

## Lesson Module Status

- Slides – draft
- Properties - done
- Flash cards –
- First minute quiz – done
- Web calendar summary – done
- Web book pages – done
- Commands – done
- Lab – done
- Supplies () - na
- Class PC's – na
- Chocolates - bringing
  
- Practice test uploaded
- CCC Confer wall paper – done
- Materials uploaded – done
- Backup headset charged – nope
- Backup slides, CCC info, handouts on flash drive - done
  
- Check that room headset is charged – done



Instructor: **Rich Simms**  
Dial-in: **888-450-4821**  
Passcode: **761867**



Emanuel



Tanner



Merrick



Quinton



Chris



Bobby



Craig



Jeff



Yu-Chen



Terry



Tommy



Eric



Dan M



Geoffrey



Marisol



Josh



Gabriel



Jesse



Tajvia



Daniel W



Jason

Quiz

No Quiz  
Today !



- [ ] Has the phone bridge been added?
- [ ] Is recording on?
- [ ] Does the phone bridge have the mike?
- [ ] Share slides, putty (rsimms, simmsben, roddyduk), Chrome and Eko VM
- [ ] Disable spelling on PowerPoint



## File Transfer and Review

Objectives	Agenda
<ul style="list-style-type: none"><li>• Transfer project files to Windows and Linux systems</li><li>• Prepare for final exam</li></ul>	<ul style="list-style-type: none"><li>• No Quiz</li><li>• Questions from last week</li><li>• File transfer continued</li><li>• Practice Test #3</li><li>• Project Workshop (optional)</li></ul>



## Previous material and assignment

### 1. Questions?



# Housekeeping



Due midnight tonight:

- Final Project submittal

Due midnight June 2:

- Test #3
- Five forum posts
- Extra credit labs

## Next week is **Cabrillo Finals Week**

- Our final exam is Test #3 (30 points)

*Practice test is available on the website*

- Time: 1:00PM - 3:50PM

*Note: Final exam will start 15 minutes earlier than our usual start time*

- Date: June 2nd

- Place: Online or Room 2501

**Points earned to date:**

amroth: 39% (201 of 510 points)  
 aragorn: 35% (183 of 510 points)  
 arwen: 73% (377 of 510 points)  
 celebrian: 69% (356 of 510 points)  
 cirdan: 102% (524 of 510 points)  
 denethor: 95% (486 of 510 points)  
 dwalin: 83% (425 of 510 points)  
 elrond: 40% (205 of 510 points)  
 eomer: 62% (321 of 510 points)  
 eowyn: 86% (441 of 510 points)  
 frodo: 106% (541 of 510 points)  
 gamling: 107% (549 of 510 points)  
 gimli: 77% (393 of 510 points)  
 gwaihir: 87% (448 of 510 points)  
 legolas: 109% (557 of 510 points)  
 orome: 102% (524 of 510 points)  
 quickbeam: 86% (440 of 510 points)  
 samwise: 93% (478 of 510 points)  
 shadowfax: 89% (458 of 510 points)  
 strider: 88% (451 of 510 points)  
 varda: 82% (421 of 510 points)

**Remaining points to earn:**

Forum-4      20  
 Test-3        30 + 10XC  
 Project        60 + 30XC  
 Extra credit   0-90XC

Percentage	Total Points	Letter Grade	Pass/No Pass
90% or higher	504 or higher	A	Pass
80% to 89.9%	448 to 503	B	Pass
70% to 79.9%	392 to 447	C	Pass
60% to 69.9%	336 to 391	D	No pass
0% to 59.9%	0 to 335	F	No pass

*Contact the instructor  
if you have questions*



Possible Points	Requirements
30	Implementing all five tasks (6 points each): <ul style="list-style-type: none"> <li>Requirements for each task:               <ul style="list-style-type: none"> <li>Minimum of 10 script command lines</li> <li>Has comments to explain what it does</li> <li>Has user interaction</li> </ul> </li> </ul>
25	You don't have to do all of these but do at least five: <ul style="list-style-type: none"> <li>Redirecting stdin (5 points)</li> <li>Redirecting stdout (5 points)</li> <li>Redirecting stderr (5 points)</li> <li>Use of permissions (5 points)</li> <li>Use of filename expansion characters (5 points)</li> <li>Use of absolute path (5 points)</li> <li>Use of relative path (5 points)</li> <li>Use of a PID (5 points)</li> <li>Use of inodes (5 points)</li> <li>Use of links (5 points)</li> <li>Use of a GID or group (5 points)</li> <li>Use of a UID or user (5 points)</li> <li>Use of a signal (5 points)</li> <li>Use of piping (5 points)</li> <li>Use of an environment variable (5 points)</li> <li>Use of a comment (5 points)</li> <li>Use of /bin/mail (5 points)</li> <li>Use of a conditional (5 points)</li> </ul> The maximum for this section are 25 points.
5	Present your script in front of the class
<b>Points lost</b>	
-15	Fails to run from <b>allscripts</b>
-15	Other students in the class are unable to read and execute your script.
-5	For each error message displayed
<b>Extra credit</b>	
30	Up to three additional tasks (10 points each)

*Please don't overlook this part of the grading rubric!*

*Please make sure you project script exists, runs without errors and can be run by other students in the class*

Points lost	
-15	Fails to run from <b>allscripts</b>
-15	Other students in the class are unable to read and execute your script.
-5	For each error message displayed

*Instructor should run `~/cis90/project/testscripts` to verify*

Additional Linux courses:

CIS 130 - Linux/UNIX Shell Programming

CIS 191 - Linux/UNIX System Administration

CIS 192 - Linux/UNIX Network Administration

CIS 193 - Linux/UNIX Security Administration



## CIS 90 Introduction to UNIX/Linux

Provides a technical overview of the UNIX/Linux operating system, including hands-on experience with commands, files, and tools. Recommended Preparation: CS 1L or CIS 172.

Transfer Credit: CSU.

Section	Days	Times	Units	Instructor	Room
72345	W	01:15PM-04:20PM	3.00	J.Griffin	2501
&	Arr.	Arr.		J.Griffin	OL

Section 72345 is a Hybrid ONLINE course. Meets weekly throughout the semester at the scheduled times with an additional 3 hr 5 min online lab per week. For details, see instructor's web page at [go.cabrillo.edu/online](http://go.cabrillo.edu/online).

*If you have friends who are interested in UNIX/Linux, let them know about CIS 90 in the Fall term*



## **CIS 191AB      UNIX/Linux Installation, Configuration and Administration**

Introduces skills required to administer UNIX/Linux systems. Prerequisite: CIS 90 or equivalent.

Section	Days	Times	Units	Instructor	Room
73605	T	06:00PM-08:05PM	4.00	J.Griffin	2501
&	Arr.	Arr.		J.Griffin	OL

Section 73605 is a Hybrid ONLINE course. Meets weekly throughout the semester at the scheduled times with an additional 1 hr 40 min online lecture, and 4 hr 5 min online lab per week. Students will be required to show that they meet the course prerequisites. For details, see instructor's web page at [go.cabrillo.edu/online](http://go.cabrillo.edu/online).

