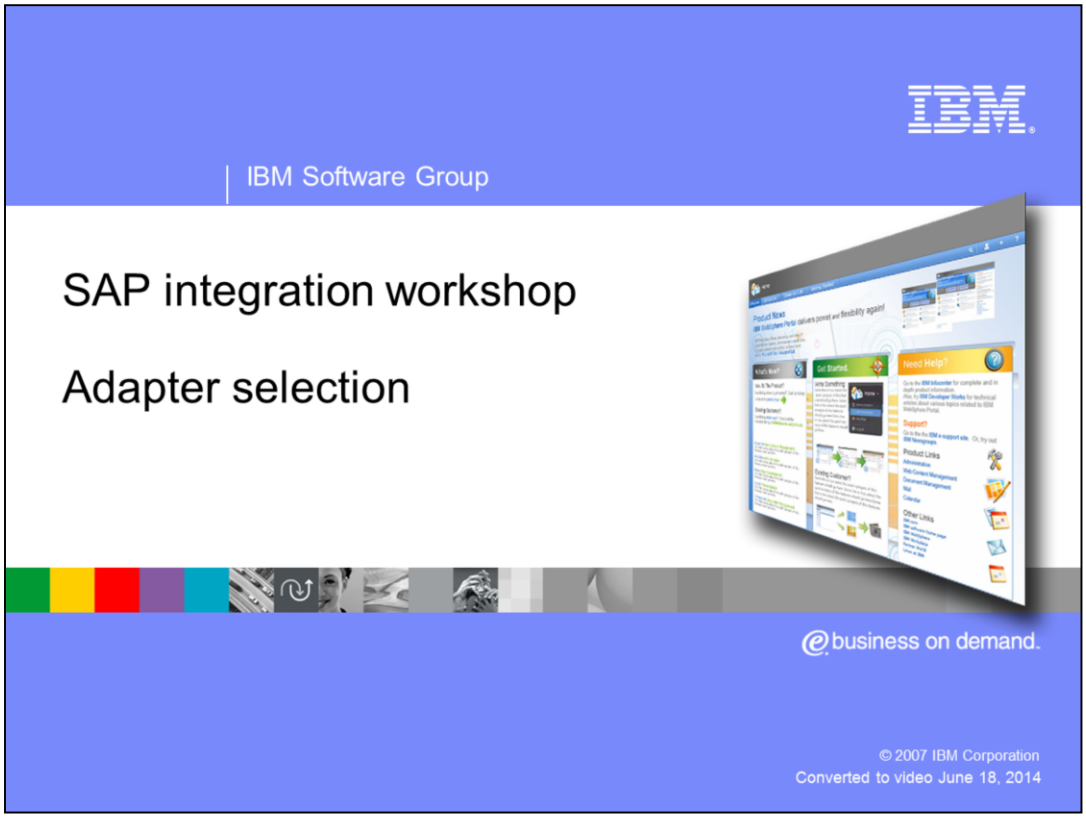
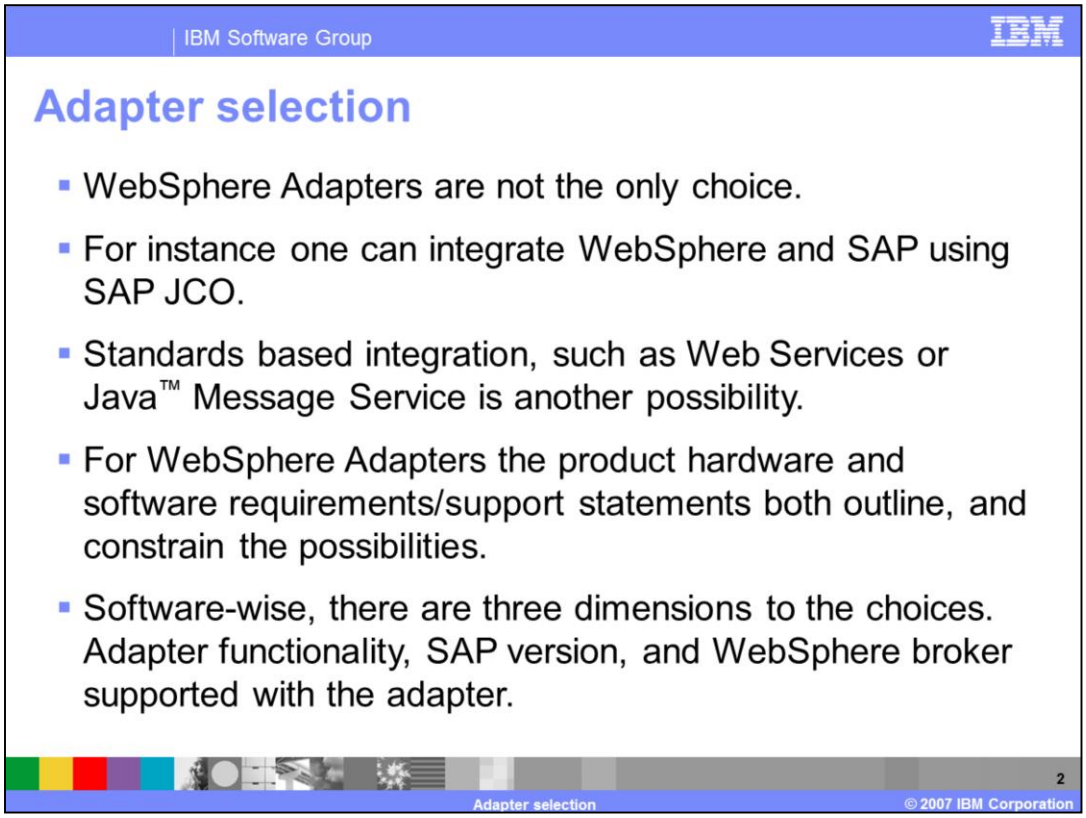


This presentation is about the WebSphere® SAP Adapter selection.

