hardware version. In the event that a cluster has mixed host version types, the key will enable the VC to place the cluster on the correct host.	See vmware.com.
XenAPI driver	auto_disk_config	If true, the root partition on the disk is automatically resized before the instance boots. This value is only taken into account by the Compute service when using a Xen-based hypervisor with the XenAPI driver. The Compute service will only attempt to resize if there is a single partition on the image, and only if the partition is in `ext3` or `ext4` format.	true | false
XenAPI driver	os_type	The operating system installed on the image. The XenAPI driver contains logic that takes different actions depending on the value of the `os_type` parameter of the image. For example, for `os_type=windows` images, it creates a FAT32-based swap partition instead of a Linux swap partition, and it limits the injected host name to less than 16 characters.	`linux` or `windows`

8. Networking command-line client

The **neutron** client is the command-line interface (CLI) for the OpenStack Networking API and its extensions. This chapter documents **neutron** version 2.3.11.

For help on a specific **neutron** command, enter:

```
$ neutron help COMMAND
```

neutron usage

```
usage: neutron [--version] [-v] [-q] [-h] [-r NUM]
               [--os-service-type <os-service-type>]
               [--os-endpoint-type <os-endpoint-type>]
               [--service-type <service-type>]
               [--endpoint-type <endpoint-type>]
               [--os-auth-strategy <auth-strategy>] [--os-auth-url <auth-url>]
               [--os-tenant-name <auth-tenant-name> | --os-project-name <auth-
project-name>]
               [--os-tenant-id <auth-tenant-id> | --os-project-id <auth-
project-id>]
               [--os-username <auth-username>] [--os-user-id <auth-user-id>]
               [--os-user-domain-id <auth-user-domain-id>]
               [--os-user-domain-name <auth-user-domain-name>]
               [--os-project-domain-id <auth-project-domain-id>]
               [--os-project-domain-name <auth-project-domain-name>]
               [--os-cert <certificate>] [--os-cacert <ca-certificate>]
               [--os-key <key>] [--os-password <auth-password>]
               [--os-region-name <auth-region-name>] [--os-token <token>]
               [--http-timeout <seconds>] [--os-url <url>] [--insecure]
```

neutron optional arguments

--version	show program's version number and exit
-v, --verbose, --debug	Increase verbosity of output and show tracebacks on errors. You can repeat this option.
-q, --quiet	Suppress output except warnings and errors.
-h, --help	Show this help message and exit.
-r NUM, --retries NUM	How many times the request to the Neutron server should be retried if it fails.
--os-service-type <os-service-type>	Defaults to env[OS_NETWORK_SERVICE_TYPE] or network.
--os-endpoint-type <os-endpoint-type>	Defaults to env[OS_ENDPOINT_TYPE] or publicURL.
--service-type <service-type>	*DEPRECATED!* Use --os-service-type.
--endpoint-type <endpoint-type>	*DEPRECATED!* Use --os-endpoint-type.
--os-auth-strategy <auth-strategy>	*DEPRECATED!* Only keystone is supported.
--os-auth-url <auth-url>	Authentication URL, defaults to env[OS_AUTH_URL].
--os-tenant-name <auth-tenant-name>	Authentication tenant name, defaults to env[OS_TENANT_NAME].

–os-project-name <auth-project-name>	Another way to specify tenant name. This option is mutually exclusive with –os-tenant-name. Defaults to `env[OS_PROJECT_NAME]`.
–os-tenant-id <auth-tenant-id>	Authentication tenant ID, defaults to `env[OS_TENANT_ID]`.
–os-project-id <auth-project-id>	Another way to specify tenant ID. This option is mutually exclusive with –os-tenant-id. Defaults to `env[OS_PROJECT_ID]`.
–os-username <auth-username>	Authentication username, defaults to `env[OS_USERNAME]`.
–os-user-id <auth-user-id>	Authentication user ID (Env: OS_USER_ID)
–os-user-domain-id <auth-user-domain-id>	OpenStack user domain ID. Defaults to `env[OS_USER_DOMAIN_ID]`.
–os-user-domain-name <auth-user-domain-name>	OpenStack user domain name. Defaults to `env[OS_USER_DOMAIN_NAME]`.
–os-project-domain-id <auth-project-domain-id>	Defaults to `env[OS_PROJECT_DOMAIN_ID]`.
–os-project-domain-name <auth-project-domain-name>	Defaults to `env[OS_PROJECT_DOMAIN_NAME]`.
–os-cert <certificate>	Path of certificate file to use in SSL connection. This file can optionally be prepended with the private key. Defaults to `env[OS_CERT]`.
–os-cacert <ca-certificate>	Specify a CA bundle file to use in verifying a TLS (https) server certificate. Defaults to `env[OS_CACERT]`.
–os-key <key>	Path of client key to use in SSL connection. This option is not necessary if your key is prepended to your certificate file. Defaults to `env[OS_KEY]`.
–os-password <auth-password>	Authentication password, defaults to `env[OS_PASSWORD]`.
–os-region-name <auth-region-name>	Authentication region name, defaults to `env[OS_REGION_NAME]`.
–os-token <token>	Authentication token, defaults to `env[OS_TOKEN]`.
–http-timeout <seconds>	Timeout in seconds to wait for an HTTP response. Defaults to `env[OS_NETWORK_TIMEOUT]` or None if not specified.
–os-url <url>	Defaults to `env[OS_URL]`.
–insecure	Explicitly allow neutronclient to perform "insecure" SSL (https) requests. The server's certificate will not be ver-

ified against any certificate authorities. This option should be used with caution.

neutron API v2.0 commands

agent-delete	Delete a given agent.
agent-list	List agents.
agent-show	Show information of a given agent.
agent-update	Updates the admin status and description for a specified agent.
bash-completion	Prints all of the commands and options for bash-completion.
cisco-credential-create	Creates a credential.
cisco-credential-delete	Delete a given credential.
cisco-credential-list	List credentials that belong to a given tenant.
cisco-credential-show	Show information of a given credential.
cisco-network-profile-create	Creates a network profile.
cisco-network-profile-delete	Delete a given network profile.
cisco-network-profile-list	List network profiles that belong to a given tenant.
cisco-network-profile-show	Show information of a given network profile.
cisco-network-profile-update	Update network profile's information.
cisco-policy-profile-list	List policy profiles that belong to a given tenant.
cisco-policy-profile-show	Show information of a given policy profile.
cisco-policy-profile-update	Update policy profile's information.
dhcp-agent-list-hosting-net	List DHCP agents hosting a network.
dhcp-agent-network-add	Add a network to a DHCP agent.
dhcp-agent-network-remove	Remove a network from a DHCP agent.
ext-list	List all extensions.
ext-show	Show information of a given resource.
firewall-create	Create a firewall.
firewall-delete	Delete a given firewall.

firewall-list	List firewalls that belong to a given tenant.
firewall-policy-create	Create a firewall policy.
firewall-policy-delete	Delete a given firewall policy.
firewall-policy-insert-rule	Insert a rule into a given firewall policy.
firewall-policy-list	List firewall policies that belong to a given tenant.
firewall-policy-remove-rule	Remove a rule from a given firewall policy.
firewall-policy-show	Show information of a given firewall policy.
firewall-policy-update	Update a given firewall policy.
firewall-rule-create	Create a firewall rule.
firewall-rule-delete	Delete a given firewall rule.
firewall-rule-list	List firewall rules that belong to a given tenant.
firewall-rule-show	Show information of a given firewall rule.
firewall-rule-update	Update a given firewall rule.
firewall-show	Show information of a given firewall.
firewall-update	Update a given firewall.
floatingip-associate	Create a mapping between a floating IP and a fixed IP.
floatingip-create	Create a floating IP for a given tenant.
floatingip-delete	Delete a given floating IP.
floatingip-disassociate	Remove a mapping from a floating IP to a fixed IP.
floatingip-list	List floating IPs that belong to a given tenant.
floatingip-show	Show information of a given floating IP.
gateway-device-create	Create a network gateway device.
gateway-device-delete	Delete a given network gateway device.
gateway-device-list	List network gateway devices for a given tenant.
gateway-device-show	Show information for a given network gateway device.
gateway-device-update	Update a network gateway device.
help	print detailed help for another command
ipsec-site-connection-create	Create an IPsec site connection.
ipsec-site-connection-delete	Delete a given IPsec site connection.

ipsec-site-connection-list	List IPsec site connections that belong to a given tenant.
ipsec-site-connection-show	Show information of a given IPsec site connection.
ipsec-site-connection-update	Update a given IPsec site connection.
l3-agent-list-hosting-router	List L3 agents hosting a router.
l3-agent-router-add	Add a router to a L3 agent.
l3-agent-router-remove	Remove a router from a L3 agent.
lb-agent-hosting-pool	Get loadbalancer agent hosting a pool.
lb-healthmonitor-associate	Create a mapping between a health monitor and a pool.
lb-healthmonitor-create	Create a health monitor.
lb-healthmonitor-delete	Delete a given health monitor.
lb-healthmonitor-disassociate	Remove a mapping from a health monitor to a pool.
lb-healthmonitor-list	List health monitors that belong to a given tenant.
lb-healthmonitor-show	Show information of a given health monitor.
lb-healthmonitor-update	Update a given health monitor.
lb-member-create	Create a member.
lb-member-delete	Delete a given member.
lb-member-list	List members that belong to a given tenant.
lb-member-show	Show information of a given member.
lb-member-update	Update a given member.
lb-pool-create	Create a pool.
lb-pool-delete	Delete a given pool.
lb-pool-list	List pools that belong to a given tenant.
lb-pool-list-on-agent	List the pools on a loadbalancer agent.
lb-pool-show	Show information of a given pool.
lb-pool-stats	Retrieve stats for a given pool.
lb-pool-update	Update a given pool.
lb-vip-create	Create a vip.
lb-vip-delete	Delete a given vip.

lb-vip-list	List vips that belong to a given tenant.
lb-vip-show	Show information of a given vip.
lb-vip-update	Update a given vip.
lbaas-healthmonitor-create	LBaaS v2 Create a healthmonitor.
lbaas-healthmonitor-delete	LBaaS v2 Delete a given healthmonitor.
lbaas-healthmonitor-list	LBaaS v2 List healthmonitors that belong to a given tenant.
lbaas-healthmonitor-show	LBaaS v2 Show information of a given healthmonitor.
lbaas-healthmonitor-update	LBaaS v2 Update a given healthmonitor.
lbaas-listener-create	LBaaS v2 Create a listener.
lbaas-listener-delete	LBaaS v2 Delete a given listener.
lbaas-listener-list	LBaaS v2 List listeners that belong to a given tenant.
lbaas-listener-show	LBaaS v2 Show information of a given listener.
lbaas-listener-update	LBaaS v2 Update a given listener.
lbaas-loadbalancer-create	LBaaS v2 Create a loadbalancer.
lbaas-loadbalancer-delete	LBaaS v2 Delete a given loadbalancer.
lbaas-loadbalancer-list	LBaaS v2 List loadbalancers that belong to a given tenant.
lbaas-loadbalancer-show	LBaaS v2 Show information of a given loadbalancer.
lbaas-loadbalancer-update	LBaaS v2 Update a given loadbalancer.
lbaas-member-create	LBaaS v2 Create a member.
lbaas-member-delete	LBaaS v2 Delete a given member.
lbaas-member-list	LBaaS v2 List members that belong to a given tenant.
lbaas-member-show	LBaaS v2 Show information of a given member.
lbaas-member-update	LBaaS v2 Update a given member.
lbaas-pool-create	LBaaS v2 Create a pool.
lbaas-pool-delete	LBaaS v2 Delete a given pool.
lbaas-pool-list	LBaaS v2 List pools that belong to a given tenant.
lbaas-pool-show	LBaaS v2 Show information of a given pool.

lbaas-pool-update	LBaaS v2 Update a given pool.
meter-label-create	Create a metering label for a given tenant.
meter-label-delete	Delete a given metering label.
meter-label-list	List metering labels that belong to a given tenant.
meter-label-rule-create	Create a metering label rule for a given label.
meter-label-rule-delete	Delete a given metering label.
meter-label-rule-list	List metering labels that belong to a given label.
meter-label-rule-show	Show information of a given metering label rule.
meter-label-show	Show information of a given metering label.
nec-packet-filter-create	Create a packet filter for a given tenant.
nec-packet-filter-delete	Delete a given packet filter.
nec-packet-filter-list	List packet filters that belong to a given tenant.
nec-packet-filter-show	Show information of a given packet filter.
nec-packet-filter-update	Update packet filter's information.
net-create	Create a network for a given tenant.
net-delete	Delete a given network.
net-external-list	List external networks that belong to a given tenant.
net-gateway-connect	Add an internal network interface to a router.
net-gateway-create	Create a network gateway.
net-gateway-delete	Delete a given network gateway.
net-gateway-disconnect	Remove a network from a network gateway.
net-gateway-list	List network gateways for a given tenant.
net-gateway-show	Show information of a given network gateway.
net-gateway-update	Update the name for a network gateway.
net-list	List networks that belong to a given tenant.
net-list-on-dhcp-agent	List the networks on a DHCP agent.
net-show	Show information of a given network.
net-update	Update network's information.
nuage-netpartition-create	Create a netpartition for a given tenant.

nuage-netpartition-delete	Delete a given netpartition.
nuage-netpartition-list	List netpartitions that belong to a given tenant.
nuage-netpartition-show	Show information of a given netpartition.
port-create	Create a port for a given tenant.
port-delete	Delete a given port.
port-list	List ports that belong to a given tenant.
port-show	Show information of a given port.
port-update	Update port's information.
queue-create	Create a queue.
queue-delete	Delete a given queue.
queue-list	List queues that belong to a given tenant.
queue-show	Show information of a given queue.
quota-delete	Delete defined quotas of a given tenant.
quota-list	List quotas of all tenants who have non-default quota values.
quota-show	Show quotas of a given tenant.
quota-update	Define tenant's quotas not to use defaults.
router-create	Create a router for a given tenant.
router-delete	Delete a given router.
router-gateway-clear	Remove an external network gateway from a router.
router-gateway-set	Set the external network gateway for a router.
router-interface-add	Add an internal network interface to a router.
router-interface-delete	Remove an internal network interface from a router.
router-list	List routers that belong to a given tenant.
router-list-on-l3-agent	List the routers on a L3 agent.
router-port-list	List ports that belong to a given tenant, with specified router.
router-show	Show information of a given router.
router-update	Update router's information.

security-group-create	Create a security group.
security-group-delete	Delete a given security group.
security-group-list	List security groups that belong to a given tenant.
security-group-rule-create	Create a security group rule.
security-group-rule-delete	Delete a given security group rule.
security-group-rule-list	List security group rules that belong to a given tenant.
security-group-rule-show	Show information of a given security group rule.
security-group-show	Show information of a given security group.
security-group-update	Update a given security group.
service-provider-list	List service providers.
subnet-create	Create a subnet for a given tenant.
subnet-delete	Delete a given subnet.
subnet-list	List subnets that belong to a given tenant.
subnet-show	Show information of a given subnet.
subnet-update	Update subnet's information.
vpn-ikepolicy-create	Create an IKE policy.
vpn-ikepolicy-delete	Delete a given IKE policy.
vpn-ikepolicy-list	List IKE policies that belong to a tenant.
vpn-ikepolicy-show	Show information of a given IKE policy.
vpn-ikepolicy-update	Update a given IKE policy.
vpn-ipsecpolicy-create	Create an IPsec policy.
vpn-ipsecpolicy-delete	Delete a given IPsec policy.
vpn-ipsecpolicy-list	List IPsec policies that belong to a given tenant connection.
vpn-ipsecpolicy-show	Show information of a given IPsec policy.
vpn-ipsecpolicy-update	Update a given IPsec policy.
vpn-service-create	Create a VPN service.
vpn-service-delete	Delete a given VPN service.
vpn-service-list	List VPN service configurations that belong to a given tenant.

vpn-service-show	Show information of a given VPN service.
vpn-service-update	Update a given VPN service.

neutron agent-delete

```
usage: neutron agent-delete [-h] [--request-format {json,xml}] AGENT
```

Delete a given agent.

Positional arguments

AGENT   ID of agent to delete.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.

neutron agent-list

```
usage: neutron agent-list [-h] [-f {csv,html,json,table,yaml}] [-c COLUMN]
                          [--max-width <integer>]
                          [--quote {all,minimal,none,nonnumeric}]
                          [--request-format {json,xml}] [-D] [-F FIELD]
                          [--sort-key FIELD] [--sort-dir {asc,desc}]
```

List agents.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.
--sort-key FIELD	Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
--sort-dir {asc,desc}	Sorts the list in the specified direction. You can repeat this option.

neutron agent-show

```
usage: neutron agent-show [-h] [-f {html,json,shell,table,value,yaml}]
```

```
                                  [-c COLUMN] [--max-width <integer>]
                                  [--prefix PREFIX] [--request-format {json,xml}] [-D]
                                  [-F FIELD]
                                  AGENT
```

Show information of a given agent.

Positional arguments

AGENT   ID of agent to look up.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                        peat this option.

neutron agent-update

```
usage: neutron agent-update [-h] [--request-format {json,xml}]
                            [--admin-state-down] [--description DESCRIPTION]
                            AGENT
```

Updates the admin status and description for a specified agent.

Positional arguments

AGENT   ID or name of agent to update.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--admin-state-down   Set admin state up of the agent to false.

--description DESCRIPTION   Description for the agent.

neutron cisco-credential-create

```
usage: neutron cisco-credential-create [-h]
                                       [-f {html,json,shell,table,value,yaml}]
                                       [-c COLUMN] [--max-width <integer>]
                                       [--prefix PREFIX]
                                       [--request-format {json,xml}]
                                       [--tenant-id TENANT_ID]
                                       [--username USERNAME]
                                       [--password PASSWORD]
                                       credential_name credential_type
```

Creates a credential.

Positional arguments

credential_name   Name/IP address for credential.

credential_type   Type of the credential.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--tenant-id TENANT_ID   The owner tenant ID.

--username USERNAME   Username for the credential.

--password PASSWORD   Password for the credential.

neutron cisco-credential-delete

```
usage: neutron cisco-credential-delete [-h] [--request-format {json,xml}]
                                       CREDENTIAL
```

Delete a given credential.

Positional arguments

CREDENTIAL   ID of credential to delete.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron cisco-credential-list

```
usage: neutron cisco-credential-list [-h] [-f {csv,html,json,table,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     [--request-format {json,xml}] [-D]
                                     [-F FIELD]
```

List credentials that belong to a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can re-
	peat this option.

neutron cisco-credential-show

```
usage: neutron cisco-credential-show [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--prefix PREFIX]
                                     [--request-format {json,xml}] [-D]
                                     [-F FIELD]
                                     CREDENTIAL
```

Show information of a given credential.

Positional arguments

CREDENTIAL   ID of credential to look up.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                       peat this option.

neutron cisco-network-profile-create

```
usage: neutron cisco-network-profile-create [-h]
                                            [-f {html,json,shell,table,value,
yaml}]
                                            [-c COLUMN]
                                            [--max-width <integer>]
                                            [--prefix PREFIX]
                                            [--request-format {json,xml}]
                                            [--tenant-id TENANT_ID]
                                            [--sub_type SUB_TYPE]
                                            [--segment_range SEGMENT_RANGE]
                                            [--physical_network
PHYSICAL_NETWORK]
                                            [--multicast_ip_range
MULTICAST_IP_RANGE]
                                            [--add-tenant ADD_TENANTS]
                                            name
                                            {vlan,overlay,multi-segment,trunk}
```

Creates a network profile.

Positional arguments

name   Name for network profile.

{vlan,overlay,multi-segment,trunk}	Segment type.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--tenant-id TENANT_ID	The owner tenant ID.
--sub_type SUB_TYPE	Sub-type for the segment. Available sub-types for overlay segments: native, enhanced; For trunk segments: vlan, overlay.
--segment_range SEGMENT_RANGE	Range for the segment.
--physical_network PHYSICAL_NETWORK	Name for the physical network.
--multicast_ip_range MULTICAST_IP_RANGE	Multicast IPv4 range.
--add-tenant ADD_TENANTS	Add tenant to the network profile. You can repeat this option.

neutron cisco-network-profile-delete

```
usage: neutron cisco-network-profile-delete [-h] [--request-format {json,xml}]
                                            NETWORK_PROFILE
```

Delete a given network profile.

Positional arguments

NETWORK_PROFILE	ID or name of network_profile to delete.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.

neutron cisco-network-profile-list

```
usage: neutron cisco-network-profile-list [-h] [-f {csv,html,json,table,yaml}]
                                          [-c COLUMN] [--max-width <integer>]
                                          [--quote {all,minimal,none,
nonnumeric}]
                                          [--request-format {json,xml}] [-D]
                                          [-F FIELD]
```

List network profiles that belong to a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                         peat this option.

neutron cisco-network-profile-show

```
usage: neutron cisco-network-profile-show [-h]
                                          [-f {html,json,shell,table,value,
yaml}]

                                          [-c COLUMN] [--max-width <integer>]
                                          [--prefix PREFIX]
                                          [--request-format {json,xml}] [-D]
                                          [-F FIELD]
                                          NETWORK_PROFILE
```

Show information of a given network profile.

Positional arguments

NETWORK_PROFILE   ID or name of network_profile to look up.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                         peat this option.

neutron cisco-network-profile-update

```
usage: neutron cisco-network-profile-update [-h] [--request-format {json,xml}]
                                            [--remove-tenant REMOVE_TENANTS]
                                            [--add-tenant ADD_TENANTS]
                                            NETWORK_PROFILE
```

Update network profile's information.

Positional arguments

NETWORK_PROFILE   ID or name of network_profile to update.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}	The XML or JSON request format.
--remove-tenant REMOVE_TENANTS	Remove tenant from the network profile. You can re-peat this option.
--add-tenant ADD_TENANTS	Add tenant to the network profile. You can repeat this option.

neutron cisco-policy-profile-list

```
usage: neutron cisco-policy-profile-list [-h] [-f {csv,html,json,table,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--quote {all,minimal,none,
nonnumeric}]

                                         [--request-format {json,xml}] [-D]
                                         [-F FIELD]
```

List policy profiles that belong to a given tenant.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can re-peat this option.

neutron cisco-policy-profile-show

```
usage: neutron cisco-policy-profile-show [-h]
                                         [-f {html,json,shell,table,value,
yaml}]

                                         [-c COLUMN] [--max-width <integer>]
                                         [--prefix PREFIX]
                                         [--request-format {json,xml}] [-D]
                                         [-F FIELD]
                                         POLICY_PROFILE
```

Show information of a given policy profile.

Positional arguments

POLICY_PROFILE	ID or name of policy_profile to look up.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.

| -F FIELD, --field FIELD | Specify the field(s) to be returned by server. You can repeat this option. |

neutron cisco-policy-profile-update

```
usage: neutron cisco-policy-profile-update [-h] [--request-format {json,xml}]
                                           POLICY_PROFILE
```

Update policy profile's information.

Positional arguments

| POLICY_PROFILE | ID or name of policy_profile to update. |

Optional arguments

| -h, --help | show this help message and exit |
| --request-format {json,xml} | The XML or JSON request format. |

neutron dhcp-agent-list-hosting-net

```
usage: neutron dhcp-agent-list-hosting-net [-h]
                                           [-f {csv,html,json,table,yaml}]
                                           [-c COLUMN] [--max-width <integer>]
                                           [--quote {all,minimal,none,
nonnumeric}]

                                           [--request-format {json,xml}] [-D]
                                           [-F FIELD]
                                           network
```

List DHCP agents hosting a network.

Positional arguments

| network | Network to query. |

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.

neutron dhcp-agent-network-add

```
usage: neutron dhcp-agent-network-add [-h] [--request-format {json,xml}]
                                      dhcp_agent network
```

Add a network to a DHCP agent.

Positional arguments

dhcp_agent   ID of the DHCP agent.

network   Network to add.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron dhcp-agent-network-remove

```
usage: neutron dhcp-agent-network-remove [-h] [--request-format {json,xml}]
                                         dhcp_agent network
```

Remove a network from a DHCP agent.

Positional arguments

dhcp_agent   ID of the DHCP agent.

network   Network to remove.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron ext-list

```
usage: neutron ext-list [-h] [-f {csv,html,json,table,yaml}] [-c COLUMN]
                        [--max-width <integer>]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--request-format {json,xml}] [-D] [-F FIELD]
```

List all extensions.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
peat this option.

neutron ext-show

```
usage: neutron ext-show [-h] [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--prefix PREFIX]
                        [--request-format {json,xml}] [-D] [-F FIELD]
                        EXTENSION
```

Show information of a given resource.

Positional arguments

EXTENSION   ID of extension to look up.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can re-peat this option.

neutron firewall-create

```
usage: neutron firewall-create [-h] [-f {html,json,shell,table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--prefix PREFIX] [--request-format {json,xml}]
                               [--tenant-id TENANT_ID] [--name NAME]
                               [--description DESCRIPTION] [--shared]
                               [--admin-state-down]
                               POLICY
```

Create a firewall.

Positional arguments

POLICY   Firewall policy name or ID.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--tenant-id TENANT_ID	The owner tenant ID.
--name NAME	Name for the firewall.
--description DESCRIPTION	Description for the firewall rule.
--shared	Set shared to True (default is False).
--admin-state-down	Set admin state up to false.

neutron firewall-delete

```
usage: neutron firewall-delete [-h] [--request-format {json,xml}] FIREWALL
```

Delete a given firewall.

Positional arguments

FIREWALL   ID or name of firewall to delete.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron firewall-list

```
usage: neutron firewall-list [-h] [-f {csv,html,json,table,yaml}] [-c COLUMN]
                             [--max-width <integer>]
                             [--quote {all,minimal,none,nonnumeric}]
                             [--request-format {json,xml}] [-D] [-F FIELD]
                             [-P SIZE] [--sort-key FIELD]
                             [--sort-dir {asc,desc}]
```

List firewalls that belong to a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                        peat this option.

-P SIZE, --page-size SIZE   Specify retrieve unit of each request, then split one re-
                                        quest to several requests.

--sort-key FIELD   Sorts the list by the specified fields in the specified direc-
                                        tions. You can repeat this option, but you must specify
                                        an equal number of sort_dir and sort_key values. Extra
                                        sort_dir options are ignored. Missing sort_dir options
                                        use the default asc value.

--sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat
                                        this option.

neutron firewall-policy-create

```
usage: neutron firewall-policy-create [-h]
```

```
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--prefix PREFIX]
                                         [--request-format {json,xml}]
                                         [--tenant-id TENANT_ID]
                                         [--description DESCRIPTION] [--shared]
                                         [--firewall-rules FIREWALL_RULES]
                                         [--audited]
                                         NAME
```

Create a firewall policy.

Positional arguments

NAME Name for the firewall policy.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--tenant-id TENANT_ID	The owner tenant ID.
--description DESCRIPTION	Description for the firewall policy.
--shared	Create a shared policy.
--firewall-rules FIREWALL_RULES	Ordered list of whitespace-delimited firewall rule names or IDs; e.g., --firewall-rules "rule1 rule2"
--audited	Sets audited to True.

neutron firewall-policy-delete

```
usage: neutron firewall-policy-delete [-h] [--request-format {json,xml}]
                                      FIREWALL_POLICY
```

Delete a given firewall policy.

Positional arguments

FIREWALL_POLICY   ID or name of firewall_policy to delete.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.

neutron firewall-policy-insert-rule

```
usage: neutron firewall-policy-insert-rule [-h] [--request-format {json,xml}]
                                           [--insert-before FIREWALL_RULE]
```

```
                                          [--insert-after FIREWALL_RULE]
                                          FIREWALL_POLICY FIREWALL_RULE
```

Insert a rule into a given firewall policy.

Positional arguments

FIREWALL_POLICY   ID or name of firewall_policy to update.

FIREWALL_RULE   New rule to insert.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--insert-before FIREWALL_RULE   Insert before this rule.

--insert-after FIREWALL_RULE   Insert after this rule.

neutron firewall-policy-list

```
usage: neutron firewall-policy-list [-h] [-f {csv,html,json,table,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--quote {all,minimal,none,nonnumeric}]
                                    [--request-format {json,xml}] [-D]
                                    [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                    [--sort-dir {asc,desc}]
```

List firewall policies that belong to a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                    peat this option.

-P SIZE, --page-size SIZE   Specify retrieve unit of each request, then split one re-
                                    quest to several requests.

--sort-key FIELD   Sorts the list by the specified fields in the specified direc-
                                    tions. You can repeat this option, but you must specify
                                    an equal number of sort_dir and sort_key values. Extra
                                    sort_dir options are ignored. Missing sort_dir options
                                    use the default asc value.

--sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat
                                    this option.

neutron firewall-policy-remove-rule

```
usage: neutron firewall-policy-remove-rule [-h] [--request-format {json,xml}]
                                           FIREWALL_POLICY FIREWALL_RULE
```

Remove a rule from a given firewall policy.

Positional arguments

FIREWALL_POLICY   ID or name of firewall_policy to update.

FIREWALL_RULE   Firewall rule to remove from policy.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron firewall-policy-show

```
usage: neutron firewall-policy-show [-h]
                                    [-f {html,json,shell,table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX]
                                    [--request-format {json,xml}] [-D]
                                    [-F FIELD]
                                    FIREWALL_POLICY
```

Show information of a given firewall policy.

Positional arguments

FIREWALL_POLICY   ID or name of firewall_policy to look up.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                     peat this option.

neutron firewall-policy-update

```
usage: neutron firewall-policy-update [-h] [--request-format {json,xml}]
                                      [--firewall-rules FIREWALL_RULES]
                                      FIREWALL_POLICY
```

Update a given firewall policy.

Positional arguments

FIREWALL_POLICY   ID or name of firewall_policy to update.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--firewall-rules   Ordered list of whitespace-delimited firewall rule names
FIREWALL_RULES   or IDs; e.g., --firewall-rules "rule1 rule2"

neutron firewall-rule-create

```
usage: neutron firewall-rule-create [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--prefix PREFIX]
                                     [--request-format {json,xml}]
                                     [--tenant-id TENANT_ID] [--name NAME]
                                     [--description DESCRIPTION] [--shared]
                                     [--source-ip-address SOURCE_IP_ADDRESS]
                                     [--destination-ip-address
 DESTINATION_IP_ADDRESS]
                                     [--source-port SOURCE_PORT]
                                     [--destination-port DESTINATION_PORT]
                                     [--enabled {True,False}] --protocol
                                     {tcp,udp,icmp,any} --action {allow,deny}
```

Create a firewall rule.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--tenant-id TENANT_ID   The owner tenant ID.

--name NAME   Name for the firewall rule.

--description DESCRIPTION   Description for the firewall rule.

--shared   Set shared to True (default is False).

--source-ip-address   Source IP address or subnet.
SOURCE_IP_ADDRESS

--destination-ip-address   Destination IP address or subnet.
DESTINATION_IP_ADDRESS

--source-port SOURCE_PORT   Source port (integer in [1, 65535] or range in a:b).

--destination-port   Destination port (integer in [1, 65535] or range in a:b).
DESTINATION_PORT

–enabled {True,False}	Whether to enable or disable this rule.
–protocol {tcp,udp,icmp,any}	Protocol for the firewall rule.
–action {allow,deny}	Action for the firewall rule.

neutron firewall-rule-delete

```
usage: neutron firewall-rule-delete [-h] [--request-format {json,xml}]
                                    FIREWALL_RULE
```

Delete a given firewall rule.

Positional arguments

FIREWALL_RULE   ID or name of firewall_rule to delete.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.

neutron firewall-rule-list

```
usage: neutron firewall-rule-list [-h] [-f {csv,html,json,table,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--quote {all,minimal,none,nonnumeric}]
                                  [--request-format {json,xml}] [-D]
                                  [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                  [--sort-dir {asc,desc}]
```

List firewall rules that belong to a given tenant.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
-D, –show-details	Show detailed information.
-F FIELD, –field FIELD	Specify the field(s) to be returned by server. You can repeat this option.
-P SIZE, –page-size SIZE	Specify retrieve unit of each request, then split one request to several requests.
–sort-key FIELD	Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

–sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat
                                            this option.

neutron firewall-rule-show

```
usage: neutron firewall-rule-show [-h] [-f {html,json,shell,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--prefix PREFIX]
                                  [--request-format {json,xml}] [-D]
                                  [-F FIELD]
                                  FIREWALL_RULE
```

Show information of a given firewall rule.

Positional arguments

FIREWALL_RULE   ID or name of firewall_rule to look up.

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

-D, –show-details   Show detailed information.

-F FIELD, –field FIELD   Specify the field(s) to be returned by server. You can re-
                                           peat this option.

neutron firewall-rule-update

```
usage: neutron firewall-rule-update [-h] [--request-format {json,xml}]
                                    [--protocol {tcp,udp,icmp,any}]
                                    FIREWALL_RULE
```

Update a given firewall rule.

Positional arguments

FIREWALL_RULE   ID or name of firewall_rule to update.

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

–protocol {tcp,udp,icmp,any}   Protocol for the firewall rule.

neutron firewall-show

```
usage: neutron firewall-show [-h] [-f {html,json,shell,table,value,yaml}]
```

```
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX] [--request-format {json,xml}]
                                    [-D] [-F FIELD]
                                    FIREWALL
```

Show information of a given firewall.

Positional arguments

FIREWALL   ID or name of firewall to look up.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.

neutron firewall-update

```
usage: neutron firewall-update [-h] [--request-format {json,xml}]
                                    [--policy POLICY]
                                    FIREWALL
```

Update a given firewall.

Positional arguments

FIREWALL   ID or name of firewall to update.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--policy POLICY	Firewall policy name or ID.

neutron floatingip-associate

```
usage: neutron floatingip-associate [-h] [--request-format {json,xml}]
                                    [--fixed-ip-address FIXED_IP_ADDRESS]
                                    FLOATINGIP_ID PORT
```

Create a mapping between a floating IP and a fixed IP.

Positional arguments

FLOATINGIP_ID   ID of the floating IP to associate.

PORT   ID or name of the port to be associated with the floating IP.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--fixed-ip-address   IP address on the port (only required if port has multiple
FIXED_IP_ADDRESS   IPs).

neutron floatingip-create

```
usage: neutron floatingip-create [-h] [-f {html,json,shell,table,value,yaml}]
                                 [-c COLUMN] [--max-width <integer>]
                                 [--prefix PREFIX]
                                 [--request-format {json,xml}]
                                 [--tenant-id TENANT_ID] [--port-id PORT_ID]
                                 [--fixed-ip-address FIXED_IP_ADDRESS]
                                 [--floating-ip-address FLOATING_IP_ADDRESS]
                                 FLOATING_NETWORK
```

Create a floating IP for a given tenant.

Positional arguments

FLOATING_NETWORK   Network name or ID to allocate floating IP from.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--tenant-id TENANT_ID   The owner tenant ID.

--port-id PORT_ID ID   of the port to be associated with the floating IP.

--fixed-ip-address   IP address on the port (only required if port has multiple
FIXED_IP_ADDRESS   IPs).

--floating-ip-address   IP address of the floating IP
FLOATING_IP_ADDRESS

neutron floatingip-delete

```
usage: neutron floatingip-delete [-h] [--request-format {json,xml}] FLOATINGIP
```

Delete a given floating IP.

Positional arguments

FLOATINGIP   ID of floatingip to delete.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron floatingip-disassociate

```
usage: neutron floatingip-disassociate [-h] [--request-format {json,xml}]
                                       FLOATINGIP_ID
```

Remove a mapping from a floating IP to a fixed IP.

Positional arguments

FLOATINGIP_ID   ID of the floating IP to disassociate.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron floatingip-list

```
usage: neutron floatingip-list [-h] [-f {csv,html,json,table,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--quote {all,minimal,none,nonnumeric}]
                               [--request-format {json,xml}] [-D] [-F FIELD]
                               [-P SIZE] [--sort-key FIELD]
                               [--sort-dir {asc,desc}]
```

List floating IPs that belong to a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                      peat this option.

-P SIZE, --page-size SIZE   Specify retrieve unit of each request, then split one re-
                                      quest to several requests.

--sort-key FIELD   Sorts the list by the specified fields in the specified direc-
                                      tions. You can repeat this option, but you must specify
                                      an equal number of sort_dir and sort_key values. Extra
                                      sort_dir options are ignored. Missing sort_dir options
                                      use the default asc value.

| –sort-dir {asc,desc} | Sorts the list in the specified direction. You can repeat this option. |

neutron floatingip-show

```
usage: neutron floatingip-show [-h] [-f {html,json,shell,table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--prefix PREFIX] [--request-format {json,xml}]
                               [-D] [-F FIELD]
                               FLOATINGIP
```

Show information of a given floating IP.

Positional arguments

FLOATINGIP   ID of floatingip to look up.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
-D, –show-details	Show detailed information.
-F FIELD, –field FIELD	Specify the field(s) to be returned by server. You can repeat this option.

neutron gateway-device-create

```
usage: neutron gateway-device-create [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--prefix PREFIX]
                                     [--request-format {json,xml}]
                                     [--tenant-id TENANT_ID]
                                     [--connector-type {stt,gre,ipsecgre,
ipsecstt,bridge}]
                                     --connector-ip CONNECTOR_IP
                                     (--client-certificate CERT_DATA | --
client-certificate-file CERT_FILE)
                                     NAME
```

Create a network gateway device.

Positional arguments

NAME Name of network gateway device to create.

Optional arguments

| -h, –help | show this help message and exit |
| –request-format {json,xml} | The XML or JSON request format. |

–tenant-id TENANT_ID	The owner tenant ID.
–connector-type {stt,gre,ipsecgre,ipsecstt,bridge}	Type of the transport zone connector to use for this device. Valid values are gre, stt, ipsecgre, ipsecstt, and bridge. Defaults to stt.
–connector-ip CONNECTOR_IP	IP address for this device's transport connector. It must correspond to the IP address of the interface used for tenant traffic on the NSX gateway node.
–client-certificate CERT_DATA	PEM certificate used by the NSX gateway transport node to authenticate with the NSX controller.
–client-certificate-file CERT_FILE	File containing the PEM certificate used by the NSX gateway transport node to authenticate with the NSX controller.

neutron gateway-device-delete

```
usage: neutron gateway-device-delete [-h] [--request-format {json,xml}]
                                     GATEWAY_DEVICE
```

Delete a given network gateway device.

Positional arguments

GATEWAY_DEVICE   ID or name of gateway_device to delete.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.

neutron gateway-device-list

```
usage: neutron gateway-device-list [-h] [-f {csv,html,json,table,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--request-format {json,xml}] [-D]
                                   [-F FIELD]
```

List network gateway devices for a given tenant.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
-D, –show-details	Show detailed information.
-F FIELD, –field FIELD	Specify the field(s) to be returned by server. You can re-peat this option.

neutron gateway-device-show

```
usage: neutron gateway-device-show [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--prefix PREFIX]
                                   [--request-format {json,xml}] [-D]
                                   [-F FIELD]
                                   GATEWAY_DEVICE
```

Show information for a given network gateway device.

