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# **oraclebmc Documentation**

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This is the public Python SDK for Oracle Bare Metal Cloud Services. Python 2.7+ and 3.5+ are supported.

```
>>> import oraclebmc
>>> config = oraclebmc.config.from_file(
...     "~/oraclebmc/config",
...     "integ-beta-profile")
>>> identity = oraclebmc.identity.IdentityClient(config)
>>> user = identity.get_user(config["user"]).data
>>> print(user)
{
  "compartment_id": "ocidl.tenancy.oc1...",
  "description": "Integration testing user [BETA]",
  "id": "ocidl.user.oc1...",
  "inactive_status": null,
  "lifecycle_state": "ACTIVE",
  "name": "testing+integ-beta@corp.com",
  "time_created": "2016-08-30T23:46:44.680000+00:00"
}
```

To get started, head over to the *installation instructions* or see more examples in the *quickstart* section.



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## Installation

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This topic describes how to install, configure, and use the Oracle Bare Metal Cloud Services Python SDK. The Python SDK supports operations for the following services:

- Identity and Access Management Service
- Core Services (Networking Service, Compute Service, and Block Volume Service)
- Object Storage Service

### Prerequisites

- An Oracle Bare Metal Cloud Services account
- A user created in that account, in a group with a policy that grants the desired permissions. This can be a user for yourself, or another person/system that needs to call the API. For an example of how to set up a new user, group, compartment, and policy, see [Adding Users](#) in the Getting Started Guide. For a list of other typical Oracle Bare Metal Cloud Services policies, see [Common Policies](#) in the User Guide.
- Python version 2.7.5 or 3.5 or later, running on Mac, Windows, or Linux.
- The Python SDK uses the [cryptography.io](#) library, which has its own additional [build requirements](#).
- A keypair used for signing API requests, with the public key uploaded to Oracle. Only the user calling the API should be in possession of the private key. (For more information, see [Configuring the SDK](#).)

### Downloading and Installing the SDK

You can install the Python SDK through the Python Package Index (PyPI), or alternatively through GitHub.

#### PyPi

To install from PyPI:

Use the following command:

```
pip install oraclebmc
```

#### GitHub

To install from GitHub:

1. Download the SDK from [GitHub](#). The download is a zip containing a whl file and documentation.

2. Extract the files from the zip.
3. Use the following command to install the SDK:

```
pip install oraclebmc-*py2.py3-none-any.whl
```

---

**Note:** If you're unable to install the whl file, make sure pip is up to date. Use `pip install -U pip` and then try to install the whl file again.

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### Virtual environment (Optional)

Although optional, Oracle recommends that you run the SDK in a virtual environment with `virtualenv`.

With Linux, it's usually in a separate package from the main Python package. If you need to install `virtualenv`, use `pip install virtualenv`. To create and activate a virtual environment:

```
virtualenv <environment name>
. <environment name>/bin/activate
```

For example:

```
virtualenv bmcs_sdk_env
. bmcs_sdk_env/bin/activate
```

## Configuring the SDK

Before using the SDK, you must set up your config file with the required credentials. For instructions, see [SDK and Tool Configuration](#) in the User Guide.

### Verify OpenSSL Version

The supported version of OpenSSL for the Python SDK is version 1.0.1 or newer. Run the following command to find out the version of OpenSSL that you have:

```
python -c "import ssl; print(ssl.OPENSSL_VERSION)"
```

If the version is lower than 1.0.1, run the following command to bypass the version issue:

```
pip install requests[security]==2.11.1
```

This command instructs the `requests` library used by the Python SDK to use the version of OpenSSL that is bundled with the `cryptography` library used by the SDK.

**Note:** If you don't want to use `requests[security]` you can update OpenSSL as you normally would. For example, on OS X, use Homebrew to update OpenSSL using the following commands:

```
brew update
brew install openssl
brew install python
```



## Troubleshooting

You might encounter issues when installing Python or the SDK, or using the SDK itself.

### Service Errors

Any operation resulting in a service error will cause an exception of type `oraclebmc.exceptions.ServiceError` to be thrown by the SDK. For information about common service errors returned by BMCS, see [API Errors](#) .

### SSL/TLS or Certificate Issues

When trying to use the SDK, if you get an exception related to SSL/TLS or certificates/certificate validation, see the command for installing `requests[security]` in *Verify OpenSSL Version*.



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## Configuration

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oraclebmc uses a simple dict to build clients and other components. You can build these manually, or oraclebmc can parse and validate a config file.

Using the default configuration location `~/.oraclebmc/config` you can use `config.from_file()` to load any profile. By default, the `DEFAULT` profile is used:

```
>>> from oraclebmc.config import from_file
>>> config = from_file()

# Using a different profile from the default location
>>> config = from_file(profile_name="integ-beta")

# Using the default profile from a different file
>>> config = from_file(file_location="~/.oraclebmc/config.prod")
```

Since `config` is a dict, you can also build it manually and check it with `config.validate_config()`:

```
import os
from myproject import testrunner
user_ocid = os.environ["USER_OCID"]
key_file = key_for(user_ocid)

config = {
    "user": user_ocid,
    "key_file": key_file,
    "fingerprint": calc_fingerprint(key_file),
    "tenancy": testrunner.tenancy,
    "region": testrunner.region
}

from oraclebmc.config import validate_config
validate_config(config)
```

### See also:

The [SDK and Tool Configuration](#) page has a full description of the required and supported options. These are supported across the SDKs, so if you've already set this file up for the Ruby or Java SDKs, you're all set.



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## **Forward Compatibility**

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Some response fields are enum-typed. In the future, individual services may return values not covered by existing enums for that field. To address this possibility, every enum-type response field has an additional value named “UNKNOWN\_ENUM\_VALUE”. If a service returns a value that is not recognized by your version of the SDK, then the response field will be set to this value. Please ensure that your code handles the “UNKNOWN\_ENUM\_VALUE” case if you have conditional logic based on an enum-typed field.



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## Quickstart

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Clients only require a valid config object:

```
>>> from oraclebmc.identity import IdentityClient
>>> identity = IdentityClient(config)
```

## CRUD operations and Pagination

### Creating entities

Let's create a new user and group, and add the user to the group. Then we'll list all users in the tenancy, and finally clean up the user and group we created.

First, we'll need to create a valid config object and service client. If you haven't set up a config file, head over to the *Configuration* section to create one. We'll use the default location `~/.oraclebmc/config` and default profile name `DEFAULT` to create an Identity client. Since we'll be using the root compartment (or tenancy) for most operations, let's also extract that from the config object:

```
>>> import oraclebmc
>>> config = oraclebmc.config.from_file()
>>> identity = oraclebmc.identity.IdentityClient(config)
>>> compartment_id = config["tenancy"]
```

Next we'll need to populate an instance of the `CreateGroupDetails` model with our request, and then send it:

```
>>> from oraclebmc.identity.models import CreateGroupDetails
>>> request = CreateGroupDetails()
>>> request.compartment_id = compartment_id
>>> request.name = "my-test-group"
>>> request.description = "Created with the Python SDK"

>>> group = identity.create_group(request)
>>> print(group.data.id)
"Id": "ocidl.group.oc1..aaaaaaaikib..."
```

Creating a user is very similar:

```
>>> from oraclebmc.identity.models import CreateUserDetails
>>> request = CreateUserDetails()
>>> request.compartment_id = compartment_id
```

```
>>> request.name = "my-test-user"
>>> request.description = "Created with the Python SDK"
>>> user = identity.create_user(request)
>>> print(user.data.id)
"ocid1.user.oc1..aaaaaaaamkym..."
```

Using the ids from the group and user above, we can add the user to the group:

```
>>> from oraclebmc.identity.models import AddUserToGroupDetails
>>> request = AddUserToGroupDetails()
>>> request.group_id = group.data.id
>>> request.user_id = user.data.id
>>> response = identity.add_user_to_group(request)
>>> print(response.status)
200
```

## Listing with Pagination

List operations use pagination to limit the size of each response. The Python SDK exposes the pagination values through the `has_next_page` and `next_page` attributes on each response. For example, listing users in the root compartment:

```
>>> first_page = identity.list_users(compartment_id=compartment_id)
>>> len(first_page.data)
100
>>> first_page.has_next_page
True
>>> first_page.next_page
'AAAAAAAAAAHNo_rjHo6xZPxHLZZ020jMio...'
```

Even though a response includes a next page, there may not be more results. The last page will return an empty list, and will not have a `next_page` token.

Here's a very simple way to paginate a call:

```
def paginate(operation, *args, **kwargs):
    while True:
        response = operation(*args, **kwargs)
        for value in response.data:
            yield value
        kwargs["page"] = response.next_page
        if not response.has_next_page:
            break
```

To iterate over all users, the call is now:

```
>>> for user in paginate(
...     identity.list_users,
...     compartment_id=compartment_id):
...     print(user)
```

This `paginate` function will work for any list call, but will not include the response metadata, such as headers, HTTP status code, or request id.



## Deleting entities

Now to clean up the entities we created. Users can't be deleted if they're still part of a group, and groups can't be deleted if they still have users. So we need to use `identity.remove_user_from_group`, which takes a `user_group_membership_id`. Because users and groups can have any number of relationships, we'll use `list_user_group_memberships` and provide **both** optional parameters `user_id` and `group_id` to constrain the result set:

```
>>> memberships = identity.list_user_group_memberships(
...     compartment_id=compartment_id,
...     user_id=user.data.id,
...     group_id=group.data.id)
# There can never be more than one membership for a unique user/group combination
>>> assert len(memberships.data) == 1
>>> membership_id = memberships.data[0].id
```

Finally, we can remove the user from the group, and delete both resources. Here we're using `response.status` to make sure the delete responded with 204:

```
>>> identity.remove_user_from_group(
...     user_group_membership_id=membership_id).status
204
>>> identity.delete_user(user_id=user.data.id).status
204
>>> identity.delete_group(group_id=group.data.id).status
204
```

## Working with Bytes

When using object storage, you'll need to provide a namespace, in addition to your compartment id:

```
>>> object_storage = oraclebmc.object_storage.ObjectStorageClient(config)
>>> namespace = object_storage.get_namespace().data
```

To upload an object, we'll create a bucket:

```
>>> from oraclebmc.object_storage.models import CreateBucketDetails
>>> request = CreateBucketDetails()
>>> request.compartment_id = compartment_id
>>> request.name = "MyTestBucket"
>>> bucket = object_storage.create_bucket(namespace, request)
>>> bucket.data.etag
'5281759f-60bb-4b93-8676-f8d141b5f211'
```

Now we can upload arbitrary bytes:

```
>>> my_data = b"Hello, World!"
>>> obj = object_storage.put_object(
...     namespace,
...     bucket.data.name,
...     "my-object-name",
...     my_data)
```

And to get it back:

```
>>> same_obj = object_storage.get_object(  
...     namespace,  
...     bucket.data.name,  
...     "my-object-name")  
... same_obj.data  
<Response [200]>  
... same_obj.data.content  
b'Hello, World!'
```

## Next Steps

Next, head to the [User Guides](#) or jump right into the [API Reference](#) to explore the available operations for each service, and their parameters. Additional Python examples can be found on [GitHub](#).

---

**Note:** The Python SDK uses lowercase\_with\_underscores for operations and parameters. For example, the [ListApiKeys](#) operation is called with `IdentityClient.list_api_keys` and its parameter `userId` is translated to `user_id`.

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## Parallel Operations

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The Python SDK supports parallel requests to Oracle Bare Metal Cloud Services. For example, the [object storage upload](#) example shows how multiple processes can be used to upload files to object storage.



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## Uploading Large Objects

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The Object Storage service supports multipart uploads to make large object uploads easier by splitting the large object into parts. The Python SDK supports raw multipart upload operations for advanced use cases, as well as a higher-level upload class that uses the multipart upload APIs. [Managing Multipart Uploads](#) provides links to the APIs used for raw multipart upload operations. Higher-level uploads can be performed using the UploadManager. The UploadManger will: split a large object into parts for you, upload the parts in parallel, and then recombine and commit the parts as a single object in Object Storage.

The [UploadObject](#) example shows how UploadManager can be used to upload files to object storage.



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## Raw Requests

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The Python SDK exposes a custom `requests.auth.AuthBase` which you can use to sign non-standard calls. This can be helpful if you need to make a BMCS- authenticated request to an alternate endpoint or to a BMCS API not yet supported in the SDK.

### Creating a Signer

Constructing a Signer instance requires a few pieces of information. By default, the SDK uses the values in the config file at `~/.oraclebmc/config`. You can manually specify the required fields, or use a config loader to pull in the values from a file:

```
from oraclebmc.signer import Signer
auth = Signer(
    tenancy='ocidl.tenancy.oc1..aaaaaaaa[...]',
    user='ocidl.user.oc1..aaaaaaaa[...]',
    fingerprint='20:3b:97:13:55:1c:[...]',
    private_key_file_location='~/.oraclebmc/bmcs_api_key.pem',
    pass_phrase='hunter2' # optional
)

# Or load directly from a file
from oraclebmc.config import from_file
config = from_file('~/.oraclebmc/config')
auth = Signer(
    tenancy=config['tenancy'],
    user=config['user'],
    fingerprint=config['fingerprint'],
    private_key_file_location=config['key_file'],
    pass_phrase=config['pass_phrase']
)
```

### Using the Signer

Once you have an instance of the auth handler, simply include it as the `auth=` param when using Requests.

```
import requests
```

```
url = 'https://iaas.us-phoenix-1.oraclecloud.com/20160918/instances[...]'
response = requests.get(url, auth=auth)
```

Remember that the result will come back in its raw form and is not unpacked into a model instance. You will need to handle the (de)serialization yourself.

The following creates a new user by talking to the identity endpoint:

```
endpoint = 'https://identity.us-phoenix-1.oraclecloud.com/20160918/users/'
body = {
    'compartmentId': config['tenancy'], # root compartment
    'name': 'TestUser',
    'description': 'Created with a raw request'
}

response = requests.post(endpoint, json=body, auth=auth)

response.raise_for_status()
print(response.json()['id'])
```



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## API Reference

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### Core Services

#### Clients

##### Block Storage

`class oraclebmc.core.blockstorage_client.BlockstorageClient` (*config*)

`create_volume` (*create\_volume\_details*, *\*\*kwargs*)

CreateVolume Creates a new volume in the specified compartment. Volumes can be created in sizes ranging from 50 GB (51200 MB) to 2 TB (2097152 MB), in 1 GB (1024 MB) increments. By default, volumes are 1 TB (1048576 MB). For general information about block volumes, see [Overview of Block Volume Service](#).

A volume and instance can be in separate compartments but must be in the same Availability Domain. For information about access control and compartments, see [Overview of the IAM Service](#). For information about Availability Domains, see [Regions and Availability Domains](#). To get a list of Availability Domains, use the *ListAvailabilityDomains* operation in the Identity and Access Management Service API.

You may optionally specify a *display name* for the volume, which is simply a friendly name or description. It does not have to be unique, and you can change it. Avoid entering confidential information.

#### Parameters

- `create_volume_details` ([CreateVolumeDetails](#)) – (required) Request to create a new volume.
- `opc_retry_token` (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A [Response](#) object with data of type [Volume](#)

**Return type** [Response](#)

`create_volume_backup` (*create\_volume\_backup\_details*, *\*\*kwargs*)

CreateVolumeBackup Creates a new backup of the specified volume. For general information about volume backups, see [Overview of Block Volume Service Backups](#)

When the request is received, the backup object is in a `REQUEST_RECEIVED` state. When the data is imaged, it goes into a `CREATING` state. After the backup is fully uploaded to the cloud, it goes into an `AVAILABLE` state.

**Parameters**

- **create\_volume\_backup\_details** (`CreateVolumeBackupDetails`) – (required) Request to create a new backup of given volume.
- **opc\_retry\_token** (`str`) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *VolumeBackup*

**Return type** *Response*

**delete\_volume** (`volume_id`, `**kwargs`)

DeleteVolume Deletes the specified volume. The volume cannot have an active connection to an instance. To disconnect the volume from a connected instance, see [Disconnecting From a Volume](#). **Warning:** All data on the volume will be permanently lost when the volume is deleted.

**Parameters**

- **volume\_id** (`str`) – (required) The OCID of the volume.
- **if\_match** (`str`) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type `None`

**Return type** *Response*

**delete\_volume\_backup** (`volume_backup_id`, `**kwargs`)

DeleteVolumeBackup Deletes a volume backup.

**Parameters**

- **volume\_backup\_id** (`str`) – (required) The OCID of the volume backup.
- **if\_match** (`str`) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type `None`

**Return type** *Response*

**get\_volume** (`volume_id`, `**kwargs`)

GetVolume Gets information for the specified volume.

**Parameters** **volume\_id** (`str`) – (required) The OCID of the volume.

**Returns** A *Response* object with data of type *Volume*

**Return type** *Response*

**get\_volume\_backup** (`volume_backup_id`, `**kwargs`)

GetVolumeBackup Gets information for the specified volume backup.

**Parameters** `volume_backup_id` (*str*) – (required) The OCID of the volume backup.

**Returns** A *Response* object with data of type *VolumeBackup*

**Return type** *Response*

**list\_volume\_backups** (*compartment\_id*, *\*\*kwargs*)

ListVolumeBackups Lists the volume backups in the specified compartment. You can filter the results by volume.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **volume\_id** (*str*) – (optional) The OCID of the volume.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.  
Example: 500
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *VolumeBackup*

**Return type** *Response*

**list\_volumes** (*compartment\_id*, *\*\*kwargs*)

ListVolumes Lists the volumes in the specified compartment and Availability Domain.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **availability\_domain** (*str*) – (optional) The name of the Availability Domain.  
Example: *Uocm:PHX-AD-1*
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.  
Example: 500
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *Volume*

**Return type** *Response*

**update\_volume** (*volume\_id*, *update\_volume\_details*, *\*\*kwargs*)

UpdateVolume Updates the specified volume’s display name. Avoid entering confidential information.

**Parameters**

- **volume\_id** (*str*) – (required) The OCID of the volume.
- **update\_volume\_details** (*UpdateVolumeDetails*) – (required) Update volume’s display name. Avoid entering confidential information.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *Volume*

**Return type** *Response*

**update\_volume\_backup** (*volume\_backup\_id*, *update\_volume\_backup\_details*, *\*\*kwargs*)

UpdateVolumeBackup Updates the display name for the specified volume backup. Avoid entering confidential information.

**Parameters**

- **volume\_backup\_id** (*str*) – (required) The OCID of the volume backup.
- **update\_volume\_backup\_details** (*UpdateVolumeBackupDetails*) – (required) Update volume backup fields
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *VolumeBackup*

**Return type** *Response*

## Compute

`class oraclebmc.core.compute_client.ComputeClient` (*config*)

**attach\_vnic** (*attach\_vnic\_details*, *\*\*kwargs*)

AttachVnic Creates a secondary VNIC and attaches it to the specified instance. For more information about secondary VNICs, see [Managing Virtual Network Interface Cards \(VNICs\)](#).

**Parameters**

- **attach\_vnic\_details** (*AttachVnicDetails*) – (required) Attach VNIC details.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *VnicAttachment*

**Return type** *Response*

**attach\_volume** (*attach\_volume\_details*, *\*\*kwargs*)

AttachVolume Attaches the specified storage volume to the specified instance.

**Parameters**

- **attach\_volume\_details** (*AttachVolumeDetails*) – (required) Attach volume request
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *VolumeAttachment*

**Return type** *Response*

**capture\_console\_history** (*capture\_console\_history\_details*, *\*\*kwargs*)

CaptureConsoleHistory Captures the most recent serial console data (up to a megabyte) for the specified instance.

The *CaptureConsoleHistory* operation works with the other console history operations as described below.

1. Use *CaptureConsoleHistory* to request the capture of up to a megabyte of the most recent console history. This call returns a *ConsoleHistory* object. The object will have a state of REQUESTED.
2. Wait for the capture operation to succeed by polling *GetConsoleHistory* with the identifier of the console history metadata. The state of the *ConsoleHistory* object will go from REQUESTED to GETTING-HISTORY and then SUCCEEDED (or FAILED).
3. Use *GetConsoleHistoryContent* to get the actual console history data (not the metadata).
4. Optionally, use *DeleteConsoleHistory* to delete the console history metadata and the console history data.

#### Parameters

- **capture\_console\_history\_details** (*CaptureConsoleHistoryDetails*) – (required) Console history details
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *ConsoleHistory*

**Return type** *Response*

**create\_image** (*create\_image\_details*, *\*\*kwargs*)

CreateImage Creates a boot disk image for the specified instance or imports an exported image from the Oracle Bare Metal Cloud Object Storage Service.

When creating a new image, you must provide the OCID of the instance you want to use as the basis for the image, and the OCID of the compartment containing that instance. For more information about images, see [Managing Custom Images](#).

When importing an exported image from the Object Storage Service, you specify the source information in *image\_source\_details()*.

When importing an image based on the namespace, bucket name, and object name, use *image\_source\_via\_object\_storage\_tuple\_details()*.

When importing an image based on the Object Storage Service URL, use *image\_source\_via\_object\_storage\_uri\_details()*. See [Object Storage URLs and pre-authenticated requests](#) for constructing URLs for image import/export.

For more information about importing exported images, see [Image Import/Export](#).

You may optionally specify a *display name* for the image, which is simply a friendly name or description. It does not have to be unique, and you can change it. See *update\_image()*. Avoid entering confidential information.

#### Parameters

- **create\_image\_details** (*CreateImageDetails*) – (required) Image creation details
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due

to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *Image*

**Return type** *Response*

**delete\_console\_history** (*instance\_console\_history\_id*, *\*\*kwargs*)

DeleteConsoleHistory Deletes the specified console history metadata and the console history data.

**Parameters**

- **instance\_console\_history\_id** (*str*) – (required) The OCID of the console history.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_image** (*image\_id*, *\*\*kwargs*)

DeleteImage Deletes an image.

**Parameters**

- **image\_id** (*str*) – (required) The OCID of the image.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**detach\_vnic** (*vnic\_attachment\_id*, *\*\*kwargs*)

DetachVnic Detaches and deletes the specified secondary VNIC. This operation cannot be used on the instance’s primary VNIC. When you terminate an instance, all attached VNICs (primary and secondary) are automatically detached and deleted.

**Parameters**

- **vnic\_attachment\_id** (*str*) – (required) The OCID of the VNIC attachment.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**detach\_volume** (*volume\_attachment\_id*, *\*\*kwargs*)

DetachVolume Detaches a storage volume from an instance. You must specify the OCID of the volume attachment.

This is an asynchronous operation; the attachment’s *lifecycleState* will change to DETACHING temporarily until the attachment is completely removed.

**Parameters**

- **volume\_attachment\_id** (*str*) – (required) The OCID of the volume attachment.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *None*

**Return type** *Response*

**export\_image** (*image\_id*, *export\_image\_details*, *\*\*kwargs*)

ExportImage Exports the specified image to the Oracle Bare Metal Cloud Object Storage Service. You can use the Object Storage Service URL, or the namespace, bucket name, and object name when specifying the location to export to.

For more information about exporting images, see [Image Import/Export](#).

To perform an image export, you need write access to the Object Storage Service bucket for the image, see [Let Users Write Objects to Object Storage Buckets](#).

See [Object Storage URLs](#) and [pre-authenticated requests](#) for constructing URLs for image import/export.

**Parameters**

- **image\_id** (*str*) – (required) The OCID of the image.
- **export\_image\_details** (*ExportImageDetails*) – (required) Details for the image export.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *Image*

**Return type** *Response*

**get\_console\_history** (*instance\_console\_history\_id*, *\*\*kwargs*)

GetConsoleHistory Shows the metadata for the specified console history. See [capture\\_console\\_history\(\)](#) for details about using the console history operations.

**Parameters** **instance\_console\_history\_id** (*str*) – (required) The OCID of the console history.

**Returns** A *Response* object with data of type *ConsoleHistory*

**Return type** *Response*

**get\_console\_history\_content** (*instance\_console\_history\_id*, *\*\*kwargs*)

GetConsoleHistoryContent Gets the actual console history data (not the metadata). See [capture\\_console\\_history\(\)](#) for details about using the console history operations.

**Parameters**

- **instance\_console\_history\_id** (*str*) – (required) The OCID of the console history.
- **offset** (*int*) – (optional) Offset of the snapshot data to retrieve.
- **length** (*int*) – (optional) Length of the snapshot data to retrieve.

**Returns** A *Response* object with data of type bytes

**Return type** *Response*

**get\_image** (*image\_id*, *\*\*kwargs*)

GetImage Gets the specified image.

**Parameters** **image\_id** (*str*) – (required) The OCID of the image.

**Returns** A *Response* object with data of type *Image*

**Return type** *Response*

**get\_instance** (*instance\_id*, *\*\*kwargs*)

GetInstance Gets information about the specified instance.

**Parameters** **instance\_id** (*str*) – (required) The OCID of the instance.

**Returns** A *Response* object with data of type *Instance*

**Return type** *Response*

**get\_vnic\_attachment** (*vnic\_attachment\_id*, *\*\*kwargs*)

GetVnicAttachment Gets the information for the specified VNIC attachment.

**Parameters** **vnic\_attachment\_id** (*str*) – (required) The OCID of the VNIC attachment.

**Returns** A *Response* object with data of type *VnicAttachment*

**Return type** *Response*

**get\_volume\_attachment** (*volume\_attachment\_id*, *\*\*kwargs*)

GetVolumeAttachment Gets information about the specified volume attachment.

**Parameters** **volume\_attachment\_id** (*str*) – (required) The OCID of the volume attachment.

**Returns** A *Response* object with data of type *VolumeAttachment*

**Return type** *Response*

**get\_windows\_instance\_initial\_credentials** (*instance\_id*, *\*\*kwargs*)

GetWindowsInstanceInitialCredentials Gets the generated credentials for the instance. Only works for Windows instances. The returned credentials are only valid for the initial login.

**Parameters** **instance\_id** (*str*) – (required) The OCID of the instance.

**Returns** A *Response* object with data of type *InstanceCredentials*

**Return type** *Response*

**instance\_action** (*instance\_id*, *action*, *\*\*kwargs*)

InstanceAction Performs one of the power actions (start, stop, softreset, or reset) on the specified instance.

**start** - power on

**stop** - power off

**softreset** - ACPI shutdown and power on

**reset** - power off and power on



Note that the **stop** state has no effect on the resources you consume. Billing continues for instances that you stop, and related resources continue to apply against any relevant quotas. You must terminate an instance (`terminate_instance()`) to remove its resources from billing and quotas.

**Parameters**

- **instance\_id** (*str*) – (required) The OCID of the instance.
- **action** (*str*) – (required) The action to perform on the instance.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *Instance*

**Return type** *Response*

**launch\_instance** (*launch\_instance\_details*, *\*\*kwargs*)

LaunchInstance Creates a new instance in the specified compartment and the specified Availability Domain. For general information about instances, see [Overview of the Compute Service](#).

For information about access control and compartments, see [Overview of the IAM Service](#).

For information about Availability Domains, see [Regions and Availability Domains](#). To get a list of Availability Domains, use the *ListAvailabilityDomains* operation in the Identity and Access Management Service API.

All Oracle Bare Metal Cloud Services resources, including instances, get an Oracle-assigned, unique ID called an Oracle Cloud Identifier (OCID). When you create a resource, you can find its OCID in the response. You can also retrieve a resource’s OCID by using a List API operation on that resource type, or by viewing the resource in the Console.

When you launch an instance, it is automatically attached to a virtual network interface card (VNIC), called the *primary VNIC*. The VNIC has a private IP address from the subnet’s CIDR. You can either assign a private IP address of your choice or let Oracle automatically assign one. You can choose whether the instance has a public IP address. To retrieve the addresses, use the `list_vnic_attachments()` operation to get the VNIC ID for the instance, and then call `get_vnic()` with the VNIC ID.

You can later add secondary VNICs to an instance. For more information, see [Managing Virtual Network Interface Cards \(VNICs\)](#).

**Parameters**

- **launch\_instance\_details** (*LaunchInstanceDetails*) – (required) Instance details
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *Instance*

**Return type** *Response*

**list\_console\_histories** (*compartment\_id*, *\*\*kwargs*)

ListConsoleHistories Lists the console history metadata for the specified compartment or instance.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **availability\_domain** (*str*) – (optional) The name of the Availability Domain.  
Example: *Uocm:PHX-AD-1*
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.  
Example: *500*
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.
- **instance\_id** (*str*) – (optional) The OCID of the instance.

**Returns** A *Response* object with data of type list of *ConsoleHistory*

**Return type** *Response*

**list\_images** (*compartment\_id*, *\*\*kwargs*)

ListImages Lists the available images in the specified compartment. For more information about images, see [Managing Custom Images](#).

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **display\_name** (*str*) – (optional) A user-friendly name. Does not have to be unique, and it’s changeable. Avoid entering confidential information.  
Example: *My new resource*
- **operating\_system** (*str*) – (optional) The image’s operating system.  
Example: *Oracle Linux*
- **operating\_system\_version** (*str*) – (optional) The image’s operating system version.  
Example: *7.2*
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.  
Example: *500*
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *Image*

**Return type** *Response*

**list\_instances** (*compartment\_id*, *\*\*kwargs*)

ListInstances Lists the instances in the specified compartment and the specified Availability Domain. You can filter the results by specifying an instance name (the list will include all the identically-named instances in the compartment).

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.

- **availability\_domain** (*str*) – (optional) The name of the Availability Domain.  
Example: *Uocm:PHX-AD-1*
- **display\_name** (*str*) – (optional) A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.  
Example: *My new resource*
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.  
Example: *500*
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *Instance*

**Return type** *Response*

**list\_shapes** (*compartment\_id*, *\*\*kwargs*)

ListShapes Lists the shapes that can be used to launch an instance within the specified compartment. You can filter the list by compatibility with a specific image.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **availability\_domain** (*str*) – (optional) The name of the Availability Domain.  
Example: *Uocm:PHX-AD-1*
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.  
Example: *500*
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.
- **image\_id** (*str*) – (optional) The OCID of an image.

**Returns** A *Response* object with data of type list of *Shape*

**Return type** *Response*

**list\_vnic\_attachments** (*compartment\_id*, *\*\*kwargs*)

ListVnicAttachments Lists the VNIC attachments in the specified compartment. A VNIC attachment resides in the same compartment as the attached instance. The list can be filtered by instance, VNIC, or Availability Domain.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **availability\_domain** (*str*) – (optional) The name of the Availability Domain.  
Example: *Uocm:PHX-AD-1*
- **instance\_id** (*str*) – (optional) The OCID of the instance.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.  
Example: *500*

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.
- **vnid\_id** (*str*) – (optional) The OCID of the VNIC.

**Returns** A *Response* object with data of type list of *VnicAttachment*

**Return type** *Response*

**list\_volume\_attachments** (*compartment\_id*, *\*\*kwargs*)

ListVolumeAttachments Lists the volume attachments in the specified compartment. You can filter the list by specifying an instance OCID, volume OCID, or both.

Currently, the only supported volume attachment type is *IScsiVolumeAttachment*.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **availability\_domain** (*str*) – (optional) The name of the Availability Domain.  
Example: *Uocm:PHX-AD-1*
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.  
Example: *500*
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.
- **instance\_id** (*str*) – (optional) The OCID of the instance.
- **volume\_id** (*str*) – (optional) The OCID of the volume.

**Returns** A *Response* object with data of type list of *VolumeAttachment*

**Return type** *Response*

**terminate\_instance** (*instance\_id*, *\*\*kwargs*)

TerminateInstance Terminates the specified instance. Any attached VNICs and volumes are automatically detached when the instance terminates.

This is an asynchronous operation; the instance’s *lifecycleState* will change to *TERMINATING* temporarily until the instance is completely removed.

**Parameters**

- **instance\_id** (*str*) – (required) The OCID of the instance.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *None*

**Return type** *Response*

**update\_image** (*image\_id*, *update\_image\_details*, *\*\*kwargs*)

UpdateImage Updates the display name of the image. Avoid entering confidential information.

**Parameters**

- **image\_id** (*str*) – (required) The OCID of the image.

- **update\_image\_details** (`UpdateImageDetails`) – (required) Updates the image display name field. Avoid entering confidential information.
- **opc\_retry\_token** (`str`) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).
- **if\_match** (`str`) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *Image*

**Return type** *Response*

**update\_instance** (`instance_id, update_instance_details, **kwargs`)

UpdateInstance Updates the display name of the specified instance. Avoid entering confidential information. The OCID of the instance remains the same.

**Parameters**

- **instance\_id** (`str`) – (required) The OCID of the instance.
- **update\_instance\_details** (`UpdateInstanceDetails`) – (required) Update instance fields
- **opc\_retry\_token** (`str`) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).
- **if\_match** (`str`) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *Instance*

**Return type** *Response*

## Virtual Network

`class oraclebmc.core.virtual_network_client.VirtualNetworkClient (config)`

**create\_cpe** (`create_cpe_details, **kwargs`)

CreateCpe Creates a new virtual Customer-Premises Equipment (CPE) object in the specified compartment. For more information, see [Managing IPSec VPNs](#).

For the purposes of access control, you must provide the OCID of the compartment where you want the CPE to reside. Notice that the CPE doesn’t have to be in the same compartment as the IPSec connection or other Networking Service components. If you’re not sure which compartment to use, put the CPE in the same compartment as the DRG. For more information about compartments and access control, see [Overview of the IAM Service](#). For information about OCIDs, see [Resource Identifiers](#).

You must provide the public IP address of your on-premise router. See [Configuring Your On-Premise Router](#).

You may optionally specify a *display name* for the CPE, otherwise a default is provided. It does not have to be unique, and you can change it. Avoid entering confidential information.

**Parameters**

- **create\_cpe\_details** (*CreateCpeDetails*) – (required) Details for creating a CPE.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *Cpe*

**Return type** *Response*

**create\_cross\_connect** (*create\_cross\_connect\_details, \*\*kwargs*)

*CreateCrossConnect* Creates a new cross-connect. Oracle recommends you create each cross-connect in a *CrossConnectGroup* so you can use link aggregation with the connection.

After creating the *CrossConnect* object, you need to go the *FastConnect* location and request to have the physical cable installed. For more information, see [FastConnect Overview](#).

For the purposes of access control, you must provide the OCID of the compartment where you want the cross-connect to reside. If you're not sure which compartment to use, put the cross-connect in the same compartment with your VCN. For more information about compartments and access control, see [Overview of the IAM Service](#). For information about OCIDs, see [Resource Identifiers](#).

You may optionally specify a *display name* for the cross-connect. It does not have to be unique, and you can change it. Avoid entering confidential information.

**Parameters**

- **create\_cross\_connect\_details** (*CreateCrossConnectDetails*) – (required) Details to create a *CrossConnect*
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *CrossConnect*

**Return type** *Response*

**create\_cross\_connect\_group** (*create\_cross\_connect\_group\_details, \*\*kwargs*)

*CreateCrossConnectGroup* Creates a new cross-connect group to use with Oracle Bare Metal Cloud Services *FastConnect*. For more information, see [FastConnect Overview](#).

For the purposes of access control, you must provide the OCID of the compartment where you want the cross-connect group to reside. If you're not sure which compartment to use, put the cross-connect group in the same compartment with your VCN. For more information about compartments and access control, see [Overview of the IAM Service](#). For information about OCIDs, see [Resource Identifiers](#).

You may optionally specify a *display name* for the cross-connect group. It does not have to be unique, and you can change it. Avoid entering confidential information.

**Parameters**

- **create\_cross\_connect\_group\_details** (`CreateCrossConnectGroupDetails`) – (required) Details to create a `CrossConnectGroup`
- **opc\_retry\_token** (`str`) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *CrossConnectGroup*

**Return type** *Response*

**create\_dhcp\_options** (`create_dhcp_details, **kwargs`)

`CreateDhcpOptions` Creates a new set of DHCP options for the specified VCN. For more information, see `DhcpOptions`.

For the purposes of access control, you must provide the OCID of the compartment where you want the set of DHCP options to reside. Notice that the set of options doesn't have to be in the same compartment as the VCN, subnets, or other Networking Service components. If you're not sure which compartment to use, put the set of DHCP options in the same compartment as the VCN. For more information about compartments and access control, see [Overview of the IAM Service](#). For information about OCIDs, see [Resource Identifiers](#).

You may optionally specify a *display name* for the set of DHCP options, otherwise a default is provided. It does not have to be unique, and you can change it. Avoid entering confidential information.

#### Parameters

- **create\_dhcp\_details** (`CreateDhcpDetails`) – (required) Request object for creating a new set of DHCP options.
- **opc\_retry\_token** (`str`) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *DhcpOptions*

**Return type** *Response*

**create\_drg** (`create_drg_details, **kwargs`)

`CreateDrg` Creates a new Dynamic Routing Gateway (DRG) in the specified compartment. For more information, see [Managing Dynamic Routing Gateways \(DRGs\)](#).

For the purposes of access control, you must provide the OCID of the compartment where you want the DRG to reside. Notice that the DRG doesn't have to be in the same compartment as the VCN, the DRG attachment, or other Networking Service components. If you're not sure which compartment to use, put the DRG in the same compartment as the VCN. For more information about compartments and access control, see [Overview of the IAM Service](#). For information about OCIDs, see [Resource Identifiers](#).

You may optionally specify a *display name* for the DRG, otherwise a default is provided. It does not have to be unique, and you can change it. Avoid entering confidential information.

#### Parameters

- **create\_drg\_details** (`CreateDrgDetails`) – (required) Details for creating a DRG.
- **opc\_retry\_token** (`str`) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same

action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *Drg*

**Return type** *Response*

**create\_drg\_attachment** (*create\_drg\_attachment\_details*, *\*\*kwargs*)

CreateDrgAttachment Attaches the specified DRG to the specified VCN. A VCN can be attached to only one DRG at a time, and vice versa. The response includes a *DrgAttachment* object with its own OCID. For more information about DRGs, see [Managing Dynamic Routing Gateways \(DRGs\)](#).

You may optionally specify a *display name* for the attachment, otherwise a default is provided. It does not have to be unique, and you can change it. Avoid entering confidential information.

For the purposes of access control, the DRG attachment is automatically placed into the same compartment as the VCN. For more information about compartments and access control, see [Overview of the IAM Service](#).

#### Parameters

- **create\_drg\_attachment\_details** (*CreateDrgAttachmentDetails*) – (required) Details for creating a *DrgAttachment*.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *DrgAttachment*

**Return type** *Response*

**create\_internet\_gateway** (*create\_internet\_gateway\_details*, *\*\*kwargs*)

CreateInternetGateway Creates a new Internet Gateway for the specified VCN. For more information, see [Managing Internet Gateways](#).

For the purposes of access control, you must provide the OCID of the compartment where you want the Internet Gateway to reside. Notice that the Internet Gateway doesn't have to be in the same compartment as the VCN or other Networking Service components. If you're not sure which compartment to use, put the Internet Gateway in the same compartment with the VCN. For more information about compartments and access control, see [Overview of the IAM Service](#). For information about OCIDs, see [Resource Identifiers](#).

You may optionally specify a *display name* for the Internet Gateway, otherwise a default is provided. It does not have to be unique, and you can change it. Avoid entering confidential information.

For traffic to flow between a subnet and an Internet Gateway, you must create a route rule accordingly in the subnet's route table (e.g., 0.0.0.0/0 > Internet Gateway). See `update_route_table()`.

You must specify whether the Internet Gateway is enabled when you create it. If it's disabled, that means no traffic will flow to/from the internet even if there's a route rule that enables that traffic. You can later use `update_internet_gateway()` to easily disable/enable the gateway without changing the route rule.

#### Parameters

- **create\_internet\_gateway\_details** (*CreateInternetGatewayDetails*) – (required) Details for creating a new Internet Gateway.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same



action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *InternetGateway*

**Return type** *Response*

**create\_ip\_sec\_connection** (*create\_ip\_sec\_connection\_details*, *\*\*kwargs*)

CreateIPSecConnection Creates a new IPSec connection between the specified DRG and CPE. For more information, see [Managing IPSec Connections](#).

In the request, you must include at least one static route to the CPE object (you're allowed a maximum of 10). For example: 10.0.8.0/16.

For the purposes of access control, you must provide the OCID of the compartment where you want the IPSec connection to reside. Notice that the IPSec connection doesn't have to be in the same compartment as the DRG, CPE, or other Networking Service components. If you're not sure which compartment to use, put the IPSec connection in the same compartment as the DRG. For more information about compartments and access control, see [Overview of the IAM Service](#). For information about OCIDs, see [Resource Identifiers](#).

You may optionally specify a *display name* for the IPSec connection, otherwise a default is provided. It does not have to be unique, and you can change it. Avoid entering confidential information.

After creating the IPSec connection, you need to configure your on-premise router with tunnel-specific information returned by `get_ip_sec_connection_device_config()`. For each tunnel, that operation gives you the IP address of Oracle's VPN headend and the shared secret (i.e., the pre-shared key). For more information, see [Configuring Your On-Premise Router](#).

To get the status of the tunnels (whether they're up or down), use `get_ip_sec_connection_device_status()`.

#### Parameters

- **create\_ip\_sec\_connection\_details** (*CreateIPSecConnectionDetails*) – (required) Details for creating an *IPSecConnection*.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *IPSecConnection*

**Return type** *Response*

**create\_private\_ip** (*create\_private\_ip\_details*, *\*\*kwargs*)

CreatePrivateIp Creates a secondary private IP for the specified VNIC. For more information about secondary private IPs, see [Managing IP Addresses](#).