It summarizes which adapters are available and gives the criteria by which to select the adapter.

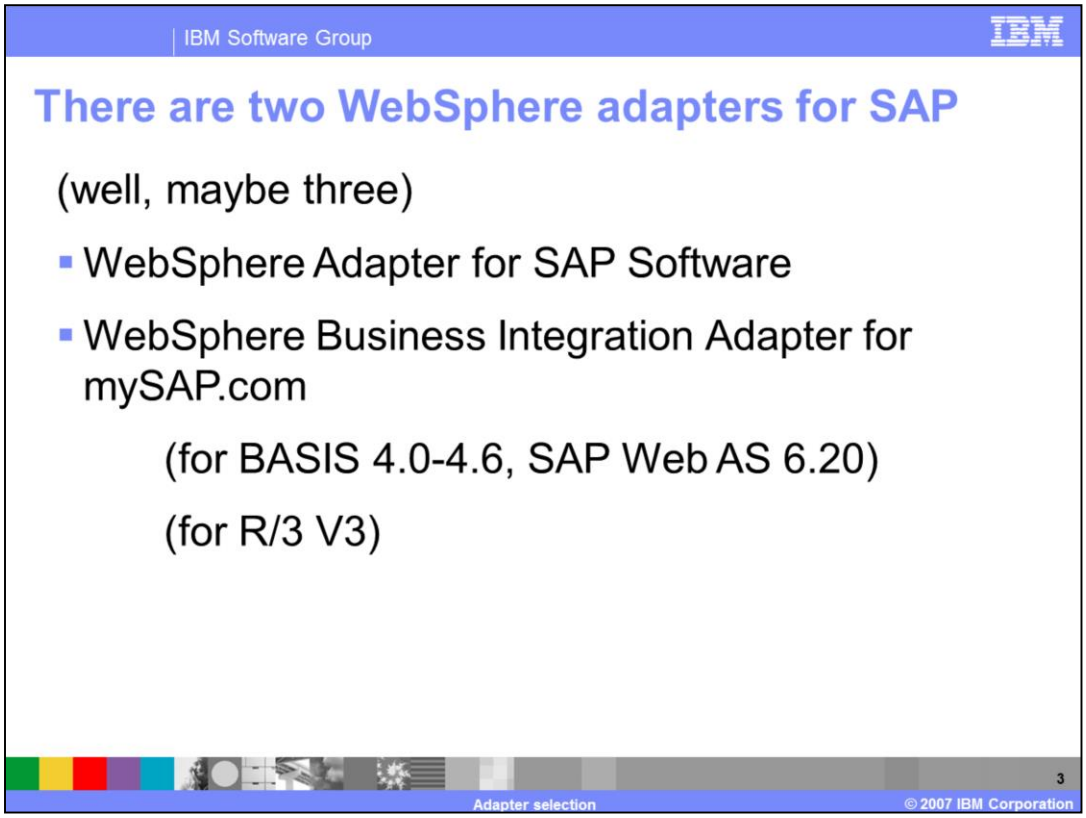
It also describes in which scenarios the adapter selection is appropriate



In the integration of WebSphere and SAP software the WebSphere adapters are not the only choice.

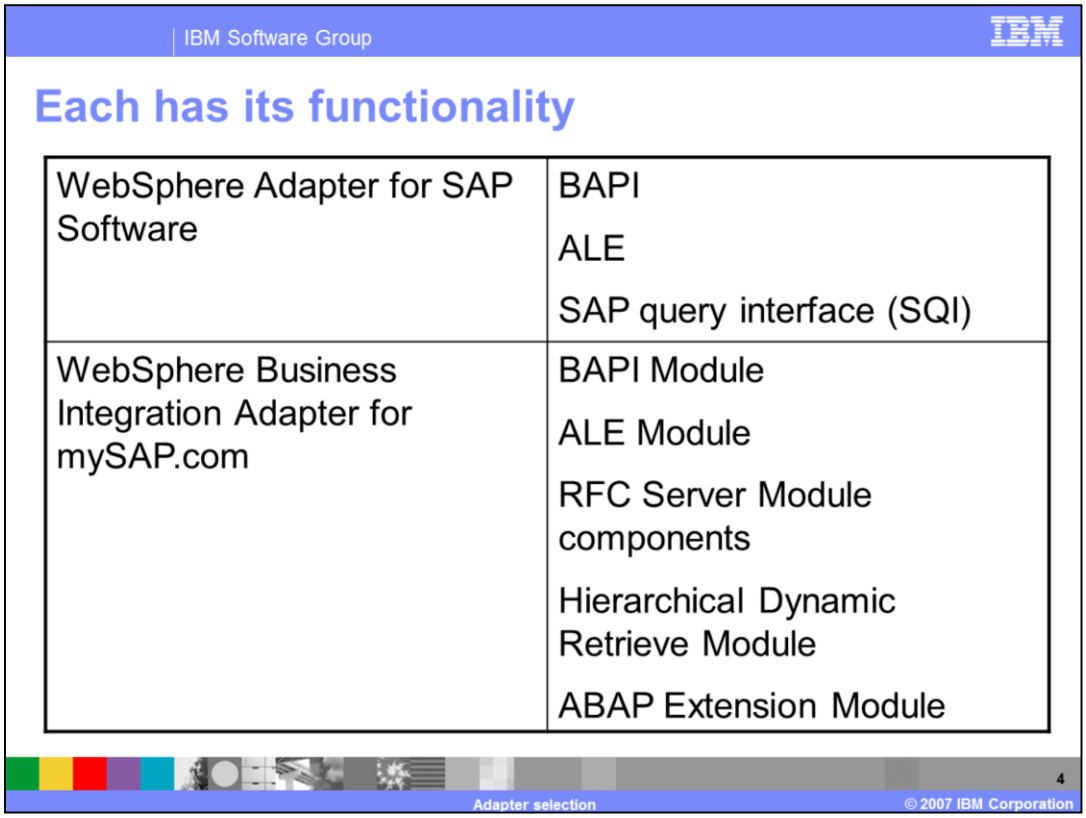
SAP Java Connector, provided by SAP, enables communication between any SAP system and Java. It is used by WebSphere adapters, and it can be used directly. But the use of the WebSphere Adapters encapsulate the JCo in a comfortable shell to leverage it more easily and use incredible tool support. Standards based integration, such as Web Services or Java Message Service is a powerful and popular method. The requirements together with overall systems architecture should determine what is the most appropriate.

