



# Moving a server from one region to another

This guide will show you how to move a server to a different region in Cleura Cloud.

## Prerequisites

In order to move a server from one region to another, you will need

- a correctly installed and configured [OpenStack CLI client](#),
- access to the RC files with credentials for both the source and target region,
- enough space on the local machine to be able to download an image of your server,
- a sufficiently configured target region including a [virtual network](#) and necessary [security groups](#).

## Finding a volume's ID

To work with the OpenStack CLI, please do not forget to [source the RC file first](#).

Use the ID of the server instead of using the server name. This will make sure that you are using the correct server.

Find the ID of your server by matching the name, using the following command:

```
$ openstack server list --name 'name'
```

ID	Name	Status	Networks	Image	Flavor
4e88215e-2df9-4	Name2	SHUTOFF	STO2_test_netwo	N/A (booted from v	b.
1c1gb					
9ca-8d39-31c01d			rk=10.x.y.z	olume)	
5b7eae					
fad16a17-a4f1-4	Name1	ACTIVE	STO2_test_netwo	N/A (booted from v	b.
1c1gb					
74c-9b90-de14c8			rk=10.x.y.z	olume)	
ab8100					

This guide is only applicable to servers that are using boot from volume. To verify this, make sure your server's `Image` value is `N/A` (booted from volume) .

To get the ID of your server's boot volume, use the following command:

```
$ openstack server show -c volumes_attached <server_id>
+-----+-----+
| Field          | Value                                     |
+-----+-----+
| volumes_attached | id='14942b23-25ef-4181-9c54-e5c100e4eeb8' |
|                  | id='34e2ca96-3c34-464f-ac66-9fef7a6810b8' |
|                  | id='68756558-dbf0-44db-9475-1bc24822371c' |
+-----+-----+
```

If there are multiple volumes attached, the first volume in the list is the server system volume. Copy this ID.

If you want to move any other attached volumes along with your server's system volume, you also need to follow the same steps for each one of these volumes.

## Stopping a running server

In the next step you are instructed to make a copy of the server's system volume. Some operating systems or applications might experience issues being copied at the same time it might be performing operations.

While this step is not strictly required, it is recommended to first power off your server.

Stop the running server with the following command:

```
openstack server stop <server_id>
```

## Creating a copy of a volume

Begin by making a copy of the volume, using the following command:

```
openstack volume create --source <source_volume_id> <copy_volume_name>
```

You will get a printout showing you information about the created volume, such as `source_volid` which is the ID of volume you just copied, and `id` of this **new** volume, that you will use in the next step to create an image.

Field	Value
attachments	[]
availability_zone	nova
bootable	true
consistencygroup_id	None
created_at	2022-11-10T15:12:11.821647
description	None
encrypted	False
id	2fde1e6d-2d72-4d70-b12d-1a2d314dba72
multiattach	False
name	<copy_volume_name>
properties	
replication_status	None
size	20
snapshot_id	None
source_volid	14942b23-25ef-4181-9c54-e5c100e4eeb8
status	creating
type	default
updated_at	None
user_id	9e19-9424-42c4-b70f-a371ec0db5d3

## Creating an image of a volume

Then create an image of the copied volume, by using the following command:

```
openstack image create --volume <copy_volume_id> <new_image_name>
```

Substitute `<copy_volume_id>` with the ID from the newly created volume in the previous step.

After a while you will get a printout showing you information of the new image, such as the image disk format `disk_format` and the image ID `image_id`, you need these two values in an upcoming step.

Field	Value
container_format	bare
disk_format	raw
display_description	None
id	2fde1e6d-2d72-4d70-b12d-1a2d314dba72
image_id	cfa8620a-52d7-4d84-91ef-b25bb24e6e33
image_name	<new_image_name>
protected	False
size	20
status	uploading
updated_at	2022-11-10T15:22:12.000000
visibility	shared

volume_type	default

Depending on the size of the volume it might take some time to upload and while it is, the image `status` will be `uploading`. Before you continue to the next step, make sure the image `status` is `active`, otherwise wait a bit and then check again with:

```
openstack image show -c status <image_id>
```

The printout should look like this before you continue.

Field	Value
status	active

It is now safe to remove the volume you created earlier, using the command:

```
openstack volume delete <copy_volume_id>
```

## Downloading an image

Download the image to your local computer, using the following command:

```
openstack image save --file <local_image_name>.<disk_format> <image_id>
```

Substitute `<disk_format>` with the value from the printout in the previous step.