#### Parameters

- **create\_private\_ip\_details** (*CreatePrivateIpDetails*) – (required) Create private IP details.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *PrivateIp*

**Return type** *Response*

**create\_route\_table** (*create\_route\_table\_details*, *\*\*kwargs*)

CreateRouteTable Creates a new route table for the specified VCN. In the request you must also include at least one route rule for the new route table. For information on the number of rules you can have in a route table, see [Service Limits](#). For general information about route tables in your VCN, see [Managing Route Tables](#).

For the purposes of access control, you must provide the OCID of the compartment where you want the route table to reside. Notice that the route table doesn't have to be in the same compartment as the VCN, subnets, or other Networking Service components. If you're not sure which compartment to use, put the route table in the same compartment as the VCN. For more information about compartments and access control, see [Overview of the IAM Service](#). For information about OCIDs, see [Resource Identifiers](#).

You may optionally specify a *display name* for the route table, otherwise a default is provided. It does not have to be unique, and you can change it. Avoid entering confidential information.

**Parameters**

- **create\_route\_table\_details** (*CreateRouteTableDetails*) – (required) Details for creating a new route table.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *RouteTable*

**Return type** *Response*

**create\_security\_list** (*create\_security\_list\_details*, *\*\*kwargs*)

CreateSecurityList Creates a new security list for the specified VCN. For more information about security lists, see [Security Lists](#). For information on the number of rules you can have in a security list, see [Service Limits](#).

For the purposes of access control, you must provide the OCID of the compartment where you want the security list to reside. Notice that the security list doesn't have to be in the same compartment as the VCN, subnets, or other Networking Service components. If you're not sure which compartment to use, put the security list in the same compartment as the VCN. For more information about compartments and access control, see [Overview of the IAM Service](#). For information about OCIDs, see [Resource Identifiers](#).

You may optionally specify a *display name* for the security list, otherwise a default is provided. It does not have to be unique, and you can change it. Avoid entering confidential information.

**Parameters**

- **create\_security\_list\_details** (*CreateSecurityListDetails*) – (required) Details regarding the security list to create.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *SecurityList*

**Return type** *Response*

**create\_subnet** (*create\_subnet\_details*, *\*\*kwargs*)

CreateSubnet Creates a new subnet in the specified VCN. You can't change the size of the subnet after creation, so it's important to think about the size of subnets you need before creating them. For more information, see [Managing Subnets](#). For information on the number of subnets you can have in a VCN, see [Service Limits](#).

For the purposes of access control, you must provide the OCID of the compartment where you want the subnet to reside. Notice that the subnet doesn't have to be in the same compartment as the VCN, route tables, or other Networking Service components. If you're not sure which compartment to use, put the subnet in the same compartment as the VCN. For more information about compartments and access control, see [Overview of the IAM Service](#). For information about OCIDs, see [Resource Identifiers](#).

You may optionally associate a route table with the subnet. If you don't, the subnet will use the VCN's default route table. For more information about route tables, see [Managing Route Tables](#).

You may optionally associate a security list with the subnet. If you don't, the subnet will use the VCN's default security list. For more information about security lists, see [Security Lists](#).

You may optionally associate a set of DHCP options with the subnet. If you don't, the subnet will use the VCN's default set. For more information about DHCP options, see [Managing DHCP Options](#).

You may optionally specify a *display name* for the subnet, otherwise a default is provided. It does not have to be unique, and you can change it. Avoid entering confidential information.

You can also add a DNS label for the subnet, which is required if you want the Internet and VCN Resolver to resolve hostnames for instances in the subnet. For more information, see [DNS in Your Virtual Cloud Network](#).

**Parameters**

- **create\_subnet\_details** (*CreateSubnetDetails*) – (required) Details for creating a subnet.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *Subnet*

**Return type** *Response*

**create\_vcn** (*create\_vcn\_details*, *\*\*kwargs*)

CreateVcn Creates a new Virtual Cloud Network (VCN). For more information, see [Managing Virtual Cloud Networks \(VCNs\)](#).

For the VCN you must specify a single, contiguous IPv4 CIDR block. Oracle recommends using one of the private IP address ranges specified in [RFC 1918](#) (10.0.0.0/8, 172.16/12, and 192.168/16). Example: 172.16.0.0/16. The CIDR block can range from /16 to /30, and it must not overlap with your on-premise network. You can't change the size of the VCN after creation.

For the purposes of access control, you must provide the OCID of the compartment where you want the VCN to reside. Consult an Oracle Bare Metal Cloud Services administrator in your organization if you're not sure which compartment to use. Notice that the VCN doesn't have to be in the same compartment as the subnets or other Networking Service components. For more information about compartments and access control, see [Overview of the IAM Service](#). For information about OCIDs, see [Resource Identifiers](#).

You may optionally specify a *display name* for the VCN, otherwise a default is provided. It does not have to be unique, and you can change it. Avoid entering confidential information.

You can also add a DNS label for the VCN, which is required if you want the instances to use the Interent and VCN Resolver option for DNS in the VCN. For more information, see [DNS in Your Virtual Cloud Network](#).

The VCN automatically comes with a default route table, default security list, and default set of DHCP options. The OCID for each is returned in the response. You can't delete these default objects, but you can change their contents (i.e., route rules, etc.)

The VCN and subnets you create are not accessible until you attach an Internet Gateway or set up an IPsec VPN or FastConnect. For more information, see [Overview of the Networking Service](#).

#### Parameters

- **create\_vcn\_details** (*CreateVcnDetails*) – (required) Details for creating a new VCN.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *Vcn*

**Return type** *Response*

**create\_virtual\_circuit** (*create\_virtual\_circuit\_details*, *\*\*kwargs*)

CreateVirtualCircuit Creates a new virtual circuit to use with Oracle Bare Metal Cloud Services FastConnect. For more information, see [FastConnect Overview](#).

For the purposes of access control, you must provide the OCID of the compartment where you want the virtual circuit to reside. If you're not sure which compartment to use, put the virtual circuit in the same compartment with the DRG it's using. For more information about compartments and access control, see [Overview of the IAM Service](#). For information about OCIDs, see [Resource Identifiers](#).

You may optionally specify a *display name* for the virtual circuit. It does not have to be unique, and you can change it. Avoid entering confidential information.

**Important:** When creating a virtual circuit, you specify a DRG for the traffic to flow through. Make sure you attach the DRG to your VCN and confirm the VCN's routing sends traffic to the DRG. Otherwise traffic will not flow. For more information, see [Managing Route Tables](#).

#### Parameters

- **create\_virtual\_circuit\_details** (*CreateVirtualCircuitDetails*) – (required) Details to create a VirtualCircuit.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *VirtualCircuit*

**Return type** *Response*

**delete\_cpe** (*cpe\_id*, *\*\*kwargs*)

DeleteCpe Deletes the specified CPE object. The CPE must not be connected to a DRG. This is an asynchronous operation; the CPE's *lifecycleState* will change to TERMINATING temporarily until the CPE is completely removed.

#### Parameters

- **cpe\_id** (*str*) – (required) The OCID of the CPE.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_cross\_connect** (*cross\_connect\_id*, *\*\*kwargs*)

DeleteCrossConnect Deletes the specified cross-connect. It must not be mapped to a VirtualCircuit.

**Parameters**

- **cross\_connect\_id** (*str*) – (required) The OCID of the cross-connect.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_cross\_connect\_group** (*cross\_connect\_group\_id*, *\*\*kwargs*)

DeleteCrossConnectGroup Deletes the specified cross-connect group. It must not contain any cross-connects, and it cannot be mapped to a VirtualCircuit.

**Parameters**

- **cross\_connect\_group\_id** (*str*) – (required) The OCID of the cross-connect group.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_dhcp\_options** (*dhcp\_id*, *\*\*kwargs*)

DeleteDhcpOptions Deletes the specified set of DHCP options, but only if it’s not associated with a subnet. You can’t delete a VCN’s default set of DHCP options.

This is an asynchronous operation; the state of the set of options will switch to TERMINATING temporarily until the set is completely removed.

**Parameters**

- **dhcp\_id** (*str*) – (required) The OCID for the set of DHCP options.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_drg** (*drg\_id*, *\*\*kwargs*)

DeleteDrg Deletes the specified DRG. The DRG must not be attached to a VCN or be connected to your on-premise network. Also, there must not be a route table that lists the DRG as a target. This is an asynchronous operation; the DRG's *lifecycleState* will change to TERMINATING temporarily until the DRG is completely removed.

**Parameters**

- **drg\_id** (*str*) – (required) The OCID of the DRG.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource's current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_drg\_attachment** (*drg\_attachment\_id*, *\*\*kwargs*)

DeleteDrgAttachment Detaches a DRG from a VCN by deleting the corresponding *DrgAttachment*. This is an asynchronous operation; the attachment's *lifecycleState* will change to DETACHING temporarily until the attachment is completely removed.

**Parameters**

- **drg\_attachment\_id** (*str*) – (required) The OCID of the DRG attachment.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource's current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_internet\_gateway** (*ig\_id*, *\*\*kwargs*)

DeleteInternetGateway Deletes the specified Internet Gateway. The Internet Gateway does not have to be disabled, but there must not be a route table that lists it as a target.

This is an asynchronous operation; the gateway's *lifecycleState* will change to TERMINATING temporarily until the gateway is completely removed.

**Parameters**

- **ig\_id** (*str*) – (required) The OCID of the Internet Gateway.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource's current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_ip\_sec\_connection** (*ipsc\_id*, *\*\*kwargs*)

DeleteIPSecConnection Deletes the specified IPSec connection. If your goal is to disable the IPSec VPN between your VCN and on-premise network, it's easiest to simply detach the DRG but keep all the IPSec VPN components intact. If you were to delete all the components and then later need to create an IPSec VPN again, you would need to configure your on-premise router again with the new information returned from `create_ip_sec_connection()`.

This is an asynchronous operation; the connection's *lifecycleState* will change to TERMINATING temporarily until the connection is completely removed.

**Parameters**

- **ipsec\_id** (*str*) – (required) The OCID of the IPsec connection.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource's current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_private\_ip** (*private\_ip\_id*, *\*\*kwargs*)

DeletePrivateIp Unassigns and deletes the specified private IP. You must specify the object's OCID. The private IP address is returned to the subnet's pool of available addresses.

This operation cannot be used with primary private IPs, which are automatically unassigned and deleted when the VNIC is terminated.

**Parameters**

- **private\_ip\_id** (*str*) – (required) The private IP's OCID.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource's current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_route\_table** (*rt\_id*, *\*\*kwargs*)

DeleteRouteTable Deletes the specified route table, but only if it's not associated with a subnet. You can't delete a VCN's default route table.

This is an asynchronous operation; the route table's *lifecycleState* will change to TERMINATING temporarily until the route table is completely removed.

**Parameters**

- **rt\_id** (*str*) – (required) The OCID of the route table.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource's current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_security\_list** (*security\_list\_id*, *\*\*kwargs*)

DeleteSecurityList Deletes the specified security list, but only if it's not associated with a subnet. You can't delete a VCN's default security list.

This is an asynchronous operation; the security list's *lifecycleState* will change to TERMINATING temporarily until the security list is completely removed.

**Parameters**

- **security\_list\_id** (*str*) – (required) The OCID of the security list.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_subnet** (*subnet\_id*, *\*\*kwargs*)

DeleteSubnet Deletes the specified subnet, but only if there are no instances in the subnet. This is an asynchronous operation; the subnet’s *lifecycleState* will change to TERMINATING temporarily. If there are any instances in the subnet, the state will instead change back to AVAILABLE.

**Parameters**

- **subnet\_id** (*str*) – (required) The OCID of the subnet.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_vcn** (*vcn\_id*, *\*\*kwargs*)

DeleteVcn Deletes the specified VCN. The VCN must be empty and have no attached gateways. This is an asynchronous operation; the VCN’s *lifecycleState* will change to TERMINATING temporarily until the VCN is completely removed.

**Parameters**

- **vcn\_id** (*str*) – (required) The OCID of the VCN.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_virtual\_circuit** (*virtual\_circuit\_id*, *\*\*kwargs*)

DeleteVirtualCircuit Deletes the specified virtual circuit.

**Important:** If you’re using FastConnect via a provider, make sure to also terminate the connection with the provider, or else the provider may continue to bill you.

**Parameters**

- **virtual\_circuit\_id** (*str*) – (required) The OCID of the virtual circuit.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*



- get\_cpe** (*cpe\_id*, *\*\*kwargs*)  
 GetCpe Gets the specified CPE's information.
- Parameters** **cpe\_id** (*str*) – (required) The OCID of the CPE.
- Returns** A *Response* object with data of type *Cpe*
- Return type** *Response*
- get\_cross\_connect** (*cross\_connect\_id*, *\*\*kwargs*)  
 GetCrossConnect Gets the specified cross-connect's information.
- Parameters** **cross\_connect\_id** (*str*) – (required) The OCID of the cross-connect.
- Returns** A *Response* object with data of type *CrossConnect*
- Return type** *Response*
- get\_cross\_connect\_group** (*cross\_connect\_group\_id*, *\*\*kwargs*)  
 GetCrossConnectGroups Gets the specified cross-connect group's information.
- Parameters** **cross\_connect\_group\_id** (*str*) – (required) The OCID of the cross-connect group.
- Returns** A *Response* object with data of type *CrossConnectGroup*
- Return type** *Response*
- get\_cross\_connect\_letter\_of\_authority** (*cross\_connect\_id*, *\*\*kwargs*)  
 GetCrossConnectLetterOfAuthority Gets the Letter of Authority for the specified cross-connect.
- Parameters** **cross\_connect\_id** (*str*) – (required) The OCID of the cross-connect.
- Returns** A *Response* object with data of type *LetterOfAuthority*
- Return type** *Response*
- get\_cross\_connect\_status** (*cross\_connect\_id*, *\*\*kwargs*)  
 GetCrossConnectStatus Gets the status of the specified cross-connect.
- Parameters** **cross\_connect\_id** (*str*) – (required) The OCID of the cross-connect.
- Returns** A *Response* object with data of type *CrossConnectStatus*
- Return type** *Response*
- get\_dhcp\_options** (*dhcp\_id*, *\*\*kwargs*)  
 GetDhcpOptions Gets the specified set of DHCP options.
- Parameters** **dhcp\_id** (*str*) – (required) The OCID for the set of DHCP options.
- Returns** A *Response* object with data of type *DhcpOptions*
- Return type** *Response*
- get\_drg** (*drg\_id*, *\*\*kwargs*)  
 GetDrg Gets the specified DRG's information.
- Parameters** **drg\_id** (*str*) – (required) The OCID of the DRG.
- Returns** A *Response* object with data of type *Drg*
- Return type** *Response*
- get\_drg\_attachment** (*drg\_attachment\_id*, *\*\*kwargs*)  
 GetDrgAttachment Gets the information for the specified *DrgAttachment*.
- Parameters** **drg\_attachment\_id** (*str*) – (required) The OCID of the DRG attachment.

**Returns** A *Response* object with data of type *DrgAttachment*

**Return type** *Response*

**get\_internet\_gateway** (*ig\_id*, *\*\*kwargs*)

GetInternetGateway Gets the specified Internet Gateway's information.

**Parameters** *ig\_id* (*str*) – (required) The OCID of the Internet Gateway.

**Returns** A *Response* object with data of type *InternetGateway*

**Return type** *Response*

**get\_ip\_sec\_connection** (*ipsc\_id*, *\*\*kwargs*)

GetIPSecConnection Gets the specified IPSec connection's basic information, including the static routes for the on-premise router. If you want the status of the connection (whether it's up or down), use `get_ip_sec_connection_device_status()`.

**Parameters** *ipsc\_id* (*str*) – (required) The OCID of the IPSec connection.

**Returns** A *Response* object with data of type *IPSecConnection*

**Return type** *Response*

**get\_ip\_sec\_connection\_device\_config** (*ipsc\_id*, *\*\*kwargs*)

GetIPSecConnectionDeviceConfig Gets the configuration information for the specified IPSec connection. For each tunnel, the response includes the IP address of Oracle's VPN headend and the shared secret.

**Parameters** *ipsc\_id* (*str*) – (required) The OCID of the IPSec connection.

**Returns** A *Response* object with data of type *IPSecConnectionDeviceConfig*

**Return type** *Response*

**get\_ip\_sec\_connection\_device\_status** (*ipsc\_id*, *\*\*kwargs*)

GetIPSecConnectionDeviceStatus Gets the status of the specified IPSec connection (whether it's up or down).

**Parameters** *ipsc\_id* (*str*) – (required) The OCID of the IPSec connection.

**Returns** A *Response* object with data of type *IPSecConnectionDeviceStatus*

**Return type** *Response*

**get\_private\_ip** (*private\_ip\_id*, *\*\*kwargs*)

GetPrivateIp Gets the specified private IP. You must specify the object's OCID. Alternatively, you can get the object by using `list_private_ips()` with the private IP address (for example, 10.0.3.3) and subnet OCID.

**Parameters** *private\_ip\_id* (*str*) – (required) The private IP's OCID.

**Returns** A *Response* object with data of type *PrivateIp*

**Return type** *Response*

**get\_route\_table** (*rt\_id*, *\*\*kwargs*)

GetRouteTable Gets the specified route table's information.

**Parameters** *rt\_id* (*str*) – (required) The OCID of the route table.

**Returns** A *Response* object with data of type *RouteTable*

**Return type** *Response*

**get\_security\_list** (*security\_list\_id*, *\*\*kwargs*)

GetSecurityList Gets the specified security list's information.

**Parameters** `security_list_id` (*str*) – (required) The OCID of the security list.

**Returns** A *Response* object with data of type *SecurityList*

**Return type** *Response*

**get\_subnet** (*subnet\_id*, *\*\*kwargs*)

GetSubnet Gets the specified subnet’s information.

**Parameters** `subnet_id` (*str*) – (required) The OCID of the subnet.

**Returns** A *Response* object with data of type *Subnet*

**Return type** *Response*

**get\_vcn** (*vcn\_id*, *\*\*kwargs*)

GetVcn Gets the specified VCN’s information.

**Parameters** `vcn_id` (*str*) – (required) The OCID of the VCN.

**Returns** A *Response* object with data of type *Vcn*

**Return type** *Response*

**get\_virtual\_circuit** (*virtual\_circuit\_id*, *\*\*kwargs*)

GetVirtualCircuit Gets the specified virtual circuit’s information.

**Parameters** `virtual_circuit_id` (*str*) – (required) The OCID of the virtual circuit.

**Returns** A *Response* object with data of type *VirtualCircuit*

**Return type** *Response*

**get\_vnic** (*vnic\_id*, *\*\*kwargs*)

GetVnic Gets the information for the specified virtual network interface card (VNIC). You can get the VNIC OCID from the `list_vnic_attachments()` operation.

**Parameters** `vnic_id` (*str*) – (required) The OCID of the VNIC.

**Returns** A *Response* object with data of type *Vnic*

**Return type** *Response*

**list\_cpes** (*compartment\_id*, *\*\*kwargs*)

ListCpes Lists the Customer-Premises Equipment objects (CPEs) in the specified compartment.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.  
Example: 500
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *Cpe*

**Return type** *Response*

**list\_cross\_connect\_groups** (*compartment\_id*, *\*\*kwargs*)

ListCrossConnectGroups Lists the cross-connect groups in the specified compartment.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.

- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: 500

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *CrossConnectGroup*

**Return type** *Response*

**list\_cross\_connect\_locations** (*compartment\_id*, *\*\*kwargs*)

ListCrossConnectLocations Lists the available FastConnect locations for cross-connect installation. You need this information so you can specify your desired location when you create a cross-connect.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: 500

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *CrossConnectLocation*

**Return type** *Response*

**list\_cross\_connects** (*compartment\_id*, *\*\*kwargs*)

ListCrossConnects Lists the cross-connects in the specified compartment. You can filter the list by specifying the OCID of a cross-connect group.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **cross\_connect\_group\_id** (*str*) – (optional) The OCID of the cross-connect group.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: 500

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *CrossConnect*

**Return type** *Response*

**list\_crossconnect\_port\_speed\_shapes** (*compartment\_id*, *\*\*kwargs*)

ListCrossConnectPortSpeedShapes Lists the available port speeds for cross-connects. You need this information so you can specify your desired port speed (i.e., shape) when you create a cross-connect.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: 500

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *CrossConnectPortSpeedShape*

**Return type** *Response*

**list\_dhcp\_options** (*compartment\_id*, *vcn\_id*, *\*\*kwargs*)

ListDhcpOptions Lists the sets of DHCP options in the specified VCN and specified compartment. The response includes the default set of options that automatically comes with each VCN, plus any other sets you’ve created.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **vcn\_id** (*str*) – (required) The OCID of the VCN.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: 500

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *DhcpOptions*

**Return type** *Response*

**list\_drg\_attachments** (*compartment\_id*, *\*\*kwargs*)

ListDrgAttachments Lists the *DrgAttachment* objects for the specified compartment. You can filter the results by VCN or DRG.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **vcn\_id** (*str*) – (optional) The OCID of the VCN.
- **drg\_id** (*str*) – (optional) The OCID of the DRG.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: 500

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *DrgAttachment*

**Return type** *Response*

**list\_drgs** (*compartment\_id*, *\*\*kwargs*)

ListDrgs Lists the DRGs in the specified compartment.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: 500

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *Drg*

**Return type** *Response*

**list\_fast\_connect\_provider\_services** (*compartment\_id*, *\*\*kwargs*)

ListFastConnectProviderServices Lists the service offerings from supported providers. You need this information so you can specify your desired provider and service offering when you create a virtual circuit.

For the compartment ID, provide the OCID of your tenancy (the root compartment).

For more information, see [FastConnect Overview](#).

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.  
Example: 500
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *FastConnectProviderService*

**Return type** *Response*

**list\_internet\_gateways** (*compartment\_id*, *vcn\_id*, *\*\*kwargs*)

ListInternetGateways Lists the Internet Gateways in the specified VCN and the specified compartment.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **vcn\_id** (*str*) – (required) The OCID of the VCN.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.  
Example: 500
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *InternetGateway*

**Return type** *Response*

**list\_ip\_sec\_connections** (*compartment\_id*, *\*\*kwargs*)

ListIPSecConnections Lists the IPSec connections for the specified compartment. You can filter the results by DRG or CPE.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **drg\_id** (*str*) – (optional) The OCID of the DRG.
- **cpe\_id** (*str*) – (optional) The OCID of the CPE.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: 500

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *IPSecConnection*

**Return type** *Response*

**list\_private\_ips** (*\*\*kwargs*)

ListPrivateIps Lists the PrivateIp objects based on one of these filters:

- Subnet OCID.
- VNIC OCID.
- Both private IP address and subnet OCID: This lets

you get a *privateIP* object based on its private IP address (for example, 10.0.3.3) and not its OCID. For comparison, `get_private_ip()` requires the OCID.

If you’re listing all the private IPs associated with a given subnet or VNIC, the response includes both primary and secondary private IPs.

#### Parameters

- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: 500

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

- **ip\_address** (*str*) – (optional) The private IP address of the *privateIp* object.

Example: 10.0.3.3

- **subnet\_id** (*str*) – (optional) The OCID of the subnet.

- **vnic\_id** (*str*) – (optional) The OCID of the VNIC.

**Returns** A *Response* object with data of type list of *PrivateIp*

**Return type** *Response*

**list\_route\_tables** (*compartment\_id*, *vcn\_id*, *\*\*kwargs*)

ListRouteTables Lists the route tables in the specified VCN and specified compartment. The response includes the default route table that automatically comes with each VCN, plus any route tables you’ve created.

#### Parameters

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **vcn\_id** (*str*) – (required) The OCID of the VCN.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: 500

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *RouteTable*

**Return type** *Response*

**list\_security\_lists** (*compartment\_id*, *vcn\_id*, *\*\*kwargs*)

ListSecurityLists Lists the security lists in the specified VCN and compartment.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **vcn\_id** (*str*) – (required) The OCID of the VCN.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.  
Example: 500
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *SecurityList*

**Return type** *Response*

**list\_subnets** (*compartment\_id*, *vcn\_id*, *\*\*kwargs*)

ListSubnets Lists the subnets in the specified VCN and the specified compartment.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **vcn\_id** (*str*) – (required) The OCID of the VCN.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.  
Example: 500
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *Subnet*

**Return type** *Response*

**list\_vcns** (*compartment\_id*, *\*\*kwargs*)

ListVcns Lists the Virtual Cloud Networks (VCNs) in the specified compartment.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.  
Example: 500
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *Vcn*

**Return type** *Response*

**list\_virtual\_circuit\_bandwidth\_shapes** (*compartment\_id*, *\*\*kwargs*)

ListVirtualCircuitBandwidthShapes Lists the available bandwidth levels for virtual circuits. You need this information so you can specify your desired bandwidth level (i.e., shape) when you create a virtual circuit.

For the compartment ID, provide the OCID of your tenancy (the root compartment).

For more information about virtual circuits, see [FastConnect Overview](#).



**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: 500

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *VirtualCircuitBandwidthShape*

**Return type** *Response*

**list\_virtual\_circuits** (*compartment\_id*, *\*\*kwargs*)

ListVirtualCircuits Lists the virtual circuits in the specified compartment.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: 500

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

**Returns** A *Response* object with data of type list of *VirtualCircuit*

**Return type** *Response*

**update\_cpe** (*cpe\_id*, *update\_cpe\_details*, *\*\*kwargs*)

UpdateCpe Updates the specified CPE’s display name. Avoid entering confidential information.

**Parameters**

- **cpe\_id** (*str*) – (required) The OCID of the CPE.
- **update\_cpe\_details** (*UpdateCpeDetails*) – (required) Details object for updating a CPE.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *Cpe*

**Return type** *Response*

**update\_cross\_connect** (*cross\_connect\_id*, *update\_cross\_connect\_details*, *\*\*kwargs*)

UpdateCrossConnect Updates the specified cross-connect.

**Parameters**

- **cross\_connect\_id** (*str*) – (required) The OCID of the cross-connect.
- **update\_cross\_connect\_details** (*UpdateCrossConnectDetails*) – (required) Update CrossConnect fields.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a

previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource's current etag value.

**Returns** A *Response* object with data of type *CrossConnect*

**Return type** *Response*

**update\_cross\_connect\_group** (*cross\_connect\_group\_id*, *update\_cross\_connect\_group\_details*, *\*\*kwargs*)

UpdateCrossConnectGroup Updates the specified cross-connect group's display name. Avoid entering confidential information.

**Parameters**

- **cross\_connect\_group\_id** (*str*) – (required) The OCID of the cross-connect group.
- **update\_cross\_connect\_group\_details** (*UpdateCrossConnectGroupDetails*) – (required) Update CrossConnectGroup fields
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource's current etag value.

**Returns** A *Response* object with data of type *CrossConnectGroup*

**Return type** *Response*

**update\_dhcp\_options** (*dhcp\_id*, *update\_dhcp\_details*, *\*\*kwargs*)

UpdateDhcpOptions Updates the specified set of DHCP options. You can update the display name or the options themselves. Avoid entering confidential information.

Note that the *options* object you provide replaces the entire existing set of options.

**Parameters**

- **dhcp\_id** (*str*) – (required) The OCID for the set of DHCP options.
- **update\_dhcp\_details** (*UpdateDhcpDetails*) – (required) Request object for updating a set of DHCP options.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource's current etag value.

**Returns** A *Response* object with data of type *DhcpOptions*

**Return type** *Response*

**update\_drg** (*drg\_id*, *update\_drg\_details*, *\*\*kwargs*)

UpdateDrg Updates the specified DRG's display name. Avoid entering confidential information.

**Parameters**

- **drg\_id** (*str*) – (required) The OCID of the DRG.
- **update\_drg\_details** (*UpdateDrgDetails*) – (required) Details object for updating a DRG.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource's current etag value.

**Returns** A *Response* object with data of type *Drg*

**Return type** *Response*

**update\_drg\_attachment** (*drg\_attachment\_id*, *update\_drg\_attachment\_details*, *\*\*kwargs*)

UpdateDrgAttachment Updates the display name for the specified *DrgAttachment*. Avoid entering confidential information.

**Parameters**

- **drg\_attachment\_id** (*str*) – (required) The OCID of the DRG attachment.
- **update\_drg\_attachment\_details** (*UpdateDrgAttachmentDetails*) – (required) Details object for updating a *DrgAttachment*.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *DrgAttachment*

**Return type** *Response*

**update\_internet\_gateway** (*ig\_id*, *update\_internet\_gateway\_details*, *\*\*kwargs*)

UpdateInternetGateway Updates the specified Internet Gateway. You can disable/enable it, or change its display name. Avoid entering confidential information.

If the gateway is disabled, that means no traffic will flow to/from the internet even if there’s a route rule that enables that traffic.

**Parameters**

- **ig\_id** (*str*) – (required) The OCID of the Internet Gateway.
- **update\_internet\_gateway\_details** (*UpdateInternetGatewayDetails*) – (required) Details for updating the Internet Gateway.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *InternetGateway*

**Return type** *Response*

**update\_ip\_sec\_connection** (*ipsec\_id*, *update\_ip\_sec\_connection\_details*, *\*\*kwargs*)

UpdateIPSecConnection Updates the display name for the specified IPSec connection. Avoid entering confidential information.

**Parameters**

- **ipsec\_id** (*str*) – (required) The OCID of the IPSec connection.
- **update\_ip\_sec\_connection\_details** (*UpdateIPSecConnectionDetails*) – (required) Details object for updating a IPSec connection.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *IPSecConnection*

**Return type** *Response*

**update\_private\_ip** (*private\_ip\_id*, *update\_private\_ip\_details*, *\*\*kwargs*)

UpdatePrivateIp Updates the specified private IP. You must specify the object's OCID. Use this operation if you want to:

- Move a secondary private IP to a different VNIC in the same subnet.
- Change the display name for a secondary private IP.
- Change the hostname for a secondary private IP.

This operation cannot be used with primary private IPs. To update the hostname for the primary IP on a VNIC, use `update_vnic()`.

**Parameters**

- **private\_ip\_id** (*str*) – (required) The private IP's OCID.
- **update\_private\_ip\_details** (`UpdatePrivateIpDetails`) – (required) Private IP details.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource's current etag value.

**Returns** A *Response* object with data of type *PrivateIp*

**Return type** *Response*

**update\_route\_table** (*rt\_id*, *update\_route\_table\_details*, *\*\*kwargs*)

UpdateRouteTable Updates the specified route table's display name or route rules. Avoid entering confidential information.

Note that the *routeRules* object you provide replaces the entire existing set of rules.

**Parameters**

- **rt\_id** (*str*) – (required) The OCID of the route table.
- **update\_route\_table\_details** (`UpdateRouteTableDetails`) – (required) Details object for updating a route table.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource's current etag value.

**Returns** A *Response* object with data of type *RouteTable*

**Return type** *Response*

**update\_security\_list** (*security\_list\_id*, *update\_security\_list\_details*, *\*\*kwargs*)

UpdateSecurityList Updates the specified security list's display name or rules. Avoid entering confidential information.

Note that the *egressSecurityRules* or *ingressSecurityRules* objects you provide replace the entire existing objects.

**Parameters**

- **security\_list\_id** (*str*) – (required) The OCID of the security list.
- **update\_security\_list\_details** (`UpdateSecurityListDetails`) – (required) Updated details for the security list.

- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *SecurityList*

**Return type** *Response*

**update\_subnet** (*subnet\_id*, *update\_subnet\_details*, *\*\*kwargs*)

UpdateSubnet Updates the specified subnet’s display name. Avoid entering confidential information.

**Parameters**

- **subnet\_id** (*str*) – (required) The OCID of the subnet.
- **update\_subnet\_details** (*UpdateSubnetDetails*) – (required) Details object for updating a subnet.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *Subnet*

**Return type** *Response*

**update\_vcn** (*vcn\_id*, *update\_vcn\_details*, *\*\*kwargs*)

UpdateVcn Updates the specified VCN’s display name. Avoid entering confidential information.

**Parameters**

- **vcn\_id** (*str*) – (required) The OCID of the VCN.
- **update\_vcn\_details** (*UpdateVcnDetails*) – (required) Details object for updating a VCN.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *Vcn*

**Return type** *Response*

**update\_virtual\_circuit** (*virtual\_circuit\_id*, *update\_virtual\_circuit\_details*, *\*\*kwargs*)

UpdateVirtualCircuit Updates the specified virtual circuit. This can be called by either the customer who owns the virtual circuit, or the provider (when provisioning or de-provisioning the virtual circuit from their end). The documentation for `update_virtual_circuit_details()` indicates who can update each property of the virtual circuit.

**Important:** If the virtual circuit is working and in the PROVISIONED state, updating any of the network-related properties (such as the DRG being used, the BGP ASN, etc.) will cause the virtual circuit’s state to switch to PROVISIONING and the related BGP session to go down. After Oracle re-provisions the virtual circuit, its state will return to PROVISIONED. Make sure you confirm that the associated BGP session is back up. For more information about the various states and how to test connectivity, see [FastConnect Overview](#).

**Parameters**

- **virtual\_circuit\_id** (*str*) – (required) The OCID of the virtual circuit.

- **update\_virtual\_circuit\_details** (`UpdateVirtualCircuitDetails`) – (required) Update `VirtualCircuit` fields.
- **if\_match** (`str`) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *VirtualCircuit*

**Return type** *Response*

**update\_vnic** (`vnic_id`, `update_vnic_details`, *\*\*kwargs*)  
 UpdateVnic Updates the specified VNIC.

**Parameters**

- **vnic\_id** (`str`) – (required) The OCID of the VNIC.
- **update\_vnic\_details** (`UpdateVnicDetails`) – (required) Details object for updating a VNIC.
- **if\_match** (`str`) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *Vnic*

**Return type** *Response*

## Models

**class** `oraclebmc.core.models.AttachIScsiVolumeDetails`

**use\_chap**

Gets the `use_chap` of this `AttachIScsiVolumeDetails`. Whether to use CHAP authentication for the volume attachment. Defaults to false.

**Returns** The `use_chap` of this `AttachIScsiVolumeDetails`.

**Return type** `bool`

**class** `oraclebmc.core.models.AttachVnicDetails`

**create\_vnic\_details**

Gets the `create_vnic_details` of this `AttachVnicDetails`. Details for creating a new VNIC.

**Returns** The `create_vnic_details` of this `AttachVnicDetails`.

**Return type** *CreateVnicDetails*

**display\_name**

Gets the `display_name` of this `AttachVnicDetails`. A user-friendly name for the attachment. Does not have to be unique, and it cannot be changed.

**Returns** The `display_name` of this `AttachVnicDetails`.

**Return type** `str`

**instance\_id**

Gets the `instance_id` of this `AttachVnicDetails`. The OCID of the instance.

**Returns** The instance\_id of this AttachVnicDetails.

**Return type** str

**class** oraclebmc.core.models.**AttachVolumeDetails**

**display\_name**

Gets the display\_name of this AttachVolumeDetails. A user-friendly name. Does not have to be unique, and it cannot be changed. Avoid entering confidential information.

**Returns** The display\_name of this AttachVolumeDetails.

**Return type** str

**static get\_subtype** (*object\_dictionary*)

Given the hash representation of a subtype of this class, use the info in the hash to return the class of the subtype.

**instance\_id**

Gets the instance\_id of this AttachVolumeDetails. The OCID of the instance.

**Returns** The instance\_id of this AttachVolumeDetails.

**Return type** str

**type**

Gets the type of this AttachVolumeDetails. The type of volume. The only supported value is "iscsi".

**Returns** The type of this AttachVolumeDetails.

**Return type** str

**volume\_id**

Gets the volume\_id of this AttachVolumeDetails. The OCID of the volume.

**Returns** The volume\_id of this AttachVolumeDetails.

**Return type** str

**class** oraclebmc.core.models.**CaptureConsoleHistoryDetails**

**instance\_id**

Gets the instance\_id of this CaptureConsoleHistoryDetails. The OCID of the instance to get the console history from.

**Returns** The instance\_id of this CaptureConsoleHistoryDetails.

**Return type** str

**class** oraclebmc.core.models.**ConsoleHistory**

**availability\_domain**

Gets the availability\_domain of this ConsoleHistory. The Availability Domain of an instance.

Example: *Uocm:PHX-AD-1*

**Returns** The availability\_domain of this ConsoleHistory.

**Return type** str

**compartment\_id**

Gets the compartment\_id of this ConsoleHistory. The OCID of the compartment.

**Returns** The compartment\_id of this ConsoleHistory.

**Return type** str

**display\_name**

Gets the display\_name of this ConsoleHistory. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

Example: *My console history metadata*

**Returns** The display\_name of this ConsoleHistory.

**Return type** str

**id**

Gets the id of this ConsoleHistory. The OCID of the console history metadata object.

**Returns** The id of this ConsoleHistory.

**Return type** str

**instance\_id**

Gets the instance\_id of this ConsoleHistory. The OCID of the instance this console history was fetched from.

**Returns** The instance\_id of this ConsoleHistory.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this ConsoleHistory. The current state of the console history.

Allowed values for this property are: "REQUESTED", "GETTING-HISTORY", "SUCCEEDED", "FAILED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this ConsoleHistory.

**Return type** str

**time\_created**

Gets the time\_created of this ConsoleHistory. The date and time the history was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this ConsoleHistory.

**Return type** datetime

**class** oraclebmc.core.models.Cpe

**compartment\_id**

Gets the compartment\_id of this Cpe. The OCID of the compartment containing the CPE.

**Returns** The compartment\_id of this Cpe.

**Return type** str

**display\_name**

Gets the display\_name of this Cpe. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this Cpe.

**Return type** str



**id**

Gets the id of this Cpe. The CPE's Oracle ID (OCID).

**Returns** The id of this Cpe.

**Return type** str

**ip\_address**

Gets the ip\_address of this Cpe. The public IP address of the on-premise router.

**Returns** The ip\_address of this Cpe.

**Return type** str

**time\_created**

Gets the time\_created of this Cpe. The date and time the CPE was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this Cpe.

**Return type** datetime

**class** oraclebmc.core.models.**CreateCpeDetails**

**compartment\_id**

Gets the compartment\_id of this CreateCpeDetails. The OCID of the compartment to contain the CPE.

**Returns** The compartment\_id of this CreateCpeDetails.

**Return type** str

**display\_name**

Gets the display\_name of this CreateCpeDetails. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this CreateCpeDetails.

**Return type** str

**ip\_address**

Gets the ip\_address of this CreateCpeDetails. The public IP address of the on-premise router.

Example: *143.19.23.16*

**Returns** The ip\_address of this CreateCpeDetails.

**Return type** str

**class** oraclebmc.core.models.**CreateCrossConnectDetails**

**compartment\_id**

Gets the compartment\_id of this CreateCrossConnectDetails. The OCID of the compartment to contain the cross-connect.

**Returns** The compartment\_id of this CreateCrossConnectDetails.

**Return type** str

**cross\_connect\_group\_id**

Gets the cross\_connect\_group\_id of this CreateCrossConnectDetails. The OCID of the cross-connect group to put this cross-connect in.

**Returns** The cross\_connect\_group\_id of this CreateCrossConnectDetails.

**Return type** str

**display\_name**

Gets the `display_name` of this `CreateCrossConnectDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `CreateCrossConnectDetails`.

**Return type** str

**far\_cross\_connect\_or\_cross\_connect\_group\_id**

Gets the `far_cross_connect_or_cross_connect_group_id` of this `CreateCrossConnectDetails`. If you already have an existing cross-connect or cross-connect group at this `FastConnect` location, and you want this new cross-connect to be on a different router (for the purposes of redundancy), provide the OCID of that existing cross-connect or cross-connect group.

**Returns** The `far_cross_connect_or_cross_connect_group_id` of this `CreateCrossConnectDetails`.

**Return type** str

**location\_name**

Gets the `location_name` of this `CreateCrossConnectDetails`. The name of the `FastConnect` location where this cross-connect will be installed. To get a list of the available locations, see `list_cross_connect_locations()`.

Example: *CyrusOne, Chandler, AZ*

**Returns** The `location_name` of this `CreateCrossConnectDetails`.

**Return type** str

**near\_cross\_connect\_or\_cross\_connect\_group\_id**

Gets the `near_cross_connect_or_cross_connect_group_id` of this `CreateCrossConnectDetails`. If you already have an existing cross-connect or cross-connect group at this `FastConnect` location, and you want this new cross-connect to be on the same router, provide the OCID of that existing cross-connect or cross-connect group.

**Returns** The `near_cross_connect_or_cross_connect_group_id` of this `CreateCrossConnectDetails`.

**Return type** str

**port\_speed\_shape\_name**

Gets the `port_speed_shape_name` of this `CreateCrossConnectDetails`. The port speed for this cross-connect. To get a list of the available port speeds, see `list_crossconnect_port_speed_shapes()`.

Example: *10 Gbps*

**Returns** The `port_speed_shape_name` of this `CreateCrossConnectDetails`.

**Return type** str

**class** `oraclebmc.core.models.CreateCrossConnectGroupDetails`

**compartment\_id**

Gets the `compartment_id` of this `CreateCrossConnectGroupDetails`. The OCID of the compartment to contain the cross-connect group.

**Returns** The `compartment_id` of this `CreateCrossConnectGroupDetails`.

**Return type** str

**display\_name**

Gets the display\_name of this CreateCrossConnectGroupDetails. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this CreateCrossConnectGroupDetails.

