Oracle® Cloud

CLI Reference for Oracle Cloud Infrastructure Compute Classic

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Preface

This document describes Compute Classic command line interface (CLI).

You can use the Compute Classic CLI to view and delete instances, manage storage and networking, and manage SSH keys.

All documentation is applicable to using the CLI on Oracle Cloud and Oracle Cloud Machine, unless otherwise indicated.

Audience

Compute Classic CLI may be used by developers, system administrations, and IT operations personnel to complete the following tasks:

- To control life-cycle management of instances, storage volumes, and other resources
- To complete medium to large scale migrations into Oracle Cloud.
- To script the life-cycle management of instances, such as creating, starting, stopping, and monitoring instances.

A basic understanding of the following is assumed:

- The UNIX command line
- Virtualization technologies
- Networking and disk storage concepts

Related Resources

For more information, see the following documents in the Compute Classic documentation set:

- *Using Oracle Cloud Infrastructure Compute Classic*
- *REST API Reference for Oracle Cloud Infrastructure Compute Classic*

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.

Convention	Meaning
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Part I

Getting Started with Compute Classic CLI

Compute Classic provides a comprehensive CLI commands that you can use to provision and manage your compute, storage, and network resources in the service.

Topics

1

Preparing to Use the CLI

Before you begin using the CLI, you must install the CLI client and set up a few environment variables as described in this section.

Topics

Before You Begin with Compute Classic

- Create and configure your account on Oracle Cloud. See Getting an Oracle.com Account in *Getting Started with Oracle Cloud*.
- Obtain a trial or paid subscription to Compute Classic. See How to Begin with Compute Classic Subscriptions in *Using Oracle Cloud Infrastructure Compute Classic*.
- Understand the features of the service. See About Compute Classic in *Using Oracle Cloud Infrastructure Compute Classic*.
- Be familiar with the Compute Classic terminology. See Compute Classic Terminology in *Using Oracle Cloud Infrastructure Compute Classic*.
- Contact your account administrator and get the required roles assigned to your user name in Oracle Cloud Infrastructure Classic Console.
  - To create, update, and delete Compute Classic objects, you must have the `Compute_Operations` role.
  - To view or retrieve details of objects, you must have the `Compute_Monitor` or `Compute_Operations` role.

  For more information, see About Compute Classic Roles in *Using Oracle Cloud Infrastructure Compute Classic*.

  If the required role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

System Requirements and Supported Platforms

Ensure that the system on which you're going to install the CLI is on a supported platform and meets the specified requirements.

Supported Platforms

- Oracle Linux 6.6, 6.7, and 7.1
- OSX 10.12.6
- RedHat Enteprise Linux 6.7 and 7.1
- Ubuntu 16 and 17
- CentOS 7
- Windows Server 2008 R2 and 2012 R2

System Requirements for Linux Systems

- Python 2 (2.6.6 or later) must be pre-installed.
- The python-dateutil module is required and it is installed automatically when you use yum.

Installing the CLI

To install the CLI:

1. Download the CLI installation bundle (`.zip` file) from http://www.oracle.com/technetwork/topics/cloud/downloads/index.html#opccli.
2. Unzip the CLI installation bundle.

   ```
   unzip opc-cli-RELEASE.zip
   ```

   RELEASE indicates the release version of the CLI.

   The following files are extracted:

   ```
   Archive:  opc-cli-RELEASE.zip
     inflating: opc-cli-RELEASE.x86_64.rpm
     inflating: README
     inflating: linux/
     inflating: linux/opc
     inflating: darwin/
     inflating: darwin/opc
     inflating: windows/
     inflating: windows/opc.exe
   ```

3. You can install the CLI in one of the following ways.
   - By copying the binary file to an appropriate location.
     - On Oracle Linux, RedHat Enteprise Linux, Ubuntu, CentOS systems:

       ```
       sudo cp ./linux/opc /usr/bin
       ```

     - On Mac OSX systems:

       ```
       sudo cp ./darwin/opc /usr/bin
       ```

  - On Windows systems, update the value of the existing `PATH` environment variable to point to the location where the `windows/opc.exe` file is available on your system. For information about updating environment variables on a Windows system, refer to your Windows documentation.

- By installing the RPM file on Oracle Linux, RedHat Enteprise Linux, and CentOS systems.

  a. Run the following command.

  ```
  sudo yum install ./opc-cli-RELEASE.rpm
  ```

  b. When prompted, enter **y**.

  Wait till you see the **Complete!** message.

  ```
  Installed:
    opc_cli-RELEASE.x86_64

  Complete!
  ```

4. Perform the steps described in Quick Start.

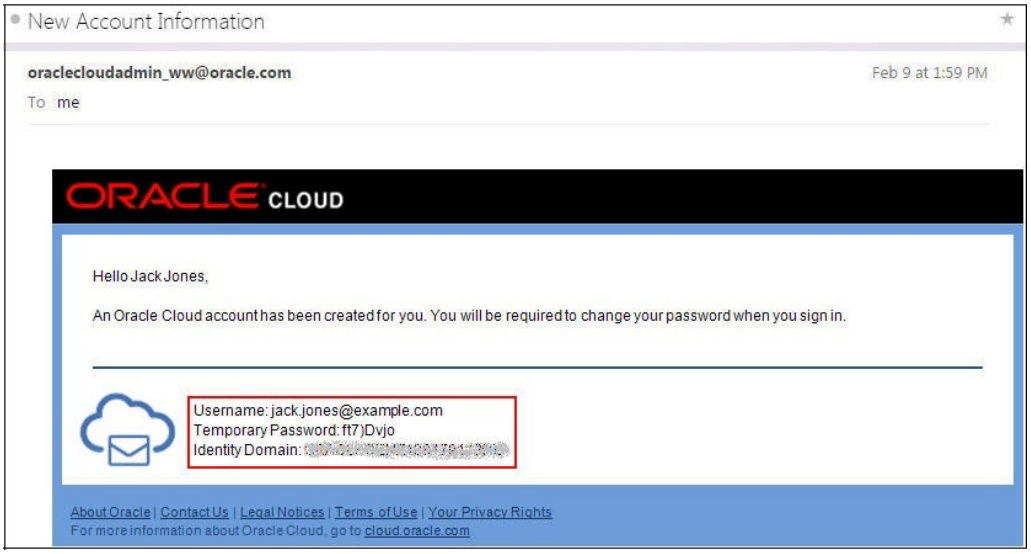
Quick Start

Create a profile to store your user name, password, and REST API endpoint URL. The sample commands provided in this section are for the Bash shell. Based on your Linux shell, the commands you should use may vary. For information about other ways to pass the information required to run CLI commands, see Setting Up Environment Variables and Files.

1. Identify the type of cloud account that you are using: Traditional Cloud Accounts (also known as Cloud Service Accounts) or Cloud Accounts with Identity Cloud Service (IDCS). See Types of Oracle Cloud Accounts in *Getting Started with Oracle Cloud*.

> **Note:**
>
> Oracle Cloud Machine only supports Cloud Accounts with Identity Cloud Service (IDCS).

2. Note down the account credentials for your Compute Classic instance.
   - On Oracle Cloud Machine: The account creation email from Oracle would contain the user name and password for your Compute Classic instance.
   - On Oracle Cloud: The account creation email from Oracle would contain the identity domain name, user name, and password for your Compute Classic instance, as shown in the following example:



If you don't have this information, contact your service administrator.

3. Note down the REST API endpoint URL of your Compute Classic site. To find out the REST API endpoint URL of your site, follow the instructions at Send Requests in *REST API for Oracle Cloud Infrastructure Compute Classic*.
4. While running CLI commands, you have to pass a two-part user name. Specify the two-part user name in one of the following ways:
   - On Oracle Cloud: If you are using a traditional cloud account or if your account creation email contains information about the identity domain, then you must use the following format for the two-part user name:

     `/Compute-identity_domain/user`

     For example, if your identity domain is `acme` and the *username* in your account-creation email is `jack.jones@example.com`, then the following would be the two-part user name that you must use for running CLI commands:

     `/Compute-acme/jack.jones@example.com`
   - On Oracle Cloud Machine: If you are using a cloud account with Identity Cloud Service (IDCS) or if your account creation email **does not** contain information about the identity domain, then you must use the following format for the two-part user name:

     `/Compute-serviceInstanceID/username`

     To get the service instance ID for your Compute Classic instance:

     a. Sign in to the Oracle Cloud Infrastructure Classic Console application. See Signing in to Your Cloud Account in *Getting Started with Oracle Cloud*.

        The Oracle Cloud Infrastructure Classic Console page is displayed. It lists the services that are assigned to your account.

     b. In the Compute service tile, click **Compute**. The Service Details page for Compute Classic is displayed.

     c. Under Additional Information, note down the **Service Instance ID**.

For example, if your service instance ID is `575260584` and the username in your account-creation email is `jack.jones@example.com`, then use the following two-part user name for REST API calls:

```
/Compute-575260584/jack.jones@example.com
```

> **Note:**
>
> All examples in this document use `/Compute-acme/jack.jones@example.com` as the two-part user name. If you are using a Cloud Account with IDCS, replace `acme` in the two-part user name with your service instance ID.

5. Store your password in a plain-text file of your choice (for example, in your `/home/user` directory).
   - On Windows system, ensure the file containing the password is a read-only file.
   - On other systems, ensure that the file containing the password isn't world-readable, by changing the permission to `600`.

     ```
     chmod 600 /full/path/to/password/file
     ```
6. Create a directory where you want to save your profile file. For example, `~/.opc/profiles`.
7. Create a new file in this folder. In this example, let's create a profile with the file name `profile-jack`.

   ```
   vi profile-jack
   ```

   ```
   {
     "global": {
       "debug-requests": false,
       "http-proxy":"http://www-proxy.example.com:80",
       "https-proxy":"https://www-proxy.example.com:80"
     },
     "compute": {
       "user": "/Compute-identity_domain/user",
       "password-file": "/full/path/to/password/file",
       "endpoint": "api-z999.compute.us0.oraclecloud.com"
     }
   }
   ```

   Replace `user`, `password-file`, and `endpoint` with values that are specific to your environment.
8. Ensure that the profile file isn't world-readable, by changing the permission to `600`.

   ```
   chmod 600 /full/path/to/profile/file
   ```
9. Store the name of the profile file in the `OPC_PROFILE_FILE` environment variable. The default value of this variable is `default` which points to the `~/.opc/profile/default` profile file.

   ```
   export OPC_PROFILE_FILE="name-of-profile-file"
   ```

10. Store the name of the folder in which the profile file is located in the `OPC_PROFILE_DIRECTORY` environment variable. The default value of this variable is `~/.opc/profiles`.

    ```
    export OPC_PROFILE_DIRECTORY="/full/path/of/profile-directory"
    ```

11. Understand the syntax of opc compute CLI commands. See General Syntax of opc compute Commands. You can now run the Compute Classic CLI commands.

12. (Optional.) Create your first storage volume.

    ```
    opc compute storage-volumes add /Compute-acme/jack.jones@example.com/MyVolume /
    oracle/public/storage/default 10G --description 'My first storage volume'
    ```

13. Review the details of your first storage volume.

    ```
    opc compute storage-volumes get /Compute-acme/jack.jones@example.com/MyVolume
    ```

    After the volume is created, the `status` field in the response shows `online`.

2

General Syntax of opc compute Commands

You can view the general syntax of `opc compute` commands by running the following command:

```
opc -h
```

The following is the general syntax of `opc compute` commands:

```
opc [global_options...] service_name [service_options...] resource_name command
[arguments...] [options...]
```

Option	Description	More Information
`global_options...`	The global command line options.	Global Options
`service_name`	Specify `compute`.	
`service_options...`	Command line options that are specific to Compute Classic.	Service Options
`resource_name`	The Compute Classic resource that you want to manage using `opc compute` CLI. To view the list of Compute Classic resources that you can manage, run the following command: `opc compute -h`	
`command`	An action that you can perform on Compute Classic objects by using the CLI commands.	General CLI Command Actions
`[arguments...]` `[options...]`	Arguments and options are specific to each command.	

Global Options

The following table describes the general CLI command options that you can use. It is not mandatory to provide values for any of these options.

Option	Description

`--format value`
`-f value`
	Specifies whether the command output should be presented in plain-text format without any table borders, table format, or JSON format.
	You can specify one of the following values:
	• `text`: This is the default option. Displays the output in plain-text format without any table borders. If you use the text format while executing the `list` commands, only values for the name parameter is returned.
	Example
	`opc -f text compute image-list list /oracle/public/`
	Sample output
	This is a sample output. The output you see will vary depending on your environment. Some lines may be truncated with ellipses (...) for readability.
	`NAME`
	`/oracle/public/oel6`
	`/oracle/public/WIN_2008_SE_R2-1.0.0-20160902-040218`
	`...`
	• `json`: Displays the output in the JavaScript Object Notation (JSON) format and this output is not filtered. Note that if you specify this format, the CLI ignores the `-F` option.
	Example
	`opc -f json compute image-list get /oracle/public/oel6`
	Sample output
	This is a sample output. The output you see will vary depending on your environment.
	`{`
	`"default": 1,`
	`"description": "\"\"",`
	`"entries": [`
	`{`
	`"attributes": {},`
	`"imagelist": null,`
	`"machineimages": [`
	`"/oracle/public/oel6"`
	`],`
	`"uri": "https://api-z999.compute.us0.oraclecloud.com/imagelist/oracle/public/oel6/entry/1",`
	`"version": 1`
	`}`
	`],`
	`"name": "/oracle/public/oel6",`
	`"uri": "https://api-z999.compute.us0.oraclecloud.com/imagelist/oracle/public/oel6"`
	`}`
	• `table`: Displays the each field in a separate column. While using the `-f table` flag, you can use the `-F` or `-fields` option to filter the output for specific resource attributes.
	If you have already set the `OPC_FORMAT` environment variable, this command line argument overrides that.
	Example

Option	Description
	`opc -f table compute image-list get /oracle/public/oel6` **Sample output** This is a sample output. The output you see will vary depending on your environment. `+------------------------` `+------------------------------------------------------` `------+` ` default	1` ` description	""` ` entries/0/imagelist |` ` entries/0/machineimages	["/oracle/public/oel6"]` ` entries/0/uri	https://api-` `z999.compute.us0.oraclecloud.com/imagelist/oracle/public/` `oel6/entry/1` ` entries/0/version	1` ` name	/oracle/public/oel6` ` uri	https://api-` `z999.compute.us0.oraclecloud.com/imagelist/oracle/public/` `oel6` `+------------------------` `+--` `------+`

Option	Description

`-F` *`comma-separated-field-names`*
`--fields` *`comma-separated-field-names`*
	Lists values only for the specified resource attributes. You can use this option to filter the output to show only the attributes that you want to see, particularly for objects that have numerous attributes.
	To use this option, you must also specify the `-f table` or `-f text` option.
	If you have already set the `OPC_FIELDS` environment variable, this command line argument overrides that.
	The list of attributes that you can specify depends on the resource. For example, the SSH key resource has the attributes `name`, `enabled`, and `key`.
	Example 1: Viewing filtered output in tabular format with borders
	To retrieve only the names and RAM of all available shapes:
	`opc -f table -F name,ram compute shape list`
	Sample output
	This is a sample output. The output you see will vary depending on your environment. Some lines may be truncated with ellipses (...) for readability.
	`+------------+--------+`
	`  NAME  | RAM`
	`+------------+--------+`
	`  oc3  |  7680`
	`  oc5  | 30720`
	`  oc4  | 15360`
	`  oc6  | 61440`
	`  ...`
	`+------------+--------+`
	Example 2: Viewing filtered output in text format without table borders
	To retrieve only the names and RAM of all available shapes:
	`opc -f text -F name,ram compute shape list`
	Sample output
	This is a sample output. The output you see will vary depending on your environment. Some lines may be truncated with ellipses (...) for readability.
	`NAME  RAM`
	`oc3  7680`
	`oc5  30720`
	`oc4  15360`
	`oc6  61440`
	`...  ...`

`--debug-requests`	Indicates that the command must be run in debug mode. The output in this mode is very verbose. It includes the request and response details of the internal API call that is invoked for the CLI command. This output may be useful for debugging issues. If you have already set the `DEBUG` environment variable, this command line argument overrides that value.
`--insecure-tls`	Specify this option when you want to disable SSL certificate verification or if you are using an unsigned certificate.

Option	Description
`--insecure-http`	Specify this option when you want to use HTTP instead of HTTPS while connection to Oracle Cloud services.
`--profile` *`file_name`* `-p` *`file_name`*	A text file that contains the user name and password for authenticating access to Compute Classic. It also contains information about the REST API endpoint URL for your Compute Classic site. For information about creating a profile, see Setting Up the Required Environment Variables and Files. Note that the file must not be world-readable. If you have already set the `OPC_PROFILE_FILE` environment variable, this command line argument overrides that value. Required if you choose not to set the environment variables: `OPC_COMPUTE_ENDPOINT`, `OPC_COMPUTE_USER`, and `OPC_COMPUTE_PASSWORD_FILE`. If you don't use this option and you have not set the environment variables, then while running every command you must explicitly specify the REST API endpoint URL by using the `-e` option, the user name by using the `-u` option, and the file which contains the password by using the `-pf` option as described in Service Options.
`--profile-directory` *`directory_name`* `--pd` *`directory_name`*	The folder that contains the file name that you specify using the `--profile` or `-p` option. If you have already set the `OPC_PROFILE_DIRECTORY` environment variable, this command line argument overrides that value.
`-h` `--help`	Show help message and exit. **Example** `opc -h`

`-v`
`--version`
	Prints the version of the CLI.
	Example
	`opc --version`
	Sample output
	`opc version 17.2.4`

`--verbose`	Print verbose output (where supported).

Service Options

The following table lists the command options that are specific to Compute Classic. For information about using these options, see Setting Up Environment Variables and Files.

Option	Description
`-u` *`value`* `--user` *`value`*	User name for authenticating access to Compute Classic.
`-pf` *`file`* `--password-file` *`file`*	Provide the full path of the text file containing the password for the user that you specify using the `-u` option. Note that the file must not be world-readable.

Option	Description
`-e` *`url`* `--endpoint` *`url`*	The API endpoint URL of your site in Compute Classic account. Some of the examples in this guide use the following API endpoint URL: `https://api-z999.compute.us0.oraclecloud.com`
`-ac` *`environment variable`* `--auth-cookie` *`environment variable`*	Provide a valid authentication cookie.
`-h` `--help`	Show help message and exit. **Example** `opc compute -h`

General CLI Command Actions

The following table describes the general actions that you can perform on Compute Classic objects by using the CLI commands.

Note that some of these actions may not be supported for certain objects and there may be additional, unique actions for some objects.

Action	Description
`add`	Creates an object.
`delete`	Deletes an object. No response is returned for the delete action.
`discover`	Retrieves the names of the specified object in a container and the names of the sub-containers. This command does not retrieve details of the object and the contents of the sub-container. You must specify a container, which can only be a parent path of the key field. For example, `/Compute-`*`identity_domain`*`/user`.
`get`	Retrieves details of the specified object.
`list`	Retrieves information about the specified object from the container you specify. This command not only retrieves the name of the object, but also all other details of the object. For some objects, you can also use additional arguments to filter the output.
`update`	Updates values of all the parameters of the specified object. If you don't provide a value for a parameter while running this command, that parameter is set to `null`. Before running the `update` command, you can run the `get` command to retrieve all the parameter values that are currently assigned, so that you can identify the values you want to retain and the ones you want to change.

Accessing Context-Sensitive Help at the Command Line

While executing a command, you can access context-sensitive help at the command line. Here are a few examples.

- `opc --help`

  Provides information about the general syntax to use the CLI.

- `opc compute --help`

Provides information about the general syntax to use the `opc compute` CLI, the command-line options, and lists all the Compute Classic resources that you can manage using the CLI.

- `opc compute instances -help`

  Describes the Compute Classic resource, `instances` in this example and lists the actions that you can take on this resource.

  ```
  SUMMARY:
     An Compute Classic instance is a virtual machine running a specific operating
  system and with CPU and memory resources that you specify

  USAGE:
     opc compute instances command [arguments...] [options...]

  COMMANDS:
        delete    Delete an Instance
        discover  Retrieve Names of all Instances in a Container
        get       Retrieve Details of an Instance
        list      Retrieve Details of all Instances in a Container

  OPTIONS:
     --help, -h  show help
  ```

- `opc compute instances get -help`

  Provides the syntax to perform the specified action on the specified resource. In this example, the `get` action is performed on the `instances` resource. It also lists all the required and mandatory arguments to run the command and describes each argument.

  ```
  NAME:
     compute instances get - Retrieve Details of an Instance

  USAGE:
     compute instances get name

  DESCRIPTION:
     Retrieve Details of an Instance

  REQUIRED ARGUMENTS:
     name - Multipart name of the object.
  ```

The CLI also prompts you to enter the correct command, if you misspell the action or the resource name. For example:

- ```
  opc compute orchestaration
  Can't find "orchestaration", did you mean "orchestration"?
  ```
- ```
  opc compute orchestration updat
  Can't find "updat", did you mean "update"?
  ```

3
Environment Variables and Profile Files

You can provide credentials and other configuration information using environment variables, profile files, and command line arguments.

Here's the order of precedence (the first option has the highest precedence):

1. The values, such as `-pf` and `-u`, that you specify at the command line take precedence over all other options.
2. When you don't provide command line arguments, the values specified in the environment variables, such as `OPC_COMPUTE_USER` and `OPC_COMPUTE_PASSWORD_FILE`, take precedence over the values provided in the profile file.
3. When you don't specify values for command line arguments and environment variables, values specified in the profile file are considered.

Topics

About Environment Variables

The following table lists all the environment variables you can use in Compute Classic CLI. It is not mandatory to specify values for any of these environment variables. You can specify values for one or more environment variables depending on how you want to interact with the CLI. Values that you specify in the environment variables override the values specified in the profile file. However, the values you specify at the command line override all the other values.

Environment Variable	Description
`DEBUG`	Set this to `true` to run commands in debug mode. The output in this mode is very verbose. It includes the request and response details of the internal API call that is invoked for the CLI command. You can use this output for debugging issues. The default value is `false`. You can set the environment variable from the Bash shell as shown in the following example: `export DEBUG="true"`
`OPC_COMPUTE_COOKIE`	Store the authentication cookie value in this environment variable. An authentication cookie is created when you run the Authentication command.

Environment Variable	Description
`OPC_COMPUTE_ENDPOINT`	Store the REST API endpoint URL of your Compute Classic site in this environment variable. To find out the REST API endpoint URL of your site, follow the instructions at Send Requests in *REST API for Oracle Cloud Infrastructure Compute Classic*. You can set the environment variable from the Bash shell as shown in the following example: `export OPC_COMPUTE_ENDPOINT="api-z999.compute.us0.oraclecloud.com"`
`OPC_COMPUTE_PASSWORD_FILE`	Name of the plain-text file that contains the password for authenticating access to Compute Classic. The account creation email from Oracle would contain the password for your Compute Classic instance. Ensure that the file containing the password isn't world-readable. You can set the environment variable from the Bash shell as shown in the following example: `export OPC_COMPUTE_PASSWORD_FILE="/full/path/of/password-file"`
`OPC_COMPUTE_USER`	Two-part user name (`/Compute-`*`identity_domain`*`/`*`user`*). The account creation email from Oracle would contain the identity domain name and user name for your Compute Classic instance. For example, if your identity domain is `acme` and the username in your account-creation email is `jack.jones@example.com`, then the following would be the two-part user name that you must use for running CLI commands: `/Compute-acme/jack.jones@example.com`. You can set the environment variable from the Bash shell as shown in the following example: `export OPC_COMPUTE_USER="/Compute-acme/jack.jones@example.com"`
`OPC_FIELDS`	Comma separated fields for table output. Lists values only for the specified resource attributes. You can use this option to filter the output to show only the attributes that you want to see, particularly for objects that have numerous attributes. You can use this option only when you have specified that the output should be displayed in tabular format. You can set the environment variable from the Bash shell as shown in the following example: `export OPC_FIELDS="name,status"`
`OPC_FORMAT`	Specify one of the following formats in which you want the output to be displayed: `json` or `table`. The default value for this environment variable is `json`. You can set the environment variable from the Bash shell as shown in the following example: `export OPC_FORMAT="table"`

Environment Variable	Description
`OPC_PROFILE_FILE`	Name of the text file that contains the user name and password for authenticating access to Compute Classic. It also contains information about the REST API endpoint URL for your Compute Classic site. For information about creating a profile, see Setting Up the Required Environment Variables and Files. Note that the file must not be world-readable. The default value for this environment variable is `default` which points to the `~/.opc/profile/default` profile file. You can set the environment variable from the Bash shell as shown in the following example: `export OPC_PROFILE_FILE="`*`name-of-profile-file`*`"`
`OPC_PROFILE_DIRECTORY`	The folder that contains the file name that you specify using the --profile or -p option. The default value for this environment variable is `~/.opc/profiles`. You can set the environment variable from the Bash shell as shown in the following example: `export OPC_PROFILE_DIRECTORY="`*`/full/path/of/profile-directory`*`"`

Tip:

To make the environment variables persist across login sessions, add the `export` commands described earlier to your `.bash_profile` or `.bashrc` file.

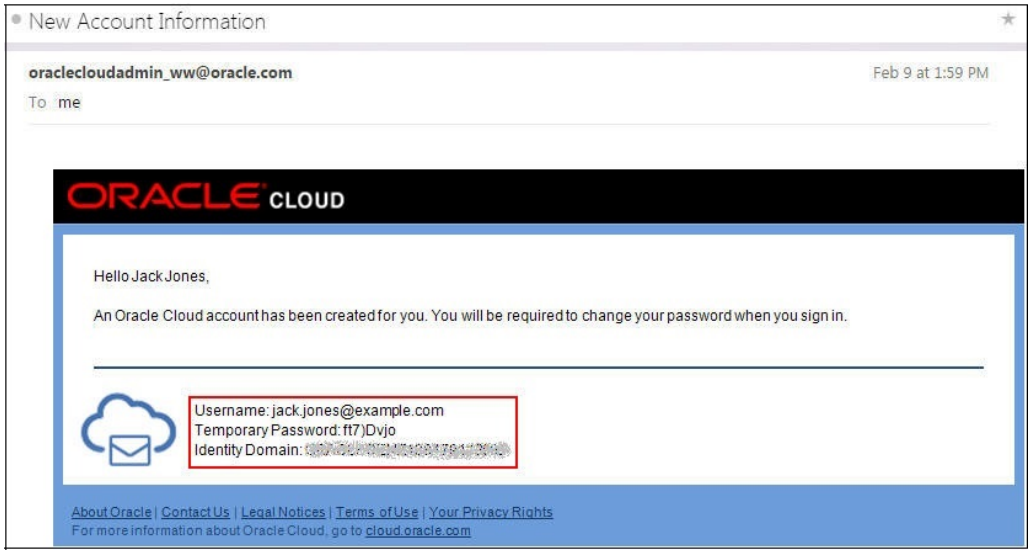
Setting Up Environment Variables and Files

While running the Compute Classic CLI commands, you must provide the user name, password, and REST API endpoint URL. There are many ways in which you can provide these values. You can use any one of these following ways based on your requirement.

On the host on which you installed the CLI client, do one of the following:

1. Note down the REST API endpoint URL of your Compute Classic site. To find out the REST API endpoint URL of your site, follow the instructions at Send Requests in *REST API for Oracle Cloud Infrastructure Compute Classic*.
2. Note down your two-part user name (`/Compute-`*`identity_domain/user`*).

   The account creation email from Oracle would contain the identity domain name, user name, and password for your Compute Classic instance, as shown in the following example:



If you don't have this information, contact your service administrator.

> **Note:**
>
> The user name consists of two parts, in the following format:
>
> `/Compute-identity_domain/user`
>
> For example, if your identity domain is `acme` and the *username* in your account-creation email is `jack.jones@example.com`, then the following would be the two-part user name that you must use for running CLI commands:
>
> `/Compute-acme/jack.jones@example.com`

3. Store your password in a plain-text file of your choice (for example, in your `/home/user` directory).

   Ensure that the file containing the password isn't world-readable, by changing the permission to `600`.

   ```
   chmod 600 /full/path/to/password/file
   ```

4. While running the Compute Classic CLI commands, you must provide the user name, password, and REST API endpoint URL in one of the following ways:

   - Option 1: Create a profile to store your user name, password, and REST API endpoint URL.

     a. Create a directory where you want to save your profile file. For example, `~/.opc/profiles`.

     b. Create a new file in this folder. In this example, let's create a profile with the file name `profile-jack`.

     ```
     vi profile-jack

     {
       "global": {
     ```

```
    "format": "json",
    "debug-requests": false
  },
  "compute": {
    "user": "/Compute-identity_domain/user",
    "password-file": "/full/path/to/password/file",
    "endpoint": "api-z999.compute.us0.oraclecloud.com"
  }
}
```

Replace `user`, `password-file`, and `endpoint` with values that are specific to your environment.

In the profile file, you can also specify values for the global options. In this example, under global options, `JSON` is specified as the output format and that the commands should not be executed in debug mode.

c. Ensure that the profile file isn't world-readable, by changing the permission to `600`.

```
chmod 600 /full/path/to/profile/file
```

d. Store the name of the profile file in the `OPC_PROFILE_FILE` environment variable. The default value of this variable is `default` which points to the `~/.opc/profile/default` profile file.

```
export OPC_PROFILE_FILE="name-of-profile-file"
```

e. Store the name of the folder in which the profile file is located in the `OPC_PROFILE_DIRECTORY` environment variable. The default value of this variable is `~/.opc/profiles`.

```
export OPC_PROFILE_DIRECTORY="/full/path/of/profile-directory"
```

If you don't set the `OPC_PROFILE_DIRECTORY` and `OPC_PROFILE_FILE` environment variables, you must specify these values at the command line. Use the `-p` and `-pd` options at the command line to specify the name of the profile file and its location respectively.

> **Tip:**
>
> To make the environment variables persist across login sessions, add the `export` commands described earlier to your `.bash_profile` or `.bashrc` file.

- Option 2: Set up environment variables.

  If you specify credentials in environment variables, then these credentials take precedence over the credentials specified in the profile file.

  – Store the REST API endpoint URL of your Compute Classic site in an environment variable named `OPC_COMPUTE_ENDPOINT`.

    You can set the environment variable from the Bash shell as shown in the following example:

    ```
    export OPC_COMPUTE_ENDPOINT="api-z999.compute.us0.oraclecloud.com"
    ```

  – Store your two-part user name (`/Compute-identity_domain/user`) in an environment variable named `OPC_COMPUTE_USER`.

You can set the environment variable from the Bash shell as shown in the following example:

```
export OPC_COMPUTE_USER="/Compute-acme/jack.jones@example.com"
```

– Store the location of your password file in an environment variable named `OPC_COMPUTE_PASSWORD_FILE`.

You can set the environment variable from the Bash shell as shown in the following example:

```
export OPC_COMPUTE_PASSWORD_FILE="/full/path/to/password/file"
```

> **Tip:**
>
> To make the environment variables persist across login sessions, add the `export` commands described earlier to your `.bash_profile` or `.bashrc` file.

- Option 3: Use command line arguments.

  If you specify credentials at the command line, then these credentials take precedence over the credentials specified using the other methods.

  If you don't set the environment variables or create a profile file, then while running every command you must explicitly specify the REST API endpoint URL by using the `-e` option, the user name by using the `-u` option, and the password by using the `-pf` option as described in Service Options.

You can now run the Compute Classic CLI commands.

4

Workflows for Typical Use Cases

For certain use cases, you must run multiple CLI commands to Compute Classic, in a specific sequence. Some of these use cases are described here. Use this information as a guide to learn how to use the Compute Classic CLI.

Topics

Adding a Machine Image

To add a machine image to Compute Classic by using the CLI, you must register the image and then add it as an entry in an image list.

Task	Procedure / CLI Command
1. Ensure that the machine image file has been uploaded to Oracle Cloud Infrastructure Object Storage Classic.	See Uploading Machine Image Files to Oracle Cloud Infrastructure Object Storage Classic in *Using Oracle Cloud Infrastructure Compute Classic*.
2. Register the image in Compute Classic.	machine-image add
3. Create an image list.	image-list add
4. Add the image that you registered earlier as an entry in the image list that you just created.	image-list-entry add
5. (Optional) Create a boot disk using the image that you added.	storage-volume add (with the `bootable` parameter set to `True`)
6. (Optional) If you created a boot disk using the image, then check whether the boot disk is created.	storage-volume get After the volume is created, the `status` field shows `online`.

You can now create instances by using this image. See Creating Instances Using an Orchestration.

> **See Also:**
>
> The following topics in *Using Oracle Cloud Infrastructure Compute Classic*:
>
> - Workflow for Creating Instances Using a Custom Machine Image
> - About Storage Volumes

Creating Instances Using an Orchestration

To create multiple instances in Compute Classic, you must create the required resources (SSH public keys, storage volumes, security lists, and so on), define the attributes of the instances in an orchestration JSON file, add the orchestration to Compute Classic, and then start the orchestration.

Task	Procedure / CLI Command
1. Generate SSH key pairs.	See Generating an SSH Key Pair in *Using Oracle Cloud Infrastructure Compute Classic*.
2. Add the public keys to Compute Classic.	ssh-key add
3. (Optional) Create storage volumes for storing data and applications. Note that you can also create storage volumes and attach them after creating the instances.	storage-volume add
4. (Optional) Create boot disks. This step is required only if you want to set up the instances to boot from a persistent disk.	storage-volume add (with the `bootable` parameter set to `True`)
5. (Optional) Create security lists.	sec-list add
6. (Optional) Reserve the required number of public IP addresses. This step is required only if you want to assign a fixed public IP address to your instance.	ip-reservation add
7. Define the attributes of all your instances in an orchestration file, a text file in JSON format. These attributes include the instance shape; the machine image to be used to create the instance; and the SSH keys, IP address, storage volumes, and security lists that you want to attach.	See Building Your First Orchestration in *Using Oracle Cloud Infrastructure Compute Classic*.
8. Add the orchestration to the service.	orchestration add
9. Start the orchestration.	orchestration update

Task	Procedure / CLI Command
10. Monitor the status of the orchestration.	orchestration get After all the objects defined in the orchestration are created, the `status` of the orchestration changes to `ready`.

See Also:

- Deleting and Re-creating Instances
- The following topics in *Using Oracle Cloud Infrastructure Compute Classic*:
  - Best Practices
  - About Storage Volumes
  - About Security Lists
  - About IP Reservations

Deleting and Re-creating Instances

After creating instances in Compute Classic by using an orchestration, you can delete and re-create the instances at any time by stopping and starting the orchestration that defines the instances.

Caution:

When you stop an orchestration, all the objects *defined* in it—instances, storage volumes, security lists, and so on—are deleted. Note that any objects that are created outside the orchestration and merely associated with the instances in the orchestration being deleted remain intact when you stop the orchestration.

Task	Procedure / CLI Command
1. Stop the orchestration.	orchestration update
2. Monitor the status of the orchestration.	orchestration get After all the objects defined in the orchestration are deleted, the `status` of the orchestration changes to `stopped`.
3. Start the orchestration.	orchestration update
4. Monitor the status of the orchestration.	orchestration get After all the objects defined in the orchestration are created, the `status` of the orchestration changes to `ready`.

> **See Also:**
>
> The following topics in *Using Oracle Cloud Infrastructure Compute Classic*:
>
> - Best Practices
> - Orchestration Life Cycle
> - Monitoring Orchestrations

Cloning an Instance

To clone an instance, create a snapshot of the instance. A machine image is created. Add this new machine image to an image list, and then use it to create a new instance.

Task	REST API Call
1. Create a snapshot request, which in turn creates a machine image to preserve all the changes made in the instance since launch. Note down the multi-part name of the snapshot request and the three-part name of the machine image. This information will be required in the next steps.	add snapshot
2. Check the progress of the asynchronous snapshot request.	get snapshot
3. After the state of the snapshot request changes from `active` to `complete`, verify that a machine image has been created.	get machineimage
3. Create an image list.	image-list add
4. Add the image that was created by the snapshot as an entry in the image list that you just created.	image-list-entry add
5. (Optional) Create a boot disk using the image that you added.	storage-volume add (with the `bootable` parameter set to `True`)
6. (Optional) If you created a boot disk using the image, then check whether the boot disk is created.	storage-volume get After the volume is created, the `status` field shows `online`.

You can now create instances by using this image. See Creating Instances Using an Orchestration.

> **See Also:**
>
> The following topics in *Using Oracle Cloud Infrastructure Compute Classic*:
>
> - Workflow for Creating Instances Using a Custom Machine Image
> - About Storage Volumes

Setting Up Firewalls Around Instances

To set up a firewall around a group of Compute Classic instances, you must create a security list and add your instances to the security list.

Task	Procedure / CLI Command
1. Create a security list.	sec-list add
2. Find out the vcable ID of each instance that you want to add to the security list.	instance get Note the value of the `vcable_id` parameter in the response.
3. Associate each vcable ID (that you identified in the previous step) with the security list, by creating security associations.	sec-association add

See Also:

- About Security Lists in *Using Oracle Cloud Infrastructure Compute Classic*
- Opening Ports on Instances

Opening Ports on Instances

By default, inbound traffic is not allowed to Compute Classic instances. Instances in a security list can communicate with other instances in the same security list, but inbound traffic to the security list is not permitted by default. To open a port for Compute Classic instances in a security list by using the REST API, you must create a security rule, specifying the source from which traffic should be permitted, the protocol and port over which the traffic should be allowed, and the security list (containing your instance) to which traffic should be allowed.

Prerequisites

- Ensure that the instances for which you want to open ports are in a security list. See Setting Up Firewalls Around Instances.
- Identify the source from which you want to allow traffic to your instances. The source can be other Compute Classic instances or hosts external to Compute Classic.

Workflow

Task	Procedure / CLI Command
1. Do one of the following: • If the source from which you want to allow traffic is a set of other Compute Classic instances, then identify the security list to which those instances belong. If those instances aren't part of a security list, then create one and add the instances to the new security list. • If the source from which you want to allow traffic is a set of external hosts, then create a security IP list containing those hosts.	• If the source is a set of other Compute Classic instances, and if those instances aren't part of a security list: Setting Up Firewalls Around Instances • If the source is a set of external hosts, and if those hosts aren't part of a security IP list: sec-ip-list add
2. Identify the security application (that is, the protocol-port combination) over which you want to permit traffic.	sec-application get
3. If the security application that you need does not exist, then create one.	sec-application add
4. Create a security rule, specifying the source (security list or security IP list) from which traffic should be permitted, the security application over which the traffic should be allowed, and the security list (containing your instance) to which traffic should be allowed.	sec-rule add

See Also:

The following topics in *Using Oracle Cloud Infrastructure Compute Classic*:

- About Security Lists
- About Security Rules
- About Security Applications

Identifying the Security Rules Applicable to an Instance

Over time, you may create multiple security rules for different purposes. To find out which security rules are applicable to an Compute Classic instance, you must identify the security lists to which the instance belongs and then determine the security rules in which each of those security lists is specified.

