



## Lesson Module Checklist

- Slides –
- Properties –
- Flash cards –
- First minute quiz –
- Web calendar summary –
- Web book pages –
- Commands –
  
- Practice test uploaded
- CCC Confer wall paper –
- Materials uploaded –
- Backup headset charged –
- Backup slides, CCC info, handouts on flash drive –
  
- Pickup Polycom 831.479.6392 –
- Check that room headset is charged – done



Dieskau



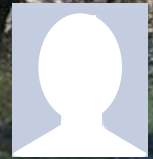
Jonathan



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



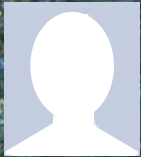
Ana



David



Obie



Dave



Cole



Corey



Nancy



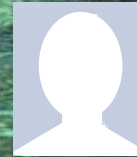
Ryan



Elia



Tasha



Darren



Scott



Devin



Everett



Juan



Raven



Rogan



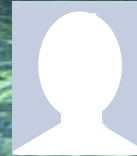
Mike



Mook



Melissa



Cameron



Jose



Jeff



Matt



Kenneth



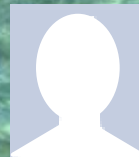
Ousmane



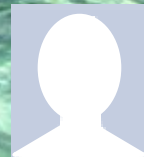
Ian



Solomon



Henry



Matthew



Mason



Chan

## Quiz

No Quiz  
Today !



- [ ] Has the phone bridge been added?
- [ ] Is recording on?
- [ ] Does the phone bridge have the mike?
- [ ] Share slides, putty x 3, Chrome, VLab, DOS prompt, Filezilla
- [ ] 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 11:59 PM tonight:

- Final Project submittal

Due 11:59 PM May 30:

- Five forum posts
- Extra credit labs



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

- Our final exam is Test #3 (30 points)
- Time: 1:00PM - 3:50PM
- Date: Wed May 30
- Place: Room 2501

### *The final exam:*

- *must be taken in Room 2501 (no CCC Confer)*
- *it must be turned in using email by the end of the exam period (no grace extension period)*

## CIS 90 - Spring 2012 - TEST 3 - 30 points

Timed Test (2 hours 50 minutes)

10 questions

1 extra credit question

### Honor Code:

This test is open book, open notes, and open computer. **HOWEVER, you must work alone. You may not share answers. You may not receive or give assistance to others.**

Name:

Download and save this test PDF to your computer. Then fill out the downloaded PDF, save it and email it as an attachment to [risimms@cabrillo.edu](mailto:risimms@cabrillo.edu) using your regular (non-Opus) email. Please cc: yourself and verify you actually sent a non-blank, completed test to be graded.

Everyone should submit their test (completed or not) by the end of exam period.

**Highlighted** text differs from practice test

### Note to Mac users:

Make sure Adobe Reader doesn't strip preceding //s from your answers in saved PDF file.

### Note to instructor:

Add borabora file on Sun

Print spool files on Sun

Add test03-broken script to class depot directory on Sun

## Points earned to date:

adaldrida: 90% (405 of 450 points)  
 alatar: 95% (430 of 450 points)  
 amroth: 84% (379 of 450 points)  
 arador: 92% (414 of 450 points)  
 aragorn: 106% (481 of 450 points)  
 arwen: 112% (507 of 450 points)  
 celebrian: 73% (331 of 450 points)  
 cirdan: 110% (498 of 450 points)  
 dori: 102% (461 of 450 points)  
 dwalin: 80% (360 of 450 points)  
 elrond: 104% (472 of 450 points)  
 eomer: 89% (403 of 450 points)  
 eowyn: 84% (382 of 450 points)  
 frodo: 110% (495 of 450 points)  
 gwaihir: 83% (376 of 450 points)  
 haldir: 85% (383 of 450 points)  
 ioreth: 20% (90 of 450 points)  
 khamul: 99% (449 of 450 points)  
 nessa: 82% (371 of 450 points)  
 orome: 98% (442 of 450 points)  
 pippin: 43% (197 of 450 points)  
 quickbeam: 107% (484 of 450 points)  
 samwise: 36% (166 of 450 points)  
 shadowfax: 103% (465 of 450 points)  
 strider: 108% (489 of 450 points)  
 theoden: 68% (307 of 450 points)  
 treebeard: 106% (477 of 450 points)  
 tulkas: 90% (407 of 450 points)  
 ulmo: 110% (495 of 450 points)

## Remaining points to earn:

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

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 "original" 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 /bin/mail (5 points)</li> <li>Use of a conditional (5 points)</li> </ul> <p>The maximum for this section are 25 points.</p>
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.
-15	Error messages are displayed when running one or more tasks
-up to 90	No credit for any task which contains unoriginal script code that: <ul style="list-style-type: none"> <li>Doesn't give full credit the original author</li> <li>Doesn't indicate where the code was obtained from</li> <li>Doesn't include licensing terms</li> <li>Violates copyright or licensing terms</li> </ul>
<b>Extra credit</b>	
30	Up to three additional tasks (10 points each)

*This is how the final project will be graded*



*Run testscripts to see  
current project progress*

Additional Linux courses:

CIS 98 - Linux/UNIX Shell Programming

CIS 191 - Linux/UNIX System Administration

CIS 192 - Linux/UNIX Network Administration

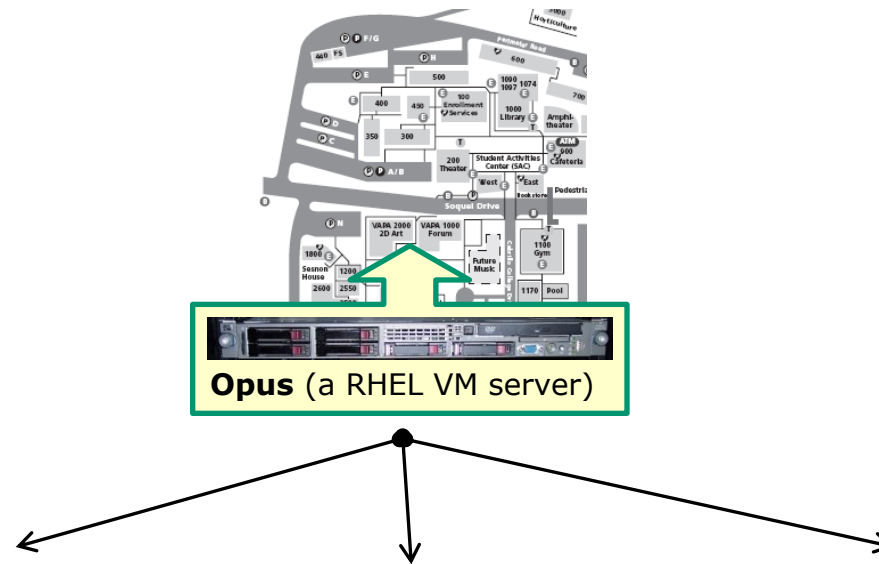
CIS 193 - Linux/UNIX Security Administration

# File Transfer



# File Transfer

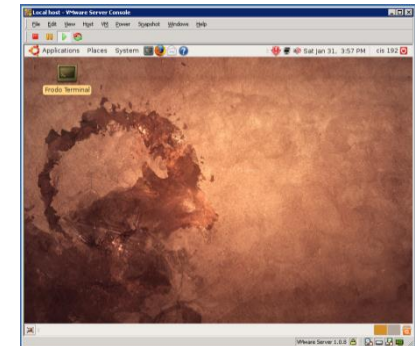
Downloading your Opus file to your home computer



Windows



Mac

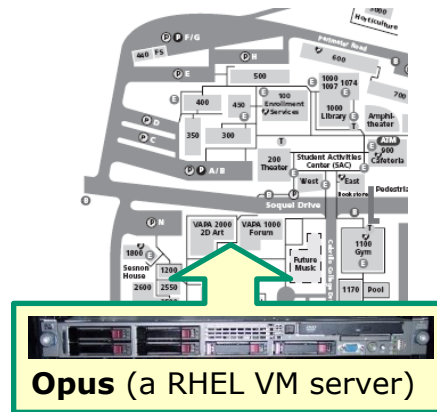


Linux

# File Transfer Windows Filezilla

# File Transfer

Downloading your Opus file to your home computer



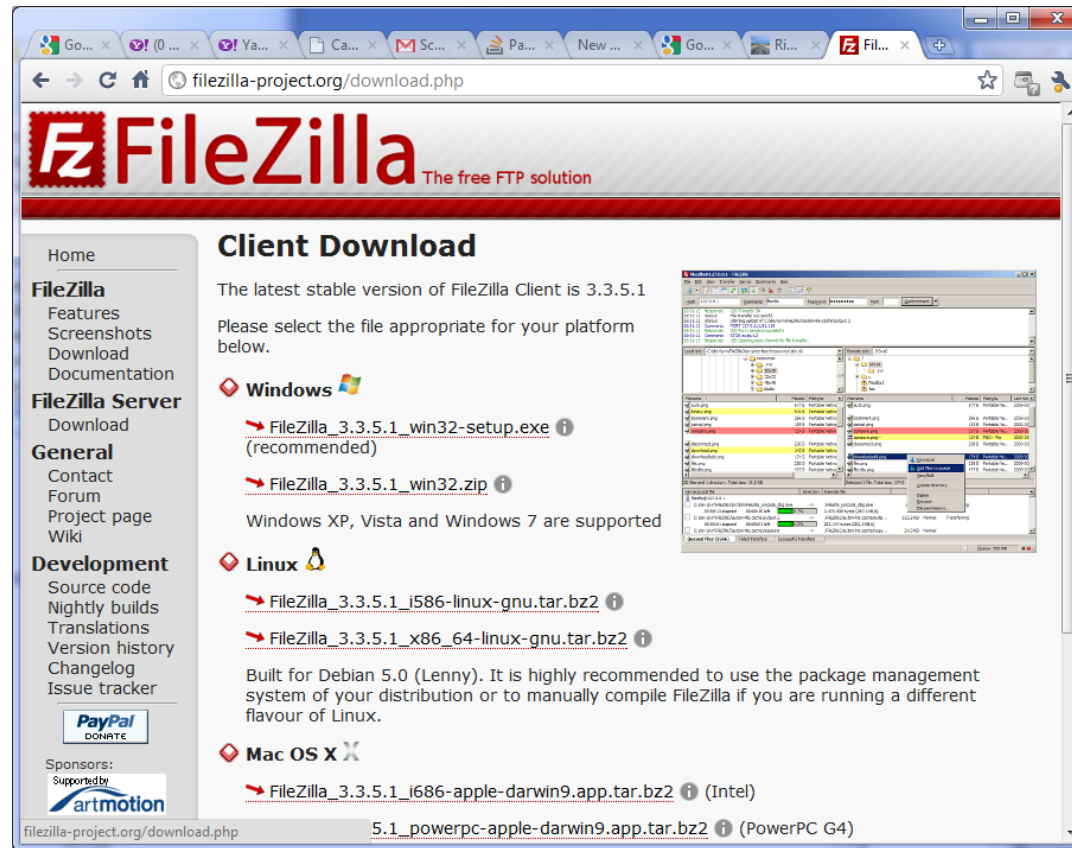
Windows

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

# File Transfer

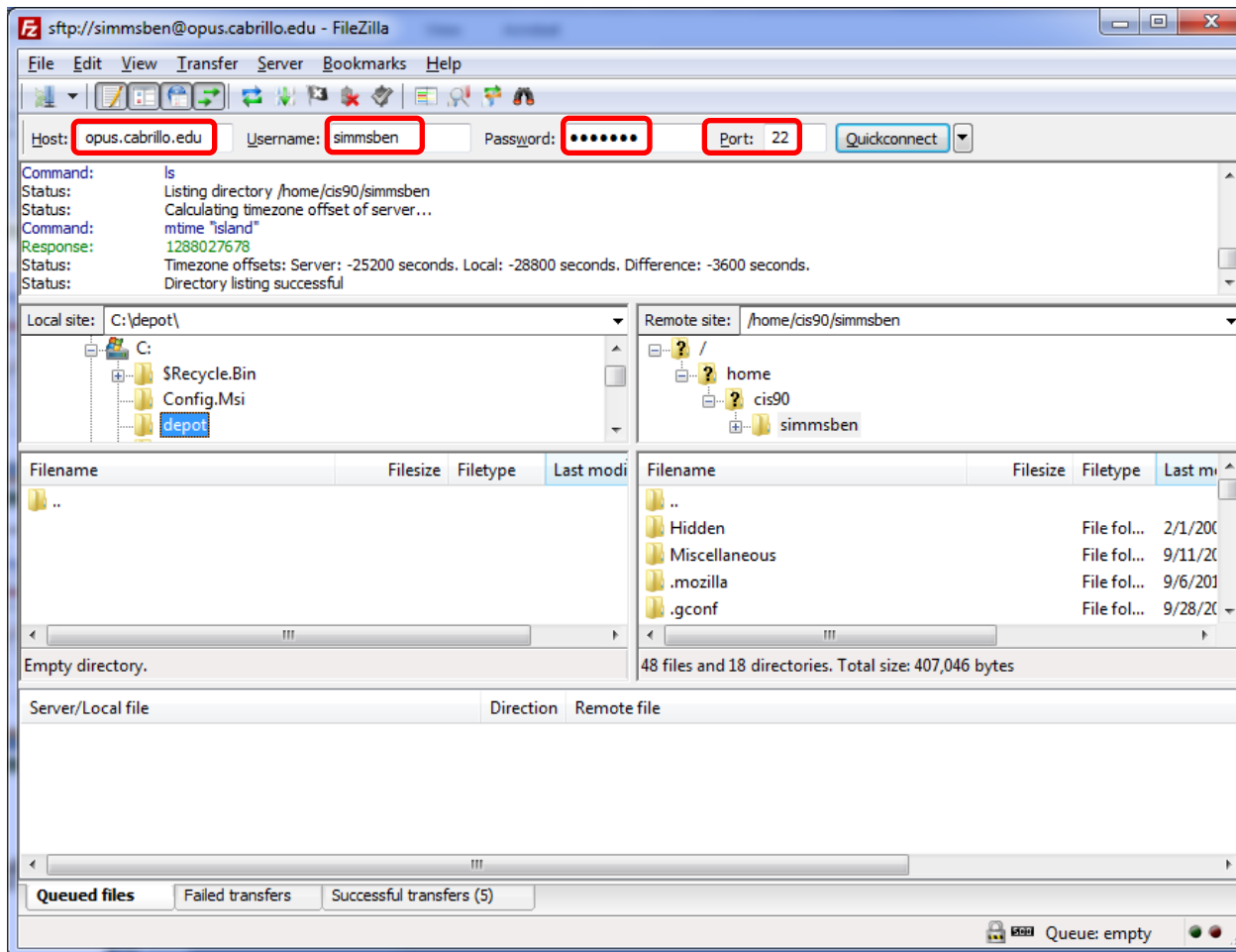
Downloading your Opus file to Windows using Filezilla

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



# File Transfer

Downloading your Opus file to Windows using Filezilla

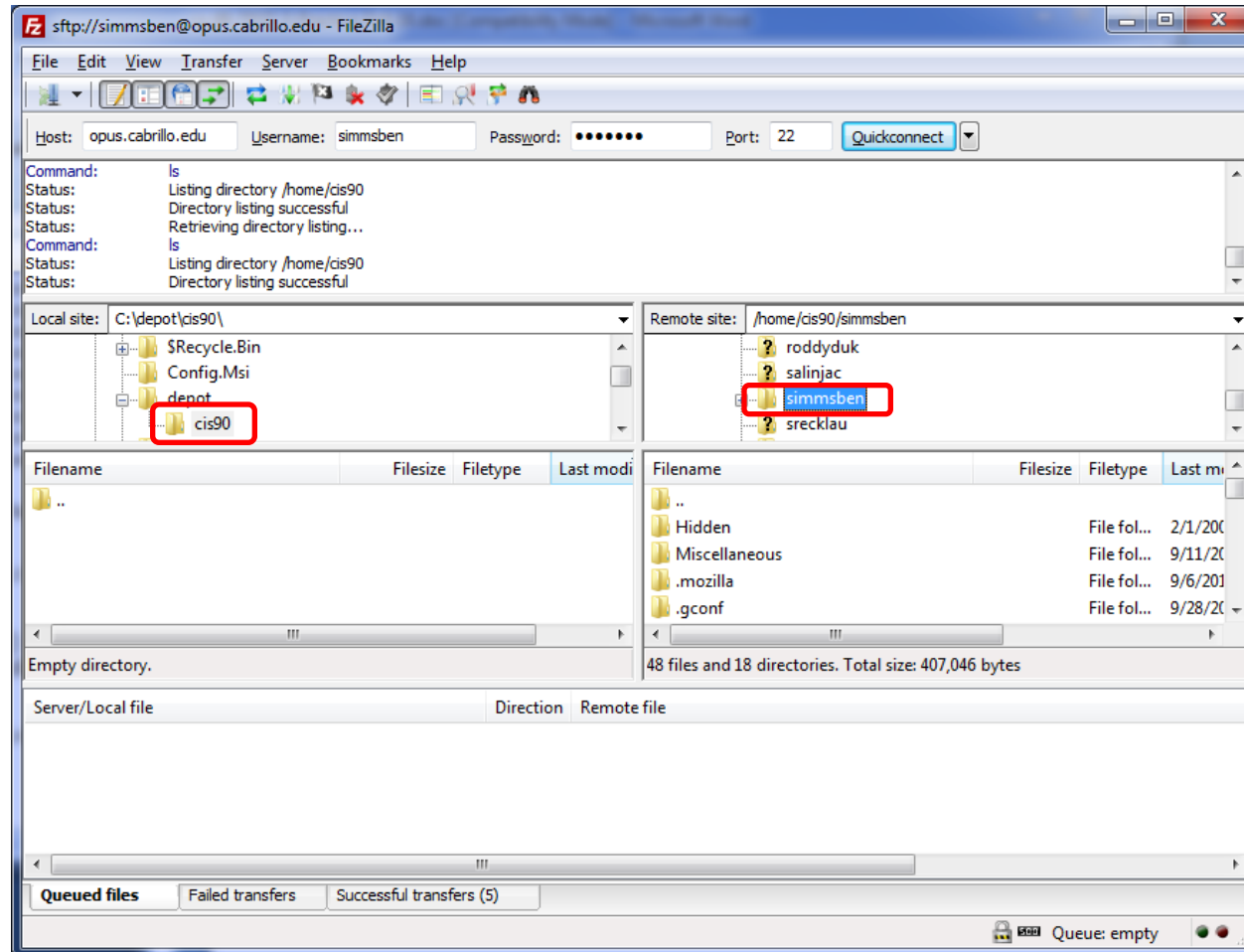


*Specify  
opus.cabrillo.edu as  
the host name with  
your Opus username,  
password and port 22  
then click  
Quickconnect*

# File Transfer

Downloading your Opus file to Windows using Filezilla

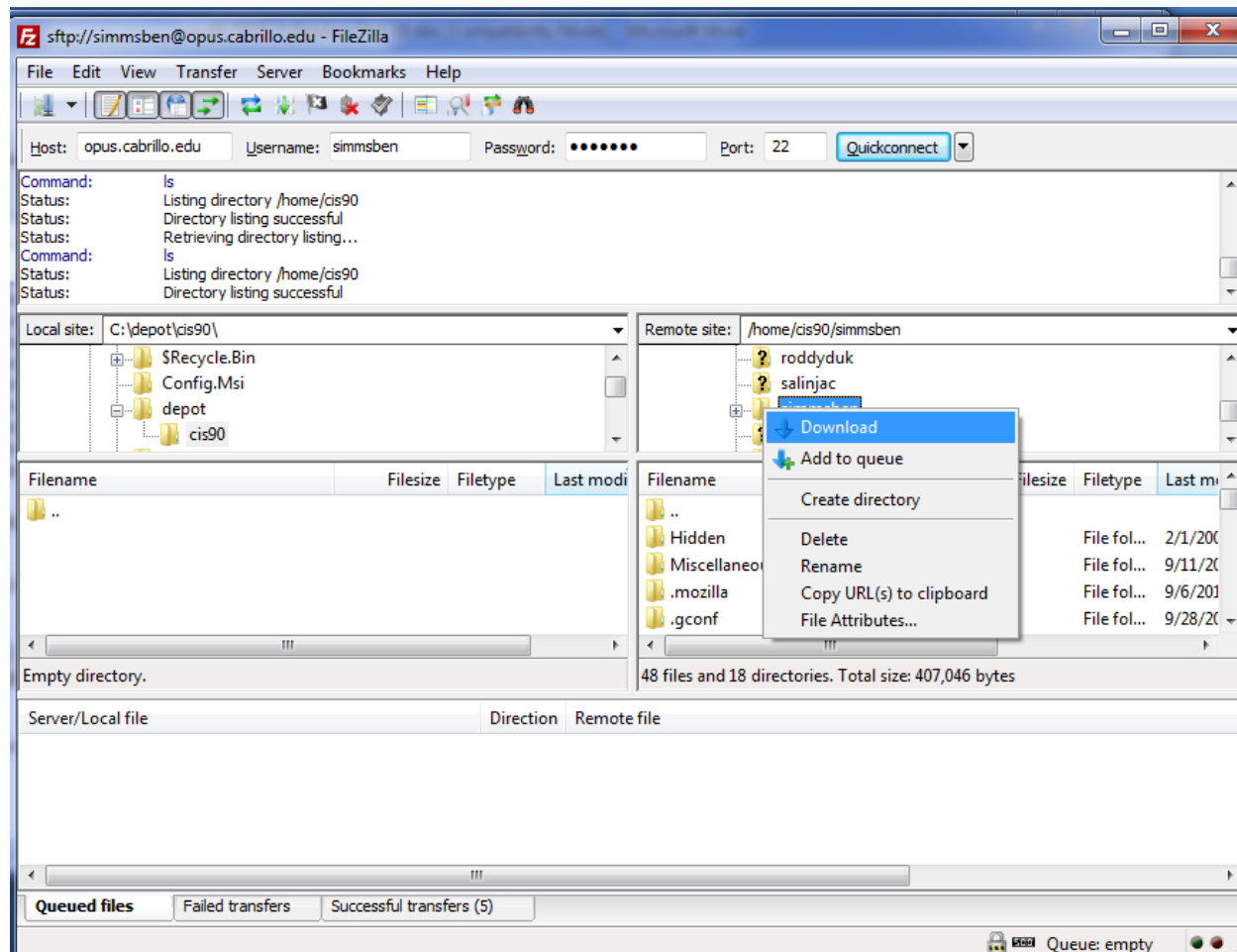
Select  
local  
folder to  
download  
file into



