



12b

Blaze Business Rules



Notes: _____

Objectives

- At the end of this section you will be able to
 - Understand Blaze and how it fits into the webMethods BPM architecture
 - Setup connectivity between Blaze Advisor and a webMethods environment
 - Understand the various Blaze decision entities
 - Create, deploy, and test simple business rules
 - Invoke a Blaze Rule service from a business process activity step
 - Deploy a Rule Maintenance Application to MWS
 - Perform instant business rule modifications using an RMA

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12b

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12b

Blaze Business Rules

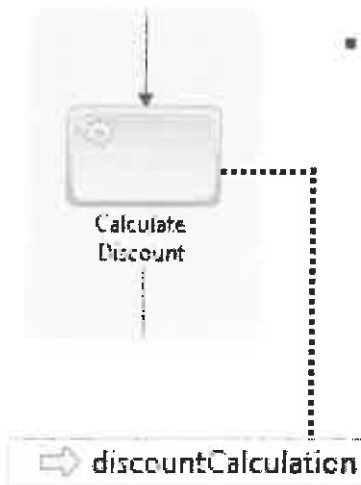
Notes: _____

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Notes: _____

Flexible Business Demands

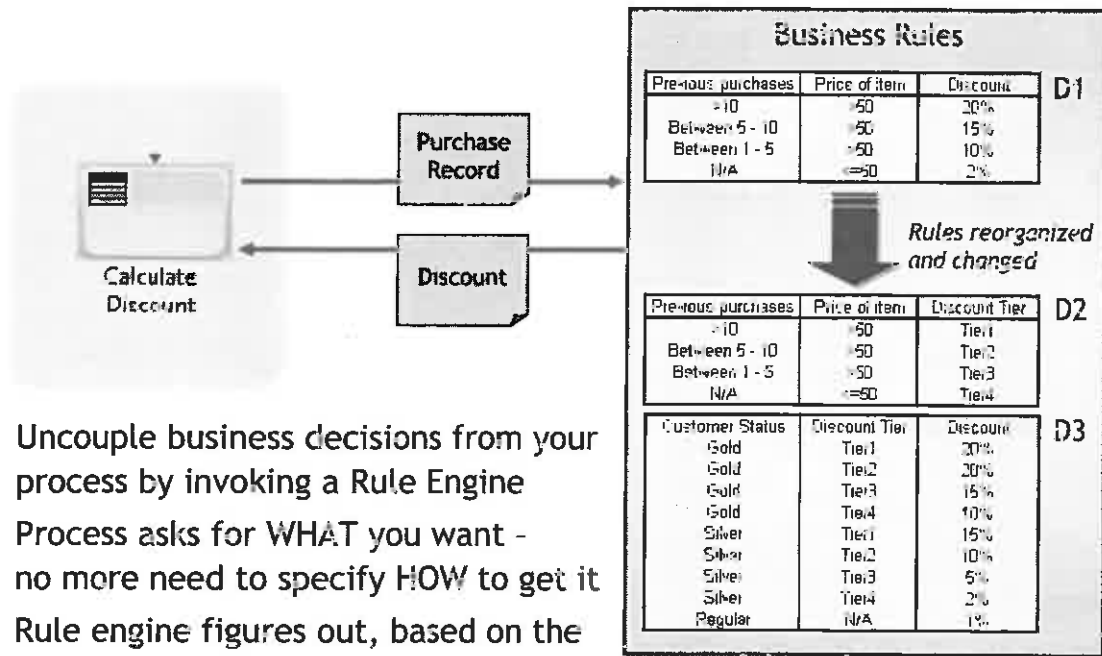


- Business computations often rely on complex decision chains
- Decisions may change because of altered business demands and conditions
- Using IS services to implement these business decisions results in
 - business logic hardcoded in service(s) (tight coupling to process activity)
 - IT developer is required any time business logic service(s) has to change
 - rule changes require reprogramming service(s) and sometimes reverse engineering is required to figure out existing rule
 - possible development / deployment delays due to resource availability issues
 - re-testing and re-deployment delays
 - less flexibility for the business

Notes: _____


[illegible]

Business Rules - Decision Making Flexibility



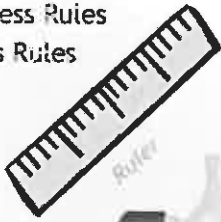
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Notes:




Rules in webMethods - Don't get Confused

- **Business Rules**
 - Implemented by webMethods Business Rules and/or Blaze Business Rules
 - Blaze Rule Service: Encapsulation of one or more Blaze Business Rules
 - Created in a Blaze Project and deployed to IS
- **CAF Rules**
 - used to assign start pages, shells and skins to groups in MWS
- **Optimize Rules**
 - BAM Asset
 - Abnormal KPI Reading
- **Trading Networks Processing Rules**



Ruler



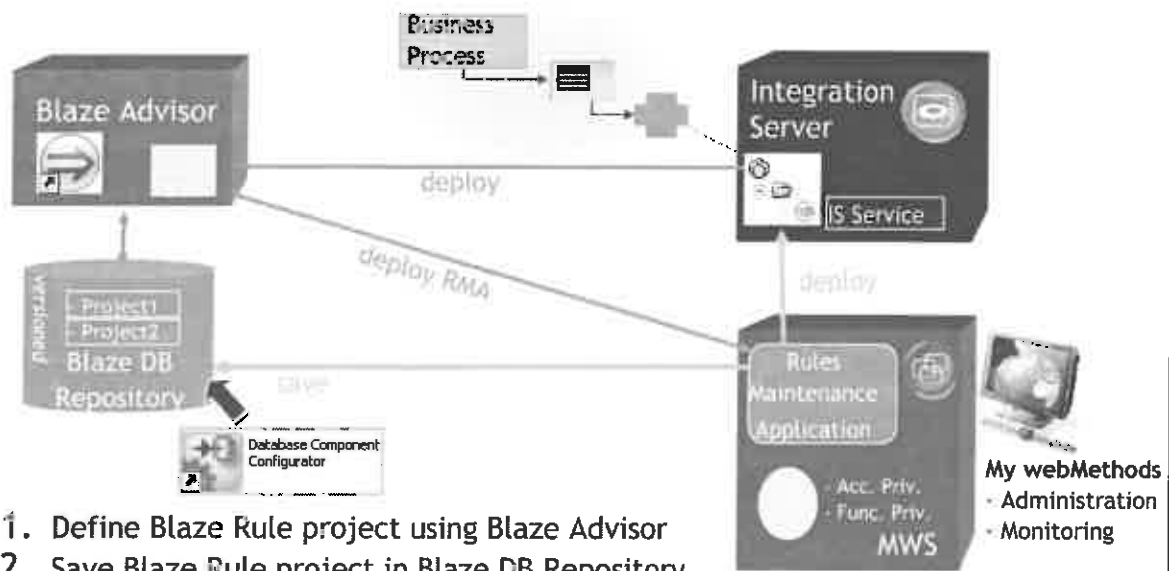
Rule of Thumb

Not covered in this class

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Notes: _____

Blaze and webMethods BPMS - The Big Picture



1. Define Blaze Rule project using Blaze Advisor
2. Save Blaze Rule project in Blaze DB Repository
3. Deploy Blaze Rule project to IS
4. Deploy Blaze Rule Maintenance Application (RMA) to MWS
5. Use RMA for rule maintenance and IS redeployment

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Notes: _____

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Blaze Business Rules

■ Some Definitions:

- "Blaze Rule" is a single IF-THEN statement in a Blaze decision entity, a branch in a decision tree, a row in a decision table, etc.
- A Blaze decision entity can be used to generate a Blaze Business Rule Service on an Integration Server