Task	Procedure / CLI Command
1. Find out the vcable ID of the instance.	instance get In the response, note the value of the `vcable_id` parameter.
2. Get a list of all the security associations for the vcable ID that you noted in step 1.	sec-association list Note the security list returned for each security association.

Task	Procedure / CLI Command
3. For each security list from step 2, get a list of all the security rules in which the given security list is the *destination*.	sec-rule list Note the security rules returned for each security list.
4. For each security list from step 2, get a list of all the security rules in which the given security list is the *source*.	sec-application list Note the security rules returned for each security list.
5. Combine the output from steps 3 and 4 to get a list of all the security rules applicable to your instance.	

Assigning a Fixed Public IP Address to an Instance

To give your Compute Classic a fixed public IP address, you must reserve an address and then attach that address to the instance.

Task	Procedure / CLI Command
1. Reserve a public IP address.	ip-reservation add
2. Find out the vcable ID of the instance that you want to assign the IP address to.	instance get In the response, note the value of the `vcable_id` parameter.
3. Attach the IP address to the instance by creating an IP association.	ip-association add

> **See Also:**
>
> About Public IP Addresses in *Using Oracle Cloud Infrastructure Compute Classic*

Finding Out the Public IP Address of an Instance

The public IP address of an Compute Classic instance is associated with the vcable of the instance. To find out the public IP address of an instance, you must identify the vcable ID of the instance and then find out the IP address associated with that vcable ID.

Task	Procedure / CLI Command
1. Find out the vcable ID of the instance.	instance get In the response, note the value of the `vcable_id` parameter.

Task	Procedure / CLI Command
2. Get the IP association for the vcable ID that you noted in step 1.	ip-association list `--vcable` *`vcable_id`* In the CLI command, specify the value of *`vcable_id`* that you have retrieved in step 1. In the response, note the value of the `ip` parameter. That is the public IP address of the instance.

Removing the Public IP Address of an Instance

To deny access to an instance over the public Internet, you can delete the public IP address associated with the instance. An IP association is a link between a public IP address and the vcable of an instance. To remove the public IP associated with an instance, find the IP association that links the vcable of the instance to the public IP address, and then delete it. If you had permanently reserved an public IP address for this instance, you can also delete that too.

Task	Procedure / CLI Command
1. Find out the vcable ID of the instance.	instance get In the response, note the value of the `vcable_id` parameter.
2. Get the IP association for the vcable ID that you noted in step 1.	ip-association list `--vcable` *`vcable_id`* In the CLI command, specify the value of *`vcable_id`* that you have retrieved in step 1. In the response, note the three-part name of the IP association.
3. Get the three-part name of the IP reservation that is associated with the instance using the IP association that you have noted in step 2.	ip-association get In the response, note the three-part name of the IP reservation.
4. Delete the IP association that you noted in step 2.	ip-association delete

Task	Procedure / CLI Command
5. (Optional.) Delete the IP reservation that you noted in step 3. If the IP reservation is permanent, you can delete it if you no longer want the IP reservation. If the IP reservation not permanent, it is automatically deleted when the IP association is deleted.	ip-reservation delete

WARNING:

If you delete an IP reservation that is referenced in an orchestration that controls this instance then, if you stop and restart the orchestration, the instance won't be created.

If you had launched this instance using an orchestration, the instance will be created again when the orchestration is stopped and started. If you had specified a public IP address for the instance in the orchestration, the relaunched instance will be associated with an IP address. You can update the orchestration to remove public IP address for an instance. See orchestration update.

See Also:

About Public IP Addresses in *Using Oracle Cloud Infrastructure Compute Classic*

Providing Block Storage Capacity for an Instance

To provide block storage capacity for an Compute Classic instance, you must create one or more storage volumes and attach them to the instance.

Task	Procedure / CLI Command
1. Create a storage volume.	storage-volume add
2. Check whether the storage volume is created.	storage-volume get After the volume is created, the `status` field shows `online`.
3. Attach the storage volume to your instance.	storage-attachment add In the response, note the name of the storage attachment.
4. Check whether the volume is attached.	storage-attachment get After the volume is attached, the `state` field shows `attached`.
5. Mount and format the disk that you just attached.	See Mounting and Unmounting a Storage Volume in *Using Oracle Cloud Infrastructure Compute Classic*.

See Also:

About Storage Volumes in *Using Oracle Cloud Infrastructure Compute Classic*.

Increasing the Size of a Storage Volume

You can update an existing storage volume to increase the capacity dynamically, even when the volume is attached to an instance.

Task	Procedure or CLI Command
1. Identify the storage volume that you want to resize.	storage-volume list In the response, note down the multi-part name of the storage volume that you want to resize.
2. Retrieve details of the storage volume you want to resize.	storage-volume get In the response, note down the current size of the storage volume.
3. Increase the size of the storage volume by specifying a size that is larger than the size you have noted down in step 2. Note that you cannot reduce the size of a storage volume after increasing it, so plan carefully.	storage-volume update In the command, specify value for the `size` parameter.
4. If the storage volume is attached to and mounted on an instance, log in to the instance, and then resize the file system.	See Increasing the Size of a Storage Volume in *Using Oracle Cloud Infrastructure Compute Classic*.

See Also:

- About Storage Volumes in *Using Oracle Cloud Infrastructure Compute Classic*

Part II
Command Line Reference

The command line reference information for Compute Classic is organized in the following sections, each of which represents an Compute Classic resource type. All documentation is applicable to using the CLI on Oracle Cloud and Oracle Cloud Machine, unless otherwise indicated.

Topics

- Security Application
- Security Association
- Security IP List
- Security List
- Security Rule
- Security Protocol for IP Network
- Security Rule for IP Network
- Shape
- SSH Public Key
- Storage Attachment
- Storage Property
- Storage Volume Snapshot
- Storage Volume
- Virtual NIC
- Virtual NIC Set
- Virtual Private Network (VPN) Endpoint
- Virtual Private Network (VPN) Endpoint v2

5
Account

This section describes the Compute Classic CLI commands you can use to view accounts.
An account is used in Compute Classic to store credentials that must be used to access another service. For example, you use an account to define the credentials and other details of the Oracle Cloud Infrastructure Object Storage Classic instance in which you store machine images.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- account list
- account discover
- account get

account list

Retrieves details of all the accounts in the specified container.

You can use this command to get details of the account that you must specify while creating a machine image.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute account list container
```

Example

```
opc -f json compute account list /Compute-acme
```

Sample Output

```
{
 "result": [
  {
   "credentials": {},
   "description": "",
   "name": "/Compute-acme/cloud_storage",
   "uri": "api-z999.compute.us0.oraclecloud.com/account/Compute-acme/cloud_storage"
  },
```

```
  {
   "credentials": {},
   "description": null,
   "name": "/Compute-acme/default",
   "uri": "api-z999.compute.us0.oraclecloud.com/account/Compute-acme/default"
  }
 ]
}
```

account discover

Retrieves a list of the accounts in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute account discover container
```

Example

```
opc -f json compute account discover /Compute-acme
```

Sample Output

```
{
  "result": [
    "/Compute-acme/cloud_storage",
    "/Compute-acme/default"  ]
}
```

account get

Retrieves details of the specified account.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute account get name
```

Example

```
opc -f json compute account get /Compute-acme/cloud_storage
```

Sample Output

```
{
   "credentials": {},
   "description": "",
   "name": "/Compute-acme/cloud_storage",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/account/Compute-acme/
cloud_storage"
}
```

6
Access Control List (ACL)

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view ACLs.
Access Control List (ACL) is a collection of security rules. You can use ACLs to control the traffic between instances. To control traffic from and to Compute Classic instances, you can apply ACLs to:

- virtual NICs of Compute Classic instances in the same IP network
- virtual NICs of a transit node, such as the VPN gateway or Internet gateway node

The default ACL allows traffic to all virtual NICs in an IP network.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

acl add

Add an access control list (ACL) to control the traffic between virtual NICs. An ACL consists of one or more security rules that is applied to a virtual NIC set. Each security rule may refer to a virtual NIC set in either the source or destination. See Workflow for Applying Access Control Lists in *Using Oracle Cloud Infrastructure Compute Classic*.

After creating an ACL, you can associate it to one or more virtual NIC sets.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute acl add name [--description description] [--enabled-flag] [--tags tags]
```

Example

```
opc -f json compute acl add /Compute-acme/jack.jones@example.com/acl1 --description
'Sample ACL 1' --enabled-flag
```

Sample Output

```
{
  "description": "Sample ACL 1",
  "enabledFlag": true,
  "name": "/Compute-acme/jack.jones@example.com/acl1",
  "tags": null,
  "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/acl/Compute-acme/
jack.jones@example.com/acl1"
}
```

acl list

Retrieves details of all ACLs in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute acl list container
```

Example

```
opc -f json compute acl list /Compute-acme
```

Sample Output

```
{
  "result": [
    {
      "name": "/Compute-acme/jack.jones@example.com/acl1",
      "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/acl/
Compute-acme/jack.jones@example.com/acl1",
      "description": "Updating sample ACL 1",
      "tags": [
        "test"
      ],
      "enabledFlag": false
    },
    {
      "name": "/Compute-acme/default",
      "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/acl/
Compute-acme/default",
      "description": null,
      "tags": [],
      "enabledFlag": true
    }
  ]
}
```

acl get

Retrieves details of the specified ACL.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute acl get name
```

Example

```
opc -f json compute acl get /Compute-acme/jack.jones@example.com/acl1
```

Sample Output

```
{
  "description": "Sample ACL 1",
  "enabledFlag": true,
  "name": "/Compute-acme/jack.jones@example.com/acl1",
  "tags": null,
  "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/acl/Compute-acme/
jack.jones@example.com/acl1"
}
```

acl update

You can update the `description` and `tag` fields for an ACL. You can also enable or disable an ACL. When you disable an ACL, it also disables the flow of traffic allowed by the security rules in scope of the ACL.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute acl update name [--description description] [--enabled-flag] [--tags
tags]
```

Example

The following example demonstrates how you can update the values of `description` and `tags` fields and disable the ACL by passing `false` to the `--enabled-flag` option.

```
opc -f json compute acl update /Compute-acme/jack.jones@example.com/acl1 --
description 'Updating description, tags, and enabledFlag for a sample ACL' --enabled-
flag=false --tags 'test'
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/acl1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/acl/Compute-acme/
jack.jones@example.com/acl1",
  "description": "Updating description, tags, and enabledFlag for a sample ACL",
  "tags": ["test"],
  "enabledFlag": false
}
```

acl delete

Deletes the specified ACL. No response is returned.

If you delete an ACL that is being used, all the affected instances will lose network connectivity.

If you want to disable an ACL and not delete it, pass `false` as the value for the `--enabled-flag` option while running the acl update command.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute acl delete name
```

Example

```
opc compute acl delete /Compute-acme/jack.jones@example.com/acl1
```

7

Authentication

This section describes the Compute Classic CLI commands that you can use to create and refresh an authentication token.
Only authenticated users can run the Compute Classic CLI commands.

There are various ways to authenticate a user. See Setting Up Environment Variables and Files. Creating an authentication cookie and saving it in an environment variable is just one of ways to authenticate a user.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

authentication add

Create an authentication cookie. You can store the value of the cookie in an environment variable, such as `OPC_COMPUTE_COOKIE`. An authentication cookie lasts for only 30 minutes, so you'll need to refresh the cookie before it expires.

You can use this command to generate an authentication token and provide it to a third-party, especially when you don't want to share your Compute Classic password with a third-party tool.

Here's the order of precedence (the first option has the highest precedence):

1. The value that you specify for the `OPC_COMPUTE_COOKIE` variable.
2. The values you specify for the command line options, such as `-pf` and `-u`.
3. When you don't provide command line arguments, the values specified in the environment variables, such as `OPC_COMPUTE_USER` and `OPC_COMPUTE_PASSWORD_FILE`, take precedence over the values provided in the profile file.
4. When you don't specify values for command line arguments and environment variables, values specified in the profile file are considered.

Syntax

```
opc compute authentication add password user
```

For help with the parameters and options of this command, run the command with the `-h` option.

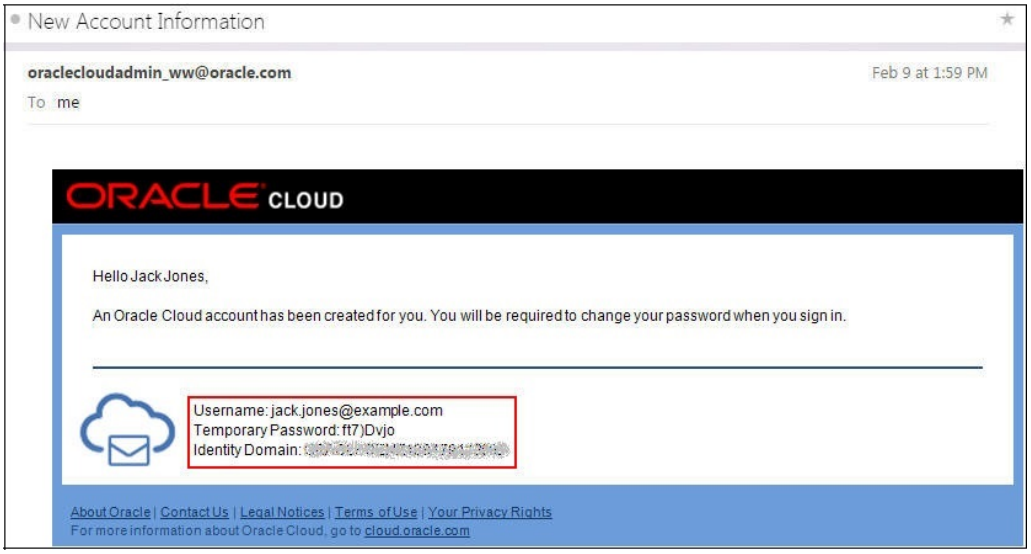
Example

Before running this command, gather the account credentials.

1. Identify the type of cloud account that you are using: Traditional Cloud Accounts (also known as Cloud Service Accounts) or Cloud Accounts with Identity Cloud Service (IDCS). See Types of Oracle Cloud Accounts in *Getting Started with Oracle Cloud*.

   > **Note:**
   >
   > Oracle Cloud Machine only supports Cloud Accounts with Identity Cloud Service (IDCS).

2. Note down the account credentials for your Compute Classic instance.
   - On Oracle Cloud Machine: The account creation email from Oracle would contain the user name and password for your Compute Classic instance.
   - On Oracle Cloud: The account creation email from Oracle would contain the identity domain name, user name, and password for your Compute Classic instance, as shown in the following example:



   If you don't have this information, contact your service administrator.

3. Note down the REST API endpoint URL of your Compute Classic site. To find out the REST API endpoint URL of your site, follow the instructions at Send Requests in *REST API for Oracle Cloud Infrastructure Compute Classic*.
4. While running CLI commands, you have to pass a two-part user name. Specify the two-part user name in one of the following ways:
   - On Oracle Cloud: If you are using a traditional cloud account or if your account creation email contains information about the identity domain, then you must use the following format for the two-part user name:

     `/Compute-identity_domain/user`

For example, if your identity domain is `acme` and the *username* in your account-creation email is `jack.jones@example.com`, then the following would be the two-part user name that you must use for running CLI commands:

```
/Compute-acme/jack.jones@example.com
```

- On Oracle Cloud Machine: If you are using a cloud account with Identity Cloud Service (IDCS) or if your account creation email **does not** contain information about the identity domain, then you must use the following format for the two-part user name:

  ```
  /Compute-serviceInstanceID/username
  ```

  To get the service instance ID for your Compute Classic instance:

  a. Sign in to the Oracle Cloud Infrastructure Classic Console application. See Signing in to Your Cloud Account in *Getting Started with Oracle Cloud*.

     The Oracle Cloud Infrastructure Classic Console page is displayed. It lists the services that are assigned to your account.

  b. In the Compute service tile, click **Compute**. The Service Details page for Compute Classic is displayed.

  c. Under Additional Information, note down the **Service Instance ID**.

     For example, if your service instance ID is `575260584` and the username in your account-creation email is `jack.jones@example.com`, then use the following two-part user name for REST API calls:

     ```
     /Compute-575260584/jack.jones@example.com
     ```

> **Note:**
>
> All examples in this document use `/Compute-acme/jack.jones@example.com` as the two-part user name. If you are using a Cloud Account with IDCS, replace `acme` in the two-part user name with your service instance ID.

5. Store your password in a plain-text file of your choice (for example, in your `/home/user` directory).

   Ensure that the file containing the password isn't world-readable, by changing the permission to `600`.

   ```
   chmod 600 /full/path/to/password/file
   ```

```
opc -f json compute -e api-z999.compute.us0.oraclecloud.com authentications add
file://./password.txt /Compute-acme/jack.jones@example.com
```

Sample Output

Some lines have been truncated with ellipses (`...`) for readability. When you run the command in your environment, you'll see the full output.

```
{  "SetCookie": "nimbula=eyJpZGVudGl0eSI6ICJ7XCJyZWFsbVwiOi..." }
```

refresh-token get

Extends the expiry of the authentication token by 30 minutes from the time you run the command. Authentication tokens expire in 30 minutes. This command extends the expiry of the current authentication token, but not beyond the session expiry time, which is 3 hours.

Prerequisite

Before running this command, set the value of the `OPC_COMPUTE_COOKIE` environment variable with the response received when you run the authentication add command.

For example, if the response that you have received while running the `authentication add` command is:

```
{
 "SetCookie":
"nimbula=eyJpZGVudGl0eSI6ICJ7XCJyZWFsbVwiOiBcImNvbXB1dGUtZW0yLXoxN1wiLCBcInZhbHVlXCI6
IFwie1xcXCJjdXN0b21lclxcXCI6IFxcXCJDb21wdXRlLWRvY2V4YW1wbGVcXFwiLCBcXFwicmVhbG1cXFwiO
iBcXFwiY29tcHV0ZS1lbTItejE3XFxcIiwgXFxcImVudGl0eV90eXBlXFxcIjogXFxcInVzZXJcXFwiLCBcXF
wic2Vzc2lvbl9leHBpcmVzXFxcIjogMTQ4Mjg0MTQzOS45MjUwMDksIFxcXCJleHBpcmVzXFxcIjogMTQ4Mjg
zMjQzOS45MjUwMzY5LCBcXFwidXNlclxcXCI6IFxcXCIvQ29tcHV0ZS1kb2NleGFtcGxlL1N5bGFqYVxcXCIs
IFxcXCJncm91cHNcXFwiOiBbXFxcIi9Db21wdXRlLWRvY2V4YW1wbGUvQ29tcHV0ZS5Db21wdXRlX09wZXJhd
GlvbnNcXFwiXX1cIiwgXCJzaWduYXR1cmVcIjogXCJhdXZxeHRXM080Y0FSZ3psUVB4Q05JTCswMUZSeDNlY1
ZjaDNIVHhETDViemZZY2kzVDkrejFSUSsvUlJBRFpZUm4zUE1kcVRGZGc1b01ZYVhEUWd6a2l3eXd0TU1KQzN
TT1MxZHdhc2hXYXVFV3NERmVxN21tMkhFd21WMFk4RE1wVHY0UDZCLzR5ZUxVT0VrcnVoNGNHMkNvNlEvMnVH
RjA4dGdITWVNMHM1Q1NFcnZqZERNcmJaT0l4M0ZtalA0QmgyTjNWYXVlK01GS0h4MmNKQ3d1UDFCTUc0NjVqT
2F1eEV0djU4TitJanp6NWhmT0hkWW9kVTNZNk0wbUJzcDRaS1lndC9IVkZPclpOK05jN3JFQkhWSmZkSW44cW
h3YW0yUFAra2JJMmo2RGozSUJNSkpDSVFYZXJzT2ZXYWVSWEdyWlN1MEV6WWd1dmJiSXJlMUE9PVwifSJ9;
Path=/; Max-Age=1800"
}
```

You'll set the value of the `OPC_COMPUTE_COOKIE` environment variable as by excluding `nimbula` and including values only till the first semicolon.

```
export
OPC_COMPUTE_COOKIE='eyJpZGVudGl0eSI6ICJ7XCJyZWFsbVwiOiBcImNvbXB1dGUtZW0yLXoxN1wiLCBcI
nZhbHVlXCI6IFwie1xcXCJjdXN0b21lclxcXCI6IFxcXCJDb21wdXRlLWRvY2V4YW1wbGVcXFwiLCBcXFwicm
VhbG1cXFwiOiBcXFwiY29tcHV0ZS1lbTItejE3XFxcIiwgXFxcImVudGl0eV90eXBlXFxcIjogXFxcInVzZXJ
cXFwiLCBcXFwic2Vzc2lvbl9leHBpcmVzXFxcIjogMTQ4Mjg0MTQzOS45MjUwMDksIFxcXCJleHBpcmVzXFxc
IjogMTQ4MjgzMjQzOS45MjUwMzY5LCBcXFwidXNlclxcXCI6IFxcXCIvQ29tcHV0ZS1kb2NleGFtcGxlL1N5b
GFqYVxcXCIsIFxcXCJncm91cHNcXFwiOiBbXFxcIi9Db21wdXRlLWRvY2V4YW1wbGUvQ29tcHV0ZS5Db21wdX
RlX09wZXJhdGlvbnNcXFwiXX1cIiwgXCJzaWduYXR1cmVcIjogXCJhdXZxeHRXM080Y0FSZ3psUVB4Q05JTCs
wMUZSeDNlY1ZjaDNIVHhETDViemZZY2kzVDkrejFSUSsvUlJBRFpZUm4zUE1kcVRGZGc1b01ZYVhEUWd6a2l3
eXd0TU1KQzNTT1MxZHdhc2hXYXVFV3NERmVxN21tMkhFd21WMFk4RE1wVHY0UDZCLzR5ZUxVT0VrcnVoNGNHM
kNvNlEvMnVHRjA4dGdITWVNMHM1Q1NFcnZqZERNcmJaT0l4M0ZtalA0QmgyTjNWYXVlK01GS0h4MmNKQ3d1UD
FCTUc0NjVqT2F1eEV0djU4TitJanp6NWhmT0hkWW9kVTNZNk0wbUJzcDRaS1lndC9IVkZPclpOK05jN3JFQkh
WSmZkSW44cWh3YW0yUFAra2JJMmo2RGozSUJNSkpDSVFYZXJzT2ZXYWVSWEdyWlN1MEV6WWd1dmJiSXJlMUE9
PVwifSJ9'
```

Syntax

```
opc compute refresh-token get
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute -e api-z999.compute.us0.oraclecloud.com -u /Compute-acme/
jack.jones@example.com refresh-token get
```

Sample Output

```
{}
```

8
Backup

 This topic does not apply to Oracle Cloud at Customer.

This section describes the Compute Classic CLI commands you can use to create, delete, and retrieve backup of storage volumes.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- backup add
- backup list
- backup get
- backup delete

backup add

 This topic does not apply to Oracle Cloud at Customer.

Use this command when you want to immediately create a snapshot of the storage volume specified in a backup configuration object instead of waiting for the next scheduled run.

You can back up a storage volume at regular intervals by creating a backup configuration and specifying the backup interval. See backup-configuration add. To back up a storage volume right away, run the `backup add` command to back up the storage volume that is specified in a backup configuration.

Prerequisite: Ensure that you have selected a replication policy for your Oracle Cloud Infrastructure Object Storage Classic instance. See Selecting a Replication Policy for Your Service Instance in *Using Oracle Cloud Infrastructure Object Storage Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute backup add name backup_configuration_name [--description description]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following example shows how you can immediately create a snapshot of a storage volume which is specified in backup configuration object `/Compute-acme/jack.jones@example.com/backupConfigVol1`. A snapshot is created immediately with the specified name, `/Compute-acme/jack.jones@example.com/vol1-BACKUP-A`.

```
opc -f json compute backup add /Compute-acme/jack.jones@example.com/vol1-BACKUP-A /
Compute-acme/jack.jones@example.com/backupConfigVol1 --description 'backup of vol1'
```

Sample Output

```
{
 "backupConfigurationName": "/Compute-acme/jack.jones@example.com/backupConfigVol1",
 "bootable": false,
 "description": "backup of vol1",
 "detailedErrorMessage": null,
 "errorMessage": null,
 "name": "/Compute-acme/jack.jones@example.com/vol1-BACKUP-A",
 "runAsUser": "/Compute-acme/jack.jones@example.com",
 "shared": false,
 "snapshotSize": null,
 "snapshotUri": null,
 "state": "SUBMITTED",
 "tagId": "f237131f-89f7-471f-8bf4-802fac186bbf",
 "uri": "https://api-z999.compute.us0.oraclecloud.com:443/backupservice/v1/backup/
Compute-acme/jack.jones@example.com/BACKUP-A",
 "volumeUri": "https://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-
acme/jack.jones@example.com/vol1"
}
```

The `state` field in the output changes from `SUBMITTED` to `COMPLETED` when snapshot of the storage volume is created. Run the backup get command to monitor the `state` of the snapshot. The time it takes to create a backup of a storage volume varies depending on the size of the volume. When `state` changes to `COMPLETED`, you can note the name of the snapshot from the `snapshotUri` field. The snapshot is stored in the associated Oracle Cloud Infrastructure Object Storage Classic instance. You can use the snapshot that you have created to restore a storage volume using the restore add command.

backup list

 This topic does not apply to Oracle Cloud at Customer.

Retrieves details of all the backup objects that match the specified query criteria. If you don't specify any query criteria, then details of all the backups that you have permission to view are displayed.

Use the `-F` option to filter the output for specific attributes. For example, use `-F name,state,errorMessage` to view the error messages for backup objects that are in the `FAILED` state.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute backup list [--backup-configuration-name backup-configuration-name]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute backup list
```

Sample Output

```
[
{
 "backupConfigurationName": "/Compute-acme/jack.jones@example.com/backupConfigVol1",
 "bootable": false,
 "description": "backup of vol1",
 "detailedErrorMessage": "",
 "errorMessage": "",
 "name": "/Compute-acme/jack.jones@example.com/vol1-BACKUP-A",
 "runAsUser": "/Compute-acme/jack.jones@example.com",
 "shared": false,
 "snapshotSize": "2147483648b",
 "snapshotUri": "/storage/snapshot/Compute-acme/jack.jones@example.com/
vol1/0899d2ff58acdb53a975b1c71f12865e4c4c18bc313da9dfcaa5482a91900dc1",
 "state": "COMPLETED",
 "tagId": "f237131f-89f7-471f-8bf4-802fac186bbf",
 "uri": "https://api-z999.compute.us0.oraclecloud.com:443/backupservice/v1/backup/
Compute-acme/jack.jones@example.com/BACKUP-A",
 "volumeUri": "https://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-
acme/jack.jones@example.com/vol1"
}
]
```

backup get


This topic does not apply to Oracle Cloud at Customer.

Retrieves details of the specified backup object.

You can use this command to verify whether the `add` operation was completed successfully and if the snapshot was created. The `state` field of the backup object changes from `SUBMITTED` to `COMPLETED` when snapshot of the storage volume is created. You can use this command to monitor the `state` of the snapshot. The time it takes to create a backup of a storage volume varies depending on the size of the volume. When `state` changes to `COMPLETED`, you can note the name of the snapshot from the `snapshotUri` field.

You can also use the `-F` option (for example, `-F name,state`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute backup get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute backup get /Compute-acme/jack.jones@example.com/vol1-BACKUP-A
```

Sample Output

```
{
 "backupConfigurationName": "/Compute-acme/jack.jones@example.com/backupConfigVol1",
 "bootable": false,
 "description": "backup of vol1",
 "detailedErrorMessage": "",
 "errorMessage": "",
 "name": "/Compute-acme/jack.jones@example.com/vol1-BACKUP-A",
 "runAsUser": "/Compute-acme/jack.jones@example.com",
 "shared": false,
 "snapshotSize": "2147483648b",
 "snapshotUri": "/storage/snapshot/Compute-acme/jack.jones@example.com/
vol1/0899d2ff58acdb53a975b1c71f12865e4c4c18bc313da9dfcaa5482a91900dc1",
 "state": "COMPLETED",
 "tagId": "f237131f-89f7-471f-8bf4-802fac186bbf",
 "uri": "https://api-z999.compute.us0.oraclecloud.com:443/backupservice/v1/backup/
Compute-acme/jack.jones@example.com/BACKUP-A",
 "volumeUri": "https://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-
acme/jack.jones@example.com/vol1"
}
```

backup delete


This topic does not apply to Oracle Cloud at Customer.

Deletes the specified backup object and its associated snapshot. No response is returned.

You can delete a backup only after the state of the backup object changes to `COMPLETED`. You can't delete a backup while a snapshot of the storage volume is being created.

Prerequisite: Ensure that you have selected a replication policy for your Oracle Cloud Infrastructure Object Storage Classic instance. See Selecting a Replication Policy for Your Service Instance in *Using Oracle Cloud Infrastructure Object Storage Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute backup delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute backup delete /Compute-acme/jack.jones@example.com/vol1-BACKUP-A
```

9

Backup Configuration

 This topic does not apply to Oracle Cloud at Customer.

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view backup configurations.

You can schedule backups to be taken automatically at defined intervals. Scheduling a backup creates snapshots of the specified storage volume and these snapshots are stored in the associated Oracle Cloud Infrastructure Object Storage Classic instance.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- backup-configuration add
- backup-configuration list
- backup-configuration get
- backup-configuration update
- backup-configuration delete

backup-configuration add

 This topic does not apply to Oracle Cloud at Customer.

You can create a backup configuration to back up storage volumes automatically at specific intervals. This creates snapshots of the specified storage volume at the specified intervals and the snapshots are stored in the associated Oracle Cloud Infrastructure Object Storage Classic instance.

When you create a backup configuration, you can also specify the number of backups to retain. For example, you can specify that a given storage volume should be backed up at hourly intervals and the two most recent completed snapshots of the storage volume should be retained. This enables you to always have your most current data backed up, without creating unnecessary copies of your data. After a snapshot is completed, if required you can restore a storage volume using the snapshot. Time taken to back up and restore storage volumes depends on the size of the storage volume, as data is written to and from the Oracle Cloud Infrastructure Object Storage Classic instance.

Prerequisite: Ensure that you have selected a replication policy for your Oracle Cloud Infrastructure Object Storage Classic instance. See Selecting a Replication Policy for Your Service Instance in *Using Oracle Cloud Infrastructure Object Storage Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

> **Note:**
>
> There are two kinds of intervals at which you can schedule backup of storage volumes: hourly and weekly. To specify the interval at which you want to back up the storage volume, you can either specify a value for `hourly-interval` or specify values for `user-time-zone`, `days-of-week`, and `time-of-day`.

To schedule backups after a fixed number of hours:

```
opc compute backup-configuration add name volume_uri interval-type [--hourly-interval hours] [--backup-retention-count number] [--description description] [--enabled]
```

To schedule backups at a fixed time of the day and on fixed days of the week:

```
opc compute backup-configuration add name volume_uri interval-type [--time-of-day time] [--user-time-zone zone] [--days-of-week days] [--backup-retention-count number] [--description description] [--enabled]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example 1: Scheduling Backup at Hourly Intervals

The following example shows how you can create a backup configuration to backup the `/Compute-acme/jack.jones@example.com/vol1` storage volume after every 12 hours. The storage volume is backed up every 12 hours but only the last two backups are retained as the `backup-retention-count` is set to 2.

```
opc -f json compute backup-configuration add /Compute-acme/jack.jones@example.com/backupConfigVol1 https://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-acme/jack.jones@example.com/vol1 hourly --hourly-interval 12 --backup-retention-count 2
```

Sample Output

```
{
 "backupRetentionCount": 2,
 "description": null,
 "enabled": true,
 "interval": {
  "Hourly": {
   "hourlyInterval": 12
  }
 },
```

```
 "name": "/Compute-acme/jack.jones@example.com/backupConfigVol1",
 "nextScheduledRun": "2017-01-13T04:54:13.869Z",
 "runAsUser": "/Compute-acme/jack.jones@example.com",
 "tagId": "006fb07f-18de-4f5c-b3ad-c00042318346",
 "uri": "https://api-z999.compute.us0.oraclecloud.com/backupservice/v1/configuration/
Compute-acme/jack.jones@example.com/backupConfigVol1",
 "volumeUri": "https://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-
acme/jack.jones@example.com/vol1"
}
```


Example 2: Scheduling Backup at Weekly Intervals

The following example shows how you can create a backup configuration to backup the `/Compute-acme/jack.jones@example.com/vol1` storage volume at 01:30 GMT every Wednesday and Friday. The backup configuration is created in disabled state when you pass `false`to the `--enabled` option.

```
opc -f json compute backup-configuration add /Compute-acme/jack.jones@example.com/
backupConfigWeeklyVol1 https://api-z999.compute.us0.oraclecloud.com/storage/volume/
Compute-acme/jack.jones@example.com/vol1 daily-weekly --time-of-day 01:30 --user-
time-zone GMT --days-of-week Wednesday,Friday --backup-retention-count 2 --
enabled=false
```

Sample Output


```
{
 "backupRetentionCount": 2,
 "description": null,
 "enabled": false,
 "interval": {
  "DailyWeekly": {
   "daysOfWeek": [
    "WEDNESDAY",
    "FRIDAY"
   ],
   "timeOfDay": "01:30",
   "userTimeZone": "GMT"
  }
 },
 "name": "/Compute-acme/jack.jones@example.com/backupConfigWeeklyVol1",
 "nextScheduledRun": "2017-01-13T01:30:00.000Z",
 "runAsUser": "/Compute-acme/jack.jones@example.com",
 "tagId": "e7668069-2b33-4b29-8013-b4e838266c9c",
 "uri": "https://api-z999.compute.us0.oraclecloud.com/backupservice/v1/configuration/
Compute-acme/jack.jones@example.com/backupConfigWeeklyVol1",
 "volumeUri": "https://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-
acme/jack.jones@example.com/vol1"
}
```


backup-configuration list


This topic does not apply to Oracle Cloud at Customer.

Retrieves details of all the backup configurations, that you have permission to view.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute backup-configuration list
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute backup-configuration list
```

Sample Output

```
[
{
 "backupRetentionCount": 2,
 "description": null,
 "enabled": true,
 "interval": {
  "Hourly": {
   "hourlyInterval": 12
  }
 },
 "name": "/Compute-acme/jack.jones@example.com/backupConfigVol1",
 "nextScheduledRun": "2017-01-13T04:54:13.869Z",
 "runAsUser": "/Compute-acme/jack.jones@example.com",
 "tagId": "006fb07f-18de-4f5c-b3ad-c00042318346",
 "uri": "https://api-z999.compute.us0.oraclecloud.com/backupservice/v1/configuration/
Compute-acme/jack.jones@example.com/backupConfigVol1",
 "volumeUri": "https://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-
acme/jack.jones@example.com/vol1"
},
{
 "backupRetentionCount": 2,
 "description": null,
 "enabled": true,
 "interval": {
  "DailyWeekly": {
   "daysOfWeek": [
    "WEDNESDAY",
    "FRIDAY"
   ],
   "timeOfDay": "01:30",
   "userTimeZone": "GMT"
  }
 },
 "name": "/Compute-acme/jack.jones@example.com/backupConfigWeeklyVol1",
 "nextScheduledRun": "2017-01-13T01:30:00.000Z",
 "runAsUser": "/Compute-acme/jack.jones@example.com",
 "tagId": "e7668069-2b33-4b29-8013-b4e838266c9c",
 "uri": "https://api-z999.compute.us0.oraclecloud.com/backupservice/v1/configuration/
Compute-acme/jack.jones@example.com/backupConfigWeeklyVol1",
 "volumeUri": "https://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-
```

```
acme/jack.jones@example.com/vol1"
}
]
```

backup-configuration get


This topic does not apply to Oracle Cloud at Customer.

Retrieves details of the specified backup configuration.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully. Use the `-F` option (for example, `-F enabled`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute backup-configuration get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute backup-configuration get /Compute-acme/jack.jones@example.com/
backupConfigWeeklyVol1
```

Sample Output

```
{
 "backupRetentionCount": 2,
 "description": null,
 "enabled": true,
 "interval": {
  "DailyWeekly": {
   "daysOfWeek": [
    "WEDNESDAY",
    "FRIDAY"
   ],
   "timeOfDay": "01:30",
   "userTimeZone": "GMT"
  }
 },
 "name": "/Compute-acme/jack.jones@example.com/backupConfigWeeklyVol1",
 "nextScheduledRun": "2017-01-13T01:30:00.000Z",
 "runAsUser": "/Compute-acme/jack.jones@example.com",
 "tagId": "e7668069-2b33-4b29-8013-b4e838266c9c",
 "uri": "https://api-z999.compute.us0.oraclecloud.com/backupservice/v1/configuration/
Compute-acme/jack.jones@example.com/backupConfigWeeklyVol1",
 "volumeUri": "https://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-
acme/jack.jones@example.com/vol1"
}
```

backup-configuration update


This topic does not apply to Oracle Cloud at Customer.

After you've created a backup schedule for a storage volume, if required, you can update the schedule to change the frequency of backups or the number of backups that you want to retain. You can also enable or disable a backup schedule. You can't modify values for `name` and `volume-uri` parameters.

Prerequisite: Ensure that you have selected a replication policy for your Oracle Cloud Infrastructure Object Storage Classic instance. See Selecting a Replication Policy for Your Service Instance in *Using Oracle Cloud Infrastructure Object Storage Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

> **Note:**
>
> There are two kinds of intervals at which you can schedule backup of storage volumes: hourly and weekly. To specify the interval at which you want to back up the storage volume, you can either specify a value for `hourly-interval` or specify values for `user-time-zone`, `days-of-week`, and `time-of-day`.

To schedule backups at a fixed time of day and on fixed days of the week:

```
opc compute backup-configuration update name enabled run-as-user volume-uri interval-type [--time-of-day time] [--user-time-zone zone] [--days-of-week days] [--backup-retention-count number] [--description description]
```

To schedule backups at fixed intervals:

```
opc compute backup-configuration update name enabled run-as-user volume-uri interval-type [--hourly-interval hours] [--backup-retention-count number] [--description description]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following example shows how you can update all the parameter values for `/Compute-acme/jack.jones@example.com/backupConfigWeeklyVol1` backup configuration, except the name of the backup configuration and storage volume.