Select  
directory  
on Opus  
to  
download

# File Transfer

Downloading your Opus file to Windows using Filezilla

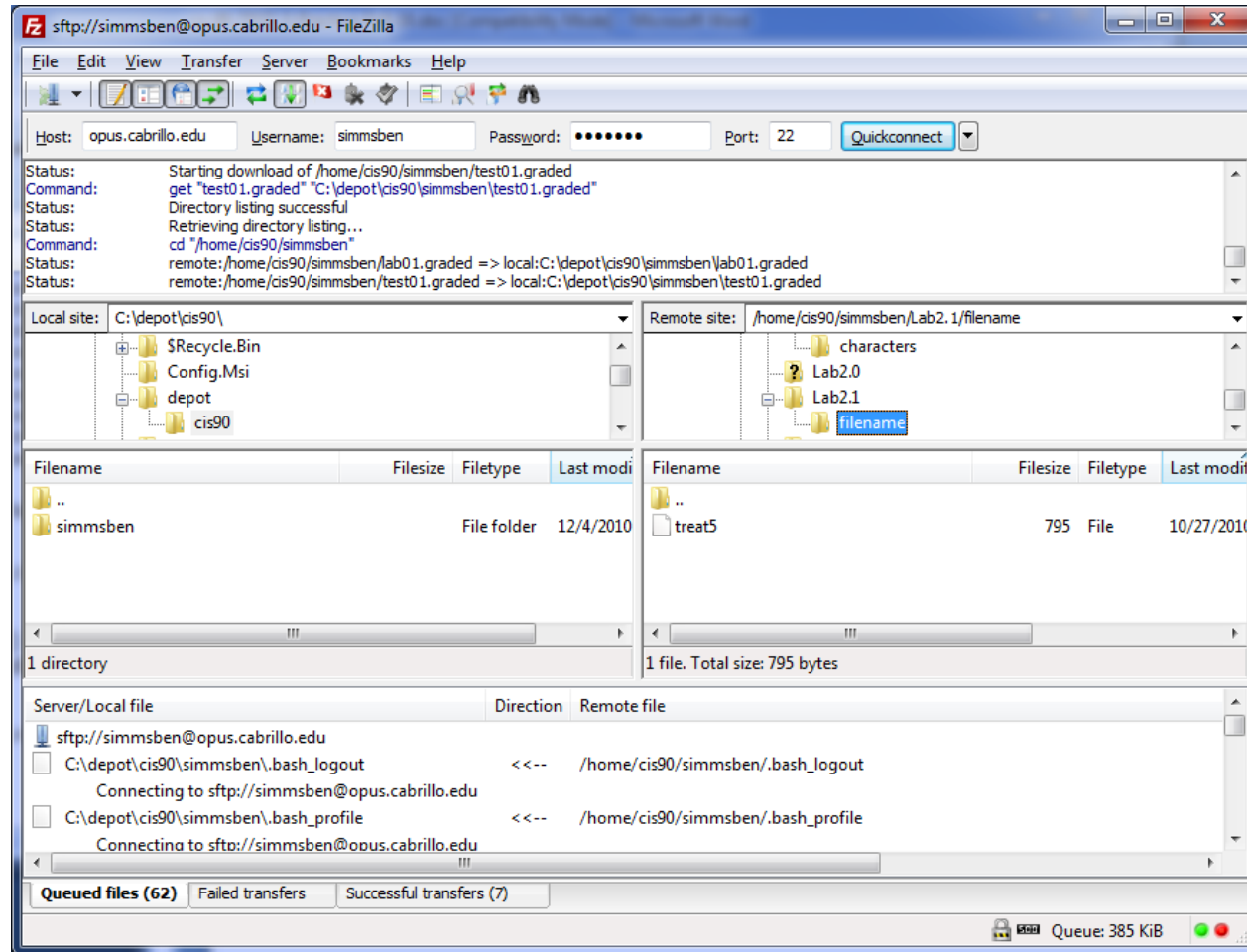


*Right-click on the Opus directory and select Download*



# File Transfer

## Downloading your Opus file to Windows using Filezilla

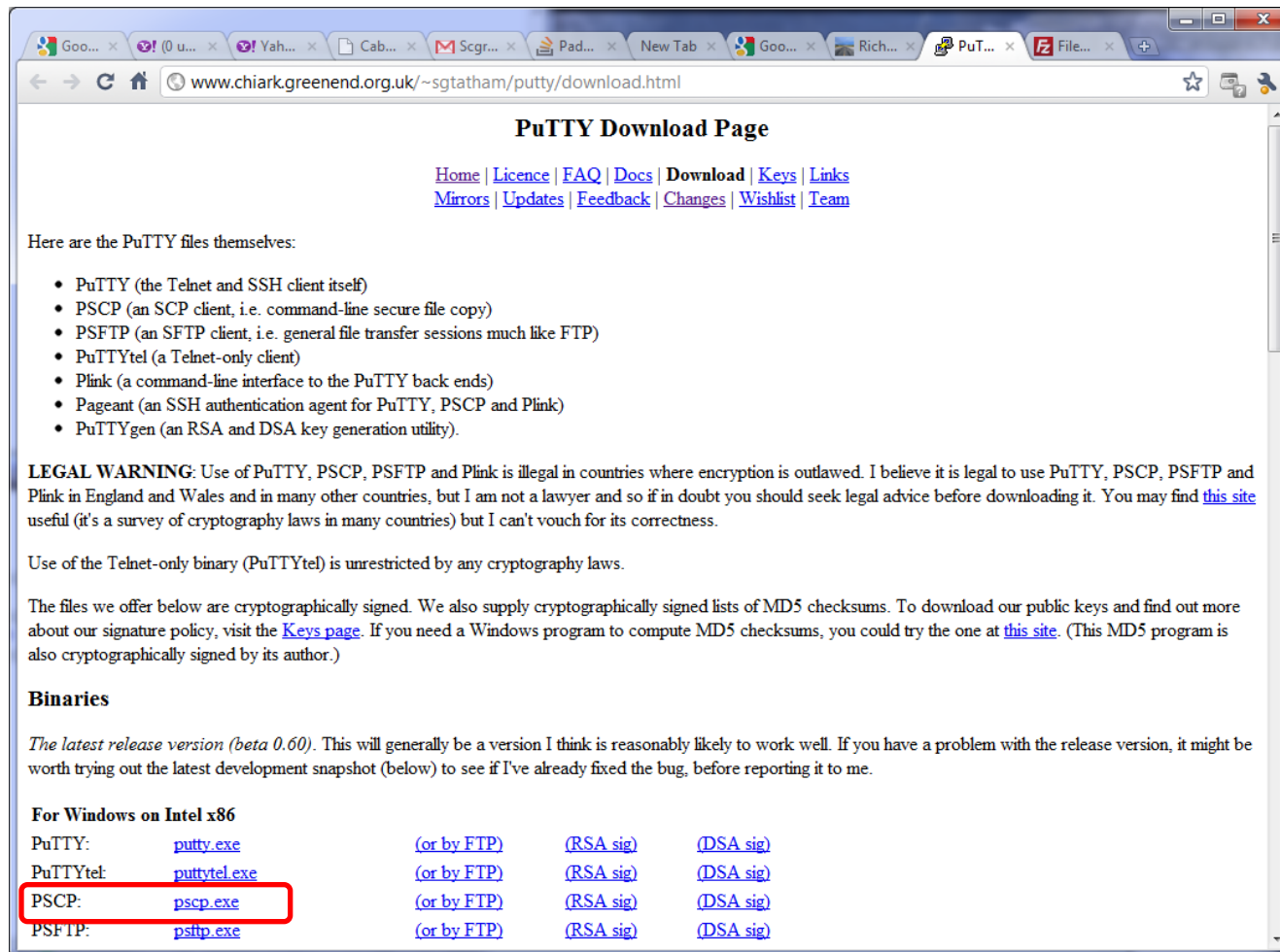


*And away it goes downloading every file and directory it finds in the Opus directory you selected to your local folder*

