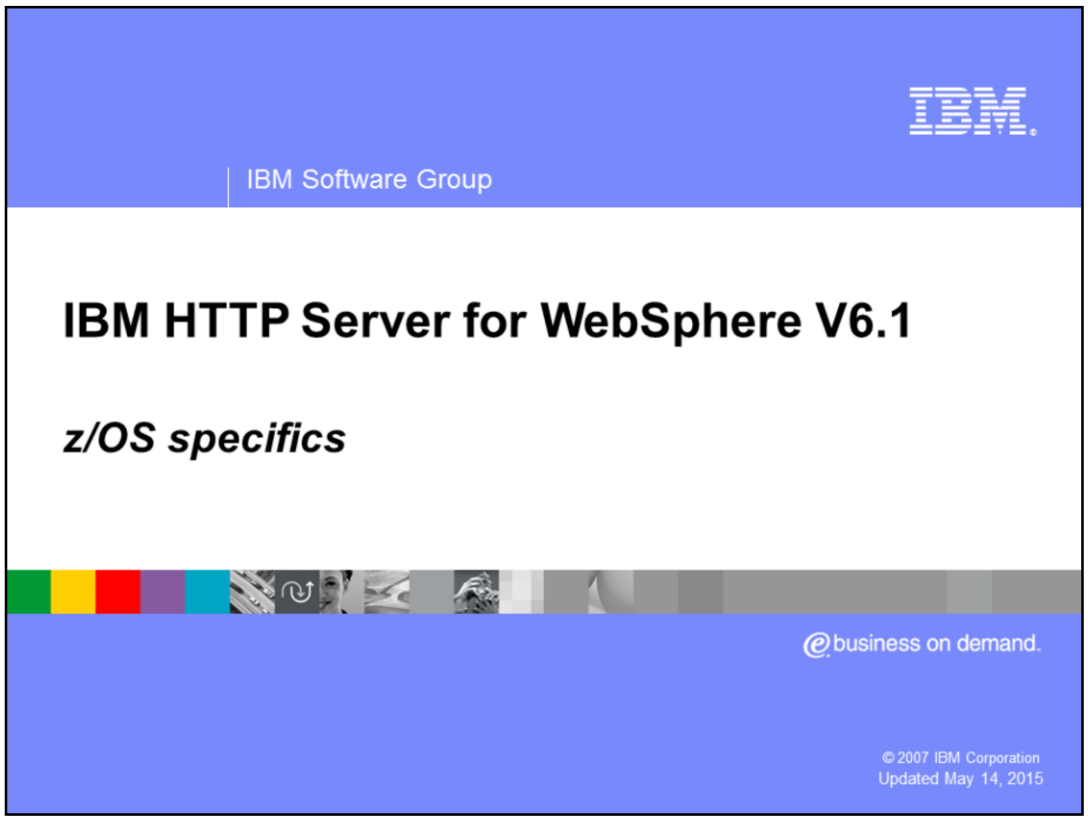
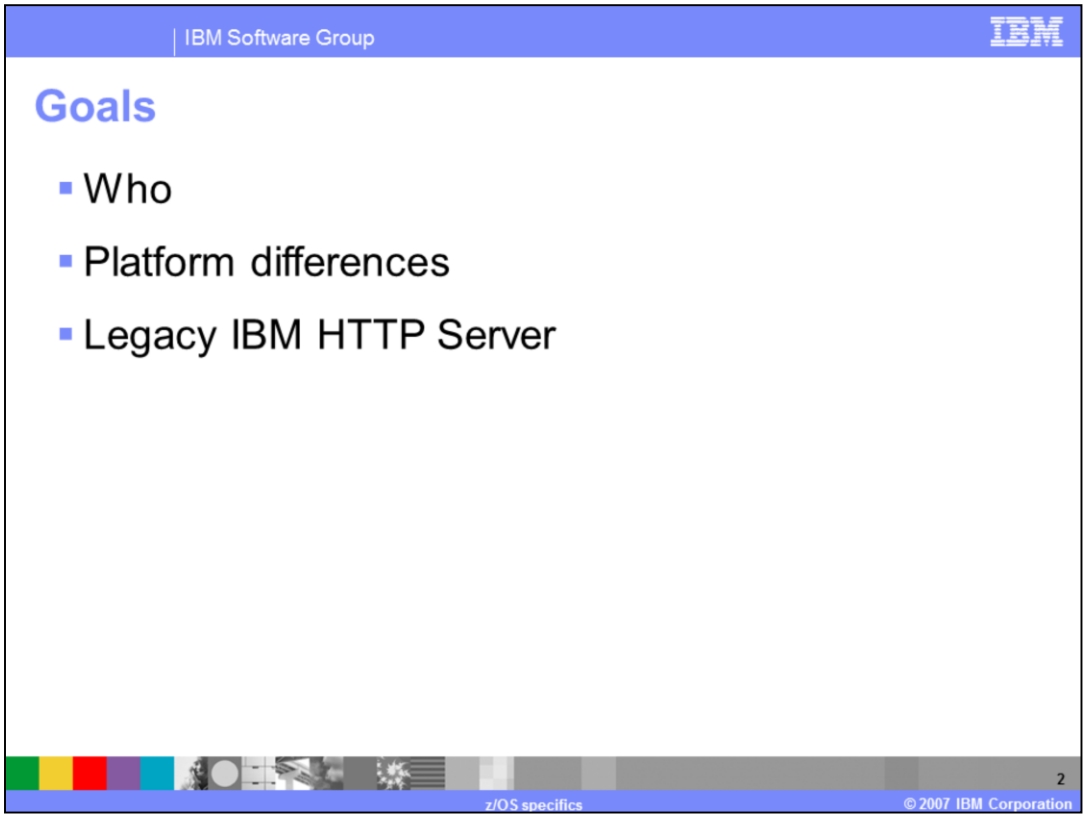
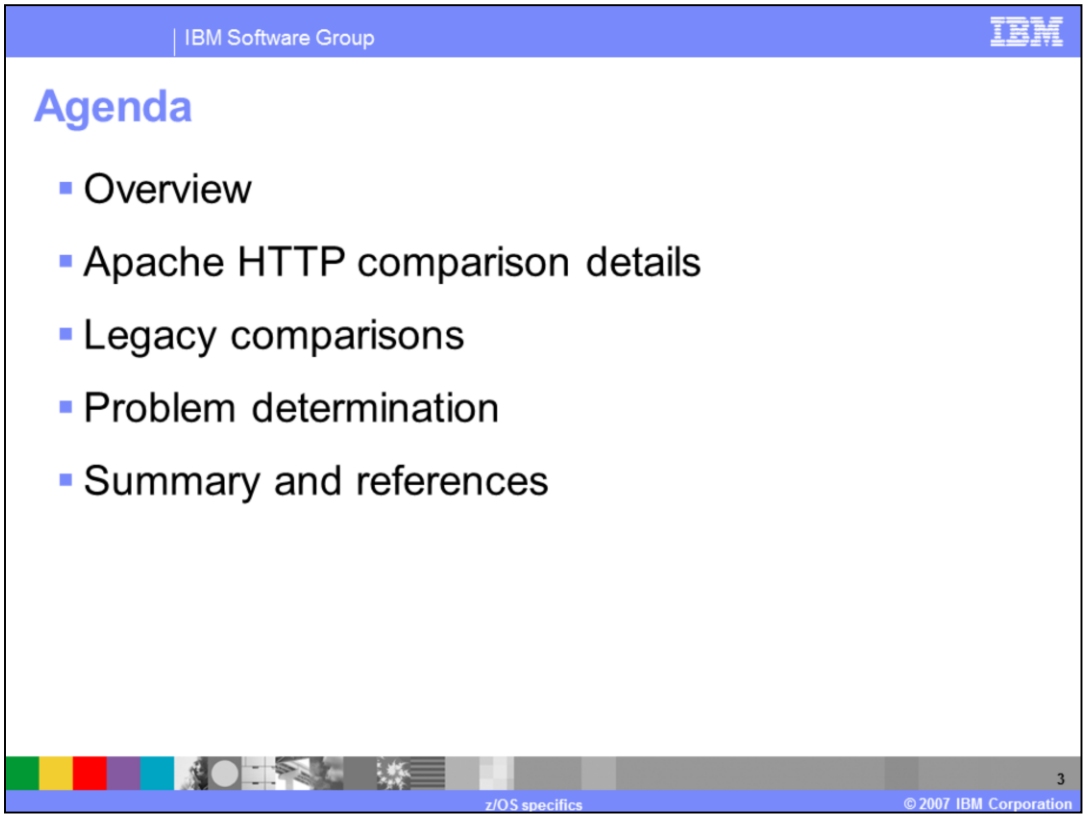


