webMethods
Integration Workshop – Day 1

July, 2016

Introduction

- This course introduces to SoftwareAG webMethods suite.

- Participants will understand the overview and architecture of webMethods platform.

- Participants learn the development tools (Designer) and how to use them.

Objectives

- Describe the architecture and components of the webMethods Platform
- Get a hands on experience on Designer and developer tools with different perspectives.
- To create packages, folders and orchestration.
- To know about Locks and its properties
- To understand about Access Control Lists (ACL)

Software versions

- This class focuses on the webMethods suite

webMethods Integration Server

webMethods Broker

Software AG Designer

Chapters

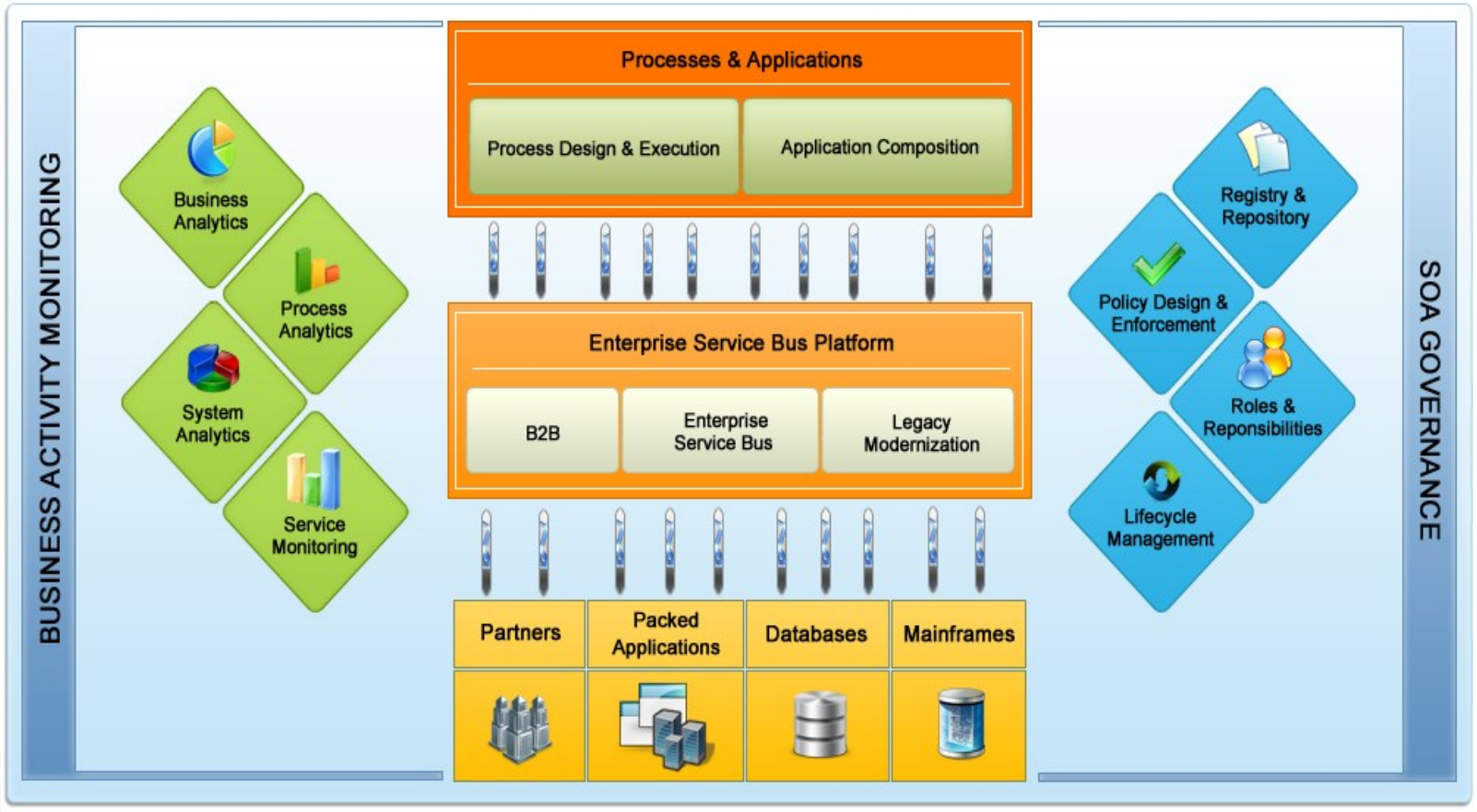
Day 1

- webMethods Overview
- Using SoftwareAG Designer
- Tool Perspectives
- Packages & Management
- Folders and locks
- Using SoftwareAG Designer
- Folders and locks
- Access Control Lists (ACL)

webMethods Overview

- Integration solutions
- Composite Application Development
- Business Activity Monitoring

Business to Business Integration
Business Process Management

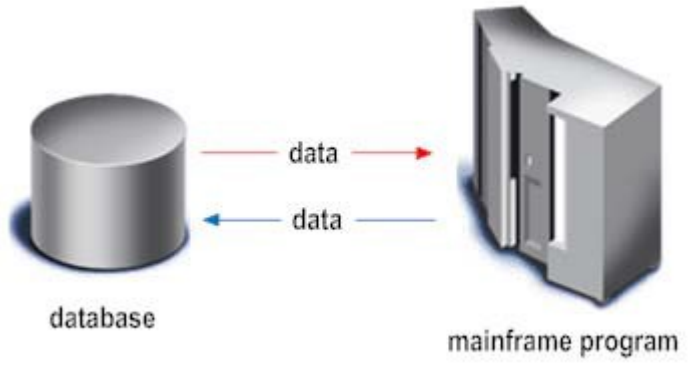


Integration Solutions

- Integration solutions enable disparate resources to share business data. Resources include software applications such as SAP, Siebel, etc.,

- Common Integration Solutions - Synchronization, Propagation, Composition.