# File Transfer

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

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



The screenshot shows a web browser window with the address bar displaying [www.chiark.greenend.org.uk/~sgtatham/putty/download.html](http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html). The page title is "PuTTY Download Page". Below the title, there are several links: [Home](#), [Licence](#), [FAQ](#), [Docs](#), [Download](#), [Keys](#), [Links](#), [Mirrors](#), [Updates](#), [Feedback](#), [Changes](#), [Wishlist](#), and [Team](#). The main content area starts with the text "Here are the PuTTY files themselves:" followed by a bulleted list of software components: PuTTY (the Telnet and SSH client itself), PSCP (an SCP client, i.e. command-line secure file copy), PSFTP (an SFTP client, i.e. general file transfer sessions much like FTP), PuTTYtel (a Telnet-only client), Plink (a command-line interface to the PuTTY back ends), Pageant (an SSH authentication agent for PuTTY, PSCP and Plink), and PuTTYgen (an RSA and DSA key generation utility). Below this list is a "LEGAL WARNING" section stating that use of PuTTY, PSCP, PSFTP, and Plink is illegal in countries where encryption is outlawed, but it is legal in England and Wales. It also mentions a survey of cryptography laws. The next section discusses the Telnet-only binary (PuTTYtel) and its unrestricted use. The "Binaries" section states that the latest release version (beta 0.60) is generally likely to work well. At the bottom, under "For Windows on Intel x86", there is a table of download links for various binaries. The "PSCP" row is highlighted with a red rectangle.

**PuTTY Download Page**

[Home](#) | [Licence](#) | [FAQ](#) | [Docs](#) | [Download](#) | [Keys](#) | [Links](#)  
[Mirrors](#) | [Updates](#) | [Feedback](#) | [Changes](#) | [Wishlist](#) | [Team](#)

Here are the PuTTY files themselves:

- PuTTY (the Telnet and SSH client itself)
- PSCP (an SCP client, i.e. command-line secure file copy)
- PSFTP (an SFTP client, i.e. general file transfer sessions much like FTP)
- PuTTYtel (a Telnet-only client)
- Plink (a command-line interface to the PuTTY back ends)
- Pageant (an SSH authentication agent for PuTTY, PSCP and Plink)
- PuTTYgen (an RSA and DSA key generation utility).

**LEGAL WARNING:** Use of PuTTY, PSCP, PSFTP and Plink is illegal in countries where encryption is outlawed. I believe it is legal to use PuTTY, PSCP, PSFTP and Plink in England and Wales and in many other countries, but I am not a lawyer and so if in doubt you should seek legal advice before downloading it. You may find [this site](#) useful (it's a survey of cryptography laws in many countries) but I can't vouch for its correctness.

Use of the Telnet-only binary (PuTTYtel) is unrestricted by any cryptography laws.

The files we offer below are cryptographically signed. We also supply cryptographically signed lists of MD5 checksums. To download our public keys and find out more about our signature policy, visit the [Keys page](#). If you need a Windows program to compute MD5 checksums, you could try the one at [this site](#). (This MD5 program is also cryptographically signed by its author.)

**Binaries**

The latest release version (beta 0.60). This will generally be a version I think is reasonably likely to work well. If you have a problem with the release version, it might be worth trying out the latest development snapshot (below) to see if I've already fixed the bug, before reporting it to me.

**For Windows on Intel x86**

PuTTY:	<a href="#">putty.exe</a>	(or by FTP)	(RSA sig)	(DSA sig)
PuTTYtel:	<a href="#">puttytel.exe</a>	(or by FTP)	(RSA sig)	(DSA sig)
PSCP:	<a href="#">pscp.exe</a>	(or by FTP)	(RSA sig)	(DSA sig)
PSFTP:	<a href="#">psftp.exe</a>	(or by FTP)	(RSA sig)	(DSA sig)

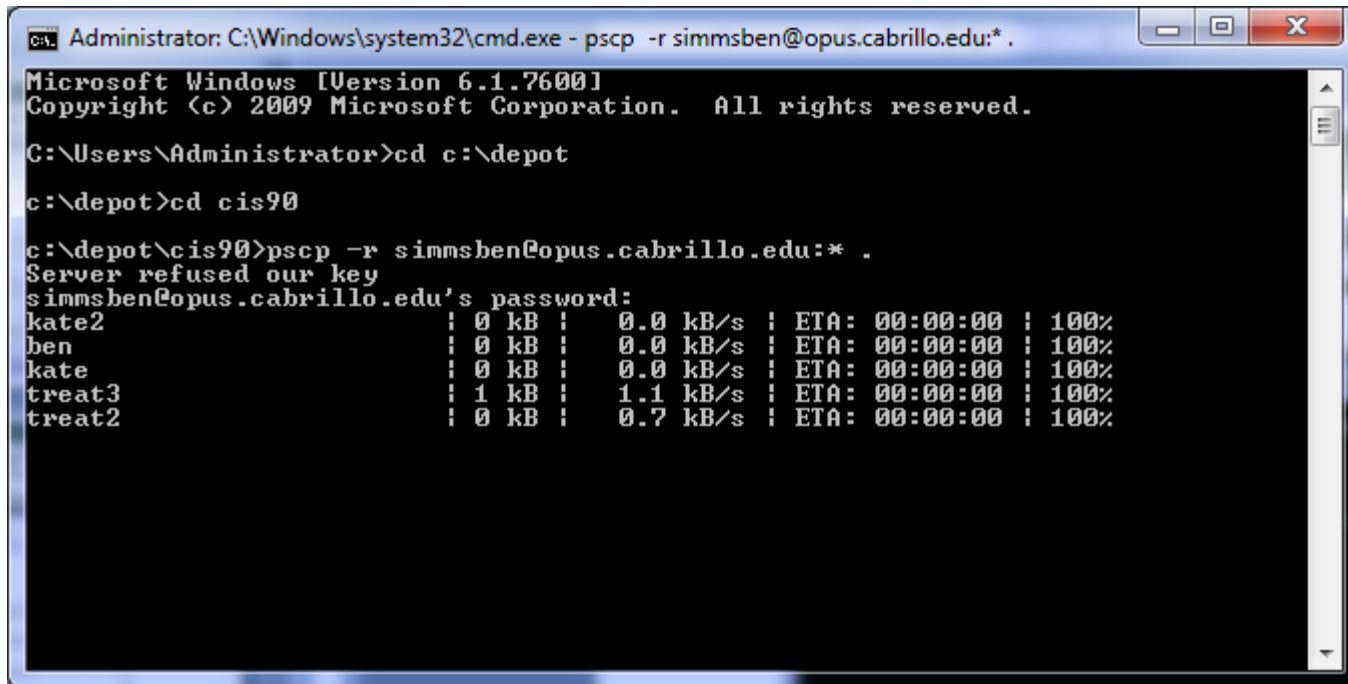
*Download the pscp file and place it in your windows folder*