When WebSphere adapters are indicated, the product hardware and software requirements and support statements both outline, and constrain the possibilities. Software-wise, there are three dimensions to the choices. These are the adapter functionality, SAP software version, and WebSphere broker supported with the adapter.



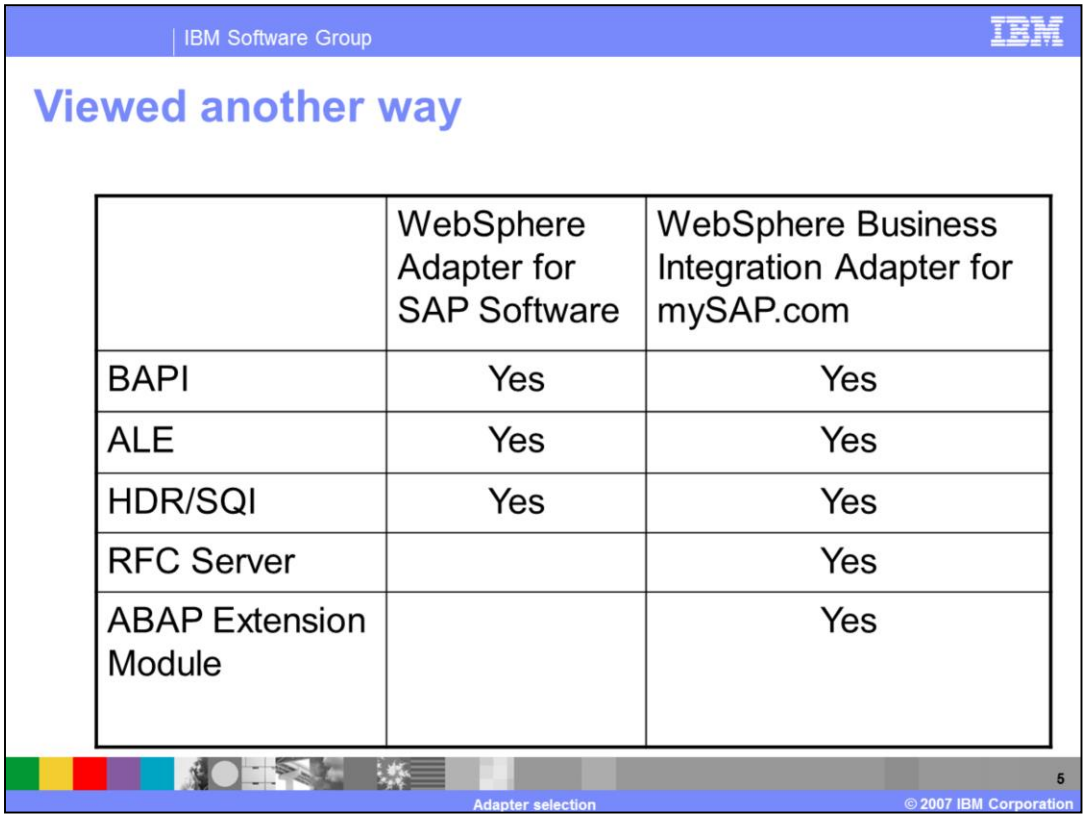
With the WebSphere adapters for SAP there are two choices.

J.C.A. standard based WebSphere Adapter for SAP Software, and proprietary WebSphere Business Integration Adapter for mySAP.com. The WebSphere Business Integration adapter comes in two versions. For BASIS 4.0 to 4.6, SAP Web Application Server 6.20, and for R/3 V3.