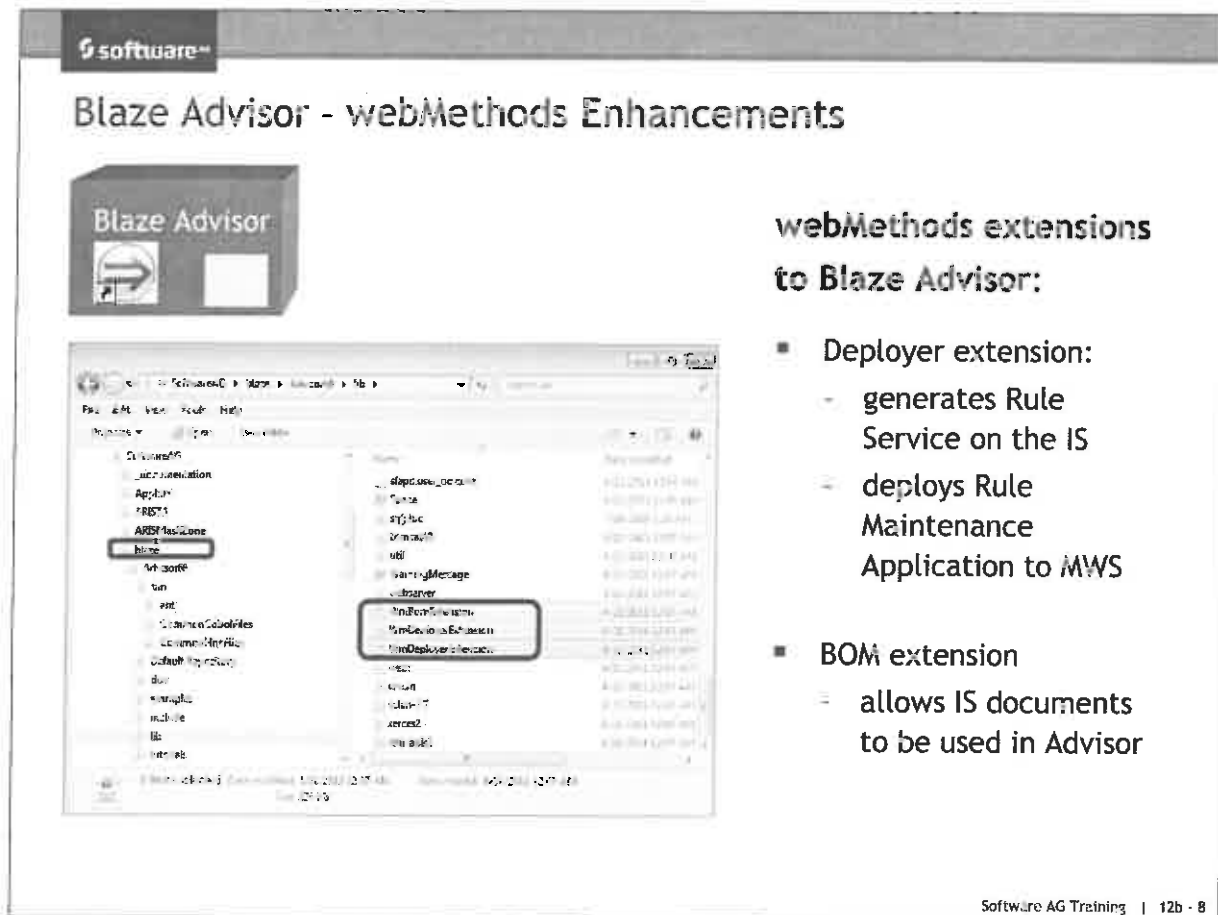
■ Some Restrictions:

- Each Rule Task Activity in a business process can only invoke one Blaze Business Rule Service
- A Blaze Business Rule Service cannot invoke another Blaze Business Rule Service
- A Blaze Business Rule Project must not contain more than 250 rules to be deployed to an Integration Server*


*This restriction can be removed by enhancing the license

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Notes: _____



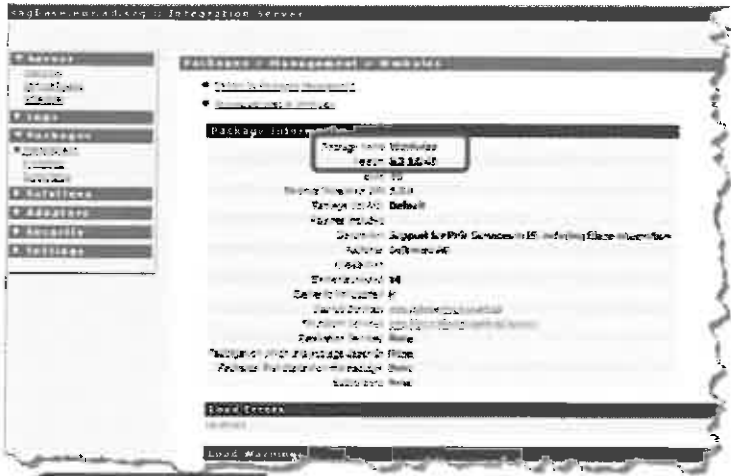
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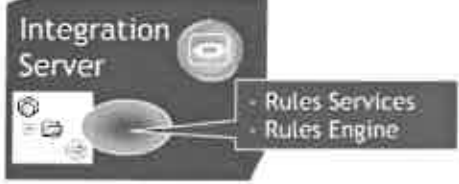


Integration Server - Blaze Enhancements

Blaze extensions to Integration Server/ Process Engine:

- WmRules package
- Blaze Rule Server runtime jars
 - Provide runtime environment for Blaze projects
- BlazeRuleService
 - IS Pluggable Node implementation that wraps Blaze entry points



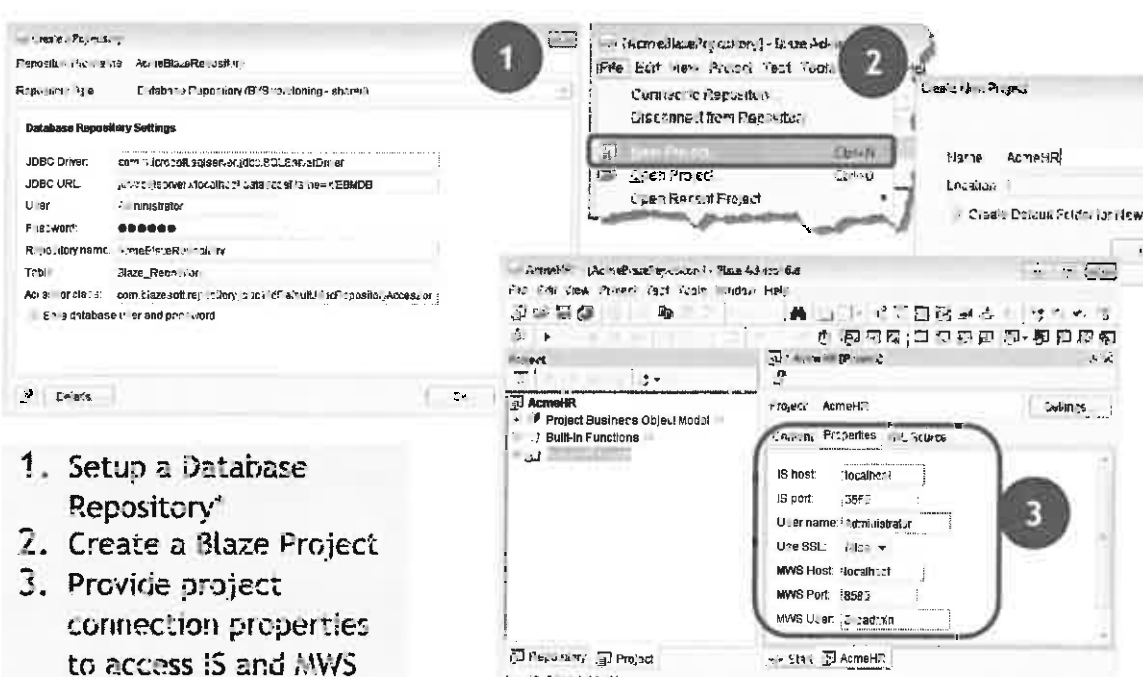


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Notes:

software

Blaze Advisor Tool - Customize Connectivity



1. Setup a Database Repository*
2. Create a Blaze Project
3. Provide project connection properties to access IS and MWS

* Prerequisite: Table Blaze_Repository must have been loaded to WERMDB using Database Component Configurator tool

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Notes:

Provide IS Documents to Blaze Advisor...

