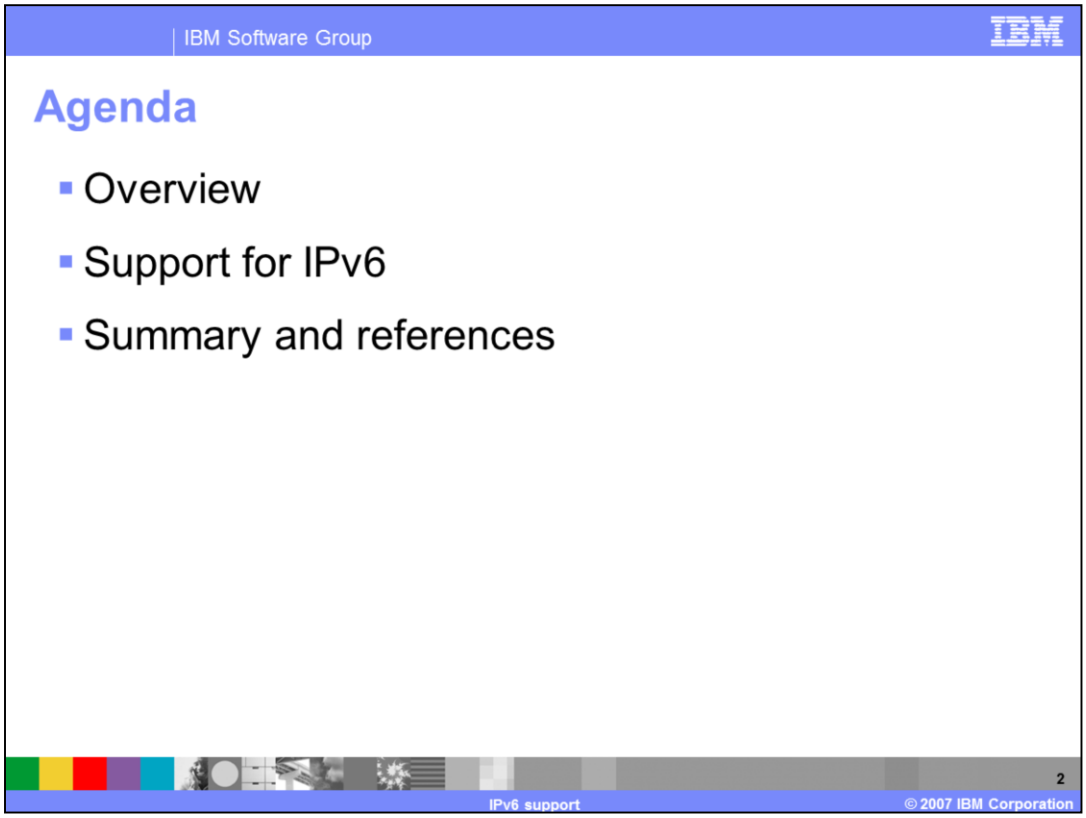
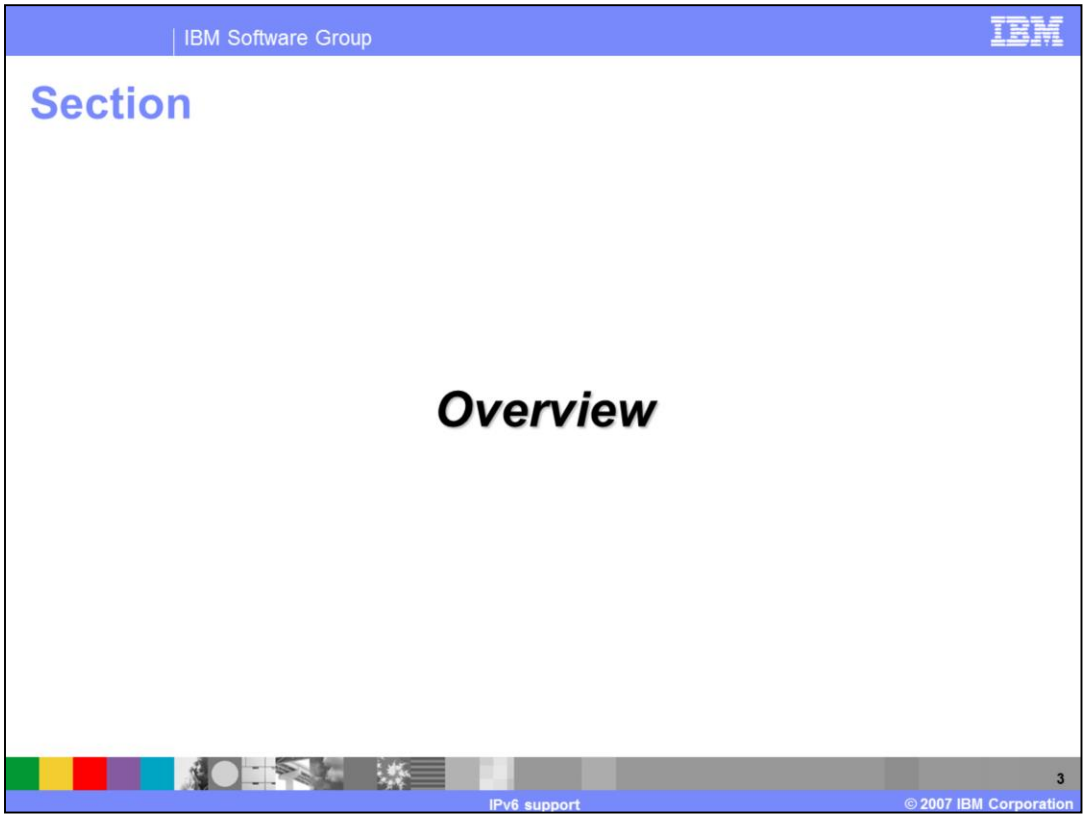
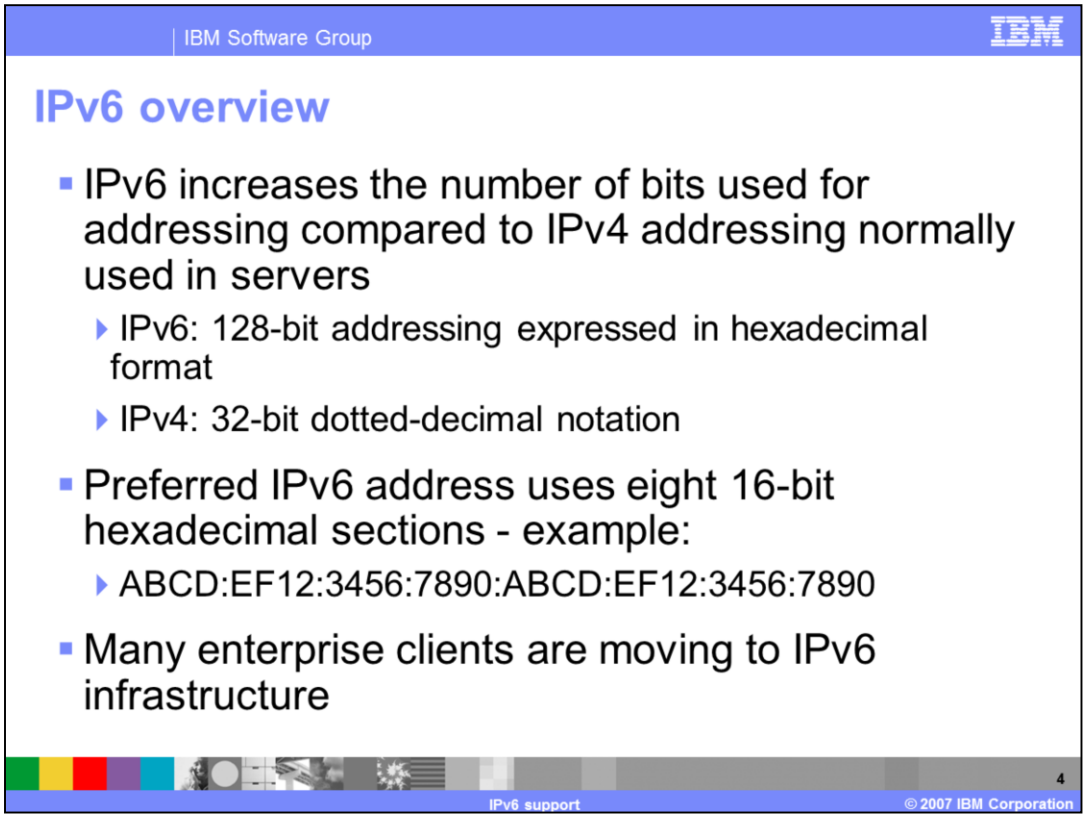
This presentation provides details on the new IPv6 support added in WebSphere® Partner Gateway V6.1