**Return type** str

**class** oraclebmc.core.models.CreateDhcpDetails

**compartment\_id**

Gets the compartment\_id of this CreateDhcpDetails. The OCID of the compartment to contain the set of DHCP options.

**Returns** The compartment\_id of this CreateDhcpDetails.

**Return type** str

**display\_name**

Gets the display\_name of this CreateDhcpDetails. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this CreateDhcpDetails.

**Return type** str

**options**

Gets the options of this CreateDhcpDetails. A set of DHCP options.

**Returns** The options of this CreateDhcpDetails.

**Return type** list[DhcpOption]

**vcn\_id**

Gets the vcn\_id of this CreateDhcpDetails. The OCID of the VCN the set of DHCP options belongs to.

**Returns** The vcn\_id of this CreateDhcpDetails.

**Return type** str

**class** oraclebmc.core.models.CreateDrgAttachmentDetails

**display\_name**

Gets the display\_name of this CreateDrgAttachmentDetails. A user-friendly name. Does not have to be unique. Avoid entering confidential information.

**Returns** The display\_name of this CreateDrgAttachmentDetails.

**Return type** str

**drg\_id**

Gets the drg\_id of this CreateDrgAttachmentDetails. The OCID of the DRG.

**Returns** The drg\_id of this CreateDrgAttachmentDetails.

**Return type** str

**vcn\_id**

Gets the vcn\_id of this CreateDrgAttachmentDetails. The OCID of the VCN.

**Returns** The vcn\_id of this CreateDrgAttachmentDetails.

**Return type** str

`class oraclebmc.core.models.CreateDrgDetails`

**compartment\_id**

Gets the `compartment_id` of this `CreateDrgDetails`. The OCID of the compartment to contain the DRG.

**Returns** The `compartment_id` of this `CreateDrgDetails`.

**Return type** str

**display\_name**

Gets the `display_name` of this `CreateDrgDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `CreateDrgDetails`.

**Return type** str

`class oraclebmc.core.models.CreateIPSecConnectionDetails`

**compartment\_id**

Gets the `compartment_id` of this `CreateIPSecConnectionDetails`. The OCID of the compartment to contain the IPSec connection.

**Returns** The `compartment_id` of this `CreateIPSecConnectionDetails`.

**Return type** str

**cpe\_id**

Gets the `cpe_id` of this `CreateIPSecConnectionDetails`. The OCID of the CPE.

**Returns** The `cpe_id` of this `CreateIPSecConnectionDetails`.

**Return type** str

**display\_name**

Gets the `display_name` of this `CreateIPSecConnectionDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `CreateIPSecConnectionDetails`.

**Return type** str

**drg\_id**

Gets the `drg_id` of this `CreateIPSecConnectionDetails`. The OCID of the DRG.

**Returns** The `drg_id` of this `CreateIPSecConnectionDetails`.

**Return type** str

**static\_routes**

Gets the `static_routes` of this `CreateIPSecConnectionDetails`. Static routes to the CPE. At least one route must be included. The CIDR must not be a multicast address or class E address.

Example: *10.0.1.0/24*

**Returns** The `static_routes` of this `CreateIPSecConnectionDetails`.

**Return type** list[str]

`class oraclebmc.core.models.CreateImageDetails`

**compartment\_id**

Gets the `compartment_id` of this `CreateImageDetails`. The OCID of the compartment containing the instance you want to use as the basis for the image.

**Returns** The `compartment_id` of this `CreateImageDetails`.

**Return type** str

**display\_name**

Gets the `display_name` of this `CreateImageDetails`. A user-friendly name for the image. It does not have to be unique, and it's changeable. Avoid entering confidential information.

You cannot use an Oracle-provided image name as a custom image name.

Example: *My Oracle Linux image*

**Returns** The `display_name` of this `CreateImageDetails`.

**Return type** str

**image\_source\_details**

Gets the `image_source_details` of this `CreateImageDetails`. Details for creating an image through import

**Returns** The `image_source_details` of this `CreateImageDetails`.

**Return type** *ImageSourceDetails*

**instance\_id**

Gets the `instance_id` of this `CreateImageDetails`. The OCID of the instance you want to use as the basis for the image.

**Returns** The `instance_id` of this `CreateImageDetails`.

**Return type** str

**class** oraclebmc.core.models.**CreateInternetGatewayDetails**

**compartment\_id**

Gets the `compartment_id` of this `CreateInternetGatewayDetails`. The OCID of the compartment to contain the Internet Gateway.

**Returns** The `compartment_id` of this `CreateInternetGatewayDetails`.

**Return type** str

**display\_name**

Gets the `display_name` of this `CreateInternetGatewayDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `CreateInternetGatewayDetails`.

**Return type** str

**is\_enabled**

Gets the `is_enabled` of this `CreateInternetGatewayDetails`. Whether the gateway is enabled upon creation.

**Returns** The `is_enabled` of this `CreateInternetGatewayDetails`.

**Return type** bool

**vcn\_id**

Gets the `vcn_id` of this `CreateInternetGatewayDetails`. The OCID of the VCN the Internet Gateway is attached to.

**Returns** The `vcn_id` of this `CreateInternetGatewayDetails`.

**Return type** str

**class** oraclebmc.core.models.**CreatePrivateIpDetails**

**display\_name**

Gets the `display_name` of this `CreatePrivateIpDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `CreatePrivateIpDetails`.

**Return type** str

**hostname\_label**

Gets the `hostname_label` of this `CreatePrivateIpDetails`. The hostname for the private IP. Used for DNS. The value is the hostname portion of the private IP's fully qualified domain name (FQDN) (for example, *bminstance-1* in FQDN *bminstance-1.subnet123.vcn1.oraclevcn.com*). Must be unique across all VNICs in the subnet and comply with [RFC 952](#) and [RFC 1123](#).

For more information, see [DNS in Your Virtual Cloud Network](#).

Example: *bminstance-1*

**Returns** The `hostname_label` of this `CreatePrivateIpDetails`.

**Return type** str

**ip\_address**

Gets the `ip_address` of this `CreatePrivateIpDetails`. A private IP address of your choice. Must be an available IP address within the subnet's CIDR. If you don't specify a value, Oracle automatically assigns a private IP address from the subnet.

Example: *10.0.3.3*

**Returns** The `ip_address` of this `CreatePrivateIpDetails`.

**Return type** str

**vnic\_id**

Gets the `vnic_id` of this `CreatePrivateIpDetails`. The OCID of the VNIC to assign the private IP to. The VNIC and private IP must be in the same subnet.

**Returns** The `vnic_id` of this `CreatePrivateIpDetails`.

**Return type** str

**class** oraclebmc.core.models.**CreateRouteTableDetails**

**compartment\_id**

Gets the `compartment_id` of this `CreateRouteTableDetails`. The OCID of the compartment to contain the route table.

**Returns** The `compartment_id` of this `CreateRouteTableDetails`.

**Return type** str

**display\_name**

Gets the `display_name` of this `CreateRouteTableDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `CreateRouteTableDetails`.

**Return type** str

**route\_rules**

Gets the route\_rules of this CreateRouteTableDetails. The collection of rules used for routing destination IPs to network devices.

**Returns** The route\_rules of this CreateRouteTableDetails.

**Return type** list[RouteRule]

**vcn\_id**

Gets the vcn\_id of this CreateRouteTableDetails. The OCID of the VCN the route table belongs to.

**Returns** The vcn\_id of this CreateRouteTableDetails.

**Return type** str

**class** oraclebmc.core.models.**CreateSecurityListDetails**

**compartment\_id**

Gets the compartment\_id of this CreateSecurityListDetails. The OCID of the compartment to contain the security list.

**Returns** The compartment\_id of this CreateSecurityListDetails.

**Return type** str

**display\_name**

Gets the display\_name of this CreateSecurityListDetails. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this CreateSecurityListDetails.

**Return type** str

**egress\_security\_rules**

Gets the egress\_security\_rules of this CreateSecurityListDetails. Rules for allowing egress IP packets.

**Returns** The egress\_security\_rules of this CreateSecurityListDetails.

**Return type** list[EgressSecurityRule]

**ingress\_security\_rules**

Gets the ingress\_security\_rules of this CreateSecurityListDetails. Rules for allowing ingress IP packets.

**Returns** The ingress\_security\_rules of this CreateSecurityListDetails.

**Return type** list[IngressSecurityRule]

**vcn\_id**

Gets the vcn\_id of this CreateSecurityListDetails. The OCID of the VCN the security list belongs to.

**Returns** The vcn\_id of this CreateSecurityListDetails.

**Return type** str

**class** oraclebmc.core.models.**CreateSubnetDetails**

**availability\_domain**

Gets the availability\_domain of this CreateSubnetDetails. The Availability Domain to contain the subnet.

Example: *Ucm:PHX-AD-1*

**Returns** The availability\_domain of this CreateSubnetDetails.

**Return type** str

**cidr\_block**

Gets the `cidr_block` of this `CreateSubnetDetails`. The CIDR IP address range of the subnet.

Example: *172.16.1.0/24*

**Returns** The `cidr_block` of this `CreateSubnetDetails`.

**Return type** `str`

**compartment\_id**

Gets the `compartment_id` of this `CreateSubnetDetails`. The OCID of the compartment to contain the subnet.

**Returns** The `compartment_id` of this `CreateSubnetDetails`.

**Return type** `str`

**dhcp\_options\_id**

Gets the `dhcp_options_id` of this `CreateSubnetDetails`. The OCID of the set of DHCP options the subnet will use. If you don't provide a value, the subnet will use the VCN's default set of DHCP options.

**Returns** The `dhcp_options_id` of this `CreateSubnetDetails`.

**Return type** `str`

**display\_name**

Gets the `display_name` of this `CreateSubnetDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `CreateSubnetDetails`.

**Return type** `str`

**dns\_label**

Gets the `dns_label` of this `CreateSubnetDetails`. A DNS label for the subnet, used in conjunction with the VNIC's hostname and VCN's DNS label to form a fully qualified domain name (FQDN) for each VNIC within this subnet (e.g., *bminstance-1.subnet123.vcn1.oraclevcn.com*). Must be an alphanumeric string that begins with a letter and is unique within the VCN. The value cannot be changed.

This value must be set if you want to use the Internet and VCN Resolver to resolve the hostnames of instances in the subnet. It can only be set if the VCN itself was created with a DNS label.

For more information, see [DNS in Your Virtual Cloud Network](#).

Example: *subnet123*

**Returns** The `dns_label` of this `CreateSubnetDetails`.

**Return type** `str`

**prohibit\_public\_ip\_on\_vnic**

Gets the `prohibit_public_ip_on_vnic` of this `CreateSubnetDetails`. Whether VNICs within this subnet can have public IP addresses. Defaults to false, which means VNICs created in this subnet will automatically be assigned public IP addresses unless specified otherwise during instance launch or VNIC creation (with the *assignPublicIp* flag in *CreateVnicDetails*). If *prohibitPublicIpOnVnic* is set to true, VNICs created in this subnet cannot have public IP addresses (i.e., it's a private subnet).

Example: *true*

**Returns** The `prohibit_public_ip_on_vnic` of this `CreateSubnetDetails`.

**Return type** `bool`

**route\_table\_id**

Gets the `route_table_id` of this `CreateSubnetDetails`. The OCID of the route table the subnet will use. If you don't provide a value, the subnet will use the VCN's default route table.



**Returns** The `route_table_id` of this `CreateSubnetDetails`.

**Return type** `str`

**security\_list\_ids**

Gets the `security_list_ids` of this `CreateSubnetDetails`. OCIDs for the security lists to associate with the subnet. If you don't provide a value, the VCN's default security list will be associated with the subnet. Remember that security lists are associated at the subnet level, but the rules are applied to the individual VNICs in the subnet.

**Returns** The `security_list_ids` of this `CreateSubnetDetails`.

**Return type** `list[str]`

**vcn\_id**

Gets the `vcn_id` of this `CreateSubnetDetails`. The OCID of the VCN to contain the subnet.

**Returns** The `vcn_id` of this `CreateSubnetDetails`.

**Return type** `str`

`class oraclebmc.core.models.CreateVcnDetails`

**cidr\_block**

Gets the `cidr_block` of this `CreateVcnDetails`. The CIDR IP address block of the VCN.

Example: `172.16.0.0/16`

**Returns** The `cidr_block` of this `CreateVcnDetails`.

**Return type** `str`

**compartment\_id**

Gets the `compartment_id` of this `CreateVcnDetails`. The OCID of the compartment to contain the VCN.

**Returns** The `compartment_id` of this `CreateVcnDetails`.

**Return type** `str`

**display\_name**

Gets the `display_name` of this `CreateVcnDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `CreateVcnDetails`.

**Return type** `str`

**dns\_label**

Gets the `dns_label` of this `CreateVcnDetails`. A DNS label for the VCN, used in conjunction with the VNIC's hostname and subnet's DNS label to form a fully qualified domain name (FQDN) for each VNIC within this subnet (e.g., `bminstance-1.subnet123.vcn1.oraclevcn.com`). Not required to be unique, but it's a best practice to set unique DNS labels for VCNs in your tenancy. Must be an alphanumeric string that begins with a letter. The value cannot be changed.

You must set this value if you want instances to be able to use hostnames to resolve other instances in the VCN. Otherwise the Internet and VCN Resolver will not work.

For more information, see [DNS in Your Virtual Cloud Network](#).

Example: `vcn1`

**Returns** The `dns_label` of this `CreateVcnDetails`.

**Return type** `str`

`class oraclebmc.core.models.CreateVirtualCircuitDetails`

**bandwidth\_shape\_name**

Gets the `bandwidth_shape_name` of this `CreateVirtualCircuitDetails`. The provisioned data rate of the connection. To get a list of the available bandwidth levels (i.e., shapes), see `list_virtual_circuit_bandwidth_shapes()`.

Example: *10 Gbps*

**Returns** The `bandwidth_shape_name` of this `CreateVirtualCircuitDetails`.

**Return type** str

**compartment\_id**

Gets the `compartment_id` of this `CreateVirtualCircuitDetails`. The OCID of the compartment to contain the virtual circuit.

**Returns** The `compartment_id` of this `CreateVirtualCircuitDetails`.

**Return type** str

**cross\_connect\_mappings**

Gets the `cross_connect_mappings` of this `CreateVirtualCircuitDetails`. Create a *CrossConnectMapping* for each cross-connect or cross-connect group this virtual circuit will run on.

**Returns** The `cross_connect_mappings` of this `CreateVirtualCircuitDetails`.

**Return type** list[CrossConnectMapping]

**customer\_bgp\_asn**

Gets the `customer_bgp_asn` of this `CreateVirtualCircuitDetails`. Your BGP ASN (either public or private). Provide this value only if there's a BGP session that goes from your edge router to Oracle. Otherwise, leave this empty or null.

**Returns** The `customer_bgp_asn` of this `CreateVirtualCircuitDetails`.

**Return type** int

**display\_name**

Gets the `display_name` of this `CreateVirtualCircuitDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `CreateVirtualCircuitDetails`.

**Return type** str

**gateway\_id**

Gets the `gateway_id` of this `CreateVirtualCircuitDetails`. The OCID of the *Drg* that this virtual circuit uses.

**Returns** The `gateway_id` of this `CreateVirtualCircuitDetails`.

**Return type** str

**provider\_name**

Gets the `provider_name` of this `CreateVirtualCircuitDetails`. The name of the provider (if you're connecting via a provider). To get a list of the provider names, see `list_fast_connect_provider_services()`.

**Returns** The `provider_name` of this `CreateVirtualCircuitDetails`.

**Return type** str

**provider\_service\_name**

Gets the `provider_service_name` of this `CreateVirtualCircuitDetails`. The name of the service offered by the provider (if you're connecting via a provider). To get a list of the available service offerings, see `list_fast_connect_provider_services()`.

**Returns** The `provider_service_name` of this `CreateVirtualCircuitDetails`.

**Return type** str

**region**

Gets the region of this `CreateVirtualCircuitDetails`. The Oracle Bare Metal Cloud Services region where this virtual circuit is located.

Example: *phx*

**Returns** The region of this `CreateVirtualCircuitDetails`.

**Return type** str

**type**

Gets the type of this `CreateVirtualCircuitDetails`. The type of IP addresses used in this virtual circuit. PRIVATE means [RFC 1918](#) addresses (10.0.0/8, 172.16/12, and 192.168/16). Only PRIVATE is supported.

Allowed values for this property are: "PUBLIC", "PRIVATE"

**Returns** The type of this `CreateVirtualCircuitDetails`.

**Return type** str

`class oraclebmc.core.models.CreateVnicDetails`

**assign\_public\_ip**

Gets the `assign_public_ip` of this `CreateVnicDetails`. Whether the VNIC should be assigned a public IP address. Defaults to whether the subnet is public or private. If not set and the VNIC is being created in a private subnet (i.e., where `prohibitPublicIpOnVnic = true` in the `Subnet`), then no public IP address is assigned. If not set and the subnet is public (`prohibitPublicIpOnVnic = false`), then a public IP address is assigned. If set to true and `prohibitPublicIpOnVnic = true`, an error is returned.

**Note:** This public IP address is associated with the primary private IP on the VNIC. Secondary private IPs cannot have public IP addresses associated with them. For more information, see [Managing IP Addresses](#).

Example: *false*

**Returns** The `assign_public_ip` of this `CreateVnicDetails`.

**Return type** bool

**display\_name**

Gets the `display_name` of this `CreateVnicDetails`. A user-friendly name for the VNIC. Does not have to be unique. Avoid entering confidential information.

**Returns** The `display_name` of this `CreateVnicDetails`.

**Return type** str

**hostname\_label**

Gets the `hostname_label` of this `CreateVnicDetails`. The hostname for the VNIC's primary private IP. Used for DNS. The value is the hostname portion of the primary private IP's fully qualified domain name (FQDN) (for example, *binstance-1* in FQDN *binstance-1.subnet123.vcn1.oraclevcn.com*). Must be unique across all VNICs in the subnet and comply with [RFC 952](#) and [RFC 1123](#). The value appears in the `Vnic` object and also the `PrivateIp` object returned by `list_private_ips()` and `get_private_ip()`.

For more information, see [DNS in Your Virtual Cloud Network](#).

When launching an instance, use this *hostnameLabel* instead of the deprecated *hostnameLabel* in `launch_instance_details()`. If you provide both, the values must match.

Example: *bminstance-1*

**Returns** The `hostname_label` of this `CreateVnicDetails`.

**Return type** str

#### **private\_ip**

Gets the `private_ip` of this `CreateVnicDetails`. A private IP address of your choice to assign to the VNIC. Must be an available IP address within the subnet's CIDR. If you don't specify a value, Oracle automatically assigns a private IP address from the subnet. This is the VNIC's *primary* private IP address. The value appears in the `Vnic` object and also the `PrivateIp` object returned by `list_private_ips()` and `get_private_ip()`.

Example: *10.0.3.3*

**Returns** The `private_ip` of this `CreateVnicDetails`.

**Return type** str

#### **subnet\_id**

Gets the `subnet_id` of this `CreateVnicDetails`. The OCID of the subnet to create the VNIC in. When launching an instance, use this *subnetId* instead of the deprecated *subnetId* in `launch_instance_details()`. At least one of them is required; if you provide both, the values must match.

**Returns** The `subnet_id` of this `CreateVnicDetails`.

**Return type** str

**class** `oraclebmc.core.models.CreateVolumeBackupDetails`

#### **display\_name**

Gets the `display_name` of this `CreateVolumeBackupDetails`. A user-friendly name for the volume backup. Does not have to be unique and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `CreateVolumeBackupDetails`.

**Return type** str

#### **volume\_id**

Gets the `volume_id` of this `CreateVolumeBackupDetails`. The OCID of the volume that needs to be backed up.

**Returns** The `volume_id` of this `CreateVolumeBackupDetails`.

**Return type** str

**class** `oraclebmc.core.models.CreateVolumeDetails`

#### **availability\_domain**

Gets the `availability_domain` of this `CreateVolumeDetails`. The Availability Domain of the volume.

Example: *Uocm:PHX-AD-1*

**Returns** The `availability_domain` of this `CreateVolumeDetails`.

**Return type** str

**compartment\_id**

Gets the compartment\_id of this CreateVolumeDetails. The OCID of the compartment that contains the volume.

**Returns** The compartment\_id of this CreateVolumeDetails.

**Return type** str

**display\_name**

Gets the display\_name of this CreateVolumeDetails. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this CreateVolumeDetails.

**Return type** str

**size\_in\_mbs**

Gets the size\_in\_mbs of this CreateVolumeDetails. The size of the volume in MBs.

**Returns** The size\_in\_mbs of this CreateVolumeDetails.

**Return type** int

**volume\_backup\_id**

Gets the volume\_backup\_id of this CreateVolumeDetails. The OCID of the volume backup from which the data should be restored on the newly created volume.

**Returns** The volume\_backup\_id of this CreateVolumeDetails.

**Return type** str

**class** oraclebmc.core.models.**CrossConnect**

**compartment\_id**

Gets the compartment\_id of this CrossConnect. The OCID of the compartment containing the cross-connect group.

**Returns** The compartment\_id of this CrossConnect.

**Return type** str

**cross\_connect\_group\_id**

Gets the cross\_connect\_group\_id of this CrossConnect. The OCID of the cross-connect group this cross-connect belongs to (if any).

**Returns** The cross\_connect\_group\_id of this CrossConnect.

**Return type** str

**display\_name**

Gets the display\_name of this CrossConnect. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this CrossConnect.

**Return type** str

**id**

Gets the id of this CrossConnect. The cross-connect's Oracle ID (OCID).

**Returns** The id of this CrossConnect.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this CrossConnect. The cross-connect's current state.

Allowed values for this property are: "PENDING\_CUSTOMER", "PROVISIONING", "PROVISIONED", "INACTIVE", "TERMINATING", "TERMINATED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this CrossConnect.

**Return type** str

**location\_name**

Gets the location\_name of this CrossConnect. The name of the FastConnect location where this cross-connect is installed.

**Returns** The location\_name of this CrossConnect.

**Return type** str

**port\_name**

Gets the port\_name of this CrossConnect. A string identifying the meet-me room port for this cross-connect.

**Returns** The port\_name of this CrossConnect.

**Return type** str

**port\_speed\_shape\_name**

Gets the port\_speed\_shape\_name of this CrossConnect. The port speed for this cross-connect.

Example: *10 Gbps*

**Returns** The port\_speed\_shape\_name of this CrossConnect.

**Return type** str

**time\_created**

Gets the time\_created of this CrossConnect. The date and time the cross-connect was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this CrossConnect.

**Return type** datetime

**class** oraclebmc.core.models.**CrossConnectGroup**

**compartment\_id**

Gets the compartment\_id of this CrossConnectGroup. The OCID of the compartment containing the cross-connect group.

**Returns** The compartment\_id of this CrossConnectGroup.

**Return type** str

**display\_name**

Gets the display\_name of this CrossConnectGroup. The display name of A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this CrossConnectGroup.

**Return type** str

**id**

Gets the id of this CrossConnectGroup. The cross-connect group's Oracle ID (OCID).

**Returns** The id of this CrossConnectGroup.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this CrossConnectGroup. The cross-connect group's current state.

Allowed values for this property are: "PROVISIONING", "PROVISIONED", "INACTIVE", "TERMINATING", "TERMINATED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this CrossConnectGroup.

**Return type** str

**time\_created**

Gets the time\_created of this CrossConnectGroup. The date and time the cross-connect group was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this CrossConnectGroup.

**Return type** datetime

**class** oraclebmc.core.models.**CrossConnectLocation**

**description**

Gets the description of this CrossConnectLocation. A description of the location.

**Returns** The description of this CrossConnectLocation.

**Return type** str

**name**

Gets the name of this CrossConnectLocation. The name of the location.

Example: *CyrusOne, Chandler, AZ*

**Returns** The name of this CrossConnectLocation.

**Return type** str

**class** oraclebmc.core.models.**CrossConnectMapping**

**bgp\_md5\_auth\_key**

Gets the bgp\_md5\_auth\_key of this CrossConnectMapping. The key for BGP MD5 authentication. Only applicable if your system requires MD5 authentication. If empty or not set (null), that means you don't use BGP MD5 authentication.

**Returns** The bgp\_md5\_auth\_key of this CrossConnectMapping.

**Return type** str

**cross\_connect\_or\_cross\_connect\_group\_id**

Gets the cross\_connect\_or\_cross\_connect\_group\_id of this CrossConnectMapping. The OCID of the cross-connect or cross-connect group for this mapping. Specified by the owner of the cross-connect or cross-connect group (the customer if the customer is colocated with Oracle; the provider if the customer is connecting via provider).

**Returns** The cross\_connect\_or\_cross\_connect\_group\_id of this CrossConnectMapping.

**Return type** str

**customer\_bgp\_peering\_ip**

Gets the customer\_bgp\_peering\_ip of this CrossConnectMapping. The BGP IP address for the router on the other end of the BGP session from Oracle. Specified by the owner of that router. If the session goes from Oracle to a customer, this is the BGP IP address of the customer's edge router. If the session goes from Oracle to a provider, this is the BGP IP address of the provider's edge router. Must use a /30 or /31 subnet mask.

Example: *10.0.0.18/31*

**Returns** The customer\_bgp\_peering\_ip of this CrossConnectMapping.

**Return type** str

**oracle\_bgp\_peering\_ip**

Gets the oracle\_bgp\_peering\_ip of this CrossConnectMapping. The IP address for Oracle's end of the BPG session. Must use a /30 or /31 subnet mask. If the session goes from Oracle to a customer's edge router, the customer specifies this information. If the session goes from Oracle to a provider's edge router, the provider specifies this.

Example: *10.0.0.19/31*

**Returns** The oracle\_bgp\_peering\_ip of this CrossConnectMapping.

**Return type** str

**vlan**

Gets the vlan of this CrossConnectMapping. The number of the specific VLAN (on the cross-connect or cross-connect group) that is assigned to this virtual circuit. Specified by the owner of the cross-connect or cross-connect group (the customer if the customer is colocated with Oracle, or the provider if the customer is connecting via provider).

Example: *200*

**Returns** The vlan of this CrossConnectMapping.

**Return type** int

**class** oraclebmc.core.models.**CrossConnectPortSpeedShape**

**name**

Gets the name of this CrossConnectPortSpeedShape. The name of the port speed shape.

Example: *10 Gbps*

**Returns** The name of this CrossConnectPortSpeedShape.

**Return type** str

**port\_speed\_in\_gbps**

Gets the port\_speed\_in\_gbps of this CrossConnectPortSpeedShape. The port speed in Gbps.

Example: *10*

**Returns** The port\_speed\_in\_gbps of this CrossConnectPortSpeedShape.

**Return type** int

**class** oraclebmc.core.models.**CrossConnectStatus**

**cross\_connect\_id**

Gets the cross\_connect\_id of this CrossConnectStatus. The OCID of the cross-connect.



**Returns** The `cross_connect_id` of this `CrossConnectStatus`.

**Return type** str

**interface\_state**

Gets the `interface_state` of this `CrossConnectStatus`. Whether Oracle’s side of the interface is up or down.

Allowed values for this property are: “UP”, “DOWN”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The `interface_state` of this `CrossConnectStatus`.

**Return type** str

**light\_level\_ind\_bm**

Gets the `light_level_ind_bm` of this `CrossConnectStatus`. The light level of the cross-connect (in dBm).

Example: *14.0*

**Returns** The `light_level_ind_bm` of this `CrossConnectStatus`.

**Return type** float

**light\_level\_indicator**

Gets the `light_level_indicator` of this `CrossConnectStatus`. Status indicator corresponding to the light level.

- NO\_LIGHT:** No measurable light
- LOW\_WARN:** There’s measurable light but it’s too low
- HIGH\_WARN:** Light level is too high
- BAD:** There’s measurable light but the signal-to-noise ratio is bad
- GOOD:** Good light level

Allowed values for this property are: “NO\_LIGHT”, “LOW\_WARN”, “HIGH\_WARN”, “BAD”, “GOOD”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The `light_level_indicator` of this `CrossConnectStatus`.

**Return type** str

**class** oraclebmc.core.models.DhcpDnsOption

**custom\_dns\_servers**

Gets the `custom_dns_servers` of this `DhcpDnsOption`. If you set `serverType` to `CustomDnsServer`, specify the IP address of at least one DNS server of your choice (three maximum).

**Returns** The `custom_dns_servers` of this `DhcpDnsOption`.

**Return type** list[str]

**server\_type**

Gets the `server_type` of this `DhcpDnsOption`. - **VcnLocal:** Reserved for future use.

- VcnLocalPlusInternet:** Also referred to as “Internet and VCN Resolver”.

Instances can resolve internet hostnames (no Internet Gateway is required), and can resolve hostnames of instances in the VCN. This is the default value in the default set of DHCP options in the VCN. For the Internet and VCN Resolver to work across the VCN, there must also be a DNS label set for the VCN, a DNS label set for each subnet, and a hostname for each instance. The Internet and VCN Resolver also enables reverse DNS lookup, which lets you determine the hostname corresponding to the private IP address. For more information, see [DNS in Your Virtual Cloud Network](#).

•**CustomDnsServer:** Instances use a DNS server of your choice (three maximum).

Allowed values for this property are: “VcnLocal”, “VcnLocalPlusInternet”, “CustomDnsServer”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The server\_type of this DhcpDnsOption.

**Return type** str

**class** oraclebmc.core.models.DhcpOption

**static** get\_subtype (*object\_dictionary*)

Given the hash representation of a subtype of this class, use the info in the hash to return the class of the subtype.

**type**

Gets the type of this DhcpOption. The specific DHCP option. Either *DomainNameServer* (for *DhcpDnsOption*) or *SearchDomain* (for *DhcpSearchDomainOption*).

**Returns** The type of this DhcpOption.

**Return type** str

**class** oraclebmc.core.models.DhcpOptions

**compartment\_id**

Gets the compartment\_id of this DhcpOptions. The OCID of the compartment containing the set of DHCP options.

**Returns** The compartment\_id of this DhcpOptions.

**Return type** str

**display\_name**

Gets the display\_name of this DhcpOptions. A user-friendly name. Does not have to be unique, and it’s changeable. Avoid entering confidential information.

**Returns** The display\_name of this DhcpOptions.

**Return type** str

**id**

Gets the id of this DhcpOptions. Oracle ID (OCID) for the set of DHCP options.

**Returns** The id of this DhcpOptions.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this DhcpOptions. The current state of the set of DHCP options.

Allowed values for this property are: “PROVISIONING”, “AVAILABLE”, “TERMINATING”, “TERMINATED”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The lifecycle\_state of this DhcpOptions.

**Return type** str

**options**

Gets the options of this DhcpOptions. The collection of individual DHCP options.

**Returns** The options of this DhcpOptions.

**Return type** list[DhcpOption]

**time\_created**

Gets the time\_created of this DhcpOptions. Date and time the set of DHCP options was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this DhcpOptions.

**Return type** datetime

**vcn\_id**

Gets the vcn\_id of this DhcpOptions. The OCID of the VCN the set of DHCP options belongs to.

**Returns** The vcn\_id of this DhcpOptions.

**Return type** str

**class** oraclebmc.core.models.DhcpSearchDomainOption

**search\_domain\_names**

Gets the search\_domain\_names of this DhcpSearchDomainOption. A single search domain name according to [RFC 952](#) and [RFC 1123](#). During a DNS query, the OS will append this search domain name to the value being queried.

If you set *DhcpDnsOption* to *VcnLocalPlusInternet*, and you assign a DNS label to the VCN during creation, the search domain name in the VCN's default set of DHCP options is automatically set to the VCN domain (e.g., *vcn1.oraclevcn.com*).

If you don't want to use a search domain name, omit this option from the set of DHCP options. Do not include this option with an empty list of search domain names, or with an empty string as the value for any search domain name.

**Returns** The search\_domain\_names of this DhcpSearchDomainOption.

**Return type** list[str]

**class** oraclebmc.core.models.Drg

**compartment\_id**

Gets the compartment\_id of this Drg. The OCID of the compartment containing the DRG.

**Returns** The compartment\_id of this Drg.

**Return type** str

**display\_name**

Gets the display\_name of this Drg. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this Drg.

**Return type** str

**id**

Gets the id of this Drg. The DRG's Oracle ID (OCID).

**Returns** The id of this Drg.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this Drg. The DRG's current state.

Allowed values for this property are: "PROVISIONING", "AVAILABLE", "TERMINATING", "TERMINATED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this Drg.

**Return type** str

**time\_created**

Gets the time\_created of this Drg. The date and time the DRG was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this Drg.

**Return type** datetime

**class oraclebmc.core.models.DrgAttachment**

**compartment\_id**

Gets the compartment\_id of this DrgAttachment. The OCID of the compartment containing the DRG attachment.

**Returns** The compartment\_id of this DrgAttachment.

**Return type** str

**display\_name**

Gets the display\_name of this DrgAttachment. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this DrgAttachment.

**Return type** str

**drg\_id**

Gets the drg\_id of this DrgAttachment. The OCID of the DRG.

**Returns** The drg\_id of this DrgAttachment.

**Return type** str

**id**

Gets the id of this DrgAttachment. The DRG attachment's Oracle ID (OCID).

**Returns** The id of this DrgAttachment.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this DrgAttachment. The DRG attachment's current state.

Allowed values for this property are: "ATTACHING", "ATTACHED", "DETACHING", "DETACHED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this DrgAttachment.

**Return type** str

**time\_created**

Gets the time\_created of this DrgAttachment. The date and time the DRG attachment was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this DrgAttachment.

**Return type** datetime

**vcn\_id**

Gets the vcn\_id of this DrgAttachment. The OCID of the VCN.

**Returns** The vcn\_id of this DrgAttachment.

**Return type** str

**class** oraclebmc.core.models.EgressSecurityRule

**destination**

Gets the destination of this EgressSecurityRule. The destination CIDR block for the egress rule. This is the range of IP addresses that a packet originating from the instance can go to.

**Returns** The destination of this EgressSecurityRule.

**Return type** str

**icmp\_options**

Gets the icmp\_options of this EgressSecurityRule. Optional and valid only for ICMP. Use to specify a particular ICMP type and code as defined in [ICMP Parameters](#). If you specify ICMP as the protocol but omit this object, then all ICMP types and codes are allowed. If you do provide this object, the type is required and the code is optional. To enable MTU negotiation for ingress internet traffic, make sure to allow type 3 (“Destination Unreachable”) code 4 (“Fragmentation Needed and Don’t Fragment was Set”). If you need to specify multiple codes for a single type, create a separate security list rule for each.

**Returns** The icmp\_options of this EgressSecurityRule.

**Return type** *IcmpOptions*

**is\_stateless**

Gets the is\_stateless of this EgressSecurityRule. A stateless rule allows traffic in one direction. Remember to add a corresponding stateless rule in the other direction if you need to support bidirectional traffic. For example, if egress traffic allows TCP destination port 80, there should be an ingress rule to allow TCP source port 80. Defaults to false, which means the rule is stateful and a corresponding rule is not necessary for bidirectional traffic.

**Returns** The is\_stateless of this EgressSecurityRule.

**Return type** bool

**protocol**

Gets the protocol of this EgressSecurityRule. The transport protocol. Specify either *all* or an IPv4 protocol number as defined in [Protocol Numbers](#). Options are supported only for ICMP (“1”), TCP (“6”), and UDP (“17”).

**Returns** The protocol of this EgressSecurityRule.

**Return type** str

**tcp\_options**

Gets the tcp\_options of this EgressSecurityRule. Optional and valid only for TCP. Use to specify particular destination ports for TCP rules. If you specify TCP as the protocol but omit this object, then all destination ports are allowed.

**Returns** The tcp\_options of this EgressSecurityRule.

**Return type** *TcpOptions*

**udp\_options**

Gets the udp\_options of this EgressSecurityRule. Optional and valid only for UDP. Use to specify particular destination ports for UDP rules. If you specify UDP as the protocol but omit this object, then all destination ports are allowed.

**Returns** The udp\_options of this EgressSecurityRule.

**Return type** *UdpOptions*

**class** oraclebmc.core.models.**ExportImageDetails**

**destination\_type**

Gets the destination\_type of this ExportImageDetails. The destination type. Use *objectStorageTuple* when specifying the namespace, bucket name, and object name. Use *objectStorageUri* when specifying the Object Storage Service URL.

**Returns** The destination\_type of this ExportImageDetails.

**Return type** str

**static get\_subtype** (*object\_dictionary*)

Given the hash representation of a subtype of this class, use the info in the hash to return the class of the subtype.

**class** oraclebmc.core.models.**ExportImageViaObjectStorageTupleDetails**

**bucket\_name**

Gets the bucket\_name of this ExportImageViaObjectStorageTupleDetails. The Object Storage Service bucket to export the image to.

**Returns** The bucket\_name of this ExportImageViaObjectStorageTupleDetails.

**Return type** str

**namespace\_name**

Gets the namespace\_name of this ExportImageViaObjectStorageTupleDetails. The Object Storage Service namespace to export the image to.

**Returns** The namespace\_name of this ExportImageViaObjectStorageTupleDetails.

**Return type** str

**object\_name**

Gets the object\_name of this ExportImageViaObjectStorageTupleDetails. The Object Storage Service object name for the exported image.

**Returns** The object\_name of this ExportImageViaObjectStorageTupleDetails.

**Return type** str

**class** oraclebmc.core.models.**ExportImageViaObjectStorageUriDetails**

**destination\_uri**

Gets the destination\_uri of this ExportImageViaObjectStorageUriDetails. The Object Storage Service URL to export the image to. See [Object Storage URLs](#) and [pre-authenticated requests](#) for constructing URLs for image import/export.

**Returns** The destination\_uri of this ExportImageViaObjectStorageUriDetails.

**Return type** str

**class** oraclebmc.core.models.**FastConnectProviderService**

**description**

Gets the description of this FastConnectProviderService. A description of the service offered by the provider.

**Returns** The description of this FastConnectProviderService.

**Return type** str

**provider\_name**

Gets the provider\_name of this FastConnectProviderService. The name of the provider.

**Returns** The provider\_name of this FastConnectProviderService.

**Return type** str

**provider\_service\_name**

Gets the provider\_service\_name of this FastConnectProviderService. The name of the service offered by the provider.

**Returns** The provider\_service\_name of this FastConnectProviderService.

**Return type** str

**class** oraclebmc.core.models.**IPSecConnection**

**compartment\_id**

Gets the compartment\_id of this IPSecConnection. The OCID of the compartment containing the IPSec connection.

**Returns** The compartment\_id of this IPSecConnection.

**Return type** str

**cpe\_id**

Gets the cpe\_id of this IPSecConnection. The OCID of the CPE.

**Returns** The cpe\_id of this IPSecConnection.

**Return type** str

**display\_name**

Gets the display\_name of this IPSecConnection. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this IPSecConnection.

**Return type** str

**drg\_id**

Gets the drg\_id of this IPSecConnection. The OCID of the DRG.

**Returns** The drg\_id of this IPSecConnection.

**Return type** str

**id**

Gets the id of this IPSecConnection. The IPSec connection's Oracle ID (OCID).

**Returns** The id of this IPSecConnection.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this IPSecConnection. The IPSec connection’s current state.

Allowed values for this property are: “PROVISIONING”, “AVAILABLE”, “TERMINATING”, “TERMINATED”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The lifecycle\_state of this IPSecConnection.

**Return type** str

**static\_routes**

Gets the static\_routes of this IPSecConnection. Static routes to the CPE. At least one route must be included. The CIDR must not be a multicast address or class E address.

Example: *10.0.1.0/24*

**Returns** The static\_routes of this IPSecConnection.

**Return type** list[str]

**time\_created**

Gets the time\_created of this IPSecConnection. The date and time the IPSec connection was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this IPSecConnection.

**Return type** datetime

**class** oraclebmc.core.models.**IPSecConnectionDeviceConfig**

**compartment\_id**

Gets the compartment\_id of this IPSecConnectionDeviceConfig. The OCID of the compartment containing the IPSec connection.

**Returns** The compartment\_id of this IPSecConnectionDeviceConfig.

**Return type** str

**id**

Gets the id of this IPSecConnectionDeviceConfig. The IPSec connection’s Oracle ID (OCID).

**Returns** The id of this IPSecConnectionDeviceConfig.

**Return type** str

**time\_created**

Gets the time\_created of this IPSecConnectionDeviceConfig. The date and time the IPSec connection was created.

**Returns** The time\_created of this IPSecConnectionDeviceConfig.

**Return type** datetime

**tunnels**

Gets the tunnels of this IPSecConnectionDeviceConfig. Two *TunnelConfig* objects.

**Returns** The tunnels of this IPSecConnectionDeviceConfig.

**Return type** list[TunnelConfig]

**class** oraclebmc.core.models.**IPSecConnectionDeviceStatus**



**compartment\_id**

Gets the compartment\_id of this IPSecConnectionDeviceStatus. The OCID of the compartment containing the IPSec connection.

**Returns** The compartment\_id of this IPSecConnectionDeviceStatus.

**Return type** str

**id**

Gets the id of this IPSecConnectionDeviceStatus. The IPSec connection's Oracle ID (OCID).

**Returns** The id of this IPSecConnectionDeviceStatus.

**Return type** str

**time\_created**

Gets the time\_created of this IPSecConnectionDeviceStatus. The date and time the IPSec connection was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this IPSecConnectionDeviceStatus.

**Return type** datetime

**tunnels**

Gets the tunnels of this IPSecConnectionDeviceStatus. Two *TunnelStatus* objects.