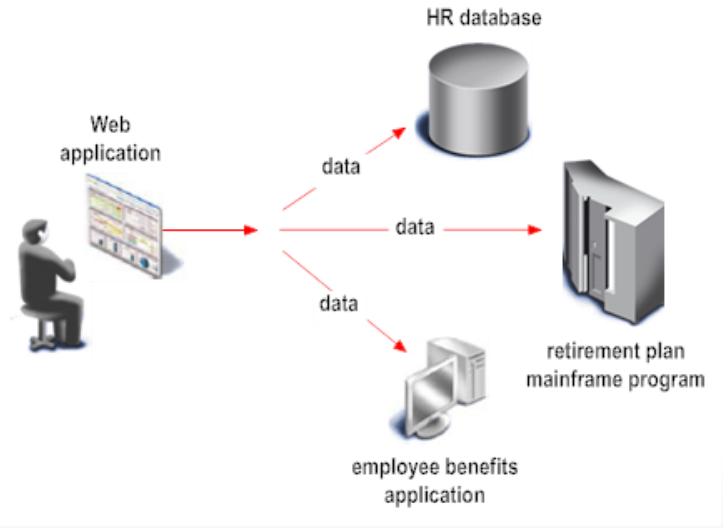
- Synchronization – One store maintains the information in a database and the other in a mainframe program. When information is added to or changed in the resource at one store, an integration solution updates the resource at the other store



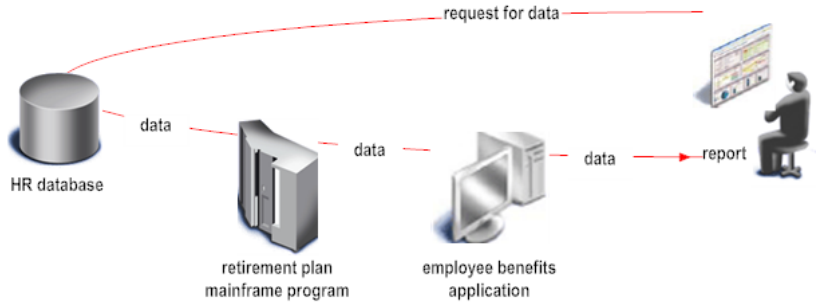
Integration Solutions – Continued..

- Propagation – Integration solution propagates the data to a human resources (HR) database, a retirement plan mainframe program, and an employee benefits application

- Composition– An integration solution gathers the data for the report from an HR database, a retirement plan mainframe program, and an employee benefits application, and then returns the data to the Web application for display in report format.

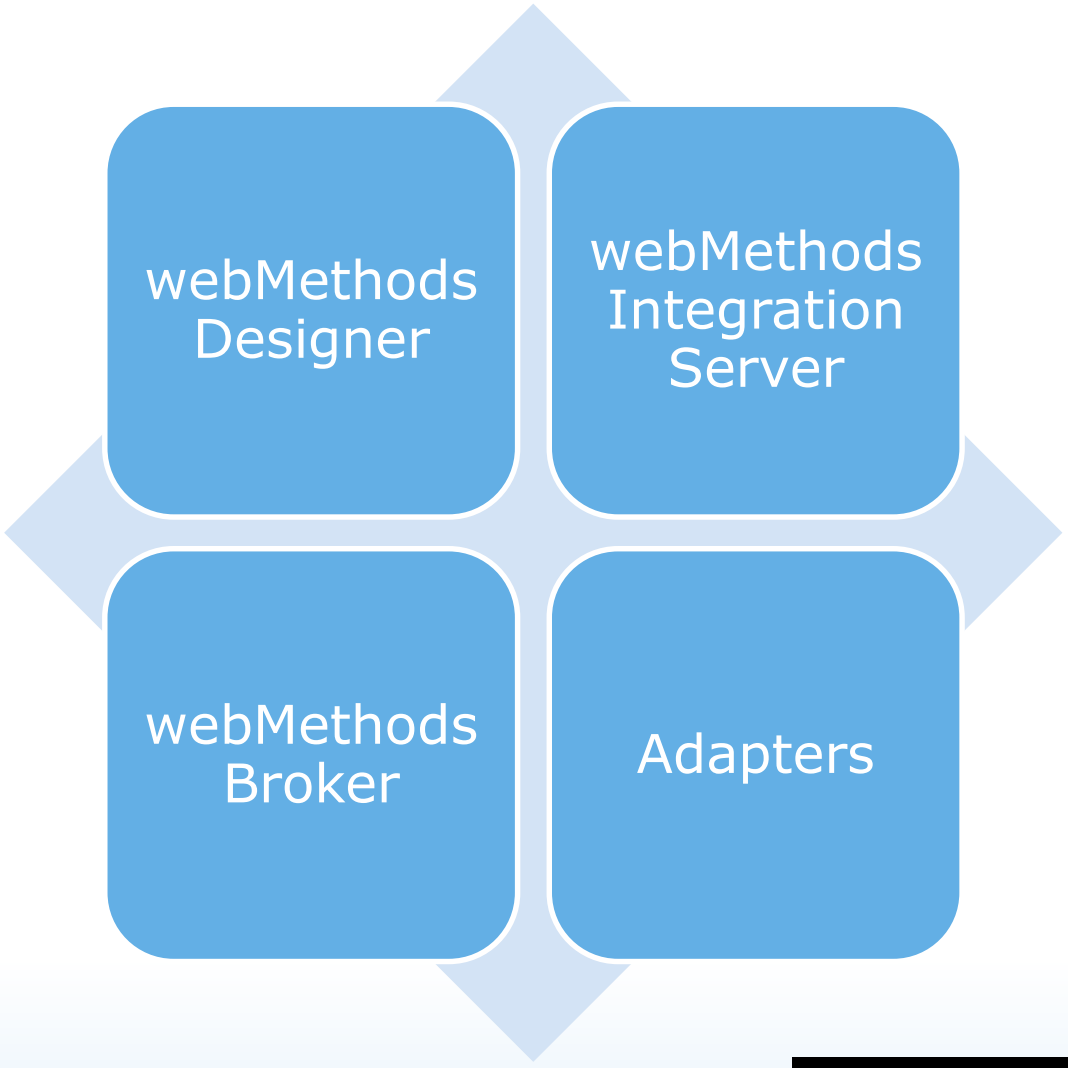


PROPOGATION



COMPOSITION

Integration Solutions – wM Tools

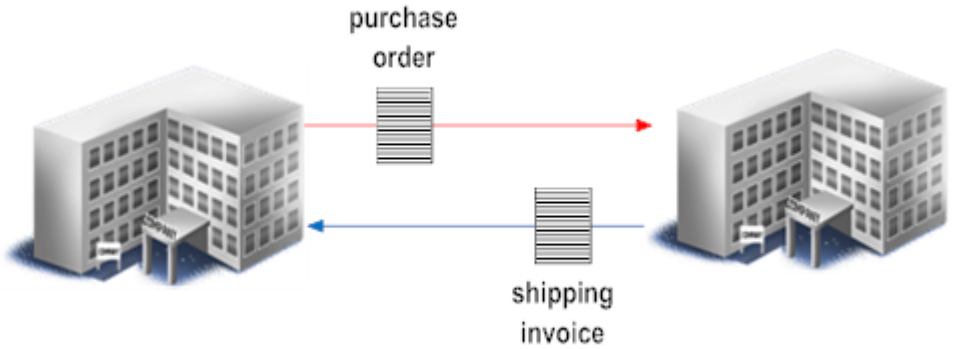


Business to Business Integration

- Business to business, or *B2B,* describes electronic commerce, or e-commerce, transactions between businesses.

- E-commerce transactions between trading partners usually involve the exchange of business documents using automated processes.

- The retailers might send purchase order documents to the manufacturer, which returns purchase order acknowledgement, shipping notice, and invoice documents. Similarly, the manufacturer might send purchase order documents to the parts suppliers, and so on.



B2B Solutions – wM Tools

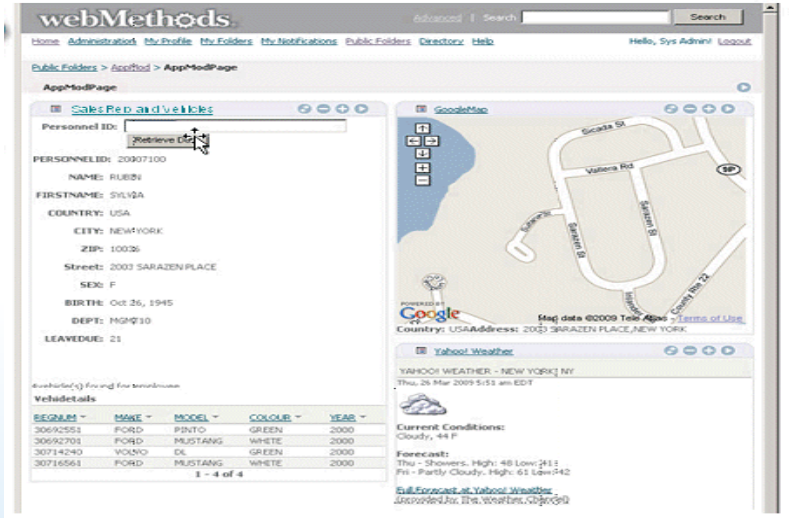
Trading Networks	• to build and manage a peer-to-peer or hub-and-spoke network of trading partners.
eStandard Modules	• eStandards Module defines the industry-standard or proprietary transport protocol,

Composite Application Development

- A composite application is made up of portlet applications and services that present data from multiple resources on one or more Web pages for the end user

- Composite applications are also used to create modernized front ends for legacy systems.

- When the end user clicks a sales representative, the composite application gets customer data from the mainframe program and displays the locations and contact information for the sale representative's customers on a Google map..



Cognizant

CAF– wM Tools

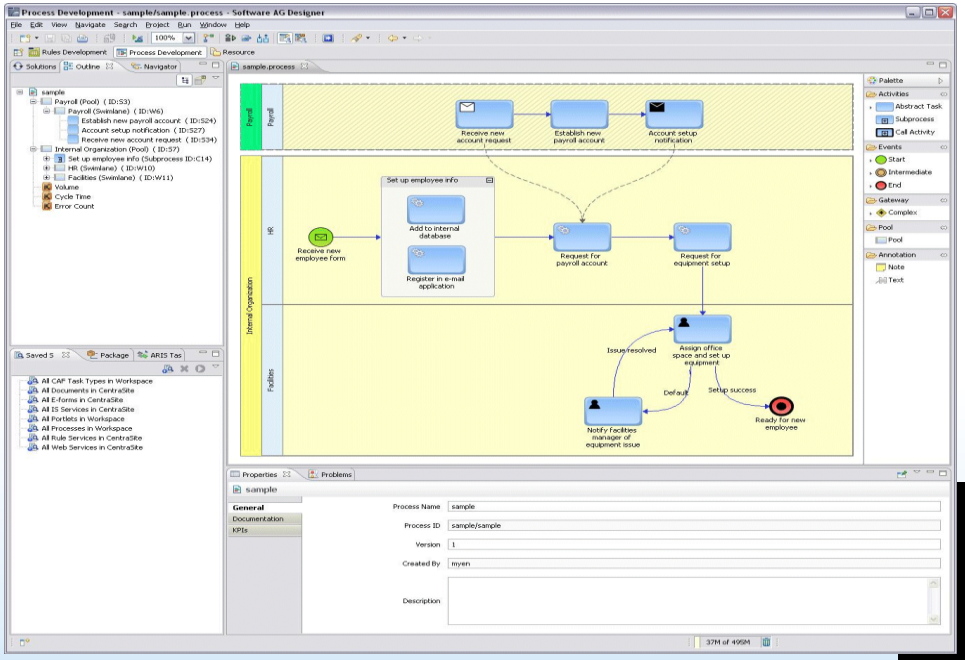
Designer	• Designer is used to develop composite applications.
My webMethods server & Integration server	• Products used to execute composite applications are My webMethods Server and Integration Server.

Business Process Management

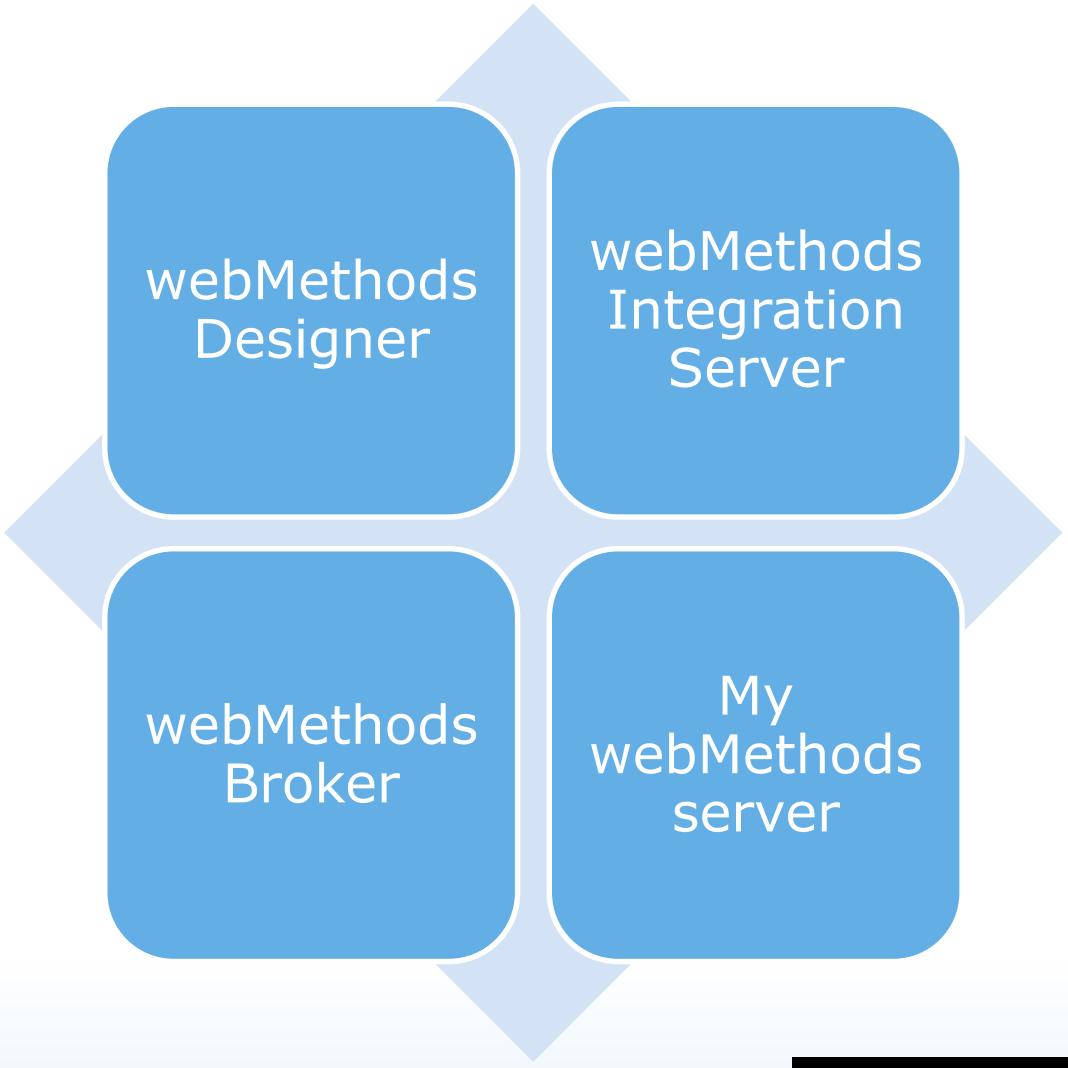
- A business process is a series of business activities that are performed in a specific order, by a variety of applications, systems, employees, and external businesses, according to defined business rules.

- Business processes are more complex and long-running than integration solutions and can include activities performed by humans.

- Business process management enables you to automate business processes. For example, the process of preparing for a new employee could be automated.



BPM – wM Tools

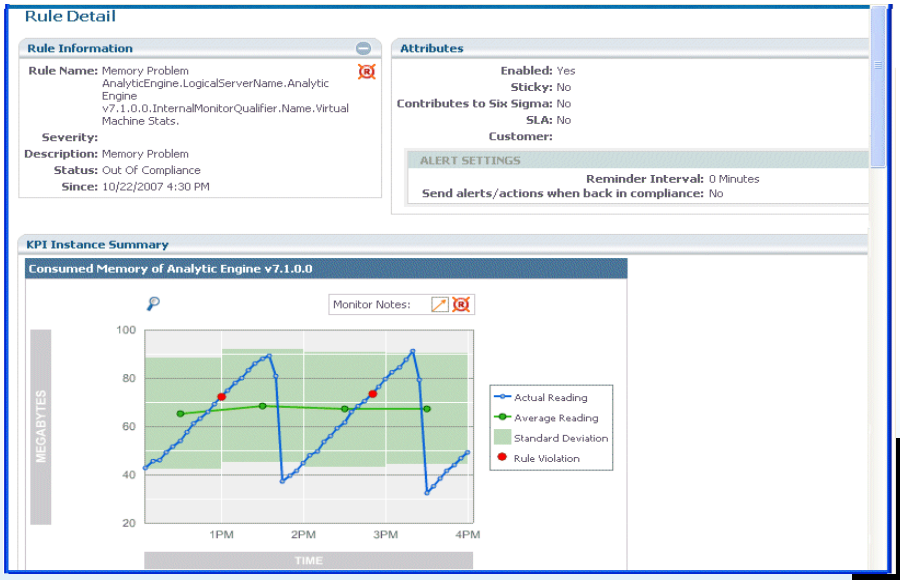


Business Activity Monitoring

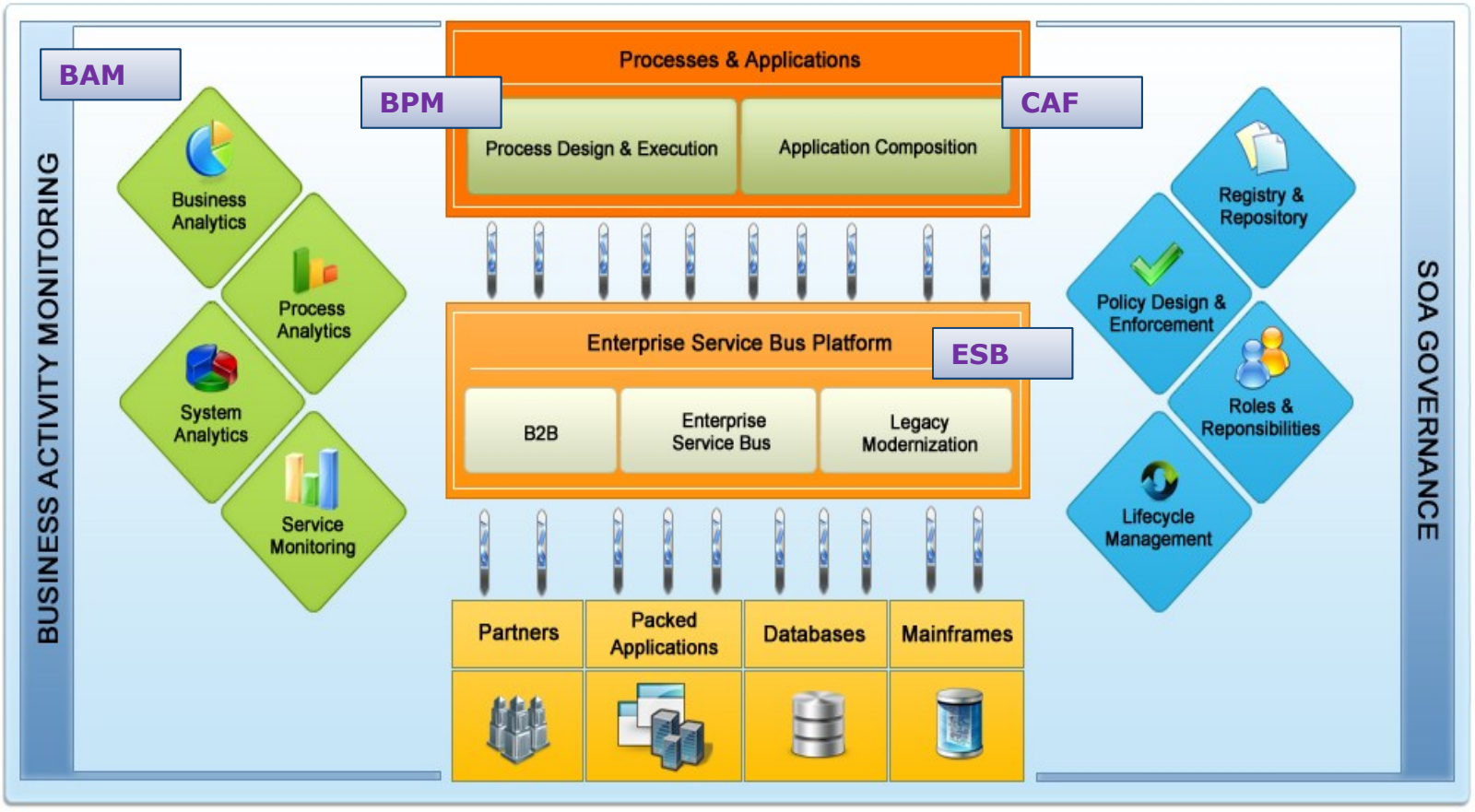
- Business activity monitoring enables an enterprise to monitor the performance of the system resources and business processes it uses to deliver goods and services.

- System resource and business process data is monitored via key performance indicators (KPIs).

- Business optimization enables an enterprise to use the monitoring information to proactively manage and optimize those system resources and business processes.



BAM – wM Tools



Using SoftwareAG Designer

- Software AG Designer provides a set of Service Development features that you can use to build, edit, and debug services and integration logic.

- Designer lets you rapidly construct integration logic with an easy-to-use implementation language called the "*webMethods flow language*".

- Flow language provides a set of simple but powerful constructs that you use to specify a sequence of actions (steps) that the Integration Server will execute at run time.

- You can use Designer to create the document types and schemas used for data validation and to define triggers that launch the execution of services when certain messages are received.

How to Start/Stop the wM IS

To start the default server instance on Windows

1. Click Start.
2. In the All Programs menu point to the Software AG folder, then point to the Start Servers folder.
3. Click the StartIntegration Server icon.

To start Integration Server on UNIX

1. Locate the startup.sh script file.
2. Execute this script.

To start a server instance from the command line

1. At a command line, type the following command to switch to the server's home directory:
   cd Integration Server_directory/instances/instance_name
   where instance_name is the name of the Integration Server instance.

2. Type the following command to start the server instance:
   For Windows: bin\server.bat -switch -switch ...
   For UNIX: bin/startup.sh -switch-switch ...
   where switch is optional and can be one of the following :-
   portportNumber; -homedirectoryName; -debuglevel; -logdestination; -quiesce

How to Start/Stop the wM IS Contd…

To shut down the server

1. Open the Integration Server Administrator if it is not already open.
2. In the upper right corner of any Integration Server Administrator screen, click Shutdown and Restart.
3. Select whether you want the server to wait before shutting down or to shut down immediately.

Delay number minutes or until all client sessions are complete. Specify the number of minutes you want the Integration Server to wait before sharing down. It then begins monitoring user activity and automatically shuts down when all non-administrator sessions complete or when the time you specify elapses (whichever comes first).

Perform action immediately. The server and all active sessions terminate immediately.

4. Click Shutdown.

To shut down the server from the command line

1. At a command line, type the following command to switch to the server instance's home directory:

Cd Integration Server_directory \instances\instance_name

where instance_name is the name of the Integration Server instance.

2. Type the following command to stop the server:

3.For Windows: bin\shutdown.bat

4.For UNIX: bin/shutdown.sh

Running Integration Server as a Windows Application vs. a Windows Service

Integration Server can run as either a Windows application or a Windows service

Use a Windows application

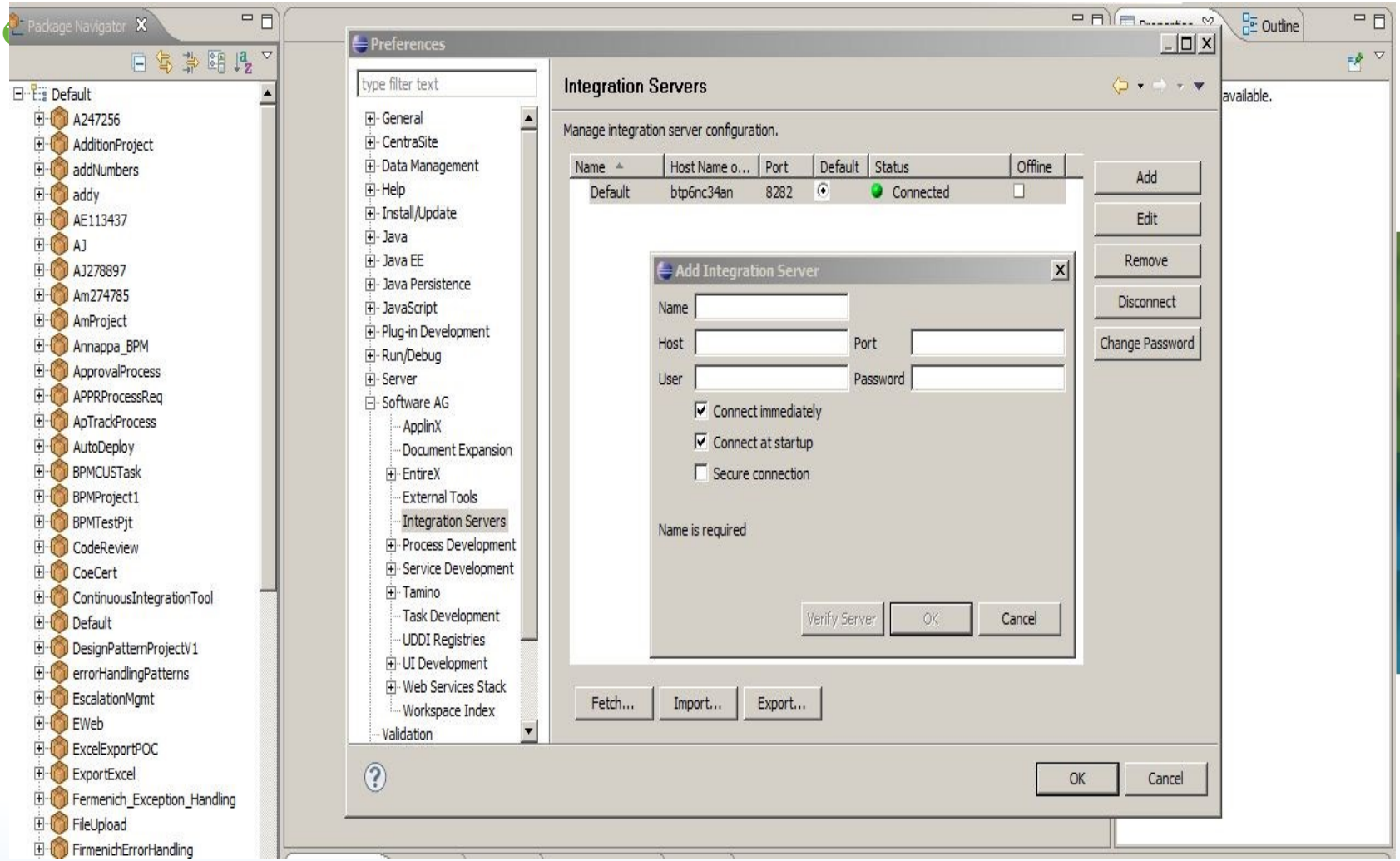
1. If we want to control when the Integration Server initializes. When Integration Server is a Windows application, you must manually start it.

2 If we installed the Integration Server as a Windows service and now want it to be a Windows application, we can manually remove the Windows service for the Integration Server. After removing the Windows service, the Integration Server will still be available as a Windows application

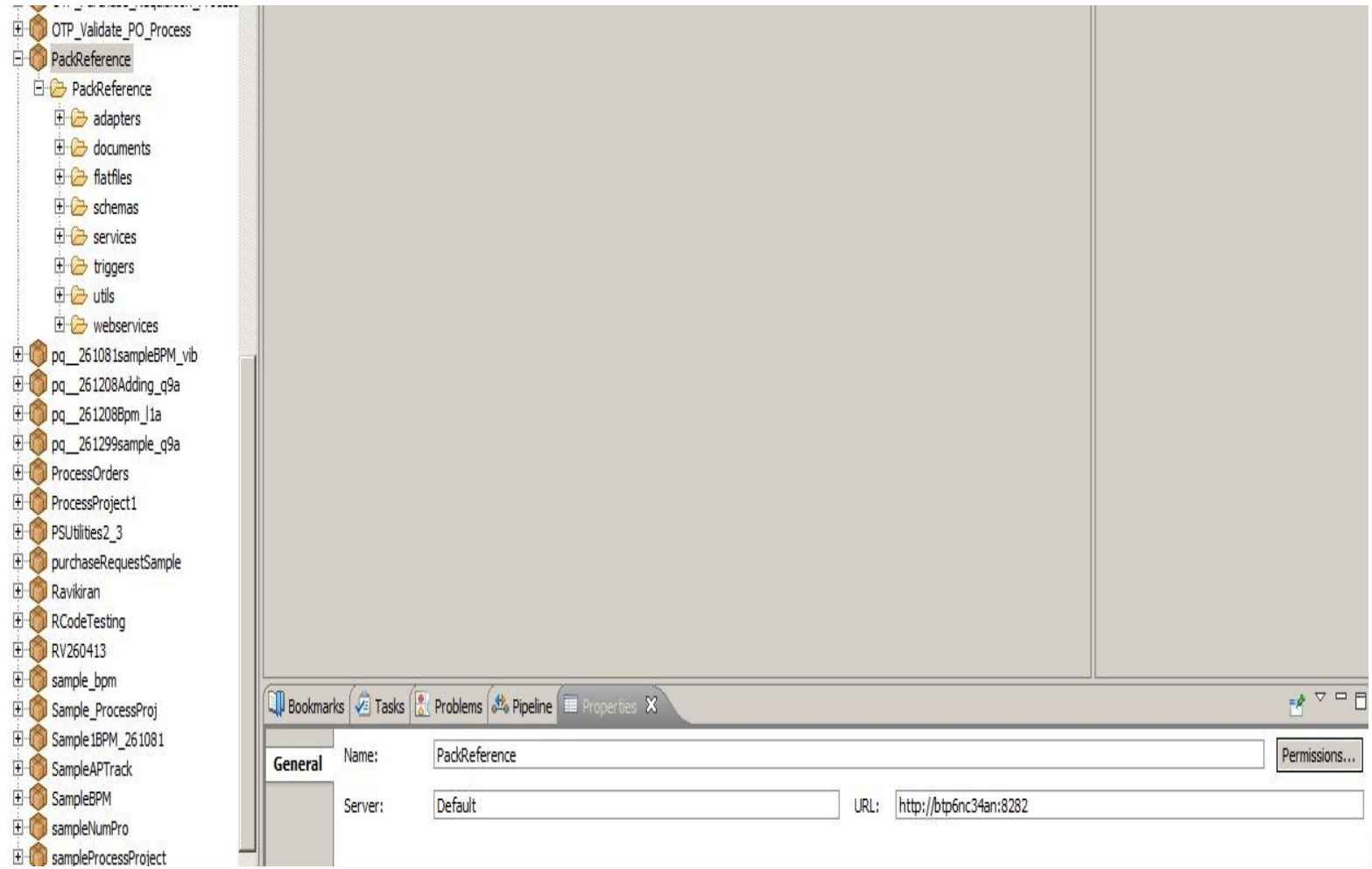
Use a Windows service to have Integration Server automatically initialize when the machine on which it is installed initializes. When we use a Windows service, we do not have to manually restart Integration Server following a machine restart.

If we installed Integration Server as a Windows application and now want it to be a Windows service, we can manually register the Integration Server service.

