Getting Your Website Online

Learning Expectations:

1. Know how to go about setting up a domain name.
2. Understand the difference between the various hosting options.
3. Be able to upload content and set/manipulate user permissions.
4. Understand basic Unix command-line syntax relevant to website directory/file permissions control.
5. Know what to look out for when testing your website.
6. Have the ability to use standard hosting management tools.

Website Development

- Creating your website offline
  - Generally coded locally or using a development server
  - Graphic creation
  - Script creation – JavaScript, PHP, etc.
- Offline testing
  - Ensure relative links are used
  - Ensure functionality works as expected

Choosing a Domain Name

- Each domain name is unique
  - Advantage: Each site is easily access and referenced from any other computer on the internet.
  - Disadvantage: It can be difficult to find a suitable domain name that is still available!

- Key Points:
  - To chose a domain name you need only focus on two things: the *name* itself and the *extension*.
  - Your full domain name must be no more than 67 characters in length.
  - While the most common extensions are .com, .net, and .org a more thorough (although not exhaustive) list is provided here.

General	Americas	Europe	Asia
.com	.us	.eu	.cc
.co	.ms	.es	.in
.net	.ca	.com.es	.co.in
.org	.ag	.nom.es	.firm.in
.info	.com.ag	.org.es	.gen.in
.me	.net.ag	.it	.ind.in
.mobi	.org.ag	.nl	.net.in
.biz	.bz	.at	.org.in
.cc	.com.bz	.de	.nu
.tv	.net.bz	.fr	.tk
.firm	.gs	.am	.fm
	.vg	.be	.jp
	.co	.se	.tw
	.com.br	.co.uk	.com.tw
	.net.br	.me.uk	.org.tw
	.com.co	.org.uk	.idv.tw
	.net.co		.asia
	.nom.co		.co.nz
	.mx		.net.nz
	.com.mx		.org.nz
	.tc		

Choosing a Domain Name

- Top Level Domains (TLDs) are most desirable
  - Online domain registrars, such as GoDaddy.com, supply domains
  - Low yearly cost
  - Country Specific Domains (e.g. .ie domains) are controlled nationally
  - The name you choose should be easy to remember as well as relevant to the business, service or organisation in question.
- Domains are registered with Nameservers around the world.
- Domain changes can take between 24-48 hours to propagate to every ISP and DNS provider

Web Hosting Options

- Personal Site Hosting
  - Building a site for personal use (i.e, not trying to sell or promote a business, product or service).
  - Many free or inexpensive hosting alternatives.
  - Check with your internet/email provider.
    - Often these companies provide free web space for customers!
  - Potential Host Suggestions:

Google Sites – http://sites.google.com
Webs – http://www.webs.com
Weebly – http://www.weebly.com
Yola – http://www.yola.com

Web Hosting Options

- Business Site Hosting
  - Dedicated Hosting
    - The most powerful and expensive option.
    - This also gives the highest level of control and the assurance that all the server's resources are committed to running your website.
  - Virtual Private Server (VPS)
    - Gives you more control over the server settings and enables you to install any additional software or modules required and comes at a medium cost.
    - Server resources are divided equally among all VPS.
  - Shared Hosting

    The least expensive option where multiple websites share the same server.

Web Hosting Options

- Key Questions to Consider:
  - How much storage space is needed?
    - Remember email can quickly rack up several gigs of storage.
  - How responsive (fast) are the host servers?
    - Check out some of their existing customer websites!
  - How reliable are host servers?
    - Check their typical uptime and also the number of back-up servers they run.
  - What type of support is offered?
    - Online, telephone etc.
  - How often are back-ups performed?
  - What types of additional features are offered?
    - E.g. PHP, MySQL, browser-based control panels, custom domains and plenty of email accounts are all pretty standard hosting features these days.
  - What are start-up and monthly costs associated with the account?