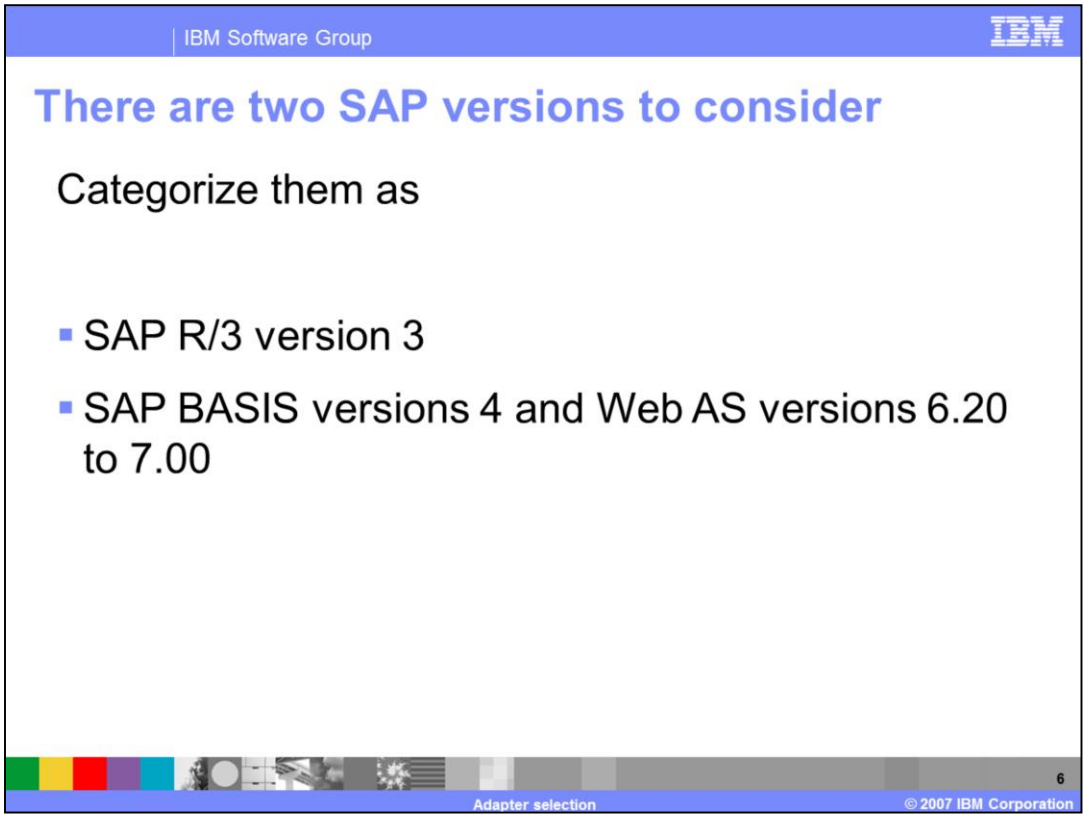


The JCA WebSphere Adapter for SAP Software supports these SAP interfaces: Business application programming interface, application linking and embedding, and SAP query interface.

The WebSphere Business Integration Adapter for mySAP.com has modules that support similar and additional functionality. The BAPI module, ALE module are supported in both adapters. Additional functions include the RFC Server module, which allows the adapter to act as an RFC server, the Hierarchical Dynamic Retrieve module, which is similar in functionality to the SQI, and ABAP Extension, which enables an integration broker to send business objects and receive events from SAP applications.

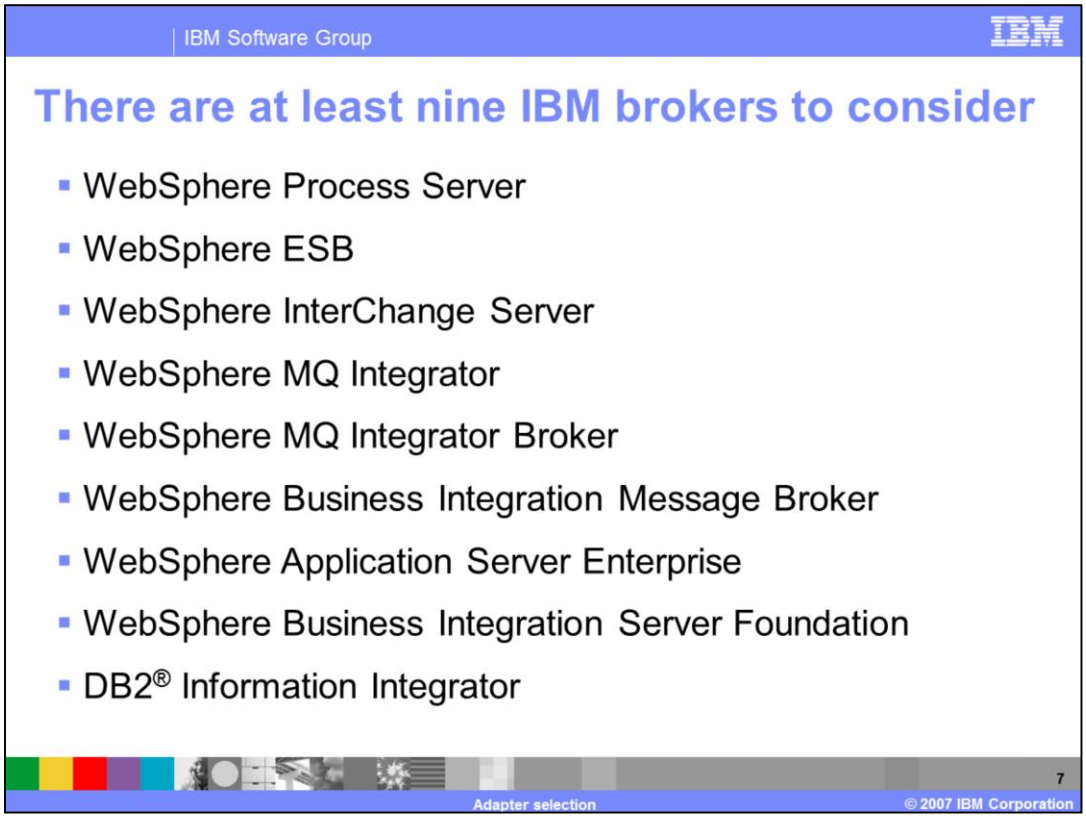


In other words, BAPI, ALE and SAP tables data retrieval is supported by both adapters. The RFC server components and ABAP extension module are only supported by the WBI adapter.



The next two slides introduce the support constraints.