1. Select "New Custom Business Object Model..."
2. Provide IS Document Type Provider class
3. Add a constructor argument
4. Click Browse button
5. Authenticate to IS

Notes:

6. Select and check desired IS document(s)

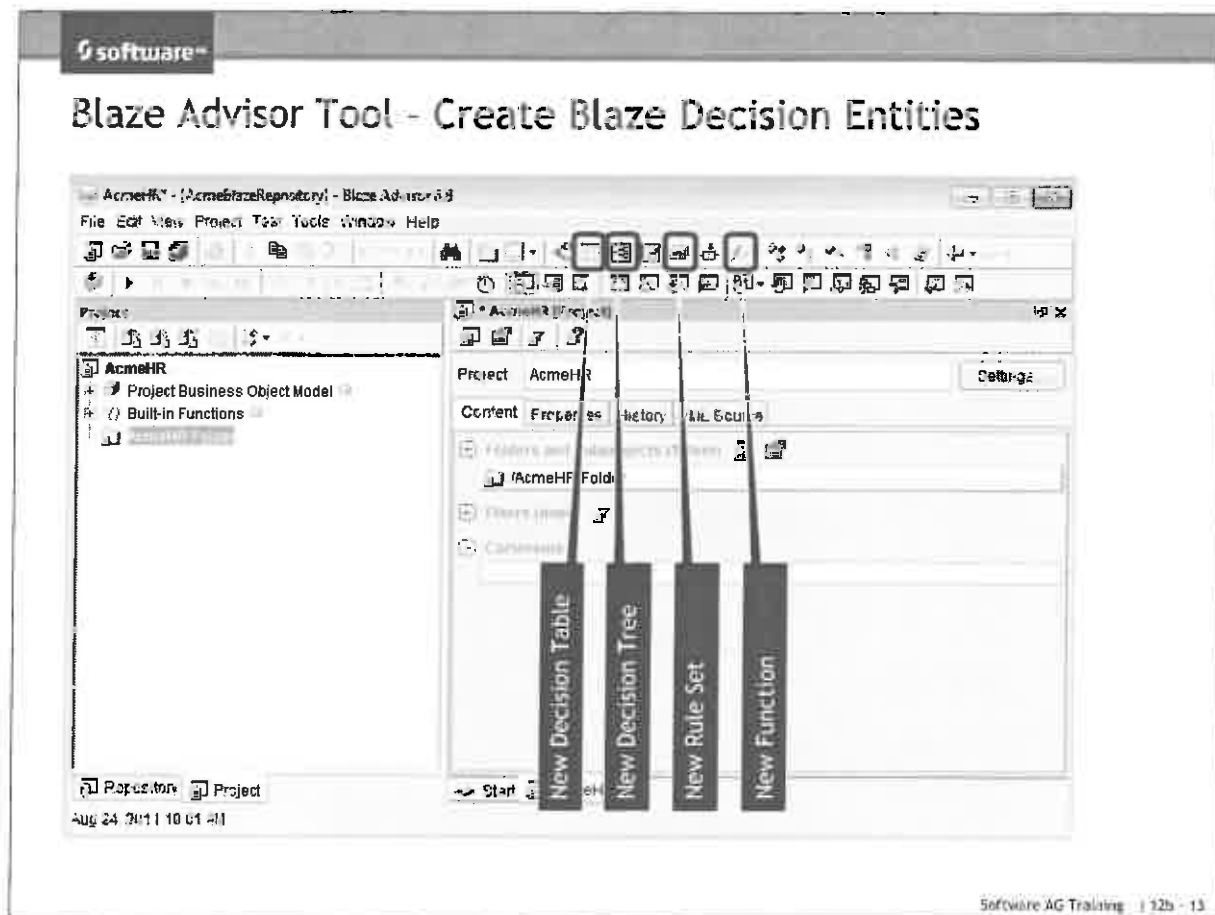
7. Click "OK"