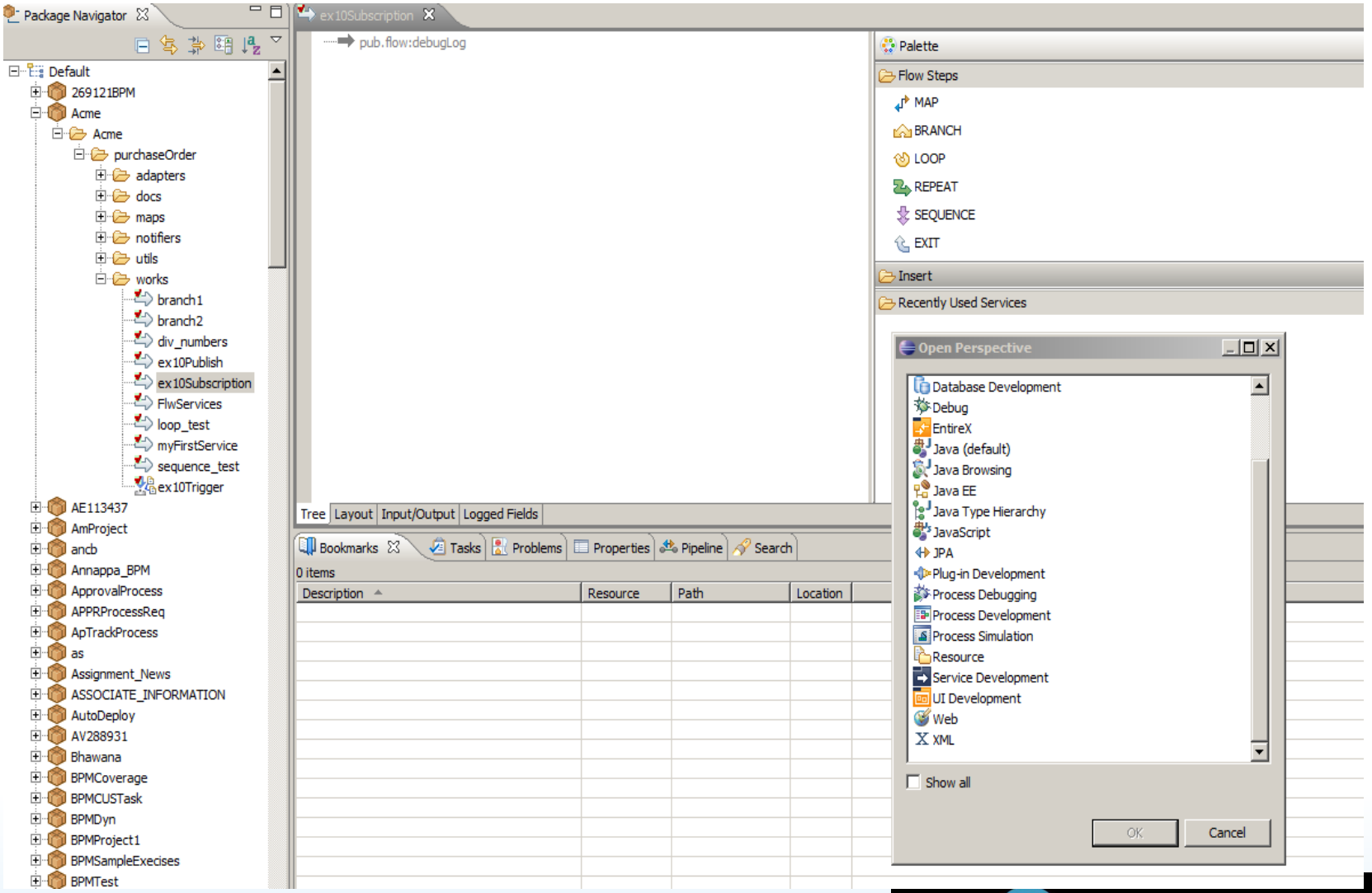
Connecting to Integration Server



Designer – A View



Designer – Perspectives



Using SoftwareAG Developer

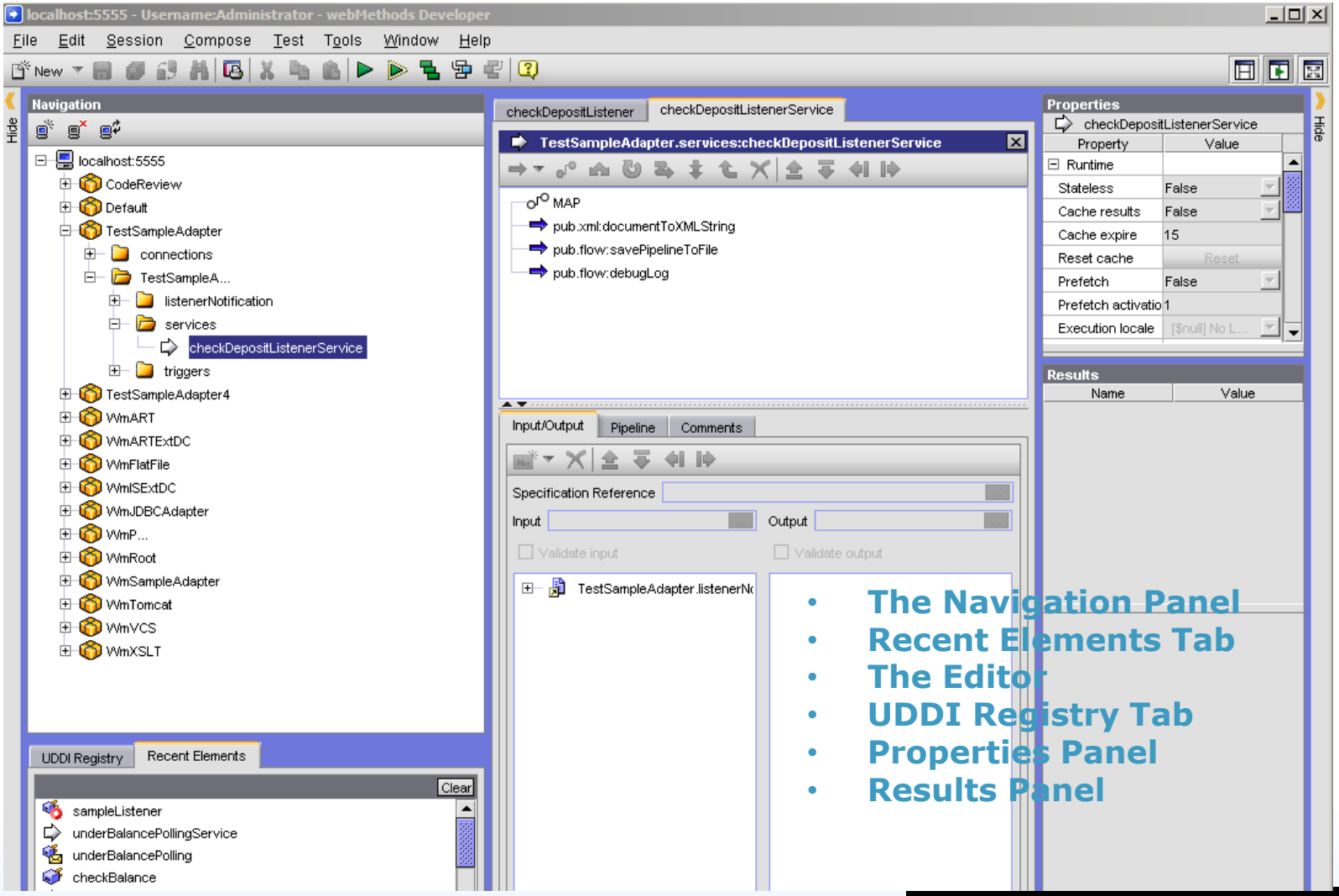
- webMethods Developer is a graphical development tool that you use to build, edit, and test integration logic.