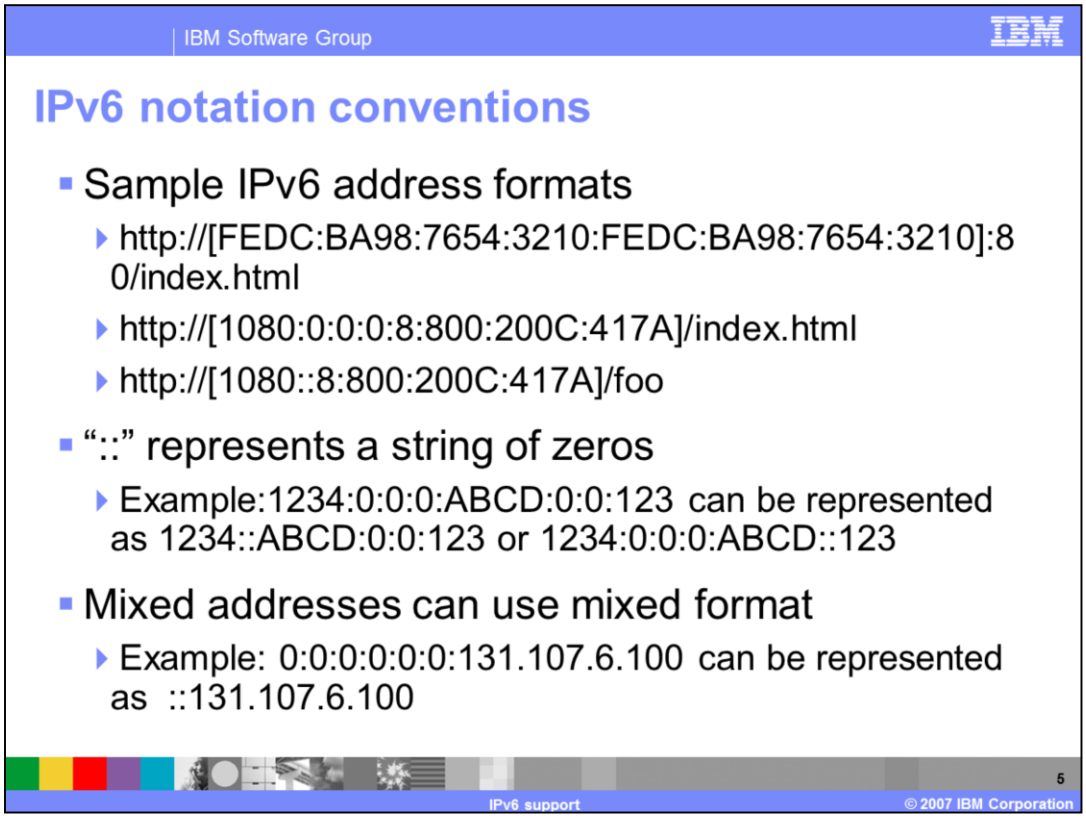
This slide shows the agenda for the presentation.



