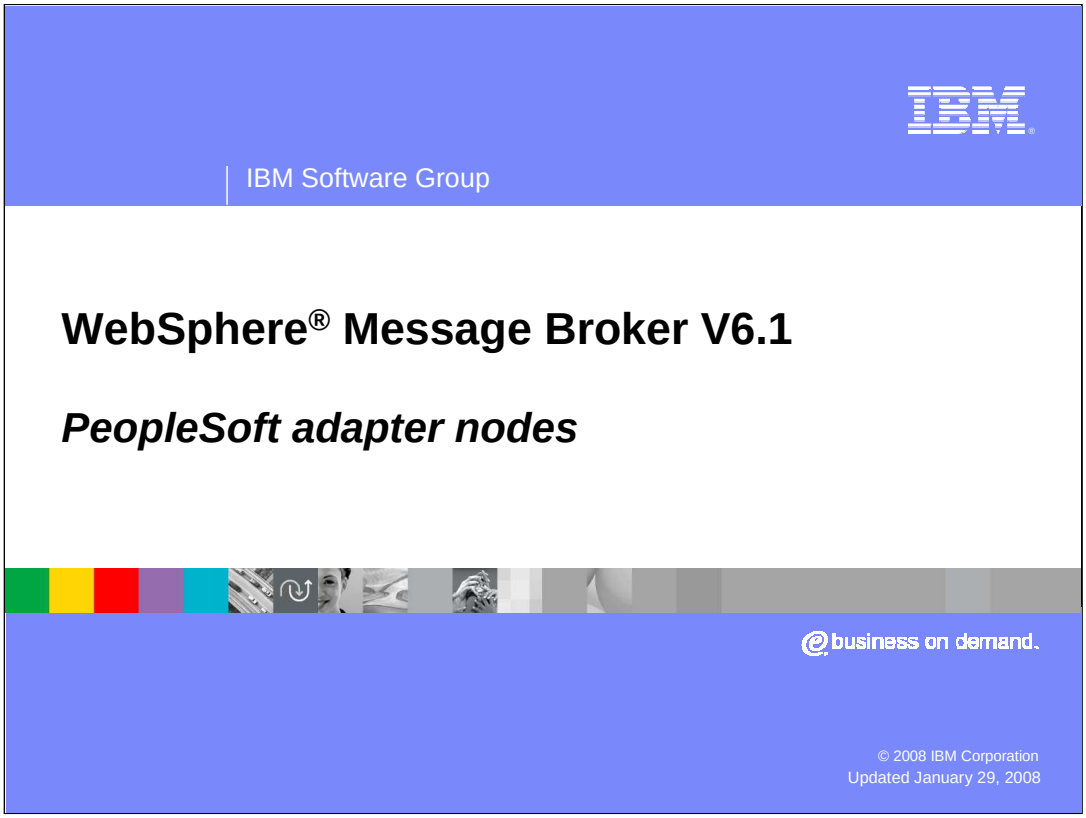


This presentation will focus on the WebSphere Adapter nodes for PeopleSoft in WebSphere Message Broker V6.1.

Agenda

- Terminology
- Dependent files
- Outbound operations
- Inbound operations and event manager
- Transaction support
- Problem determination
- Summary

The agenda is as shown on this page.

Section

Terminology

This section covers the some of the PeopleSoft terminology.

