MIS6070

Web Based Information Systems

Lesson 6

Installing and Configuring a Web Server

- Apache is the most popular Web server software used on the Internet
- Microsoft IIS for Windows is the second most popular server software
- In Windows, a **service** refers to a program that performs a specific function to support other programs

Installing and Running Apache on UNIX and Linux

1. Go to **http:/httpd.apache.org/download.cgi**
2. Run the `gunzip` command:
   `gunzip httpd-2.0.52.tar.gz`
3. Run the `tar` command:
   `tar xvf httpd-2.0.52.tar`
4. Change to the http-2.0.52 directory:
   `cd httpd-2.0.52`
5. Run the `configure` command:
   `./configure`

Installing and Running Apache on UNIX and Linux

6. Compile the Apache source code with the **`make`** command
7. Run the **`make install`** command in the httpd-2.0.52 directory
8. Start, stop, and restart Apache using the **`apachectl`** control script

Installing and Running Apache on Windows

1. Go to **http:/httpd.apache.org/download.cgi**
2. Download the **apache_2.0.52-win32-x86-no_ssl.msi** installation file
3. Navigate to the installation file and from the Welcome screen, click **Next**
4. Accept the terms of the License Agreement, click **Next**
5. Read the contents of the Read This First screen, click **Next**

Installing and Running Apache on Windows

6. Accept the default values, click **Next**
7. Select a **Typical** installation, click **Next**
8. Accept the default Destination Folder directory, click **Next**
9. Click **Back** to make changes or click **Install** to finish
10. Click **Finish**

Installing and Running Internet Information Services on Windows

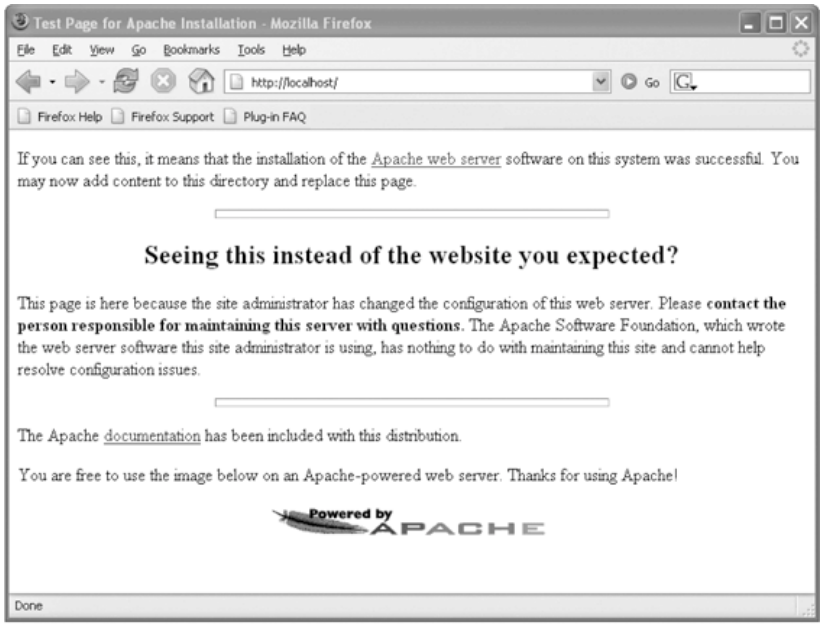
1. Open the **Control Panel** from the **Start** menu
2. If using Windows XP, select **Switch to Classic View**
3. Select the **Add or Remove Programs** icon
4. Click **Add/Remove Windows Components**
5. Click the check box next to Internet Information Services (IIS), click **Next**

Installing and Running IIS on Windows

6. After the installation is complete, click **Finish**
7. If prompted, restart Windows otherwise close the Control Panel

Testing Your Web Server

1. Open your Web browser
2. Type **http://localhost/** in the Address box, click **Enter**



Apache's default Web page

Testing Your Web Server (continued)

3. Type **http://127.0.0.1/** in the Address box, click **Enter**

Web page informing you that IIS is running

Configuring Apache

- To configure ports and other settings you must edit the **httpd.conf** file
- For UNIX/Linux
  - /usr/local/apache2/conf
- For Windows
  - C:\Program Files\Apache Group\Apache2\conf
- Lines that begin with the pound sign (#) are informational comments
- Lines without pound signs contain **directives**