This section provides a brief overview of IPv6 protocol.

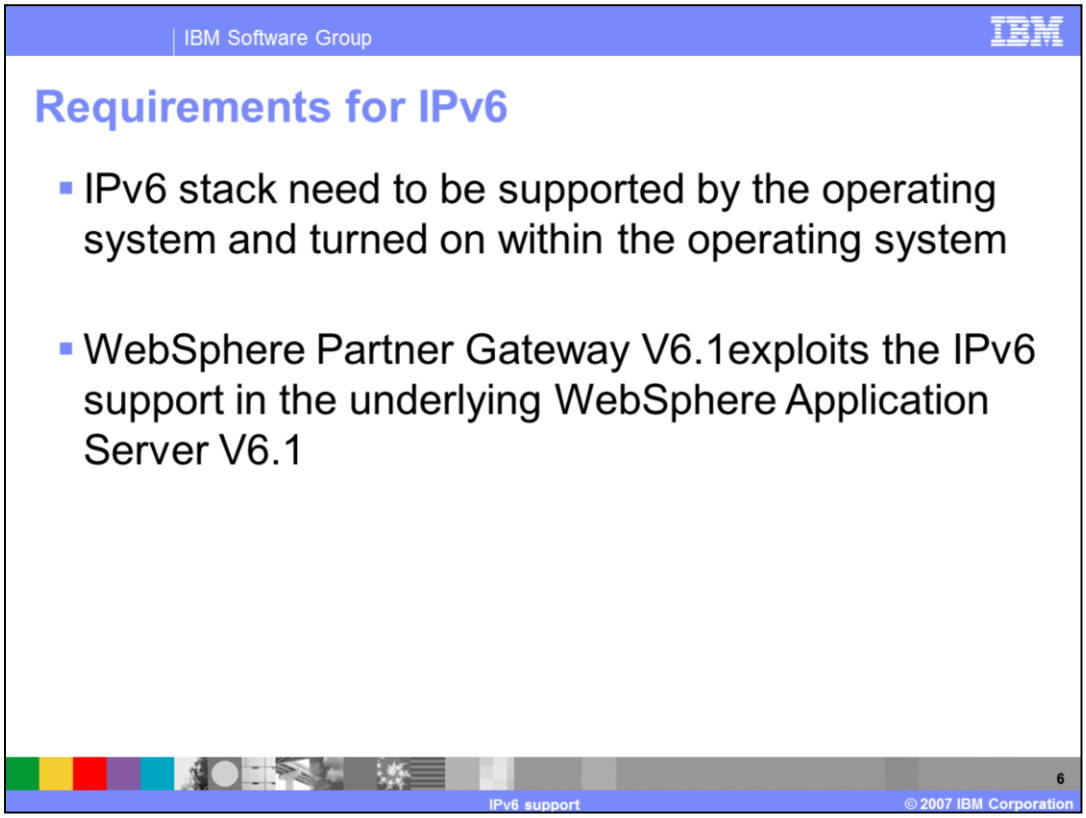


Internet Protocol Version 4 or IPv4 is no longer sufficient for many businesses because it is based on 32-bit architecture. There is a growing shortage of IPv4 addresses. Internet Protocol Version 6 or IPv6 is based on 128-bit architecture, which allows far more addresses to be available for use over the Internet



Strings of zeros are common in IPv6 addresses. Consequently, an alternate form of address representation allows "::" to be used to represent a portion of the address containing consecutive zeros. The "::" placeholder can be used to represent more than one zero, but may not be used more than once in an address.

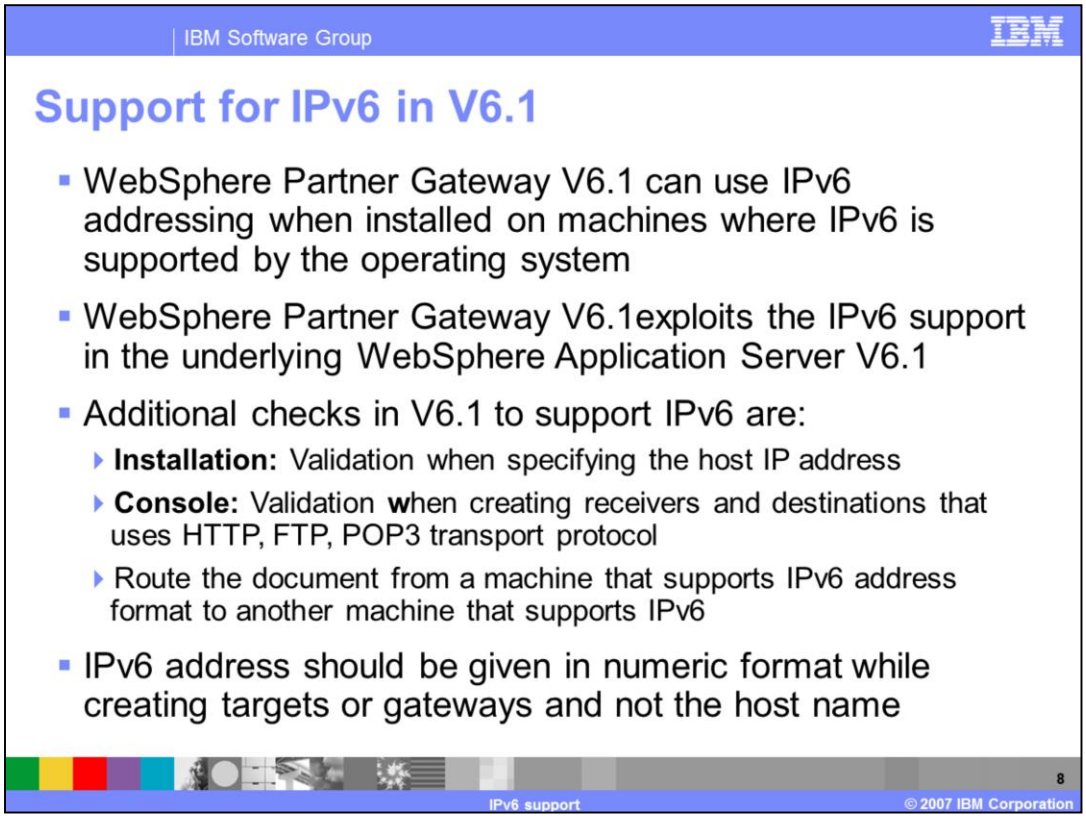
Textually displaying addresses is used in environments with a mixture of IPv4 and IPv6 nodes. In this notation, the six high-order (leftmost) 16-bit sections are displayed in hexadecimal, but the remaining bits are displayed in the familiar dotted-decimal notation.