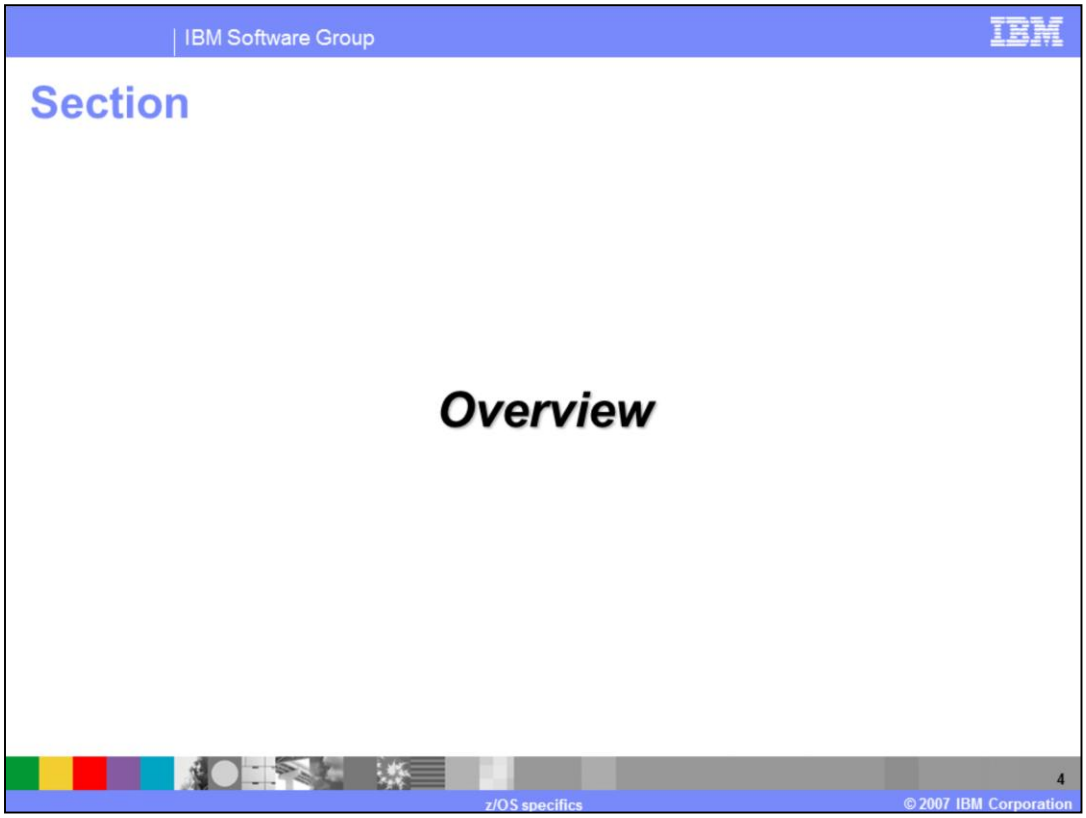
This presentation discusses the new IBM HTTP Server for WebSphere® V6.1 on a z/OS® platform.



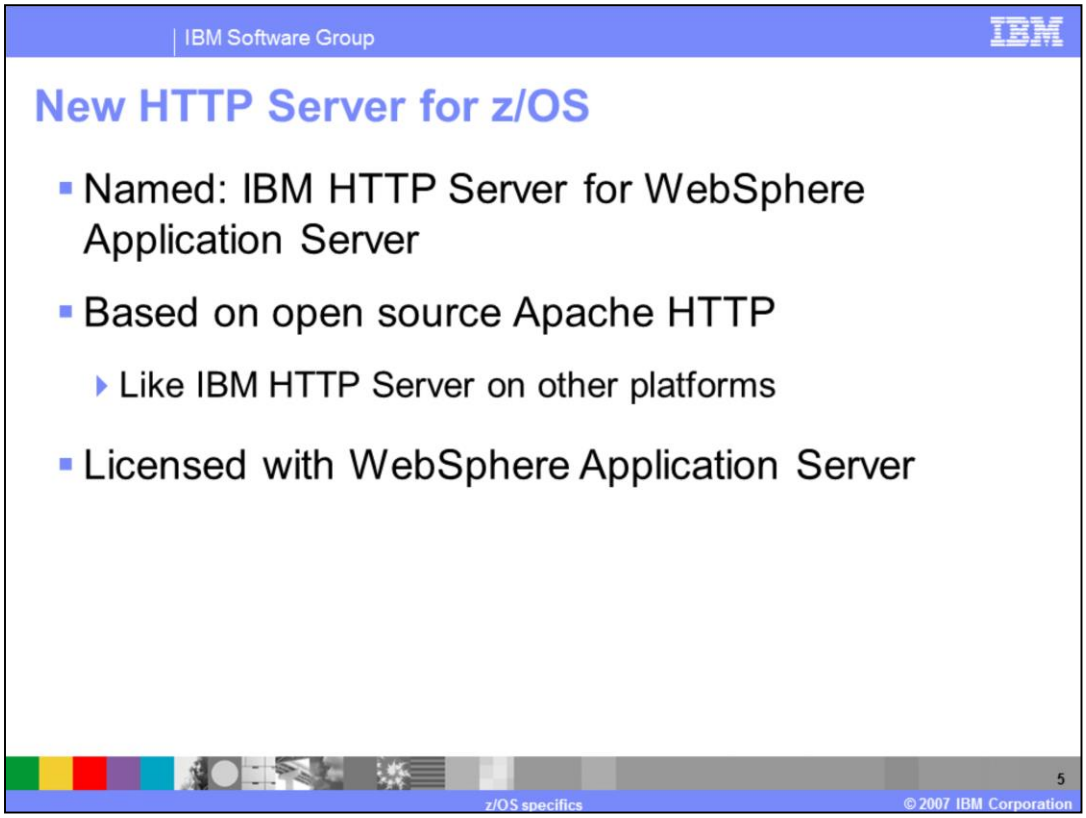
This presentation assumes you have a working knowledge of Apache HTTP servers or IBM HTTP Server for WebSphere found on distributed platforms. You will learn the differences between the various IBM HTTP Server products. The IBM HTTP Server for WebSphere found on distributed platforms is very similar to IBM HTTP Server for WebSphere on z/OS and an Apache HTTP server. At the same time, there are more differences with the legacy IBM HTTP Server packaged with the z/OS operating system and referred to as the legacy IBM HTTP Server in this presentation.