**Returns** The tunnels of this IPSecConnectionDeviceStatus.

**Return type** list[TunnelStatus]

**class oraclebmc.core.models.IScsiVolumeAttachment**

**chap\_secret**

Gets the chap\_secret of this IScsiVolumeAttachment. The Challenge-Handshake-Authentication-Protocol (CHAP) secret valid for the associated CHAP user name. (Also called the "CHAP password".)

Example: *d6866c0d-298b-48ba-95af-309b4faux45e*

**Returns** The chap\_secret of this IScsiVolumeAttachment.

**Return type** str

**chap\_username**

Gets the chap\_username of this IScsiVolumeAttachment. The volume's system-generated Challenge-Handshake-Authentication-Protocol (CHAP) user name.

Example: *ocid1.volume.oc1.phx.abyhqljrgvttnlx73nmrwfau7kcvzfs3s66izvxf2h4lgvyndsdsnoiwr5q*

**Returns** The chap\_username of this IScsiVolumeAttachment.

**Return type** str

**ipv4**

Gets the ipv4 of this IScsiVolumeAttachment. The volume's iSCSI IP address.

Example: *169.254.0.2*

**Returns** The ipv4 of this IScsiVolumeAttachment.

**Return type** str

**iqn**

Gets the iqn of this IScsiVolumeAttachment. The target volume's iSCSI Qualified Name in the format defined by RFC 3720.

Example: *iqn.2015-12.us.oracle.com:456b0391-17b8-4122-bbf1-f85fc0bb97d9*

**Returns** The iqn of this IScsiVolumeAttachment.

**Return type** str

**port**

Gets the port of this IScsiVolumeAttachment. The volume's iSCSI port.

Example: *3260*

**Returns** The port of this IScsiVolumeAttachment.

**Return type** int

**class** oraclebmc.core.models.**IcmpOptions**

**code**

Gets the code of this IcmpOptions. The ICMP code (optional).

**Returns** The code of this IcmpOptions.

**Return type** int

**type**

Gets the type of this IcmpOptions. The ICMP type.

**Returns** The type of this IcmpOptions.

**Return type** int

**class** oraclebmc.core.models.**Image**

**base\_image\_id**

Gets the base\_image\_id of this Image. The OCID of the image originally used to launch the instance.

**Returns** The base\_image\_id of this Image.

**Return type** str

**compartment\_id**

Gets the compartment\_id of this Image. The OCID of the compartment containing the instance you want to use as the basis for the image.

**Returns** The compartment\_id of this Image.

**Return type** str

**create\_image\_allowed**

Gets the create\_image\_allowed of this Image. Whether instances launched with this image can be used to create new images. For example, you cannot create an image of an Oracle Database instance.

Example: *true*

**Returns** The create\_image\_allowed of this Image.

**Return type** bool

**display\_name**

Gets the display\_name of this Image. A user-friendly name for the image. It does not have to be unique, and it's changeable. Avoid entering confidential information. You cannot use an Oracle-provided image name as a custom image name.

Example: *My custom Oracle Linux image*

**Returns** The `display_name` of this Image.

**Return type** str

**id**

Gets the `id` of this Image. The OCID of the image.

**Returns** The `id` of this Image.

**Return type** str

**lifecycle\_state**

Gets the `lifecycle_state` of this Image. Allowed values for this property are: “PROVISIONING”, “IMPORTING”, “AVAILABLE”, “EXPORTING”, “DISABLED”, “DELETED”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The `lifecycle_state` of this Image.

**Return type** str

**operating\_system**

Gets the `operating_system` of this Image. The image’s operating system.

Example: *Oracle Linux*

**Returns** The `operating_system` of this Image.

**Return type** str

**operating\_system\_version**

Gets the `operating_system_version` of this Image. The image’s operating system version.

Example: *7.2*

**Returns** The `operating_system_version` of this Image.

**Return type** str

**time\_created**

Gets the `time_created` of this Image. The date and time the image was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The `time_created` of this Image.

**Return type** datetime

**class** `oraclebmc.core.models.ImageSourceDetails`

**static** `get_subtype` (*object\_dictionary*)

Given the hash representation of a subtype of this class, use the info in the hash to return the class of the subtype.

**source\_type**

Gets the `source_type` of this `ImageSourceDetails`. The source type for the image. Use *objectStorageTuple* when specifying the namespace, bucket name, and object name. Use *objectStorageUri* when specifying the Object Storage Service URL.

**Returns** The `source_type` of this `ImageSourceDetails`.

**Return type** str

**class** `oraclebmc.core.models.ImageSourceViaObjectStorageTupleDetails`

**bucket\_name**

Gets the `bucket_name` of this `ImageSourceViaObjectStorageTupleDetails`. The Object Storage Service bucket for the image.

**Returns** The `bucket_name` of this `ImageSourceViaObjectStorageTupleDetails`.

**Return type** `str`

**namespace\_name**

Gets the `namespace_name` of this `ImageSourceViaObjectStorageTupleDetails`. The Object Storage Service namespace for the image.

**Returns** The `namespace_name` of this `ImageSourceViaObjectStorageTupleDetails`.

**Return type** `str`

**object\_name**

Gets the `object_name` of this `ImageSourceViaObjectStorageTupleDetails`. The Object Storage Service name for the image.

**Returns** The `object_name` of this `ImageSourceViaObjectStorageTupleDetails`.

**Return type** `str`

**class** `oraclebmc.core.models.ImageSourceViaObjectStorageUriDetails`

**source\_uri**

Gets the `source_uri` of this `ImageSourceViaObjectStorageUriDetails`. The Object Storage Service URL for the image.

**Returns** The `source_uri` of this `ImageSourceViaObjectStorageUriDetails`.

**Return type** `str`

**class** `oraclebmc.core.models.IngressSecurityRule`

**icmp\_options**

Gets the `icmp_options` of this `IngressSecurityRule`. Optional and valid only for ICMP. Use to specify a particular ICMP type and code as defined in [ICMP Parameters](#). If you specify ICMP as the protocol but omit this object, then all ICMP types and codes are allowed. If you do provide this object, the type is required and the code is optional. To enable MTU negotiation for ingress internet traffic, make sure to allow type 3 (“Destination Unreachable”) code 4 (“Fragmentation Needed and Don’t Fragment was Set”). If you need to specify multiple codes for a single type, create a separate security list rule for each.

**Returns** The `icmp_options` of this `IngressSecurityRule`.

**Return type** `IcmpOptions`

**is\_stateless**

Gets the `is_stateless` of this `IngressSecurityRule`. A stateless rule allows traffic in one direction. Remember to add a corresponding stateless rule in the other direction if you need to support bidirectional traffic. For example, if ingress traffic allows TCP destination port 80, there should be an egress rule to allow TCP source port 80. Defaults to false, which means the rule is stateful and a corresponding rule is not necessary for bidirectional traffic.

**Returns** The `is_stateless` of this `IngressSecurityRule`.

**Return type** `bool`

**protocol**

Gets the protocol of this IngressSecurityRule. The transport protocol. Specify either *all* or an IPv4 protocol number as defined in [Protocol Numbers](#). Options are supported only for ICMP (“1”), TCP (“6”), and UDP (“17”).

**Returns** The protocol of this IngressSecurityRule.

**Return type** str

**source**

Gets the source of this IngressSecurityRule. The source CIDR block for the ingress rule. This is the range of IP addresses that a packet coming into the instance can come from.

**Returns** The source of this IngressSecurityRule.

**Return type** str

**tcp\_options**

Gets the tcp\_options of this IngressSecurityRule. Optional and valid only for TCP. Use to specify particular destination ports for TCP rules. If you specify TCP as the protocol but omit this object, then all destination ports are allowed.

**Returns** The tcp\_options of this IngressSecurityRule.

**Return type** *TcpOptions*

**udp\_options**

Gets the udp\_options of this IngressSecurityRule. Optional and valid only for UDP. Use to specify particular destination ports for UDP rules. If you specify UDP as the protocol but omit this object, then all destination ports are allowed.

**Returns** The udp\_options of this IngressSecurityRule.

**Return type** *UdpOptions*

**class** oraclebmc.core.models.**Instance**

**availability\_domain**

Gets the availability\_domain of this Instance. The Availability Domain the instance is running in.

Example: *Uocm:PHX-AD-1*

**Returns** The availability\_domain of this Instance.

**Return type** str

**compartment\_id**

Gets the compartment\_id of this Instance. The OCID of the compartment that contains the instance.

**Returns** The compartment\_id of this Instance.

**Return type** str

**display\_name**

Gets the display\_name of this Instance. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

Example: *My bare metal instance*

**Returns** The display\_name of this Instance.

**Return type** str

**extended\_metadata**

Gets the extended\_metadata of this Instance. Additional metadata key/value pairs that you provide. They serve a similar purpose and functionality from fields in the 'metadata' object.

They are distinguished from 'metadata' fields in that these can be nested JSON objects (whereas 'metadata' fields are string/string maps only).

If you don't need nested metadata values, it is strongly advised to avoid using this object and use the Metadata object instead.

**Returns** The extended\_metadata of this Instance.

**Return type** dict(str, object)

**id**

Gets the id of this Instance. The OCID of the instance.

**Returns** The id of this Instance.

**Return type** str

**image\_id**

Gets the image\_id of this Instance. The image used to boot the instance. You can enumerate all available images by calling `list_images()`.

**Returns** The image\_id of this Instance.

**Return type** str

**ipxe\_script**

Gets the ipxe\_script of this Instance. When an Oracle Bare Metal Cloud Services or virtual machine instance boots, the iPXE firmware that runs on the instance is configured to run an iPXE script to continue the boot process.

If you want more control over the boot process, you can provide your own custom iPXE script that will run when the instance boots; however, you should be aware that the same iPXE script will run every time an instance boots; not only after the initial LaunchInstance call.

The default iPXE script connects to the instance's local boot volume over iSCSI and performs a network boot. If you use a custom iPXE script and want to network-boot from the instance's local boot volume over iSCSI the same way as the default iPXE script, you should use the following iSCSI IP address: 169.254.0.2, and boot volume IQN: iqn.2015-02.oracle.boot.

For more information about the Bring Your Own Image feature of Oracle Bare Metal Cloud Services, see [Bring Your Own Image](#).

For more information about iPXE, see <http://ipxe.org>.

**Returns** The ipxe\_script of this Instance.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this Instance. The current state of the instance.

Allowed values for this property are: "PROVISIONING", "RUNNING", "STARTING", "STOPPING", "STOPPED", "CREATING\_IMAGE", "TERMINATING", "TERMINATED", "UNKNOWN\_ENUM\_VALUE". Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this Instance.

**Return type** str

**metadata**

Gets the metadata of this Instance. Custom metadata that you provide.

**Returns** The metadata of this Instance.

**Return type** dict(str, str)

**region**

Gets the region of this Instance. The region that contains the Availability Domain the instance is running in.

Example: *phx*

**Returns** The region of this Instance.

**Return type** str

**shape**

Gets the shape of this Instance. The shape of the instance. The shape determines the number of CPUs and the amount of memory allocated to the instance. You can enumerate all available shapes by calling `list_shapes()`.

**Returns** The shape of this Instance.

**Return type** str

**time\_created**

Gets the `time_created` of this Instance. The date and time the instance was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The `time_created` of this Instance.

**Return type** datetime

**class** `oraclebmc.core.models.InstanceCredentials`

**password**

Gets the password of this InstanceCredentials. The password for the username.

**Returns** The password of this InstanceCredentials.

**Return type** str

**username**

Gets the username of this InstanceCredentials. The username.

**Returns** The username of this InstanceCredentials.

**Return type** str

**class** `oraclebmc.core.models.InternetGateway`

**compartment\_id**

Gets the `compartment_id` of this InternetGateway. The OCID of the compartment containing the Internet Gateway.

**Returns** The `compartment_id` of this InternetGateway.

**Return type** str

**display\_name**

Gets the `display_name` of this `InternetGateway`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `InternetGateway`.

**Return type** str

**id**

Gets the `id` of this `InternetGateway`. The Internet Gateway's Oracle ID (OCID).

**Returns** The `id` of this `InternetGateway`.

**Return type** str

**is\_enabled**

Gets the `is_enabled` of this `InternetGateway`. Whether the gateway is enabled. When the gateway is disabled, traffic is not routed to/from the Internet, regardless of route rules.

**Returns** The `is_enabled` of this `InternetGateway`.

**Return type** bool

**lifecycle\_state**

Gets the `lifecycle_state` of this `InternetGateway`. The Internet Gateway's current state.

Allowed values for this property are: "PROVISIONING", "AVAILABLE", "TERMINATING", "TERMINATED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The `lifecycle_state` of this `InternetGateway`.

**Return type** str

**time\_created**

Gets the `time_created` of this `InternetGateway`. The date and time the Internet Gateway was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The `time_created` of this `InternetGateway`.

**Return type** datetime

**vcn\_id**

Gets the `vcn_id` of this `InternetGateway`. The OCID of the VCN the Internet Gateway belongs to.

**Returns** The `vcn_id` of this `InternetGateway`.

**Return type** str

**class** `oraclebmc.core.models.LaunchInstanceDetails`

**availability\_domain**

Gets the `availability_domain` of this `LaunchInstanceDetails`. The Availability Domain of the instance.

Example: *Uocm:PHX-AD-1*

**Returns** The `availability_domain` of this `LaunchInstanceDetails`.

**Return type** str

**compartment\_id**

Gets the `compartment_id` of this `LaunchInstanceDetails`. The OCID of the compartment.

**Returns** The `compartment_id` of this `LaunchInstanceDetails`.



**Return type** str

**create\_vnic\_details**

Gets the `create_vnic_details` of this `LaunchInstanceDetails`. Details for the primary VNIC, which is automatically created and attached when the instance is launched.

**Returns** The `create_vnic_details` of this `LaunchInstanceDetails`.

**Return type** *CreateVnicDetails*

**display\_name**

Gets the `display_name` of this `LaunchInstanceDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

Example: *My bare metal instance*

**Returns** The `display_name` of this `LaunchInstanceDetails`.

**Return type** str

**extended\_metadata**

Gets the `extended_metadata` of this `LaunchInstanceDetails`. Additional metadata key/value pairs that you provide. They serve a similar purpose and functionality from fields in the 'metadata' object.

They are distinguished from 'metadata' fields in that these can be nested JSON objects (whereas 'metadata' fields are string/string maps only).

If you don't need nested metadata values, it is strongly advised to avoid using this object and use the `Metadata` object instead.

**Returns** The `extended_metadata` of this `LaunchInstanceDetails`.

**Return type** dict(str, object)

**hostname\_label**

Gets the `hostname_label` of this `LaunchInstanceDetails`. Deprecated. Instead use *hostnameLabel* in *CreateVnicDetails*. If you provide both, the values must match.

**Returns** The `hostname_label` of this `LaunchInstanceDetails`.

**Return type** str

**image\_id**

Gets the `image_id` of this `LaunchInstanceDetails`. The OCID of the image used to boot the instance.

**Returns** The `image_id` of this `LaunchInstanceDetails`.

**Return type** str

**ipxe\_script**

Gets the `ipxe_script` of this `LaunchInstanceDetails`. This is an advanced option.

When an Oracle Bare Metal Cloud Services or virtual machine instance boots, the iPXE firmware that runs on the instance is configured to run an iPXE script to continue the boot process.

If you want more control over the boot process, you can provide your own custom iPXE script that will run when the instance boots; however, you should be aware that the same iPXE script will run every time an instance boots; not only after the initial `LaunchInstance` call.

The default iPXE script connects to the instance's local boot volume over iSCSI and performs a network boot. If you use a custom iPXE script and want to network-boot from the instance's local boot volume over iSCSI the same way as the default iPXE script, you should use the following iSCSI IP address: 169.254.0.2, and boot volume IQN: iqn.2015-02.oracle.boot.

For more information about the Bring Your Own Image feature of Oracle Bare Metal Cloud Services, see [Bring Your Own Image](#).

For more information about iPXE, see <http://ipxe.org>.

**Returns** The `ipxe_script` of this `LaunchInstanceDetails`.

**Return type** `str`

#### metadata

Gets the metadata of this `LaunchInstanceDetails`. Custom metadata key/value pairs that you provide, such as the SSH public key required to connect to the instance.

A metadata service runs on every launched instance. The service is an HTTP endpoint listening on 169.254.169.254. You can use the service to:

- Provide information to [Cloud-Init](#) to be used for various system initialization tasks.
- Get information about the instance, including the custom metadata that you provide when you launch the instance.

#### Providing Cloud-Init Metadata

You can use the following metadata key names to provide information to Cloud-Init:

**“ssh\_authorized\_keys”** - Provide one or more public SSH keys to be included in the `~/.ssh/authorized_keys` file for the default user on the instance. Use a newline character to separate multiple keys. The SSH keys must be in the format necessary for the `authorized_keys` file, as shown in the example below.

**“user\_data”** - Provide your own base64-encoded data to be used by Cloud-Init to run custom scripts or provide custom Cloud-Init configuration. For information about how to take advantage of user data, see the [Cloud-Init Documentation](#).

**Note:** Cloud-Init does not pull this data from the `http://169.254.169.254/opc/v1/instance/metadata/` path. When the instance launches and either of these keys are provided, the key values are formatted as OpenStack metadata and copied to the following locations, which are recognized by Cloud-Init:

`http://169.254.169.254/openstack/latest/meta_data.json` - This JSON blob contains, among other things, the SSH keys that you provided for

**“ssh\_authorized\_keys”**.

`http://169.254.169.254/openstack/latest/user_data` - Contains the base64-decoded data that you provided for **“user\_data”**.

#### Metadata Example

```
“metadata” [{ “quake_bot_level” : “Severe”, “ssh_authorized_keys” : “ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAQCAQCZ06fccNTQfq+xubFIJ5ZR3kt+uzspdH9tXL+lAejSM1NXM+
ryan.smith@company.com ssh-rsa AAAAB3NzaC1yc2EAAAABJQAAAQEAzJSAtwEPoB3Jmr58IXrDGzLuD
rsa-key-20160227”, “user_data” : “SWYgeW91IGNhbiBzZWUgdGhpcywgGhlbiBpdCB3b3JrZWQgbWF5Yn
}
}
```

#### Getting Metadata on the Instance

To get information about your instance, connect to the instance using SSH and issue any of the following GET requests:

```
curl http://169.254.169.254/opc/v1/instance/ curl http://169.254.169.254/opc/v1/
instance/metadata/ curl http://169.254.169.254/opc/v1/instance/metadata/<any-key-
name>
```

You'll get back a response that includes all the instance information; only the metadata information; or the metadata information for the specified key name, respectively.

**Returns** The metadata of this LaunchInstanceDetails.

**Return type** dict(str, str)

#### shape

Gets the shape of this LaunchInstanceDetails. The shape of an instance. The shape determines the number of CPUs, amount of memory, and other resources allocated to the instance.

You can enumerate all available shapes by calling `list_shapes()`.

**Returns** The shape of this LaunchInstanceDetails.

**Return type** str

#### subnet\_id

Gets the `subnet_id` of this LaunchInstanceDetails. **Deprecated.** Instead use `subnetId` in `CreateVnicDetails`. At least one of them is required; if you provide both, the values must match.

**Returns** The `subnet_id` of this LaunchInstanceDetails.

**Return type** str

**class** `oraclebmc.core.models.LetterOfAuthority`

#### circuit\_type

Gets the `circuit_type` of this LetterOfAuthority. The type of cross-connect fiber, termination, and optical specification.

Allowed values for this property are: "Single\_mode\_LC", "Single\_mode\_SC", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The `circuit_type` of this LetterOfAuthority.

**Return type** str

#### cross\_connect\_id

Gets the `cross_connect_id` of this LetterOfAuthority. The OCID of the cross-connect.

**Returns** The `cross_connect_id` of this LetterOfAuthority.

**Return type** str

#### facility\_location

Gets the `facility_location` of this LetterOfAuthority. The address of the FastConnect location.

**Returns** The `facility_location` of this LetterOfAuthority.

**Return type** str

#### port\_name

Gets the `port_name` of this LetterOfAuthority. The meet-me room port for this cross-connect.

**Returns** The `port_name` of this LetterOfAuthority.

**Return type** str

#### time\_expires

Gets the `time_expires` of this LetterOfAuthority. The date and time when the Letter of Authority expires, in the format defined by RFC3339.

**Returns** The `time_expires` of this `LetterOfAuthority`.

**Return type** `datetime`

**time\_issued**

Gets the `time_issued` of this `LetterOfAuthority`. The date and time the Letter of Authority was created, in the format defined by RFC3339.

Example: `2016-08-25T21:10:29.600Z`

**Returns** The `time_issued` of this `LetterOfAuthority`.

**Return type** `datetime`

**class** `oraclebmc.core.models.PortRange`

**max**

Gets the `max` of this `PortRange`. The maximum port number. Must not be lower than the minimum port number. To specify a single port number, set both the `min` and `max` to the same value.

**Returns** The `max` of this `PortRange`.

**Return type** `int`

**min**

Gets the `min` of this `PortRange`. The minimum port number. Must not be greater than the maximum port number.

**Returns** The `min` of this `PortRange`.

**Return type** `int`

**class** `oraclebmc.core.models.PrivateIp`

**availability\_domain**

Gets the `availability_domain` of this `PrivateIp`. The private IP's Availability Domain.

Example: `Uocm:PHX-AD-1`

**Returns** The `availability_domain` of this `PrivateIp`.

**Return type** `str`

**compartment\_id**

Gets the `compartment_id` of this `PrivateIp`. The OCID of the compartment containing the private IP.

**Returns** The `compartment_id` of this `PrivateIp`.

**Return type** `str`

**display\_name**

Gets the `display_name` of this `PrivateIp`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `PrivateIp`.

**Return type** `str`

**hostname\_label**

Gets the `hostname_label` of this `PrivateIp`. The hostname for the private IP. Used for DNS. The value is the hostname portion of the private IP's fully qualified domain name (FQDN) (for example, `bminstance-1` in FQDN `bminstance-1.subnet123.vcn1.oraclevcn.com`). Must be unique across all VNICS in the subnet and comply with RFC 952 and RFC 1123.

For more information, see [DNS in Your Virtual Cloud Network](#).

Example: *bminstance-1*

**Returns** The `hostname_label` of this `PrivateIp`.

**Return type** `str`

#### **id**

Gets the `id` of this `PrivateIp`. The private IP's Oracle ID (OCID).

**Returns** The `id` of this `PrivateIp`.

**Return type** `str`

#### **ip\_address**

Gets the `ip_address` of this `PrivateIp`. The private IP address of the *privateIp* object. The address is within the CIDR of the VNIC's subnet.

Example: *10.0.3.3*

**Returns** The `ip_address` of this `PrivateIp`.

**Return type** `str`

#### **is\_primary**

Gets the `is_primary` of this `PrivateIp`. Whether this private IP is the primary one on the VNIC. Primary private IPs are unassigned and deleted automatically when the VNIC is terminated.

Example: *true*

**Returns** The `is_primary` of this `PrivateIp`.

**Return type** `bool`

#### **subnet\_id**

Gets the `subnet_id` of this `PrivateIp`. The OCID of the subnet the VNIC is in.

**Returns** The `subnet_id` of this `PrivateIp`.

**Return type** `str`

#### **time\_created**

Gets the `time_created` of this `PrivateIp`. The date and time the private IP was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The `time_created` of this `PrivateIp`.

**Return type** `datetime`

#### **vnic\_id**

Gets the `vnic_id` of this `PrivateIp`. The OCID of the VNIC the private IP is assigned to. The VNIC and private IP must be in the same subnet.

**Returns** The `vnic_id` of this `PrivateIp`.

**Return type** `str`

**class** `oraclebmc.core.models.RouteRule`

#### **cidr\_block**

Gets the `cidr_block` of this `RouteRule`. A destination IP address range in CIDR notation. Matching packets will be routed to the indicated network entity (the target).

Example: *0.0.0.0/0*

**Returns** The cidr\_block of this RouteRule.

**Return type** str

**network\_entity\_id**

Gets the network\_entity\_id of this RouteRule. The OCID for the route rule's target.

**Returns** The network\_entity\_id of this RouteRule.

**Return type** str

**class** oraclebmc.core.models.**RouteTable**

**compartment\_id**

Gets the compartment\_id of this RouteTable. The OCID of the compartment containing the route table.

**Returns** The compartment\_id of this RouteTable.

**Return type** str

**display\_name**

Gets the display\_name of this RouteTable. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this RouteTable.

**Return type** str

**id**

Gets the id of this RouteTable. The route table's Oracle ID (OCID).

**Returns** The id of this RouteTable.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this RouteTable. The route table's current state.

Allowed values for this property are: "PROVISIONING", "AVAILABLE", "TERMINATING", "TERMINATED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this RouteTable.

**Return type** str

**route\_rules**

Gets the route\_rules of this RouteTable. The collection of rules for routing destination IPs to network devices.

**Returns** The route\_rules of this RouteTable.

**Return type** list[RouteRule]

**time\_created**

Gets the time\_created of this RouteTable. The date and time the route table was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this RouteTable.

**Return type** datetime

**vcn\_id**

Gets the vcn\_id of this RouteTable. The OCID of the VCN the route table list belongs to.

**Returns** The vcn\_id of this RouteTable.

**Return type** str

**class** oraclebmc.core.models.**SecurityList**

**compartment\_id**

Gets the compartment\_id of this SecurityList. The OCID of the compartment containing the security list.

**Returns** The compartment\_id of this SecurityList.

**Return type** str

**display\_name**

Gets the display\_name of this SecurityList. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this SecurityList.

**Return type** str

**egress\_security\_rules**

Gets the egress\_security\_rules of this SecurityList. Rules for allowing egress IP packets.

**Returns** The egress\_security\_rules of this SecurityList.

**Return type** list[EgressSecurityRule]

**id**

Gets the id of this SecurityList. The security list's Oracle Cloud ID (OCID).

**Returns** The id of this SecurityList.

**Return type** str

**ingress\_security\_rules**

Gets the ingress\_security\_rules of this SecurityList. Rules for allowing ingress IP packets.

**Returns** The ingress\_security\_rules of this SecurityList.

**Return type** list[IngressSecurityRule]

**lifecycle\_state**

Gets the lifecycle\_state of this SecurityList. The security list's current state.

Allowed values for this property are: "PROVISIONING", "AVAILABLE", "TERMINATING", "TERMINATED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this SecurityList.

**Return type** str

**time\_created**

Gets the time\_created of this SecurityList. The date and time the security list was created, in the format defined by RFC3339.

Example: 2016-08-25T21:10:29.600Z

**Returns** The time\_created of this SecurityList.

**Return type** datetime

**vcn\_id**

Gets the vcn\_id of this SecurityList. The OCID of the VCN the security list belongs to.

**Returns** The vcn\_id of this SecurityList.

**Return type** str

**class** oraclebmc.core.models.**Shape**

**shape**

Gets the shape of this Shape. The name of the shape. You can enumerate all available shapes by calling `list_shapes()`.

**Returns** The shape of this Shape.

**Return type** str

**class** oraclebmc.core.models.**Subnet**

**availability\_domain**

Gets the availability\_domain of this Subnet. The subnet's Availability Domain.

Example: *Uocm:PHX-AD-1*

**Returns** The availability\_domain of this Subnet.

**Return type** str

**cidr\_block**

Gets the cidr\_block of this Subnet. The subnet's CIDR block.

Example: *172.16.1.0/24*

**Returns** The cidr\_block of this Subnet.

**Return type** str

**compartment\_id**

Gets the compartment\_id of this Subnet. The OCID of the compartment containing the subnet.

**Returns** The compartment\_id of this Subnet.

**Return type** str

**dhcp\_options\_id**

Gets the dhcp\_options\_id of this Subnet. The OCID of the set of DHCP options associated with the subnet.

**Returns** The dhcp\_options\_id of this Subnet.

**Return type** str

**display\_name**

Gets the display\_name of this Subnet. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this Subnet.

**Return type** str

**dns\_label**

Gets the dns\_label of this Subnet. A DNS label for the subnet, used in conjunction with the VNIC's hostname and VCN's DNS label to form a fully qualified domain name (FQDN) for each VNIC within this subnet (e.g., *bminstance-1.subnet123.vcn1.oraclevcn.com*). Must be an alphanumeric string that begins with a letter and is unique within the VCN. The value cannot be changed.



The absence of this parameter means the Internet and VCN Resolver will not resolve hostnames of instances in this subnet.

For more information, see [DNS in Your Virtual Cloud Network](#).

Example: *subnet123*

**Returns** The `dns_label` of this Subnet.

**Return type** str

**id**

Gets the id of this Subnet. The subnet’s Oracle ID (OCID).

**Returns** The id of this Subnet.

**Return type** str

**lifecycle\_state**

Gets the `lifecycle_state` of this Subnet. The subnet’s current state.

Allowed values for this property are: “PROVISIONING”, “AVAILABLE”, “TERMINATING”, “TERMINATED”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The `lifecycle_state` of this Subnet.

**Return type** str

**prohibit\_public\_ip\_on\_vnic**

Gets the `prohibit_public_ip_on_vnic` of this Subnet. Whether VNICs within this subnet can have public IP addresses. Defaults to false, which means VNICs created in this subnet will automatically be assigned public IP addresses unless specified otherwise during instance launch or VNIC creation (with the *assign-PublicIp* flag in *CreateVnicDetails*). If *prohibitPublicIpOnVnic* is set to true, VNICs created in this subnet cannot have public IP addresses (i.e., it’s a private subnet).

Example: *true*

**Returns** The `prohibit_public_ip_on_vnic` of this Subnet.

**Return type** bool

**route\_table\_id**

Gets the `route_table_id` of this Subnet. The OCID of the route table the subnet is using.

**Returns** The `route_table_id` of this Subnet.

**Return type** str

**security\_list\_ids**

Gets the `security_list_ids` of this Subnet. OCIDs for the security lists to use for VNICs in this subnet.

**Returns** The `security_list_ids` of this Subnet.

**Return type** list[str]

**subnet\_domain\_name**

Gets the `subnet_domain_name` of this Subnet. The subnet’s domain name, which consists of the subnet’s DNS label, the VCN’s DNS label, and the *oraclevcn.com* domain.

For more information, see [DNS in Your Virtual Cloud Network](#).

Example: *subnet123.vcn1.oraclevcn.com*

**Returns** The `subnet_domain_name` of this Subnet.

**Return type** str

**time\_created**

Gets the `time_created` of this Subnet. The date and time the subnet was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The `time_created` of this Subnet.

**Return type** `datetime`

**vcn\_id**

Gets the `vcn_id` of this Subnet. The OCID of the VCN the subnet is in.

**Returns** The `vcn_id` of this Subnet.

**Return type** `str`

**virtual\_router\_ip**

Gets the `virtual_router_ip` of this Subnet. The IP address of the virtual router.

Example: *10.0.14.1*

**Returns** The `virtual_router_ip` of this Subnet.

**Return type** `str`

**virtual\_router\_mac**

Gets the `virtual_router_mac` of this Subnet. The MAC address of the virtual router.

Example: *00:00:17:B6:4D:DD*

**Returns** The `virtual_router_mac` of this Subnet.

**Return type** `str`

**class** `oraclebmc.core.models.TcpOptions`

**destination\_port\_range**

Gets the `destination_port_range` of this `TcpOptions`. An inclusive range of allowed destination ports. Use the same number for the min and max to indicate a single port. Defaults to all ports if not specified.

**Returns** The `destination_port_range` of this `TcpOptions`.

**Return type** *PortRange*

**source\_port\_range**

Gets the `source_port_range` of this `TcpOptions`. An inclusive range of allowed source ports. Use the same number for the min and max to indicate a single port. Defaults to all ports if not specified.

**Returns** The `source_port_range` of this `TcpOptions`.

**Return type** *PortRange*

**class** `oraclebmc.core.models.TunnelConfig`

**ip\_address**

Gets the `ip_address` of this `TunnelConfig`. The IP address of Oracle's VPN headend.

Example: *129.146.17.50*

**Returns** The `ip_address` of this `TunnelConfig`.

**Return type** `str`

**shared\_secret**

Gets the `shared_secret` of this `TunnelConfig`. The shared secret of the IPsec tunnel.

Example: `vFG2IF6TWq4UToUiLSRDoJEUs6j1c.p8G.dVQxiMfMO0yXMLi.IZTbYIWhGu4V8o`

**Returns** The `shared_secret` of this `TunnelConfig`.

**Return type** `str`

**time\_created**

Gets the `time_created` of this `TunnelConfig`. The date and time the IPsec connection was created, in the format defined by RFC3339.

Example: `2016-08-25T21:10:29.600Z`

**Returns** The `time_created` of this `TunnelConfig`.

**Return type** `datetime`

**class** `oraclebmc.core.models.TunnelStatus`

**ip\_address**

Gets the `ip_address` of this `TunnelStatus`. The IP address of Oracle's VPN headend.

Example: `129.146.17.50`

**Returns** The `ip_address` of this `TunnelStatus`.

**Return type** `str`

**lifecycle\_state**

Gets the `lifecycle_state` of this `TunnelStatus`. The tunnel's current state.

Allowed values for this property are: "UP", "DOWN", "DOWN\_FOR\_MAINTENANCE", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The `lifecycle_state` of this `TunnelStatus`.

**Return type** `str`

**time\_created**

Gets the `time_created` of this `TunnelStatus`. The date and time the IPsec connection was created, in the format defined by RFC3339.

Example: `2016-08-25T21:10:29.600Z`

**Returns** The `time_created` of this `TunnelStatus`.

**Return type** `datetime`

**time\_state\_modified**

Gets the `time_state_modified` of this `TunnelStatus`. When the state of the tunnel last changed, in the format defined by RFC3339.

Example: `2016-08-25T21:10:29.600Z`

**Returns** The `time_state_modified` of this `TunnelStatus`.

**Return type** `datetime`

**class** `oraclebmc.core.models.UdpOptions`

**destination\_port\_range**

Gets the `destination_port_range` of this `UdpOptions`. An inclusive range of allowed destination ports. Use the same number for the min and max to indicate a single port. Defaults to all ports if not specified.

**Returns** The `destination_port_range` of this `UdpOptions`.

**Return type** *PortRange*

**source\_port\_range**

Gets the `source_port_range` of this `UdpOptions`. An inclusive range of allowed source ports. Use the same number for the min and max to indicate a single port. Defaults to all ports if not specified.

**Returns** The `source_port_range` of this `UdpOptions`.

**Return type** *PortRange*

**class** `oraclebmc.core.models.UpdateCpeDetails`

**display\_name**

Gets the `display_name` of this `UpdateCpeDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `UpdateCpeDetails`.

**Return type** `str`

**class** `oraclebmc.core.models.UpdateCrossConnectDetails`

**display\_name**

Gets the `display_name` of this `UpdateCrossConnectDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `UpdateCrossConnectDetails`.

**Return type** `str`

**is\_active**

Gets the `is_active` of this `UpdateCrossConnectDetails`. Set to true to activate the cross-connect. You activate it after the physical cabling is complete, and you've confirmed the cross-connect's light levels are good and your side of the interface is up. Activation indicates to Oracle that the physical connection is ready.

Example: *true*

**Returns** The `is_active` of this `UpdateCrossConnectDetails`.

**Return type** `bool`

**class** `oraclebmc.core.models.UpdateCrossConnectGroupDetails`

**display\_name**

Gets the `display_name` of this `UpdateCrossConnectGroupDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `UpdateCrossConnectGroupDetails`.

**Return type** `str`

**class** `oraclebmc.core.models.UpdateDhcpDetails`

**display\_name**

Gets the `display_name` of this `UpdateDhcpDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `UpdateDhcpDetails`.

**Return type** str

**options**

Gets the options of this `UpdateDhcpDetails`.

**Returns** The options of this `UpdateDhcpDetails`.

**Return type** list[DhcpOption]

**class** oraclebmc.core.models.UpdateDrgAttachmentDetails

**display\_name**

Gets the `display_name` of this `UpdateDrgAttachmentDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `UpdateDrgAttachmentDetails`.

**Return type** str

**class** oraclebmc.core.models.UpdateDrgDetails

**display\_name**

Gets the `display_name` of this `UpdateDrgDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `UpdateDrgDetails`.

**Return type** str

**class** oraclebmc.core.models.UpdateIPSecConnectionDetails

**display\_name**

Gets the `display_name` of this `UpdateIPSecConnectionDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `UpdateIPSecConnectionDetails`.

**Return type** str

**class** oraclebmc.core.models.UpdateImageDetails

**display\_name**

Gets the `display_name` of this `UpdateImageDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

Example: *My custom Oracle Linux image*

**Returns** The `display_name` of this `UpdateImageDetails`.

**Return type** str

**class** oraclebmc.core.models.UpdateInstanceDetails

**display\_name**

Gets the `display_name` of this `UpdateInstanceDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

Example: *My bare metal instance*

**Returns** The `display_name` of this `UpdateInstanceDetails`.

**Return type** str

**class** `oraclebmc.core.models.UpdateInternetGatewayDetails`

**display\_name**

Gets the `display_name` of this `UpdateInternetGatewayDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `UpdateInternetGatewayDetails`.

**Return type** str

**is\_enabled**

Gets the `is_enabled` of this `UpdateInternetGatewayDetails`. Whether the gateway is enabled.

**Returns** The `is_enabled` of this `UpdateInternetGatewayDetails`.

**Return type** bool

**class** `oraclebmc.core.models.UpdatePrivateIpDetails`

**display\_name**

Gets the `display_name` of this `UpdatePrivateIpDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `UpdatePrivateIpDetails`.

**Return type** str

**hostname\_label**

Gets the `hostname_label` of this `UpdatePrivateIpDetails`. The hostname for the private IP. Used for DNS. The value is the hostname portion of the private IP's fully qualified domain name (FQDN) (for example, *bminstance-1* in FQDN *bminstance-1.subnet123.vcn1.oraclevcn.com*). Must be unique across all VNICs in the subnet and comply with [RFC 952](#) and [RFC 1123](#).

For more information, see [DNS in Your Virtual Cloud Network](#).

Example: *bminstance-1*

**Returns** The `hostname_label` of this `UpdatePrivateIpDetails`.

**Return type** str

**vnic\_id**

Gets the `vnic_id` of this `UpdatePrivateIpDetails`. The OCID of the VNIC to reassign the private IP to. The VNIC must be in the same subnet as the current VNIC.

**Returns** The `vnic_id` of this `UpdatePrivateIpDetails`.

**Return type** str

**class** `oraclebmc.core.models.UpdateRouteTableDetails`

**display\_name**

Gets the `display_name` of this `UpdateRouteTableDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `UpdateRouteTableDetails`.

**Return type** str

**route\_rules**

Gets the `route_rules` of this `UpdateRouteTableDetails`. The collection of rules used for routing destination IPs to network devices.

**Returns** The `route_rules` of this `UpdateRouteTableDetails`.

**Return type** list[RouteRule]

**class oraclebmc.core.models.UpdateSecurityListDetails**

**display\_name**

Gets the `display_name` of this `UpdateSecurityListDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `UpdateSecurityListDetails`.

**Return type** str

**egress\_security\_rules**

Gets the `egress_security_rules` of this `UpdateSecurityListDetails`. Rules for allowing egress IP packets.

**Returns** The `egress_security_rules` of this `UpdateSecurityListDetails`.

**Return type** list[EgressSecurityRule]

**ingress\_security\_rules**

Gets the `ingress_security_rules` of this `UpdateSecurityListDetails`. Rules for allowing ingress IP packets.

**Returns** The `ingress_security_rules` of this `UpdateSecurityListDetails`.

**Return type** list[IngressSecurityRule]

**class oraclebmc.core.models.UpdateSubnetDetails**

**display\_name**

Gets the `display_name` of this `UpdateSubnetDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `UpdateSubnetDetails`.

**Return type** str

**class oraclebmc.core.models.UpdateVcnDetails**

**display\_name**

Gets the `display_name` of this `UpdateVcnDetails`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `UpdateVcnDetails`.

**Return type** str

**class oraclebmc.core.models.UpdateVirtualCircuitDetails**

**bandwidth\_shape\_name**

Gets the `bandwidth_shape_name` of this `UpdateVirtualCircuitDetails`. The provisioned data rate of the connection. To get a list of the available bandwidth levels (i.e., shapes), see `list_virtual_circuit_bandwidth_shapes()`.

To be updated only by the customer who owns the virtual circuit.

**Returns** The `bandwidth_shape_name` of this `UpdateVirtualCircuitDetails`.

**Return type** str

**cross\_connect\_mappings**

Gets the `cross_connect_mappings` of this `UpdateVirtualCircuitDetails`. An array of mappings, each containing properties for a cross-connect or cross-connect group associated with this virtual circuit.

The customer and provider can update different properties in the mapping depending on the situation. See the description of the [CrossConnectMapping](#).

**Returns** The `cross_connect_mappings` of this `UpdateVirtualCircuitDetails`.

**Return type** list[CrossConnectMapping]

**customer\_bgp\_asn**

Gets the `customer_bgp_asn` of this `UpdateVirtualCircuitDetails`. The BGP ASN of the network at the other end of the BGP session from Oracle.

If the BGP session is from the customer's edge router to Oracle, the required value is the customer's ASN, and it can be updated only by the customer.

If the BGP session is from the provider's edge router to Oracle, the required value is the provider's ASN, and it can be updated only by the provider.

**Returns** The `customer_bgp_asn` of this `UpdateVirtualCircuitDetails`.

**Return type** int

**display\_name**

Gets the `display_name` of this `UpdateVirtualCircuitDetails`. A user-friendly name. Does not have to be unique. Avoid entering confidential information.

