Software Management

Router Setting

Setting MAC Address Control

- The MAC address filter is a powerful security feature that allows you to specify which computers are allowed on the wireless network.
- This list can be configured so any computer attempting to access the wireless network that is not specified in the filter list will be denied access.
- When you enable this feature, you must enter the MAC address of each client (computer) to which you want to allow network access.
- The “Block” feature lets you turn on and off access to the network easily for any computer without having to add and remove the computer’s MAC address from the list.

FINDING MAC ADDRESS OF THE COMPUTER

1) For Windows: Open run window

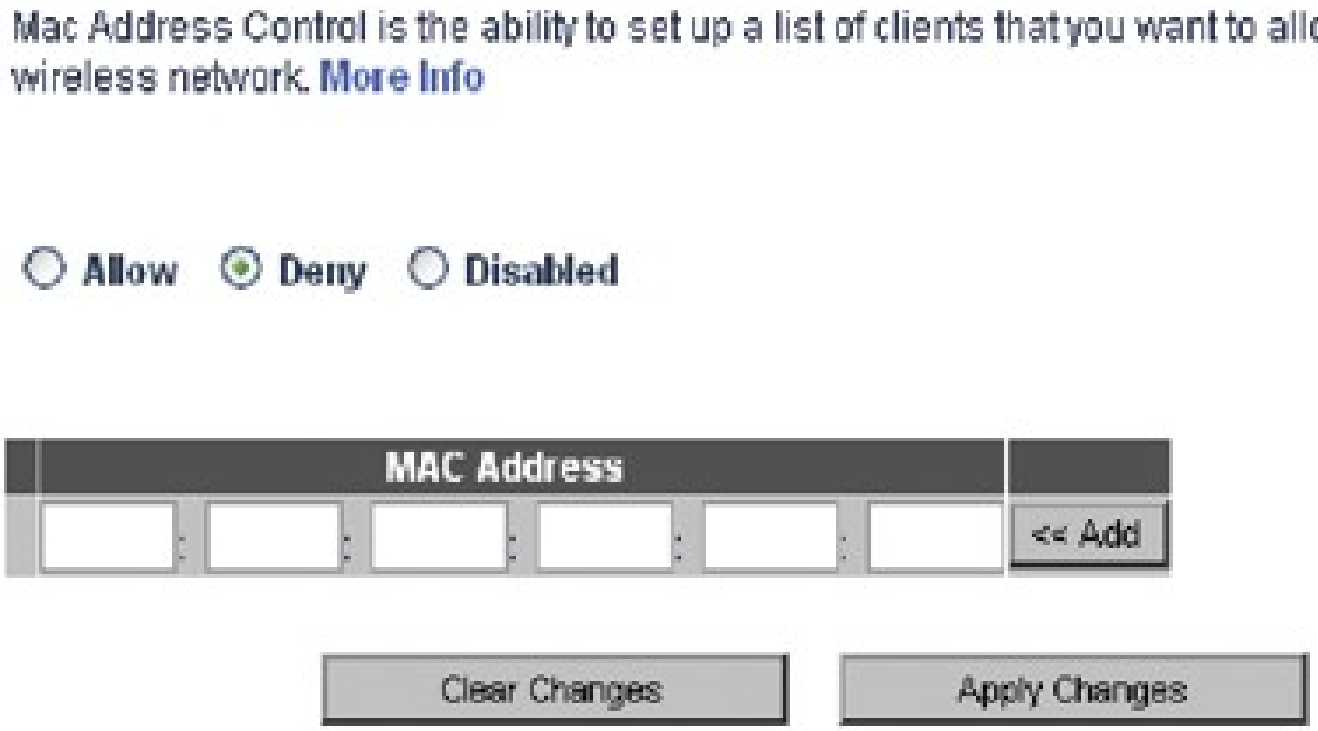
Then type “ipconfig/all”

2) For Unix : The instruction is “ifconfig”

Setting up an Allow Access List

1. Select the “Allow” radio button to begin setting up a list of computers allowed to connect to the wireless network.
2. Next, in the “MAC Address” field that is blank, type in the MAC address of the wireless computer you want to be able to access the wireless network, then click “<<Add” .
3. Continue to do this until all of the computers you want to add have been entered.
4. Click “Apply Changes” to finish.

