

## LESSON 5

# Publishing a Web

### **O**BJECTIVES

*You will be able to:*

- describe the Internet connections necessary to publish a Web.
- identify methods of publishing a Web on a local server.
- identify methods of publishing a Web on a remote server.
- use the Web Publishing Wizard.



In this lesson, you will learn how to publish a Web using FrontPage. You will learn what a Web server is and its function for publishing Webs. The types of Internet connections used for publishing and accessing Webs will be covered. You will also learn how to “serve” your Web using a local and remote server.

## Putting Your Web Online

Although going into the details of Web server administration is beyond the scope of this course, there are a few aspects of publishing a Web that should be mentioned. To begin, what is meant by publishing a Web? At its most basic, publishing a Web means giving other users access to your Web pages. Those users might be on the Internet or an internal company network known as an Intranet. They might access the pages from your local computer or a computer to which you upload your files. Which options you choose will depend on the intent of your pages and your audience.

### What is a Web Server?

A Web server consists of a computer connected to the Internet, loaded with specialized software for “serving” files. In order for all the features of your pages to function properly, the pages must be loaded onto a Web server.

The computer can be virtually any type and be using any of the common operating systems (e.g., Unix, Windows98/2002/NT, MacOS, OS/2, etc.). Obviously, the faster the processor the better, but there are Web servers being used that employ everything from 486’s to the latest Pentium models.

What is really referred to as a Web server is the server software application. It takes in requests by Web browsers (client), then fills the request by accessing the files and sending them to the client. This process is accomplished using Hypertext Transfer Protocol (HTTP) to communicate back and forth between server and client.

### Other Functions of Web Servers

Web servers can do much more than just fill requests by browsers. The common functions of Web sites are provided by the Web server software. Each software package will come with a set of features for administering a Web site. A few of the common features are:

- **Processing forms and scripts**

The server acts as the “go-between” for taking in the information on a form or script and accessing the requested files or data.

- **Providing user messages**

When a user tries to access a page that has been moved or no longer exists, it is the servers job to supply a message, such as “404: File Not Found.”

- **Security**

Web servers can be configured for all types of security arrangements. Most of the security involves who is allowed access to the server and what types of actions users are permitted to carry out. Secure Sockets Layer (SSL) is a security protocol that encrypts information being passed between the server and SSL-enabled browsers. You may run across SSL if your Web server is used for electronic commerce involving the use of credit card numbers or other sensitive information.

### **FrontPage Server Extensions**

The intent of the FrontPage Server Extensions is to ensure that the pages you create with FrontPage will be readable by most Web servers. For standard HTML pages with just text and images, the server extensions are of little concern. If you use forms, connect to a database or use other interactive elements, the server extensions become very important. Most of the more popular Web servers are supported with FrontPage extensions and more are being added. Check the Microsoft Web site for updates and to download the extensions (<http://www.microsoft.com/frontpage>).

Getting the extensions may be relatively easy, but that does not always mean you will be able to use them. If you use a Web server that is operated by your Internet Service Provider (ISP), they may not allow you to load the server extensions. Before you begin creating Web pages that require server extensions, be sure to check with your ISP. Sometimes they will permit the use of server extensions, but you may have to pay extra or change the type of connection you are using. If the Web server is operated by your organization, then it will be up to the network administrator to decide whether to allow the server extensions.

If you use the Microsoft Personal Web Server (PWS), which can be installed with FrontPage, the old server extensions can be installed with that server. You can use Microsoft PWS as your Web server software, but it is a fairly stripped down version of server software. It will not be able to handle the burden of a fully active Web site. Also, the latest FrontPage 2002 server extensions cannot be loaded on PWS, they must be installed on a server running Windows 2002, such as Microsoft Internet Information Server.

## **Internet Connections**

There are two types of Internet connections you will be concerned with when publishing a Web. First, the connection between you and the Web server. Second, the connection between the Web server and your users.

### **Your Connection**

Unless you have personal and direct access to the Web server that is connected to the Internet (which certainly has its advantages), you will need to have some sort of

connection to your Web server in order to upload your files. That connection can either be accomplished through dial-up or dedicated lines.

### *Dial-up*

With dial-up, each time you want to use the Internet, you have to dial into your ISP. A device called a *modem* allows your computer to communicate with your ISP's computer over standard telephone lines. Currently, the highest speed modems operate at 56Kbps (56 kilobits per second). That is much faster than older modems, but if you are uploading multimedia files, it can be painfully slow.

Another type of dial-up connection is Integrated Services Digital Network (ISDN). This connection is much faster, up to 128Kbs, and is all digital – making it somewhat more reliable for data communications. Of course the gain in speed and reliability comes at a price. There is usually a fairly hefty installation charge, plus the cost of an ISDN modem and connection charges.

### *Dedicated*

Dedicated connections are essentially high speed data lines that are always connected to the ISP. Many of these connections are some variety of what is known as a T1 line, which carries 1.544 Mbps. Organizations may have a full T1 or “borrow” part of a T1. The bottom line is these connections are very fast and can make your job of sending files much easier.

Other options in this category for the home user include Digital Subscriber Line (DSL) and cable modems. Both are much faster than standard dial-up, but both also have their disadvantages. Cable modem speeds can slow as more users are online because you share the line with those other users. DSL is not available in all communities because you must be close to the phone company's switching center for it to work. In any case, you often hear about the fast speeds of these methods, but something you should be aware of is that those speeds are on the download. Upload speeds, which you are concerned with when publishing a Web, are going to be much slower.

## **Web Server Connection**

Of primary importance to users of your site is how your Web server is connected to the Internet. Your Web server can use anything from a 14.4Kbps modem to a T3 (45Mbps) dedicated leased line. Obviously, the faster the connection the better. As the number of users increases, the connection will begin to slow. To avoid this situation, use a Web server with the highest speed access you can afford.

There are many options for Web server connections. You may be able to “rent” space for your Web on your ISP. If you plan on using an ISP to host your site, be sure to check out what type of connection they are using and the performance you can expect. They should have multiple connections to the Internet, so that if one breaks down the others can fill in.

If you are using the Web site at your organization, you will obviously use whatever connection they are employing. Because most organizations need a fairly high level of connectivity, this is often the ideal situation.

You can always host your own site. If you install FrontPage with Microsoft PWS and you have even a dial-up connection, that is all you need. There are many drawbacks to this method, but if you are only looking to host a few pages for a very small audience it is an option. The next section will cover how to host your own site using FrontPage.

### Using a Local Server

For the purposes of this course, a local server is a Web server on which FrontPage is loaded. In other words, you are not sending your pages to a remote server.

#### Turning Your PC Into a Web Site

No matter if you have a dedicated or dial-up connection, when you establish a connection to the Internet, your Webs can be made available to the world. All you need to do is give out your Internet Protocol (IP) address and anyone can visit your pages. The IP address is akin to your phone number on the Internet. Every computer is assigned an IP number and use those numbers to communicate with one another. The format for IP numbers is always four sets of digits separated by dots (periods) that range from 0 to 255 (e.g., 129.34.136.9). Remember that if you do give out your IP address, any users of your site will have to deal with the speed of your connection.

There are a couple of reasons why this arrangement is not desirable for an everyday connection. First, most organizations (dedicated connection) and ISPs (dial-up connection) assign IP addresses dynamically. This means the IP number for your computer will constantly change, not allowing you to give out a permanent address for your Web server. It is possible to obtain a permanent IP number from your ISP, but can often be quite expensive. Second, you have to have a permanent IP address in order to use a domain name. A domain name is the “human” name given to the IP number. For example, an IP number might be 127.128.4.136, with the domain name being *www.mycompany.com*.

Despite those drawbacks, you will still find uses for this method of publishing a Web. For example, you might give your IP number to colleagues across the country to have them review your pages. Whatever the reason, to be able to direct users to your computer, you must first locate your IP number. You can use FrontPage to find the address by clicking on the **H**elp menu and selecting **A**bout FrontPage. On the dialog box that appears, there is a **N**etwork Test... button that once clicked, allows you to run a test that produces the IP number of the machine you are using. Once you have the IP number, you can then add the Web name and filename to complete the URL (e.g., `http://127.123.65.109/myweb/webpage.htm`).



### Exercise 5-1: Locating Your IP Number

In this exercise, you will locate the IP number of the computer you are using. If possible, you will then give that number to another student to have them access one of the pages you created earlier. Alternately, your instructor may simply conduct a demonstration.

