
My sCool Server Documentation

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MSS Documentation Team

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CHAPTER 1

About the User Manual

This user manual includes guidance for some of the day-to-day tasks that may be required by an administrator (computer lab in-charge, teacher). It is assumed that the administration has some basic knowledge of working with a Linux distribution as the server is intended to be used to teach the Linux subject in schools. Providing comprehensive server administration guidance is outside the scope of this document.

We have created My sCool Server keeping in mind the “ease of use” so quite a lot of tasks(not all of them) can be accomplished without having to [RTFM](#), however understanding that this device packs a lot of complex technologies so to accomplish anything “under the hood” the administrator must go through the instructions below at the minimum and follow up reading the manuals provided by applications or online for more details or tasks not covered here.

1.1 Important Notice

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1.3 Contact

1.3.1 Corporate Headquarters

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Web site: <http://www.myscoolserver.com>

Visit <http://www.myscoolserver.com/contact> for the regional and latest contact information.

1.3.2 Social

Twitter <https://www.twitter.com/myscoolserver>

Facebook <https://www.facebook.com/myscoolserver>

Google+ <https://plus.google.com/+Myscoolserver>

2.1 Create new user

Boot into Admin-Desktop, login as *mssadmin* and perform these steps –

Via GUI

1. Navigate to System → Administration → Users and Groups
2. Add new user by pressing the +Add button and fill in the details (You may have to wait for the existing user list to load.)
3. Set the new user's password in the next dialog

Via Terminal

```
sudo useradd -m <username>
```

Enter *mssadmin*'s password when prompted and continue.

Set the password to activate the user's account.

```
sudo passwd <username>
```

2.1.1 Add user to epoptes group

Note: This must only be done for teacher accounts as it grants some extra privileges.

Boot into Admin-Desktop, login as *mssadmin* and execute the following in a Terminal –

```
sudo usermod -a -G eptotes <username>
```

Enter *mssadmin*'s password when prompted and continue.

2.2 Change password

2.2.1 To change your own password

Via GUI

```
Alt+F2 -> ltsp-remoteapps users-admin
```

Press Change . . . against the Password : label. Thereafter set your password in the Change User Password dialog.

Via Terminal

```
Alt+F2 -> ltsp-remoteapps xterm -> passwd
```

2.2.2 To change password of other user

Boot into Admin-Desktop, login as *mssadmin* and perform these steps -

Via GUI

1. Navigate to System → Administration → Users and Groups
2. Select the user whose password needs changing
3. Press Change . . . against the Password label
4. Authenticate with *mssadmin*'s password when prompted
5. Set new password in the Change User Password dialog

Via Terminal

```
sudo passwd <username>
```

Enter *mssadmin*'s password when prompted and continue.

2.3 Mass user addition

For adding several users at one go, boot into Admin-Desktop, login as *mssadmin** and perform these steps -

- Create space separated file containing “username password” such as this `sample`.

Steps:

- Use LibreOffice Calc to create the file
- Choose File -> Save as. You will see the Save as dialog.
- In the File type field select the format Text CSV (.csv).
- Enter a file name as users.csv and click Save.
- From the Export of text files dialog that appears, select the field delimiter as {space} for the data to be exported, and press OK.

Note: There should be no empty lines in the file.

- Open terminal and execute the command –

```
sudo massuseradd <path_to_csv_file>
```

Example:

```
sudo massuseradd /home/mssadmin/users.csv
```

2.4 Default credentials

By default, the appliance is shipped with the following user accounts pre-configured i.e. if no customisation has been requested during order placement –

Account Type	Username	Password
Admin	mssadmin	myskool
Student	student<n>	12345
Teacher	teacher<n>	imteacher

Warning: It is strongly recommend that a user must change the account password upon first time use.

Network Configuration

3.1 Via Network Manager

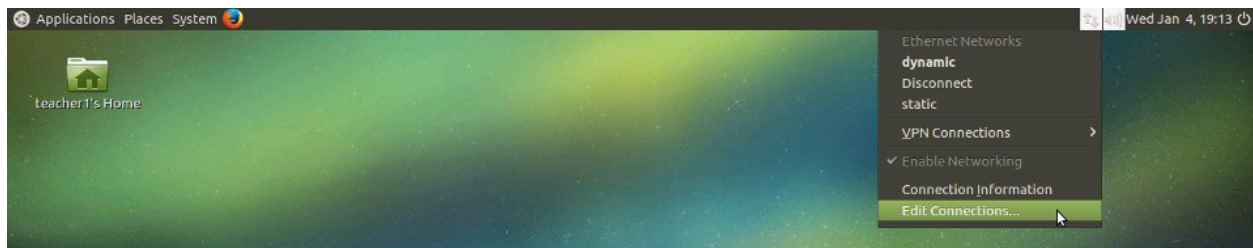
MSS comes with 2 predefined network configurations: Static and Dynamic.