MAC ADDRESS CONTROL



Password = scram root password

RESTARTING THE ROUTER

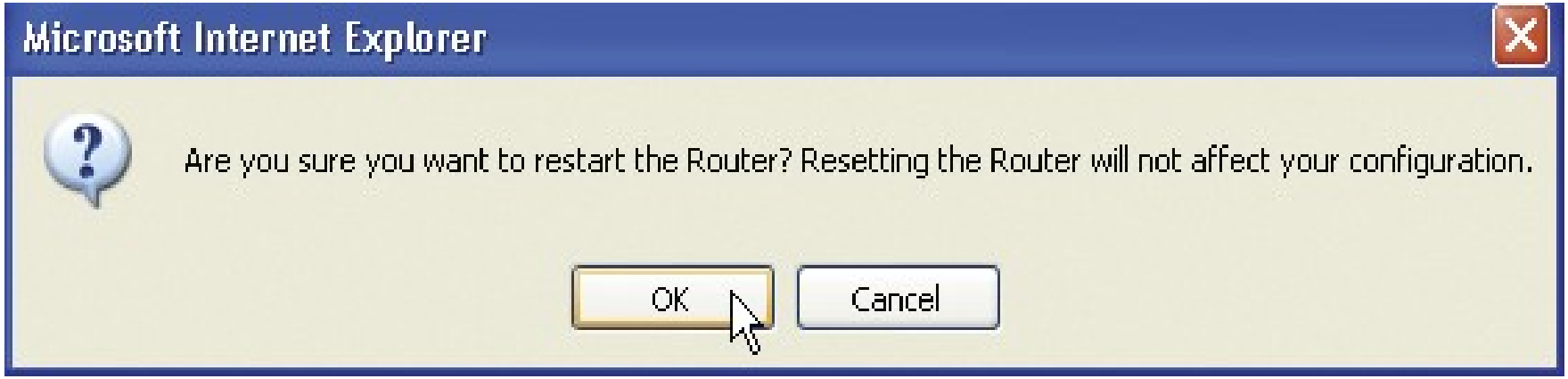
- **Sometimes it may be necessary to restart or reboot the router if it begins working improperly.**
- **Restarting or rebooting the router will NOT delete any of your configuration settings.**

Restarting the Router to Restore Normal Operation

1. Go to the UTILITIES page.

2. Click the “Restart Router” button.

The following message will appear. Click “OK”.



The following message will appear. Restarting the Router can take up to 60 seconds. It is important not to turn off the power to the Router during the restart.

- **A 60-second countdown will appear on the screen. When the countdown reaches zero, the Router will be restarted**

Software installation

CONTENTS

TECPLOT 360

Minimum System Requirements for Tecplot360

1. System Requirements -A minimum of 250 MB of disk space and 1 GB of RAM.

2. Graphics Requirements -An OpenGL®-accelerated card.

3. Display Requirements -A minimum resolution of 1024 x 768.

4. Supported Platforms-Windows, Linux

Tecplot Installation in Linux

1. **Download tec360(tar.gz) form this link https://galaxy.iitb.ac.in/pub/Software/Tec360/tec360.tar.gz**

2. **Save the file.**

3. **Extract the file using**
   # tar xzf tec360.tar.gz

4. **Goto tec360/unix directory**

5. **Change the file permissions using the below command**
   #chmod a+x setuptec

6. Execute the
   # ./setuptec

7. Give path for installation directory
   # /usr/local/tec360

8. Select the option 1

9. Select your OS and version Note: command to find os version #uname -r

10. Select the option 3 "Skip the license manager"

11. Download tec360 executable for accessing license (Copy this link and save it http://www.aero.iitb.ac.in:8081/~velan/Troubleshooting/tec360) tec360

12. Rename the tec360.htm to tec360

 # mv tec360.htm tec360

13. Move the tec360 file to given path

 # mv tec360 /usr/local/bin or /usr/bin

14. Goto /usr/local/bin

 # chmod a+x tec360

15. **Add the below lines in your .bashrcfile using this command**
    #vi .bashrc
    export TLMHOST=@galaxy.iitb.ac.in
    export TEC360HOME=/home/local/tec360
    export TLMHOST=@tecplot.iitb.ac.in
    export TEC360HOME=/usr/local/tec360

16. **Save and exit from the file**

17. **Run the this command in terminal**
    #. .bashrc

18. **Type tec360 form command prompt for execute tech360**
    #tec360

Tecplot installation in Windows

1. Download Tecplot from this link https://galaxy.iitb.ac.in/pub/Software/Tec360/tec360.tar.gz
2. Extract the tec360.tar.gz file using winrar
3. Open the folder tec360 and go windows directory
4. Double click the setup.exe file
5. Select license type “select network license”
6. Type galaxy.iitb.ac.in for accessing license press tab to activate next button
7. Double click the Tecplot360 in desktop to open tecplot

GRIDGEN

Minimum system requirements for GridgenV15 Installation

- **100 Mbytes disk space**
- **OpenGL capable color display**
- **Ethernet card**
- **CD-ROM drive**
- **128 Mbytes RAM**

Gridgen Installation on server

- **Depending on Linux OS configuration download tar ball from http://www.pointwise.com/support/dload.shtml**
- **Untar the tar file as a root**
  #tar -xvzf gg-linux_x86_64.tar.gz
- **Move the dir. Created to /usr/local/ and go to the dir.**
  #mv GridgenV15 /usr/local/
  #cd /usr/local/GridgenV15
- **Run the License manager**
  #./LICENSE_CONTROL.SH
- **Press 'f' to import license and give the license file path, when asked**
- **Press 'c' to start license manager**

Gridgen Installation on server

- **Press 'e' to check status**
- **Press 'x' to exit license manager**
- **Cmd To run gridgen by any user $/usr/local/Gridgen15/gridgen &**

Gridgen Installation on clients

- **Follow first 3 steps as explained in server installation**
- **Logged in as root in server m/c, Scp the license file from server machine to client m/c.**
  #scp /usr/local/GridgenV15/licenses/pointwise_flexnet.lic root@client:/usr/local/GridgenV15/licenses/
- **Run the License manager**
  #./LICENSE_CONTROL.SH
- **Press 'c' to start the license manager**
- **Press 'e' to check status**
- **Press 'x' to exit license manager**
- **Cmd To run gridgen by any user**
  $/usr/local/Gridgen15/gridgen &