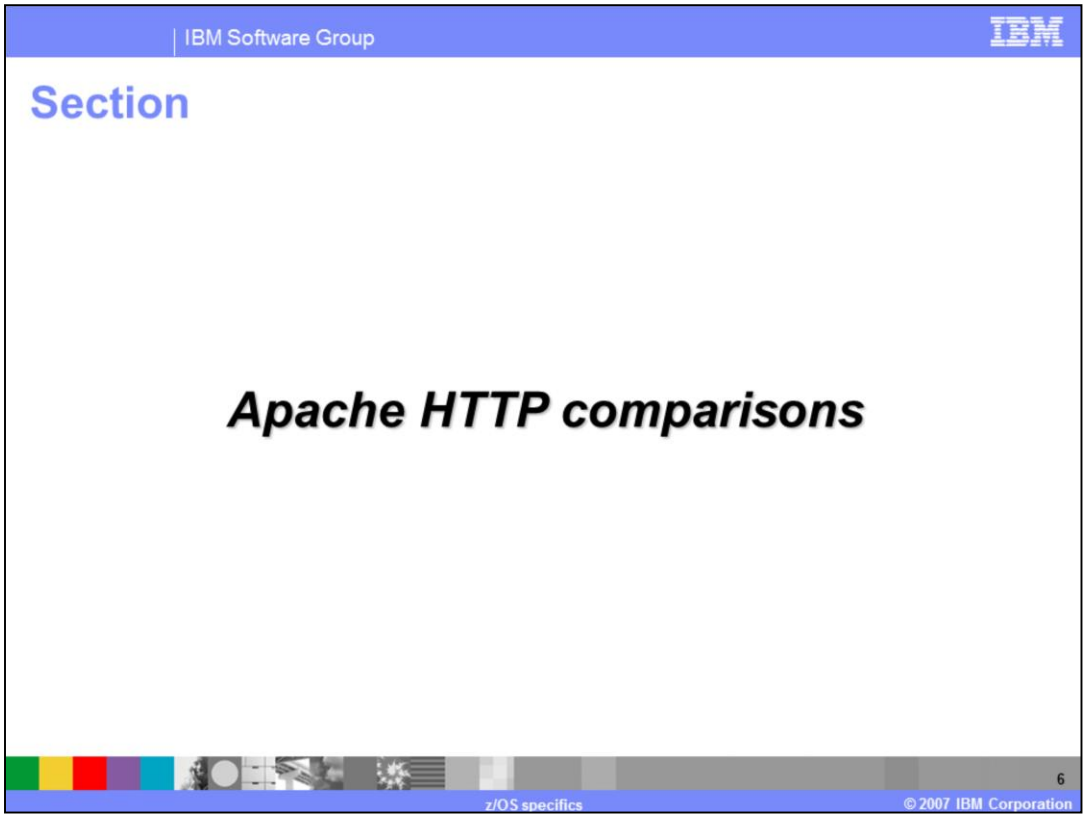
This presentation will first look at IBM HTTP Server for WebSphere Application Server on z/OS and then discuss the differences with other Web servers. The reference section contains considerable additional documentation.



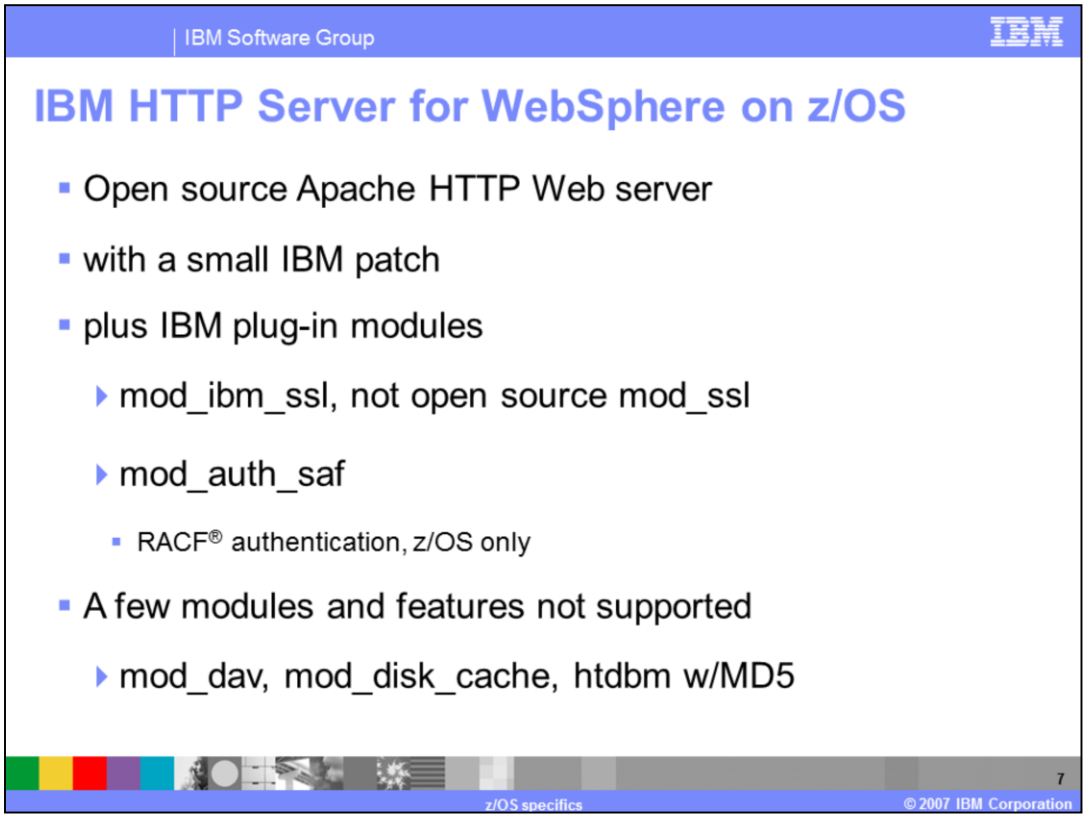
This section introduces IBM HTTP Server for WebSphere Application Server on z/OS.



The IBM HTTP Server for WebSphere Application Server for z/OS is the same Web server packaged with the distributed version of WebSphere application. Unlike the IBM HTTP Server packaged with the z/OS operating system, IBM HTTP Server for WebSphere is based on the Apache Web server. The IBM HTTP Server packaged with the z/OS operating system is based on Domino® Go. The main advantage to using this version is you can define the Web server actions in the same manner you define these actions on your distributed platforms. Furthermore the Apache Web server design allows adding extensions (modules) that are created and shared by a large open source community. IBM HTTP Server for WebSphere Application Server requires a WebSphere Application Server license on all LPARs where it runs.