Positional arguments

GATEWAY_DEVICE   ID or name of gateway_device to look up.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.

neutron gateway-device-update

```
usage: neutron gateway-device-update [-h] [--request-format {json,xml}]
                                     [--name NAME]
                                     [--connector-type {stt,gre,ipsecgre,
ipsecstt,bridge}]
                                     [--connector-ip CONNECTOR_IP]
                                     [--client-certificate CERT_DATA | --
client-certificate-file CERT_FILE]
                                     GATEWAY_DEVICE
```

Update a network gateway device.

Positional arguments

GATEWAY_DEVICE   ID or name of gateway_device to update.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--name NAME	New name for network gateway device.
--connector-type {stt,gre,ipsecgre,ipsecstt,bridge}	Type of the transport zone connector to use for this device. Valid values are gre, stt, ipsecgre, ipsecstt, and bridge. Defaults to stt.

–connector-ip CONNECTOR_IP	IP address for this device's transport connector. It must correspond to the IP address of the interface used for tenant traffic on the NSX gateway node.
–client-certificate CERT_DATA	PEM certificate used by the NSX gateway transport node to authenticate with the NSX controller.
–client-certificate-file CERT_FILE	File containing the PEM certificate used by the NSX gateway transport node to authenticate with the NSX controller.

neutron ipsec-site-connection-create

```
usage: neutron ipsec-site-connection-create [-h]
                                             [-f {html,json,shell,table,value,
yaml}]

                                             [-c COLUMN]
                                             [--max-width <integer>]
                                             [--prefix PREFIX]
                                             [--request-format {json,xml}]
                                             [--tenant-id TENANT_ID]
                                             [--admin-state-down] [--name NAME]
                                             [--description DESCRIPTION]
                                             [--mtu MTU]
                                             [--initiator {bi-directional,
response-only}]

                                             [--dpd action=ACTION,interval=
INTERVAL,timeout=TIMEOUT]

                                             --vpnservice-id VPNSERVICE
                                             --ikepolicy-id IKEPOLICY
                                             --ipsecpolicy-id IPSECPOLICY
                                             --peer-address PEER_ADDRESS
                                             --peer-id PEER_ID --peer-cidr
                                             PEER_CIDRS --psk PSK
```

Create an IPsec site connection.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--tenant-id TENANT_ID	The owner tenant ID.
--admin-state-down	Set admin state up to false.
--name NAME	Set friendly name for the connection.
--description DESCRIPTION	Set a description for the connection.
--mtu MTU MTU	size for the connection, default:1500
--initiator {bi-directional,response-only}	Initiator state in lowercase, default:bi-directional

–dpd	action=ACTION,interval=INTERVAL,timeout=TIMEOUT Ipsec connection. Dead Peer Detection attributes. 'action'-hold,clear,disabled,restart,restart-by-peer. 'interval' and 'timeout' are non negative integers. 'interval' should be less than 'timeout' value. 'action', default:hold 'interval', default:30, 'timeout', default:120.
–vpnservice-id VPNSERVICE	VPN service instance ID associated with this connection.
–ikepolicy-id IKEPOLICY	IKE policy ID associated with this connection.
–ipsecpolicy-id IPSECPOLICY	IPsec policy ID associated with this connection.
–peer-address PEER_ADDRESS	Peer gateway public IPv4/IPv6 address or FQDN.
–peer-id PEER_ID	Peer router identity for authentication. Can be IPv4/IPv6 address, e-mail address, key id, or FQDN.
–peer-cidr PEER_CIDRS	Remote subnet(s) in CIDR format.
–psk PSK	Pre-shared key string.

neutron ipsec-site-connection-delete

```
usage: neutron ipsec-site-connection-delete [-h] [--request-format {json,xml}]
                                            IPSEC_SITE_CONNECTION
```

Delete a given IPsec site connection.

Positional arguments

IPSEC_SITE_CONNECTION	ID or name of ipsec_site_connection to delete.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.

neutron ipsec-site-connection-list

```
usage: neutron ipsec-site-connection-list [-h] [-f {csv,html,json,table,yaml}]
                                          [-c COLUMN] [--max-width <integer>]
                                          [--quote {all,minimal,none,
nonnumeric}]

                                          [--request-format {json,xml}] [-D]
                                          [-F FIELD] [-P SIZE]
                                          [--sort-key FIELD]
                                          [--sort-dir {asc,desc}]
```

List IPsec site connections that belong to a given tenant.

Optional arguments

-h, –help	show this help message and exit

–request-format {json,xml}	The XML or JSON request format.
-D, –show-details	Show detailed information.
-F FIELD, –field FIELD	Specify the field(s) to be returned by server. You can repeat this option.
-P SIZE, –page-size SIZE	Specify retrieve unit of each request, then split one request to several requests.
–sort-key FIELD	Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
–sort-dir {asc,desc}	Sorts the list in the specified direction. You can repeat this option.

neutron ipsec-site-connection-show

```
usage: neutron ipsec-site-connection-show [-h]
                                          [-f {html,json,shell,table,value,
yaml}]
                                          [-c COLUMN] [--max-width <integer>]
                                          [--prefix PREFIX]
                                          [--request-format {json,xml}] [-D]
                                          [-F FIELD]
                                          IPSEC_SITE_CONNECTION
```

Show information of a given IPsec site connection.

Positional arguments

IPSEC_SITE_CONNECTION	ID or name of ipsec_site_connection to look up.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
-D, –show-details	Show detailed information.
-F FIELD, –field FIELD	Specify the field(s) to be returned by server. You can repeat this option.

neutron ipsec-site-connection-update

```
usage: neutron ipsec-site-connection-update [-h] [--request-format {json,xml}]
                                            [--dpd action=ACTION,interval=
INTERVAL,timeout=TIMEOUT]
                                            IPSEC_SITE_CONNECTION
```

Update a given IPsec site connection.

Positional arguments

IPSEC_SITE_CONNECTION   ID or name of ipsec_site_connection to update.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--dpd   action=ACTION,interval=INTERVAL,timeout=TIMEOUT
                                         Ipsec connection. Dead Peer Detection attributes. 'ac-
                                         tion'-hold,clear,disabled,restart,restart-by-peer. 'interval'
                                         and 'timeout' are non negative integers. 'interval' should
                                         be less than 'timeout' value. 'action', default:hold 'inter-
                                         val', default:30, 'timeout', default:120.

neutron l3-agent-list-hosting-router

```
usage: neutron l3-agent-list-hosting-router [-h]
                                            [-f {csv,html,json,table,yaml}]
                                            [-c COLUMN]
                                            [--max-width <integer>]
                                            [--quote {all,minimal,none,
nonnumeric}]

                                            [--request-format {json,xml}] [-D]
                                            [-F FIELD]
                                            router
```

List L3 agents hosting a router.

Positional arguments

router   Router to query.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                         peat this option.

neutron l3-agent-router-add

```
usage: neutron l3-agent-router-add [-h] [--request-format {json,xml}]
                                   l3_agent router
```

Add a router to a L3 agent.

Positional arguments

l3_agent   ID of the L3 agent.

router   Router to add.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron l3-agent-router-remove

```
usage: neutron l3-agent-router-remove [-h] [--request-format {json,xml}]
                                      l3_agent router
```

Remove a router from a L3 agent.

Positional arguments

l3_agent   ID of the L3 agent.

router   Router to remove.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron lb-agent-hosting-pool

```
usage: neutron lb-agent-hosting-pool [-h] [-f {csv,html,json,table,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     [--request-format {json,xml}] [-D]
                                     [-F FIELD]
                                     pool
```

Get loadbalancer agent hosting a pool. Deriving from ListCommand though server will return only one agent to keep common output format for all agent schedulers

Positional arguments

pool   Pool to query.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, –field FIELD   Specify the field(s) to be returned by server. You can re-
peat this option.

neutron lb-healthmonitor-associate

```
usage: neutron lb-healthmonitor-associate [-h] [--request-format {json,xml}]
                                          HEALTH_MONITOR_ID POOL
```

Create a mapping between a health monitor and a pool.

Positional arguments

HEALTH_MONITOR_ID   Health monitor to associate.

POOL   ID of the pool to be associated with the health monitor.

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

neutron lb-healthmonitor-create

```
usage: neutron lb-healthmonitor-create [-h]
                                       [-f {html,json,shell,table,value,yaml}]
                                       [-c COLUMN] [--max-width <integer>]
                                       [--prefix PREFIX]
                                       [--request-format {json,xml}]
                                       [--tenant-id TENANT_ID]
                                       [--admin-state-down]
                                       [--expected-codes EXPECTED_CODES]
                                       [--http-method HTTP_METHOD]
                                       [--url-path URL_PATH] --delay DELAY
                                       --max-retries MAX_RETRIES --timeout
                                       TIMEOUT --type {PING,TCP,HTTP,HTTPS}
```

Create a health monitor.

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

–tenant-id TENANT_ID   The owner tenant ID.

–admin-state-down   Set admin state up to false.

**–expected-codes
EXPECTED_CODES**   The list of HTTP status codes expected in response from
the member to declare it healthy. This attribute can con-
tain one value, or a list of values separated by comma,
or a range of values (e.g. "200-299"). If this attribute is
not specified, it defaults to "200".

–http-method HTTP_METHOD	The HTTP method used for requests by the monitor of type HTTP.
–url-path URL_PATH	The HTTP path used in the HTTP request used by the monitor to test a member health. This must be a string beginning with a / (forward slash).
–delay DELAY	The time in seconds between sending probes to members.
–max-retries MAX_RETRIES	Number of permissible connection failures before changing the member status to INACTIVE. [1..10]
–timeout TIMEOUT	Maximum number of seconds for a monitor to wait for a connection to be established before it times out. The value must be less than the delay value.
–type {PING,TCP,HTTP,HTTPS}	One of the predefined health monitor types.

neutron lb-healthmonitor-delete

```
usage: neutron lb-healthmonitor-delete [-h] [--request-format {json,xml}]
                                       HEALTH_MONITOR
```

Delete a given health monitor.

Positional arguments

HEALTH_MONITOR   ID of health_monitor to delete.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.

neutron lb-healthmonitor-disassociate

```
usage: neutron lb-healthmonitor-disassociate [-h]
                                             [--request-format {json,xml}]
                                             HEALTH_MONITOR_ID POOL
```

Remove a mapping from a health monitor to a pool.

Positional arguments

HEALTH_MONITOR_ID	Health monitor to associate.
POOL	ID of the pool to be associated with the health monitor.

Optional arguments

-h, –help	show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron lb-healthmonitor-list

```
usage: neutron lb-healthmonitor-list [-h] [-f {csv,html,json,table,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     [--request-format {json,xml}] [-D]
                                     [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                     [--sort-dir {asc,desc}]
```

List health monitors that belong to a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                      peat this option.

-P SIZE, --page-size SIZE   Specify retrieve unit of each request, then split one re-
                                      quest to several requests.

--sort-key FIELD   Sorts the list by the specified fields in the specified direc-
                                      tions. You can repeat this option, but you must specify
                                      an equal number of sort_dir and sort_key values. Extra
                                      sort_dir options are ignored. Missing sort_dir options
                                      use the default asc value.

--sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat
                                      this option.

neutron lb-healthmonitor-show

```
usage: neutron lb-healthmonitor-show [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--prefix PREFIX]
                                     [--request-format {json,xml}] [-D]
                                     [-F FIELD]
                                     HEALTH_MONITOR
```

Show information of a given health monitor.

Positional arguments

HEALTH_MONITOR   ID of health_monitor to look up.

Optional arguments

-h, --help   show this help message and exit

–request-format {json,xml}	The XML or JSON request format.
-D, –show-details	Show detailed information.
-F FIELD, –field FIELD	Specify the field(s) to be returned by server. You can re-peat this option.

neutron lb-healthmonitor-update

```
usage: neutron lb-healthmonitor-update [-h] [--request-format {json,xml}]
                                       HEALTH_MONITOR
```

Update a given health monitor.

Positional arguments

HEALTH_MONITOR   ID or name of health_monitor to update.

Optional arguments

| **-h, –help** | show this help message and exit |
| **–request-format {json,xml}** | The XML or JSON request format. |

neutron lb-member-create

```
usage: neutron lb-member-create [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--prefix PREFIX]
                                [--request-format {json,xml}]
                                [--tenant-id TENANT_ID] [--admin-state-down]
                                [--weight WEIGHT] --address ADDRESS
                                --protocol-port PROTOCOL_PORT
                                POOL
```

Create a member.

Positional arguments

POOL   Pool ID or name this vip belongs to.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
–tenant-id TENANT_ID	The owner tenant ID.
–admin-state-down	Set admin state up to false.
–weight WEIGHT	Weight of pool member in the pool (default:1, [0..256]).
–address ADDRESS IP	address of the pool member on the pool network.

–protocol-port PROTOCOL_PORT	Port on which the pool member listens for requests or connections.

neutron lb-member-delete

```
usage: neutron lb-member-delete [-h] [--request-format {json,xml}] MEMBER
```

Delete a given member.

Positional arguments

MEM- BER	ID or name of member to delete.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.

neutron lb-member-list

```
usage: neutron lb-member-list [-h] [-f {csv,html,json,table,yaml}] [-c COLUMN]
                              [--max-width <integer>]
                              [--quote {all,minimal,none,nonnumeric}]
                              [--request-format {json,xml}] [-D] [-F FIELD]
                              [-P SIZE] [--sort-key FIELD]
                              [--sort-dir {asc,desc}]
```

List members that belong to a given tenant.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
-D, –show-details	Show detailed information.
-F FIELD, –field FIELD	Specify the field(s) to be returned by server. You can repeat this option.
-P SIZE, –page-size SIZE	Specify retrieve unit of each request, then split one request to several requests.
–sort-key FIELD	Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
–sort-dir {asc,desc}	Sorts the list in the specified direction. You can repeat this option.

neutron lb-member-show

```
usage: neutron lb-member-show [-h] [-f {html,json,shell,table,value,yaml}]
                              [-c COLUMN] [--max-width <integer>]
                              [--prefix PREFIX] [--request-format {json,xml}]
                              [-D] [-F FIELD]
                              MEMBER
```

Show information of a given member.

Positional arguments

MEM-   ID of member to look up.
BER

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                        peat this option.

neutron lb-member-update

```
usage: neutron lb-member-update [-h] [--request-format {json,xml}] MEMBER
```

Update a given member.

Positional arguments

MEM-   ID or name of member to update.
BER

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron lb-pool-create

```
usage: neutron lb-pool-create [-h] [-f {html,json,shell,table,value,yaml}]
                              [-c COLUMN] [--max-width <integer>]
                              [--prefix PREFIX] [--request-format {json,xml}]
                              [--tenant-id TENANT_ID] [--admin-state-down]
                              [--description DESCRIPTION] --lb-method
                              {ROUND_ROBIN,LEAST_CONNECTIONS,SOURCE_IP} --name
                              NAME --protocol {HTTP,HTTPS,TCP} --subnet-id
```

```
                                      SUBNET [--provider PROVIDER]
```

Create a pool.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--tenant-id TENANT_ID	The owner tenant ID.
--admin-state-down	Set admin state up to false.
--description DESCRIPTION	Description of the pool.
--lb-method {ROUND_ROBIN,LEAST_CONNECTIONS,SOURCE_IP}	The algorithm used to distribute load between the members of the pool.
--name NAME	The name of the pool.
--protocol {HTTP,HTTPS,TCP}	Protocol for balancing.
--subnet-id SUBNET	The subnet on which the members of the pool will be located.
--provider PROVIDER	Provider name of loadbalancer service.

neutron lb-pool-delete

```
usage: neutron lb-pool-delete [-h] [--request-format {json,xml}] POOL
```

Delete a given pool.

Positional arguments

POOL   ID or name of pool to delete.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.

neutron lb-pool-list

```
usage: neutron lb-pool-list [-h] [-f {csv,html,json,table,yaml}] [-c COLUMN]
                            [--max-width <integer>]
                            [--quote {all,minimal,none,nonnumeric}]
                            [--request-format {json,xml}] [-D] [-F FIELD]
                            [-P SIZE] [--sort-key FIELD]
                            [--sort-dir {asc,desc}]
```

List pools that belong to a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                        peat this option.

-P SIZE, --page-size SIZE   Specify retrieve unit of each request, then split one re-
                                        quest to several requests.

--sort-key FIELD   Sorts the list by the specified fields in the specified direc-
                                        tions. You can repeat this option, but you must specify
                                        an equal number of sort_dir and sort_key values. Extra
                                        sort_dir options are ignored. Missing sort_dir options
                                        use the default asc value.

--sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat
                                        this option.

neutron lb-pool-list-on-agent

```
usage: neutron lb-pool-list-on-agent [-h] [-f {csv,html,json,table,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     [--request-format {json,xml}] [-D]
                                     [-F FIELD]
                                     lbaas_agent
```

List the pools on a loadbalancer agent.

Positional arguments

lbaas_agent   ID of the loadbalancer agent to query.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                        peat this option.

neutron lb-pool-show

```
usage: neutron lb-pool-show [-h] [-f {html,json,shell,table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>]
                           [--prefix PREFIX] [--request-format {json,xml}]
```

```
                              [-D] [-F FIELD]
                              POOL
```

Show information of a given pool.

Positional arguments

POOL   ID or name of pool to look up.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                   peat this option.

neutron lb-pool-stats

```
usage: neutron lb-pool-stats [-h] [-f {html,json,shell,table,value,yaml}]
                              [-c COLUMN] [--max-width <integer>]
                              [--prefix PREFIX] [--request-format {json,xml}]
                              [-D] [-F FIELD]
                              POOL
```

Retrieve stats for a given pool.

Positional arguments

POOL   ID or name of pool to look up.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                   peat this option.

neutron lb-pool-update

```
usage: neutron lb-pool-update [-h] [--request-format {json,xml}] POOL
```

Update a given pool.

Positional arguments

POOL   ID or name of pool to update.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron lb-vip-create

```
usage: neutron lb-vip-create [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>]
                             [--prefix PREFIX] [--request-format {json,xml}]
                             [--tenant-id TENANT_ID] [--address ADDRESS]
                             [--admin-state-down]
                             [--connection-limit CONNECTION_LIMIT]
                             [--description DESCRIPTION] --name NAME
                             --protocol-port PROTOCOL_PORT --protocol
                             {TCP,HTTP,HTTPS} --subnet-id SUBNET
                             POOL
```

Create a vip.

Positional arguments

POOL   Pool ID or name this vip belongs to.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--tenant-id TENANT_ID   The owner tenant ID.

--address ADDRESS IP   address of the vip.

--admin-state-down   Set admin state up to false.

--connection-limit   The maximum number of connections per second al-
CONNECTION_LIMIT   lowed for the vip. Positive integer or -1 for unlimited
                                       (default).

--description DESCRIPTION   Description of the vip.

--name NAME   Name of the vip.

--protocol-port   TCP port on which to listen for client traffic that is asso-
PROTOCOL_PORT   ciated with the vip address.

--protocol {TCP,HTTP,HTTPS}   Protocol for balancing.

--subnet-id SUBNET   The subnet on which to allocate the vip address.

neutron lb-vip-delete

```
usage: neutron lb-vip-delete [-h] [--request-format {json,xml}] VIP
```

Delete a given vip.

Positional arguments

VIP   ID or name of vip to delete.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron lb-vip-list

```
usage: neutron lb-vip-list [-h] [-f {csv,html,json,table,yaml}] [-c COLUMN]
                           [--max-width <integer>]
                           [--quote {all,minimal,none,nonnumeric}]
                           [--request-format {json,xml}] [-D] [-F FIELD]
                           [-P SIZE] [--sort-key FIELD]
                           [--sort-dir {asc,desc}]
```

List vips that belong to a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                    peat this option.

-P SIZE, --page-size SIZE   Specify retrieve unit of each request, then split one re-
                                    quest to several requests.

--sort-key FIELD   Sorts the list by the specified fields in the specified direc-
                                    tions. You can repeat this option, but you must specify
                                    an equal number of sort_dir and sort_key values. Extra
                                    sort_dir options are ignored. Missing sort_dir options
                                    use the default asc value.

--sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat
                                    this option.

neutron lb-vip-show

```
usage: neutron lb-vip-show [-h] [-f {html,json,shell,table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>]
                           [--prefix PREFIX] [--request-format {json,xml}]
                           [-D] [-F FIELD]
                           VIP
```

Show information of a given vip.

Positional arguments

VIP   ID or name of vip to look up.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                        peat this option.

neutron lb-vip-update

```
usage: neutron lb-vip-update [-h] [--request-format {json,xml}] VIP
```

Update a given vip.

Positional arguments

VIP   ID or name of vip to update.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron lbaas-healthmonitor-create

```
usage: neutron lbaas-healthmonitor-create [-h]
                                          [-f {html,json,shell,table,value,
yaml}]
                                          [-c COLUMN] [--max-width <integer>]
                                          [--prefix PREFIX]
                                          [--request-format {json,xml}]
                                          [--tenant-id TENANT_ID]
                                          [--admin-state-down]
                                          [--expected-codes EXPECTED_CODES]
                                          [--http-method HTTP_METHOD]
                                          [--url-path URL_PATH] --delay DELAY
                                          --max-retries MAX_RETRIES --timeout
                                          TIMEOUT --type {PING,TCP,HTTP,HTTPS}
```

LBaaS v2 Create a healthmonitor.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}	The XML or JSON request format.
--tenant-id TENANT_ID	The owner tenant ID.
--admin-state-down	Set admin state up to false.
--expected-codes EXPECTED_CODES	The list of HTTP status codes expected in response from the member to declare it healthy. This attribute can contain one value, or a list of values separated by comma, or a range of values (e.g. "200-299"). If this attribute is not specified, it defaults to "200".
--http-method HTTP_METHOD	The HTTP method used for requests by the monitor of type HTTP.
--url-path URL_PATH	The HTTP path used in the HTTP request used by the monitor to test a member health. This must be a string beginning with a / (forward slash).
--delay DELAY	The time in seconds between sending probes to members.
--max-retries MAX_RETRIES	Number of permissible connection failures before changing the member status to INACTIVE. [1..10].
--timeout TIMEOUT	Maximum number of seconds for a monitor to wait for a connection to be established before it times out. The value must be less than the delay value.
--type {PING,TCP,HTTP,HTTPS}	One of the predefined health monitor types.

neutron lbaas-healthmonitor-delete

```
usage: neutron lbaas-healthmonitor-delete [-h] [--request-format {json,xml}]
                                          HEALTHMONITOR
```

LBaaS v2 Delete a given healthmonitor.

Positional arguments

HEALTHMONI-TOR	ID or name of healthmonitor to delete.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.

neutron lbaas-healthmonitor-list

```
usage: neutron lbaas-healthmonitor-list [-h] [-f {csv,html,json,table,yaml}]
                                        [-c COLUMN] [--max-width <integer>]
```

```
                                   [--quote {all,minimal,none,
nonnumeric}]

                                   [--request-format {json,xml}] [-D]
                                   [-F FIELD] [-P SIZE]
                                   [--sort-key FIELD]
                                   [--sort-dir {asc,desc}]
```

LBaaS v2 List healthmonitors that belong to a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                  peat this option.

-P SIZE, --page-size SIZE   Specify retrieve unit of each request, then split one re-
                                  quest to several requests.

--sort-key FIELD   Sorts the list by the specified fields in the specified direc-
                                  tions. You can repeat this option, but you must specify
                                  an equal number of sort_dir and sort_key values. Extra
                                  sort_dir options are ignored. Missing sort_dir options
                                  use the default asc value.

--sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat
                                  this option.

neutron lbaas-healthmonitor-show

```
usage: neutron lbaas-healthmonitor-show [-h]
                                   [-f {html,json,shell,table,value,
yaml}]

                                   [-c COLUMN] [--max-width <integer>]
                                   [--prefix PREFIX]
                                   [--request-format {json,xml}] [-D]
                                   [-F FIELD]
                                   HEALTHMONITOR
```

LBaaS v2 Show information of a given healthmonitor.

Positional arguments

HEALTHMONI-   ID or name of healthmonitor to look up.
TOR

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can re-peat this option.

neutron lbaas-healthmonitor-update

```
usage: neutron lbaas-healthmonitor-update [-h] [--request-format {json,xml}]
                                          HEALTHMONITOR
```

LBaaS v2 Update a given healthmonitor.

Positional arguments

HEALTHMONI-TOR	ID or name of healthmonitor to update.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.

neutron lbaas-listener-create

```
usage: neutron lbaas-listener-create [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--prefix PREFIX]
                                     [--request-format {json,xml}]
                                     [--tenant-id TENANT_ID]
                                     [--admin-state-down]
                                     [--connection-limit CONNECTION_LIMIT]
                                     [--description DESCRIPTION] [--name NAME]
                                     --loadbalancer LOADBALANCER --protocol
                                     {TCP,HTTP,HTTPS} --protocol-port PORT
```

LBaaS v2 Create a listener.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--tenant-id TENANT_ID	The owner tenant ID.
--admin-state-down	Set admin state up to false.
--connection-limit CONNECTION_LIMIT	The maximum number of connections per second al-lowed for the vip. Positive integer or -1 for unlimited (default).
--description DESCRIPTION	Description of the listener.

–name NAME	The name of the listener.
–loadbalancer LOADBALANCER	ID or name of the load balancer.
–protocol {TCP,HTTP,HTTPS}	Protocol for the listener.
–protocol-port PORT	Protocol port for the listener.

neutron lbaas-listener-delete

```
usage: neutron lbaas-listener-delete [-h] [--request-format {json,xml}]
                                     LISTENER
```

LBaaS v2 Delete a given listener.

Positional arguments

LISTENER   ID or name of listener to delete.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.

neutron lbaas-listener-list

```
usage: neutron lbaas-listener-list [-h] [-f {csv,html,json,table,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--request-format {json,xml}] [-D]
                                   [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                   [--sort-dir {asc,desc}]
```

LBaaS v2 List listeners that belong to a given tenant.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
-D, –show-details	Show detailed information.
-F FIELD, –field FIELD	Specify the field(s) to be returned by server. You can repeat this option.
-P SIZE, –page-size SIZE	Specify retrieve unit of each request, then split one request to several requests.
–sort-key FIELD	Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

–sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat
                                            this option.

neutron lbaas-listener-show

```
usage: neutron lbaas-listener-show [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--prefix PREFIX]
                                   [--request-format {json,xml}] [-D]
                                   [-F FIELD]
                                   LISTENER
```

LBaaS v2 Show information of a given listener.

Positional arguments

LISTENER   ID or name of listener to look up.

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

-D, –show-details   Show detailed information.

-F FIELD, –field FIELD   Specify the field(s) to be returned by server. You can re-
                                            peat this option.

neutron lbaas-listener-update

```
usage: neutron lbaas-listener-update [-h] [--request-format {json,xml}]
                                     LISTENER
```

LBaaS v2 Update a given listener.

Positional arguments

LISTENER   ID or name of listener to update.

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

neutron lbaas-loadbalancer-create

```
usage: neutron lbaas-loadbalancer-create [-h]
                                         [-f {html,json,shell,table,value,
yaml}]
                                         [-c COLUMN] [--max-width <integer>]
```

```
                                        [--prefix PREFIX]
                                        [--request-format {json,xml}]
                                        [--tenant-id TENANT_ID]
                                        [--description DESCRIPTION]
                                        [--admin-state-down] [--name NAME]
                                        [--provider PROVIDER]
                                        [--vip-address VIP_ADDRESS]
                                        VIP_SUBNET
```

LBaaS v2 Create a loadbalancer.

Positional arguments

VIP_SUBNET   Load balancer VIP subnet.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--tenant-id TENANT_ID   The owner tenant ID.

--description DESCRIPTION   Description of the load balancer.

--admin-state-down   Set admin state up to false.

--name NAME   Name of the load balancer.

--provider PROVIDER   Provider name of load balancer service.

--vip-address VIP_ADDRESS   VIP address for the load balancer.

neutron lbaas-loadbalancer-delete

```
usage: neutron lbaas-loadbalancer-delete [-h] [--request-format {json,xml}]
                                         LOADBALANCER
```

LBaaS v2 Delete a given loadbalancer.

Positional arguments

**LOADBAL-   ID or name of loadbalancer to delete.
ANCER**

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron lbaas-loadbalancer-list

```
usage: neutron lbaas-loadbalancer-list [-h] [-f {csv,html,json,table,yaml}]
```

```
                                    [-c COLUMN] [--max-width <integer>]
                                    [--quote {all,minimal,none,nonnumeric}]
                                    [--request-format {json,xml}] [-D]
                                    [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                    [--sort-dir {asc,desc}]
```

LBaaS v2 List loadbalancers that belong to a given tenant.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.
-P SIZE, --page-size SIZE	Specify retrieve unit of each request, then split one request to several requests.
--sort-key FIELD	Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
--sort-dir {asc,desc}	Sorts the list in the specified direction. You can repeat this option.

neutron lbaas-loadbalancer-show

```
usage: neutron lbaas-loadbalancer-show [-h]
                                       [-f {html,json,shell,table,value,yaml}]
                                       [-c COLUMN] [--max-width <integer>]
                                       [--prefix PREFIX]
                                       [--request-format {json,xml}] [-D]
                                       [-F FIELD]
                                       LOADBALANCER
```

LBaaS v2 Show information of a given loadbalancer.

Positional arguments

LOADBAL-ANCER	ID or name of loadbalancer to look up.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.

| -F FIELD, --field FIELD | Specify the field(s) to be returned by server. You can re-peat this option. |

neutron lbaas-loadbalancer-update

```
usage: neutron lbaas-loadbalancer-update [-h] [--request-format {json,xml}]
                                         LOADBALANCER
```

LBaaS v2 Update a given loadbalancer.

Positional arguments

| LOADBAL-ANCER | ID or name of loadbalancer to update. |

Optional arguments

| -h, --help | show this help message and exit |
| --request-format {json,xml} | The XML or JSON request format. |

neutron lbaas-member-create

```
usage: neutron lbaas-member-create [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--prefix PREFIX]
                                   [--request-format {json,xml}]
                                   [--tenant-id TENANT_ID]
                                   [--admin-state-down] [--weight WEIGHT]
                                   --subnet SUBNET --address ADDRESS
                                   --protocol-port PROTOCOL_PORT
                                   POOL
```

LBaaS v2 Create a member.

Positional arguments

| POOL | ID or name of the pool that this member belongs to. |

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--tenant-id TENANT_ID	The owner tenant ID.
--admin-state-down	Set admin state up to false
--weight WEIGHT	Weight of member in the pool (default:1, [0..256]).
--subnet SUBNET	Subnet ID or name for the member.
--address ADDRESS IP	address of the pool member in the pool.

–protocol-port **PROTOCOL_PORT**	Port on which the pool member listens for requests or connections.

neutron lbaas-member-delete

```
usage: neutron lbaas-member-delete [-h] [--request-format {json,xml}]
                                   MEMBER POOL
```

LBaaS v2 Delete a given member.

Positional arguments

MEM-BER	ID or name of member to delete.
POOL	ID or name of the pool that this member belongs to.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.

neutron lbaas-member-list

```
usage: neutron lbaas-member-list [-h] [-f {csv,html,json,table,yaml}]
                                 [-c COLUMN] [--max-width <integer>]
                                 [--quote {all,minimal,none,nonnumeric}]
                                 [--request-format {json,xml}] [-D] [-F FIELD]
                                 [-P SIZE] [--sort-key FIELD]
                                 [--sort-dir {asc,desc}]
                                 POOL
```

LBaaS v2 List members that belong to a given tenant.

Positional arguments

POOL	ID or name of the pool that this member belongs to.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
-D, –show-details	Show detailed information.
-F FIELD, –field FIELD	Specify the field(s) to be returned by server. You can repeat this option.
-P SIZE, –page-size SIZE	Specify retrieve unit of each request, then split one request to several requests.
–sort-key FIELD	Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify

an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

–sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat this option.

neutron lbaas-member-show

```
usage: neutron lbaas-member-show [-h] [-f {html,json,shell,table,value,yaml}]
                                 [-c COLUMN] [--max-width <integer>]
                                 [--prefix PREFIX]
                                 [--request-format {json,xml}] [-D] [-F FIELD]
                                 MEMBER POOL
```

LBaaS v2 Show information of a given member.

Positional arguments

MEM-   ID or name of member to look up.
BER

POOL   ID or name of the pool that this member belongs to.

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

-D, –show-details   Show detailed information.

-F FIELD, –field FIELD   Specify the field(s) to be returned by server. You can re-
                                        peat this option.

neutron lbaas-member-update

```
usage: neutron lbaas-member-update [-h] [--request-format {json,xml}]
                                   [--admin-state-down] [--weight WEIGHT]
                                   MEMBER POOL
```

LBaaS v2 Update a given member.

Positional arguments

MEM-   ID or name of member to update.
BER

POOL   ID or name of the pool that this member belongs to

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}	The XML or JSON request format.
–admin-state-down	Set admin state up to false
–weight WEIGHT	Weight of member in the pool (default:1, [0..256])

neutron lbaas-pool-create

```
usage: neutron lbaas-pool-create [-h] [-f {html,json,shell,table,value,yaml}]
                                 [-c COLUMN] [--max-width <integer>]
                                 [--prefix PREFIX]
                                 [--request-format {json,xml}]
                                 [--tenant-id TENANT_ID] [--admin-state-down]
                                 [--description DESCRIPTION]
                                 [--healthmonitor-id HEALTHMONITOR_ID]
                                 [--session-persistence TYPE:VALUE]
                                 --lb-algorithm
                                 {ROUND_ROBIN,LEAST_CONNECTIONS,SOURCE_IP}
                                 --listener LISTENER --protocol
                                 {HTTP,HTTPS,TCP}
                                 NAME
```

LBaaS v2 Create a pool.

Positional arguments

NAME The name of the pool.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
–tenant-id TENANT_ID	The owner tenant ID.
–admin-state-down	Set admin state up to false.
–description DESCRIPTION	Description of the pool.
–healthmonitor-id HEALTHMONITOR_ID	ID of the health monitor to use.
–session-persistence	TYPE:VALUE The type of session persistence to use.
–lb-algorithm {ROUND_ROBIN,LEAST_CONNECTIONS,SOURCE_IP}	The algorithm used to distribute load between the members of the pool.
–listener LISTENER	The listener to associate with the pool
–protocol {HTTP,HTTPS,TCP}	Protocol for balancing.

neutron lbaas-pool-delete

```
usage: neutron lbaas-pool-delete [-h] [--request-format {json,xml}] POOL
```

LBaaS v2 Delete a given pool.

Positional arguments

POOL   ID or name of pool to delete.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron lbaas-pool-list

```
usage: neutron lbaas-pool-list [-h] [-f {csv,html,json,table,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--quote {all,minimal,none,nonnumeric}]
                               [--request-format {json,xml}] [-D] [-F FIELD]
                               [-P SIZE] [--sort-key FIELD]
                               [--sort-dir {asc,desc}]
```

LBaaS v2 List pools that belong to a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                       peat this option.

-P SIZE, --page-size SIZE   Specify retrieve unit of each request, then split one re-
                                       quest to several requests.

--sort-key FIELD   Sorts the list by the specified fields in the specified direc-
                                       tions. You can repeat this option, but you must specify
                                       an equal number of sort_dir and sort_key values. Extra
                                       sort_dir options are ignored. Missing sort_dir options
                                       use the default asc value.

--sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat
                                       this option.

neutron lbaas-pool-show

```
usage: neutron lbaas-pool-show [-h] [-f {html,json,shell,table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--prefix PREFIX] [--request-format {json,xml}]
                               [-D] [-F FIELD]
                               POOL
```

LBaaS v2 Show information of a given pool.

Positional arguments

POOL   ID or name of pool to look up.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.

neutron lbaas-pool-update

```
usage: neutron lbaas-pool-update [-h] [--request-format {json,xml}] POOL
```

LBaaS v2 Update a given pool.

Positional arguments

POOL   ID or name of pool to update.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.

neutron meter-label-create

```
usage: neutron meter-label-create [-h] [-f {html,json,shell,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--prefix PREFIX]
                                  [--request-format {json,xml}]
                                  [--tenant-id TENANT_ID]
                                  [--description DESCRIPTION] [--shared]
                                  NAME
```

Create a metering label for a given tenant.

Positional arguments

NAME Name of metering label to create.

Optional arguments

-h, --help	show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

–tenant-id TENANT_ID   The owner tenant ID.

–description DESCRIPTION   Description of metering label to create.

–shared   Set the label as shared.

neutron meter-label-delete

```
usage: neutron meter-label-delete [-h] [--request-format {json,xml}]
                                  METERING_LABEL
```

Delete a given metering label.

Positional arguments

METERING_LABEL   ID or name of metering_label to delete.

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

neutron meter-label-list

```
usage: neutron meter-label-list [-h] [-f {csv,html,json,table,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--request-format {json,xml}] [-D] [-F FIELD]
                                [-P SIZE] [--sort-key FIELD]
                                [--sort-dir {asc,desc}]
```

List metering labels that belong to a given tenant.

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

-D, –show-details   Show detailed information.

-F FIELD, –field FIELD   Specify the field(s) to be returned by server. You can re-
peat this option.

-P SIZE, –page-size SIZE   Specify retrieve unit of each request, then split one re-
quest to several requests.

–sort-key FIELD   Sorts the list by the specified fields in the specified direc-
tions. You can repeat this option, but you must specify
an equal number of sort_dir and sort_key values. Extra

> sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat this option.

neutron meter-label-rule-create

```
usage: neutron meter-label-rule-create [-h]
                                       [-f {html,json,shell,table,value,yaml}]
                                       [-c COLUMN] [--max-width <integer>]
                                       [--prefix PREFIX]
                                       [--request-format {json,xml}]
                                       [--tenant-id TENANT_ID]
                                       [--direction {ingress,egress}]
                                       [--excluded]
                                       LABEL REMOTE_IP_PREFIX
```

Create a metering label rule for a given label.

Positional arguments

LABEL   Id or Name of the label.

REMOTE_IP_PREFIX   CIDR to match on.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--tenant-id TENANT_ID   The owner tenant ID.

--direction {ingress,egress}   Direction of traffic, default: ingress.

--excluded   Exclude this CIDR from the label, default: not excluded.

neutron meter-label-rule-delete

```
usage: neutron meter-label-rule-delete [-h] [--request-format {json,xml}]
                                       METERING_LABEL_RULE
```

Delete a given metering label.

Positional arguments

METERING_LABEL_RULE   ID or name of metering_label_rule to delete.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron meter-label-rule-list

```
usage: neutron meter-label-rule-list [-h] [-f {csv,html,json,table,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     [--request-format {json,xml}] [-D]
                                     [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                     [--sort-dir {asc,desc}]
```

List metering labels that belong to a given label.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.
-P SIZE, --page-size SIZE	Specify retrieve unit of each request, then split one request to several requests.
--sort-key FIELD	Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
--sort-dir {asc,desc}	Sorts the list in the specified direction. You can repeat this option.

neutron meter-label-rule-show

```
usage: neutron meter-label-rule-show [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--prefix PREFIX]
                                     [--request-format {json,xml}] [-D]
                                     [-F FIELD]
                                     METERING_LABEL_RULE
```

Show information of a given metering label rule.