EMACS

Emacs Installation

- **Download link for emacs**
- **http://www.gnu.org/software/emacs/emacs.html**
- **Use the below command to installs emacs**
- **Extract the file and**
- **Move to the extracted directory**
- **Use the below command to install emacs**
- **./configure; make; make install;**
- **Use the below command for install RPM file**
- **rpm –Uvh emacs.rpm**

Printer installation (HP)

Printer driver Installation

- **Download driver tar balls, depending on your printer model- http://foo2zjs.rkkda.com/**

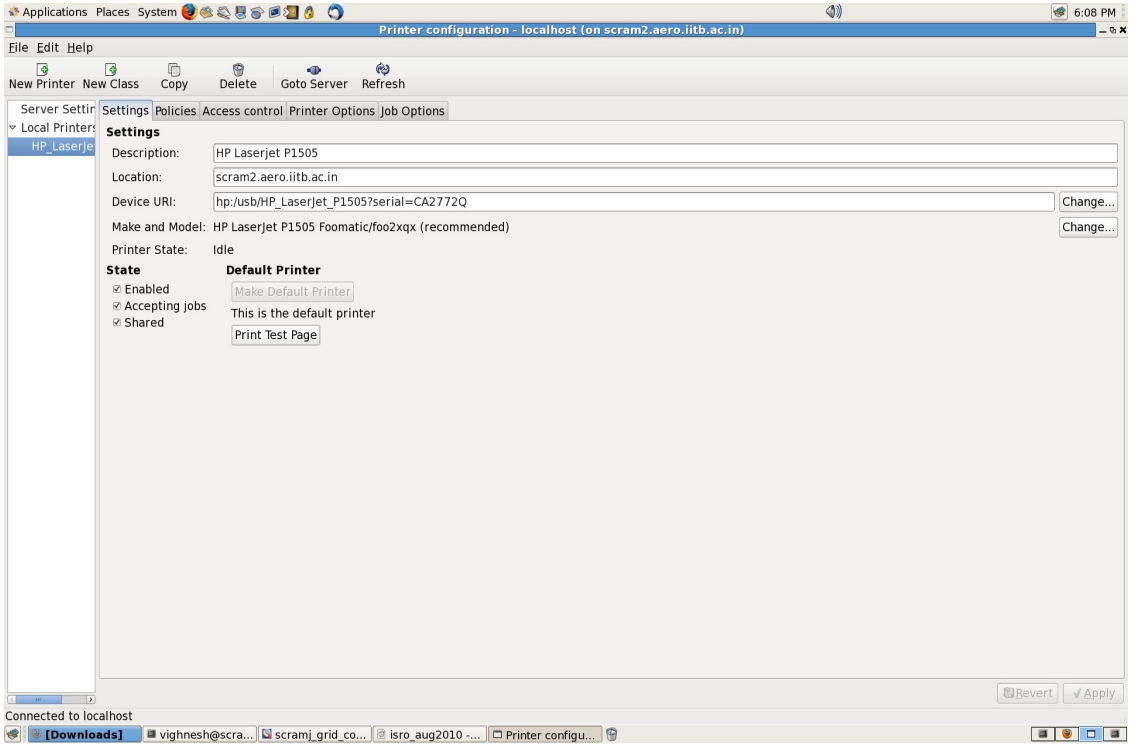
- **Extract the tar file and goto the extracted dir. (as root)**
  #tar zxf foo2zjs.tar.gz
  #cd foo2zjs

- **Run the commands seqentially**
  #make
  #make install
  #make install-hotplug
  (Plug the usb printer to the m/c or replug if already plugged in)
  #make cups (to install Common unix printing system)