Accessing PeopleSoft APIs

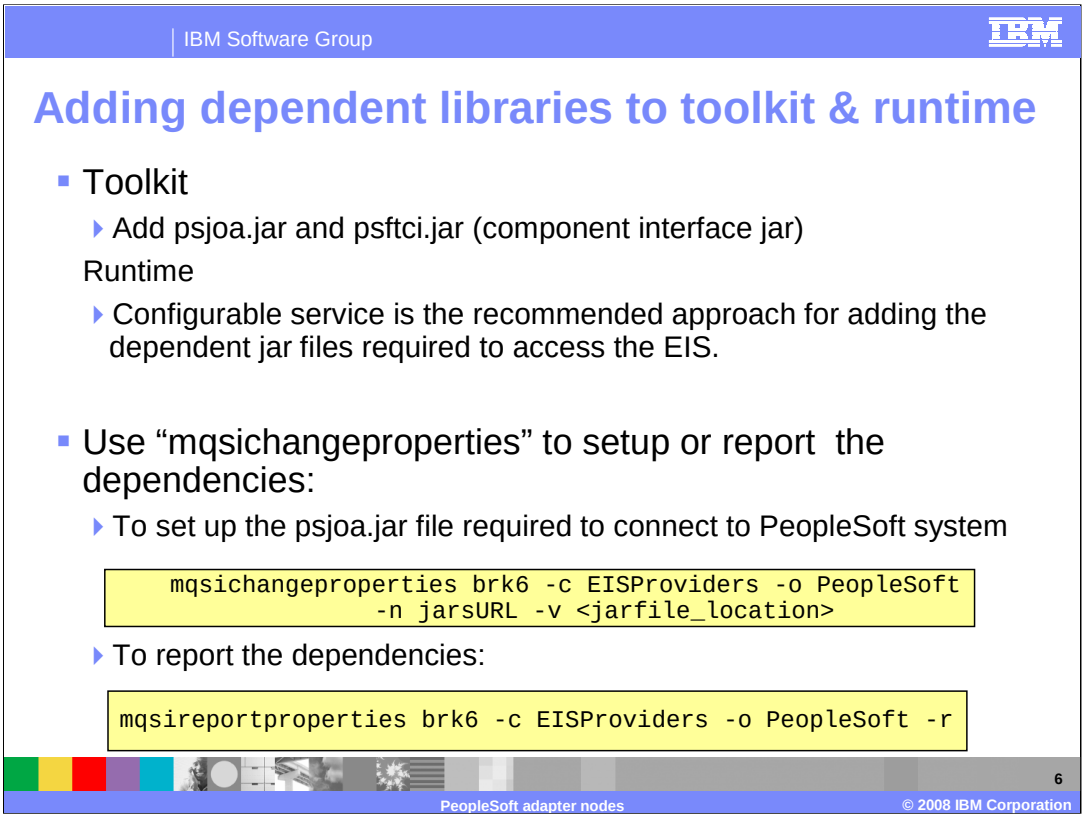
- There are two layers of the People Tools API classes to access a designated component interface and the underlying business
  - The primary layer is the one through which a session instance is created and a connection is made
  - Component interface is the secondary layer and is accessible to the resource adapter only from the session instance created in the primary layer. Within a component interface, the resource adapter has access to :
    - All the exposed PeopleSoft objects in the component interface definition
    - PeopleCode methods associated with the underlying components
    - Records with the exception of search dialog and menu-specific processing such as Active X
- The EIS-specific portion of the PeopleSoft resource adapter will rely on these two layers to communicate with the EIS

PeopleSoft API classes expose two layers of classes to the Adapter. The first one is used to create a connection and a session instance to the PeopleSoft application. The second one is the component interface through which the adapter interacts with the exposed PeopleSoft objects and their methods.

Section

Dependent files

This section covers dependent files.