IPv6 must be supported and enabled in the operating system where WebSphere Partner Gateway V6.1 is running. At the end of this presentation, the Reference section contains links on where to find information for configuring IPv6 on different operating systems.

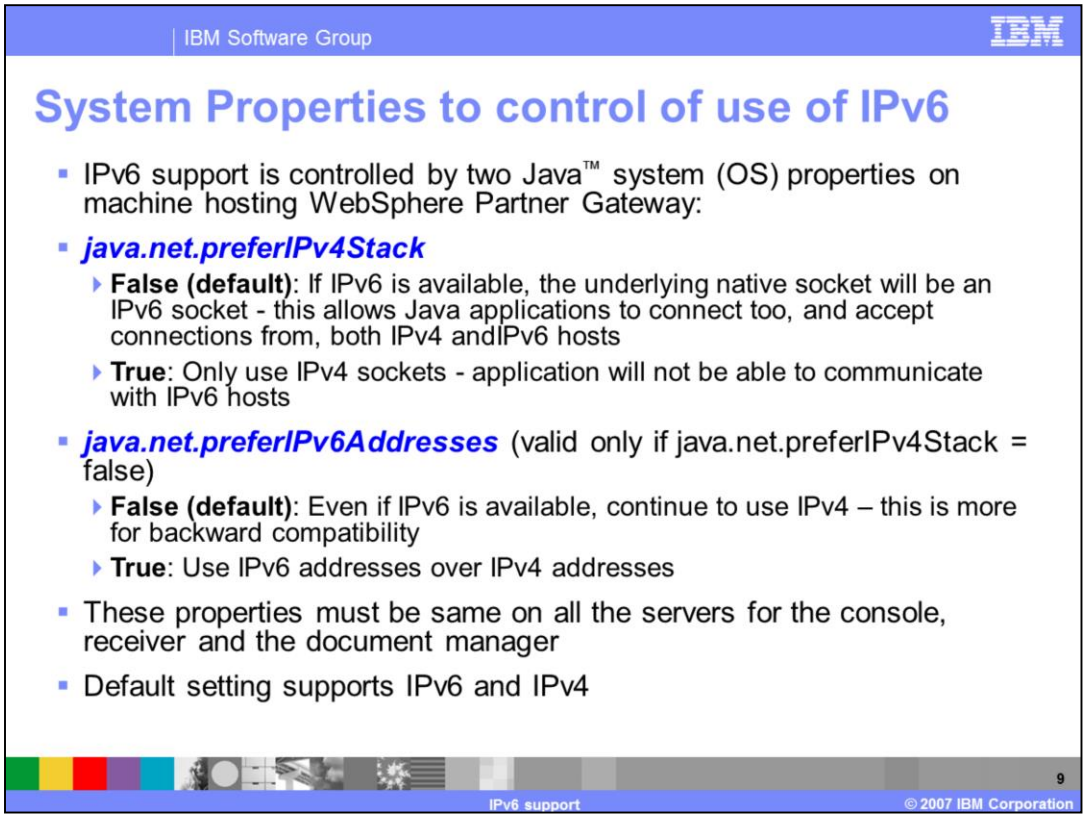
WebSphere Partner Gateway V6.1 exploits the IPv6 support present in the WebSphere Application Server V6.1. The IPv6 support has been enabled in WebSphere Application Server V6.0.2 and beyond. Since WebSphere Partner Gateway V6.0 used WebSphere Application Server V6.0, there was no IPv6 support in WebSphere Partner Gateway V6.0.

This section provides more details on IPv6 support added in WebSphere Partner Gateway V6.1



WebSphere Application Server Version 6.1 supports a *dual mode* environment in which you can have some applications running on IPv4 and other applications running on IPv6.

