

# Role STORE - Non Redundant (CentOS8/Win2019)

## 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
lvm vgs

# 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

```
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 -l 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\_jtelshared**. 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 **lv\_jtelshared** is created on the volume group which contains the aggregated space.

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

## Create File System

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

```
mkfs.xfs -L data /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 <<EOF >> /etc/fstab  
/dev/mapper/vg_jtelshared-lv_jtelshared /srv/jtel/shared      xfs      defaults 0    0  
EOF
```

## Mount the File System

```
mount /srv/jtel/shared
```

## 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 lsof.

```
dnf -y install samba samba-client 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 = SMB3
    reset on zero vc = 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 SeLinux and the Firewall

The following command sets up selinux for the smb service and opens the necessary ports in the firewall:

```
setsebool -P samba_enable_home_dirs=on samba_export_all_rw=on use_samba_home_dirs=on use_nfs_home_dirs=on
firewall-cmd --zone=public --add-port=445/tcp --add-port=139/tcp --add-port=138/udp --add-port=137/udp --permanent
firewall-cmd --reload
```

## Enable and Start Samba

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

```
systemctl enable nmb
systemctl enable smb
systemctl start nmb
systemctl start smb
```

## 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.

CAUTION PASSWORD

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

### 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**