# Role STORE - Non Redundant (Debian/Win2019)

# Install the MySQL Client

(This will be needed later).

If you are installing STORE on a machine which will contain the role DATA too, then do not install the default mysql client, as this will collide with MySQL. Instead, install the MySQL software first (see role DATA).

apt-get -y install default-mysql-client lvm2

# Create the Store with LVM

It is recommended to create the STORE machine without the disk for the storage being mounted by the installation routines.

## **Useful Commands**

The following commands are useful to see the current configuration of the machine,

```
# Show free space on existing devices
df -h
# Show drives
ls /dev/sd*
# Show partitions
fdisk -l
# Show partitions
ls /dev/sd*
# Re-scan the SCSI bus
echo "- - -" > /sys/class/scsi_host/host0/scan
echo "- - -" > /sys/class/scsi_host/host1/scan
echo "- - -" > /sys/class/scsi_host/host2/scan
# View physical volumes managed by LVM
lvm pvs
# Display logical volumes managed by LVM
lvm lvs
# Display logical volume groups managed by LVM
# Where is what mounted
mount
```

Some of the information above may be required to complete installation.

It is important to know where the disk to be used is, and where the space is.

Usually, we recommend adding a second disk drive to the machine for the storage.

The following assumes that the disk was added as /dev/sdb on the machine, and is not yet partitioned.

If this is not the case, or the drive is not /dev/sdb or the space was added to an existing partition, then the commands below will have to be (carefully) modified to take this into account.

# **Creation Steps**

### **Create a Partition**

Partitioning is only required if there are multiple disks. If the machine has only one disk, then no partition must be created for the samba share. You can continue below at "Prepare Mount Point" in this case.

```
fdisk /dev/sdb

# --> Edit the partitions on /dev/sdb

n

# --> Create new partition

p

# --> New primary partition

1

# --> Create new partition 1 (view output at fdisk -1 above)

Enter

# --> Confirmation that the first available cylinder should be used

Enter

# --> Confirmation that the last available cylinder is to be used (gives the maximum size in total)

t

# --> Change partition type

8e

# --> Linux LVM

w

# --> When OK, write
```

### **Create LVM Physical Volume**

This command creates a physical volume which can be managed by LVM.

The above commands will have created a partition /dev/sdb1. If you are working on a different partition, then modify accordingly.

```
lvm pvcreate /dev/sdb1
```

## **Create a Volume Group**

This command creates a volume group called vg\_itelshared. The volume group can be expanded later, by adding more physical volumes.

```
lvm vgcreate "vg_jtelshared" /dev/sdb1
```

## **Create a Logical Volume**

Finally, a logical volume Iv\_itelshared is created on the volume group which contains the aggregated space.

```
lvm lvcreate -1 +100%FREE vg_jtelshared -n lv_jtelshared
```

# **Create File System**

Now, the file system is created. Here we use ext4, though you can use something else if you really want.

```
{\tt mkfs.ext4\ /dev/vg\_jtelshared/lv\_jtelshared}
```

## **Prepare Mount Point**

The data should be mounted to the directory /srv/jtel/shared.

The following commands prepare for this:

```
mkdir /srv/jtel
mkdir /srv/jtel/shared
chown -R jtel:jtel /srv/jtel
```

### Add to fstab to Mount at Boot

The following adds a line to fstab to mount the file system at boot:

```
cat <<EOFF >> /etc/fstab
/dev/mapper/vg_jtelshared-lv_jtelshared /srv/jtel/shared ext4 defaults 0 0
EOFF
```

## **Mount the File System**

This also makes sure the ownership is correct:

```
mount /srv/jtel/shared
chown -R jtel:jtel /srv/jtel
```

### Checks

df -h

This should show an entry for /srv/jtel/shared with the expected amount of free space.

# Install and Configure Access to STORE

### **Install Samba**

These commands install the samba server and client and Isof.

Note: if a popup selection screen comes asking whether you want the smb.conf modified, then just hit enter.

```
apt-get -y install samba smbclient lsof
```

## **Configure Samba**

The following creates a samba configuration file with a minimum configuration.

```
# SMB Conf
cat <<EOFF > /etc/samba/smb.conf
[global]
   workgroup = JTEL
   security = user
   passdb backend = tdbsam
   min protocol = SMB2
   reset on zero vc = yes
   ntlm auth = yes
[shared]
   comment = jtel ACD Shared Directory
   public = no
   read only = no
   writable = yes
   locking = yes
   path = /srv/jtel/shared
   create mask = 0644
   directory mask = 0755
   force user = jtel
   force group = jtel
   acl allow execute always = True
EOFF
```

# **Setup the Firewall**

Allow the ports required for SMB to work correctly:

```
ufw allow 445/tcp
```

Allow the ports required for SMB to work correctly on a specific ethernet interface:

```
ufw allow in on eth1 to any port 445 proto tcp
```

### **Enable and Start Samba**

The following commands setup the SMB and NMB services to autostart, and start them.

```
systemctl enable nmbd
systemctl enable smbd
systemctl start nmbd
systemctl start smbd
```

## Manually link /home/jtel/shared

Finally, link the /home/jtel/shared folder.

```
ln -s /srv/jtel/shared /home/jtel/shared
```

## Setup Access to the Samba Server

## jtel User Access

The following command creates the smb credentials for the jtel user.

There is no need to create smb credentials for the jtel user on systems with only one linux machine, as there would be no other machines with a jtel user to connect to the share.

#### CAUTION PASSWORD

```
printf '<password>\n< | smbpasswd -a -s jtel</pre>
```

#### **Further User Access**

If necessary, add further users to samba - replacing password with the actual password for the user. Here, for example, the windows administrator user:

#### CAUTION PASSWORD

```
useradd -m Administrator
printf '<password>\n<password>\n' | smbpasswd -a -s Administrator
```

# Test the file mount

Finally, test the file mount from one of the other machines. Either by connecting to STORE, or by using the windows explorer to attach to \acd-store\shared