*CIS 191 is a hybrid class that will meet 2 hours a week (Tuesday evening) in the classroom and another two hour session from a lecture archive which the student can choose when to view.*

*Labs are also part of the class and that time can be done remotely and scheduled to the student's convenience.*



**CIS 192A UNIX/Linux TCP/IP Administration**

Teaches building, monitoring and troubleshooting of a UNIX/Linux network infrastructure. Prerequisites: CIS 81 and CIS 90. Recommended Preparation: CIS 191A. Repeatability: May be taken 2 times.

Section	Days	Times	Units	Instructor	Room
73604	T	01:00PM-05:10PM	2.00	R.Simms	2501
&	Arr.	Arr.		R.Simms	OL

Section 73604 is a Hybrid ONLINE course. Meets 8 weeks 10/25-12/13, at the scheduled times. Students may attend in the classroom or online using CCC Confer. Additional 4 hr 5 min of arranged lab per week in the Network and Systems Technology Lab. Students will be required to show that they meet the course prerequisites. For details, see instructor's web page at [go.cabrillo.edu/online](http://go.cabrillo.edu/online) or e-mail the instructor at [risimms@cabrillo.edu](mailto:risimms@cabrillo.edu).

*CIS 192 is only for the second 8 weeks of the term*

*CIS 192 will hold classes in the classroom and online simultaneously. Students may attend either way.*

## Fall 2011 Linux Courses

<input type="checkbox"/>	Fall 2011	Waitlisted	<a href="#">CIS-191AB-73605 (73605) UNIX/Linux Inst. Config. Admin</a>	Main Campus	08/29/2011-12/17/2011 Lecture Tuesday 06:00PM - 08:05PM, Computer Information Labs, Room 2501 (more)...	J. Griffin	0 / 24 / 3	4.00	
<input type="checkbox"/>	Fall 2011	Waitlisted	<a href="#">CIS-90-72345 (72345) Intro to UNIX/Linux</a>	Main Campus	08/29/2011-12/17/2011 Lecture Wednesday 01:15PM - 04:20PM, Computer Information Labs, Room 2501 (more)...	J. Griffin	0 / 24 / 4	3.00	
<input type="checkbox"/>	Fall 2011	Open	<a href="#">CIS-192A-73604 (73604) UNIX/Linux TCP/IP Admin</a>	Main Campus	10/25/2011-12/13/2011 Lecture Tuesday 01:00PM - 05:10PM, Computer Information Labs, Room 2501 (more)...	R. Simms	11 / 24 / 0	2.00	

1. CIS 191 and CIS 192 will be offered on the same day, but the 192A is only for the second 8 weeks
2. CIS 191 is a hybrid class that will meet 2 hours a week (Tuesday evening) in the classroom and another two hour session from a lecture archive which the student can choose when to view. Labs are also part of the class and that time can be done remotely and scheduled to the student's convenience.
3. 3) CIS 192 will hold classes in the classroom and online simultaneously. Students may attend either way.

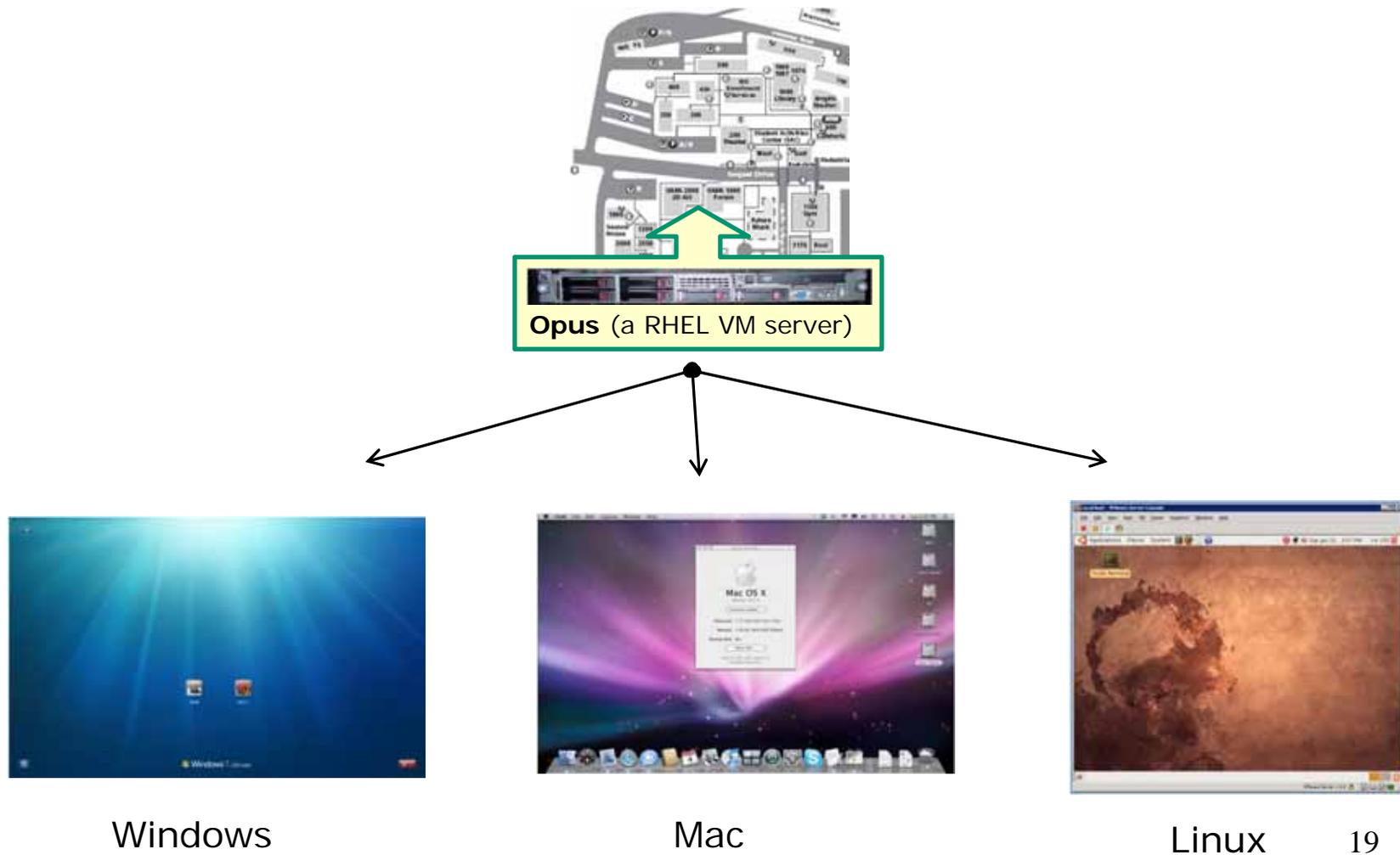
*If there are a few students who could not possibly make the CIS 191 two hours on campus, they can contact Jim for possible ways to make the class still work.*



