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How to Create an Image from an ISO in mCloud

Vincent (Vinnie) Curle - 2025-03-14 - [mCloud](#)

Cloud images are by far the preferred way to deploy VM Instances in mCloud, but at times the need to install from ISO may arise. Please keep in mind that this is an advanced process. This guide will attempt to detail the steps required to create and configure one in your mCloud Dashboard.

Please Note: instances generated from images made in this manner will need to have things like IP address, disk resizing, hostnames and SSH keys manually applied, and will most likely ignore cloud-init as well.

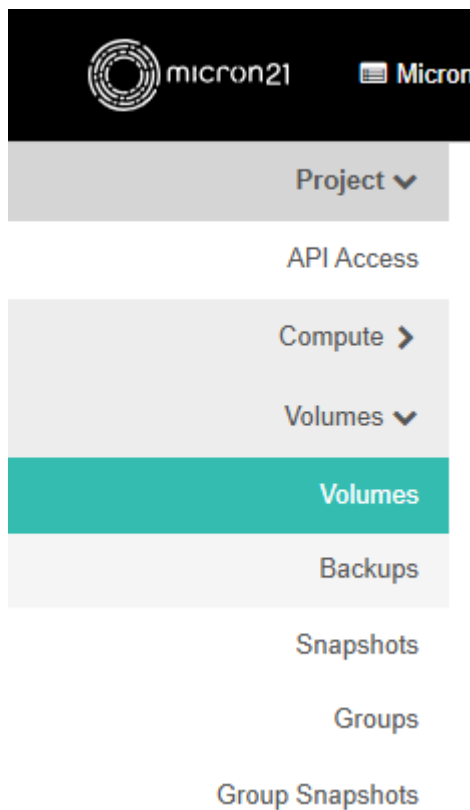
Prerequisites

You will need to ensure that the ISO exists in your mCloud Dashboard. If you need a new ISO please upload it following the details in the guide linked below:

<https://support.micron21.com/kb/articles/359-how-to-upload-an-iso-to-the-mcloud-dashboard>

Method:

1. Log into mCloud at <https://mcloud.micron21.com/>
2. Navigate to Project > Volumes > Volumes



1.

3. Click "+Create Volume"



1.

4. On this page set the following details as required:

1. Volume Name: Enter the name you'd like set for the ISO,
2. Description: Enter the desired Description as required, or leave this field blank
3. Volume Source: From the dropdown, select 'Image'
4. Use Image as Source: Set the appropriate source image for the ISO.
5. Type: Set the volume type you wish to use, leave the size as the default set by the ISO,
6. Availability Zone: Set the relevant availability zone from the dropdown. Usually, this will be "Kilsyth".

1.

5. click "Create Volume"

6. Next, we will create a volume for the OS to be installed onto.

7. Click "+ Create Volume" again



1.

8. Leave the volume source blank, as this will be an empty volume, then set the same details as above. Click "Create Volume".

1. Note; you can keep the size for this one small as this is an interim step and will be removed later in the article

Create Volume ✕

Volume Name

Description

Volume Source

Type

Size (GiB) *

Availability Zone

Group ⓘ

Description:
Volumes are block devices that can be attached to instances.

Volume Type Description:
NVMe
No description available.

Volume Limits

Total Gibibytes	82 of 5,000 GiB Used
Number of Volumes	3 of 100 Used

2.

9. click "Create Volume"

10. In the list of volumes, Click "Edit Volume" on the new blank volume

11. On the edit Volume page, tick the 'Bootable' tick box, then click Submit

Edit Volume



Volume Name

Description

Description:

Modify name and description of a volume.

The "Bootable" flag specifies that this volume can be used to launch an instance.

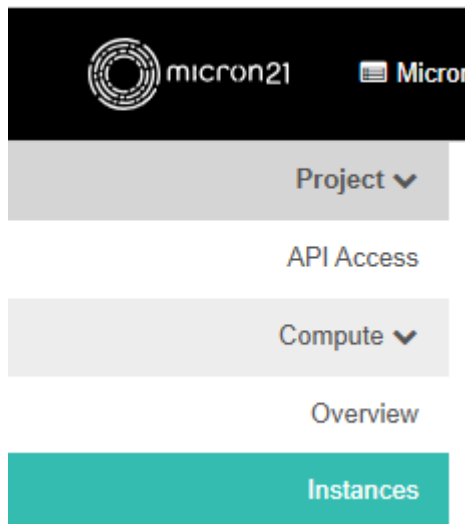
Bootable

Cancel

Submit

1.