Configuring Apache

httpd.conf - Notepad

File Edit Format View Help

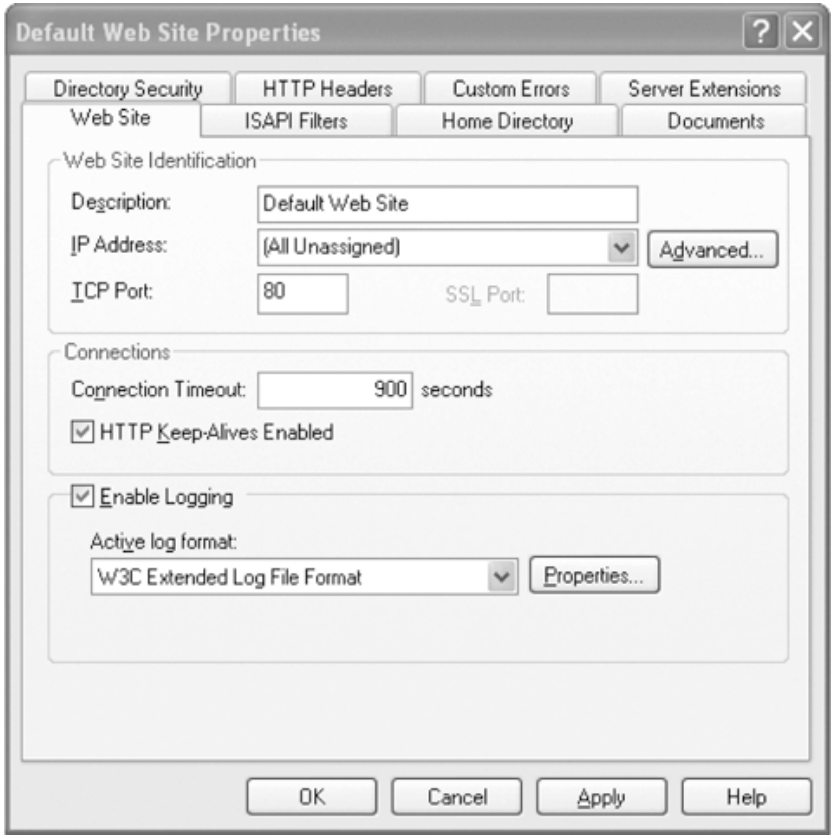
```
#
# Listen: Allows you to bind Apache to specific IP addresses and/or
# ports, instead of the default. See also the <VirtualHost>
# directive.
#
# Change this to Listen on specific IP addresses as shown below to
# prevent Apache from glomming onto all bound IP addresses (0.0.0.0)
#
#Listen 12.34.56.78:80
Listen 80

#
# Dynamic Shared Object (DSO) Support
#
# To be able to use the functionality of a module which was built as a DSO
you
# have to place corresponding `LoadModule' lines at this location so the
# directives contained in it are actually available _before_ they are used.
# Statically compiled modules (those listed by `httpd -l') do not need
# to be loaded here.
#
# Example:
# LoadModule foo_module modules/mod_foo.so
#
LoadModule access_module modules/mod_access.so
LoadModule actions_module modules/mod_actions.so
LoadModule alias_module modules/mod_alias.so
LoadModule asis_module modules/mod_asis.so
LoadModule auth_module modules/mod_auth.so
```

httpd.conf

Configuring Apache

- **Directives** define information about how a program should be configured
- The `DocumentRoot` directive identifies the default directory from where Apache serves Web pages
- The `Alias` directive identifies other directories that Apache can use to serve Web pages

Configuring Internet Information Services



Default Web Site Properties dialog box

Installing PHP on UNIX and Linux Systems Running Apache

1. Go to **http://www.php.net/downloads.php**
2. Run the `gunzip` command:
   `gunzip php-5.0.3.tar.gz`
3. Run the `tar` command:
   `tar xvf php-5.0.3.tar`
4. Change to the php-5.0.3 directory:
   `cd php-5.0.3`
5. Run the `configure` command:
   `./configure`

Installing PHP on UNIX and Linux Systems Running Apache

6. Compile the PHP source code with the `make` command
7. Run the `make install` command in the php-5.0.3 directory
8. Specify which configuration file you want to use with PHP:
   `cp php.ini-dist /usr/local/lib/php.ini`

Installing PHP Windows Running Apache or IIS

1. Go to **http://www.php.net/downloads.php** and download the latest Windows binary installer
2. Navigate to the installation file and from the Welcome screen, click **Next**
3. In the License Agreement screen, click **I Agree**
4. In the Installation Type screen, select **Standard**, then click **Next**
5. Accept the default destination location, click **Next**

Installing PHP Windows Running Apache or IIS

6. In the Mail Configuration screen, accept the default values of **localhost**, click **Next**
7. In the Server Type screen, select the type of Web server that you want to use with PHP, click **Next**
8. In the Start Installation screen, click **Next** to begin installation
9. Click **OK** to close the dialog box of the Web server you selected

