Unix Commands

Use these sheets as reference for the Sun Microsystems Unix network, Paprika, at Mary Washington. Please remember that Unix is case sensitive. **Upper case and lower case letters are considered different letters.**

I. Accessing the System

A. To begin a session use:
1. login: **username** (Your username is the same as your EAGLENET username.)
2. passwd:(A first time user must use his/her temporary **Eaglenet password**)

B. Changing Your Password
1. To the $ prompt enter: **passwd**
2. Enter old password in response to prompt old passwd:
3. Enter new password in response to prompt new passwd:
4. Re-enter new password for verification
   Do not use the #, @, $ or the \ key in your password.**

C. To terminate the current session use: **exit** or click on the **exit sign**

D. To obtain on-line help use: **man *commandname***
If you are unsure of the exact command name use: **apropos *command***

E. To determine path from root to current directory use: **pwd**

F. To echo the screen as displayed in a file called ***filename***
use: **script *filename***
(Continue with desired tasks.)
To terminate the screen echo use: **exit**

G. To close all open files use: **sync**

II. File Management

A. To obtain a list of file names use: **ls, ls –a, or ls -l**

B. To view the contents of a file use: **more *filename***
<return> displays next line, q terminates display, space bar displays next screen.

C. To erase files from your account use: **rm *filename***

D. To rename a file in your account use: **mv *currentfilename newfilename***

E. To duplicate the content of a file use: **cp *source_file destination_file***

F. To merge two or more files use: **cat** *file1 file2 ... > combo*

G. To append a file to another file use: **cat** *sourcefile >> destinationfile*

H. To terminate a UNIX command or an executing program use: **CTRL-c**
(hold down the control key and press the letter c)

III. Managing Directories

A. To create a subdirectory use **mkdir** *Name_of_Directory*

B. To change to a subdirectory use **cd** *Name_of_Directory*

C. To move to the parent directory use **cd ..** <enter>

D. To return to your home directory use **cd** <enter>

E. To delete a directory you must first delete all its files.
1. Use rm *.* to do this
2. Use **cd ..** to move to the parent directory
3. Use **rmdir Name_of_Directory** to delete the directory itself.

IV. Print Commands

A. To obtain a hardcopy printout of your file use:
lp *filename* (The output will be printed on the printers in B14.)

B. To view current print buffer use: **lpstat**
(Each job under your username will be listed with a print id.)

C. To cancel a print job use: **cancel** *printid*
(Use the printid as displayed using the lpstat command.
The printer must be online for this command to be effective.)

V. Executing a Java jar file

1. Use NetBeans to build your project.
2. Correct all errors detected by NetBeans. Save your work. Build your project as corrected.
3. Execute your project by selecting Run/Run Main Project.
4. If your program runs to completion then examine the results to verify that the program is free of logical errors and yielding correct results. If you find a logical error then correct it, and continue with step 2 as described above.

5. Preparing your assignment for submission

- Navigate to the folder containing your project **$cd cpsc.220/projectName**
- Open a script file to capture the results: **$ script results.out**
- Execute your program: **$ java –jar "dist/projectName.jar"**
- Terminate the script file: **$ exit**
- Package all of the files together and print:
$ cat results.out /src/projectName/mainClass.java |lp

VI. Electronic Mail Using elm

A. Accessing Your Incoming Mail
1. Enter **elm** to the $ prompt.
2. Follow on-screen instructions to access and delete current messages.
3. To save current message enter: **s** and then provide an appropriate filename for storage.
(Backspace over any default name not desired by you.)

B. Sending and Creating a Mail Message

1. While in elm, select the M)ail option
2. You will then see an empty workspace
3. Depress the letter a to allow you to enter text
   Be sure to hit return at the end of each line
4. Use this sequence to retain a permanent copy of the file just created.
   a. Hit the esc key to switch to command mode
   b. Enter a colon (:). The cursor will move to the command line at the bottom of the screen.
   c. Enter wq (return) **DO NOT APPEND A FILENAME!**
5. You have now been returned to the elm menu