# File Transfer

# File Transfer

Downloading your Opus file to your home computer





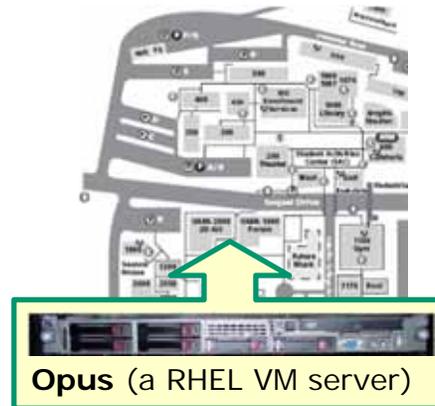
# File Transfer

# Windows

# Filezilla

# File Transfer

Downloading your Opus file to your home computer



Windows

*For Windows you can use the pscp  
(Putty scp) program or a file transfer  
utility like Filezilla*

# File Transfer

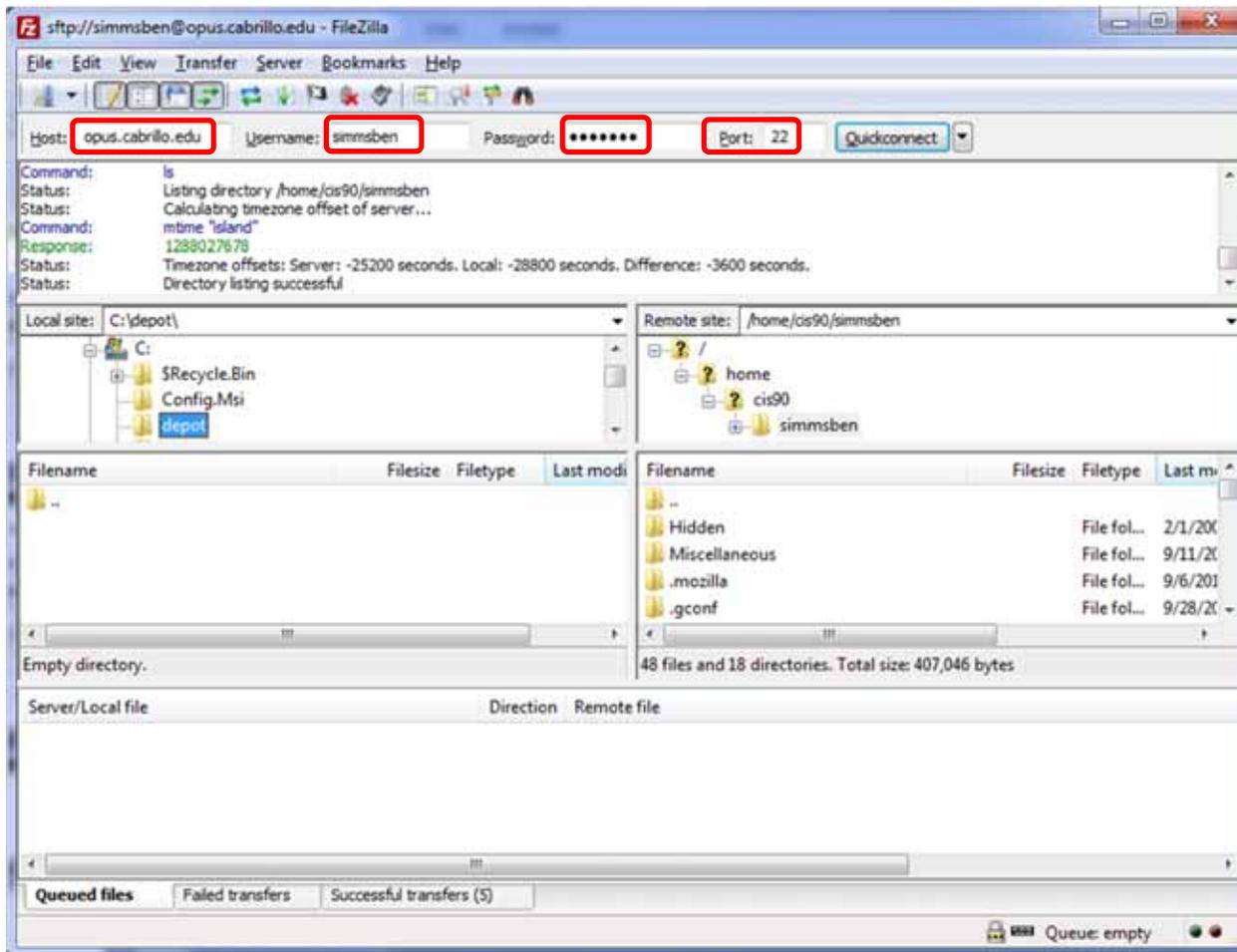
Downloading your Opus file to Windows using Filezilla

