

proxmox cloud init notes

Cloud init in proxmox by default offers basic functionality to create a user, add a password for that user, decide if the machine should be updated and import ssh keys and doing basic network config. This is good enough to get started using ansible but cloud init is capable of so much more including setting up repositorys, installing packages, running arbitrary commands to configure the system, perform advanced network setup and setup many users on the system by default and much much more.

I am largely using information from this article <https://dustinrue.com/2020/05/going-deeper-with-proxmox-cloud-init/> to get this project off the ground. I have been struggling to understand how to get this working for the last while and I think this is going to be a great feather for my toolbox.

First we started by editing the Cephfs volume storage at the datacenter level to allow for snippets. This allows the file system to use the cloud init file that we create to apply it to the cloud init disk we already have "installed" on one of our templates.

Next we create a file in the `/mnt/pve/Cephfs/snippets/` directory that will be our cloud init user file. This will include things like creating our user, adding ssh keys, and installing packages. If you plan to use a more complicated netplan file than just turning on DHCP for the first network interfaces you can also setup a network cloud init file. You could create a meta file as well but Im not sure why that would be nessicary.

A few things I would like to know and I will test as I go though this. If I leave some fields blank can I still use the basic config information to apply things like the system hostname? That would be helpful to know.

I am going to be working off examples from the cloud init documentation for this. I would like to have my systems at least have a bare minimum config of being setup to work with ansible and also to have mdns installed. below is a cloud init file that should allow that. Im also going to create an additional user to get into the system. it doesnt seem like it will use the cloud init from the default user and it also seems like the network setup is fucked as well

To select a custom cloud init file for a specific VM you use the command ``qm set <VMID> --cicustom "user=local:snippets/user.yaml``

```
#cloud-config

# Install additional packages on first boot
#
# Default: none
```

```

#
# if packages are specified, then package_update will be set to true
#
# packages may be supplied as a single package name or as a list
# with the format [<package>, <version>] wherein the specific
# package version will be installed.
packages:
- libnss-mdns
- qemu-guest-agent

# A common use-case for cloud-init is to bootstrap user and ssh
# settings to be managed by a remote configuration management tool,
# such as ansible.
#
# This example assumes a default Ubuntu cloud image, which should contain
# the required software to be managed remotely by Ansible.
#

ssh_pwauth: false
users:
- name: borg
  gecos: Ansible User
  groups: users,admin,wheel
  sudo: ALL=(ALL) NOPASSWD:ALL
  shell: /bin/bash
  ssh_authorized_keys:
    - "ssh-rsa YOUR KEY HERE"

```

This all ended up working pretty well with a few caveats. I don't think you can create a user named admin on an Ubuntu machine. At least the system failed to create that user. There are a few other important things I learned.

First, you can only use either use the builtin cloud init tools from the proxmox UI ****or**** you can use custom cloud init tools using the `cicustom` command. This is slightly unfortunate because I cannot quite figure out how to pass in the name of the machine used by proxmox to the custom cloud init file at the buildtime for the new vm. this isnt a huge issue but it does mean a tweak in how the systems are spun up and setup. the systems all come out with the same host name if using cicustom.

I think that this is the best solution for some projects. If a template is setup to generate specifically configured systems (like the tailscale templates) the cicustom command makes more sense so you can get a basic config and

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