```
opc -f json compute backup-configuration update /Compute-acme/jack.jones@example.com/
backupConfigWeeklyVol1 false /Compute-acme/jack.jones@example.com https://api-
z999.compute.us0.oraclecloud.com/storage/volume/Compute-acme/jack.jones@example.com/
vol1 daily-weekly --time-of-day 04:00 --user-time-zone GMT --days-of-week
tuesday,thursday --backup-retention-count 3
```

Sample Output

```
{
 "backupRetentionCount": 3,
 "description": null,
 "enabled": false,
 "interval": {
  "DailyWeekly": {
   "daysOfWeek": [
    "TUESDAY",
    "THURSDAY"
   ],
   "timeOfDay": "04:00",
   "userTimeZone": "GMT"
  }
 },
 "name": "/Compute-acme/jack.jones@example.com/backupConfigWeeklyVol1",
 "nextScheduledRun": "2017-01-13T01:30:00.000Z",
 "runAsUser": "/Compute-acme/jack.jones@example.com",
 "tagId": "e7668069-2b33-4b29-8013-b4e838266c9c",
 "uri": "https://api-z999.compute.us0.oraclecloud.com/backupservice/v1/configuration/
Compute-acme/jack.jones@example.com/backupConfigWeeklyVol1",
 "volumeUri": "https://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-
acme/jack.jones@example.com/vol1"
}
```

backup-configuration delete

 This topic does not apply to Oracle Cloud at Customer.

Deletes the specified backup configuration. No response is returned.

Before deleting a backup configuration, you must delete all backups and restore objects that are related to the backup configuration. See backup delete and restore delete.

If you want to disable a backup configuration or stop taking backup as per the schedule defined in a backup configuration, consider running the backup-configuration update command to set the `enabled` parameter to `false`.

Prerequisite: Ensure that you have selected a replication policy for your Oracle Cloud Infrastructure Object Storage Classic instance. See Selecting a Replication Policy for Your Service Instance in *Using Oracle Cloud Infrastructure Object Storage Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute backup-configuration delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute backup-configuration delete /Compute-acme/jack.jones@example.com/
backupConfigWeeklyVol1
```

10
Image List

This section describes the Compute Classic CLI commands you can use to add, list, get, view, update, and delete image lists.
The machine images that you can use for creating instances are stored in image lists. You can add machine images to an image list to create a versioned selection of related machine images. For example, you might want to set up an image list containing a selection of machine images of various Oracle Linux releases. When you create an instance, by using a launch plan for example, you must specify the image list that contains the image you want to use. You can also specify the entry in the image list which you want to use to launch instances. If you don't specify an entry, the default entry defined for the image list is used. For more information, see Maintaining Versions of Private Machine Images in *Using Oracle Cloud Infrastructure Compute Classic*.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

image-list add

Adds an image list to Compute Classic.

After adding an image list, you can add machine images to the image list as described in image-list-entry add.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute image-list add name description [--default default]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute image-list add /Compute-acme/jack.jones@example.com/prodimages
'Linux images for production environment'
```

Sample Output

```
{
   "default": 1,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/imagelist/Compute-acme/
jack.jones@example.com/prodimages",
   "description": "Linux images for production environment",
   "name": "/Compute-acme/jack.jones@example.com/prodimages",
   "entries": []
  }
```

image-list list

Retrieves details of all the available image lists in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute image-list list container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute image-list list /oracle/public
```

Sample Output

Note that this output is merely an example. The image lists displayed when you run this command may be different.

```
{
 "result": [
  {
   "default": 1,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/imagelist/oracle/public/
oel_6.4_60GB",
   "description": "OEL 6 60GB disk",
   "name": "/oracle/public/oel_6.4_60GB",
   "entries": [
    {
     "attributes": {},
     "version": 1,
     "machineimages": [
      "/oracle/public/oel6.4_60GB_20140410"
     ],
     "uri": "https://api-z999.compute.us0.oraclecloud.com/imagelist/oracle/public/
```

```
oel_6.4_60GB/entry/1"
    }
   ]
  }
 ]
}
```

image-list discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute image-list discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute image-list discover /oracle/public
```

Sample Output

Note that this output is merely an example. The image lists displayed when you run this command may be different.

```
{
 "result": [
  "/oracle/public/oel_6.4_60GB",
  "/oracle/public/oel_6.4_5GB",
  "/oracle/public/oel_6.4_20GB"
 ]
}
```

image-list get

Retrieves details of the specified image list. You can also use this request to retrieve details of all the available image list entries in the specified image list.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute image-list get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute image-list get /oracle/public/oel_6.4_60GB
```

Sample Output

Note that this output is merely an example. The image-list details displayed when you run this command may be different.

```
{
   "default": 1,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/imagelist/oracle/public/
oel_6.4_60GB",
   "description": "OEL 6 60GB disk",
   "name": "/oracle/public/oel_6.4_60GB",
   "entries": [
    {
     "attributes": {},
     "version": 1,
     "machineimages": [
      "/oracle/public/oel6.4_60GB_20140410"
     ],
     "uri": "https://api-z999.compute.us0.oraclecloud.com/imagelist/oracle/public/
oel_6.4_60GB/entry/1"
    }
   ]
}
```

image-list update

Updates the description of an image list. You can also update the default image list entry to be used while launching instances using the specified image list.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute image-list update name description [--default default]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command updates the description and the default image list entry to be used while launching instances using this image list for the `/Compute-acme/jack.jones@example.com/prodimages` image list.

```
opc -f json compute image-list update /Compute-acme/jack.jones@example.com/
prodimages 'production images' --default 2
```

Sample Output

```
{
   "default": 2,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/imagelist/Compute-acme/
jack.jones@example.com/prodimages",
   "description": "production images",
   "name": "/Compute-acme/jack.jones@example.com/prodimages",
   "entries": []
}
```

image-list delete

Deletes an image list. No response is returned.

You can't delete system-provided image lists that are available in the `/oracle/public` container.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute image-list delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute image-list delete /Compute-acme/jack.jones@example.com/ol6
```

11

Image List Entry

This section describes the Compute Classic CLI commands you can use to add, list, view, and delete image list entries.
The machine images that you can use for creating instances are stored in image lists. Each machine image in an image list is identified by an image list entry. When you create an instance, by using a launch plan for example, you must specify the image list that contains the image you want to use. You can also specify the entry in the image list which you want to use to launch instances. If you don't specify an entry, the default entry defined for the image list is used. For more information, see Maintaining Versions of Private Machine Images in *Using Oracle Cloud Infrastructure Compute Classic*.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- image-list-entry add
- image-list-entry get
- image-list-entry delete

image-list-entry add

Adds an image list entry to Compute Classic. Each machine image in an image list is identified by an image list entry.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute image-list-entry add name machineimages version [--attributes attributes]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute image-list-entry add /Compute-acme/jack.jones@example.com/
prodimages /oracle/public/oel_6.4_2GB_v1 3 --attributes '{"type": "Oracle Linux
6.6"}'
```

Sample Output

```
{
 "attributes": {
  "type": "Oracle Linux 6.6"
 },
 "imagelist": null,
 "machineimages": [
  "/oracle/public/oel_6.4_2GB_v1"
 ],
 "uri": "https://api-z999.compute.us0.oraclecloud.com/imagelist/Compute-acme/
jack.jones@example.com/prodimages/entry/3",
 "version": 3
}
```

image-list-entry get

Retrieves details of the specified image list entry.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute image-list-entry get name version
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute image-list-entry get /Compute-acme/jack.jones@example.com/
prodimages 3
```

Sample Output

Note that this output is merely an example. The image-list entry details displayed when you run this command may be different.

```
{
 "attributes": {
  "type": "Oracle Linux 6.6"
 },
 "imagelist": null,
 "machineimages": [
  "/oracle/public/oel_6.4_2GB_v1"
 ],
 "uri": "https://api-z999.compute.us0.oraclecloud.com/imagelist/Compute-acme/
jack.jones@example.com/prodimages/entry/3",
 "version": 3
}
```

image-list-entry delete

Deletes an image list entry. No response is returned.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute image-list-entry delete name version
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute image-list-entry delete /Compute-acme/jack.jones@example.com/prodimages 3
```

12

Instance Console

You can use the console output of an instance to diagnose failures that occurred while booting the instance. The `instanceconsole` object is created when an instance is launched, and it is destroyed when the instance is deleted.

Commands

- instance-console get

instance-console get

Retrieves the messages that appear when an instance boots. Use these messages to diagnose unresponsive instances and failures in the boot up process.

Syntax

```
opc compute instance-console get instance_name
```

Example

```
opc -f json compute instance-console get /Compute-acme/jack.jones@example.com/
68a3c40c-466e-41df-a7f2-00fbfbd590e5
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
  "timestamp": "2017-03-16T09:00:38",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/instanceconsole/Compute-acme/
jack.jones@example.com/68a3c40c-466e-41df-a7f2-00fbfbd590e5",
  "name": "/Compute-acme/jack.jones@example.com/68a3c40c-466e-41df-
a7f2-00fbfbd590e5",
  "output": "acpiphp: Slot [7] registered\r\n[    0.894800] ... login: "
}
```

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Instance

This section describes the Compute Classic CLI commands that you can use to view and delete instances.
An Compute Classic instance is a virtual machine running a specific operating system and with CPU and memory resources that you specify. See About Instances in *Using Oracle Cloud Infrastructure Compute Classic*. For information about creating instances, see launch-plan add.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- instance list
- instance discover
- instance get
- instance update
- instance delete

instance list

Retrieves names of all the instances in the specified container that match the specified query criteria. You can pass one or more query parameters to filter the search results. If you don't specify any query criteria, then names of all the instances in the container are displayed. To retrieve all the details instances, specify the `-f json` option.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute instance list container [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command retrieves the names of the instances in the `/Compute-acme/jack.jones@example.com` container which are tagged `production`.

```
opc -f table compute instance list /Compute-acme/jack.jones@example.com --tags
production
```

Sample Output

```
+-------------------------------------------------------------------------------+
|                                      NAME                                     |
+-------------------------------------------------------------------------------+
 /Compute-acme/jack.jones@example.com/dev-vm/55a30ad5-ddc2-4991-9c17-f02e97e5c36d
 /Compute-acme/jack.jones@example.com/prod-vm/ee4b020e-deae-41b2-af72-44a6aa13728b
+-------------------------------------------------------------------------------+
```

instance discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute instance discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute instance discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result": [
  "/Compute-acme/jack.jones@example.com/app1-vm/",
  "/Compute-acme/jack.jones@example.com/app2-vm/",
  "/Compute-acme/jack.jones@example.com/app3-vm/"
 ]
}
```

instance get

Retrieves details of the specified instance.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute instance get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Examples

The following command retrieves value of the `vcable_id` parameter for the specified instance.

```
opc -f table -F vcable_id compute instance get /Compute-acme/jack.jones@example.com/
dev2/6073c806-f7da-47eb-9678-6e618931b29a
```

Sample Output

```
+----------+-------------------------------------------------------------------------
+
  vcable_id | /Compute-acme/jack.jones@example.com/f7a0859c-caa9-49e2-bf8a-
a1c2798d4fe5
+----------+-------------------------------------------------------------------------
+
```

instance update

Updates the status of the instance, as well as the tags and shape associated with the instance.

You can update values for the following instance parameters:

- `desired_state`: You can update the value of this parameter to shut down and restart individual instances which use a persistent bootable storage volume. You cannot update this parameter for ephemeral instances.
  - Specify `shutdown` as the value for `desired_state` to shut down an instance which is in the `running` state.
  - Specify `running` as the value for `desired_state` to restart an instance that you had previously shutdown. The instance is restarted without losing any of the instance data or configuration.
- `shape`: You can update the value of this parameter to change the shape associated with an instance which is in the `shutdown` state. You cannot change the shape of a running instance.
- `tags`: You can update the array of tags that's associated with an instance.

Shutting down an instance is useful when you've created multiple instances in a single orchestration. In this case, stopping the instance orchestration would cause all instances to be deleted. If you want to stop one or more instances, while letting other instances in the same orchestration run, you can shut down the required instances individually.

Here's what happens when you shut down an instance:

- The instance ID is retained and reused when you restart the instance. So the multipart instance name doesn't change. This is useful in case the instance name is referenced by other objects, such as storage attachments.
- For instances created using orchestrations v1, the instance orchestration shows an error. However, even if the HA policy specified is active, the instance isn't automatically re-created.
- The resources associated with that instance, such as storage volumes and IP reservations, are freed up and can be used by other instances if required.

However, if you attempt to restart an instance, ensure that the required resources are available, otherwise the instance can't restart and will go into an error state.

- The private IP address on the shared network is released. If you restart the instance later, it is allotted a private IP address afresh. So the private IP address of the instance on the shared network is likely to change.
- Dynamically allocated IP addresses on IP networks are also released. So if you start the instance later, dynamically allocated IP addresses on IP networks are also likely to change. Static private IP addresses that are allocated to interfaces in the instance orchestration won't change.
- Any changes that you'd made to the instance in Compute Classic after the instance was created will be lost. For example, if you added the instance to security lists, attached storage volumes to the instance, or detached and attached an IP reservation, you'll need to make those changes again. The instance will be restarted with the resources that are associated with it in the instance orchestration.

> **Note:**
>
> Changes made to the instance by logging in to the instance won't be lost, however, as these are preserved on the persistent storage volumes attached to the instance. Data on storage volumes isn't affected by shutting down an instance.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute instance update name [--desired-state running | shutdown] [--tags tags]
[--shape shape]
```

Many other options may appear in the syntax, but you cannot change the value of these options.

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command shuts down the `/Compute-acme/jack.jones@example.com/production/dd959b49-60d1-4659-85d3-647722877628` instance which is in the running state and modifies the associated tags.

```
opc compute instance update /Compute-acme/jack.jones@example.com/production/
dd959b49-60d1-4659-85d3-647722877628 --desired-state shutdown --tags 'shutdown
instance'
```

It takes some time for the state of the instance to change. To track the change in the status, run the instance get command.

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
account /Compute-acme/default
attributes/dns/domain   compute-acme.oraclecloud.internal.
attributes/dns/hostname b9479d.compute-acme.oraclecloud.internal.
attributes/dns/nimbula_vcable-eth0      b9479d.compute-acme.oraclecloud.internal.
attributes/network/nimbula_vcable-eth0/address  ["c6:b...","10.3..."]
attributes/network/nimbula_vcable-eth0/dhcp_options
attributes/network/nimbula_vcable-eth0/id       /Compute-acme/jack.jones@example.com/
58de1c89-a006-494d-88a6-6d5113664c58
attributes/network/nimbula_vcable-eth0/model
attributes/network/nimbula_vcable-eth0/vethernet        /oracle/public/default
attributes/network/nimbula_vcable-eth0/vethernet_id     0
attributes/network/nimbula_vcable-eth0/vethernet_type   vlan
attributes/nimbula_orchestration        /Compute-acme/jack.jones@example.com/
production_instance
attributes/sshkeys
availability_domain     /ad1
boot_order      [1]
desired_state   shutdown
disk_attach
domain  compute-acme.oraclecloud.internal.
entry
error_reason
fingerprint
hostname        b9479d.compute-acme.oraclecloud.internal.
hypervisor/mode hvm
image_format    raw
imagelist
ip      0.0.0.0
label   production
name    /Compute-acme/jack.jones@example.com/production/
dd959b49-60d1-4659-85d3-647722877628
networking/eth0/dns     ["b9479d.compute-acme.oraclecloud.internal."]
networking/eth0/model
networking/eth0/nat     ippool:/oracle/public/ippool
networking/eth0/seclists        ["/Compute-acme/default/default"]
networking/eth0/vethernet       /oracle/public/default
placement_requirements  ["/system/compute/placement/default","/system/compute/
allow_instances"]
platform        linux
priority        /oracle/public/default
quota   /Compute-acme
quota_reservation
relationships
resolvers
reverse_dns     true
shape   oc3
site
sshkeys
start_time      2017-06-30T11:01:24Z
state   shutdown
storage_attachments/0/index     1
storage_attachments/0/volume    /Compute-acme/jack.jones@example.com/production-
volume
tags    ["shutdown instance"]
```

```
uri     https://api-z999.compute.us0.oraclecloud.com/instance/Compute-acme/
jack.jones@example.com
/production/dd959b49-60d1-4659-85d3-647722877628
vcable_id
virtio
vnc
```

instance delete

Shuts down an instance and removes it permanently from the system. No response is returned.

You can delete instances that is managed by an orchestration. However, if the HA policy for the instance is active, then the instance is re-created as soon as you delete it. To delete an instance which has an active HA policy, you must stop the corresponding orchestration. If you have created an instance by defining a launch plan, then it is not managed by an orchestration and you can delete such an instance by using this command.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute instance delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute instance delete /Compute-acme/jack.jones@example.com/dev1/6073c806-
f7da-47eb-9678-6e618931b29a
```

14

Instance Snapshot

This section describes the Compute Classic CLI commands you can use to add, view, and delete snapshots of an instance.
When you run the `delete instance` command, it shuts down the instance and removes it permanently from the system. This destroys all customizations you have made since the instance was launched. To preserve all the changes you have made in the instance since launch, create a snapshot of the modified instance. A machine image is created. Add this new machine image to an image list, and then use it to create a new instance.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

snapshot add

Creates a snapshot request, which in turn creates a machine image to preserve all the changes made in the instance since launch.

There can be only one snapshot request in the `active` or `queued` state for an instance at any given time. After the request state changes to `error` or `complete`, you can issue another snapshot request for that instance.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute snapshot add instance [--machineimage machineimage] [--delay=shutdown]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Examples

The following example shows how you can take a snapshot of an instance while the instance is in the `running` state.

```
opc compute snapshot add /Compute-acme/jack.jones@example.com/a6fbb572-
a584-486a-9314-56a24499028d --machineimage /Compute-acme/jack.jones@example.com/
snapshot1

[
  {
   "account": "/Compute-acme/cloud_storage",
   "name": "/Compute-acme/jack.jones@example.com/a6fbb572-
a584-486a-9314-56a24499028d/4dbb2b4c-d315-47ba-b938-696f74826bec",
   "machineimage": "/Compute-acme/jack.jones@example.com/snapshot1",
   "creation_time": "2017-02-26T11:43:05Z",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/snapshot/Compute-acme/
jack.jones@example.com/a6fbb572-a584-486a-9314-56a24499028d/4dbb2b4c-d315-47ba-
b938-696f74826bec",
   "quota": null,
   "delay": "",
   "instance": "/Compute-acme/jack.jones@example.com/a6fbb572-
a584-486a-9314-56a24499028d",
   "state": "active",
   "error_reason": ""
  }
 ]
```

This command returns a snapshot request identifier, which you can use to check the progress of the asynchronous snapshot request by running `list` or `get` command. For information about finding the state of the snapshot, see snapshot get.

After the snapshot of the running instance is taken, the state of the snapshot request changes to `complete`. You can run the `get machineimage` command to verify that the snapshot request has created the machine image correctly.

Add this new machine image to an image list, and then use it to create a new instance.

The following example shows how you can take a snapshot of an instance just before shutting it down. Use this option when you want to take preserve the custom changes you have made to an instance before deleting the instance. It creates a machine image which preserves the changes you have made, and then the instance is deleted.

```
opc -f json compute snapshots add /Compute-acme/jack.jones@example.com/
dafcc088-1f0f-4550-b364-e901709873e1 --machineimage /Compute-acme/
jack.jones@example.com/snapshot2 --delay=shutdown

{
   "account": "/Compute-acme/cloud_storage",
   "name": "/Compute-acme/jack.jones@example.com/dafcc088-1f0f-4550-b364-
e901709873e1/0b0ef87a-a7c8-46b3-8cdc-3315a203a431",
   "machineimage": "/Compute-acme/jack.jones@example.com/snapshot2",
   "creation_time": "2017-02-26T11:49:21Z",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/snapshot/Compute-acme/
jack.jones@example.com/dafcc088-1f0f-4550-b364-e901709873e1/0b0ef87a-
a7c8-46b3-8cdc-3315a203a431",
   "quota": null,
   "delay": "shutdown",
   "instance": "/Compute-acme/jack.jones@example.com/dafcc088-1f0f-4550-b364-
e901709873e1",
```

```
  "state": "active",
  "error_reason": ""
}
```

If you use the `--delay=shutdown` option, the snapshot remains in the `active` state, until you shutdown the instance by running the `delete instance` command. When the `delete instance` command is executed, a snapshot of the instance is taken and a machine image is created, the state of the snapshot changes to `complete`, and then the instance is stopped and deleted.

You can run the `get machineimage` command to verify that the snapshot request has created the machine image correctly. Add this new machine image to an image list, and then use it to create a new instance.

snapshot get

Retrieves details for a specific snapshot.

You can use the `get` command to verify whether `add` operation was completed successfully. Use the `-F` option (for example, `-F state`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute snapshot get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following example retrieves the state of the snapshot.

```
opc -f table -F state compute snapshot get /Compute-acme/jack.jones@example.com/
a6fbb572-a584-486a-9314-56a24499028d/0b0ef87a-a7c8-46b3-8cdc-3315a203a431
```

Sample Output

```
+-------+--------+
  state | active
+-------+--------+
```

snapshot list

Retrieves details of all the instance snapshots in the specified container that match the specified query criteria. You can pass one or more query parameters to filter the search results. If you don't specify any query criteria, then details of all the snapshots in the container are displayed.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute snapshot list container [--name name] [--instance instance] [--
machineimage machineimage]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following example shows how you can list information, such as name of the snapshot and the corresponding machine image.

```
opc -f text -F name,machineimage compute snapshot list /Compute-acme/
jack.jones@example.com
```

Sample Output

Some lines have been truncated with ellipses (`...`) for readability. When you run the command in your environment, you'll see the full output.

```
MACHINEIMAGE    NAME
/Compute-acme/jack.jones@example.com/a6fbb572-a58...f748/d806...8     /Compute-acme/
jack.jones@example.com/snapshot1
/Compute-acme/jack.jones@example.com/dafcc088-1f0...873e/c923...0     /Compute-acme/
jack.jones@example.com/snapshot2
```

snapshot discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute snapshot discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following example lists the snapshots of the instance `/Compute-acme/jack.jones@example.com/a6fbb572-a584-486a-9314-56a24499028d`.

```
opc -f json compute snapshot discover /Compute-acme/jack.jones@example.com/a6fbb572-
a584-486a-9314-56a24499028d/
```

Sample Output

```
{
 "result": [
   /Compute-acme/jack.jones@example.com/a6fbb572-a584-486a-9314-56a24499028d/
4dbb2b4c-d315-47ba-b938-696f74826bec
   /Compute-acme/jack.jones@example.com/a6fbb572-a584-486a-9314-56a24499028d/
df8caca5-8a27-4153-9c5f-7440080b40c8
 ]
}
```

snapshot delete

Deletes a snapshot request. Deleting the snapshot request does not delete the machine image that was created by it. No response is returned for the delete action.

The following restrictions apply for deleting a snapshot request:

- Requests in the `active` state cannot be deleted.
- Requests can only be deleted when they are in the `error` or `complete` state.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute snapshot delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute snapshot delete /Compute-acme/jack.jones@example.com/a6fbb572-
a584-486a-9314-56a24499028d/4dbb2b4c-d315-47ba-b938-696f74826bec
```

15

IP Address Association Used in IP Network

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view IP address associations that are used in IP Networks. IP Address Association is the association between an IP address reservation and a virtual NIC of an instance. Among all the IP address associations on a single virtual NIC, all the reachable IP address prefixes must be non-overlapping (excluding the 'default' prefix), and at most one IP address pool may have the 'default' reachable IP address prefix.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

ip-address-association add

Creates an IP address association for IP networks in Compute Classic.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-association add name [--description description] [--tags
tags] [--ip-address-reservation ip-address-reservation] [--vnic vnic]
```

Example

```
opc -f json compute ip-address-association add /Compute-acme/jack.jones@example.com/
ipassociation1 --vnic /Compute-acme/jack.jones@example.com/
2e6627de-6842-49bc-9c28-21da524c297d/eth0 --ip-address-reservation /Compute-acme/
jack.jones@example.com/ipreservation1
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/ipassociation1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/ipassociation/
```

```
Compute-acme/jack.jones@example.com/ipassociation1",
  "description": null,
  "tags": [],
  "vnic": "/Compute-acme/jack.jones@example.com/2e6627de-6842-49bc-9c28-21da524c297d/
eth0",
  "ipAddressReservation": "/Compute-acme/jack.jones@example.com/ipreservation1"
}
```

ip-address-association list

Retrieves details of the IP address associations that are available in the specified container. This command is for IP address associations used in IP networks..

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-association list container
```

Example

```
opc -f json compute ip-address-association list /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
"result":[
{
  "name": "/Compute-acme/jack.jones@example.com/ipassociation1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/ipassociation/
Compute-acme/jack.jones@example.com/ipassociation1",
  "description": null,
  "tags": [],
  "vnic": "/Compute-acme/jack.jones@example.com/2e6627de-6842-49bc-9c28-21da524c297d/
eth0",
  "ipAddressReservation": "/Compute-acme/jack.jones@example.com/ipreservation1"
}
]
}
```

ip-address-association get

Retrieves details of the specified IP address association.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-association get name
```

Example

```
opc -f json compute ip-address-association get /Compute-acme/jack.jones@example.com/
ipreservation1
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/ipassociation1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/ipassociation/
Compute-acme/jack.jones@example.com/ipassociation1",
  "description": null,
  "tags": [],
  "vnic": "/Compute-acme/jack.jones@example.com/2e6627de-6842-49bc-9c28-21da524c297d/
eth0",
  "ipAddressReservation": "/Compute-acme/jack.jones@example.com/ipreservation1"
}
```

ip-address-association update

You can update the description, tags, virtual NIC, and IP address reservation of an IP association used in IP networks.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-association update name [--description description] [--tags
tags] [--ip-address-reservation ip-address-reservation] [--vnic vnic]
```

Example

The following example shows how you can update the description, virtual NIC, and IP address reservation of an IP association used in IP networks.

```
opc -f json compute ip-address-association update /Compute-acme/
jack.jones@example.com/ipassociation1 --description 'Updated description for IP
association' --ip-address-reservation /Compute-acme/jack.jones@example.com/
ipreservation2 --vnic /Compute-acme/jack.jones@example.com/
2e6627de-6842-49bc-9c28-21da524c297d/eth1
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/ipassociation1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/ipassociation/
Compute-acme/jack.jones@example.com/ipassociation1",
  "description": "Updated description for IP association",
  "tags": [],
  "vnic": "/Compute-acme/jack.jones@example.com/2e6627de-6842-49bc-9c28-21da524c297d/
```

```
eth1",
  "ipAddressReservation": "/Compute-acme/jack.jones@example.com/ipreservation2"
}
```

ip-address-association delete

Deletes the specified IP address association. No response is returned.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-association delete name
```

Example

```
opc compute ip-address-association delete /Compute-acme/jack.jones@example.com/
ipassociation1
```

16

IP Address Prefix Set

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view IP address prefix sets.
An IP address prefix set lists IPv4 addresses in the CIDR address prefix format.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- ip-address-prefix-set add
- ip-address-prefix-set list
- ip-address-prefix-set get
- ip-address-prefix-set update
- ip-address-prefix-set delete

ip-address-prefix-set add

Adds an IP address prefix set to Compute Classic.

An IP address prefix set lists IPv4 addresses in the CIDR address prefix format. After creating an IP address prefix set, you can specify it as a source or destination for permitted traffic while creating a security rule. See security-rule add.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-prefix-set add name [--ip-address-prefixes CIDR-IPv4-prefixes-list] [--description description] [--tags tags]
```

Example

```
opc -f json compute ip-address-prefix-set add /Compute-acme/jack.jones@example.com/ipaddressprefixset1 --ip-address-prefixes '192.168.0.0/16'
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
 "ipAddressPrefixes": ["192.168.0.0/16"],
```

```
 "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/ipaddressprefixset/
Compute-acme/jack.jones@example.com/ipaddressprefixset1",
 "description": null,
 "tags": [],
 "name": "/Compute-acme/jack.jones@example.com/ipaddressprefixset1"
}
```

ip-address-prefix-set get

Retrieves details of the specified IP address prefix set.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-prefix-set get name
```

Example

```
opc -f json compute ip-address-prefix-set get /Compute-acme/jack.jones@example.com/
ipaddressprefixset1
```

Sample Output

```
{
 "ipAddressPrefixes": ["192.168.0.0/16"],
 "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/ipaddressprefixset//
Compute-acme/jack.jones@example.com/ipaddressprefixset1",
 "description": null,
 "tags": [],
 "name": "/Compute-acme/jack.jones@example.com/ipaddressprefixset1"
}
```

ip-address-prefix-set update

Updates the description, tags, and IP address prefixes in an IP address prefix set.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-prefix-set update name [--ip-address-prefixes CIDR-IPv4-
prefixes-list] [--description description] [--tags tags]
```

Example

The following example shows how to update an IP address prefix set, `/Compute-acme/jack.jones@example.com/ipaddressprefixset1` by adding another IP address prefix to the existing IP address prefix set.

```
opc -f json compute ip-address-prefix-set update /Compute-acme/
jack.jones@example.com/ipaddressprefixset1 --description 'Updating an IP address
prefix set'
```

Sample Output

Some lines have been truncated with ellipses (`...`) for readability. When you run the command in your environment, you'll see the full output.

```
{
  "name": "/Compute-acme/jack.jones@example.com/ipaddressprefixset1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/
ipaddressprefixset/Compute-acme/jack.jones@example.com/ipaddressprefixset1",
  "description": "Updating an IP address prefix set",
  "tags": [],
  "ipAddressPrefixes": [
    "192.168.0.0/16",
    "172.120.0.0/24"
  ]
}
```

ip-address-prefix-set delete

Deletes the specified IP address prefix set. No response is returned.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-prefix-set delete name
```

Example

```
opc compute ip-address-prefix-set delete /Compute-acme/jack.jones@example.com/
ipaddressprefixset2
```

ip-address-prefix-set list

Retrieves details of all the IP address prefix sets that are available in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system

administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-prefix-set list container
```

Example

```
opc -f json compute ip-address-prefix-set list /Compute-acme/jack.jones@example.com
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
  "result": [
    {
      "name": "/Compute-acme/jack.jones@example.com/ipaddressprefixset2",
      "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/
ipaddressprefixset/Compute-acme/jack.jones@example.com/ipaddressprefixset2",
      "description": "Sample IP address prefix set",
      "tags": [

      ],
      "ipAddressPrefixes": [
        "178.120.0.0/24"
      ]
    },
    {
      "name": "/Compute-acme/jack.jones@example.com/ipaddressprefixset1",
      "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/
ipaddressprefixset/Compute-acme/jack.jones@example.com/ipaddressprefixset1",
      "description": "updating an IP address prefix set",
      "tags": [

      ],
      "ipAddressPrefixes": [
        "192.168.0.0/16",
        "172.120.0.0/24"
      ]
    }
  ]
}
```

17

IP Address Reservation for IP Network

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view IP address reservations for IP networks.
A reservation of a NAT IPv4 address, which can be associated to one or more virtual NICs for routing outside of an IP network or IP network exchange using NAT.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- ip-address-reservation add
- ip-address-reservation list
- ip-address-reservation get
- ip-address-reservation update
- ip-address-reservation delete

ip-address-reservation add

Creates an IP address reservation for used in IP networks. Reserves a NAT IPv4 address, which you can associate with one or more virtual NICs for routing traffic outside an IP network or an IP network exchange using NAT.

To reserve an IP address for an instance that you have created in the flat network, see ip-reservation add.

Reserve an IP address from one of the following IP pools:

- A pool of public IP addresses. An IP address from this pool is accessible over the public Internet.
- A pool of cloud IP addresses. An IP address from this pool is accessible to other IP networks in the Oracle cloud. You can use these IP addresses to communicate with other Oracle services.

When you reserve an IP address from a specified IP pool, an IPv4 address is allocated for your use. A public IP address or a cloud IP address can be associated with only one vNIC at a time. However, a single vNIC can have a maximum of two NAT IP addresses, one from each IP pool.

After reserving an IP address, you can and associate the IP address with a vNIC on your instance. See ip-address-association add.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that

the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-reservation add name [--ip-address-pool ip_address_pool_name]
[--description description] [--tags tags]
```

Example

```
opc -f json compute ip-address-reservation add /Compute-acme/jack.jones@example.com/
ipreservation1 --ip-address-pool /oracle/public/public-ippool
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/ipreservation1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/ipreservation/
Compute-acme/jack.jones@example.com/ipreservation1",
  "description": null,
  "tags": [],
  "ipAddress": "10.252.152.90",
  "ipAddressPool": "/oracle/public/public-ippool"
}
```

ip-address-reservation list

Retrieves details of the IP address reservations that are available in the specified container. This request is for IP address reservations used in IP networks.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-reservation list container
```

Example

```
opc -f json compute ip-address-reservation list /Compute-acme/jack.jones@example.com
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
"result":[
{
  "name": "/Compute-acme/jack.jones@example.com/ipreservation1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/ipreservation/
Compute-acme/jack.jones@example.com/ipreservation1",
  "description": null,
  "tags": [],
  "ipAddress": "10.252.152.90",
  "ipAddressPool": "/oracle/public/public-ippool"
```

```
},
{
  "name": "/Compute-acme/jack.jones@example.com/ipreservation2",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/ipreservation/
Compute-acme/jack.jones@example.com/ipreservation2",
  "description": null,
  "tags": [],
  "ipAddress": "10.252.152.52",
  "ipAddressPool": "/oracle/public/cloud-ippool"
}
]
}
```

ip-address-reservation get

Retrieves details of the specified IP address reservation for IP networks.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-reservation get name
```

Example

```
opc -f json compute ip-address-reservation get /Compute-acme/jack.jones@example.com/
ipreservation1
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/ipreservation1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/ipreservation/
Compute-acme/jack.jones@example.com/ipreservation1",
  "description": null,
  "tags": [],
  "ipAddress": "10.252.152.90",
  "ipAddressPool": "/oracle/public/public-ippool"
}
```

ip-address-reservation update

Updates the specified IP address reservation which is used in IP Networks. You can update values for `ip-address-pool`, `description`, and `tags` parameters.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that

the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-reservation update name [--ip-address-pool
ip_address_pool_name] [--description description] [--tags tags]
```

Example

This following example demonstrates how you can update the description of the `/Compute-acme/jack.jones@example.com/ipreservation1` IP address reservation for use in an IP network. You can also change the `ip-address-pool` from `/oracle/public/public-ippool` to `/oracle/public/cloud-ippool` to communicate with instances privately.

```
opc -f json compute ip-address-reservation update /Compute-acme/
jack.jones@example.com/ipreservation1 --ip-address-pool /oracle/public/cloud-ippool
--description 'updated description for IP reservation'
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com
/ipreservation1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/ipreservation/
Compute-acme/jack.jones@example.com
/ipreservation1",
  "description": "updated description for IP reservation",
  "tags": [],
  "ipAddress": "10.252.152.90",
  "ipAddressPool": "/oracle/public/public-ippool"
}
```

ip-address-reservation delete

Deletes the specified IP address reservation which is used in an IP network. No response is returned.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-address-reservation delete name
```

Example

```
opc compute ip-address-reservation delete /Compute-acme/jack.jones@example.com/
ipreservation1
```

18
IP Association

This section describes the Compute Classic CLI commands that you can use to create, delete, and view IP associations.
An IP association is a link between a public IP address and the vcable of an instance. A vcable is an attachment point to a specific network interface of an instance. A vcable is created automatically when an instance is created and is deleted when the instance is deleted.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- ip-association add
- ip-association list
- ip-association discover
- ip-association get
- ip-association delete

ip-association add

Creates an association between an IP address and the vcable ID of an instance.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-association add parentpool vcable
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example 1

This command associates the IP reservation named `/Compute-acme/jack.jones@example.com/de60ae9e-62e4-445c-bb0c-b3cc80e2d4c8` to the instance that has the vcable ID `/Compute-acme/jack.jones@example.com/8da0bcf0-a928-4b0a-bc88-db1ec28ea3b1`.

To retrieve the vcable ID of an instance, see instance get.

```
opc -f json compute ip-association add ipreservation:/Compute-acme/
jack.jones@example.com/de60ae9e-62e4-445c-bb0c-b3cc80e2d4c8 /Compute-acme/
jack.jones@example.com/8da0bcf0-a928-4b0a-bc88-db1ec28ea3b1
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
   "account": "/Compute-acme/default",
   "vcable": "/Compute-acme/jack.jones@example.com/8da0bcf0-a928-4b0a-bc88-
db1ec28ea3b1",
   "name": "/Compute-acme/jack.jones@example.com/3fc62d32-1c9a-42a9-9851-
e5581b4c2253",
   "ip": "public_ip_address",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/ip/association/Compute-acme/
jack.jones@example.com/3fc62d32-1...",
   "parentpool": "ipreservation:/Compute-acme/jack.jones@example.com/
de60ae9e-62e4-445c-bb0c-b3cc80e2d4c8",
   "reservation": "/Compute-acme/jack.jones@example.com/de60ae9e-62e4-445c-bb0c-
b3cc80e2..."
}
```

Example 2

This command associates temporary IP address from the `/oracle/public/ippool` IP pool with the instance that has the vcable ID `/Compute-acme/jack.jones@example.com/abb46785-693f-4576-863d-caca011ac5ce`.

```
opc -f json compute ip-association add ippool:/oracle/public/ippool /Compute-acme/
jack.jones@example.com/abb46785-693f-4576-863d-caca011ac5ce
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
   "account": "/Compute-acme/default",
   "vcable": "/Compute-acme/jack.jones@example.com/abb46785-693f-4576-863d-
caca011ac5ce",
   "name": "/Compute-acme/jack.jones@example.com/3fc62d32-1c9a-42a9-9851-
e5581b4c2253",
   "ip": "public_ip_address",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/ip/association/Compute-acme/
jack.jones@example.com/3fc62d32-1...",
   "parentpool": "ippool:/oracle/public/ippool",
   "reservation": "/Compute-acme/jack.jones@example.com/de60ae9e-62e4-445c-bb0c-
b3cc80e2..."
}
```

ip-association list

Retrieves details of all the IP associations in the specified container that match the specified query criteria. You can pass one or more query parameters to filter the search results. If you don't specify any query criteria, then details of all the IP associations in the container are displayed.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-association list container [--vcable vcable_id] [--parentpool pool]
[--reservation reservation] [--enabled | --no-enabled]
```

For help with the parameters and options of this command, run the command with the `-h` option.

This command retrieves details of all the IP associations in the `/Compute-acme/jack.jones@example.com` container.