Document becomes available in the project tree view

Inner structures must be referenced IS documents

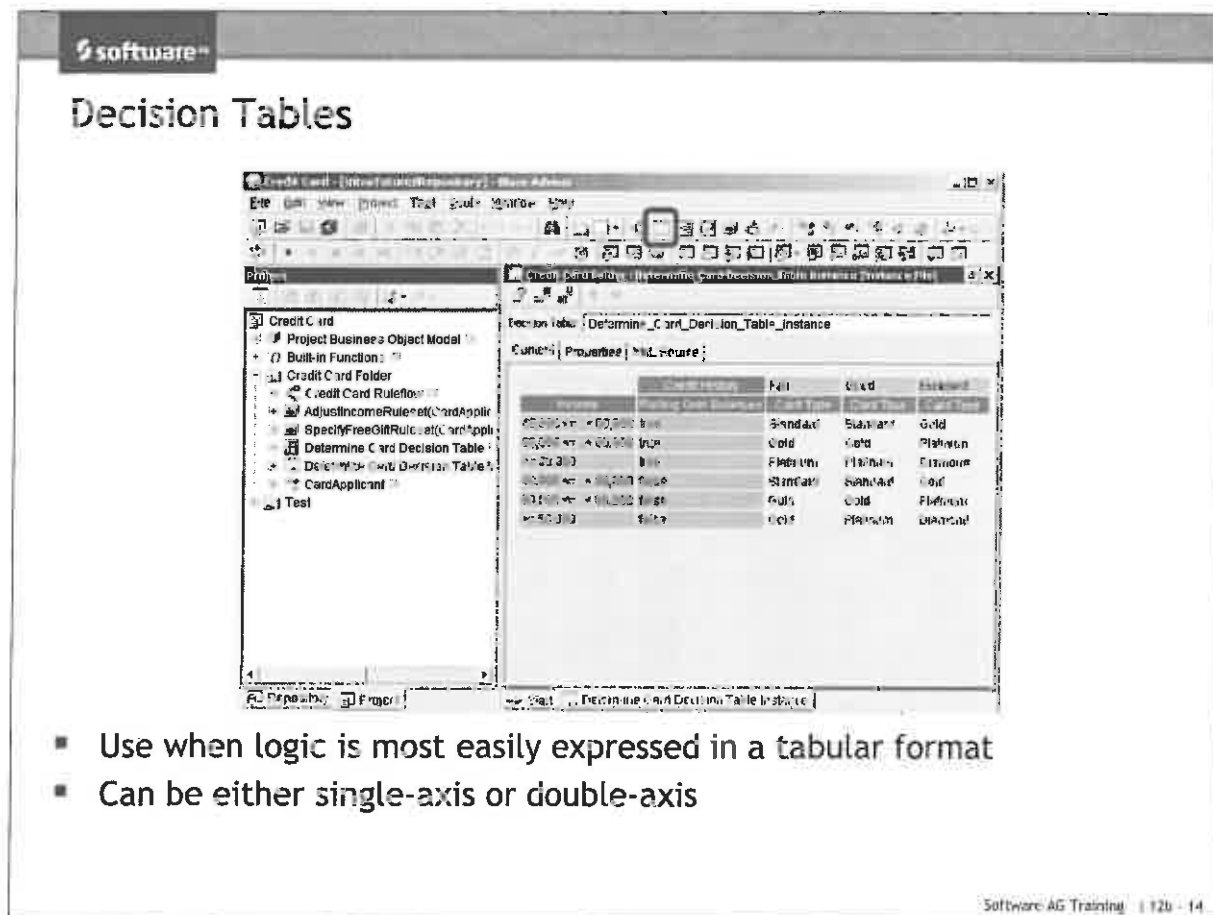
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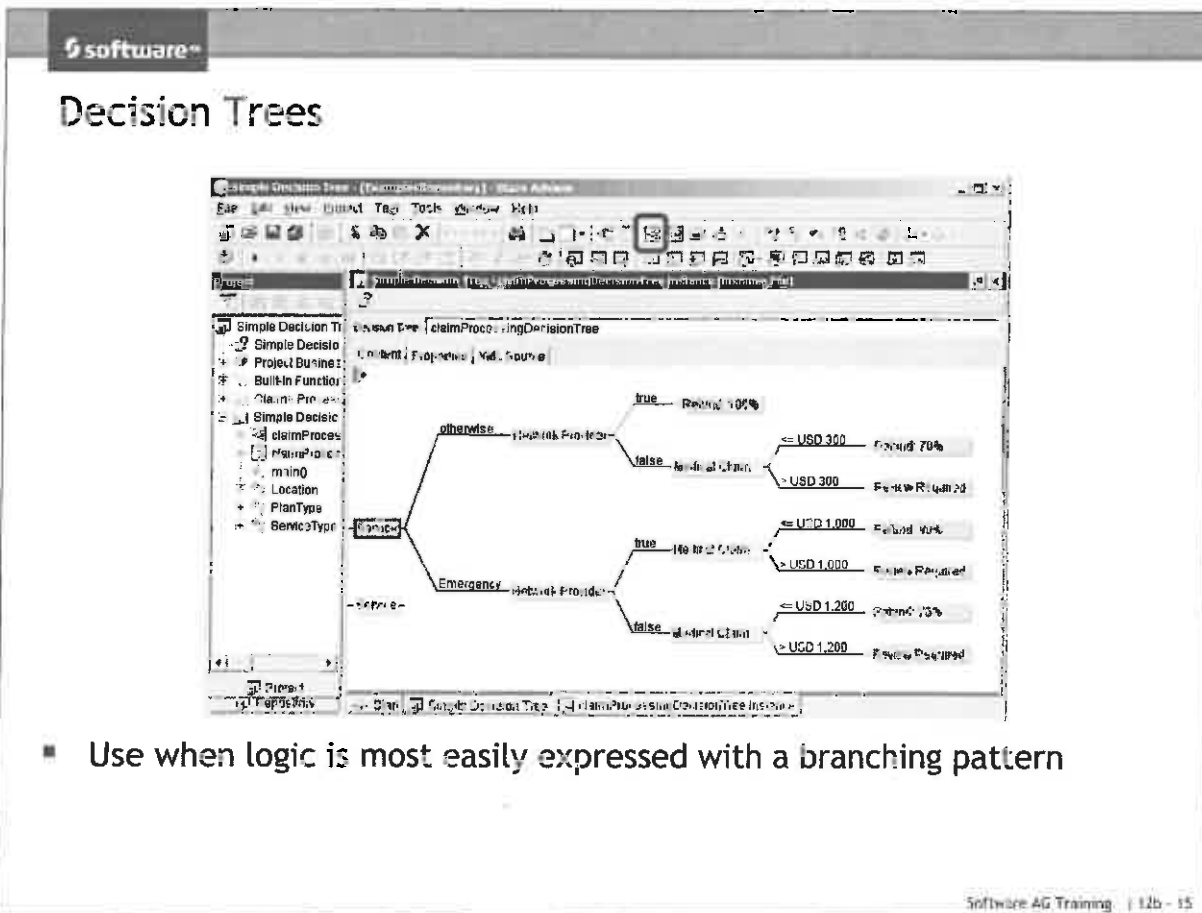


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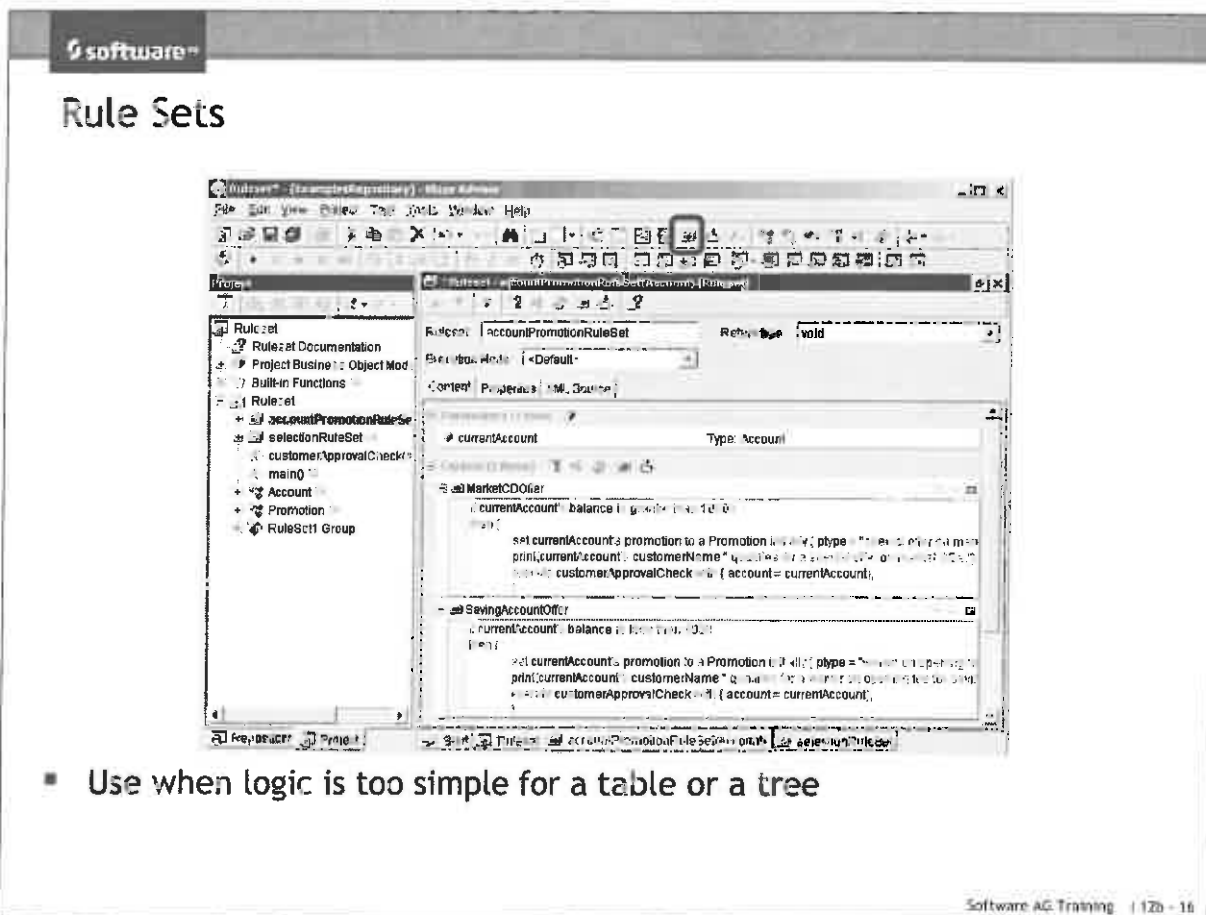
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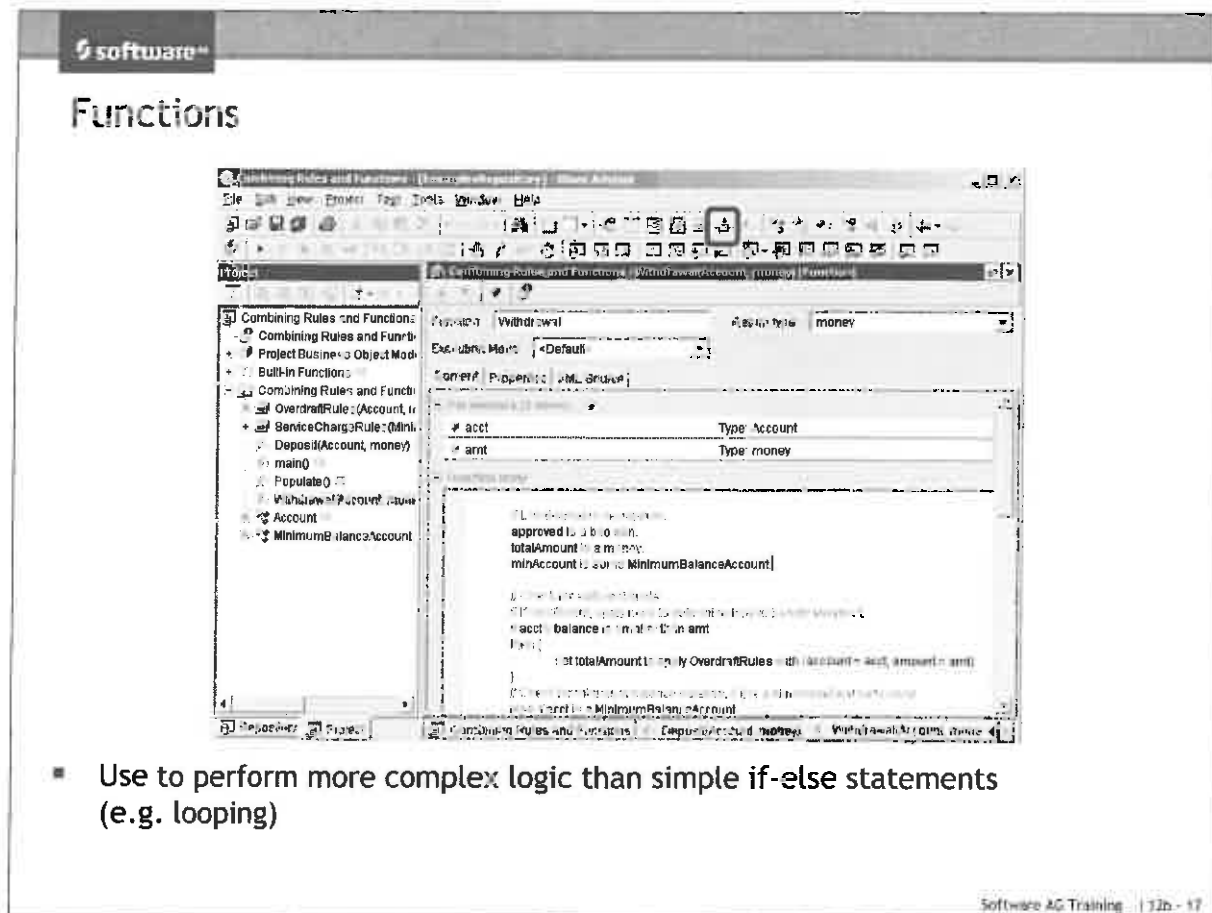
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Notes:

Blaze Advisor Tool - Deploy to an Integration Server

- Deploy Blaze Decision Entities to an IS
- Creates implementation within corresponding IS package structure

Package and folder name corresponds to Blaze project name

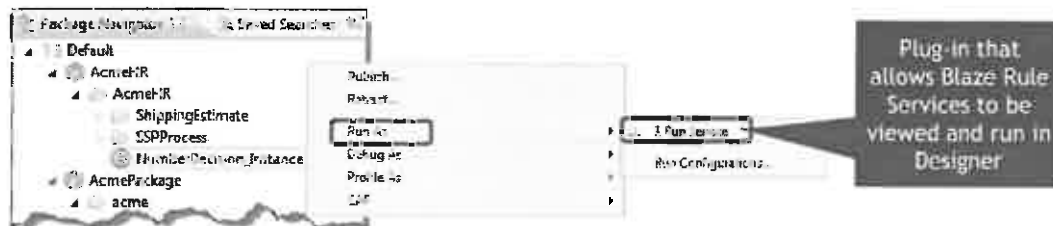
Service name corresponds to Blaze decision entity

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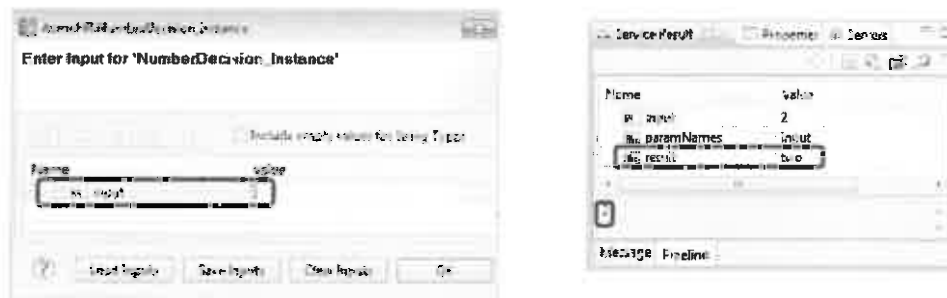
Notes:

Test Deployed Blaze Business Rule Service

- Run deployed Blaze Business Rule Service (Service Development)



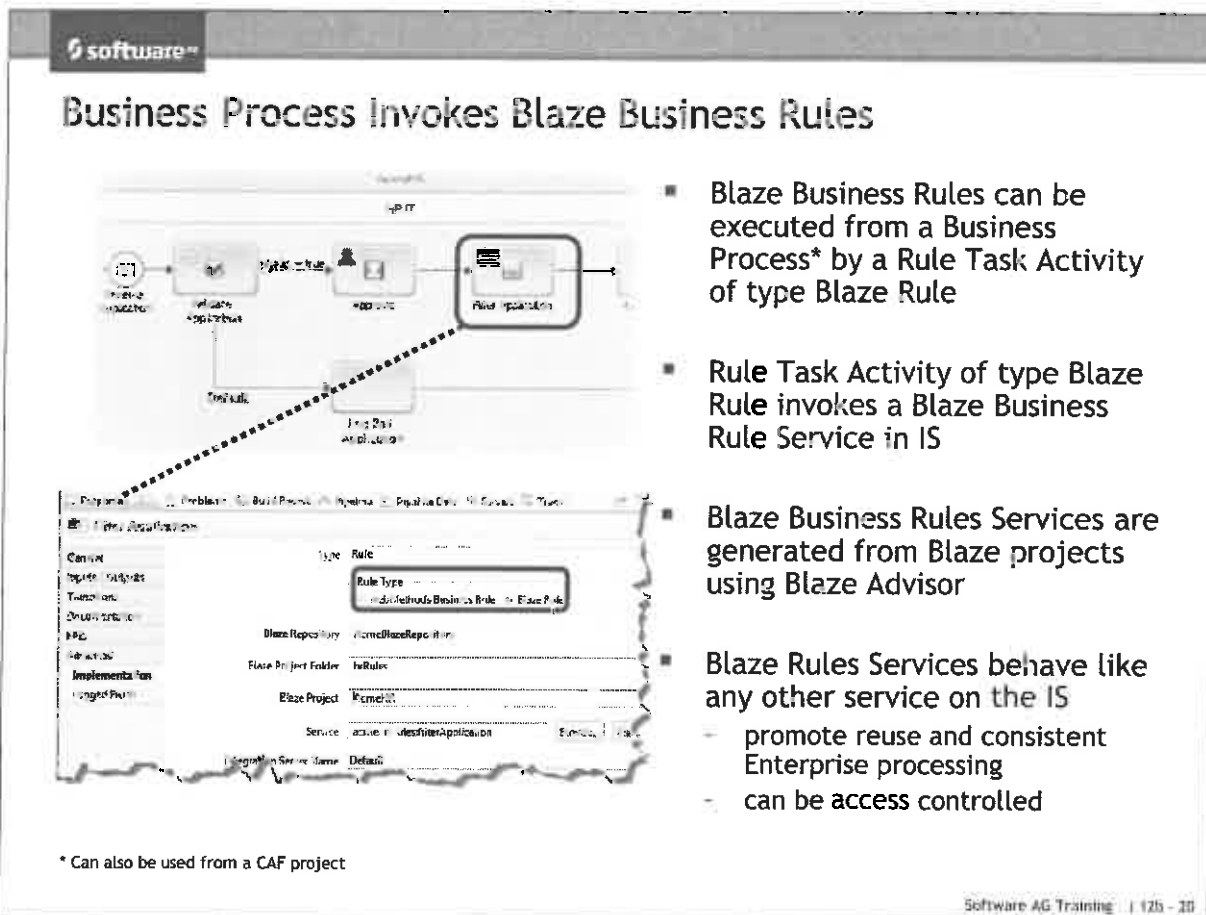
- Provide input for Decision Entity:



