Module Outline

Data

Luc Small | 5 February 2013 | 1.1

Introduction

This document is the outline for the *Data* module.

Summary

This module is targeted at participants who want to learn how to:

- Transfer data to and from the HPC machine.

- Perform in-situ editing of files on the HPC machine

- Change permissions on files and folders on the HPC machine

This module assumes knowledge of

- Putty and SSH, to the point where you can log in to the HPC machine

By the end of this module, participants will understand:

- Installing and configuring an FTP program; connecting.
- Navigating local and remote folders.
- Transferring files between them.
- Different file types: text, binary, DOS, Unix.
- Using Putty Secure Copy (PSCP) for bulk transfers on the command line.
- Getting a dataset off the web and onto the server.
- Interactive editing of files on the HPC machine.
- That all files and directories are protected by a user and group security model.
- That to execute a script it must be made executable.

External Resources

In this module, you will make use of some external materials. These materials were not created by Intersect, but are either standard tools used in the area of this module or are particularly useful for teaching purposes.

For this module, the following resources are used

Name	Location	Description
Putty	http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html	A popular, free, SSH client that supports interactive shells and secure file copy (PSCP)
FileZilla	http://filezilla-project.org/	A free FTP client that supports Secure FTP (SFTP) as used on HPC machines.
Wget	http://www.gnu.org/software/wget/	A free command line tool for retrieving files from the WWW.

Further Reading

The following resources will help consolidate or extend the information presented in this module.

For this module, the following resources are used

Name	Location	Description
Putty Documentation	http://the.earth.li/~sgtatham/ putty/0.60/htmldoc/	Main source of documentation for Putty.
FileZilla Documentation	http://wiki.filezilla-project.org/Documentation	Main source of documentation for FileZilla.
Wget Documentation	http://www.gnu.org/software/ wget/manual/html_node/index .html	Main source of documentation for Wget
Understanding UNIX permissions and chmod	http://www.perlfect.com/articl es/chmod.shtml	An introduction to file permissions on UNIX systems

Units Outline

Name	Concepts Introduced	Learning Outcomes
Making a move (Using FTP)	Installing and configuring an FTP program; connecting. Navigating local and remote folders. Transferring between them. Different file types: text, binary, DOS, UNIX.	Can login via Secure FTP and see home directory. Can transfer a file from local machine via ftp to home directory. Understands the difference between DOS and UNIX formats. Can convert files between DOS and UNIX formats. Can transfer a file created on the server back to local machine.
The second date (Using SCP)	PSCP is handy for bulk transfers on the command line. PSCP basic syntax. Transferring files between local machine and server.	Can use PSCP to upload multiple files at once. Can use PSCP to download multiple files at once.
(W)get it on! (Using Wget)	Getting a dataset off the web and onto the server. (Conceptually the same to get software on the server).	Can use the basic Wget syntax to download a dataset from the web.
Things need to change, and quick! (Editing files in place)	Interactive editing on the server.	Can edit a file, save changes, and exit editor.
What's mine is yours (Permissions and ownership)	All files and directories are protected by a user and group security model. To run a script, it must be made executable.	Can make a file private. Can allow another to read and write to a file. Can make a script executable.

Revision History

Version No.	Revision Date	Summary of Changes	Revised by
1.0	23/05/2011	Initial version	Luc Small
1.1	5/2/2013	Updated for new HPC system	Luc Small