Autofs

- ❖ Autofs is a Linux/Unix service that automatically mounts filesystems when they are accessed and unmounts them after a period of inactivity.
- ❖ It uses a daemon, `automount`, and configuration files to manage mount points dynamically.
- ❖ This helps in managing remote file systems and removable media more efficiently.

Step 1: Install autofs packages

yum install autofs

```
[root@client ~]# yum install autofs
Last metadata expiration check: 0:06:49 ago on Tue 16 Jul 2024 12:02:56 PM IST.
Dependencies resolved.
================================================================================
 Package              Architecture      Version            Repository       Size
================================================================================
Installing:
 autofs               x86_64            1:5.1.7-31.el9     Localrepo_BaseOS  385 k
Installing dependencies:
 libsss_autofs        x86_64            2.7.3-1.el9        Localrepo_BaseOS   38 k

Transaction Summary
================================================================================
Install  2 Packages

Total size: 423 k
Installed size: 1.1 M
```

Step 2: Next will create the directory and Status,start,enable and again will check the status

```
[root@client ~]# mkdir /auto_fs
[root@client ~]# systemctl status autofs
○ autofs.service - Automounts filesystems on demand
     Loaded: loaded (/usr/lib/systemd/system/autofs.service; disabled; vendor preset: disabled)
     Active: inactive (dead)
[root@client ~]# systemctl start autofs
[root@client ~]# systemctl enable autofs
Created symlink /etc/systemd/system/multi-user.target.wants/autofs.service → /usr/lib/systemd/system/autofs.s
ervice.
[root@client ~]# systemctl status autofs
● autofs.service - Automounts filesystems on demand
     Loaded: loaded (/usr/lib/systemd/system/autofs.service; enabled; vendor preset: disabled)
     Active: active (running) since Tue 2024-07-16 12:12:22 IST; 29s ago
   Main PID: 34151 (automount)
      Tasks: 5 (limit: 10764)
     Memory: 1.8M
        CPU: 111ms
     CGroup: /system.slice/autofs.service
             └─34151 /usr/sbin/automount --systemd-service --dont-check-daemon

Jul 16 12:12:22 client systemd[1]: Starting Automounts filesystems on demand...
Jul 16 12:12:22 client systemd[1]: Started Automounts filesystems on demand.
```

Step 3: Config file : /etc/auto.master (vi /etc/auto.master) and will create the directory to enter the vi/etc.auto.master

vi /etc/auto.master

```
# Sample auto.master file
# This is a 'master' automounter map and it has the following format:
# mount-point [map-type[,format]:]map [options]
# For details of the format look at auto.master(5).
#
/misc    /etc/auto.misc
/auto_fs /etc/auto.misc
# NOTE: mounts done from a hosts map will be mounted with the
#       "nosuid" and "nodev" options unless the "suid" and "dev"
#       options are explicitly given.
```

Step 4: Reference file: /etc/auto.misc and modify misc

vi /etc/auto.misc

```
#
# This is an automounter map and it has the following format
# key [ -mount-options-separated-by-comma ] location
# Details may be found in the autofs(5) manpage

cd              -fstype=iso9660,ro,nosuid,nodev :/dev/cdrom
gowtham        ▮-fstype=nfs              192.168.48.128:/nfs_server
```

Step 5:unmount the directory will check it

```
[root@client ~]# df -h
Filesystem                  Size  Used Avail Use% Mounted on
devtmpfs                    4.0M     0  4.0M   0% /dev
tmpfs                       873M     0  873M   0% /dev/shm
tmpfs                       349M   13M  337M   4% /run
/dev/mapper/cs-root          17G   12G  5.6G  68% /
/dev/sda1                  1014M  283M  732M  28% /boot
tmpfs                       175M   96K  175M   1% /run/user/0
/dev/sr0                    8.2G  8.2G     0 100% /apple
192.168.48.128:/nfs_server   17G   13G  4.3G  76% /nfs_client
[root@client ~]# umount /nfs_client
[root@client ~]# df -h
Filesystem                  Size  Used Avail Use% Mounted on
devtmpfs                    4.0M     0  4.0M   0% /dev
tmpfs                       873M     0  873M   0% /dev/shm
tmpfs                       349M   13M  337M   4% /run
/dev/mapper/cs-root          17G   12G  5.6G  68% /
/dev/sda1                  1014M  283M  732M  28% /boot
tmpfs                       175M   96K  175M   1% /run/user/0
/dev/sr0                    8.2G  8.2G     0 100% /apple
```

Step 6:Restart Autofs service

systemctl restart autofs

Step 7:Next change the directory and list it and again cd the name and pwd to check it and list it

```
[root@client ~]# cd /auto_fs/
[root@client auto_fs]# ls
[root@client auto_fs]# ls -l
total 0
[root@client auto_fs]# cd gowtham
[root@client gowtham]# pwd
/auto_fs/gowtham
[root@client gowtham]# ls -l
total 220
-rw-r--r--. 1 root root   769 Jul 16 11:56 appstream.conf
-rw-r--r--. 1 root root    55 Jul 16 11:56 asound.conf
-rw-r--r--. 1 root root 28974 Jul 16 11:56 brltty.conf
-rw-r--r--. 1 root root  1371 Jul 16 11:56 chrony.conf
-rw-r--r--. 1 root root 27839 Jul 16 11:56 dnsmasq.conf
-rw-r--r--. 1 root root   117 Jul 16 11:56 dracut.conf
-rw-r--r--. 1 root root    20 Jul 16 11:56 fprintd.conf
-rw-r--r--. 1 root root    38 Jul 16 11:56 fuse.conf
-rw-r--r--. 1 root root     9 Jul 16 11:56 host.conf
-rw-r--r--. 1 root root  5799 Jul 16 11:56 idmapd.conf
-rw-r--r--. 1 root root  8892 Jul 16 11:56 kdump.conf
-rw-r--r--. 1 root root   880 Jul 16 11:56 krb5.conf
-rw-r--r--. 1 root root    28 Jul 16 11:56 ld.so.conf
-rw-r-----. 1 root root   191 Jul 16 11:56 libaudit.conf
-rw-r--r--. 1 root root  2391 Jul 16 11:56 libuser.conf
-rw-r--r--. 1 root root    19 Jul 16 11:56 locale.conf
-rw-r--r--. 1 root root   496 Jul 16 11:56 logrotate.conf
-rw-r--r--. 1 root root  5235 Jul 16 11:56 man_db.conf
```