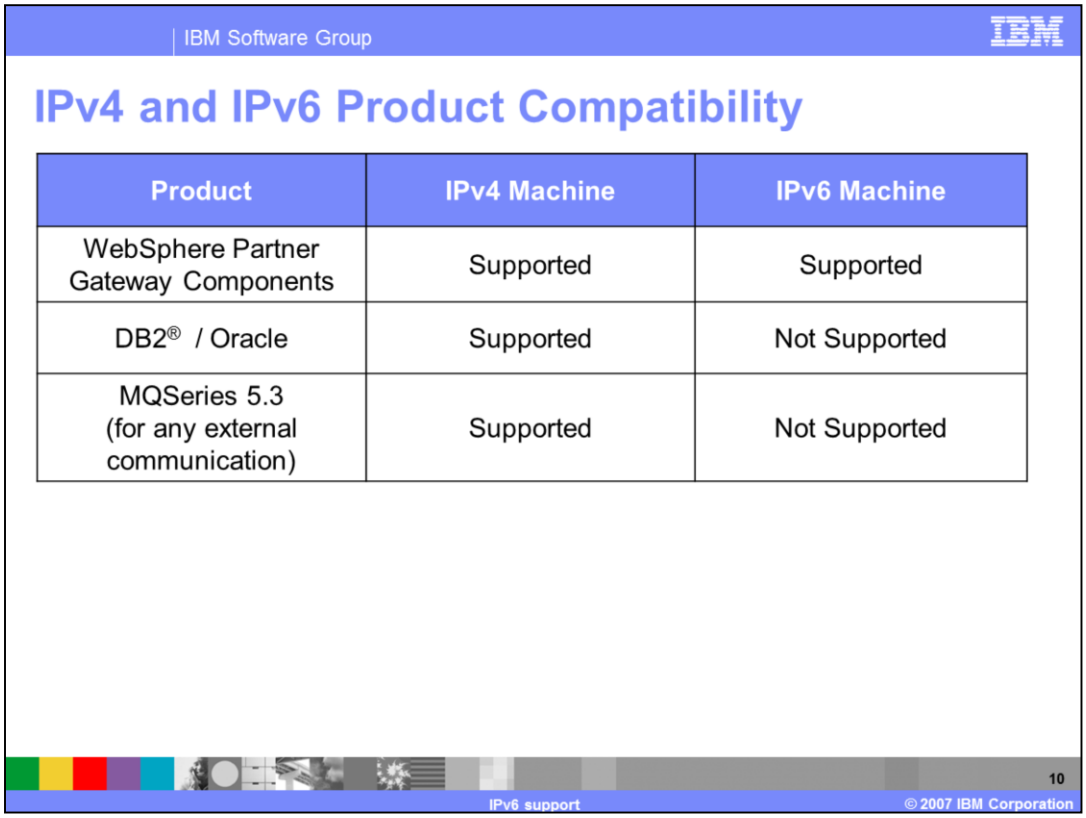
Additional checks are included during installation and in the administrative console while creating receivers and destinations that require you to specify a host name or IP address. When you are creating targets or gateways, you should give IPv6 addresses in numeric format rather than using the host name.



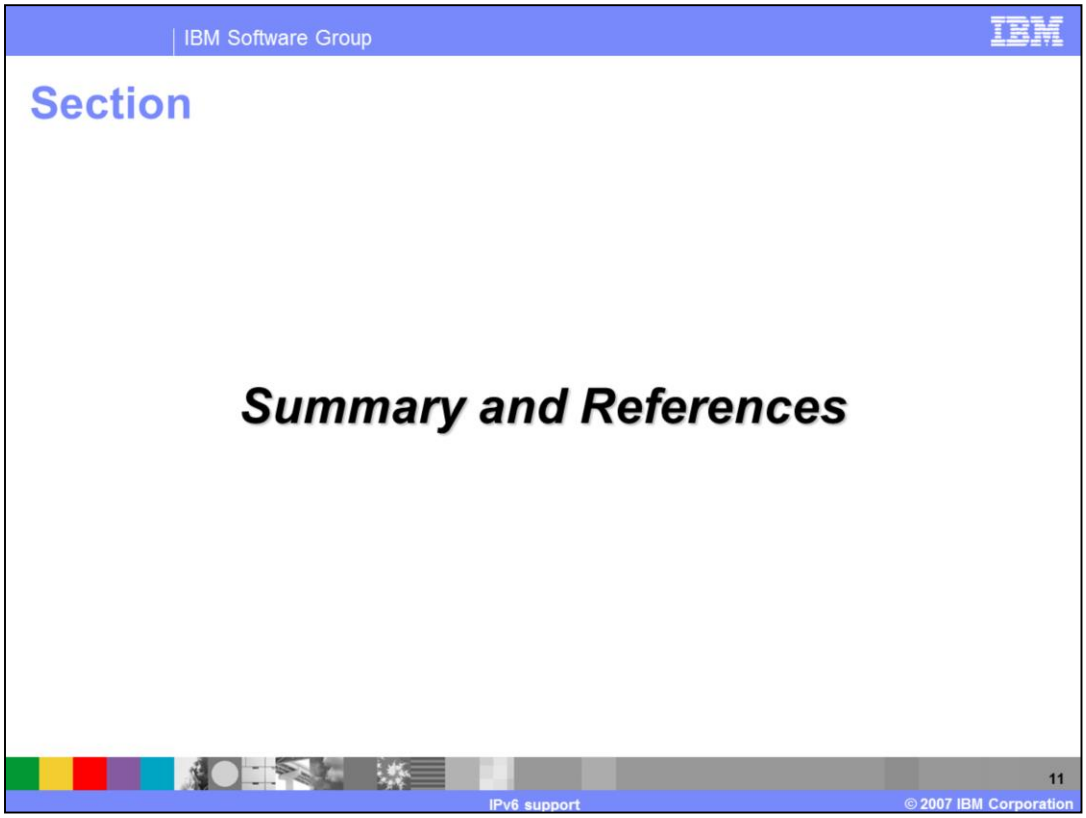
IPv6 support is controlled by two Java system properties on machine hosting WebSphere Partner Gateway.

The first property is java.net.preferIPv4Stack which by default is set to false. If IPv6 is available on the operating system, the underlying native socket will be an IPv6 socket. This allows Java applications to connect to, and accept connections from, both IPv4 and IPv6 hosts. If an application has a preference to only use IPv4 sockets, then this property can be set to true. The implication is that the application will not be able to communicate with IPv6 hosts.

