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NAS Setup in Linux Ubuntu SOP

Purpose:

The purpose of a Network Attached Storage (NAS) system in Ubuntu Server is to provide a centralized storage solution for a network of computers.

Scope:

To provide all employees with a centralized data storage solution that can be accessed from anywhere on the network.

Responsibilities:

The IT department at KnonSense will be responsible for maintenance, update, patches, etc.

Prerequisites:

- Client Computer
- User Authentication:
- Network Protocol

Procedure:

- Download Ubuntu Server ISO from: http://www.ubuntu.com/download/server
- Choose a SSH Server, and Samba from the list during the installation process.
- Shutdown the computer and then switch back on.
- System will boot up and a login screen will appear.
- Install updates using this command :

sudo apt-get update
sudo apt-get dist-upgrade
sudo reboot

- Set static IP address by two ways:
  Adding NAS IP Address to the Local DNS by using this command:

```
echo -e "192.168.1.100\t nas.local" | sudo tee -a /etc/hosts
```

OR

- Assigning an IP based on MAC address. Using ifconfig to obtain details of the MAC address.

```
sudo nano /etc/network/interfaces

iface eth0 inet static
        address 192.168.1.100
        network 192.168.1.0
        netmask 255.255.255.0
        broadcast 192.168.1.255
        gateway 192.168.1.1
        dns-nameservers 1.1.1.1 1.0.0.1
```

- The NAS can be accessed via SSH with the following terminal command:

```
ssh user@nas.local
```

- Sharing the Drives and making the drives accessible to other computers:

Installing NFS (Network File System) using this command :

```
sudo apt install nfs-kernel-server
```

- Exporting drive folders to a certain network range when they‘re added to /etc/exports by using this command :

```
sudo nano /etc/exports

mnt/disk1       192.168.1.0/24(rw,sync,root_squash,subtree_check)
/mnt/disk2      192.168.1.0/24(rw,sync,root_squash,subtree_check)
```

- Restarting NFS with the following command :

sudo service nfs-server restart

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- Installing SAMBA using this command

sudo apt install samba samba-common-bin

- Setting up network shares :

sudo nano /etc/samba/smb.conf

This creates a share called “mynas” allowing access to all the drives mounted under the /mnt folder.

```
mynas]
 comment = Samba on My NAS
 path = /mnt/
 read only = no
 browsable = yes
```

- Adding user account to access the Samba share

A samba password needs to be setup for user account

sudo smbpasswd -a $(whoami)
sudo smbpasswd -a anotheruser

- Restart Samba :

  sudo service smbd restart

- Connecting to share using the following command in Linux:

  smb://IP address of NAS

Conclusions:

This SOP provides step to step instruction setting up NAS in linux server via NFS OR SAMBA.

References:

- https://quidsup.net/tutorials/?p=ubuntu-create-nas#8-samba

Revision History: