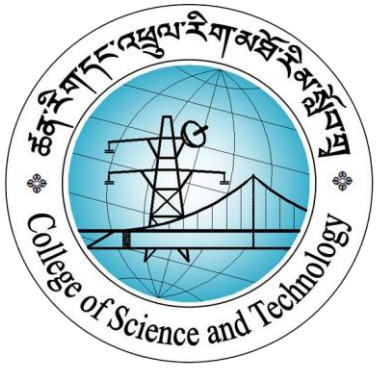

Royal University of Bhutan

LESSON – 4

CONNECTING TO LINUX SYSTEM

LINUX ENVIRONMENT

- What is Console/Terminal/Shell?
  - Console is basically what you see when you are looking at your computer screen
  - Graphical Linux console Vs Text-based Linux console
  - Terminal is an environment that is opened on the console which provide access to a text shell
  - Shell is the command-line environment that can be used to type commands

SWITCHING BETWEEN TERMINALS IN A GRAPHICAL ENVIRONMENT

- In graphical environment, it is relatively easy to open several different working environments:

1. Right-click on Desktop -> Select **Open in Terminal**
2. Application -> Terminal

ACTIVITY I

- Working from several terminal windows simultaneously

1. Start and log in as non-root user account from graphical windows
2. Open Terminal from Desktop
3. Open another terminal from Utilities
4. Note the shell symbol and from one of the terminal type su – and enter the password of the root user. Notice shell symbol. Then, type tail –f /var/log/auth.log. This opens trace on the file, where you can monitor security events in real time.
5. From the another terminal type su – and provide wrong password. Then, look at the terminal where trace file is opened, you will see an error message has been written to this file.
6. 6. Use the Ctrl+c to close the tail –f session

BECOMING

```
$ su
Password:(Not echoed)
#
```

SUPERUSER

```
$ su -
Password:(Not echoed)
#
```

Virtual console

- This feature allows to open six different terminal windows

  - Use the key sequences Ctrl+Alt+F1 through Ctrl+Alt+F6

- Command to List Current Logged-in Users in Linux

  - **who** command is used to find out the following information :

  1. Time of last system boot
  2. Current run level of the system
  3. List of logged-in users and more.

USING SSH & RELATED UTILITIES

- So far, seen direct accessing a system.
- Connecting/Accessing Remote System/Server
  - Secure Shell (SSH)
    - Administrators use it to connect server/s that are not physically accessible
    - Most common method to gain access to other machines over the network
    - Cryptography is used to ensure that you are connecting to the intended server
    - Also, traffic is encrypted while transmitted

ACTIVITY II

- Instruction:

1. Record your IP in a piece of paper and share with your friend near you.
2. Check whether you are able to connect to your friend`s computer from your computer (use: ping IP)
3. Run sshd service if it is not running
4. Access remote system (friend’s terminal) by typing ssh . Enter password when prompted.
5. Type exit to close the SSH session.

ACTIVITY III

- Instruction:

1. Create a user account for your friend near you.

    - Command: adduser user1

2. Share the credentials
3. Ask your friend to login to your system using ssh service
4. Using **who** and **tail –f /var/log/auth.log** command verify their login activity

SUMMARY

- In this lesson, you have learnt that:
  - There are six different Virtual console (seven - one) environments
  - Working with pseudo terminal
  - How to start, reboot and shut down the Linux system
  - SSH is used to connect system remotely
  - Two types of working environment: GUI (Graphic User Interface) and CLI (Command Line Interface)