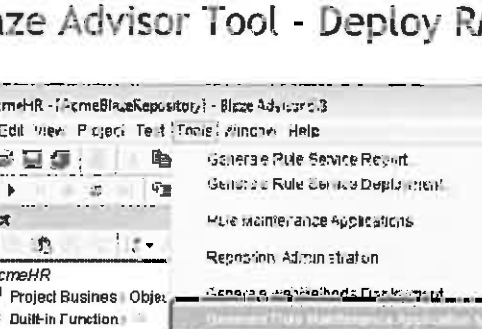
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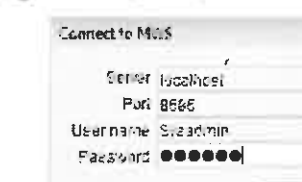
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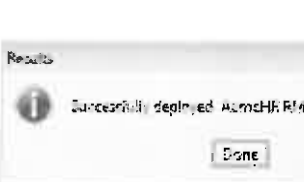


Notes:

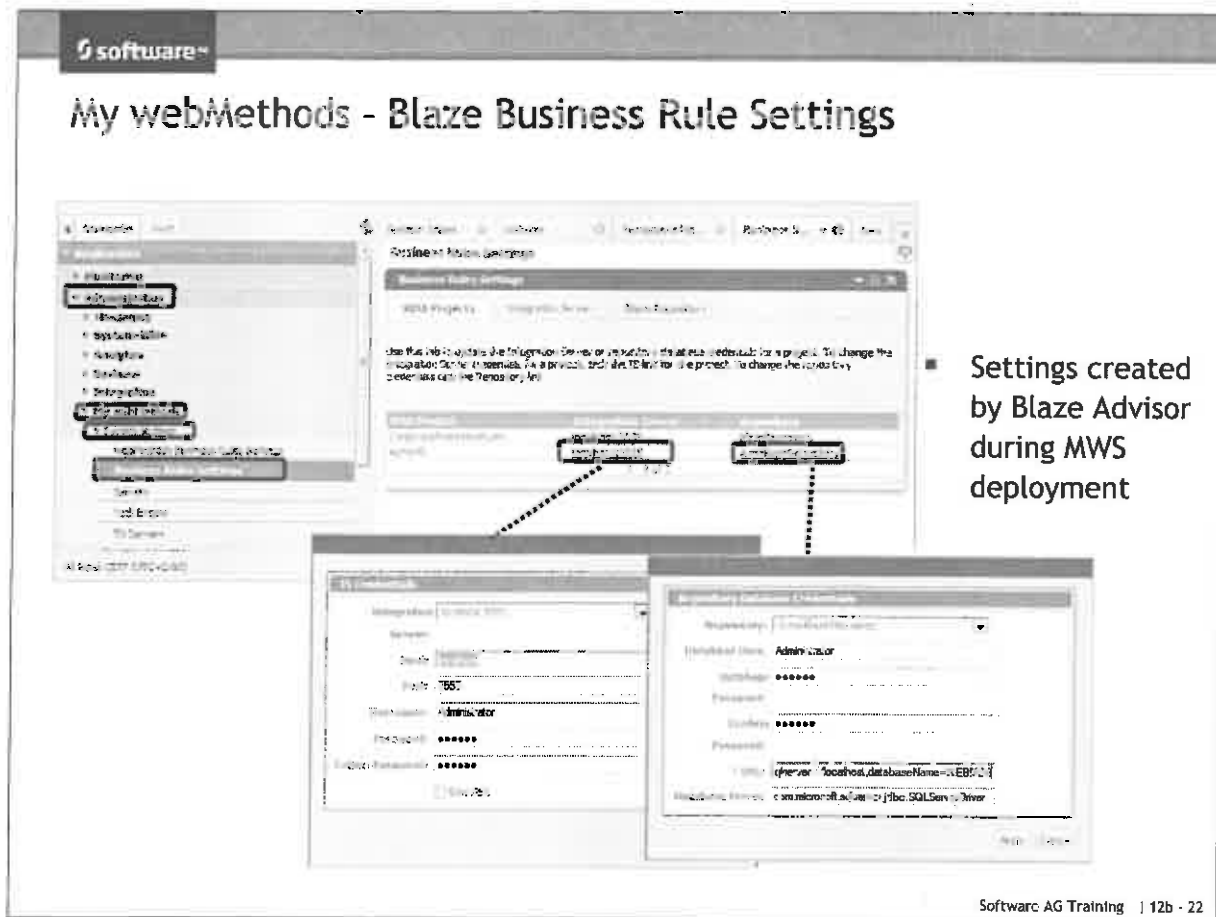


- Generate Rule Maintenance Application (RMA) to MWS
- One RMA for each Blaze decision entity, e.g. Decision Table






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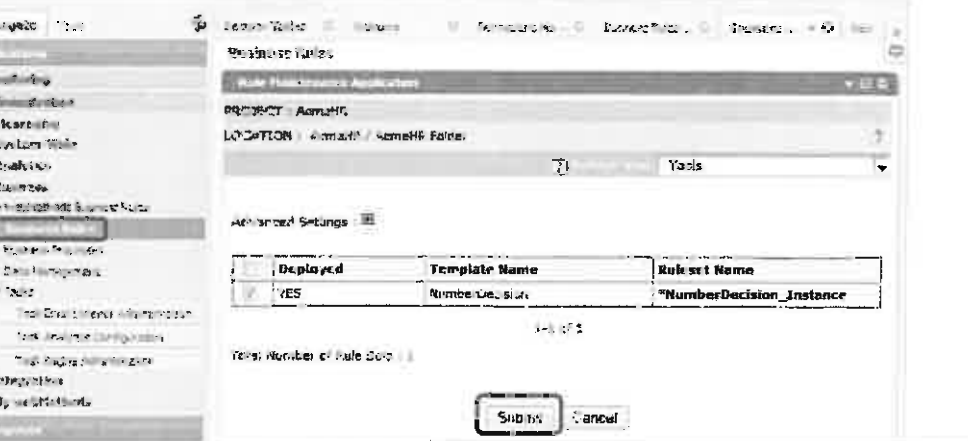
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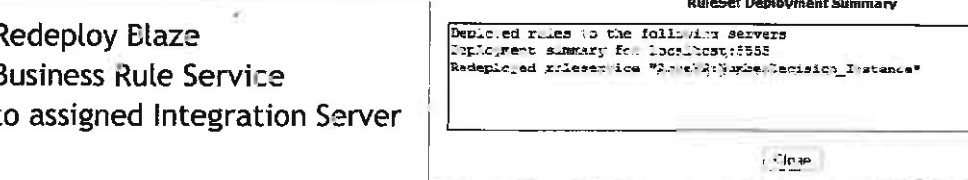
Notes:



...Use RMA for Instant Blaze Business Rule Modifications

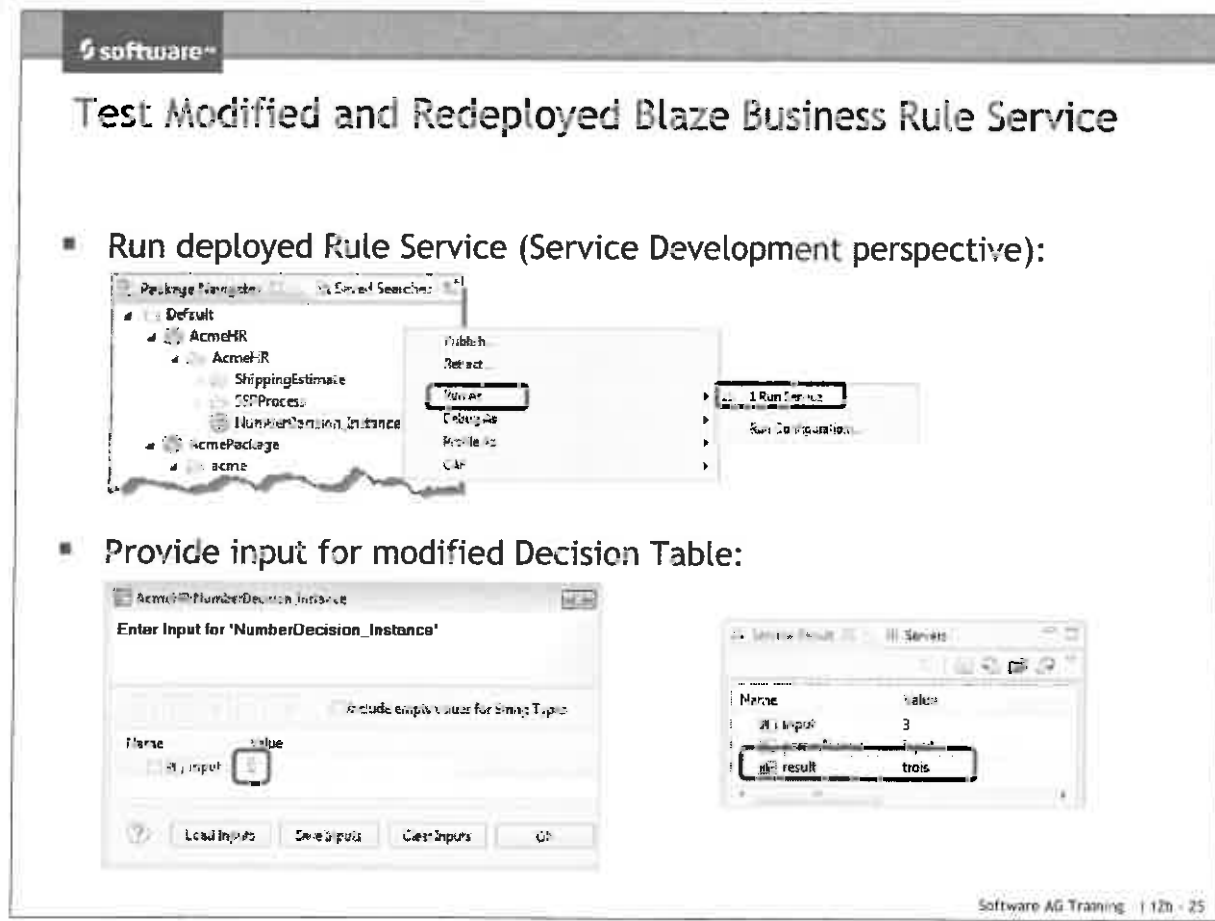


- **Redeploy Blaze Business Rule Service to assigned Integration Server**



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Notes:



Notes:

More Information

- webMethods Business Rules:
More Information at class *webMethods 8.2 Business Rules*
- Blaze:
A Blaze Business Rules tutorial available at the Software AG
Developer Community:
http://communities.softwareag.com/ecosystem/communities/public/Developer/webmethods/products/bpm_suite/tutorials/blazebusiness/index.html



Notes: _____

Blaze Business Rules vs. webMethods Business Rules

- webMethods BPMS supports webMethods Business Rules and FICO Blaze Business Rules.
- webMethods Business Rules was designed complement webMethods BPMS to fully support use cases that webMethods BPMS requires.
- webMethods Business Rules is not intended to have all of a Business Rules Management System (BRMS) capabilities that FICO offers.

	webMethods Business Rules	FICO Blaze Business Rules
Rules interact with Business Processes	Yes. BPMS processes can be started, stopped, suspended, failed, resumed, and canceled. Manual decisions (tasks) are also supported.	Custom coding required
Rule execution of IS Services	IS services can be invoked using Rule actions.	Custom coding required
Integrated with Designer	Rules are designed and tested in Designer. Rule decision tables can be dragged and dropped into business processes.	No

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13

Starting Processes

Notes: _____

Objectives

- At the end of this section, you will be able to
 - Name the different receive protocols used in a process model
 - Start processes by publishing documents via:
 - Designer
 - IS Services
 - HTML forms
 - REST services
 - CAF Portlets using validations and dynamic dropdowns
 - Microsoft InfoPath or Adobe LiveCycle e-forms
 - Invoke a business process synchronously

Notes: _____

Starting Processes - Receive Protocols

- A Process must contain at least one Start Message Event, Start Signal Event, or Receive Task*
- Start Event/Receive Task defines

- Document type to be received

Receive Document:

Receive Protocol

Subscription (For Broker Documents)

Simple Service (For Synchronous Receive/Send)

JMS (For JMS Triggered Processes)

- Whenever Process Engine receives a document via a defined Receive protocol, an associated process instance is started and initialized with the received document data. Prerequisites:
 - Process must have been build & uploaded to IS and enabled in Process Engine
 - Doctype must have been synchronized with Broker***

* Receive Task must be checked to allow to start a process instance

** Only available at Receive Tasks

*** In certain cases synchronization is not necessary, e.g. when "running" a publishable document from Designer or debugging a process in Designer.

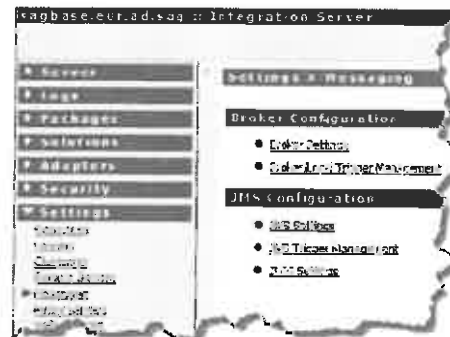
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Notes:

Receive Protocols - Prerequisites

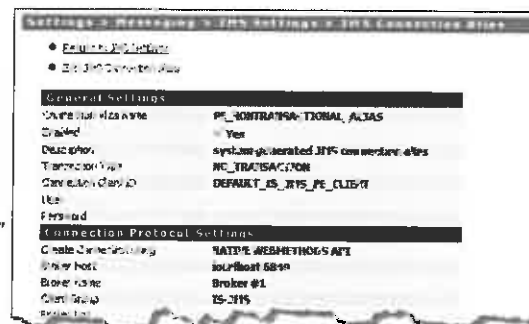
- **Protocol Subscription (For Broker Documents)** requires the Integration Server (Process Engine host) be connected to a configured webMethods Broker.

(see chapter 2 for more information)



- **Protocol JMS (For JMS Triggered Processes)** requires the Integration Server (Process Engine host) be connected to a configured JMS provider (e.g. Broker).