Positional arguments

METERING_LABEL_RULE	ID or name of metering_label_rule to look up.

Optional arguments

-h, --help	show this help message and exit

–request-format {json,xml}	The XML or JSON request format.
-D, –show-details	Show detailed information.
-F FIELD, –field FIELD	Specify the field(s) to be returned by server. You can re-peat this option.

neutron meter-label-show

```
usage: neutron meter-label-show [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--prefix PREFIX]
                                [--request-format {json,xml}] [-D] [-F FIELD]
                                METERING_LABEL
```

Show information of a given metering label.

Positional arguments

METERING_LABEL	ID or name of metering_label to look up.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
-D, –show-details	Show detailed information.
-F FIELD, –field FIELD	Specify the field(s) to be returned by server. You can re-peat this option.

neutron nec-packet-filter-create

```
usage: neutron nec-packet-filter-create [-h]
                                        [-f {html,json,shell,table,value,
yaml}]
                                        [-c COLUMN] [--max-width <integer>]
                                        [--prefix PREFIX]
                                        [--request-format {json,xml}]
                                        [--tenant-id TENANT_ID]
                                        [--admin-state-down] [--name NAME]
                                        [--in-port PORT] [--src-mac SRC_MAC]
                                        [--dst-mac DST_MAC]
                                        [--eth-type ETH_TYPE]
                                        [--protocol PROTOCOL]
                                        [--src-cidr SRC_CIDR]
                                        [--dst-cidr DST_CIDR]
                                        [--src-port SRC_PORT]
                                        [--dst-port DST_PORT]
                                        [--priority PRIORITY]
                                        [--action {allow,drop}]
                                        NETWORK
```

Create a packet filter for a given tenant.

Positional arguments

NET-   network to which this packet filter is applied
WORK

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--tenant-id TENANT_ID	The owner tenant ID.
--admin-state-down	Set Admin State Up to false
--name NAME	Name of this packet filter
--in-port PORT	Name or ID of the input port
--src-mac SRC_MAC	Source MAC address
--dst-mac DST_MAC	Destination MAC address
--eth-type ETH_TYPE	Ether Type. Integer [0:65535] (hex or decimal). E.g., 0x0800 (IPv4), 0x0806 (ARP), 0x86DD (IPv6)
--protocol PROTOCOL IP	Protocol. Protocol name or integer. Recognized names are icmp, tcp, udp, arp (case insensitive). Integer should be [0:255] (decimal or hex).
--src-cidr SRC_CIDR	Source IP address CIDR
--dst-cidr DST_CIDR	Destination IP address CIDR
--src-port SRC_PORT	Source port address
--dst-port DST_PORT	Destination port address
--priority PRIORITY	Priority of the filter. Integer of [0:65535]. Default: 30000.
--action {allow,drop}	Action of the filter. Default: allow

neutron nec-packet-filter-delete

```
usage: neutron nec-packet-filter-delete [-h] [--request-format {json,xml}]
                                        PACKET_FILTER
```

Delete a given packet filter.

Positional arguments

PACKET_FILTER   ID or name of packet_filter to delete.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron nec-packet-filter-list

```
usage: neutron nec-packet-filter-list [-h] [-f {csv,html,json,table,yaml}]
                                      [-c COLUMN] [--max-width <integer>]
                                      [--quote {all,minimal,none,nonnumeric}]
                                      [--request-format {json,xml}] [-D]
                                      [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                      [--sort-dir {asc,desc}]
```

List packet filters that belong to a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                       peat this option.

-P SIZE, --page-size SIZE   Specify retrieve unit of each request, then split one re-
                                       quest to several requests.

--sort-key FIELD   Sorts the list by the specified fields in the specified direc-
                                       tions. You can repeat this option, but you must specify
                                       an equal number of sort_dir and sort_key values. Extra
                                       sort_dir options are ignored. Missing sort_dir options
                                       use the default asc value.

--sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat
                                       this option.

neutron nec-packet-filter-show

```
usage: neutron nec-packet-filter-show [-h]
                                      [-f {html,json,shell,table,value,yaml}]
                                      [-c COLUMN] [--max-width <integer>]
                                      [--prefix PREFIX]
                                      [--request-format {json,xml}] [-D]
                                      [-F FIELD]
                                      PACKET_FILTER
```

Show information of a given packet filter.

Positional arguments

PACKET_FILTER   ID or name of packet_filter to look up.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                        peat this option.

neutron nec-packet-filter-update

```
usage: neutron nec-packet-filter-update [-h] [--request-format {json,xml}]
                                        [--admin-state {True,False}]
                                        [--name NAME] [--src-mac SRC_MAC]
                                        [--dst-mac DST_MAC]
                                        [--eth-type ETH_TYPE]
                                        [--protocol PROTOCOL]
                                        [--src-cidr SRC_CIDR]
                                        [--dst-cidr DST_CIDR]
                                        [--src-port SRC_PORT]
                                        [--dst-port DST_PORT]
                                        [--priority PRIORITY]
                                        [--action {allow,drop}]
                                        PACKET_FILTER
```

Update packet filter's information.

Positional arguments

PACKET_FILTER   ID or name of packet_filter to update.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--admin-state {True,False}   Set a value of Admin State Up

--name NAME   Name of this packet filter

--src-mac SRC_MAC   Source MAC address

--dst-mac DST_MAC   Destination MAC address

--eth-type ETH_TYPE   Ether Type. Integer [0:65535] (hex or decimal). E.g.,
                                        0x0800 (IPv4), 0x0806 (ARP), 0x86DD (IPv6)

--protocol PROTOCOL IP   Protocol. Protocol name or integer. Recognized names
                                        are icmp, tcp, udp, arp (case insensitive). Integer should
                                        be [0:255] (decimal or hex).

--src-cidr SRC_CIDR   Source IP address CIDR

–dst-cidr DST_CIDR	Destination IP address CIDR
–src-port SRC_PORT	Source port address
–dst-port DST_PORT	Destination port address
–priority PRIORITY	Priority of the filter. Integer of [0:65535].
–action {allow,drop}	Action of the filter.

neutron net-create

```
usage: neutron net-create [-h] [-f {html,json,shell,table,value,yaml}]
                          [-c COLUMN] [--max-width <integer>]
                          [--prefix PREFIX] [--request-format {json,xml}]
                          [--tenant-id TENANT_ID] [--admin-state-down]
                          [--shared] [--router:external]
                          [--provider:network_type <network_type>]
                          [--provider:physical_network
 <physical_network_name>]
                          [--provider:segmentation_id <segmentation_id>]
                          NAME
```

Create a network for a given tenant.

Positional arguments

NAME Name of network to create.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
–tenant-id TENANT_ID	The owner tenant ID.
–admin-state-down	Set admin state up to false.
–shared	Set the network as shared.
–router:external	Set network as external, it is only available for admin
–provider:network_type <network_type>	The physical mechanism by which the virtual network is implemented.
–provider:physical_network <physical_network_name>	Name of the physical network over which the virtual network is implemented.
–provider:segmentation_id <segmentation_id>	VLAN ID for VLAN networks or tunnel-id for GRE/VXLAN networks.

neutron net-delete

```
usage: neutron net-delete [-h] [--request-format {json,xml}] NETWORK
```

Delete a given network.

Positional arguments

NET-WORK   ID or name of network to delete.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron net-external-list

```
usage: neutron net-external-list [-h] [-f {csv,html,json,table,yaml}]
                                 [-c COLUMN] [--max-width <integer>]
                                 [--quote {all,minimal,none,nonnumeric}]
                                 [--request-format {json,xml}] [-D] [-F FIELD]
                                 [-P SIZE] [--sort-key FIELD]
                                 [--sort-dir {asc,desc}]
```

List external networks that belong to a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE   Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD   Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat this option.

neutron net-gateway-connect

```
usage: neutron net-gateway-connect [-h] [--request-format {json,xml}]
                                   [--segmentation-type SEGMENTATION_TYPE]
                                   [--segmentation-id SEGMENTATION_ID]
                                   NET-GATEWAY-ID NETWORK-ID
```

Add an internal network interface to a router.

Positional arguments

NET-GATEWAY-ID   ID of the network gateway.

NETWORK-ID   ID of the internal network to connect on the gateway.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--segmentation-type SEGMENTATION_TYPE	L2 segmentation strategy on the external side of the gateway (e.g.: VLAN, FLAT).
--segmentation-id SEGMENTATION_ID	Identifier for the L2 segment on the external side of the gateway.

neutron net-gateway-create

```
usage: neutron net-gateway-create [-h] [-f {html,json,shell,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--prefix PREFIX]
                                  [--request-format {json,xml}]
                                  [--tenant-id TENANT_ID]
                                  [--device id=ID,interface_name=NAME_OR_ID]
                                  NAME
```

Create a network gateway.

Positional arguments

NAME Name of network gateway to create.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--tenant-id TENANT_ID	The owner tenant ID.
--device	id=ID,interface_name=NAME_OR_ID Device info for this gateway. You can repeat this option for multiple devices for HA gateways.

neutron net-gateway-delete

```
usage: neutron net-gateway-delete [-h] [--request-format {json,xml}]
                                  NETWORK_GATEWAY
```

Delete a given network gateway.

Positional arguments

NETWORK_GATEWAYID or name of network_gateway to delete.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron net-gateway-disconnect

```
usage: neutron net-gateway-disconnect [-h] [--request-format {json,xml}]
                                      [--segmentation-type SEGMENTATION_TYPE]
                                      [--segmentation-id SEGMENTATION_ID]
                                      NET-GATEWAY-ID NETWORK-ID
```

Remove a network from a network gateway.

Positional arguments

NET-GATEWAY-ID   ID of the network gateway.

NETWORK-ID   ID of the internal network to connect on the gateway.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--segmentation-type   L2 segmentation strategy on the external side of the
SEGMENTATION_TYPE   gateway (e.g.: VLAN, FLAT).

--segmentation-id   Identifier for the L2 segment on the external side of the
SEGMENTATION_ID   gateway.

neutron net-gateway-list

```
usage: neutron net-gateway-list [-h] [-f {csv,html,json,table,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--request-format {json,xml}] [-D] [-F FIELD]
```

List network gateways for a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, –field FIELD   Specify the field(s) to be returned by server. You can re-
                                           peat this option.

neutron net-gateway-show

```
usage: neutron net-gateway-show [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--prefix PREFIX]
                                [--request-format {json,xml}] [-D] [-F FIELD]
                                NETWORK_GATEWAY
```

Show information of a given network gateway.

Positional arguments

NETWORK_GATEWAYID or name of network_gateway to look up.

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

-D, –show-details   Show detailed information.

-F FIELD, –field FIELD   Specify the field(s) to be returned by server. You can re-
                                          peat this option.

neutron net-gateway-update

```
usage: neutron net-gateway-update [-h] [--request-format {json,xml}]
                                  NETWORK_GATEWAY
```

Update the name for a network gateway.

Positional arguments

NETWORK_GATEWAYID or name of network_gateway to update.

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

neutron net-list

```
usage: neutron net-list [-h] [-f {csv,html,json,table,yaml}] [-c COLUMN]
                        [--max-width <integer>]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--request-format {json,xml}] [-D] [-F FIELD]
                        [-P SIZE] [--sort-key FIELD] [--sort-dir {asc,desc}]
```

List networks that belong to a given tenant.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.
-P SIZE, --page-size SIZE	Specify retrieve unit of each request, then split one request to several requests.
--sort-key FIELD	Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
--sort-dir {asc,desc}	Sorts the list in the specified direction. You can repeat this option.

neutron net-list-on-dhcp-agent

```
usage: neutron net-list-on-dhcp-agent [-h] [-f {csv,html,json,table,yaml}]
                                       [-c COLUMN] [--max-width <integer>]
                                       [--quote {all,minimal,none,nonnumeric}]
                                       [--request-format {json,xml}] [-D]
                                       [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                       [--sort-dir {asc,desc}]
                                       dhcp_agent
```

List the networks on a DHCP agent.

Positional arguments

dhcp_agent	ID of the DHCP agent.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.
-P SIZE, --page-size SIZE	Specify retrieve unit of each request, then split one request to several requests.
--sort-key FIELD	Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify

an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

–sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat this option.

neutron net-show

```
usage: neutron net-show [-h] [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--prefix PREFIX]
                        [--request-format {json,xml}] [-D] [-F FIELD]
                        NETWORK
```

Show information of a given network.

Positional arguments

NET-   ID or name of network to look up.
WORK

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

-D, –show-details   Show detailed information.

-F FIELD, –field FIELD   Specify the field(s) to be returned by server. You can re-peat this option.

neutron net-update

```
usage: neutron net-update [-h] [--request-format {json,xml}] NETWORK
```

Update network's information.

Positional arguments

NET-   ID or name of network to update.
WORK

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

neutron nuage-netpartition-create

```
usage: neutron nuage-netpartition-create [-h]
                                         [-f {html,json,shell,table,value,
yaml}]
```

```
                                            [-c COLUMN] [--max-width <integer>]
                                            [--prefix PREFIX]
                                            [--request-format {json,xml}]
                                            [--tenant-id TENANT_ID]
                                            name
```

Create a netpartition for a given tenant.

Positional arguments

name   Name of netpartition to create.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--tenant-id TENANT_ID   The owner tenant ID.

neutron nuage-netpartition-delete

```
usage: neutron nuage-netpartition-delete [-h] [--request-format {json,xml}]
                                         NET_PARTITION
```

Delete a given netpartition.

Positional arguments

NET_PARTITION   ID or name of net_partition to delete.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron nuage-netpartition-list

```
usage: neutron nuage-netpartition-list [-h] [-f {csv,html,json,table,yaml}]
                                       [-c COLUMN] [--max-width <integer>]
                                       [--quote {all,minimal,none,nonnumeric}]
                                       [--request-format {json,xml}] [-D]
                                       [-F FIELD]
```

List netpartitions that belong to a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

| -F FIELD, --field FIELD | Specify the field(s) to be returned by server. You can re- peat this option. |

neutron nuage-netpartition-show

```
usage: neutron nuage-netpartition-show [-h]
                                       [-f {html,json,shell,table,value,yaml}]
                                       [-c COLUMN] [--max-width <integer>]
                                       [--prefix PREFIX]
                                       [--request-format {json,xml}] [-D]
                                       [-F FIELD]
                                       NET_PARTITION
```

Show information of a given netpartition.

Positional arguments

| NET_PARTITION | ID or name of net_partition to look up. |

Optional arguments

| -h, --help | show this help message and exit |

| --request-format {json,xml} | The XML or JSON request format. |

| -D, --show-details | Show detailed information. |

| -F FIELD, --field FIELD | Specify the field(s) to be returned by server. You can re- peat this option. |

neutron port-create

```
usage: neutron port-create [-h] [-f {html,json,shell,table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>]
                           [--prefix PREFIX] [--request-format {json,xml}]
                           [--tenant-id TENANT_ID] [--name NAME]
                           [--fixed-ip subnet_id=SUBNET,ip_address=IP_ADDR]
                           [--device-id DEVICE_ID]
                           [--device-owner DEVICE_OWNER] [--admin-state-down]
                           [--mac-address MAC_ADDRESS]
                           [--security-group SECURITY_GROUP | --no-security-
groups]
                           [--extra-dhcp-opt EXTRA_DHCP_OPTS]
                           NETWORK
```

Create a port for a given tenant.

Positional arguments

| NET- WORK | Network ID or name this port belongs to. |

Optional arguments

| -h, --help | show this help message and exit |

–request-format {json,xml}	The XML or JSON request format.
–tenant-id TENANT_ID	The owner tenant ID.
–name NAME	Name of this port.
–fixed-ip	subnet_id=SUBNET,ip_address=IP_ADDR Desired IP and/or subnet for this port: subnet_id=<name_or_id>,ip_address=<ip>. You can repeat this option.
–device-id DEVICE_ID	Device ID of this port.
–device-owner DEVICE_OWNER	Device owner of this port.
–admin-state-down	Set admin state up to false.
–mac-address MAC_ADDRESS	MAC address of this port.
–security-group SECURITY_GROUP	Security group associated with the port. You can repeat this option.
–no-security-groups	Associate no security groups with the port.
–extra-dhcp-opt EXTRA_DHCP_OPTS	Extra dhcp options to be assigned to this port: opt_name=<dhcp_option_name>,opt_value=<value>,ip_version={4, 6}. You can repeat this option.

neutron port-delete

```
usage: neutron port-delete [-h] [--request-format {json,xml}] PORT
```

Delete a given port.

Positional arguments

PORT   ID or name of port to delete.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.

neutron port-list

```
usage: neutron port-list [-h] [-f {csv,html,json,table,yaml}] [-c COLUMN]
                         [--max-width <integer>]
                         [--quote {all,minimal,none,nonnumeric}]
                         [--request-format {json,xml}] [-D] [-F FIELD]
                         [-P SIZE] [--sort-key FIELD] [--sort-dir {asc,desc}]
```

List ports that belong to a given tenant.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.
-P SIZE, --page-size SIZE	Specify retrieve unit of each request, then split one request to several requests.
--sort-key FIELD	Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
--sort-dir {asc,desc}	Sorts the list in the specified direction. You can repeat this option.

neutron port-show

```
usage: neutron port-show [-h] [-f {html,json,shell,table,value,yaml}]
                         [-c COLUMN] [--max-width <integer>] [--prefix PREFIX]
                         [--request-format {json,xml}] [-D] [-F FIELD]
                         PORT
```

Show information of a given port.

Positional arguments

PORT   ID or name of port to look up.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.

neutron port-update

```
usage: neutron port-update [-h] [--request-format {json,xml}] [--name NAME]
                           [--fixed-ip subnet_id=SUBNET,ip_address=IP_ADDR]
                           [--device-id DEVICE_ID]
                           [--device-owner DEVICE_OWNER]
```

```
                              [--admin-state-up {True,False}]
                              [--security-group SECURITY_GROUP | --no-security-
groups]
                              [--extra-dhcp-opt EXTRA_DHCP_OPTS]
                              PORT
```

Update port's information.

Positional arguments

PORT   ID or name of port to update.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--name NAME	Name of this port.
--fixed-ip	subnet_id=SUBNET,ip_address=IP_ADDR Desired IP and/or subnet for this port: subnet_id=<name_or_id>,ip_address=<ip>. You can re-peat this option.
--device-id DEVICE_ID	Device ID of this port.
--device-owner DEVICE_OWNER	Device owner of this port.
--admin-state-up {True,False}	Set admin state up for the port.
--security-group SECURITY_GROUP	Security group associated with the port. You can repeat this option.
--no-security-groups	Associate no security groups with the port.
--extra-dhcp-opt EXTRA_DHCP_OPTS	Extra dhcp options to be assigned to this port: opt_na me=<dhcp_option_name>,opt_value=<value>,ip_version={4, 6}. You can repeat this option.

neutron queue-create

```
usage: neutron queue-create [-h] [-f {html,json,shell,table,value,yaml}]
                            [-c COLUMN] [--max-width <integer>]
                            [--prefix PREFIX] [--request-format {json,xml}]
                            [--tenant-id TENANT_ID] [--min MIN] [--max MAX]
                            [--qos-marking QOS_MARKING] [--default DEFAULT]
                            [--dscp DSCP]
                            NAME
```

Create a queue.

Positional arguments

NAME Name of queue.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--tenant-id TENANT_ID	The owner tenant ID.
--min MIN	Minimum rate.
--max MAX	Maximum rate.
--qos-marking QOS_MARKING	QOS marking as untrusted or trusted.
--default DEFAULT	If true all created ports will be the size of this queue, if queue is not specified
--dscp DSCP	Differentiated Services Code Point.

neutron queue-delete

```
usage: neutron queue-delete [-h] [--request-format {json,xml}] QOS_QUEUE
```

Delete a given queue.

Positional arguments

QOS_QUEUE ID or name of qos_queue to delete.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.

neutron queue-list

```
usage: neutron queue-list [-h] [-f {csv,html,json,table,yaml}] [-c COLUMN]
                          [--max-width <integer>]
                          [--quote {all,minimal,none,nonnumeric}]
                          [--request-format {json,xml}] [-D] [-F FIELD]
```

List queues that belong to a given tenant.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.

neutron queue-show

```
usage: neutron queue-show [-h] [-f {html,json,shell,table,value,yaml}]
                          [-c COLUMN] [--max-width <integer>]
                          [--prefix PREFIX] [--request-format {json,xml}] [-D]
                          [-F FIELD]
                          QOS_QUEUE
```

Show information of a given queue.

Positional arguments

QOS_QUEUE   ID or name of qos_queue to look up.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                    peat this option.

neutron quota-delete

```
usage: neutron quota-delete [-h] [--request-format {json,xml}]
                            [--tenant-id tenant-id]
```

Delete defined quotas of a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--tenant-id   tenant-id The owner tenant ID.

neutron quota-list

```
usage: neutron quota-list [-h] [-f {csv,html,json,table,yaml}] [-c COLUMN]
                          [--max-width <integer>]
                          [--quote {all,minimal,none,nonnumeric}]
                          [--request-format {json,xml}]
```

List quotas of all tenants who have non-default quota values.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron quota-show

```
usage: neutron quota-show [-h] [-f {html,json,shell,table,value,yaml}]
                          [-c COLUMN] [--max-width <integer>]
                          [--prefix PREFIX] [--request-format {json,xml}]
                          [--tenant-id tenant-id]
```

Show quotas of a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--tenant-id   tenant-id The owner tenant ID.

neutron quota-update

```
usage: neutron quota-update [-h] [-f {html,json,shell,table,value,yaml}]
                            [-c COLUMN] [--max-width <integer>]
                            [--prefix PREFIX] [--request-format {json,xml}]
                            [--tenant-id tenant-id] [--network networks]
                            [--subnet subnets] [--port ports]
                            [--router routers] [--floatingip floatingips]
                            [--security-group security_groups]
                            [--security-group-rule security_group_rules]
                            [--vip vips] [--pool pools] [--member members]
                            [--health-monitor health_monitors]
```

Define tenant's quotas not to use defaults.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--tenant-id   tenant-id The owner tenant ID.

--network   networks The limit of networks.

--subnet   subnets The limit of subnets.

--port   ports The limit of ports.

--router   routers The limit of routers.

--floatingip   floatingips The limit of floating IPs.

--security-group   security_groups The limit of security groups.

--security-group-rule   security_group_rules The limit of security groups rules.

--vip   vips The limit of vips.

–pool	pools The limit of pools.
–member	members The limit of pool members.
–health-monitor	health_monitors The limit of health monitors.

neutron router-create

```
usage: neutron router-create [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>]
                             [--prefix PREFIX] [--request-format {json,xml}]
                             [--tenant-id TENANT_ID] [--admin-state-down]
                             [--distributed {True,False}] [--ha {True,False}]
                             NAME
```

Create a router for a given tenant.

Positional arguments

NAME Name of router to create.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
–tenant-id TENANT_ID	The owner tenant ID.
–admin-state-down	Set admin state up to false.
–distributed {True,False}	Create a distributed router.
–ha {True,False}	Create a highly available router.

neutron router-delete

```
usage: neutron router-delete [-h] [--request-format {json,xml}] ROUTER
```

Delete a given router.

Positional arguments

ROUTER   ID or name of router to delete.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.

neutron router-gateway-clear

```
usage: neutron router-gateway-clear [-h] [--request-format {json,xml}] ROUTER
```

Remove an external network gateway from a router.

Positional arguments

ROUTER   ID or name of the router.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron router-gateway-set

```
usage: neutron router-gateway-set [-h] [--request-format {json,xml}]
                                  [--disable-snat]
                                  ROUTER EXTERNAL-NETWORK
```

Set the external network gateway for a router.

Positional arguments

ROUTER   ID or name of the router.

**EXTERNAL-NET-   ID or name of the external network for the gateway.
WORK**

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--disable-snat   Disable source NAT on the router gateway.

neutron router-interface-add

```
usage: neutron router-interface-add [-h] [--request-format {json,xml}]
                                    ROUTER INTERFACE
```

Add an internal network interface to a router.

Positional arguments

ROUTER   ID or name of the router.

INTERFACE   The format is "SUBNET|subnet=SUBNET|port=PORT". Either a subnet or port
                 must be specified. Both ID and name are accepted as SUBNET or PORT. Note
                 that "subnet=" can be omitted when specifying a subnet.

Optional arguments

-h, --help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

neutron router-interface-delete

```
usage: neutron router-interface-delete [-h] [--request-format {json,xml}]
                                       ROUTER INTERFACE
```

Remove an internal network interface from a router.

Positional arguments

ROUTER   ID or name of the router.

INTERFACE   The format is "SUBNET|subnet=SUBNET|port=PORT". Either a subnet or port
                  must be specified. Both ID and name are accepted as SUBNET or PORT. Note
                  that "subnet=" can be omitted when specifying a subnet.

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

neutron router-list

```
usage: neutron router-list [-h] [-f {csv,html,json,table,yaml}] [-c COLUMN]
                           [--max-width <integer>]
                           [--quote {all,minimal,none,nonnumeric}]
                           [--request-format {json,xml}] [-D] [-F FIELD]
                           [-P SIZE] [--sort-key FIELD]
                           [--sort-dir {asc,desc}]
```

List routers that belong to a given tenant.

Optional arguments

-h, –help   show this help message and exit

–request-format {json,xml}   The XML or JSON request format.

-D, –show-details   Show detailed information.

-F FIELD, –field FIELD   Specify the field(s) to be returned by server. You can re-
                                        peat this option.

-P SIZE, –page-size SIZE   Specify retrieve unit of each request, then split one re-
                                        quest to several requests.

–sort-key FIELD   Sorts the list by the specified fields in the specified direc-
                                        tions. You can repeat this option, but you must specify
                                        an equal number of sort_dir and sort_key values. Extra
                                        sort_dir options are ignored. Missing sort_dir options
                                        use the default asc value.

–sort-dir {asc,desc}	Sorts the list in the specified direction. You can repeat this option.

neutron router-list-on-l3-agent

```
usage: neutron router-list-on-l3-agent [-h] [-f {csv,html,json,table,yaml}]
                                       [-c COLUMN] [--max-width <integer>]
                                       [--quote {all,minimal,none,nonnumeric}]
                                       [--request-format {json,xml}] [-D]
                                       [-F FIELD]
                                       l3_agent
```

List the routers on a L3 agent.

Positional arguments

l3_agent   ID of the L3 agent to query.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
-D, –show-details	Show detailed information.
-F FIELD, –field FIELD	Specify the field(s) to be returned by server. You can re-peat this option.

neutron router-port-list

```
usage: neutron router-port-list [-h] [-f {csv,html,json,table,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--request-format {json,xml}] [-D] [-F FIELD]
                                [-P SIZE] [--sort-key FIELD]
                                [--sort-dir {asc,desc}]
                                router
```

List ports that belong to a given tenant, with specified router.

Positional arguments

router   ID or name of router to look up.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
-D, –show-details	Show detailed information.
-F FIELD, –field FIELD	Specify the field(s) to be returned by server. You can re-peat this option.

-P SIZE, --page-size SIZE	Specify retrieve unit of each request, then split one request to several requests.
--sort-key FIELD	Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
--sort-dir {asc,desc}	Sorts the list in the specified direction. You can repeat this option.

neutron router-show

```
usage: neutron router-show [-h] [-f {html,json,shell,table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>]
                           [--prefix PREFIX] [--request-format {json,xml}]
                           [-D] [-F FIELD]
                           ROUTER
```

Show information of a given router.

Positional arguments

ROUTER   ID or name of router to look up.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.

neutron router-update

```
usage: neutron router-update [-h] [--request-format {json,xml}] ROUTER
```

Update router's information.

Positional arguments

ROUTER   ID or name of router to update.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.

neutron security-group-create

```
usage: neutron security-group-create [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--prefix PREFIX]
                                     [--request-format {json,xml}]
                                     [--tenant-id TENANT_ID]
                                     [--description DESCRIPTION]
                                     NAME
```

Create a security group.

Positional arguments

NAME Name of security group.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--tenant-id TENANT_ID   The owner tenant ID.

--description DESCRIPTION   Description of security group.

neutron security-group-delete

```
usage: neutron security-group-delete [-h] [--request-format {json,xml}]
                                     SECURITY_GROUP
```

Delete a given security group.

Positional arguments

SECURITY_GROUP   ID or name of security_group to delete.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron security-group-list

```
usage: neutron security-group-list [-h] [-f {csv,html,json,table,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--request-format {json,xml}] [-D]
                                   [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                   [--sort-dir {asc,desc}]
```

List security groups that belong to a given tenant.

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                    peat this option.

-P SIZE, --page-size SIZE   Specify retrieve unit of each request, then split one re-
                                    quest to several requests.

--sort-key FIELD   Sorts the list by the specified fields in the specified direc-
                                    tions. You can repeat this option, but you must specify
                                    an equal number of sort_dir and sort_key values. Extra
                                    sort_dir options are ignored. Missing sort_dir options
                                    use the default asc value.

--sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat
                                    this option.

neutron security-group-rule-create

```
usage: neutron security-group-rule-create [-h]
                                          [-f {html,json,shell,table,value,
yaml}]
                                          [-c COLUMN] [--max-width <integer>]
                                          [--prefix PREFIX]
                                          [--request-format {json,xml}]
                                          [--tenant-id TENANT_ID]
                                          [--direction {ingress,egress}]
                                          [--ethertype ETHERTYPE]
                                          [--protocol PROTOCOL]
                                          [--port-range-min PORT_RANGE_MIN]
                                          [--port-range-max PORT_RANGE_MAX]
                                          [--remote-ip-prefix
 REMOTE_IP_PREFIX]
                                          [--remote-group-id REMOTE_GROUP]
                                          SECURITY_GROUP
```

Create a security group rule.

Positional arguments

SECURITY_GROUP   Security group name or ID to add rule.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--tenant-id TENANT_ID   The owner tenant ID.

–direction {ingress,egress}	Direction of traffic: ingress/egress.
–ethertype ETHERTYPE	IPv4/IPv6
–protocol PROTOCOL	Protocol of packet.
–port-range-min PORT_RANGE_MIN	Starting port range.
–port-range-max PORT_RANGE_MAX	Ending port range.
–remote-ip-prefix REMOTE_IP_PREFIX	CIDR to match on.
–remote-group-id REMOTE_GROUP	Remote security group name or ID to apply rule.

neutron security-group-rule-delete

```
usage: neutron security-group-rule-delete [-h] [--request-format {json,xml}]
                                          SECURITY_GROUP_RULE
```

Delete a given security group rule.

Positional arguments

SECURITY_GROUP_RULE	ID of security_group_rule to delete.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.

neutron security-group-rule-list

```
usage: neutron security-group-rule-list [-h] [-f {csv,html,json,table,yaml}]
                                        [-c COLUMN] [--max-width <integer>]
                                        [--quote {all,minimal,none,
nonnumeric}]
                                        [--request-format {json,xml}] [-D]
                                        [-F FIELD] [-P SIZE]
                                        [--sort-key FIELD]
                                        [--sort-dir {asc,desc}]
                                        [--no-nameconv]
```

List security group rules that belong to a given tenant.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.

-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can re-peat this option.
-P SIZE, --page-size SIZE	Specify retrieve unit of each request, then split one re-quest to several requests.
--sort-key FIELD	Sorts the list by the specified fields in the specified direc-tions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
--sort-dir {asc,desc}	Sorts the list in the specified direction. You can repeat this option.
--no-nameconv	Do not convert security group ID to its name.

neutron security-group-rule-show

```
usage: neutron security-group-rule-show [-h]
                                        [-f {html,json,shell,table,value,
yaml}]

                                        [-c COLUMN] [--max-width <integer>]
                                        [--prefix PREFIX]
                                        [--request-format {json,xml}] [-D]
                                        [-F FIELD]
                                        SECURITY_GROUP_RULE
```

Show information of a given security group rule.

Positional arguments

SECURITY_GROUP_RULE	ID of security_group_rule to look up.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can re-peat this option.

neutron security-group-show

```
usage: neutron security-group-show [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--prefix PREFIX]
```

```
                                    [--request-format {json,xml}] [-D]
                                    [-F FIELD]
                                    SECURITY_GROUP
```

Show information of a given security group.

Positional arguments

SECURITY_GROUP   ID or name of security_group to look up.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.

neutron security-group-update

```
usage: neutron security-group-update [-h] [--request-format {json,xml}]
                                     [--name NAME] [--description DESCRIPTION]
                                     SECURITY_GROUP
```

Update a given security group.

Positional arguments

SECURITY_GROUP   ID or name of security_group to update.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--name NAME	Name of security group.
--description DESCRIPTION	Description of security group.

neutron service-provider-list

```
usage: neutron service-provider-list [-h] [-f {csv,html,json,table,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     [--request-format {json,xml}] [-D]
                                     [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                     [--sort-dir {asc,desc}]
```

List service providers.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.
-P SIZE, --page-size SIZE	Specify retrieve unit of each request, then split one request to several requests.
--sort-key FIELD	Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
--sort-dir {asc,desc}	Sorts the list in the specified direction. You can repeat this option.

neutron subnet-create

```
usage: neutron subnet-create [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>]
                             [--prefix PREFIX] [--request-format {json,xml}]
                             [--tenant-id TENANT_ID] [--name NAME]
                             [--gateway GATEWAY_IP] [--no-gateway]
                             [--allocation-pool start=IP_ADDR,end=IP_ADDR]
                             [--host-route destination=CIDR,nexthop=IP_ADDR]
                             [--dns-nameserver DNS_NAMESERVER]
                             [--disable-dhcp] [--enable-dhcp]
                             [--ip-version {4,6}]
                             [--ipv6-ra-mode {dhcpv6-stateful,dhcpv6-
stateless,slaac}]
                             [--ipv6-address-mode {dhcpv6-stateful,dhcpv6-
stateless,slaac}]
                             NETWORK CIDR
```

Create a subnet for a given tenant.

Positional arguments

NET-WORK	Network ID or name this subnet belongs to.
CIDR	CIDR of subnet to create.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.

–tenant-id TENANT_ID	The owner tenant ID.
–name NAME	Name of this subnet.
–gateway GATEWAY_IP	Gateway IP of this subnet.
–no-gateway	No distribution of gateway.
–allocation-pool	start=IP_ADDR,end=IP_ADDR Allocation pool IP addresses for this subnet (This option can be repeated).
–host-route	destination=CIDR,nexthop=IP_ADDR Additional route (This option can be repeated).
–dns-nameserver DNS_NAMESERVER	DNS name server for this subnet (This option can be repeated).
–disable-dhcp	Disable DHCP for this subnet.
–enable-dhcp	Enable DHCP for this subnet.
–ip-version {4,6} IP	version to use, default is 4.
–ipv6-ra-mode {dhcpv6-stateful,dhcpv6-stateless,slaac}	IPv6 RA (Router Advertisement) mode.
–ipv6-address-mode {dhcpv6-stateful,dhcpv6-stateless,slaac}	IPv6 address mode.

neutron subnet-delete

```
usage: neutron subnet-delete [-h] [--request-format {json,xml}] SUBNET
```

Delete a given subnet.

Positional arguments

SUB-NET	ID or name of subnet to delete.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.

neutron subnet-list

```
usage: neutron subnet-list [-h] [-f {csv,html,json,table,yaml}] [-c COLUMN]
                           [--max-width <integer>]
                           [--quote {all,minimal,none,nonnumeric}]
                           [--request-format {json,xml}] [-D] [-F FIELD]
                           [-P SIZE] [--sort-key FIELD]
                           [--sort-dir {asc,desc}]
```

List subnets that belong to a given tenant.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can re-peat this option.
-P SIZE, --page-size SIZE	Specify retrieve unit of each request, then split one re-quest to several requests.
--sort-key FIELD	Sorts the list by the specified fields in the specified direc-tions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
--sort-dir {asc,desc}	Sorts the list in the specified direction. You can repeat this option.

neutron subnet-show

```
usage: neutron subnet-show [-h] [-f {html,json,shell,table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>]
                           [--prefix PREFIX] [--request-format {json,xml}]
                           [-D] [-F FIELD]
                           SUBNET
```

Show information of a given subnet.

Positional arguments

SUB-NET	ID or name of subnet to look up.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can re-peat this option.

neutron subnet-update

```
usage: neutron subnet-update [-h] [--request-format {json,xml}] [--name NAME]
```

```
                                [--gateway GATEWAY_IP] [--no-gateway]
                                [--allocation-pool start=IP_ADDR,end=IP_ADDR]
                                [--host-route destination=CIDR,nexthop=IP_ADDR]
                                [--dns-nameserver DNS_NAMESERVER]
                                [--disable-dhcp] [--enable-dhcp]
                              SUBNET
```

Update subnet's information.

Positional arguments

SUB-   ID or name of subnet to update.
NET

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--name NAME	Name of this subnet.
--gateway GATEWAY_IP	Gateway IP of this subnet.
--no-gateway	No distribution of gateway.
--allocation-pool	start=IP_ADDR,end=IP_ADDR Allocation pool IP addresses for this subnet (This option can be repeated).
--host-route	destination=CIDR,nexthop=IP_ADDR Additional route (This option can be repeated).
--dns-nameserver DNS_NAMESERVER	DNS name server for this subnet (This option can be repeated).
--disable-dhcp	Disable DHCP for this subnet.
--enable-dhcp	Enable DHCP for this subnet.

neutron vpn-ikepolicy-create

```
usage: neutron vpn-ikepolicy-create [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--prefix PREFIX]
                                [--request-format {json,xml}]
                                [--tenant-id TENANT_ID]
                                [--description DESCRIPTION]
                                [--auth-algorithm {sha1}]
                                [--encryption-algorithm
 ENCRYPTION_ALGORITHM]
                                [--phase1-negotiation-mode {main}]
                                [--ike-version {v1,v2}]
                                [--pfs {group2,group5,group14}]
                                [--lifetime units=UNITS,value=VALUE]
                              NAME
```

Create an IKE policy.

Positional arguments

NAME   Name of the IKE policy.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
--tenant-id TENANT_ID	The owner tenant ID.
--description DESCRIPTION	Description of the IKE policy
--auth-algorithm {sha1}	Authentication algorithm in lowercase. Default:sha1
--encryption-algorithm ENCRYPTION_ALGORITHM	Encryption algorithm in lowercase, default:aes-128
--phase1-negotiation-mode {main}	IKE Phase1 negotiation mode in lowercase, default:main
--ike-version {v1,v2}	IKE version in lowercase, default:v1
--pfs {group2,group5,group14}	Perfect Forward Secrecy in lowercase, default:group5
--lifetime	units=UNITS,value=VALUE IKE lifetime attributes. 'units'-seconds, default:seconds. 'value'-non negative integer, default:3600.

neutron vpn-ikepolicy-delete

```
usage: neutron vpn-ikepolicy-delete [-h] [--request-format {json,xml}]
                                    IKEPOLICY
```

Delete a given IKE policy.

Positional arguments

IKEPOLICY   ID or name of ikepolicy to delete.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.

neutron vpn-ikepolicy-list

```
usage: neutron vpn-ikepolicy-list [-h] [-f {csv,html,json,table,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
```

```
[--quote {all,minimal,none,nonnumeric}]
[--request-format {json,xml}] [-D]
[-F FIELD] [-P SIZE] [--sort-key FIELD]
[--sort-dir {asc,desc}]
```

List IKE policies that belong to a tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                     peat this option.