To be updated only by the customer who owns the virtual circuit.

**Returns** The `display_name` of this `UpdateVirtualCircuitDetails`.

**Return type** str

**gateway\_id**

Gets the `gateway_id` of this `UpdateVirtualCircuitDetails`. The OCID of the [Drg](#) that this virtual circuit uses.

To be updated only by the customer who owns the virtual circuit.

**Returns** The `gateway_id` of this `UpdateVirtualCircuitDetails`.

**Return type** str

**provider\_state**

Gets the `provider_state` of this `UpdateVirtualCircuitDetails`. The provider's state in relation to this virtual circuit. Relevant only if the customer is using FastConnect via a provider. ACTIVE means the provider has provisioned the virtual circuit from their end. INACTIVE means the provider has not yet provisioned the virtual circuit, or has de-provisioned it.

To be updated only by the provider.

Allowed values for this property are: "ACTIVE", "INACTIVE"



**Returns** The provider\_state of this UpdateVirtualCircuitDetails.

**Return type** str

**reference\_comment**

Gets the reference\_comment of this UpdateVirtualCircuitDetails. Provider-supplied reference information about this virtual circuit. Relevant only if the customer is using FastConnect via a provider.

To be updated only by the provider.

**Returns** The reference\_comment of this UpdateVirtualCircuitDetails.

**Return type** str

**class** oraclebmc.core.models.UpdateVnicDetails

**display\_name**

Gets the display\_name of this UpdateVnicDetails. A user-friendly name. Does not have to be unique, and it's changeable.

**Returns** The display\_name of this UpdateVnicDetails.

**Return type** str

**hostname\_label**

Gets the hostname\_label of this UpdateVnicDetails. The hostname for the VNIC's primary private IP. Used for DNS. The value is the hostname portion of the primary private IP's fully qualified domain name (FQDN) (for example, *bminstance-1* in FQDN *bminstance-1.subnet123.vcn1.oraclevcn.com*). Must be unique across all VNICs in the subnet and comply with [RFC 952](#) and [RFC 1123](#). The value appears in the *Vnic* object and also the *PrivateIp* object returned by `list_private_ips()` and `get_private_ip()`.

For more information, see [DNS in Your Virtual Cloud Network](#).

**Returns** The hostname\_label of this UpdateVnicDetails.

**Return type** str

**class** oraclebmc.core.models.UpdateVolumeBackupDetails

**display\_name**

Gets the display\_name of this UpdateVolumeBackupDetails. A friendly user-specified name for the volume backup. Avoid entering confidential information.

**Returns** The display\_name of this UpdateVolumeBackupDetails.

**Return type** str

**class** oraclebmc.core.models.UpdateVolumeDetails

**display\_name**

Gets the display\_name of this UpdateVolumeDetails. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this UpdateVolumeDetails.

**Return type** str

**class** oraclebmc.core.models.Vcn

**cidr\_block**

Gets the `cidr_block` of this Vcn. The CIDR IP address block of the VCN.

Example: *172.16.0.0/16*

**Returns** The `cidr_block` of this Vcn.

**Return type** str

**compartment\_id**

Gets the `compartment_id` of this Vcn. The OCID of the compartment containing the VCN.

**Returns** The `compartment_id` of this Vcn.

**Return type** str

**default\_dhcp\_options\_id**

Gets the `default_dhcp_options_id` of this Vcn. The OCID for the VCN's default set of DHCP options.

**Returns** The `default_dhcp_options_id` of this Vcn.

**Return type** str

**default\_route\_table\_id**

Gets the `default_route_table_id` of this Vcn. The OCID for the VCN's default route table.

**Returns** The `default_route_table_id` of this Vcn.

**Return type** str

**default\_security\_list\_id**

Gets the `default_security_list_id` of this Vcn. The OCID for the VCN's default security list.

**Returns** The `default_security_list_id` of this Vcn.

**Return type** str

**display\_name**

Gets the `display_name` of this Vcn. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this Vcn.

**Return type** str

**dns\_label**

Gets the `dns_label` of this Vcn. A DNS label for the VCN, used in conjunction with the VNIC's hostname and subnet's DNS label to form a fully qualified domain name (FQDN) for each VNIC within this subnet (e.g., *bminstance-1.subnet123.vcn1.oraclevcn.com*). Must be an alphanumeric string that begins with a letter. The value cannot be changed.

The absence of this parameter means the Internet and VCN Resolver will not work for this VCN.

For more information, see [DNS in Your Virtual Cloud Network](#).

Example: *vcn1*

**Returns** The `dns_label` of this Vcn.

**Return type** str

**id**

Gets the `id` of this Vcn. The VCN's Oracle ID (OCID).

**Returns** The `id` of this Vcn.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this Vcn. The VCN's current state.

Allowed values for this property are: "PROVISIONING", "AVAILABLE", "TERMINATING", "TERMINATED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this Vcn.

**Return type** str

**time\_created**

Gets the time\_created of this Vcn. The date and time the VCN was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this Vcn.

**Return type** datetime

**vcn\_domain\_name**

Gets the vcn\_domain\_name of this Vcn. The VCN's domain name, which consists of the VCN's DNS label, and the *oraclevcn.com* domain.

For more information, see [DNS in Your Virtual Cloud Network](#).

Example: *vcn1.oraclevcn.com*

**Returns** The vcn\_domain\_name of this Vcn.

**Return type** str

**class** oraclebmc.core.models.**VirtualCircuit**

**bandwidth\_shape\_name**

Gets the bandwidth\_shape\_name of this VirtualCircuit. The provisioned data rate of the connection.

**Returns** The bandwidth\_shape\_name of this VirtualCircuit.

**Return type** str

**bgp\_session\_state**

Gets the bgp\_session\_state of this VirtualCircuit. The state of the BGP session associated with the virtual circuit.

Allowed values for this property are: "UP", "DOWN", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The bgp\_session\_state of this VirtualCircuit.

**Return type** str

**compartment\_id**

Gets the compartment\_id of this VirtualCircuit. The OCID of the compartment containing the virtual circuit.

**Returns** The compartment\_id of this VirtualCircuit.

**Return type** str

**cross\_connect\_mappings**

Gets the cross\_connect\_mappings of this VirtualCircuit. An array of mappings, each containing properties for a cross-connect or cross-connect group that is associated with this virtual circuit.

**Returns** The `cross_connect_mappings` of this `VirtualCircuit`.

**Return type** `list[CrossConnectMapping]`

**customer\_bgp\_asn**

Gets the `customer_bgp_asn` of this `VirtualCircuit`. The BGP ASN of the network at the other end of the BGP session from Oracle. If the session is between the customer's edge router and Oracle, the value is the customer's ASN. If the BGP session is between the provider's edge router and Oracle, the value is the provider's ASN.

**Returns** The `customer_bgp_asn` of this `VirtualCircuit`.

**Return type** `int`

**display\_name**

Gets the `display_name` of this `VirtualCircuit`. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The `display_name` of this `VirtualCircuit`.

**Return type** `str`

**gateway\_id**

Gets the `gateway_id` of this `VirtualCircuit`. The OCID of the customer's *Drg* that this virtual circuit uses.

**Returns** The `gateway_id` of this `VirtualCircuit`.

**Return type** `str`

**id**

Gets the `id` of this `VirtualCircuit`. The virtual circuit's Oracle ID (OCID).

**Returns** The `id` of this `VirtualCircuit`.

**Return type** `str`

**lifecycle\_state**

Gets the `lifecycle_state` of this `VirtualCircuit`. The virtual circuit's current state. For information about the different states, see [FastConnect Overview](#).

Allowed values for this property are: "PENDING\_PROVIDER", "VERIFYING", "PROVISIONING", "PROVISIONED", "FAILED", "INACTIVE", "TERMINATING", "TERMINATED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The `lifecycle_state` of this `VirtualCircuit`.

**Return type** `str`

**oracle\_bgp\_asn**

Gets the `oracle_bgp_asn` of this `VirtualCircuit`. The Oracle BGP ASN.

**Returns** The `oracle_bgp_asn` of this `VirtualCircuit`.

**Return type** `int`

**provider\_name**

Gets the `provider_name` of this `VirtualCircuit`. The name of the provider (if the customer is connecting via a provider).

**Returns** The `provider_name` of this `VirtualCircuit`.

**Return type** `str`

**provider\_service\_name**

Gets the provider\_service\_name of this VirtualCircuit. The name of the service offered by the provider (if the customer is connecting via a provider).

**Returns** The provider\_service\_name of this VirtualCircuit.

**Return type** str

**provider\_state**

Gets the provider\_state of this VirtualCircuit. The provider’s state in relation to this virtual circuit (if the customer is connecting via a provider). ACTIVE means the provider has provisioned the virtual circuit from their end. INACTIVE means the provider has not yet provisioned the virtual circuit, or has de-provisioned it.

Allowed values for this property are: “ACTIVE”, “INACTIVE”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The provider\_state of this VirtualCircuit.

**Return type** str

**reference\_comment**

Gets the reference\_comment of this VirtualCircuit. Provider-supplied reference information about this virtual circuit (if the customer is connecting via a provider).

**Returns** The reference\_comment of this VirtualCircuit.

**Return type** str

**region**

Gets the region of this VirtualCircuit. The Oracle Bare Metal Cloud Services region where this virtual circuit is located.

**Returns** The region of this VirtualCircuit.

**Return type** str

**time\_created**

Gets the time\_created of this VirtualCircuit. The date and time the virtual circuit was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this VirtualCircuit.

**Return type** datetime

**type**

Gets the type of this VirtualCircuit. The type of IP addresses used in this virtual circuit. PRIVATE means RFC 1918 addresses (10.0.0.0/8, 172.16/12, and 192.168/16). Only PRIVATE is supported.

Allowed values for this property are: “PUBLIC”, “PRIVATE”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The type of this VirtualCircuit.

**Return type** str

**class** oraclebmc.core.models.VirtualCircuitBandwidthShape

**bandwidth\_in\_mbps**

Gets the bandwidth\_in\_mbps of this VirtualCircuitBandwidthShape. The bandwidth in Mbps.

Example: *10000*

**Returns** The bandwidth\_in\_mbps of this VirtualCircuitBandwidthShape.

**Return type** int

**name**

Gets the name of this VirtualCircuitBandwidthShape. The name of the bandwidth shape.

Example: *10 Gbps*

**Returns** The name of this VirtualCircuitBandwidthShape.

**Return type** str

**class** oraclebmc.core.models.Vnic

**availability\_domain**

Gets the availability\_domain of this Vnic. The VNIC's Availability Domain.

Example: *Uocm:PHX-AD-1*

**Returns** The availability\_domain of this Vnic.

**Return type** str

**compartment\_id**

Gets the compartment\_id of this Vnic. The OCID of the compartment containing the VNIC.

**Returns** The compartment\_id of this Vnic.

**Return type** str

**display\_name**

Gets the display\_name of this Vnic. A user-friendly name. Does not have to be unique. Avoid entering confidential information.

**Returns** The display\_name of this Vnic.

**Return type** str

**hostname\_label**

Gets the hostname\_label of this Vnic. The hostname for the VNIC's primary private IP. Used for DNS. The value is the hostname portion of the primary private IP's fully qualified domain name (FQDN) (e.g., *bminstance-1* in FQDN *bminstance-1.subnet123.vcn1.oraclevcn.com*). Must be unique across all VNICs in the subnet and comply with [RFC 952](#) and [RFC 1123](#).

For more information, see [DNS in Your Virtual Cloud Network](#).

Example: *bminstance-1*

**Returns** The hostname\_label of this Vnic.

**Return type** str

**id**

Gets the id of this Vnic. The OCID of the VNIC.

**Returns** The id of this Vnic.

**Return type** str

**is\_primary**

Gets the is\_primary of this Vnic. Whether the VNIC is the primary VNIC (the VNIC that is automatically created and attached during instance launch).

**Returns** The is\_primary of this Vnic.

**Return type** bool

**lifecycle\_state**

Gets the lifecycle\_state of this Vnic. The current state of the VNIC.

Allowed values for this property are: “PROVISIONING”, “AVAILABLE”, “TERMINATING”, “TERMINATED”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The lifecycle\_state of this Vnic.

**Return type** str

**mac\_address**

Gets the mac\_address of this Vnic. The MAC address of the VNIC.

Example: *00:00:17:B6:4D:DD*

**Returns** The mac\_address of this Vnic.

**Return type** str

**private\_ip**

Gets the private\_ip of this Vnic. The private IP address of the primary *privateIp* object on the VNIC. The address is within the CIDR of the VNIC’s subnet.

Example: *10.0.3.3*

**Returns** The private\_ip of this Vnic.

**Return type** str

**public\_ip**

Gets the public\_ip of this Vnic. The public IP address of the VNIC, if one is assigned.

**Returns** The public\_ip of this Vnic.

**Return type** str

**subnet\_id**

Gets the subnet\_id of this Vnic. The OCID of the subnet the VNIC is in.

**Returns** The subnet\_id of this Vnic.

**Return type** str

**time\_created**

Gets the time\_created of this Vnic. The date and time the VNIC was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this Vnic.

**Return type** datetime

**class** oraclebmc.core.models.VnicAttachment

**availability\_domain**

Gets the availability\_domain of this VnicAttachment. The Availability Domain of the instance.

Example: *Uocm:PHX-AD-1*

**Returns** The availability\_domain of this VnicAttachment.

**Return type** str

**compartment\_id**

Gets the compartment\_id of this VnicAttachment. The OCID of the compartment the VNIC attachment is in, which is the same compartment the instance is in.

**Returns** The compartment\_id of this VnicAttachment.

**Return type** str

**display\_name**

Gets the display\_name of this VnicAttachment. A user-friendly name. Does not have to be unique. Avoid entering confidential information.

**Returns** The display\_name of this VnicAttachment.

**Return type** str

**id**

Gets the id of this VnicAttachment. The OCID of the VNIC attachment.

**Returns** The id of this VnicAttachment.

**Return type** str

**instance\_id**

Gets the instance\_id of this VnicAttachment. The OCID of the instance.

**Returns** The instance\_id of this VnicAttachment.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this VnicAttachment. The current state of the VNIC attachment.

Allowed values for this property are: “ATTACHING”, “ATTACHED”, “DETACHING”, “DETACHED”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The lifecycle\_state of this VnicAttachment.

**Return type** str

**subnet\_id**

Gets the subnet\_id of this VnicAttachment. The OCID of the VNIC’s subnet.

**Returns** The subnet\_id of this VnicAttachment.

**Return type** str

**time\_created**

Gets the time\_created of this VnicAttachment. The date and time the VNIC attachment was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this VnicAttachment.

**Return type** datetime

**vlan\_tag**

Gets the vlan\_tag of this VnicAttachment. The Oracle-assigned VLAN tag of the attached VNIC. Available after the attachment process is complete.

Example: *0*

**Returns** The vlan\_tag of this VnicAttachment.

**Return type** int



**vnic\_id**

Gets the vnic\_id of this VnicAttachment. The OCID of the VNIC. Available after the attachment process is complete.

**Returns** The vnic\_id of this VnicAttachment.

**Return type** str

**class** oraclebmc.core.models.**Volume**

**availability\_domain**

Gets the availability\_domain of this Volume. The Availability Domain of the volume.

Example: *Uocm:PHX-AD-1*

**Returns** The availability\_domain of this Volume.

**Return type** str

**compartment\_id**

Gets the compartment\_id of this Volume. The OCID of the compartment that contains the volume.

**Returns** The compartment\_id of this Volume.

**Return type** str

**display\_name**

Gets the display\_name of this Volume. A user-friendly name. Does not have to be unique, and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this Volume.

**Return type** str

**id**

Gets the id of this Volume. The volume's Oracle ID (OCID).

**Returns** The id of this Volume.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this Volume. The current state of a volume.

Allowed values for this property are: "PROVISIONING", "RESTORING", "AVAILABLE", "TERMINATING", "TERMINATED", "FAULTY", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this Volume.

**Return type** str

**size\_in\_mbs**

Gets the size\_in\_mbs of this Volume. The size of the volume in MBs.

**Returns** The size\_in\_mbs of this Volume.

**Return type** int

**time\_created**

Gets the time\_created of this Volume. The date and time the volume was created. Format defined by RFC3339.

**Returns** The time\_created of this Volume.

**Return type** datetime

`class oraclebmc.core.models.VolumeAttachment`

**attachment\_type**

Gets the attachment\_type of this VolumeAttachment. The type of volume attachment.

**Returns** The attachment\_type of this VolumeAttachment.

**Return type** str

**availability\_domain**

Gets the availability\_domain of this VolumeAttachment. The Availability Domain of an instance.

Example: *Uocm:PHX-AD-1*

**Returns** The availability\_domain of this VolumeAttachment.

**Return type** str

**compartment\_id**

Gets the compartment\_id of this VolumeAttachment. The OCID of the compartment.

**Returns** The compartment\_id of this VolumeAttachment.

**Return type** str

**display\_name**

Gets the display\_name of this VolumeAttachment. A user-friendly name. Does not have to be unique, and it cannot be changed. Avoid entering confidential information.

Example: *My volume attachment*

**Returns** The display\_name of this VolumeAttachment.

**Return type** str

**static get\_subtype** (*object\_dictionary*)

Given the hash representation of a subtype of this class, use the info in the hash to return the class of the subtype.

**id**

Gets the id of this VolumeAttachment. The OCID of the volume attachment.

**Returns** The id of this VolumeAttachment.

**Return type** str

**instance\_id**

Gets the instance\_id of this VolumeAttachment. The OCID of the instance the volume is attached to.

**Returns** The instance\_id of this VolumeAttachment.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this VolumeAttachment. The current state of the volume attachment.

Allowed values for this property are: "ATTACHING", "ATTACHED", "DETACHING", "DETACHED", "UNKNOWN\_ENUM\_VALUE". Any unrecognized values returned by a service will be mapped to "UNKNOWN\_ENUM\_VALUE".

**Returns** The lifecycle\_state of this VolumeAttachment.

**Return type** str

**time\_created**

Gets the time\_created of this VolumeAttachment. The date and time the volume was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this VolumeAttachment.

**Return type** datetime

**volume\_id**

Gets the volume\_id of this VolumeAttachment. The OCID of the volume.

**Returns** The volume\_id of this VolumeAttachment.

**Return type** str

**class** oraclebmc.core.models.**VolumeBackup**

**compartment\_id**

Gets the compartment\_id of this VolumeBackup. The OCID of the compartment that contains the volume backup.

**Returns** The compartment\_id of this VolumeBackup.

**Return type** str

**display\_name**

Gets the display\_name of this VolumeBackup. A user-friendly name for the volume backup. Does not have to be unique and it's changeable. Avoid entering confidential information.

**Returns** The display\_name of this VolumeBackup.

**Return type** str

**id**

Gets the id of this VolumeBackup. The OCID of the volume backup.

**Returns** The id of this VolumeBackup.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this VolumeBackup. The current state of a volume backup.

Allowed values for this property are: "CREATING", "AVAILABLE", "TERMINATING", "TERMINATED", "FAULTY", "REQUEST\_RECEIVED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this VolumeBackup.

**Return type** str

**size\_in\_mbs**

Gets the size\_in\_mbs of this VolumeBackup. The size of the volume, in MBs.

**Returns** The size\_in\_mbs of this VolumeBackup.

**Return type** int

**time\_created**

Gets the time\_created of this VolumeBackup. The date and time the volume backup was created. This is the time the actual point-in-time image of the volume data was taken. Format defined by RFC3339.

**Returns** The time\_created of this VolumeBackup.

**Return type** datetime

**time\_request\_received**

Gets the `time_request_received` of this `VolumeBackup`. The date and time the request to create the volume backup was received. Format defined by RFC3339.

**Returns** The `time_request_received` of this `VolumeBackup`.

**Return type** datetime

**unique\_size\_in\_mbs**

Gets the `unique_size_in_mbs` of this `VolumeBackup`. The size used by the backup, in MBs. It is typically smaller than `sizeInMBs`, depending on the space consumed on the volume and whether the backup is full or incremental.

**Returns** The `unique_size_in_mbs` of this `VolumeBackup`.

**Return type** int

**volume\_id**

Gets the `volume_id` of this `VolumeBackup`. The OCID of the volume.

**Returns** The `volume_id` of this `VolumeBackup`.

**Return type** str

## Identity

### Client

`class oraclebmc.identity.identity_client.IdentityClient` (*config*)

**add\_user\_to\_group** (*add\_user\_to\_group\_details*, *\*\*kwargs*)

`AddUserToGroup` Adds the specified user to the specified group and returns a `UserGroupMembership` object with its own OCID.

After you send your request, the new object's `lifecycleState` will temporarily be `CREATING`. Before using the object, first make sure its `lifecycleState` has changed to `ACTIVE`.

**Parameters**

- **add\_user\_to\_group\_details** (`AddUserToGroupDetails`) – (required) Request object for adding a user to a group.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A `Response` object with data of type `UserGroupMembership`

**Return type** `Response`

**create\_compartment** (*create\_compartment\_details*, *\*\*kwargs*)

`CreateCompartment` Creates a new compartment in your tenancy.

**Important:** Compartments cannot be renamed or deleted.

You must specify your tenancy's OCID as the compartment ID in the request object. Remember that the tenancy is simply the root compartment. For information about OCIDs, see [Resource Identifiers](#).

You must also specify a *name* for the compartment, which must be unique across all compartments in your tenancy and cannot be changed. You can use this name or the OCID when writing policies that apply to the compartment. For more information about policies, see [How Policies Work](#).

You must also specify a *description* for the compartment (although it can be an empty string). It does not have to be unique, and you can change it anytime with `update_compartment()`.

After you send your request, the new object's *lifecycleState* will temporarily be CREATING. Before using the object, first make sure its *lifecycleState* has changed to ACTIVE.

#### Parameters

- **create\_compartment\_details** (`CreateCompartmentDetails`) – (required) Request object for creating a new compartment.
- **opc\_retry\_token** (`str`) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *Compartment*

**Return type** *Response*

**create\_group** (`create_group_details`, `**kwargs`)

CreateGroup Creates a new group in your tenancy.

You must specify your tenancy's OCID as the compartment ID in the request object (remember that the tenancy is simply the root compartment). Notice that IAM resources (users, groups, compartments, and some policies) reside within the tenancy itself, unlike cloud resources such as compute instances, which typically reside within compartments inside the tenancy. For information about OCIDs, see [Resource Identifiers](#).

You must also specify a *name* for the group, which must be unique across all groups in your tenancy and cannot be changed. You can use this name or the OCID when writing policies that apply to the group. For more information about policies, see [How Policies Work](#).

You must also specify a *description* for the group (although it can be an empty string). It does not have to be unique, and you can change it anytime with `update_group()`.

After you send your request, the new object's *lifecycleState* will temporarily be CREATING. Before using the object, first make sure its *lifecycleState* has changed to ACTIVE.

After creating the group, you need to put users in it and write policies for it. See `add_user_to_group()` and `create_policy()`.

#### Parameters

- **create\_group\_details** (`CreateGroupDetails`) – (required) Request object for creating a new group.
- **opc\_retry\_token** (`str`) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *Group*

**Return type** *Response*

**create\_identity\_provider** (*create\_identity\_provider\_details*, *\*\*kwargs*)

CreateIdentityProvider Creates a new identity provider in your tenancy. For more information, see [Identity Providers and Federation](#).

You must specify your tenancy's OCID as the compartment ID in the request object. Remember that the tenancy is simply the root compartment. For information about OCIDs, see [Resource Identifiers](#).

You must also specify a *name* for the *IdentityProvider*, which must be unique across all *IdentityProvider* objects in your tenancy and cannot be changed.

You must also specify a *description* for the *IdentityProvider* (although it can be an empty string). It does not have to be unique, and you can change it anytime with `update_identity_provider()`.

After you send your request, the new object's *lifecycleState* will temporarily be CREATING. Before using the object, first make sure its *lifecycleState* has changed to ACTIVE.

**Parameters**

- **create\_identity\_provider\_details** (*CreateIdentityProviderDetails*) – (required) Request object for creating a new SAML2 identity provider.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *IdentityProvider*

**Return type** *Response*

**create\_idp\_group\_mapping** (*create\_idp\_group\_mapping\_details*, *identity\_provider\_id*, *\*\*kwargs*)

CreateIdpGroupMapping Creates a single mapping between an IdP group and an IAM Service Group.

**Parameters**

- **create\_idp\_group\_mapping\_details** (*CreateIdpGroupMappingDetails*) – (required) Add a mapping from an SAML2.0 identity provider group to a BMC group.
- **identity\_provider\_id** (*str*) – (required) The OCID of the identity provider.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *IdpGroupMapping*

**Return type** *Response*

**create\_or\_reset\_ui\_password** (*user\_id*, *\*\*kwargs*)

CreateOrResetUIPassword Creates a new Console one-time password for the specified user. For more information about user credentials, see [User Credentials](#).

Use this operation after creating a new user, or if a user forgets their password. The new one-time password is returned to you in the response, and you must securely deliver it to the user. They'll be prompted to change this password the next time they sign in to the Console. If they don't change it within 7 days, the password will expire and you'll need to create a new one-time password for the user.

**Note:** The user's Console login is the unique name you specified when you created the user (see `create_user()`).

**Parameters**

- **user\_id** (*str*) – (required) The OCID of the user.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *UIPassword*

**Return type** *Response*

**create\_policy** (*create\_policy\_details*, *\*\*kwargs*)

CreatePolicy Creates a new policy in the specified compartment (either the tenancy or another of your compartments). If you're new to policies, see [Getting Started with Policies](#).

You must specify a *name* for the policy, which must be unique across all policies in your tenancy and cannot be changed.

You must also specify a *description* for the policy (although it can be an empty string). It does not have to be unique, and you can change it anytime with `update_policy()`.

You must specify one or more policy statements in the *statements* array. For information about writing policies, see [How Policies Work](#) and [Common Policies](#).

After you send your request, the new object's *lifecycleState* will temporarily be CREATING. Before using the object, first make sure its *lifecycleState* has changed to ACTIVE.

New policies take effect typically within 10 seconds.

**Parameters**

- **create\_policy\_details** (*CreatePolicyDetails*) – (required) Request object for creating a new policy.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *Policy*

**Return type** *Response*

**create\_region\_subscription** (*create\_region\_subscription\_details*, *tenancy\_id*, *\*\*kwargs*)

CreateRegionSubscription Creates a subscription to a region for a tenancy.

**Parameters**

- **create\_region\_subscription\_details** (*CreateRegionSubscriptionDetails*) – (required) Request object for activate a new region.
- **tenancy\_id** (*str*) – (required) The OCID of the tenancy.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due

to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *RegionSubscription*

**Return type** *Response*

**create\_swift\_password** (*create\_swift\_password\_details*, *user\_id*, *\*\*kwargs*)

CreateSwiftPassword Creates a new Swift password for the specified user. For information about what Swift passwords are for, see [Managing User Credentials](#).

You must specify a *description* for the Swift password (although it can be an empty string). It does not have to be unique, and you can change it anytime with `update_swift_password()`.

Every user has permission to create a Swift password for *their own user ID*. An administrator in your organization does not need to write a policy to give users this ability. To compare, administrators who have permission to the tenancy can use this operation to create a Swift password for any user, including themselves.

**Parameters**

- **create\_swift\_password\_details** (*CreateSwiftPasswordDetails*) – (required) Request object for creating a new swift password.
- **user\_id** (*str*) – (required) The OCID of the user.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *SwiftPassword*

**Return type** *Response*

**create\_user** (*create\_user\_details*, *\*\*kwargs*)

CreateUser Creates a new user in your tenancy. For conceptual information about users, your tenancy, and other IAM Service components, see [Overview of the IAM Service](#).

You must specify your tenancy’s OCID as the compartment ID in the request object (remember that the tenancy is simply the root compartment). Notice that IAM resources (users, groups, compartments, and some policies) reside within the tenancy itself, unlike cloud resources such as compute instances, which typically reside within compartments inside the tenancy. For information about OCIDs, see [Resource Identifiers](#).

You must also specify a *name* for the user, which must be unique across all users in your tenancy and cannot be changed. Allowed characters: No spaces. Only letters, numerals, hyphens, periods, underscores, +, and @. If you specify a name that’s already in use, you’ll get a 409 error. This name will be the user’s login to the Console. You might want to pick a name that your company’s own identity system (e.g., Active Directory, LDAP, etc.) already uses. If you delete a user and then create a new user with the same name, they’ll be considered different users because they have different OCIDs.

You must also specify a *description* for the user (although it can be an empty string). It does not have to be unique, and you can change it anytime with `update_user()`. You can use the field to provide the user’s full name, a description, a nickname, or other information to generally identify the user.

After you send your request, the new object’s *lifecycleState* will temporarily be CREATING. Before using the object, first make sure its *lifecycleState* has changed to ACTIVE.

A new user has no permissions until you place the user in one or more groups (see `add_user_to_group()`). If the user needs to access the Console, you need to provide the user a



password (see `create_or_reset_ui_password()`). If the user needs to access the Oracle Bare Metal Cloud Services REST API, you need to upload a public API signing key for that user (see [Required Keys and OCIDs](#) and also `upload_api_key()`).

**Important:** Make sure to inform the new user which compartment(s) they have access to.

**Parameters**

- **create\_user\_details** (`CreateUserDetails`) – (required) Request object for creating a new user.
- **opc\_retry\_token** (`str`) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *User*

**Return type** *Response*

**delete\_api\_key** (`user_id, fingerprint, **kwargs`)

DeleteApiKey Deletes the specified API signing key for the specified user.

Every user has permission to use this operation to delete a key for *their own user ID*. An administrator in your organization does not need to write a policy to give users this ability. To compare, administrators who have permission to the tenancy can use this operation to delete a key for any user, including themselves.

**Parameters**

- **user\_id** (`str`) – (required) The OCID of the user.
- **fingerprint** (`str`) – (required) The key’s fingerprint.
- **if\_match** (`str`) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_group** (`group_id, **kwargs`)

DeleteGroup Deletes the specified group. The group must be empty.

**Parameters**

- **group\_id** (`str`) – (required) The OCID of the group.
- **if\_match** (`str`) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_identity\_provider** (`identity_provider_id, **kwargs`)

DeleteIdentityProvider Deletes the specified identity provider. The identity provider must not have any group mappings (see `IdpGroupMapping`).

**Parameters**

- **identity\_provider\_id** (*str*) – (required) The OCID of the identity provider.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_idp\_group\_mapping** (*identity\_provider\_id*, *mapping\_id*, **\*\*kwargs**)

DeleteIdpGroupMapping Deletes the specified group mapping.

**Parameters**

- **identity\_provider\_id** (*str*) – (required) The OCID of the identity provider.
- **mapping\_id** (*str*) – (required) The OCID of the group mapping.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_policy** (*policy\_id*, **\*\*kwargs**)

DeletePolicy Deletes the specified policy. The deletion takes effect typically within 10 seconds.

**Parameters**

- **policy\_id** (*str*) – (required) The OCID of the policy.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_swift\_password** (*user\_id*, *swift\_password\_id*, **\*\*kwargs**)

DeleteSwiftPassword Deletes the specified Swift password for the specified user.

**Parameters**

- **user\_id** (*str*) – (required) The OCID of the user.
- **swift\_password\_id** (*str*) – (required) The OCID of the Swift password.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_user** (*user\_id*, **\*\*kwargs**)

DeleteUser Deletes the specified user. The user must not be in any groups.

**Parameters**

- **user\_id** (*str*) – (required) The OCID of the user.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *None*

**Return type** *Response*

**get\_compartment** (*compartment\_id*, *\*\*kwargs*)  
 GetCompartment Gets the specified compartment’s information.

This operation does not return a list of all the resources inside the compartment. There is no single API operation that does that. Compartments can contain multiple types of resources (instances, block storage volumes, etc.). To find out what’s in a compartment, you must call the “List” operation for each resource type and specify the compartment’s OCID as a query parameter in the request. For example, call the `list_instances()` operation in the Cloud Compute Service or the `list_volumes()` operation in Cloud Block Storage.

**Parameters** **compartment\_id** (*str*) – (required) The OCID of the compartment.

**Returns** A *Response* object with data of type *Compartment*

**Return type** *Response*

**get\_group** (*group\_id*, *\*\*kwargs*)  
 GetGroup Gets the specified group’s information.

This operation does not return a list of all the users in the group. To do that, use `list_user_group_memberships()` and provide the group’s OCID as a query parameter in the request.

**Parameters** **group\_id** (*str*) – (required) The OCID of the group.

**Returns** A *Response* object with data of type *Group*

**Return type** *Response*

**get\_identity\_provider** (*identity\_provider\_id*, *\*\*kwargs*)  
 GetIdentityProvider Gets the specified identity provider’s information.

**Parameters** **identity\_provider\_id** (*str*) – (required) The OCID of the identity provider.

**Returns** A *Response* object with data of type *IdentityProvider*

**Return type** *Response*

**get\_idp\_group\_mapping** (*identity\_provider\_id*, *mapping\_id*, *\*\*kwargs*)  
 GetIdpGroupMapping Gets the specified group mapping.

**Parameters**

- **identity\_provider\_id** (*str*) – (required) The OCID of the identity provider.
- **mapping\_id** (*str*) – (required) The OCID of the group mapping.

**Returns** A *Response* object with data of type *IdpGroupMapping*

**Return type** *Response*

**get\_policy** (*policy\_id*, *\*\*kwargs*)

GetPolicy Gets the specified policy's information.

**Parameters** **policy\_id** (*str*) – (required) The OCID of the policy.

**Returns** A *Response* object with data of type *Policy*

**Return type** *Response*

**get\_tenancy** (*tenancy\_id*, *\*\*kwargs*)

GetTenancy Get the specified tenancy's information.

**Parameters** **tenancy\_id** (*str*) – (required) The OCID of the tenancy.

**Returns** A *Response* object with data of type *Tenancy*

**Return type** *Response*

**get\_user** (*user\_id*, *\*\*kwargs*)

GetUser Gets the specified user's information.

**Parameters** **user\_id** (*str*) – (required) The OCID of the user.

**Returns** A *Response* object with data of type *User*

**Return type** *Response*

**get\_user\_group\_membership** (*user\_group\_membership\_id*, *\*\*kwargs*)

GetUserGroupMembership Gets the specified UserGroupMembership's information.

**Parameters** **user\_group\_membership\_id** (*str*) – (required) The OCID of the user-GroupMembership.

**Returns** A *Response* object with data of type *UserGroupMembership*

**Return type** *Response*

**list\_api\_keys** (*user\_id*, *\*\*kwargs*)

ListApiKeys Lists the API signing keys for the specified user. A user can have a maximum of three keys.

Every user has permission to use this API call for *their own user ID*. An administrator in your organization does not need to write a policy to give users this ability.

**Parameters** **user\_id** (*str*) – (required) The OCID of the user.

**Returns** A *Response* object with data of type list of *ApiKey*

**Return type** *Response*

**list\_availability\_domains** (*compartment\_id*, *\*\*kwargs*)

ListAvailabilityDomains Lists the Availability Domains in your tenancy. Specify the OCID of either the tenancy or another of your compartments as the value for the compartment ID (remember that the tenancy is simply the root compartment). See [Where to Get the Tenancy's OCID and User's OCID](#).

**Parameters** **compartment\_id** (*str*) – (required) The OCID of the compartment (remember that the tenancy is simply the root compartment).

**Returns** A *Response* object with data of type list of *AvailabilityDomain*

**Return type** *Response*

**list\_compartments** (*compartment\_id*, *\*\*kwargs*)

ListCompartments Lists the compartments in your tenancy. You must specify your tenancy's OCID as the value for the compartment ID (remember that the tenancy is simply the root compartment). See [Where to Get the Tenancy's OCID and User's OCID](#).

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment (remember that the tenancy is simply the root compartment).
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

**Returns** A *Response* object with data of type list of *Compartment*

**Return type** *Response*

**list\_groups** (*compartment\_id*, *\*\*kwargs*)

ListGroups Lists the groups in your tenancy. You must specify your tenancy’s OCID as the value for the compartment ID (remember that the tenancy is simply the root compartment). See [Where to Get the Tenancy’s OCID and User’s OCID](#).

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment (remember that the tenancy is simply the root compartment).
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

**Returns** A *Response* object with data of type list of *Group*

**Return type** *Response*

**list\_identity\_providers** (*protocol*, *compartment\_id*, *\*\*kwargs*)

ListIdentityProviders Lists all the identity providers in your tenancy. You must specify the identity provider type (e.g., *SAML2* for identity providers using the SAML2.0 protocol). You must specify your tenancy’s OCID as the value for the compartment ID (remember that the tenancy is simply the root compartment). See [Where to Get the Tenancy’s OCID and User’s OCID](#).

**Parameters**

- **protocol** (*str*) – (required) The protocol used for federation.
- **compartment\_id** (*str*) – (required) The OCID of the compartment (remember that the tenancy is simply the root compartment).
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

**Returns** A *Response* object with data of type list of *IdentityProvider*

**Return type** *Response*

**list\_idp\_group\_mappings** (*identity\_provider\_id*, *\*\*kwargs*)

ListIdpGroupMappings Lists the group mappings for the specified identity provider.

**Parameters**

- **identity\_provider\_id** (*str*) – (required) The OCID of the identity provider.
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

**Returns** A *Response* object with data of type list of *IdpGroupMapping*

**Return type** *Response*

**list\_policies** (*compartment\_id*, *\*\*kwargs*)

ListPolicies Lists the policies in the specified compartment (either the tenancy or another of your compartments). See [Where to Get the Tenancy’s OCID and User’s OCID](#).

To determine which policies apply to a particular group or compartment, you must view the individual statements inside all your policies. There isn’t a way to automatically obtain that information via the API.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment (remember that the tenancy is simply the root compartment).
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

**Returns** A *Response* object with data of type list of *Policy*

**Return type** *Response*

**list\_region\_subscriptions** (*tenancy\_id*, *\*\*kwargs*)

ListRegionSubscriptions Lists the region subscriptions for the specified tenancy.

**Parameters** **tenancy\_id** (*str*) – (required) The OCID of the tenancy.

**Returns** A *Response* object with data of type list of *RegionSubscription*

**Return type** *Response*

**list\_regions** (*\*\*kwargs*)

ListRegions Lists all the regions offered by Oracle Bare Metal Cloud Services.

**Returns** A *Response* object with data of type list of *Region*

**Return type** *Response*

**list\_swift\_passwords** (*user\_id*, *\*\*kwargs*)

ListSwiftPasswords Lists the Swift passwords for the specified user. The returned object contains the password’s OCID, but not the password itself. The actual password is returned only upon creation.

**Parameters** **user\_id** (*str*) – (required) The OCID of the user.

**Returns** A *Response* object with data of type list of *SwiftPassword*

**Return type** *Response*

**list\_user\_group\_memberships** (*compartment\_id*, *\*\*kwargs*)

ListUserGroupMemberships Lists the *UserGroupMembership* objects in your tenancy. You must specify your tenancy’s OCID as the value for the compartment ID (see [Where to Get the Tenancy’s OCID and User’s OCID](#)). You must also then filter the list in one of these ways:

- You can limit the results to just the memberships for a given user by specifying a *userId*.
- Similarly, you can limit the results to just the memberships for a given group by specifying a *groupId*.
- You can set both the *userId* and *groupId* to determine if the specified user is in the specified group.

If the answer is no, the response is an empty list.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment (remember that the tenancy is simply the root compartment).
- **user\_id** (*str*) – (optional) The OCID of the user.
- **group\_id** (*str*) – (optional) The OCID of the group.
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

**Returns** A *Response* object with data of type list of *UserGroupMembership*

**Return type** *Response*

**list\_users** (*compartment\_id*, *\*\*kwargs*)

ListUsers Lists the users in your tenancy. You must specify your tenancy’s OCID as the value for the compartment ID (remember that the tenancy is simply the root compartment). See [Where to Get the Tenancy’s OCID and User’s OCID](#).

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment (remember that the tenancy is simply the root compartment).
- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

**Returns** A *Response* object with data of type list of *User*

**Return type** *Response*

**remove\_user\_from\_group** (*user\_group\_membership\_id*, *\*\*kwargs*)

RemoveUserFromGroup Removes a user from a group by deleting the corresponding *UserGroupMembership*.

**Parameters**

- **user\_group\_membership\_id** (*str*) – (required) The OCID of the userGroupMembership.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**update\_compartment** (*compartment\_id*, *update\_compartment\_details*, *\*\*kwargs*)

UpdateCompartment Updates the specified compartment’s description.

**Parameters**

- **compartment\_id** (*str*) – (required) The OCID of the compartment.
- **update\_compartment\_details** (*UpdateCompartmentDetails*) – (required) Request object for updating a compartment.

- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *Compartment*

**Return type** *Response*

**update\_group** (*group\_id*, *update\_group\_details*, **\*\*kwargs**)

UpdateGroup Updates the specified group.

**Parameters**

- **group\_id** (*str*) – (required) The OCID of the group.
- **update\_group\_details** (*UpdateGroupDetails*) – (required) Request object for updating a group.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *Group*

**Return type** *Response*

**update\_identity\_provider** (*identity\_provider\_id*, *update\_identity\_provider\_details*, **\*\*kwargs**)

UpdateIdentityProvider Updates the specified identity provider.