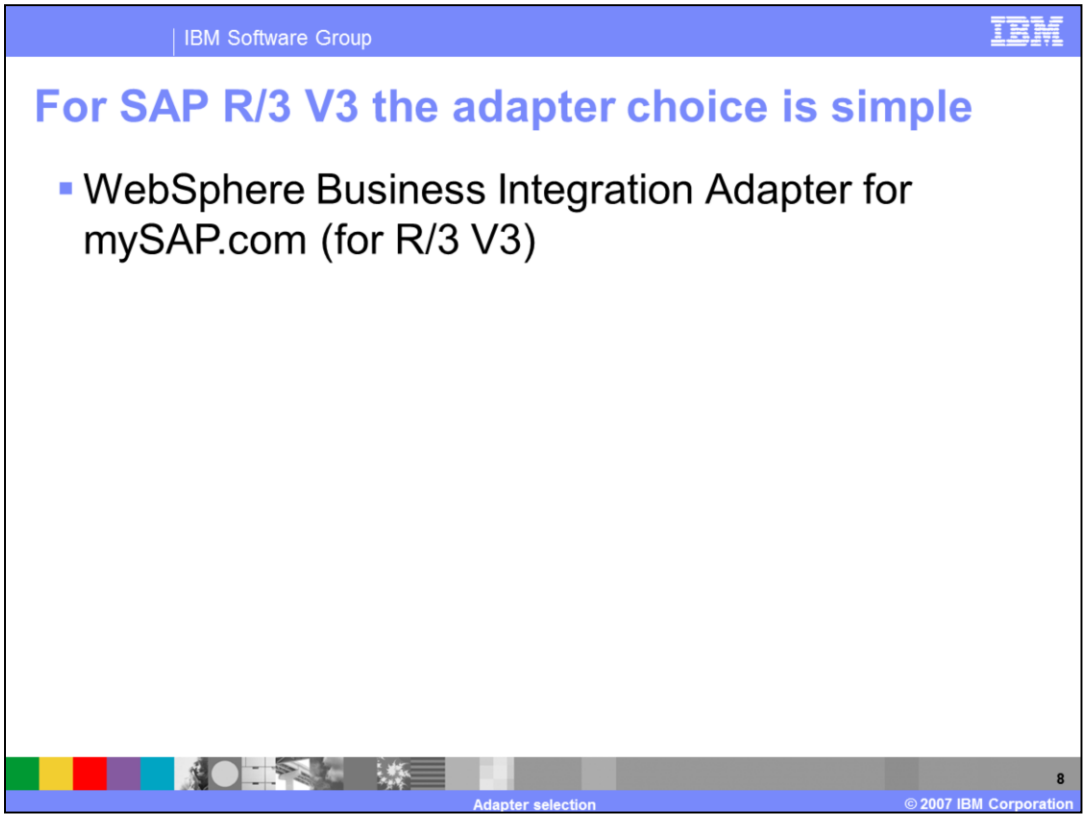
First is SAP version. The supported SAP versions are in two categories. SAP R/3 version 3, and the later versions, SAP BASIS version 4 and Web Application Server version 6.20 to 7.00.



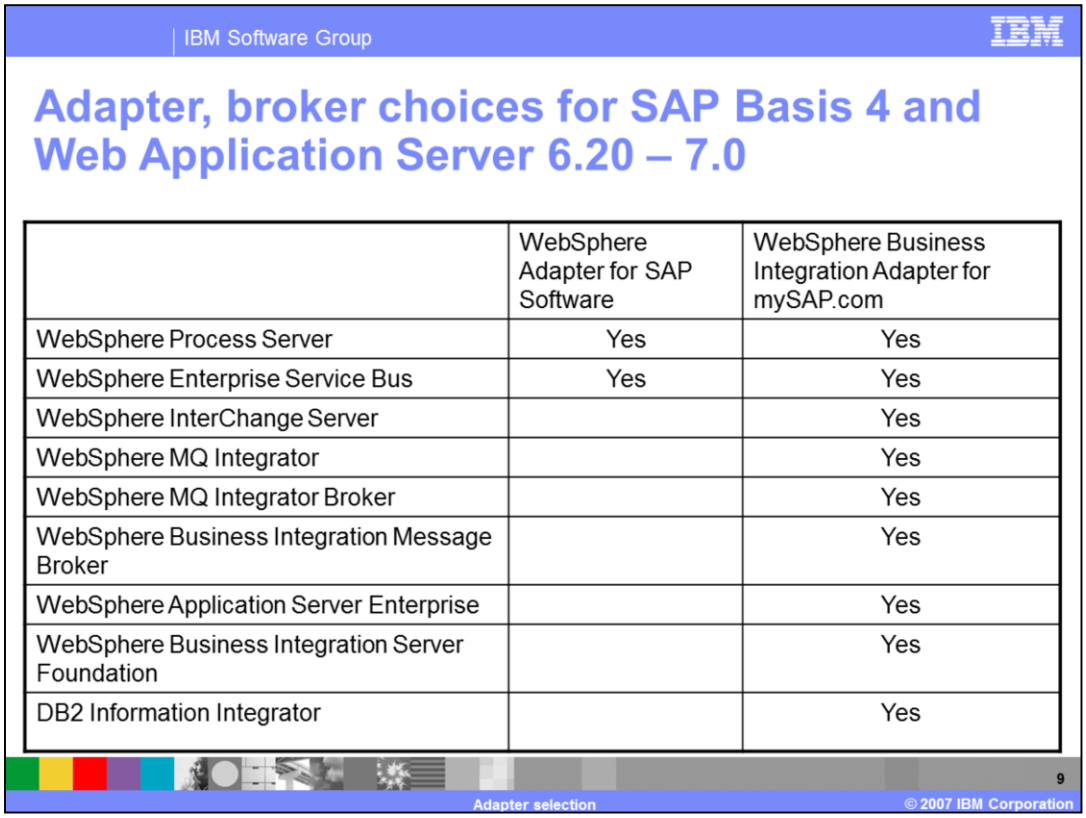
Second, there are at least these nine IBM brokers to consider.

To make things a bit more complicated, one needs to track the broker versions as well.