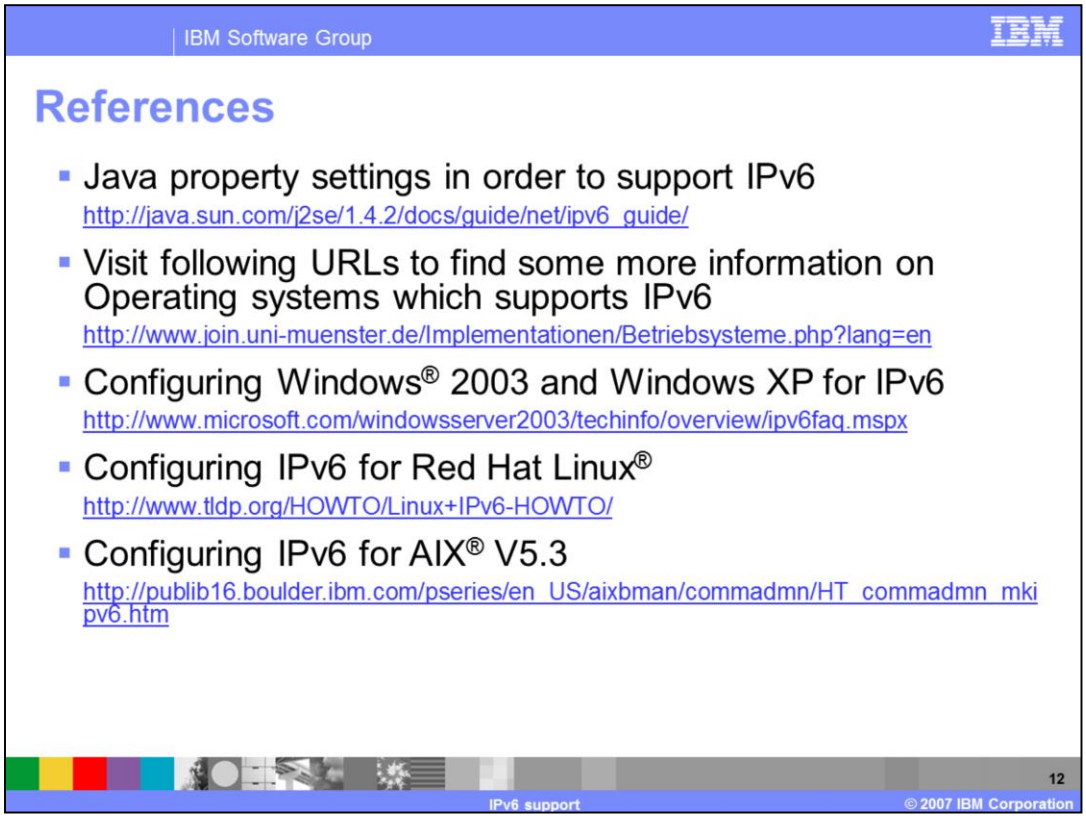
The second property is java.net.preferIPv6Addresses which by default is set to false. If IPv6 is available on the operating system, the default preference is to prefer an IPv4-mapped address over an IPv6 address. This is for compatibility reasons—for example, applications that depend on access to an IPv4-only service, or applications that depend on the representation of an IP address. This property can be set to true to change the preferences to use IPv6 addresses over IPv4 addresses. This allows applications to be tested and deployed in environments where the application is expected to connect to IPv6 services.



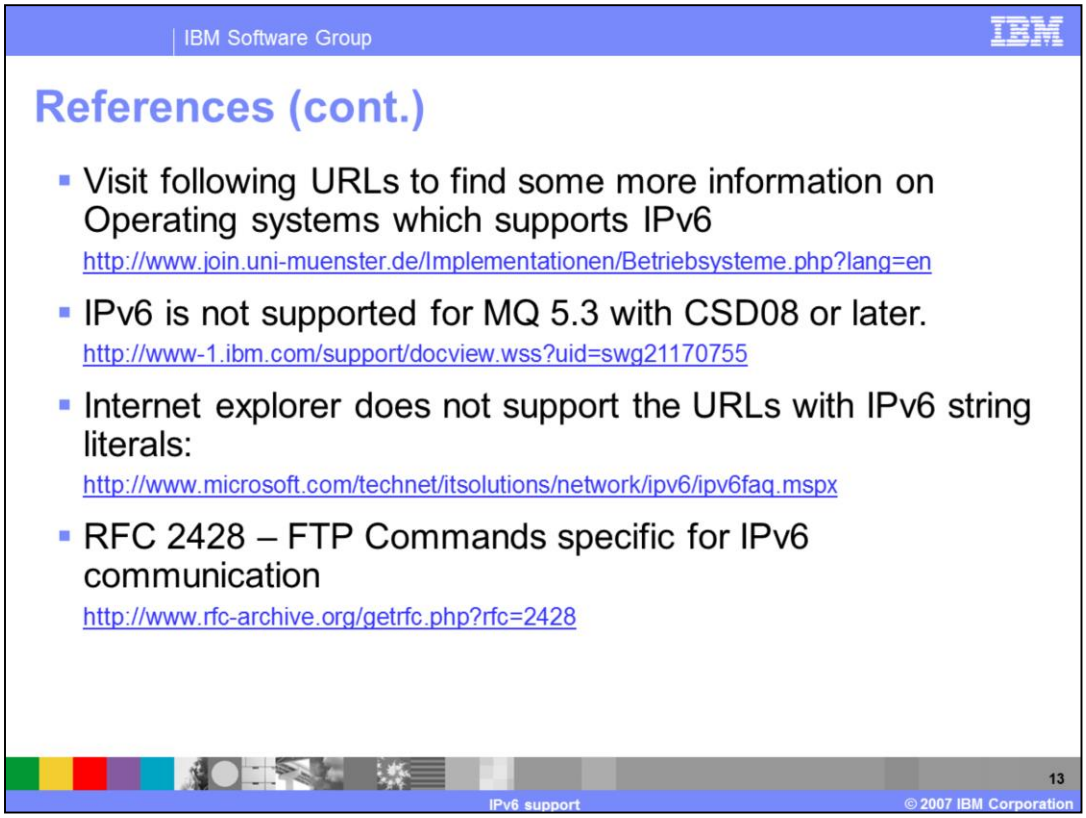
This slide lists the table showing the compatibility of various products required by the WebSphere Partner Gateway to IPv4 and IPv6. Since IPv6 is set at the operating system level, when WebSphere Partner Gateway V6.1 uses IPv6, the database (DB2 or Oracle) will need to be on a separate machine because the databases do not support IPv6.