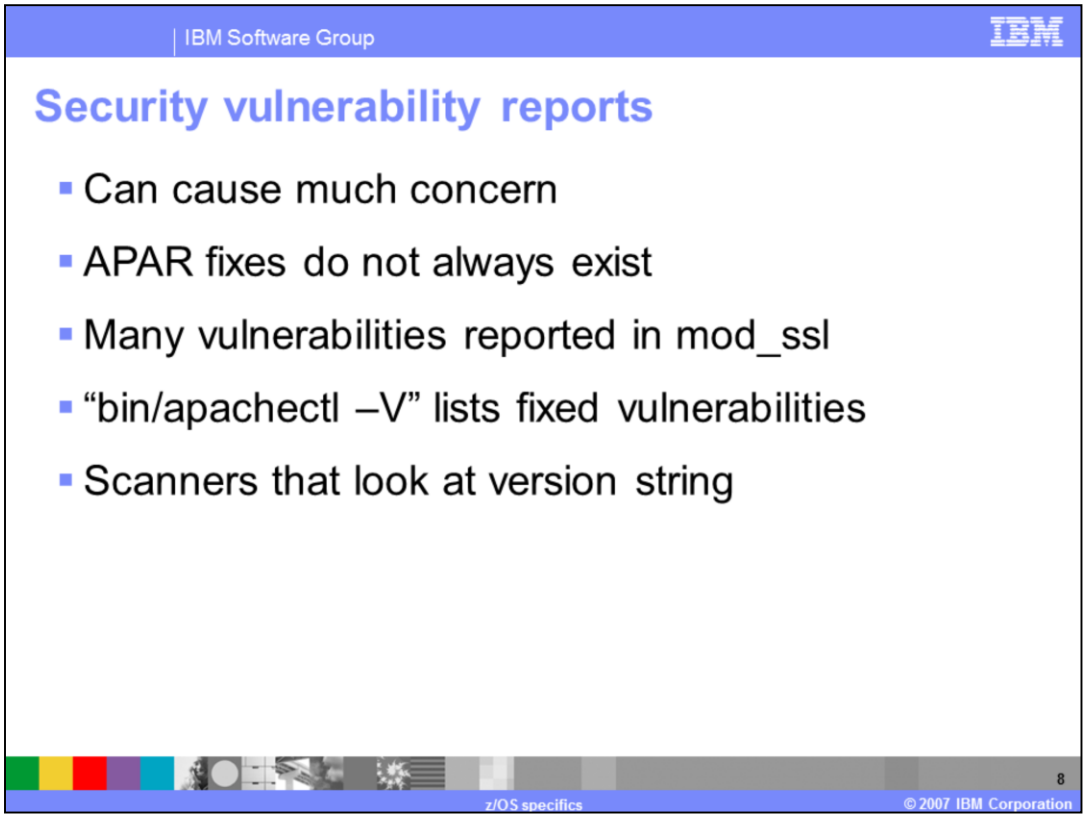


This section compares IBM HTTP Server for WebSphere with the Apache HTTP server.



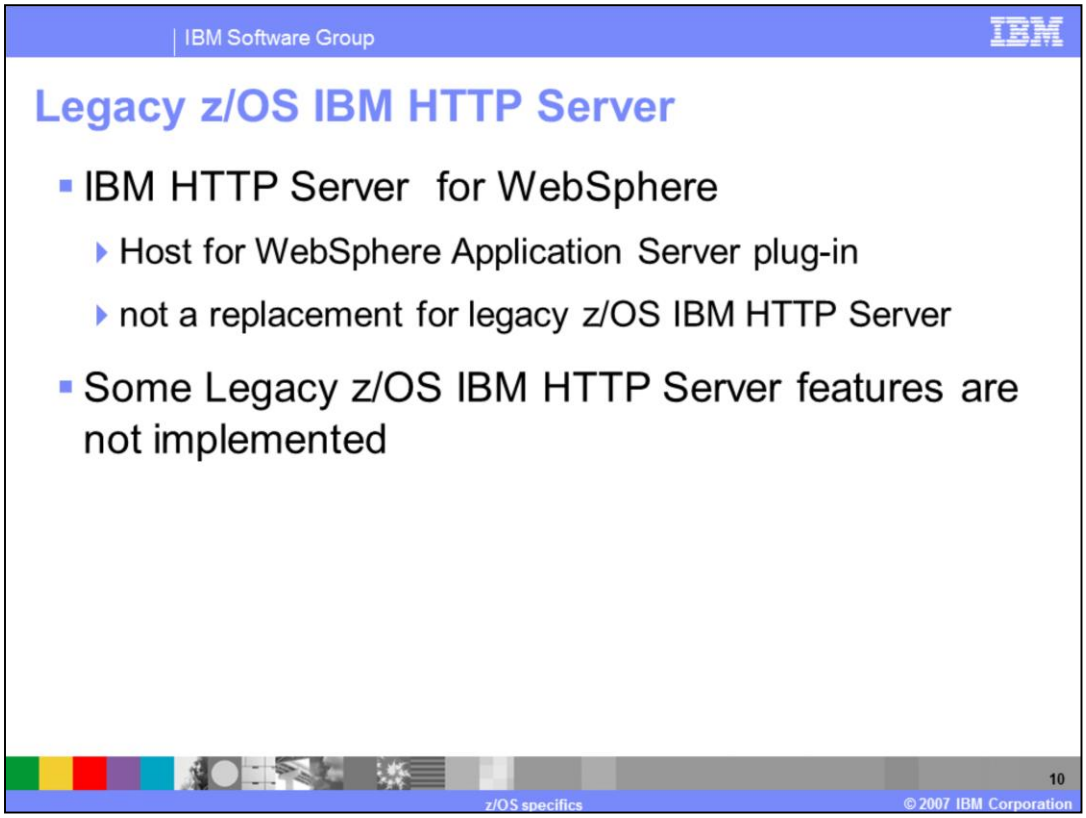
On z/OS platforms, IBM HTTP Server for WebSphere is an implementation of the Apache Web server expressly for running on z/OS with only slight variations from IBM HTTP Server found on distributed platforms. Both of these Web servers are implementations of the Apache Web server with minor differences. First of all there is a small IBM patch to generically improve Apache and is found on all platforms. Also on all platforms is an improved SSL module labeled mod_ssl_ibm. On z/OS platforms there are modules to take advantage of the improved security offered by SAF and convert text between ASCII and EBCDIC. There are a few modules that are not relevant on z/OS: mod_dav, mod_disk_cache and htdbm with MD5. In the mod_dav module, the DAV stands for Distributed Authoring and Versioning.

This extension to the HTTP protocol allows creating, moving, copying, and deleting resources and collections on a remote Web server. The module mod_disk_cache implements a disk based storage manager. The module htdbm is used to manipulate the data base management format files used to store usernames and password for basic authentication of HTTP users.