And at least for now - DataPower XI50 is not supported with any of the SAP adapters.



SAP R/3 version 3 is only supported with the WebSphere Business Integration Adapter for mySAP.com, so if that is your SAP version, your choice is done.

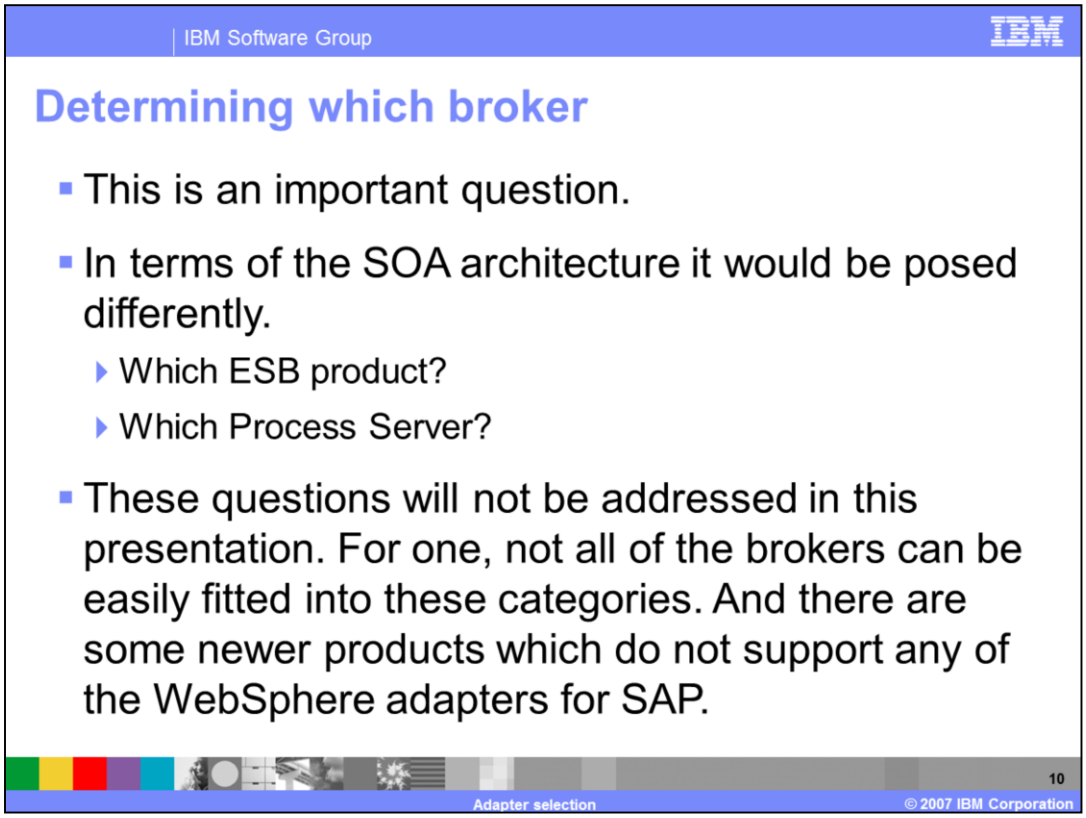


With SAP BASIS versions 4 and Web Application Server versions 6.20 to 7.00, these broker and adapter combinations are supported.

Both adapters are supported with WebSphere Process Server and WebSphere Enterprise Service Bus. Unless functionality requirements dictate otherwise, prefer the WebSphere Adapter for SAP.

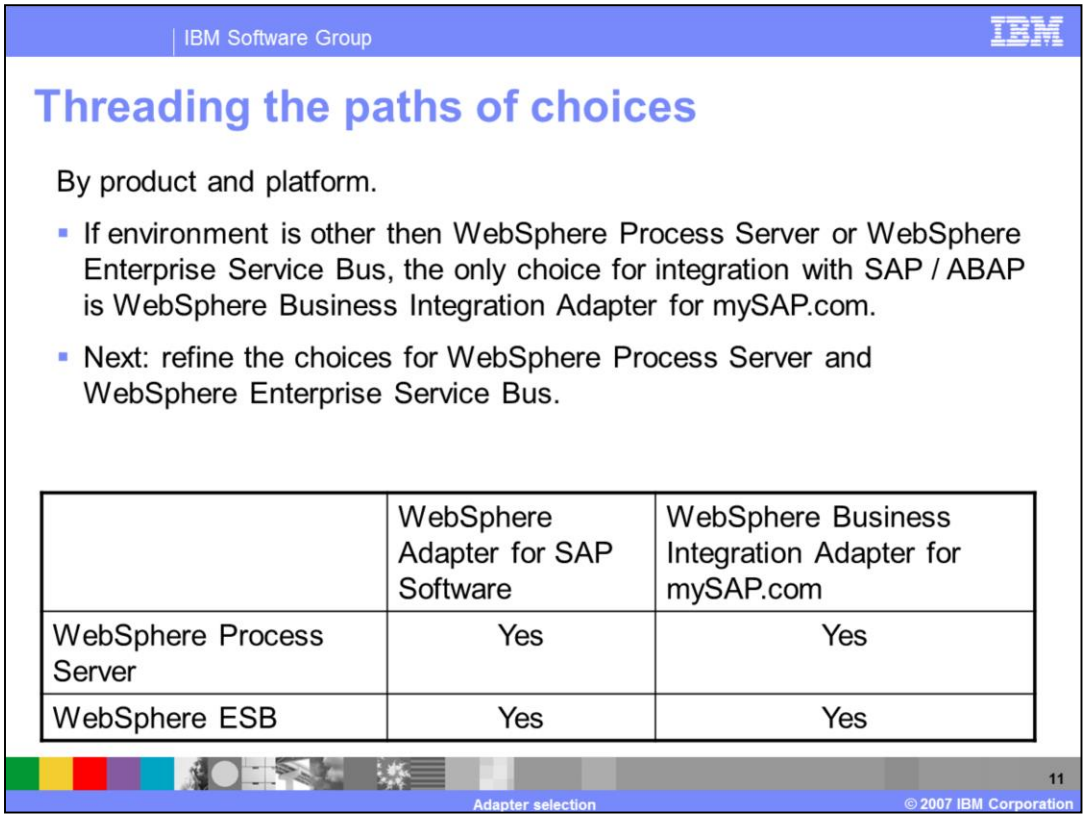
WebSphere Business Integration Adapter for mySAP.com is only supported for the brokers shown here