1. If necessary, make a connection to the Internet.

*There is a good chance you are using a dedicated connection. But if you dialing into the Internet, follow your instructors directions on how to connect.*

2. If necessary, open FrontPage.

*For this exercise, it is not necessary to have a Web open.*

3. In FrontPage, from the **H**elp menu, choose **A**bout FrontPage



Figure 5-1: About FrontPage

4. Click **N**etwork Test...

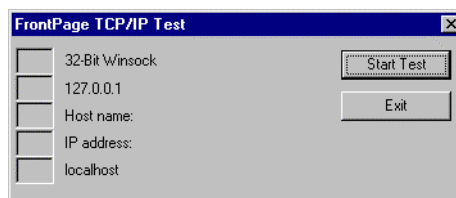
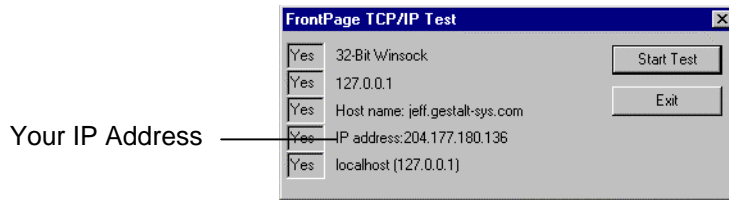


Figure 5-2: Network Test

5. Click **S**tart Test



**Figure 5-3: Results of Network Test**

6. Write down the IP address.
7. Click **Exit**, then **OK**.
8. If possible, give the URL for the **frames** Web and the **frameset.htm** file to a fellow student.

*For example, <http://111.111.111.111/frames/frameset.htm>.*

9. Open Internet Explorer, then type in the URL given to you by another student and you should see his/her page.

### **Web Page Design Tip**

Going through FrontPage Explorer is not the only way to find your IP number. In Windows95, click on **Start**, choose **Run...**, then type **wiipcfg** and click **OK**. This produces a dialog box with your IP number.

### Installing FrontPage Onto an Existing Server

Besides using FrontPage to create and test Web pages, it can be loaded directly onto a Web server. Remember that FrontPage is a site management tool as well as a page editor. You may need to install the server extensions, but FrontPage will work with many of the popular Web server software packages.

Once the server extensions are installed, you can log in and administer a server – assuming that you have permission.

Care must be taken when making updates to a “live” server. Remember that as you save files, they are made available to all users (i.e., they are published). If you want to test pages or need approval before making them public, you will probably want to create your pages on your own computer, then upload them to a primary server.

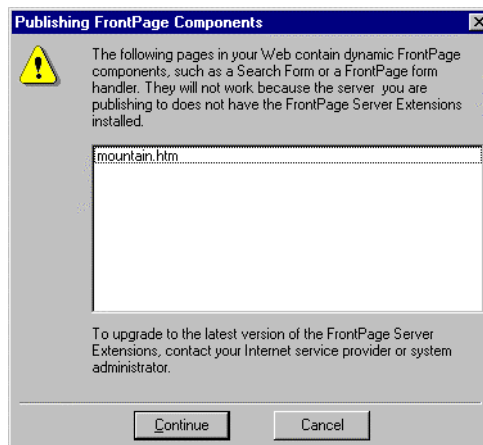
## Using a Remote Server

FrontPage acknowledges the fact that you will often create your files locally, then send them to a remote server located somewhere on the Internet, by including a Web publishing feature. Without FrontPage, most Web page authors use a File Transfer Protocol (FTP) client to upload their files. FTP is an Internet protocol for sending and receiving files. FTP clients are not terribly complicated, but it is another software program to learn. FrontPage eliminates the need to learn to new software and gives you greatly enhanced control over the files you are sending. FrontPage accomplishes the sending of files to a remote server using a “Publish” button.

### The Publish Button

In FrontPage there is a “Publish” button that is used to send your files to a Web server that contains the FrontPage server extensions. Assuming the extensions are installed, all you need to do is click on the “Publish” button and type in the name of the Web server (e.g., `www.isp.com/~username`). You can choose whether you want to send all of the pages or only the ones you’ve just changed. This can save you time, because if you just changed a couple of file only those files are uploaded as opposed to the entire Web. You can also access the publishing feature from the **File** menu, where you can choose another site to send your pages to because FrontPage will default to sending to the location you first chose.

