Linux Tutorial

Scientific Exploration through Simulations (SETS)
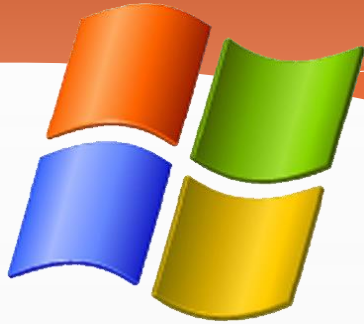
Syracuse University – July 2012

Agenda

1. Introduction to Linux OS

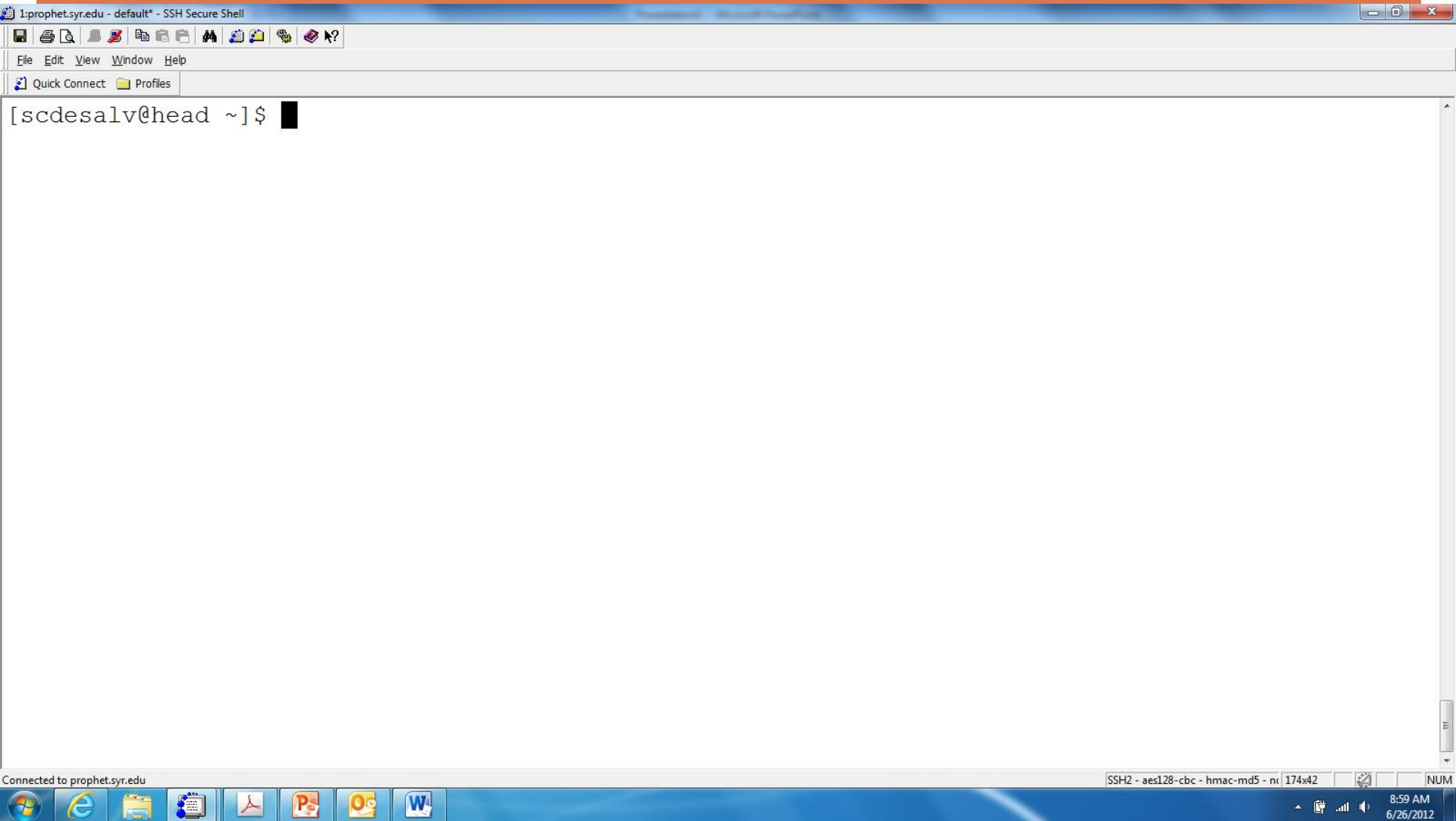2. Basic Linux commands

3. vi Editor

4. Exploring the Linux OS

Windows vs. Linux

Windows
1. Click icons / folders
2. Notepad or MS Word
3. Must be purchased
4. Desktop