# 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 files 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  .lessht
12/04/2010  04:39 PM  <DIR>          .mozilla
12/04/2010  04:39 PM          40  .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  .viminfo
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       1,580  small_town
12/04/2010  04:40 PM       9,733  smb.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  timecal
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_am_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 files 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

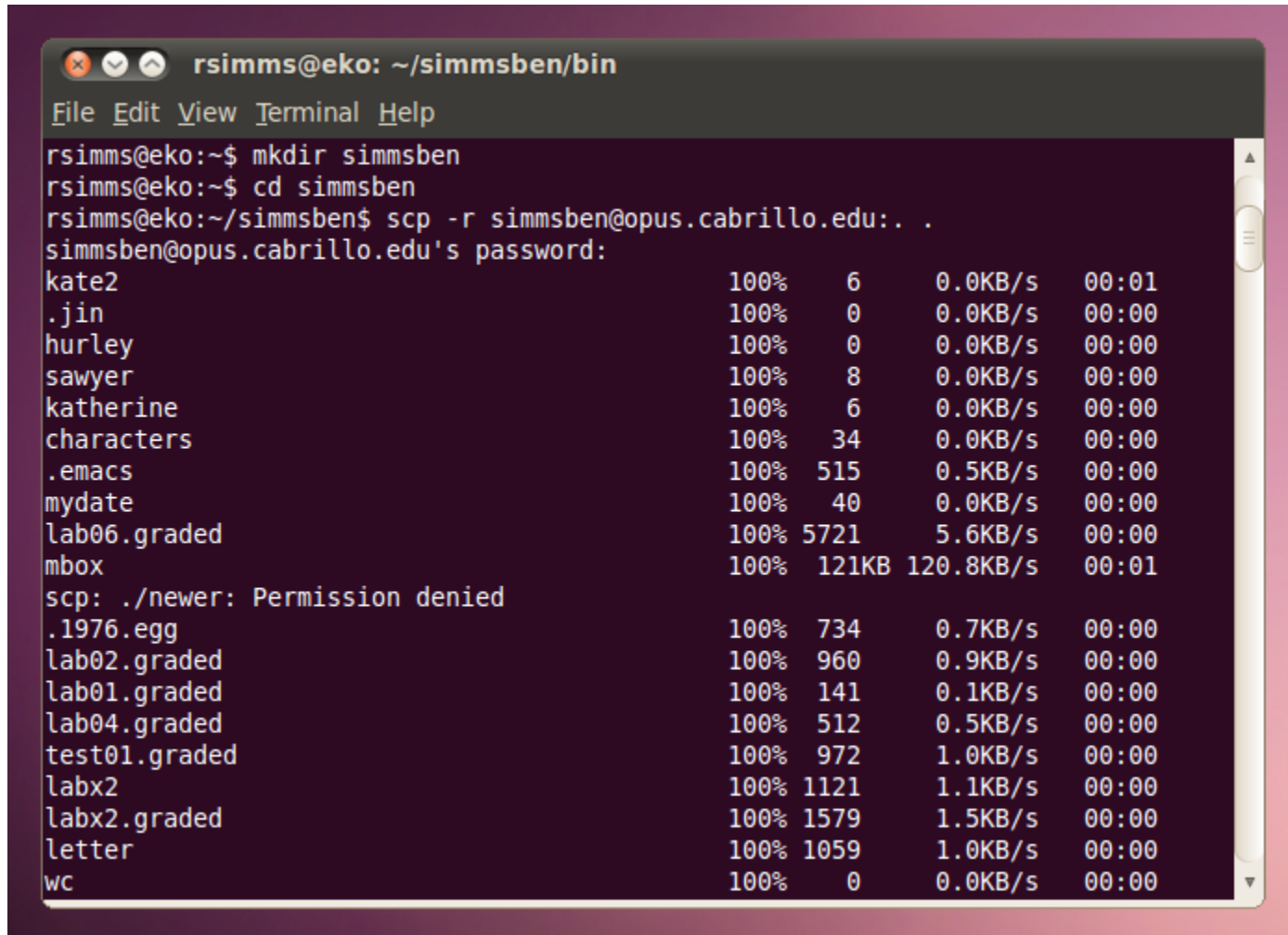
## Linux or Mac

### scp

# File Transfer

Downloading your Opus files to Linux or Mac using scp

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

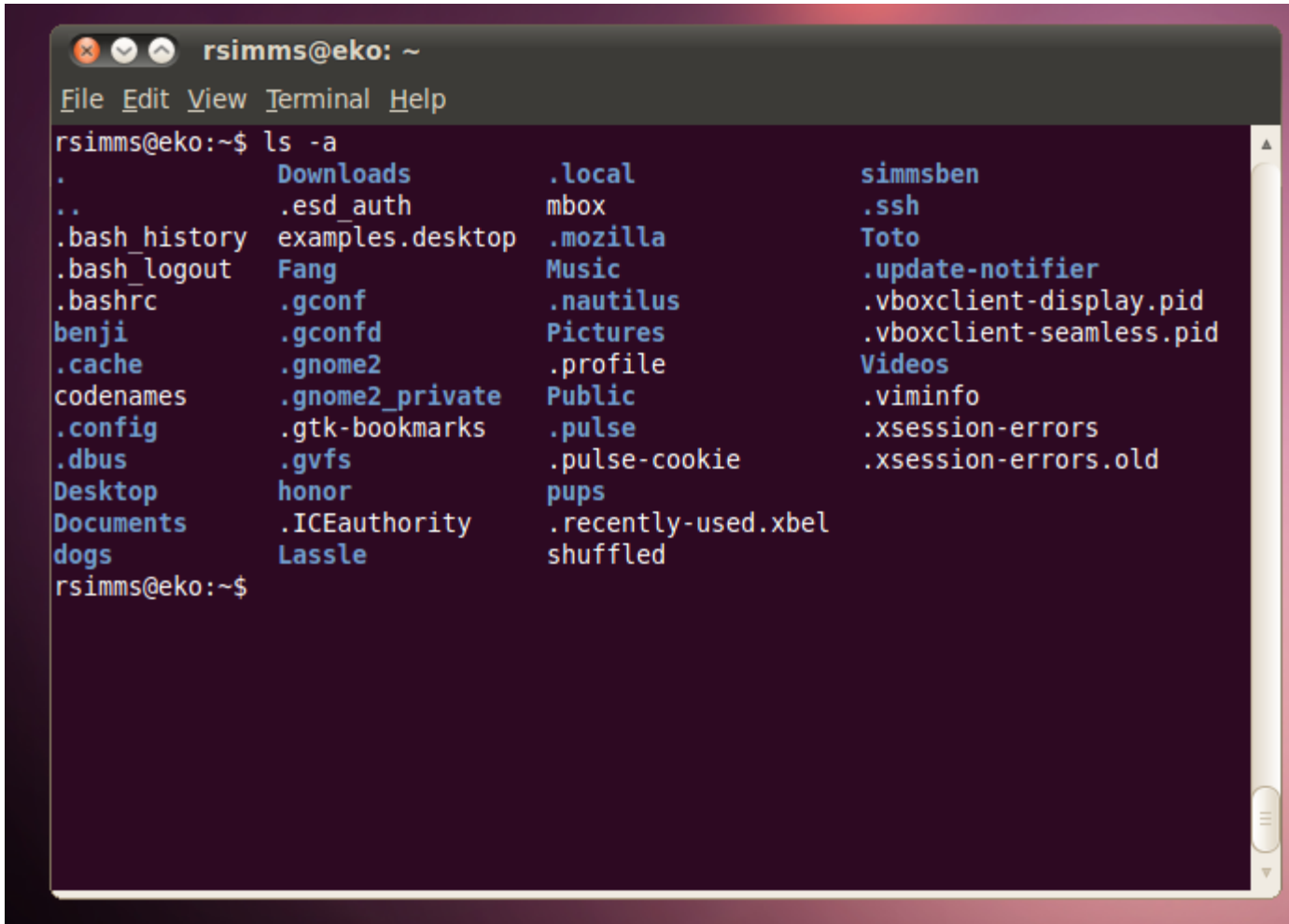


```
rsimms@eko: ~/simmsben/bin
File Edit View Terminal Help
rsimms@eko:~$ mkdir simmsben
rsimms@eko:~$ cd simmsben
rsimms@eko:~/simmsben$ scp -r simmsben@opus.cabrillo.edu:.. .
simmsben@opus.cabrillo.edu's password:
kate2                100%   6      0.0KB/s   00:01
.jin                 100%   0      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*

A screenshot of a terminal window titled 'rsimms@eko: ~'. The window has a menu bar with 'File', 'Edit', 'View', 'Terminal', and 'Help'. The terminal shows the command 'rsimms@eko:~\$ ls -a' and its output, which lists files and directories in four columns. The output includes hidden files like '.bash\_history', '.cache', and '.config', as well as standard directories like 'Downloads', 'Documents', and 'Desktop'. The prompt 'rsimms@eko:~\$' is shown at the bottom.

```
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 .pulse          .viminfo  
.config       .gtk-bookmarks .pulse-cookie   .xsession-errors  
.dbus         .gvfs           pups            .xsession-errors.old  
Desktop      honor           .recently-used.xbel  
Documents    .ICEauthority  shuffled  
dogs         Lassle  
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/ simben/ | wc -l  
365  
/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/simben/simben90.tar bin/ answers/ simben/
bin/
bin/tally
bin/checkgrades
bin/riddle
bin/check5
< snipped >
tar: simben/newer: Cannot open: Permission denied
< snipped >
tar: simben/simben90.tar: file is the archive; not dumped
< snipped >
simben/fast/file2
simben/fast/file5
simben/lotsoferrors
simben/bsym2
tar: Error exit delayed from previous errors
/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/simben/simben90.tar | wc -l  
363  
/home/cis90 $ find bin/ answers/ simben/ | wc -l  
365  
/home/cis90 $
```

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

*The two files that did not get added to the archive were newer (permissions prevented) and simben90.tar (the tarball itself)*