VII. The vim Editor

A. File creation

1. Enter the command **vim** to the unix $ prompt
2. You will then see an empty workspace
3. Depress the letter **a** to allow you to enter text. Be sure to hit return at the end of each line
4. Use this sequence to retain a permanent copy of the file just created.
   a. Hit the **esc** key to switch to command mode
   b. Enter a colon (**:**).
   The cursor will move to the command line at the bottom of the screen.
   c. Enter **wq filename.cpp** (return)
5. You have now been returned to Unix.
6. To periodically save your work to date, use:
   a. the **esc** key to place you in command mode:
   b. Enter **: w filename.cpp** (return)
7. Continue entering and saving text as necessary.
   Subsequent saving of file replaces previous version by the same file name.
   Enter **:wq filename.cpp** (return) to save the current workspace and exit vi.
8. To exit vi work session without saving current workspace enter**: q!**

B. File Modification Using the vim Editor

1. Enter vi using: **vim full_file_name**
2. Moving the cursor around the screen
   To end of current line use: **$**
   To start of current line use: **0**
   up, down left, right use designated arrow keys OR **k , j, h, l**
   To end of file use: **G**
   To first line of file use **:1** (return)
3. To advance to next page use **pgdown**
   To go back to previous page use **pgup**
4. To display line numbers enter: **esc, colon (:), set number ,** (return)
5. To move cursor to a specific line enter **esc, colon(:), line_number,** (return)
   e.g. esc, :15 (return)
6. To insert text to left of cursor, enter **i** followed by text to insert.
7. To insert text to right of cursor, enter **a** followed by text to insert.
8. Lines may be inserted by following the same sequence and depressing (return) as appropriate.
9. To delete character at cursor use **x**
10. To delete line containing cursor use **dd**
    To delete several lines from cursor line on use: #_of_lines**dd**
    e.g. To delete 5 lines from the cursor line use: **5dd**

11. To replace character at cursor use **r** *newch*
12. To substitute more than one character for character at cursor use **s** *newchars*
13. To replace all occurrences of a text pattern with another use
    :g/text_pattern/s//replacement_pattern/g
14. To search file:
    Forwards from cursor use **/*pattern*** (return)
    Backwards from cursor use **?*pattern*** (return)
    To repeat previous search command use /(return)
15. To join current line with next line use **J**
16. To move a block of text
    -Position cursor at start of block
    -remove block with #_lines_in_block**dd** e.g. 10dd
    -reposition cursor
    -enter lowercase **p**
17. To copy a block of text
    -Position cursor at start of block
    -copy block with #_lines_in_block**yy**
    e.g. To copy 12 lines of text use: **12yy**
    -reposition cursor
    -enter lowercase **p**
18. Enter **%** with cursor on a (,),{,},[,] to find its mate.
19. To Undo the most recent command use **u**

VIII. Remote Access to the HP-UX System Using Eaglenet and Windows

Sometimes the B13 lab may be crowded. Sometimes you may want to work on your program late at night and not feel like walking all the way over to Trinkle. Remote access to paprika is the answer.

If you intend to use telnet to gain remote access to the paprika system, you must use the vi/vim editor. It is an editor that functions within a remote login environment. This is one of the reasons that it is a good idea to be able to use the vi/vim Editor!

I recommend using a secure telnet client like **PuTTY**.