If your network already has a DHCP server serving IP address to devices connected on your LAN then you need to configure the MSS in Dynamic mode. If no such DHCP server exists, then configure the MSS in Static mode.

It is safe to assume that in majority of cases where a new network has just been setup for the purpose of installing the MSS, there is no pre-existing DHCP server, hence one may safely opt for Static mode.

Herein are the details of how to configure in Static or Dynamic mode:

After login, edit the connection that would not be used and uncheck “Automatically connect to this network when it is available” to disable auto-connection attempts in the undesired mode. For example, herein below, we are *disabling ‘Dynamic’ and enabling ‘Static’ mode*.



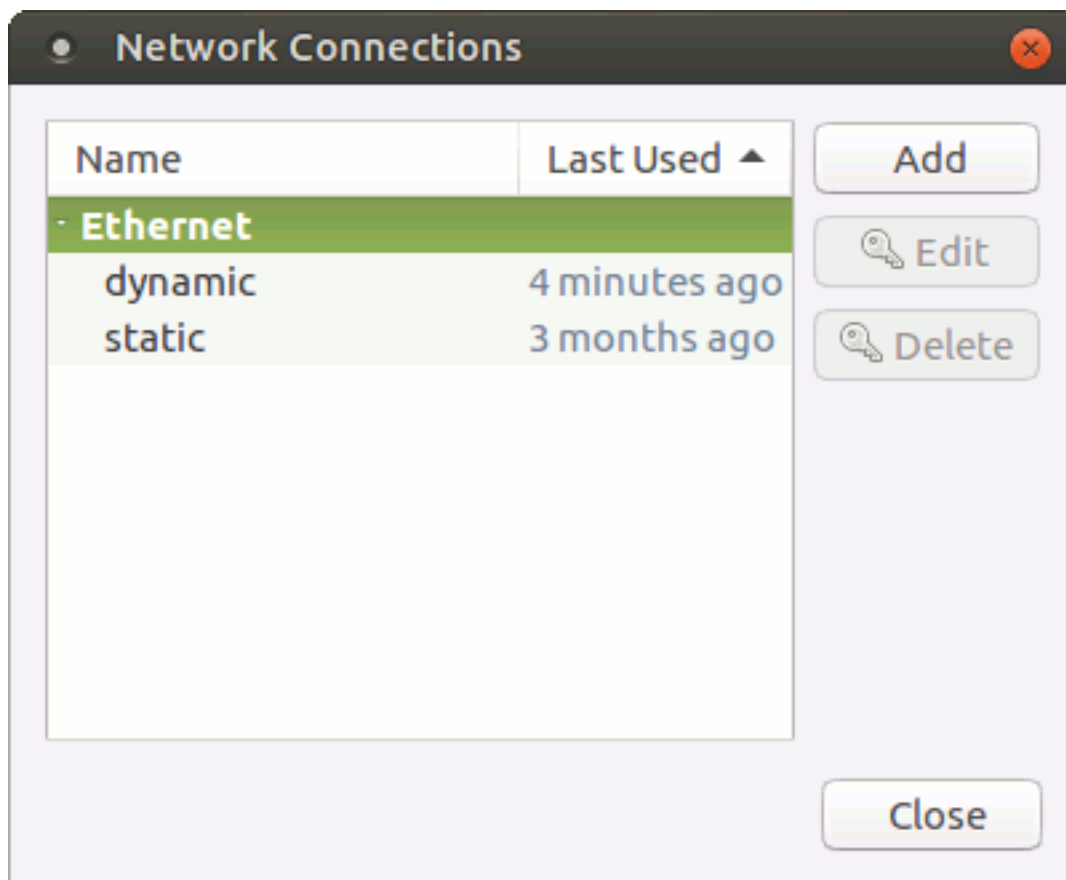
Network Manager - Edit Connections

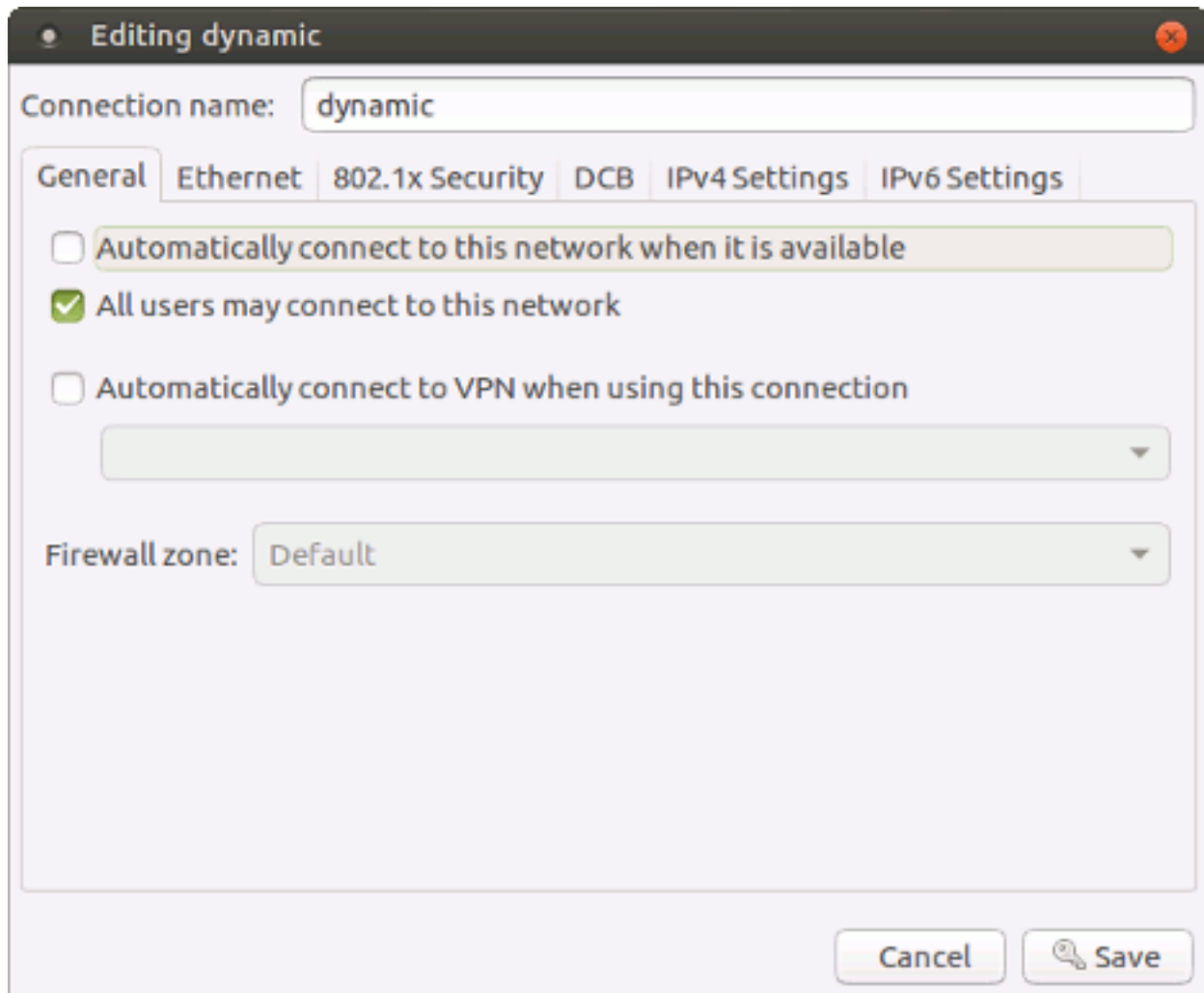
Network Connections

Uncheck to switch off dynamic mode

Check to switch on static mode

Finally, choose “static” in the Network Manager menu and your MSS is now operating in static mode.





The screenshot shows a window titled "Editing dynamic" with a close button in the top right corner. Below the title bar is a text field labeled "Connection name:" containing the word "dynamic". Underneath are several tabs: "General", "Ethernet", "802.1x Security", "DCB", "IPv4 Settings", and "IPv6 Settings". The "General" tab is selected. It contains three checkboxes: "Automatically connect to this network when it is available" (unchecked), "All users may connect to this network" (checked), and "Automatically connect to VPN when using this connection" (unchecked). Below the third checkbox is an empty dropdown menu. At the bottom of the tab area is a "Firewall zone:" label followed by a dropdown menu showing "Default". At the very bottom of the window are two buttons: "Cancel" and "Save" (which has a key icon).

