

Instructor's Web Page Development Guide

Introduction

This guide has been written to help instructors of the Johns Hopkins Part-Time Programs in Engineering and Applied Science establish web pages on the Unix server called `aplcenmp.apl.jhu.edu` (also goes by `www.apl.jhu.edu` and `apl.jhu.edu`, but is referred to as Server herein). There are two levels of web pages for instructors. The first or *primary* level is managed by Homewood Academic Computing and is created from the information entered by the instructor when the web form <http://apl.jhu.edu/Courses/form.html> is filled out. The purpose of this level of information is to describe the course content. This level will not be discussed further in this document except to say that one of the things contained in this first-level page is a link to the *secondary* or second-level page.

The second-level page is managed by the webmaster for this Server and is intended to reflect specific class information that may be unique to an instructor, a section, and/or a term. Draft guidelines for development of this page may be found at http://apl.jhu.edu/Misc/Instructor_Info/coursehmpage_policy.html. Typical contents include syllabus, class notes, example problems, assignments, test scores, etc. Often an instructor will wish to restrict portions of this level to just the students in the class at the time. More discussion on how to accomplish this will be given later. The Server's webmaster, upon notification that the page is ready, will create a link to it from the *Classes* page which, in turn, may be reached from the Server's home page (<http://www.apl.jhu.edu>).

What Does an Instructor Need?

Server Account

Whereas the *primary* page is automatically generated and maintained, for the most part, by personnel at the Homewood campus, the *secondary* page(s) is created and maintained by the instructor (with help from the Webmaster as needed). To accomplish this, the instructor must first have an account on the Server. An account application can be submitted via a web form on the Server home page (http://www.apl.jhu.edu/Misc/Acct_Form/unix_acct_form.html). Fill out and submit this form and an account will be established once verification is completed. You will be notified as to your account username (this is specified on the form) and password.

Web Page Space

Generally-speaking, web pages are intended for and available to the entire internet community. This being the case, it seemed prudent to provide space for Instructor web pages that does not require world access to their Server account space. Therefore a general access area has been set up for Instructor use that can include not

only class web pages, but also notes, files, etc. that the instructor wishes to have generally available to his/her class. The Unix path to this general area is /u2/instructors/Notes. Concurrent with the establishment of an instructor account, a subdirectory is established in this area using the instructor's last name, and ownership is given to the requesting instructor. Thus for the instructor *Jones*, there would be a directory /u2/instructors/Notes/*Jones* and the URL for *Jones*' web page would be <http://www.apl.jhu.edu/Notes/Jones>.

Tools

The tools needed to create and maintain static web pages generally consist of a tool to create and/or edit a web page and a tool or mechanism to place that web page on the Server in the proper location (see section above). For each of these two general capabilities, there are a large selection of software packages that can be used, each varying in cost, ease of use, and capabilities. For example, web page development could be accomplished with no more than a text editor, performed directly on the Server, a word processor such as MS Word, or fully capable professional Web Development package such as Microsoft's Front Page.

Placing new web pages on the Server can be accomplished through file transfer programs that allow one to upload web pages from a local PC to the Server. These range from simple command-line oriented *ftp* programs such as comes with Windows 95/98/NT, to GUI-based, easy-to-use shareware packages such as **ws_ftp** and **cuteFTP**. However with JHU's imposed security restrictions, something like secure shell (SSH) must be used. A non-commercial version of the "ssh client" program for windows called "SSHSecureShellClient-3.2.9.exe" can be downloaded from: <ftp://metalab.unc.edu/pub/packages/security/ssh/>. In addition, many of the Web page composer programs such as Netscape provide methods to "publish" a new or modified page onto a Server.

A third class of tools that can be very helpful are Unix commands, themselves. There are times when the simplest method of achieving something is to telnet (actually "ssh" for our server) to the Server and use various Unix commands at the command-line prompt to achieve the desired effect (for example, setting up a protected area). Refer to the end of this document for some of the more useful Unix commands.

Steps to Creating A Web Site

The first step is to develop the home web page or starting point, generally off-line (e.g. on a local PC). Other pages would then be created as needed with links to these pages from the home page. Any graphics (gif or jpeg files) or PDF files would be included. The next step involves transferring the pages to the Aplcenmp server. Finally, these pages generally need to be linked to existing pages (if they're additions to an existing site). This last step can involve editing existing instructor web pages, or it may require modifications to the existing system-level web pages. The instructor can perform the former while the latter must be done by the webmaster.

Creating/Modifying A Web Page

There are many ways to create a web page. The easiest way is to a word processor such as Microsoft Word. MS Word 97 or newer has the ability to convert a document into a web page by selecting "Save as HTML..." from the "File" menu. A similar capability exists in MS PowerPoint. However we **strongly discourage** using this feature as it creates a tremendous number of files and uses excessive amounts of disk space. It is far better to convert PowerPoint files into PDF format (see discussion below). Once the web pages are created (either html or pdf format), they can be uploaded to the web site using file transfer as discussed earlier or a "publish" mechanism that is part of many web development tools.

One such web development tool is Netscape Communicator 4.x's Composer program. It provides a **wysiwyg** (what you see is what you get) editor creating new or editing existing web pages. And best of all, it is freeware and runs on PCs, Macs, and Unix systems and provides a built-in *publish* capability. There are, of course, many other more sophisticated web development tools, some shareware, some commercial. Refer to the Netscape documentation or Help files for further details on the use of Composer.

In order to link your document to an existing web page (assuming this is not the top-level *index.html* page, you will need to select a word, phrase, or image and specify that object to be a *link*. How one specifies it to be a link varies with the tool being used. In MS Word, select Insert->Hyperlink and enter the path and filename of the existing web page into the first field in the dialog box. **Note:** The path should be relative to the web page located on the EPP UNIX System Server (in the Notes/<Instructor> subdirectory), not relative to the location of your document on your PC.