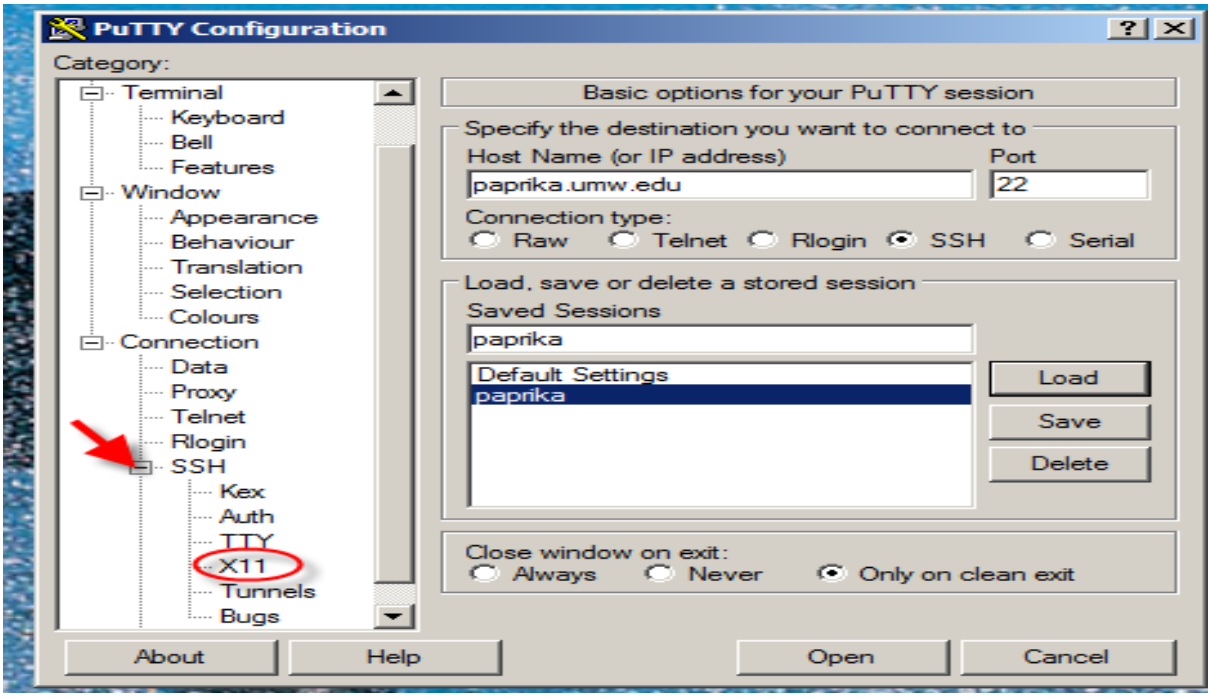
A. Using PuTTy to connect to paprika

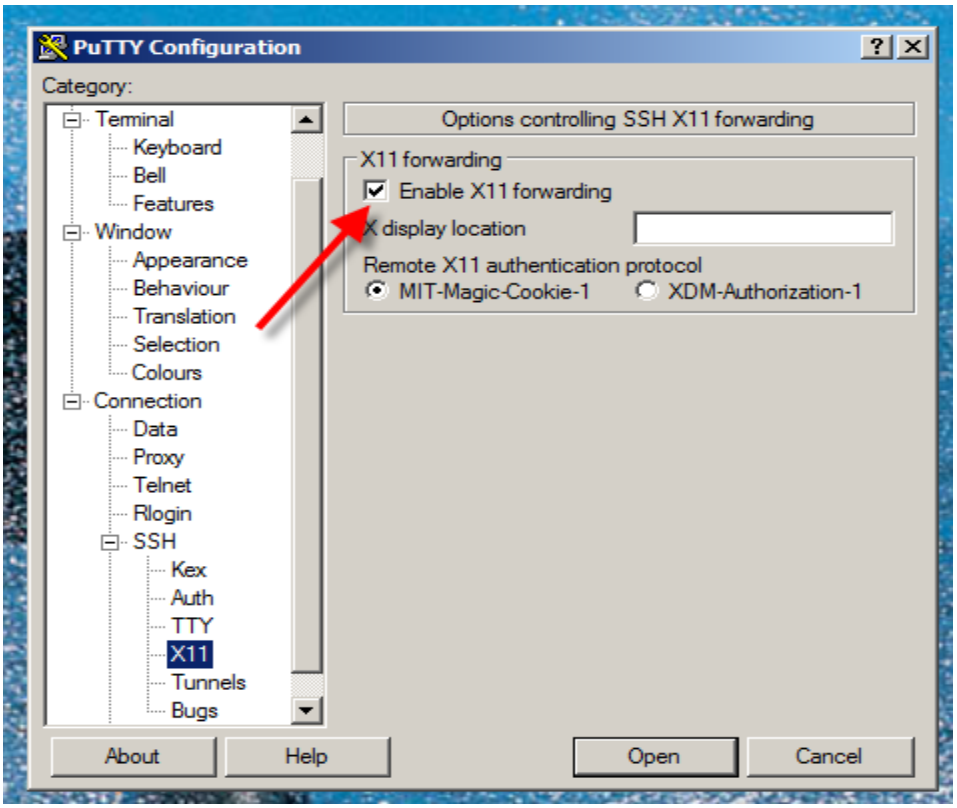
If you are off-campus then you need to login with your Internet provider.
After a successful login you are ready to use PuTTY. A Unix screen will appear and you are ready to work just as if you were in the B13 lab!

For instructions on how to download, install, and use PuTTy, see "**Remote access to the UNIX network**" posted on my Web page.

For instructions on how to download, install, and use XMing, see "**Downloading, Installing, Using XMing**" posted on my Web page.

If you wish to use PuTTy in conjunction with XMing to execute NetBeans on Paprika from your desktop, please include the following additional steps.