Editing dynamic

Connection name: dynamic

General Ethernet 802.1x Security DCB IPv4 Settings IPv6 Settings

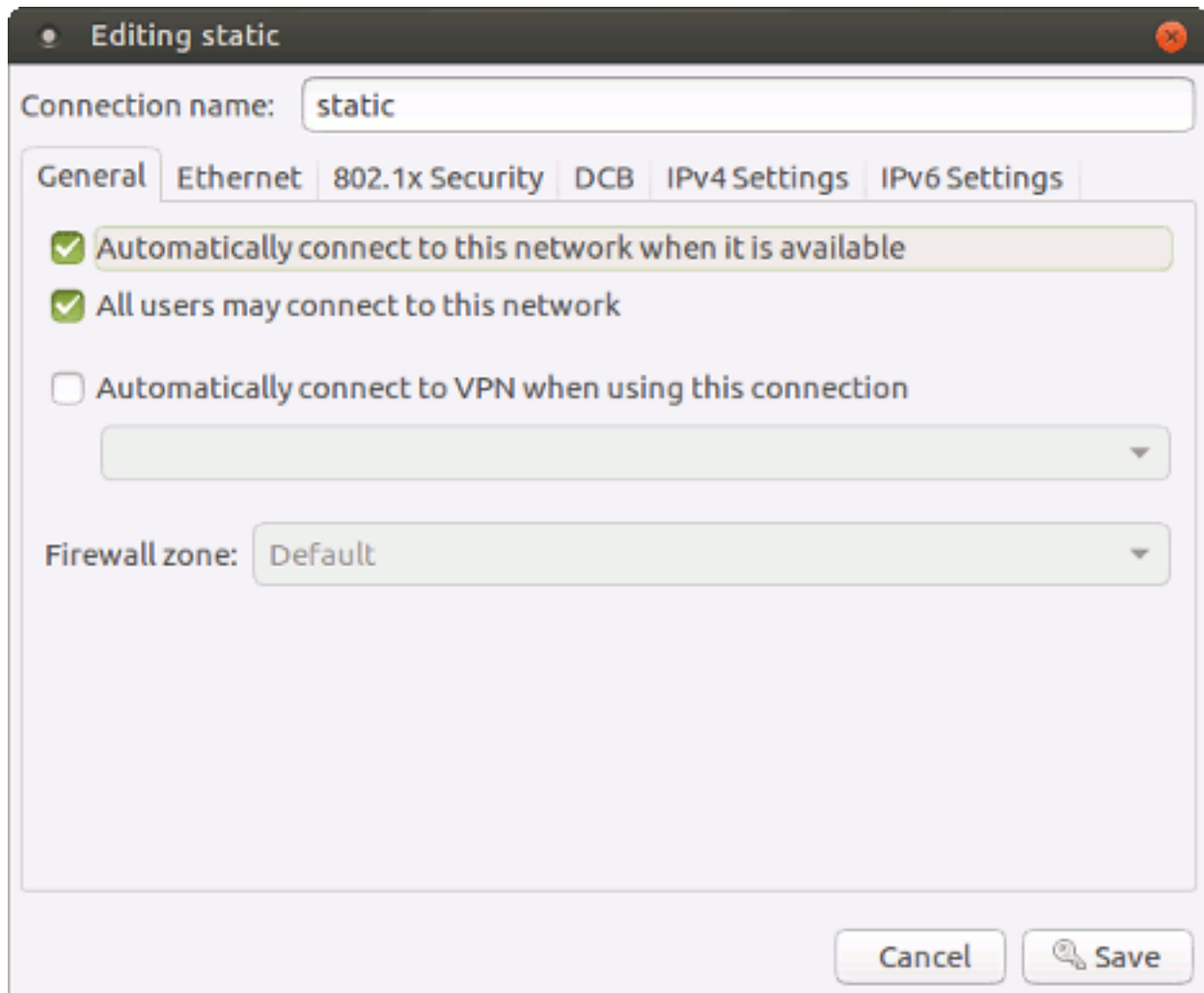
☐ Automatically connect to this network when it is available

☒ All users may connect to this network

☐ Automatically connect to VPN when using this connection

Firewall zone: Default

Cancel Save



The screenshot shows a window titled "Editing static" with a close button in the top right corner. The window contains a "Connection name:" label followed by a text input field containing the word "static". Below this is a tabbed interface with six tabs: "General", "Ethernet", "802.1x Security", "DCB", "IPv4 Settings", and "IPv6 Settings". The "General" tab is selected and contains three checked checkboxes: "Automatically connect to this network when it is available", "All users may connect to this network", and "Automatically connect to VPN when using this connection". Below the third checkbox is an empty dropdown menu. At the bottom of the tabbed area is a "Firewall zone:" label followed by a dropdown menu showing "Default". At the bottom right of the window are two buttons: "Cancel" and "Save" (which has a key icon).