-P SIZE, --page-size SIZE   Specify retrieve unit of each request, then split one re-
                                     quest to several requests.

--sort-key FIELD   Sorts the list by the specified fields in the specified direc-
                                     tions. You can repeat this option, but you must specify
                                     an equal number of sort_dir and sort_key values. Extra
                                     sort_dir options are ignored. Missing sort_dir options
                                     use the default asc value.

--sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat
                                     this option.

neutron vpn-ikepolicy-show

```
usage: neutron vpn-ikepolicy-show [-h] [-f {html,json,shell,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--prefix PREFIX]
                                  [--request-format {json,xml}] [-D]
                                  [-F FIELD]
                                  IKEPOLICY
```

Show information of a given IKE policy.

Positional arguments

IKEPOLICY   ID or name of ikepolicy to look up.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                     peat this option.

neutron vpn-ikepolicy-update

```
usage: neutron vpn-ikepolicy-update [-h] [--request-format {json,xml}]
                                    [--lifetime units=UNITS,value=VALUE]
                                    IKEPOLICY
```

Update a given IKE policy.

Positional arguments

IKEPOLICY   ID or name of ikepolicy to update.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--lifetime   units=UNITS,value=VALUE IKE lifetime attributes. 'units'-seconds, default:seconds. 'value'-non negative integer, default:3600.

neutron vpn-ipsecpolicy-create

```
usage: neutron vpn-ipsecpolicy-create [-h]
                                      [-f {html,json,shell,table,value,yaml}]
                                      [-c COLUMN] [--max-width <integer>]
                                      [--prefix PREFIX]
                                      [--request-format {json,xml}]
                                      [--tenant-id TENANT_ID]
                                      [--description DESCRIPTION]
                                      [--transform-protocol {esp,ah,ah-esp}]
                                      [--auth-algorithm {sha1}]
                                      [--encryption-algorithm
 ENCRYPTION_ALGORITHM]
                                      [--encapsulation-mode {tunnel,
transport}]
                                      [--pfs {group2,group5,group14}]
                                      [--lifetime units=UNITS,value=VALUE]
                                      NAME
```

Create an IPsec policy.

Positional arguments

NAME Name of the IPsec policy.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--tenant-id TENANT_ID   The owner tenant ID.

–description DESCRIPTION	Description of the IPsec policy.
–transform-protocol {esp,ah,ah-esp}	Transform protocol in lowercase, default:esp
–auth-algorithm {sha1}	Authentication algorithm in lowercase, default:sha1
–encryption-algorithm ENCRYPTION_ALGORITHM	Encryption algorithm in lowercase, default:aes-128
–encapsulation-mode {tunnel,transport}	Encapsulation mode in lowercase, default:tunnel
–pfs {group2,group5,group14}	Perfect Forward Secrecy in lowercase, default:group5
–lifetime	units=UNITS,value=VALUE IPsec lifetime attributes. 'units'-seconds, default:seconds. 'value'-non negative integer, default:3600.

neutron vpn-ipsecpolicy-delete

```
usage: neutron vpn-ipsecpolicy-delete [-h] [--request-format {json,xml}]
                                      IPSECPOLICY
```

Delete a given IPsec policy.

Positional arguments

IPSECPOLICY   ID or name of ipsecpolicy to delete.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.

neutron vpn-ipsecpolicy-list

```
usage: neutron vpn-ipsecpolicy-list [-h] [-f {csv,html,json,table,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--quote {all,minimal,none,nonnumeric}]
                                    [--request-format {json,xml}] [-D]
                                    [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                    [--sort-dir {asc,desc}]
```

List IPsec policies that belong to a given tenant connection.

Optional arguments

-h, –help	show this help message and exit
–request-format {json,xml}	The XML or JSON request format.
-D, –show-details	Show detailed information.

-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.
-P SIZE, --page-size SIZE	Specify retrieve unit of each request, then split one request to several requests.
--sort-key FIELD	Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
--sort-dir {asc,desc}	Sorts the list in the specified direction. You can repeat this option.

neutron vpn-ipsecpolicy-show

```
usage: neutron vpn-ipsecpolicy-show [-h]
                                    [-f {html,json,shell,table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX]
                                    [--request-format {json,xml}] [-D]
                                    [-F FIELD]
                                    IPSECPOLICY
```

Show information of a given IPsec policy.

Positional arguments

IPSECPOLICY   ID or name of ipsecpolicy to look up.

Optional arguments

-h, --help	show this help message and exit
--request-format {json,xml}	The XML or JSON request format.
-D, --show-details	Show detailed information.
-F FIELD, --field FIELD	Specify the field(s) to be returned by server. You can repeat this option.

neutron vpn-ipsecpolicy-update

```
usage: neutron vpn-ipsecpolicy-update [-h] [--request-format {json,xml}]
                                      [--lifetime units=UNITS,value=VALUE]
                                      IPSECPOLICY
```

Update a given IPsec policy.

Positional arguments

IPSECPOLICY   ID or name of ipsecpolicy to update.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--lifetime   units=UNITS,value=VALUE IPsec lifetime attributes.
                                   'units'-seconds, default:seconds. 'value'-non negative in-
                                   teger, default:3600.

neutron vpn-service-create

```
usage: neutron vpn-service-create [-h] [-f {html,json,shell,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--prefix PREFIX]
                                  [--request-format {json,xml}]
                                  [--tenant-id TENANT_ID] [--admin-state-down]
                                  [--name NAME] [--description DESCRIPTION]
                                  ROUTER SUBNET
```

Create a VPN service.

Positional arguments

ROUTER   Router unique identifier for the VPN service.

SUB-   Subnet unique identifier for the VPN service deployment.
NET

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

--tenant-id TENANT_ID   The owner tenant ID.

--admin-state-down   Set admin state up to false.

--name NAME   Set a name for the VPN service.

--description DESCRIPTION   Set a description for the VPN service.

neutron vpn-service-delete

```
usage: neutron vpn-service-delete [-h] [--request-format {json,xml}]
                                  VPNSERVICE
```

Delete a given VPN service.

Positional arguments

VPNSERVICE   ID or name of vpnservice to delete.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

neutron vpn-service-list

```
usage: neutron vpn-service-list [-h] [-f {csv,html,json,table,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--request-format {json,xml}] [-D] [-F FIELD]
                                [-P SIZE] [--sort-key FIELD]
                                [--sort-dir {asc,desc}]
```

List VPN service configurations that belong to a given tenant.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                        peat this option.

-P SIZE, --page-size SIZE   Specify retrieve unit of each request, then split one re-
                                        quest to several requests.

--sort-key FIELD   Sorts the list by the specified fields in the specified direc-
                                        tions. You can repeat this option, but you must specify
                                        an equal number of sort_dir and sort_key values. Extra
                                        sort_dir options are ignored. Missing sort_dir options
                                        use the default asc value.

--sort-dir {asc,desc}   Sorts the list in the specified direction. You can repeat
                                        this option.

neutron vpn-service-show

```
usage: neutron vpn-service-show [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--prefix PREFIX]
                                [--request-format {json,xml}] [-D] [-F FIELD]
                                VPNSERVICE
```

Show information of a given VPN service.

Positional arguments

VPNSERVICE   ID or name of vpnservice to look up.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

-D, --show-details   Show detailed information.

-F FIELD, --field FIELD   Specify the field(s) to be returned by server. You can re-
                                       peat this option.

neutron vpn-service-update

```
usage: neutron vpn-service-update [-h] [--request-format {json,xml}]
                                        VPNSERVICE
```

Update a given VPN service.

Positional arguments

VPNSERVICE   ID or name of vpnservice to update.

Optional arguments

-h, --help   show this help message and exit

--request-format {json,xml}   The XML or JSON request format.

9. neutron-debug command-line client

The **neutron-debug** client is an extension to the **neutron** command-line interface (CLI) for the OpenStack neutron-debug tool. This chapter documents **neutron-debug** version 2.3.0.

For help on a specific **neutron-debug** command, enter:

```
$ neutron-debug help COMMAND
```

neutron-debug usage

```
[--os-password <auth-password>]
[--os-tenant-name <auth-tenant-name>]
[--os-tenant-id <auth-tenant-id>] [--os-auth-url <auth-url>]
[--os-region-name <region-name>] [--service-type <service-type>]
[--service-name <service-name>]
[--volume-service-name <volume-service-name>]
[--endpoint-type <endpoint-type>]
[--os-volume-api-version <volume-api-ver>]
[--os-cacert <ca-certificate>] [--retries <retries>]
<subcommand> ...
```

Subcommands

probe-create   Create probe port - create port and interface within a network namespace.

probe-list   List all probes.

probe-clear   Clear all probes.

probe-delete   Delete probe - delete port then delete the namespace.

probe-exec   Execute commands in the namespace of the probe.

ping-all   ping-all is an all-in-one command to ping all fixed IPs in a specified network.

neutron-debug optional arguments

–version   Show version number and exit.

-v, –verbose, –debug	Increase verbosity of output and show tracebacks on errors. Can be repeated.
-q, –quiet	Suppress output except warnings and errors
-h, –help	Show this help message and exit
–os-auth-strategy <auth-strategy>	Authentication strategy (Env: OS_AUTH_STRATEGY, default keystone). For now, any other value will disable the authentication
–os-auth-url <auth-url>	Authentication URL (Env: OS_AUTH_URL)
–os-tenant-name <auth-tenant-name>	Authentication tenant name (Env: OS_TENANT_NAME)
–os-tenant-id <auth-tenant-id>	Authentication tenant name (Env: OS_TENANT_ID)
–os-username <auth-username>	Authentication username (Env: OS_USERNAME)
–os-password <auth-password>	Authentication password (Env: OS_PASSWORD)
–os-region-name <auth-region-name>	Authentication region name (Env: OS_REGION_NAME)
–os-token <token>	Defaults to `env[OS_TOKEN]`
–endpoint-type <endpoint-type>	Defaults to `env[OS_ENDPOINT_TYPE]` or public URL.
–os-url <url>	Defaults to `env[OS_URL]`
–os-cacert <ca-certificate>	Specify a CA bundle file to use in verifying a TLS (HTTPS) server certificate. Defaults to `env[OS_CACERT]`
–insecure	Explicitly allow neutron-debug to perform "insecure" SSL (HTTPS) requests. The server's certificate will not be verified against any certificate authorities. This option should be used with caution.
–config-file CONFIG_FILE	Config file for interface driver (You may also use l3_agent.ini)

neutron-debug probe-create command

```
usage: neutron-debug probe-create NET
```

Create probe port - create port and interface, then place it into the created network namespace.

Positional arguments

NET ID   ID of the network in which the probe will be created.

neutron-debug probe-list command

```
usage: neutron-debug probe-list
```

List probes.

neutron-debug probe-clear command

```
usage: neutron-debug probe-clear
```

Clear all probes.

neutron-debug probe-delete command

```
usage: neutron-debug probe-delete <port-id>
```

Remove a probe.

Positional arguments

<port-id>   ID of the probe to delete.

neutron-debug probe-exec command

```
usage: neutron-debug probe-exec <port-id> <command>
```

Execute commands in the namespace of the probe

neutron-debug ping-all command

```
usage: neutron-debug ping-all <port-id> --timeout <number
```

All-in-one command to ping all fixed IPs in a specified network. A probe creation is not needed for this command. A new probe is created automatically. It will, however, need to be deleted manually when it is no longer needed. When there are multiple networks, the newly created probe will be attached to a random network and thus the ping will take place from within that random network.

Positional arguments

<port-id>   ID of the port to use.

Optional arguments

–timeout <timeout in seconds>   Optional ping timeout.

neutron-debug example

```
usage: neutron-debug create-probe < NET_ID>
```

Create a probe namespace within the network identified by NET_ID. The namespace will have the name of qprobe-<UUID of the probe port>

> ### Note
>
> For the following examples to function, the security group rules may need to be modified to allow the SSH (TCP port 22) or ping (ICMP) traffic into network.

```
usage: neutron-debug probe-exec <probe ID> "ssh <IP of instance>"
```

SSH to an instance within the network.

```
usage: neutron-debug ping-all <network ID>"
```

Ping all instances on this network to verify they are responding.

```
usage: neutron-debug probe-exec <probe_ID> dhcping <VM_MAC address> -s <IP of
 DHCP server>"
```

Ping the DHCP server for this network using dhcping to verify it is working.

10. Object Storage command-line client

The **swift** client is the command-line interface (CLI) for the OpenStack Object Storage API and its extensions. This chapter documents **swift** version `2.3.1`.

For help on a specific **swift** command, enter:

```
$ swift COMMAND --help
```

swift usage

```
[--debug] [--info] [--quiet] [--auth <auth_url>]
[--auth-version <auth_version>] [--user <username>]
[--key <api_key>] [--retries <num_retries>]
[--os-username <auth-user-name>] [--os-password <auth-password>]
[--os-user-id <auth-user-id>]
[--os-user-domain-id <auth-user-domain-id>]
[--os-user-domain-name <auth-user-domain-name>]
[--os-tenant-id <auth-tenant-id>]
[--os-tenant-name <auth-tenant-name>]
[--os-project-id <auth-project-id>]
[--os-project-name <auth-project-name>]
[--os-project-domain-id <auth-project-domain-id>]
[--os-project-domain-name <auth-project-domain-name>]
[--os-auth-url <auth-url>] [--os-auth-token <auth-token>]
[--os-storage-url <storage-url>] [--os-region-name <region-name>]
[--os-service-type <service-type>]
[--os-endpoint-type <endpoint-type>]
[--os-cacert <ca-certificate>] [--insecure]
[--no-ssl-compression]
<subcommand> [--help]
```

Subcommands

delete   Delete a container or objects within a container.

download   Download objects from containers.

list   Lists the containers for the account or the objects for a container.

post   Updates meta information for the account, container, or object; creates
                      containers if not present.

stat   Displays information for the account, container, or object.

upload	Uploads files or directories to the given container.
capabilities	List cluster capabilities.
tempurl	Create a temporary URL

swift examples

```
swift download --help
swift -A https://auth.api.rackspacecloud.com/v1.0 -U user -K api_key stat -v
swift --os-auth-url https://api.example.com/v2.0 --os-tenant-name tenant \
    --os-username user --os-password password list
swift --os-auth-url https://api.example.com/v3 --auth-version 3\
    --os-project-name project1 --os-project-domain-name domain1 \
    --os-username user --os-user-domain-name domain1 \
    --os-password password list
swift --os-auth-url https://api.example.com/v3 --auth-version 3\
    --os-project-id 0123456789abcdef0123456789abcdef \
    --os-user-id abcdef0123456789abcdef0123456789 \
    --os-password password list
swift --os-auth-token 6ee5eb33efad4e45ab46806eac010566 \
    --os-storage-url https://10.1.5.2:8080/v1/AUTH_ced809b6a4baea7aeab61a \
    list
swift list --lh
```

swift optional arguments

–version	show program's version number and exit
-h, –help	show this help message and exit
–os-help	Show OpenStack authentication options.
-s, –snet	Use SERVICENET internal network.
-v, –verbose	Print more info.
–debug	Show the curl commands and results of all http queries regardless of result status.
–info	Show the curl commands and results of all http queries which return an error.
-q, –quiet	Suppress status output.
-A AUTH, –auth=AUTH URL	for obtaining an auth token.
-V AUTH_VERSION, –auth-version=AUTH_VERSION	Specify a version for authentication. Defaults to 1.0.
-U USER, –user=USER	User name for obtaining an auth token.
-K KEY, –key=KEY	Key for obtaining an auth token.
-R RETRIES, –retries=RETRIES	The number of times to retry a failed connection.

–insecure	Allow swiftclient to access servers without hav- ing to verify the SSL certificate. Defaults to `env[SWIFTCLIENT_INSECURE]` (set to 'true' to en- able).
–no-ssl-compression	This option is deprecated and not used anymore. SSL compression should be disabled by default by the sys- tem SSL library.

swift delete

```
Usage: swift delete
```

Delete a container or objects within a container.

Positional arguments

<container>	Name of container to delete from.
[object]	Name of object to delete. Specify multiple times for multiple objects.

Optional arguments

–all	Delete all containers and objects.
–leave-segments	Do not delete segments of manifest objects.
–object-threads <threads>	Number of threads to use for deleting objects. Default is 10.
–container-threads <threads>	Number of threads to use for deleting containers. De- fault is 10.

swift download

```
Usage: swift download
```

Download objects from containers.

Positional arguments

<container>	Name of container to download from. To download a whole account, omit this and specify –all.
<object>	Name of object to download. Specify multiple times for multiple objects. Omit this to download all objects from the container.

Optional arguments

–all	Indicates that you really want to download everything in the account.

–marker	Marker to use when starting a container or account download.
–prefix <prefix>	Only download items beginning with <prefix>
–output <out_file>	For a single file download, stream the output to <out_file>. Specifying "-" as <out_file> will redirect to std-out.
–object-threads <threads>	Number of threads to use for downloading objects. Default is 10.
–container-threads <threads>	Number of threads to use for downloading containers. Default is 10.
–no-download	Perform download(s), but don't actually write anything to disk.
–header <header_name:header_value>	Adds a customized request header to the query, like "Range" or "If-Match". This argument is repeatable. Example –header "content-type:text/plain"
–skip-identical	Skip downloading files that are identical on both sides.

swift list

```
Usage: swift list
```

Lists the containers for the account or the objects for a container.

Positional arguments

[container] Name of container to list object in.

Optional arguments

–long Long listing format, similar to ls -l.

–lh Report sizes in human readable format similar to ls -lh.

–totals Used with -l or –lh, only report totals.

–prefix Only list items beginning with the prefix.

–delimiter Roll up items with the given delimiter. For containers only. See OpenStack Swift API documentation for what this means.

swift post

```
Usage: swift post
```

Updates meta information for the account, container, or object. If the container is not found, it will be created automatically.

Positional arguments

[container]   Name of container to post to.

[object]   Name of object to post. Specify multiple times for multiple objects.

Optional arguments

–read-acl <acl>   Read ACL for containers. Quick summary of ACL
                                    syntax: .r:*, .r:-.example.com, .r:www.example.com, ac-
                                    count1, account2:user2

–write-acl <acl>   Write ACL for containers. Quick summary of ACL syntax: ac-
                                    count1 account2:user2

–sync-to <sync-to>   Sync To for containers, for multi-cluster replication.

–sync-key <sync-key>   Sync Key for containers, for multi-cluster replication.

–meta <name:value>   Sets a meta data item. This option may be repeated. Exam-
                                    ple: -m Color:Blue -m Size:Large

–header <header>   Set request headers. This option may be repeated. Example -
                                    H "content-type:text/plain"

swift stat

```
Usage: swift stat
```

Displays information for the account, container, or object.

Positional arguments

[container]   Name of container to stat from.

[object]   Name of object to stat.

Optional arguments

–lh   Report sizes in human readable format similar to ls -lh.

swift upload

```
Usage: swift upload
```

Uploads specified files and directories to the given container.

Positional arguments

<container>   Name of container to upload to.

<file_or_directory>   Name of file or directory to upload. Specify multiple times for
                                    multiple uploads.

Optional arguments

–changed	Only upload files that have changed since the last up-load.
–skip-identical	Skip uploading files that are identical on both sides.
–segment-size \<size\>	Upload files in segments no larger than \<size\> (in Bytes) and then create a "manifest" file that will download all the segments as if it were the original file.
–segment-container \<container\>	Upload the segments into the specified container. If not specified, the segments will be uploaded to a \<container\>_segments container to not pollute the main \<container\> listings.
–leave-segments	Indicates that you want the older segments of manifest objects left alone (in the case of overwrites).
–object-threads \<threads\>	Number of threads to use for uploading full objects. Default is 10.
–segment-threads \<threads\>	Number of threads to use for uploading object segments. Default is 10.
–header \<header\>	Set request headers with the syntax header:value. This option may be repeated. Example -H "content-type:text/plain".
–use-slo	When used in conjunction with –segment-size it will create a Static Large Object instead of the default Dynamic Large Object.
–object-name \<object-name\>	Upload file and name object to \<object-name\> or upload dir and use \<object-name\> as object prefix instead of folder name.

11. Orchestration command-line client

The **heat** client is the command-line interface (CLI) for the Orchestration API and its extensions. This chapter documents **heat** version 0.3.0.

For help on a specific **heat** command, enter:

```
$ heat help COMMAND
```

heat usage

```
usage: heat [--version] [-d] [-v] [--api-timeout API_TIMEOUT]
            [--os-no-client-auth] [--heat-url HEAT_URL]
            [--heat-api-version HEAT_API_VERSION] [--include-password] [-k]
            [--os-cert OS_CERT] [--cert-file OS_CERT] [--os-key OS_KEY]
            [--key-file OS_KEY] [--os-cacert <ca-certificate-file>]
            [--ca-file OS_CACERT] [--os-username OS_USERNAME]
            [--os-user-id OS_USER_ID] [--os-user-domain-id OS_USER_DOMAIN_ID]
            [--os-user-domain-name OS_USER_DOMAIN_NAME]
            [--os-project-id OS_PROJECT_ID]
            [--os-project-name OS_PROJECT_NAME]
            [--os-project-domain-id OS_PROJECT_DOMAIN_ID]
            [--os-project-domain-name OS_PROJECT_DOMAIN_NAME]
            [--os-password OS_PASSWORD] [--os-tenant-id OS_TENANT_ID]
            [--os-tenant-name OS_TENANT_NAME] [--os-auth-url OS_AUTH_URL]
            [--os-region-name OS_REGION_NAME] [--os-auth-token OS_AUTH_TOKEN]
            [--os-service-type OS_SERVICE_TYPE]
            [--os-endpoint-type OS_ENDPOINT_TYPE]
            <subcommand> ...
```

Subcommands

action-check	Check that stack resources are in expected states.
action-resume	Resume the stack.
action-suspend	Suspend the stack.
build-info	Retrieve build information.
config-create	Create a software configuration.
config-delete	Delete software configurations.
config-show	View details of a software configuration.
create	*DEPRECATED!* Use stack-create instead.
delete	*DEPRECATED!* Use stack-delete instead.
deployment-delete	Delete software deployments.
deployment-metadata-show	Get deployment configuration metadata for the specified server.
deployment-show	Show the details of a software deployment.
describe	*DEPRECATED!* Use stack-show instead.
event	*DEPRECATED!* Use event-show instead.
event-list	List events for a stack.
event-show	Describe the event.
gettemplate	*DEPRECATED!* Use template-show instead.

list	*DEPRECATED!* Use stack-list instead.
output-list	Show available outputs.
output-show	Show a specific stack output.
resource	*DEPRECATED!* Use resource-show instead.
resource-list	Show list of resources belonging to a stack.
resource-metadata	List resource metadata.
resource-show	Describe the resource.
resource-signal	Send a signal to a resource.
resource-template	*DEPRECATED!* Use resource-type-template instead.
resource-type-list	List the available resource types.
resource-type-show	Show the resource type.
resource-type-template	Generate a template based on a resource type.
service-list	List the Heat engines.
snapshot-delete	Delete a snapshot of a stack.
snapshot-list	List the snapshots of a stack.
snapshot-show	Show a snapshot of a stack.
stack-abandon	Abandon the stack.
stack-adopt	Adopt a stack.
stack-cancel-update	Cancel currently running update of the stack.
stack-create	Create the stack.
stack-delete	Delete the stack(s).
stack-list	List the user's stacks.
stack-preview	Preview the stack.
stack-restore	Restore a snapshot of a stack.
stack-show	Describe the stack.
stack-snapshot	Make a snapshot of a stack.
stack-update	Update the stack.
template-show	Get the template for the specified stack.
template-validate	Validate a template with parameters.

update	*DEPRECATED!* Use stack-update instead.
validate	*DEPRECATED!* Use template-validate instead.
bash-completion	Prints all of the commands and options to stdout.
help	Display help about this program or one of its subcommands.

heat optional arguments

–version	Shows the client version and exits.
-d, –debug	Defaults to `env[HEATCLIENT_DEBUG]`.
-v, –verbose	Print more verbose output.
–api-timeout API_TIMEOUT	Number of seconds to wait for an API response, defaults to system socket timeout
–os-no-client-auth	Do not contact keystone for a token. Defaults to `env[OS_NO_CLIENT_AUTH]`.
–heat-url HEAT_URL	Defaults to `env[HEAT_URL]`.
–heat-api-version HEAT_API_VERSION	Defaults to `env[HEAT_API_VERSION]` or 1.
–include-password	Send os-username and os-password to heat.
-k, –insecure	Explicitly allow heatclient to perform "insecure SSL" (https) requests. The server's certificate will not be verified against any certificate authorities. This option should be used with caution.
–os-cert OS_CERT	Path of certificate file to use in SSL connection. This file can optionally be prepended with the private key.
–cert-file OS_CERT	*DEPRECATED!* Use –os-cert.
–os-key OS_KEY	Path of client key to use in SSL connection. This option is not necessary if your key is prepended to your cert file.
–key-file OS_KEY	*DEPRECATED!* Use –os-key.
–os-cacert <ca-certificate-file>	Path of CA TLS certificate(s) used to verify the remote server's certificate. Without this option glance looks for the default system CA certificates.
–ca-file OS_CACERT	*DEPRECATED!* Use –os-cacert.
–os-username OS_USERNAME	Defaults to `env[OS_USERNAME]`.
–os-user-id OS_USER_ID	Defaults to `env[OS_USER_ID]`.

–os-user-domain-id OS_USER_DOMAIN_ID	Defaults to `env[OS_USER_DOMAIN_ID]`.
–os-user-domain-name OS_USER_DOMAIN_NAME	Defaults to `env[OS_USER_DOMAIN_NAME]`.
–os-project-id OS_PROJECT_ID	Another way to specify tenant ID. This option is mutually exclusive with –os-tenant-id. Defaults to `env[OS_PROJECT_ID]`.
–os-project-name OS_PROJECT_NAME	Another way to specify tenant name. This option is mutually exclusive with –os-tenant-name. Defaults to `env[OS_PROJECT_NAME]`.
–os-project-domain-id OS_PROJECT_DOMAIN_ID	Defaults to `env[OS_PROJECT_DOMAIN_ID]`.
–os-project-domain-name OS_PROJECT_DOMAIN_NAME	Defaults to `env[OS_PROJECT_DOMAIN_NAME]`.
–os-password OS_PASSWORD	Defaults to `env[OS_PASSWORD]`.
–os-tenant-id OS_TENANT_ID	Defaults to `env[OS_TENANT_ID]`.
–os-tenant-name OS_TENANT_NAME	Defaults to `env[OS_TENANT_NAME]`.
–os-auth-url OS_AUTH_URL	Defaults to `env[OS_AUTH_URL]`.
–os-region-name OS_REGION_NAME	Defaults to `env[OS_REGION_NAME]`.
–os-auth-token OS_AUTH_TOKEN	Defaults to `env[OS_AUTH_TOKEN]`.
–os-service-type OS_SERVICE_TYPE	Defaults to `env[OS_SERVICE_TYPE]`.
–os-endpoint-type OS_ENDPOINT_TYPE	Defaults to `env[OS_ENDPOINT_TYPE]`.

heat action-check

```
usage: heat action-check <NAME or ID>
```

Check that stack resources are in expected states.

Positional arguments

<NAME or ID>   Name or ID of stack to check.

heat action-resume

```
usage: heat action-resume <NAME or ID>
```

Resume the stack.

Positional arguments

<NAME or ID> Name or ID of stack to resume.

heat action-suspend

```
usage: heat action-suspend <NAME or ID>
```

Suspend the stack.

Positional arguments

<NAME or ID> Name or ID of stack to suspend.

heat build-info

```
usage: heat build-info
```

Retrieve build information.

heat config-create

```
usage: heat config-create [-f <FILE or URL>] [-c <FILE or URL>]
                          [-g <GROUP_NAME>]
                          <CONFIG_NAME>
```

Create a software configuration.

Positional arguments

<CONFIG_NAME> Name of the configuration to create.

Optional arguments

-f <FILE or URL>, --definition-file <FILE or URL> Path to JSON/YAML containing map defining <inputs>, <outputs>, and <options>.

-c <FILE or URL>, --config-file <FILE or URL> Path to configuration script/data.

-g <GROUP_NAME>, --group <GROUP_NAME> Group name of configuration tool expected by the config.

heat config-delete

```
usage: heat config-delete <ID> [<ID> ...]
```

Delete software configurations.

Positional arguments

<ID>   IDs of the configurations to delete.

heat config-show

```
usage: heat config-show [-c] <ID>
```

View details of a software configuration.

Positional arguments

<ID>   ID of the config.

Optional arguments

-c, –config-only   Only display the value of the <config> property.

heat deployment-delete

```
usage: heat deployment-delete <ID> [<ID> ...]
```

Delete software deployments.

Positional arguments

<ID>   IDs of the deployments to delete.

heat deployment-metadata-show

```
usage: heat deployment-metadata-show <ID>
```

Get deployment configuration metadata for the specified server.

Positional arguments

<ID>   ID of the server to fetch deployments for.

heat deployment-show

```
usage: heat deployment-show <ID>
```

Show the details of a software deployment.

Positional arguments

<ID>   ID of the deployment.

heat event-list

```
usage: heat event-list [-r <RESOURCE>] [-f <KEY1=VALUE1;KEY2=VALUE2...>]
```

```
                          [-l <LIMIT>] [-m <ID>]
                          <NAME or ID>
```

List events for a stack.

Positional arguments

\<NAME or ID>   Name or ID of stack to show the events for.

Optional arguments

-r \<RESOURCE>, --resource \<RE-SOURCE>   Name of the resource to filter events by.

-f \<KEY1=VALUE1;KEY2=VALUE2...>, --filters \<KEY1=VALUE1;KEY2=VALUE2...>   Filter parameters to apply on returned events. This can be specified multiple times, or once with parameters separated by a semicolon.

-l \<LIMIT>, --limit \<LIMIT>   Limit the number of events returned.

-m \<ID>, --marker \<ID>   Only return events that appear after the given event ID.

heat event-show

```
usage: heat event-show <NAME or ID> <RESOURCE> <EVENT>
```

Describe the event.

Positional arguments

\<NAME or ID>   Name or ID of stack to show the events for.

\<RESOURCE>   Name of the resource the event belongs to.

\<EVENT>   ID of event to display details for.

heat output-list

```
usage: heat output-list <NAME or ID>
```

Show available outputs.

Positional arguments

\<NAME or ID>   Name or ID of stack to query.

heat output-show

```
usage: heat output-show [-a] [-F <FORMAT>] <NAME or ID> [<OUTPUT NAME>]
```

Show a specific stack output.

Positional arguments

<NAME or ID>   Name or ID of stack to query.

<OUTPUT   Name of an output to display.
NAME>

Optional arguments

-a, –all   Display all stack outputs.

-F <FORMAT>, –format <FOR-   The output value format, one of: json, raw
MAT>

heat resource-list

```
usage: heat resource-list [-n <DEPTH>] <NAME or ID>
```

Show list of resources belonging to a stack.

Positional arguments

<NAME or ID>   Name or ID of stack to show the resources for.

Optional arguments

-n <DEPTH>, –nested-depth   Depth of nested stacks from which to display resources.
<DEPTH>

heat resource-metadata

```
usage: heat resource-metadata <NAME or ID> <RESOURCE>
```

List resource metadata.

Positional arguments

<NAME or ID>   Name or ID of stack to show the resource metadata for.

<RESOURCE>   Name of the resource to show the metadata for.

heat resource-show

```
usage: heat resource-show <NAME or ID> <RESOURCE>
```

Describe the resource.

Positional arguments

<NAME or ID>   Name or ID of stack to show the resource for.

<RESOURCE>   Name of the resource to show the details for.

heat resource-signal

```
usage: heat resource-signal [-D <DATA>] [-f <FILE>] <NAME or ID> <RESOURCE>
```

Send a signal to a resource.

Positional arguments

<NAME or ID>   Name or ID of stack the resource belongs to.

<RESOURCE>   Name of the resource to signal.

Optional arguments

-D <DATA>, --data <DATA>   JSON Data to send to the signal handler.

-f <FILE>, --data-file <FILE>   File containing JSON data to send to the signal handler.

heat resource-template

```
usage: heat resource-template [-F <FORMAT>] <RESOURCE_TYPE>
```

DEPRECATED! Use resource-type-template instead.

Positional arguments

<RESOURCE_TYPE>   Resource type to generate a template for.

Optional arguments

-F <FORMAT>, --format <FOR-MAT>   The template output format, one of: yaml, json.

heat resource-type-list

```
usage: heat resource-type-list
```

List the available resource types.

heat resource-type-show

```
usage: heat resource-type-show <RESOURCE_TYPE>
```

Show the resource type.

Positional arguments

<RESOURCE_TYPE>   Resource type to get the details for.

heat resource-type-template

```
usage: heat resource-type-template [-F <FORMAT>] <RESOURCE_TYPE>
```

Generate a template based on a resource type.

Positional arguments

<RESOURCE_TYPE>   Resource type to generate a template for.

Optional arguments

-F <FORMAT>, --format <FOR-   The template output format, one of: yaml, json.
MAT>

heat service-list

```
usage: heat service-list
```

List the Heat engines.

heat snapshot-delete

```
usage: heat snapshot-delete <NAME or ID> <SNAPSHOT>
```

Delete a snapshot of a stack.

Positional arguments

<NAME or ID>   Name or ID of the stack containing the snapshot.

<SNAPSHOT>   The ID of the snapshot to delete.

heat snapshot-list

```
usage: heat snapshot-list <NAME or ID>
```

List the snapshots of a stack.

Positional arguments

<NAME or ID>   Name or ID of the stack containing the snapshots.

heat snapshot-show

```
usage: heat snapshot-show <NAME or ID> <SNAPSHOT>
```

Show a snapshot of a stack.

Positional arguments

<NAME or ID>   Name or ID of the stack containing the snapshot.

<SNAPSHOT>　　　　The ID of the snapshot to show.

heat stack-abandon

```
usage: heat stack-abandon [-O <FILE>] <NAME or ID>
```

Abandon the stack. This will delete the record of the stack from Heat, but will not delete any of the underlying resources. Prints an adoptable JSON representation of the stack to stdout or a file on success.

Positional arguments

<NAME or ID>　　　Name or ID of stack to abandon.

Optional arguments

-O <FILE>, –output-file <FILE>　　　file to output abandon result. If the option is specified, the result will be output into <FILE>.

heat stack-adopt

```
usage: heat stack-adopt [-e <FILE or URL>] [-c <TIMEOUT>] [-t <TIMEOUT>]
                        [-a <FILE or URL>] [-r]
                        [-P <KEY1=VALUE1;KEY2=VALUE2...>]
                        <STACK_NAME>
```

Adopt a stack.

Positional arguments

<STACK_NAME>　　Name of the stack to adopt.

Optional arguments

-e <FILE or URL>, –environment-file <FILE or URL>	Path to the environment, it can be specified multiple times.
-c <TIMEOUT>, –create-timeout <TIMEOUT>	Stack creation timeout in minutes. *DEPRECATED* use –timeout instead.
-t <TIMEOUT>, –timeout <TIMEOUT>	Stack creation timeout in minutes.
-a <FILE or URL>, –adopt-file <FILE or URL>	Path to adopt stack data file.
-r, –enable-rollback	Enable rollback on create/update failure.
-P <KEY1=VALUE1;KEY2=VALUE2...>, –parameters <KEY1=VALUE1;KEY2=VALUE2...>	Parameter values used to create the stack. This can be specified multiple times, or once with parameters separated by a semicolon.

heat stack-cancel-update

```
usage: heat stack-cancel-update <NAME or ID>
```

Cancel currently running update of the stack.

Positional arguments

<NAME or ID>   Name or ID of stack to cancel update for.

heat stack-create

```
usage: heat stack-create [-f <FILE>] [-e <FILE or URL>] [-u <URL>] [-o <URL>]
                         [-c <TIMEOUT>] [-t <TIMEOUT>] [-r]
                         [-P <KEY1=VALUE1;KEY2=VALUE2...>]
                         <STACK_NAME>
```

Create the stack.

Positional arguments

<STACK_NAME>   Name of the stack to create.

Optional arguments

-f <FILE>, --template-file <FILE>	Path to the template.
-e <FILE or URL>, --environment-file <FILE or URL>	Path to the environment, it can be specified multiple times.
-u <URL>, --template-url <URL>	URL of template.
-o <URL>, --template-object <URL>	URL to retrieve template object (e.g. from swift).
-c <TIMEOUT>, --create-timeout <TIMEOUT>	Stack creation timeout in minutes. *DEPRECATED* use –timeout instead.
-t <TIMEOUT>, --timeout <TIME­OUT>	Stack creation timeout in minutes.
-r, --enable-rollback	Enable rollback on create/update failure.
-P <KEY1=VALUE1;KEY2=VALUE2...>, --parameters <KEY1=VALUE1;KEY2=VALUE2...>	Parameter values used to create the stack. This can be specified multiple times, or once with parameters separated by a semicolon.

heat stack-delete

```
usage: heat stack-delete <NAME or ID> [<NAME or ID> ...]
```

Delete the stack(s).

Positional arguments

<NAME or ID>   Name or ID of stack(s) to delete.

heat stack-list

```
usage: heat stack-list [-s] [-n] [-f <KEY1=VALUE1;KEY2=VALUE2...>]
                       [-l <LIMIT>] [-m <ID>] [-g] [-o]
```

List the user's stacks.

Optional arguments

-s, --show-deleted	Include soft-deleted stacks in the stack listing.
-n, --show-nested	Include nested stacks in the stack listing.
-f <KEY1=VALUE1;KEY2=VALUE2...>, --filters <KEY1=VALUE1;KEY2=VALUE2...>	Filter parameters to apply on returned stacks. This can be specified multiple times, or once with parameters separated by a semicolon.
-l <LIMIT>, --limit <LIMIT>	Limit the number of stacks returned.
-m <ID>, --marker <ID>	Only return stacks that appear after the given stack ID.
-g, --global-tenant	Display stacks from all tenants. Operation only authorized for users who match the policy in heat's policy.json.
-o, --show-owner	Display stack owner information. This is automatically enabled when using --global-tenant.

heat stack-preview

```
usage: heat stack-preview [-f <FILE>] [-e <FILE or URL>] [-u <URL>] [-o <URL>]
                          [-t <TIMEOUT>] [-r]
                          [-P <KEY1=VALUE1;KEY2=VALUE2...>]
                          <STACK_NAME>
```

Preview the stack.

Positional arguments

<STACK_NAME>   Name of the stack to preview.

Optional arguments

-f <FILE>, --template-file <FILE>	Path to the template.
-e <FILE or URL>, --environment-file <FILE or URL>	Path to the environment, it can be specified multiple times.