**Parameters**

- **identity\_provider\_id** (*str*) – (required) The OCID of the identity provider.
- **update\_identity\_provider\_details** (*UpdateIdentityProviderDetails*) – (required) Request object for updating a identity provider.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *IdentityProvider*

**Return type** *Response*

**update\_idp\_group\_mapping** (*identity\_provider\_id*, *mapping\_id*, *update\_idp\_group\_mapping\_details*, **\*\*kwargs**)

UpdateIdpGroupMapping Updates the specified group mapping.

**Parameters**

- **identity\_provider\_id** (*str*) – (required) The OCID of the identity provider.
- **mapping\_id** (*str*) – (required) The OCID of the group mapping.
- **update\_idp\_group\_mapping\_details** (*UpdateIdpGroupMappingDetails*) – (required) Request object for updating an identity provider group mapping
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *IdpGroupMapping*



**Return type** *Response*

**update\_policy** (*policy\_id*, *update\_policy\_details*, **\*\*kwargs**)

UpdatePolicy Updates the specified policy. You can update the description or the policy statements themselves.

Policy changes take effect typically within 10 seconds.

**Parameters**

- **policy\_id** (*str*) – (required) The OCID of the policy.
- **update\_policy\_details** (*UpdatePolicyDetails*) – (required) Request object for updating a policy.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *Policy*

**Return type** *Response*

**update\_swift\_password** (*user\_id*, *swift\_password\_id*, *update\_swift\_password\_details*, **\*\*kwargs**)

UpdateSwiftPassword Updates the specified Swift password’s description.

**Parameters**

- **user\_id** (*str*) – (required) The OCID of the user.
- **swift\_password\_id** (*str*) – (required) The OCID of the Swift password.
- **update\_swift\_password\_details** (*UpdateSwiftPasswordDetails*) – (required) Request object for updating a Swift password.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *SwiftPassword*

**Return type** *Response*

**update\_user** (*user\_id*, *update\_user\_details*, **\*\*kwargs**)

UpdateUser Updates the description of the specified user.

**Parameters**

- **user\_id** (*str*) – (required) The OCID of the user.
- **update\_user\_details** (*UpdateUserDetails*) – (required) Request object for updating a user.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *User*

**Return type** *Response*

**update\_user\_state** (*user\_id*, *update\_state\_details*, **\*\*kwargs**)

UpdateUserState Updates the state of the specified user.

### Parameters

- **user\_id** (*str*) – (required) The OCID of the user.
- **update\_state\_details** (*UpdateStateDetails*) – (required) Request object for updating a user state.
- **if\_match** (*str*) – (optional) For optimistic concurrency control. In the PUT or DELETE call for a resource, set the *if-match* parameter to the value of the etag from a previous GET or POST response for that resource. The resource will be updated or deleted only if the etag you provide matches the resource’s current etag value.

**Returns** A *Response* object with data of type *User*

**Return type** *Response*

**upload\_api\_key** (*user\_id*, *create\_api\_key\_details*, *\*\*kwargs*)

UploadApiKey Uploads an API signing key for the specified user.

Every user has permission to use this operation to upload a key for *their own user ID*. An administrator in your organization does not need to write a policy to give users this ability. To compare, administrators who have permission to the tenancy can use this operation to upload a key for any user, including themselves.

**Important:** Even though you have permission to upload an API key, you might not yet have permission to do much else. If you try calling an operation unrelated to your own credential management (e.g., *ListUsers*, *LaunchInstance*) and receive an “unauthorized” error, check with an administrator to confirm which IAM Service group(s) you’re in and what access you have. Also confirm you’re working in the correct compartment.

After you send your request, the new object’s *lifecycleState* will temporarily be CREATING. Before using the object, first make sure its *lifecycleState* has changed to ACTIVE.

### Parameters

- **user\_id** (*str*) – (required) The OCID of the user.
- **create\_api\_key\_details** (*CreateApiKeyDetails*) – (required) Request object for uploading an API key for a user.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type *ApiKey*

**Return type** *Response*

## Models

`class oraclebmc.identity.models.AddUserToGroupDetails`

**group\_id**

Gets the *group\_id* of this *AddUserToGroupDetails*. The OCID of the group.

**Returns** The *group\_id* of this *AddUserToGroupDetails*.

**Return type** *str*

**user\_id**

Gets the *user\_id* of this *AddUserToGroupDetails*. The OCID of the user.

**Returns** The `user_id` of this `AddUserToGroupDetails`.

**Return type** str

class oraclebmc.identity.models.**ApiKey**

**fingerprint**

Gets the fingerprint of this `ApiKey`. The key's fingerprint (e.g., 12:34:56:78:90:ab:cd:ef:12:34:56:78:90:ab:cd:ef).

**Returns** The fingerprint of this `ApiKey`.

**Return type** str

**inactive\_status**

Gets the `inactive_status` of this `ApiKey`. The detailed status of `INACTIVE` lifecycleState.

**Returns** The `inactive_status` of this `ApiKey`.

**Return type** int

**key\_id**

Gets the `key_id` of this `ApiKey`. An Oracle-assigned identifier for the key, in this format: TENANCY\_OCID/USER\_OCID/KEY\_FINGERPRINT.

**Returns** The `key_id` of this `ApiKey`.

**Return type** str

**key\_value**

Gets the `key_value` of this `ApiKey`. The key's value.

**Returns** The `key_value` of this `ApiKey`.

**Return type** str

**lifecycle\_state**

Gets the `lifecycle_state` of this `ApiKey`. The API key's current state. After creating an `ApiKey` object, make sure its `lifecycleState` changes from `CREATING` to `ACTIVE` before using it.

Allowed values for this property are: "CREATING", "ACTIVE", "INACTIVE", "DELETING", "DELETED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The `lifecycle_state` of this `ApiKey`.

**Return type** str

**time\_created**

Gets the `time_created` of this `ApiKey`. Date and time the `ApiKey` object was created, in the format defined by RFC3339.

Example: 2016-08-25T21:10:29.600Z

**Returns** The `time_created` of this `ApiKey`.

**Return type** datetime

**user\_id**

Gets the `user_id` of this `ApiKey`. The OCID of the user the key belongs to.

**Returns** The `user_id` of this `ApiKey`.

**Return type** str

**class** oraclebmc.identity.models.**AvailabilityDomain**

**compartment\_id**

Gets the compartment\_id of this AvailabilityDomain. The OCID of the tenancy.

**Returns** The compartment\_id of this AvailabilityDomain.

**Return type** str

**name**

Gets the name of this AvailabilityDomain. The name of the Availability Domain.

**Returns** The name of this AvailabilityDomain.

**Return type** str

**class** oraclebmc.identity.models.**Compartment**

**compartment\_id**

Gets the compartment\_id of this Compartment. The OCID of the tenancy containing the compartment.

**Returns** The compartment\_id of this Compartment.

**Return type** str

**description**

Gets the description of this Compartment. The description you assign to the compartment. Does not have to be unique, and it's changeable.

**Returns** The description of this Compartment.

**Return type** str

**id**

Gets the id of this Compartment. The OCID of the compartment.

**Returns** The id of this Compartment.

**Return type** str

**inactive\_status**

Gets the inactive\_status of this Compartment. The detailed status of INACTIVE lifecycleState.

**Returns** The inactive\_status of this Compartment.

**Return type** int

**lifecycle\_state**

Gets the lifecycle\_state of this Compartment. The compartment's current state. After creating a compartment, make sure its *lifecycleState* changes from CREATING to ACTIVE before using it.

Allowed values for this property are: "CREATING", "ACTIVE", "INACTIVE", "DELETING", "DELETED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this Compartment.

**Return type** str

**name**

Gets the name of this Compartment. The name you assign to the compartment during creation. The name must be unique across all compartments in the tenancy and cannot be changed.

**Returns** The name of this Compartment.

**Return type** str

**time\_created**

Gets the time\_created of this Compartment. Date and time the compartment was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this Compartment.

**Return type** datetime

**class** oraclebmc.identity.models.**CreateApiKeyDetails**

**key**

Gets the key of this CreateApiKeyDetails. The public key. Must be an RSA key in PEM format.

**Returns** The key of this CreateApiKeyDetails.

**Return type** str

**class** oraclebmc.identity.models.**CreateCompartmentDetails**

**compartment\_id**

Gets the compartment\_id of this CreateCompartmentDetails. The OCID of the tenancy containing the compartment.

**Returns** The compartment\_id of this CreateCompartmentDetails.

**Return type** str

**description**

Gets the description of this CreateCompartmentDetails. The description you assign to the compartment during creation. Does not have to be unique, and it's changeable.

**Returns** The description of this CreateCompartmentDetails.

**Return type** str

**name**

Gets the name of this CreateCompartmentDetails. The name you assign to the compartment during creation. The name must be unique across all compartments in the tenancy and cannot be changed.

**Returns** The name of this CreateCompartmentDetails.

**Return type** str

**class** oraclebmc.identity.models.**CreateGroupDetails**

**compartment\_id**

Gets the compartment\_id of this CreateGroupDetails. The OCID of the tenancy containing the group.

**Returns** The compartment\_id of this CreateGroupDetails.

**Return type** str

**description**

Gets the description of this CreateGroupDetails. The description you assign to the group during creation. Does not have to be unique, and it's changeable.

**Returns** The description of this CreateGroupDetails.

**Return type** str

**name**

Gets the name of this CreateGroupDetails. The name you assign to the group during creation. The name must be unique across all groups in the tenancy and cannot be changed.

**Returns** The name of this CreateGroupDetails.

**Return type** str

**class** oraclebmc.identity.models.**CreateIdentityProviderDetails**

**compartment\_id**

Gets the compartment\_id of this CreateIdentityProviderDetails. The OCID of your tenancy.

**Returns** The compartment\_id of this CreateIdentityProviderDetails.

**Return type** str

**description**

Gets the description of this CreateIdentityProviderDetails. The description you assign to the *IdentityProvider* during creation. Does not have to be unique, and it's changeable.

**Returns** The description of this CreateIdentityProviderDetails.

**Return type** str

**static get\_subtype** (*object\_dictionary*)

Given the hash representation of a subtype of this class, use the info in the hash to return the class of the subtype.

**name**

Gets the name of this CreateIdentityProviderDetails. The name you assign to the *IdentityProvider* during creation. The name must be unique across all *IdentityProvider* objects in the tenancy and cannot be changed.

**Returns** The name of this CreateIdentityProviderDetails.

**Return type** str

**product\_type**

Gets the product\_type of this CreateIdentityProviderDetails. The identity provider service or product (e.g., Oracle Identity Cloud Service).

Example: *IDCS*

Allowed values for this property are: "IDCS"

**Returns** The product\_type of this CreateIdentityProviderDetails.

**Return type** str

**protocol**

Gets the protocol of this CreateIdentityProviderDetails. The protocol used for federation.

Example: *SAML2*

Allowed values for this property are: "SAML2"

**Returns** The protocol of this CreateIdentityProviderDetails.

**Return type** str

**class** oraclebmc.identity.models.**CreateIdpGroupMappingDetails**

**group\_id**

Gets the `group_id` of this `CreateIdpGroupMappingDetails`. The OCID of the IAM Service *Group* you want to map to the IdP group.

**Returns** The `group_id` of this `CreateIdpGroupMappingDetails`.

**Return type** str

**idp\_group\_name**

Gets the `idp_group_name` of this `CreateIdpGroupMappingDetails`. The name of the IdP group you want to map.

**Returns** The `idp_group_name` of this `CreateIdpGroupMappingDetails`.

**Return type** str

**class** oraclebmc.identity.models.**CreatePolicyDetails**

**compartment\_id**

Gets the `compartment_id` of this `CreatePolicyDetails`. The OCID of the compartment containing the policy (either the tenancy or another compartment).

**Returns** The `compartment_id` of this `CreatePolicyDetails`.

**Return type** str

**description**

Gets the description of this `CreatePolicyDetails`. The description you assign to the policy during creation. Does not have to be unique, and it's changeable.

**Returns** The description of this `CreatePolicyDetails`.

**Return type** str

**name**

Gets the name of this `CreatePolicyDetails`. The name you assign to the policy during creation. The name must be unique across all policies in the tenancy and cannot be changed.

**Returns** The name of this `CreatePolicyDetails`.

**Return type** str

**statements**

Gets the statements of this `CreatePolicyDetails`. An array of policy statements written in the policy language. See [How Policies Work](#) and [Common Policies](#).

**Returns** The statements of this `CreatePolicyDetails`.

**Return type** list[str]

**version\_date**

Gets the `version_date` of this `CreatePolicyDetails`. The version of the policy. If null or set to an empty string, when a request comes in for authorization, the policy will be evaluated according to the current behavior of the services at that moment. If set to a particular date (YYYY-MM-DD), the policy will be evaluated according to the behavior of the services on that date.

**Returns** The `version_date` of this `CreatePolicyDetails`.

**Return type** datetime

**class** oraclebmc.identity.models.**CreateRegionSubscriptionDetails**

**region\_key**

Gets the region\_key of this CreateRegionSubscriptionDetails. The regions's key.

Allowed values are: - *PHX* - *IAD*

Example: *PHX*

**Returns** The region\_key of this CreateRegionSubscriptionDetails.

**Return type** str

**class** oraclebmc.identity.models.**CreateSaml2IdentityProviderDetails**

**metadata**

Gets the metadata of this CreateSaml2IdentityProviderDetails. The XML that contains the information required for federating.

**Returns** The metadata of this CreateSaml2IdentityProviderDetails.

**Return type** str

**metadata\_url**

Gets the metadata\_url of this CreateSaml2IdentityProviderDetails. The URL for retrieving the identity provider's metadata, which contains information required for federating.

**Returns** The metadata\_url of this CreateSaml2IdentityProviderDetails.

**Return type** str

**class** oraclebmc.identity.models.**CreateSwiftPasswordDetails**

**description**

Gets the description of this CreateSwiftPasswordDetails. The description you assign to the Swift password during creation. Does not have to be unique, and it's changeable.

**Returns** The description of this CreateSwiftPasswordDetails.

**Return type** str

**class** oraclebmc.identity.models.**CreateUserDetails**

**compartment\_id**

Gets the compartment\_id of this CreateUserDetails. The OCID of the tenancy containing the user.

**Returns** The compartment\_id of this CreateUserDetails.

**Return type** str

**description**

Gets the description of this CreateUserDetails. The description you assign to the user during creation. Does not have to be unique, and it's changeable.

**Returns** The description of this CreateUserDetails.

**Return type** str

**name**

Gets the name of this CreateUserDetails. The name you assign to the user during creation. This is the user's login for the Console. The name must be unique across all users in the tenancy and cannot be changed.

**Returns** The name of this CreateUserDetails.



**Return type** str

**class** oraclebmc.identity.models.**Group**

**compartment\_id**

Gets the compartment\_id of this Group. The OCID of the tenancy containing the group.

**Returns** The compartment\_id of this Group.

**Return type** str

**description**

Gets the description of this Group. The description you assign to the group. Does not have to be unique, and it's changeable.

**Returns** The description of this Group.

**Return type** str

**id**

Gets the id of this Group. The OCID of the group.

**Returns** The id of this Group.

**Return type** str

**inactive\_status**

Gets the inactive\_status of this Group. The detailed status of INACTIVE lifecycleState.

**Returns** The inactive\_status of this Group.

**Return type** int

**lifecycle\_state**

Gets the lifecycle\_state of this Group. The group's current state. After creating a group, make sure its *lifecycleState* changes from CREATING to ACTIVE before using it.

Allowed values for this property are: "CREATING", "ACTIVE", "INACTIVE", "DELETING", "DELETED", "UNKNOWN\_ENUM\_VALUE". Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this Group.

**Return type** str

**name**

Gets the name of this Group. The name you assign to the group during creation. The name must be unique across all groups in the tenancy and cannot be changed.

**Returns** The name of this Group.

**Return type** str

**time\_created**

Gets the time\_created of this Group. Date and time the group was created, in the format defined by RFC3339.

Example: 2016-08-25T21:10:29.600Z

**Returns** The time\_created of this Group.

**Return type** datetime

**class** oraclebmc.identity.models.**IdentityProvider**

**compartment\_id**

Gets the `compartment_id` of this `IdentityProvider`. The OCID of the tenancy containing the `IdentityProvider`.

**Returns** The `compartment_id` of this `IdentityProvider`.

**Return type** str

**description**

Gets the description of this `IdentityProvider`. The description you assign to the `IdentityProvider` during creation. Does not have to be unique, and it's changeable.

**Returns** The description of this `IdentityProvider`.

**Return type** str

**static get\_subtype** (*object\_dictionary*)

Given the hash representation of a subtype of this class, use the info in the hash to return the class of the subtype.

**id**

Gets the `id` of this `IdentityProvider`. The OCID of the `IdentityProvider`.

**Returns** The `id` of this `IdentityProvider`.

**Return type** str

**inactive\_status**

Gets the `inactive_status` of this `IdentityProvider`. The detailed status of INACTIVE lifecycleState.

**Returns** The `inactive_status` of this `IdentityProvider`.

**Return type** int

**lifecycle\_state**

Gets the `lifecycle_state` of this `IdentityProvider`. The current state. After creating an `IdentityProvider`, make sure its `lifecycleState` changes from CREATING to ACTIVE before using it.

Allowed values for this property are: "CREATING", "ACTIVE", "INACTIVE", "DELETING", "DELETED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The `lifecycle_state` of this `IdentityProvider`.

**Return type** str

**name**

Gets the name of this `IdentityProvider`. The name you assign to the `IdentityProvider` during creation. The name must be unique across all `IdentityProvider` objects in the tenancy and cannot be changed. This is the name federated users see when choosing which identity provider to use when signing in to the Oracle Bare Metal Cloud Services Console.

**Returns** The name of this `IdentityProvider`.

**Return type** str

**product\_type**

Gets the `product_type` of this `IdentityProvider`. The identity provider service or product (e.g., Oracle Identity Cloud Service). Allowed value: `IDCS`.

Example: `IDCS`

**Returns** The `product_type` of this `IdentityProvider`.

**Return type** str

**protocol**

Gets the protocol of this IdentityProvider. The protocol used for federation. Allowed value: *SAML2*.

Example: *SAML2*

**Returns** The protocol of this IdentityProvider.

**Return type** str

**time\_created**

Gets the time\_created of this IdentityProvider. Date and time the *IdentityProvider* was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this IdentityProvider.

**Return type** datetime

**class** oraclebmc.identity.models.**IdpGroupMapping**

**compartment\_id**

Gets the compartment\_id of this IdpGroupMapping. The OCID of the tenancy containing the *IdentityProvider*.

**Returns** The compartment\_id of this IdpGroupMapping.

**Return type** str

**group\_id**

Gets the group\_id of this IdpGroupMapping. The OCID of the IAM Service group that is mapped to the IdP group.

**Returns** The group\_id of this IdpGroupMapping.

**Return type** str

**id**

Gets the id of this IdpGroupMapping. The OCID of the *IdpGroupMapping*.

**Returns** The id of this IdpGroupMapping.

**Return type** str

**idp\_group\_name**

Gets the idp\_group\_name of this IdpGroupMapping. The name of the IdP group that is mapped to the IAM Service group.

**Returns** The idp\_group\_name of this IdpGroupMapping.

**Return type** str

**idp\_id**

Gets the idp\_id of this IdpGroupMapping. The OCID of the *IdentityProvider* this mapping belongs to.

**Returns** The idp\_id of this IdpGroupMapping.

**Return type** str

**inactive\_status**

Gets the inactive\_status of this IdpGroupMapping. The detailed status of INACTIVE lifecycleState.

**Returns** The inactive\_status of this IdpGroupMapping.

**Return type** int

**lifecycle\_state**

Gets the `lifecycle_state` of this `IdpGroupMapping`. The mapping's current state. After creating a mapping object, make sure its `lifecycleState` changes from `CREATING` to `ACTIVE` before using it.

Allowed values for this property are: “`CREATING`”, “`ACTIVE`”, “`INACTIVE`”, “`DELETING`”, “`DELETED`”, “`UNKNOWN_ENUM_VALUE`”. Any unrecognized values returned by a service will be mapped to ‘`UNKNOWN_ENUM_VALUE`’.

**Returns** The `lifecycle_state` of this `IdpGroupMapping`.

**Return type** str

**time\_created**

Gets the `time_created` of this `IdpGroupMapping`. Date and time the mapping was created, in the format defined by RFC3339.

Example: `2016-08-25T21:10:29.600Z`

**Returns** The `time_created` of this `IdpGroupMapping`.

**Return type** datetime

**class** `oraclebmc.identity.models.Policy`

**compartment\_id**

Gets the `compartment_id` of this `Policy`. The OCID of the compartment containing the policy (either the tenancy or another compartment).

**Returns** The `compartment_id` of this `Policy`.

**Return type** str

**description**

Gets the description of this `Policy`. The description you assign to the policy. Does not have to be unique, and it's changeable.

**Returns** The description of this `Policy`.

**Return type** str

**id**

Gets the `id` of this `Policy`. The OCID of the policy.

**Returns** The `id` of this `Policy`.

**Return type** str

**inactive\_status**

Gets the `inactive_status` of this `Policy`. The detailed status of `INACTIVE` `lifecycleState`.

**Returns** The `inactive_status` of this `Policy`.

**Return type** int

**lifecycle\_state**

Gets the `lifecycle_state` of this `Policy`. The policy's current state. After creating a policy, make sure its `lifecycleState` changes from `CREATING` to `ACTIVE` before using it.

Allowed values for this property are: “`CREATING`”, “`ACTIVE`”, “`INACTIVE`”, “`DELETING`”, “`DELETED`”, “`UNKNOWN_ENUM_VALUE`”. Any unrecognized values returned by a service will be mapped to ‘`UNKNOWN_ENUM_VALUE`’.

**Returns** The `lifecycle_state` of this `Policy`.

**Return type** str

**name**

Gets the name of this Policy. The name you assign to the policy during creation. The name must be unique across all policies in the tenancy and cannot be changed.

**Returns** The name of this Policy.

**Return type** str

**statements**

Gets the statements of this Policy. An array of one or more policy statements written in the policy language.

**Returns** The statements of this Policy.

**Return type** list[str]

**time\_created**

Gets the time\_created of this Policy. Date and time the policy was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this Policy.

**Return type** datetime

**version\_date**

Gets the version\_date of this Policy. The version of the policy. If null or set to an empty string, when a request comes in for authorization, the policy will be evaluated according to the current behavior of the services at that moment. If set to a particular date (YYYY-MM-DD), the policy will be evaluated according to the behavior of the services on that date.

**Returns** The version\_date of this Policy.

**Return type** datetime

**class** oraclebmc.identity.models.**Region**

**key**

Gets the key of this Region. The key of the region.

Allowed values are: - *PHX* - *IAD*

**Returns** The key of this Region.

**Return type** str

**name**

Gets the name of this Region. The name of the region.

Allowed values are: - *us-phoenix-1* - *us-ashburn-1*

**Returns** The name of this Region.

**Return type** str

**class** oraclebmc.identity.models.**RegionSubscription**

**is\_home\_region**

Gets the is\_home\_region of this RegionSubscription. Indicates if the region is the home region or not.

**Returns** The is\_home\_region of this RegionSubscription.

**Return type** bool

**region\_key**

Gets the `region_key` of this `RegionSubscription`. The region's key.

Allowed values are: - *PHX* - *IAD*

**Returns** The `region_key` of this `RegionSubscription`.

**Return type** str

**region\_name**

Gets the `region_name` of this `RegionSubscription`. The region's name.

Allowed values are: - *us-phoenix-1* - *us-ashburn-1*

**Returns** The `region_name` of this `RegionSubscription`.

**Return type** str

**status**

Gets the status of this `RegionSubscription`. The region subscription status.

Allowed values for this property are: "READY", "IN\_PROGRESS", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The status of this `RegionSubscription`.

**Return type** str

**class** `oraclebmc.identity.models.Saml2IdentityProvider`

**metadata\_url**

Gets the `metadata_url` of this `Saml2IdentityProvider`. The URL for retrieving the identity provider's metadata, which contains information required for federating.

**Returns** The `metadata_url` of this `Saml2IdentityProvider`.

**Return type** str

**redirect\_url**

Gets the `redirect_url` of this `Saml2IdentityProvider`. The URL to redirect federated users to for authentication with the identity provider.

**Returns** The `redirect_url` of this `Saml2IdentityProvider`.

**Return type** str

**signing\_certificate**

Gets the `signing_certificate` of this `Saml2IdentityProvider`. The identity provider's signing certificate used by the IAM Service to validate the SAML2 token.

**Returns** The `signing_certificate` of this `Saml2IdentityProvider`.

**Return type** str

**class** `oraclebmc.identity.models.SwiftPassword`

**description**

Gets the description of this `SwiftPassword`. The description you assign to the Swift password. Does not have to be unique, and it's changeable.

**Returns** The description of this `SwiftPassword`.

**Return type** str

**expires\_on**

Gets the expires\_on of this SwiftPassword. Date and time when this password will expire, in the format defined by RFC3339. Null if it never expires.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The expires\_on of this SwiftPassword.

**Return type** datetime

**id**

Gets the id of this SwiftPassword. The OCID of the Swift password.

**Returns** The id of this SwiftPassword.

**Return type** str

**inactive\_status**

Gets the inactive\_status of this SwiftPassword. The detailed status of INACTIVE lifecycleState.

**Returns** The inactive\_status of this SwiftPassword.

**Return type** int

**lifecycle\_state**

Gets the lifecycle\_state of this SwiftPassword. The password's current state. After creating a password, make sure its *lifecycleState* changes from CREATING to ACTIVE before using it.

Allowed values for this property are: "CREATING", "ACTIVE", "INACTIVE", "DELETING", "DELETED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this SwiftPassword.

**Return type** str

**password**

Gets the password of this SwiftPassword. The Swift password. The value is available only in the response for *CreateSwiftPassword*, and not for *ListSwiftPasswords* or *UpdateSwiftPassword*.

**Returns** The password of this SwiftPassword.

**Return type** str

**time\_created**

Gets the time\_created of this SwiftPassword. Date and time the *SwiftPassword* object was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this SwiftPassword.

**Return type** datetime

**user\_id**

Gets the user\_id of this SwiftPassword. The OCID of the user the password belongs to.

**Returns** The user\_id of this SwiftPassword.

**Return type** str

**class** oraclebmc.identity.models.**Tenancy**

**description**

Gets the description of this Tenancy. The description of the tenancy.

**Returns** The description of this Tenancy.

**Return type** str

**home\_region\_key**

Gets the home\_region\_key of this Tenancy. The region key for the tenancy's home region.

Allowed values are: - *IAD* - *PHX*

**Returns** The home\_region\_key of this Tenancy.

**Return type** str

**id**

Gets the id of this Tenancy. The OCID of the tenancy.

**Returns** The id of this Tenancy.

**Return type** str

**name**

Gets the name of this Tenancy. The name of the tenancy.

**Returns** The name of this Tenancy.

**Return type** str

**class** oraclebmc.identity.models.**UIPassword**

**inactive\_status**

Gets the inactive\_status of this UIPassword. The detailed status of INACTIVE lifecycleState.

**Returns** The inactive\_status of this UIPassword.

**Return type** int

**lifecycle\_state**

Gets the lifecycle\_state of this UIPassword. The password's current state. After creating a password, make sure its *lifecycleState* changes from CREATING to ACTIVE before using it.

Allowed values for this property are: "CREATING", "ACTIVE", "INACTIVE", "DELETING", "DELETED", 'UNKNOWN\_ENUM\_VALUE'. Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this UIPassword.

**Return type** str

**password**

Gets the password of this UIPassword. The user's password for the Console.

**Returns** The password of this UIPassword.

**Return type** str

**time\_created**

Gets the time\_created of this UIPassword. Date and time the password was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this UIPassword.

**Return type** datetime



**user\_id**

Gets the user\_id of this UIPassword. The OCID of the user.

**Returns** The user\_id of this UIPassword.

**Return type** str

**class** oraclebmc.identity.models.UpdateCompartmentDetails

**description**

Gets the description of this UpdateCompartmentDetails. The description you assign to the compartment. Does not have to be unique, and it's changeable.

**Returns** The description of this UpdateCompartmentDetails.

**Return type** str

**class** oraclebmc.identity.models.UpdateGroupDetails

**description**

Gets the description of this UpdateGroupDetails. The description you assign to the group. Does not have to be unique, and it's changeable.

**Returns** The description of this UpdateGroupDetails.

**Return type** str

**class** oraclebmc.identity.models.UpdateIdentityProviderDetails

**description**

Gets the description of this UpdateIdentityProviderDetails. The description you assign to the *IdentityProvider*. Does not have to be unique, and it's changeable.

**Returns** The description of this UpdateIdentityProviderDetails.

**Return type** str

**static get\_subtype** (*object\_dictionary*)

Given the hash representation of a subtype of this class, use the info in the hash to return the class of the subtype.

**protocol**

Gets the protocol of this UpdateIdentityProviderDetails. The protocol used for federation.

Example: *SAML2*

Allowed values for this property are: "SAML2"

**Returns** The protocol of this UpdateIdentityProviderDetails.

**Return type** str

**class** oraclebmc.identity.models.UpdateIdpGroupMappingDetails

**group\_id**

Gets the group\_id of this UpdateIdpGroupMappingDetails. The OCID of the group.

**Returns** The group\_id of this UpdateIdpGroupMappingDetails.

**Return type** str

**idp\_group\_name**

Gets the idp\_group\_name of this UpdateIdpGroupMappingDetails. The idp group name.

**Returns** The idp\_group\_name of this UpdateIdpGroupMappingDetails.

**Return type** str

**class** oraclebmc.identity.models.**UpdatePolicyDetails**

**description**

Gets the description of this UpdatePolicyDetails. The description you assign to the policy. Does not have to be unique, and it's changeable.

**Returns** The description of this UpdatePolicyDetails.

**Return type** str

**statements**

Gets the statements of this UpdatePolicyDetails. An array of policy statements written in the policy language. See [How Policies Work](#) and [Common Policies](#).

**Returns** The statements of this UpdatePolicyDetails.

**Return type** list[str]

**version\_date**

Gets the version\_date of this UpdatePolicyDetails. The version of the policy. If null or set to an empty string, when a request comes in for authorization, the policy will be evaluated according to the current behavior of the services at that moment. If set to a particular date (YYYY-MM-DD), the policy will be evaluated according to the behavior of the services on that date.

**Returns** The version\_date of this UpdatePolicyDetails.

**Return type** datetime

**class** oraclebmc.identity.models.**UpdateSaml2IdentityProviderDetails**

**metadata**

Gets the metadata of this UpdateSaml2IdentityProviderDetails. The XML that contains the information required for federating.

**Returns** The metadata of this UpdateSaml2IdentityProviderDetails.

**Return type** str

**metadata\_url**

Gets the metadata\_url of this UpdateSaml2IdentityProviderDetails. The URL for retrieving the identity provider's metadata, which contains information required for federating.

**Returns** The metadata\_url of this UpdateSaml2IdentityProviderDetails.

**Return type** str

**class** oraclebmc.identity.models.**UpdateStateDetails**

**blocked**

Gets the blocked of this UpdateStateDetails. Update state to blocked or unblocked. Only "false" is supported (for changing the state to unblocked).

**Returns** The blocked of this UpdateStateDetails.

**Return type** bool

**class** oraclebmc.identity.models.UpdateSwiftPasswordDetails

**description**

Gets the description of this UpdateSwiftPasswordDetails. The description you assign to the Swift password. Does not have to be unique, and it's changeable.

**Returns** The description of this UpdateSwiftPasswordDetails.

**Return type** str

**class** oraclebmc.identity.models.UpdateUserDetails

**description**

Gets the description of this UpdateUserDetails. The description you assign to the user. Does not have to be unique, and it's changeable.

**Returns** The description of this UpdateUserDetails.

**Return type** str

**class** oraclebmc.identity.models.User

**compartment\_id**

Gets the compartment\_id of this User. The OCID of the tenancy containing the user.

**Returns** The compartment\_id of this User.

**Return type** str

**description**

Gets the description of this User. The description you assign to the user. Does not have to be unique, and it's changeable.

**Returns** The description of this User.

**Return type** str

**id**

Gets the id of this User. The OCID of the user.

**Returns** The id of this User.

**Return type** str

**inactive\_status**

Gets the inactive\_status of this User. Returned only if the user's *lifecycleState* is INACTIVE. A 16-bit value showing the reason why the user is inactive:

- bit 0: SUSPENDED (reserved for future use)
- bit 1: DISABLED (reserved for future use)
- bit 2: BLOCKED (the user has exceeded the maximum number of failed login attempts for the Console)

**Returns** The inactive\_status of this User.

**Return type** int

**lifecycle\_state**

Gets the lifecycle\_state of this User. The user's current state. After creating a user, make sure its *lifecycleState* changes from CREATING to ACTIVE before using it.

Allowed values for this property are: “CREATING”, “ACTIVE”, “INACTIVE”, “DELETING”, “DELETED”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The lifecycle\_state of this User.

**Return type** str

**name**

Gets the name of this User. The name you assign to the user during creation. This is the user’s login for the Console. The name must be unique across all users in the tenancy and cannot be changed.

**Returns** The name of this User.

**Return type** str

**time\_created**

Gets the time\_created of this User. Date and time the user was created, in the format defined by RFC3339.

Example: 2016-08-25T21:10:29.600Z

**Returns** The time\_created of this User.

**Return type** datetime

**class** oraclebmc.identity.models.**UserGroupMembership**

**compartment\_id**

Gets the compartment\_id of this UserGroupMembership. The OCID of the tenancy containing the user, group, and membership object.

**Returns** The compartment\_id of this UserGroupMembership.

**Return type** str

**group\_id**

Gets the group\_id of this UserGroupMembership. The OCID of the group.

**Returns** The group\_id of this UserGroupMembership.

**Return type** str

**id**

Gets the id of this UserGroupMembership. The OCID of the membership.

**Returns** The id of this UserGroupMembership.

**Return type** str

**inactive\_status**

Gets the inactive\_status of this UserGroupMembership. The detailed status of INACTIVE lifecycleState.

**Returns** The inactive\_status of this UserGroupMembership.

**Return type** int

**lifecycle\_state**

Gets the lifecycle\_state of this UserGroupMembership. The membership’s current state. After creating a membership object, make sure its *lifecycleState* changes from CREATING to ACTIVE before using it.

Allowed values for this property are: “CREATING”, “ACTIVE”, “INACTIVE”, “DELETING”, “DELETED”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The lifecycle\_state of this UserGroupMembership.

**Return type** str

**time\_created**

Gets the time\_created of this UserGroupMembership. Date and time the membership was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_created of this UserGroupMembership.

**Return type** datetime

**user\_id**

Gets the user\_id of this UserGroupMembership. The OCID of the user.

**Returns** The user\_id of this UserGroupMembership.

**Return type** str

## Load Balancer

### Client

`class oraclebmc.load_balancer.load_balancer_client.LoadBalancerClient` (*config*)

**create\_backend** (*create\_backend\_details*, *load\_balancer\_id*, *backend\_set\_name*, *\*\*kwargs*)

CreateBackend Adds a backend server to a backend set.

#### Parameters

- **create\_backend\_details** (*CreateBackendDetails*) – (required) The details to add a backend server to a backend set.
- **load\_balancer\_id** (*str*) – (required) The OCID of the load balancer associated with the backend set and servers.
- **backend\_set\_name** (*str*) – (required) The name of the backend set to add the backend server to.

Example: *My backend set*

- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type None

**Return type** *Response*

**create\_backend\_set** (*create\_backend\_set\_details*, *load\_balancer\_id*, *\*\*kwargs*)

CreateBackendSet Adds a backend set to a load balancer.

#### Parameters

- **create\_backend\_set\_details** (*CreateBackendSetDetails*) – (required) The details for adding a backend set.
- **load\_balancer\_id** (*str*) – (required) The **OCID** of the load balancer on which to add a backend set.
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type None

**Return type** *Response*

**create\_certificate** (*create\_certificate\_details, load\_balancer\_id, \*\*kwargs*)  
 CreateCertificate Creates an asynchronous request to add an SSL certificate.

**Parameters**

- **create\_certificate\_details** (*CreateCertificateDetails*) – (required) The details of the certificate to add.
- **load\_balancer\_id** (*str*) – (required) The **OCID** of the load balancer on which to add the certificate.
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type None

**Return type** *Response*

**create\_listener** (*create\_listener\_details, load\_balancer\_id, \*\*kwargs*)  
 CreateListener Adds a listener to a load balancer.

**Parameters**

- **create\_listener\_details** (*CreateListenerDetails*) – (required) Details to add a listener.
- **load\_balancer\_id** (*str*) – (required) The **OCID** of the load balancer on which to add a listener.
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due

to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type None

**Return type** *Response*

**create\_load\_balancer** (*create\_load\_balancer\_details*, *\*\*kwargs*)

CreateLoadBalancer Creates a new load balancer in the specified compartment. For general information about load balancers, see [Overview of the Load Balancing Service](#).

For the purposes of access control, you must provide the OCID of the compartment where you want the load balancer to reside. Notice that the load balancer doesn't have to be in the same compartment as the VCN or backend set. If you're not sure which compartment to use, put the load balancer in the same compartment as the VCN. For information about access control and compartments, see [Overview of the IAM Service](#).

You must specify a display name for the load balancer. It does not have to be unique, and you can change it.

For information about Availability Domains, see [Regions and Availability Domains](#). To get a list of Availability Domains, use the *ListAvailabilityDomains* operation in the Identity and Access Management Service API.

All Oracle Bare Metal Cloud Services resources, including load balancers, get an Oracle-assigned, unique ID called an Oracle Cloud Identifier (OCID). When you create a resource, you can find its OCID in the response. You can also retrieve a resource's OCID by using a List API operation on that resource type, or by viewing the resource in the Console. For more information, see [Resource Identifiers](#).

After you send your request, the new object's state will temporarily be PROVISIONING. Before using the object, first make sure its state has changed to RUNNING.

When you create a load balancer, the system assigns an IP address. To get the IP address, use the *get\_load\_balancer()* operation.

#### Parameters

- **create\_load\_balancer\_details** (*CreateLoadBalancerDetails*) – (required) The configuration details for creating a load balancer.
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_backend** (*load\_balancer\_id*, *backend\_set\_name*, *backend\_name*, *\*\*kwargs*)

DeleteBackend Removes a backend server from a given load balancer and backend set.

#### Parameters

- **load\_balancer\_id** (*str*) – (required) The OCID of the load balancer associated with the backend set and server.

- **backend\_set\_name** (*str*) – (required) The name of the backend set associated with the backend server.

Example: *My backend set*

- **backend\_name** (*str*) – (required) The name of the backend server to remove.

Example: *My backend server*

- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_backend\_set** (*load\_balancer\_id*, *backend\_set\_name*, *\*\*kwargs*)

DeleteBackendSet Deletes the specified backend set. Note that deleting a backend set removes its backend servers from the load balancer.

Before you can delete a backend set, you must remove it from any active listeners.

**Parameters**

- **load\_balancer\_id** (*str*) – (required) The **OCID** of the load balancer associated with the backend set.

- **backend\_set\_name** (*str*) – (required) The name of the backend set to delete.

Example: *My backend set*

- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_certificate** (*load\_balancer\_id*, *certificate\_name*, *\*\*kwargs*)

DeleteCertificate Deletes an SSL certificate from a load balancer.

**Parameters**

- **load\_balancer\_id** (*str*) – (required) The **OCID** of the load balancer associated with the certificate to be deleted.

- **certificate\_name** (*str*) – (required) The name of the certificate to delete.

Example: *My certificate*

- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_listener** (*load\_balancer\_id*, *listener\_name*, *\*\*kwargs*)

DeleteListener Deletes a listener from a load balancer.

**Parameters**

- **load\_balancer\_id** (*str*) – (required) The **OCID** of the load balancer associated with the listener to delete.



- **listener\_name** (*str*) – (required) The name of the listener to delete.

Example: *My listener*

- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

**Returns** A *Response* object with data of type *None*

**Return type** *Response*

**delete\_load\_balancer** (*load\_balancer\_id*, *\*\*kwargs*)

DeleteLoadBalancer Stops a load balancer and removes it from service.

**Parameters**

- **load\_balancer\_id** (*str*) – (required) The **OCID** of the load balancer to delete.
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

**Returns** A *Response* object with data of type *None*

**Return type** *Response*

**get\_backend** (*load\_balancer\_id*, *backend\_set\_name*, *backend\_name*, *\*\*kwargs*)

GetBackend Gets the specified backend server's configuration information.

**Parameters**

- **load\_balancer\_id** (*str*) – (required) The **OCID** of the load balancer associated with the backend set and server.
- **backend\_set\_name** (*str*) – (required) The name of the backend set that includes the backend server.  
Example: *My backend set*
- **backend\_name** (*str*) – (required) The name of the backend server to retrieve.  
Example: *My backend server*
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

**Returns** A *Response* object with data of type *Backend*

**Return type** *Response*

**get\_backend\_set** (*load\_balancer\_id*, *backend\_set\_name*, *\*\*kwargs*)

GetBackendSet Gets the specified backend set's configuration information.

**Parameters**

- **load\_balancer\_id** (*str*) – (required) The **OCID** of the specified load balancer.
- **backend\_set\_name** (*str*) – (required) The name of the backend set to retrieve.  
Example: *My backend set*
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

**Returns** A *Response* object with data of type *BackendSet*

**Return type** *Response*

**get\_health\_checker** (*load\_balancer\_id*, *backend\_set\_name*, *\*\*kwargs*)

GetHealthChecker Gets the health check policy information for a given load balancer and backend set.