# 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 ..
```

```
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 (extracting on home Linux computer)

*extract*

```
[cis90@frodo opus-files]# tar xvf simben90.tar  
bin/  
bin/tally  
bin/checkgrades  
bin/riddle  
bin/check5  
bin/allscripts
```

< *snipped* >

```
simben/fast/file2  
simben/fast/file5  
simben/lotsoferrors  
simben/bsym2  
[cis90@frodo opus-files]#
```

*Extract the  
tarball*

# Archiving

tar command (extracting 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 simben
-rw-r--r--  1 root root 1034240 Dec  8 23:43 simben90.tar
[cis90@frodo opus-files]#
```

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

# Archiving

tar command (extracting on home Linux computer)

```
[cis90@frodo opus-files]# cd simben/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
```

Benji'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 an absolute path to script file to run*

# Archives

## gzip and gunzip



# Archiving

## tar command (on Opus)

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

```
/home/cis90/simben $ ls -l simben90.tar
-rw-rw-r-- 1 simben90 cis90 1269760 May 22 09:20 simben90.tar

/home/cis90/simben $ gzip simben90.tar
/home/cis90/simben $ ls -l simben90.tar*
-rw-rw-r-- 1 simben90 cis90 240968 May 22 09:20 simben90.tar.gz
```

*Later, uncompress the archive with **gunzip***

```
/home/cis90/simben $ gunzip simben90.tar.gz
/home/cis90/simben $ ls -l simben90.tar*
-rw-rw-r-- 1 simben90 cis90 1269760 May 22 09:20 simben90.tar
```

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

# Final Exam

# Final Exam

The CIS 90 Final Exam is Test #3

- **The Final Exam is May 30 - 1:00 to 3:50PM**
- **The final exam will be Test #3  
(worth 30 points + 3 points extra credit)**
  - Open book, open notes, open computer.
  - During the test you must work alone and not ask or give assistance to others.

# Final Exam

The CIS 90 Final Exam is Test #3

- **A Practice Test 3 is available on the web site**

- To minimize stress on the final exam:
  - ❖ Work EVERY question on the practice test and NOTE exactly the steps required to answer each question.
  - ❖ Use the notes you took doing the practice test on the final exam.
- You may work with others and use the forum to discuss questions and answers on the practice test prior to the final exam.



# Project Presentations



## **To demo your project and earn five points:**

Join CCC Confer and share desktop when it is your turn

- Remote users should dial or Skype to 888-450-4821 and use passcode: 761867
- Classroom students can use Station #5 next to the Polycom

*Five minutes max please!*

# 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