Printer configuration

- **Run cmd as a root**
  #system-config-printer &

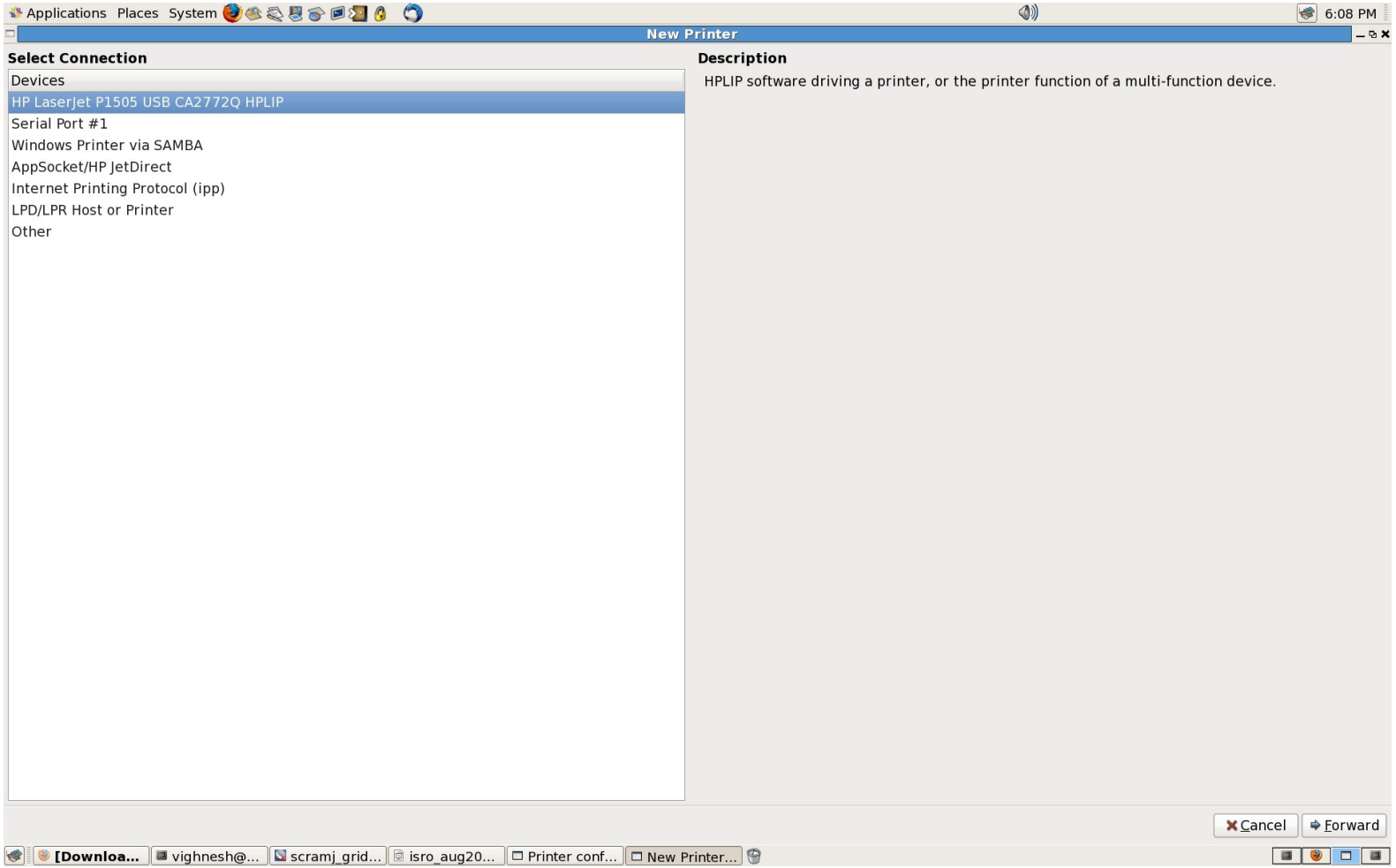
- **Following screen will appear (Example: HP 1505 installation on scram2)**