**Parameters**

- **load\_balancer\_id** (*str*) – (required) The **OCID** of the load balancer associated with the health check policy to be retrieved.
- **backend\_set\_name** (*str*) – (required) The name of the backend associated with the health check policy to be retrieved.

Example: *My backend set*

- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

**Returns** A *Response* object with data of type *HealthChecker*

**Return type** *Response*

**get\_load\_balancer** (*load\_balancer\_id*, *\*\*kwargs*)

GetLoadBalancer Gets the specified load balancer's configuration information.

**Parameters**

- **load\_balancer\_id** (*str*) – (required) The **OCID** of the load balancer to retrieve.
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

**Returns** A *Response* object with data of type *LoadBalancer*

**Return type** *Response*

**get\_work\_request** (*work\_request\_id*, *\*\*kwargs*)

GetWorkRequest Gets the details of a work request.

**Parameters**

- **work\_request\_id** (*str*) – (required) The **OCID** of the work request to retrieve.
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

**Returns** A *Response* object with data of type *WorkRequest*

**Return type** *Response*

**list\_backend\_sets** (*load\_balancer\_id*, *\*\*kwargs*)

ListBackendSets Lists all backend sets associated with a given load balancer.

**Parameters**

- **load\_balancer\_id** (*str*) – (required) The **OCID** of the load balancer associated with the backend sets to retrieve.
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

**Returns** A *Response* object with data of type list of *BackendSet*

**Return type** *Response*

**list\_backends** (*load\_balancer\_id*, *backend\_set\_name*, *\*\*kwargs*)

ListBackends Lists the backend servers for a given load balancer and backend set.

**Parameters**

- **load\_balancer\_id** (*str*) – (required) The **OCID** of the load balancer associated with the backend set and servers.
- **backend\_set\_name** (*str*) – (required) The name of the backend set associated with the backend servers.

Example: *My backend set*

- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

**Returns** A *Response* object with data of type list of *Backend*

**Return type** *Response*

**list\_certificates** (*load\_balancer\_id*, *\*\*kwargs*)

ListCertificates Lists all SSL certificates associated with a given load balancer.

**Parameters**

- **load\_balancer\_id** (*str*) – (required) The **OCID** of the load balancer associated with the certificates to be listed.
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

**Returns** A *Response* object with data of type list of *Certificate*

**Return type** *Response*

**list\_load\_balancers** (*compartment\_id*, *\*\*kwargs*)

ListLoadBalancers Lists all load balancers in the specified compartment.

**Parameters**

- **compartment\_id** (*str*) – (required) The **OCID** of the compartment containing the load balancers to list.
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: *500*

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

Example: *3*

- **detail** (*str*) – (optional) The level of detail to return for each result. Can be *full* or *simple*.

Example: *full*

**Returns** A *Response* object with data of type list of *LoadBalancer*

**Return type** *Response*

**list\_policies** (*compartment\_id*, *\*\*kwargs*)

ListPolicies Lists the available load balancer policies.

**Parameters**

- **compartment\_id** (*str*) – (required) The **OCID** of the compartment containing the load balancer policies to list.
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: *500*

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

Example: *3*

**Returns** A *Response* object with data of type list of *LoadBalancerPolicy*

**Return type** *Response*

**list\_protocols** (*compartment\_id*, *\*\*kwargs*)

ListProtocols Lists all supported traffic protocols.

**Parameters**

- **compartment\_id** (*str*) – (required) The **OCID** of the compartment containing the load balancer protocols to list.
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.
- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: *500*

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

Example: *3*

**Returns** A *Response* object with data of type list of *LoadBalancerProtocol*

**Return type** *Response*

**list\_shapes** (*compartment\_id*, *\*\*kwargs*)

ListShapes Lists the valid load balancer shapes.

**Parameters**

- **compartment\_id** (*str*) – (required) The **OCID** of the compartment containing the load balancer shapes to list.

- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: 500

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

Example: 3

**Returns** A *Response* object with data of type list of *LoadBalancerShape*

**Return type** *Response*

**list\_work\_requests** (*load\_balancer\_id*, *\*\*kwargs*)

ListWorkRequests Lists the work requests for a given load balancer.

**Parameters**

- **load\_balancer\_id** (*str*) – (required) The OCID of the load balancer associated with the work requests to retrieve.
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

- **limit** (*int*) – (optional) The maximum number of items to return in a paginated “List” call.

Example: 500

- **page** (*str*) – (optional) The value of the *opc-next-page* response header from the previous “List” call.

Example: 3

**Returns** A *Response* object with data of type list of *WorkRequest*

**Return type** *Response*

**update\_backend** (*update\_backend\_details*, *load\_balancer\_id*, *backend\_set\_name*, *backend\_name*, *\*\*kwargs*)

UpdateBackend Updates the configuration of a backend server within the specified backend set.

**Parameters**

- **update\_backend\_details** (*UpdateBackendDetails*) – (required) Details for updating a backend server.

- **load\_balancer\_id** (*str*) – (required) The OCID of the load balancer associated with the backend set and server.

- **backend\_set\_name** (*str*) – (required) The name of the backend set associated with the backend server.

Example: *My backend set*

- **backend\_name** (*str*) – (required) The name of the backend server to update.

Example: *My backend server*

- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type None

**Return type** *Response*

**update\_backend\_set** (*update\_backend\_set\_details*, *load\_balancer\_id*, *backend\_set\_name*, **\*\*kwargs**)

UpdateBackendSet Updates a backend set.

**Parameters**

- **update\_backend\_set\_details** (*UpdateBackendSetDetails*) – (required) The details to update a backend set.
- **load\_balancer\_id** (*str*) – (required) The OCID of the load balancer associated with the backend set.
- **backend\_set\_name** (*str*) – (required) The name of the backend set to update.  
Example: *My backend set*
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type None

**Return type** *Response*

**update\_health\_checker** (*health\_checker*, *load\_balancer\_id*, *backend\_set\_name*, **\*\*kwargs**)

UpdateHealthChecker Updates the health check policy for a given load balancer and backend set.

**Parameters**

- **health\_checker** (*UpdateHealthCheckerDetails*) – (required) The health check policy configuration details.
- **load\_balancer\_id** (*str*) – (required) The OCID of the load balancer associated with the health check policy to be updated.
- **backend\_set\_name** (*str*) – (required) The name of the backend set associated with the health check policy to be retrieved.  
Example: *My backend set*
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.

- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type None

**Return type** *Response*

**update\_listener** (*update\_listener\_details*, *load\_balancer\_id*, *listener\_name*, **\*\*kwargs**)

UpdateListener Updates a listener for a given load balancer.

**Parameters**

- **update\_listener\_details** (*UpdateListenerDetails*) – (required) Details to update a listener.
- **load\_balancer\_id** (*str*) – (required) The OCID of the load balancer associated with the listener to update.
- **listener\_name** (*str*) – (required) The name of the listener to update.

Example: *My listener*

- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type None

**Return type** *Response*

**update\_load\_balancer** (*update\_load\_balancer\_details*, *load\_balancer\_id*, **\*\*kwargs**)

UpdateLoadBalancer Updates a load balancer’s configuration.

**Parameters**

- **update\_load\_balancer\_details** (*UpdateLoadBalancerDetails*) – (required) The details for updating a load balancer’s configuration.
- **load\_balancer\_id** (*str*) – (required) The OCID of the load balancer to update.
- **opc\_request\_id** (*str*) – (optional) The unique Oracle-assigned identifier for the request. If you need to contact Oracle about a particular request, please provide the request ID.
- **opc\_retry\_token** (*str*) – (optional) A token that uniquely identifies a request so it can be retried in case of a timeout or server error without risk of executing that same action again. Retry tokens expire after 24 hours, but can be invalidated before then due to conflicting operations (e.g., if a resource has been deleted and purged from the system, then a retry of the original creation request may be rejected).

**Returns** A *Response* object with data of type None

**Return type** *Response*

## Models

`class oraclebmc.load_balancer.models.Backend`

### **backup**

Gets the backup of this Backend. Whether the load balancer should treat this server as a backup unit. If *true*, the load balancer forwards no ingress traffic to this backend server unless all other backend servers not marked as “backup” fail the health check policy.

Example: *true*

**Returns** The backup of this Backend.

**Return type** bool

### **drain**

Gets the drain of this Backend. Whether the load balancer should drain this server. Servers marked “drain” receive no new incoming traffic.

Example: *true*

**Returns** The drain of this Backend.

**Return type** bool

### **ip\_address**

Gets the `ip_address` of this Backend. The IP address of the backend server.

Example: *10.10.10.4*

**Returns** The `ip_address` of this Backend.

**Return type** str

### **name**

Gets the name of this Backend. A name to uniquely identify this backend server in the backend set.

Example: *My first backend server*

**Returns** The name of this Backend.

**Return type** str

### **offline**

Gets the offline of this Backend. Whether the load balancer should treat this server as offline. Offline servers receive no incoming traffic.

Example: *true*

**Returns** The offline of this Backend.

**Return type** bool

### **port**

Gets the port of this Backend. The communication port for the backend server.

Example: *8080*

**Returns** The port of this Backend.

**Return type** int

### **weight**

Gets the weight of this Backend. The load balancing policy weight assigned to the server. Backend servers with a higher weight receive a larger proportion of incoming traffic. For example, a server weighted ‘3’



receives 3 times the number of new connections as a server weighted '1'. For more information on load balancing policies, see [How Load Balancing Policies Work](#).

Example: 3

**Returns** The weight of this Backend.

**Return type** int

**class** oraclebmc.load\_balancer.models.**BackendDetails**

**backup**

Gets the backup of this BackendDetails. Whether the load balancer should treat this server as a backup unit. If *true*, the load balancer forwards no ingress traffic to this backend server unless all other backend servers not marked as "backup" fail the health check policy.

Example: *true*

**Returns** The backup of this BackendDetails.

**Return type** bool

**drain**

Gets the drain of this BackendDetails. Whether the load balancer should drain this server. Servers marked "drain" receive no new incoming traffic.

Example: *true*

**Returns** The drain of this BackendDetails.

**Return type** bool

**ip\_address**

Gets the ip\_address of this BackendDetails. The IP address of the backend server.

Example: *10.10.10.4*

**Returns** The ip\_address of this BackendDetails.

**Return type** str

**offline**

Gets the offline of this BackendDetails. Whether the load balancer should treat this server as offline. Offline servers receive no incoming traffic.

Example: *true*

**Returns** The offline of this BackendDetails.

**Return type** bool

**port**

Gets the port of this BackendDetails. The communication port for the backend server.

Example: *8080*

**Returns** The port of this BackendDetails.

**Return type** int

**weight**

Gets the weight of this BackendDetails. The load balancing policy weight assigned to the server. Backend servers with a higher weight receive a larger proportion of incoming traffic. For example, a server weighted '3' receives 3 times the number of new connections as a server weighted '1'. For more information on load balancing policies, see [How Load Balancing Policies Work](#).

Example: 3

**Returns** The weight of this BackendDetails.

**Return type** int

**class** oraclebmc.load\_balancer.models.**BackendSet**

**backends**

Gets the backends of this BackendSet.

**Returns** The backends of this BackendSet.

**Return type** list[Backend]

**health\_checker**

Gets the health\_checker of this BackendSet.

**Returns** The health\_checker of this BackendSet.

**Return type** *HealthChecker*

**name**

Gets the name of this BackendSet. A friendly name for the backend set. It must be unique and it cannot be changed.

Example: *My backend set*

**Returns** The name of this BackendSet.

**Return type** str

**policy**

Gets the policy of this BackendSet. The load balancer policy for the backend set. The default load balancing policy is 'ROUND\_ROBIN' To get a list of available policies, use the `list_policies()` operation.

Example: *LEAST\_CONNECTIONS*

**Returns** The policy of this BackendSet.

**Return type** str

**session\_persistence\_configuration**

Gets the session\_persistence\_configuration of this BackendSet.

**Returns** The session\_persistence\_configuration of this BackendSet.

**Return type** *SessionPersistenceConfigurationDetails*

**ssl\_configuration**

Gets the ssl\_configuration of this BackendSet.

**Returns** The ssl\_configuration of this BackendSet.

**Return type** *SSLConfiguration*

**class** oraclebmc.load\_balancer.models.**BackendSetDetails**

**backends**

Gets the backends of this BackendSetDetails.

**Returns** The backends of this BackendSetDetails.

**Return type** list[BackendDetails]

**health\_checker**

Gets the health\_checker of this BackendSetDetails.

**Returns** The health\_checker of this BackendSetDetails.

**Return type** *HealthCheckerDetails*

**policy**

Gets the policy of this BackendSetDetails. The load balancer policy for the backend set. The default load balancing policy is 'ROUND\_ROBIN' To get a list of available policies, use the `list_policies()` operation.

Example: *LEAST\_CONNECTIONS*

**Returns** The policy of this BackendSetDetails.

**Return type** str

**session\_persistence\_configuration**

Gets the session\_persistence\_configuration of this BackendSetDetails.

**Returns** The session\_persistence\_configuration of this BackendSetDetails.

**Return type** *SessionPersistenceConfigurationDetails*

**ssl\_configuration**

Gets the ssl\_configuration of this BackendSetDetails.

**Returns** The ssl\_configuration of this BackendSetDetails.

**Return type** *SSLConfigurationDetails*

**class** oraclebmc.load\_balancer.models.**Certificate**

**ca\_certificate**

Gets the ca\_certificate of this Certificate. The Certificate Authority certificate, or any interim certificate, that you received from your SSL certificate provider.

Example:

```

---BEGIN CERTIFICATE--- MIIeczCCA1ugAwIBAgIBADANBgkqhkiG9w0BAQQFAD..AkGA1UEBhMCR0Ix
EzARBgNVBAgTCiNvbWUtU3RhdGUxFDASBgNVBAoTC0..0EgTHRkMTcwNQYD
VQQLZy5DbGFzcyAxIFB1YmtpYyBQcm9tYXJ5IENlc..XRpb24gQXV0aG9y
aXR5MRQwEgYDVQQDEwtCZXN0IENBIEx0ZDAeFw0wMD..TUwMTZaFw0wMTAy
... ---END CERTIFICATE---

```

**Returns** The ca\_certificate of this Certificate.

**Return type** str

**certificate\_name**

Gets the certificate\_name of this Certificate. A friendly name for the certificate bundle. It must be unique and it cannot be changed.

Example: *My certificate bundle*

**Returns** The certificate\_name of this Certificate.

**Return type** str

**public\_certificate**

Gets the public\_certificate of this Certificate. The public certificate, in PEM format, that you received from your SSL certificate provider.

Example:

```

—BEGIN CERTIFICATE— MIIC2jCCAkMCAg38MA0GCSqGSIb3DQEBBQUAMIGbMQswCQYDVQQGEwJK
A1UECBMFVG9reW8xEDAObgNVBAcTB0NodW8ta3UxETAPBgNVBAoTCEZyYW5rNERE
MRgwFgYDVQQLew9XZjWJDZlXJ0IFN1cHBvcnQxGDAWBgNVBAMTD0ZyYW5rNEREIFdl
YiBDQTEjMCEGCSqGSIb3DQEJARYUc3VwcG9ydEBmcmFuazRkZC5jb20wHhcNMTIw
... —END CERTIFICATE—

```

**Returns** The public\_certificate of this Certificate.

**Return type** str

**class** oraclebmc.load\_balancer.models.**CertificateDetails**

**ca\_certificate**

Gets the ca\_certificate of this CertificateDetails. The Certificate Authority certificate, or any interim certificate, that you received from your SSL certificate provider.

Example:

```

—BEGIN CERTIFICATE— MIIIEczCCA1ugAwIBAgIBADANBgkqhkiG9w0BAQQFAD..AkGA1UEBhMCR0Ix
EzARBgNVBAgTCiNvbWUtU3RhdGUxFDASBgNVBAoTC0..0EgTHRkMTcwNQYD
VQQLew5DbGFzcyAxIFB1YmtpYyBQcmItYXJ5IENlcn..XRpb24gQXV0aG9y
aXR5MRQwEgYDVQQDEwtCZXN0IENBIEEx0ZDAeFw0wMD..TUwMTZaFw0wMTAy
... —END CERTIFICATE—

```

**Returns** The ca\_certificate of this CertificateDetails.

**Return type** str

**certificate\_name**

Gets the certificate\_name of this CertificateDetails. A friendly name for the certificate bundle. It must be unique and it cannot be changed.

Example: *My certificate bundle*

**Returns** The certificate\_name of this CertificateDetails.

**Return type** str

**passphrase**

Gets the passphrase of this CertificateDetails. A passphrase for encrypted private keys. This is needed only if you created your certificate with a passphrase.

Example: *Mysecretunlockingcode42!1!*

**Returns** The passphrase of this CertificateDetails.

**Return type** str

**private\_key**

Gets the private\_key of this CertificateDetails. The SSL private key for your certificate, in PEM format.

Example:

```

—BEGIN RSA PRIVATE KEY— jO1O1v2ftXMsawM90tnXwc6xhOAT1gDBC9S8DKeca..JZNUgYYwNS0dP2UK
tmyN+XqVcAKw4HqVmChXy5b5msu8elq3uc2NqNVtR..2ksSLukP8pxXcHyb
+sEwvM4uf8qbnHAqwnOnP9+KV9vds6BaH1eRA4CHz..n+NVZlZBsTxTIS16
/Umr7wJzVrMqK5sDiSu4WuaaBdqMGfL5hLsTjcBFD..Da2iyQmSKuVD4IIZ ... —END
RSA PRIVATE KEY—

```

**Returns** The `private_key` of this `CertificateDetails`.

**Return type** str

**public\_certificate**

Gets the `public_certificate` of this `CertificateDetails`. The public certificate, in PEM format, that you received from your SSL certificate provider.

Example:

```

---BEGIN CERTIFICATE--- MIIC2jCCAkMCAg38MA0GCSqGSIb3DQEBBQUAMIGbMQswCQYDVQQGEwJK
A1UECBMFVG9reW8xEDAObgNVBAcTB0NodW8ta3UxETAPBgNVBAoTCEZyYW5rNERE
MRgwFgYDVQQLEw9XZWJDZXJ0IFN1cHBvcnQxGDAWBgNVBAMTD0ZyYW5rNEREIFdl
YiBDQTEjMCEGCSqGSIb3DQEJARYUc3VwcG9ydEBmcmFuazRkZC5jb20wHhcNMTIw
... ---END CERTIFICATE---

```

**Returns** The `public_certificate` of this `CertificateDetails`.

**Return type** str

**class** `oraclebmc.load_balancer.models.CreateBackendDetails`

**backup**

Gets the backup of this `CreateBackendDetails`. Whether the load balancer should treat this server as a backup unit. If `true`, the load balancer forwards no ingress traffic to this backend server unless all other backend servers not marked as “backup” fail the health check policy.

Example: `true`

**Returns** The backup of this `CreateBackendDetails`.

**Return type** bool

**drain**

Gets the drain of this `CreateBackendDetails`. Whether the load balancer should drain this server. Servers marked “drain” receive no new incoming traffic.

Example: `true`

**Returns** The drain of this `CreateBackendDetails`.

**Return type** bool

**ip\_address**

Gets the `ip_address` of this `CreateBackendDetails`. The IP address of the backend server.

Example: `10.10.10.4`

**Returns** The `ip_address` of this `CreateBackendDetails`.

**Return type** str

**offline**

Gets the offline of this `CreateBackendDetails`. Whether the load balancer should treat this server as offline. Offline servers receive no incoming traffic.

Example: `true`

**Returns** The offline of this `CreateBackendDetails`.

**Return type** bool

**port**

Gets the port of this CreateBackendDetails. The communication port for the backend server.

Example: *8080*

**Returns** The port of this CreateBackendDetails.

**Return type** int

**weight**

Gets the weight of this CreateBackendDetails. The load balancing policy weight assigned to the server. Backend servers with a higher weight receive a larger proportion of incoming traffic. For example, a server weighted '3' receives 3 times the number of new connections as a server weighted '1'. For more information on load balancing policies, see [How Load Balancing Policies Work](#).

Example: *3*

**Returns** The weight of this CreateBackendDetails.

**Return type** int

**class** oraclebmc.load\_balancer.models.**CreateBackendSetDetails**

**backends**

Gets the backends of this CreateBackendSetDetails.

**Returns** The backends of this CreateBackendSetDetails.

**Return type** list[BackendDetails]

**health\_checker**

Gets the health\_checker of this CreateBackendSetDetails.

**Returns** The health\_checker of this CreateBackendSetDetails.

**Return type** *HealthCheckerDetails*

**name**

Gets the name of this CreateBackendSetDetails. A friendly name for the backend set. It must be unique and it cannot be changed.

Example: *My backend set*

**Returns** The name of this CreateBackendSetDetails.

**Return type** str

**policy**

Gets the policy of this CreateBackendSetDetails. The load balancer policy for the backend set. The default load balancing policy is 'ROUND\_ROBIN' To get a list of available policies, use the `list_policies()` operation.

Example: *LEAST\_CONNECTIONS*

**Returns** The policy of this CreateBackendSetDetails.

**Return type** str

**session\_persistence\_configuration**

Gets the session\_persistence\_configuration of this CreateBackendSetDetails.

**Returns** The session\_persistence\_configuration of this CreateBackendSetDetails.

**Return type** *SessionPersistenceConfigurationDetails*

**ssl\_configuration**

Gets the ssl\_configuration of this CreateBackendSetDetails.

**Returns** The ssl\_configuration of this CreateBackendSetDetails.

**Return type** *SSLConfigurationDetails*

**class** oraclebmc.load\_balancer.models.**CreateCertificateDetails**

**ca\_certificate**

Gets the ca\_certificate of this CreateCertificateDetails. The Certificate Authority certificate, or any interim certificate, that you received from your SSL certificate provider.

Example:

```

---BEGIN CERTIFICATE--- MIIEcZCCA1ugAwIBAgIBADANBgkqhkiG9w0BAQQFAD..AkGA1UEBhMCR0Ix
EzARBgNVBAgTCiNvbWUtU3RhdGUxFDASBgNVBAoTC0..0EgTHRkMTcwNQYD
VQQLEx5DbGFzcyAxIFB1YmtpYyBQcm1tYXJ5IENlcn..XRpb24gQXV0aG9y
aXR5MRQwEgYDVQQDEwtCZXN0IENBIEEx0ZDAeFw0wMD..TUwMTZaFw0wMTAy
... ---END CERTIFICATE---

```

**Returns** The ca\_certificate of this CreateCertificateDetails.

**Return type** str

**certificate\_name**

Gets the certificate\_name of this CreateCertificateDetails. A friendly name for the certificate bundle. It must be unique and it cannot be changed.

Example: *My certificate bundle*

**Returns** The certificate\_name of this CreateCertificateDetails.

**Return type** str

**passphrase**

Gets the passphrase of this CreateCertificateDetails. A passphrase for encrypted private keys. This is needed only if you created your certificate with a passphrase.

Example: *Mysecretunlockingcode42!!!*

**Returns** The passphrase of this CreateCertificateDetails.

**Return type** str

**private\_key**

Gets the private\_key of this CreateCertificateDetails. The SSL private key for your certificate, in PEM format.

Example:

```

---BEGIN RSA PRIVATE KEY--- jO1O1v2ftXMsawM90tnXwc6xhOAT1gDBC9S8DKeca..JZNUgYYwNS0dP2UK
tmyN+XqVcAKw4HqVmChXy5b5msu8eIq3uc2NqNVtR..2ksSLukP8pxXcHyb
+sEwvM4uf8qbnHAqwnOnP9+KV9vds6BaH1eRA4CHz..n+NVZlZBsTxTIS16
/Umr7wJzVrMqK5sDiSu4WuaaBdqMGfL5hLsTjcBFD..Da2iyQmSKuVD4IIZ ... ---END
RSA PRIVATE KEY---

```

**Returns** The private\_key of this CreateCertificateDetails.

**Return type** str

**public\_certificate**

Gets the `public_certificate` of this `CreateCertificateDetails`. The public certificate, in PEM format, that you received from your SSL certificate provider.

Example:

```

---BEGIN CERTIFICATE--- MIIC2jCCAkMCAg38MA0GCSqGSIb3DQEBBQUAMIGbMQswCQYDVQQGEwJK
A1UECBMFVG9reW8xEDAOBgNVBAcTB0NodW8ta3UxETAPBgNVBAoTCEZyYW5rNERE
MRgwFgYDVQQLEw9XZWJDZXJ0IFN1cHBvcnQxGDAWBgNVBAMTD0ZyYW5rNEREIFdl
YiBDQTEjMCEGCSqGSIb3DQEJARYUc3VwcG9ydEBmcmFuazRkZC5jb20wHhcNMTIw
... ---END CERTIFICATE---

```

**Returns** The `public_certificate` of this `CreateCertificateDetails`.

**Return type** `str`

**class** `oraclebmc.load_balancer.models.CreateListenerDetails`

**default\_backend\_set\_name**

Gets the `default_backend_set_name` of this `CreateListenerDetails`. The name of the associated backend set.

**Returns** The `default_backend_set_name` of this `CreateListenerDetails`.

**Return type** `str`

**name**

Gets the name of this `CreateListenerDetails`. A friendly name for the listener. It must be unique and it cannot be changed.

Example: *My listener*

**Returns** The name of this `CreateListenerDetails`.

**Return type** `str`

**port**

Gets the port of this `CreateListenerDetails`. The communication port for the listener.

Example: *80*

**Returns** The port of this `CreateListenerDetails`.

**Return type** `int`

**protocol**

Gets the protocol of this `CreateListenerDetails`. The protocol on which the listener accepts connection requests. To get a list of valid protocols, use the `list_protocols()` operation.

Example: *HTTP*

**Returns** The protocol of this `CreateListenerDetails`.

**Return type** `str`

**ssl\_configuration**

Gets the `ssl_configuration` of this `CreateListenerDetails`.

**Returns** The `ssl_configuration` of this `CreateListenerDetails`.

**Return type** *SSLConfigurationDetails*

**class** `oraclebmc.load_balancer.models.CreateLoadBalancerDetails`



**backend\_sets**

Gets the backend\_sets of this CreateLoadBalancerDetails.

**Returns** The backend\_sets of this CreateLoadBalancerDetails.

**Return type** dict(str, BackendSetDetails)

**certificates**

Gets the certificates of this CreateLoadBalancerDetails.

**Returns** The certificates of this CreateLoadBalancerDetails.

**Return type** dict(str, CertificateDetails)

**compartment\_id**

Gets the compartment\_id of this CreateLoadBalancerDetails. The [OCID](#) of the compartment in which to create the load balancer.

**Returns** The compartment\_id of this CreateLoadBalancerDetails.

**Return type** str

**display\_name**

Gets the display\_name of this CreateLoadBalancerDetails. A user-friendly name. It does not have to be unique, and it is changeable.

Example: *My load balancer*

**Returns** The display\_name of this CreateLoadBalancerDetails.

**Return type** str

**is\_private**

Gets the is\_private of this CreateLoadBalancerDetails. Whether the load balancer has a VCN-local (private) IP address.

If “true”, the service assigns a private IP address to the load balancer. The load balancer requires only one subnet to host both the primary and secondary load balancers. The private IP address is local to the subnet. The load balancer is accessible only from within the VCN that contains the associated subnet, or as further restricted by your security list rules. The load balancer can route traffic to any backend server that is reachable from the VCN.

For a private load balancer, both the primary and secondary load balancer hosts are within the same Availability Domain.

If “false”, the service assigns a public IP address to the load balancer. A load balancer with a public IP address requires two subnets, each in a different Availability Domain. One subnet hosts the primary load balancer and the other hosts the secondary (stand-by) load balancer. A public load balancer is accessible from the internet, depending on your VCN’s [security list rules](#).

Example: *false*

**Returns** The is\_private of this CreateLoadBalancerDetails.

**Return type** bool

**listeners**

Gets the listeners of this CreateLoadBalancerDetails.

**Returns** The listeners of this CreateLoadBalancerDetails.

**Return type** dict(str, ListenerDetails)

**shape\_name**

Gets the `shape_name` of this `CreateLoadBalancerDetails`. A template that determines the total pre-provisioned bandwidth (ingress plus egress). To get a list of available shapes, use the `list_shapes()` operation.

Example: *100Mbps*

**Returns** The `shape_name` of this `CreateLoadBalancerDetails`.

**Return type** str

**subnet\_ids**

Gets the `subnet_ids` of this `CreateLoadBalancerDetails`. An array of subnet OCIDs.

**Returns** The `subnet_ids` of this `CreateLoadBalancerDetails`.

**Return type** list[str]

**class** oraclebmc.load\_balancer.models.**HealthChecker**

**interval\_in\_millis**

Gets the `interval_in_millis` of this `HealthChecker`. The interval between health checks, in milliseconds. The default is 10000 (10 seconds).

Example: *30000*

**Returns** The `interval_in_millis` of this `HealthChecker`.

**Return type** int

**port**

Gets the port of this `HealthChecker`. The backend server port against which to run the health check. If the port is not specified, the load balancer uses the port information from the `Backend` object.

Example: *8080*

**Returns** The port of this `HealthChecker`.

**Return type** int

**protocol**

Gets the protocol of this `HealthChecker`. The protocol the health check must use; either HTTP or TCP.

Example: *HTTP*

**Returns** The protocol of this `HealthChecker`.

**Return type** str

**response\_body\_regex**

Gets the `response_body_regex` of this `HealthChecker`. A regular expression for parsing the response body from the backend server.

Example: *^(500|40|1348)\$*

**Returns** The `response_body_regex` of this `HealthChecker`.

**Return type** str

**retries**

Gets the `retries` of this `HealthChecker`. The number of retries to attempt before a backend server is considered “unhealthy”. Defaults to 3.

Example: *3*

**Returns** The `retries` of this `HealthChecker`.

**Return type** int

**return\_code**

Gets the return\_code of this HealthChecker. The status code a healthy backend server should return. If you configure the health check policy to use the HTTP protocol, you can use common HTTP status codes such as “200”.

Example: *200*

**Returns** The return\_code of this HealthChecker.

**Return type** int

**timeout\_in\_millis**

Gets the timeout\_in\_millis of this HealthChecker. The maximum timeout before a retry, in milliseconds. Defaults to 3000 (3 seconds).

Example: *6000*

**Returns** The timeout\_in\_millis of this HealthChecker.

**Return type** int

**url\_path**

Gets the url\_path of this HealthChecker. The path against which to run the health check.

Example: */healthcheck*

**Returns** The url\_path of this HealthChecker.

**Return type** str

**class** oraclebmc.load\_balancer.models.**HealthCheckerDetails**

**interval\_in\_millis**

Gets the interval\_in\_millis of this HealthCheckerDetails. The interval between health checks, in milliseconds.

Example: *30000*

**Returns** The interval\_in\_millis of this HealthCheckerDetails.

**Return type** int

**port**

Gets the port of this HealthCheckerDetails. The backend server port against which to run the health check. If the port is not specified, the load balancer uses the port information from the *Backend* object.

Example: *8080*

**Returns** The port of this HealthCheckerDetails.

**Return type** int

**protocol**

Gets the protocol of this HealthCheckerDetails. The protocol the health check must use; either HTTP or TCP.

Example: *HTTP*

**Returns** The protocol of this HealthCheckerDetails.

**Return type** str

**response\_body\_regex**

Gets the `response_body_regex` of this `HealthCheckerDetails`. A regular expression for parsing the response body from the backend server.

Example: `^(500|40[1348])$`

**Returns** The `response_body_regex` of this `HealthCheckerDetails`.

**Return type** `str`

**retries**

Gets the `retries` of this `HealthCheckerDetails`. The number of retries to attempt before a backend server is considered “unhealthy”.

Example: `3`

**Returns** The `retries` of this `HealthCheckerDetails`.

**Return type** `int`

**return\_code**

Gets the `return_code` of this `HealthCheckerDetails`. The status code a healthy backend server should return.

Example: `200`

**Returns** The `return_code` of this `HealthCheckerDetails`.

**Return type** `int`

**timeout\_in\_millis**

Gets the `timeout_in_millis` of this `HealthCheckerDetails`. The maximum timeout in milliseconds before a retry.

Example: `6000`

**Returns** The `timeout_in_millis` of this `HealthCheckerDetails`.

**Return type** `int`

**url\_path**

Gets the `url_path` of this `HealthCheckerDetails`. The path against which to run the health check.

Example: `/healthcheck`

**Returns** The `url_path` of this `HealthCheckerDetails`.

**Return type** `str`

**class** `oraclebmc.load_balancer.models.IpAddress`

**ip\_address**

Gets the `ip_address` of this `IpAddress`. An IP address.

Example: `128.148.10.20`

**Returns** The `ip_address` of this `IpAddress`.

**Return type** `str`

**is\_public**

Gets the `is_public` of this `IpAddress`. Whether the IP address is public or private.

If “true”, the IP address is public and accessible from the internet.

If “false”, the IP address is private and accessible only from within the associated VCN.

**Returns** The `is_public` of this `IpAddress`.

**Return type** bool

**class** oraclebmc.load\_balancer.models.**Listener**

**default\_backend\_set\_name**

Gets the default\_backend\_set\_name of this Listener. The name of the associated backend set.

**Returns** The default\_backend\_set\_name of this Listener.

**Return type** str

**name**

Gets the name of this Listener. A friendly name for the listener. It must be unique and it cannot be changed.

Example: *My listener*

**Returns** The name of this Listener.

**Return type** str

**port**

Gets the port of this Listener. The communication port for the listener.

Example: *80*

**Returns** The port of this Listener.

**Return type** int

**protocol**

Gets the protocol of this Listener. The protocol on which the listener accepts connection requests. To get a list of valid protocols, use the `list_protocols()` operation.

Example: *HTTP*

**Returns** The protocol of this Listener.

**Return type** str

**ssl\_configuration**

Gets the ssl\_configuration of this Listener.

**Returns** The ssl\_configuration of this Listener.

**Return type** *SSLConfiguration*

**class** oraclebmc.load\_balancer.models.**ListenerDetails**

**default\_backend\_set\_name**

Gets the default\_backend\_set\_name of this ListenerDetails. The name of the associated backend set.

**Returns** The default\_backend\_set\_name of this ListenerDetails.

**Return type** str

**port**

Gets the port of this ListenerDetails. The communication port for the listener.

Example: *80*

**Returns** The port of this ListenerDetails.

**Return type** int

**protocol**

Gets the protocol of this ListenerDetails. The protocol on which the listener accepts connection requests. To get a list of valid protocols, use the `list_protocols()` operation.

Example: *HTTP*

**Returns** The protocol of this ListenerDetails.

**Return type** str

**ssl\_configuration**

Gets the ssl\_configuration of this ListenerDetails.

**Returns** The ssl\_configuration of this ListenerDetails.

**Return type** *SSLConfigurationDetails*

**class** oraclebmc.load\_balancer.models.**LoadBalancer**

**backend\_sets**

Gets the backend\_sets of this LoadBalancer.

**Returns** The backend\_sets of this LoadBalancer.

**Return type** dict(str, BackendSet)

**certificates**

Gets the certificates of this LoadBalancer.

**Returns** The certificates of this LoadBalancer.

**Return type** dict(str, Certificate)

**compartment\_id**

Gets the compartment\_id of this LoadBalancer. The **OCID** of the compartment containing the load balancer.

**Returns** The compartment\_id of this LoadBalancer.

**Return type** str

**display\_name**

Gets the display\_name of this LoadBalancer. A user-friendly name. It does not have to be unique, and it is changeable.

Example: *My load balancer*

**Returns** The display\_name of this LoadBalancer.

**Return type** str

**id**

Gets the id of this LoadBalancer. The **OCID** of the load balancer.

**Returns** The id of this LoadBalancer.

**Return type** str

**ip\_addresses**

Gets the ip\_addresses of this LoadBalancer. An array of IP addresses.

**Returns** The ip\_addresses of this LoadBalancer.

**Return type** list[IpAddress]

**is\_private**

Gets the `is_private` of this LoadBalancer. Whether the load balancer has a VCN-local (private) IP address.

If “true”, the service assigns a private IP address to the load balancer. The load balancer requires only one subnet to host both the primary and secondary load balancers. The private IP address is local to the subnet. The load balancer is accessible only from within the VCN that contains the associated subnet, or as further restricted by your security list rules. The load balancer can route traffic to any backend server that is reachable from the VCN.

For a private load balancer, both the primary and secondary load balancer hosts are within the same Availability Domain.

If “false”, the service assigns a public IP address to the load balancer. A load balancer with a public IP address requires two subnets, each in a different Availability Domain. One subnet hosts the primary load balancer and the other hosts the secondary (stand-by) load balancer. A public load balancer is accessible from the internet, depending on your VCN’s [security list rules](#).

**Returns** The `is_private` of this LoadBalancer.

**Return type** bool

**lifecycle\_state**

Gets the `lifecycle_state` of this LoadBalancer. Allowed values for this property are: “CREATING”, “FAILED”, “ACTIVE”, “DELETING”, “DELETED”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The `lifecycle_state` of this LoadBalancer.

**Return type** str

**listeners**

Gets the listeners of this LoadBalancer.

**Returns** The listeners of this LoadBalancer.

**Return type** dict(str, Listener)

**shape\_name**

Gets the `shape_name` of this LoadBalancer. A template that determines the total pre-provisioned bandwidth (ingress plus egress). To get a list of available shapes, use the `list_shapes()` operation.

Example: *100Mbps*

**Returns** The `shape_name` of this LoadBalancer.

**Return type** str

**subnet\_ids**

Gets the `subnet_ids` of this LoadBalancer. An array of subnet [OCIDs](#).

**Returns** The `subnet_ids` of this LoadBalancer.

**Return type** list[str]

**time\_created**

Gets the `time_created` of this LoadBalancer. The date and time the load balancer was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The `time_created` of this LoadBalancer.

**Return type** datetime

**class** oraclebmc.load\_balancer.models.**LoadBalancerPolicy**

**name**

Gets the name of this LoadBalancerPolicy. The name of the load balancing policy.

**Returns** The name of this LoadBalancerPolicy.

**Return type** str

**class** oraclebmc.load\_balancer.models.**LoadBalancerProtocol**

**name**

Gets the name of this LoadBalancerProtocol. The name of the protocol.

**Returns** The name of this LoadBalancerProtocol.

**Return type** str

**class** oraclebmc.load\_balancer.models.**LoadBalancerShape**

**name**

Gets the name of this LoadBalancerShape. The name of the shape.

**Returns** The name of this LoadBalancerShape.

**Return type** str

**class** oraclebmc.load\_balancer.models.**SSLConfiguration**

**certificate\_name**

Gets the certificate\_name of this SSLConfiguration. A friendly name for the certificate bundle. It must be unique and it cannot be changed.

Example: *My certificate bundle*

**Returns** The certificate\_name of this SSLConfiguration.

**Return type** str

**verify\_depth**

Gets the verify\_depth of this SSLConfiguration. The maximum depth for peer certificate chain verification.

Example: 3

**Returns** The verify\_depth of this SSLConfiguration.

**Return type** int

**verify\_peer\_certificate**

Gets the verify\_peer\_certificate of this SSLConfiguration. Whether the load balancer listener should verify peer certificates.

Example: *true*

**Returns** The verify\_peer\_certificate of this SSLConfiguration.

**Return type** bool

**class** oraclebmc.load\_balancer.models.**SSLConfigurationDetails**



**certificate\_name**

Gets the `certificate_name` of this `SSLConfigurationDetails`. A friendly name for the certificate bundle. It must be unique and it cannot be changed.

Example: *My certificate bundle*

**Returns** The `certificate_name` of this `SSLConfigurationDetails`.

**Return type** `str`

**verify\_depth**

Gets the `verify_depth` of this `SSLConfigurationDetails`. The maximum depth for peer certificate chain verification.

Example: *3*

**Returns** The `verify_depth` of this `SSLConfigurationDetails`.

**Return type** `int`

**verify\_peer\_certificate**

Gets the `verify_peer_certificate` of this `SSLConfigurationDetails`. Whether the load balancer listener should verify peer certificates.

Example: *true*

**Returns** The `verify_peer_certificate` of this `SSLConfigurationDetails`.

**Return type** `bool`

**class** `oraclebmc.load_balancer.models.SessionPersistenceConfigurationDetails`

**cookie\_name**

Gets the `cookie_name` of this `SessionPersistenceConfigurationDetails`. The name of the cookie used to detect a session initiated by the backend server. Use `*` to specify that any cookie set by the backend causes the session to persist.

Example: *myCookieName*

**Returns** The `cookie_name` of this `SessionPersistenceConfigurationDetails`.

**Return type** `str`

**disable\_fallback**

Gets the `disable_fallback` of this `SessionPersistenceConfigurationDetails`. Whether the load balancer is prevented from directing traffic from a persistent session client to a different backend server if the original server is unavailable. Defaults to `false`.

Example: *true*

**Returns** The `disable_fallback` of this `SessionPersistenceConfigurationDetails`.

**Return type** `bool`

**class** `oraclebmc.load_balancer.models.UpdateBackendDetails`

**backup**

Gets the `backup` of this `UpdateBackendDetails`. Whether the load balancer should treat this server as a backup unit. If `true`, the load balancer forwards no ingress traffic to this backend server unless all other backend servers not marked as “backup” fail the health check policy.

Example: *true*

**Returns** The `backup` of this `UpdateBackendDetails`.

**Return type** bool

**drain**

Gets the drain of this UpdateBackendDetails. Whether the load balancer should drain this server. Servers marked “drain” receive no new incoming traffic.