12. Now we'll be creating a temporary instance to install the Operating System. - Next, Navigate to Project > Compute > Instances



1.

13. Click "Launch Instance"

14. Enter a temporary name, and select the Availability zone selected in steps 4 and 6, and click Next

Launch Instance

Please provide the initial hostname for the instance, the availability zone where it will be deployed, and the instance count. Increase the Count to create multiple instances with the same settings.

Project Name
Micron21-Demo

Instance Name *
Installing

Description

Availability Zone
Kilsyth

Count *
1

Total Instances (100 Max)
3%

2 Current Usage
1 Added
97 Remaining

1.

15. For Boot Source, select "Volume" then select the ISO volume we created earlier. Leave the empty volume unselected for now. And ensure the option to "Delete volume on instance delete" is not selected. Then Click Next

Launch Instance

Instance source is the template used to create an instance. You can use an image, a snapshot of an instance (image snapshot), a volume or a volume snapshot (if enabled). You can also choose to use persistent storage by creating a new volume.

Source

Select Boot Source
Volume

Delete Volume on Instance Delete
Yes No

Allocated
Displaying 1 item

Name	Description	Size	Type	Availability Zone
> CloudLinux-8.9	-	2 GB	ISO	Kilsyth

Displaying 1 item

Available 1 Select one

Q Click here for filters or full text search.

Displaying 1 item

Name	Description	Size	Type	Availability Zone
> CloudLinux-Install	-	5 GB		Kilsyth

Displaying 1 item

1.

16. On the Flavor page, select the desired Resource limits as required.

Launch Instance ✕

?

Flavors manage the sizing for the compute, memory and storage capacity of the instance.

Allocated

Displaying 1 item

Name	VCPUS	RAM	Total Disk	Root Disk	Ephemeral Disk	Public
> perf-test	4	4 GB	0 GB	0 GB	0 GB	Yes

Displaying 1 item

Available 2 Select one

Click here for filters or full text search.

Displaying 2 items

Name	VCPUS	RAM	Total Disk	Root Disk	Ephemeral Disk	Public
> DiskTest	2	4 GB	0 GB	0 GB	0 GB	Yes
> perf-test-bigger	10	10 GB	0 GB	0 GB	0 GB	Yes

Displaying 2 items

1. ✕ Cancel < Back Next > Launch Instance

17. Select the desired network.

Launch Instance ✕

?

Networks provide the communication channels for instances in the cloud. You can select ports instead of networks or a mix of both.

Allocated 1

Displaying 1 item

Network	Subnets Associated	Shared	Admin State	Status
> Demo-Internal-Network	Demo-Internal-Subnet	No	Up	Active

Displaying 1 item

Available 1 Select one or more

Click here for filters or full text search.

Displaying 1 item

Network	Subnets Associated	Shared	Admin State	Status
> public	1b1aa3a1-7fb8-4e00-b73c-d448b5682ac9 c859931d-f6e9-429e-b45b-530efece4aa0	Yes	Up	Active

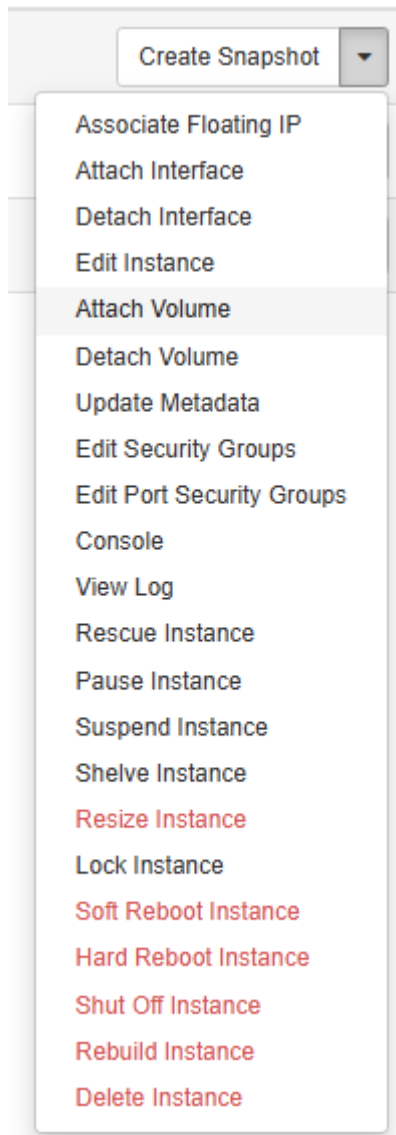
Displaying 1 item

1. ✕ Cancel < Back Next > Launch Instance

2. Note: Depending on the ISO you are installing, this may need to match the final network you'd like associated with VMs created using the new Image