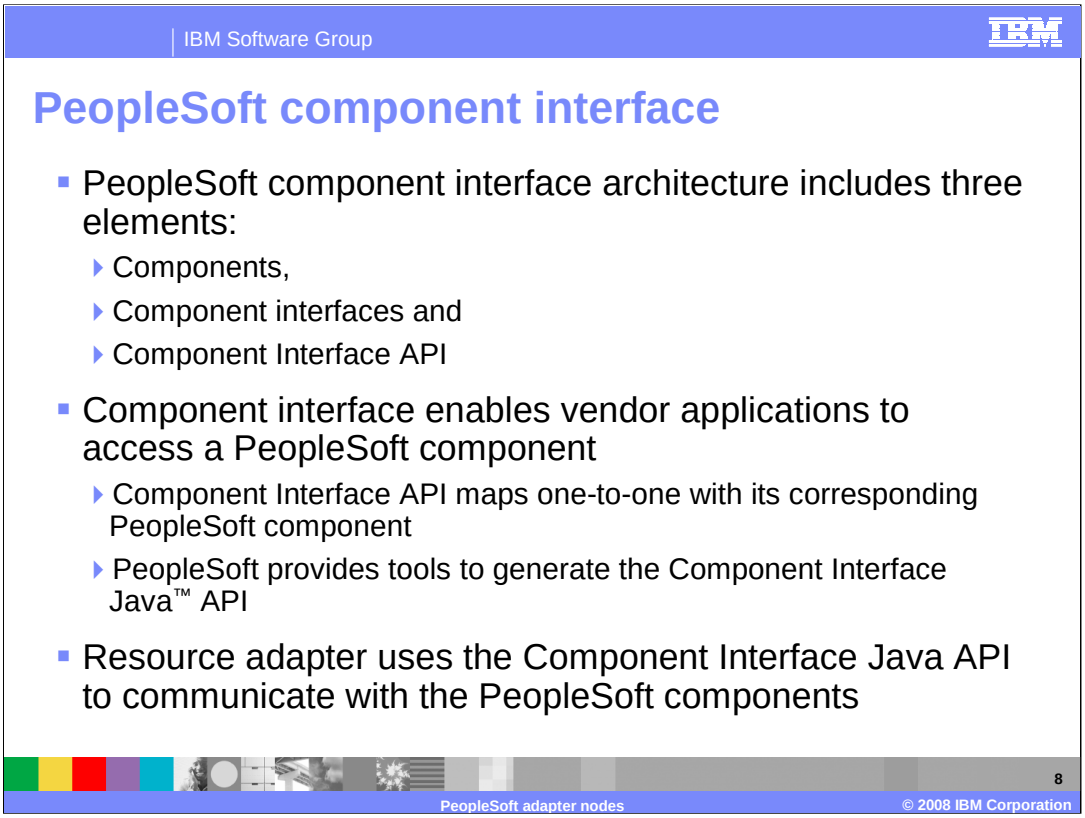


There are a set of dependent files required by the adapter at runtime and during design time when working with the adapter connection wizard. The wizard prompts you for the files required during design time. Once you finish the development of the application, before you deploy the application to the broker runtime, you need to set the dependency files required by the adapter to connect to the enterprise information system. You can make use of the mqsichangeproperties command to accomplish this task. The slide shows the format of the command for setting the PeopleSoft component interface jar file. These dependent files are used by the adapter to connect and communicate with the PeopleSoft system. Based on the version of PeopleSoft you are using, different files are needed as dependencies

Section

Outbound operations

This section covers the outbound operations.



PeopleSoft provides a component interface architecture that enables other applications to access a PeopleSoft component. The component interface API maps one-to-one with its corresponding PeopleSoft component. PeopleSoft provides tools to generate the Component Interface Java API. The PeopleSoft adapter uses the Component Interface Java API to communicate with the PeopleSoft components.

Outbound operations

- PeopleSoft Request node receives a message representing the PeopleSoft function call
  - Message definition contains properties that correspond to the method arguments, interface used and other application specific information
- Adapter component extracts the elements from the message
  - From the metadata, the Adapter determines the appropriate component interface and make the requested changes in the EIS
  - Using the component interface name associated with the specific message definition, the adapter gets the component interface and sets the appropriate keys specified in the message
  - When the key values are set, the adapter can instantiate an existing component interface to retrieve, update, or create a component interface
- Supported operations are create, update, delete, retrieve, retrieve all, exists

The high level flow of the outbound operations is shown here.

The adapter models the PeopleSoft function call as messages. The adapter node receives a message representing a PeopleSoft function call and the data.

Adapter component extracts the elements from the message. From the metadata, the Adapter determines the appropriate component interface and makes the requested changes in the EIS. Using the component interface name associated with the specific message definition, the adapter gets the component interface and sets the appropriate keys from the values specified in the message. When the key values are set, the adapter can instantiate an existing component interface to retrieve, update, or create a component interface.

Section

Inbound operations and event management

This section covers the inbound operations and event manager.

Configuration for inbound event management

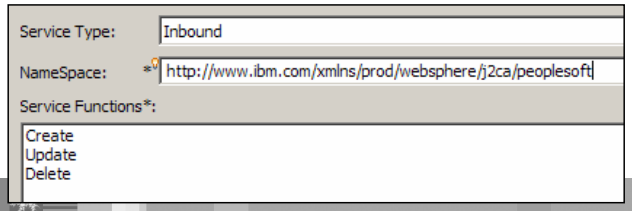
- Create a custom event project for the events with the fields and records needed for the IBM events
- To generate events within PeopleSoft,
  - insert the event generation calls (like in SavePostChange function) in the component of interest
  - Sample code provides two functions, IBMPublishFutureDatedEvent and IBMPublishEvent
    - IBMPublishFutureDatedEvent is used for publishing future dated events that need to be polled when the date arrived
    - IBMPublishEvent is used for publishing the regular events (not in the future)
  - This allows the events to be published after the component save is done. The event information published is stored in the event table

Inbound operations are based on events being triggered when a PeopleSoft component is created, modified or deleted. The PeopleSoft developer must create a custom PeopleSoft component to store the events that are being triggered as a result of the updates to the PeopleSoft component. The schema for the custom PeopleSoft component for event store cannot be changed. A sample custom PeopleSoft component, called, “IBM Events” is provided with the adapter.

Triggers need to be inserted in the PeopleSoft component that needs to be watched for events. Sample triggers are also provided.