Editing static

Connection name: static

General Ethernet 802.1x Security DCB IPv4 Settings IPv6 Settings

☒ Automatically connect to this network when it is available

☒ All users may connect to this network

☐ Automatically connect to VPN when using this connection

Firewall zone: Default

Cancel Save

Monitoring and Broadcasting

4.1 Epopetes

Epopetes is a monitoring and broadcasting tool to assist teachers in imparting lessons.

Only a user belonging to “epoptes” group can launch epoptes application, see [Add user to epoptes group](#).

All pre-configured teacher accounts are already members of the *epoptes* group. Using epoptes is self evident and intuitive, however complete documentation is available [here](#).

When using *English-Desktop*, a teacher can start Epopetes as below:

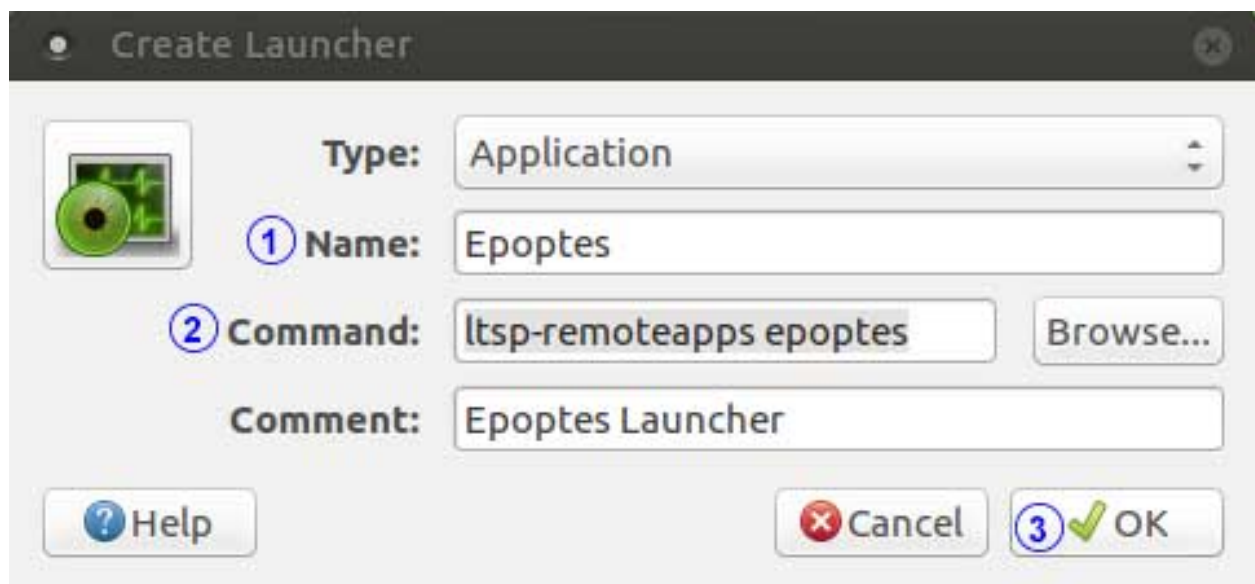
```
Alt+F2 -> ltsp-remoteapps epoptes
```

4.1.1 Create Epopetes Launcher

Using the steps herein a teacher may create a desktop launcher to start Epopetes with just a click.

- Right click on desktop and select `Create launcher...`
- In `Create Launcher` dialog do following steps -
 1. Enter Name as `Epopetes`
 2. Enter Command as `ltsp-remoteapps epoptes`
 3. Press OK

Note: You may need to refresh (F5) the desktop to see the newly created launcher



5.1 Web Server

The My sCool Server comes pre-configured with a ready to use web server to help you host your content and make it available on the local network.

Pre-hosted content can be accessed from all clients powered by the MSS via any web browser at -

```
http://server/
```

5.1.1 Hosting custom content

Boot into Admin-Desktop, login as *mssadmin* and put your custom content to be locally hosted at –

```
/var/www/html/mss/custom
```

The instructions for customisation of the custom content tile are available via a browser at -

```
http://server/mss/custom
```

Note: Do ensure that all content to be hosted should have the the following minimum permissions - read and execute for folders and read for files for the target audience.

Setting requisite permissions via Terminal

Execute the following commands in a terminal to set requisite permissions -

```
sudo find /var/www/html/mss/custom -type d -exec chmod a+rx {} \;  
sudo find /var/www/html/mss/custom -type f -exec chmod a+r {} \;
```

5.1.2 Individual content hosting

There could be a need for each user to host their own HTML based web content. Each user can host one's individual content at -

```
/home/<username>/public_html
```

and it may then be accessed by all connected clients at

```
http://server/~<username>
```

Note: Do ensure that all content to be hosted should have the the following minimum permissions - read and execute for folders and read for files for the target audience.