If the server extensions are not installed, you can still use this feature to publish your Web. Simply enter the name of the FTP server instead of the Web server. For example, your site on your ISP might be `http://www.isp.com/jandoe` but for publishing you would enter `ftp://ftp.isp.com/jandoe` (assuming the name of the FTP server is `ftp.isp.com`). This should cause the server to ask for your username and password. Once you’ve entered those items, your files will be uploaded. If you happen to have any content that requires server extensions, at least FrontPage is nice enough to tell you about it. You will receive a message similar to the one below.



**Figure 5-4: FrontPage Component Warning**



### Exercise 5-2: Publishing a Web

In this exercise, you will publish a Web to your Personal Web Server. Normally, you would publish to a remote server, but this will allow you to see how the process works. Alternately, your instructor may simply conduct a demonstration.

1. In FrontPage, open the **frames** Web.
2. Click on the **Publish** button.

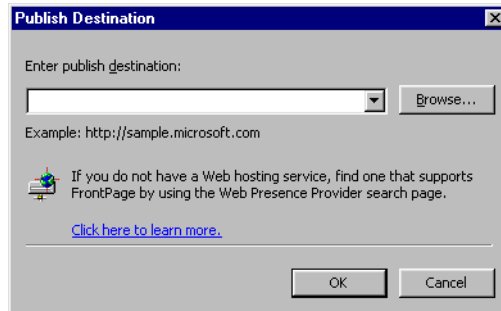


Figure 5-5: Publish FrontPage Web Dialog Box

3. In the Enter publish destination: field, type **http://localhost/frames2**.

*This will publish a copy of this Web onto the same Web server, assuming you have the Microsoft PWS installed.*

4. At the warning message about the Web not existing, click **OK**.
5. Click the **Show** button on the Publish dialog box to view both sites (the current and publish to sites).

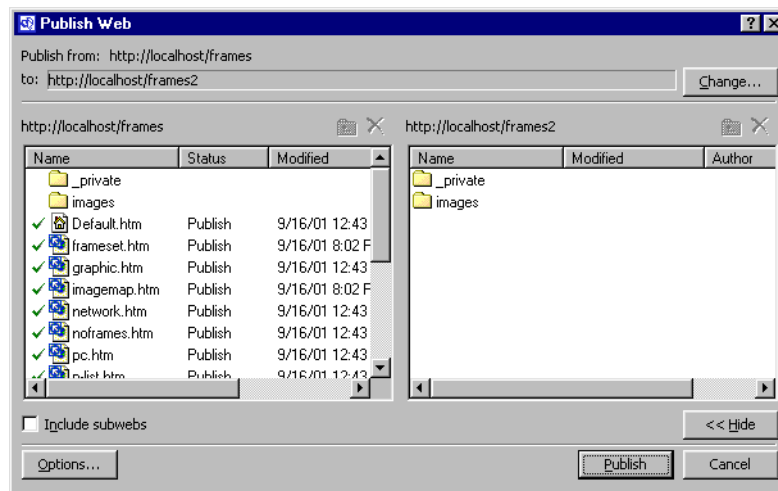


Figure 5-6: Publish Web

*All files with a green check will be “uploaded.”*

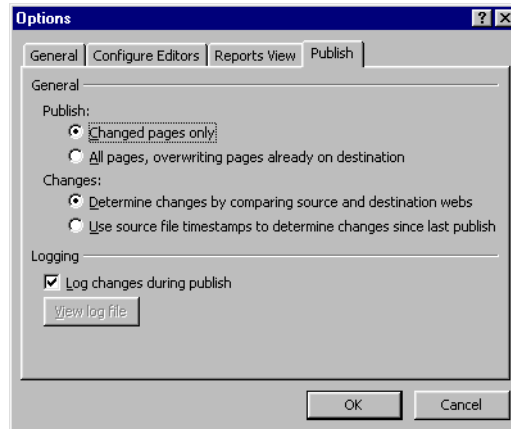
6. Click **Options...**

Figure 5-7: Publish Options

*Here's where you can choose to send only pages that have changed.*

7. Click **OK** to accept the defaults.
8. Click **Publish**.
9. When completed, click the **Done** button.
10. From the **File** menu, select **Open Web** and you should see frames2 as one of the Webs.

*To test the publishing of only changed pages, you can open the frames Web, change something on one of the pages, then publish and only the page you change should be uploaded.*

## Review

In this lesson, you learned what is involved in having your Web pages published. You have been introduced to the functions of a Web server. You also learned the Internet connections that are available to you and your users. You located your IP number for use in serving your pages to other users and used the "Publish" button to publish a Web to your Personal Web Server.