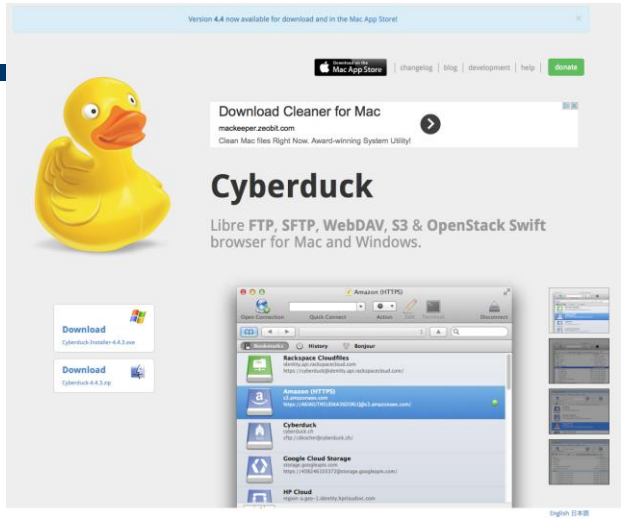
Web Hosting Options

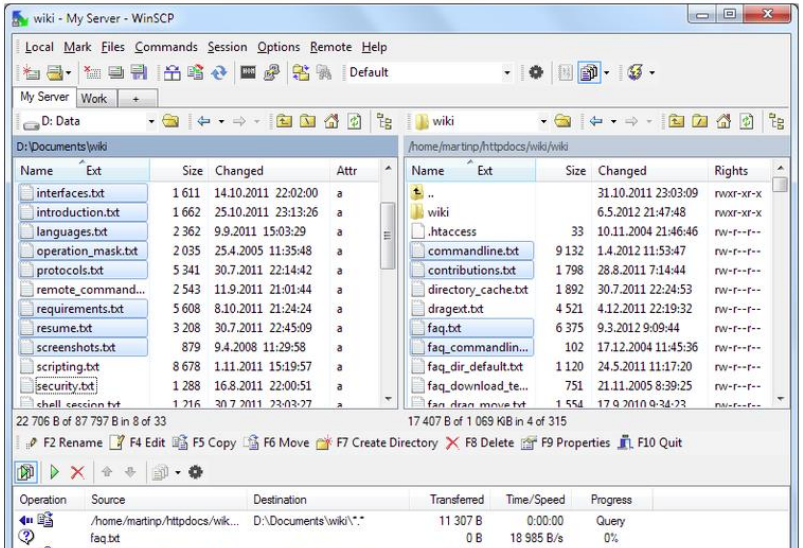
- Business Site Host Suggestions

Site5 – http://www.site5.com
Yahoo!– http://smallbusiness.yahoo.com
HostMonster– http://www.hostmonster.com
Dream Host– http://www.dreamhost.com
Bluehost– http://www.bluehost.com
FatCow– http://www.fatcow.com
Weenly– http://www.weebly.com

Uploading Your Content

- Secure File Transfer Protocol (SFTP)
  - The most common methods of uploading your website from your local machine onto your web server.
  - Data is encrypted over a SSH en route to the server.
  - Files are uploaded to a “public_html” or “html” directory depending on the webserver software configuration.
  - SFTP clients such as WinSCP or Cyberduck make this process into a simple drag and drop operation.





Ensuring Access Rights

- Uploading your content to your web host is done through your ssh account. This results in the files you upload being “owned” by you.
  - To ensure your end users and the web hosting software will be able to access the files, the correct permissions must be associated with them
  - This can be done through your SFTP client or through the command line using the “*chmod*” command.

Ensuring Access Rights

- Unix permissions are split into three categories – *Read*, *Write* and *Execute*
- Unix permissions also allow you to configure different rules that correspond to the file *owner*, *group* and *the world* (i.e. everyone else).

Ensuring Access Rights

- Think of the CHMOD permissions as a simple addition:
  - execute permission = 1
  - write permission = 2
  - write and execute (1+2) = 3
  - read permission = 4
  - read and execute (4+1) = 5
  - read and write (4+2) = 6
  - read, write and execute (4+2+1) = 7

Numerical permissions

#	Permission	rwx
7	full	111
6	read and write	110
5	read and execute	101
4	read only	100
3	write and execute	011
2	write only	010
1	execute only	001
0	none	000

CHMOD Examples

- CHMOD stands for **ch**ange **mod**e
  - chmod 600 file.ext - You can read and write; the world can't. Good for private files.
  - chmod 700 file.ext - You can read, write, and execute; the world can't. Good for scripts.
  - chmod 644 file.ext - You can read and write; the world can only read. Good for web pages.
  - chmod 755 file.ext - You can read, write, and execute; the world can read and execute. Good for programs you want to share, and your public_html directory.