- **Select the New printer option**

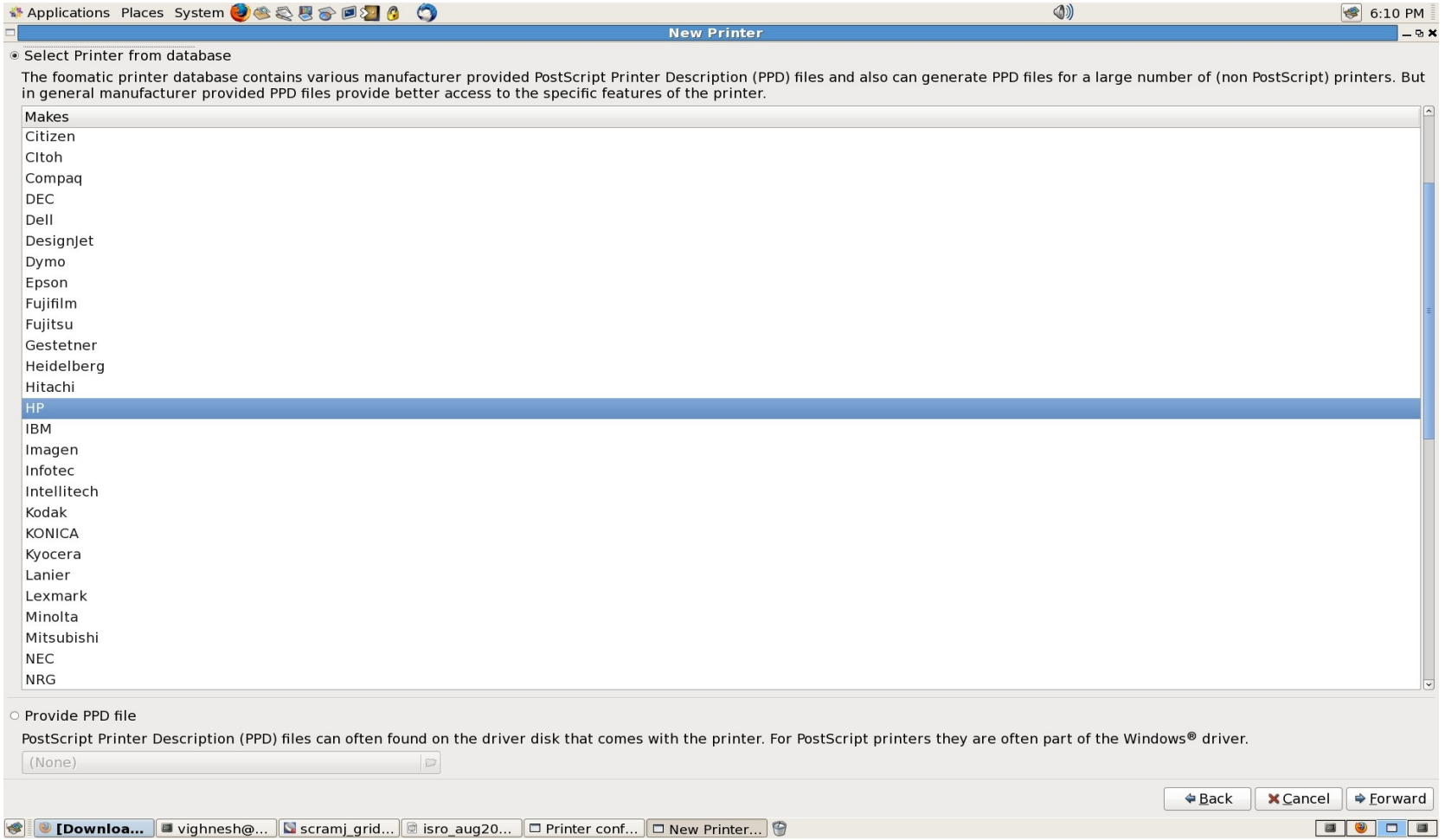
Printer configuration

- **Select the printer connection type**



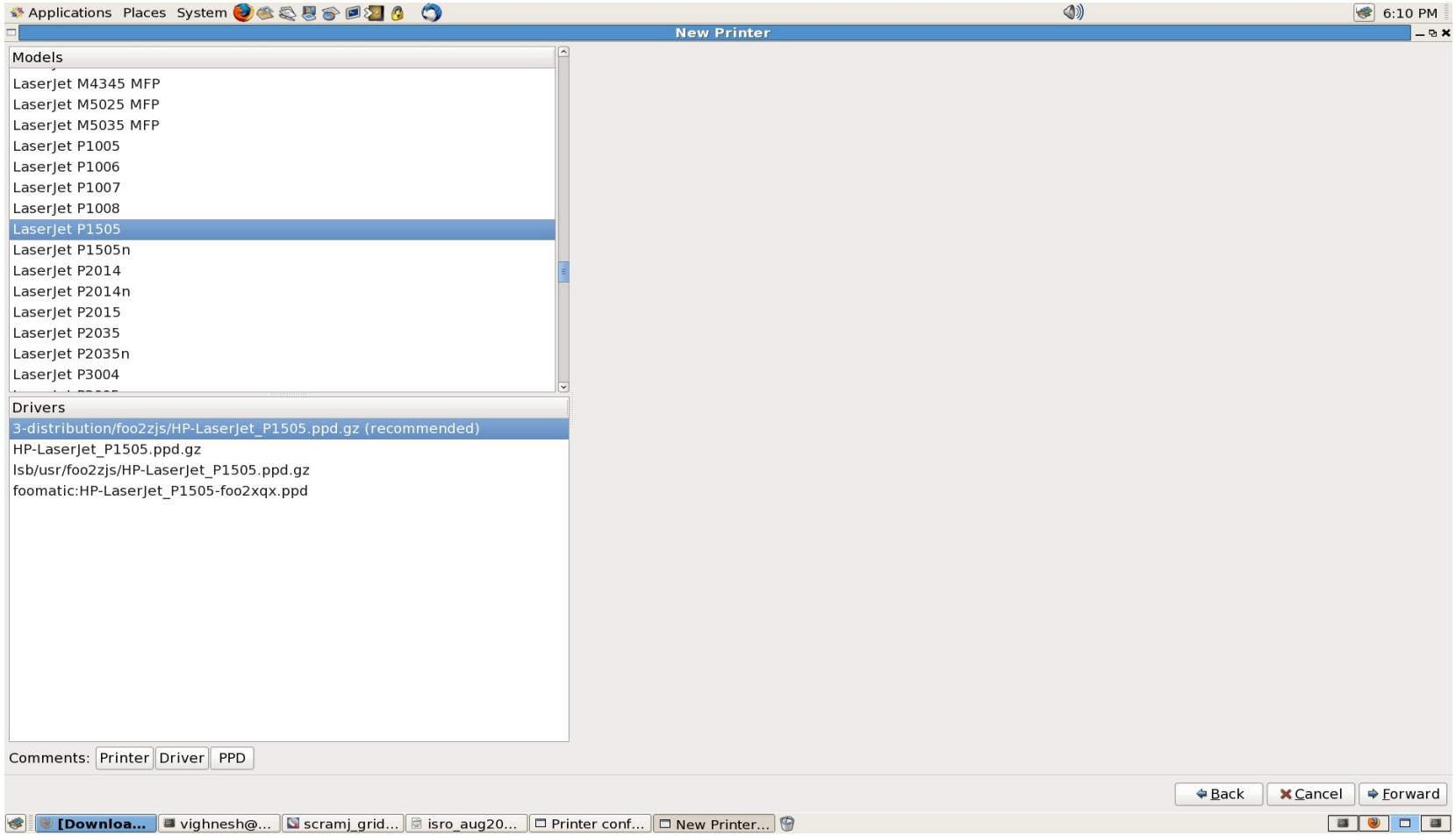
Printer configuration

- **Select the printer manufacturer from the list**



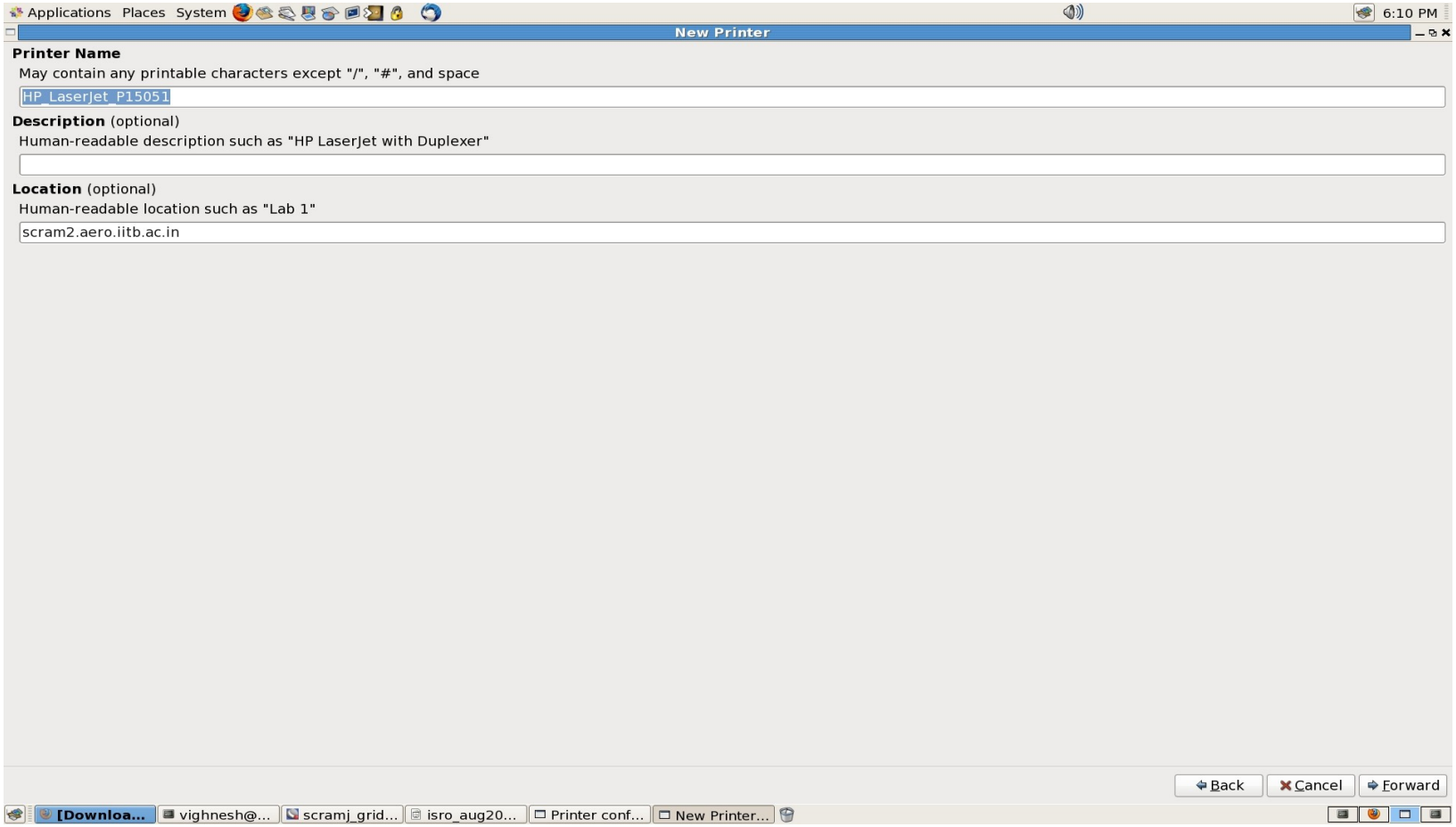
Printer configuration

- **Select the printer model and recommended driver from the list**



Printer configuration

- **Enter the Printer name in the index**



- **By clicking 'forward' printer will be created in the list**

Network Information Service and Network File System (NFS)

NFS server setup

- **Edit and include following lines in /etc/exports file as a root (Example of scram m/c)**

  #directory machine-name(option1,option2,option3)

  /home 10.101.11.73(rw,sync,no_root_squash)
  /home 10.101.11.74(rw,sync,no_root_squash)
  /home 10.101.11.75(rw,sync,no_root_squash)
  /home 10.101.11.76(rw,sync,no_root_squash)
  /home 10.101.11.77(rw,sync,no_root_squash)
  /home 10.101.11.79(rw,sync,no_root_squash)
  /home 10.101.5.38(rw,sync,no_root_squash)

- **directory -> the directory that you want to share. It may be an entire volume though it need not be. If you share a directory, then all directories under it within the same file system will be shared as well.**

