Creating Templates with Cloud-Init

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Steps

- **Prepare the Virtual Machine:**
  - Follow the normal steps to create a VM.
  - Skip choosing an ISO by selecting "no disk."
  - Delete the storage location.
  - Set the CPU and RAM to your desired specifications (this can be changed later when deploying the VM).

- **Configure Cloud-Init:**
  - Go to the Hardware tab and add a Cloud-Init Drive.
  - In the Cloud-Init section, enter the user and password details, and set the IP configuration to DHCP to ensure each VM gets a new IP.

- **Download the Cloud Image:**
  - SSH into the Proxmox node.
  - Download the cloud image using the command below (we are using the Ubuntu 22.04 LTS Jammy release https://cloud-images.ubuntu.com/minimal/releases/jammy/release/):

```
wget https://cloud-images.ubuntu.com/minimal/releases/jammy/release/ubuntu-22.04-minimal-cloudimg-amd64.img
```

Note: While this link is for the Ubuntu 22.04 LTS server image, any cloud image can be used.

- **Prepare the Server View:**
  - Execute the following command to configure server view post-creation (replace `***` with the created VM ID):

```
qm set *** --serial0 socket --vga serial0
```

- **Rename and Resize the Image:**
  - Rename the downloaded image (ubuntu-22.04) and set the storage using these commands:

```
mv ubuntu-22.04-minimal-cloudimg-amd64.img ubuntu-22.04.qcow2
```

```
qemu-img resize ubuntu-22.04.qcow2 40G
```

This resizes the image to create a 40GB drive for each VM.

- **Import the Disk:**
  - Import the disk to the VM ID and specify the storage location such as "local-lvm" (replace `**` with the created VM ID):

```
qm importdisk *** ubuntu-22.04.qcow2 local-lvm
```

- **Finalize VM Configuration:**
  - In the Proxmox web GUI, enable the newly created unused disk. If it's an SSD, select Discard and SSD emulation, then add it.
  - Change the boot order in options since the new disk will not be primary by default.
  - **Verify that everything is configured correctly**.
  - Convert the VM to a template.

POST installation commands

After installing the VM, you'll need to set up and verify the QEMU agent:

- **Install the QEMU Agent:**
  - To get the QEMU agent to work, install it using the following command:

```
sudo apt install qemu-guest-agent -y
```

This allows you to control the VM from the Proxmox GUI for actions like rebooting or shutting it down.

- **Reboot the VM:**

    - Reboot your VM to start the QEMU agent service.

- **Verify the QEMU Agent Service:**
    - Check if the QEMU agent is running with this command:

```
systemctl status qemu-guest-agent
```