-u <URL>, –template-url <URL>	URL of template.
-o <URL>, –template-object <URL>	URL to retrieve template object (e.g. from swift)
-t <TIMEOUT>, –timeout <TIME-OUT>	Stack creation timeout in minutes. This is only used duringvalidation in preview.
-r, –enable-rollback	Enable rollback on failure. This option is not used duringpreview and exists only for symmetry with stack- create.
-P <KEY1=VALUE1;KEY2=VALUE2...>, –parameters <KEY1=VALUE1;KEY2=VALUE2...>	Parameter values used to preview the stack. This can be specified multiple times, or once with parameters separated by semicolon.

heat stack-restore

```
usage: heat stack-restore <NAME or ID> <SNAPSHOT>
```

Restore a snapshot of a stack.

Positional arguments

<NAME or ID>   Name or ID of the stack containing the snapshot.

<SNAPSHOT>   The ID of the snapshot to restore.

heat stack-show

```
usage: heat stack-show <NAME or ID>
```

Describe the stack.

Positional arguments

<NAME or ID>   Name or ID of stack to describe.

heat stack-snapshot

```
usage: heat stack-snapshot [-n <NAME>] <NAME or ID>
```

Make a snapshot of a stack.

Positional arguments

<NAME or ID>   Name or ID of stack to snapshot.

Optional arguments

-n <NAME>, –name <NAME>   If specified, the name given to the snapshot.

heat stack-update

```
usage: heat stack-update [-f <FILE>] [-e <FILE or URL>] [-u <URL>] [-o <URL>]
                         [-t <TIMEOUT>] [-r] [--rollback <VALUE>]
                         [-P <KEY1=VALUE1;KEY2=VALUE2...>] [-x]
                         [-c <PARAMETER>]
                         <NAME or ID>
```

Update the stack.

Positional arguments

<NAME or ID>   Name or ID of stack to update.

Optional arguments

-f <FILE>, --template-file <FILE>   Path to the template.

-e <FILE or URL>, --environment-file <FILE or URL>   Path to the environment, it can be specified multiple times.

-u <URL>, --template-url <URL>   URL of template.

-o <URL>, --template-object <URL>   URL to retrieve template object (e.g. from swift).

-t <TIMEOUT>, --timeout <TIMEOUT>   Stack update timeout in minutes.

-r, --enable-rollback   *DEPRECATED!* Use --rollback argument instead. Enable rollback on stack update failure. NOTE: default behavior is now to use the rollback value of existing stack.

--rollback <VALUE>   Set rollback on update failure. Values ('1', 't', 'true', 'on', 'y', 'yes') set rollback to enabled. Values ('0', 'f', 'false', 'off', 'n', 'no') set rollback to disabled. Default is to use the value of existing stack to be updated.

-P <KEY1=VALUE1;KEY2=VALUE2...>, --parameters <KEY1=VALUE1;KEY2=VALUE2...>   Parameter values used to create the stack. This can be specified multiple times, or once with parameters separated by a semicolon.

-x, --existing   Re-use the set of parameters of the current stack. Parameters specified in --parameters will patch over the existing values in the current stack. Parameters omitted will keep the existing values.

-c <PARAMETER>, --clear-parameter <PARAMETER>   Remove the parameters from the set of parameters of current stack for the stack-update. The default value in the template will be used. This can be specified multiple times.

heat template-show

```
usage: heat template-show <NAME or ID>
```

Get the template for the specified stack.

Positional arguments

<NAME or ID>   Name or ID of stack to get the template for.

heat template-validate

```
usage: heat template-validate [-u <URL>] [-f <FILE>] [-e <FILE or URL>]
                              [-o <URL>]
```

Validate a template with parameters.

Optional arguments

-u <URL>, --template-url <URL>   URL of template.

-f <FILE>, --template-file <FILE>   Path to the template.

-e <FILE or URL>, --environ-ment-file <FILE or URL>   Path to the environment, it can be specified multiple times.

-o <URL>, --template-object <URL>   URL to retrieve template object (e.g. from swift).

12. Telemetry command-line client

The **ceilometer** client is the command-line interface (CLI) for the Telemetry API and its extensions. This chapter documents **ceilometer** version `1.0.13`.

For help on a specific **ceilometer** command, enter:

```
$ ceilometer help COMMAND
```

ceilometer usage

```
usage: ceilometer [--version] [-d] [-v] [--timeout TIMEOUT]
                  [--ceilometer-url <CEILOMETER_URL>]
                  [--ceilometer-api-version CEILOMETER_API_VERSION]
                  [--os-tenant-id <tenant-id>]
                  [--os-region-name <region-name>]
                  [--os-auth-token <auth-token>]
                  [--os-service-type <service-type>]
                  [--os-endpoint-type <endpoint-type>] [--os-cacert <cacert>]
```

```
                         [--os-insecure <insecure>] [--os-cert-file <cert-file>]
                         [--os-key-file <key-file>] [--os-cert <cert>]
                         [--os-key <key>] [--os-project-name <project-name>]
                         [--os-project-id <project-id>]
                         [--os-user-domain-id <user-domain-id>]
                         [--os-user-domain-name <user-domain-name>]
                         [--os-endpoint <endpoint>] [--os-auth-system <auth-system>]
                         [--os-username <username>] [--os-password <password>]
                         [--os-tenant-name <tenant-name>] [--os-token <token>]
                         [--os-auth-url <auth-url>]
                         <subcommand> ...
```

Subcommands

alarm-combination-create	Create a new alarm based on state of other alarms.
alarm-combination-update	Update an existing alarm based on state of other alarms.
alarm-create	Create a new alarm (Deprecated). Use alarm- threshold-create instead.
alarm-delete	Delete an alarm.
alarm-gnocchi-metrics-threshold-create	Create a new alarm based on computed statistics.
alarm-gnocchi-metrics-threshold-update	Update an existing alarm based on computed statistics.
alarm-gnocchi-resources-threshold-create	Create a new alarm based on computed statistics.
alarm-gnocchi-resources-threshold-update	Update an existing alarm based on computed statistics.
alarm-history	Display the change history of an alarm.
alarm-list	List the user's alarms.
alarm-show	Show an alarm.
alarm-state-get	Get the state of an alarm.
alarm-state-set	Set the state of an alarm.
alarm-threshold-create	Create a new alarm based on computed statistics.
alarm-threshold-update	Update an existing alarm based on computed statistics.
alarm-update	Update an existing alarm (Deprecated).
event-list	List events.
event-show	Show a particular event.
event-type-list	List event types.

meter-list	List the user's meters.
query-alarm-history	Query Alarm History.
query-alarms	Query Alarms.
query-samples	Query samples.
resource-list	List the resources.
resource-show	Show the resource.
sample-create	Create a sample.
sample-list	List the samples (return OldSample objects if -m/–meter is set).
sample-show	Show an sample.
statistics	List the statistics for a meter.
trait-description-list	List trait info for an event type.
trait-list	List all traits with name <trait_name> for Event Type <event_type>.
bash-completion	Prints all of the commands and options to stdout.
help	Display help about this program or one of its subcommands.

ceilometer optional arguments

–version	show program's version number and exit
-d, –debug	Defaults to `env[CEILOMETERCLIENT_DEBUG]`.
-v, –verbose	Print more verbose output.
–timeout TIMEOUT	Number of seconds to wait for a response.
–ceilometer-url <CEILOMETER_URL>	*DEPRECATED*, use –os-endpoint instead. Defaults to `env[CEILOMETER_URL]`.
–ceilometer-api-version CEILOMETER_API_VERSION	Defaults to `env[CEILOMETER_API_VERSION]` or 2.
–os-tenant-id <tenant-id>	Defaults to `env[OS_TENANT_ID]`.
–os-region-name <region-name>	Defaults to `env[OS_REGION_NAME]`.
–os-auth-token <auth-token>	Defaults to `env[OS_AUTH_TOKEN]`.
–os-service-type <service-type>	Defaults to `env[OS_SERVICE_TYPE]`.

–os-endpoint-type <end-point-type>	Defaults to `env[OS_ENDPOINT_TYPE]`.
–os-cacert <cacert>	Defaults to `env[OS_CACERT]`.
–os-insecure <insecure>	Defaults to `env[OS_INSECURE]`.
–os-cert-file <cert-file>	Defaults to `env[OS_CERT_FILE]`.
–os-key-file <key-file>	Defaults to `env[OS_KEY_FILE]`.
–os-cert <cert>	Defaults to `env[OS_CERT]`.
–os-key <key>	Defaults to `env[OS_KEY]`.
–os-project-name <project-name>	Defaults to `env[OS_PROJECT_NAME]`.
–os-project-id <project-id>	Defaults to `env[OS_PROJECT_ID]`.
–os-user-domain-id <user-domain-id>	Defaults to `env[OS_USER_DOMAIN_ID]`.
–os-user-domain-name <user-domain-name>	Defaults to `env[OS_USER_DOMAIN_NAME]`.
–os-endpoint <endpoint>	Defaults to `env[OS_ENDPOINT]`.
–os-auth-system <auth-system>	Defaults to `env[OS_AUTH_SYSTEM]`.
–os-username <username>	Defaults to `env[OS_USERNAME]`.
–os-password <password>	Defaults to `env[OS_PASSWORD]`.
–os-tenant-name <tenant-name>	Defaults to `env[OS_TENANT_NAME]`.
–os-token <token>	Defaults to `env[OS_TOKEN]`.
–os-auth-url <auth-url>	Defaults to `env[OS_AUTH_URL]`.

ceilometer alarm-combination-create

```
usage: ceilometer alarm-combination-create --name <NAME>
                                           [--project-id <PROJECT_ID>]
                                           [--user-id <USER_ID>]
                                           [--description <DESCRIPTION>]
                                           [--state <STATE>]
                                           [--severity <SEVERITY>]
                                           [--enabled {True|False}]
                                           [--alarm-action <Webhook URL>]
                                           [--ok-action <Webhook URL>]
                                           [--insufficient-data-action
 <Webhook URL>]
                                           [--time-constraint <Time
 Constraint>]
```

```
                                           --alarm_ids <ALARM IDS>
                                           [--operator <OPERATOR>]
                                           [--repeat-actions {True|False}]
```

Create a new alarm based on state of other alarms.

Optional arguments

–name <NAME>	Name of the alarm (must be unique per tenant). Required.
–project-id <PROJECT_ID>	Tenant to associate with alarm (only settable by admin users).
–user-id <USER_ID>	User to associate with alarm (only settable by admin users).
–description <DESCRIPTION>	Free text description of the alarm.
–state <STATE>	State of the alarm, one of: ['ok', 'alarm', 'insufficient data']
–severity <SEVERITY>	Severity of the alarm, one of: ['low', 'moderate', 'critical']
–enabled {True|False}	True if alarm evaluation/actioning is enabled.
–alarm-action <Webhook URL> URL	to invoke when state transitions to alarm. May be used multiple times. Defaults to None.
–ok-action <Webhook URL> URL	to invoke when state transitions to OK. May be used multiple times. Defaults to None.
–insufficient-data-action <Webhook URL>	URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.
–time-constraint <Time Constraint>	Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timezone=<IANA Timezone>]] Defaults to None.
–alarm_ids <ALARM IDS>	List of alarm IDs. Required.
–operator <OPERATOR>	Operator to compare with, one of: ['and', 'or'].
–repeat-actions {True|False}	True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.

ceilometer alarm-combination-update

```
usage: ceilometer alarm-combination-update [--name <NAME>]
```

```
                                          [--project-id <PROJECT_ID>]
                                          [--user-id <USER_ID>]
                                          [--description <DESCRIPTION>]
                                          [--state <STATE>]
                                          [--severity <SEVERITY>]
                                          [--enabled {True|False}]
                                          [--alarm-action <Webhook URL>]
                                          [--ok-action <Webhook URL>]
                                          [--insufficient-data-action
<Webhook URL>]
                                          [--time-constraint <Time
Constraint>]
                                          [--remove-time-constraint
<Constraint names>]
                                          [--alarm_ids <ALARM IDS>]
                                          [--operator <OPERATOR>]
                                          [--repeat-actions {True|False}]
                                          [<ALARM_ID>]
```

Update an existing alarm based on state of other alarms.

Positional arguments

<ALARM_ID>   ID of the alarm to update.

Optional arguments

–name <NAME>	Name of the alarm (must be unique per tenant).
–project-id <PROJECT_ID>	Tenant to associate with alarm (only settable by admin users).
–user-id <USER_ID>	User to associate with alarm (only settable by admin users).
–description <DESCRIPTION>	Free text description of the alarm.
–state <STATE>	State of the alarm, one of: ['ok', 'alarm', 'insufficient data']
–severity <SEVERITY>	Severity of the alarm, one of: ['low', 'moderate', 'critical']
–enabled {True|False}	True if alarm evaluation/actioning is enabled.
–alarm-action <Webhook URL> URL	to invoke when state transitions to alarm. May be used multiple times. Defaults to None.
–ok-action <Webhook URL> URL	to invoke when state transitions to OK. May be used multiple times. Defaults to None.
–insufficient-data-action <Webhook URL>	URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.
–time-constraint <Time Constraint>	Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas

its duration is given in seconds. Can be specified mul-
tiple times for multiple time constraints, format is:
name=<CONSTRAINT_NAME>;start=<CRON>;durati
on=<SECONDS>;[description=<DESCRIPTION>;[timez
one=<IANA Timezone>]] Defaults to None.

**–remove-time-constraint <Con-   Name or list of names of the time constraints to re-
straint names>**   move.

–alarm_ids <ALARM IDS>   List of alarm IDs.

–operator <OPERATOR>   Operator to compare with, one of: ['and', 'or'].

–repeat-actions {True|False}   True if actions should be repeatedly notified while alarm
                                     remains in target state.

ceilometer alarm-delete

```
usage: ceilometer alarm-delete [<ALARM_ID>]
```

Delete an alarm.

Positional arguments

<ALARM_ID>   ID of the alarm to delete.

ceilometer alarm-gnocchi-metrics-threshold-create

```
usage: ceilometer alarm-gnocchi-metrics-threshold-create --name <NAME>
                                                          [--project-id
 <PROJECT_ID>]
                                                          [--user-id <USER_ID>]
                                                          [--description
 <DESCRIPTION>]
                                                          [--state <STATE>]
                                                          [--severity
 <SEVERITY>]
                                                          [--enabled {True|
False}]
                                                          [--alarm-action
 <Webhook URL>]
                                                          [--ok-action <Webhook
 URL>]
                                                          [--insufficient-data-
action <Webhook URL>]
                                                          [--time-constraint
 <Time Constraint>]
                                                          [--granularity
 <GRANULARITY>]
                                                          [--evaluation-periods
 <COUNT>]
                                                          [--aggregation-method
 <AGGREATION>]
                                                          [--comparison-
operator <OPERATOR>]
                                                          --threshold
```

```
                                        <THRESHOLD>
                                        [--repeat-actions

{True|False}]
                                        -m <METRICS>
```

Create a new alarm based on computed statistics.

Optional arguments

–name <NAME>	Name of the alarm (must be unique per tenant). Required.
–project-id <PROJECT_ID>	Tenant to associate with alarm (only settable by admin users).
–user-id <USER_ID>	User to associate with alarm (only settable by admin users).
–description <DESCRIPTION>	Free text description of the alarm.
–state <STATE>	State of the alarm, one of: ['ok', 'alarm', 'insufficient data']
–severity <SEVERITY>	Severity of the alarm, one of: ['low', 'moderate', 'critical']
–enabled {True|False}	True if alarm evaluation/actioning is enabled.
–alarm-action <Webhook URL> URL	to invoke when state transitions to alarm. May be used multiple times. Defaults to None.
–ok-action <Webhook URL> URL	to invoke when state transitions to OK. May be used multiple times. Defaults to None.
–insufficient-data-action <Webhook URL>	URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.
–time-constraint <Time Constraint>	Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timezone=<IANA Timezone>]] Defaults to None.
–granularity <GRANULARITY>	Length of each period (seconds) to evaluate over.
–evaluation-periods <COUNT>	Number of periods to evaluate over.
–aggregation-method <AGGREATION>	Aggregation method to use, one of: ['max', 'min', 'avg', 'sum', 'count'].
–comparison-operator <OPERATOR>	Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].

–threshold <THRESHOLD>	Threshold to evaluate against. Required.
–repeat-actions {True|False}	True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.
-m <METRICS>, –metrics <MET-RICS>	Metric to evaluate against. Required.

ceilometer alarm-gnocchi-metrics-threshold-update

```
usage: ceilometer alarm-gnocchi-metrics-threshold-update [--name <NAME>]
                                                         [--project-id
 <PROJECT_ID>]
                                                         [--user-id <USER_ID>]
                                                         [--description
 <DESCRIPTION>]
                                                         [--state <STATE>]
                                                         [--severity
 <SEVERITY>]
                                                         [--enabled {True|
False}]
                                                         [--alarm-action
 <Webhook URL>]
                                                         [--ok-action <Webhook
 URL>]
                                                         [--insufficient-data-
action <Webhook URL>]
                                                         [--time-constraint
 <Time Constraint>]
                                                         [--granularity
 <GRANULARITY>]
                                                         [--evaluation-periods
 <COUNT>]
                                                         [--aggregation-method
 <AGGREATION>]
                                                         [--comparison-
operator <OPERATOR>]
                                                         [--threshold
 <THRESHOLD>]
                                                         [--repeat-actions
 {True|False}]
                                                         [-m <METRICS>]
                                                         [--remove-time-
constraint <Constraint names>]
                                                         [<ALARM_ID>]
```

Update an existing alarm based on computed statistics.

Positional arguments

<ALARM_ID>   ID of the alarm to update.

Optional arguments

–name <NAME>   Name of the alarm (must be unique per tenant).

–project-id <PROJECT_ID>	Tenant to associate with alarm (only settable by admin users).
–user-id <USER_ID>	User to associate with alarm (only settable by admin users).
–description <DESCRIPTION>	Free text description of the alarm.
–state <STATE>	State of the alarm, one of: ['ok', 'alarm', 'insufficient data']
–severity <SEVERITY>	Severity of the alarm, one of: ['low', 'moderate', 'critical']
–enabled {True|False}	True if alarm evaluation/actioning is enabled.
–alarm-action <Webhook URL> URL	to invoke when state transitions to alarm. May be used multiple times. Defaults to None.
–ok-action <Webhook URL> URL	to invoke when state transitions to OK. May be used multiple times. Defaults to None.
–insufficient-data-action <Webhook URL>	URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.
–time-constraint <Time Constraint>	Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timezone=<IANA Timezone>]] Defaults to None.
–granularity <GRANULARITY>	Length of each period (seconds) to evaluate over.
–evaluation-periods <COUNT>	Number of periods to evaluate over.
–aggregation-method <AGGREATION>	Aggregation method to use, one of: ['max', 'min', 'avg', 'sum', 'count'].
–comparison-operator <OPERATOR>	Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].
–threshold <THRESHOLD>	Threshold to evaluate against.
–repeat-actions {True|False}	True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.
-m <METRICS>, –metrics <METRICS>	Metric to evaluate against.
–remove-time-constraint <Constraint names>	Name or list of names of the time constraints to remove.

ceilometer alarm-gnocchi-resources-threshold-create

```
usage: ceilometer alarm-gnocchi-resources-threshold-create --name <NAME>
                                                           [--project-id
 <PROJECT_ID>]
                                                           [--user-id
 <USER_ID>]
                                                           [--description
 <DESCRIPTION>]
                                                           [--state <STATE>]
                                                           [--severity
 <SEVERITY>]
                                                           [--enabled {True|
False}]
                                                           [--alarm-action
 <Webhook URL>]
                                                           [--ok-action
 <Webhook URL>]
                                                           [--insufficient-
data-action <Webhook URL>]
                                                           [--time-constraint
 <Time Constraint>]
                                                           [--granularity
 <GRANULARITY>]
                                                           [--evaluation-
periods <COUNT>]
                                                           [--aggregation-
method <AGGREATION>]
                                                           [--comparison-
operator <OPERATOR>]
                                                           --threshold
                                                           <THRESHOLD>
                                                           [--repeat-actions
 {True|False}]
                                                           -m <METRIC>
                                                           --resource-type
                                                           <RESOURCE_TYPE>
                                                           --resource-
constraint
 <RESOURCE_CONSTRAINT>
```

Create a new alarm based on computed statistics.

Optional arguments

–name <NAME>   Name of the alarm (must be unique per tenant). Re-
                                     quired.

–project-id <PROJECT_ID>   Tenant to associate with alarm (only settable by admin
                                     users).

–user-id <USER_ID>   User to associate with alarm (only settable by admin
                                     users).

–description <DESCRIPTION>   Free text description of the alarm.

–state <STATE>	State of the alarm, one of: ['ok', 'alarm', 'insufficient data']
–severity <SEVERITY>	Severity of the alarm, one of: ['low', 'moderate', 'critical']
–enabled {True|False}	True if alarm evaluation/actioning is enabled.
–alarm-action <Webhook URL> URL	to invoke when state transitions to alarm. May be used multiple times. Defaults to None.
–ok-action <Webhook URL> URL	to invoke when state transitions to OK. May be used multiple times. Defaults to None.
–insufficient-data-action <Webhook URL>	URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.
–time-constraint <Time Constraint>	Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timezone=<IANA Timezone>]] Defaults to None.
–granularity <GRANULARITY>	Length of each period (seconds) to evaluate over.
–evaluation-periods <COUNT>	Number of periods to evaluate over.
–aggregation-method <AGGREATION>	Aggregation method to use, one of: ['max', 'min', 'avg', 'sum', 'count'].
–comparison-operator <OPERATOR>	Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].
–threshold <THRESHOLD>	Threshold to evaluate against. Required.
–repeat-actions {True|False}	True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.
-m <METRIC>, –metric <METRIC>	Metric to evaluate against. Required.
–resource-type <RESOURCE_TYPE>	Resource_type to evaluate against. Required.
–resource-constraint <RESOURCE_CONSTRAINT>	Resources to evaluate against or a expression to select multiple resources. Required.

ceilometer alarm-gnocchi-resources-threshold-update

```
usage: ceilometer alarm-gnocchi-resources-threshold-update [--name <NAME>]
                                                           [--project-id
 <PROJECT_ID>]
```

```
 <USER_ID>]                                          [--user-id

                                                     [--description
 <DESCRIPTION>]
                                                     [--state <STATE>]
                                                     [--severity
 <SEVERITY>]
                                                     [--enabled {True|
False}]
                                                     [--alarm-action
 <Webhook URL>]
                                                     [--ok-action
 <Webhook URL>]
                                                     [--insufficient-
data-action <Webhook URL>]
                                                     [--time-constraint
 <Time Constraint>]
                                                     [--granularity
 <GRANULARITY>]
                                                     [--evaluation-
periods <COUNT>]
                                                     [--aggregation-
method <AGGREATION>]
                                                     [--comparison-
operator <OPERATOR>]
                                                     [--threshold
 <THRESHOLD>]
                                                     [--repeat-actions
 {True|False}]
                                                     [-m <METRIC>]
                                                     [--resource-type
 <RESOURCE_TYPE>]
                                                     [--resource-
constraint <RESOURCE_CONSTRAINT>]
                                                     [--remove-time-
constraint <Constraint names>]
                                                     [<ALARM_ID>]
```

Update an existing alarm based on computed statistics.

Positional arguments

<ALARM_ID>   ID of the alarm to update.

Optional arguments

–name <NAME>	Name of the alarm (must be unique per tenant).
–project-id <PROJECT_ID>	Tenant to associate with alarm (only settable by admin users).
–user-id <USER_ID>	User to associate with alarm (only settable by admin users).
–description <DESCRIPTION>	Free text description of the alarm.
–state <STATE>	State of the alarm, one of: ['ok', 'alarm', 'insufficient data']

–severity <SEVERITY>	Severity of the alarm, one of: ['low', 'moderate', 'critical']
–enabled {True|False}	True if alarm evaluation/actioning is enabled.
–alarm-action <Webhook URL> URL	to invoke when state transitions to alarm. May be used multiple times. Defaults to None.
–ok-action <Webhook URL> URL	to invoke when state transitions to OK. May be used multiple times. Defaults to None.
–insufficient-data-action <Webhook URL>	URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.
–time-constraint <Time Constraint>	Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timezone=<IANA Timezone>]] Defaults to None.
–granularity <GRANULARITY>	Length of each period (seconds) to evaluate over.
–evaluation-periods <COUNT>	Number of periods to evaluate over.
–aggregation-method <AGGREATION>	Aggregation method to use, one of: ['max', 'min', 'avg', 'sum', 'count'].
–comparison-operator <OPERATOR>	Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].
–threshold <THRESHOLD>	Threshold to evaluate against.
–repeat-actions {True|False}	True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.
-m <METRIC>, –metric <METRIC>	Metric to evaluate against.
–resource-type <RESOURCE_TYPE>	Resource_type to evaluate against.
–resource-constraint <RESOURCE_CONSTRAINT>	Resources to evaluate against or a expression to select multiple resources.
–remove-time-constraint <Constraint names>	Name or list of names of the time constraints to remove.

ceilometer alarm-history

```
usage: ceilometer alarm-history [-q <QUERY>] [<ALARM_ID>]
```

Display the change history of an alarm.

Positional arguments

<ALARM_ID>   ID of the alarm for which history is shown.

Optional arguments

-q <QUERY>, --query <QUERY>   key[op]data_type::value; list. data_type is optional, but
                                        if supplied must be string, integer, float, or boolean.

ceilometer alarm-list

```
usage: ceilometer alarm-list [-q <QUERY>]
```

List the user's alarms.

Optional arguments

-q <QUERY>, --query <QUERY>   key[op]data_type::value; list. data_type is optional, but
                                        if supplied must be string, integer, float, or boolean.

ceilometer alarm-show

```
usage: ceilometer alarm-show [<ALARM_ID>]
```

Show an alarm.

Positional arguments

<ALARM_ID>   ID of the alarm to show.

ceilometer alarm-state-get

```
usage: ceilometer alarm-state-get [<ALARM_ID>]
```

Get the state of an alarm.

Positional arguments

<ALARM_ID>   ID of the alarm state to show.

ceilometer alarm-state-set

```
usage: ceilometer alarm-state-set --state <STATE> [<ALARM_ID>]
```

Set the state of an alarm.

Positional arguments

<ALARM_ID>   ID of the alarm state to set.

Optional arguments

--state <STATE> State of the alarm, one of: ['ok', 'alarm', 'insufficient data']. Required.

ceilometer alarm-threshold-create

```
usage: ceilometer alarm-threshold-create --name <NAME>
                                    [--project-id <PROJECT_ID>]
                                    [--user-id <USER_ID>]
                                    [--description <DESCRIPTION>]
                                    [--state <STATE>]
                                    [--severity <SEVERITY>]
                                    [--enabled {True|False}]
                                    [--alarm-action <Webhook URL>]
                                    [--ok-action <Webhook URL>]
                                    [--insufficient-data-action <Webhook
 URL>]

                                    [--time-constraint <Time Constraint>]
                                    -m <METRIC> [--period <PERIOD>]
                                    [--evaluation-periods <COUNT>]
                                    [--statistic <STATISTIC>]
                                    [--comparison-operator <OPERATOR>]
                                    --threshold <THRESHOLD> [-q <QUERY>]
                                    [--repeat-actions {True|False}]
```

Create a new alarm based on computed statistics.

Optional arguments

--name <NAME> Name of the alarm (must be unique per tenant). Required.

--project-id <PROJECT_ID> Tenant to associate with alarm (only settable by admin users).

--user-id <USER_ID> User to associate with alarm (only settable by admin users).

--description <DESCRIPTION> Free text description of the alarm.

--state <STATE> State of the alarm, one of: ['ok', 'alarm', 'insufficient data']

--severity <SEVERITY> Severity of the alarm, one of: ['low', 'moderate', 'critical']

--enabled {True|False} True if alarm evaluation/actioning is enabled.

--alarm-action <Webhook URL> URL to invoke when state transitions to alarm. May be used multiple times. Defaults to None.

--ok-action <Webhook URL> URL to invoke when state transitions to OK. May be used multiple times. Defaults to None.

--insufficient-data-action <Webhook URL> URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.

–time-constraint <Time Constraint>	Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timezone=<IANA Timezone>]] Defaults to None.
-m <METRIC>, –meter-name <METRIC>	Metric to evaluate against. Required.
–period <PERIOD>	Length of each period (seconds) to evaluate over.
–evaluation-periods <COUNT>	Number of periods to evaluate over.
–statistic <STATISTIC>	Statistic to evaluate, one of: ['max', 'min', 'avg', 'sum', 'count'].
–comparison-operator <OPERATOR>	Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].
–threshold <THRESHOLD>	Threshold to evaluate against. Required.
-q <QUERY>, –query <QUERY>	key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, float, or boolean.
–repeat-actions {True|False}	True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.

ceilometer alarm-threshold-update

```
usage: ceilometer alarm-threshold-update [--name <NAME>]
                                         [--project-id <PROJECT_ID>]
                                         [--user-id <USER_ID>]
                                         [--description <DESCRIPTION>]
                                         [--state <STATE>]
                                         [--severity <SEVERITY>]
                                         [--enabled {True|False}]
                                         [--alarm-action <Webhook URL>]
                                         [--ok-action <Webhook URL>]
                                         [--insufficient-data-action <Webhook
URL>]
                                         [--time-constraint <Time Constraint>]
                                         [--remove-time-constraint <Constraint
names>]
                                         [-m <METRIC>] [--period <PERIOD>]
                                         [--evaluation-periods <COUNT>]
                                         [--statistic <STATISTIC>]
                                         [--comparison-operator <OPERATOR>]
                                         [--threshold <THRESHOLD>]
                                         [-q <QUERY>]
                                         [--repeat-actions {True|False}]
                                         [<ALARM_ID>]
```

Update an existing alarm based on computed statistics.

Positional arguments

<ALARM_ID>   ID of the alarm to update.

Optional arguments

–name <NAME>	Name of the alarm (must be unique per tenant).
–project-id <PROJECT_ID>	Tenant to associate with alarm (only settable by admin users).
–user-id <USER_ID>	User to associate with alarm (only settable by admin users).
–description <DESCRIPTION>	Free text description of the alarm.
–state <STATE>	State of the alarm, one of: ['ok', 'alarm', 'insufficient data']
–severity <SEVERITY>	Severity of the alarm, one of: ['low', 'moderate', 'critical']
–enabled {True|False}	True if alarm evaluation/actioning is enabled.
–alarm-action <Webhook URL> URL	to invoke when state transitions to alarm. May be used multiple times. Defaults to None.
–ok-action <Webhook URL> URL	to invoke when state transitions to OK. May be used multiple times. Defaults to None.
–insufficient-data-action <Webhook URL>	URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.
–time-constraint <Time Constraint>	Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timezone=<IANA Timezone>]] Defaults to None.
–remove-time-constraint <Constraint names>	Name or list of names of the time constraints to remove.
-m <METRIC>, –meter-name <METRIC>	Metric to evaluate against.
–period <PERIOD>	Length of each period (seconds) to evaluate over.
–evaluation-periods <COUNT>	Number of periods to evaluate over.
–statistic <STATISTIC>	Statistic to evaluate, one of: ['max', 'min', 'avg', 'sum', 'count'].

–comparison-operator <OPERA-TOR>	Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].
–threshold <THRESHOLD>	Threshold to evaluate against.
-q <QUERY>, –query <QUERY>	key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, float, or boolean.
–repeat-actions {True|False}	True if actions should be repeatedly notified while alarm remains in target state.

ceilometer alarm-update

```
usage: ceilometer alarm-update [--name <NAME>] [--project-id <PROJECT_ID>]
                               [--user-id <USER_ID>]
                               [--description <DESCRIPTION>] [--state <STATE>]
                               [--severity <SEVERITY>]
                               [--enabled {True|False}]
                               [--alarm-action <Webhook URL>]
                               [--ok-action <Webhook URL>]
                               [--insufficient-data-action <Webhook URL>]
                               [--time-constraint <Time Constraint>]
                               [--remove-time-constraint <Constraint names>]
                               [--period <PERIOD>]
                               [--evaluation-periods <COUNT>] [-m <METRIC>]
                               [--statistic <STATISTIC>]
                               [--comparison-operator <OPERATOR>]
                               [--threshold <THRESHOLD>]
                               [--matching-metadata <Matching Metadata>]
                               [--repeat-actions {True|False}]
                               [<ALARM_ID>]
```

Update an existing alarm (Deprecated).

Positional arguments

<ALARM_ID>   ID of the alarm to update.

Optional arguments

–name <NAME>	Name of the alarm (must be unique per tenant).
–project-id <PROJECT_ID>	Tenant to associate with alarm (only settable by admin users).
–user-id <USER_ID>	User to associate with alarm (only settable by admin users).
–description <DESCRIPTION>	Free text description of the alarm.
–state <STATE>	State of the alarm, one of: ['ok', 'alarm', 'insufficient data']
–severity <SEVERITY>	Severity of the alarm, one of: ['low', 'moderate', 'critical']
–enabled {True|False}	True if alarm evaluation/actioning is enabled.

–alarm-action <Webhook URL> URL	to invoke when state transitions to alarm. May be used multiple times. Defaults to None.
–ok-action <Webhook URL> URL	to invoke when state transitions to OK. May be used multiple times. Defaults to None.
–insufficient-data-action <Webhook URL>	URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.
–time-constraint <Time Constraint>	Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timezone=<IANA Timezone>]] Defaults to None.
–remove-time-constraint <Constraint names>	Name or list of names of the time constraints to remove.
–period <PERIOD>	Length of each period (seconds) to evaluate over.
–evaluation-periods <COUNT>	Number of periods to evaluate over.
-m <METRIC>, –meter-name <METRIC>	Metric to evaluate against.
–statistic <STATISTIC>	Statistic to evaluate, one of: ['max', 'min', 'avg', 'sum', 'count']
–comparison-operator <OPERATOR>	Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].
–threshold <THRESHOLD>	Threshold to evaluate against.
–matching-metadata <Matching Metadata>	A meter should match this resource metadata (key=value) additionally to the meter_name. Defaults to None.
–repeat-actions {True|False}	True if actions should be repeatedly notified while alarm remains in target state.

ceilometer event-list

```
usage: ceilometer event-list [-q <QUERY>] [--no-traits]
```

List events.

Optional arguments

-q <QUERY>, –query <QUERY>	key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, floator datetime.

–no-traits   If specified, traits will not be printed.

ceilometer event-show

```
usage: ceilometer event-show <message_id>
```

Show a particular event.

Positional arguments

<message_id>   The ID of the event. Should be a UUID.

ceilometer event-type-list

```
usage: ceilometer event-type-list
```

List event types.

ceilometer meter-list

```
usage: ceilometer meter-list [-q <QUERY>]
```

List the user's meters.

Optional arguments

-q <QUERY>, --query <QUERY>   key[op]data_type::value; list. data_type is optional, but
                                       if supplied must be string, integer, float, or boolean.

ceilometer query-alarm-history

```
usage: ceilometer query-alarm-history [-f <FILTER>] [-o <ORDERBY>]
                                      [-l <LIMIT>]
```

Query Alarm History.

Optional arguments

-f <FILTER>, --filter <FILTER>   {complex_op: [{simple_op: {field_name: value}}]} The
                                          complex_op is one of: ['and', 'or'], simple_op is one of:
                                          ['=', '!=', '<', '<=', '>', '>='].

-o <ORDERBY>, --orderby <OR-   [{field_name: direction}, {field_name: direction}] The
DERBY>   direction is one of: ['asc', 'desc'].

-l <LIMIT>, --limit <LIMIT>   Maximum number of alarm history items to return.

ceilometer query-alarms

```
usage: ceilometer query-alarms [-f <FILTER>] [-o <ORDERBY>] [-l <LIMIT>]
```

Query Alarms.

Optional arguments

-f <FILTER>, --filter <FILTER>	{complex_op: [{simple_op: {field_name: value}}]} The complex_op is one of: ['and', 'or'], simple_op is one of: ['=', '!=', '<', '<=', '>', '>='].
-o <ORDERBY>, --orderby <OR-DERBY>	[{field_name: direction}, {field_name: direction}] The direction is one of: ['asc', 'desc'].
-l <LIMIT>, --limit <LIMIT>	Maximum number of alarms to return.

ceilometer query-samples

```
usage: ceilometer query-samples [-f <FILTER>] [-o <ORDERBY>] [-l <LIMIT>]
```

Query samples.

Optional arguments

-f <FILTER>, --filter <FILTER>	{complex_op: [{simple_op: {field_name: value}}]} The complex_op is one of: ['and', 'or'], simple_op is one of: ['=', '!=', '<', '<=', '>', '>='].
-o <ORDERBY>, --orderby <OR-DERBY>	[{field_name: direction}, {field_name: direction}] The direction is one of: ['asc', 'desc'].
-l <LIMIT>, --limit <LIMIT>	Maximum number of samples to return.

ceilometer resource-list

```
usage: ceilometer resource-list [-q <QUERY>]
```

List the resources.

Optional arguments

-q <QUERY>, --query <QUERY>	key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, float, or boolean.

ceilometer resource-show

```
usage: ceilometer resource-show <RESOURCE_ID>
```

Show the resource.

Positional arguments

<RESOURCE_ID>	ID of the resource to show.

ceilometer sample-create

```
usage: ceilometer sample-create [--project-id <PROJECT_ID>]
```

```
                              [--user-id <USER_ID>] -r <RESOURCE_ID> -m
                              <METER_NAME> --meter-type <METER_TYPE>
                              --meter-unit <METER_UNIT> --sample-volume
                              <SAMPLE_VOLUME>
                              [--resource-metadata <RESOURCE_METADATA>]
                              [--timestamp <TIMESTAMP>]
```

Create a sample.

Optional arguments

–project-id <PROJECT_ID>	Tenant to associate with sample (only settable by admin users).
–user-id <USER_ID>	User to associate with sample (only settable by admin users).
-r <RESOURCE_ID>, –resource-id <RESOURCE_ID>	ID of the resource. Required.
-m <METER_NAME>, –meter-name <METER_NAME>	The meter name. Required.
–meter-type <METER_TYPE>	The meter type. Required.
–meter-unit <METER_UNIT>	The meter unit. Required.
–sample-volume <SAMPLE_VOLUME>	The sample volume. Required.
–resource-metadata <RESOURCE_METADATA>	Resource metadata. Provided value should be a set of key-value pairs e.g. {"key":"value"}.
–timestamp <TIMESTAMP>	The sample timestamp.

ceilometer sample-list

```
usage: ceilometer sample-list [-q <QUERY>] [-m <NAME>] [-l <NUMBER>]
```

List the samples (return OldSample objects if -m/–meter is set).

Optional arguments

-q <QUERY>, –query <QUERY>	key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, float, or boolean.
-m <NAME>, –meter <NAME>	Name of meter to show samples for.
-l <NUMBER>, –limit <NUMBER>	Maximum number of samples to return.

ceilometer sample-show

```
usage: ceilometer sample-show <SAMPLE_ID>
```

Show an sample.

Positional arguments

<SAMPLE_ID>   ID (aka message ID) of the sample to show.

ceilometer statistics

```
usage: ceilometer statistics [-q <QUERY>] -m <NAME> [-p <PERIOD>] [-g <FIELD>]
                             [-a <FUNC>[<-<PARAM>]]
```

List the statistics for a meter.