6.1 Create Live USB

Li-f-e: Linux for Education OS image is included on the server and can be used to create a bootable media by booting into Admin-Desktop and thereafter logging in as **mssadmin** user.

Note Select “isohybrid” / “EFI” option when creating a bootable media intended to boot computers that only support EFI booting. This option can also boot on legacy hardware so use this if you are not sure about your hardware capabilities.

Use of “isohybrid” option is officially recommended way of creating bootable USB, hence more reliable. *Do note that this will wipe the USB device and cannot be used as a normal storage media from Windows PC.*

Use “Ubuntu” / “Legacy” option if you wish to use the device as a storage media on Windows or to preserve data. This method requires one vfat formatted partition on the USB stick. The partition should not be in use at the time of creating boot media. If booting fails using this method, use isohybrid / EFI mode.

6.1.1 Via Shortcuts

Use either of these launcher icons on the Desktop - Live USB GUI EFI or Live USB GUI Legacy as per your bootable media preference.

6.1.2 Via Menu

`System Tools -> Live USB GUI`

You will be requested for the ISO image in the above process. The Li-f-e.iso file is located at one of these directory paths - /recovery/ or /home/mssadmin/.

6.1.3 Via Terminal

It may be more convenient to use command line for running this task multiple times.

```
sudo live-grub-stick --isohybrid /recovery/Li-f-e.iso /dev/sdb
```

6.1.4 References

See the following external links (*requires internet*) to learn how to boot from USB stick and troubleshoot if the USB does not boot:

[Change the boot order in BIOS](#)

[Boot from a USB device](#)

CHAPTER 7

Backup and Recovery

We understand that accidents happen and that everyone deserves a second chance. Being open-source one may be tempted to play around with the server and we do not penalise you for doing so. The My sCool Server provides Factory Restore options via –

1. Server boot menu or
2. USB created with the recovery.sh tool

Factory Restore option restores the system to the state the server left Recherche's premises, which may include customisation such as user accounts etc., if the data is given at the time of order placement.

Warning: Exercise caution before using the Factory Restore feature. It shall override any customisations done by the user to the server and shall restore it to the factory shipping state. It may also delete user created data. Hence, if user generated data is of value, it is strongly recommended that /home data is periodically backed up on an external media by following the steps below.

Note: The Factory Restore feature does not restore any preloaded or custom loaded web-content. Backup and restoration of all content accessible via `http://server` is the responsibility of the end-user. Read below for easy and useful backup steps.

Multiple snapshots can be created. It is limited by space available on the /recovery partition. MSS uses borg deduplicated backup so only the changes made to system since the last backup are stored on subsequent backup attempts.

- To create a backup, run the following command as root (sudo su -):

```
recovery.sh create
```

- To restore to factory image from a running system, run the following as root (sudo su -):

```
recovery.sh restore [optional snapshot number]
```

- Snapshots are numerical, 1 denoting the factory image. By default, running restore will restore to that snapshot. To restore to last snapshot taken run the following as root (sudo su -):

```
recovery.sh restore last
```

Snapshot management is beyond the scope of this tool and document. Refer [borg documentation](#) for details.

Herein are just a few examples of what can be done with borg:

- To list all snapshots:

```
sudo borg list /recovery/system
```

- To create a custom snapshot, for example, creating a snapshot of /home:

```
borg init --encryption=none </backup/folder/path/home>
borg create --stats --progress --compression lz4 </backup/folder/path/home>::
↪<snapshotname> /home
```

/backup/folder/path/ must have sufficient space.

- To restore /home from snapshot:

```
borg mount </backup/folder/path/home>::<snapshotname> /mnt
rsync -avP /mnt/* /home/
```

When restoration is complete:

```
umount /mnt
```

7.1 Pre-loaded Content Locations

Most of the preloaded web content resides at the common location - /var/www/html/mss. However some of the content that have their own custom location are listed below -

NROER /home/docker

Gyankunj Slate /home/mssadmin/slate

ePathshala /home/mssadmin/epathshala

8.1 Booting or Freezing Problem

If the client machines do not boot or they freeze while working, it can be caused by a faulty network cable, connection or switch. Try connecting a client directly to the server using a LAN cable and attempt booting the client. If the client boots, it confirms that the client and server both are in working order. Then continue troubleshooting your physical network or contact your network engineer.

In case the client machines still do not boot after trying all above steps, *contact the MSS support team*.

