

Discovering HTTP Server (powered by Apache) on iSeries

By Jim Fall

Do you find yourself in this situation?

You've got a tried and true RPG 5250 application built on a hardware platform with a world-class database. But now you're feeling uneasy because the rest of the IT world is talking about e-business and your users are asking for an interface to your application from a browser on the World Wide Web.

Now your boss has asked you to research what you'll need to web-enable your application. Where do you start? You do some research and determine that you're going to need something called a hyper-text transfer protocol (HTTP) server (also called a webserver). Where are you going to find one of those? And what new hardware is required to run one?

The answer may be very simple... Did you know that there may already be one installed on your iSeries machine?

The IBM HTTP Server (Powered by Apache) is included with the IBM HTTP Server product (5722-DG1). Apache, a freeware HTTP server, is open-source software that implements the industry standard HTTP/1.1 protocol with a focus on being highly configurable and extensible.



Dating back to OS/400 V4R3, IBM has been shipping a webserver in the IBM HTTP Server product (5769-DG1). The IBM HTTP server is a no-charge licensed program product. The server software is part of the bonus pack, which is included with every AS/400 or iSeries machine shipped since V4R3.

In V4R3, the HTTP server is based on the IBM HTTP (originally Domino Go) server technology.

IBM HTTP Server (powered by Apache)

In December of 2000, IBM shipped the IBM HTTP Server (Powered by Apache) for iSeries on OS/400 V4R5. The server is based on the Apache Software

Foundation's open-source HTTP server technology. Today, 5722-DG1 includes two versions of HTTP server. While servers of both types can coexist on the same iSeries system, IBM's strategic direction for all platforms, including iSeries, is Apache-based servers.

Apache is an industry-standard, robust HTTP server. In fact, studies indicate that over half of the web sites on the internet are served by an Apache server. Apache is supported on over 30 different hardware platforms and a variety of operating systems.

Collaborative development of the Apache server is carried out by an organization called the Apache Software Foundation (www.apache.org). Source code and documentation for the server is provided on the Web, and numerous textbooks and articles have been written about the Apache server.

ADMIN HTTP server

When setting up an HTTP server, a Web administrator must define a set of rules for the server. For example, the Web administrator must define the users that will be allowed access to your web site. The administrator must also define which set of resources the HTTP server needs to serve to this set of users. The rules for the HTTP server are stored in a text file called the HTTP server configuration file. Keywords within the configuration file are called directives. Each directive has a different purpose and helps define the rules for the server. The Apache server has over 200 different directives that can be specified in a configuration file.

This rich set of Apache configuration options also adds a degree of complexity to the task of HTTP server configuration. On many platforms where Apache is supported, the Web administrator performs Apache configuration by editing a raw text configuration file. This method of configuration requires an in-depth knowledge of all of the Apache configuration directives, including their syntax. To aid an iSeries Web administrator with HTTP server configuration, IBM ships a special server with the DG1 product called the ADMIN server.

The ADMIN server provides a browser-based graphical user interface for configuring and managing the HTTP server (powered by Apache). The interface allows a web administrator to start, stop, and configure the HTTP server.

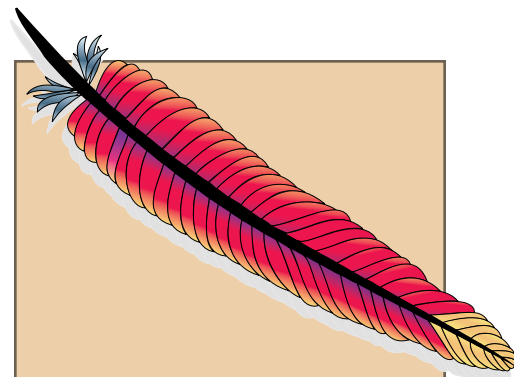
Web Application Development Support

In addition to serving up a web site consisting of static Hyper Text Markup Language (HTML) pages, Apache can serve other types of web sites. Web programmers may choose to write Common Gateway Interface (CGI) programs to create dynamic web site content. A specialized CGI program called Net.Data is shipped with 5722-DG1. Net.Data is a scripting language that helps to simplify the task of web-enabling an application. Dynamic information can be inserted into a HTML page through the use of Server Side Include (SSI) tags. Lastly, an Apache plug in for WebSphere is available on iSeries to enable WebSphere Application Server with Apache. The WebSphere Application Server may be of interest to the Java web application developer wishing to write an application using Java servlets or Java Server Pages (JSPs). For more information on the HTTP Server (Powered by Apache), visit www.ibm.com/servers/eserver/iseries/software/http.



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[To learn more about the HTTP server (Powered by Apache), join us at the September TUG meeting of the members. See "The Agenda", on page 8 for more details.]



The Apache Software Foundation

The Apache Software Foundation provides support for the Apache community of open-source software projects. The Apache projects are characterized by a collaborative, consensus based development process, an open and pragmatic software license, and a desire to create high quality software that leads the way in its field. They consider themselves not simply a group of projects sharing a server, but rather a community of developers and users.

You are invited to participate in The Apache Software Foundation. They welcome contributions in many forms. Membership consists of those individuals who have demonstrated a commitment to collaborative open-source software development through sustained participation and contributions within the Foundation's projects. For more information browse to: <http://www.apache.org>



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