Optional arguments

-q <QUERY>, --query <QUERY>	key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, float, or boolean.
-m <NAME>, --meter <NAME>	Name of meter to list statistics for. Required.
-p <PERIOD>, --period <PERIOD>	Period in seconds over which to group samples.
-g <FIELD>, --groupby <FIELD>	Field for group by.
-a <FUNC>[<-<PARAM>], --aggregate <FUNC>[<-<PARAM>]	Function for data aggregation. Available aggregates are: count, cardinality, min, max, sum, stddev, avg. Defaults to [].

ceilometer trait-description-list

```
usage: ceilometer trait-description-list -e <EVENT_TYPE>
```

List trait info for an event type.

Optional arguments

-e <EVENT_TYPE>, --event_type <EVENT_TYPE>	Type of the event for which traits will be shown. Required.

ceilometer trait-list

```
usage: ceilometer trait-list -e <EVENT_TYPE> -t <TRAIT_NAME>
```

List all traits with name <trait_name> for Event Type <event_type>.

Optional arguments

-e <EVENT_TYPE>, --event_type <EVENT_TYPE>	Type of the event for which traits will listed. Required.
-t <TRAIT_NAME>, --trait_name <TRAIT_NAME>	The name of the trait to list. Required.

13. Database Service command-line client

The **trove** client is the command-line interface (CLI) for the Database API and its extensions. This chapter documents **trove** version `1.0.8`.

For help on a specific **trove** command, enter:

```
$ trove help COMMAND
```

trove usage

```
usage: trove [--version] [--debug] [--os-auth-system <auth-system>]
             [--service-type <service-type>] [--service-name <service-name>]
             [--bypass-url <bypass-url>]
             [--database-service-name <database-service-name>]
             [--endpoint-type <endpoint-type>]
             [--os-database-api-version <database-api-ver>]
             [--retries <retries>] [--json] [--insecure]
             [--os-cacert <ca-certificate>] [--os-cert <certificate>]
             [--os-key <key>] [--timeout <seconds>]
             [--os-auth-url OS_AUTH_URL] [--os-domain-id OS_DOMAIN_ID]
             [--os-domain-name OS_DOMAIN_NAME] [--os-project-id OS_PROJECT_ID]
             [--os-project-name OS_PROJECT_NAME]
             [--os-project-domain-id OS_PROJECT_DOMAIN_ID]
             [--os-project-domain-name OS_PROJECT_DOMAIN_NAME]
             [--os-trust-id OS_TRUST_ID] [--os-user-id OS_USER_ID]
             [--os-user-name OS_USERNAME]
             [--os-user-domain-id OS_USER_DOMAIN_ID]
             [--os-user-domain-name OS_USER_DOMAIN_NAME]
             [--os-password OS_PASSWORD] [--os-tenant-name <auth-tenant-name>]
             [--os-tenant-id <tenant-id>] [--os-auth-token OS_AUTH_TOKEN]
             [--os-region-name <region-name>]
             <subcommand> ...
```

Subcommands

backup-copy   Creates a backup from another backup.

backup-create   Creates a backup of an instance.

backup-delete	Deletes a backup.
backup-list	Lists available backups.
backup-list-instance	Lists available backups for an instance.
backup-show	Shows details of a backup.
cluster-create	Creates a new cluster.
cluster-delete	Deletes a cluster.
cluster-instances	Lists all instances of a cluster.
cluster-list	Lists all the clusters.
cluster-show	Shows details of a cluster.
configuration-attach	Attaches a configuration group to an instance.
configuration-create	Creates a configuration group.
configuration-default	Shows the default configuration of an instance.
configuration-delete	Deletes a configuration group.
configuration-detach	Detaches a configuration group from an instance.
configuration-instances	Lists all instances associated with a configuration group.
configuration-list	Lists all configuration groups.
configuration-parameter-list	Lists available parameters for a configuration group.
configuration-parameter-show	Shows details of a configuration parameter.
configuration-patch	Patches a configuration group.
configuration-show	Shows details of a configuration group.
configuration-update	Updates a configuration group.
create	Creates a new instance.
database-create	Creates a database on an instance.
database-delete	Deletes a database from an instance.
database-list	Lists available databases on an instance.
datastore-list	Lists available datastores.
datastore-show	Shows details of a datastore.
datastore-version-list	Lists available versions for a datastore.
datastore-version-show	Shows details of a datastore version.

delete	Deletes an instance.
detach-replica	Detaches a replica instance from its replication source.
flavor-list	Lists available flavors.
flavor-show	Shows details of a flavor.
limit-list	Lists the limits for a tenant.
list	Lists all the instances.
metadata-create	Creates metadata in the database for instance <id>.
metadata-delete	Deletes metadata for instance <id>.
metadata-edit	Replaces metadata value with a new one, this is non-destructive.
metadata-list	Shows all metadata for instance <id>.
metadata-show	Shows metadata entry for key <key> and instance <id>.
metadata-update	Updates metadata, this is destructive.
resize-flavor	[*DEPRECATED*] Please use resize-instance instead.
resize-instance	Resizes an instance with a new flavor.
resize-volume	Resizes the volume size of an instance.
restart	Restarts an instance.
root-enable	Enables root for an instance and resets if already exists.
root-show	Gets status if root was ever enabled for an instance.
secgroup-add-rule	Creates a security group rule.
secgroup-delete-rule	Deletes a security group rule.
secgroup-list	Lists all security groups.
secgroup-list-rules	Lists all rules for a security group.
secgroup-show	Shows details of a security group.
show	Shows details of an instance.
update	Updates an instance: Edits name, configuration, or replica source.
user-create	Creates a user on an instance.
user-delete	Deletes a user from an instance.

user-grant-access	Grants access to a database(s) for a user.
user-list	Lists the users for an instance.
user-revoke-access	Revokes access to a database for a user.
user-show	Shows details of a user of an instance.
user-show-access	Shows access details of a user of an instance.
user-update-attributes	Updates a user's attributes on an instance.
bash-completion	Prints arguments for bash_completion.
help	Displays help about this program or one of its subcommands.

trove optional arguments

--version	show program's version number and exit
--debug	Print debugging output.
--os-auth-system <auth-system>	
--service-type <service-type>	Defaults to database for most actions.
--service-name <service-name>	Defaults to env[TROVE_SERVICE_NAME].
--bypass-url <bypass-url>	Defaults to env[TROVE_BYPASS_URL].
--database-service-name <database-service-name>	Defaults to env[TROVE_DATABASE_SERVICE_NAME].
--endpoint-type <end-point-type>	Defaults to env[TROVE_ENDPOINT_TYPE] or publicURL.
--os-database-api-version <database-api-ver>	Accepts 1, defaults to env[OS_DATABASE_API_VERSION].
--retries <retries>	Number of retries.
--json, --os-json-output	Output JSON instead of prettyprint. Defaults to env[OS_JSON_OUTPUT].
--insecure	Explicitly allow client to perform "insecure" TLS (https) requests. The server's certificate will not be verified against any certificate authorities. This option should be used with caution.
--os-cacert <ca-certificate>	Specify a CA bundle file to use in verifying a TLS (https) server certificate. Defaults to env[OS_CACERT].
--os-cert <certificate>	Defaults to env[OS_CERT].

–os-key <key>	Defaults to `env[OS_KEY]`.
–timeout <seconds>	Set request timeout (in seconds).
–os-auth-url OS_AUTH_URL	Authentication URL
–os-domain-id OS_DOMAIN_ID	Domain ID to scope to
–os-domain-name OS_DOMAIN_NAME	Domain name to scope to
–os-project-id OS_PROJECT_ID	Project ID to scope to
–os-project-name OS_PROJECT_NAME	Project name to scope to
–os-project-domain-id OS_PROJECT_DOMAIN_ID	Domain ID containing project
–os-project-domain-name OS_PROJECT_DOMAIN_NAME	Domain name containing project
–os-trust-id OS_TRUST_ID	Trust ID
–os-user-id OS_USER_ID	User ID
–os-user-name OS_USERNAME, –os-username OS_USERNAME	Username
–os-user-domain-id OS_USER_DOMAIN_ID	User's domain id
–os-user-domain-name OS_USER_DOMAIN_NAME	User's domain name
–os-password OS_PASSWORD	User's password
–os-tenant-name <auth-tenant-name>	Tenant to request authorization on. Defaults to `env[OS_TENANT_NAME]`.
–os-tenant-id <tenant-id>	Tenant to request authorization on. Defaults to `env[OS_TENANT_ID]`.
–os-auth-token OS_AUTH_TOKEN	Defaults to `env[OS_AUTH_TOKEN]`
–os-region-name <region-name>	Specify the region to use. Defaults to `env[OS_REGION_NAME]`.

trove backup-copy

```
usage: trove backup-copy <name> <backup>
                        [--region <region>] [--description <description>]
```

Creates a backup from another backup.

Positional arguments

<name>   Name of the backup.

<backup>   Backup ID of the source backup.

Optional arguments

–region <region>   Region where the source backup resides.

–description <description>   An optional description for the backup.

trove backup-create

```
usage: trove backup-create <instance> <name>
                           [--description <description>] [--parent <parent>]
```

Creates a backup of an instance.

Positional arguments

<instance>   ID of the instance.

<name>   Name of the backup.

Optional arguments

–description <description>   An optional description for the backup.

–parent <parent>   Optional ID of the parent backup to perform an incre-
                                        mental backup from.

trove backup-delete

```
usage: trove backup-delete <backup>
```

Deletes a backup.

Positional arguments

<backup>   ID of the backup.

trove backup-list

```
usage: trove backup-list [--limit <limit>] [--datastore <datastore>]
```

Lists available backups.

Optional arguments

–limit <limit>   Return up to N number of the most recent backups.

–datastore <datastore>   Name or ID of the datastore to list backups for.

trove backup-list-instance

```
usage: trove backup-list-instance [--limit <limit>] <instance>
```

Lists available backups for an instance.

Positional arguments

<instance>   ID of the instance.

Optional arguments

–limit <limit>   Return up to N number of the most recent backups.

trove backup-show

```
usage: trove backup-show <backup>
```

Shows details of a backup.

Positional arguments

<backup>   ID of the backup.

trove cluster-create

```
usage: trove cluster-create <name> <datastore> <datastore_version>
                            [--instance <flavor_id=flavor_id,volume=volume>]
```

Creates a new cluster.

Positional arguments

<name>   Name of the cluster.

<datastore>   A datastore name or UUID.

<datastore_version>   A datastore version name or UUID.

Optional arguments

–instance   Create an instance for the cluster. Specify multiple times
<flavor_id=flavor_id,volume=volume> to create multiple instances.

trove cluster-delete

```
usage: trove cluster-delete <cluster>
```

Deletes a cluster.

Positional arguments

<cluster>   ID of the cluster.

trove cluster-instances

```
usage: trove cluster-instances <cluster>
```

Lists all instances of a cluster.

Positional arguments

\<cluster\>   ID or name of the cluster.

trove cluster-list

```
usage: trove cluster-list [--limit <limit>] [--marker <ID>]
```

Lists all the clusters.

Optional arguments

–limit \<limit\>   Limit the number of results displayed.

–marker \<ID\>   Begin displaying the results for IDs greater than the specified mark-
                            er. When used with –limit, set this to the last ID displayed in the pre-
                            vious run.

trove cluster-show

```
usage: trove cluster-show <cluster>
```

Shows details of a cluster.

Positional arguments

\<cluster\>   ID or name of the cluster.

trove configuration-attach

```
usage: trove configuration-attach <instance> <configuration>
```

Attaches a configuration group to an instance.

Positional arguments

\<instance\>   ID of the instance.

\<configuration\>   ID of the configuration group to attach to the instance.

trove configuration-create

```
usage: trove configuration-create <name> <values>
                                  [--datastore <datastore>]
                                  [--datastore_version <datastore_version>]
                                  [--description <description>]
```

Creates a configuration group.

Positional arguments

<name>   Name of the configuration group.

<values>   Dictionary of the values to set.

Optional arguments

–datastore <datastore>	Datastore assigned to the configuration group.
–datastore_version <datastore_version>	Datastore version ID assigned to the configuration group.
–description <description>	An optional description for the configuration group.

trove configuration-default

```
usage: trove configuration-default <instance>
```

Shows the default configuration of an instance.

Positional arguments

<instance>   ID of the instance.

trove configuration-delete

```
usage: trove configuration-delete <configuration_group>
```

Deletes a configuration group.

Positional arguments

<configuration_group>   ID of the configuration group.

trove configuration-detach

```
usage: trove configuration-detach <instance>
```

Detaches a configuration group from an instance.

Positional arguments

<instance>   ID of the instance.

trove configuration-instances

```
usage: trove configuration-instances <configuration_group>
```

Lists all instances associated with a configuration group.

Positional arguments

<configuration_group>			ID of the configuration group.

trove configuration-list

```
usage: trove configuration-list
```

Lists all configuration groups.

trove configuration-parameter-list

```
usage: trove configuration-parameter-list <datastore_version>
                                          [--datastore <datastore>]
```

Lists available parameters for a configuration group.

Positional arguments

<datastore_version>			Datastore version name or ID assigned to the configuration
						group.

Optional arguments

–datastore <datastore> ID			or name of the datastore to list configuration param-
						eters for. Optional if the ID of the datastore_version is
						provided.

trove configuration-parameter-show

```
usage: trove configuration-parameter-show <datastore_version> <parameter>
                                          [--datastore <datastore>]
```

Shows details of a configuration parameter.

Positional arguments

<datastore_version>			Datastore version name or ID assigned to the configuration
						group.

<parameter>				Name of the configuration parameter.

Optional arguments

–datastore <datastore> ID			or name of the datastore to list configuration param-
						eters for. Optional if the ID of the datastore_version is
						provided.

trove configuration-patch

```
usage: trove configuration-patch <configuration_group> <values>
```

Patches a configuration group.

Positional arguments

<configuration_group>   ID of the configuration group.

<values>   Dictionary of the values to set.

trove configuration-show

```
usage: trove configuration-show <configuration_group>
```

Shows details of a configuration group.

Positional arguments

<configuration_group>   ID of the configuration group.

trove configuration-update

```
usage: trove configuration-update <configuration_group> <values>
                                  [--name <name>]
                                  [--description <description>]
```

Updates a configuration group.

Positional arguments

<configuration_group>   ID of the configuration group.

<values>   Dictionary of the values to set.

Optional arguments

–name <name>   Name of the configuration group.

–description <description>   An optional description for the configuration group.

trove create

```
usage: trove create <name> <flavor_id>
                    [--size <size>]
                    [--databases <databases> [<databases> ...]]
                    [--users <users> [<users> ...]] [--backup <backup>]
                    [--availability_zone <availability_zone>]
                    [--datastore <datastore>]
                    [--datastore_version <datastore_version>]
                    [--nic <net-id=net-uuid,v4-fixed-ip=ip-addr,port-id=port-
uuid>]
                    [--configuration <configuration>]
                    [--replica_of <source_id>]
```

Creates a new instance.

Positional arguments

\<name\>   Name of the instance.

\<flavor_id\>   Flavor of the instance.

Optional arguments

–size \<size\>   Size of the instance disk volume in GB. Required when
                                      volume support is enabled.

–databases \<databases\>   Optional list of databases.
[\<databases\> ...]

–users \<users\> [\<users\> ...]   Optional list of users in the form user:password.

–backup \<backup\> A   backup ID.

–availability_zone   The Zone hint to give to nova.
\<availability_zone\>

–datastore \<datastore\> A   datastore name or ID.

–datastore_version   A datastore version name or ID.
\<datastore_version\>

–nic \<net-id=net-uuid,v4-fixed-   Create a NIC on the instance. Specify option multiple
ip=ip-addr,port-id=port-uuid\>   times to create multiple NICs. net- id: attach NIC to net-
                                      work with this ID (either port-id or net-id must be spec-
                                      ified), v4-fixed-ip: IPv4 fixed address for NIC (optional),
                                      port-id: attach NIC to port with this ID (either port-id or
                                      net-id must be specified).

–configuration \<configuration\>   ID of the configuration group to attach to the instance.

–replica_of \<source_id\> ID   of an existing instance to replicate from.

trove database-create

```
usage: trove database-create <instance> <name>
                             [--character_set <character_set>]
                             [--collate <collate>]
```

Creates a database on an instance.

Positional arguments

\<instance\>   ID of the instance.

\<name\>   Name of the database.

Optional arguments

–character_set \<character_set\>   Optional character set for database.

–collate <collate>   Optional collation type for database.

trove database-delete

```
usage: trove database-delete <instance> <database>
```

Deletes a database from an instance.

Positional arguments

<instance>   ID of the instance.

<database>   Name of the database.

trove database-list

```
usage: trove database-list <instance>
```

Lists available databases on an instance.

Positional arguments

<instance>   ID of the instance.

trove datastore-list

```
usage: trove datastore-list
```

Lists available datastores.

trove datastore-show

```
usage: trove datastore-show <datastore>
```

Shows details of a datastore.

Positional arguments

<datastore>   ID of the datastore.

trove datastore-version-list

```
usage: trove datastore-version-list <datastore>
```

Lists available versions for a datastore.

Positional arguments

<datastore>   ID or name of the datastore.

trove datastore-version-show

```
usage: trove datastore-version-show <datastore_version>
                                    [--datastore <datastore>]
```

Shows details of a datastore version.

Positional arguments

<datastore_version>   ID or name of the datastore version.

Optional arguments

–datastore <datastore> ID   or name of the datastore. Optional if the ID of the
                                        datastore_version is provided.

trove delete

```
usage: trove delete <instance>
```

Deletes an instance.

Positional arguments

<instance>   ID of the instance.

trove detach-replica

```
usage: trove detach-replica <instance>
```

Detaches a replica instance from its replication source.

Positional arguments

<instance>   ID of the instance.

trove flavor-list

```
usage: trove flavor-list
```

Lists available flavors.

trove flavor-show

```
usage: trove flavor-show <flavor>
```

Shows details of a flavor.

Positional arguments

<flavor>   ID or name of the flavor.

trove limit-list

```
usage: trove limit-list
```

Lists the limits for a tenant.

trove list

```
usage: trove list [--limit <limit>] [--marker <ID>] [--include-clustered]
```

Lists all the instances.

Optional arguments

–limit <limit>   Limit the number of results displayed.

–marker <ID>   Begin displaying the results for IDs greater than the specified marker. When used with –limit, set this to the last ID displayed in the previous run.

–include-clustered   Include instances that are part of a cluster (default false).

trove metadata-create

```
usage: trove metadata-create <instance_id> <key> <value>
```

Creates metadata in the database for instance <id>.

Positional arguments

<instance_id>   UUID for instance

<key>   Key for assignment

<value>   Value to assign to <key>

trove metadata-delete

```
usage: trove metadata-delete <instance_id> <key>
```

Deletes metadata for instance <id>.

Positional arguments

<instance_id>   UUID for instance

<key>   Metadata key to delete

trove metadata-edit

```
usage: trove metadata-edit <instance_id> <key> <value>
```

Replaces metadata value with a new one, this is non-destructive.

Positional arguments

\<instance_id\>   UUID for instance

\<key\>   Key to replace

\<value\>   New value to assign to \<key\>

trove metadata-list

```
usage: trove metadata-list <instance_id>
```

Shows all metadata for instance \<id\>.

Positional arguments

\<instance_id\>   UUID for instance

trove metadata-show

```
usage: trove metadata-show <instance_id> <key>
```

Shows metadata entry for key \<key\> and instance \<id\>.

Positional arguments

\<instance_id\>   UUID for instance

\<key\>   key to display

trove metadata-update

```
usage: trove metadata-update <instance_id> <key> <newkey> <value>
```

Updates metadata, this is destructive.

Positional arguments

\<instance_id\>   UUID for instance

\<key\>   Key to update

\<newkey\>   New key

\<value\>   Value to assign to \<newkey\>

trove resize-instance

```
usage: trove resize-instance <instance> <flavor_id>
```

Resizes an instance with a new flavor.

Positional arguments

<instance>   ID of the instance.

<flavor_id>   New flavor of the instance.

trove resize-volume

```
usage: trove resize-volume <instance> <size>
```

Resizes the volume size of an instance.

Positional arguments

<instance>   ID of the instance.

<size>   New size of the instance disk volume in GB.

trove restart

```
usage: trove restart <instance>
```

Restarts an instance.

Positional arguments

<instance>   ID of the instance.

trove root-enable

```
usage: trove root-enable <instance>
```

Enables root for an instance and resets if already exists.

Positional arguments

<instance>   ID of the instance.

trove root-show

```
usage: trove root-show <instance>
```

Gets status if root was ever enabled for an instance.

Positional arguments

<instance>   ID of the instance.

trove secgroup-add-rule

```
usage: trove secgroup-add-rule <security_group> <cidr>
```

Creates a security group rule.

Positional arguments

<security_group>   Security group ID.

<cidr>   CIDR address.

trove secgroup-delete-rule

```
usage: trove secgroup-delete-rule <security_group_rule>
```

Deletes a security group rule.

Positional arguments

<security_group_rule>   Name of security group rule.

trove secgroup-list

```
usage: trove secgroup-list
```

Lists all security groups.

trove secgroup-list-rules

```
usage: trove secgroup-list-rules <security_group>
```

Lists all rules for a security group.

Positional arguments

<security_group>   Security group ID.

trove secgroup-show

```
usage: trove secgroup-show <security_group>
```

Shows details of a security group.

Positional arguments

<security_group>   Security group ID

trove show

```
usage: trove show <instance>
```

Shows details of an instance.

Positional arguments

<instance>   ID or name of the instance.

trove update

```
usage: trove update <instance>
                    [--name <name>] [--configuration <configuration>]
                    [--detach-replica-source] [--remove_configuration]
```

Updates an instance: Edits name, configuration, or replica source.

Positional arguments

<instance>   UUID of the instance.

Optional arguments

–name <name>   Name of the instance.

–configuration <configuration>   ID of the configuration reference to attach.

–detach-replica-source   Detach the replica instance from its replication source.

–remove_configuration   Drops the current configuration reference.

trove user-create

```
usage: trove user-create <instance> <name> <password>
                    [--host <host>]
                    [--databases <databases> [<databases> ...]]
```

Creates a user on an instance.

Positional arguments

<instance>   ID of the instance.

<name>   Name of user.

<password>   Password of user.

Optional arguments

–host <host>   Optional host of user.

–databases <databases>   Optional list of databases.
[<databases> ...]

trove user-delete

```
usage: trove user-delete [--host <host>] <instance> <name>
```

Deletes a user from an instance.

Positional arguments

<instance>   ID of the instance.

<name>   Name of user.

Optional arguments

–host <host>   Optional host of user.

trove user-grant-access

```
usage: trove user-grant-access <instance> <name> <databases> [<databases> ...]
                                [--host <host>]
```

Grants access to a database(s) for a user.

Positional arguments

<instance>   ID of the instance.

<name>   Name of user.

<databases>   List of databases.

Optional arguments

–host <host>   Optional host of user.

trove user-list

```
usage: trove user-list <instance>
```

Lists the users for an instance.

Positional arguments

<instance>   ID of the instance.

trove user-revoke-access

```
usage: trove user-revoke-access [--host <host>] <instance> <name> <database>
```

Revokes access to a database for a user.

Positional arguments

<instance>   ID of the instance.

<name>   Name of user.

<database>   A single database.

Optional arguments

–host <host>   Optional host of user.

trove user-show

```
usage: trove user-show [--host <host>] <instance> <name>
```

Shows details of a user of an instance.

Positional arguments

<instance>   ID of the instance.

<name>   Name of user.

Optional arguments

–host <host>   Optional host of user.

trove user-show-access

```
usage: trove user-show-access [--host <host>] <instance> <name>
```

Shows access details of a user of an instance.

Positional arguments

<instance>   ID of the instance.

<name>   Name of user.

Optional arguments

–host <host>   Optional host of user.

trove user-update-attributes

```
usage: trove user-update-attributes <instance> <name>
                                     [--host <host>] [--new_name <new_name>]
                                     [--new_password <new_password>]
                                     [--new_host <new_host>]
```

Updates a user's attributes on an instance. At least one optional argument must be provided.

Positional arguments

<instance>   ID of the instance.

<name>   Name of user.

Optional arguments

–host <host>   Optional host of user.

–new_name <new_name>   Optional new name of user.

| **–new_password** **<new_password>** | Optional new password of user. |
| **–new_host <new_host>** | Optional new host of user. |

14. Database Service Management command-line client

The **trove-manage** client is the command-line interface (CLI) for the Database Management Utility and its extensions. This chapter documents **trove-manage** version 2014.2.

For help on a specific **trove-manage** command, enter:

```
$ trove-manage COMMAND --help
```

trove-manage usage

```
usage: trove-manage [-h] [--config-dir DIR] [--config-file PATH] [--debug]
                    [--log-config-append PATH] [--log-date-format DATE_FORMAT]
                    [--log-dir LOG_DIR] [--log-file PATH]
                    [--log-format FORMAT] [--nodebug] [--nouse-syslog]
                    [--nouse-syslog-rfc-format] [--noverbose]
                    [--syslog-log-facility SYSLOG_LOG_FACILITY] [--use-syslog]
                    [--use-syslog-rfc-format] [--verbose] [--version]

                    {db_sync,db_upgrade,db_downgrade,datastore_update,
datastore_version_update,db_recreate}
                    ...
```

trove-manage optional arguments

-h, --help	show this help message and exit
--config-dir DIR	Path to a config directory to pull *.conf files from. This file set is sorted, so as to provide a predictable parse order if individual options are over-ridden. The set is parsed after the file(s) specified via previous --config-file, arguments hence over-ridden options in the directory take precedence.
--config-file PATH	Path to a config file to use. Multiple config files can be specified, with values in later files taking precedence. The default files used are: None.
--debug, -d	Print debugging output (set logging level to DEBUG instead of default WARNING level).

–log-config-append PATH, –log_config PATH	The name of a logging configuration file. This file is appended to any existing logging configuration files. For details about logging configuration files, see the Python logging module documentation.
–log-date-format DATE_FORMAT	Format string for %(asctime)s in log records. Default: None .
–log-dir LOG_DIR, –logdir LOG_DIR	(Optional) The base directory used for relative –log- file paths.
–log-file PATH, –logfile PATH	(Optional) Name of log file to output to. If no default is set, logging will go to stdout.
–log-format FORMAT	*DEPRECATED*. A logging.Formatter log message format string which may use any of the available logging.LogRecord attributes. This option is deprecated. Please use logging_context_format_string and logging_default_format_string instead.
–nodebug	The inverse of –debug
–nouse-syslog	The inverse of –use-syslog
–nouse-syslog-rfc-format	The inverse of –use-syslog-rfc-format
–noverbose	The inverse of –verbose
–syslog-log-facility SYSLOG_LOG_FACILITY	Syslog facility to receive log lines.
–use-syslog	Use syslog for logging. Existing syslog format is *DEPRECATED* during I, and will change in J to honor RFC5424.
–use-syslog-rfc-format	(Optional) Enables or disables syslog rfc5424 format for logging. If enabled, prefixes the MSG part of the syslog message with APP-NAME (RFC5424). The format without the APP-NAME is deprecated in I, and will be removed in J.
–verbose, -v	Print more verbose output (set logging level to INFO instead of default WARNING level).
–version	show program's version number and exit

trove-manage datastore_update command

```
usage: trove-manage datastore_update [-h] datastore_name default_version
```

Add or update a datastore. If the datastore already exists, the default version will be updated.

Positional arguments

datastore_name	Name of the datastore.

default_version   Name or ID of an existing datastore version to set as the default. When adding a new datastore, use an empty string.

Optional arguments

-h, --help   show this help message and exit

trove-manage datastore_version_update command

```
usage: trove-manage datastore_version_update [-h]
                                             datastore version_name manager
                                             image_id packages active
```

Add or update a datastore version. If the datastore version already exists, all values except the datastore name and version will be updated.

Positional arguments

datastore   Name of the datastore.

version_name   Name of the datastore version.

manager   Name of the manager that will administer the datastore version.

image_id   ID of the image used to create an instance of the datastore version.

packages   Packages required by the datastore version that are installed on the guest image.

active   Whether the datastore version is active or not. Accepted values are 0 and 1.

Optional arguments

-h, --help   show this help message and exit

trove-manage db_downgrade command

```
usage: trove-manage db_downgrade [-h] [--repo_path REPO_PATH] version
```

Downgrade the database to the specified version.

Positional arguments

version   Target version.

Optional arguments

-h, --help   show this help message and exit

--repo_path REPO_PATH   SQLAlchemy Migrate repository path.

trove-manage db_recreate command

```
usage: trove-manage db_recreate [-h] repo_path
```

Drop the database and recreate it.

Positional arguments

repo_path   SQLAlchemy Migrate repository path.

Optional arguments

-h, --help   show this help message and exit

trove-manage db_sync command

```
usage: trove-manage db_sync [-h] [--repo_path REPO_PATH]
```

Populate the database structure

Optional arguments

-h, --help   show this help message and exit

--repo_path REPO_PATH   SQLAlchemy Migrate repository path.

trove-manage db_upgrade command

```
usage: trove-manage db_upgrade [-h] [--version VERSION]
                               [--repo_path REPO_PATH]
```

Upgrade the database to the specified version.

Optional arguments

-h, --help   show this help message and exit

--version VERSION   Target version. Defaults to the latest version.

--repo_path REPO_PATH   SQLAlchemy Migrate repository path.

15. Data processing command-line client

The **sahara** client is the command-line interface (CLI) for the Data processing API and its extensions. This chapter documents **sahara** version 0.7.7.

For help on a specific **sahara** command, enter:

```
$ sahara help COMMAND
```

sahara usage

```
usage: sahara [--version] [--debug] [--os-cache]
              [--service-type <service-type>]
              [--endpoint-type <endpoint-type>]
              [--sahara-api-version <sahara-api-ver>]
              [--bypass-url <bypass-url>] [--os-tenant-name OS_TENANT_NAME]
              [--os-tenant-id OS_TENANT_ID] [--os-auth-system OS_AUTH_SYSTEM]
              [--os-auth-token OS_AUTH_TOKEN] [--insecure]
              [--os-cacert <ca-certificate>] [--os-cert <certificate>]
              [--os-key <key>] [--timeout <seconds>]
              [--os-auth-url OS_AUTH_URL] [--os-domain-id OS_DOMAIN_ID]
              [--os-domain-name OS_DOMAIN_NAME]
              [--os-project-id OS_PROJECT_ID]
              [--os-project-name OS_PROJECT_NAME]
              [--os-project-domain-id OS_PROJECT_DOMAIN_ID]
              [--os-project-domain-name OS_PROJECT_DOMAIN_NAME]
              [--os-trust-id OS_TRUST_ID] [--os-user-id OS_USER_ID]
              [--os-user-name OS_USERNAME]
              [--os-user-domain-id OS_USER_DOMAIN_ID]
              [--os-user-domain-name OS_USER_DOMAIN_NAME]
              [--os-password OS_PASSWORD]
              <subcommand> ...
```

Subcommands

cluster-create	Create a cluster.
cluster-delete	Delete a cluster.
cluster-list	Print a list of available clusters.
cluster-show	Show details of a cluster.
cluster-template-create	Create a cluster template.
cluster-template-delete	Delete a cluster template.
cluster-template-list	Print a list of available cluster templates.
cluster-template-show	Show details of a cluster template.
data-source-create	Create a data source that provides job input or receives job output.
data-source-delete	Delete a data source.
data-source-list	Print a list of available data sources.
data-source-show	Show details of a data source.
event-list	Show events of a cluster.
image-add-tag	Add a tag to an image.
image-list	Print a list of available images.

image-register	Register an image from the Image index.
image-remove-tag	Remove a tag from an image.
image-show	Show details of an image.
image-unregister	Unregister an image.
job-binary-create	Record a job binary.
job-binary-data-create	Store data in the internal DB. Use 'swift upload' instead of this command. Use this command only if Swift is not available.
job-binary-data-delete	Delete an internally stored job binary data.
job-binary-data-list	Print a list of internally stored job binary data.
job-binary-delete	Delete a job binary.
job-binary-list	Print a list of job binaries.
job-binary-show	Show details of a job binary.
job-create	Create a job.
job-delete	Delete a job.
job-list	Print a list of jobs.
job-show	Show details of a job.
job-template-create	Create a job template.
job-template-delete	Delete a job template.
job-template-list	Print a list of job templates.
job-template-show	Show details of a job template.
node-group-template-create	Create a node group template.
node-group-template-delete	Delete a node group template.
node-group-template-list	Print a list of available node group templates.
node-group-template-show	Show details of a node group template.
plugin-list	Print a list of available plugins.
plugin-show	Show details of a plugin.
bash-completion	Prints arguments for bash-completion. Prints all of the commands and options to stdout so that the sahara.bash_completion script doesn't have to hard code them.

help   Display help about this program or one of its subcom-
                                    mands.

sahara optional arguments

–version   show program's version number and exit

–debug   Print debugging output.

–os-cache   Use the auth token cache. Defaults to False if
                                    `env[OS_CACHE]` is not set.

–service-type <service-type>   Defaults to data-processing for all actions.

**–endpoint-type <end-   Defaults to `env[SAHARA_ENDPOINT_TYPE]` or publi-
point-type>**   cURL.

**–sahara-api-version <sahara-api- Accepts "api", defaults to
ver>**   `env[SAHARA_API_VERSION]`.

–bypass-url <bypass-url>   Use this API endpoint instead of the Service Catalog.

**–os-tenant-name   Defaults to `env[OS_TENANT_NAME]`.
OS_TENANT_NAME**

–os-tenant-id OS_TENANT_ID   Defaults to `env[OS_TENANT_ID]`.

**–os-auth-system   Defaults to `env[OS_AUTH_SYSTEM]`.
OS_AUTH_SYSTEM**

**–os-auth-token   Defaults to `env[OS_AUTH_TOKEN]`.
OS_AUTH_TOKEN**

–insecure   Explicitly allow client to perform "insecure" TLS (https)
                                    requests. The server's certificate will not be verified
                                    against any certificate authorities. This option should be
                                    used with caution.

–os-cacert <ca-certificate>   Specify a CA bundle file to use in verifying a TLS (https)
                                    server certificate. Defaults to `env[OS_CACERT]`.

–os-cert <certificate>   Defaults to `env[OS_CERT]`.

–os-key <key>   Defaults to `env[OS_KEY]`.

–timeout <seconds>   Set request timeout (in seconds).

–os-auth-url OS_AUTH_URL   Authentication URL

–os-domain-id OS_DOMAIN_ID   Domain ID to scope to

**–os-domain-name   Domain name to scope to
OS_DOMAIN_NAME**

–os-project-id OS_PROJECT_ID	Project ID to scope to
–os-project-name OS_PROJECT_NAME	Project name to scope to
–os-project-domain-id OS_PROJECT_DOMAIN_ID	Domain ID containing project
–os-project-domain-name OS_PROJECT_DOMAIN_NAME	Domain name containing project
–os-trust-id OS_TRUST_ID	Trust ID
–os-user-id OS_USER_ID	User ID
–os-user-name OS_USERNAME, –os-username OS_USERNAME	Username
–os-user-domain-id OS_USER_DOMAIN_ID	User's domain id
–os-user-domain-name OS_USER_DOMAIN_NAME	User's domain name
–os-password OS_PASSWORD	User's password

sahara cluster-create

```
usage: sahara cluster-create [--json JSON]
```

Create a cluster.

Optional arguments

–json JSON JSON   representation of cluster.

sahara cluster-delete

```
usage: sahara cluster-delete [--name NAME] [--id <cluster_id>]
```

Delete a cluster.

Optional arguments

–name NAME   Name of the cluster.

–id <cluster_id> ID   of the cluster to delete.

sahara cluster-list

```
usage: sahara cluster-list
```

Print a list of available clusters.

sahara cluster-show

```
usage: sahara cluster-show [--name NAME] [--id <cluster_id>] [--json]
```

Show details of a cluster.

Optional arguments

–name NAME   Name of the cluster.

–id <cluster_id> ID   of the cluster to show.

–json   Print JSON representation of the cluster.

sahara cluster-template-create

```
usage: sahara cluster-template-create [--json JSON]
```

Create a cluster template.

Optional arguments

–json JSON JSON   representation of cluster template.

sahara cluster-template-delete

```
usage: sahara cluster-template-delete [--name NAME] [--id <template_id>]
```

Delete a cluster template.

Optional arguments

–name NAME   Name of the cluster template.

–id <template_id> ID   of the cluster template to delete.

sahara cluster-template-list

```
usage: sahara cluster-template-list
```

Print a list of available cluster templates.

sahara cluster-template-show

```
usage: sahara cluster-template-show [--name NAME] [--id <template_id>]
                                    [--json]
```

Show details of a cluster template.

Optional arguments

–name NAME   Name of the cluster template.

–id <template_id> ID   of the cluster template to show.

–json   Print JSON representation of cluster template.

sahara data-source-create

```
usage: sahara data-source-create --name NAME --type TYPE --url URL
                                 [--description DESCRIPTION] [--user USER]
                                 [--password PASSWORD]
```

Create a data source that provides job input or receives job output.

Optional arguments

–name NAME   Name of the data source.

–type TYPE   Type of the data source.

–url URL URL   for the data source.

–description DESCRIPTION   Description of the data source.

–user USER   Username for accessing the data source URL.

–password PASSWORD   Password for accessing the data source URL.

sahara data-source-delete

```
usage: sahara data-source-delete [--name NAME] [--id ID]
```

Delete a data source.

Optional arguments

–name NAME   Name of the data source.

–id ID ID   of data source to delete.

sahara data-source-list

```
usage: sahara data-source-list
```

Print a list of available data sources.

sahara data-source-show

```
usage: sahara data-source-show [--name NAME] [--id ID]
```

Show details of a data source.

Optional arguments

–name NAME   Name of the data source.

–id ID ID   of the data source.

sahara event-list

```
usage: sahara event-list [--name <cluster_name>] [--id <cluster_id>]
                         [--step <step_id>]
```

Show events of a cluster.

Optional arguments

–name <cluster_name>   Name of the cluster to show events.

–id <cluster_id> ID   of the cluster to show events.

–step <step_id> ID   of provision step to show events.

sahara image-add-tag

```
usage: sahara image-add-tag [--name NAME] [--id <image_id>] --tag <tag>
```

Add a tag to an image.

Optional arguments

–name NAME   Name of the image.

–id <image_id> ID   of image to tag.

–tag <tag>   Tag to add.

sahara image-list

```
usage: sahara image-list
```

Print a list of available images.

sahara image-register

```
usage: sahara image-register --id <image_id> [--username <name>]
                             [--description <desc>]
```

Register an image from the Image index.

Optional arguments

–id <image_id> ID   of image, run "glance image-list" to see all IDs.

–username <name>   Username of privileged user in the image.

–description <desc>   Description of the image.

sahara image-remove-tag

```
usage: sahara image-remove-tag [--name NAME] [--id <image_id>] --tag <tag>
```

Remove a tag from an image.

Optional arguments

–name NAME   Name of the image.

–id <image_id>   Image to tag.