<http://filezilla-project.org/download.php>



# File Transfer

Downloading your Opus file to Windows using Filezilla

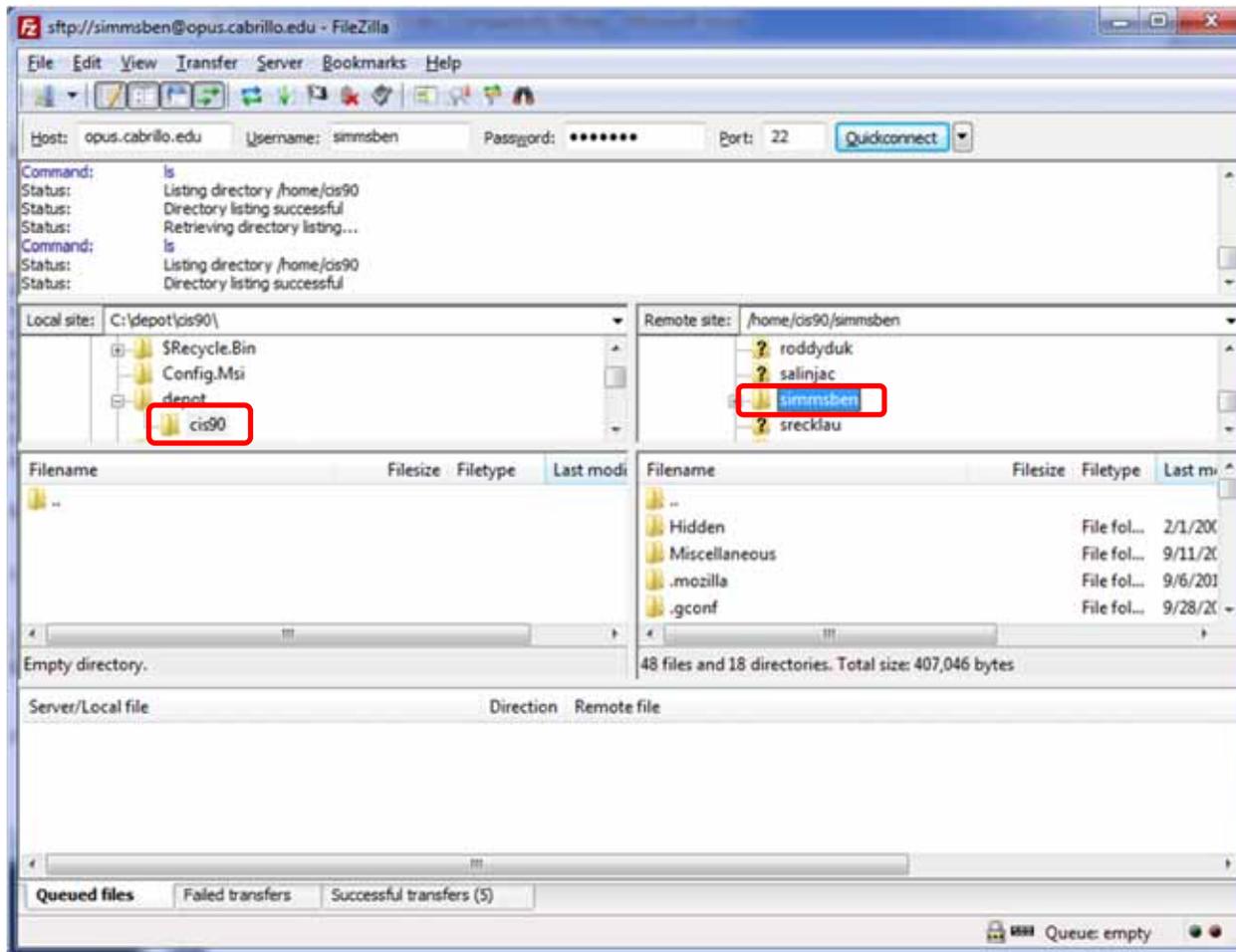


*Specify  
opus.cabrillo.edu as  
the host name with  
your Opus username,  
password and port 22  
then click  
Quickconnect*

# File Transfer

Downloading your Opus file to Windows using Filezilla

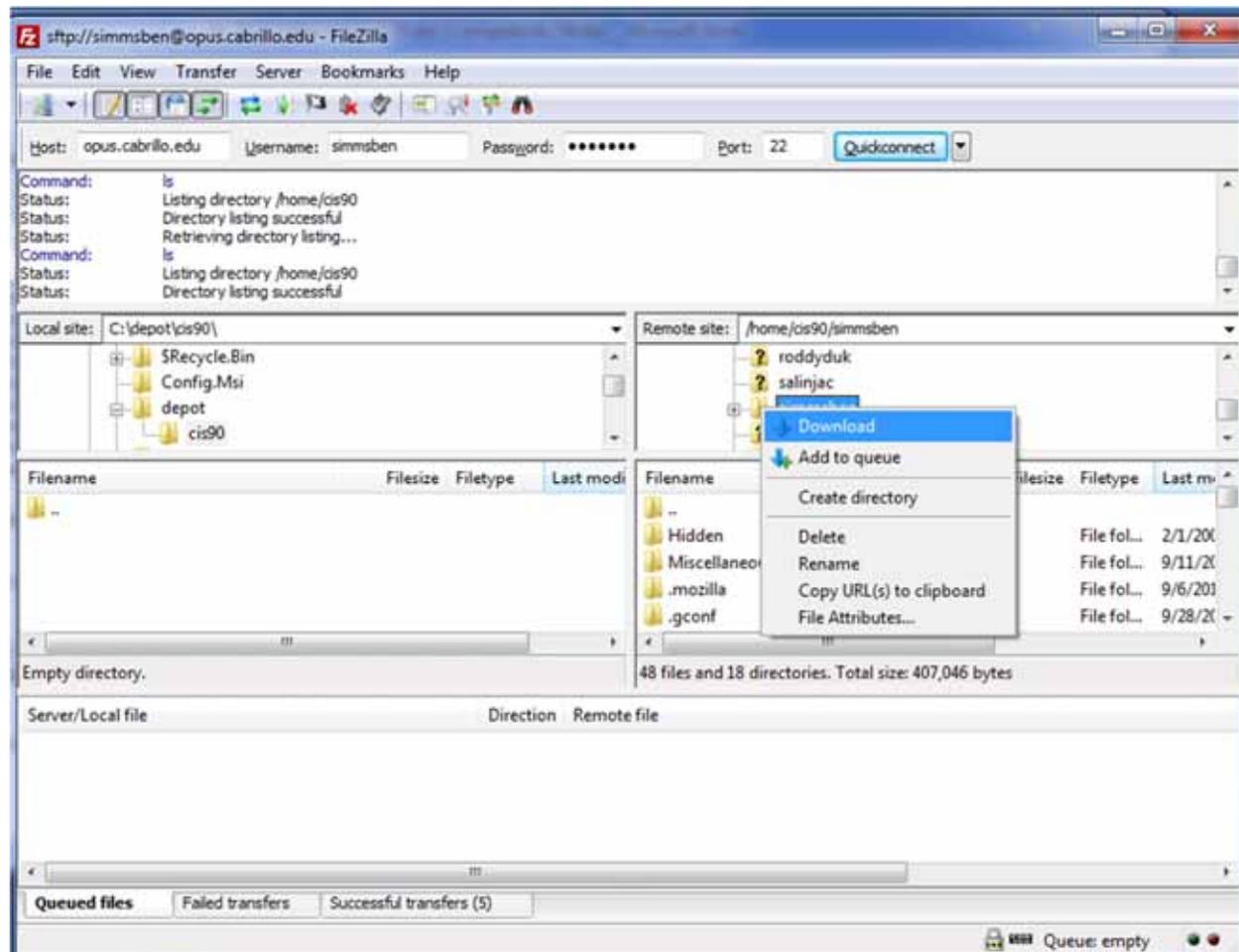
Select local folder to download file into



Select directory on Opus to download

# File Transfer

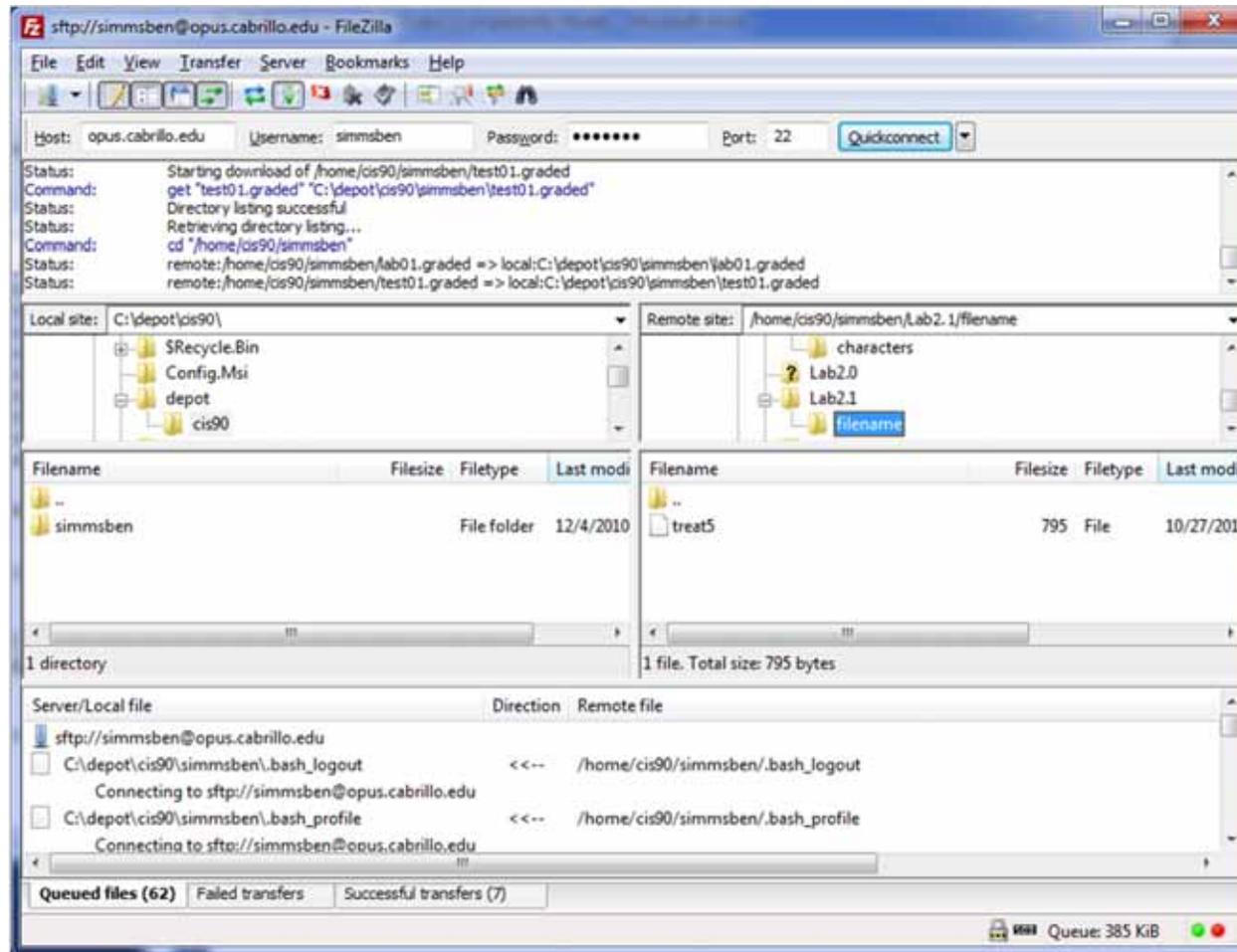
Downloading your Opus file to Windows using Filezilla