Publishing A Web Page

Publishing a web page generally means transferring a locally created or modified page to the server. One of the easiest ways to transfer such files is with one of the many File Transfer Protocol (ftp) programs available for PCs as discussed in the **tools** section above. You will need to transfer any HTML, PDF, and image files that are needed for your web site from your PC to the Server.

Many web development tools also have a "Publish" button that can also upload a web page and associated graphics, etc. For example, Netscape Composer (Versions 4.X and 7.X) have this capability. Commercial products such as Dreamweaver also have something equivalent (as does FrontPage, but is a bit more cumbersome to set up and use). For specific direction on the use of these tools, refer to the tool documentation.

Special Topics

CGI Scripts

Because of security concerns, CGI scripts may only be installed and accessed from an instructor-owned directory. This is true whether you are a student or an instructor. Basically, the instructor is held responsible for CGI scripts that he/she allows in his/her CGI directory. The web server is set up to allow CGI scripts to be run from

/u2/instructors/Notes/CGI/<instructor name>. If you wish to have such a directory made available, contact the [webmaster](#).

Limiting Access (Password Protection)

The simplest way password protect sections of your web pages is to create a subdirectory called “protected” or some such name. Place a file called `.htaccess` in that directory, along with any pages or subdirectories you want to require password access to. The `.htaccess` file is a text file, created with an ASCII editor such as *notepad*. The contents of this file control access to the directory it is in and any subdirectories of that directory. It contains the path to the authorizing files, namely a group file and a user file. The group file lists a group name and all the users in that group. The user file lists all the users and their respective passwords.

To limit access to those members of your class (the most common usage), simply define a single entry in the group file, calling it something like “class”, and have a single user defined in that class. Then the user file contains a single entry corresponding to the user given in the group file, along with associated password. Finally, in the access file, under the LIMIT restrictions, specify that the group called “class” is required. The group file is typically called `.htgroup` and the user file is typically called `.htpasswd`. You generally want the user and group files tucked away somewhere that is not generally accessible—certainly not in the same directory as the access file (`.htaccess`).

Example:

Let's assume that the instructor's home directory is `/u2/instructors/smith` and Ms Smith is interested in protecting some web pages for course 605123.45. She has decided to store the sensitive *group* (`.htgroup`) and *password* (`.htpasswd`) files in a subdirectory called “webpageadmin”. Finally, she has decided to use the Authorization Name “ByPassword” to help provide a hint to the reader as to what is needed to open the page in question. The `.htaccess` file would like something like:

.htaccess

```
AuthUserFile /u2/instructors/smith/webpageadmin/605123.45/.htpasswd
AuthGroupFile /u2/instructors/smith/webpageadmin/605123.45/.htgroup
AuthName ByPassword
AuthType Basic
<Limit GET>
    require group class
</Limit>
```

This file would be located in the directory whose contents are to be protected.

The .htgroup and .htpassword files would be located in /u2/instructors/smith/webpageadmin/605123.45 as specified in the .htaccess file above.

.htgroup

class: 605123.45

.htpasswd

605123.45: eafalmla;iu

Just as .htaccess is created with a text editor, so is the group file (.htgroup). On the other hand, .htpasswd is created with a program called `htpasswd`. Typing the command with no args at the Unix command line prompt will display the syntax of this command.

Conversion of PowerPoint to PDF

To convert a Microsoft PowerPoint (or Word) file into an Adobe Acrobat PDF file, you may wish to use Adobe Acrobat's *Distiller* utility. As an alternative to purchasing and installing Adobe Acrobat, you may obtain a free copy of 602Pro PRINT PACK which is an easy-to-use PDF conversion tool providing fast, one click document conversion. It works independently from Adobe Acrobat and supports any Windows 98/NT/ME/2000/XP application that can print. Copies of 602Pro PrintPack can be obtained from the PTE Education office at APL Center or Montgomery Center. Any document can be converted to PDF Format using the either of these programs simply by selecting the appropriate printer type. For example, to convert a PowerPoint presentation into a PDF file, do the following:

- o Open the presentation (PPT file) in PowerPoint.
- o Select "Print..." from the "File" menu.
- o Select "Acrobat Distiller" from the printer selection (pull-down) menu and then select "OK" to "print".
- o When the "Save PDF File As ..." window pops up, enter the directory filename you'd like to save the new PDF file as and click "OK".

The process is exactly the same for 602Pro except that for a printer type, you must select "Print2PDF". Both a [User's Guide](#) and an [Installation Guide](#) are available on line.

You can view the PDF file using the Adobe Acrobat Reader. Adobe distributes the Reader for free and you may want to include a link to Adobe's web site if you are going to use PDF files on your web site. The Adobe Acrobat Reader can be downloaded from

<http://www.adobe.com/Prodindex/acrobat/readstep.html>

For questions or comments on any of the above, contact [webmaster](#).

Appendix: Useful UNIX commands

- *ls - list, list the contents of the current directory*
- *cd <subdir> - change directory, moves you to a subdirectory. If “cd ..” is used, you will be moved to the directory above the current directory (known as the parent directory)*
- *pwd - path to working directory, provides the absolute path from the root directory to the parent directory*
- *rm <filename> - remove, delete a file. If “rm *” is used, all files in current directory will be deleted.*
- *mv <file1> <file2> - rename, changes the name <file1> to <file2>*
- *mv <file1> <subdir> - move, moves the file to the specified subdirectory or to the parent directory if “..” is used for <subdir>.*