–tag <tag>   Tag to remove.

sahara image-show

```
usage: sahara image-show [--name NAME] [--id <image_id>]
```

Show details of an image.

Optional arguments

–name NAME   Name of the image.

–id <image_id> ID   of the image.

sahara image-unregister

```
usage: sahara image-unregister [--name NAME] [--id <image_id>]
```

Unregister an image.

Optional arguments

–name NAME   Name of the image.

–id <image_id> ID   of image to unregister.

sahara job-binary-create

```
usage: sahara job-binary-create --name NAME --url URL
                                [--description DESCRIPTION] [--user USER]
                                [--password PASSWORD]
```

Record a job binary.

Optional arguments

–name NAME   Name of the job binary.

–url URL URL   for the job binary.

–description DESCRIPTION	Description of the job binary.
–user USER	Username for accessing the job binary URL.
–password PASSWORD	Password for accessing the job binary URL.

sahara job-binary-data-create

```
usage: sahara job-binary-data-create [--file FILE]
```

Store data in the internal DB. Use 'swift upload' instead of this command. Use this command only if Swift is not available.

Optional arguments

–file FILE   Data to store.

sahara job-binary-data-delete

```
usage: sahara job-binary-data-delete --id ID
```

Delete an internally stored job binary data.

Optional arguments

–id ID ID   of internally stored job binary data.

sahara job-binary-data-list

```
usage: sahara job-binary-data-list
```

Print a list of internally stored job binary data.

sahara job-binary-delete

```
usage: sahara job-binary-delete [--name NAME] [--id ID]
```

Delete a job binary.

Optional arguments

–name NAME   Name of the job binary.

–id ID ID   of the job binary to delete.

sahara job-binary-list

```
usage: sahara job-binary-list
```

Print a list of job binaries.

sahara job-binary-show

```
usage: sahara job-binary-show [--name NAME] [--id ID]
```

Show details of a job binary.

Optional arguments

–name NAME   Name of the job binary.

–id ID ID   of the job binary.

sahara job-create

```
usage: sahara job-create --job-template JOB_TEMPLATE --cluster CLUSTER
                         [--input-data INPUT_DATA] [--output-data OUTPUT_DATA]
                         [--param name=value] [--arg ARG]
                         [--config name=value]
```

Create a job.

Optional arguments

–job-template JOB_TEMPLATE   ID of the job template to run.

–cluster CLUSTER ID   of the cluster to run the job in.

–input-data INPUT_DATA   ID of the input data source.

–output-data OUTPUT_DATA   ID of the output data source.

–param   name=value Parameters to add to the job, repeatable.

–arg ARG   Arguments to add to the job, repeatable.

–config   name=value Config parameters to add to the job, re-
                                                          peatable.

sahara job-delete

```
usage: sahara job-delete --id ID
```

Delete a job.

Optional arguments

–id ID ID   of a job.

sahara job-list

```
usage: sahara job-list
```

Print a list of jobs.

sahara job-show

```
usage: sahara job-show --id ID
```

Show details of a job.

Optional arguments

–id ID ID   of the job.

sahara job-template-create

```
usage: sahara job-template-create --name NAME --type TYPE [--main MAIN]
                                  [--lib LIB] [--description DESCRIPTION]
```

Create a job template.

Optional arguments

–name NAME   Name of the job template.

–type TYPE   Type of the job template.

–main MAIN ID   for job's main job-binary.

–lib LIB ID   of job's lib job-binary, repeatable.

–description DESCRIPTION   Description of the job template.

sahara job-template-delete

```
usage: sahara job-template-delete [--name NAME] [--id ID]
```

Delete a job template.

Optional arguments

–name NAME   Name of the job template.

–id ID ID   of the job template.

sahara job-template-list

```
usage: sahara job-template-list
```

Print a list of job templates.

sahara job-template-show

```
usage: sahara job-template-show [--name NAME] [--id ID]
```

Show details of a job template.

Optional arguments

–name NAME   Name of the job template.

–id ID ID   of the job template.

sahara node-group-template-create

```
usage: sahara node-group-template-create [--json JSON]
```

Create a node group template.

Optional arguments

–json JSON JSON   representation of node group template.

sahara node-group-template-delete

```
usage: sahara node-group-template-delete [--name NAME] [--id <template_id>]
```

Delete a node group template.

Optional arguments

–name NAME   Name of the node group template.

–id <template_id> ID   of the node group template to delete.

sahara node-group-template-list

```
usage: sahara node-group-template-list
```

Print a list of available node group templates.

sahara node-group-template-show

```
usage: sahara node-group-template-show [--name NAME] [--id <template_id>]
                                       [--json]
```

Show details of a node group template.

Optional arguments

–name NAME   Name of the node group template.

–id <template_id> ID   of the node group template to show.

–json   Print JSON representation of node group template.

sahara plugin-list

```
usage: sahara plugin-list
```

Print a list of available plugins.

sahara plugin-show

```
usage: sahara plugin-show --name <plugin>
```

Show details of a plugin.

Optional arguments

–name <plugin>   Name of the plugin.

16. OpenStack client

The **openstack** client is a common OpenStack command-line interface (CLI). This chapter documents **openstack** version 1.0.2.

For help on a specific **openstack** command, enter:

```
$ openstack help COMMAND
```

openstack usage

```
usage: openstack [--version] [-v] [--log-file LOG_FILE] [-q] [--debug]
                 [--os-url <url>] [--os-region-name <auth-region-name>]
                 [--os-cacert <ca-bundle-file>] [--verify | --insecure]
                 [--os-default-domain <auth-domain>] [--timing]
                 [--os-compute-api-version <compute-api-version>]
                 [--os-network-api-version <network-api-version>]
                 [--os-image-api-version <image-api-version>]
                 [--os-volume-api-version <volume-api-version>]
                 [--os-identity-api-version <identity-api-version>]
                 [--os-auth-type <auth-type>] [--os-username <auth-username>]
                 [--os-identity-provider <auth-identity-provider>]
                 [--os-project-domain-name <auth-project-domain-name>]
                 [--os-project-domain-id <auth-project-domain-id>]
                 [--os-project-name <auth-project-name>]
                 [--os-auth-url <auth-auth-url>]
                 [--os-trust-id <auth-trust-id>]
                 [--os-service-provider-endpoint <auth-service-provider-
endpoint>]
                 [--os-user-domain-id <auth-user-domain-id>]
                 [--os-domain-name <auth-domain-name>]
                 [--os-identity-provider-url <auth-identity-provider-url>]
                 [--os-token <auth-token>] [--os-domain-id <auth-domain-id>]
                 [--os-user-domain-name <auth-user-domain-name>]
                 [--os-user-id <auth-user-id>] [--os-password <auth-password>]
                 [--os-project-id <auth-project-id>]
                 [--os-object-api-version <object-api-version>] [-h]
```

openstack optional arguments

--version	show program's version number and exit
-v, --verbose	Increase verbosity of output. Can be repeated.
--log-file LOG_FILE	Specify a file to log output. Disabled by default.
-q, --quiet	suppress output except warnings and errors
-h, --help	show this help message and exit
--debug	show tracebacks on errors
--os-url <url>	Defaults to env[OS_URL]

–os-region-name <auth-re-gion-name>	Authentication region name (Env: OS_REGION_NAME)
–os-cacert <ca-bundle-file>	CA certificate bundle file (Env: OS_CACERT)
–verify	Verify server certificate (default)
–insecure	Disable server certificate verification
–os-default-domain <auth-do-main>	Default domain ID, default=default (Env: OS_DEFAULT_DOMAIN)
–timing	Print API call timing info
–os-compute-api-version <com-pute-api-version>	Compute API version, default=2 (Env: OS_COMPUTE_API_VERSION)
–os-network-api-version <net-work-api-version>	Network API version, default=2 (Env: OS_NETWORK_API_VERSION)
–os-image-api-version <im-age-api-version>	Image API version, default=1 (Env: OS_IMAGE_API_VERSION)
–os-volume-api-version <vol-ume-api-version>	Volume API version, default=1 (Env: OS_VOLUME_API_VERSION)
–os-identity-api-version <identi-ty-api-version>	Identity API version, default=2 (Env: OS_IDENTITY_API_VERSION)
–os-auth-type <auth-type>	Select an auhentication type. Available types: v2token, v2password, v3password, v3scopedsaml, v3unscopedadfs, token, v3token, password, v3unscopedsaml. Default: selected based on –os- user-name/–os-token (Env: OS_AUTH_TYPE)
–os-username <auth-username>	With v2password: Username to login with With v3password: Username With v3unscopedadfs: User-name With password: Username With v3unscopedsaml: Username (Env: OS_USERNAME)
–os-identity-provider <auth-identity-provider>	With v3unscopedadfs: Identity Provider's name With v3unscopedsaml: Identity Provider's name (Env: OS_IDENTITY_PROVIDER)
–os-project-domain-name <auth-project-domain-name>	With v3password: Domain name containing project With v3scopedsaml: Domain name containing project With v3unscopedadfs: Domain name containing project With token: Domain name containing project With v3token: Domain name containing project With password: Domain name containing project With v3unscopedsaml: Domain name containing project (Env: OS_PROJECT_DOMAIN_NAME)
–os-project-domain-id <auth-project-domain-id>	With v3password: Domain ID containing project With v3scopedsaml: Domain ID containing project With

	v3unscopedadfs: Domain ID containing project With to-ken: Domain ID containing project With v3token: Do-main ID containing project With password: Domain ID containing project With v3unscopedsaml: Domain ID containing project (Env: OS_PROJECT_DOMAIN_ID)
–os-project-name <auth-project-name>	With v3password: Project name to scope to With v3scopedsaml: Project name to scope to With v3unscopedadfs: Project name to scope to With token: Project name to scope to With v3token: Project name to scope to With password: Project name to scope to With v3unscopedsaml: Project name to scope to (Env: OS_PROJECT_NAME)
–os-auth-url <auth-auth-url>	With v2token: Authentication URL With v2password: Authentication URL With v3password: Authentica-tion URL With v3scopedsaml: Authentication URL With v3unscopedadfs: Authentication URL With to-ken: Authentication URL With v3token: Authen-tication URL With password: Authentication URL With v3unscopedsaml: Authentication URL (Env: OS_AUTH_URL)
–os-trust-id <auth-trust-id>	With v2token: Trust ID With v2password: Trust ID With v3password: Trust ID With v3scopedsaml: Trust ID With v3unscopedadfs: Trust ID With token: Trust ID With v3token: Trust ID With password: Trust ID With v3unscopedsaml: Trust ID (Env: OS_TRUST_ID)
–os-service-provider-endpoint <auth-service-provider-end-point>	With v3unscopedadfs: Service Provider's Endpoint (Env: OS_SERVICE_PROVIDER_ENDPOINT)
–os-user-domain-id <auth-us-er-domain-id>	With v3password: User's domain id With password: User's domain id (Env: OS_USER_DOMAIN_ID)
–os-domain-name <auth-do-main-name>	With v3password: Domain name to scope to With v3scopedsaml: Domain name to scope to With v3unscopedadfs: Domain name to scope to With token: Domain name to scope to With v3token: Domain name to scope to With password: Domain name to scope to With v3unscopedsaml: Domain name to scope to (Env: OS_DOMAIN_NAME)
–os-identity-provider-url <auth-identity-provider-url>	With v3unscopedadfs: Identity Provider's URL With v3unscopedsaml: Identity Provider's URL (Env: OS_IDENTITY_PROVIDER_URL)
–os-token <auth-token>	With v2token: Token With v3scopedsaml: Token to authenticate with With token: Token to authenticate with With v3token: Token to authenticate with (Env: OS_TOKEN)

–os-domain-id <auth-domain-id>	With v3password: Domain ID to scope to With v3scopedsaml: Domain ID to scope to With v3unscopedadfs: Domain ID to scope to With token: Domain ID to scope to With v3token: Domain ID to scope to With password: Domain ID to scope to With v3unscopedsaml: Domain ID to scope to (Env: OS_DOMAIN_ID)
–os-user-domain-name <auth-user-domain-name>	With v3password: User's domain name With password: User's domain name (Env: OS_USER_DOMAIN_NAME)
–os-user-id <auth-user-id>	With v2password: User ID to longin with With v3password: User ID With password: User id (Env: OS_USER_ID)
–os-password <auth-password>	With v2password: Password to use With v3password: User's password With v3unscopedadfs: Password With password: User's password With v3unscopedsaml: Password (Env: OS_PASSWORD)
–os-project-id <auth-project-id>	With v3password: Project ID to scope to With v3scopedsaml: Project ID to scope to With v3unscopedadfs: Project ID to scope to With token: Project ID to scope to With v3token: Project ID to scope to With password: Project ID to scope to With v3unscopedsaml: Project ID to scope to (Env: OS_PROJECT_ID)
–os-object-api-version <object-api-version>	Object API version, default=1 (Env: OS_OBJECT_API_VERSION)
-h, –help	Show this help message and exit

openstack aggregate add host

```
usage: openstack --os-auth-type token aggregate add host [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--prefix PREFIX]
                                <aggregate> <host>
```

Add host to aggregate

Positional arguments

<aggregate>   Aggregate (name or ID)

<host>   Host to add to <aggregate>

Optional arguments

-h, –help   show this help message and exit

openstack aggregate create

```
usage: openstack --os-auth-type token aggregate create [-h] [-f {html,json,
shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--prefix PREFIX]
                                   [--zone <availability-zone>]
                                   [--property <key=value>]
                                   <name>
```

Create a new aggregate

Positional arguments

<name>   New aggregate name

Optional arguments

-h, --help   show this help message and exit

--zone <availability-zone>   Availability zone name

--property <key=value>   Property to add to this aggregate (repeat option to set
                                      multiple properties)

openstack aggregate delete

```
usage: openstack --os-auth-type token aggregate delete [-h] <aggregate>
```

Delete an existing aggregate

Positional arguments

<aggregate>   Aggregate to delete (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack aggregate list

```
usage: openstack --os-auth-type token aggregate list [-h] [-f {csv,html,json,
table,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--long]
```

List all aggregates

Optional arguments

-h, --help   show this help message and exit

–long   List additional fields in output

openstack aggregate remove host

```
usage: openstack --os-auth-type token aggregate remove host [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--prefix PREFIX]
                                     <aggregate> <host>
```

Remove host from aggregate

Positional arguments

<aggregate>   Aggregate (name or ID)

<host>   Host to remove from <aggregate>

Optional arguments

-h, –help   show this help message and exit

openstack aggregate set

```
usage: openstack --os-auth-type token aggregate set [-h] [-f {html,json,shell,
table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--prefix PREFIX] [--name <name>]
                                     [--zone <availability-zone>]
                                     [--property <key=value>]
                                     <aggregate>
```

Set aggregate properties

Positional arguments

<aggregate>   Aggregate to modify (name or ID)

Optional arguments

-h, –help   show this help message and exit

–name <name>   Set aggregate name

–zone <availability-zone>   Set availability zone name

–property <key=value>   Property to set on <aggregate> (repeat option to set
                                   multiple properties)

openstack aggregate show

```
usage: openstack --os-auth-type token aggregate show [-h] [-f {html,json,
shell,table,value,yaml}]
```

```
                                        [-c COLUMN] [--max-width <integer>]
                                        [--prefix PREFIX]
                                        <aggregate>
```

Display aggregate details

Positional arguments

<aggregate>   Aggregate to display (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack availability zone list

```
usage: openstack --os-auth-type token availability zone list [-h] [-f {csv,
html,json,table,yaml}]
                                        [-c COLUMN] [--max-width <integer>]
                                        [--quote {all,minimal,none,
nonnumeric}]
                                        [--long]
```

List availability zones and their status

Optional arguments

-h, --help   show this help message and exit

--long   List additional fields in output

openstack backup create

```
usage: openstack --os-auth-type token backup create [-h] [-f {html,json,shell,
table,value,yaml}]
                                        [-c COLUMN] [--max-width <integer>]
                                        [--prefix PREFIX] [--container <container>]
                                        [--name <name>] [--description <description>]
                                        <volume>
```

Create new backup

Positional arguments

<volume>   Volume to backup (name or ID)

Optional arguments

-h, --help   show this help message and exit

--container <container>   Optional backup container name

--name <name>   Name of the backup

–description <description>   Description of the backup

openstack backup delete

```
usage: openstack --os-auth-type token backup delete [-h] <backup> [<backup> ..
.]
```

Delete backup(s)

Positional arguments

<backup>   Backup(s) to delete (ID only)

Optional arguments

-h, –help   show this help message and exit

openstack backup list

```
usage: openstack --os-auth-type token backup list [-h] [-f {csv,html,json,
table,yaml}] [-c COLUMN]
                                  [--max-width <integer>]
                                  [--quote {all,minimal,none,nonnumeric}] [--long]
```

List backups

Optional arguments

-h, –help   show this help message and exit

–long   List additional fields in output

openstack backup restore

```
usage: openstack --os-auth-type token backup restore [-h] <backup> <volume>
```

Restore backup

Positional arguments

<backup>   Backup to restore (ID only)

<volume>   Volume to restore to (name or ID)

Optional arguments

-h, –help   show this help message and exit

openstack backup show

```
usage: openstack --os-auth-type token backup show [-h] [-f {html,json,shell,
table,value,yaml}]
```

```
                                        [-c COLUMN] [--max-width <integer>]
                                        [--prefix PREFIX]
                                        <backup>
```

Display backup details

Positional arguments

<backup>   Backup to display (ID only)

Optional arguments

-h, --help   show this help message and exit

openstack catalog list

```
usage: openstack --os-auth-type token catalog list [-h] [-f {csv,html,json,
table,yaml}] [-c COLUMN]
                                        [--max-width <integer>]
                                        [--quote {all,minimal,none,nonnumeric}]
```

List services in the service catalog

Optional arguments

-h, --help   show this help message and exit

openstack catalog show

```
usage: openstack --os-auth-type token catalog show [-h] [-f {html,json,shell,
table,value,yaml}]
                                        [-c COLUMN] [--max-width <integer>]
                                        [--prefix PREFIX]
                                        <service>
```

Display service catalog details

Positional arguments

<service>   Service to display (type or name)

Optional arguments

-h, --help   show this help message and exit

openstack command list

```
usage: openstack --os-auth-type token command list [-h] [-f {csv,html,json,
table,yaml}] [-c COLUMN]
                                        [--max-width <integer>]
                                        [--quote {all,minimal,none,nonnumeric}]
```

List recognized commands by group

openstack compute agent create

```
usage: openstack --os-auth-type token compute agent create [-h]
                                    [-f {html,json,shell,table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX]
                                    <os> <architecture> <version> <url>
                                    <md5hash> <hypervisor>
```

Create compute agent command

Positional arguments

<os>   Type of OS

<architecture>   Type of architecture

<version>   Version

<url>   URL

<md5hash>   MD5 hash

<hypervisor>   Type of hypervisor

Optional arguments

-h, --help   show this help message and exit

openstack compute agent delete

```
usage: openstack --os-auth-type token compute agent delete [-h] <id>
```

Delete compute agent command

Positional arguments

<id>   ID of agent to delete

Optional arguments

-h, --help   show this help message and exit

openstack compute agent list

```
usage: openstack --os-auth-type token compute agent list [-h] [-f {csv,html,
json,table,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--quote {all,minimal,none,nonnumeric}]
                                    [--hypervisor <hypervisor>]
```

List compute agent command

Optional arguments

-h, --help   show this help message and exit

--hypervisor <hypervisor>   Type of hypervisor

openstack compute agent set

```
usage: openstack --os-auth-type token compute agent set [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--prefix PREFIX]
                                   <id> <version> <url> <md5hash>
```

Set compute agent command

Positional arguments

<id>   ID of the agent

<version>   Version of the agent

<url>   URL

<md5hash>   MD5 hash

Optional arguments

-h, --help   show this help message and exit

openstack compute service list

```
usage: openstack --os-auth-type token compute service list [-h] [-f {csv,html,
json,table,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--host <host>] [--service <service>]
```

List service command

Optional arguments

-h, --help   show this help message and exit

--host <host>   Name of host

--service <service>   Name of service

openstack compute service set

```
usage: openstack --os-auth-type token compute service set [-h] [-f {csv,html,
json,table,yaml}]
```

```
                                          [-c COLUMN] [--max-width <integer>]
                                          [--quote {all,minimal,none,nonnumeric}]
                                          [--enable | --disable]
                                          <host> <service>
```

Set service command

Positional arguments

<host>   Name of host

<service>   Name of service

Optional arguments

-h, --help   show this help message and exit

--enable   Enable a service

--disable   Disable a service

openstack console log show

```
usage: openstack --os-auth-type token console log show [-h] [--lines <num-
lines>] <server>
```

Show server's console output

Positional arguments

<server>   Server to show console log (name or ID)

Optional arguments

-h, --help   show this help message and exit

--lines <num-lines>   Number of lines to display from the end of the log (default=all)

openstack console url show

```
usage: openstack --os-auth-type token console url show [-h] [-f {html,json,
shell,table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX]
                                    [--novnc | --xvpvnc | --spice]
                                    <server>
```

Show server's remote console URL

Positional arguments

<server>   Server to show URL (name or ID)

Optional arguments

-h, --help   show this help message and exit

--novnc   Show noVNC console URL (default)

--xvpvnc   Show xpvnc console URL

--spice   Show SPICE console URL

openstack container create

```
usage: openstack --os-auth-type token container create [-h] [-f {csv,html,
json,table,yaml}]
                                      [-c COLUMN] [--max-width <integer>]
                                      [--quote {all,minimal,none,nonnumeric}]
                                      <container-name> [<container-name> ...]
```

Create new container

Positional arguments

<container-name>   New container name(s)

Optional arguments

-h, --help   show this help message and exit

openstack container delete

```
usage: openstack --os-auth-type token container delete [-h] <container>
 [<container> ...]
```

Delete container

Positional arguments

<container>   Container(s) to delete

Optional arguments

-h, --help   show this help message and exit

openstack container list

```
usage: openstack --os-auth-type token container list [-h] [-f {csv,html,json,
table,yaml}]
                                      [-c COLUMN] [--max-width <integer>]
                                      [--quote {all,minimal,none,nonnumeric}]
                                      [--prefix <prefix>] [--marker <marker>]
                                      [--end-marker <end-marker>] [--limit <limit>]
                                      [--long] [--all]
```

List containers

Optional arguments

-h, –help   show this help message and exit

–prefix <prefix>   Filter list using <prefix>

–marker <marker>   Anchor for paging

–end-marker <end-marker>   End anchor for paging

–limit <limit>   Limit the number of containers returned

–long   List additional fields in output

–all   List all containers (default is 10000)

openstack container save

```
usage: openstack --os-auth-type token container save [-h] <container>
```

Save container contents locally

Positional arguments

<container>   Container to save

Optional arguments

-h, –help   show this help message and exit

openstack container show

```
usage: openstack --os-auth-type token container show [-h] [-f {html,json,
shell,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--prefix PREFIX]
                                  <container>
```

Display container details

Positional arguments

<container>   Container to display

Optional arguments

-h, –help   show this help message and exit

openstack ec2 credentials create

```
usage: openstack --os-auth-type token ec2 credentials create [-h]
```

```
                                    [-f {html,json,shell,table,value,
yaml}]]

                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX]
                                    [--project <project>] [--user <user>]
```

Create EC2 credentials

Optional arguments

-h, --help   show this help message and exit

--project <project>   Specify an alternate project (default: current authenticated project)

--user <user>   Specify an alternate user (default: current authenticated user)

openstack ec2 credentials delete

```
usage: openstack --os-auth-type token ec2 credentials delete [-h] [--user
 <user>] <access-key>
```

Delete EC2 credentials

Positional arguments

<access-key>   Credentials access key

Optional arguments

-h, --help   show this help message and exit

--user <user>   Specify a user

openstack ec2 credentials list

```
usage: openstack --os-auth-type token ec2 credentials list [-h] [-f {csv,html,
json,table,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--quote {all,minimal,none,nonnumeric}]
                                    [--user <user>]
```

List EC2 credentials

Optional arguments

-h, --help   show this help message and exit

--user <user>   Specify a user

openstack ec2 credentials show

```
usage: openstack --os-auth-type token ec2 credentials show [-h]
```

```
                                        [-f {html,json,shell,table,value,yaml}]
                                        [-c COLUMN] [--max-width <integer>]
                                        [--prefix PREFIX] [--user <user>]
                                        <access-key>
```

Display EC2 credentials details

Positional arguments

<access-key>   Credentials access key

Optional arguments

-h, --help   show this help message and exit

--user <user>   Specify a user

openstack endpoint create

```
usage: openstack --os-auth-type token endpoint create [-h] [-f {html,json,
shell,table,value,yaml}]
                                        [-c COLUMN] [--max-width <integer>]
                                        [--prefix PREFIX] --publicurl <url>
                                        [--adminurl <url>] [--internalurl <url>]
                                        [--region <region-id>]
                                        <service>
```

Create new endpoint

Positional arguments

<service>   New endpoint service (name or ID)

Optional arguments

-h, --help   show this help message and exit

--publicurl <url>   New endpoint public URL (required)

--adminurl <url>   New endpoint admin URL

--internalurl <url>   New endpoint internal URL

--region <region-id>   New endpoint region ID

openstack endpoint delete

```
usage: openstack --os-auth-type token endpoint delete [-h] <endpoint-id>
```

Delete endpoint

Positional arguments

<endpoint-id>   Endpoint ID to delete

openstack endpoint list

```
usage: openstack --os-auth-type token endpoint list [-h] [-f {csv,html,json,
table,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--quote {all,minimal,none,nonnumeric}]
                                    [--long]
```

List endpoints

Optional arguments

-h, --help   show this help message and exit

--long   List additional fields in output

openstack endpoint show

```
usage: openstack --os-auth-type token endpoint show [-h] [-f {html,json,shell,
table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX]
                                    <endpoint-id>
```

Display endpoint details

Positional arguments

<endpoint-id>   Endpoint ID to display

Optional arguments

-h, --help   show this help message and exit

openstack extension list

```
usage: openstack --os-auth-type token extension list [-h] [-f {csv,html,json,
table,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--quote {all,minimal,none,nonnumeric}]
                                    [--compute] [--identity] [--network]
                                    [--volume] [--long]
```

List API extensions

Optional arguments

-h, --help   show this help message and exit

–compute   List extensions for the Compute API

–identity   List extensions for the Identity API

–network   List extensions for the Network API

–volume   List extensions for the Volume API

–long   List additional fields in output

openstack flavor create

```
usage: openstack --os-auth-type token flavor create [-h] [-f {html,json,shell,
table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--prefix PREFIX] [--id <id>] [--ram <size-mb>]
                                   [--disk <size-gb>] [--ephemeral <size-gb>]
                                   [--swap <size-gb>] [--vcpus <vcpus>]
                                   [--rxtx-factor <factor>] [--public | --private]
                                   <flavor-name>
```

Create new flavor

Positional arguments

<flavor-name>   New flavor name

Optional arguments

-h, –help   show this help message and exit

–id <id>   Unique flavor ID; 'auto' creates a UUID (default: auto)

–ram <size-mb>   Memory size in MB (default 256M)

–disk <size-gb>   Disk size in GB (default 0G)

–ephemeral <size-gb>   Ephemeral disk size in GB (default 0G)

–swap <size-gb>   Swap space size in GB (default 0G)

–vcpus <vcpus>   Number of vcpus (default 1)

–rxtx-factor <factor>   RX/TX factor (default 1)

–public   Flavor is available to other projects (default)

–private   Flavor is not available to other projects

openstack flavor delete

```
usage: openstack --os-auth-type token flavor delete [-h] <flavor>
```

Delete flavor

Positional arguments

<flavor>   Flavor to delete (name or ID)

Optional arguments

-h, –help   show this help message and exit

openstack flavor list

```
usage: openstack --os-auth-type token flavor list [-h] [-f {csv,html,json,
table,yaml}] [-c COLUMN]
                                 [--max-width <integer>]
                                 [--quote {all,minimal,none,nonnumeric}]
```

List flavors

Optional arguments

-h, –help   show this help message and exit

openstack flavor show

```
usage: openstack --os-auth-type token flavor show [-h] [-f {html,json,shell,
table,value,yaml}]
                                 [-c COLUMN] [--max-width <integer>]
                                 [--prefix PREFIX]
                                 <flavor>
```

Display flavor details

Positional arguments

<flavor>   Flavor to display (name or ID)

Optional arguments

-h, –help   show this help message and exit

openstack host list

```
usage: openstack --os-auth-type token host list [-h] [-f {csv,html,json,table,
yaml}] [-c COLUMN]
                                 [--max-width <integer>]
                                 [--quote {all,minimal,none,nonnumeric}]
                                 [--zone <zone>]
```

List host command

Optional arguments

-h, –help   show this help message and exit

–zone <zone>   Only return hosts in the availability zone.

openstack host show

```
usage: openstack --os-auth-type token host show [-h] [-f {csv,html,json,table,
yaml}] [-c COLUMN]
                            [--max-width <integer>]
                            [--quote {all,minimal,none,nonnumeric}]
                            <host>
```

Show host command

Positional arguments

<host>   Name of host

Optional arguments

-h, –help   show this help message and exit

openstack hypervisor list

```
usage: openstack --os-auth-type token hypervisor list [-h] [-f {csv,html,json,
table,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--matching <hostname-str>]
```

List hypervisors

Optional arguments

-h, –help   show this help message and exit

–matching <hostname-str>   Filter hypervisors using <hostname-str> substring

openstack hypervisor show

```
usage: openstack --os-auth-type token hypervisor show [-h] [-f {html,json,
shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--prefix PREFIX]
                                   <id>
```

Show hypervisor details

Positional arguments

<id>   ID of the hypervisor to display

Optional arguments

-h, –help   show this help message and exit

openstack image create

```
usage: openstack --os-auth-type token image create [-h] [-f {html,json,shell,
table,value,yaml}]
                              [-c COLUMN] [--max-width <integer>]
                              [--prefix PREFIX] [--id <id>] [--store <store>]
                              [--container-format <container-format>]
                              [--disk-format <disk-format>]
                              [--owner <project>] [--size <size>]
                              [--min-disk <disk-gb>] [--min-ram <ram-mb>]
                              [--location <image-url>]
                              [--copy-from <image-url>] [--file <file>]
                              [--volume <volume>] [--force]
                              [--checksum <checksum>]
                              [--protected | --unprotected]
                              [--public | --private] [--property <key=value>]
                              <image-name>
```

Create/upload an image

Positional arguments

<image-name>   New image name

Optional arguments

-h, --help	show this help message and exit
--id <id>	Image ID to reserve
--store <store>	Upload image to this store
--container-format <container-format>	Image container format (default: bare)
--disk-format <disk-format>	Image disk format (default: raw)
--owner <project>	Image owner project name or ID
--size <size>	Image size, in bytes (only used with --location and --copy-from)
--min-disk <disk-gb>	Minimum disk size needed to boot image, in gigabytes
--min-ram <ram-mb>	Minimum RAM size needed to boot image, in megabytes
--location <image-url>	Download image from an existing URL
--copy-from <image-url>	Copy image from the data store (similar to --location)
--file <file>	Upload image from local file
--volume <volume>	Create image from a volume

–force	Force image creation if volume is in use (only meaningful with –volume)
–checksum <checksum>	Image hash used for verification
–protected	Prevent image from being deleted
–unprotected	Allow image to be deleted (default)
–public	Image is accessible to the public
–private	Image is inaccessible to the public (default)
–property <key=value>	Set a property on this image (repeat option to set multiple properties)

openstack image delete

```
usage: openstack --os-auth-type token image delete [-h] <image> [<image> ...]
```

Delete image(s)

Positional arguments

<image>   Image(s) to delete (name or ID)

Optional arguments

-h, –help   show this help message and exit

openstack image list

```
usage: openstack --os-auth-type token image list [-h] [-f {csv,html,json,
table,yaml}] [-c COLUMN]
                            [--max-width <integer>]
                            [--quote {all,minimal,none,nonnumeric}]
                            [--page-size <size>] [--long]
```

List available images

Optional arguments

-h, –help   show this help message and exit

–page-size <size>   Number of images to request in each paginated request

–long   List additional fields in output

openstack image save

```
usage: openstack --os-auth-type token image save [-h] [--file <filename>]
 <image>
```

Save an image locally

Positional arguments

<image>   Image to save (name or ID)

Optional arguments

-h, –help   show this help message and exit

–file <filename>   Downloaded image save filename (default: stdout)

openstack image set

```
usage: openstack --os-auth-type token image set [-h] [-f {html,json,shell,
table,value,yaml}]
                         [-c COLUMN] [--max-width <integer>]
                         [--prefix PREFIX] [--name <name>]
                         [--owner <project>] [--min-disk <disk-gb>]
                         [--min-ram <disk-ram>]
                         [--protected | --unprotected]
                         [--public | --private] [--property <key=value>]
                         <image>
```

Set image properties

Positional arguments

<image>   Image to modify (name or ID)

Optional arguments

-h, –help   show this help message and exit

–name <name>   New image name

–owner <project>   New image owner project (name or ID)

–min-disk <disk-gb>   Minimum disk size needed to boot image, in gigabytes

–min-ram <disk-ram>   Minimum RAM size needed to boot image, in megabytes

–protected   Prevent image from being deleted

–unprotected   Allow image to be deleted (default)

–public   Image is accessible to the public

–private   Image is inaccessible to the public (default)

–property <key=value>   Set a property on this image (repeat option to set multiple properties)

openstack image show

```
usage: openstack --os-auth-type token image show [-h] [-f {html,json,shell,
table,value,yaml}]
```

```
                                   [-c COLUMN] [--max-width <integer>]
                                   [--prefix PREFIX]
                                   <image>
```

Display image details

Positional arguments

<image>   Image to display (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack ip fixed add

```
usage: openstack --os-auth-type token ip fixed add [-h] <network> <server>
```

Add fixed-ip command

Positional arguments

<network>   Name of the network to fetch an IP address from

<server>   Name of the server to receive the IP address

Optional arguments

-h, --help   show this help message and exit

openstack ip fixed remove

```
usage: openstack --os-auth-type token ip fixed remove [-h] <ip-address>
 <server>
```

Remove fixed-ip command

Positional arguments

<ip-address>   IP address to remove from server

<server>   Name of the server to remove the IP address from

Optional arguments

-h, --help   show this help message and exit

openstack ip floating add

```
usage: openstack --os-auth-type token ip floating add [-h] <ip-address>
 <server>
```

Add floating-ip to server

Positional arguments

<ip-address>   IP address to add to server

<server>   Server to receive the IP address (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack ip floating create

```
usage: openstack --os-auth-type token ip floating create [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--prefix PREFIX]
                                   <pool>
```

Create new floating-ip

Positional arguments

<pool>   Pool to fetch floating IP from

Optional arguments

-h, --help   show this help message and exit

openstack ip floating delete

```
usage: openstack --os-auth-type token ip floating delete [-h] <ip-address>
```

Delete a floating-ip

Positional arguments

<ip-address>   IP address to delete

Optional arguments

-h, --help   show this help message and exit

openstack ip floating list

```
usage: openstack --os-auth-type token ip floating list [-h] [-f {csv,html,
json,table,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--quote {all,minimal,none,nonnumeric}]
```

List floating-ips

Optional arguments

-h, --help   show this help message and exit

openstack ip floating pool list

```
usage: openstack --os-auth-type token ip floating pool list [-h] [-f {csv,
html,json,table,yaml}]
                                        [-c COLUMN] [--max-width <integer>]
                                        [--quote {all,minimal,none,nonnumeric}]
```

List floating-ip-pools

Optional arguments

-h, --help   show this help message and exit

openstack ip floating remove

```
usage: openstack --os-auth-type token ip floating remove [-h] <ip-address>
 <server>
```

Remove floating-ip from server

Positional arguments

<ip-address>   IP address to remove from server

<server>   Server to remove the IP address from (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack keypair create

```
usage: openstack --os-auth-type token keypair create [-h] [-f {html,json,
shell,table,value,yaml}]
                                        [-c COLUMN] [--max-width <integer>]
                                        [--prefix PREFIX] [--public-key <file>]
                                        <name>
```

Create new public key

Positional arguments

<name>   New public key name

Optional arguments

-h, --help   show this help message and exit

--public-key <file>   Filename for public key to add

openstack keypair delete

```
usage: openstack --os-auth-type token keypair delete [-h] <key>
```

Delete public key

Positional arguments

<key>   Public key to delete

Optional arguments

-h, --help   show this help message and exit

openstack keypair list

```
usage: openstack --os-auth-type token keypair list [-h] [-f {csv,html,json,
table,yaml}] [-c COLUMN]
                                [--max-width <integer>]
                                [--quote {all,minimal,none,nonnumeric}]
```

List public key fingerprints

Optional arguments

-h, --help   show this help message and exit

openstack keypair show

```
usage: openstack --os-auth-type token keypair show [-h] [-f {html,json,shell,
table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--prefix PREFIX] [--public-key]
                                <key>
```

Display public key details

Positional arguments

<key>   Public key to display

Optional arguments

-h, --help   show this help message and exit

--public-key   Show only bare public key

openstack limits show

```
usage: openstack --os-auth-type token limits show [-h] [-f {csv,html,json,
table,yaml}] [-c COLUMN]
                                [--max-width <integer>]
```

```
                                    [--quote {all,minimal,none,nonnumeric}]
                                    [--absolute | --rate] [--reserved]
```

Show compute and volume limits

Optional arguments

-h, --help   show this help message and exit

--absolute   Show absolute limits

--rate   Show rate limits

--reserved   Include reservations count [only valid with --absolute]

openstack module list

```
usage: openstack --os-auth-type token module list [-h] [-f {html,json,shell,
table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX] [--all]
```

List module versions

Optional arguments

-h, --help   show this help message and exit

--all   Show all modules that have version information

openstack network create

```
usage: openstack --os-auth-type token network create [-h] [-f {html,json,
shell,table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX] [--enable | --disable]
                                    [--share | --no-share]
                                    <network_name>
```

Create a network

Positional arguments

<network_name>   Name of network to create

Optional arguments

-h, --help   show this help message and exit

--enable   Set administrative state up

--disable   Set administrative state down

--share   Share the network across tenants

–no-share　　　　　Do not share the network across tenants

openstack network delete

```
usage: openstack --os-auth-type token network delete [-h] <network>
 [<network> ...]
```

Delete network(s)

Positional arguments

<network>　　　Network(s) to delete (name or ID)

Optional arguments

-h, –help　　　　　　show this help message and exit

openstack network list

```
usage: openstack --os-auth-type token network list [-h] [-f {csv,html,json,
table,yaml}] [-c COLUMN]
                                  [--max-width <integer>]
                                  [--quote {all,minimal,none,nonnumeric}]
                                  [--external] [--dhcp DHCP] [--long]
```

List networks

Optional arguments

-h, –help　　　　　　　show this help message and exit

–external　　　　　　List external networks

–dhcp DHCP ID　　　of the DHCP agent

–long　　　　　　　Long listing

openstack network set

```
usage: openstack --os-auth-type token network set [-h] [--enable | --disable]
                                  [--name <network_name>] [--share | --no-share]
                                  <network>
```