```
opc -f json compute ip-association list /Compute-acme/jack.jones@example.com
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
 "result": [
  {
   "account": "/Compute-acme/default",
   "vcable": "/Compute-acme/jack.jones@example.com/016e75e7-e911-42d1-
bfe1-6a7f1b3f7908",
   "name": "/Compute-acme/jack.jones@example.com/
1ce4e833-02ea-409c-8a3b-3b1ec3efff79",
   "ip": "public_ip_address",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/ip/association/Compute-acme/
jack.jones@example.com/1ce4e833-02...",
   "parentpool": "ippool:/oracle/public/ippool",
   "reservation": "/Compute-acme/jack.jones@example.com/prod-vm1"
  },
  {
   "account": "/Compute-acme/default",
   "vcable": "/Compute-acme/jack.jones@example.com/8da0bcf0-a928-4b0a-bc88-
db1ec28ea3b1",
   "name": "/Compute-acme/jack.jones@example.com/3fc62d32-1c9a-42a9-9851-
e5581b4c2253",
   "ip": "public_ip_address",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/ip/association/Compute-acme/
jack.jones@example.com/3fc62d32-1...",
   "parentpool": "ipreservation:/Compute-acme/jack.jones@example.com/
de60ae9e-62e4-445c-bb0c-b3cc80e2d4c8",
   "reservation": "/Compute-acme/jack.jones@example.com/de60ae9e-62e4-445c-bb0c-
b3cc80e2d4c8"
  }
 ]
}
```

ip-association discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-association discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute ip-association discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result": [
  "/Compute-acme/jack.jones@example.com/1ce4e833-02ea-409c-8a3b-3b1ec3efff79",
  "/Compute-acme/jack.jones@example.com/3fc62d32-1c9a-42a9-9851-e5581b4c2253",
  "/Compute-acme/jack.jones@example.com/4e7f5c45-30f4-423c-b27f-0e7e57a75728"
 ]
}
```

ip-association get

Retrieves details of the specified IP association.

You can use the `get` command to verify whether a previous `add` operation was completed successfully.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-association get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute ip-association get /Compute-acme/jack.jones@example.com/
1ce4e833-02ea-409c-8a3b-3b1ec3efff79
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
   "account": "/Compute-acme/default",
   "vcable": "/Compute-acme/jack.jones@example.com/8da0bcf0-a928-4b0a-bc88-
db1ec28ea3b1",
   "name": "/Compute-acme/jack.jones@example.com/3fc62d32-1c9a-42a9-9851-
e5581b4c2253",
   "ip": "public_ip_address",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/ip/association/Compute-acme/
jack.jones@example.com/3fc62d32-1...",
   "parentpool": "ipreservation:/Compute-acme/jack.jones@example.com/
de60ae9e-62e4-445c-bb0c-b3cc80e2d4c8",
   "reservation": "/Compute-acme/jack.jones@example.com/de60ae9e-62e4-445c-bb0c-
b3cc80e2..."
}
```

ip-association delete

Deletes the specified IP association. No response is returned.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-association delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute ip-association delete /Compute-acme/jack.jones@example.com/
3fc62d32-1c9a-42a9-9851-e5581b4c2253
```

19
IP Network

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view IP networks.
An IP network allows you to define an IP subnet in your account. The size of the IP subnet and the set IP addresses in the subnet are determined by the IP address prefix that you specify while creating the IP network. These IP addresses aren't part of the common pool of Oracle-provided IP addresses used by the shared network. When you attach an instance to an IP network (by specifying the network in the instance launch plan), the instance is assigned an IP address in that subnet. You can assign IP addresses to instances either statically or dynamically, depending on your business needs. So you have complete control over the IP addresses assigned to your instances. For more information, see Managing IP Networks in *Using Oracle Cloud Infrastructure Compute Classic*.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

ip-network add

Creates an IP network. An IP network allows you to define an IP subnet in your account. With an IP network you can isolate instances by creating separate IP networks and adding instances to specific networks. Traffic can flow between instances within the same IP network, but by default each network is isolated from other networks and from the public Internet.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-network add name ip-address-prefix [--ipnetworkexchange IP-network-exchange] [--description description] [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute ip-network add /Compute-acme/jack.jones@example.com/ipnet1
192.168.0.0/24
```

Sample Output

```
 {
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/ipnetwork/
Compute-acme/jack.jones@example.com/ipnet1",
  "ipNetworkExchange": null,
  "ipAddressPrefix": "192.168.0.0/24",
  "name": "/Compute-acme/jack.jones@example.com/ipnet1"
 }
```

ip-network list

Retrieves details of all the IP networks in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-network list container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute ip-network list /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result": [
 {
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/ipnetwork/
Compute-acme/jack.jones@example.com/ipnet1",
  "ipNetworkExchange": null,
  "ipAddressPrefix": "192.168.0.0/24",
  "name": "/Compute-acme/jack.jones@example.com/ipnet1"
 }
]
}
```

ip-network get

Retrieves details of the specified IP network.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-network get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute ip-network get /Compute-acme/jack.jones@example.com/ipnet1
```

Sample Output

```
{
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/ipnetwork/
Compute-acme/jack.jones@example.com/ipnet1",
  "ipNetworkExchange": null,
  "ipAddressPrefix": "192.168.0.0/24",
  "name": "/Compute-acme/jack.jones@example.com/ipnet1"
}
```

ip-network update

You can update an IP network and change the specified IP address prefix for the network after you've created the network and attached instances to it. However, when you change an IP address prefix, it could cause the IP addresses currently assigned to existing instances to fall outside the specified IP network. If this happens, all traffic to and from those vNICs will be dropped.

If the IP address of an instance is dynamically allocated, stopping the instance orchestration and restarting it will reassign a valid IP address from the IP network to the instance.

However, if the IP address of an instance is static - that is, if the IP address is specified in the instance orchestration while creating the instance - then the IP address can't be updated by stopping the instance orchestration and restarting it. You would have to manually update the orchestration to assign a valid IP address to the vNIC attached to that IP network.

It is therefore recommended that if you update an IP network, you only expand the network by specifying the same IP address prefix but with a shorter prefix length. For example, you can expand 192.168.1.0/24 to 192.168.1.0/20. Don't, however, change the IP address. This ensures that all IP addresses that have been currently allocated to instances remain valid in the updated IP network.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

`opc compute ip-network update` *`name ipaddressprefix`* `[--ip-network-exchange` *`ip-Network-Exchange`*`] [--description` *`description`*`] [--tags` *`tags`*`]`

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command updates the IP address prefix of the `/Compute-acme/jack.jones@example.com/ipnet1` IP network from `192.168.0.0/24` to `192.168.0.0/20` and adds the IP network to the specified IP network exchange.

```
opc -f json compute ip-network update --ip-network-exchange /Compute-acme/
jack.jones@example.com/ipexchange1 /Compute-acme/jack.jones@example.com/ipnet1
192.168.0.0/20
```

Sample Output

```
{
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/ipnetwork/
Compute-acme/jack.jones@example.com/ipnet1",
  "ipNetworkExchange": "/Compute-acme/jack.jones@example.com/ipNetworkExchange1",
  "ipAddressPrefix": "192.168.0.0/20",
  "name": "/Compute-acme/jack.jones@example.com/ipnet1"
 }
```

ip-network delete

Deletes the specified IP network. No response is returned.

If you delete an IP network that contains instances, the packets sent across the instances within the IP network are dropped.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

`opc compute ip-network delete` *`name`*

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute ip-network delete /Compute-acme/jack.jones@example.com/ipnet1
```

20
IP Network Exchange

This section describes the Compute Classic CLI commands you can use to add, delete, and view IP network exchange.
An IP network exchange can include multiple IP networks, but an IP network can be added to only one IP network exchange. For more information, see Managing IP Networks in *Using Oracle Cloud Infrastructure Compute Classic*.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

ip-network-exchange add

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-network-exchange add name [--description description] [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute ip-network-exchange add /Compute-acme/jack.jones@example.com/
ipNetworkExchange1
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/ipNetworkExchange1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/
ipnetworkexchange/Compute-acme/jack.jones@example.com/ipNetworkExchange1"
}
```

ip-network-exchange list

Retrieves details of all the IP network exchanges in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-network-exchange list container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute ip-network-exchange list /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result":[
 {
  "name": "/Compute-acme/jack.jones@example.com/ipNetworkExchange1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/
ipnetworkexchange/Compute-acme/jack.jones@example.com/ipNetworkExchange1"
 }
]
}
```

ip-network-exchange get

Retrieves details of the specified IP network exchange.

You can use the `get` command to verify whether `add` operation was completed successfully.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-network-exchange get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute ip-network-exchange get /Compute-acme/jack.jones@example.com/
ipNetworkExchange1
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/ipNetworkExchange1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/
ipnetworkexchange/Compute-acme/jack.jones@example.com/ipNetworkExchange1"
}
```

ip-network-exchange delete

Deletes the specified IP network exchange. No response is returned.

If you delete an IP network exchange that connects two IP networks, the packets sent across the IP networks are dropped.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-network-exchange delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute ip-network-exchange delete /Compute-acme/jack.jones@example.com/
ipNetworkExchange1
```

21
IP Reservation

This section describes the Compute Classic CLI commands that you can use to add, delete, update, and view IP reservations.
An IP reservation is the allocation of a public IP address from an IP address pool. After creating an IP reservation, you can associate it with an instance by using an IP association, to enable access between the Internet and the instance.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- ip-reservation add
- ip-reservation list
- ip-reservation discover
- ip-reservation get
- ip-reservation update
- ip-reservation delete

ip-reservation add

Creates an IP reservation. After creating an IP reservation, you can associate it with an instance by using the ip-association add command.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-reservation add name parentpool [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute ip-reservation add /Compute-acme/jack.jones@example.com/
prod1_ipres /oracle/public/ippool --tags 'production'
```

Sample Output

```
{
   "account": "/Compute-acme/default",
```

```
   "used": false,
   "name": "/Compute-acme/jack.jones@example.com/prod1_ipres",
   "tags": ["production"],
   "ip": "public_ip_address",
   "quota": null,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/ip/reservation/Compute-acme/
jack.jones@example.com/prod1_ipres",
   "parentpool": "/oracle/public/ippool",
   "permanent": true
}
```

ip-reservation list

Retrieves details of all the IP reservations in the specified container that match the specified query criteria. You can pass one or more query parameters to filter the search results. If you don't specify any query criteria, then details of all the IP reservations in the container are displayed.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-reservation list container [--used] [--permanent] [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following command retrieves the names and IP addresses of the IP reservations that are in the specified container and that are currently associated with instances by specifying the `--used` option.

```
opc -f table -F name,ip compute ip-reservation list /Compute-acme/
jack.jones@example.com --used
```

Sample Output

```
+-------------------------------------------------------------------------------
+-----------------+
                                          NAME
|        IP
+-------------------------------------------------------------------------------
+-----------------+
/Compute-acme/jack.jones@example.comdb3ce09f-006e-49f8-90e8-cdc3362e32a8     |
public_ip_address
/Compute-acme/jack.jones@example.come3a7d6a9-67b8-4441-8412-981b537b0026     |
public_ip_address
+-------------------------------------------------------------------------------
+-----------------+
```

ip-reservation discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-reservation discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute ip-reservation discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result": [
  "/Compute-acme/jack.jones@example.com/prod1_ipres",
  "/Compute-acme/jack.jones@example.com/dev1_ipres"
  ]
}
```

ip-reservation get

Retrieves details of the specified IP reservation.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully. Use the `-F` option (for example, `-F name`) to filter the output for specific attributes. You can also filter the results to retrieve value for the `used` parameter. If the value of the `used` parameter is `false`, it indicates that the IP reservation is not being used.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-reservation get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Parameter / Option	Required / Optional	Description
name	required	Three-part name of the object (`/Compute-identity_domain/user/object`).

Example

```
opc -f table -F used compute ip-reservation get /Compute-acme/jack.jones@example.com/
prod1
```

Sample Output

```
+------+-------+
  used | false
+------+-------+
```

ip-reservation update

Changes the `permanent` field of an IP reservation from `false` to `true` or vice versa. You can also update the `tags` that are used to identify the IP reservation.

You can use this command when, for example, you want to delete an instance but retain its autoallocated public IP address as a permanent IP reservation for use later with another instance. In such a case, before deleting the instance, change the `permanent` field of the IP reservation from `false` to `true`.

Note that if you change the `permanent` field of an IP reservation to `false` and if the reservation is not associated with an instance, the reservation will be deleted.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

`opc compute ip-reservation update` *`name parentpool permanent`* `[--tags` *`tags`*`]`

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following example shows how to update an IP reservation to change the value of `permanent` and `tags`.

```
opc -f json compute ip-reservation update /Compute-acme/jack.jones@example.com/
prod1 /oracle/public/ippool false --tags 'production-instance'
```

Sample Output

The following example shows the response received in JSON format when you update an IP reservation. Note that if you change the permanent field of an IP reservation to false, and if the reservation is not associated with an instance, then the reservation will be deleted. As the IP reservation considered in this example is not associated with an instance (`"used": false`), this IP reservation is updated, and then deleted.

```
{
   "account": "/Compute-acme/default",
   "used": false,
   "name": "/Compute-acme/jack.jones@example.com/prod1",
```

```
        "tags": ["production-instance"],
   "ip": "public_ip_address",
   "quota": null,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/ip/reservation/Compute-acme/
jack.jones@example.com/prod1",
   "parentpool": "/oracle/public/ippool",
   "permanent": false
}
```

ip-reservation delete

Deletes the specified IP reservation. No response is returned.

Ensure that no instance is using the IP reservation that you want to delete. The `used` parameter in an IP reservation indicates whether the IP reservation is being used. If the `used` parameter is set to `false`, the IP reservation is not being used. For more information about retrieving the value of the `used` parameter, see ip-reservation get.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ip-reservation delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute ip-reservation delete /Compute-acme/jack.jones@example.com/prod1_ipres
```

22

Launch Plan

This section describes the Compute Classic CLI command you can use to create instances by using launch plans.
A launch plan is a JSON-formatted file that defines the properties of one or more instances. You can use a launch plan to quickly create and start multiple, non-persistent instances in Compute Classic. Note that while you can reuse your launch plan JSON file to create instances afresh based on the attributes and provisioning sequence specified in the JSON file, the launch plan itself doesn't persist in Compute Classic.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- launch-plan add

launch-plan add

This section describes the Compute Classic CLI command that you can use to create instances by using launch plans.
A launch plan specifies the provisioning sequence and attributes of the instances that you want to create. Note that while you can reuse your launch plan JSON file to create new instances based on the attributes and provisioning sequence specified in the JSON file, the launch plan itself doesn't persist in Compute Classic.

When you create an instance, the initial state is `preparing`, as Compute Classic allocates resources and prepares to create the instance. Next, the state changes to `initializing`, which indicates that the specified image is being installed. When initializing is complete, the instance state changes to `running`, which indicates that the OS has started. When an instance is in the `running` state, you can connect to it and use it to run applications. You are billed for an instance from the time the `initializing` stage is complete till you delete the instance.

Prerequisites

- Create the required networking and storage objects that you want to use while creating the instances.
- Create a JSON file to specify attributes for the Compute Classic instances that you want to create. See Instance Attributes Specified in a Launch Plan in *Using Oracle Cloud Infrastructure Compute Classic*.
- After creating the JSON file, you should validate it. You can do this by using a third-party tool, such as JSONLint, or any other validation tool of your choice. If your JSON format isn't valid, then an error message is displayed when you add your orchestration.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

Use any one of the following syntax.

- `opc compute launch-plan add --request-body=FILE.json`

  In this syntax, *`filename`* is the full path and name of the JSON-formatted file containing the launch plan attributes. For information about the attributes you can specify in a launch plan JSON file, see Instance Attributes Specified in a Launch Plan in *Using Oracle Cloud Infrastructure Compute Classic*.

- `opc compute launch-plan add instances [--relationships relationship.json]`

For help with the parameters and options of this command, run the command with the `-h` option.

Example 1: Specifying instance attributes in a single JSON file

```
opc -f json compute launch-plan add --request-body=launchplan.json
```

Example of launchplan.json

The following is an example of a JSON-formatted file showing the attributes for two instances with different IP addresses and shapes but using the same SSH keys and the same image.

```
{
  "instances": [
    {
      "shape": "oc3",
      "imagelist": "/oracle/public/oel_6.4_2GB_v1",
      "name": "/Compute-acme/jack.jones@example.com/dev-vm",
      "label": "dev-vm",
      "sshkeys": [
        "/Compute-acme/jack.jones@example.com/ssh-key1"
      ],
      "networking": {
        "eth0": {
          "seclists": [
            "/Compute-acme/default/default"
          ],
          "nat": "ippool:/oracle/public/ippool"
        }
      }
    },
    {
      "shape": "oc4",
      "imagelist": "/oracle/public/oel_6.4_2GB_v1",
      "name": "/Compute-acme/jack.jones@example.com/prod-vm",
      "label": "prod-vm",
      "sshkeys": [
        "/Compute-acme/jack.jones@example.com/ssh-key1"
      ],
```

```
      "networking": {
        "eth0": {
          "seclists": [
            "/Compute-acme/default/default"
          ],
          "nat": "ippool:/oracle/public/ippool"
        }
      }
    }
  ],
  "relationships": [
    {
      "instances": [
        "dev-vm",
        "prod-vm"
      ],
      "type": "different_node"
    }
  ]
}
```

Example 2: Specifying instance attributes at the command line

```
opc -f json compute launch-plan add file://launch_instances.json --relationships
file://relationship.json
```

Example JSON files

The following shows an example of the instance attributes specified in the `launch_instances.json` file to create two instances with the specified instance attributes. The relationship between these instances is defined in the `relationship.json` file.

Example `launch_instances.json` File

```
{
  "instances": [
    {
      "shape": "oc3",
      "imagelist": "/oracle/public/oel6",
      "name": "/Compute-acme/jack.jones@example.com/dev-vm",
      "label": "dev-vm",
      "sshkeys": [
        "/Compute-acme/jack.jones@example.com/ssh-key1"
      ],
      "networking": {
        "eth0": {
          "seclists": [
            "/Compute-acme/default/default"
          ],
          "nat": "ippool:/oracle/public/ippool"
        }
      }
    },
    {
      "shape": "oc4",
      "imagelist": "/oracle/public/oel6",
      "name": "/Compute-acme/jack.jones@example.com/prod-vm",
      "label": "prod-vm",
      "sshkeys": [
        "/Compute-acme/jack.jones@example.com/ssh-key1"
```

```
      ],
      "networking": {
        "eth0": {
          "seclists": [
            "/Compute-acme/default/default"
          ],
          "nat": "ippool:/oracle/public/ippool"
        }
      }
    }
  ]
}
```

Example `relationship.json` File

```
{
    "relationships": [{
        "instances": [
            "dev-vm",
            "prod-vm"
        ],
        "type": "different_node"
    }]
}
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
 "instances": [
  {
   "account": "/Compute-acme/default",
   "attributes": {
    "sshkeys": [
     "ssh-rsa AAAAB3NzaC1y..."
    ]
   },
   "availability_domain": null,
   "boot_order": [],
   "cluster": null,
   "cluster_uri": null,
   "console": null,
   "delete_requested": null,
   "desired_state": "running",
   "disk_attach": "",
   "domain": "compute-acme.oraclecloud.internal.",
   "entry": 1,
   "error_exception": null,
   "error_reason": "",
   "fingerprint": "",
   "higgs": null,
   "hostname": "a83333.compute-acme.oraclecloud.internal.",
   "hypervisor": {
    "mode": "hvm"
   },
   "hypervisor_type": null,
   "id": "7221d5b3-1770-4a34-9a24-ab6a0e0ed871",
   "image_format": "raw",
   "imagelist": "/oracle/public/oel6",
```

```
   "ip": "0.0.0.0",
   "label": "dev-vm",
   "last_seen": null,
   "last_state_change_time": null,
   "launch_context": "1703085e6316f319d1f3b16fe5669f73be229b",
   "metrics": null,
   "name": "/Compute-acme/jack.jones@example.com/dev-vm/7221d5b3-1770-4a34-9a24-
ab6a0e0ed871",
   "nat_associations": null,
   "networking": {
    "eth0": {
     "dns": [
      "a83333.compute-acme.oraclecloud.internal."
     ],
     "model": "",
     "nat": "ippool:/oracle/public/ippool",
     "seclists": [
      "/Compute-acme/default/default"
     ],
     "vethernet": "/oracle/public/default"
    }
   },
   "node": null,
   "node_uuid": null,
   "numerical_priority": 100,
   "placement_requirements": [
    "/system/compute/placement/default",
    "/system/compute/allow_instances"
   ],
   "platform": "linux",
   "priority": "/oracle/public/default",
   "quota": "/Compute-acme",
   "quota_reservation": null,
   "relationships": [],
   "resolvers": null,
   "resource_requirements": {
    "compressed_size": 376848450,
    "cpus": 2.0,
    "decompressed_size": 5905612288,
    "gpus": 0,
    "io": 200,
    "is_root_ssd": false,
    "ram": 7680,
    "root_disk_size": 0,
    "ssd_data_size": 0
   },
   "reverse_dns": true,
   "seclist_associations": null,
   "shape": "oc3",
   "site": "",
   "sshkeys": [
    "/Compute-acme/jack.jones@example.com/ssh-key1"
   ],
   "start_requested": false,
   "start_time": "2017-03-08T09:29:58Z",
   "state": "queued",
   "storage_attachment_associations": [],
   "storage_attachments": [],
   "suspend_file": null,
   "suspend_requested": false,
   "tags": [],
```

```
   "target_node": null,
   "tracking_id": null,
   "uri": "http://api-z999.compute.us0.oraclecloud.com/instance/Compute-acme/
jack.jones@example.com/dev-vm/7221d5b3-1770-4a34-9a24-ab6a0e0ed871",
   "vcable_id": null,
   "vethernets": null,
   "virtio": null,
   "vnc": "",
   "vnc_key": null
  },
  {
   "account": "/Compute-acme/default",
   "attributes": {
    "sshkeys": [
     "ssh-rsa AAAAB3NzaC..."
    ]
   },
   "availability_domain": null,
   "boot_order": [],
   "cluster": null,
   "cluster_uri": null,
   "console": null,
   "delete_requested": null,
   "desired_state": "running",
   "disk_attach": "",
   "domain": "compute-acme.oraclecloud.internal.",
   "entry": 1,
   "error_exception": null,
   "error_reason": "",
   "fingerprint": "",
   "higgs": null,
   "hostname": "f12678.compute-acme.oraclecloud.internal.",
   "hypervisor": {
    "mode": "hvm"
   },
   "hypervisor_type": null,
   "id": "fb68c7c1-e61f-4090-b46c-bfd5ba5a699b",
   "image_format": "raw",
   "imagelist": "/oracle/public/oel6",
   "ip": "0.0.0.0",
   "label": "prod-vm",
   "last_seen": null,
   "last_state_change_time": null,
   "launch_context": "1703085e6316f319d1f3b16fe5669f73be229b",
   "metrics": null,
   "name": "/Compute-acme/jack.jones@example.com/prod-vm/fb68c7c1-e61f-4090-b46c-
bfd5ba5a699b",
   "nat_associations": null,
   "networking": {
    "eth0": {
     "dns": [
      "f12678.compute-acme.oraclecloud.internal."
     ],
     "model": "",
     "nat": "ippool:/oracle/public/ippool",
     "seclists": [
      "/Compute-acme/default/default"
     ],
     "vethernet": "/oracle/public/default"
    }
   },
```

```
    "node": null,
    "node_uuid": null,
    "numerical_priority": 100,
    "placement_requirements": [
     "/system/compute/placement/default",
     "/system/compute/allow_instances"
    ],
    "platform": "linux",
    "priority": "/oracle/public/default",
    "quota": "/Compute-acme",
    "quota_reservation": null,
    "relationships": [],
    "resolvers": null,
    "resource_requirements": {
     "compressed_size": 376848450,
     "cpus": 4.0,
     "decompressed_size": 5905612288,
     "gpus": 0,
     "io": 400,
     "is_root_ssd": false,
     "ram": 15360,
     "root_disk_size": 0,
     "ssd_data_size": 0
    },
    "reverse_dns": true,
    "seclist_associations": null,
    "shape": "oc4",
    "site": "",
    "sshkeys": [
     "/Compute-acme/jack.jones@example.com/ssh-key1"
    ],
    "start_requested": false,
    "start_time": "2017-03-08T09:29:58Z",
    "state": "queued",
    "storage_attachment_associations": [],
    "storage_attachments": [],
    "suspend_file": null,
    "suspend_requested": false,
    "tags": [],
    "target_node": null,
    "tracking_id": null,
    "uri": "http://api-z999.compute.us0.oraclecloud.com/instance/Compute-acme/
jack.jones@example.com/prod-vm/fb68c7c1-e61f-4090-b46c-bfd5ba5a699b",
    "vcable_id": null,
    "vethernets": null,
    "virtio": null,
    "vnc": "",
    "vnc_key": null
   }
  ],
  "relationships": [
   {
    "instances": [
     "dev-vm",
     "prod-vm"
    ],
    "type": "different_node"
   }
  ]
}
```

23
Machine Image

This section describes the Compute Classic CLI commands that you can use to create, delete, and view machine images.
A **machine image** is a template of a virtual hard disk of a specific size with an installed operating system. You use machine images to create virtual machine instances in Compute Classic.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

machine-image add

Adds a machine image to Compute Classic.

Before performing this task, you must upload your machine image file to Compute Classic. Make a note of the name of the `.tar.gz` file that you have uploaded. You'll need to provide this name while adding a machine image to Compute Classic. For more information, see Uploading Machine Image Files to Oracle Cloud Infrastructure Object Storage Classic in *Using Oracle Cloud Infrastructure Compute Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute machine-image add name file [--attributes="attributes"] [--description
'description'] [--account /Compute-IdentityDomain/cloud_storage]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute machine-image add /Compute-acme/jack.jones@example.com/
prodimages oraclelinux-x64.img.tar.gz --attributes="platform=linux"
```

Sample Output

```
{
   "account": "/Compute-acme/cloud_storage",
   "name": "/Compute-acme/jack.jones@example.com/prodimages",
   "sizes": {
    "uploaded": 2641539583,
    "total": 2641539583,
    "decompressed": 22020096000
   },
   "uri": "http://api.compute.us0.oraclecloud.com/machineimage/Compute-acme/
jack.jones@example.com/prodimages",
   "quota": null,
   "platform": "linux",
   "no_upload": true,
   "state": "available",
   "signed_by": null,
   "file": "http://api.compute.us0.oraclecloud.com:443/machineimage/Compute-acme/
jack.jones@example.com/oraclelinux-x64",
   "signature": "",
   "checksums": {},
   "attributes": {"platform": "linux"},
   "error_reason": "",
   "image_format": "raw",
   "audited": null
}
```

machine-image list

Retrieves details of all the machine images in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute machine-image list container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f table -F name,state compute machine-image list /oracle/public
```

Sample Output

Note that this output is merely an example. The machine images that are displayed when you run this command may be different.

```
+------------------------------------------------------------+-----------+
                             NAME                            |   STATE
+------------------------------------------------------------+-----------+
 /oracle/public/oel_6.4_20GB                                 | available
 /oracle/public/oel_6.4_2GB                                  | available
```

```
 /oracle/public/oel_6.4_2GB                                  | available
 /oracle/public/corente_gateway_images-9.4.141a              | available
 /oracle/public/OL-6.4-20GB-x11-RD                           | available
 /oracle/public/OL-6.4-20GB-x11-RD_2                         | available
+-------------------------------------------------------------+-----------+
```

machine-image discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute machine-image discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute machine-image discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result": [
/Compute-acme/jack.jones@example.com/oraclelinux-x64
 ]
}
```

machine-image get

Retrieves details of the specified machine image.

You can use the `get` command to verify whether the `add` operation was completed successfully. Use the `-F` option (for example, `-F state`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute machine-image get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute machine-image get /Compute-acme/jack.jones@example.com/
oraclelinux-x64
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
   "account": "/Compute-acme/cloud_storage",
   "name": "/Compute-acme/jack.jones@example.com/oraclelinux-x64",
   "sizes": {
    "uploaded": 2641539583,
    "total": 2641539583,
    "decompressed": 22020096000
   },
   "uri": "https://api-z999.compute.us0.oraclecloud.com/machineimage/Compute-acme/
jack.jones@example.com/oraclelinux-x64",
   "quota": null,
   "platform": "linux",
   "no_upload": true,
   "state": "available",
   "signed_by": null,
   "file": "https://api-z999.compute.us0.oraclecloud.com:443/machineimage/Compute-
acme/jack.jones@example.com/oraclelinux-x64",
   "signature": "",
   "checksums": {},
   "attributes": {},
   "error_reason": "",
   "image_format": "raw",
   "audited": null
 }
```

machine-image delete

Deletes a machine image. No response is returned.

When you no longer need a machine image that you've registered in Compute Classic, you can delete the image.

You can't delete system-provided machine images that are available in the `/oracle/public` container.

Prerequisites

- Ensure that the machine image you want to delete isn't used in any orchestration.

> **Caution:**
>
> If you delete a machine image that's used in an orchestration, then when that orchestration is stopped and re-started, the instances won't be created.

Deleting an image removes the image from your Compute Classic account. However, the image file in your Oracle Cloud Infrastructure Object Storage Classic account is **not** deleted. You can register this image in your Compute Classic account again later, if required. You'll only need to remember the name of the `.tar.gz` image file that is available in your Oracle Cloud Infrastructure Object Storage Classic account. For instructions to permanently remove a machine image file from Oracle Cloud Infrastructure Object Storage Classic, see the Deleting Machine Image Files from Oracle Cloud Infrastructure Object Storage Classictutorial.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute machine-image delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute machine-image delete /Compute-acme/jack.jones@example.com/oraclelinux-x64
```

24
Orchestration

This section describes the Compute Classic CLI commands that you can use to add, start, stop, view, update, and delete orchestrations.

An **orchestration** defines the attributes and interdependencies of a collection of compute, networking, and storage resources in Compute Classic. You can use orchestrations to automate the provisioning and lifecycle operations of an entire virtual compute topology.

After creating an orchestration (in a JSON-formatted file) and adding it to Compute Classic, you can trigger the creation and removal all the resources defined in the orchestration with a single step.

An orchestration contains one or more object plans (`oplans`). The attributes that you can specify in an `oplan` vary depending on the object type (`obj_type`). For detailed information about the object types that you can create by using orchestrations and the attributes for each object type, see Attributes in Orchestrations in *Using Oracle Cloud Infrastructure Compute Classic*.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- orchestration add
- orchestration list
- orchestration discover
- orchestration get
- orchestration update
- orchestration delete

orchestration add

Adds an orchestration to Compute Classic. An orchestration is defined in a JavaScript Object Notation (JSON) file that contains the attributes of the Compute Classic objects that you want to create.

Prerequisites

- Create a JSON file to specify attributes for the Compute Classic objects that you want to create. See Building Your First Orchestration in *Using Oracle Cloud Infrastructure Compute Classic*.
- After creating the JSON file, you should validate it. You can do this by using a third-party tool, such as JSONLint, or any other validation tool of your choice. If your JSON format isn't valid, then an error message is displayed when you add your orchestration.

After adding an orchestration, you can start the orchestration as described in orchestration update to create all the objects you have defined in the orchestration JSON file.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

Use any one of the following syntax.

- In this syntax, `filename` is the complete path and name of the file where you have defined the details of the orchestration in JSON format. For information about building an orchestration JSON file, see Building Your First Orchestration in *Using Oracle Cloud Infrastructure Compute Classic*.

  ```
  opc compute orchestration add --request-body=filename.json
  ```

- `opc compute orchestration add oplans [--name name] [--description description] [--relationships relationships] [--schedule schedule]`

For help with the parameters and options of this command, run the command with the `-h` option.

Example 1: Specifying all orchestration attributes in a single JSON file

```
opc -f json compute orchestration add --request-body=./orchestration.json
```

Example of orchestration.json

The following is an example of a JSON-formatted file showing the attributes, such as storage volume, description, SSH key, security list, shape, and image list for a single instance.

```
{
  "description": "Simple orchestration with an SSH key and a security list",
  "name": "/Compute-acme/joe.jonathan@example.com/simple_orchestration",
  "oplans": [
    {
      "label": "simple_oplan",
      "obj_type": "launchplan",
      "objects": [
        {
          "instances": [
            {
              "imagelist": "/oracle/public/oel6",
              "label": "Linux",
              "networking": {
                "eth0": {
                  "seclists": [
                    "/Compute-acme/joe.jonathan@example.com/seclist1"
                  ],
                  "nat": "ippool:/oracle/public/ippool"
                }
              },
              "shape": "oc3",
              "storage_attachments": [
```

```
                {
                  "index": 1,
                  "volume": "/Compute-acme/joe.jonathan@example.com/vol1"

                }
              ],
              "sshkeys": [
                "/Compute-acme/joe.jonathan@example.com/ssh-key1"
              ]
            }
          ]
        }
      ]
    }
  ]
}
```

Sample Output for Example 1

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
 "account": "/Compute-acme/default",
 "description": "Simple orchestration with an SSH key and a security list",
 "info": {},
 "name": "/Compute-acme/jack.jones@example.com/simple_orchestration",
 "oplans": [
  {
   "ha_policy": "",
   "info": {},
   "label": "simple_oplan",
   "obj_type": "launchplan",
   "objects": [
    {
     "instances": [
      {
       "imagelist": "/oracle/public/oel6",
       "label": "Linux",
       "networking": {
        "eth0": {
         "nat": "ippool:/oracle/public/ippool",
         "seclists": [
          "/Compute-acme/jack.jones@example.com/seclist1"
         ]
        }
       },
       "shape": "oc3",
       "sshkeys": [
        "/Compute-acme/jack.jones@example.com/ssh-key1"
       ],
       "storage_attachments": [
        {
         "index": 1,
         "volume": "/Compute-acme/jack.jones@example.com/vol1"
        }
       ],
       "uri": null
      }
     ]
    }
```

```
   ],
   "status": "stopped",
   "status_timestamp": null
  }
 ],
 "relationships": [],
 "schedule": {
  "start_time": null,
  "stop_time": null
 },
 "status": "stopped",
 "status_timestamp": null,
 "uri": "https://api-z999.compute.us0.oraclecloud.com/orchestration/Compute-acme/
jack.jones@example.com/simple_orchestration",
 "user": "/Compute-acme/jack.jones@example.com"
}
```

Example 2: Specifying orchestration attributes in different JSON files

In the following example, orchestration attributes are specified in different JSON files. Instance attributes are defined in the `oplan.json` file. Relationship between oplans is defined in the `relationship.json` file. The schedule to start the orchestration is defined in the `schedule.json` file.

```
opc -f json compute orchestration add  file://./oplan.json --relationships file://./
relationship.json --name /Compute-acme/jack.jones@example.com/orchestration2 --
schedule file://./schedule.json --description 'an orchestration containing multiple
oplan with relationship and schedule defined'
```

Example of oplan.json

```
[ {
    "ha_policy": "active",
    "label": "launchplan1",
    "obj_type": "launchplan",
    "objects": [
      {
        "instances": [
          {
            "imagelist": "/oracle/public/oel6",
            "label": "instance1",
            "name": "/Compute-acme/jack.jones@example.com/instance1",
            "shape": "oc3"
          }
        ]
      }
    ]
  },
  {
    "ha_policy": "active",
    "label": "launchplan2",
    "obj_type": "launchplan",
    "objects": [
      {
        "instances": [
          {
            "imagelist": "/oracle/public/oel6",
            "label": "instance2",
            "name": "/Compute-acme/jack.jones@example.com/instance2",
            "shape": "oc3"
          }
```

```
        ]
      }
    ]
  }
]
```

Example of relationship.json

```
[
    {
      "oplan": "launchplan2",
      "to_oplan": "launchplan1",
      "type": "depends"
    }
]
```

Example of schedule.json

```
{
    "start_time": "2017-04-04T13:31:45Z",
    "stop_time": null
}
```

Sample Output for Example 2

```
{
 "account": "/Compute-acme/default",
 "description": "an orchestration containing multiple oplan with relationship and
schedule defined",
 "info": {},
 "name": "/Compute-acme/jack.jones@example.com/orchestration2",
 "oplans": [
  {
   "ha_policy": "active",
   "info": {},
   "label": "launchplan1",
   "obj_type": "launchplan",
   "objects": [
    {
     "instances": [
      {
       "imagelist": "/oracle/public/oel6",
       "label": "instance1",
       "name": "/Compute-acme/jack.jones@example.com/instance1",
       "shape": "oc3",
       "uri": null
      }
     ]
    }
   ],
   "status": "stopped",
   "status_timestamp": null
  },
  {
   "ha_policy": "active",
   "info": {},
   "label": "launchplan2",
   "obj_type": "launchplan",
   "objects": [
    {
     "instances": [
```

```
      {
       "imagelist": "/oracle/public/oel6",
       "label": "instance2",
       "name": "/Compute-acme/jack.jones@example.com/instance2",
       "shape": "oc3",
       "uri": null
      }
     ]
    }
   ],
   "status": "stopped",
   "status_timestamp": null
  }
 ],
 "relationships": [
  {
   "oplan": "launchplan2",
   "to_oplan": "launchplan1",
   "type": "depends"
  }
 ],
 "schedule": {
  "start_time": null,
  "stop_time": null
 },
 "status": "stopped",
 "status_timestamp": null,
 "uri": "https://api-z999.compute.us0.oraclecloud.com/orchestration/Compute-acme/
jack.jones@example.com/orchestration2",
 "user": "/Compute-acme/jack.jones@example.com"
}
```


orchestration list

Retrieves details of all the orchestrations in the specified container that match the specified query criteria. You can pass one or more query parameters to filter the search results. If you don't specify any query criteria, then details of all the orchestrations in the container are displayed.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration list container [--status status]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f table -F name,status compute orchestration list /Compute-acme/
jack.jones@example.com
```

Sample Output

```
+-----------------------------------------------------------+----------+
|                             NAME                          |  STATUS  |
+-----------------------------------------------------------+----------+
| /Compute-acme/jack.jones@example.com/webportal            | stopping |
| /Compute-acme/jack.jones@example.com/webclient            | stopped  |
| /Compute-acme/jack.jones@example.com/appserver_master     | ready    |
| /Compute-acme/jack.jones@example.com/appserver_storage    | ready    |
+-----------------------------------------------------------+----------+
```

orchestration discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute orchestration discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result": [
  "/Compute-acme/jack.jones@example.com/webportal",
  "/Compute-acme/jack.jones@example.com/webserver"
 ]
}
```

orchestration get

Retrieves details of the specified orchestration.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully. Use the `-F` option (for example, `-F status`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f table -F status compute orchestration get /Compute-acme/
jack.jones@example.com/webportal
```

Sample Output

```
+--------+-------+
  status | ready
+--------+-------+
```

orchestration update

Updates an orchestration. You can update an orchestration by modifying the attributes specified in the orchestration JSON file. You can also start and stop an orchestration.

To modifying the attributes specified in an orchestration:

1. Run the orchestration get command to get the latest contents of the orchestration in JSON format.
2. Copy the content in JSON format, and then make the required changes in the JSON file offline using any text editor. Ensure that you specify the name of the orchestration that you want to modify in the updated orchestration JSON file.

   You can update orchestrations when they are in one of the following states: `stopped` and `running`. Depending on the state of an orchestration, you can make the following updates:

   - When an orchestration is in the `stopped` state, you can modify, add, or remove all the attributes defined in the orchestration JSON file.
   - When an orchestration is running, you can make the following changes to the orchestration:
     - Add or remove oplans. For example: when an orchestration is running, you can add a new oplan with attributes to launch a new instance.
     - Modify the HA policy of the existing oplans. You cannot modify any other attributes of existing oplans.
3. After updating the JSON file, you should validate it. You can do this by using a third-party tool, such as JSONLint, or any other validation tool of your choice. If your JSON format isn't valid, then an error message is displayed when you update the orchestration.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

Use any one of the following syntax.

- `opc compute orchestration update` *`name`* `--request-body=`*`filename.json`* `[--action STOP/START]`
- `opc compute orchestration update` *`name`* `[--oplans` *`filename.json`*`] [--description` *`description`*`] [--relationships` *`relationships`*`] [--schedule` *`schedule`*`] [--action STOP/START]`

For help with the parameters and options of this command, run the command with the `-h` option.

Example 1: Starting an orchestration

The following example starts the `/Compute-acme/jack.jones@example.com/simple_orchestration` that you added by sending the POST /orchestration/ HTTP request. When you start an orchestration, all the objects defined in the orchestration are created. To monitor the status of the orchestration, send the GET /orchestration/{name} HTTP request.

```
opc -f json compute orchestration update /Compute-acme/jack.jones@example.com/
simple_orchestration --request-body=orchestration.json --action START
```

Sample output for example 1

```
{
 "account": "/Compute-acme/default",
 "description": "Simple orchestration with an SSH key and a security list",
 "info": {},
 "name": "/Compute-acme/jack.jones@example.com/simple_orch",
 "oplans": [
  {
   "ha_policy": "",
   "info": {},
   "label": "simple_oplan",
   "obj_type": "launchplan",
   "objects": [
    {
     "instances": [
      {
       "imagelist": "/oracle/public/oel6",
       "label": "Linux",
       "networking": {
        "eth0": {
         "nat": "ippool:/oracle/public/ippool",
         "seclists": [
          "/Compute-acme/default/default"
         ]
        }
       },
       "shape": "oc3",
       "sshkeys": [
        "/Compute-acme/jack.jones@example.com/ssh-key1"
       ],
       "storage_attachments": [
        {
         "index": 1,
         "volume": "/Compute-acme/jack.jones@example.com/vol1"
        }
```

```
       ],
       "uri": null
      }
     ]
    }
   ],
   "status": "stopped",
   "status_timestamp": null
  }
 ],
 "relationships": [],
 "schedule": {
  "start_time": "2017-03-27T08:55:39Z",
  "stop_time": null
 },
 "status": "starting",
 "status_timestamp": null,
 "uri": "https://10.88.212.10:445/orchestration/Compute-acme/jack.jones@example.com/
simple_orch",
 "user": "/Compute-acme/jack.jones@example.com"
}
```

Example 2: Updating the details of an orchestration

The following command updates the `/Compute-acme/jack.jones@example.com/orchestration2` orchestration with the updated information provided in `oplan.json` file. In the example, the `oplan.json` file contains the downloaded orchestration details. The content of the `oplan.json` is updated offline using a text editor to use the `/Compute-acme/jack.jones@example.com/prodimages` image list in place of the `/oracle/public/oel_6` image list. The description of the orchestration is updated at the command line. The orchestration is updated based on the information provided in the JSON file, and then it is started.

```
opc -f json compute orchestration update /Compute-acme/jack.jones@example.com/
orchestration2 --oplan file://./oplan1.json --relationships file://./
relationship.json --description 'updating an orchestration containing multiple oplan
with relationship and schedule defined' --action=START
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
 "account": "/Compute-acme/default",
 "description": "updating an orchestration containing multiple oplan with
relationship and schedule defined",
 "info": {},
 "name": "/Compute-acme/jack.jones@example.com/orchestration2",
 "oplans": [
  {
   "ha_policy": "active",
   "info": {},
   "label": "launchplan1",
   "obj_type": "launchplan",
   "objects": [
    {
     "instances": [
      {
       "imagelist": "/Compute-acme/jack.jones@example.com/prodimages",
```

```
      "label": "instance1",
      "name": "/Compute-acme/jack.jones@example.com/instance1",
      "shape": "oc3",
      "uri": null
     }
    ]
   }
  ],
  "status": "stopped",
  "status_timestamp": null
 },
 {
  "ha_policy": "active",
  "info": {},
  "label": "launchplan2",
  "obj_type": "launchplan",
  "objects": [
   {
    "instances": [
     {
      "imagelist": "/Compute-acme/jack.jones@example.com/prodimages",
      "label": "instance2",
      "name": "/Compute-acme/jack.jones@example.com/instance2",
      "shape": "oc3",
      "uri": null
     }
    ]
   }
  ],
  "status": "stopped",
  "status_timestamp": null
 }
],
"relationships": [
 {
  "oplan": "launchplan2",
  "to_oplan": "launchplan1",
  "type": "depends"
 }
],
"schedule": {
 "start_time": "2017-03-28T07:17:39Z",
 "stop_time": null
},
"status": "starting",
"status_timestamp": null,
"uri": "https://api-z999.compute.us0.oraclecloud.com/orchestration/Compute-acme/
jack.jones@example.com/orchestration2",
"user": "/Compute-acme/jack.jones@example.com"
}
```


orchestration delete

Deletes an orchestration. No response is returned for the delete action.

Before deleting an orchestration, you must stop the orchestration and wait till the status of the orchestration changes to `stopped`. When you stop an orchestration, all the objects defined in the orchestration are deleted. However, stopping an orchestration doesn't cause the orchestration itself to be deleted. Even after you stop an orchestration, you can still start, view, or update the orchestration.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute orchestration delete /Compute-acme/jack.jones@example.com/webportal
```

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Orchestration Object

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view orchestration objects.
An orchestration object is an object in Compute Classic which is managed by orchestration v2. It is the primary building block of an orchestration. Each object contains all the attributes for the compute, networking, or storage resource that you want to create. When you define an object in an orchestration, you can create dependencies with other objects by using references. See Object References and Relationships in *Using Oracle Cloud Infrastructure Compute Classic*.

Orchestrations are designed to handle up to 100 interdependent objects. Creating objects using other commands may compromise your orchestration.

> **Note:**
>
> You should always use your orchestrations to manage resources that you've created using orchestrations. For example, use the `orchestration-object add` command to add a security list to a running instance or to create a storage snapshot of an attached storage volume instead of using the `sec-lists add` or `storage-snapshot add` commands respectively. Don't, for example, use the web console, CLI commands, or REST API to delete an object that you created using an orchestration. This could cause your orchestration to either attempt to re-create the object and associated resources, or to go into an error state.

Also remember that you shouldn't try to use or manage resources created using orchestrations v1 by referencing them in orchestrations v2, or vice versa.

You can add objects to, remove objects from, or update objects in an orchestration by using the commands listed below.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- orchestration-object add
- orchestration-object list
- orchestration-object get
- orchestration-object discover
- orchestration-object update
- orchestration-object delete

orchestration-object add

Adds an object to the specified orchestration v2 in Compute Classic.

The action of the orchestration object you add is determined by the `desired_state` of the orchestration it is associated with.

- Objects are created when the `desired_state` of the associated orchestration is set to `active`.
- Objects are deleted when the `desired_state` of the associated orchestration is set to `inactive`.
- Only non-persistent objects are deleted when the `desired_state` of the associated orchestration is set to suspend. Persistent objects are not deleted when the associated orchestration is suspended. To make an object persistent, set the persistent attribute to true. When an object is set to persist, it is not deleted when the orchestration is suspended. If the persistent objects are not already in the active state, they are created. If the orchestration is terminated, then all the objects are deleted. If you set the persistent attribute of an object to true, then you must set the persistent attribute of all the dependent objects as well to true. For example, if a persistent instance references a bootable storage volume, the storage volume must also be persistent. For more information, see Object Persistence in Orchestrations v2 in *Using Oracle Cloud Infrastructure Compute Classic*.

To change the `desired_state` of an orchestration, run the orchestration-v2 update command.

You can determine the status of an object by viewing the value of its `health` parameter.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration-object add [--request-body=FILE.json]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute orchestration-object add --request-body=addObject.json
```

Example of addObject.json

The following shows an example of the content in the `addObject.json` file to create a security list with default attribute values. As `persistent` is set to `true`, a persistent security list is created. A persistent object is not deleted when the orchestration is suspended. `/Compute-acme/jack.jones@example.com/seclist1` is the name of the persistent security list that is created, and `/Compute-acme/jack.jones@example.com/`

`myOrchestration/seclist1` is the name of the orchestration object that will track this security list. The state of the security list is determined by the `desired_state` of the associated orchestration, `/Compute-acme/jack.jones@example.com/myOrchestration`.

```
{
  "type":"SecList",
  "orchestration": "/Compute-acme/jack.jones@example.com/myOrchestration",
  "name": "/Compute-acme/jack.jones@example.com/myOrchestration/seclist1",
  "label": "mySeclist1",
  "persistent": true,
  "template": {
   "name": "/Compute-acme/jack.jones@example.com/seclist1"
      },
  "description": "a persistent security list"
}
```

Sample Output

You can find the current status of the object by looking at the value of the `health` parameter in the output. As the `desired_state` of the associated orchestration is `inactive`, the security list object is also `inactive`.

```
{
    "relationships": [],
    "account": "/Compute-acme/default",
    "time_updated": null,
    "description": "a persistent security list",
    "user": "/Compute-acme/jack.jones@example.com",
    "persistent": true,
    "uri": "https://api-z999.compute.us0.oraclecloud.com/platform/v1/object/Compute-
acme/jack.jones@example.com/myOrchestration/seclist1",
    "template": {
        "name": "/Compute-acme/jack.jones@example.com/seclist1"
    },
    "label": "mySeclist1",
    "time_audited": null,
    "version": 1,
    "health": {
        "status": "inactive"
    },
  "time_created": "2017-03-10T11:05:39Z",
    "orchestration": "/Compute-acme/jack.jones@example.com/myOrchestration",
    "type": "SecList",
    "name": "/Compute-acme/jack.jones@example.com/myOrchestration/seclist1"
}
```

orchestration-object list

Retrieves details of all the orchestration objects that are available and match the specified query criteria. To filter the search results, you can pass one or more names of orchestrations as query options. This retrieves only the names of the objects that belong to the specified orchestration. If you don't specify any query criteria, then details of all the orchestration objects in the container are displayed.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration-object list container [--orchestration orchestration-name]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute orchestration-object list /Compute-acme/
jack.jones@example.comfirstOrchestration
```

Sample Output

```
{
  "result": [
     {
      "relationships": [

      ],
      "account": "/Compute-acme/default",
      "time_updated": "2017-03-10T08:42:39Z",
      "description": "",
      "user": "/Compute-acme/jack.jones@example.com",
      "persistent": false,
      "uri": "https://api-z999.compute.us0.oraclecloud.com/platform/v1/object/
Compute-acme/jack.jones@example.com/firstOrchestration/my-seclist",
      "template": {
        "name": "/Compute-acme/jack.jones@example.com/my-seclist"
      },
      "label": "my-seclist",
      "time_audited": "2017-03-10T12:29:43Z",
      "version": 2,
      "health": {
        "status": "active",
        "object": {
          "account": "/Compute-acme/default",
          "description": "",
          "uri": "https://api-z999.compute.us0.oraclecloud.com/seclist/Compute-acme/
jack.jones@example.com/my-seclist",
          "outbound_cidr_policy": "PERMIT",
          "policy": "DENY",
          "name": "/Compute-acme/jack.jones@example.com/my-seclist"
        }
      },
      "time_created": "2017-03-09T11:05:43Z",
      "orchestration": "/Compute-acme/jack.jones@example.com/firstOrchestration",
      "type": "SecList",
      "name": "/Compute-acme/jack.jones@example.com/firstOrchestration/my-seclist"
    },
    {
      "relationships": [
```

```
      ],
      "account": "/Compute-acme/default",
      "time_updated": "2017-03-10T08:44:45Z",
      "description": "a persistent storage volume",
      "user": "/Compute-acme/jack.jones@example.com",
      "persistent": true,
      "uri": "https://api-z999.compute.us0.oraclecloud.com/platform/v1/object/
Compute-acme/jack.jones@example.com/firstOrchestration/volume1",
      "template": {
        "size": "2G",
        "properties": [
          "/oracle/public/storage/default"
        ],
        "name": "/Compute-acme/jack.jones@example.com/volume1"
      },
      "label": "myVolume1",
      "time_audited": "2017-03-20T16:04:20Z",
      "version": 4,
      "health": {
        "status": "active",
        "object": {
          "managed": true,
          "snapshot_id": null,
          "snapshot_account": null,
          "machineimage_name": null,
          "status_timestamp": "2017-03-20T15:57:57Z",
          "imagelist": null,
          "writecache": false,
          "size": "2147483648",
          "platform": null,
          "readonly": false,
          "storage_pool": "/Compute-acme/storagepool/iscsi/thruput_1",
          "shared": false,
          "status": "Online",
          "hash": 1665999033,
          "description": null,
          "tags": [

          ],
          "quota": null,
          "status_detail": null,
          "properties": [
            "/oracle/public/storage/default"
          ],
          "account": "/Compute-acme/default",
          "name": "/Compute-acme/jack.jones@example.com/volume1",
          "bootable": false,
          "hypervisor": null,
          "uri": "http://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-
acme/jack.jones@example.com/volume1",
          "imagelist_entry": -1,
          "snapshot": null
        }
      },
      "time_created": "2017-03-10T07:05:24Z",
      "orchestration": "/Compute-acme/jack.jones@example.com/firstOrchestration",
      "type": "StorageVolume",
      "name": "/Compute-acme/jack.jones@example.com/firstOrchestration/volume1"
    }
  ]
}
```

orchestration-object get

Retrieves details of the specified orchestration object.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully. Use the `-F` option (for example, `-F status`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration-object get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute orchestration-object get /Compute-acme/jack.jones@example.com/
myOrchestration/seclist1
```

Sample Output

```
{
  "relationships": [],
  "account": "/Compute-acme/default",
  "time_updated": "2017-03-10T11:17:42Z",
  "description": "a persistent security list",
  "user": "/Compute-acme/jack.jones@example.com",
  "persistent": true,
  "uri": "https://api-z999.compute.us0.oraclecloud.com/platform/v1/object/Compute-
acme/jack.jones@example.com/myOrchestration/seclist1",
  "template": {
    "name": "/Compute-acme/jack.jones@example.com/seclist1"
  },
  "label": "mySeclist1",
  "time_audited": "2017-03-10T11:27:44Z",
  "version": 2,
  "health": {
    "status": "active",
    "object": {
      "account": "/Compute-acme/default",
      "description": "",
      "uri": "https://api-z999.compute.us0.oraclecloud.com/seclist/Compute-acme/
jack.jones@example.com/seclist1",
      "outbound_cidr_policy": "PERMIT",
      "policy": "DENY",
      "name": "/Compute-acme/jack.jones@example.com/seclist1"
    }
  },
  "time_created": "2017-03-10T11:05:39Z",
  "orchestration": "/Compute-acme/jack.jones@example.com/myOrchestration",
```

```
  "type": "SecList",
  "name": "/Compute-acme/jack.jones@example.com/myOrchestration/seclist1"
}
```

orchestration-object discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration-object discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute orchestration-object discover /Compute-acme/jack.jones@example.com/
myOrchestration
```

Sample Output

```
result
------------------------------------------------------------
/Compute-acme/jack.jones@example.com/myOrchestration/seclist1
/Compute-acme/jack.jones@example.com/myOrchestration/c18a1d1b-fdf4-48fd-
b6f7-271bfa4d8bd7
```

orchestration-object update

Updates the specified orchestration object. You can update the following fields of an orchestration object: `description`, `label`, `persistent`, `relationships`, and `template`. You cannot update an object while the orchestration within which it is contained is in a transient state, such as `activating`, `deactivating`, and `suspending`.

Also note that you cannot move an object from one orchestration to another.

To update an orchestration object:

1. Retrieve the details of the orchestration object in JSON format by running the orchestration-object get command.
2. Note down the `version` of the orchestration object. You'll need to specify the version of the orchestration object while running the update command.
3. Modify the JSON file as per your requirements. You can update the following fields of an orchestration object: `description`, `label`, `persistent`, `relationships`, and `template`. You cannot update values for the other fields.
4. After updating the JSON file, you should validate it. You can do this by using a third-party tool, such as JSONLint, or any other validation tool of your choice. If

your JSON format isn't valid, then an error message is displayed when you update the orchestration object.

5. Provide the modified JSON as the request body for this command.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration-object update name [--request-body=FILE.json]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute orchestration-object update /Compute-acme/jack.jones@example.com/
myOrchestration/seclist1 --request-body=update_object.json
```

Example of update_object.json File

The following example shows the content in the `update_object.json` file to update the `/Compute-acme/jack.jones@example.com/myOrchestration/mySeclist` object which is present in the`/Compute-acme/jack.jones@example.com/myOrchestration` orchestration. The following fields are updated for this object: `persistent` is set to `false`, `label`, `description`, and `outbound_cidr_policy` is set to `PERMIT`.

```
{
  "type": "SecList",
  "orchestration": "/Compute-acme/jack.jones@example.com/myOrchestration",
  "name": "/Compute-acme/jack.jones@example.com/myOrchestration/seclist1",
  "label": "my-Security-list-1",
  "persistent": false,
  "template": {
   "name": "/Compute-acme/jack.jones@example.com/seclist1",
   "outbound_cidr_policy": "PERMIT",
   "policy": "DENY"
   },
  "version": 2,
  "description": "an updated security list which is not persistent"
}
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
  "relationships": [
  ],
  "account": "/Compute-acme/default",
  "time_updated": "2016-11-10T22:36:23Z",
  "name": "/Compute-acme/jack.jones@example.com/mySeclist",
```

```
  "persistent": false,
  "uri": "https://api-z999.compute.us0.oraclecloud.com/platform/v1/object/Compute-
acme/jack.jones@example.com/myOrchestration/mySeclist",
  "time_created": "2016-11-10T16:47:05Z",
  "label": "my-seclist",
  "time_audited": "2016-11-10T22:36:16Z",
  "orchestration": "/Compute-acme/jack.jones@example.com/myOrchestration",
  "version": 3,
  "health": {
    "status": "inactive"
    "object": {
      "account": "/Compute-acme/default",
      "description": "",
      "uri": null,
      "outbound_cidr_policy": "PERMIT",
      "policy": "DENY",
      "name": "/Compute-acme/jack.jones@example.com/seclist1"
    }
  },
  "user": "/Compute-acme/jack.jones@example.com",
  "template": {
    "name": "/Compute-acme/jack.jones@example.com/seclist1"
    "policy": "PERMIT",
    "outbound_cidr_policy": "PERMIT",
  },
  "type": "SecList",
  "description": "an updated security list which is not persistent"
}
```

orchestration-object delete

Deletes the specified orchestration object and the underlying object. For example, if you send a request to delete the `/Compute-acme/jack.jones@example.com/myOrchestration/mySeclist` orchestration object, the underlying `/Compute-acme/jack.jones@example.com/mySeclist` security list is also deleted.

No response is returned for this command.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration-object delete name [--terminate=true]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example 1: Deleting an inactive object

The following example shows how to delete an object, `/Compute-acme/jack.jones@example.com/myOrchestration/mySeclist`, which is in the `inactive` state.

```
opc compute orchestration-object delete /Compute-acme/jack.jones@example.com/
myOrchestration/mySeclist
```

Example 2: Deleting an active object

The following example shows how to delete an object, `/Compute-acme/jack.jones@example.com/myOrchestration/Seclist1`, which is in the `active` state. To delete an orchestration object in any `active` state, provide the `terminate=True` option to delete the orchestration object.

```
opc compute orchestration-object delete /Compute-acme/jack.jones@example.com/
myOrchestration/Seclist1 --terminate=True
```

26
Orchestration v2

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view orchestration v2.
An orchestration defines the attributes and interdependencies of a collection of compute, networking, and storage resources in Compute Classic. You can use orchestrations to automate the provisioning and lifecycle operations of an entire virtual compute topology.

In earlier versions of Compute Classic, you could use orchestrations v1 to create and manage resources. From release 17.1.2 onwards, you can also create and provision resources using orchestrations v2.

> **Note:**
>
> You should always use your orchestrations to manage resources that you've created using orchestrations. Don't, for example, use the web console, CLI commands, or REST API requests to delete an object that you created using an orchestration. This could cause your orchestration to either attempt to re-create the object and associated resources, or to go into an error state.

Also remember that you shouldn't try to use or manage resources created using orchestrations v1 by referencing them in orchestrations v2, or vice versa.

For more information, see About Orchestrations v2 in *Using Oracle Cloud Infrastructure Compute Classic*.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

orchestration-v2 add

To use an orchestration to control the provisioning and life cycle of objects in Compute Classic, you must define the orchestration in a JSON-format file and then use this

request to add an orchestration to Compute Classic. You can define all your cloud resources in a single orchestration and manage the resources individually.

Prerequisites

- You must have already created the orchestration file that you want to upload. See Building Your First Orchestration v2 in *Using Oracle Cloud Infrastructure Compute Classic*.
- You should also validate your JSON file. You can do this by using a third-party tool, such as JSONLint, or any other validation tool of your choice. If your JSON isn't valid, then an error occurs when you upload the orchestration. Oracle doesn't support or endorse any third-party validation tool.

If you upload an orchestrations v2 file with the `desired_state` specified as `active`, the orchestration is activated automatically and the objects defined in it are created. If you upload an orchestration with the `desired_state` specified as `inactive`, the orchestration is added but the objects specified in the orchestration are not created. You can activate the orchestration later to create all the objects that you have defined in the orchestration JSON file. See orchestration-object update.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration-v2 add request-body
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example Command

```
opc -f json compute orchestration-v2 add ./orchv2.json
```

Example of orchv2.json

The following is an example of a JSON-formatted file showing the attributes for a single security list object which is provided in an orchestration called `/Compute-acme/jack.jones@example.com/firstOrchestration`. As the `desired_state` is specified as `inactive`, so the orchestration is added to Compute Classic but the security list is not created.

```
{
    "desired_state": "inactive",
    "name": "/Compute-acme/jack.jones@example.com/firstOrchestration",
    "objects": [{
        "template": {
            "name": "/Compute-acme/jack.jones@example.com/seclist"
        },
        "label": "my-first-seclist",
        "type": "SecList"
    }]
}
```

Sample Output


```
{
    "status": "inactive",
    "account": "/Compute-acme/default",
    "time_updated": null,
    "description": "",
    "tags": [],
    "uri": "https://api-z999.compute.us0.oraclecloud.com/platform/v1/orchestration/
Compute-acme/jack.jones@example.com/firstOrchestration",
    "time_created": "2017-03-08T14:14:25Z",
    "name": "/Compute-acme/jack.jones@example.com/firstOrchestration",
    "time_audited": null,
    "objects": [{
        "relationships": [],
        "account": "/Compute-acme/default",
        "time_updated": null,
        "description": "",
        "user": "/Compute-acme/jack.jones@example.com",
        "persistent": false,
        "uri": "https://api-z999.compute.us0.oraclecloud.com/platform/v1/object/
Compute-acme/jack.jones@example.com/firstOrchestration/c18a1d1b-fdf4-48fd-
b6f7-271bfa4d8bd7",
        "template": {
            "name": "/Compute-acme/jack.jones@example.com/seclist"
        },
        "label": "my-first-seclist",
        "time_audited": null,
        "version": 1,
        "health": {
            "status": "inactive"
        },
        "time_created": "2017-03-08T14:14:25Z",
        "orchestration": "/Compute-acme/jack.jones@example.com/firstOrchestration",
        "type": "SecList",
        "name": "/Compute-acme/jack.jones@example.com/firstOrchestration/c18a1d1b-
fdf4-48fd-b6f7-271bfa4d8bd7"
    }],
    "user": "/Compute-acme/jack.jones@example.com",
    "version": 1,
    "id": "dd3d3d40-a2ab-434f-be5c-1acfbb200872",
    "desired_state": "inactive"
}
```


orchestration-v2 list

Retrieves details of all the orchestrations that are available in the specified container and match the specified query criteria. To filter the search results, you can pass one or more tags as query criteria. If you don't specify any tags, then details of all the orchestrations in the container are displayed.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration-v2 list container [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute orchestration-v2 list /Compute-acme/jack.jones@example.com
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
NAME
/Compute-acme/jack.jones@example.com/firstOrchestration
```

orchestration-v2 get

Retrieves details of the specified orchestration v2.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully. Use the `-F` option (for example, `-F status`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration-v2 get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute orchestration-v2 get /Compute-acme/jack.jones@example.com/
firstOrchestration
```

Sample Output

```
{
    "status": "active",
    "account": "/Compute-acme/default",
    "time_updated": "2017-03-08T17:00:20Z",
    "description": "",
    "tags": [],
    "uri": "https://api-z999.compute.us0.oraclecloud.com/platform/v1/orchestration/
Compute-acme/jack.jones@example.com/firstOrchestration",
    "time_created": "2017-03-08T14:14:25Z",
    "name": "/Compute-acme/jack.jones@example.com/firstOrchestration",
```

```
    "time_audited": "2017-03-08T18:34:32Z",
    "objects": [{
        "relationships": [],
        "account": "/Compute-acme/default",
        "time_updated": "2017-03-08T17:00:20Z",
        "description": "",
        "user": "/Compute-acme/jack.jones@example.com",
        "persistent": false,
        "uri": "https://api-z999.compute.us0.oraclecloud.com/platform/v1/object/
Compute-acme/jack.jones@example.com/firstOrchestration/c18a1d1b-fdf4-48fd-
b6f7-271bfa4d8bd7",
        "template": {
            "name": "/Compute-acme/jack.jones@example.com/seclist"
        },
        "label": "my-first-seclist",
        "time_audited": "2017-03-08T18:34:23Z",
        "version": 2,
        "health": {
            "status": "active",
            "object": {
                "account": "/Compute-acme/default",
                "description": "",
                "uri": "https://api-z999.compute.us0.oraclecloud.com/seclist/Compute-
acme/jack.jones@example.com/seclist",
                "outbound_cidr_policy": "PERMIT",
                "policy": "DENY",
                "name": "/Compute-acme/jack.jones@example.com/seclist"
            }
        },
        "time_created": "2017-03-08T14:14:25Z",
        "orchestration": "/Compute-acme/jack.jones@example.com/firstOrchestration",
        "type": "SecList",
        "name": "/Compute-acme/jack.jones@example.com/firstOrchestration/c18a1d1b-
fdf4-48fd-b6f7-271bfa4d8bd7"
    }],
    "user": "/Compute-acme/jack.jones@example.com",
    "version": 2,
    "id": "dd3d3d40-a2ab-434f-be5c-1acfbb200872",
    "desired_state": "active"
}
```


orchestration-v2 discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration-v2 discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute orchestration-v2 discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
/Compute-acme/jack.jones@example.com/simple_orchestration
/Compute-acme/jack.jones@example.com/firstOrchestration
```

orchestration-v2 update

You can update the body of the orchestration or change the state of the orchestration.

Before updating the body of an orchestration-v2:

1. Get the latest version of the orchestration by running the orchestration-v2 get command.
2. Modify the orchestration as per your requirements. Ensure that you specify the latest `version` of the orchestration in the request body.
3. You should also validate your JSON file. You can do this by using a third-party tool, such as JSONLint, or any other validation tool of your choice. If your JSON isn't valid, then an error occurs when you upload the orchestration. Oracle doesn't support or endorse any third-party validation tool.

You can also change the state of the orchestration and all the objects specified in the orchestration by changing the value of the `desired_state` parameter of orchestration-v2.

Value of `desired_state` parameter	Description
`active`	Activates an orchestration and creates the objects defined in it.
`suspend`	Deletes all the nonpersistent objects defined in the orchestration. When you suspend an active orchestration, only the nonpersistent objects are deleted; the persistent objects are not deleted.
`inactive`	Deletes all the objects defined in an orchestration. You this option when you want to delete all the objects defined in an orchestration, but retain the orchestration.

You cannot update an orchestration when it is in a transient state, such as `activating`, `suspending`, or `deactivating` state. However, you can terminate or delete an orchestration irrespective of the current state of the orchestration.

> **Note:**
>
> Do not use this command to add, remove, or modify individual objects. Instead use the Orchestration Object commands. You can use this command to modify multiple objects in an orchestration.

- To add an object to orchestration-v2, run the orchestration-object add command.

- To modify an existing object in orchestration-v2, run the orchestration-object update command.
- To delete an object from orchestration-v2, run the orchestration-v2 delete command.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

- To change only the state of orchestration v2:

  ```
  opc compute orchestration-v2 update name [--desired-state state]
  ```

- To update the body of the orchestration v2, including the state of the orchestration:

```
opc compute orchestration-v2 update name request-body [--desired-state state]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example: Activating an orchestration-v2

The following example shows how to activate an orchestration, `/Compute-acme/jack.jones@example.com/firstOrchestration` by specifying the `desired-state` as `active`.

```
opc compute orchestration-v2 update /Compute-acme/jack.jones@example.com/
firstOrchestration --desired-state=active
```

Sample Output

```
{
    "status": "activating",
    "account": "/Compute-acme/default",
    "time_updated": "2017-03-08T17:00:20Z",
    "description": "",
    "tags": [],
    "uri": "https://api-z999.compute.us0.oraclecloud.com/platform/v1/orchestration/
Compute-acme/jack.jones@example.com/firstOrchestration",
    "time_created": "2017-03-08T14:14:25Z",
    "name": "/Compute-acme/jack.jones@example.com/firstOrchestration",
    "time_audited": "2017-03-08T17:00:12Z",
    "objects": [{
        "relationships": [],
        "account": "/Compute-acme/default",
        "time_updated": "2017-03-08T17:00:20Z",
        "description": "",
        "user": "/Compute-acme/jack.jones@example.com",
        "persistent": false,
        "uri": "https://api-z999.compute.us0.oraclecloud.com/platform/v1/object/
Compute-acme/jack.jones@example.com/firstOrchestration/c18a1d1b-fdf4-48fd-
b6f7-271bfa4d8bd7",
        "template": {
            "name": "/Compute-acme/jack.jones@example.com/seclist"
```

```
        },
        "label": "my-first-seclist",
        "time_audited": null,
        "version": 2,
        "health": {
            "status": "inactive"
        },
        "time_created": "2017-03-08T14:14:25Z",
        "orchestration": "/Compute-acme/jack.jones@example.com/firstOrchestration",
        "type": "SecList",
        "name": "/Compute-acme/jack.jones@example.com/firstOrchestration/c18a1d1b-
fdf4-48fd-b6f7-271bfa4d8bd7"
    }],
    "user": "/Compute-acme/jack.jones@example.com",
    "version": 2,
    "id": "dd3d3d40-a2ab-434f-be5c-1acfbb200872",
    "desired_state": "active"
}
```


orchestration-v2 delete

After you've terminated an orchestration, if you don't need it any more, you can delete the orchestration. If you want to retain the orchestration but delete the objects created by it, you can terminate the orchestration. See orchestration-object update.

To delete an active orchestration, you must specify `true` as the value for the `terminate` parameter.

No response is returned for this command.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute orchestration-v2 delete name [--terminate=true]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example 1: Deleting an orchestration which is in the active state

```
opc compute orchestration-v2 delete /Compute-acme/jack.jones@example.com/
simple_orchestration --terminate=true
```

Example 2: Deleting an orchestration which is in the inactive state

```
opc compute orchestration-v2 delete /Compute-acme/jack.jones@example.com/
firstOrchestration
```

27
OSS Container

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view OSS containers.
You can create Compute Classic containers using the Compute Classic CLI command. A container is created in Oracle Cloud Infrastructure Object Storage Classic and a corresponding OSS container object is created in Compute Classic.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- oss-container add
- oss-container list
- oss-container get
- oss-container discover
- oss-container update
- oss-container delete

oss-container add

Creates a container in Oracle Cloud Infrastructure Object Storage Classic and adds a local OSS container object to Compute Classic.

After creating a container in Oracle Cloud Infrastructure Object Storage Classic, you can fetch its details. See Managing Containers in Oracle Cloud Infrastructure Object Storage Classic in *Using Oracle Cloud Infrastructure Object Storage Classic*.

Prerequisite: Ensure that you have selected a replication policy for your Oracle Cloud Infrastructure Object Storage Classic instance. See Selecting a Replication Policy for Your Service Instance in *Using Oracle Cloud Infrastructure Object Storage Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute oss-container add account delete-remote [--container container_name] [--
name  name]
```

Example

```
opc -f json compute oss-container add /Compute-acme/cloud_storage true --container
'container-name'
```

Sample Output

```
{
  "account": "/Compute-acme/cloud_storage",
  "delete_remote": true,
  "container": "container-name",
  "georeplication": "us2",
  "modification_time": "2016-12-23T08:03:43Z",
  "creation_time": "2016-12-23T08:03:43Z",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/integrations/osscontainer/
Compute-acme/jack.jones@example.com/2437242e-ee77-40d9-b45c-a608fc09c029",
  "deletion_progress": "",
  "state": "created",
  "error_reason": "",
  "name": "/Compute-acme/jack.jones@example.com/2437242e-ee77-40d9-b45c-a608fc09c029"
}
```

oss-container list

Retrieves names of all Oracle Cloud Infrastructure Object Storage Classic containers.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute oss-container list container [--name name]
```

> **Note:**
>
> The `container` parameter in the syntax does not refer to containers in Oracle Cloud Infrastructure Object Storage Classic. It refers to containers in Compute Classic, such as `/Compute-`*`identity_domain`* and `/Compute-`*`identity_domain/user`*.

Example

```
opc -f json compute oss-container list /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
  "result": [
    {
      "account": "/Compute-acme/cloud_storage",
      "delete_remote": true,
```

```
      "container": "container-name",
      "georeplication": "us2",
      "modification_time": "2016-12-23T08:03:43Z",
      "creation_time": "2016-12-23T08:03:43Z",
      "uri": "https://api-z999.compute.us0.oraclecloud.com/integrations/osscontainer/
Compute-acme/jack.jones@example.com/2437242e-ee77-40d9-b45c-a608fc09c029",
      "deletion_progress": "",
      "state": "created",
      "error_reason": "",
      "name": "/Compute-acme/jack.jones@example.com/2437242e-ee77-40d9-b45c-
a608fc09c029"
    },
    {
      "account": "/Compute-acme/cloud_storage",
      "delete_remote": true,
      "container": "container1",
      "georeplication": "us2",
      "modification_time": "2016-12-23T10:38:53Z",
      "creation_time": "2016-12-23T10:38:53Z",
      "uri": "https://api-z999.compute.us0.oraclecloud.com/integrations/osscontainer/
Compute-acme/jack.jones@example.com/container1",
      "deletion_progress": "",
      "state": "created",
      "error_reason": "",
      "name": "/Compute-acme/jack.jones@example.com/container1"
    }
  ]
}
```


oss-container get

Retrieves details of the specified container in Oracle Cloud Infrastructure Object Storage Classic.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully. Use the `-F` option (for example, `-F state`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc -f json compute oss-container get name
```

Example

```
opc compute oss-container get /Compute-acme/jack.jones@example.com/container1
```

Sample Output


```
{
  "account": "/Compute-acme/cloud_storage",
  "delete_remote": true,
  "container": "container1",
```

```
  "georeplication": "us2",
  "modification_time": "2016-12-23T10:38:53Z",
  "creation_time": "2016-12-23T10:38:53Z",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/integrations/osscontainer/
Compute-acme/jack.jones@example.com/container1",
  "deletion_progress": "",
  "state": "created",
  "error_reason": "",
  "name": "/Compute-acme/jack.jones@example.com/container1"
}
```

oss-container discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute oss-container discover container
```

Example

```
opc -f json compute oss-container discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result": [
    "/Compute-acme/jack.jones@example.com/2437242e-ee77-40d9-b45c-a608fc09c02
    "/Compute-acme/jack.jones@example.com/container1
 ]
}
```

oss-container update

You can only modify the value of the `delete_remote` attribute of the OSS container. The `delete_remote` attribute defines whether the remote Oracle Cloud Infrastructure Object Storage Classic storage container and its objects will be deleted when the local OSS container object is deleted. When `delete_remote` attribute of the Oracle Cloud Infrastructure Object Storage Classic container object is set to `true`, the associated Oracle Cloud Infrastructure Object Storage Classic container is deleted along with all its objects when you delete the local OSS container object. When set to `false`, only the local OSS container object is deleted.

Prerequisite: Ensure that you have selected a replication policy for your Oracle Cloud Infrastructure Object Storage Classic instance. See Selecting a Replication Policy for Your Service Instance in *Using Oracle Cloud Infrastructure Object Storage Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that

the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute oss-container update name account [--delete-remote]
```

Example

The following example changes the value of the `delete_remote` parameter to `false` for an OSS container, `/Compute-acme/jack.jones@example.com/container1`.

```
opc -f json compute oss-container update /Compute-acme/jack.jones@example.com/
container1 /Compute-acme/cloud_storage --delete-remote false
```

Sample Output

```
{
  "account": "/Compute-acme/cloud_storage",
  "delete_remote": false,
  "container": "container1",
  "georeplication": "us2",
  "modification_time": "2016-12-23T09:36:41Z",
  "creation_time": "2016-12-23T09:36:41Z",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/integrations/osscontainer/
Compute-acme/jack.jones@example.com/container1",
  "deletion_progress": "",
  "state": "created",
  "error_reason": "",
  "name": "/Compute-acme/jack.jones@example.com/container1"
}
```

oss-container delete

Deletes the specified Oracle Cloud Infrastructure Object Storage Classic container. When `delete_remote` attribute of the Oracle Cloud Infrastructure Object Storage Classic container object is set to `true`, the associated Oracle Cloud Infrastructure Object Storage Classic container is deleted along with all its objects when you delete the local OSS container object. When set to `false`, only the local OSS container object is deleted. To retrieve the value of the `delete_remote` attribute of the OSS container, run the oss-container get command. To change the value of the `delete_remote` attribute of the OSS container object, run the oss-container update command. When `delete_remote` is set to `true`, all the objects in the remote container are deleted in batches of 200. The remote container is deleted when it is empty, and then the local OSS container object is deleted. When you send this command, the state of the OSS container object changes to `deleting`. The time taken to delete the object varies depending on the number of objects in the remote container.

Prerequisite: Ensure that you have selected a replication policy for your Oracle Cloud Infrastructure Object Storage Classic instance. See Selecting a Replication Policy for Your Service Instance in *Using Oracle Cloud Infrastructure Object Storage Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute oss-container delete name
```

Example

```
opc compute oss-container delete /Compute-acme/jack.jones@example.com/container1
```

28
Private Gateway

 This topic does not apply to Oracle Cloud at Customer.