Example: *true*

**Returns** The drain of this UpdateBackendDetails.

**Return type** bool

**offline**

Gets the offline of this UpdateBackendDetails. Whether the load balancer should treat this server as offline. Offline servers receive no incoming traffic.

Example: *true*

**Returns** The offline of this UpdateBackendDetails.

**Return type** bool

**weight**

Gets the weight of this UpdateBackendDetails. The load balancing policy weight assigned to the server. Backend servers with a higher weight receive a larger proportion of incoming traffic. For example, a server weighted ‘3’ receives 3 times the number of new connections as a server weighted ‘1’. For more information on load balancing policies, see [How Load Balancing Policies Work](#).

Example: *3*

**Returns** The weight of this UpdateBackendDetails.

**Return type** int

**class** oraclebmc.load\_balancer.models.UpdateBackendSetDetails

**backends**

Gets the backends of this UpdateBackendSetDetails.

**Returns** The backends of this UpdateBackendSetDetails.

**Return type** list[BackendDetails]

**health\_checker**

Gets the health\_checker of this UpdateBackendSetDetails.

**Returns** The health\_checker of this UpdateBackendSetDetails.

**Return type** *HealthCheckerDetails*

**policy**

Gets the policy of this UpdateBackendSetDetails. The load balancer policy for the backend set. The default load balancing policy is ‘ROUND\_ROBIN’ To get a list of available policies, use the `list_policies()` operation.

Example: *LEAST\_CONNECTIONS*

**Returns** The policy of this UpdateBackendSetDetails.

**Return type** str

**session\_persistence\_configuration**

Gets the session\_persistence\_configuration of this UpdateBackendSetDetails.

**Returns** The session\_persistence\_configuration of this UpdateBackendSetDetails.

**Return type** *SessionPersistenceConfigurationDetails*

**ssl\_configuration**

Gets the ssl\_configuration of this UpdateBackendSetDetails.

**Returns** The ssl\_configuration of this UpdateBackendSetDetails.

**Return type** *SSLConfigurationDetails*

**class** oraclebmc.load\_balancer.models.**UpdateHealthCheckerDetails**

**interval\_in\_millis**

Gets the interval\_in\_millis of this UpdateHealthCheckerDetails. The interval between health checks, in milliseconds.

Example: *30000*

**Returns** The interval\_in\_millis of this UpdateHealthCheckerDetails.

**Return type** int

**port**

Gets the port of this UpdateHealthCheckerDetails. The backend server port against which to run the health check.

Example: *8080*

**Returns** The port of this UpdateHealthCheckerDetails.

**Return type** int

**protocol**

Gets the protocol of this UpdateHealthCheckerDetails. The protocol the health check must use; either HTTP or TCP.

Example: *HTTP*

**Returns** The protocol of this UpdateHealthCheckerDetails.

**Return type** str

**response\_body\_regex**

Gets the response\_body\_regex of this UpdateHealthCheckerDetails. A regular expression for parsing the response body from the backend server.

Example: *^(500|40[1348])\$*

**Returns** The response\_body\_regex of this UpdateHealthCheckerDetails.

**Return type** str

**retries**

Gets the retries of this UpdateHealthCheckerDetails. The number of retries to attempt before a backend server is considered “unhealthy”.

Example: *3*

**Returns** The retries of this UpdateHealthCheckerDetails.

**Return type** int

**return\_code**

Gets the return\_code of this UpdateHealthCheckerDetails. The status code a healthy backend server should return.

Example: *200*

**Returns** The return\_code of this UpdateHealthCheckerDetails.

**Return type** int

**timeout\_in\_millis**

Gets the timeout\_in\_millis of this UpdateHealthCheckerDetails. The maximum timeout in milliseconds before a retry.

Example: *6000*

**Returns** The timeout\_in\_millis of this UpdateHealthCheckerDetails.

**Return type** int

**url\_path**

Gets the url\_path of this UpdateHealthCheckerDetails. The path against which to run the health check.

Example: */healthcheck*

**Returns** The url\_path of this UpdateHealthCheckerDetails.

**Return type** str

**class** oraclebmc.load\_balancer.models.**UpdateListenerDetails**

**default\_backend\_set\_name**

Gets the default\_backend\_set\_name of this UpdateListenerDetails. The name of the associated backend set.

**Returns** The default\_backend\_set\_name of this UpdateListenerDetails.

**Return type** str

**port**

Gets the port of this UpdateListenerDetails. The communication port for the listener.

Example: *80*

**Returns** The port of this UpdateListenerDetails.

**Return type** int

**protocol**

Gets the protocol of this UpdateListenerDetails. The protocol on which the listener accepts connection requests. To get a list of valid protocols, use the list\_protocols() operation.

Example: *HTTP*

**Returns** The protocol of this UpdateListenerDetails.

**Return type** str

**ssl\_configuration**

Gets the ssl\_configuration of this UpdateListenerDetails.

**Returns** The ssl\_configuration of this UpdateListenerDetails.

**Return type** *SSLConfigurationDetails*

**class** oraclebmc.load\_balancer.models.**UpdateLoadBalancerDetails**

**display\_name**

Gets the display\_name of this UpdateLoadBalancerDetails. The user-friendly display name for the load balancer. It does not have to be unique, and it is changeable.

Example: *My load balancer*

**Returns** The display\_name of this UpdateLoadBalancerDetails.

**Return type** str

**class** oraclebmc.load\_balancer.models.**WorkRequest**

**error\_details**

Gets the error\_details of this WorkRequest.

**Returns** The error\_details of this WorkRequest.

**Return type** list[WorkRequestError]

**id**

Gets the id of this WorkRequest. The **OCID** of the work request.

**Returns** The id of this WorkRequest.

**Return type** str

**lifecycle\_state**

Gets the lifecycle\_state of this WorkRequest. Allowed values for this property are: "ACCEPTED", "IN\_PROGRESS", "FAILED", "SUCCEEDED", "UNKNOWN\_ENUM\_VALUE". Any unrecognized values returned by a service will be mapped to 'UNKNOWN\_ENUM\_VALUE'.

**Returns** The lifecycle\_state of this WorkRequest.

**Return type** str

**load\_balancer\_id**

Gets the load\_balancer\_id of this WorkRequest. The **OCID** of the load balancer with which the work request is associated.

**Returns** The load\_balancer\_id of this WorkRequest.

**Return type** str

**message**

Gets the message of this WorkRequest. A collection of data, related to the load balancer provisioning process, that helps with debugging in the event of failure. Possible data elements include:

- workflow name
- event ID
- work request ID
- load balancer ID
- workflow completion message

**Returns** The message of this WorkRequest.

**Return type** str

**time\_accepted**

Gets the time\_accepted of this WorkRequest. The date and time the work request was created, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_accepted of this WorkRequest.

**Return type** datetime

**time\_finished**

Gets the time\_finished of this WorkRequest. The date and time the work request was completed, in the format defined by RFC3339.

Example: *2016-08-25T21:10:29.600Z*

**Returns** The time\_finished of this WorkRequest.

**Return type** datetime

**type**

Gets the type of this WorkRequest. The type of action the work request represents.

**Returns** The type of this WorkRequest.

**Return type** str

**class** oraclebmc.load\_balancer.models.**WorkRequestError**

**error\_code**

Gets the error\_code of this WorkRequestError. Allowed values for this property are: “BAD\_INPUT”, “INTERNAL\_ERROR”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The error\_code of this WorkRequestError.

**Return type** str

**message**

Gets the message of this WorkRequestError. A human-readable error string.

**Returns** The message of this WorkRequestError.

**Return type** str

## Object Storage

### Client

**class** oraclebmc.object\_storage.object\_storage\_client.**ObjectStorageClient** (*config*)

**abort\_multipart\_upload** (*namespace\_name, bucket\_name, object\_name, upload\_id, \*\*kwargs*)

AbortMultipartUpload Aborts an in-progress multipart upload and deletes all parts that have been uploaded.

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **object\_name** (*str*) – (required) The name of the object.  
Example: *test/object1.log*
- **upload\_id** (*str*) – (required) The upload ID for a multipart upload.

- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type *None*

**Return type** *Response*

**commit\_multipart\_upload** (*namespace\_name*, *bucket\_name*, *object\_name*, *upload\_id*, *commit\_multipart\_upload\_details*, *\*\*kwargs*)

CommitMultipartUpload Commits a multipart upload, which involves checking part numbers and ETags of the parts, to create an aggregate object.

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **object\_name** (*str*) – (required) The name of the object.  
Example: *test/object1.log*
- **upload\_id** (*str*) – (required) The upload ID for a multipart upload.
- **commit\_multipart\_upload\_details** (*CommitMultipartUploadDetails*) – (required) The part numbers and ETags for the parts you want to commit.
- **if\_match** (*str*) – (optional) The entity tag to match. For creating and committing a multipart upload to an object, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **if\_none\_match** (*str*) – (optional) The entity tag to avoid matching. The only valid value is “\*”, which indicates that the request should fail if the object already exists. For creating and committing a multipart upload, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type *None*

**Return type** *Response*

**create\_bucket** (*namespace\_name*, *create\_bucket\_details*, *\*\*kwargs*)

CreateBucket Creates a bucket in the given namespace with a bucket name and optional user-defined metadata.

To use this and other API operations, you must be authorized in an IAM policy. If you’re not authorized, talk to an administrator. If you’re an administrator who needs to write policies to give users access, see [Getting Started with Policies](#).

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **create\_bucket\_details** (*CreateBucketDetails*) – (required) Request object for creating a bucket.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type *Bucket*

**Return type** *Response*

**create\_multipart\_upload** (*namespace\_name*, *bucket\_name*, *create\_multipart\_upload\_details*, *\*\*kwargs*)

CreateMultipartUpload Starts a new multipart upload to a specific object in the given bucket in the given namespace.

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **create\_multipart\_upload\_details** (*CreateMultipartUploadDetails*) – (required) Request object for creating a multi-part upload.
- **if\_match** (*str*) – (optional) The entity tag to match. For creating and committing a multipart upload to an object, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **if\_none\_match** (*str*) – (optional) The entity tag to avoid matching. The only valid value is “\*”, which indicates that the request should fail if the object already exists. For creating and committing a multipart upload, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type *MultipartUpload*

**Return type** *Response*

**create\_preauthenticated\_request** (*namespace\_name*, *bucket\_name*, *create\_preauthenticated\_request\_details*, *\*\*kwargs*)

CreatePreauthenticatedRequest Create a pre-authenticated request specific to the bucket

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **create\_preauthenticated\_request\_details** (*CreatePreauthenticatedRequestDetails*) – (required) details for creating the pre-authenticated request.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type *PreauthenticatedRequest*

**Return type** *Response*

**delete\_bucket** (*namespace\_name*, *bucket\_name*, *\*\*kwargs*)

DeleteBucket Deletes a bucket if it is already empty. If the bucket is not empty, use `delete_object()` first.

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.

Example: *my-new-bucket1*



- **if\_match** (*str*) – (optional) The entity tag to match. For creating and committing a multipart upload to an object, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_object** (*namespace\_name*, *bucket\_name*, *object\_name*, **\*\*kwargs**)

DeleteObject Deletes an object.

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **object\_name** (*str*) – (required) The name of the object.  
Example: *test/object1.log*
- **if\_match** (*str*) – (optional) The entity tag to match. For creating and committing a multipart upload to an object, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**delete\_preauthenticated\_request** (*namespace\_name*, *bucket\_name*, *par\_id*, **\*\*kwargs**)

DeletePreauthenticatedRequest Deletes the bucket level pre-authenticated request

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **par\_id** (*str*) – (required) The unique identifier for the pre-authenticated request (PAR). This can be used to manage the PAR such as GET or DELETE the PAR
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**get\_bucket** (*namespace\_name*, *bucket\_name*, **\*\*kwargs**)

GetBucket Gets the current representation of the given bucket in the given namespace.

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*

- **if\_match** (*str*) – (optional) The entity tag to match. For creating and committing a multipart upload to an object, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **if\_none\_match** (*str*) – (optional) The entity tag to avoid matching. The only valid value is ‘\*’, which indicates that the request should fail if the object already exists. For creating and committing a multipart upload, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type *Bucket*

**Return type** *Response*

**get\_namespace** (*\*\*kwargs*)

GetNamespace Gets the name of the namespace for the user making the request. An account name must be unique, must start with a letter, and can have up to 15 lowercase letters and numbers. You cannot use spaces or special characters.

**Parameters** **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type *str*

**Return type** *Response*

**get\_object** (*namespace\_name*, *bucket\_name*, *object\_name*, *\*\*kwargs*)

GetObject Gets the metadata and body of an object.

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **object\_name** (*str*) – (required) The name of the object.  
Example: *test/object1.log*
- **if\_match** (*str*) – (optional) The entity tag to match. For creating and committing a multipart upload to an object, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **if\_none\_match** (*str*) – (optional) The entity tag to avoid matching. The only valid value is ‘\*’, which indicates that the request should fail if the object already exists. For creating and committing a multipart upload, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.
- **range** (*str*) – (optional) Optional byte range to fetch, as described in [RFC 7233](#), section 2.1. Note, only a single range of bytes is supported.

**Returns** A *Response* object with data of type *stream*

**Return type** *Response*

**get\_preauthenticated\_request** (*namespace\_name*, *bucket\_name*, *par\_id*, *\*\*kwargs*)

GetPreauthenticatedRequest Get the bucket level pre-authenticateted request

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.

- **bucket\_name** (*str*) – (required) The name of the bucket.

Example: *my-new-bucket1*

- **par\_id** (*str*) – (required) The unique identifier for the pre-authenticated request (PAR). This can be used to manage the PAR such as GET or DELETE the PAR
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type *PreauthenticatedRequestSummary*

**Return type** *Response*

**head\_bucket** (*namespace\_name*, *bucket\_name*, *\*\*kwargs*)

HeadBucket Efficiently checks if a bucket exists and gets the current ETag for the bucket.

#### Parameters

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **if\_match** (*str*) – (optional) The entity tag to match. For creating and committing a multipart upload to an object, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **if\_none\_match** (*str*) – (optional) The entity tag to avoid matching. The only valid value is '\*', which indicates that the request should fail if the object already exists. For creating and committing a multipart upload, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**head\_object** (*namespace\_name*, *bucket\_name*, *object\_name*, *\*\*kwargs*)

HeadObject Gets the user-defined metadata and entity tag for an object.

#### Parameters

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **object\_name** (*str*) – (required) The name of the object.  
Example: *test/object1.log*
- **if\_match** (*str*) – (optional) The entity tag to match. For creating and committing a multipart upload to an object, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **if\_none\_match** (*str*) – (optional) The entity tag to avoid matching. The only valid value is '\*', which indicates that the request should fail if the object already exists. For creating and committing a multipart upload, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**list\_buckets** (*namespace\_name*, *compartment\_id*, *\*\*kwargs*)

ListBuckets Gets a list of all *BucketSummary*'s in a compartment. A *BucketSummary* contains only summary fields for the bucket and does not contain fields like the user-defined metadata.

To use this and other API operations, you must be authorized in an IAM policy. If you're not authorized, talk to an administrator. If you're an administrator who needs to write policies to give users access, see [Getting Started with Policies](#).

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **compartment\_id** (*str*) – (required) The ID of the compartment in which to create the bucket.
- **limit** (*int*) – (optional) The maximum number of items to return.
- **page** (*str*) – (optional) The page at which to start retrieving results.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type list of *BucketSummary*

**Return type** *Response*

**list\_multipart\_upload\_parts** (*namespace\_name*, *bucket\_name*, *object\_name*, *upload\_id*, *\*\*kwargs*)

ListMultipartUploadParts Lists the parts of an in-progress multipart upload.

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **object\_name** (*str*) – (required) The name of the object.  
Example: *test/object1.log*
- **upload\_id** (*str*) – (required) The upload ID for a multipart upload.
- **limit** (*int*) – (optional) The maximum number of items to return.
- **page** (*str*) – (optional) The page at which to start retrieving results.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type list of *MultipartUploadPartSummary*

**Return type** *Response*

**list\_multipart\_uploads** (*namespace\_name*, *bucket\_name*, *\*\*kwargs*)

ListMultipartUploads Lists all in-progress multipart uploads for the given bucket in the given namespace.

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **limit** (*int*) – (optional) The maximum number of items to return.
- **page** (*str*) – (optional) The page at which to start retrieving results.

- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type list of *MultipartUpload*

**Return type** *Response*

**list\_objects** (*namespace\_name*, *bucket\_name*, **\*\*kwargs**)

ListObjects Lists the objects in a bucket.

To use this and other API operations, you must be authorized in an IAM policy. If you're not authorized, talk to an administrator. If you're an administrator who needs to write policies to give users access, see [Getting Started with Policies](#).

#### Parameters

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **prefix** (*str*) – (optional) The string to use for matching against the start of object names in a list query.
- **start** (*str*) – (optional) Object names returned by a list query must be greater or equal to this parameter.
- **end** (*str*) – (optional) Object names returned by a list query must be strictly less than this parameter.
- **limit** (*int*) – (optional) The maximum number of items to return.
- **delimiter** (*str*) – (optional) When this parameter is set, only objects whose names do not contain the delimiter character (after an optionally specified prefix) are returned. Scanned objects whose names contain the delimiter have part of their name up to the last occurrence of the delimiter (after the optional prefix) returned as a set of prefixes. Note that only '/' is a supported delimiter character at this time.
- **fields** (*str*) – (optional) Object summary in list of objects includes the 'name' field. This parameter can also include 'size' (object size in bytes), 'md5', and 'timeCreated' (object creation date and time) fields. Value of this parameter should be a comma-separated, case-insensitive list of those field names. For example 'name,timeCreated,md5'.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type *ListObjects*

**Return type** *Response*

**list\_preauthenticated\_requests** (*namespace\_name*, *bucket\_name*, **\*\*kwargs**)

ListPreauthenticatedRequests List pre-authenticated requests for the bucket

#### Parameters

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **object\_name\_prefix** (*str*) – (optional) Pre-authenticated requests returned by the list must have object names starting with prefix
- **limit** (*int*) – (optional) The maximum number of items to return.
- **page** (*str*) – (optional) The page at which to start retrieving results.

- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type list of *PreauthenticatedRequestSummary*

**Return type** *Response*

**put\_object** (*namespace\_name*, *bucket\_name*, *object\_name*, *put\_object\_body*, *\*\*kwargs*)

PutObject Creates a new object or overwrites an existing one.

To use this and other API operations, you must be authorized in an IAM policy. If you’re not authorized, talk to an administrator. If you’re an administrator who needs to write policies to give users access, see [Getting Started with Policies](#).

#### Parameters

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **object\_name** (*str*) – (required) The name of the object.  
Example: *test/object1.log*
- **put\_object\_body** (*stream*) – (required) The object to upload to the object store.
- **content\_length** (*int*) – (optional) The content length of the body.
- **if\_match** (*str*) – (optional) The entity tag to match. For creating and committing a multipart upload to an object, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **if\_none\_match** (*str*) – (optional) The entity tag to avoid matching. The only valid value is ‘\*’, which indicates that the request should fail if the object already exists. For creating and committing a multipart upload, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.
- **expect** (*str*) – (optional) 100-continue
- **content\_md5** (*str*) – (optional) The base-64 encoded MD5 hash of the body.
- **content\_type** (*str*) – (optional) The content type of the object. Defaults to ‘application/octet-stream’ if not overridden during the PutObject call.
- **content\_language** (*str*) – (optional) The content language of the object.
- **content\_encoding** (*str*) – (optional) The content encoding of the object.
- **str) opc\_meta** (*dict (str,)*) – (optional) Optional user-defined metadata key and value.

**Returns** A *Response* object with data of type None

**Return type** *Response*

**update\_bucket** (*namespace\_name*, *bucket\_name*, *update\_bucket\_details*, *\*\*kwargs*)

UpdateBucket Performs a partial or full update of a bucket’s user-defined metadata.

#### Parameters

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.

- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **update\_bucket\_details** (`UpdateBucketDetails`) – (required) Request object for updating a bucket.
- **if\_match** (*str*) – (optional) The entity tag to match. For creating and committing a multipart upload to an object, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.

**Returns** A *Response* object with data of type *Bucket*

**Return type** *Response*

**upload\_part** (*namespace\_name*, *bucket\_name*, *object\_name*, *upload\_id*, *upload\_part\_num*, *upload\_part\_body*, *\*\*kwargs*)

UploadPart Uploads a single part of a multipart upload.

**Parameters**

- **namespace\_name** (*str*) – (required) The top-level namespace used for the request.
- **bucket\_name** (*str*) – (required) The name of the bucket.  
Example: *my-new-bucket1*
- **object\_name** (*str*) – (required) The name of the object.  
Example: *test/object1.log*
- **upload\_id** (*str*) – (required) The upload ID for a multipart upload.
- **upload\_part\_num** (*int*) – (required) The part number that identifies the object part currently being uploaded.
- **upload\_part\_body** (*stream*) – (required) The part being uploaded to the Object Storage Service.
- **content\_length** (*int*) – (optional) The content length of the body.
- **opc\_client\_request\_id** (*str*) – (optional) The client request ID for tracing.
- **if\_match** (*str*) – (optional) The entity tag to match. For creating and committing a multipart upload to an object, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **if\_none\_match** (*str*) – (optional) The entity tag to avoid matching. The only valid value is ‘\*’, which indicates that the request should fail if the object already exists. For creating and committing a multipart upload, this is the entity tag of the target object. For uploading a part, this is the entity tag of the target part.
- **expect** (*str*) – (optional) 100-continue
- **content\_md5** (*str*) – (optional) The base-64 encoded MD5 hash of the body.

**Returns** A *Response* object with data of type *None*

**Return type** *Response*

## Models

`class oraclebmc.object_storage.models.Bucket`

### `compartment_id`

Gets the `compartment_id` of this Bucket. The compartment ID in which the bucket is authorized.

**Returns** The `compartment_id` of this Bucket.

**Return type** str

### `created_by`

Gets the `created_by` of this Bucket. The OCID of the user who created the bucket.

**Returns** The `created_by` of this Bucket.

**Return type** str

### `etag`

Gets the `etag` of this Bucket. The entity tag for the bucket.

**Returns** The `etag` of this Bucket.

**Return type** str

### `metadata`

Gets the metadata of this Bucket. Arbitrary string keys and values for user-defined metadata.

**Returns** The metadata of this Bucket.

**Return type** dict(str, str)

### `name`

Gets the name of this Bucket. The name of the bucket.

**Returns** The name of this Bucket.

**Return type** str

### `namespace`

Gets the namespace of this Bucket. The namespace in which the bucket lives.

**Returns** The namespace of this Bucket.

**Return type** str

### `public_access_type`

Gets the `public_access_type` of this Bucket. The type of public access available on this bucket. Allows authenticated caller to access the bucket or contents of this bucket. By default a bucket is set to `NoPublicAccess`. It is treated as `NoPublicAccess` when this value is not specified. When the type is `NoPublicAccess` the bucket does not allow any public access. When the type is `ObjectRead` the bucket allows public access to the `GetObject`, `HeadObject`, `ListObjects`.

Allowed values for this property are: “`NoPublicAccess`”, “`ObjectRead`”, ‘`UNKNOWN_ENUM_VALUE`’. Any unrecognized values returned by a service will be mapped to ‘`UNKNOWN_ENUM_VALUE`’.

**Returns** The `public_access_type` of this Bucket.

**Return type** str

### `time_created`

Gets the `time_created` of this Bucket. The date and time at which the bucket was created.

**Returns** The `time_created` of this Bucket.



**Return type** datetime

**class** oraclebmc.object\_storage.models.**BucketSummary**

**compartment\_id**

Gets the compartment\_id of this BucketSummary. The compartment ID in which the bucket is authorized.

**Returns** The compartment\_id of this BucketSummary.

**Return type** str

**created\_by**

Gets the created\_by of this BucketSummary. The OCID of the user who created the bucket.

**Returns** The created\_by of this BucketSummary.

**Return type** str

**etag**

Gets the etag of this BucketSummary. The entity tag for the bucket.

**Returns** The etag of this BucketSummary.

**Return type** str

**name**

Gets the name of this BucketSummary. The name of the bucket.

**Returns** The name of this BucketSummary.

**Return type** str

**namespace**

Gets the namespace of this BucketSummary. The namespace in which the bucket lives.

**Returns** The namespace of this BucketSummary.

**Return type** str

**time\_created**

Gets the time\_created of this BucketSummary. The date and time at which the bucket was created.

**Returns** The time\_created of this BucketSummary.

**Return type** datetime

**class** oraclebmc.object\_storage.models.**CommitMultipartUploadDetails**

**parts\_to\_commit**

Gets the parts\_to\_commit of this CommitMultipartUploadDetails. The part numbers and ETags for the parts to be committed.

**Returns** The parts\_to\_commit of this CommitMultipartUploadDetails.

**Return type** list[CommitMultipartUploadPartDetails]

**parts\_to\_exclude**

Gets the parts\_to\_exclude of this CommitMultipartUploadDetails. The part numbers for the parts to be excluded from the completed object. Each part created for this upload must be in either partsToExclude or partsToCommit, but cannot be in both.

**Returns** The parts\_to\_exclude of this CommitMultipartUploadDetails.

**Return type** list[int]

`class oraclebmc.object_storage.models.CommitMultipartUploadPartDetails`

**etag**

Gets the etag of this CommitMultipartUploadPartDetails. The ETag returned when this part was uploaded.

**Returns** The etag of this CommitMultipartUploadPartDetails.

**Return type** str

**part\_num**

Gets the part\_num of this CommitMultipartUploadPartDetails. The part number for this part.

**Returns** The part\_num of this CommitMultipartUploadPartDetails.

**Return type** int

`class oraclebmc.object_storage.models.CreateBucketDetails`

**compartment\_id**

Gets the compartment\_id of this CreateBucketDetails. The ID of the compartment in which to create the bucket.

**Returns** The compartment\_id of this CreateBucketDetails.

**Return type** str

**metadata**

Gets the metadata of this CreateBucketDetails. Arbitrary string, up to 4KB, of keys and values for user-defined metadata.

**Returns** The metadata of this CreateBucketDetails.

**Return type** dict(str, str)

**name**

Gets the name of this CreateBucketDetails. The name of the bucket. Valid characters are uppercase or lowercase letters, numbers, and dashes. Bucket names must be unique within the namespace.

**Returns** The name of this CreateBucketDetails.

**Return type** str

**public\_access\_type**

Gets the public\_access\_type of this CreateBucketDetails. The type of public access available on this bucket. Allows authenticated caller to access the bucket or contents of this bucket. By default a bucket is set to NoPublicAccess. It is treated as NoPublicAccess when this value is not specified. When the type is NoPublicAccess the bucket does not allow any public access. When the type is ObjectRead the bucket allows public access to the GetObject, HeadObject, ListObjects.

Allowed values for this property are: “NoPublicAccess”, “ObjectRead”

**Returns** The public\_access\_type of this CreateBucketDetails.

**Return type** str

`class oraclebmc.object_storage.models.CreateMultipartUploadDetails`

**content\_encoding**

Gets the content\_encoding of this CreateMultipartUploadDetails. the content encoding of the object to upload.

**Returns** The content\_encoding of this CreateMultipartUploadDetails.

**Return type** str

**content\_language**

Gets the content\_language of this CreateMultipartUploadDetails. the content language of the object to upload.

**Returns** The content\_language of this CreateMultipartUploadDetails.

**Return type** str

**content\_type**

Gets the content\_type of this CreateMultipartUploadDetails. the content type of the object to upload.

**Returns** The content\_type of this CreateMultipartUploadDetails.

**Return type** str

**metadata**

Gets the metadata of this CreateMultipartUploadDetails. Arbitrary string keys and values for the user-defined metadata for the object. Keys must be in “opc-meta-*\**” format.

**Returns** The metadata of this CreateMultipartUploadDetails.

**Return type** dict(str, str)

**object**

Gets the object of this CreateMultipartUploadDetails. the name of the object to which this multi-part upload is targetted.

**Returns** The object of this CreateMultipartUploadDetails.

**Return type** str

**class** oraclebmc.object\_storage.models.**CreatePreauthenticatedRequestDetails**

**access\_type**

Gets the access\_type of this CreatePreauthenticatedRequestDetails. the operation that can be performed on this resource e.g PUT or GET.

Allowed values for this property are: “ObjectRead”, “ObjectWrite”, “ObjectReadWrite”, “AnyObjectWrite”

**Returns** The access\_type of this CreatePreauthenticatedRequestDetails.

**Return type** str

**name**

Gets the name of this CreatePreauthenticatedRequestDetails. user specified name for pre-authenticated request. Helpful for management purposes.

**Returns** The name of this CreatePreauthenticatedRequestDetails.

**Return type** str

**object\_name**

Gets the object\_name of this CreatePreauthenticatedRequestDetails. Name of object that is being granted access to by the pre-authenticated request. This can be null and that would mean that the pre-authenticated request is granting access to the entire bucket

**Returns** The object\_name of this CreatePreauthenticatedRequestDetails.

**Return type** str

**time\_expires**

Gets the `time_expires` of this `CreatePreauthenticatedRequestDetails`. The expiration date after which the pre-authenticated request will no longer be valid per spec [RFC 3339](#)

**Returns** The `time_expires` of this `CreatePreauthenticatedRequestDetails`.

**Return type** `datetime`

**class** `oraclebmc.object_storage.models.ListObjects`

**next\_start\_with**

Gets the `next_start_with` of this `ListObjects`. The name of the object to use in the `'startWith'` parameter to obtain the next page of a truncated `ListObjects` response.

**Returns** The `next_start_with` of this `ListObjects`.

**Return type** `str`

**objects**

Gets the objects of this `ListObjects`. An array of object summaries.

**Returns** The objects of this `ListObjects`.

**Return type** `list[ObjectSummary]`

**prefixes**

Gets the prefixes of this `ListObjects`. Prefixes that are common to the results returned by the request if the request specified a delimiter.

**Returns** The prefixes of this `ListObjects`.

**Return type** `list[str]`

**class** `oraclebmc.object_storage.models.MultipartUpload`

**bucket**

Gets the bucket of this `MultipartUpload`. The bucket in which the in-progress multipart upload is stored.

**Returns** The bucket of this `MultipartUpload`.

**Return type** `str`

**namespace**

Gets the namespace of this `MultipartUpload`. The namespace in which the in-progress multipart upload is stored.

**Returns** The namespace of this `MultipartUpload`.

**Return type** `str`

**object**

Gets the object of this `MultipartUpload`. The object name of the in-progress multipart upload.

**Returns** The object of this `MultipartUpload`.

**Return type** `str`

**time\_created**

Gets the `time_created` of this `MultipartUpload`. The date and time when the upload was created.

**Returns** The `time_created` of this `MultipartUpload`.

**Return type** `datetime`

**upload\_id**

Gets the upload\_id of this MultipartUpload. The unique identifier for the in-progress multipart upload.

**Returns** The upload\_id of this MultipartUpload.

**Return type** str

**class** oraclebmc.object\_storage.models.MultipartUploadPartSummary

**etag**

Gets the etag of this MultipartUploadPartSummary. the current entity tag for the part.

**Returns** The etag of this MultipartUploadPartSummary.

**Return type** str

**md5**

Gets the md5 of this MultipartUploadPartSummary. the MD5 hash of the bytes of the part.

**Returns** The md5 of this MultipartUploadPartSummary.

**Return type** str

**part\_number**

Gets the part\_number of this MultipartUploadPartSummary. the part number for this part.

**Returns** The part\_number of this MultipartUploadPartSummary.

**Return type** int

**size**

Gets the size of this MultipartUploadPartSummary. the size of the part in bytes.

**Returns** The size of this MultipartUploadPartSummary.

**Return type** int

**class** oraclebmc.object\_storage.models.ObjectSummary

**md5**

Gets the md5 of this ObjectSummary. Base64-encoded MD5 hash of the object data.

**Returns** The md5 of this ObjectSummary.

**Return type** str

**name**

Gets the name of this ObjectSummary. The name of the object.

**Returns** The name of this ObjectSummary.

**Return type** str

**size**

Gets the size of this ObjectSummary. Size of the object in bytes.

**Returns** The size of this ObjectSummary.

**Return type** int

**time\_created**

Gets the time\_created of this ObjectSummary. Date and time of object creation.

**Returns** The time\_created of this ObjectSummary.

**Return type** datetime

`class oraclebmc.object_storage.models.PreauthenticatedRequest`

**access\_type**

Gets the `access_type` of this `PreauthenticatedRequest`. the operation that can be performed on this resource e.g PUT or GET.

Allowed values for this property are: “ObjectRead”, “ObjectWrite”, “ObjectReadWrite”, “AnyObjectWrite”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The `access_type` of this `PreauthenticatedRequest`.

**Return type** str

**access\_uri**

Gets the `access_uri` of this `PreauthenticatedRequest`. the uri to embed in the url when using the pre-authenticated request.

**Returns** The `access_uri` of this `PreauthenticatedRequest`.

**Return type** str

**id**

Gets the `id` of this `PreauthenticatedRequest`. the unique identifier to use when directly addressing the pre-authenticated request

**Returns** The `id` of this `PreauthenticatedRequest`.

**Return type** str

**name**

Gets the `name` of this `PreauthenticatedRequest`. the user supplied name of the pre-authenticated request.

**Returns** The `name` of this `PreauthenticatedRequest`.

**Return type** str

**object\_name**

Gets the `object_name` of this `PreauthenticatedRequest`. Name of object that is being granted access to by the pre-authenticated request. This can be null and that would mean that the pre-authenticated request is granting access to the entire bucket

**Returns** The `object_name` of this `PreauthenticatedRequest`.

**Return type** str

**time\_created**

Gets the `time_created` of this `PreauthenticatedRequest`. the date when the pre-authenticated request was created as per spec [RFC 3339](#)

**Returns** The `time_created` of this `PreauthenticatedRequest`.

**Return type** datetime

**time\_expires**

Gets the `time_expires` of this `PreauthenticatedRequest`. the expiration date after which the pre authenticated request will no longer be valid as per spec [RFC 3339](#)

**Returns** The `time_expires` of this `PreauthenticatedRequest`.

**Return type** datetime

`class oraclebmc.object_storage.models.PreauthenticatedRequestSummary`

**access\_type**

Gets the `access_type` of this `PreauthenticatedRequestSummary`. the operation that can be performed on this resource e.g PUT or GET.

Allowed values for this property are: “ObjectRead”, “ObjectWrite”, “ObjectReadWrite”, “AnyObjectWrite”, ‘UNKNOWN\_ENUM\_VALUE’. Any unrecognized values returned by a service will be mapped to ‘UNKNOWN\_ENUM\_VALUE’.

**Returns** The `access_type` of this `PreauthenticatedRequestSummary`.

**Return type** str

**id**

Gets the `id` of this `PreauthenticatedRequestSummary`. the unique identifier to use when directly addressing the pre-authenticated request

**Returns** The `id` of this `PreauthenticatedRequestSummary`.

**Return type** str

**name**

Gets the name of this `PreauthenticatedRequestSummary`. the user supplied name of the pre-authenticated request

**Returns** The name of this `PreauthenticatedRequestSummary`.

**Return type** str

**object\_name**

Gets the `object_name` of this `PreauthenticatedRequestSummary`. Name of object that is being granted access to by the pre-authenticated request. This can be null and that would mean that the pre-authenticated request is granting access to the entire bucket

**Returns** The `object_name` of this `PreauthenticatedRequestSummary`.

**Return type** str

**time\_created**

Gets the `time_created` of this `PreauthenticatedRequestSummary`. the date when the pre-authenticated request was created as per spec [RFC 3339](#)

**Returns** The `time_created` of this `PreauthenticatedRequestSummary`.

**Return type** datetime

**time\_expires**

Gets the `time_expires` of this `PreauthenticatedRequestSummary`. the expiration date after which the pre authenticated request will no longer be valid as per spec [RFC 3339](#)

**Returns** The `time_expires` of this `PreauthenticatedRequestSummary`.

**Return type** datetime

**class** `oraclebmc.object_storage.models.UpdateBucketDetails`

**metadata**

Gets the metadata of this `UpdateBucketDetails`. Arbitrary string, up to 4KB, of keys and values for user-defined metadata.

**Returns** The metadata of this `UpdateBucketDetails`.

**Return type** dict(str, str)

**name**

Gets the name of this UpdateBucketDetails. The name of the bucket.

**Returns** The name of this UpdateBucketDetails.

**Return type** str

**namespace**

Gets the namespace of this UpdateBucketDetails. The namespace in which the bucket lives.

**Returns** The namespace of this UpdateBucketDetails.

**Return type** str

**public\_access\_type**

Gets the public\_access\_type of this UpdateBucketDetails. The type of public access available on this bucket. Allows authenticated caller to access the bucket or contents of this bucket. By default a bucket is set to NoPublicAccess. It is treated as NoPublicAccess when this value is not specified. When the type is NoPublicAccess the bucket does not allow any public access. When the type is ObjectRead the bucket allows public access to the GetObject, HeadObject, ListObjects.

Allowed values for this property are: “NoPublicAccess”, “ObjectRead”

**Returns** The public\_access\_type of this UpdateBucketDetails.

**Return type** str

## Base Client

**class** oraclebmc.base\_client.**BaseClient** (*service, config, signer, type\_mapping*)

**call\_api** (*resource\_path, method, path\_params=None, query\_params=None, header\_params=None, body=None, response\_type=None, enforce\_content\_headers=True*)

Makes the HTTP request and return the deserialized data.

**Parameters**

- **resource\_path** – Path to the resource (e.g. /instance)
- **method** – HTTP method
- **path\_params** – (optional) Path parameters in the url.
- **query\_params** – (optional) Query parameters in the url.
- **header\_params** – (optional) Request header params.
- **body** – (optional) Request body.
- **response\_type** – (optional) Response data type.
- **enforce\_content\_headers** – (optional) Whether content headers should be added for PUT and POST requests when not present. Defaults to True.

**Returns** A Response object, or throw in the case of an error.

## Config

oraclebmc.config.**from\_file** (*file\_location='~/oraclebmc/config', profile\_name='DEFAULT'*)

Create a config dict from a file.



### Parameters

- **file\_location** – Path to the config file. Defaults to `~/.oraclebmc/config`
- **profile\_name** – The profile to load from the config file. Defaults to “DEFAULT”

**Returns** A config dict that can be used to create clients.

`oraclebmc.config.validate_config` (*config*)

Raises `ValueError` if required fields are missing or malformed.

`oraclebmc.regions.is_region` (*region\_name*)

`oraclebmc.regions.endpoint_for` (*service, region=None, endpoint=None*)

Returns the base URI for a service, either in the given region or at the specified endpoint.

If endpoint and region are provided, endpoint is used.

## Exceptions

**exception** `oraclebmc.exceptions.ClientError`

A client-side error occurred..

**exception** `oraclebmc.exceptions.ConfigFileNotFound`

Config file not be found.

**exception** `oraclebmc.exceptions.InvalidConfig` (*errors*)

The config object is missing required keys or contains malformed values.

For example:

```
raise InvalidConfig({
    "region": "missing",
    "key_id": "malformed"
})
```

**exception** `oraclebmc.exceptions.InvalidPrivateKey`

The provided key is not a private key, or the provided passphrase is incorrect.

**exception** `oraclebmc.exceptions.MaximumWaitTimeExceeded`

Maximum wait time has been exceeded.

**exception** `oraclebmc.exceptions.MissingPrivateKeyPassphrase`

The provided key requires a passphrase.

**exception** `oraclebmc.exceptions.ProfileNotFound`

The specified profile was not found in the config file.

**exception** `oraclebmc.exceptions.ServiceError` (*status, code, headers, message*)

The service returned an error response.

**exception** `oraclebmc.exceptions.WaitUntilNotSupported`

`wait_until` is not supported by this response.

## Signing

`oraclebmc.signer.load_private_key_from_file` (*filename, pass\_phrase=None*)

`oraclebmc.signer.load_private_key` (*secret, pass\_phrase*)

Loads a private key that may use a `pass_phrase`.

Tries to correct or diagnose common errors:

- provided `pass_phrase` but didn't need one
- provided a public key

**class** `oraclebmc.signer.Signer` (*tenancy, user, fingerprint, private\_key\_file\_location, pass\_phrase=None*)

A requests auth instance that can be reused across requests.

You can manually sign calls by creating an instance of the signer, and providing it as the `auth` argument to Requests functions:

```
import requests
from oraclebmc import Signer

auth = Signer(...)
resp = requests.get("https://...", auth=auth)
```

## Utilities

`oraclebmc.util.to_dict` (*obj*)

Helper to flatten models into dicts for rendering.

The following conversions are applied:

- `datetime.date`, `datetime.datetime`, `datetime.time` are converted into ISO8601 UTC strings

**class** `oraclebmc.util.Sentinel` (*name, truthy=True*)

Named singletons for clear docstrings. Also used to differentiate an explicit param of `None` from a lack of argument.

```
>>> missing = Sentinel("Missing", False)
>>> also_missing = Sentinel("Missing", False)
>>> assert missing is also_missing
>>> repr(missing)
<Missing>
>>> assert bool(missing) is False
```

## Request

**class** `oraclebmc.request.Request` (*method, url, query\_params=None, header\_params=None, body=None, response\_type=None, enforce\_content\_headers=True*)

## Response

**class** `oraclebmc.response.Response` (*status, headers, data, request*)

**has\_next\_page**

Gets a value representing whether or not there is a next page of results in a list Response.

**Return type** bool



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## Contributions

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Got a fix for a bug, or a new feature you'd like to contribute? The SDK is open source and accepting pull requests on [GitHub](#).



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