If you start a new Project without leveraging an existing landscape, then just start with one of the SOA brokers – WebSphere Process Server or WebSphere Enterprise Service Bus.

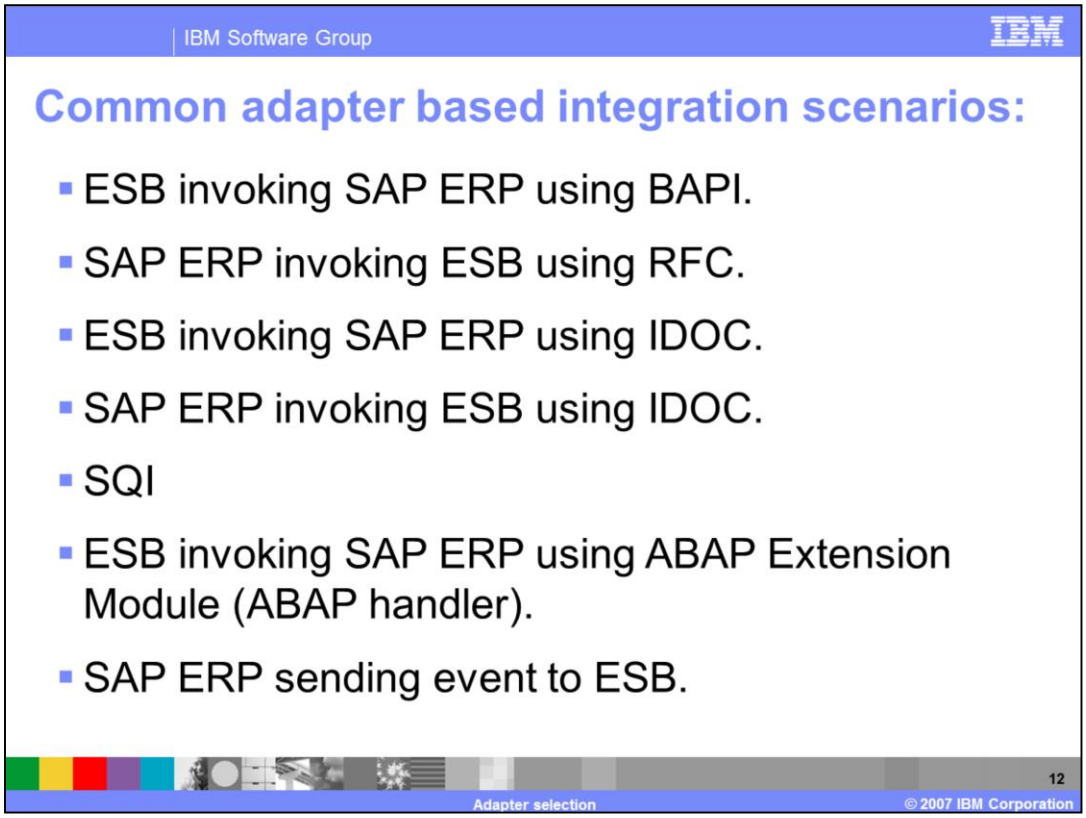


Selecting a broker is an important architectural choice which will not be considered in this presentation.

The selection of the right broker is mostly covered in architectural discussions.



You need only to consider the choice of the adapter for the WebSphere Process Server or the WebSphere Enterprise Service Bus, for which both of the adapters are supported. For any other broker the choice is reduced to the WebSphere Business Integration Adapter.



The rest of the presentation describes some common adapter based integration scenarios.

IBM's enterprise service bus is available in two products, the WebSphere Process Server and the WebSphere Enterprise Service Bus. The term "ESB" is used here to mean the enterprise service bus in either of those two products. The scenarios in this part of the presentation examine several combinations of SAP software interacting with either of these enterprise service bus products.

ESB invoking SAP ERP using BAPI

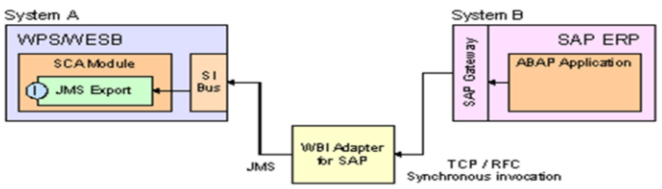
- WebSphere Adapter for SAP Software (JCA) is used to build a communication channel between the ESB and any ABAP based SAP ERP system.
- The enterprise service bus is calling a dedicated BAPI or remote enabled function module in the target SAP ERP backend.

This slide shows the WebSphere Process Server or WebSphere Enterprise Service Bus invoking SAP ERP using BAPI.

In this scenario the JCA WebSphere Adapter for SAP Software is used to build a communication channel between the Process Server or the ESB and any ABAP based SAP ERP system to call a dedicated BAPI or remote enabled function module in the SAP ERP backend. The graphic shows the components involved in both systems.