Linux
1. Type commands
2. vi Editor
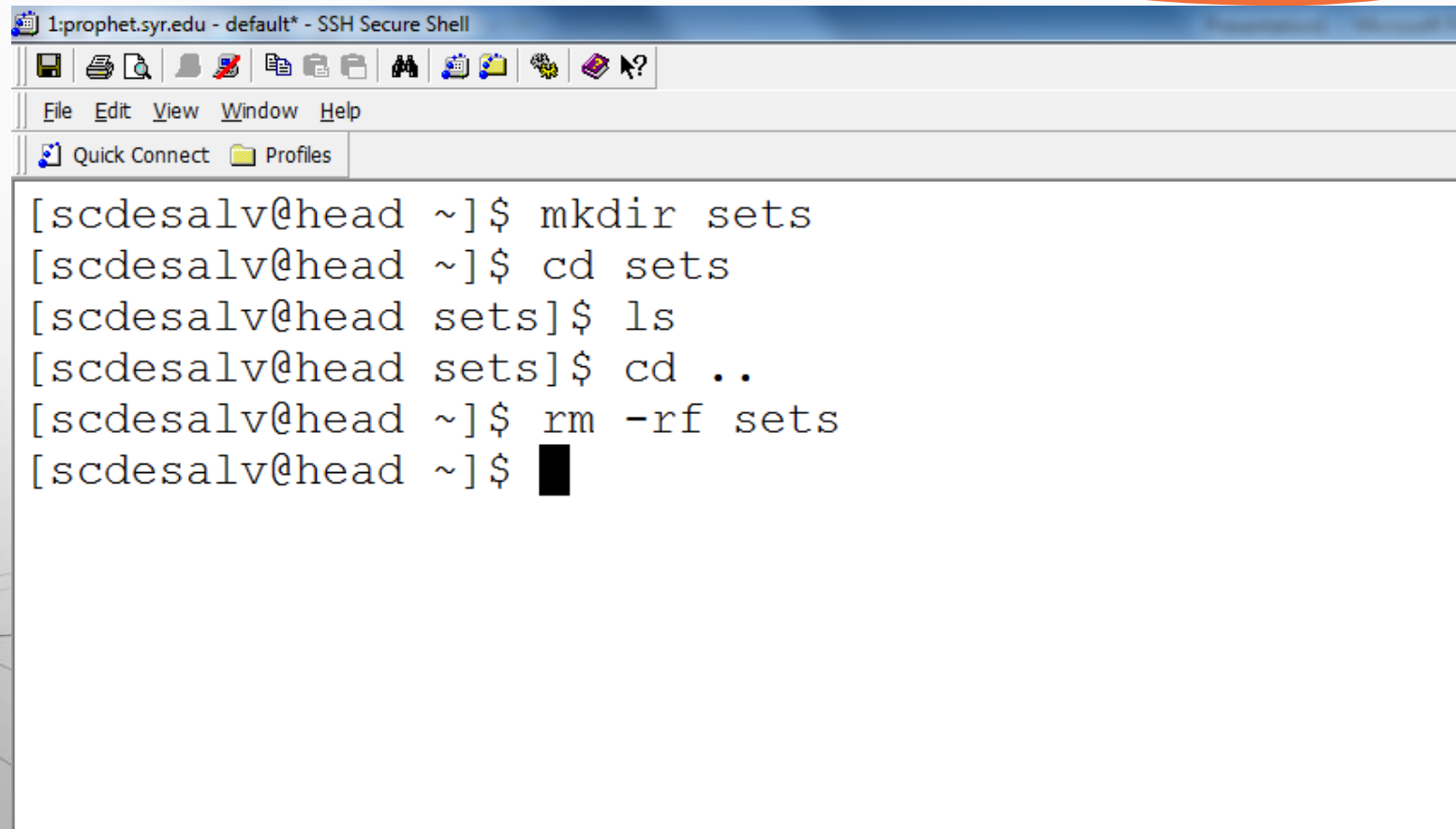3. Open source & free
4. Shell (Command Line)