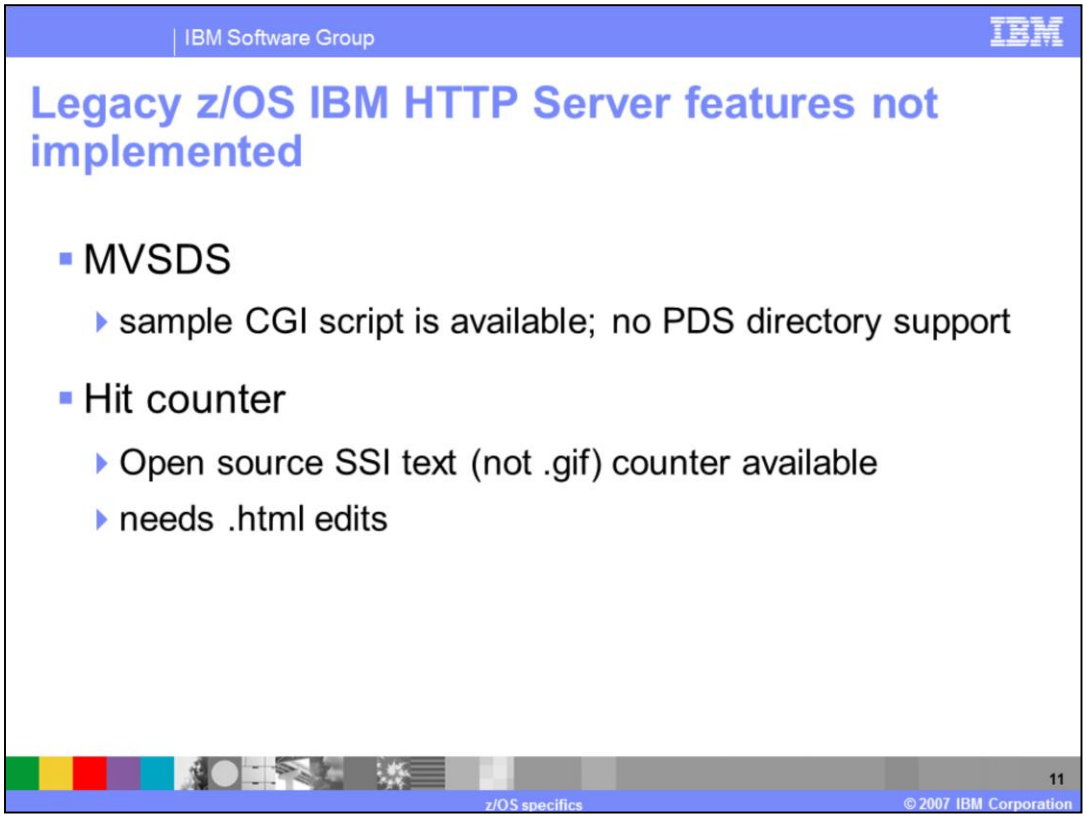


Security vulnerability reports are generated in the greater Apache HTTP server community. This is a great service; however you should be aware that many of these problems are not applicable to the IBM HTTP Server for WebSphere product. Several of these reports are about the Apache module mod_ssl. Since the IBM version uses mod_ibm_ssl on all platforms, these reports are not relevant to IBM HTTP Server for WebSphere. The command “bin/apachectl –V” will list all the vulnerabilities that have been fixed. There are many scanners that look at the version string for an Apache HTTP server and report vulnerabilities that have not been fixed in a deployed Apache HTTP server. For the reasons just mentioned, you have to be careful that the vulnerabilities reported by these scanners are applicable to IBM HTTP Server for WebSphere.

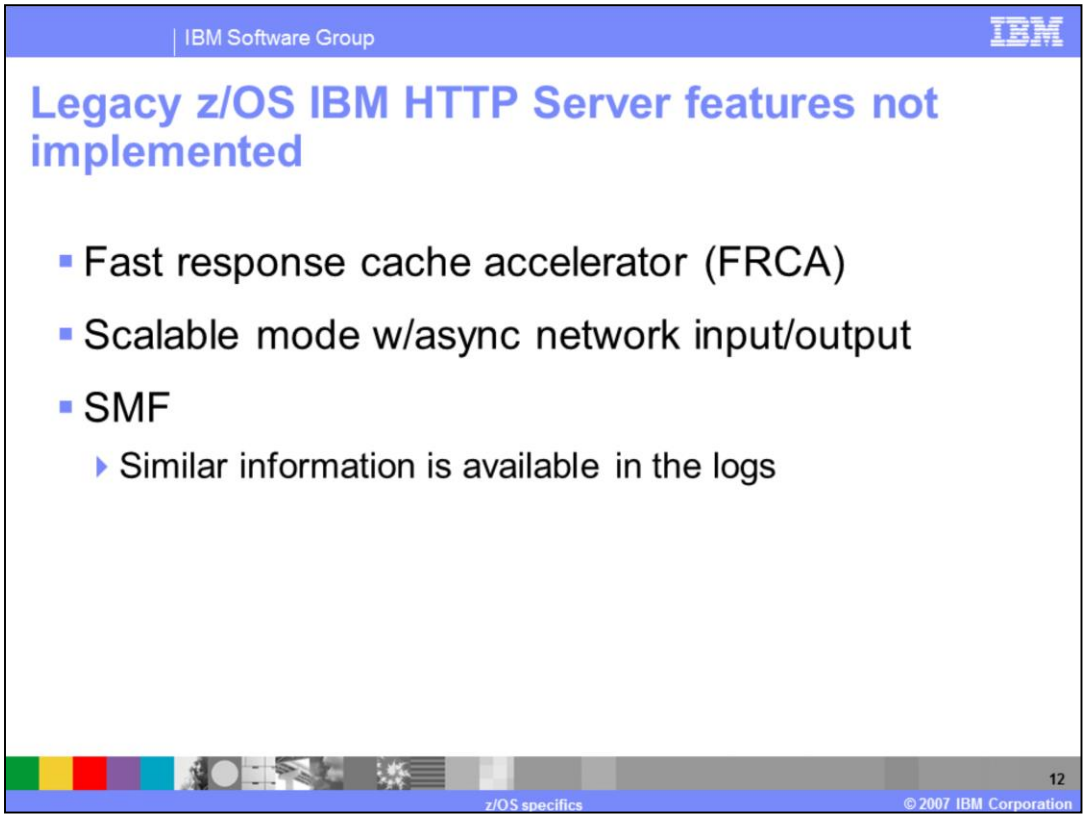
This section addresses the differences between IBM HTTP Server for WebSphere and the legacy IBM HTTP Server packaged with the z/OS operating system.



