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

Revision #8
Created 2024-10-01 16:15:11 UTC by jholmstadt
Updated 2024-10-01 18:32:48 UTC by jholmstadt