The Command Window

Directories

* Make new directory   mkdir name
* Change directories   cd name

* Go to previous directory   cd **..**
* Delete directory   rm –rf name
* List files / folders   ls
* Find where you are   pwd

Directories

Files

* Copy files   cp filename newname
* Move files   mv filename directory
* Rename files   mv filename newname
* List files / folders   ls
* Print file   lpr filename

Files

Test Your Knowledge

`mv file ../../dirname`

This command will do which of the following?

A Move file to dirname in previous directory

B Move file to dirname in directory before previous directory

C Copy file to dirname in previous directory

D Rename file to `../../`dirname

Test Your Knowledge

`mv file ../../dirname`

This command will:

B Move file to dirname in directory before previous directory

Test Your Knowledge

```
rm file.xvg file2.gro
```

This command will do which of the following?

A Rename file.xvg to file2.gro

B Move file.xvg to file2.gro

C Delete file.xvg and file2.gro

D Delete file2.gro from file.xvg

Test Your Knowledge

`rm file.xvg file2.gro`

This command will:

C   Delete file.xvg and file2.gro

Test Your Knowledge

`cp file.xvg file2.gro file3.gro ../sets`

This command will do which of the following?

A Copy file.xvg to file2.gro and file3.gro to ../sets

B Move file.xvg, file2.gro and file3.gro to ../sets

C Rename file.xvg to file2.gro and file3.gro to ../sets

D Copy file.xvg, file2.gro and file3.gro to ../sets

Test Your Knowledge

```
cp file.xvg file2.gro file3.gro ../sets
```

This command will:

D Copy file.xvg, file2.gro and file3.gro to ../sets

vi Editor

* Opening vi Editor   vi filename
* Create new file   vi newfilename.xxx
* File extensions

.gro   .dat   .xtc   .txt   .trr   .edr   .cpt   .pdb

* Delete file   rm newfilename.xxx

vi Editor - Navigating

* Use arrow keys to navigate (scroll up/down)
* Page forward   Ctrl+f
* Page backward   Ctrl+b
* Go to top   :0
* Go to bottom   :$
* Beginning of line   0
* End of line $

vi Editor

vi Editor – Editing / Saving

* Inserting/Editing   i
* Stop inserting   esc
* Undo   u
* Quit without saving   :quit!
* Save and quit   :wq
* Save   :w
* Save to new file   :w newfilename

vi Editor – Editing

* Delete line   dd
* yy   copy line (yank line)
* p   paste
* :#   (ex.   :10)   go to line 10
* /text   (ex. /NP)   go to next instance of NP

vi Editor

Test Your Knowledge

`i $ end`

In vi Editor, this command will do which of the following?

A Insert "$ end" at the cursor

B Go to the end of a line and insert "end"

C Insert "end" at the beginning of a line

D Insert "$" at the end of a line

Test Your Knowledge

```
i $ end
```

This command will:

A Insert "$ end" at the cursor

Test Your Knowledge

`:$ $ i xxx` `esc` `0`

This set of commands will do which of the following?

A Go to end of page, end of line, insert "xxx", then go to beginning of line

B Go to top of page, end of line, insert "xxx", then go to beginning of line

C Go to end of page, end of line, insert "xxx esc 0"

D Go to top of page, beginning of line, insert "xxx", then go to end of line

Test Your Knowledge

`:$ $ i xxx` `esc` `0`

This set of commands will:

A Go to end of page, end of line, insert "xxx", then go to beginning of line

Test Your Knowledge

10dd

In vi Editor, this command will do which of the following?

A Go down 10 lines and delete that line

B Go up 10 lines and delete that line

C Delete 10 random lines

D Delete 10 lines starting at the cursor

Test Your Knowledge

`10dd`

This command will:

D   Delete 10 lines starting at the cursor