Inbound operations – Overall high level flow

- Events are used to monitor changes to component operations within PeopleSoft
- Peoplecode should be added to the component for publishing events
- Events are stored in People Soft tables
  - Component keys are stored in event for the adapter to later retrieve the component information
- Adapter polls for events and if found, retrieves the event
- Adapter retrieves the component information (based on the operation on the component)
- Available inbound operations are for Create, Update, Delete operations



The adapter polls for the events, looking in the custom PeopleSoft event store.

When a new event is detected by the adapter, based on the event status, the adapter retrieves it. The adapter retrieves the component object represented by the event, converts it into a message using the appropriate message definition, and delivers it to the rest of the message flow.

The available inbound operations where events can be generated are Create, Update and Delete.

What happens when component is changed?

1. The function, IBMPublishEvent(*&BOName, &KeyNames*) or IBMPublishFutureDatedEvent is called
   - *&KeyNames* contains the values to allow the adapter to later instantiate the component interface with the necessary key values
2. A new entry is added to the IBM_EVENT_TBL record where the information is stored until the adapter retrieves it as an event
   - Event status is set to 0 or 99 (99 is set for events with future dates)
   - Event date is set to the system date (for IBMPublishDate) or future date (for IBMPublishFutureDatedEvent)
3. Adapter polls for the events in the event project and extracts events with status = 0 (indicating event has not been processed)
4. Adapter retrieves information for the component interface and populate the message before calling the message listener
5. Any errors that occur during the event function do not affect the commit or functionality of the PeopleCode operation

This slide goes into the details of what happens when a component with an event trigger is changed. Based on the trigger function, either IBMPublishEvent or IBMPublishFutureDatedEvent is called. When the component is changed, a new entry is added to the event store with the status of 0 for a new event or 99 for a new event for a future date. The adapter periodically polls for the new event, based on the polling period. New events (status = 0) are extracted and processed within the adapter.

For each new event, the adapter retrieves the component information related to the event. It then populates a message before sending it to the rest of message flow.

Transaction support

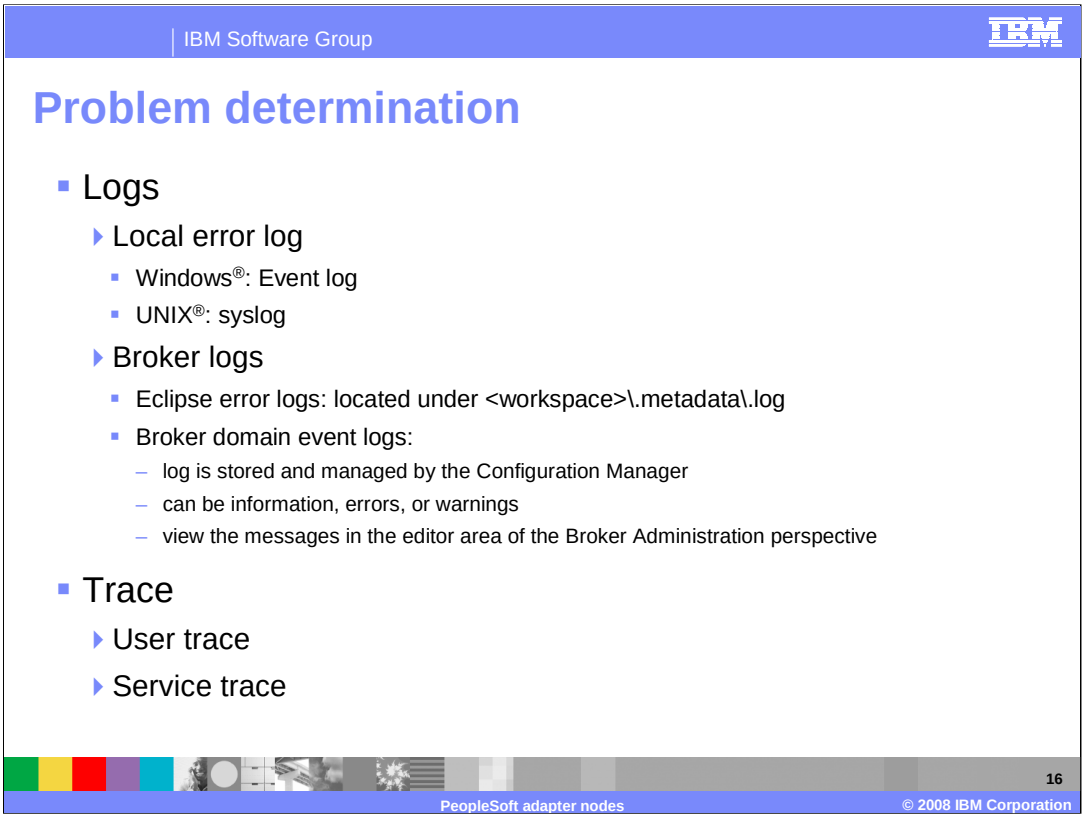
- Transaction
  - PeopleSoft application does not support local or XA transaction
  - Hence this feature is not supported by the adapter

PeopleSoft applications do not support transactions, so there is no end to end transaction available from the adapter to and from the PeopleSoft application.