8.2 Top Panel Missing

If the top panel does not show up execute the following –

```
Alt+F2 -> resetpanel
```

8.3 Restore Desktop to Default Settings

To restore the desktop to default settings of any user run this in terminal from mssadmin account login once the user has logged out –

```
sudo mv /home/<username>/ .config /home/<username>/ .config-backup
```

Next ask the user to login again.

or

Users can also try this from a running session -

```
Alt+F2 -> resetdesktop
```

User will need to log out and back in for changes to apply.

8.4 Remote Desktop Connection Issues

Try the following steps as mssadmin user (enter password when prompted) -

Check the status of the service

```
sudo systemctl status xrdp
```

Restart the service

```
sudo systemctl restart xrdp
```

To check the XRDP processes running

```
ps ax | grep xrdp
```

Log files related to XRDP

```
sudo tail -f /var/log/xrdp-sesman.log
```

To specifically diagnose rdp login issue.

```
sudo tail -f /var/log/auth.log
```

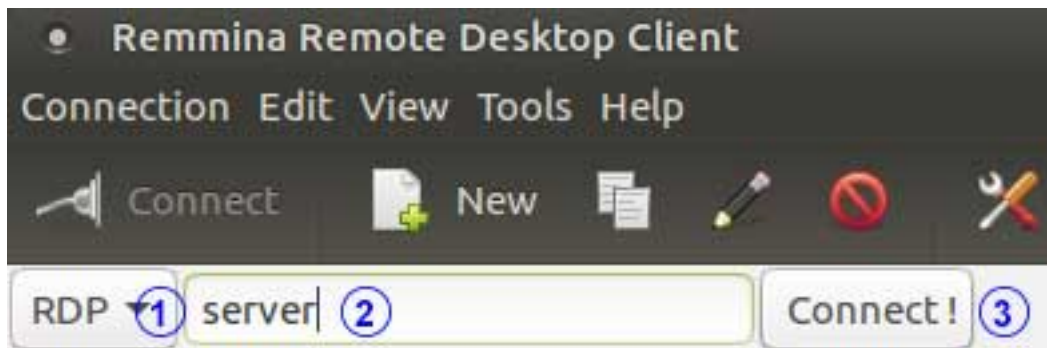
Try a user part from one that may currently be logged into an active session.

CHAPTER 9

Remote Support

For getting support remotely from support team, perform the following steps -

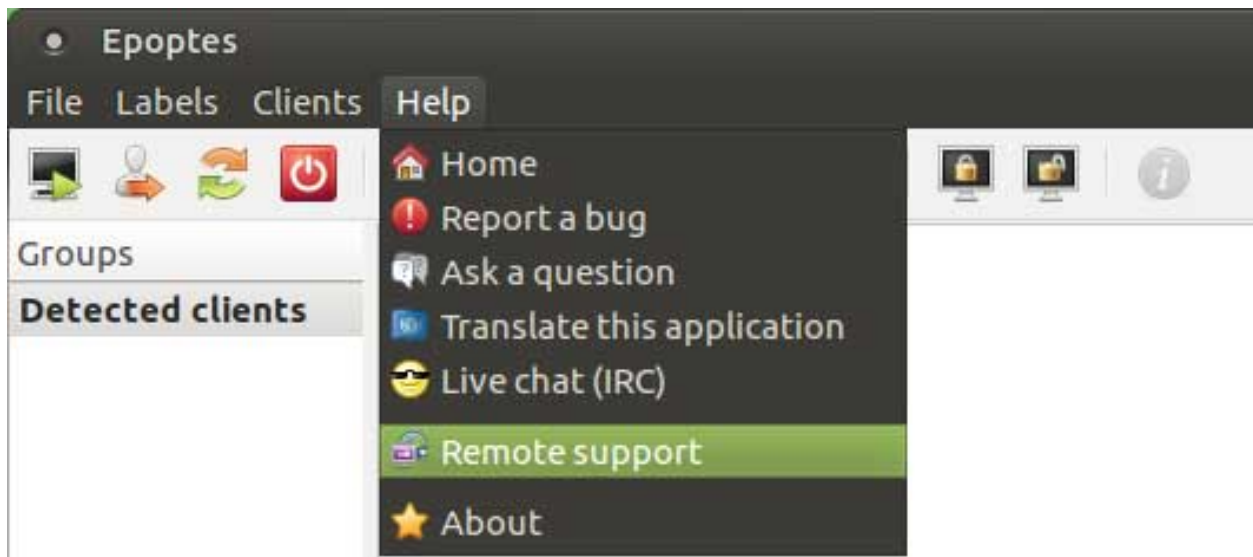
- Login with any account, navigate to Applications → Internet → Remmina
- Do following steps -
 1. RDP must be selected in dropdown box.
 2. Type `server` as shown below.
 3. Hit `Connect` !.



