

# 1 Web Services

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Using web services in the UNIX/LIONS Environment.

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## 1.1 Please Read!

LIONS was developed to provide the university with general purpose UNIX-based computing and research facilities. While LIONS is perfectly capable of serving web pages, the University supports an environment that may be more appropriate for departmental and college web sites. Additional information on university web development resources is available at:

<https://www.odu.edu/websolutions/>

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As explained on the [UNIX/LIONS](#) page under the **Introduction to LIONS** tab, faculty and staff may request the ability to host a university related web page from their LIONS account by sending a request to [itshelp@odu.edu](mailto:itshelp@odu.edu) and then creating a `public_html` directory via the directions in the next section. In most cases students may obtain this ability through the authorization of a department representative, meaning, that their instructor or faculty advisor needs to make the request in behalf of the student. **Please note that in neither case is this ability on by default unless it was requested at the time the account was created. Just having a `public_html` directory in your home directory will not make its contents accessible via the web.**

If you wish to house your departmental or organizational web pages under LIONS, we recommend that you do not store them under your LIONS user id. Please contact [webcomm@odu.edu](mailto:webcomm@odu.edu) if you are interested in creating a web presence for your college/department.

## 1.2 DISCLAIMER

**PLEASE NOTE THE FOLLOWING:** While the LIONS support staff maintains the web server software, we are unable to assist with the creation and design of your web site. There are several online tutorials as well as some excellent books on how to make your pages as professional as possible. In addition, the central university web services is more than capable of assistance in creation of web pages which utilize their services. Please view the link above or email [webcomm@odu.edu](mailto:webcomm@odu.edu) for more information.

## 1.3 Creating The `public_html` Directory

Your files should be placed into a folder in your LIONS home directory called

```
public_html
```

This directory should have the proper permissions set so that the web server can access it's contents. (Departmental and organizational directories should already have their permissions set correctly by us. If not, please let us know.) Once we have made your LIONS account "web-capable", please follow these instructions for setting up the `public_html` directory:

1. Log into a LIONS workstation in your department or into [lin-login.lions.odu.edu](http://lin-login.lions.odu.edu). (For help on this, please see the [UNIX/LIONS](#) page under the **Remote Access** tab. **NOTE: You will not be able to log into [www.lions.odu.edu](http://www.lions.odu.edu) as that is a restricted machine and you will see an error message telling you so.**)
2. Once logged in, enter the following command at the unix shell prompt:

```
/afs/lions.odu.edu/noarch/bin/mkpublic_html
```

This command will create your `public_html` directory and set the permissions correctly such that the webserver can access your content.

**Please note that even if you create the `public_html` directory without issuing the "`mkpublic_html`" command, you can always rerun this command over again at any time, and your file permissions will be set properly..**

## 1.4 Creating and Updating your Web Pages

To create/update your pages, you can use these methods:

1. Log into a UNIX workstation in your department or into [lin-login.lions.odu.edu](http://lin-login.lions.odu.edu) and edit your web pages by hand using UNIX utilities such as [vi](#), [GNU nano](#),

etc. This method is probably best for those who like to “get their hands dirty” with raw HTML.

2. Edit your pages “offline” using any one of the available WYSIWYG web development packages such as [Adobe DreamWeaver](#) or a word processor like [Microsoft Word](#). Then, you’ll need to upload the files to the `public_html` folder in your LIONS home directory or departmental/organizational home using either a standard command line-based FTP client or by “dropping and dragging” your files with a graphical FTP client such as WS-FTP.

As a reminder, the LIONS FTP site name is

**ftp.lions.odu.edu.**

If the above is unclear, see the [Web FTP Tutorial](#) at the end of this document.

## 1.5 Accessing Your Web Pages

You may access your personal web pages by pointing your browser to the following URL:

```
http://www.lions.odu.edu/~youruserid
```

where *youruserid* is the name of your LIONS user id.

For departmental pages, they can be accessed by:

```
http://www.lions.odu.edu/dept/departmentname
```

For organizational pages, they can be accessed by:

```
http://www.lions.odu.edu/org/departmentname
```

**Note that *every* directory, including the `public_html` directory, needs to have a `index.html` or `index.htm` file in them. If not, you will receive a *403 Forbidden* error message. The reason for this is to prevent open directories from being exposed to the world.**

## 1.6 Setting Up The “cgi-bin” Directory

Once you have access to display web pages, you also have the ability to create and run CGI scripts. All of your CGI scripts must be placed in a directory called **cgi-bin** located in the `public_html` folder in your home directory. If they’re not there, your CGI scripts won’t work.

To create it, follow these instructions after creating your `public_html` directory as described earlier in this document:

1. Log into **lin-login.lions.odu.edu** or a UNIX LIONS workstation in your department. (NOTE: You will not be able to log into *www.lions.odu.edu* as that is a restricted machine and you will see an error message telling you so.)
2. Next, enter the following two commands at the unix shell prompt:

```
cd $HOME/public_html
mkdir cgi-bin
```

## 1.7 Web FTP Tutorial

This is a very brief tutorial on how to upload your files from a Windows(tm) platform over to the LIONS `public_html` directory for display on the web. Note that this is very command line driven and does not discuss GUI FTP clients.

1. Place the documents that you wish to upload into your "My Documents" folder. This will make things easier later on.
2. Click the 'Start' menu, then 'Run'. In the dialog box under "Open:", type `cmd` and press Enter. This will start up the Command Prompt. You should see a C prompt which looks like this:

```
C:\Documents and Settings\yourusername
```

where *yourusername* is your local account on your machine.

3. Issue

```
cd my documents
```

to go into your "My Documents" folder.

4. Type the following to start the FTP session to the LIONS ftp server:

```
ftp ftp.lions.odu.edu
```

Text similar to the following should now appear:

```
Connected to ftp.lions.odu.edu.
220 Welcome to LIONS FTP service.
Name (ftp.lions.odu.edu:user):
```

At this point, you would type in your LIONS account id and hit Enter. (Note that the examples use *yourusername* - just enter yours instead): The following will now appear:

```
User (ftp.lions.odu.edu:(none)): yourusername
331 Please specify the password.
Password:
```

5. Here is where you type your password. For security reasons, it will not appear when you type it. The 230 message similar to the following will appear when successful:

```
230 Login successful.  
Remote system type is UNIX.  
Using binary mode to transfer files.  
ftp>
```

6. Next, type the following to change path to your `public_html` directory:

```
cd public_html
```

7. To upload files, type the `put` command followed by space and the name of the file to upload. For example, if you're uploading a file called 'index.htm', you would type the following:

```
put index.htm
```

Note that the main document in `public_html` must be either 'index.html' or 'index.htm', otherwise when you use a browser to go to your home directory, you will receive a 403 Forbidden error message.

When the `put` command is finished, a message similar to the following will appear:

```
200 PORT command successful  
150 Opening ASCII mode data connection for index.htm  
226 Transfer complete.  
ftp: nnnnn bytes sent in nn.nnSeconds nnnn.nnKbytes/sec.
```

8. Continue using `put` to upload the rest of the files.
9. When you're finished, type 'quit' and you will exit:

```
ftp> quit  
221 Goodbye.
```

For more details on using FTP, please see the FTP HOWTO document on the [UNIX/LIONS](#) web page.