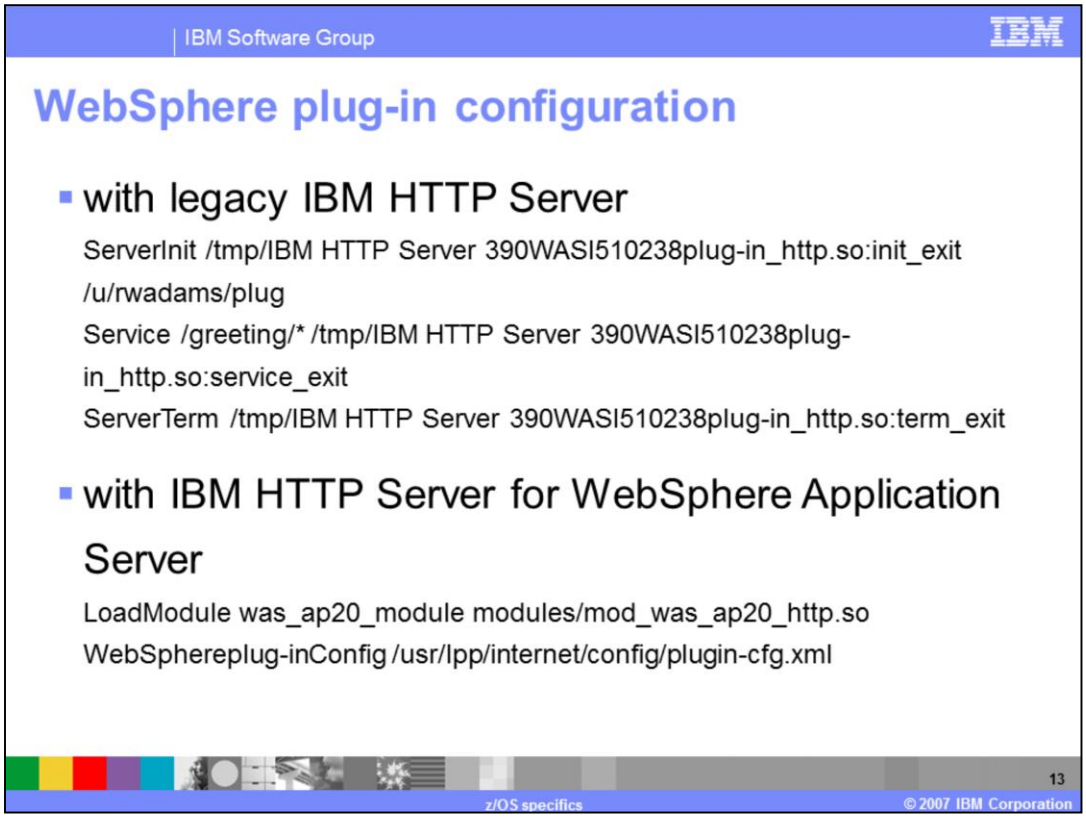
IBM HTTP Server for WebSphere is intended to host a WebSphere plug-in with the same semantics as found in IBM HTTP Server on distributed platforms. As already mentioned there are few differences between IBM HTTP Server for WebSphere on all platforms. While both legacy IBM HTTP Server and IBM HTTP Server for WebSphere can host a WebSphere plug-in, there are several differences between IBM HTTP Server for WebSphere and the legacy IBM HTTP Server on z/OS. In general, the legacy IBM HTTP Server has been established for some time and supports some z/OS specific functionality. The new IBM HTTP Server for WebSphere is Apache based and through the extended community has a richer base of functionality. The following pages detail some of the features in the legacy IBM HTTP Server that are not present in IBM HTTP Server for WebSphere.



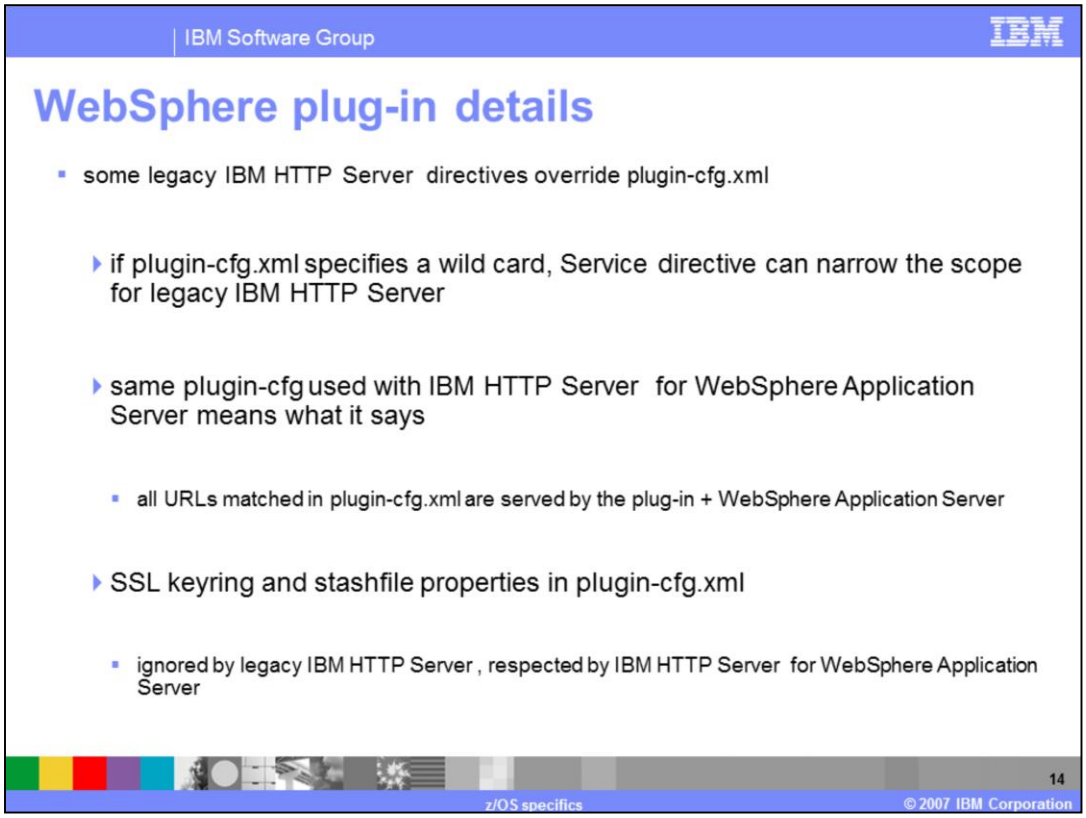
On legacy IBM HTTP Server systems, there is an MVSDS procedure to interact with MVS data sets. This call is not part of the standard IBM HTTP Server for WebSphere. You can create a module to do the equivalent, but it is not currently supplied by IBM. A sample script is available. The hit counter provided in legacy IBM HTTP Server provides a graphic (a gif) that can be incorporated into a page. IBM HTTP Server for WebSphere does not have such a hit counter, instead there are several examples available on the Web.



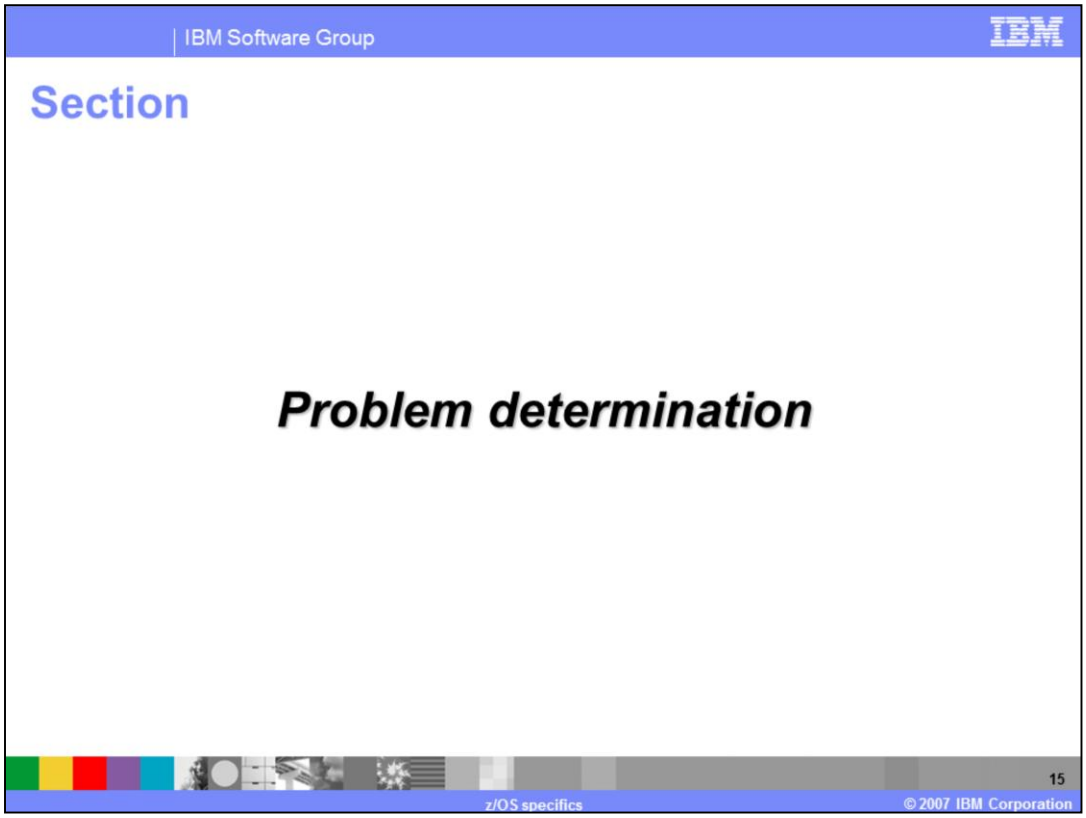
Neither the fast response cash accelerator nor the capability to run IBM HTTP Server in scaleable mode with asynchronous I/O is available in IBM HTTP Server for WebSphere. The legacy IBM HTTP Server provides support for system management facility (SMF) records. While the IBM HTTP Server for WebSphere does not provide this information, similar information is available in the many logs that are kept.