NFS server setup

- **machine-name -> client machines that will have access to the directory. The machines may be listed by their DNS address or their IP address**
- **optionxx -> the option listing for each machine will describe what kind of access that machine will have**
- **Reboot the server**
- **After boot up run the command to check NFS is running or not**
  #rpcinfo quota

NFS client setup

- **Edit and include following line in /etc/fstab file, as a root (Example of scram4 m/c)**

  #device mount-point fs-type options dumb fsckorder
  10.101.11.78:/home /home nfs defaults 0 0

- **Reboot the client machine**

NFS client setup

- **Edit and include following line in /etc/fstab file, as a root (Example of scram4 m/c)**

  #device mount-point fs-type options dumb fsckorder
  10.101.11.78:/home /home nfs defaults 0 0

- **Mount the NFS directory on the client**
  # mount -a

NIS user on server

For adding user (Perform on server:-scram):

```
# useradd -g users <nisuser>
# passwd <nisuser>
Changing password for user nisuser.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
# cd /var/yp
# make
gmake[1]: Entering directory `/var/yp/scram'
Updating passwd.byname...
Updating passwd.byuid...
Updating netid.byname...
gmake[1]: Leaving directory `/var/yp/scram'
# service ypbind restart
```

For checking :

```
# ypmatch <nisuser> passwd
<nisuser>:$1$d6E2i79Q$wp3Eo0Qw9nFD/::504:100::/home/<nisuser>
:/bin/bash
```

For removing nisuser:

Follow the step same as removing the normal user

Quata

For setting up quota for nisuser:
edquota <nisuser>

For quota check:
quota <nisuser>

NIS on client

For NIS failure on client, run on client:
service ypbind restart

Cluster Management

CONTENTS

- Boot up
- Shutting down
- Monitoring

Booting Up hyperx

- Sequence
    - Boot up hyperx nas node
    - Boot up hyperx head node
    - Boot up compute nodes

SHUTING DOWN

- To shut down all the running compute nodes and nas node run cmd as a root
  #rocks run hosts poweroff

- Then shutdown head node using #poweroff cmd

- To shutdown only selected compute nodes run the cmd as a root
  (for example shuting down comput-1-1 compute-1-2 compute-1-3)
  #for i in 1 2 3 ; do ssh compute-1-$i '/sbin/shutdown -h now' ; done