*Right-click on the Opus directory and select Download*

# File Transfer

Downloading your Opus file to Windows using Filezilla

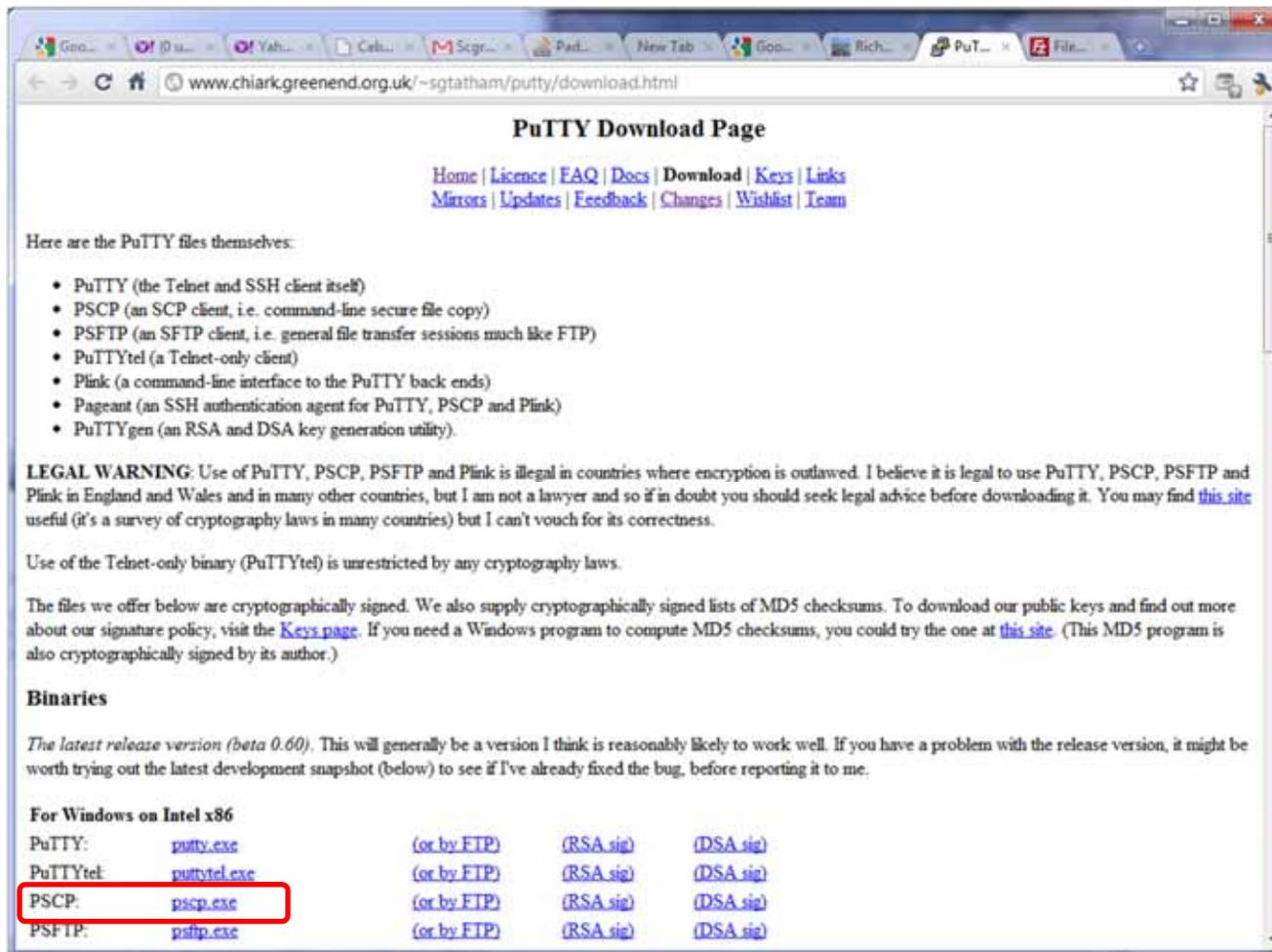


*And away it goes downloading every file and directory it finds in the Opus directory you selected to your local folder*

# File Transfer

Downloading your Opus file to Windows using pscp (Putty scp)

<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>



*Download the pscp file and place it in your windows folder*

# File Transfer Windows pscp

## File Transfer

Downloading your Opus file to Windows using pscp (Putty scp)