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view private gateway.

You can create a private gateway when you want to set up a private data connection between subnets in your premises and IP networks in your Compute Classic account through Oracle Cloud Infrastructure FastConnect Classic edge routers. For the procedure to set up FastConnect Classic to connect to instances on IP networks, see Connecting to Instances Using Oracle Cloud Infrastructure FastConnect Classic in *Using Oracle Cloud Infrastructure Compute Classic*.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- private-gateway add
- private-gateway list
- private-gateway discover
- private-gateway get
- private-gateway update
- private-gateway delete

private-gateway add

 This topic does not apply to Oracle Cloud at Customer.

Adds a private gateway to Compute Classic. You can create a private gateway when you want to set up a private data connection between subnets in your premises and IP networks in your Compute Classic account.

You can create a private gateway object in Compute Classic and attach your IP networks to this private gateway. Then set up a FastConnect Classic private peering connection. With this connection, you can access instances on your IP networks using their private IP addresses from your on-premise private networks. You don't need to associate public IP addresses with instances on IP networks. After creating the private gateway object, note down the three-part name of the object (`/Compute-identity_domain/user/object`). You'll need to provide this name when you set up a FastConnect Classic private peering connection. See Provisioning FastConnect in *Using Oracle Cloud Infrastructure FastConnect Classic*.

For the workflow to set up FastConnect Classic to connect to instances on IP networks, see Connecting to Instances Using Oracle Cloud Infrastructure FastConnect Classic in *Using Oracle Cloud Infrastructure Compute Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute private-gateway add name [--description description] [--ip-networks list-of-ip-networks] [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute private-gateway add /Compute-acme/jack.jones@example.com/privategateway1
--description 'My first private gateway' --ip-networks  "/Compute-acme/
jack.jones@example.com/ipnet1, /Compute-acme/jack.jones@example.com/ipnet2"
```

Sample Output

Some lines have been truncated with ellipses (`. . .`) for readability. When you run the command in your environment, you'll see the full output.

```
{
  "name": "/Compute-acme/jack.jones@example.com/privategateway1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/privategateway/
Compute-acme/jack.jones@example.com/privategateway1",
  "description": "My first private gateway",
  "tags": null,
  "ipNetworks": [
    "/Compute-acme/jack.jones@example.com/ipnet2",
    "/Compute-acme/jack.jones@example.com/ipnet1"
  ]
}
```

private-gateway list


This topic does not apply to Oracle Cloud at Customer.

Retrieves details of all the private gateway objects that are available in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute private-gateway list container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute private-gateway list /Compute-acme/jack.jones@example.com
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
  "name": "/Compute-acme/jack.jones@example.com/privategateway1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/privategateway/
Compute-acme/jack.jones@example.com/privategateway1",
  "description": "My first private gateway",
  "tags": null,
  "ipNetworks": [
    "/Compute-acme/jack.jones@example.com/ipnet2",
    "/Compute-acme/jack.jones@example.com/ipnet1"
  ]
}
```

private-gateway get

 This topic does not apply to Oracle Cloud at Customer.

Retrieves details of the specified private gateway.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute private-gateway get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute private-gateway get /Compute-acme/jack.jones@example.com/privategateway1
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
  "name": "/Compute-acme/jack.jones@example.com/privategateway1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/privategateway/
Compute-acme/jack.jones@example.com/privategateway1",
  "description": "My first private gateway",
  "tags": null,
  "ipNetworks": [
    "/Compute-acme/jack.jones@example.com/ipnet2",
    "/Compute-acme/jack.jones@example.com/ipnet1"
  ]
}
```

private-gateway discover

 This topic does not apply to Oracle Cloud at Customer.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute private-gateway discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute private-gateway discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
result
------------------------------------------------------------
/Compute-acme/jack.jones@example.com/privategateway1
/Compute-acme/jack.jones@example.com/privategateway2
```

private-gateway update

 This topic does not apply to Oracle Cloud at Customer.

You can update the description, tags, and IP networks that are associated with a private gateway.

If you have already set up a FastConnect Classic private peering session using the private gateway that you are updating, traffic immediately starts flowing through FastConnect Classic to instances on the updated IP networks.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute private-gateway update name [--description description] [--ip-networks
list-of-ip-networks] [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command updates the description of the `/Compute-acme/jack.jones@example.com/privategateway1` private gateway. It also modifies the IP networks that are associated the private gateway.

```
opc -f json compute private-gateway update /Compute-acme/jack.jones@example.com/
privategateway1 --description 'updated description' --ip-networks  "/Compute-acme/
jack.jones@example.com/ipnet1"
```

Sample Output

Some lines have been truncated with ellipses (`...`) for readability. When you run the command in your environment, you'll see the full output.

```
{
  "name": "/Compute-acme/jack.jones@example.com/privategateway1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/privategateway/
Compute-acme/jack.jones@example.com/privategateway1",
  "description": "updated description",
  "tags": [],
  "ipNetworks": [
    "/Compute-acme/jack.jones@example.com/ipnet1"
  ]
}
```

private-gateway delete


This topic does not apply to Oracle Cloud at Customer.

Deletes the specified private gateway. No response is returned.

Ensure that the private gateway is not being used before deleting it. When you request for FastConnect Classic private peering, you have to provide the name of the private gateway. Once the peering is created, you cannot change the private gateway. If you delete a private gateway that is being used in private peering, you can no longer send traffic over this connection. If you want to modify a private gateway, run the private-gateway update command to modify the IP networks that are associated with the private gateway.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute private-gateway delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute private-gateway delete /Compute-acme/jack.jones@example.com/
privategateway1
```

29
Reboot Instance Request

This section describes the Compute Classic CLI commands you can use to add, delete, and view requests to reboot instances.
Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- reboot-instance-request add
- reboot-instance-request delete
- reboot-instance-request discover
- reboot-instance-request get
- reboot-instance-request list

reboot-instance-request add

Adds a reboot instance request to Compute Classic.

If your instance hangs after it starts running, you can use this request to reboot your instance. After creating this request, run the reboot-instance-request get command to retrieve the status of the request. When the status of the reboot instance request changes to `complete`, you know that the instance has been rebooted.

To reboot the instance, you need to know its name, which you can retrieve by running the instance discover command.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute reboot-instance-request add instance [--hard]
```

Example

```
opc -f json compute reboot-instance-request add /Compute-acme/jack.jones@example.com/
7b036196-d077-4b6a-b2c8-64bc9d8d97ce
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/7b036196-d077-4b6a-b2c8-64bc9d8d97ce/
8666a368-6264-4cee-9ec4-63996234deb1",
  "client_owned": true,
```

```
  "hard": false,
  "creation_time": "2016-09-19T16:08:10Z",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/rebootinstancerequest/Compute-
acme/jack.jones@example.com/7b036196-d077-4b6a-b2c8-64bc9d8d97ce/
8666a368-6264-4cee-9ec4-63996234deb1",
  "instance_id": "7b036196-d077-4b6a-b2c8-64bc9d8d97ce",
  "instance": "/Compute-acme/jack.jones@example.com/7b036196-d077-4b6a-
b2c8-64bc9d8d97ce",
  "state": "active",
  "request_id": "8666a368-6264-4cee-9ec4-63996234deb1",
  "error_reason": ""
}
```


reboot-instance-request list

Retrieves details of the reboot instance requests that are available in the specified container and match the specified query criteria. If you don't specify any query criteria, then details of all the reboot instance requests in the container are displayed. To filter the search results, you can pass one or more query parameters.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute reboot-instance-request list container  [--instance INSTANCE] [--hard]
[--name NAME]
```

Example

```
opc -f json compute reboot-instance-request list /Compute-acme/jack.jones@example.com
```

Sample Output


```
{
"result": [
{
  "name": "/Compute-acme/jack.jones@example.com/7b036196-d077-4b6a-b2c8-64bc9d8d97ce/
8666a368-6264-4cee-9ec4-63996234deb1",
  "client_owned": true,
  "hard": true,
  "creation_time": "2016-05-10T16:08:10Z",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/rebootinstancerequest/Compute-
acme/jack.jones@example.com/7b036196-d077-4b6a-b2c8-64bc9d8d97ce/
8666a368-6264-4cee-9ec4-63996234deb1",
  "instance_id": "7b036196-d077-4b6a-b2c8-64bc9d8d97ce",
  "instance": "/Compute-acme/jack.jones@example.com/7b036196-d077-4b6a-
b2c8-64bc9d8d97ce",
  "state": "complete",
  "request_id": "8666a368-6264-4cee-9ec4-63996234deb1",
  "error_reason": ""
}
]
}
```

reboot-instance-request get

Retrieves details of the specified reboot instance request. You can use this request when you want to find out the status of a reboot instance request.

When you create a reboot instance request, the status of the request changes from `queued` to `active`, and then to `complete`. When status is `active`, the instance starts getting rebooted. When the reboot of the instance is complete, the status changes to `complete`.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute reboot-instance-request get name
```

Example

```
opc -f json compute reboot-instance-request get /Compute-acme/jack.jones@example.com/
7b036196-d077-4b6a-b2c8-64bc9d8d97ce/8666a368-6264-4cee-9ec4-63996234deb1
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
  "name": "/Compute-acme/jack.jones@example.com/7b036196-d077-4b6a-b2c8-64bc9d8d97ce/
8666a368-6264-4cee-9ec4-63996234deb1",
  "client_owned": true,
  "hard": true,
  "creation_time": "2016-05-10T16:08:10Z",
  "uri": "https://api-z999.compute.us0.oraclecloud.com/rebootinstancerequest/Compute-
acme/jack.jones@example.com/7b036196-d077-4b6a-b2c8-64bc9d8d97ce/
8666a368-6264-4cee-9ec4-63996234deb1",
  "instance_id": "7b036196-d077-4b6a-b2c8-64bc9d8d97ce",
  "instance": "/Compute-acme/jack.jones@example.com/7b036196-d077-4b6a-
b2c8-64bc9d8d97ce",
  "state": "active",
  "request_id": "8666a368-6264-4cee-9ec4-63996234deb1",
  "error_reason": ""
}
```

reboot-instance-request discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute reboot-instance-request discover container
```

Example

```
opc -f json compute reboot-instance-request discover /Compute-acme/
jack.jones@example.com
```

Sample Output

```
{
 "result": [
       "/Compute-acme/jack.jones@example.com/7b036196-d077-4b6a-b2c8-64bc9d8d97ce"
  ]
}
```

reboot-instance-request delete

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute reboot-instance-request delete name
```

Example

```
opc compute reboot-instance-request delete /Compute-acme/jack.jones@example.com/
7b036196-d077-4b6a-b2c8-64bc9d8d97ce/8666a368-6264-4cee-9ec4-63996234deb1
```

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Restore

 This topic does not apply to Oracle Cloud at Customer.

This section describes the Compute Classic CLI commands you can use to restore a storage volume, retrieve details of the restored storage volume, and delete a restore.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- restore add
- restore list
- restore get
- restore delete

restore add

 This topic does not apply to Oracle Cloud at Customer.

Restores a storage volume from a previously completed backup.

When you back up a storage volume using the backup add command, a snapshot of the storage volume is created. These snapshots are stored in the associated Oracle Cloud Infrastructure Object Storage Classic instance. At any time, if required, you can use these backups to restore a storage volume.

You can restore a storage volume from a backup that is in the `COMPELETED` state. Before running this command, verify that the `state` field value of the backup you want to restore is `COMPLETED` by retrieving details of the backup and checking the `state` field. See backup get.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute restore add backup_name volume_uri  [--description description] [--name
restore_name]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute restore add /Compute-acme/jack.jones@example.com/vol1-BACKUP-A /
storage/volume/Compute-acme/jack.jones@example.com/restored-example-volume --
description 'restore of storage volume vol1' --name /Compute-acme/
jack.jones@example.com/vol1-RESTORE-A
```

Sample Output

```
{
 "backupConfigurationName": "/Compute-acme/jack.jones@example.com/backupConfigVol1",
 "backupName": "/Compute-acme/jack.jones@example.com/vol1-BACKUP-A",
 "bootable": false,
 "description": "restore of storage volume vol1",
 "detailedErrorMessage": "",
 "errorMessage": "",
 "name": "/Compute-acme/jack.jones@example.com/vol1-RESTORE-A",
 "runAsUser": "/Compute-acme/jack.jones@example.com",
 "state": "SUBMITTED",
 "tagId": "170158d5-470a-4ee1-a50e-c2aed5bbdebc",
 "uri": "https://api-z999.compute.us0.oraclecloud.com:443/backupservice/v1/restore/
Compute-acme/jack.jones@example.com/vol1-RESTORE-A",
 "volumeUri": "/storage/volume/Compute-acme/jack.jones@example.com/restored-example-
volume"
}
```

Check the `state` field to identify if the storage volume has been restored. When you create a restore, the `status` field value is `SUBMITTED`. Run the restore get command to monitor the value of the `status` field. Restoring a storage volume from a backup can take quite a long time depending on the size of the storage volume. When the `state` of the restore object changes to `COMPLETED`, it indicates that a storage volume has been created with the specified name.

restore list


This topic does not apply to Oracle Cloud at Customer.

Retrieves details of all the restore objects in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute restore list [--backup-configuration-name backup-configuration-name]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute restore list /Compute-acme/jack.jones@example.com
```

Sample Output

```
[
{
 "backupConfigurationName": "/Compute-acme/jack.jones@example.com/backupConfigVol1",
 "backupName": "/Compute-acme/jack.jones@example.com/vol1-BACKUP-A",
 "bootable": false,
 "description": "restore of vol1",
 "detailedErrorMessage": "",
 "errorMessage": "",
 "name": "/Compute-acme/jack.jones@example.com/vol1-RESTORE-A",
 "runAsUser": "/Compute-acme/jack.jones@example.com",
 "state": "COMPLETED",
 "tagId": "170158d5-470a-4ee1-a50e-c2aed5bbdebc",
 "uri": "https://api-z999.compute.us0.oraclecloud.com:443/backupservice/v1/restore/
Compute-acme/jack.jones@example.com/vol1-RESTORE-A",
 "volumeUri": "/storage/volume/Compute-acme/jack.jones@example.com/restored-example-
volume"
}
]
```

restore get


This topic does not apply to Oracle Cloud at Customer.

Retrieves details of the specified restore object.

You can use the `get` command to verify whether `add` operation was completed successfully. Use the `-F` option (for example, `-F name,state`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute restore get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute restore get /Compute-acme/jack.jones@example.com/vol1-RESTORE-A
```

Sample Output

```
{
 "backupConfigurationName": "/Compute-acme/jack.jones@example.com/backupConfigVol1",
```

```
 "backupName": "/Compute-acme/jack.jones@example.com/vol1-BACKUP-A",
 "bootable": false,
 "description": "restore of volSK",
 "detailedErrorMessage": "",
 "errorMessage": "",
 "name": "/Compute-acme/jack.jones@example.com/vol1-RESTORE-A",
 "runAsUser": "/Compute-acme/jack.jones@example.com",
 "state": "COMPLETED",
 "tagId": "170158d5-470a-4ee1-a50e-c2aed5bbdebc",
 "uri": "https://api-z999.compute.us0.oraclecloud.com:443/backupservice/v1/restore/
Compute-acme/jack.jones@example.com/vol1-RESTORE-A",
 "volumeUri": "/storage/volume/Compute-acme/jack.jones@example.com/restored-example-
volume"
}
```


restore delete

 This topic does not apply to Oracle Cloud at Customer.

Deletes the specified restore object. This command does not delete the restored storage volume that is created when you run the restore add command. No response is returned.

You can delete a restore only when the `state` field value of the restore is `COMPLETED`.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute restore delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute restore delete /Compute-acme/jack.jones@example.com/vol1-RESTORE-A
```

31
Route

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view routes.
You can create routes to send traffic to a destination that could be either on another IP network or outside the network, such as an external host.

Route specifies the IP address of the destination as well as a vNICset which provides the next hop for routing packets. Using routes allows you to specify multiple routes to each destination network. Using vNICsets in routes also provides egress load balancing and high availability.

For more information, see Managing IP Networks in *Using Oracle Cloud Infrastructure Compute Classic*.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- route add
- route list
- route get
- route update
- route delete

route add

Adds a route to Compute Classic. The route specifies the IP address of the destination as well as a vNICset which provides the next hop for routing packets. A route is used when the destination IP address matches the IP address prefix of a route. When multiple vNICs are specified in the vNICset used by a route, egress traffic is load balanced across all the specified vNICs. A route has an IP address prefix. If the destination address matches the IP address prefix, that route is used.

Let's say that you create a route and specify vNIC A and vNIC B as the `nextHopVnicSet` parameter value. Then the route you create will apply to all the instances that can access vNIC A or are in the same IP network exchange as vNIC A. Similarly, the route also applies to all the instances that can access vNIC B or are in the same IP network exchange as vNIC B.

You can also use routes when you to use a VPN gateway to connect to instances in your IP network. You can specify the IP address of the VPN gateway as the `ipAddressPrefix` of the route to enable traffic to the VPN gateway.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute route add name ip-address-prefix next-hop-vnic-set [--admin-distance
admin-distance] [--description description] [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute route add /Compute-acme/jack.jones@example.com/route1
10.33.88.0/24 /Compute-acme/jack.jones@example.com/vnicset1
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/route1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/route/Compute-
acme/jack.jones@example.com/route1",
  "nextHopVnicSet": "/Compute-acme/jack.jones@example.com/vnicset1",
  "ipAddressPrefix": "10.33.88.0/24",
  "adminDistance": 0
}
```

route list

Retrieves details of all the routes in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute route list container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute route list /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
"result":[
{
```

```
  "name": "/Compute-acme/jack.jones@example.com/route1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/route/Compute-
acme/jack.jones@example.com/route1",
  "nextHopVnicSet": "/Compute-acme/jack.jones@example.com/vnicset1",
  "ipAddressPrefix": "10.33.88.0/24",
  "adminDistance": 0
}
]
}
```

route get

Retrieves details of the specified route.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully. Use the `-F` option (for example, `-F name`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute route get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute route get /Compute-acme/jack.jones@example.com/route1
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/route1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/route/Compute-
acme/jack.jones@example.com/route1",
  "nextHopVnicSet": "/Compute-acme/jack.jones@example.com/vnicset1",
  "ipAddressPrefix": "10.33.88.0/24",
  "adminDistance": 0
}
```

route update

You can update the following parameter values for a route: IP address of the destination, vNICset that provides the next hop for routing packets, and the route's administrative distance.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that

the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute route update name ip-address-prefix next-hop-vnic-set [--admin-distance admin-distance] [--description description] [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following example demonstrates how you can modify the values of `next-hop-vnic-set`, `ip-address-prefix`, and `admin-distance` for the `/Compute-acme/jack.jones@example.com/route1` route.

```
opc -f json compute route update /Compute-acme/jack.jones@example.com/route1
196.40.5.10/24 /Compute-acme/jack.jones@example.com/vnicset2 --admin-distance 2
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/route1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/route/Compute-acme/jack.jones@example.com/route1",
  "nextHopVnicSet": "/Compute-acme/jack.jones@example.com/vnicset2",
  "ipAddressPrefix": "196.40.5.10/24",
  "adminDistance": 2
}
```

route delete

Deletes the specified route. No response is returned.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute route delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute route delete /Compute-acme/jack.jones@example.com/route1
```

32
Security Application

This section describes the Compute Classic CLI commands that you can use to create, delete, and view security applications.
A security application is an IP protocol-to-port mapping that you can use in security rules. Compute Classic provides several predefined security applications. You can also define your own security applications. To view a list of all the predefined security applications, run the sec-application list command for the `/oracle/public` container.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- sec-application add
- sec-application list
- sec-application discover
- sec-application get
- sec-application delete

sec-application add

Creates a security application. After creating security applications, you can use them in security rules by using the sec-rule add command.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-application add name protocol [--description 'description'] [--dport
port_number] [--icmptype icmptype] [--icmpcode icmpcode]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

- The following example shows how you can create a security application by specifying a range of ports.

  ```
  opc -f json compute sec-application add /Compute-acme/jack.jones@example.com/
  customsecapp tcp --dport 2018-2040 --description 'custom security application'
  ```

```
{
   "protocol": "tcp",
   "name": "/Compute-acme/jack.jones@example.com/customsecapp",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/secapplication/Compute-
acme/jack.jones@example.com/customsecapp",
   "icmptype": "",
   "dport": "2018-2040",
   "icmpcode": "",
   "description": "custom security application"
}
```

- The following example shows how you can create a security application by specifying a single port.

```
opc -f json compute sec-application add /Compute-acme/jack.jones@example.com/
video_streaming_udp udp --dport 70 --description 'video streaming security
application'

{
   "protocol": "udp",
   "name": "/Compute-acme/jack.jones@example.com/video_streaming_udp",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/secapplication/Compute-
acme/jack.jones@example.com/video_streaming_udp",
   "icmptype": "",
   "dport": "70",
   "icmpcode": "",
   "description": "video streaming security application"
  }
```

sec-application list

Retrieves details of the security applications that are in the specified container and match the specified query criteria. If you don't specify any query criteria, then details of all the security applications in the container are displayed. You can use the list command to validate the results of add and delete operations. Use the -F option to filter results based on specific attribute names to verify content updates and state changes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

`opc compute sec-application list` *`container`* `[--protocol` *`protocol`*`] [--description '`*`description`*`'] [--name` *`name`*`] [--dport` *`ports`*`] [--icmpcode` *`icmpcode`*`] [--icmptype` *`icmptype`*`]`

For help with the parameters and options of this command, run the command with the `-h` option.

Command Examples

- This command retrieves the names, protocol, and destination ports of all the user-defined TCP security applications.

```
opc -f table -F name,dport,protocol compute sec-application list /Compute-acme/
jack.jones@example.com --protocol tcp
+-----------------------------------------+------------+----------+
             NAME                        |   DPORT    | PROTOCOL
+-----------------------------------------+------------+----------+
 /Compute-acme/jack.jones@example.com/tcp1   |  2018-2040 | tcp
 /Compute-acme/jack.jones@example.com/tcp2   |  2048-2060 | tcp
 /Compute-acme/jack.jones@example.com/tcp3   |  2068-2080 | tcp
+-----------------------------------------+------------+----------+
```

- This command retrieves the names, protocol, and destination ports of all the system-provided, predefined security applications. Note that this output is merely an example. The security applications displayed when you run this command may be different.

```
opc -f table -F name,protocol compute sec-application list /oracle/public
+----------------------------+----------+
             NAME             | PROTOCOL
+----------------------------+----------+
 /oracle/public/all           | all
 /oracle/public/cloudservice  | tcp
 /oracle/public/dns-tcp       | tcp
 /oracle/public/dns-udp       | udp
 /oracle/public/http          | tcp
 /oracle/public/https         | tcp
 /oracle/public/icmp          | icmp
 /oracle/public/ldap          | tcp
 /oracle/public/ldaps         | tcp
 /oracle/public/mail          | tcp
 /oracle/public/mysql         | tcp
 /oracle/public/nfs           | tcp
 /oracle/public/ntp-tcp       | tcp
 /oracle/public/ntp-udp       | udp
 /oracle/public/ping-reply    | icmp
 /oracle/public/pings         | icmp
 /oracle/public/rdp           | tcp
 /oracle/public/rpcbind       | tcp
 /oracle/public/rsync         | tcp
 /oracle/public/snmp-tcp      | tcp
 /oracle/public/snmp-trap-tcp | tcp
 /oracle/public/snmp-trap-udp | udp
 /oracle/public/snmp-udp      | udp
 /oracle/public/squid         | tcp
 /oracle/public/ssh           | tcp
 /oracle/public/tcp5900       | tcp
 /oracle/public/telnet        | tcp
 /oracle/public/udp443        | udp
+----------------------------+----------+
```

sec-application get

Retrieves details of the specified security application.

You can use the `get` command to verify whether a previous `add` operation was completed successfully. Use the `-F` option (for example, `-F name`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-application get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute sec-application get /Compute-acme/jack.jones@example.com/
secapptcp
```

Sample Output

```
{
   "protocol": "tcp",
   "name": "/Compute-acme/jack.jones@example.com/secapptcp",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/secapplication/Compute-acme/
jack.jones@example.com/secapptcp",
   "icmptype": "",
   "dport": "2018-2040",
   "icmpcode": "",
   "description": "TCP ports 2018-2040"
}
```

sec-application discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-application discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute sec-application discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result": [
  "/Compute-acme/jack.jones@example.com/customsecapp",
```

```
  "/Compute-acme/jack.jones@example.com/secappudp",
  "/Compute-acme/jack.jones@example.com/secapptcp"
 ]
}
```

sec-application delete

Deletes a security application. No response is returned.

You can't delete system-provided security application that are available in the `/oracle/public` container.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-application     delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute sec-application    delete /Compute-acme/jack.jones@example.com/secapp1
```

33
Security Association

This section describes the CLI commands that you can use to create, delete, and view security associations.
A security association is a relationship between a security list and the vcable of an instance. The vcable is an attachment point to a specific network interface of an instance. The vcable enables dynamic association/disassociation of its instance with security lists. You can associate up to five security lists with a given vcable. You will receive the 400 HTTP status response as the error code if you try to associate more than 5 security lists with a vcable using security associations. This limit includes security lists specified in the instance configuration (for example, in a launch plan) as well as new security associations added after creating instances.

Because of the granular 1:1 security association of a vcable to a security list, it is possible to individually delete and add security lists to any vcable in the system. Note that when a security list is deleted, all the security associations involving that security list are also deleted. This could cut off instance connectivity, because instances that were associated with the deleted security list may now have no security lists associated with their vcables.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- sec-association add
- sec-association list
- sec-association discover
- sec-association get
- sec-association delete

sec-association add

Creates a security association to associate a security list with the vcable ID of an instance.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-association add seclist vcable [--name name]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following example shows how you can associate the security list `/Compute-acme/jack.jones@example.com/dev` to an instance which has the vcable ID `/Compute-acme/jack.jones@example.com/8da0bcf0-a928-4b0a-bc88-db1ec28ea3b1`. The name of the security association is generated automatically.

```
opc -f json compute sec-association add /Compute-acme/jack.jones@example.com/dev /
Compute-acme/jack.jones@example.com/8da0bcf0-a928-4b0a-bc88-db1ec28ea3b1
```

Sample Output

Some lines have been truncated with ellipses (`...`) for readability. When you run the command in your environment, you'll see the full output.

```
{
   "vcable": "/Compute-acme/jack.jones@example.com/8da0bcf0-a928-4b0a-bc88-
db1ec28ea3b1",
   "seclist": "/Compute-acme/jack.jones@example.com/dev",
   "uri": "db://bsecsite/secassociation/Compute-acme/jack.jones@example.com/06fa63ae-
b68...",
   "name": "/Compute-acme/jack.jones@example.com/06fa63ae-b68c-40a2-a81f-
ec257d0198e2"
}
```

sec-association list

Retrieves details of the security associations that are in the specified container and match the specified query criteria. If you don't specify any query criteria, then details of all the security associations in the container are displayed.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-association list container [--vcable vcable_id] [--name name] [--
seclist seclist]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command retrieves the names of all the security associations in the `/Compute-acme/jack.jones@example.com` container with `/Compute-acme/jack.jones@example.com/prod-ng` as the security list.

```
opc -f table compute sec-association list /Compute-acme/jack.jones@example.com --
seclist /Compute-acme/jack.jones@example.com/prod-ng
```

Sample Output

```
+------------------------------------------------------------------------+
                                    NAME
+------------------------------------------------------------------------+
 /Compute-acme/jack.jones@example.com/06fa63ae-b68c-40a2-a81f-ec257d0198e2
 /Compute-acme/jack.jones@example.com/6f263ec2-6bc9-421d-b7b2-a66839c53169
+------------------------------------------------------------------------+
```

sec-association discover

Syntax

```
opc compute sec-association discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Example

```
opc compute sec-association discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result": [
  /Compute-acme/jack.jones@example.com/06fa63ae-b68c-40a2-a81f-ec257d0198e2
  /Compute-acme/jack.jones@example.com/23ca8bdb-1080-4ce3-819b-1664c14c9264
  /Compute-acme/jack.jones@example.com/54f52ede-ce8a-4d09-8ee5-241bfa2bba13
  /Compute-acme/jack.jones@example.com/6f263ec2-6bc9-421d-b7b2-a66839c53169
  /Compute-acme/jack.jones@example.com/8e4f603a-4a6f-4793-9eed-1378bc8ef7fd
 ]
}
```

sec-association get

Retrieves details about the specified security association.

You can use the `get` command to verify whether a previous `add` operation was completed successfully. Use the `-F` option (for example, `-F name`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-association get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute sec-association get /Compute-acme/jack.jones@example.com/06fa63ae-
b68c-40a2-a81f-ec257d0198e2
```

Sample Output

```
{
   "vcable": "/Compute-acme/jack.jones@example.com/8da0bcf0-a928-4b0a-bc88-
db1ec28ea3b1",
   "seclist": "/Compute-acme/jack.jones@example.com/dev",
   "uri": "db://bsecsite/secassociation/Compute-acme/jack.jones@example.com/06fa63ae-
b68...",
   "name": "/Compute-acme/jack.jones@example.com/06fa63ae-b68c-40a2-a81f-
ec257d0198e2"
}
```

sec-association delete

Deletes the specified security association. After you delete a security association, it takes a few minutes for the change to take effect. No response is returned.

> **Note:**
>
> You can delete all security associations, if you want to. If you delete all the security associations, instances will not be associated with any security list, and you cannot access the instance by NAT or flat IP. You can only access instances which are added to at least one security association.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-association delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute sec-association delete /Compute-acme/jack.jones@example.com/06fa63ae-
b68c-40a2-a81f-ec257d0198e2
```

34
Security IP List

This section describes the Compute Classic CLI commands that you can use to create, delete, update, and view security IP lists.
A security IP list is a set of IP addresses or subnets external to the instances you create in Oracle Cloud. These lists can then be used as a source or a destination when you define access rules.

Note that, a security IP list named `/oracle/public/public-internet` is predefined in Compute Classic. You can use this security IP list as the source in a security rule to permit traffic from any host on the Internet.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

sec-ip-list add

Creates a security IP list. Note that, after creating a security IP list, you can add additional IP addresses to the list by running the `sec-ip-list add` command again with just the additional IP addresses.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-ip-list add name secipentries [--description 'description']
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute sec-ip-list add /Compute-acme/jack.jones@example.com/yumrepo
173.223.232.153,173.223.232.161 --description 'public yum site'
```

Sample Output

```
{
   "secipentries": [
    "173.223.232.153",
    "173.223.232.161"
   ],
   "description": "public yum site",
   "name": "/Compute-acme/jack.jones@example.com/yumrepo",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/seciplist/Compute-acme/
jack.jones@example.com/yumrepo"
}
```

sec-ip-list list

Retrieves details of the security IP lists that are in the specified container and match the specified query criteria. If you don't specify any query criteria, then details of all the security IP lists in the container are displayed.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-ip-list list container [--name name]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following example retrieves the names and IP addresses in all the security IP lists defined in the `/oracle/public` container.

```
opc -f table -F name,secipentries compute sec-ip-list list /oracle/public
```

Sample Output

Note that this output is merely an example. The security IP lists displayed when you run this command may be different.

```
+-------------------------------+-------------------------------+
             NAME               |          SECIPENTRIES
+-------------------------------+-------------------------------+
 /oracle/public/instance        | [10.2.0.0/26 10.196.160.0/19
                                | 10.196.192.0/19]
 /oracle/public/paas-infra      | [10.102.201.132 10.102.201.133
                                | 10.102.201.134 10.102.201.138
                                | 10.202.8.150 10.202.8.155
                                | 160.34.15.48/29 100.64.0.0/24]
 /oracle/public/public-internet | [0.0.0.0/0]
 /oracle/public/site            | [10.110.23.0/26
                                | 10.110.23.128/26
```

```
                                | 10.110.23.192/26]
+-----------------------------+-----------------------------+
```

sec-ip-list discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-ip-list discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute sec-ip-list discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result": [
  "/Compute-acme/jack.jones@example.com/yumrepo",
  "/Compute-acme/jack.jones@example.com/adminhosts"
 ]
}
```

sec-ip-list get

Retrieves information about the specified security IP list.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully. Use the `-F` option (for example, `-F name`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-ip-list get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following example retrieves the IP addresses defined in the `/Compute-acme/jack.jones@example.com/yumrepo` security IP list.

```
opc -f json compute sec-ip-list get /Compute-acme/jack.jones@example.com/yumrepo
```

Sample Output

```
{
   "secipentries": [
    "173.223.232.153",
    "173.223.232.161"
   ],
   "description": "public yum site",
   "name": "/Compute-acme/jack.jones@example.com/yumrepo",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/seciplist/Compute-acme/
jack.jones@example.com/yumrepo"
}
```

sec-ip-list update

Updates IP addresses and description of the specified security IP list. Note that this command replaces the values in the `secipentries` and `description` fields with the new values that you specify. To add one or more IP addresses to the existing list, run the sec-ip-list add command and specify just the additional IP addresses.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-ip-list update name secipentries [--description 'description']
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command replaces the IP addresses and description of the `/Compute-acme/jack.jones@example.com/yumrepo` security IP list.

```
opc -f json compute sec-ip-list update /Compute-acme/jack.jones@example.com/yumrepo
203.0.113.5,203.0.113.6 --description 'admin hosts'
```

Sample Output

```
{
   "secipentries": [
    "203.0.113.5",
    "203.0.113.6"
   ],
   "description": "admin hosts",
   "name": "/Compute-acme/jack.jones@example.com/yumrepo",
```

```
   "uri": "https://api-z999.compute.us0.oraclecloud.com/seciplist/Compute-acme/
jack.jones@example.com/yumrepo"
}
```

sec-ip-list delete

Deletes the specified security IP list. No response is returned.

You can't delete system-provided security IP lists that are available in the `/oracle/public` container.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-ip-list delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute sec-ip-list delete /Compute-acme/jack.jones@example.com/yumrepo
```

35
Security List

This section describes the Compute Classic CLI commands that you can use to create, delete, update, and view security lists.
A security list is a group of one or more instances that you can specify as the destination or source in a security rule. Instances within a network group can communicate fully with one another on all ports. When you attach an instance to a security list, the inbound and outbound policies defined in the security list are applicable to that instance.

While creating an instance, if you don't attach it to any security list, the instance gets attached automatically to the predefined `/Compute-identity_domain/default/default` security list, which has the inbound policy set to `DENY` and the outbound policy set to `PERMIT`.

For more information about security lists, see About Security Lists in *Using Oracle Cloud Infrastructure Compute Classic*.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

sec-list add

Creates a security list. After creating security lists, you can add instances to them by using the add secassociation command.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-list add name [--description 'description'] [--policy
inbound_policy] [--outbound_cidr_policy outbound_policy]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command creates a security list that permits inbound and outbound traffic.

```
opc -f json compute sec-list add /Compute-acme/jack.jones@example.com/deny-traffic
--description 'Deny traffic' --policy deny --outbound-cidr-policy deny
```

> **Note:**
>
> If the `outbound_cidr_policy` for a security list (seclist) is set to `DENY`, you can create security rules (secrules) to enable outbound communication from the instances within that security list to public IP addresses (seciplists). This way, you can create holes in the outbound firewall. You cannot create security rules to enable outbound communication from a security list to public IP addresses if the `outbound_cidr_policy` for the security list is set to `PERMIT`.

Sample Output

```
{
   "account": "/Compute-acme/default",
   "name": "/Compute-acme/jack.jones@example.com/deny-traffic",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/seclist/Compute-acme/
jack.jones@example.com/deny-traffic",
   "outbound_cidr_policy": "DENY",
   "policy": "DENY",
   "description": "Deny traffic"
}
```

sec-list list

Retrieves details of the security lists that are in the specified container and match the specified query criteria. If you don't specify any query criteria, then details of all the security lists in the container are displayed. Use the `list` command to validate the results of `add`, `update`, and `delete` operations.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-list list container [--name name]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following example retrieves the details of all the security lists in the `/Compute-acme` container.

```
opc -f json compute sec-list list /Compute-acme
```

Sample Output

```
{
 "result": [
  {
   "account": "/Compute-acme/default",
   "description": "deny traffic",
   "name": "/Compute-acme/jack.jones@example.com/deny-traffic",
   "outbound_cidr_policy": "DENY",
   "policy": "DENY",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/seclist/Compute-acme/
jack.jones@example.com/deny-traffic"
  },
  {
   "account": "/Compute-acme/default",
   "description": "",
   "name": "/Compute-acme/default/default",
   "outbound_cidr_policy": "PERMIT",
   "policy": "DENY",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/seclist/Compute-acme/default/
default"
  }
  ]
}
```

sec-list discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-list discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute sec-list discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result": [
  "/Compute-acme/jack.jones@example.com/deny",
  "/Compute-acme/jack.jones@example.com/permitall"
```

```
  ]
}
```

sec-list get

Retrieves information about the specified security list.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-list get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command retrieves the `name` and `policy` attributes of the `/Compute-acme/jack.jones@example.com/permitall` seclist.

```
opc -f json compute sec-list get /Compute-acme/jack.jones@example.com/deny
```

Sample Output

```
{
   "account": "/Compute-acme/default",
   "name": "/Compute-acme/jack.jones@example.com/deny-traffic",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/seclist/Compute-acme/
jack.jones@example.com/deny-traffic",
   "outbound_cidr_policy": "DENY",
   "policy": "DENY",
   "description": "Deny traffic"
}
```

sec-list update

Updates inbound policy, outbound policy, and description for the specified security list.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-list update name [--policy inbound_policy] [--outbound_cidr_policy
outbound_policy] [--description 'description']
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command changes the inbound policy and outbound policy of the `/Compute-acme/jack.jones@example.com/deny` security list to `permit` and updates the description.

```
opc compute sec-list update /Compute-acme/jack.jones@example.com/deny --policy
permit --outbound-cidr-policy permit --description "updated security list"
```

Sample Output

```
{
   "account": "/Compute-acme/default",
   "name": "/Compute-acme/jack.jones@example.com/deny",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/seclist/Compute-acme/
jack.jones@example.com/deny",
   "outbound_cidr_policy": "PERMIT",
   "policy": "PERMIT",
   "description": "updated security list"
}
```

sec-list delete

Deletes the specified security list. No response is returned.