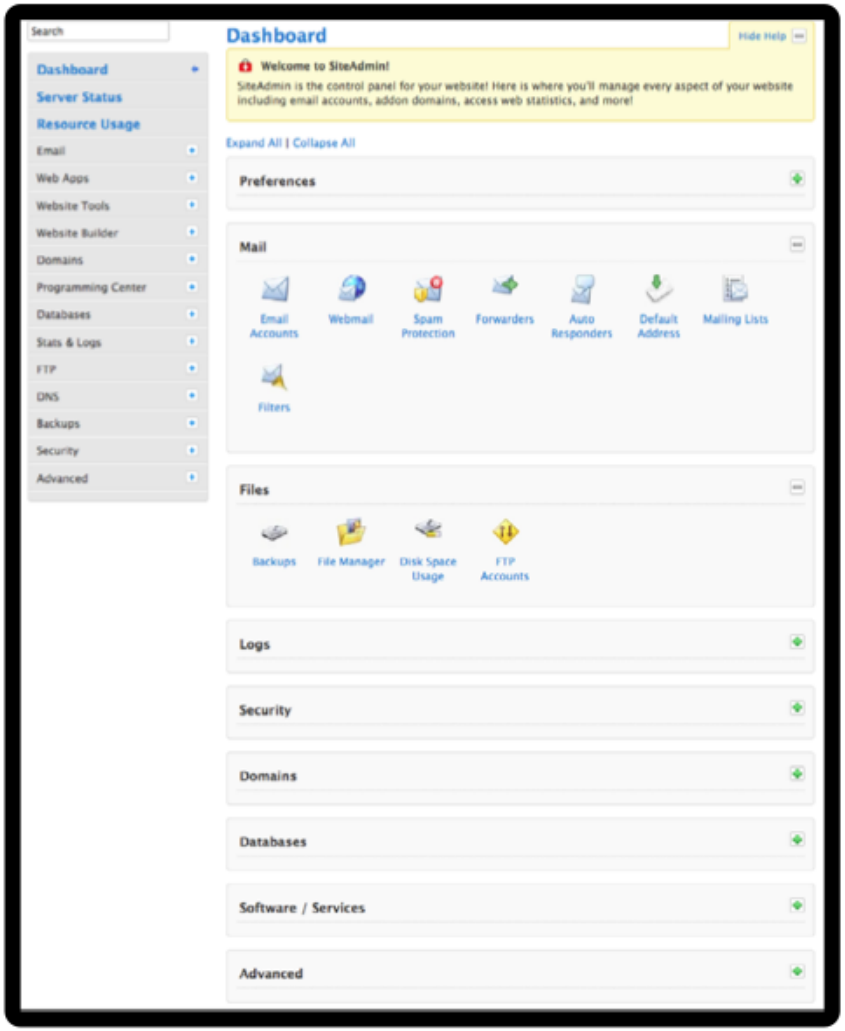
Easier Way to CHMOD

- You can also change file permissions with letters:
  - **u** = user (yourself)
  - **g** = group
  - **a** = everyone
  - **r** = read
  - **w** = write
  - **x** = execute

- chmod u+rw file.ext - Give yourself read and write permission
- chmod u+x file.ext - Give yourself execute permission.
- chmod a+rw file.ext - Give read & write permission to everyone.
- chmod –x file.ext – Remove execute permission from everyone (including you).

Using Hosting Management Tools

- cPanel
  - One of the most popular hosting management tools.
  - Provides options for:
    - Uploading files
    - Setting preferences
    - Managing email accounts
    - Managing site databases
    - Accessing site statistics
    - Installing add-ons like WordPress
    - Checking server information



Testing Your Live Website

- When you get your website online, it's important to test it to ensure it is operating as expected.

- Things to look out for:
  - Images loading correctly
  - Links pointing to the correct files
  - Links opening in the corrent window
  - Dynamic content functioning correctly

Unix Help/Manuals

- man {command}
  - Type man ls to read the manual for the ls command.
- man {command} > {filename}
  - Redirect help to a file to download.

Directory Navigation and Creation

- cd {dirname}
  - There must be a space between.
- cd ~
  - Go back to home directory, useful if you're lost.
- cd ..
  - Go back one directory.
- pwd
  - Show where you are as full path. Useful if you're lost or exploring.

- mkdir {dirname}
  - Create a new Directory/Folder

List (ls) command

- ls {path_1} {path_2}
  - List both {path_1} and {path_2}.
- ls -l {path}
  - Long listing, with date, size and permissions.
- ls -a {path}
  - Show all files, including important .dot files that don't otherwise show.
- ls -F {path}
  - Show type of each file. "**/**" = directory, "*****" = executable.
- ls -R {path}
  - Recursive listing, with all subdirs.
- ls {path} > {filename}
  - Redirect directory to a file.
- ls {path} | more
  - Show listing one screen at a time.

Deleting Files

- In Unix, to delete files, we use the remove (rm) command
- **There is no undo!**
- rmdir {dirname}
  - Only works if {dirname} is empty.
- rm -r {dirname}
  - Remove all files and subdirs. Careful!
- rm {filespec}
  - **?** and ***** wildcards work. "?" is any character; "*" is any string of characters.
- ls {filespec}
  rm {filespec}
  - Good strategy: first list a group to make sure it's what's you think...
    ...then delete it all at once.

Moving or Copying Files

- cp {file1} {file2}
- cp -r {dir1} {dir2}
  - Recursive, copy directory and all subdirs.
- cat {newfile} >> {oldfile} Append newfile to end of oldfile.

- mv {oldfile} {newfile}
  - Moving a file and renaming it are the same thing.
- mv {oldname} {newname}

View Text Files

- more {filename}
  - View file one screen at a time.
- less {filename}
  - Like **more**, with extra features.
- cat {filename}
  - View file, but it scrolls.
- cat {filename} | more
  - View file one screen at a time.
- pico {filename}
  - Use text editor and don't save.