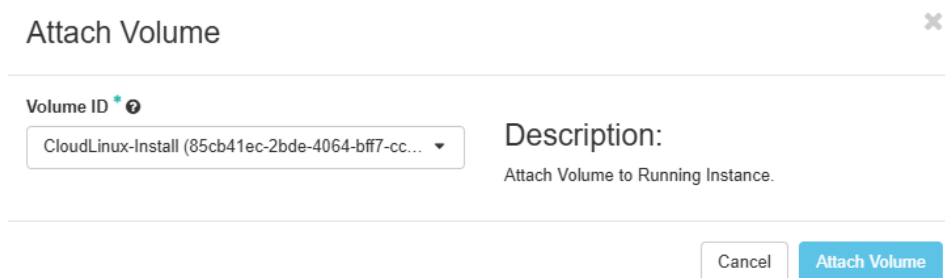
18. Click "Launch Instance" and allow some time for the instance to be created

19. Once the Instance has finished being built, select the drop-down menu on the right and select "Attach Volume"



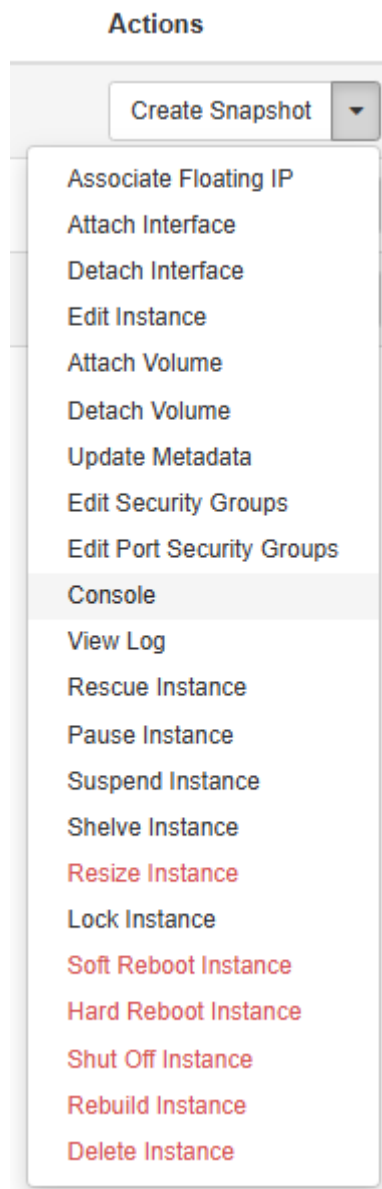
1.

20. Select the empty volume you created previously, then click "Attach Volume"



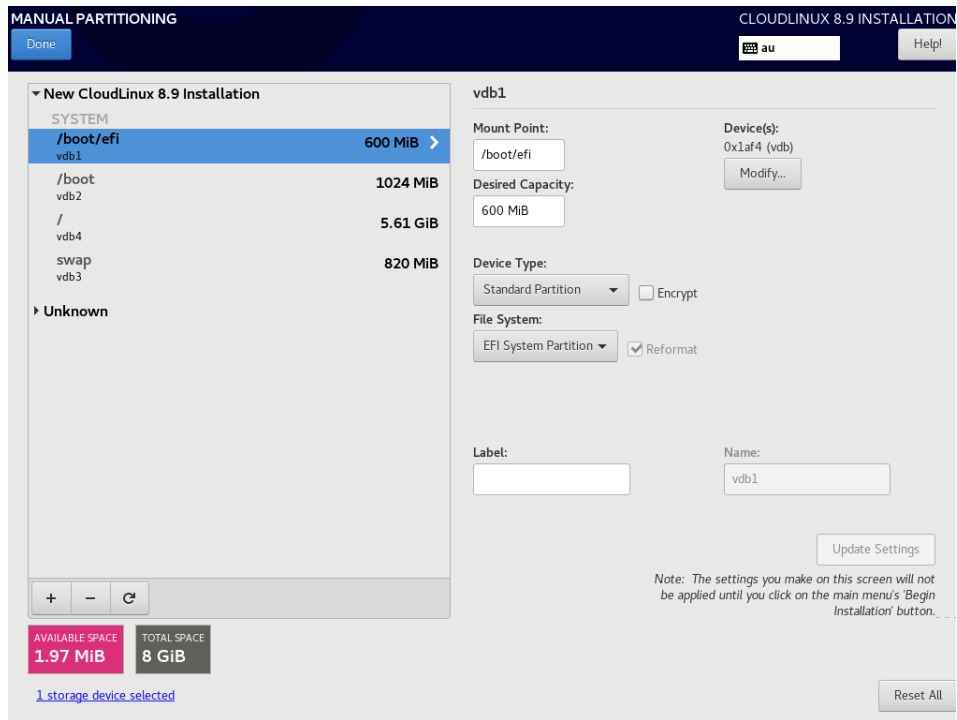
1.