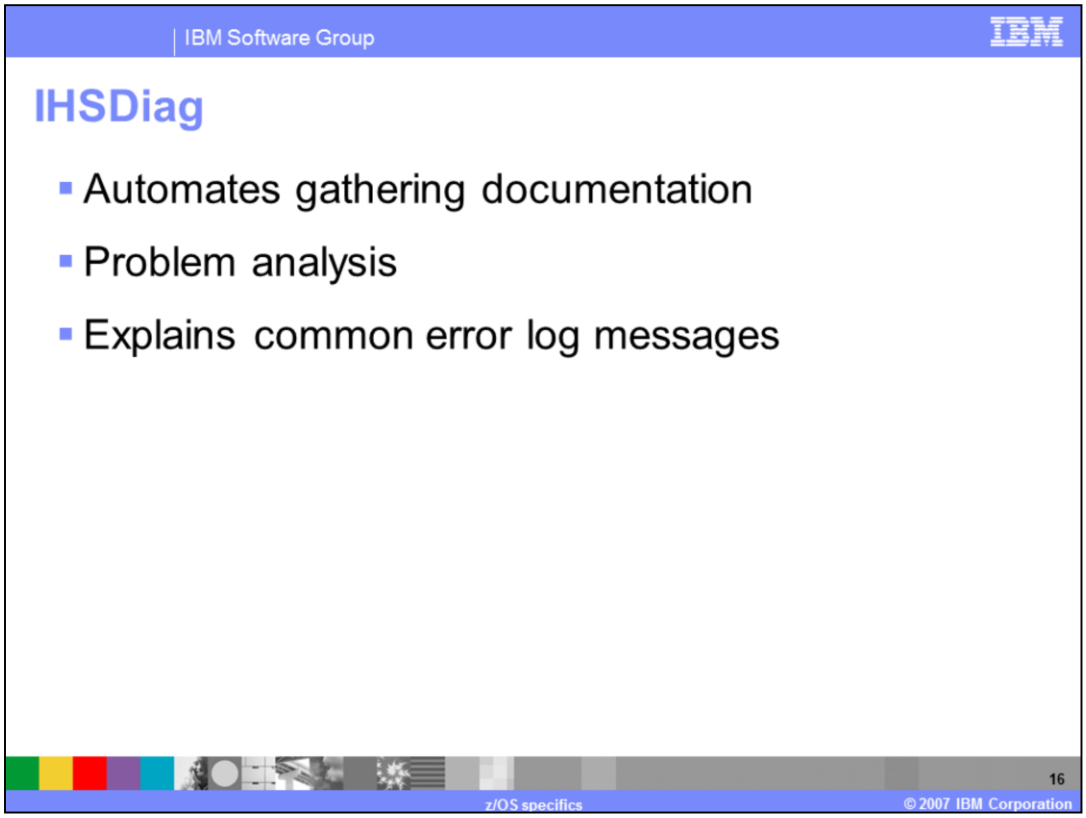
The formats and the information in the configuration files for legacy and new IBM HTTP Server are quite different. As a result, some of the information that could be placed in the httpd.conf file has to now be placed in the plug-in. The top set of lines specify how to start and stop a plug-in and how to handle configuration root. For example, start by sending the request “/greeting/” to a specific entry point in the plug-in. The IBM HTTP Server for WebSphere configuration files specifies where the plug-in is (as an Apache module) and where the plug-in configuration file is.



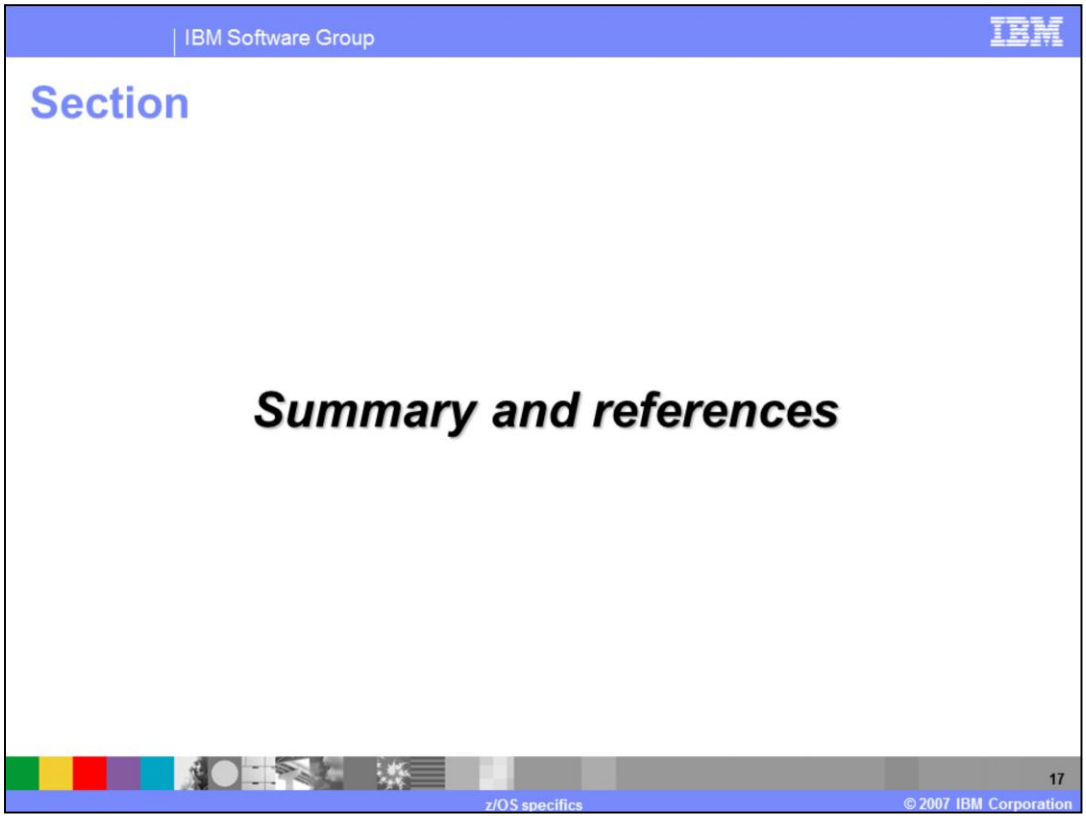
This slide shows some of the specific differences in how to specify wildcards in URL addresses. There are two new security statements present in the IBM HTTP Server for WebSphere.