Configuring Apache for PHP on UNIX/Linux Platforms

1. Open the **httpd.conf** file from the **/usr/local/apache2/conf** directory
2. Search for the `LoadModule` directive:
   `LoadModule php5_module libexec/libphp5.so`
3. Add the `AddType` directive to the end of the file:
   `AddType application/x-httpd-php .php`
4. Save and close the **httpd.conf** file
5. Restart Apache with the command:
   `/usr/local/apache2/bin/apachectl restart`

Configuring Apache for PHP on Windows

1. Click the **Start** menu and point to **All Programs**
2. Select the **Edit the Apache httpd.config Configuration File** command
3. Add the following to the end of the file:

```
ScriptAlias /PHP/ "C:/PHP/"
AddType application/x-httpd-php .php
Action application/x-httpd-php "/PHP/php-cgi.exe"
```

4. Save and close the **httpd.conf** file
5. Restart Apache and select the **`Restart`** command

Configuring PHP

php.ini - Notepad

File Edit Format View Help

```
;;;;;;;;;;;;;;;;;;;;
; Resource Limits ;
;;;;;;;;;;;;;;;;;;;;

max_execution_time = 30     ; Maximum execution time of each script, in seconds
max_input_time = 60     ; Maximum amount of time each script may spend parsing request
data
memory_limit = 8M      ; Maximum amount of memory a script may consume (8MB)


;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
; Error handling and logging ;
;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;

; error_reporting is a bit-field.  Or each number up to get desired error
; reporting level
; E_ALL              - All errors and warnings (doesn't include E_STRICT)
; E_ERROR            - fatal run-time errors
; E_WARNING          - run-time warnings (non-fatal errors)
; E_PARSE            - compile-time parse errors
; E_NOTICE           - run-time notices (these are warnings which often result
;                      from a bug in your code, but it's possible that it was
;                      intentional (e.g., using an uninitialized variable and
;                      relying on the fact it's automatically initialized to an
;                      empty string)
; E_STRICT                    - run-time notices, enable to have PHP suggest changes
;                      to your code which will ensure the best interoperability
;                      and forward compatibility of your code
; E_CORE_ERROR       - fatal errors that occur during PHP's initial startup
; E_CORE_WARNING     - warnings (non-fatal errors) that occur during PHP's
;                      initial startup
```

The php.ini configuration file

Installing and Configuring MySQL on UNIX and Linux

1. Go to **http://dev.mysql.com/downloads/** and download the latest version of MySQL
2. Create a separate group and user named for running MySQL:
   ```
   groupadd mysql
   useradd -g mysql mysql
   ```
3. Run the **`gunzip mysql-4.1.9.tar.gz`** command
4. Run the **`tar xvf mysql-4.1.9.tar`** command
5. Change to the **`mysql-4.1.9`** directory

Installing and Configuring MySQL on UNIX and Linux

6. Run the **`./configure`** command
7. Compile the MySQL code with the **`make`** command
8. Run the **`make install`** command
9. Change to the scripts directory
10. Run the **`mysql_install_db --user=mysql`** script
11. Run the ownership commands:

```
chown -R root /usr/local/mysql
chown -R mysql /usr/local/mysql/var
chgrp -R mysql /usr/local/mysql
```

Installing and Configuring MySQL on Windows

1. Go to **http://dev.mysql.com/downloads/**
2. Open Windows Explorer or My Computer and start the MySQL installation
3. In the Welcome screen, click **Next** to start the installation
4. Accept the default setup type **Typical**, click **Next**
5. Click **Back** to make changes or click **Install** to continue

Installing and Configuring MySQL on Windows

6. Create a new account or skip sign-in, click **Next**
7. In the Wizard Completed screen, click **Finish**
8. In the first screen of the MySQL Server Instance Configuration Wizard, click **Next**
9. In the Configuration Type screen, select **Standard Configuration**, click **Next**

Installing and Configuring MySQL on Windows

10. In the Windows Options screen, accept the default values (***do not select*** the Include Bin Directory in Windows PATH check box), click **Next**
11. In the Security Options screen, deselect the **Modify Security Settings** check box, click **Next**
12. Click **Back** to change any of the configuration operations or **Execute** to finish

Testing the MySQL Server

1. Check to see if MySQL is running
   - For UNIX/Linux systems:

     `/usr/local/mysql/bin/mysqld_safe --user=mysql &`
   - For Windows, use the Services window
2. Run the `mysqladmin version` command
   - For UNIX/Linux systems:

     `/usr/local/mysql/bin/mysqladmin version`
   - For Windows, change to the C:\Program Files\MySQL\MySQL Server 4.1\bin\ directory and run:

     `mysqladmin version`