21. Open the drop-down menu again, and this time select "Console"



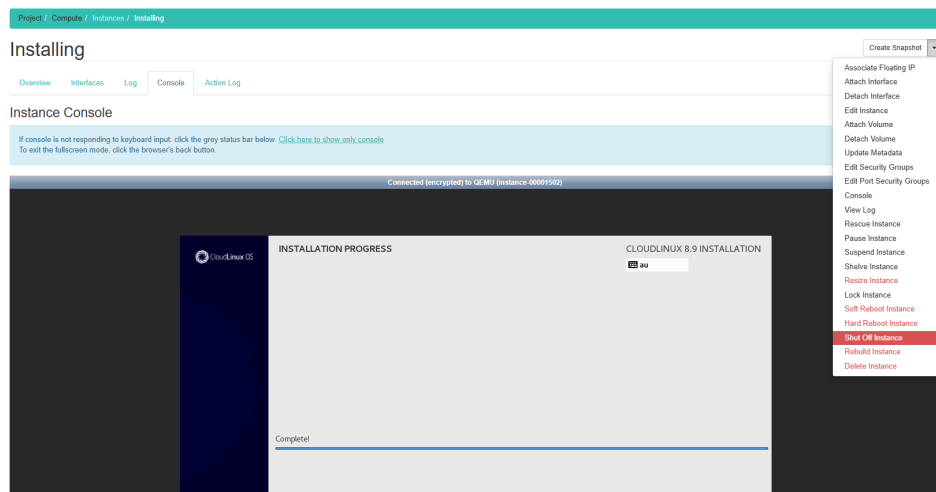
1.

22. Inside the Console, Follow the standard installation method for your Operating system. Some OS may require that you manually configure partitions. In these cases, you will need to refer to the OS documentation for details on how to complete the configuration.



1.

- Once you have completed the installation, shut off the VM instance from the dropdown menu at the top right.



1.

- Next, Navigate back to Project > Compute > Instances
- Delete the temporary instance created earlier in the guide (From step 11)
- Navigate to Project > Volumes > Volumes. Click on the previously blank volume you created (Now with an OS installed on it)
- On the install volume page, open the drop-down menu and select "Upload to Image". Give it the desired name, and leave the disk format as "Raw"

Upload Volume to Image



Volume Name *

Image Name *

Disk Format

Description:

Upload the volume to the Image Service as an image. This is equivalent to the `cinder upload-to-image` command.

Choose "Disk Format" for the image. The volume images are created with the QEMU disk image utility.

1.

28. Wait for the upload to complete, then navigate to Compute > Images

29. Locate the Image you just created and from its drop-down menu select 'Edit Image'

30. Set Description and Visibility as required, then click Next

31. On the left, unbranch "libvirt Driver Options for Images" and click the + on Firmware Type. On the right-hand side, set the firmware type to match what you set when you uploaded the ISO. Click Update Image

1. Note: if you didn't set this when you uploaded the ISO, you shouldn't need to set it here. If this setting is unset, the system will assume BIOS mode

Edit Image



Image Details

Metadata

You can specify resource metadata by moving items from the left column to the right column. In the left column there are metadata definitions from the Glance Metadata Catalog. Use the "Custom" option to add metadata with the key of your choice.

Available Metadata	Filter	Existing Metadata	Filter
libvirt Driver Options		hw_firmware_type	uefi
libvirt Driver Options for Images		os_hash_algo	sha512
CD-ROM Bus		os_hash_value	ed394d8ff7d6a...
Disk Bus		os_hidden	false
Hide hypervisor id		stores	rbd
Kernel Command Line			
Machine Type			
Max Video Ram			
Multiqueue Enabled			
OS Type			

Firmware Type (*hw_firmware_type*)

Specifies whether the image should be booted with a legacy BIOS or with UEFI.

2.

32. You can now use this image to deploy instances as described in our "How to Create a VM Instance from Image":

<https://support.micron21.com/kb/articles/358-how-to-create-a-vm-instance-from-an-image-in-mcloud>

1. Note: Unfortunately instances generated from images made in this manner will need to have things like IP address, disk resizing, hostnames and SSH keys manually applied, and will most likely ignore cloud-init as well.