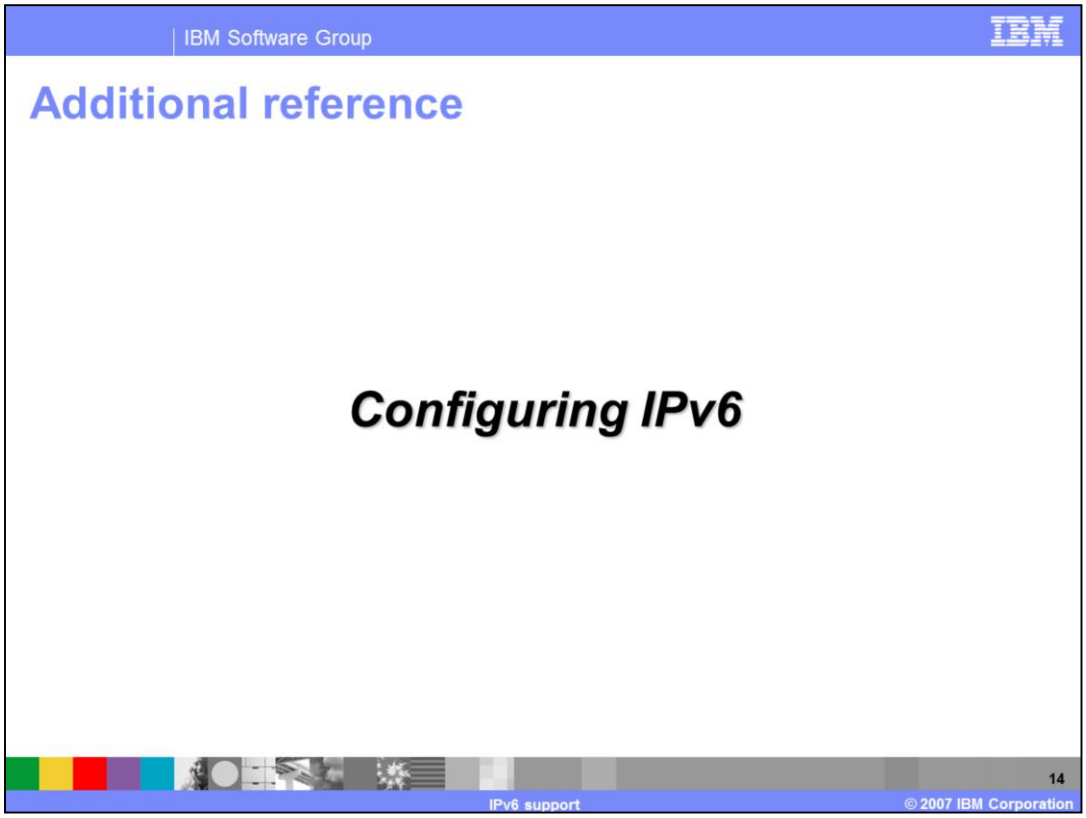
This section provides a brief summary of the presentation.



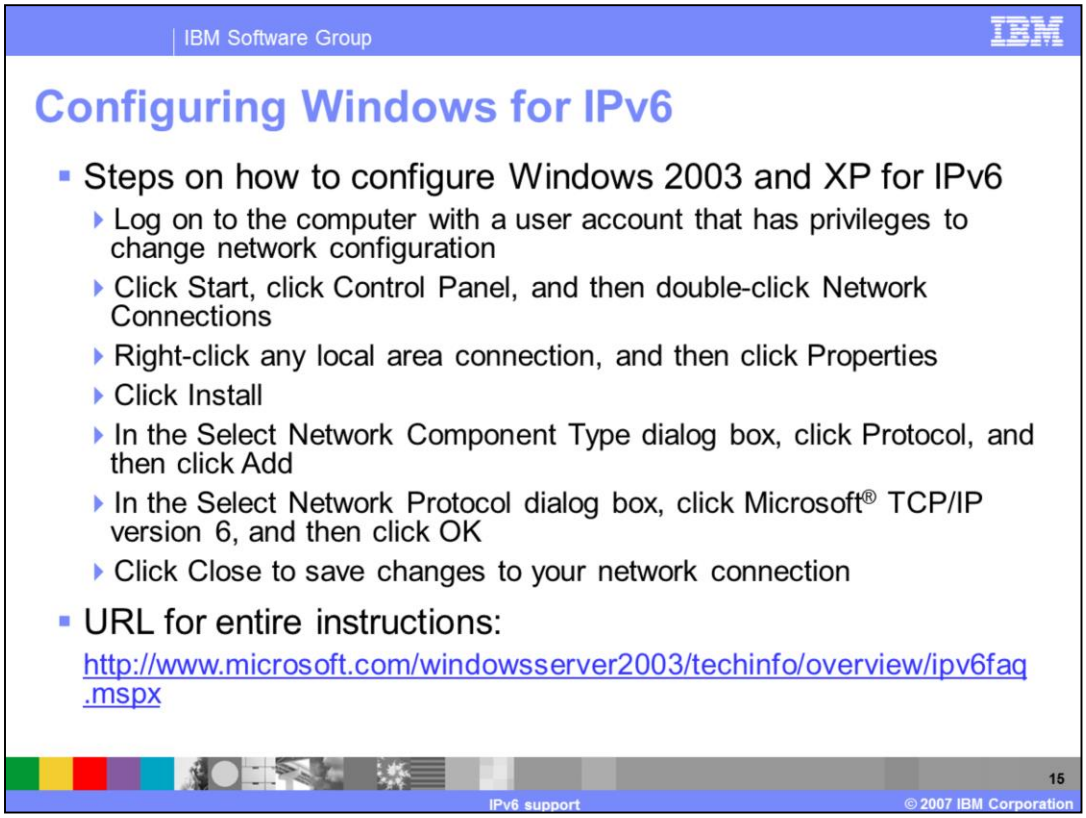
WebSphere Partner Gateway V6.1 now supports IPv6. DB2 and Oracle do not have support for IPv6. So they cannot exist in a pure IPv6 environment and if the machine hosting your WebSphere Partner Gateway instance is going to be in a pure IPv6 environment, the databases cannot exist on the same machine. Also listed on this slide and the next slide are references that you can use to get more details on IPv6 and support for IPv6 in several other products.