PuTTY Configuration
Category:
Terminal
Keyboard
Bell
Features
Window
Appearance
Behaviour
Translation
Selection
Colours
Connection
Data
Proxy
Telnet
Rlogin
SSH
Kex
Auth
TTY
X11
Tunnels
Bugs
Basic options for your PuTTY session
Specify the destination you want to connect to
Host Name (or IP address)
Port
paprika.umw.edu
22
Connection type:
Raw
Telnet
Rlogin
SSH
Serial
Load, save or delete a stored session
Saved Sessions
paprika
Default Settings
paprika
Load
Save
Delete
Close window on exit:
Always
Never
Only on clean exit
About
Help
Open
Cancel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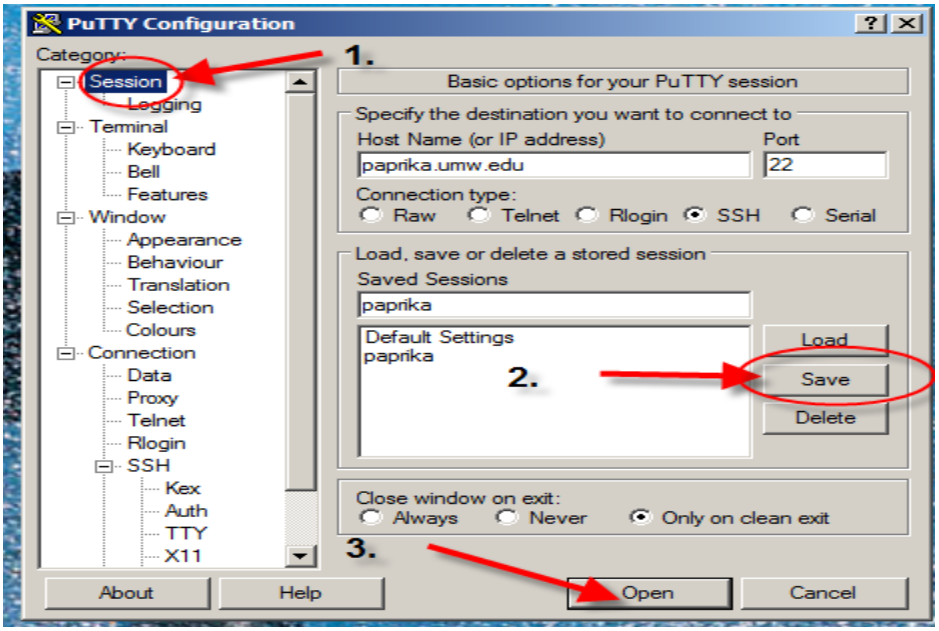
Kex
Auth
TTY
X11
Tunnels
Bugs
Options controlling SSH X11 forwarding
X11 forwarding
Enable X11 forwarding
X display location
Remote X11 authentication protocol
MIT-Magic-Cookie-1
XDM-Authorization-1
About
Help
Open
Cancel



Running X-Based Paprika Programs Using Your PC

Start XMing on your PC and just let it run in the background. (See "**Downloading, Installing, and Using XMing"** posted on my Web page.)

Open putty and choose the server you want to connect to.
If you did not previously save these preferences:
In the settings on the side, go to Connection -> SSH -> X11
Check the "Enable X11 forwarding" box and save your settings.

In your terminal window, you should now be able to run netbeans by entering netbeans to the $ prompt.

B. To Transfer Files Between a PC and the HP-UX System:
On your Windows machine, use a secure FTP client to upload and download files from your paprika account. I recommend using FireFTP available as a plug-in to FireFox. Please see "**Downloading, Installing, and Using FireFTP"** posted on my Web page.

C. Using MS-Word to Prepare a File For Use On Paprika
After you feel comfortable using the vim Editor, you may wish to use MS-Word to type your initial program file. **Make sure that you have MS-Word configured for straight quotes and not smart quotes**. You enter the text as you would for any other document. **Paprika cannot interpret .doc files. To save a file in a format usable by Paprika you must use File, Save-As, Save as Type: Text Only With Line Breaks, File Name:**
"your_file_name.cpp" , then click Save. You must include the " (quotes) otherwise the system will append .txt which is again not appropriate for Paprika. After creating and saving your file on your PC you can transfer it to your Paprika account using an ftp client or you can send yourself email.