SAP ERP invoking ESB using RFC

- WebSphere Business Integration Adapter for mySAP.com is used to build a communication channel between ESB and any ABAP based SAP ERP system.
- ABAP based applications call [through the SAP Gateway] a remote destination in a transparent manner to run business logic that is implemented in a WebSphere Environment.



Here you see SAP ERP invoking WebSphere Process Server or WebSphere Enterprise Service Bus using RFC.

In this scenario the WebSphere Business Integration Adapter for mySAP.com is used to build a communication channel between the Process Server or the ESB, and any ABAP based SAP ERP system. ABAP based applications call through the SAP Gateway to a remote destination in a transparent manner to run business logic that is implemented in WebSphere environment. The graphic again shows the components involved in both systems.

ESB invoking SAP ERP using IDOC

- WebSphere Adapter for SAP Software (JCA) is used to build a communication channel between ESB and any ABAP based SAP ERP system.
- ESB is sending a specific Intermediate Document (IDOC) to the SAP ERP backend. Within the SAP ALE distribution model the external application is handled as a standard message sender and the received IDOC is processed like it is defined in the ALE distribution model.

This slide shows the ESB invoking the SAP ERP using IDOC.

In this scenario the JCA WebSphere Adapter for SAP Software is used to build a communication channel between the WebSphere Process Server or the WebSphere Enterprise Service Bus and any ABAP based SAP ERP system. WebSphere is sending a specific Intermediate Document to the SAP ERP backend. Within the SAP ALE distribution model, the external application is handled as a standard message sender and the received IDOC is processed the way it is defined in the ALE distribution model.

SAP ERP invoking ESB using IDOC

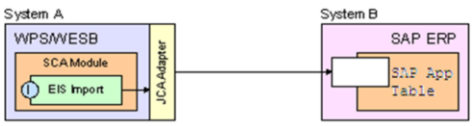
- WebSphere Adapter for SAP Software (JCA) is used to build a communication channel between ESB and any ABAP based SAP ERP system.
- ESB is receiving a specific Intermediate Document (IDOC) from the SAP ERP backend. Within the SAP ALE distribution model the external J2EE application is handled as a standard message receiver.

Scenario in which the SAP ERP invokes WebSphere Process Server or WebSphere Enterprise Service Bus using IDOC.

The JCA WebSphere Adapter for SAP Software is used to build a communication channel between WebSphere and any ABAP based SAP ERP system. WebSphere is receiving a specific IDOC from the SAP ERP backend. Within the SAP ALE distribution model the external J2EE application is handled as a standard message receiver.

ESB invoking SAP ERP using SQI

- WebSphere Adapter for SAP Software (JCA) is used to build a communication channel between ESB and any ABAP based SAP ERP system.
- ESB is retrieving [or checking existence of] data from SAP application tables

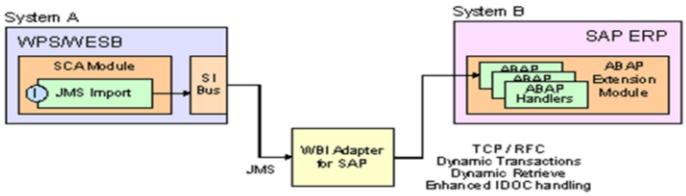


This slide shows WebSphere Process Server or WebSphere Enterprise Service Bus invoking SAP ERP using SQI.

In this scenario, the JCA WebSphere Adapter for SAP Software is used to build a communication channel between the Process Server or the ESB and any ABAP based SAP ERP system. SQI is used to retrieve data from SAP application tables. Retrieval can include hierarchical retrieval from multiple tables. Both static and dynamic specification of where clauses is supported.

ESB invoking SAP ERP using the ABAP extension module

- WebSphere Business Integration Adapter for mySAP.com is used to build a communication channel between ESB and any ABAP based SAP ERP system.
- ESB is triggering a function within the ABAP Extension Module in the target SAP ERP backend.

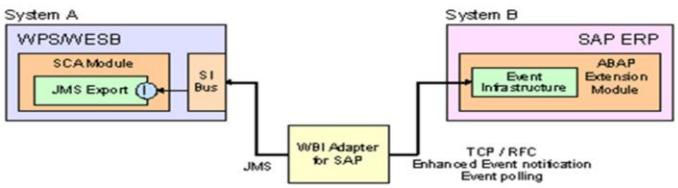


WebSphere Process Server or WebSphere Enterprise Service Bus can invoke SAP ERP using the ABAP Extension Module.

In this scenario the WebSphere Business Integration Adapter for mySAP.com is used to build a communication channel between the WebSphere Process Server or the WebSphere Enterprise Service Bus and any ABAP-based SAP ERP system. WebSphere triggers a function within the ABAP Extension Module in the target SAP ERP backend.

SAP ERP sending event to the ESB

- WebSphere Business Integration Adapter for mySAP.com is used to build a communication channel between the ESB and any ABAP based SAP ERP system.
- SAP ERP is invoking WebSphere Enterprise Service Bus using WebSphere Business Integration Adapter for mySAP.com and the ABAP extension module to deliver a business event.



This is the scenario where SAP ERP sends an event to WebSphere Process Server or WebSphere Enterprise Service Bus.

WebSphere Business Integration Adapter for mySAP.com is used to build a communication channel between WebSphere and any ABAP based SAP ERP system. SAP ERP invokes WebSphere Process Server or WebSphere Enterprise Service Bus using WebSphere Business Integration Adapter for mySAP.com and the ABAP Extension Module to deliver a business event.

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- WebSphere Business Integration Adapter mySAP.com Overview
  - http://publib.boulder.ibm.com/infocenter/wbihelp/v6rxmx/topic/com.ibm.wbia_adapters.doc/doc/mysap4/mysap428.htm#HDRSII-OVERVIEW-CHAPTEROVERVIEW

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