- When connection is established, Login as `mssadmin` in remmina screen .

Note: Following steps should be perform in opened remmina window


- Connect Wi-Fi/Hotspot for Internet Connection, see [Connect Wi-Fi/Hotspot](#) section for getting connected to Internet via Wi-Fi/Hotspot.
- Launch Epoptes from Applications → Internet → Epoptes
- Select Remote support option from Help → Remote support



- In remote-assistance dialog follow the steps below -
 1. In Method check if Graphic (VNC) is selected.
 2. In Host type `support.myscoolserver.com:5500`
 3. Hit Connect.
- On successful connection, Status will change to Connected.

9.1 Connect Wi-Fi/Hotspot

For connecting Wi-Fi/Hotspot in MSS, login as *mssadmin* and perform these steps -

- Click on  from top-right corner of the screen, and click the name of the network you want to connect to.


Note: If the name of the network is not in the list, select `More networks` to see if the network is further down the list. If you still do not see the network, your device may be out of range or the network might be hidden.

- Type password of *mssadmin* in Authenticate dialog as shown below and hit Authenticate.
- It will again prompt for the password with the Authenticate dialog, type password of *mssadmin* and hit Authenticate
- If the network is protected by a password, enter the password in Wi-Fi Network Authentication Required dialog when prompted and click Connect.





Authenticate

**System policy prevents control of network connections**

An application is attempting to perform an action that requires privileges. Authentication is required to perform this action.


Password:

▸ Details

Cancel

Authenticate

Authenticate

**System policy prevents modification of personal network settings**

An application is attempting to perform an action that requires privileges. Authentication is required to perform this action.

Password:

▸ Details

Cancel

Authenticate

Wi-Fi Network Authentication Required

**Authentication required by Wi-Fi network**

Passwords or encryption keys are required to access the Wi-Fi network 'My sCool Server'.

Password: 

☐ Show password

Cancel

Connect

- The network icon will change to



Note: If the connection is not successful, you may be asked for your password again or it might just tell you that the connection has been disconnected.

CHAPTER 10

Useful Documentation and Support

The My sCool Server comes preloaded with Hackett and Bankwell comic books¹ and content from Spoken Tutorial² that walks you through everything you need to know about using Ubuntu linux, almost every GUI application comes with F1 help, and respective documentation in /usr/share/doc folder.

Lot more community created documentation is also available online:

<https://ubuntu-manual.org>

<https://help.ubuntu.com>

<https://ubuntu-mate.github.io>

<https://help.ubuntu.com/community/CommonQuestions>

<https://help.ubuntu.com/community/Beginners/FAQ>

<http://askubuntu.com/questions?sort=faq>

<https://ubuntu-mate.community/t/ubuntu-beginners-guide-complete-how-to-install-and-run-first-update/955/7>

<https://ubuntu-mate.org/faq>

10.1 Community help for Ubuntu specific issues

<http://community.ubuntu.com/help-information>

<https://ubuntu-mate.org/community>

10.2 Help for typing in your language

<https://help.ubuntu.com/community/ibus>

¹ <http://hackettandbankwell.com>

² <http://spoken-tutorial.org/about-us>

10.3 For issues specific to Li-f-e

<https://sourceforge.net/projects/cyberorg-home/support>

10.4 For issues specific to MSS

<https://github.com/RechercheTech/mss/issues>

10.5 Recommended reading before asking for assistance

<http://www.catb.org/esr/faqs/smart-questions.html>

Every My sCool Server has a sticker bearing a unique MSS ID or S/N (Serial Number). This ID is important for all communications with Recherche Tech in regards to your MSS hardware. If you ever have an issue with your MSS hardware and it is under warranty, simply open a ticket through any of the support channels and quote this MSS ID and the nature of your problem.

10.6 Frequently asked questions -

<http://myscoolserver.com/faqs>

10.7 Discussion forum -

<http://discourse.myscoolserver.com>

10.8 Feature videos -

<https://www.youtube.com/c/myscoolserver>

10.9 Important Links

Some helpful links

Document Title	Offline version (available on local server without internet)	Online version (Latest version on internet)
Getting Started Guide		http://www.myscoolserver.com/getting-started
This User Guide	http://server/mss/mss-doc-latest/	http://mss-doc.rtfid.io/



11.1 Corporate Headquarters

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Web site: <http://www.myscoolserver.com>

Visit <http://www.myscoolserver.com/contact> for the regional and latest contact information.

11.2 Social

Twitter <https://www.twitter.com/myscoolserver>

Facebook <https://www.facebook.com/myscoolserver>

Google+ <https://plus.google.com/+Myscoolserver>