Set network properties

Positional arguments

<network>　　　Name or identifier of network to set

Optional arguments

-h, –help　　　　　　　　　show this help message and exit

–enable	Set administrative state up
–disable	Set administrative state down
–name <network_name>	New name for the network
–share	Share the network across tenants
–no-share	Do not share the network across tenants

openstack network show

```
usage: openstack --os-auth-type token network show [-h] [-f {html,json,shell,
table,value,yaml}]
                              [-c COLUMN] [--max-width <integer>]
                              [--prefix PREFIX]
                              <network>
```

Show network details

Positional arguments

<network>   Name or identifier of network to show

Optional arguments

-h, –help   show this help message and exit

openstack object create

```
usage: openstack --os-auth-type token object create [-h] [-f {csv,html,json,
table,yaml}]
                              [-c COLUMN] [--max-width <integer>]
                              [--quote {all,minimal,none,nonnumeric}]
                              <container> <filename> [<filename> ...]
```

Upload object to container

Positional arguments

<container>   Container for new object

<filename>   Local filename(s) to upload

Optional arguments

-h, –help   show this help message and exit

openstack object delete

```
usage: openstack --os-auth-type token object delete [-h] <container> <object>
 [<object> ...]
```

Delete object from container

Positional arguments

<container>   Delete object(s) from <container>

<object>   Object(s) to delete

Optional arguments

-h, --help   show this help message and exit

openstack object list

```
usage: openstack --os-auth-type token object list [-h] [-f {csv,html,json,
table,yaml}] [-c COLUMN]
                                [--max-width <integer>]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--prefix <prefix>] [--delimiter <delimiter>]
                                [--marker <marker>] [--end-marker <end-marker>]
                                [--limit <limit>] [--long] [--all]
                                <container>
```

List objects

Positional arguments

<container>   Container to list

Optional arguments

-h, --help   show this help message and exit

--prefix <prefix>   Filter list using <prefix>

--delimiter <delimiter>   Roll up items with <delimiter>

--marker <marker>   Anchor for paging

--end-marker <end-marker>   End anchor for paging

--limit <limit>   Limit the number of objects returned

--long   List additional fields in output

--all   List all objects in container (default is 10000)

openstack object save

```
usage: openstack --os-auth-type token object save [-h] [--file <filename>]
 <container> <object>
```

Save object locally

Positional arguments

<container>   Download <object> from <container>

\<object>   Object to save

Optional arguments

-h, --help   show this help message and exit

--file \<filename>   Destination filename (defaults to object name)

openstack object show

```
usage: openstack --os-auth-type token object show [-h] [-f {html,json,shell,
table,value,yaml}]
                              [-c COLUMN] [--max-width <integer>]
                              [--prefix PREFIX]
                              <container> <object>
```

Display object details

Positional arguments

\<container>   Display \<object> from \<container>

\<object>   Object to display

Optional arguments

-h, --help   show this help message and exit

openstack project create

```
usage: openstack --os-auth-type token project create [-h] [-f {html,json,
shell,table,value,yaml}]
                                 [-c COLUMN] [--max-width <integer>]
                                 [--prefix PREFIX]
                                 [--description <description>]
                                 [--enable | --disable]
                                 [--property <key=value>] [--or-show]
                                 <project-name>
```

Create new project

Positional arguments

\<project-name>   New project name

Optional arguments

-h, --help   show this help message and exit

--description \<description>   Project description

--enable   Enable project (default)

--disable   Disable project

–property <key=value>   Add a property to <name> (repeat option to set multi-
ple properties)

–or-show   Return existing project

openstack project delete

```
usage: openstack --os-auth-type token project delete [-h] <project>
 [<project> ...]
```

Delete project(s)

Positional arguments

<project>   Project(s) to delete (name or ID)

Optional arguments

-h, –help   show this help message and exit

openstack project list

```
usage: openstack --os-auth-type token project list [-h] [-f {csv,html,json,
table,yaml}] [-c COLUMN]
                                    [--max-width <integer>]
                                    [--quote {all,minimal,none,nonnumeric}] [--long]
```

List projects

Optional arguments

-h, –help   show this help message and exit

–long   List additional fields in output

openstack project set

```
usage: openstack --os-auth-type token project set [-h] [--name <name>]
                            [--description <description>]
                            [--enable | --disable] [--property <key=value>]
                            <project>
```

Set project properties

Positional arguments

<project>   Project to modify (name or ID)

Optional arguments

-h, –help   show this help message and exit

–name <name>   Set project name

–description <description>   Set project description

–enable   Enable project

–disable   Disable project

–property <key=value>   Set a project property (repeat option to set multiple
                                 properties)

openstack project show

```
usage: openstack --os-auth-type token project show [-h] [-f {html,json,shell,
table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--prefix PREFIX]
                                <project>
```

Display project details

Positional arguments

<project>   Project to display (name or ID)

Optional arguments

-h, –help   show this help message and exit

openstack project usage list

```
usage: openstack --os-auth-type token project usage list [-h] [-f {csv,html,
json,table,yaml}]
                                      [-c COLUMN] [--max-width <integer>]
                                      [--quote {all,minimal,none,nonnumeric}]
                                      [--start <start>] [--end <end>]
```

List resource usage per project

Optional arguments

-h, –help   show this help message and exit

–start <start>   Usage range start date, ex 2012-01-20 (default: 4 weeks ago)

–end <end>   Usage range end date, ex 2012-01-20 (default: tomorrow)

openstack quota set

```
usage: openstack --os-auth-type token quota set [-h] [--class] [--properties
 <properties>]
                                [--ram <ram>] [--secgroup-rules <secgroup-rules>]
```

```
                              [--instances <instances>] [--key-pairs <key-pairs>]
                              [--fixed-ips <fixed-ips>] [--secgroups <secgroups>]
                              [--injected-file-size <injected-file-size>]
                              [--floating-ips <floating-ips>]
                              [--injected-files <injected-files>]
                              [--cores <cores>]
                              [--injected-path-size <injected-path-size>]
                              [--gigabytes <gigabytes>] [--volumes <volumes>]
                              [--snapshots <snapshots>]
                              <project/class>
```

Set quotas for project or class

Positional arguments

<project/class>   Set quotas for this project or class (name/ID)

Optional arguments

-h, --help   show this help message and exit

--class   Set quotas for <class>

--properties <properties>   New value for the properties quota

--ram <ram>   New value for the ram quota

--secgroup-rules <sec-group-rules> New value for the secgroup-rules quota

--instances <instances>   New value for the instances quota

--key-pairs <key-pairs>   New value for the key-pairs quota

--fixed-ips <fixed-ips>   New value for the fixed-ips quota

--secgroups <secgroups>   New value for the secgroups quota

--injected-file-size <injected-file-size> New value for the injected-file-size quota

--floating-ips <floating-ips>   New value for the floating-ips quota

--injected-files <injected-files>   New value for the injected-files quota

--cores <cores>   New value for the cores quota

--injected-path-size <injected-path-size> New value for the injected-path-size quota

--gigabytes <gigabytes>   New value for the gigabytes quota

--volumes <volumes>   New value for the volumes quota

--snapshots <snapshots>   New value for the snapshots quota

openstack quota show

```
usage: openstack --os-auth-type token quota show [-h] [-f {html,json,shell,
table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--prefix PREFIX] [--class | --default]
                               <project/class>
```

Show quotas for project or class

Positional arguments

<project/class>   Show this project or class (name/ID)

Optional arguments

-h, --help   show this help message and exit

--class   Show quotas for <class>

--default   Show default quotas for <project>

openstack role add

```
usage: openstack --os-auth-type token role add [-h] [-f {html,json,shell,
table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--prefix PREFIX] --project <project> --user <user>
                               <role>
```

Add role to project:user

Positional arguments

<role>   Role to add to <project>:<user> (name or ID)

Optional arguments

-h, --help   show this help message and exit

--project <project>   Include <project> (name or ID)

--user <user>   Include <user> (name or ID)

openstack role create

```
usage: openstack --os-auth-type token role create [-h] [-f {html,json,shell,
table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--prefix PREFIX] [--or-show]
                               <name>
```

Create new role

Positional arguments

\<name>   New role name

Optional arguments

-h, --help   show this help message and exit

--or-show   Return existing role

openstack role delete

```
usage: openstack --os-auth-type token role delete [-h] <role> [<role> ...]
```

Delete role(s)

Positional arguments

\<role>   Role(s) to delete (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack role list

```
usage: openstack --os-auth-type token role list [-h] [-f {csv,html,json,table,
yaml}] [-c COLUMN]
                              [--max-width <integer>]
                              [--quote {all,minimal,none,nonnumeric}]
                              [--project <project>] [--user <user>]
```

List roles

Optional arguments

-h, --help   show this help message and exit

--project \<project>   Filter roles by \<project> (name or ID)

--user \<user>   Filter roles by \<user> (name or ID)

openstack role remove

```
usage: openstack --os-auth-type token role remove [-h] --project <project> --
user <user> <role>
```

Remove role from project : user

Positional arguments

\<role>   Role to remove (name or ID)

Optional arguments

-h, --help   show this help message and exit

--project <project>   Include <project> (name or ID)

--user <user>   Include <user> (name or ID)

openstack role show

```
usage: openstack --os-auth-type token role show [-h] [-f {html,json,shell,
table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>]
                           [--prefix PREFIX]
                           <role>
```

Display role details

Positional arguments

<role>   Role to display (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack security group create

```
usage: openstack --os-auth-type token security group create [-h]
                             [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>]
                             [--prefix PREFIX]
                             [--description <description>]
                             <name>
```

Create a new security group

Positional arguments

<name>   New security group name

Optional arguments

-h, --help   show this help message and exit

--description <description>   Security group description

openstack security group delete

```
usage: openstack --os-auth-type token security group delete [-h] <group>
```

Delete a security group

Positional arguments

<group>   Name or ID of security group to delete

Optional arguments

-h, –help   show this help message and exit

openstack security group list

```
usage: openstack --os-auth-type token security group list [-h] [-f {csv,html,
json,table,yaml}]
                                          [-c COLUMN] [--max-width <integer>]
                                          [--quote {all,minimal,none,nonnumeric}]
                                          [--all-projects]
```

List all security groups

Optional arguments

-h, –help   show this help message and exit

–all-projects   Display information from all projects (admin only)

openstack security group rule create

```
usage: openstack --os-auth-type token security group rule create [-h]
                                          [-f {html,json,shell,table,value,
yaml}]
                                          [-c COLUMN]
                                          [--max-width <integer>]
                                          [--prefix PREFIX]
                                          [--proto <proto>]
                                          [--src-ip <ip-address>]
                                          [--dst-port <port-range>]
                                          <group>
```

Create a new security group rule

Positional arguments

<group>   Create rule in this security group

Optional arguments

-h, –help   show this help message and exit

–proto <proto> IP   protocol (icmp, tcp, udp; default: tcp)

–src-ip <ip-address>   Source IP (may use CIDR notation; default: 0.0.0.0/0)

–dst-port <port-range>   Destination port, may be a range: 137:139 (default: 0; on-
                                    ly required for proto tcp and udp)

openstack security group rule delete

```
usage: openstack --os-auth-type token security group rule delete [-h] [--proto
 <proto>]
                                        [--src-ip <ip-address>]
                                        [--dst-port <port-range>]
                                        <group>
```

Delete a security group rule

Positional arguments

<group>   Create rule in this security group

Optional arguments

-h, --help   show this help message and exit

--proto <proto> IP   protocol (icmp, tcp, udp; default: tcp)

--src-ip <ip-address>   Source IP (may use CIDR notation; default: 0.0.0.0/0)

--dst-port <port-range>   Destination port, may be a range: 137:139 (default: 0; on-
                                     ly required for proto tcp and udp)

openstack security group rule list

```
usage: openstack --os-auth-type token security group rule list [-h] [-f {csv,
html,json,table,yaml}]
                                        [-c COLUMN] [--max-width <integer>]
                                        [--quote {all,minimal,none,
nonnumeric}]
                                        <group>
```

List all security group rules

Positional arguments

<group>   Create rule in this security group

Optional arguments

-h, --help   show this help message and exit

openstack security group set

```
usage: openstack --os-auth-type token security group set [-h]
                          [-f {html,json,shell,table,value,yaml}]
                          [-c COLUMN] [--max-width <integer>]
                          [--prefix PREFIX] [--name <new-name>]
                          [--description <description>]
                          <group>
```

Set security group properties

Positional arguments

<group>   Name or ID of security group to change

Optional arguments

-h, --help   show this help message and exit

--name <new-name>   New security group name

--description <description>   New security group name

openstack security group show

```
usage: openstack --os-auth-type token security group show [-h]
                                    [-f {html,json,shell,table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX]
                                    <group>
```

Show a specific security group

Positional arguments

<group>   Name or ID of security group to change

Optional arguments

-h, --help   show this help message and exit

openstack server add security group

```
usage: openstack --os-auth-type token server add security group [-h] <server>
 <group>
```

Add security group to server

Positional arguments

<server>   Server (name or ID)

<group>   Security group to add (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack server add volume

```
usage: openstack --os-auth-type token server add volume [-h] [--device
 <device>] <server> <volume>
```

Add volume to server

Positional arguments

<server>   Server (name or ID)

<volume>   Volume to add (name or ID)

Optional arguments

-h, --help   show this help message and exit

--device <device>   Server internal device name for volume

openstack server create

```
usage: openstack --os-auth-type token server create [-h] [-f {html,json,shell,
table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--prefix PREFIX]
                               (--image <image> | --volume <volume>) --flavor
                               <flavor>
                               [--security-group <security-group-name>]
                               [--key-name <key-name>]
                               [--property <key=value>]
                               [--file <dest-filename=source-filename>]
                               [--user-data <user-data>]
                               [--availability-zone <zone-name>]
                               [--block-device-mapping <dev-name=mapping>]
                               [--nic <nic-config-string>]
                               [--hint <key=value>]
                               [--config-drive <config-drive-volume>|True]
                               [--min <count>] [--max <count>] [--wait]
                               <server-name>
```

Create a new server

Positional arguments

<server-name>   New server name

Optional arguments

-h, --help   show this help message and exit

--image <image>   Create server from this image

--volume <volume>   Create server from this volume

--flavor <flavor>   Create server with this flavor

--security-group <securi-   Security group to assign to this server (repeat for multi-
ty-group-name>   ple groups)

--key-name <key-name>   Keypair to inject into this server (optional extension)

--property <key=value>   Set a property on this server (repeat for multiple values)

–file <dest-filename=source-file-name>	File to inject into image before boot (repeat for multiple files)
–user-data <user-data>	User data file to serve from the metadata server
–availability-zone <zone-name>	Select an availability zone for the server
–block-device-mapping <dev-name=mapping>	Map block devices; map is <id>:<type>:<size(GB)>:<delete_on_terminate> (optional extension)
–nic <nic-config-string>	Specify NIC configuration (optional extension)
–hint <key=value>	Hints for the scheduler (optional extension)
–config-drive <config-drive-volume>|True	Use specified volume as the config drive, or 'True' to use an ephemeral drive
–min <count>	Minimum number of servers to launch (default=1)
–max <count>	Maximum number of servers to launch (default=1)
–wait	Wait for build to complete

openstack server delete

```
usage: openstack --os-auth-type token server delete [-h] <server> [<server> ..
.]
```

Delete server(s)

Positional arguments

<server>   Server(s) to delete (name or ID)

Optional arguments

-h, –help   show this help message and exit

openstack server image create

```
usage: openstack --os-auth-type token server image create [-h]
                                        [-f {html,json,shell,table,value,yaml}]
                                        [-c COLUMN] [--max-width <integer>]
                                        [--prefix PREFIX] [--name <image-name>]
                                        [--wait]
                                        <server>
```

Create a new disk image from a running server

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, --help   show this help message and exit

--name <image-name>   Name of new image (default is server name)

--wait   Wait for image create to complete

openstack server list

```
usage: openstack --os-auth-type token server list [-h] [-f {csv,html,json,
table,yaml}] [-c COLUMN]
                                [--max-width <integer>]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--reservation-id <reservation-id>]
                                [--ip <ip-address-regex>]
                                [--ip6 <ip-address-regex>] [--name <name-regex>]
                                [--instance-name <server-name>]
                                [--status <status>] [--flavor <flavor>]
                                [--image <image>] [--host <hostname>]
                                [--all-projects] [--long]
```

List servers

Optional arguments

-h, --help   show this help message and exit

--reservation-id <reservation-id>   Only return instances that match the reservation

--ip <ip-address-regex>   Regular expression to match IP addresses

--ip6 <ip-address-regex>   Regular expression to match IPv6 addresses

--name <name-regex>   Regular expression to match names

--instance-name <server-name>   Regular expression to match instance name (admin on-
                                            ly)

--status <status>   Search by server status

--flavor <flavor>   Search by flavor

--image <image>   Search by image

--host <hostname>   Search by hostname

--all-projects   Include all projects (admin only)

--long   List additional fields in output

openstack server lock

```
usage: openstack --os-auth-type token server lock [-h] <server>
```

Lock server

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, –help   show this help message and exit

openstack server migrate

```
usage: openstack --os-auth-type token server migrate [-h] [--live <hostname>]
                              [--shared-migration | --block-migration]
                              [--disk-overcommit | --no-disk-overcommit]
                              [--wait]
                              <server>
```

Migrate server to different host

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, –help   show this help message and exit

–live <hostname>   Target hostname

–shared-migration   Perform a shared live migration (default)

–block-migration   Perform a block live migration

–disk-overcommit   Allow disk over-commit on the destination host

–no-disk-overcommit   Do not over-commit disk on the destination host (default)

–wait   Wait for resize to complete

openstack server pause

```
usage: openstack --os-auth-type token server pause [-h] <server>
```

Pause server

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, –help   show this help message and exit

openstack server reboot

```
usage: openstack --os-auth-type token server reboot [-h] [--hard | --soft] [--
wait] <server>
```

Perform a hard or soft server reboot

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, --help   show this help message and exit

--hard   Perform a hard reboot

--soft   Perform a soft reboot

--wait   Wait for reboot to complete

openstack server rebuild

```
usage: openstack --os-auth-type token server rebuild [-h] [-f {html,json,
shell,table,value,yaml}]
                              [-c COLUMN] [--max-width <integer>]
                              [--prefix PREFIX] --image <image>
                              [--password <password>] [--wait]
                              <server>
```

Rebuild server

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, --help   show this help message and exit

--image <image>   Recreate server from this image

--password <password>   Set the password on the rebuilt instance

--wait   Wait for rebuild to complete

openstack server remove security group

```
usage: openstack --os-auth-type token server remove security group [-h]
 <server> <group>
```

Remove security group from server

Positional arguments

<server>   Name or ID of server to use

<group>   Name or ID of security group to remove from server

Optional arguments

-h, --help   show this help message and exit

openstack server remove volume

```
usage: openstack --os-auth-type token server remove volume [-h] <server>
 <volume>
```

Remove volume from server

Positional arguments

<server>   Server (name or ID)

<volume>   Volume to remove (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack server rescue

```
usage: openstack --os-auth-type token server rescue [-h] [-f {html,json,shell,
table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--prefix PREFIX]
                                <server>
```

Put server in rescue mode

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack server resize

```
usage: openstack --os-auth-type token server resize [-h] [--flavor <flavor> |
 --verify | --revert]
                                [--wait]
                                <server>
```

Scale server to a new flavor

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, --help   show this help message and exit

--flavor <flavor>   Resize server to specified flavor

--verify   Verify server resize is complete

--revert   Restore server state before resize

--wait   Wait for resize to complete

openstack server resume

```
usage: openstack --os-auth-type token server resume [-h] <server>
```

Resume server

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack server set

```
usage: openstack --os-auth-type token server set [-h] [--name <new-name>] [--
root-password]
                                [--property <key=value>]
                                <server>
```

Set server properties

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, --help   show this help message and exit

--name <new-name>   New server name

--root-password   Set new root password (interactive only)

--property <key=value>   Property to add/change for this server (repeat option to set multiple properties)

openstack server show

```
usage: openstack --os-auth-type token server show [-h] [-f {html,json,shell,
table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--prefix PREFIX] [--diagnostics]
                                   <server>
```

Show server details

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, --help   show this help message and exit

--diagnostics   Display server diagnostics information

openstack server ssh

```
usage: openstack --os-auth-type token server ssh [-h] [--login <login-name>]
 [--port <port>]
                                   [--identity <keyfile>] [--option <config-options>]
                                   [-4 | -6]
                                   [--public | --private | --address-type <address-
type>]
                                   <server>
```

Ssh to server

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, --help   show this help message and exit

--login <login-name>   Login name (ssh -l option)

--port <port>   Destination port (ssh -p option)

--identity <keyfile>   Private key file (ssh -i option)

--option <config-options>   Options in ssh_config(5) format (ssh -o option)

-4   Use only IPv4 addresses

-6   Use only IPv6 addresses

--public   Use public IP address

–private   Use private IP address

–address-type <address-type>   Use other IP address (public, private, etc)

openstack server suspend

```
usage: openstack --os-auth-type token server suspend [-h] <server>
```

Suspend server

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, –help   show this help message and exit

openstack server unlock

```
usage: openstack --os-auth-type token server unlock [-h] <server>
```

Unlock server

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, –help   show this help message and exit

openstack server unpause

```
usage: openstack --os-auth-type token server unpause [-h] <server>
```

Unpause server

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, –help   show this help message and exit

openstack server unrescue

```
usage: openstack --os-auth-type token server unrescue [-h] <server>
```

Restore server from rescue mode

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack server unset

```
usage: openstack --os-auth-type token server unset [-h] [--property <key>]
 <server>
```

Unset server properties

Positional arguments

<server>   Server (name or ID)

Optional arguments

-h, --help   show this help message and exit

--property <key>   Property key to remove from server (repeat to unset multiple val-
                               ues)

openstack service create

```
usage: openstack --os-auth-type token service create [-h] [-f {html,json,
shell,table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX] [--name <name>]
                                    [--description <description>]
                                    <type>
```

Create new service

Positional arguments

<type>   New service type (compute, image, identity, volume, etc)

Optional arguments

-h, --help   show this help message and exit

--name <name>   New service name

--description <description>   New service description

openstack service delete

```
usage: openstack --os-auth-type token service delete [-h] <service>
```

Delete service

Positional arguments

<service>   Service to delete (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack service list

```
usage: openstack --os-auth-type token service list [-h] [-f {csv,html,json,
table,yaml}] [-c COLUMN]
                                    [--max-width <integer>]
                                    [--quote {all,minimal,none,nonnumeric}] [--long]
```

List services

Optional arguments

-h, --help   show this help message and exit

--long   List additional fields in output

openstack service show

```
usage: openstack --os-auth-type token service show [-h] [-f {html,json,shell,
table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX] [--catalog]
                                    <service>
```

Display service details

Positional arguments

<service>   Service to display (type, name or ID)

Optional arguments

-h, --help   show this help message and exit

--catalog   Show service catalog information

openstack snapshot create

```
usage: openstack --os-auth-type token snapshot create [-h] [-f {html,json,
shell,table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX] --name <name>
                                    [--description <description>] [--force]
```

```
                                     <volume>
```

Create new snapshot

Positional arguments

<volume>   Volume to snapshot (name or ID)

Optional arguments

-h, --help   show this help message and exit

--name <name>   Name of the snapshot

--description <description>   Description of the snapshot

--force   Create a snapshot attached to an instance. Default is
                                      False

openstack snapshot delete

```
usage: openstack --os-auth-type token snapshot delete [-h] <snapshot>
 [<snapshot> ...]
```

Delete snapshot(s)

Positional arguments

<snapshot>   Snapshot(s) to delete (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack snapshot list

```
usage: openstack --os-auth-type token snapshot list [-h] [-f {csv,html,json,
table,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--long]
```

List snapshots

Optional arguments

-h, --help   show this help message and exit

--long   List additional fields in output

openstack snapshot set

```
usage: openstack --os-auth-type token snapshot set [-h] [--name <name>]
```

```
                               [--description <description>]
                               [--property <key=value>]
                               <snapshot>
```

Set snapshot properties

Positional arguments

<snapshot>   Snapshot to modify (name or ID)

Optional arguments

-h, --help   show this help message and exit

--name <name>   New snapshot name

--description <description>   New snapshot description

--property <key=value>   Property to add/change for this snapshot (repeat option to set multiple properties)

openstack snapshot show

```
usage: openstack --os-auth-type token snapshot show [-h] [-f {html,json,shell,
table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--prefix PREFIX]
                               <snapshot>
```

Display snapshot details

Positional arguments

<snapshot>   Snapshot to display (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack snapshot unset

```
usage: openstack --os-auth-type token snapshot unset [-h] [--property <key>]
 <snapshot>
```

Unset snapshot properties

Positional arguments

<snapshot>   Snapshot to modify (name or ID)

Optional arguments

-h, --help   show this help message and exit

–property <key>   Property to remove from snapshot (repeat to remove multiple values)

openstack token issue

```
usage: openstack --os-auth-type token token issue [-h] [-f {html,json,shell,
table,value,yaml}]
                              [-c COLUMN] [--max-width <integer>]
                              [--prefix PREFIX]
```

Issue new token

Optional arguments

-h, –help   show this help message and exit

openstack token revoke

```
usage: openstack --os-auth-type token token revoke [-h] <token>
```

Revoke existing token

Positional arguments

<token>   Token to be deleted

Optional arguments

-h, –help   show this help message and exit

openstack usage list

```
usage: openstack --os-auth-type token usage list [-h] [-f {csv,html,json,
table,yaml}] [-c COLUMN]
                              [--max-width <integer>]
                              [--quote {all,minimal,none,nonnumeric}]
                              [--start <start>] [--end <end>]
```

List resource usage per project

Optional arguments

-h, –help   show this help message and exit

–start <start>   Usage range start date, ex 2012-01-20 (default: 4 weeks ago)

–end <end>   Usage range end date, ex 2012-01-20 (default: tomorrow)

openstack usage show

```
usage: openstack --os-auth-type token usage show [-h] [-f {html,json,shell,
table,value,yaml}]
```

```
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX] [--project <project>]
                                    [--start <start>] [--end <end>]
```

Show resource usage for a single project

Optional arguments

-h, --help   show this help message and exit

--project <project>   Name or ID of project to show usage for

--start <start>   Usage range start date, ex 2012-01-20 (default: 4 weeks ago)

--end <end>   Usage range end date, ex 2012-01-20 (default: tomorrow)

openstack user create

```
usage: openstack --os-auth-type token user create [-h] [-f {html,json,shell,
table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX] [--project <project>]
                                    [--password <password>] [--password-prompt]
                                    [--email <email-address>] [--enable | --disable]
                                    [--or-show]
                                    <name>
```

Create new user

Positional arguments

<name>   New user name

Optional arguments

-h, --help   show this help message and exit

--project <project>   Default project (name or ID)

--password <password>   Set user password

--password-prompt   Prompt interactively for password

--email <email-address>   Set user email address

--enable   Enable user (default)

--disable   Disable user

--or-show   Return existing user

openstack user delete

```
usage: openstack --os-auth-type token user delete [-h] <user> [<user> ...]
```

Delete user(s)

Positional arguments

<user>   User(s) to delete (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack user list

```
usage: openstack --os-auth-type token user list [-h] [-f {csv,html,json,table,
yaml}] [-c COLUMN]
                              [--max-width <integer>]
                              [--quote {all,minimal,none,nonnumeric}]
                              [--project <project>] [--long]
```

List users

Optional arguments

-h, --help   show this help message and exit

--project <project>   Filter users by project (name or ID)

--long   List additional fields in output

openstack user role list

```
usage: openstack --os-auth-type token user role list [-h] [-f {csv,html,json,
table,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--quote {all,minimal,none,nonnumeric}]
                                  [--project <project>]
                                  [<user>]
```

List user-role assignments

Positional arguments

<user>   User to list (name or ID)

Optional arguments

-h, --help   show this help message and exit

--project <project>   Filter users by <project> (name or ID)

openstack user set

```
usage: openstack --os-auth-type token user set [-h] [--name <name>] [--project
 <project>]
```

```
                               [--password <user-password>] [--password-prompt]
                               [--email <email-address>] [--enable | --disable]
                               <user>
```

Set user properties

Positional arguments

<user>   User to change (name or ID)

Optional arguments

-h, --help   show this help message and exit

--name <name>   Set user name

--project <project>   Set default project (name or ID)

--password <user-password>   Set user password

--password-prompt   Prompt interactively for password

--email <email-address>   Set user email address

--enable   Enable user (default)

--disable   Disable user

openstack user show

```
usage: openstack --os-auth-type token user show [-h] [-f {html,json,shell,
table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>]
                             [--prefix PREFIX]
                             <user>
```

Display user details

Positional arguments

<user>   User to display (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack volume create

```
usage: openstack --os-auth-type token volume create [-h] [-f {html,json,shell,
table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--prefix PREFIX] --size <size>
                                   [--snapshot-id <snapshot-id>]
                                   [--description <description>]
```

```
                                        [--type <volume-type>] [--user <user>]
                                        [--project <project>]
                                        [--availability-zone <availability-zone>]
                                        [--image <image>] [--source <volume>]
                                        [--property <key=value>]
                                        <name>
```

Create new volume

Positional arguments

<name>   New volume name

Optional arguments

-h, --help	show this help message and exit
--size <size>	New volume size in GB
--snapshot-id <snapshot-id>	Use <snapshot-id> as source of new volume
--description <description>	New volume description
--type <volume-type>	Use <volume-type> as the new volume type
--user <user>	Specify an alternate user (name or ID)
--project <project>	Specify an alternate project (name or ID)
--availability-zone <availability-ty-zone>	Create new volume in <availability-zone>
--image <image>	Use <image> as source of new volume (name or ID)
--source <volume>	Volume to clone (name or ID)
--property <key=value>	Set a property on this volume (repeat option to set multiple properties)

openstack volume delete

```
usage: openstack --os-auth-type token volume delete [-h] [--force] <volume>
  [<volume> ...]
```

Delete volume(s)

Positional arguments

<volume>   Volume(s) to delete (name or ID)

Optional arguments

-h, --help	show this help message and exit
--force	Attempt forced removal of volume(s), regardless of state (defaults to False)

openstack volume list

```
usage: openstack --os-auth-type token volume list [-h] [-f {csv,html,json,
table,yaml}] [-c COLUMN]
                                  [--max-width <integer>]
                                  [--quote {all,minimal,none,nonnumeric}]
                                  [--status <status>] [--name <name>]
                                  [--all-projects] [--long]
```

List volumes

Optional arguments

-h, --help   show this help message and exit

--status <status>   Filter results by status

--name <name>   Filter results by name

--all-projects   Include all projects (admin only)

--long   List additional fields in output

openstack volume set

```
usage: openstack --os-auth-type token volume set [-h] [--name <name>] [--
description <description>]
                                  [--property <key=value>]
                                  <volume>
```

Set volume properties

Positional arguments

<volume>   Volume to change (name or ID)

Optional arguments

-h, --help   show this help message and exit

--name <name>   New volume name

--description <description>   New volume description

--property <key=value>   Property to add or modify for this volume (repeat op-
                                    tion to set multiple properties)

openstack volume show

```
usage: openstack --os-auth-type token volume show [-h] [-f {html,json,shell,
table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--prefix PREFIX]
```

```
                            <volume>
```

Show volume details

Positional arguments

<volume>   Volume to display (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack volume type create

```
usage: openstack --os-auth-type token volume type create [-h]
                                    [-f {html,json,shell,table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--prefix PREFIX] [--property <key=value>]
                                    <name>
```

Create new volume type

Positional arguments

<name>   New volume type name

Optional arguments

-h, --help   show this help message and exit

--property <key=value>   Property to add for this volume type (repeat option to set
                                    multiple properties)

openstack volume type delete

```
usage: openstack --os-auth-type token volume type delete [-h] <volume-type>
```

Delete volume type

Positional arguments

<volume-type>   Volume type to delete (name or ID)

Optional arguments

-h, --help   show this help message and exit

openstack volume type list

```
usage: openstack --os-auth-type token volume type list [-h] [-f {csv,html,
json,table,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--quote {all,minimal,none,nonnumeric}]
```

```
                                    [--long]
```

List volume types

Optional arguments

-h, --help   show this help message and exit

--long   List additional fields in output

openstack volume type set

```
usage: openstack --os-auth-type token volume type set [-h] [--property <key=
value>] <volume-type>
```

Set volume type properties

Positional arguments

<volume-type>   Volume type to modify (name or ID)

Optional arguments

-h, --help   show this help message and exit

--property <key=value>   Property to add or modify for this volume type (repeat op-
                                        tion to set multiple properties)

openstack volume type unset

```
usage: openstack --os-auth-type token volume type unset [-h] [--property
 <key>] <volume-type>
```

Unset volume type properties

Positional arguments

<volume-type>   Volume type to modify (name or ID)

Optional arguments

-h, --help   show this help message and exit

--property <key>   Property to remove from volume type (repeat option to remove
                          multiple properties)

openstack volume unset

```
usage: openstack --os-auth-type token volume unset [-h] [--property <key>]
 <volume>
```

Unset volume properties

Positional arguments

<volume>   Volume to modify (name or ID)

Optional arguments

-h, –help   show this help message and exit

–property <key>   Property to remove from volume (repeat option to remove multi-
                           ple properties)

Appendix A. Community support

Table of Contents

The following resources are available to help you run and use OpenStack. The OpenStack community constantly improves and adds to the main features of OpenStack, but if you have any questions, do not hesitate to ask. Use the following resources to get OpenStack support, and troubleshoot your installations.

Documentation

For the available OpenStack documentation, see docs.openstack.org.

To provide feedback on documentation, join and use the `<openstack-docs@lists.openstack.org>` mailing list at OpenStack Documentation Mailing List, or report a bug.

The following books explain how to install an OpenStack cloud and its associated components:

- *Installation Guide for openSUSE 13.1 and SUSE Linux Enterprise Server 11 SP3*

- *Installation Guide for Red Hat Enterprise Linux 7, CentOS 7, and Fedora 20*

- *Installation Guide for Ubuntu 14.04*

The following books explain how to configure and run an OpenStack cloud:

- *Architecture Design Guide*

- *Cloud Administrator Guide*

- *Configuration Reference*

- *Operations Guide*

- *High Availability Guide*

- *Security Guide*

- *Virtual Machine Image Guide*

The following books explain how to use the OpenStack dashboard and command-line clients:

- *API Quick Start*

- *End User Guide*

- *Admin User Guide*

- *Command-Line Interface Reference*

The following documentation provides reference and guidance information for the OpenStack APIs:

- OpenStack API Complete Reference (HTML)

- API Complete Reference (PDF)

- *OpenStack Block Storage Service API v2 Reference*

- *OpenStack Compute API v2 and Extensions Reference*

- *OpenStack Identity Service API v2.0 Reference*

- *OpenStack Image Service API v2 Reference*

- *OpenStack Networking API v2.0 Reference*

- *OpenStack Object Storage API v1 Reference*

The *Training Guides* offer software training for cloud administration and management.

ask.openstack.org

During the set up or testing of OpenStack, you might have questions about how a specific task is completed or be in a situation where a feature does not work correctly. Use the ask.openstack.org site to ask questions and get answers. When you visit the http://ask.openstack.org site, scan the recently asked questions to see whether your question has already been answered. If not, ask a new question. Be sure to give a clear, concise summary in the title and provide as much detail as possible in the description. Paste in your command output or stack traces, links to screen shots, and any other information which might be useful.

OpenStack mailing lists

A great way to get answers and insights is to post your question or problematic scenario to the OpenStack mailing list. You can learn from and help others who might have similar issues. To subscribe or view the archives, go to http://lists.openstack.org/cgi-bin/mailman/listinfo/openstack. You might be interested in the other mailing lists for specific projects or development, which you can find on the wiki. A description of all mailing lists is available at http://wiki.openstack.org/MailingLists.

The OpenStack wiki

The OpenStack wiki contains a broad range of topics but some of the information can be difficult to find or is a few pages deep. Fortunately, the wiki search feature enables you to search by title or content. If you search for specific information, such as about networking or nova, you can find a large amount of relevant material. More is being added all the time, so be sure to check back often. You can find the search box in the upper-right corner of any OpenStack wiki page.

The Launchpad Bugs area

The OpenStack community values your set up and testing efforts and wants your feedback. To log a bug, you must sign up for a Launchpad account at https://launchpad.net/+login. You can view existing bugs and report bugs in the Launchpad Bugs area. Use the search feature to determine whether the bug has already been reported or already been fixed. If it still seems like your bug is unreported, fill out a bug report.

Some tips:

• Give a clear, concise summary.

• Provide as much detail as possible in the description. Paste in your command output or stack traces, links to screen shots, and any other information which might be useful.

• Be sure to include the software and package versions that you are using, especially if you are using a development branch, such as, `"Juno release" vs git commit bc79c3ecc55929bac585d04a03475b72e06a3208`.

• Any deployment-specific information is helpful, such as whether you are using Ubuntu 14.04 or are performing a multi-node installation.

The following Launchpad Bugs areas are available:

• Bugs: OpenStack Block Storage (cinder)

• Bugs: OpenStack Compute (nova)

• Bugs: OpenStack Dashboard (horizon)

• Bugs: OpenStack Identity (keystone)

• Bugs: OpenStack Image Service (glance)

• Bugs: OpenStack Networking (neutron)

• Bugs: OpenStack Object Storage (swift)

• Bugs: Bare Metal (ironic)

• Bugs: Data Processing Service (sahara)

• Bugs: Database Service (trove)

- Bugs: Orchestration (heat)

- Bugs: Telemetry (ceilometer)

- Bugs: Queue Service (marconi)

- Bugs: OpenStack API Documentation (developer.openstack.org)

- Bugs: OpenStack Documentation (docs.openstack.org)

The OpenStack IRC channel

The OpenStack community lives in the #openstack IRC channel on the Freenode network. You can hang out, ask questions, or get immediate feedback for urgent and pressing issues. To install an IRC client or use a browser-based client, go to http://webchat.freenode.net/. You can also use Colloquy (Mac OS X, http://colloquy.info/), mIRC (Windows, http://www.mirc.com/), or XChat (Linux). When you are in the IRC channel and want to share code or command output, the generally accepted method is to use a Paste Bin. The OpenStack project has one at http://paste.openstack.org. Just paste your longer amounts of text or logs in the web form and you get a URL that you can paste into the channel. The OpenStack IRC channel is #openstack on irc.freenode.net. You can find a list of all OpenStack IRC channels at https://wiki.openstack.org/wiki/IRC.

Documentation feedback

To provide feedback on documentation, join and use the <openstack-docs@lists.openstack.org> mailing list at OpenStack Documentation Mailing List, or report a bug.

OpenStack distribution packages

The following Linux distributions provide community-supported packages for OpenStack:

- **Debian:** http://wiki.debian.org/OpenStack

- **CentOS, Fedora, and Red Hat Enterprise Linux:** http://openstack.redhat.com/

- **openSUSE and SUSE Linux Enterprise Server:** http://en.opensuse.org/Portal:OpenStack

- **Ubuntu:** https://wiki.ubuntu.com/ServerTeam/CloudArchive