`pscp -r username@opus.cabrillo.edu:* .`

```

Administrator: C:\Windows\system32\cmd.exe - pscp -r simmsben@opus.cabrillo.edu:* .
Microsoft Windows [Version 6.1.7600]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

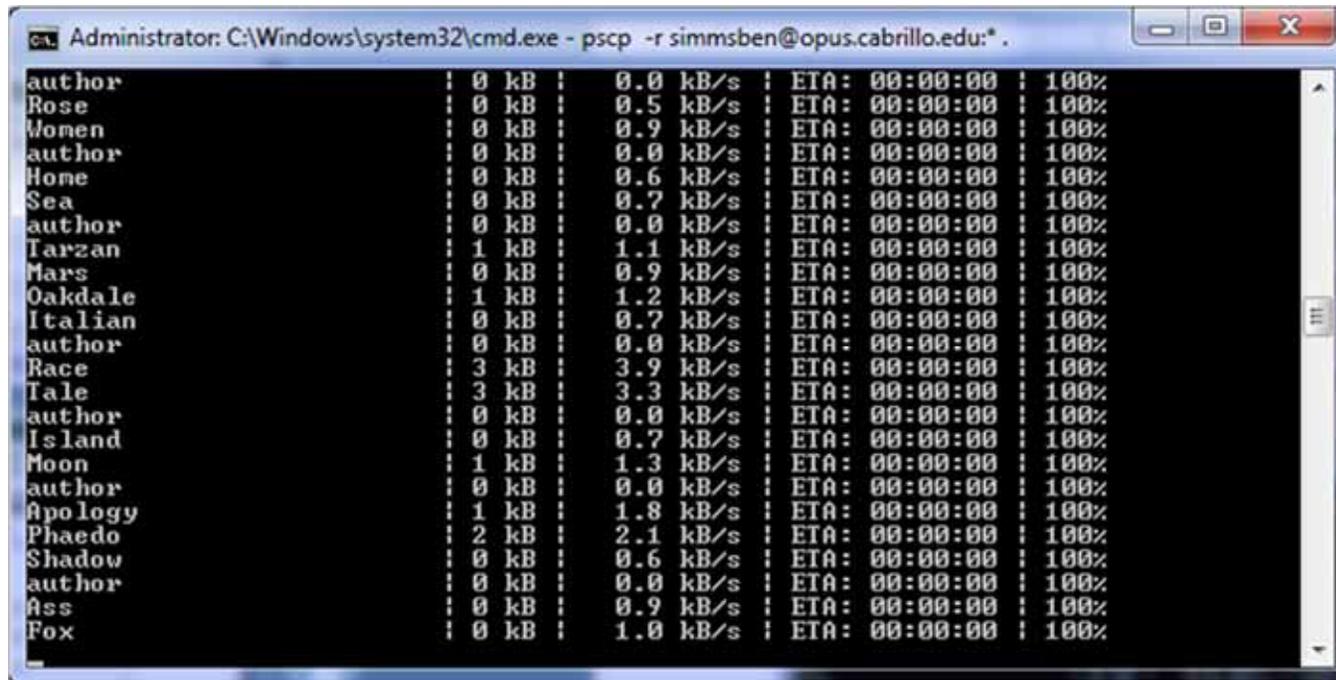
C:\Users\Administrator>cd c:\depot
c:\depot>cd cis90
c:\depot\cis90>pscp -r simmsben@opus.cabrillo.edu:* .
Server refused our key
simmsben@opus.cabrillo.edu's password:
kate2          | 0 kB | 0.0 kB/s | ETA: 00:00:00 | 100%
ben            | 0 kB | 0.0 kB/s | ETA: 00:00:00 | 100%
kate          | 0 kB | 0.0 kB/s | ETA: 00:00:00 | 100%
treat3        | 1 kB | 1.1 kB/s | ETA: 00:00:00 | 100%
treat2        | 0 kB | 0.7 kB/s | ETA: 00:00:00 | 100%
  
```

*Navigate to the local folder where you want to download your Opus file to then use the pscp command with the -r option to recursively download all the files in your home directory*

# File Transfer

Downloading your Opus file to Windows using pscp (Putty scp)

`pscp -r username@opus.cabrillo.edu:* .`



```
Administrator: C:\Windows\system32\cmd.exe - pscp -r simmsben@opus.cabrillo.edu:*
author          0 kB      0.0 kB/s    ETA: 00:00:00  100%
Rose            0 kB      0.5 kB/s    ETA: 00:00:00  100%
Women           0 kB      0.9 kB/s    ETA: 00:00:00  100%
author          0 kB      0.0 kB/s    ETA: 00:00:00  100%
Home            0 kB      0.6 kB/s    ETA: 00:00:00  100%
Sea             0 kB      0.7 kB/s    ETA: 00:00:00  100%
author          0 kB      0.0 kB/s    ETA: 00:00:00  100%
Tarzan          1 kB      1.1 kB/s    ETA: 00:00:00  100%
Mars            0 kB      0.9 kB/s    ETA: 00:00:00  100%
Oakdale         1 kB      1.2 kB/s    ETA: 00:00:00  100%
Italian         0 kB      0.7 kB/s    ETA: 00:00:00  100%
author          0 kB      0.0 kB/s    ETA: 00:00:00  100%
Race            3 kB      3.9 kB/s    ETA: 00:00:00  100%
Tale            3 kB      3.3 kB/s    ETA: 00:00:00  100%
author          0 kB      0.0 kB/s    ETA: 00:00:00  100%
Island          0 kB      0.7 kB/s    ETA: 00:00:00  100%
Moon            1 kB      1.3 kB/s    ETA: 00:00:00  100%
author          0 kB      0.0 kB/s    ETA: 00:00:00  100%
Apology         1 kB      1.8 kB/s    ETA: 00:00:00  100%
Phaedo          2 kB      2.1 kB/s    ETA: 00:00:00  100%
Shadow          0 kB      0.6 kB/s    ETA: 00:00:00  100%
author          0 kB      0.0 kB/s    ETA: 00:00:00  100%
Ass             0 kB      0.9 kB/s    ETA: 00:00:00  100%
Fox             0 kB      1.0 kB/s    ETA: 00:00:00  100%
```

# File Transfer

Downloading your Opus file to Windows using pscp (Putty scp)

`pscp -r username@opus.cabrillo.edu:* .`

```

Administrator: C:\Windows\system32\cmd.exe
proposal2      | 2 kB | 2.1 kB/s | ETA: 00:00:00 | 100%
manpage       | 10 kB | 10.3 kB/s | ETA: 00:00:00 | 100%
better_town   | 1 kB | 1.3 kB/s | ETA: 00:00:00 | 100%
file.dos      | 0 kB | 0.1 kB/s | ETA: 00:00:00 | 100%
mystery       | 3 kB | 3.4 kB/s | ETA: 00:00:00 | 100%
fruit         | 0 kB | 0.1 kB/s | ETA: 00:00:00 | 100%
salad         | 0 kB | 0.1 kB/s | ETA: 00:00:00 | 100%
bigfile       | 10 kB | 10.3 kB/s | ETA: 00:00:00 | 100%
.history      | 0 kB | 0.0 kB/s | ETA: 00:00:00 | 100%
what_am_i    | 0 kB | 0.3 kB/s | ETA: 00:00:00 | 100%
dogs.tar      | 110 kB | 110.0 kB/s | ETA: 00:00:00 | 100%
smb.conf      | 9 kB | 9.5 kB/s | ETA: 00:00:00 | 100%
timecal       | 0 kB | 0.5 kB/s | ETA: 00:00:00 | 100%
test01.graded | 4 kB | 4.2 kB/s | ETA: 00:00:00 | 100%
lab01.graded  | 0 kB | 0.4 kB/s | ETA: 00:00:00 | 100%
uhistory      | 32 kB | 32.9 kB/s | ETA: 00:00:00 | 100%
.bash_profile | 0 kB | 0.3 kB/s | ETA: 00:00:00 | 100%
.bash_history | 16 kB | 16.1 kB/s | ETA: 00:00:00 | 100%
spellk       | 0 kB | 0.5 kB/s | ETA: 00:00:00 | 100%
.bash_logout  | 0 kB | 0.0 kB/s | ETA: 00:00:00 | 100%
scp: unable to open directory ./Hidden.bak: permission denied

c:\depot\cis90>_
  
