# Debian Template Image Preparation and Cloning

ROUGH DRAFT

# Fresh Install of VM

## Fresh Debian Installation

To be documented

## Post-install Ubuntu Configuration

- Go to the Console tab and **Power On** the VM
- Once it comes up, login to your VM
- Get the VM IP:

```
ip addr
```

- SSH to the VM and login as your unprivileged user
- su to root (enter the root password)

```
su -
```

- Edit sources.list

```
deb http://deb.debian.org/debian bookworm main non-free-firmware
deb-src http://deb.debian.org/debian bookworm main non-free-firmware

deb http://security.debian.org/debian-security bookworm-security main non-free-
firmware
deb-src http://security.debian.org/debian-security bookworm-security main non-free-
firmware
```

```
deb http://deb.debian.org/debian bookworm-updates main non-free-firmware
deb-src http://deb.debian.org/debian bookworm-updates main non-free-firmware
```

- Install sudo and add your user to sudo group

```
apt-get install sudo
usermod -aG sudo johndoe
```

- Logout and reconnect via SSH
- Run any available upgrades and reboot

```
sudo apt update && sudo apt upgrade -y && sudo reboot
```

- Set up Chrony for time sync

```
sudo apt install -y chrony && \
sudo systemctl restart chrony && \
chronyc tracking | grep --color=auto -e ^ -e "Last offset.*"
```

- Add /usr/sbin to default PATH

```
sudo bash -c 'echo '\''PATH="/usr/sbin:$PATH"'\'' >> /etc/profile.d/usr_sbin_path.sh'
```

# VIM Tweaks

- Install VIM basic

```
sudo apt install vim
```

- Set VIM as the default editor

```
sudo update-alternatives --config editor
```

# Template Image Prep

## Set up OpenSSH Key Reconfiguration

> If you simply clone a Debian image without resetting the OpenSSH server host keys, an attacker can take those host keys and perform a MITM SSH attack on any system that was

> cloned from the same image. So we have to make sure those are reset before we make the image, and then automatically regenerated on the next boot.

- Copy/Paste/Run this entire chunk of script into your terminal (creates process that checks for missing keys at boot, and regenerates them if missing):

```
if [ `systemctl is-enabled openssh-reconfigure.service 2> /dev/null > /dev/null ||
true && false` ] ; then \
  echo "OpenSSH Key Reconfiguration Service already installed." ; \
else
  sudo bash -c 'cat << EOF > /usr/local/sbin/openssh-reconfigure
#!/bin/bash
test -f /etc/ssh/ssh_host_dsa_key || dpkg-reconfigure openssh-server
EOF'
sudo chmod 700 /usr/local/sbin/openssh-reconfigure
sudo bash -c 'cat << EOF > /etc/systemd/system/openssh-reconfigure.service
[Unit]
Description=OpenSSH Key Reconfiguration Service
Before=ssh.service

[Service]
Type=simple
ExecStart=/usr/local/sbin/openssh-reconfigure

[Install]
WantedBy=multi-user.target
EOF' ; \
  sudo chmod 644 /etc/systemd/system/openssh-reconfigure.service ; \
  sudo systemctl enable openssh-reconfigure.service ; \
fi
```

- Delete the existing keys

```
sudo /bin/rm -v /etc/ssh/ssh_host_*
```

# Clear the Machine ID

- Run this:

```
sudo bash -c "truncate -s0 /etc/machine-id ; \
rm /var/lib/dbus/machine-id ; \
ln -s /etc/machine-id /var/lib/dbus/machine-id"
```

# Genericize the interface config

- Make these alterations to `/etc/network/interfaces` in the `enX0` section. Leave the comments for the image/template user to understand what needs to happen to re-activate networking

```
iface enX0 inet dhcp
#iface enX0 inet static
#       address 192.168.160.XXX
#       netmask 255.255.254.0
#       gateway 192.168.160.1
#       dns-nameservers 192.168.160.105
```

# Clear the Bash, VIM, and other history

- Run this:

```
rm -rf ~/.viminfo ~/.Xauthority ~/.cache
sudo bash -c 'rm -rf ~/.viminfo ~/.Xauthority ~/.cache'
sudo bash -c 'echo -n "" > /var/log/wtmp'
sudo bash -c 'echo -n "" > /var/log/btmp'
sudo bash -c 'echo -n "" > /var/log/lastlog'

### These should always run last
sudo bash -c 'truncate -s0 ~/.bash_history ; history -c'
truncate -s0 ~/.bash_history ; history -c
```

# Shutdown

- Run this:

```
sudo shutdown -h now
```

# Create the Template or Image

# XCP-NG

## Using XOA Xen Orchestra

- Go to **Home → VMs**
- Change the **Filters** to blank
- Click on your new VM
- Click on the name of the VM
- Change the name to: `TPL_D12.7.0_20240709172110`
  - `TPL` means this is a user-generated template
  - `D12.7.0` indicates this is Debian 12.7.0
  - `20240709172110` Indicates the revision date of THE DOCUMENT YOU ARE READING in UTC, ie 2024 July 9th, 17:21:10. This is used as a means of revision control.
- Click on **Advanced**
- Click **Convert to template**
- Click **OK** on the confirmation dialog

---

Created 2024-10-01 16:15:11 UTC by jholmstadt
Updated 2024-10-01 18:32:48 UTC by jholmstadt