Cluster monitoring

- Commands for queue status
  $showq
  $qstat [-a] [-n]
  $pbsnodes [-a] [-l]
- Commands to restart gmond and gmetad deomons
  (this deomons are necessary for web based cluster monitoring)
  #rocks run host “service gmetad restart”
  #rocks run host “service gmond restart”
- For web based cluster monitoring, visit web site
  http://hyperx.aero.iitb.ac.in/

```
[nithiyaraj@hyperx SIM_OSW_PRAC]$ showq
ACTIVE JOBS--------------------
JOBNAME            USERNAME      STATE  PROC   REMAINING            STARTTIME

6177               rajhansa    Running    32     1:51:44  Thu Sep  2 11:30:45
6176                  amjad    Running    16    10:37:12  Thu Sep  2 10:16:13

     2 Active Jobs      48 of   48 Processors Active (100.00%)
                         8 of    8 Nodes Active      (100.00%)

IDLE JOBS----------------------
JOBNAME            USERNAME      STATE  PROC     WCLIMIT            QUEUETIME


0 Idle Jobs

BLOCKED JOBS----------------
JOBNAME            USERNAME      STATE  PROC     WCLIMIT            QUEUETIME

6175               nithiyaraj   Deferred    20    12:00:00  Thu Sep  2 10:07:36

Total Jobs: 3   Active Jobs: 2   Idle Jobs: 0   Blocked Jobs: 1
[nithiyaraj@hyperx SIM_OSW_PRAC]$
```

```
[nithiyaraj@hyperx SIM_OSW_PRAC]$ qstat -n

hyperx.aero.iitb.ac.in:
                                                                  Req'd  Req'd   Elap
Job ID               Username Queue    Jobname          SessID NDS   TSK Memory Time  S Time
-------------------- -------- -------- ---------------- ------ ----- --- ------ ----- - -----
6175.hyperx.aero     nithiyar dual     job.sh             --      5  --    --  12:00 Q   --
    --
6176.hyperx.aero     amjad    dual     STDIN              5284     4  --    --  12:00 R 01:44
   compute-0-3/3+compute-0-3/2+compute-0-3/1+compute-0-3/0+compute-0-2/3
   +compute-0-2/2+compute-0-2/1+compute-0-2/0+compute-0-1/3+compute-0-1/2
   +compute-0-1/1+compute-0-1/0+compute-0-0/3+compute-0-0/2+compute-0-0/1
   +compute-0-0/0
6177.hyperx.aero     rajhansa quad     job.sh            11304     4  --    --  02:00 R 00:30
   compute-1-4/7+compute-1-4/6+compute-1-4/5+compute-1-4/4+compute-1-4/3
   +compute-1-4/2+compute-1-4/1+compute-1-4/0+compute-1-3/7+compute-1-3/6
   +compute-1-3/5+compute-1-3/4+compute-1-3/3+compute-1-3/2+compute-1-3/1
   +compute-1-3/0+compute-1-2/7+compute-1-2/6+compute-1-2/5+compute-1-2/4
   +compute-1-2/3+compute-1-2/2+compute-1-2/1+compute-1-2/0+compute-1-1/7
   +compute-1-1/6+compute-1-1/5+compute-1-1/4+compute-1-1/3+compute-1-1/2
   +compute-1-1/1+compute-1-1/0
[nithiyaraj@hyperx SIM_OSW_PRAC]$
```

```
[nithiyaraj@hyperx ~]$ pbsnodes -a
compute-0-0
     state = job-exclusive
     np = 4
     ntype = cluster
     jobs = 0/6191.hyperx.aero.iitb.ac.in, 1/6191.hyperx.aero.iitb.ac.in, 2/6191
.hyperx.aero.iitb.ac.in, 3/6191.hyperx.aero.iitb.ac.in
     status = opsys=linux,uname=Linux compute-0-0.local 2.6.18-128.1.14.el5 #1 S
MP Wed Jun 17 06:38:05 EDT 2009 x86_64,sessions=6455 6474 6493 6512,nsessions=4,
nusers=1,idletime=138107,totmem=25020172kb,availmem=24029112kb,physmem=4047324kb
,ncpus=4,loadave=3.69,netload=48136485425,state=free,jobs=6191.hyperx.aero.iitb.
ac.in,varattr=,rectime=1283504252

compute-0-1
     state = job-exclusive
     np = 4
     ntype = cluster
     jobs = 0/6191.hyperx.aero.iitb.ac.in, 1/6191.hyperx.aero.iitb.ac.in, 2/6191
.hyperx.aero.iitb.ac.in, 3/6191.hyperx.aero.iitb.ac.in
     status = opsys=linux,uname=Linux compute-0-1.local 2.6.18-128.1.14.el5 #1 S
MP Wed Jun 17 06:38:05 EDT 2009 x86_64,sessions=6603 6622 6641 6660,nsessions=4,
nusers=1,idletime=137961,totmem=25020172kb,availmem=23933872kb,physmem=4047324kb
,ncpus=4,loadave=3.40,netload=92564797543,state=free,jobs=6191.hyperx.aero.iitb.
ac.in,varattr=,rectime=1283504255
```

```
compute-1-5
     state = down
     np = 8
     ntype = cluster

compute-1-6
     state = down
     np = 8
     ntype = cluster

compute-1-7
     state = down
     np = 8
     ntype = cluster

compute-1-8
     state = down
     np = 8
     ntype = cluster

compute-1-11
     state = down
     np = 8
     ntype = cluster
```

```
[nithiyaraj@hyperx ~]$ pbsnodes -l
compute-0-4             down
compute-0-5             down
compute-0-6             down
compute-0-7             down
compute-0-8             down
compute-0-9             down
compute-0-10            down
compute-0-11            down
compute-0-12            down
compute-0-13            down
compute-0-14            down
compute-0-15            down
compute-0-16            down
compute-0-17            down
compute-0-18            down
compute-1-0             down
compute-1-5             down
compute-1-6             down
compute-1-7             down
compute-1-8             down
compute-1-11            down
compute-1-12            down
compute-1-13            down
compute-1-14            down
compute-1-15            down
compute-1-9             down
compute-1-10            down
[nithiyaraj@hyperx ~]$
```

```
[nithiyaraj@hyperx ~]$ pbsnodes -l all
compute-0-0            job-exclusive
compute-0-1            job-exclusive
compute-0-2            job-exclusive
compute-0-3            job-exclusive
compute-0-4            down
compute-0-5            down
compute-0-6            down
compute-0-7            down
compute-0-8            down
compute-0-9            down
compute-0-10           down
compute-0-11           down
compute-0-12           down
compute-0-13           down
compute-0-14           down
compute-0-15           down
compute-0-16           down
compute-0-17           down
compute-0-18           down
compute-1-0            down
compute-1-2            free
compute-1-3            job-exclusive
compute-1-4            job-exclusive
compute-1-5            down
compute-1-6            down
compute-1-7            down
compute-1-8            down
compute-1-11           down
compute-1-12           down
compute-1-13           down
compute-1-14           down
compute-1-15           down
compute-1-9            down
compute-1-10           down
compute-1-1            down
[nithiyaraj@hyperx ~]$
```

```
[nithiyaraj@hyperx ~]$ pbsnodes -l active
compute-0-0             job-exclusive
compute-0-1             job-exclusive
compute-0-2             job-exclusive
compute-0-3             job-exclusive
compute-1-3             job-exclusive
compute-1-4             job-exclusive
[nithiyaraj@hyperx ~]$
```

```
[nithiyaraj@hyperx ~]$ pbsnodes -l up
compute-0-0             job-exclusive
compute-0-1             job-exclusive
compute-0-2             job-exclusive
compute-0-3             job-exclusive
compute-1-2             free
compute-1-3             job-exclusive
compute-1-4             job-exclusive
[nithiyaraj@hyperx ~]$
```

Killing the jobs

- To kill others job

  #qdel -p [job id]

- To kill own job as user

  $qdel [job id]

end