```

# File Transfer

Downloading your Opus file to Windows using pscp (Putty scp)

```
Administrator: C:\Windows\system32\cmd.exe
c:\depot\cis90>dir
Volume in drive C has no label.
Volume Serial Number is EE43-96D3

Directory of c:\depot\cis90

12/04/2010  04:40 PM  <DIR>          .
12/04/2010  04:40 PM  <DIR>          ..
12/04/2010  04:39 PM          146 .bashrc
12/04/2010  04:40 PM       16,438 .bash_history
12/04/2010  04:40 PM           24 .bash_logout
12/04/2010  04:40 PM        354 .bash_profile
12/04/2010  04:38 PM        515 .emacs
12/04/2010  04:38 PM  <DIR>          .gconf
12/04/2010  04:38 PM  <DIR>          .gconfd
12/04/2010  04:40 PM           36 .history
12/04/2010  04:40 PM           47 .lesshst
12/04/2010  04:39 PM        .mozilla
12/04/2010  04:39 PM           48 .plan
12/04/2010  04:38 PM           82 .sh_history
12/04/2010  04:40 PM  <DIR>          .ssh
12/04/2010  04:39 PM        6,081 .vininfo
12/04/2010  04:40 PM       10,576 bigfile
12/04/2010  04:39 PM           70 bigshell
12/04/2010  04:39 PM  <DIR>          bin
12/04/2010  04:38 PM           22 characters
12/04/2010  04:39 PM       11,013 checkx2.bak
12/04/2010  04:40 PM           0 chmod
12/04/2010  04:39 PM           0 cinderella
12/04/2010  04:40 PM           0 cinderella.ba
12/04/2010  04:38 PM  <DIR>          class
```

```
Administrator: C:\Windows\system32\cmd.exe
12/04/2010  04:40 PM  <DIR>          Lab2.0
12/04/2010  04:38 PM  <DIR>          Lab2.1
12/04/2010  04:38 PM          1,028 labx2
12/04/2010  04:38 PM          1,044 letter
12/04/2010  04:39 PM           104 log
12/04/2010  04:38 PM       122,791 mbox
12/04/2010  04:40 PM  <DIR>          Miscellaneous
12/04/2010  04:40 PM          759 mission
12/04/2010  04:39 PM           0 myfile
12/04/2010  04:38 PM  <DIR>          poems
12/04/2010  04:39 PM          1,074 proposal1
12/04/2010  04:40 PM          2,175 proposal2
12/04/2010  04:39 PM          2,054 proposal3
12/04/2010  04:39 PM          1,500 small_town
12/04/2010  04:40 PM          9,733 snb.conf
12/04/2010  04:38 PM           70 songul
12/04/2010  04:40 PM          485 spellk
12/04/2010  04:39 PM           6 stash
12/04/2010  04:40 PM          4,276 test01.graded
12/04/2010  04:38 PM          250 text.err
12/04/2010  04:38 PM          231 text.fxd
12/04/2010  04:40 PM          509 tinecal
12/04/2010  04:38 PM          1,484 treat1
12/04/2010  04:40 PM       33,699 uhistory
12/04/2010  04:39 PM           6 veronica
12/04/2010  04:40 PM          352 what_an_i
          48 File(s)          407,046 bytes
          19 Dir(s)        43,865,870,336 bytes free

c:\depot\cis90>_
```

*Use the dir command to review what you have downloaded*

# File Transfer

Downloading your Opus file to Windows using pscp (Putty scp)

## *More example pscp commands*

```
c:\depot\bin>pscp -r simmsben@opus.cabrillo.edu:/home/cis90/answers/* .
simmsben@opus.cabrillo.edu's password:
lab04          | 0 kB | 0.5 kB/s | ETA: 00:00:00 | 100%
lab10          | 1 kB | 1.6 kB/s | ETA: 00:00:00 | 100%
lab07          | 10 kB | 11.0 kB/s | ETA: 00:00:00 | 100%
lab05          | 0 kB | 0.8 kB/s | ETA: 00:00:00 | 100%
lab09          | 2 kB | 2.8 kB/s | ETA: 00:00:00 | 100%
lab06          | 4 kB | 4.4 kB/s | ETA: 00:00:00 | 100%
lab03          | 32 kB | 32.9 kB/s | ETA: 00:00:00 | 100%
lab02          | 1 kB | 1.1 kB/s | ETA: 00:00:00 | 100%
lab01          | 0 kB | 0.2 kB/s | ETA: 00:00:00 | 100%
test01         | 1 kB | 1.2 kB/s | ETA: 00:00:00 | 100%
test02         | 1 kB | 1.4 kB/s | ETA: 00:00:00 | 100%
lab08          | 5 kB | 5.2 kB/s | ETA: 00:00:00 | 100%

c:\depot\bin>
```

# File Transfer

Downloading your Opus file to Windows using pscp (Putty scp)

## *More example pscp commands*

```
c:\depot>pscp -r simmsben@opus.cabrillo.edu:/home/cis90/bin/riddle* .
simmsben@opus.cabrillo.edu's password:
riddle                | 0 kB | 0.9 kB/s | ETA: 00:00:00 | 100%
riddle2               | 0 kB | 0.9 kB/s | ETA: 00:00:00 | 100%
riddle1               | 0 kB | 0.9 kB/s | ETA: 00:00:00 | 100%
```

```
c:\depot>pscp -r simmsben@opus.cabrillo.edu:/home/cis90/bin/all* .
simmsben@opus.cabrillo.edu's password:
allscripts            | 4 kB | 4.3 kB/s | ETA: 00:00:00 | 100%
allscripts.v1         | 3 kB | 4.0 kB/s | ETA: 00:00:00 | 100%
allscripts.v2         | 4 kB | 4.3 kB/s | ETA: 00:00:00 | 100%
```

# File Transfer

## Linux or Mac

### scp

# File Transfer

Downloading your Opus files to Linux or Mac using scp

`scp -r simmsben@opus.cabrillo.edu:.. .` *To download all files*

```

rsimms@eko: ~/simmsben/bin
File Edit View Terminal Help
rsimms@eko:~$ mkdir simmsben
rsimms@eko:~$ cd simmsben
rsimms@eko:~/simmsben$ scp -r simmsben@opus.cabrillo.edu:.. .
simmsben@opus.cabrillo.edu's password:
kate2                100%   6      0.0KB/s   00:01
.jin                 100%   0      0.0KB/s   00:00
hurley               100%   0      0.0KB/s   00:00
sawyer               100%   8      0.0KB/s   00:00
katherine            100%   6      0.0KB/s   00:00
characters           100%  34     0.0KB/s   00:00
.emacs               100% 515     0.5KB/s   00:00
mydate               100%  40     0.0KB/s   00:00
lab06.graded         100% 5721    5.6KB/s   00:00
mbox                 100% 121KB 120.8KB/s 00:01
scp: ./newer: Permission denied
.1976.egg            100%  734    0.7KB/s   00:00
lab02.graded         100%  960    0.9KB/s   00:00
lab01.graded         100%  141    0.1KB/s   00:00
lab04.graded         100%  512    0.5KB/s   00:00
test01.graded        100%  972    1.0KB/s   00:00
labx2                100% 1121    1.1KB/s   00:00
labx2.graded         100% 1579    1.5KB/s   00:00
letter               100% 1059    1.0KB/s   00:00
wc                   100%   0      0.0KB/s   00:00