Substitute `<image_id>` with the ID from the printout in the previous step.

When you have downloaded the file, verify that the checksum of the file is the same as the `checksum` value of the image.

```
md5 <local_image_name>.<disk_format>
```

This will output the checksum of your local file.

```
MD5 (<local_image_name>.<disk_format>) = 4b086035a943cc1676583c0cc78f0896
```

Show the checksum of the image in the cloud, using the following command:

```
openstack image show -c checksum <image_id>
```

These two checksums should be the same.

Field	Value
checksum	4b086035a943cc1676583c0cc78f0896

You are now done with the steps for the source region. The following steps will be done on the target region.

It is now safe to remove the image you created earlier, using the command:

```
openstack image delete <image_id>
```

## Uploading an image

Source the RC-file for the region you want to upload to.

```
source <target_region_openrc>
```

Upload the image to the new region. Set the correct disk format, input the path to the image file and select a name for the new image.

```
openstack image create --disk-format <disk_format> --file  
<local_image_name>.<disk_format> <new_image_name>
```

The upload will take some time, depending on your internet upload speed and the size of the image. When the upload is finished you get a printout displaying information about your image.

Field	Value
container_format	bare
created_at	2022-11-17T16:26:58Z
disk_format	raw
file	/v2/images/df4593a9-a4d4-46fe-9c82-1b8f88ecac5d/file
id	df4593a9-a4d4-46fe-9c82-1b8f88ecac5d
min_disk	0
min_ram	0
name	<new_image_name>
owner	facabd68822643d19be8c9de84e27c49
properties	locations=[], os_hidden=False, owner_specified.openstack.md5="", owner_specified.openstack.object='images/<new_image_name>', owner_specified.openstack.sha256=""
protected	False
schema	/v2/schemas/image
status	saving
tags	

updated_at	2022-11-17T16:26:58Z
visibility	shared

But your image is not yet ready to use, Cleura Cloud still needs to process the file, which shouldn't take long. To check the status of the image, use the ID of the new image with the following command:

```
$ openstack image show <new_image_id>
```

Field	Value
checksum	4b086035a943cc1676583c0cc78f0896
container_format	bare
created_at	2022-11-17T16:26:58Z
disk_format	raw
file	/v2/images/df4593a9-a4d4-46fe-9c82-1b8f88ecac5d/file
id	df4593a9-a4d4-46fe-9c82-1b8f88ecac5d
min_disk	0
min_ram	0
name	<new_image_name>
owner	facabd68822643d19be8c9de84e27c49
properties	locations=[], os_hidden=False, owner_specified.openstack.md5="", owner_specified.openstack.object='images/<new_image_name>', owner_specified.openstack.sha256=""
protected	False
schema	/v2/schemas/image
status	active
tags	
updated_at	2022-11-17T16:26:58Z
visibility	shared

When the image's `status` value is `active`, the whole upload process is done.

Verify that the checksum of the new image is the same as your local file:

```
openstack image show -c checksum <new_image_id>
```

It is now safe to remove the image file from your local computer.

## Creating a volume from an image

First you must choose the image you want to create a volume from.

List all your private images with the following command:

```
$ openstack image list --private
```

ID	Name	Status
----	------	--------

```
+-----+-----+-----+
| f9ce95de-564e-4f6e-ad0e-789c84f30b7c | <new_image_name>      | active |
+-----+-----+-----+
```

Then create the volume using the ID of the image in this command:

```
openstack volume create --size <GB> --image <new_image_id> <new_volume_name>
```

Substitute `<GB>` with the size in gigabytes you wish the volume to be.

## Creating a server from a volume

Now you need to create the new server using the system volume. To create a new server, follow [this guide](#).

**Cleura Cloud Management Panel**      **OpenStack CLI**

If you use the  
Cleura Cloud  
Management  
Panel, when  
choosing a *boot*

*source*, select *Boot*

*from volume* and

If you also moved other volumes, after you have created the server is the time to  
then your server's  
attach those volumes to the server.  
system volume.

If you use the

OpenStack CLI,

forgo the `--image`

and `--boot-from-`

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volume options

and instead use `--`

volume

volume

`<new_volume_name>`