



## Session-3.2

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# LizardFS Chunk-Server Configuration

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## = Installation of LizardFS Packages

```
apt update
apt install -y lizardfs-client lizardfs-common lizardfs-adm lizardfs-chunkserver xfsprogs parted
```

We have to modify Hosts file as follows.  
Here make your **hostname** according to your **groupname** following the bellow format

IP Address	groupX-nodeY
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// replace X with group-number & Y with node number as instructor say.

For Example for **Group # 01**

```
vim /etc/hosts
192.168.108.10 group1-node0 mfsmaster
192.168.108.11 group1-node1
192.168.108.12 group1-node2
192.168.108.13 group1-node3
```

**Now ping to all nodes from each-other to check the communication among all nodes in a group, if any not found via ping we have troubleshoot.**

This is very important to follow the proper naming of the nodes.  
For massive deployment you may use internal dns-server configured by unbound.

## = Disk partition format for chunk server.

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We have to allocate dedicated disks (HDD/SSD) or Disk Partition (For Practice), those will be the building-blocks of the LizardFS distributed file system.

Identify & format the HDD partition with **xf**s (please be careful to identify and format the partition).

Use **gparted** (GUI Interface) to create appropriate disk-preparation/partitions.

Suppose here our created partitions are **/dev/sdb3** & **/dev/sdb4**; (Please choose your appropriate partition)

```
mkfs.xfs /dev/sdb3
```

```
mkfs.xfs /dev/sdb4
```

```
mkdir /mnt/disk1
```

```
mkdir /mnt/disk2
```

Now mount the partition in `/mnt/disk1` & `/mnt/disk2`;

Here we will mount the disks/partition via `/etc/fstab` file, so that while reboot the node, it mount automatically.

```
vim /etc/fstab
```

```
/dev/sdb3 /mnt/disk1 xfs defaults,noatime,nodiratime 0 0  
/dev/sdb4 /mnt/disk2 xfs defaults,noatime,nodiratime 0 0
```

Run the mount command;

```
mount -a
```

See the mount status;

```
df -h
```

Now change the ownership of the mounted disks

```
chown -R lizardfs:lizardfs /mnt/disk1
```

```
chown -R lizardfs:lizardfs /mnt/disk2
```

## = Chunk Server Configuration:

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```
cp -r /usr/share/doc/lizardfs-chunkserver/examples/* /etc/lizardfs/
```

```
cd /etc/lizardfs  
gunzip mfschunkserver.cfg.gz
```

```
vim mfschunkserver.cfg
```

Now uncomment the following lines | OR | Copy & Past the following lines at the end of the file.

```
WORKING_USER = lizardfs  
WORKING_GROUP = lizardfs  
SYSLOG_IDENT = mfschunkserver  
DATA_PATH = /var/lib/lizardfs  
MASTER_HOST = mfsmaster  
MASTER_PORT = 9420  
HDD_CONF_FILENAME = /etc/lizardfs/mfshdd.cfg
```

```
vim mfshdd.cfg
```

Add the following line;

```
/mnt/disk1  
/mnt/disk2
```

Now restart the service

```
/etc/init.d/lizardfs-chunkserver restart  
systemctl enable lizardfs-chunkserver
```

Now browse to <http://192.168.108.10:9425/> to check that new chunk-server is added or not.

## = Mounting the clustered storage.

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```
cp -r /usr/share/doc/lizardfs-client/examples/* /etc/lizardfs/
```

```
vim mfsmount.cfg
```

Uncomment the following line

```
/mnt/lizardfs
```

```
mkdir /mnt/lizardfs
```

```
chown -R lizardfs:lizardfs /mnt/lizardfs
```

```
mfsmount
```

```
df -h ; to see its mounted or not
```

Now set the default replication factor to 2, so that anything kept in the clustered storage it has two copies of those to survive the failure of any clustered node/disks.

```
lizardfs setgoal 2 /mnt/lizardfs
```

## = Making the script to start LizardFS service start automatically after reboot

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Make the file `/etc/network/if-up.d/lizardfs-up.sh` and add the following lines,

```
vim /etc/network/if-up.d/lizardfs-up.sh
#!/bin/bash
/etc/init.d/lizardfs-chunkserver restart
sleep 5
mfsmount
Save-and-Exit
```

```
chmod +x /etc/network/if-up.d/lizardfs-up.sh
echo 'post-up /etc/network/if-up.d/lizardfs-up.sh' >> /etc/network/interfaces
```

Now reboot and check after reboot that everything is working properly or not.

```
reboot
```

## = LizardFS -Add Cluster Storage in Virt-Manager

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```
mkdir /mnt/lizardfs/iso ; this has to be done from only one node of a group  
mkdir /mnt/lizardfs/kvm ; this has to be done from only one node of a group
```

```
cd /mnt/lizardfs/iso/  
wget -c http://192.168.108.8/iso/ubuntu-18.04-server-amd64.iso ; it is to be done from only one node of a group
```

- Add mfs directory in virt-manager.
- Install ubuntu-server 18.04
- Please Use the VM name as follows;

naming-format:- **groupX-nodeY-vm1**

Example for **group1-node1-vm1**