```

# File Transfer

Downloading your Opus files to Linux or Mac using scp

**ls -a** *To review what was downloaded*

```

rsimms@eko: ~
File Edit View Terminal Help
rsimms@eko:~$ ls -a
.          Downloads      .local        simmsben
..         .esd_auth     mbox          .ssh
.bash_history  examples.desktop .mozilla      Toto
.bash_logout  Fang          Music         .update-notifier
.bashrc       .gconf       .nautilus    .vboxclient-display.pid
benji        .gconfd     Pictures      .vboxclient-seamless.pid
.cache       .gnome2     .profile     Videos
codenames   .gnome2_private Public         .viminfo
.config     .gtk-bookmarks .pulse       .xsession-errors
.dbus       .gvfs       .pulse-cookie .xsession-errors.old
Desktop     honor       pups
Documents  .ICEauthority .recently-used.xbel
dogs       Lassle     shuffled
rsimms@eko:~$

```

## File Transfer

Downloading your Opus files to Linux or Mac using scp

More examples of using scp on your local Mac or Linux system:

```
scp -r simmsben@opus.cabrillo.edu:* .
```

*Recursive copy of remote home directory to current local directory (doesn't copy home directory hidden files)*

```
scp -r simmsben@opus.cabrillo.edu:.. .
```

*Recursive copy of remote home directory to current local directory (includes hidden files in home directory)*

```
scp simmsben@opus.cabrillo.edu:simmsben.tar .
```

*Copies archive file in remote home directory to current local directory*

```
scp -r simmsben@opus.cabrillo.edu:/home/cis90ol/answers answers/
```

*Recursive copy of class answers directory to local directory named answers (which must be created first)*



# Archives



# Archiving

## tar command (on Opus)

*Use wc to count the number of files in the three directories*

```
/home/cis90 $ find bin/ answers/ roddyduk/ | wc -l  
263  
/home/cis90 $
```

*The bin directory has allscripts, riddles and other files used in class. The answers directory has answers for each lab. Your home directory has all the files you made during the course.*

# Archiving

tar command (on Opus)

*verbose*  
*create*

*Name of tarball to create*      *directories to backup*

```
/home/cis90 $ tar cvf /home/cis90/roddyduk/roddyduk.tar bin/ answers/ roddyduk/
bin/
bin/submit
bin/submit.bak
bin/exam
bin/allscripts
```

*< snipped >*

```
tar: roddyduk/roddyduk.tar: file is the archive; not dumped
roddyduk/program
roddyduk/exitscript
roddyduk/red-12-09-08
roddyduk/red-12-09-2008
roddyduk/blue-12-09-2008
/home/cis90 $
```

*Backup all these files into a single tarball*

# Archiving

tar command (on Opus)

*verbose*  
*table of contents*

*Name of tarball*

```
/home/cis90 $ tar tvf /home/cis90/roddyduk/roddyduk.tar | wc -l  
263  
/home/cis90 $
```

*Use the t option (table of contents) to list the contents of the tarball which are then piped to wc to count*

# Archiving

tar command (on Opus)

*Archive everything in your home directory (including all sub directories) plus the class bin and answer directories into one tarball.*

```
cd /home/cis90/
```

```
find bin/ answers/ $LOGNAME/ | wc -l Count the files to be archived
```

```
tar cvf /home/cis90/$LOGNAME/$LOGNAME.tar bin/ answers/ $LOGNAME/
```

```
tar tvf /home/cis90/$LOGNAME/$LOGNAME.tar | wc -l This counts the files in the archive
```

# Archiving

tar command (on home Linux computer)

*extract*

```
[cis90@frodo opus-files]# tar xvf roddyduk.tar  
bin/  
bin/submit  
bin/submit.bak
```

< snipped >

```
roddyduk/program  
roddyduk/exitscript  
roddyduk/red-12-09-08  
roddyduk/red-12-09-2008  
roddyduk/blue-12-09-2008  
[cis90@frodo opus-files]#
```

*Extract the  
tarball*

# Archiving

tar command (on home Linux computer)

```
[cis90@frodo opus-files]# ls -l
total 1044
drwxr-xr-x  2  201  103    4096 Nov 28 17:41 answers
drwxr-x---  2  201  103    4096 Nov 30 23:25 bin
drwxr-xr-x 28 1156  103    4096 Dec 10 13:50 roddyduk
-rw-r--r--  1 root root 1034240 Dec  8 23:43 roddyduk.tar
[cis90@frodo opus-files]#
```

*The bin, answer and home directories have been recreated*

# Archiving

tar command (on home Linux computer)

```
[cis90@frodo opus-files]# cd roddyduk/bin
[cis90@frodo bin]# ls
app      banner    datecal   hi        I         myscript.bak  treat5  tryme
backups  benscript enlightenment home      myscript  myscript.v1  treed   zoom
[cis90@frodo bin]# myscript
-bash: myscript: command not found
[cis90@frodo bin]# ./myscript
```

Duke's CIS 90 Final Project

- 1) Color
- 2) My Find Command
- 3) More practice
- 4) Duke's friend made this one - Thank You
- 5) Task 5
- 6) Exit

Enter Your Choice:

*Note we have a different path on this system so may have to specify a relative path to script file to run*



# Final Exam

# Final Exam

The CIS 90 Final Exam is Test #3

- **The Final Exam is June 2 - 1:00 to 3:50PM**
- **The final exam will be Test #3  
(worth 30 points + 10 points extra credit)**
  - Open book, open notes, open computer.
  - During the test you must work alone and not ask or give assistance to others.
  - If you need more time, you may take the exam home and email it to me by midnight.

## Final Exam

The CIS 90 Final Exam is Test #3

- **A Practice Test 3 is available on the web site**
  - You may work with others and use the forum to discuss questions and answers on the practice test prior to the final exam.
  - Just like the real test, the first 15 questions correlate to the 15 lessons we've covered in this class.
  - Just like the real test, there are five extra credit questions at the end taken from the website Flashcards.



# Project Presentations



# Wrap up



New commands:

tar

Backup and restore files

New Files and Directories:

Next Class is the Final Exam

Test #3

Five Posts

Lab X1 (extra credit)

Lab X2 (extra credit)



# Project Workshop (optional)



# Backup



# Archiving

## tar command (on Opus)

*Next, compress the archive with **gzip***

```
/home/cis90/roddyduk $ ls -l roddyduk.tar  
-rw-rw---- 1 roddyduk cis90 1034240 Dec 10 13:50 roddyduk.tar  
/home/cis90/roddyduk $
```

```
/home/cis90/roddyduk $ gzip roddyduk.tar  
/home/cis90/roddyduk $ ls -l roddyduk.tar*  
-rw-rw---- 1 roddyduk cis90 168996 Dec 10 13:50 roddyduk.tar.gz  
/home/cis90/roddyduk $
```

*Note: **gzip** renames the tarball by adding the **.gz** suffix*