Note that a security list that's associated with instances or is used in security rules can't be deleted.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-list delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute sec-list delete /Compute-acme/jack.jones@example.com/deny
```

36
Security Rule

This section describes the Compute Classic CLI commands that you can use to create, delete, update, and view security rules.
A security rule defines network access over a specified protocol between instances in two security lists, or from a set of external hosts (an IP list) to instances in a security list. Security rules tie the security list, security IP list, and security application entities together.

For more information about security rules, see About Security Rules in *Using Oracle Cloud Infrastructure Compute Classic*.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

sec-rule add

Adds a security rule.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-rule add name action application dst_list src_list [--disabled] [--
description 'description']
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command creates and enables a security rule to permit HTTP traffic from the Internet to the `prod_seclist` security list. By default the security list is created in the

enabled state. To enable it explicitly, set the `--disabled` option to `false` while creating the security rule.

```
opc -f json compute sec-rule add /Compute-acme/jack.jones@example.com/prod permit /
oracle/public/http seclist:/Compute-acme/jack.jones@example.com/prod_seclist
seciplist:/oracle/public/public-internet --disabled=false --description 'Permit
traffic from the Internet to the production seclist'
```

Sample Output

```
{
   "dst_list": "seclist:/Compute-acme/jack.jones@example.com/prod_seclist",
   "name": "/Compute-acme/jack.jones@example.com/prod",
   "src_list": "seciplist:/oracle/public/public-internet",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/secrule/Compute-acme/
jack.jones@example.com/prod",
   "disabled": false,
   "application": "/oracle/public/http",
   "action": "permit",
   "description": "Permit traffic from the Internet to the production seclist"
}
```

sec-rule list

Retrieves details of the security rules that are in the specified container and match the specified query criteria. You can pass one or more query parameters to filter the search results. If you don't specify any query criteria, then details of all the security rules in the container are displayed.

Use the `list` command to validate the results of `add`, `update`, and `delete` operations. Use the `-F` option to filter on specific attribute names to verify content updates and state changes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-rule list container [--dst-list destination] [--name name] [--src-
list source] [--disabled] [--application security-application] [--description
'description']
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command retrieves the destinations of all the enabled security rules in the `/Compute-acme` container with the security IP list `/oracle/public/public-internet` as the source.

```
opc -f table -F name,dst_list compute sec-rule list /Compute-acme --src-list
seciplist:/oracle/public/public-internet
```

Sample Output

```
+-----------------------------------------------------
+-----------------------------------------------------------+
                           NAME
|                               DST LIST
+-----------------------------------------------------
+-----------------------------------------------------------+
 /Compute-acme/jane/secrule-ssh              | seclist:/Compute-acme/jane/
seclist1
 /Compute-acme/jack/prod                     | seclist:/Compute-acme/deny-
traffic
 /Compute-acme/jack.jones@example.com/prod-ng  | seclist:/Compute-acme/
jack.jones@example.com/prod-env
+-----------------------------------------------------
+-----------------------------------------------------------+
```

sec-rule get

Retrieves details of the specified security rule.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully. Use the `-F` option (for example, `-F name,disabled`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-rule get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute sec-rule get /Compute-acme/jack.jones@example.com/dev-to-prod
```

Sample Output

```
{
   "dst_list": "seclist:/Compute-acme/jack.jones@example.com/prod-ng",
   "name": "/Compute-acme/jack.jones@example.com/dev-to-prod",
   "src_list": "seclist:/Compute-acme/jack.jones@example.com/dev-ng",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/secrule/Compute-acme/
jack.jones@example.com/dev-to-prod",
   "disabled": false,
   "application": "/oracle/public/ssh",
   "action": "PERMIT",
   "description": "Permits SSH traffic from dev instances to prod instances"
 }
```

sec-rule discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-rule discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute sec-rule discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result": [
  "/Compute-acme/jack.jones@example.com/DefaultPublicSSHAccess",
  "/Compute-acme/jack.jones@example.com/dev-to-prod,
  "/Compute-acme/jack.jones@example.com/internet-to-prod
 ]
}
```

sec-rule update

Disables or enables the specified security rule. You can also update the description of the security rule.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-rule update name action application dst_list src_list [--disabled]
[--description 'description']
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command disables the `/Compute-acme/admin/prod` secrule. As no value is provided for the `description` parameter, description (if previously provided) is deleted.

```
opc -f json compute sec-rule update /Compute-acme/jack.jones@example.com/prod
permit /oracle/public/http seclist:/Compute-acme/jack.jones@example.com/prod_seclist
seciplist:/oracle/public/public-internet --disabled
```

Sample Output

```
{
 "action": "permit",
 "application": "/oracle/public/http",
 "description": "",
 "disabled": true,
 "dst_list": "seclist:/Compute-acme/jack.jones@example.com/prod_seclist",
 "name": "/Compute-acme/jack.jones@example.com/prod",
 "src_list": "seciplist:/oracle/public/public-internet",
 "uri": "https://api-z999.compute.us0.oraclecloud.com/secrule/Compute-acme/
jack.jones@example.com/prod"
}
```

sec-rule delete

Deletes the specified security rule. No response is returned.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute sec-rule delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute sec-rule delete /Compute-acme/jack.jones@example.com/prod
```

37
Security Protocol for IP Network

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view security protocols for IP networks.
A security protocol allows you to specify a transport protocol and the source and destination ports to be used with the specified protocol. It is used for matching packets in a security rule. When you create a security rule, the protocols and ports of the specified security protocols are used to determine the type of traffic that is permitted by that security rule. If you don't specify protocols and ports in a security protocol, traffic is permitted over all protocols and ports.

You can specify a security protocol in multiple security rules. So if you have a protocol that you want to use in a number of security rules, you don't have to create the protocol multiple times.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

security-protocol add

Creates a security protocol for IP Networks. A security protocol allows you to specify a transport protocol and the source and destination ports to be used with the specified protocol. When you create a security rule, the protocols and ports of the specified security protocols are used to determine the type of traffic that is permitted by that security rule. If you don't specify protocols and ports in a security protocol, traffic is permitted over all protocols and ports.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute security-protocol add name [--description description] [--tags tags] [--
ip-protocol protocol] [--dst-port-set port-numbers] [--src-port-set port-numbers]
```

Example

```
opc -f json compute security-protocol add /Compute-acme/jack.jones@example.com/
secprotocol1 --description 'Sample security protocol' --ip-protocol tcp --dst-port-
set "2018-2040" --src-port-set "1018-1040"
```

Sample Output

```
{
 "description": "Sample security protocol",
 "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/secprotocol/Compute-
acme/jack.jones@example.com/secprotocol1",
 "ipProtocol": "tcp",
 "srcPortSet": ["1018-1040"],
 "dstPortSet": ["2018-2040"],
 "tags":[],
 "name": "/Compute-acme/jack.jones@example.com/secprotocol1"
}
```

security-protocol list

Retrieve details of all security protocols in the specified container. This request is for security protocols used in IP networks.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute security-protocol list container
```

Example

```
opc -f json compute security-protocol list /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
  "result": [
    {
      "name": "/Compute-acme/jack.jones@example.com/secprotocol1",
      "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/
secprotocol/Compute-acme/jack.jones@example.com/secprotocol1",
      "description": "sample security protocol",
      "tags": [],
      "ipProtocol": "tcp",
      "srcPortSet": ["2010-2022"],
      "dstPortSet": ["2025-2030"]
    },
    {
      "name": "/Compute-acme/jack.jones@example.com/secprotocol2",
      "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/
secprotocol/Compute-acme/jack.jones@example.com/secprotocol2",
      "description": "Sample security protocol 2",
      "tags": [],
```

```
      "ipProtocol": "tcp",
      "srcPortSet": ["2036-2042"],
      "dstPortSet": ["2045-2050"]
    }
  ]
}
```

security-protocol get

Retrieves details of the specified security protocol. This request is for security protocols used in IP networks.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute security-protocol get name
```

Example

```
opc -f json compute security-protocol get /Compute-acme/jack.jones@example.com/
secprotocol1
```

Sample Output

```
{
 "description": "Sample security protocol",
 "uri": "https://api-z999.compute.us0.oraclecloud.com/network/v1/secprotocol/Compute-
acme/jack.jones@example.com/secprotocol1",
 "ipProtocol": "tcp",
 "srcPortSet": ["1018-1040"],
 "dstPortSet": ["2018-2040"],
 "tags":[],
 "name": "/Compute-acme/jack.jones@example.com/secprotocol1"
}
```

security-protocol update

Update the specified security protocol for IP networks. You can update values of the `description`, `ip-protocol`, `dst-port-set`, `src-port-set`, and `tags` parameters of a security protocol.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute security-protocol update name [--description description] [--tags tags]
[--ip-protocol protocol] [--dst-port-set port-numbers] [--src-port-set port-numbers]
```

Example

The following example demonstrates how you can update values of the `description`, `ip-protocol`, `dst-port-set`, and `src-port-set` parameters of the `/Compute-acme/jack.jones@example.com/secprotocol1` security protocol.

```
opc -f json compute security-protocol update /Compute-acme/jack.jones@example.com/
secprotocol1 --description 'Updating sample security protocol' --ip-protocol udp --
dst-port-set "2025-2030" --src-port-set "2010-2022"
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/secprotocol1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/secprotocol/
Compute-acme/jack.jones@example.com/secprotocol1",
  "description": "Updating sample security protocol",
  "tags": [],
  "ipProtocol": "udp",
  "srcPortSet": ["2010-2022"],
  "dstPortSet": ["2025-2030"]
}
```

security-protocol delete

Deletes the specified security protocol used in IP networks. No response is returned.

Ensure that the security protocol is not being used before deleting it.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute security-protocol delete name
```

Example

```
opc compute security-protocol delete /Compute-acme/jack.jones@example.com/
secprotocol1
```

38
Security Rule for IP Network

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view security rules for IP networks.
A security rule permits traffic from a specified source or to a specified destination. You must specify the direction of a security rule - either ingress or egress. In addition, you can specify the source or destination of permitted traffic, and the security protocol and port used to send or receive packets. Each of the parameters that you specify in a security rule provides a criterion that the type of traffic permitted by that rule must match. Only packets that match all of the specified criteria are permitted. If you don't specify match criteria in the security rule, all traffic in the specified direction is permitted. The primary function of security rules is to help identify the type of traffic to be allowed in the IP network.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

security-rule add

Adds a security rule for IP networks to Compute Classic. A security rule permits traffic from a specified source or to a specified destination. You must specify the direction of a security rule - either ingress or egress. In addition, you can specify the source or destination of permitted traffic, and the security protocol and port used to send or receive packets. Each of the parameters that you specify in a security rule provides a criterion that the type of traffic permitted by that rule must match. Only packets that match all of the specified criteria are permitted. If you don't specify match criteria in the security rule, all traffic in the specified direction is permitted.

When you create a security rule with a specified direction, say ingress, you should also create a corresponding security rule for the opposite direction - in this case, egress. This is generally required to ensure that when traffic is permitted in one direction, responses or acknowledgement packets in the opposite direction are also permitted.

When you create a security rule, you specify the ACL that it belongs to. ACLs apply to vNICsets. You can apply multiple ACLs to a vNICset and you can apply each ACL to multiple vNICsets. When an ACL is applied to a vNICset, every security rule that belongs to the ACL applies to every vNIC that is specified in the vNICset.

A security rule allows you to specify the following parameters:

- The flow direction - ingress or egress
- (Optional) A source vNICset or a list of source IP address prefix sets, or both
- (Optional) A destination vNICset or a list of destination IP address prefix sets, or both
- (Optional) A list of security protocols
- (Optional) The name of the ACL that contains this rule
- (Optional) An option to disable the security rule

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute security-rule add name flow-direction [--acl acl] [--description
description] [--tags tags] [--dst-ip-address-prefix-sets IPv4-prefixes-list] [--src-
ip-address-prefix-sets IPv4-prefixes-list] [--dst-vnic-set vnic-set-list] [--src-
vnic-set vnic-set-list] [--sec-protocols security_protocols] [--enabled-flag]
```

Example

```
opc -f json compute security-rule add /Compute-acme/jack.jones@example.com/secrule1
egress --acl /Compute-acme/jack.jones@example.com/acl1 --description 'Sample
security rule' --src-ip-address-prefix-sets /Compute-acme/jack.jones@example.com/
ipaddressprefixset1 --dst-vnic-set /Compute-acme/jack.jones@example.com/vnicset2 --
src-vnic-set /Compute-acme/jack.jones@example.com/vnicset1 --sec-protocols /Compute-
acme/jack.jones@example.com/secprotocol1 --enabled-flag
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
  "name": "/Compute-acme/jack.jones@example.com/secrule1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/secrule/
Compute-acme/jack.jones@example.com/secrule1",
  "description": "Sample security rule",
  "tags": null,
  "acl": "/Compute-acme/jack.jones@example.com/acl1",
  "flowDirection": "egress",
  "srcVnicSet": "/Compute-acme/jack.jones@example.com/vnicset1",
  "dstVnicSet": "/Compute-acme/jack.jones@example.com/vnicset2",
  "srcIpAddressPrefixSets": ["/Compute-acme/jack.jones@example.com/
ipaddressprefixset1"]
  "dstIpAddressPrefixSets": null,
  "secProtocols": ["/Compute-acme/jack.jones@example.com/secprotocol1"],
  "enabledFlag": true
}
```

security-rule list

Retrieves details of all the security rules in the specified container. This request is for security rules used in IP networks.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute security-rule list container [--name name]
```

Example

```
opc -f json compute security-rule list /Compute-acme
```

Sample Output

```
{
  "result": [
    {
      "name": "/Compute-acme/default/egress",
      "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/secrule/
Compute-acme/default/egress",
      "description": "Default egress Network Security Rule",
      "tags": [],
      "acl": "/Compute-acme/default",
      "flowDirection": "egress",
      "srcVnicSet": "/Compute-acme/default",
      "dstVnicSet": null,
      "srcIpAddressPrefixSets": [],
      "dstIpAddressPrefixSets": [],
      "secProtocols": [],
      "enabledFlag": true
    },
    {
      "name": "/Compute-acme/default/ingress",
      "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/secrule/
Compute-acme/default/ingress",
      "description": "Default ingress Network Security Rule",
      "tags": [],
      "acl": "/Compute-acme/default",
      "flowDirection": "ingress",
      "srcVnicSet": "/Compute-acme/default",
      "dstVnicSet": "/Compute-acme/default",
      "srcIpAddressPrefixSets": [],
      "dstIpAddressPrefixSets": [],
      "secProtocols": [],
      "enabledFlag": true
    }
  ]
}
```

security-rule get

Retrieves details of the specified security rule which is used in IP networks.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute security-rule get name
```

Example

```
opc -f json compute security-rule get /Compute-acme/jack.jones@example.com/secrule1
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/secrule1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/secrule/
Compute-acme/jack.jones@example.com/secrule1",
  "description": "Sample security rule",
  "tags": null,
  "acl": "/Compute-acme/jack.jones@example.com/acl1",
  "flowDirection": "egress",
  "srcVnicSet": "/Compute-acme/jack.jones@example.com/vnicset1",
  "dstVnicSet": "/Compute-acme/jack.jones@example.com/vnicset2",
  "srcIpAddressPrefixSets": ["/Compute-acme/jack.jones@example.com/
ipaddressprefixset1"]
  "dstIpAddressPrefixSets": null,
  "secProtocols": ["/Compute-acme/jack.jones@example.com/secprotocol1"],
  "enabledFlag": true
}
```

security-rule update

You can update values of all the parameters of a security rule that is used in IP networks, except its name. You can also enable or disable a security rule.

This command updates values for all the parameters. If you don't provide a value for a parameter, it is changed to null. Before updating a security rule, you can run the security-rule get command to retrieve all the values that are currently assigned to it, so that you can check which values you want to retain and which values you want to change.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that

the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute security-rule update name flow-direction [--acl acl] [--description
description] [--tags tags] [--dst-ip-address-prefix-sets IPv4-prefixes-list] [--src-
ip-address-prefix-sets IPv4-prefixes-list] [--dst-vnic-set vnic-set-list] [--src-
vnic-set vnic-set-list] [--sec-protocols security_protocols] [--enabled-flag]
```

Example

The following example shows how you can disable a security rule,`/Compute-acme/jack.jones@example.com/secrule1`, by passing `false` as value for the `--enabled-flag` option.

```
opc -f json compute security-rule update /Compute-acme/jack.jones@example.com/
secrule1 egress --enabled-flag=false
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
  "name": "/Compute-acme/jack.jones@example.com/secrule1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/secrule/
Compute-acme/jack.jones@example.com/secrule1",
  "description": null,
  "tags": [],
  "acl": null,
  "flowDirection": "egress",
  "srcVnicSet": null,
  "dstVnicSet": null,
  "srcIpAddressPrefixSets": [],
  "dstIpAddressPrefixSets": [],
  "secProtocols": [],
  "enabledFlag": false
}
```

security-rule delete

Deletes the specified security rule. Before deleting a security rule, ensure that it is not being used.

If you want to disable a security rule, run the security-rule update command and set the value of the `--enabled-flag` option as `false` to disable the security rule.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute security-rule delete name
```

Example

```
opc compute security-rule delete /Compute-acme/jack.jones@example.com/secrule1
```

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Shape

This section describes the Compute Classic CLI commands you can use to list and view the available shapes. Note that you can't add, update, or delete shapes.
A shape is a resource profile that specifies the number of CPU threads and the amount of memory (in MB) to be allocated to an instance. When you create an instance, by using a launch plan for example, you must specify the shape you want to use. For more information, see About Machine Images and Shapes in *Using Oracle Cloud Infrastructure Compute Classic*.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

shape list

Retrieves the name of all the available shapes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute shape list
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command retrieves the name for all available shapes.

```
opc -f table compute shape list
```

Sample Output

Note that this output is just an example. Some lines may be truncated with ellipses (...) for readability. For accurate and up-to-date information about each shape, see About Machine Images and Shapes in *Using Oracle Cloud Infrastructure Compute Classic*.

```
+------------+
     NAME
+------------+
```

```
  oc3
  oc4
  oc5
  oc6
  ...
+------------+
```

shape get

Retrieves the CPU and memory details of the specified shape.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute shape get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute shape get oc3
```

Sample Output

This output is just an example. For accurate and up-to-date information about each shape, see About Machine Images and Shapes in *Using Oracle Cloud Infrastructure Compute Classic*.

The `cpus` field shows the number of CPU threads and the `ram` field shows the amount of memory in MBs. Ignore the `io` attribute in the output. The disk I/O rate is the same across all shapes though the output may indicate otherwise.

```
{
 "cpus": 2,
 "gpus": 0,
 "io": 200,
 "is_root_ssd": false,
 "name": "oc3",
 "nds_iops_limit": 0,
 "placement_requirements": [],
 "ram": 7680,
 "root_disk_size": 0,
 "ssd_data_size": 0,
 "uri": "https://api-z999.compute.us0.oraclecloud.com/shape/oc3"
}
```

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SSH Public Key

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view SSH public keys.
To connect to an instance using SSH, you must associate it with one or more SSH public keys. You must first generate the required SSH key pairs by using a tool such as `ssh-keygen`, and then upload the public keys to Oracle Cloud. For instructions to generate SSH key pairs, see Generating an SSH Key Pair in *Using Oracle Cloud Infrastructure Compute Classic*.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- ssh-key add
- ssh-key list
- ssh-key discover
- ssh-key get
- ssh-key update
- ssh-key delete

ssh-key add

Adds an SSH public key to Compute Classic.

You must first generate the required SSH key pairs by using a tool such as `ssh-keygen`, and then upload the public keys to Compute Classic. For instructions to generate SSH key pairs, see Generating an SSH Key Pair in *Using Oracle Cloud Infrastructure Compute Classic*.

After adding SSH public keys, you can associate them with instances by specifying the key names in launch plans, as described in launch-plan add.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ssh-key add name key [--enabled]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following command adds an SSH public key with the specified name and value. You can provide the value of the SSH key directly at the command line or you can provide the value in a file. By default, the SSH key is enabled. If you want to create an SSH key and disable it, set the `--enabled` option to `false` while adding the SSH key. You can't associate disabled SSH keys with instances.

- `opc -f json compute ssh-key add /Compute-acme/jack.jones@example.com/adminkey file://~/.ssh/id_rsa.pub`
- The SSH key value has been truncated with ellipses (`...`) for readability. Provide the entire value of the SSH key when you run the command.

  ```
  opc compute ssh-key add /Compute-acme/jack.jones@example.com/adminkey "ssh-rsa AAAAB3NzaC1yc2EAAAABIwA ..."
  ```

Sample Output

Some lines have been truncated with ellipses (`...`) for readability. When you run the command in your environment, you'll see the full output.

```
{
   "enabled": true,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/sshkey/Compute-acme/
jack.jones@example.com/adminkey",
   "key": "ssh-rsa AAAAB3NzaC1yc2EAAAABIwAAAQEA0ibAEmysI4o1z...",
   "name": "/Compute-acme/jack.jones@example.com/adminkey"
}
```

ssh-key list

Retrieves details of all the SSH public keys in the specified container that match the specified query criteria. You can pass one or more query parameters to filter the search results. If you don't specify any query criteria, then details of all the SSH public keys in the container are displayed.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

`opc compute ssh-key list` *`container`* `[--name` *`name`*`]`

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute ssh-key list /Compute-acme/jack.jones@example.com
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
 "result": [
  {
   "enabled": true,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/sshkey/Compute-acme/
jack.jones@example.com/dev_sshkey",
   "key": "ssh-rsa AAAAB3NzaC1yc2EAAAABIwAAA...",
   "name": "/Compute-acme/jack.jones@example.com/dev_sshkey"
  },
  {
   "enabled": false,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/sshkey/Compute-acme/
jack.jones@example.com/prod_sshkey",
   "key": "ssh-rsa AAAAB3NmbD2zw2EDDDDEMcDDD...",
   "name": "/Compute-acme/jack.jones@example.com/prod_sshkey"
  }
 ]
}
```

ssh-key discover

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ssh-key discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute ssh-key discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result": [
        /Compute-acme/jack.jones@example.com/dev_sshkey
        /Compute-acme/jack.jones@example.com/prod_sshkey
 ]
}
```

ssh-key get

Retrieves details of the specified SSH public key.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully. Use the `-F` option (for example, `-F enabled`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ssh-key get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute ssh-key get /Compute-acme/jack.jones@example.com/dev_sshkey
```

Sample Output

Some lines have been truncated with ellipses (`...`) for readability. When you run the command in your environment, you'll see the full output.

```
{
   "enabled": false,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/sshkey/Compute-acme/
jack.jones@example.com/dev_sshkey",
   "key": "ssh-rsa AAAAB3NzaC1yc2EAAAABIwAAAQEA0ibAEm...",
   "name": "/Compute-acme/jack.jones@example.com/dev_sshkey"
}
```

ssh-key update

Updates the status or value of an SSH public key.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute ssh-key update name key [--enabled]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following command disables the `/Compute-acme/jack.jones@example.com/adminkey` key. You can't associate disabled SSH keys with instances. While updating

an SSH key, you can provide the value of the SSH key directly at the command line or you can provide the value in a file.

- `opc -f json compute ssh-key update /Compute-acme/jack.jones@example.com/adminkey file://~/.ssh/id_rsa.pub --enabled=false`
- The SSH key value has been truncated with ellipses (`...`) for readability. Provide the entire value of the SSH key when you run the command.

  ```
  opc -f json compute ssh-key update /Compute-acme/jack.jones@example.com/adminkey
  "ssh-rsa AAAAB3NzaC1yc2EAAAABIwA ..." --enabled=false
  ```

Sample Output

Some lines have been truncated with ellipses (`...`) for readability. When you run the command in your environment, you'll see the full output.

```
{
   "enabled": false,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/sshkey/Compute-acme/
jack.jones@example.com/adminkey",
   "key": "ssh-rsa AAAAB3NzaC1yc2EAAAABIwAAAQEA0ibAEmysI...",
   "name": "/Compute-acme/jack.jones@example.com/adminkey"
}
```

ssh-key delete

Deletes an SSH public key. No response is returned.

Ensure that the SSH key that you want to delete is no longer being used by any instance.

> **Caution:**
>
> When you delete a key that's associated with an instance, the instance continues to be accessible using `ssh`. But before re-creating the instance, you must remove the deleted key from the orchestration of that instance. Otherwise, the orchestration won't start.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

`opc compute ssh-key delete` *`name`*

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute ssh-key delete /Compute-acme/jack.jones@example.com/adminkey
```

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Storage Attachment

This section describes the Compute Classic CLI commands that you can use to create, delete, and view storage attachments.
A storage attachment is an association between a storage volume and an instance. You can associate a volume with only one instance at a time. You can detach a volume from an instance by deleting the relevant storage attachment.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- storage-attachment add
- storage-attachment list
- storage-attachment discover
- storage-attachment get
- storage-attachment delete

storage-attachment add

Attaches a storage volume to an instance.

Note that, after attaching the volume, you must create a file system and mount the file system on the instance. For more information, see Mounting a Storage Volume on an Instance in *Using Oracle Cloud Infrastructure Compute Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-attachment add index instance_name storage_volume_name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command attaches the `/Compute-acme/jack.jones@example.com/dev-vol1` storage volume to the `/Compute-acme/jack.jones@example.com/dev-inst1` instance with the index 4.

To retrieve the names of storage volumes, use the storage-volume list command.

To retrieve the names of instances, use the instance list command.

```
opc -f json compute storage-attachment add 4 /Compute-acme/jack.jones@example.com/
dev2/6073c806-f7da-47eb-9678-6e618931b29a /Compute-acme/jack.jones@example.com/dev-
vol1
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
   "index": 4,
   "account": null,
   "storage_volume_name": "/Compute-acme/jack.jones@example.com/dev-vol1",
   "hypervisor": null,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/storage/attachment/Compute-
acme/jack.jones@example.com/dev2/60...29a/1aa...",
   "name": "/Compute-acme/jack.jones@example.com/dev2/6073c806-
f7da-47eb-9678-6e618931b29a/1aa...",
   "instance_name": "/Compute-acme/jack.jones@example.com/dev2/6073c806-
f7da-47eb-9678-6e61893...",
   "state": "attaching",
   "readonly": false
 }
```

To verify whether the storage attachment was created, note the name of the storage attachment returned by the `storage-attachments add` command. Then, run the storage-attachment get command for the name you noted. In the output, look for the `"state": "attached"` line.

storage-attachment list

Retrieves details of the storage attachments that are in the specified container and match the specified query criteria. You can pass one or more query parameters to filter the search results. If you don't specify any query criteria, then details of all the storage attachments in the container are displayed.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-attachment list container [--name name] [--instance-name
instance-name] [--state state] [--storage-volume-name storage-volume-name]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command retrieves the name and state for each storage attachment in the `/Compute-acme/jack.jones@example.com` container.

```
opc -f table -F name,state compute storage-attachment list /Compute-acme/
jack.jones@example.com
```

Sample Output

```
+-------------------------------------------------------------------------------
-----------------------------------+----------+

NAME                                                                 |  STATE
+-------------------------------------------------------------------------------
-----------------------------------+----------+
 /Compute-acme/jack.jones@example.com/dev-vm/55a30ad5-ddc2-4991-9c17-f02e97e5c36d/
49e16db9-54ee-4ca0-a6dd-d2d20edc0f87  | attached
 /Compute-acme/jack.jones@example.com/dev-vm2/ac004583-2329-4109-8f4a-
e2b87e984cd6/8c33e520-ddb6-4b34-910c-a22de7626702 | attached
 /Compute-acme/jack.jones@example.com/prod-vm/c9833906-19e5-413a-a409-0ef36c04c26d/
82353e0c-c6f0-4c94-9572-e1aefd800635 | attached
+-------------------------------------------------------------------------------
-----------------------------------------------------------------------+----------+
```

storage-attachment discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-attachment discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command retrieves the names of the storage attachments in the `/Compute-acme/jack.jones@example.com/prod1` container.

```
opc -f json compute storage-attachment discover /Compute-acme/jack.jones@example.com/
prod1/
```

Sample Output

```
{
 "result": [
  "/Compute-acme/jack.jones@example.com/prod1/f1a67244-9abc-45d5-af69-8eef1ce6b74c/"
  ]
}
```

storage-attachment get

Retrieves the details of the specified storage attachment.

You can use the `get` command to verify whether a previous `add` operation was completed successfully. Use the `-F` option (for example, `-F name`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-attachment get name
```

Example

```
opc -f json compute storage-attachment get /Compute-acme/jack.jones@example.com/
6073c806-f7da-47e...
```

Sample Output

Some lines have been truncated with ellipses (. . .) for readability. When you run the command in your environment, you'll see the full output.

```
{
 "list": [
  {
   "index": 1,
   "account": null,
   "storage_volume_name": "/Compute-acme/jack.jones@example.com/dev-vol1",
   "hypervisor": null,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/storage/attachment/Compute-
acme/jack.jones@example.com/dev2/60...",
   "name": "/Compute-acme/jack.jones@example.com/dev2/6073c806-
f7da-47eb-9678-6e618931b29a/945...",
   "instance_name": "/Compute-acme/jack.jones@example.com/dev2/6073c806-f7da-...",
   "state": "attached",
   "readonly": false
  }
 ]
}
```

storage-attachment delete

Deletes the specified storage attachment. No response is returned. Before deleting the storage attachment, you must unmount the associated storage volume. See Mounting and Unmounting a Storage Volume in *Using Oracle Cloud Infrastructure Compute Classic*.

Note that volumes attached to an instance at launch time can't be detached.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-attachment delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute storage-attachment delete /Compute-acme/jack.jones@example.com/prod1/
f1a67244-9abc-45d5-af69-8eef1ce6b74c/1aa557de-118a-4ea7-afc7-73beabe8cf42
```

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Storage Property

This section describes the Compute Classic CLI commands that you can use to view storage properties.
Storage properties are used to determine the placement of storage volume when a volume is created.

You must specify a storage property while creating a storage volume. For storage volumes that require low latency and high IOPS, such as for storing database files, select the **/oracle/public/storage/latency** storage property. For all other storage volumes, select **/oracle/public/storage/default**.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

storage-property list

Retrieves details of all the storage properties in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-property list container [--name name]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute storage-property list /oracle/public
```

Sample Output

Some lines have been truncated with ellipses (`...`) for readability. When you run the command in your environment, you'll see the full output.

```
{
 "result": [
```

```
  {
   "description": "Default storageproperty for all StoragePools and StorageVolumes",
   "name": "/oracle/public/storage/default",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/property/storage/oracle/
public/storage/default"
  },
  {
   "description": "for accessing iSCSI volumes optimized for latency",
   "name": "/oracle/public/storage/latency",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/property/storage/oracle/
public/storage/latency"
  },
  {
   "description": "Default property used for storing snapshot",
   "name": "/oracle/public/storage/snapshot/default",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/property/storage/oracle/
public/storage/snapshot/default"
  }
 ]
}
```

> **Note:**
>
> Other storage properties might be listed. But don't use any of them. For storage volumes that require low latency and high IOPS, such as for storing database files, select **/oracle/public/storage/latency**. For all other storage volumes, select **/oracle/public/storage/default**.

storage-property discover

Retrieves a list of the storage properties in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-property discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute storage-property discover /oracle/public/storage
```

Sample Output

```
{
 "result": [
  "/oracle/public/storage/default",
  "/oracle/public/storage/latency",
```

```
  "/oracle/public/storage/snapshot/"
 ]
}
```

storage-property get

Retrieves details of the specified storage property.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-property get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute storage-property get /oracle/public/storage/default
```

Sample Output

```
{
   "description": "Default storageproperty for all StoragePools and StorageVolumes",
   "name": "/oracle/public/storage/default",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/property/storage/oracle/
public/storage/default"
}
```

43
Storage Volume Snapshot

This section describes the Compute Classic CLI commands you can use to add, delete, and view storage volume snapshots.
Creating a snapshot of a storage volume enables you to capture all the data stored on the storage volume. You can retain snapshots as a backup, or use them to create new, identical storage volumes.

If you take multiple snapshots of a storage volume, each snapshot captures all the data stored on the storage volume. You can create either colocated or remote storage volume snapshots.

- **Colocated snapshots:** Snapshots are stored in the same physical location as the original storage volume and each snapshot uses the same amount of storage as the original volume. As compared to the time taken to create a remote snapshot, colocated snapshots are created relatively quickly. Colocated snapshots are useful for quickly cloning storage volumes within a site.
- **Remote snapshots:** Snapshots aren't stored in the same location as the original storage volume. Instead, they are stored in the associated Oracle Cloud Infrastructure Object Storage Classic instance. However, creating a remote snapshot and restoring a storage volume from a remote snapshot can take quite a long time depending on the size of the storage volume, as data is written to and from the Oracle Cloud Infrastructure Object Storage Classic instance.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

storage-snapshot add

Creates a snapshot of the specified storage volume. Creating a storage volume snapshot enables you to capture the current state of the storage volume. You can retain snapshots as a backup, or use them to create new, identical storage volumes.

You can create a snapshot of a storage volume either when it is attached to an instance or after detaching it. If the storage volume is attached to an instance, then only data that has already been written to the storage volume will be captured in the snapshot. Data that is cached by the application or the operating system will be excluded from the snapshot.

> **Tip:**
>
> To create a snapshot of a bootable storage volume that is currently being used by an instance, it is recommended that you delete the instance by stopping the instance orchestration before you create the snapshot. Deleting the instance doesn't delete any data on the bootable storage volume, because the data is stored on a persistent boot disk. When the instance is deleted, it ensures that all data is written to the storage volume and no further data can be written to the disk while taking the snapshot. You can create the instance again later, after the snapshot is created.

To use this snapshot to create a storage volume, see storage-volume add.

Prerequisite: Ensure that you have selected a replication policy for your Oracle Cloud Infrastructure Object Storage Classic instance. See Selecting a Replication Policy for Your Service Instance in *Using Oracle Cloud Infrastructure Object Storage Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-snapshot add storagevolume [--name name] [--description
description] [--property property] [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example 1: Creating a Remote Storage Snapshot

```
opc -f json compute storage-snapshot add /Compute-acme/jack.jones@example.com/vol1 --
description 'Remote snapshot of vol1'
```

Sample Output

```
{
 "account": "/Compute-acme/cloud_storage",
 "description": "Remote snapshot of vol1",
 "machineimage_name": null,
 "name": "/Compute-acme/jack.jones@example.com/vol1/
d21140f4df6d4746fd5035db02a78786077385dfd3f664cae08ae643c964b23b",
 "platform": null,
 "property": "/oracle/public/storage/snapshot/default",
 "size": "10737418240",
 "snapshot_id": "d21140f4df6d4746fd5035db02a78786077385dfd3f664cae08ae643c964b23b",
 "snapshot_timestamp": null,
 "start_timestamp": "2017-02-08T09:36:42Z",
 "status": "initializing",
 "status_detail": "The storage snapshot is currently being initialized.",
 "status_timestamp": "2017-02-08T09:36:42Z",
 "tags": [],
 "uri": "http://api-z999.compute.us0.oraclecloud.com/storage/snapshot/Compute-acme/
jack.jones@example.com/vol1/
```

```
d21140f4df6d4746fd5035db02a78786077385dfd3f664cae08ae643c964b23b",
 "volume": "/Compute-acme/jack.jones@example.com/vol1"
}
```


Example 2: Creating a Colocated Storage Snapshot

```
opc compute storage-snapshot add /Compute-acme/jack.jones@example.com/vol1 --
description 'Colocated snapshot of vol1' --property /oracle/private/storage/snapshot/
collocated
```

Sample Output


```
{
 "account": null,
 "description": "Colocated snapshot of vol1",
 "machineimage_name": null,
 "name": "/Compute-acme/jack.jones@example.com/
vol1/2b4bb1eb967e42268e300cbdb842de40be33d74b1e858a938166013aa7362eaa",
 "platform": null,
 "property": "/oracle/private/storage/snapshot/collocated",
 "size": "10737418240",
 "snapshot_id": "2b4bb1eb967e42268e300cbdb842de40be33d74b1e858a938166013aa7362eaa",
 "snapshot_timestamp": null,
 "start_timestamp": "2017-02-08T09:45:39Z",
 "status": "initializing",
 "status_detail": "The storage snapshot is currently being initialized.",
 "status_timestamp": "2017-02-08T09:45:39Z",
 "tags": [],
 "uri": "https://api-z999.compute.us0.oraclecloud.com/storage/snapshot/Compute-acme/
jack.jones@example.com/
vol1/2b4bb1eb967e42268e300cbdb842de40be33d74b1e858a938166013aa7362eaa",
 "volume": "/Compute-acme/jack.jones@example.com/vol1"
}
```


storage-snapshot list

Retrieves details of the storage volume snapshots that are available in the specified container and match the specified query criteria. If you don't specify any query criteria, then details of all the storage volume snapshots in the container are displayed.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-snapshot list container [--tags tags] [--since since] [--until
until]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following example retrieves details of snapshots that were generated from 1st to 6th October within the `/Compute-acme/jack.jones@example.com` container.

```
opc -f table compute storage-snapshot list /Compute-acme/jack.jones@example.com --
since 2016-10-01T07:04:52Z --until 2016-10-06T07:04:52Z
```

Sample Output

```
+-------------------------------------------------------------------------------
------------------------+

NAME
+-------------------------------------------------------------------------------
------------------------+/Compute-acme/jack.jones@example.com/vol1/
f479227d88f56d68a752f0f388c50372768087c18cd575e4146f9ff96f803f75
/Compute-acme/jack.jones@example.com/vol1/
cb61eb710d69c63668128d12b5807739c3a8148d657b3a90c7cc7c5e3df374f4
+-------------------------------------------------------------------------------
------------------------+
```

storage-snapshot discover

Retrieves a list of storage snapshots in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-snapshot discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute storage-snapshot discover /Compute-acme/jack.jones@example.com/
vol1
```

Sample Output

```
{
 "result": [
   /Compute-acme/jack.jones@example.com/vol1/
dc14ed57a74c072fd2ec71ed152021eadc10bc868ae17c759f6233ee7317a15d
   /Compute-acme/jack.jones@example.com/vol1/snapshot2
 ]
}
```

storage-snapshot get

Retrieves details of the specified storage snapshot.

You can use the `get` command to verify whether `add` operation was completed successfully. Use the `-F` option (for example, `-F status`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-snapshot get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute storage-snapshot get /Compute-acme/jack.jones@example.com/vol1/
snapshot2
```

Sample Output

```
{
   "status": "completed",
   "start_timestamp": "2016-04-06T07:04:52Z",
   "name": "/Compute-acme/jack.jones@example.com/vol1/snap2",
   "tags": [],
   "description": "Snapshot of vol1",
   "snapshot_timestamp": "2016-04-06T07:01:45Z",
   "account": null,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/storage/snapshot/Compute-
acme/jack.jones%40example.com/vol1/snap2",
   "volume": "/Compute-acme/jack.jones@example.com/vol1",
   "snapshot_id": "04b4d060dda38f3f9efd335436c6d4b439cfdad15b048639f1e312eb8fbd082c",
   "status_detail": null,
   "property": "/oracle/private/storage/snapshot/collocated",
   "status_timestamp": "2016-04-06T07:04:53Z",
   "size": "10737418240"
 }
```

storage-snapshot delete

Deletes a storage snapshot. No response is returned.