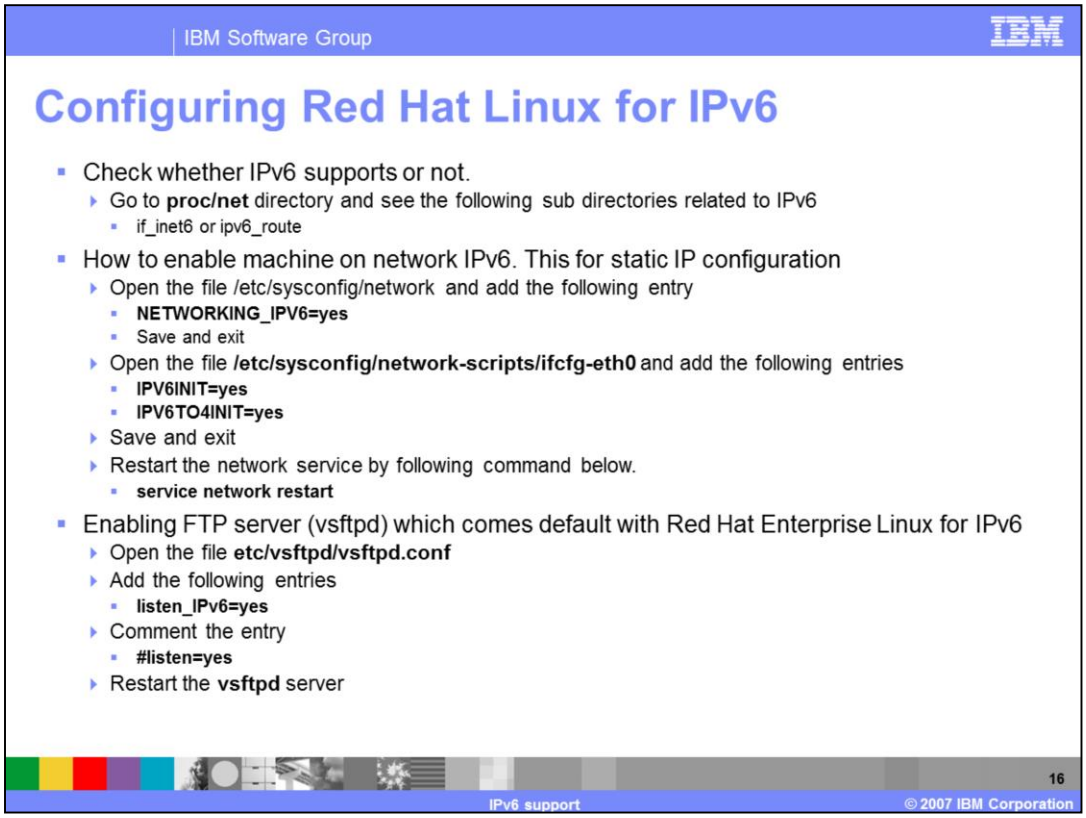
Here are some more references to materials for IPv6.



The next two slides provide more details on how to configure Windows and Red Hat Linux for IPv6.



Here are the steps to configure IPv6 for Windows 2003 and XP. The URL links to the Website that contains more details on IPv6 configuration and support for Windows.



These are the steps to configure Red Hat Linux to use IPv6.

Trademarks, copyrights, and disclaimers

The following terms are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both:

AIX DB2 IBM MQSeries WebSphere

Microsoft, Windows, and the Windows logo are registered trademarks of Microsoft Corporation in the United States, other countries, or both.

Java, and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Product data has been reviewed for accuracy as of the date of initial publication. Product data is subject to change without notice. This document could include technical inaccuracies or typographical errors. IBM may make improvements or changes in the products or programs described herein at any time without notice. Any statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only. References in this document to IBM products, programs, or services does not imply that IBM intends to make such products, programs or services available in all countries in which IBM operates or does business. Any reference to an IBM Program Product in this document is not intended to state or imply that only that program product may be used. Any functionally equivalent program, that does not infringe IBM's intellectual property rights, may be used instead.

Information is provided "AS IS" without warranty of any kind. THE INFORMATION PROVIDED IN THIS DOCUMENT IS DISTRIBUTED "AS IS" WITHOUT ANY WARRANTY, EITHER EXPRESS OR IMPLIED. IBM EXPRESSLY DISCLAIMS ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT. IBM shall have no responsibility to update this information. IBM products are warranted, if at all, according to the terms and conditions of the agreements (for example, IBM Customer Agreement, Statement of Limited Warranty, International Program License Agreement, etc.) under which they are provided. Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products in connection with this publication and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products.

IBM makes no representations or warranties, express or implied, regarding non-IBM products and services.

The provision of the information contained herein is not intended to, and does not, grant any right or license under any IBM patents or copyrights. Inquiries regarding patent or copyright licenses should be made, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. All customer examples described are presented as illustrations of how those customers have used IBM products and the results they may have achieved. The actual throughput or performance that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput or performance improvements equivalent to the ratios stated here.