- Developer lets you rapidly construct integration logic with an easy-to-use implementation language called the "*webMethods flow language*".

- Flow language provides a set of simple but powerful constructs that you use to specify a sequence of actions (steps) that the Integration Server will execute at run time.

- You can use Developer to create the document types and schemas used for data validation and to define triggers that launch the execution of services when certain messages are received.

Developer – A View



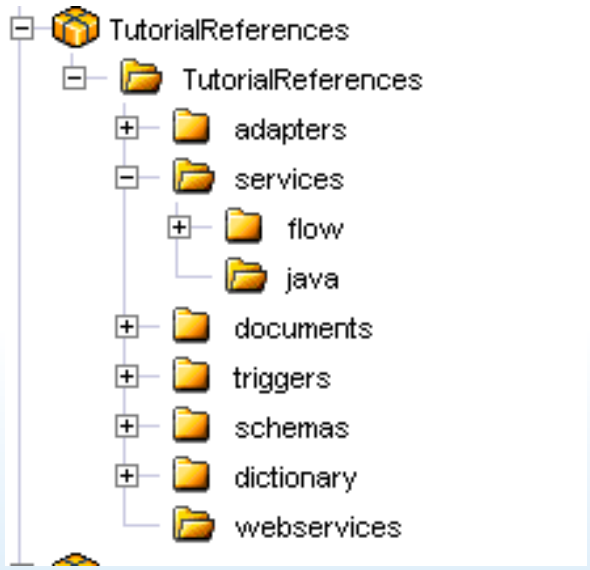
- The Navigation Panel
- Recent Elements Tab
- The Editor
- UDDI Registry Tab
- Properties Panel
- Results Panel

Elements

- Server
- Package
- Folder
- Flow Service
- Web Service Descriptor
- Adapter Notifications
- Specifications
- Java Service
- Trigger
- Document type
- Adapter Service
- Schema
- Flat file Schema
- Flat file Dictionary
- Publishable Document type

Packages

- Bundle of related Services and files. Mostly organized by function or application
- Every element in wM Developer must belong to a package
- On the server side, package represents a subdirectory within the IntegrationServer_directory\packages directory
- The service fullnamespace starts from the folder name and not from the packageName. PackageNames doest not affect service namespace.



Package Management

- Creating a package
- Deploying a package in an Integration Server
- Activating the package
- Assigning dependencies and version number
- Exporting a package
- Archiving a package

Locking Elements

- Simultaneous modification of elements in a multi-user environment prevented by enforcing locking of elements.

- Elements such as flow services, Java services, schemas, and specifications can be locked.

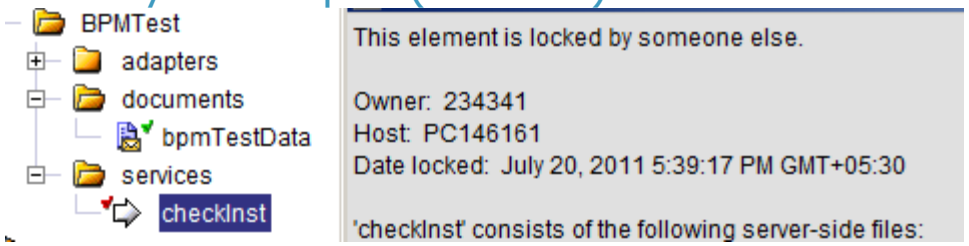
- User locks
  - Locks obtained by individual users
  - Element is read-only to the rest of the users until unlocked

- System Locks
  - Element's corresponding server files are read only on the IS

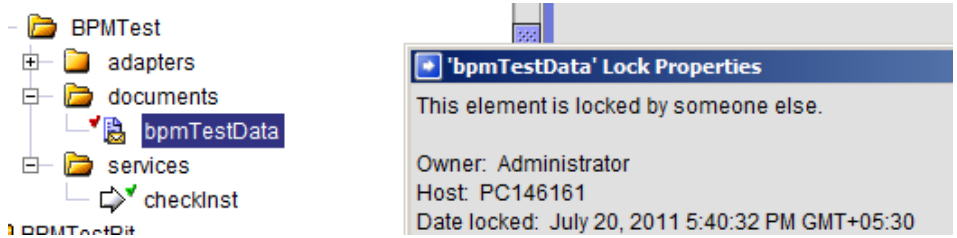
- Services can be used and run regardless of its lock status, as long as Execute access to the service is granted.

Locking Elements - illustrated

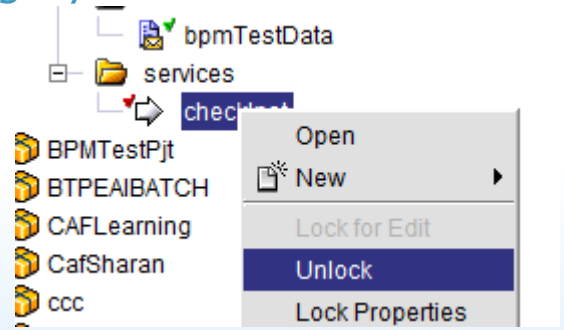
- Service locked by developer (232322)



- Service locked by Administrator



- Lock overriding by Administrator



Access Control List

- Control access to packages, folders and other elements (services, document types, specifications, etc) at group level

- Identifies groups of users allowed to access an element (Allowed Groups) and/or groups that are not allowed to access the element (Denied Groups)

- Different kind of access
  - List – controls visibility to the existence of an element and its metadata
  - Read – controls the visibility to the source code and its metadata
  - Write – controls lock, rename, modification and deletion of an element
  - Execute – controls execution of a service

Summary

What have we learnt today ?

- webMethods Overview
- Integration Challenges
- Using SoftwareAG Designer
- Using SoftwareAG Developer
- Perspectives, Server, Packages, Locks & ACL

Q & A

- What are the common Integration Solutions ? What is Composition ?
- What is B2B & A2A ?
- What are the tools used to develop BPM solutions ?
- What are the different kinds of access in ACL's ?
- What are the different types of Locks ?
- Why do we lock first before editing the flow service, or IS elements ?

Thank you