Section

Problem determination

This section covers problem determination. Log and trace files are covered in the common WebSphere Adapter nodes overview presentation



On Windows, the local error log is the Windows Event log's application view. On UNIX and Linux systems, the local error log is the *syslog*. Where syslog messages are sent depends on how you configure your UNIX or Linux system. The Eclipse error log captures internal errors that are caused by the operating system or your code and are logged in the .log file under your workspace. Broker domain log information is written to the broker domain Event Log. This log is stored and managed by the Configuration Manager. The Event Log displays messages about events that occur within the broker domain, such as deploying topology or topics hierarchy configuration. The messages can be information, errors, or warnings. You view the messages in the editor area of the Broker Administration perspective. The broker domain Event Log shows errors that are generated by all workbench users in that particular domain. You can enable the user and service traces by using the *`mqsichangetrace command`*

Section

Summary and references

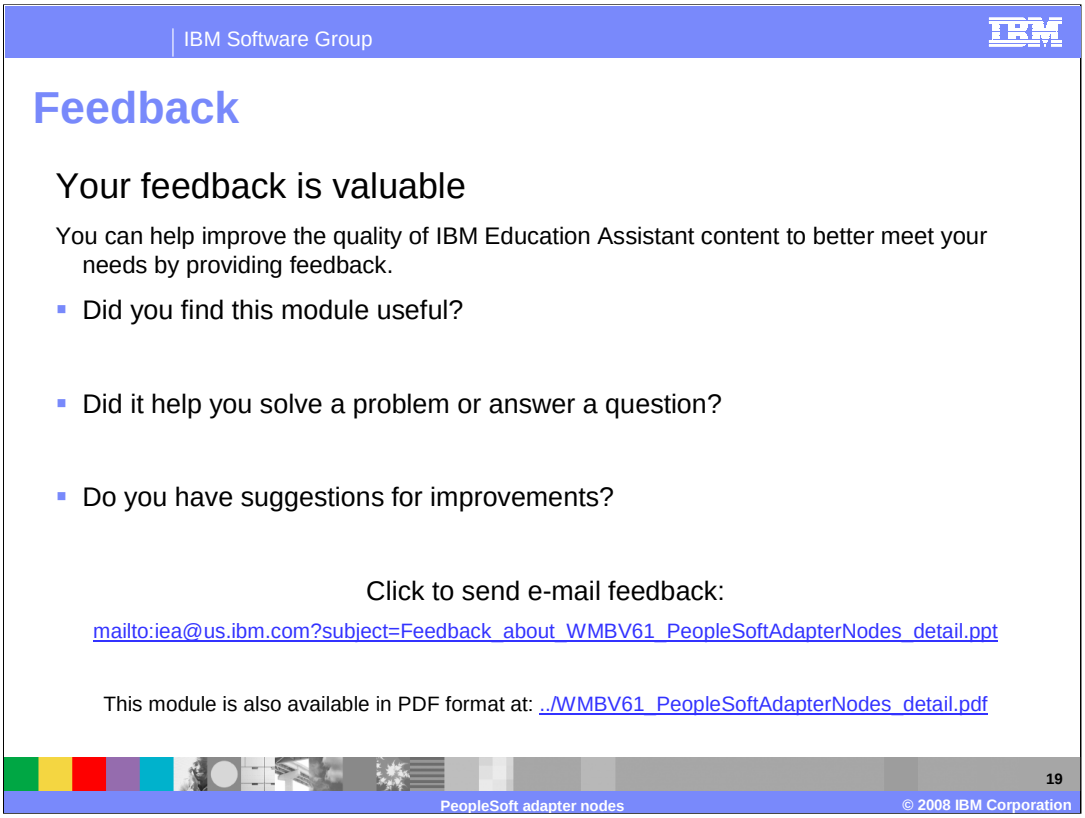
This section covers the summary and references.

Summary and references

- Summary
  - Discussed PeopleSoft adapter nodes in details covering the architecture, operations, problem determination
- References
  - Information center
  - User guide

In summary, this presentation covered the details of PeopleSoft adapter nodes functionality

More information can be found in the user guide and the Information Center



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