You can restore or clone an existing storage volume by creating a snapshot of the storage volume and using the snapshot to create a new storage volume. You can create multiple snapshots of a storage volume. If a storage volume snapshot gets outdated, or if you no longer need a snapshot, you can delete it. You can't delete a colocated snapshot if it has been used to create a new storage volume.

Prerequisite: Ensure that you have selected a replication policy for your Oracle Cloud Infrastructure Object Storage Classic instance. See Selecting a Replication Policy for Your Service Instance in *Using Oracle Cloud Infrastructure Object Storage Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that

the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-snapshot delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute storage-snapshot delete /Compute-acme/jack.jones@example.com/vol1/
snapshot2
```

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Storage Volume

This section describes the Compute Classic CLI commands that you can use to create, delete, update, and view storage volumes.
A storage volume is virtual disk drive that provides block storage.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- storage-volume add
- storage-volume delete
- storage-volume discover
- storage-volume get
- storage-volume list
- storage-volume update

storage-volume add

Creates a storage volume.

After creating storage volumes you can attach them to instances by using the storage-attachment add command.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-volume add name properties size [--bootable] [--description
description] [--imagelist imagelist] [--imagelist_entry imagelist_entry] [--snapshot
snapshot] [--snapshot_id snapshot_id] [--snapshot_account snapshot_account] [--tags
tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example 1: Creating a Storage Volume

You can create a storage volume, a virtual disk that provides persistent block storage space for instances in Compute Classic. You can use such storage volumes to store data and applications. To create such a storage volume, you only need to specify values for the required parameters.

The following example demonstrates how to create a 10-GB storage volume named `vol1` in the `/Compute-acme/jack.jones@example.com` container.

```
opc -f json compute storage-volume add /Compute-acme/jack.jones@example.com/vol1 /
oracle/public/storage/default 10G --description 'Accounting Department Block
Storage' --tags 'Accounting Dept.'
```

Sample Output

```
{
   "account": "/Compute-acme/default",
   "managed": true,
   "description": "Accounting Department Block Storage",
   "name": "/Compute-acme/jack.jones@example.com/vol1",
   "tags": ["Accounting Dept."],
   "bootable": false,
   "hypervisor": null,
   "quota": null,
   "uri": "https://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-acme/
jack.jones@example.com/dev1",
   "imagelist": null,
   "imagelist_entry": -1,
   "machineimage_name": null,
   "platform": null,
   "storage_pool": null,
   "writecache": false,
   "shared": false,
   "snapshot_id": null,
   "snapshot_account": null,
   "snapshot": null,
   "status": "Initializing",
   "status_detail": "The storage volume is currently being initialized.",
   "status_timestamp": "2016-07-17T11:15:24Z",
   "properties": [
    "/oracle/public/storage/default"
   ],
   "size": "10737418240"
 }
```

Example 2: Creating a Bootable Storage Volume

The following example shows how to create a bootable storage volume, a storage volume that is associated with a machine image. While creating a bootable storage volume, the size of the storage volume must be at least 5% higher than the size of the machine image that you are associating with the storage volume. To create a bootable storage volume, in addition to specifying values for the required parameters, you must set `bootable` to `true` and specify a value for the `imagelist` parameter. If you don't specify the `imagelist_entry` parameter, the default image list entry is considered.

The following example demonstrates how to create a bootable storage volume called `/Compute-acme/jack.jones@example.com/vol2` by associating the storage volume with the `/oracle/public/oel_6.4_2GB` image list.

```
opc -f json compute storage-volume add /Compute-acme/jack.jones@example.com/vol2 /
oracle/public/storage/default 20G --description 'Accounting Department Bootable
Block Storage' --tags 'Accounting Dept.' --bootable --imagelist /oracle/public/
oel_6.4_2GB
```

Sample Output


```
{
 "account": "/Compute-acme/default",
 "bootable": true,
 "description": "Accounting Department Block Storage",
 "hypervisor": null,
 "imagelist": "/oracle/public/oel_6.4_2GB",
 "imagelist_entry": 1,
 "machineimage_name": "/oracle/public/oel_6.4_2GB",
 "managed": true,
 "name": "/Compute-acme/jack.jones@example.com/vol2",
 "platform": "linux",
 "properties": [
  "/oracle/public/storage/default"
 ],
 "quota": null,
 "shared": false,
 "size": "10737418240",
 "snapshot": null,
 "snapshot_account": null,
 "snapshot_id": null,
 "status": "Initializing",
 "status_detail": "The storage volume is currently being initialized.",
 "status_timestamp": "2017-02-08T06:20:02Z",
 "storage_pool": null,
 "tags": [
  "Accounting Dept."
 ],
 "uri": "https://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-acme/
jack.jones@example.com/vol2",
 "writecache": false
}
```


While creating an instance, you can specify a bootable storage volume as a persistent boot disk for the instance.

Example 3: Restoring a Storage Volume from a Storage Snapshot

While restoring a storage volume from a storage snapshot, take care of the following points:

- The `property` value you specify for the restored volume must be compatible with the property value of the storage snapshot from which you are restoring the volume.
- The size of the restored storage volume must be equal to or more than the size of the storage snapshot.
- If the storage snapshot is associated with a machine image, it indicates this is a snapshot of a bootable storage volume. While restoring the storage volume from such a snapshot, specify the `bootable` parameter.

To retrieve information about a storage snapshot, see storage-snapshot get.

The following example shows how to restore a storage volume `/Compute-acme/jack.jones@example.com/restored-volume1` from a storage snapshot `/Compute-acme/jack.jones@example.com/vol1/264fb75d47b40dcfc91303ea16912b73fd60dd65697989281630b362e2436205`.

```
opc -f json compute storage-volume add /Compute-acme/jack.jones@example.com/restored-
volume1 /oracle/public/storage/default 20G --snapshot /Compute-acme/
jack.jones@example.com/
vol1/264fb75d47b40dcfc91303ea16912b73fd60dd65697989281630b362e2436205
```

Sample Output


```
{
   "managed": true,
   "status_timestamp": "2016-09-28T10:49:07Z",
   "snapshot_account": null,
   "machineimage_name": null,
   "snapshot_id": "264fb75d47b40dcfc91303ea16912b73fd60dd65697989281630b362e2436205",
   "imagelist": null,
   "writecache": false,
   "size": "21474836480",
   "platform": null,
   "storage_pool": "/uabc2z3c/lmnis09-v1_multipath/storagepool/iscsi/thruput_1",
   "shared": false,
   "status": "Initializing",
   "description": null,
   "tags": [],
   "quota": null,
   "status_detail": "The storage volume is currently being initialized.",
   "properties": [
    "/oracle/public/storage/default"
   ],
   "account": "/Compute-acme/default",
   "name": "/Compute-acme/jack.jones@example.com/restored-volume1",
   "bootable": false,
   "hypervisor": null,
   "uri": "http://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-acme/
jack.jones@example.com/restored-volume1",
   "imagelist_entry": -1,
   "snapshot": "/Compute-acme/jack.jones@example.com/
vol1/264fb75d47b40dcfc91303ea16912b73fd60dd65697989281630b362e2436205"
 }
```


storage-volume list

Retrieves details of the storage volumes that are in the specified container and match the specified query criteria. You can pass one or more query parameters to filter the search results. If you don't specify any query criteria, then details of all the storage volumes in the container are displayed.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-volume list container [--name name] [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command retrieves the name and size of all the storage volumes in the `/Compute-acme/jack.jones@example.com` container.

```
opc -f table -F name,status compute storage-volume list /Compute-acme/
jack.jones@example.com
```

Sample Output

```
+-----------------------------------------------------------------+--------+
                                NAME                               | STATUS
+-----------------------------------------------------------------+--------+
 /Compute-acme/jack.jones@example.com/restoredVol1                | Error
 /Compute-acme/jack.jones@example.com/vol1                        | Online
 /Compute-acme/jack.jones@example.com/vol2                        | Online
+-----------------------------------------------------------------+--------+
```

storage-volume discover

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-volume discover container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command retrieves the names of the storage volumes in the `/Compute-acme/jack.jones@example.com` container.

```
opc -f json compute storage-volume discover /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
 "result": [
   /Compute-acme/jack.jones@example.com/dev-vol1
   /Compute-acme/jack.jones@example.com/dev-vol2
   /Compute-acme/jack.jones@example.com/prod-vol1
   /Compute-acme/jack.jones@example.com/prod-vol2
 ]
}
```

storage-volume get

Retrieves information about the specified storage volume.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully. Use the `-F` option (for example, `-F name`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-volume get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command retrieves details of the `/Compute-acme/jack.jones@example.com/dev-vol1` volume.

```
opc -f json compute storage-volume get /Compute-acme/jack.jones@example.com/dev-vol1
```

Sample Output

```
{
   "status": "Online",
   "account": "/Compute-acme/default",
   "managed": true,
   "description": null,
   "name": "/Compute-acme/jack.jones@example.com/dev-vol1",
   "tags": [],
   "bootable": false,
   "hypervisor": null,
   "quota": "null",
   "uri": "https://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-acme/
jack.jones@example.com/dev-vol1",
   "imagelist_entry": 0,
   "storage_pool": "/root/storagepools/computepool",
   "machineimage_name": null,
   "status_timestamp": "2015-10-09T08:51:29Z",
   "shared": false,
   "imagelist": null,
   "status_detail": "The storage volume is online.",
   "writecache": false,
   "properties": [
    "/oracle/public/storage/default"
   ],
   "size": "10737418240"
 }
```

storage-volume update

Updates a storage volume.

Although you have to pass values for several parameters, you can only increase the size of the storage volume and modify the values for the `tags` and `description`

parameters. You must specify all the required fields, although these fields won't be updated.

You can update an existing storage volume to increase the capacity dynamically, even when the volume is attached to an instance. After increasing the size of the storage volume that is attached and mounted on an instance, log in to the instance, and then resize the file system. See Increasing the Size of a Storage Volume in *Using Oracle Cloud Infrastructure Compute Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-volume update name properties size [--description description]
[--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command updates the size of the storage volume named `/Compute-acme/jack.jones@example.com/vol1` from 10 GB to 20 GB and updates the description.

```
opc -f json compute storage-volume update /Compute-acme/jack.jones@example.com/vol1 /
oracle/public/storage/default 20G --description 'Increased storage for  Accounting
Department' --tags 'Accounting Department'
```

Sample Output

```
{
 "account": "/Compute-acme/default",
 "bootable": false,
 "description": "Increased storage for  Accounting Department",
 "hypervisor": null,
 "imagelist": null,
 "imagelist_entry": -1,
 "machineimage_name": null,
 "managed": true,
 "name": "/Compute-acme/jack.jones@example.com/vol1",
 "platform": null,
 "properties": [
  "/oracle/public/storage/default"
 ],
 "quota": null,
 "shared": false,
 "size": "21474836480",
 "snapshot": null,
 "snapshot_account": null,
 "snapshot_id": null,
 "status": "Updating",
 "status_detail": "The storage volume is currently being updated.",
 "status_timestamp": "2017-02-08T16:24:29Z",
 "storage_pool": "/ucfc2z3c/u1dis01nas09-v1_multipath/storagepool/iscsi/thruput_1",
 "tags": [
```

```
  "Accounting Department"
 ],
 "uri": "http://api-z999.compute.us0.oraclecloud.com/storage/volume/Compute-acme/
jack.jones@example.com/vol1",
 "writecache": false
}
```

storage-volume delete

Deletes the specified storage volume. No response is returned.

Note that to delete storage volumes that are attached to instances, you must first detach them by using the storage-attachment delete command.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute storage-volume delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

This command deletes the `/Compute-acme/jack.jones@example.com/vol1` volume.

```
opc compute storage-volume delete /Compute-acme/jack.jones@example.com/vol1
```

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Virtual NIC

This section describes the Compute Classic CLI commands you can use to view virtual NICs.
A Virtual NIC, or vNIC, is a virtual network interface card that enables an instance to be associated with a network. Virtual NIC is created when you launch an instance using an orchestration or a launch plan and in the network attributes you specify the IP network or shared network that each vNIC of an instance should be associated with. For more information, see Instance Attributes in *Using Oracle Cloud Infrastructure Compute Classic*.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- virtual-nic list
- virtual-nic get

virtual-nic list

Retrieves details of all the virtual NICs in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute virtual-nic list container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute virtual-nic list /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
  "result": [
    {
      "name": "/Compute-acme/jack.jones@example.com/inst2/4f0840bd-49dc-4d7f-
bcc2-628c0cd5006b/eth1",
      "uri": "https://api-z999.compute.us0.oraclecloud.com443/network/v1/vnic/
Compute-acme/jack.jones@example.com/inst2/4f0840bd-49dc-4d7f-bcc2-628c0cd5006b/eth1",
```

```
      "macAddress": "c6:b0:c0:a8:08:04"
    },
    {
      "name": "/Compute-acme/jack.jones@example.com/inst1-vnic1-ipnet1",
      "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/vnic/
Compute-acme/jack.jones@example.com/inst1-vnic1-ipnet1",
      "macAddress": "c6:b0:c0:a8:03:0b"
    },
    {
      "name": "/Compute-acme/jack.jones@example.com/ol67multinic_20160909113256/
a4138f96-31bc-4e28-8696-3eb0916f75f1/eth0",
      "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/vnic/
Compute-acme/jack.jones@example.com/ol67multinic_20160909113256/
a4138f96-31bc-4e28-8696-3eb0916f75f1/eth0",
      "macAddress": "02:36:9c:9d:82:0a"
    }
  ]
}
```

virtual-nic get

Retrieves details of the specified virtual NIC.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute virtual-nic get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute virtual-nic get /Compute-acme/jack.jones@example.com/inst1-vnic1-
ipnet1
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/inst1-vnic1-ipnet1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/vnic/Compute-
acme/jack.jones@example.com/inst1-vnic1-ipnet1",
  "macAddress": "c6:b0:c0:a8:03:0b"
}
```

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Virtual NIC Set

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view virtual NIC set.
A Virtual NIC Set, or vNICset, is a collection of one or more vNICs. You must specify a vNICset when you create a route. When a vNICset containing multiple vNICs is used in a route, Equal Cost Multipath (ECMP) anycast routing is implemented. Traffic routed by that route is load balanced across all the vNICs in the vNICset. Using vNICsets with multiple vNICs also ensures high availability for traffic across the specified vNICs.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

virtual-nic-set add

Adds a virtual NIC set to Compute Classic.

A Virtual NIC Set, or vNICset, is a collection of one or more vNICs. You must specify a vNICset when you create a route. When a vNICset containing multiple vNICs is used in a route, Equal Cost Multipath (ECMP) anycast routing is implemented. Traffic routed by that route is load balanced across all the vNICs in the vNICset. Using vNICsets with multiple vNICs also ensures high availability for traffic across the specified vNICs.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute virtual-nic-set add name [--vnics vnics] [--applied-acls acls] [--
description description] [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example 1: Creating a vNIC set while working with new instances

For new instances that you create in an IP network, create an empty vNIC set and then specify the multipart name of the empty vNIC set in the networking section of the orchestration or launch plan. For example, if you create a vNIC set with the name `/Compute-acme/jack.jones@example.com/vnicset_new_instance`, then specify `“vnicsets": ["/Compute-acme/jack.jones@example.com/vnicset_new_instance"]` in the `networking` section of the orchestration or launch plan. When the instance is created, vNICs are automatically populated in the vNIC set that you mentioned in the orchestration or launch plan. When you delete the instance, the vNICs are automatically removed from the vNIC set.

```
opc -f json compute virtual-nic-set add /Compute-acme/jack.jones@example.com/
vnicset_new_instance
```

Sample Output for Example 1

```
{
  "name": "/Compute-acme/jack.jones@example.com/vnicset_new_instance",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/vnicset/
Compute-acme/jack.jones@example.com/vnicset_new_instance",
  "vnics": [],
  "appliedAcls": [],
  "description": null,
  "tags": [],
}
```

Example 2: Creating a vNIC set while working with existing instances

For existing instances that are available in the IP network, use the instance get command to get details of the virtual NICs of an instance, and then add the virtual NICs to a virtual NIC set. The following example demonstrates how you can create a virtual NIC set by specifying a comma-separated list of virtual NICs.

```
opc -f json compute virtual-nic-set add /Compute-acme/jack.jones@example.com/
vnicset1 --vnics "/Compute-acme/jack.jones@example.com/inst2/4f0840bd-49dc-4d7f-
bcc2-628c0cd5006b/eth1,/Compute-acme/jack.jones@example.com/inst1-vnic1-ipnet1"
```

Sample Output for Example 2

```
{
  "name": "/Compute-acme/jack.jones@example.com/vnicset1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/vnicset/
Compute-acme/jack.jones@example.com/vnicset1",
  "vnics": [
    "/Compute-acme/jack.jones@example.com/inst2/4f0840bd-49dc-4d7f-bcc2-628c0cd5006b/
eth1",
    "/Compute-acme/jack.jones@example.com/inst1-vnic1-ipnet1"
  ],
  "appliedAcls": [],
  "description": null,
  "tags": [],
}
```

virtual-nic-set list

Retrieves details of all the virtual NIC sets in the specified container.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute virtual-nic-set list container
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute virtual-nic-set list /Compute-acme/jack.jones@example.com
```

Sample Output

```
{
"result":[
 {
  "name": "/Compute-acme/jack.jones@example.com/vnicset1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com.com:443/network/v1/vnicset/
Compute-acme/jack.jones@example.com/vnicset1",
  "vnics": [
    "/Compute-acme/jack.jones@example.com/inst2/4f0840bd-49dc-4d7f-bcc2-628c0cd5006b/
eth1",
    "/Compute-acme/jack.jones@example.com/inst1-vnic1-ipnet1"
   ]
  }
 ]
}
```

virtual-nic-set get

Retrieves details of the specified virtual NIC set.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully. Use the `-F` option (for example, `-F name`) to filter the output for specific attributes.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute virtual-nic-set get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute virtual-nic-set get /Compute-acme/jack.jones@example.com/vnicset1
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/vnicset1",
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/vnicset/
Compute-acme/jack.jones@example.com/vnicset1",
  "vnics": [
    "/Compute-acme/jack.jones@example.com/inst2/4f0840bd-49dc-4d7f-bcc2-628c0cd5006b/
eth1",
    "/Compute-acme/jack.jones@example.com/inst1-vnic1-ipnet1"
  ]
}
```

virtual-nic-set update

You can add or remove virtual NICs in a virtual NIC set.

This command updates values for all the parameters. If you don't provide a value for a parameter, it is changed to null. Before updating a virtual NIC set, you can run the virtual-nic-set get command to retrieve all the values that are currently assigned to it, so that you can check which values you want to retain and which values you want to change.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute virtual-nic-set update name [--vnics 'comma-separated list of vnics'] [--
applied-acls applied-acls] [--description description] [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following command shows how to add a virtual NIC `/Compute-acme/jack.jones@example.com/inst3/a4138f96-31bc-4e28-8696-3eb0916f75f1/eth0` to an existing virtual NIC set `/Compute-acme/jack.jones@example.com/vnicset1` which already contains two virtual NICs.

```
opc -f json compute virtual-nic-set update /Compute-acme/jack.jones@example.com/
vnicset1 --vnics "/Compute-acme/jack.jones@example.com/inst2/4f0840bd-49dc-4d7f-
bcc2-628c0cd5006b/eth1, /Compute-acme/jack.jones@example.com/inst1-vnic1-ipnet1, /
Compute-acme/jack.jones@example.com/inst3/a4138f96-31bc-4e28-8696-3eb0916f75f1/eth0"
```

Sample Output

```
{
  "name": "/Compute-acme/jack.jones@example.com/vnicset1",
```

```
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/vnicset/
Compute-acme/jack.jones@example.com/vnicset1",
  "vnics": [
    "/Compute-acme/jack.jones@example.com/inst2/4f0840bd-49dc-4d7f-bcc2-628c0cd5006b/
eth1",
    "/Compute-acme/jack.jones@example.com/inst1-vnic1-ipnet1",
    "/Compute-acme/jack.jones@example.com/inst3/a4138f96-31bc-4e28-8696-3eb0916f75f1/
eth0"
   ],
}
```

virtual-nic-set delete

Deletes the specified virtual NIC set. No response is returned.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute virtual-nic-set delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute virtual-nic-set delete /Compute-acme/jack.jones@example.com/vnicset1
```

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Virtual Private Network (VPN) Endpoint

 This topic does not apply to Oracle Cloud at Customer.

You can create secure IPSec-based tunnels between your data center and the instances in your Compute Classic site to securely access your instances.

A `vpnendpoint` object represents a VPN tunnel to your Compute Classic site. After you've configured your VPN gateway device, you can manage your VPN connections. You can create up to 20 VPN tunnels to your Compute Classic site. You can use any internet service provider to access your Compute Classic site, provided you have a VPN device to terminate an IPSec VPN tunnel.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- vpn-endpoint add
- vpn-endpoint list
- vpn-endpoint get
- vpn-endpoint update
- vpn-endpoint update

vpn-endpoint add

 This topic does not apply to Oracle Cloud at Customer.

Creates a VPN tunnel between your data center and your Compute Classic site. You can create up to 20 VPN tunnels to your Compute Classic site.

Create a `vpnendpoint` object to contain information such as IP address of the peer, the pre-shared key to be used, the routes that are reachable using this endpoint, and whether or not the VPN connection is enabled. The `vpnendpoint` object also returns status and statistics when you use the `GET` command.

Before you create a VPN tunnel, you must complete the following tasks:

1. Request the Oracle Cloud Infrastructure Networking Classic - VPN for Dedicated Compute Classic service. For more information, see Requesting Oracle Cloud Infrastructure Networking Classic - VPN for Dedicated Compute Classic in *Using Oracle Cloud Infrastructure Compute Classic*.
2. Configure your VPN gateway to connect to the Oracle Cloud VPN gateway after the Oracle Cloud Infrastructure Networking Classic - VPN for Dedicated Compute

Classic service is provisioned. For more information, see Configuring Your VPN Gateway in *Using Oracle Cloud Infrastructure Compute Classic*.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute vpn-endpoint add name customer-vpn-gateway psk reachable_routes [--
enabled]
```

Example

```
opc -f json compute vpn-endpoint add /Compute-acme/vpn-to-LA 11.22.33.44 ./
pre_shared_key.txt 192.168.155.2/24,192.168.135.0/24 --enabled
```

Sample Output

```
{
   "status": "UP",
   "psk": "********",
   "name": "/Compute-acme/vpn-to-LA",
   "reachable_routes": [
    "192.168.155.2/24",
    "192.168.135.0/24"
   ],
   "enabled": true,
   "uri": "http://api.oc.example.com/vpnendpoint/Compute-acme/vpn-to-LA",
   "status_desc": "",
   "customer_vpn_gateway": "192.168.111.2"
}
```

vpn-endpoint list


This topic does not apply to Oracle Cloud at Customer.

Retrieves details of all the VPN endpoints in the specified container, subject to permissions.

Syntax

```
opc compute vpn-endpoint list container
```

Example

```
opc -f json compute vpn-endpoint list /Compute-acme
```

Sample Output

```
{
 "result": [
    {
      "status": "UP",
      "psk": "********",
```

```
      "name": "/Compute-acme/vpn-to-LA",
      "reachable_routes": [
        "192.168.155.2/24",
        "192.168.135.0/24"
      ],
      "enabled": true,
      "uri": "http://api-z999.compute.us0.oraclecloud.com/vpnendpoint/Compute-acme/
vpn-to-LA",
      "status_desc": "",
      "customer_vpn_gateway": "192.168.111.2"
    }
  ]
}
```

vpn-endpoint get


This topic does not apply to Oracle Cloud at Customer.

Retrieves details of the specified VPN endpoint.

You can use the `get` command to verify whether `add` and `update` operations were completed successfully.

Syntax

```
opc compute vpn-endpoint get name
```

Example

```
opc -f json compute vpn-endpoint get /Compute-acme/vpn-to-LA
```

Sample Output

```
{
   "status": "UP",
   "psk": "********",
   "name": "/Compute-acme/vpn-to-LA",
   "reachable_routes": [
    "192.168.155.2/24",
    "192.168.135.0/24"
   ],
   "enabled": true,
   "uri": "http://api.oc.example.com/vpnendpoint/Compute-acme/vpn-to-LA",
   "status_desc": "",
   "customer_vpn_gateway": "192.168.111.2"
}
```

vpn-endpoint update


This topic does not apply to Oracle Cloud at Customer.

After you've configured your VPN connection, you can update the connection to enable or disable the VPN tunnel, or to change other connection details.

Syntax

```
opc compute vpn-endpoint update name customer-vpn-gateway psk reachable_routes [--
enabled]
```

Example

```
opc -f json compute vpn-endpoint update /Compute-acme/vpn-to-LA 192.168.111.2 ./
pre_shared_key.txt 192.168.155.0/24 --enabled
```

Sample Output

```
{
   "status": "UP",
   "psk": "********",
   "name": "/Compute-acme/vpn-to-LA",
   "reachable_routes": [
    "192.168.155.0/24"
   ],
   "enabled": true,
   "uri": "http://api.oc.example.com/Compute-acme/vpn-to-LA",
   "status_desc": "",
   "customer_vpn_gateway": "192.168.111.2"
}
```

vpn-endpoint delete


This topic does not apply to Oracle Cloud at Customer.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Deletes a VPN endpoint. No response is returned.

Syntax

```
opc compute vpn-endpoint delete name
```

Example

```
opc compute vpn-endpoint delete /Compute-acme/vpn-to-LA
```

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VPN Endpoint v2

 This topic does not apply to Oracle Cloud at Customer.

This section describes the Compute Classic CLI commands you can use to add, delete, update, and view VPN endpoint v2.

You can set up a VPN connection between your data center and IP networks in your Compute Classic site. This provides a secure communication channel between your data center and instances that are added to your IP networks. To set up a VPN connection, see Workflow for Setting Up a VPN Connection in *Using Oracle Cloud Infrastructure Compute Classic*.

Before running the CLI commands described in this section, make sure that you've installed the CLI client and set up the required environment variables as described in Preparing to Use the CLI.

Commands

- vpn-endpoint-v2 add
- vpn-endpoint-v2 list
- vpn-endpoint-v2 get
- vpn-endpoint-v2 update
- vpn-endpoint-v2 delete

vpn-endpoint-v2 add

 This topic does not apply to Oracle Cloud at Customer.

Creates an IPSec VPN connection from Oracle Cloud to your data centers using VPN as a Service (VPNaaS).

> **Note:**
>
> You can use VPNaaS to set up a tunnel to instances that are on IP networks. However, VPNaaS doesn't support VPN connections to instances that don't have any interface on IP networks. To establish a VPN tunnel to instances that are on the shared network, follow the steps for creating a single-homed Corente Services Gateway instance in Setting Up VPN in *Using Oracle Cloud Infrastructure Compute Classic*.

Prerequisites

Ensure that you complete the following tasks and noted the required information before creating a VPN connection.

- Create an IP network or use an existing IP network. See Creating an IP Network in *Using Oracle Cloud Infrastructure Compute Classic*. Make a note of the name of this IP network.
- Configure a supported third-party VPN device at your data center and make a note of the public IP address of this gateway. The third-party VPN device must be ready for the VPN connection to be established. For information about certified third-party VPN device configurations, see About Setting Up VPN in *Using Oracle Cloud Infrastructure Compute Classic*.
- Ensure that you have the pre-shared key (PSK) that you want to use for this VPN connection.
- Create a vNICset. When you create instances, specify this vNICset for each vNIC that is added to an IP network that will be reachable over the VPN connection. See Creating a vNICset in *Using Oracle Cloud Infrastructure Compute Classic*.
- While your VPN connection is being configured, its status is `PENDING`. It can take around 20 to 30 minutes for your VPN gateway to be created. When the cloud VPN gateway is created, the `localGatewayAddress` parameter provides its public IP address. To monitor the status of your VPN connection and retrieve the public IP address of the cloud VPN gateway, run the vpn-endpoint-v2 get command. You'll have to update the third-party VPN device in your data center with the public IP address of your cloud VPN gateway. If the third-party device in your data center is configured and ready, the VPN connection is established. The value of the `tunnelStatus` parameter changes to `UP` when the connection is established.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute vpn-endpoint-v2 add name customer-vpn-gateway ip-network psk reachable-
routes [--vnic-sets comma-separated vnic-sets] [--ike-identifier ike-ID] [--pfs-flag
true|false] [--phase1-settings '{"encryption": "aes128, aes192, aes256","hash":
"sha1, sha2_256, md5","dhGroup":
"group2, group5, group14, group22, group23, group24"}'] [--phase2-settings
'{"encryption": "aes128, aes192, aes256","hash": "sha1, sha2_256, md5"}'] [ --
description description] [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute vpn-endpoint-v2 add /Compute-acme/jack.jones@example.com/
vpnconnection2 10.248.64.237 /Compute-acme/jack.jones@example.com/ipnet2 /tmp/psk
"10.248.69.16/28, 10.248.59.16/28" --vnic-sets "/Compute-acme/jack.jones@example.com/
vnicset2" --phase1-settings '{"encryption": "aes128","hash": "sha1","dhGroup":
"group2"}' --phase2-settings '{"encryption": "aes256","hash": "md5"}'
```

Sample Output

```
{
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/vpnendpoint/
Compute-acme/jack.jones@example.com/vpnconnection2",
  "tunnelStatus": "PENDING",
  "psk": "******",
  "name": "/Compute-acme/jack.jones@example.com/vpnconnection2",
  "reachable_routes": [
   10.248.69.16/28,
   10.248.59.16/28
  ],
  "pfsFlag": true,
  "vnicSets": [
    "/Compute-acme/jack.jones@example.com/vnicset2"
  ],
  "customer_vpn_gateway": "10.248.64.237",
  "ipNetwork": "/Compute-acme/jack.jones@example.com/ipnet2",
  "phase1Settings": {
    "encryption": "aes128",
    "hash": "sha1",
    "dhGroup": "group2"
  },
  "phase2Settings": {
    "encryption": "aes256",
    "hash": "md5"
  }
}
```

vpn-endpoint-v2 list

This topic does not apply to Oracle Cloud at Customer.

Retrieves details of the VPN connections in the specified container and match the specified query criteria. If you don't specify any query criteria, then details of all the VPN connections in the container are displayed. To filter the search results, you can pass one or more query parameters.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

`opc compute vpn-endpoint-v2 list` *`container`* `[--name` *`name`*`] [--customer-vpn-gateway` *`ip_address_of_your_VPN_gateway`*`]`

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc -f json compute vpn-endpoint-v2 list /Compute-acme/jack.jones@example.com
```

Sample Output


```
{
  "result": [
    {
      "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/
vpnendpoint/Compute-acme/jack.jones@example.com/vpnconnection1",
      "tunnelStatus": "UP",
      "psk": "******",
      "name": "/Compute-acme/jack.jones@example.com/vpnconnection1",
      "reachable_routes": [
        "10.2.3.0/24",
        "10.3.2.0/24"
      ],
      "pfsFlag": true,
      "localGatewayAddress": "10.252.155.208",
      "vnicSets": [
        "/Compute-acme/jack.jones@example.com/vnicset1"
      ],
      "phase1Settings": {
        "dhGroup": "group2",
        "encryption": "aes128",
        "hash": "sha1",
        "lifetime": 0
      },
      "phase2Settings": {
        "encryption": "aes256",
        "hash": "md5",
        "lifetime": 0
      },
      "customer_vpn_gateway": "172.16.254.1",
      "ikeIdentifier": "10.12.13.14",
      "ipNetwork": "/Compute-acme/jack.jones@example.com/ipnet1"
    },
    {
      "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/
vpnendpoint/Compute-acme/jack.jones@example.com/vpnconnection2",
      "tunnelStatus": "UP",
      "psk": "******",
      "name": "/Compute-acme/jack.jones@example.com/vpnconnection2",
      "reachable_routes": [
        "10.33.32.0/24"
      ],
      "pfsFlag": true,
      "localGatewayAddress": "10.252.152.139",
      "vnicSets": [
        "/Compute-acme/jack.jones@example.com/vnicset1"
      ],
      "phase1Settings": {
        "encryption": "aes128",
        "hash": "sha1",
        "dhGroup": "group2"
      },
      "phase2Settings": {
        "encryption": "aes256",
        "hash": "md5"
      },
      "customer_vpn_gateway": "10.32.32.205",
      "ikeIdentifier": "10.22.23.24",
      "ipNetwork": "/Compute-acme/jack.jones@example.com/ipnet1"
```

```
    }
  ]
}
```

vpn-endpoint-v2 get


This topic does not apply to Oracle Cloud at Customer.

Retrieves details of the specified VPN connection. You can retrieve details of a VPN connection to track the status of the tunnel. The tunnel can be in one of the following states:

- `PENDING`: indicates that your VPN connection is being set up.
- `UP`: indicates that your VPN connection is established.
- `DOWN`: indicates that your VPN connection is down.
- `ERROR`: indicates that your VPN connection is in the error state.

Required Role

To complete this task, you must have the `Compute_Monitor` or `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc -f json compute vpn-endpoint-v2 get name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute vpn-endpoint-v2 get /Compute-acme/jack.jones@example.com/vpnconnection1
```

Sample Output

The following example shows the response body in JSON format. The value of the tunnelStatus parameter provides the current status of the VPN connection.

```
{
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/vpnendpoint/
Compute-acme/jack.jones@example.com/vpnconnection1",
  "tunnelStatus": "UP",
 "psk": "******",
  "name": "/Compute-acme/jack.jones@example.com/vpnconnection1",
  "reachable_routes": [
    "10.2.3.0/24",
    "10.3.2.0/24"
  ],
  "pfsFlag": true,
"localGatewayAddress": "10.252.155.208",
  "vnicSets": [
    "/Compute-acme/jack.jones@example.com/vnicset1"
  ],
  "phase1Settings": {
```

```
    "encryption": "aes128",
    "hash": "sha1",
    "dhGroup": "group2"
  },
  "phase2Settings": {
    "encryption": "aes256",
    "hash": "md5"
  },
  "customer_vpn_gateway": "172.16.254.1",
  "ikeIdentifier": "10.12.13.14",
  "ipNetwork": "/Compute-acme/jack.jones@example.com/ipnet1"
}
```

vpn-endpoint-v2 update


This topic does not apply to Oracle Cloud at Customer.

Updates values of the `psk` and `reachable-routes` parameters for the specified VPN connection. If you want to update values for any other parameter, you'll have to delete the VPN connection and then re-create with the new parameters by running the vpn-endpoint-v2 add command. Although you can only update the values for `psk` and `reachable-routes` using this request, you must specify the current values for all the existing parameters in the request body.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute vpn-endpoint-v2 update name customer-vpn-gateway ip-network psk
reachable-routes [--vnic-sets comma-separated vnic-sets] [--ike-identifier ike-ID]
[--pfs-flag true|false] [--phase1-settings {"encryption":
"aes128, aes192, aes256","hash": "sha1, sha2_256, md5","dhGroup":
"group2, group5, group14, group22, group23, group24"}"] [--phase2-settings
{"encryption": "aes128, aes192, aes256","hash": "sha1, sha2_256, md5"}] [--
description description] [--tags tags]
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

The following example shows how to update the values for `psk` and `reachable-routes`. Although you can update only these two parameters, you have to specify the current values for all the existing parameters. PFS flag is set to `true` by default.

```
opc -f json compute vpn-endpoint-v2 update /Compute-acme/jack.jones@example.com/
vpnconnection2 10.248.64.237 /Compute-acme/jack.jones@example.com/ipnet2 ./
updated_psk "10.248.69.16/28,10.238.56.16/28" --vnic-sets /Compute-acme/
jack.jones@example.com/vnicset2 --phase1-settings "{"encryption": "aes128","hash":
"sha1","dhGroup": "group2"}" --phase2-settings {"encryption": "aes256","hash": "md5"}
```

Sample Output

```
{
  "uri": "https://api-z999.compute.us0.oraclecloud.com:443/network/v1/vpnendpoint/
Compute-acme/jack.jones@example.com/vpnconnection2",
  "tunnelStatus": "UP",
  "psk": "******",
  "name": "/Compute-acme/jack.jones@example.com/vpnconnection2",
  "reachable_routes": [
   10.248.69.16/28,
   10.238.56.16/28
  ],
  "pfsFlag": true,
  "vnicSets": [
    "/Compute-acme/jack.jones@example.com/vnicset2"
  ],
  "customer_vpn_gateway": "10.248.64.237",
  "ipNetwork": "/Compute-acme/jack.jones@example.com/ipnet2",
  "phase1Settings": {
    "encryption": "aes128",
    "hash": "sha1",
    "dhGroup": "group2"
  },
  "phase2Settings": {
    "encryption": "aes256",
    "hash": "md5"
  }
}
```

vpn-endpoint-v2 delete


This topic does not apply to Oracle Cloud at Customer.

Deletes the specified VPN endpoint v2. No response is returned. The delete operation is allowed only when the VPN connection is in ready or error lifecycle state.

You may want to add new vNIC sets or update other parameters of an existing VPN connection. Not all parameters of a VPN connection can be updated using the vpn-endpoint-v2 update command. In such cases, you can delete the VPN connection, and then recreate the it with the updated parameters by using the vpn-endpoint-v2 add command.

Required Role

To complete this task, you must have the `Compute_Operations` role. If this role isn't assigned to you or you're not sure, then ask your system administrator to ensure that the role is assigned to you in Oracle Cloud Infrastructure Classic Console. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

Syntax

```
opc compute vpn-endpoint-v2 delete name
```

For help with the parameters and options of this command, run the command with the `-h` option.

Example

```
opc compute vpn-endpoint-v2 delete /Compute-acme/jack.jones@example.com/
vpnconnection1
```