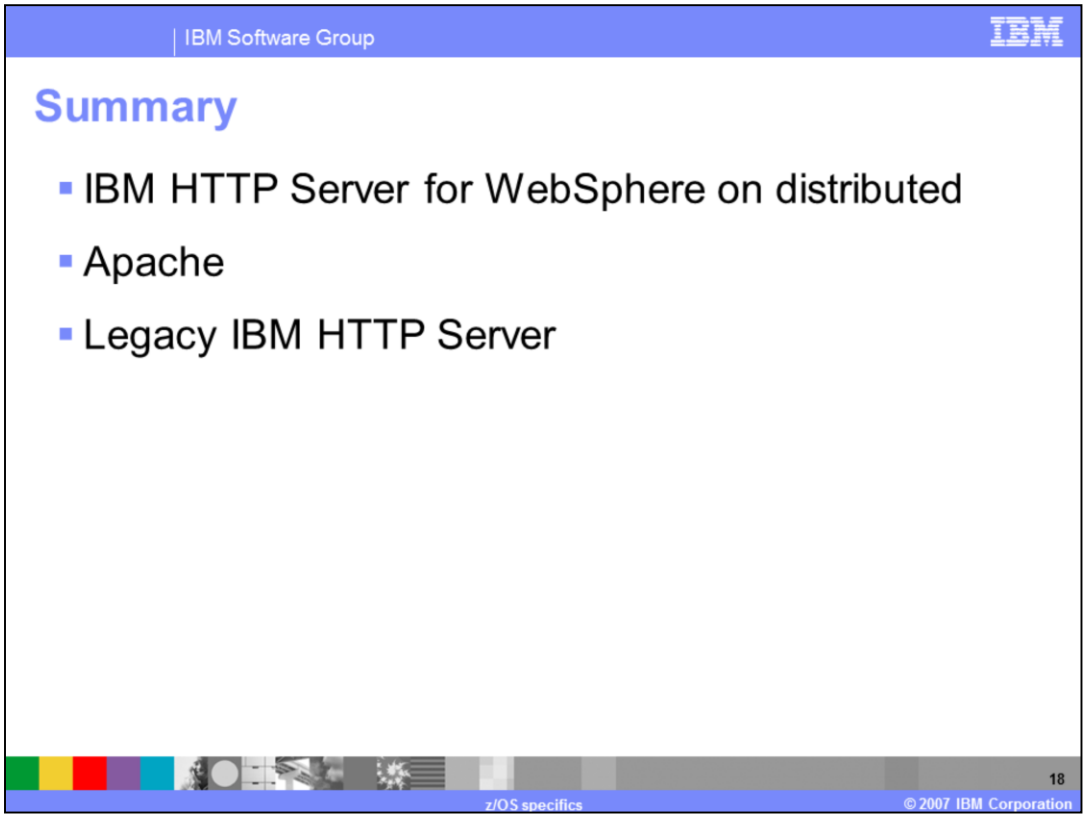
This section discusses IHSDiag, a tool to aid problem determination.



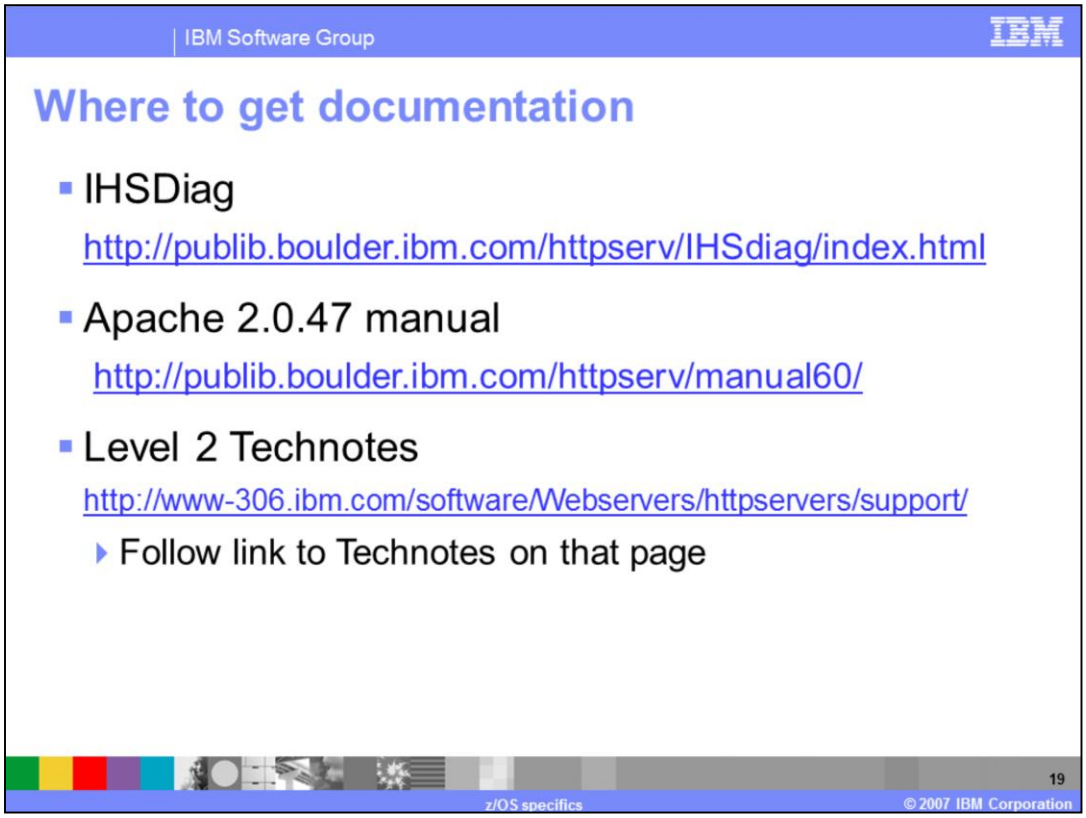
IHSDiag is a tool that automates gathering documentation and analyzing software problems. IHSDiag is available from a Web site listed in the references. Also on this site is considerable documentation on how to perform problem determination.



This section contains a summary and references.



This presentation discussed the new IBM HTTP Server for WebSphere V6.1 on a z/OS platform. The IBM HTTP Server for WebSphere found on distributed platforms is very similar to IBM HTTP Server for WebSphere on z/OS and an Apache HTTP server. At the same time, there are more differences with the legacy IBM HTTP Server packaged with the z/OS operating system and referred to as the legacy IBM HTTP Server in this presentation.



On the IHSDiag Web Site you can find important questions and answers including error document handling, diagnosing HTTP compression problems, and disabling TRACE and TRACK methods. You will also find descriptions of diagnostic features of IHSDiag, third-party modules and diagnostic modules.

The IBM-supplied manual for Apache 2.0.47 includes IBM-specific updates. The information center contains links to this manual where appropriate.

The Technotes referenced here are supplied by level two support members from IBM service. These notes do contain some information that is not relevant to z/OS such as certificate management and installation.

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