(see class "webMethods 8.2 Integration Workshop" for more information)



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Notes: _____

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Starting Processes - Possibilities

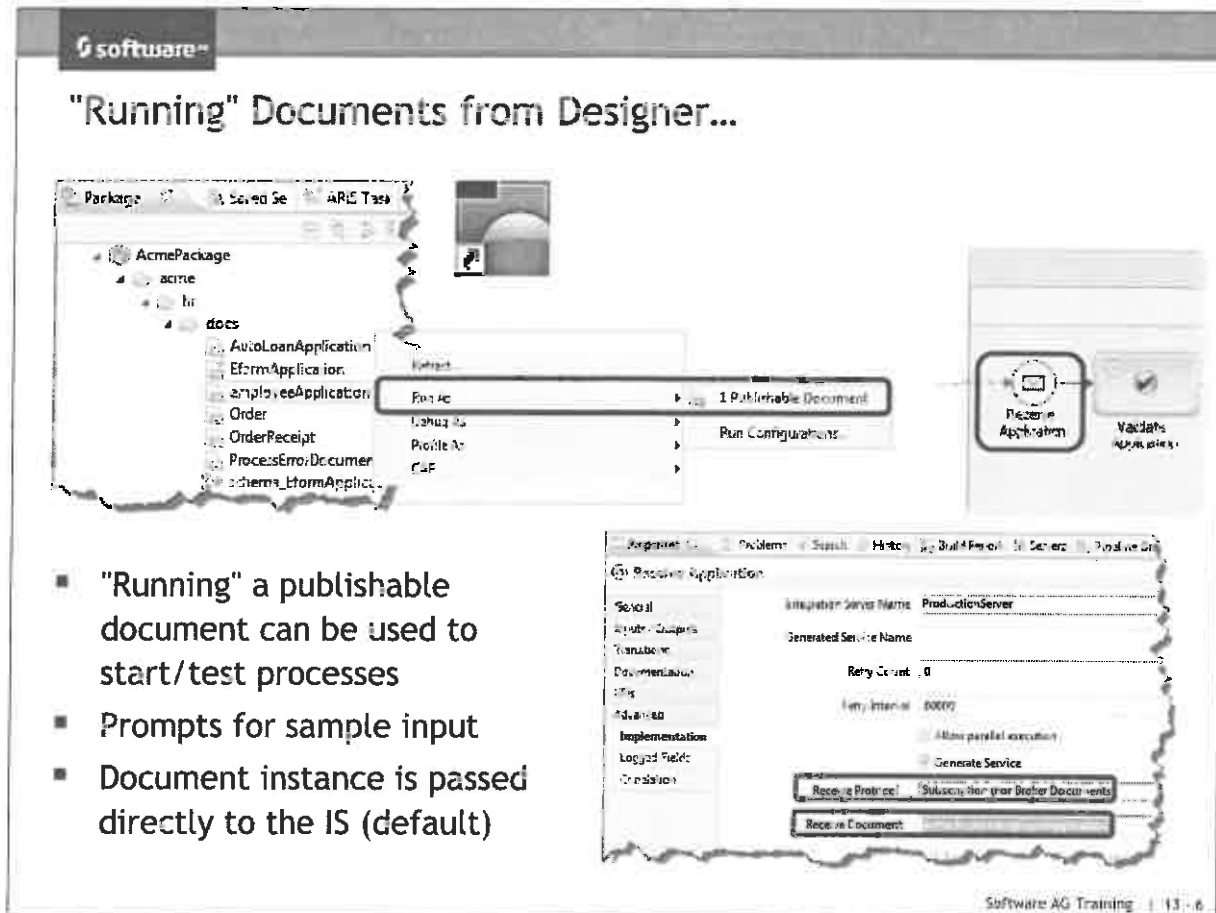
Starting a process:

- From Software AG Designer:
 - "Running" a document of the doctype the process subscribes to
 - uses Eclipse Run Configuration
 - Debugging a process
 - Passes document directly to the Process Engine
- Via Integration Server service:
 - IS listens for client requests on one or more ports.
IS supports HTTP, HTTPS, FTP, FTPS, and E-mail ports*. E.g.:
 - HTTP port can be used to invoke a service directly, to invoke an IS REST service, or to invoke an IS Web service provider
 - E-mail port can be used to invoke an IS service by sending an e-mail
 - After the client request is received via a port, an IS service is executed.
This service can use `pub.publish:publish` (Broker Subscription) or `pub.prt.jms.send` (JMS) to send the required document.
- Triggered by E-forms or Content Documents

* Services can also be started on the Integration Server in many other ways

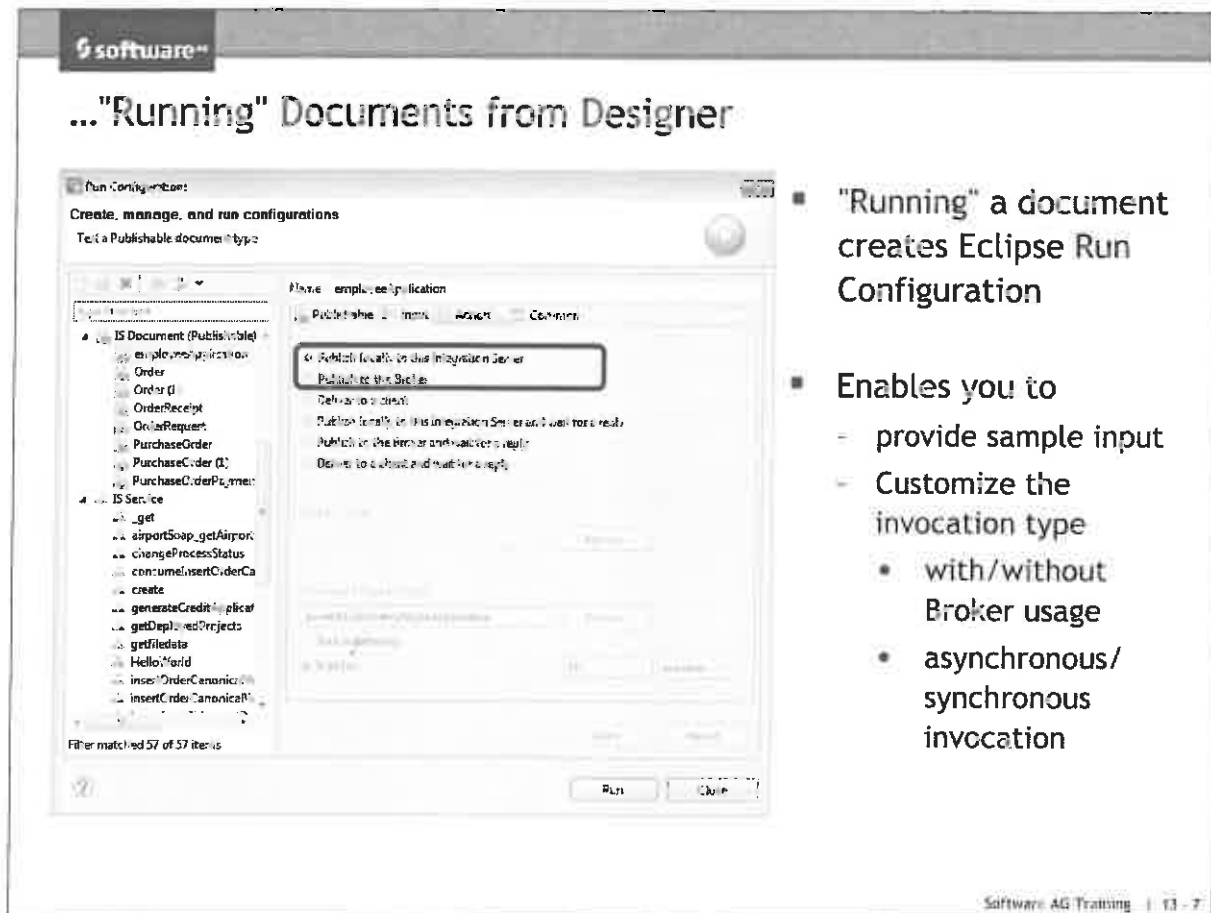
Software AG Training | 13 - 5

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Starting Processes via Integration Server Service - Samples

- Custom IS service that calls `pub.publish:publish` or `pub.prt.jms.send` can be invoked in Integration Server by:



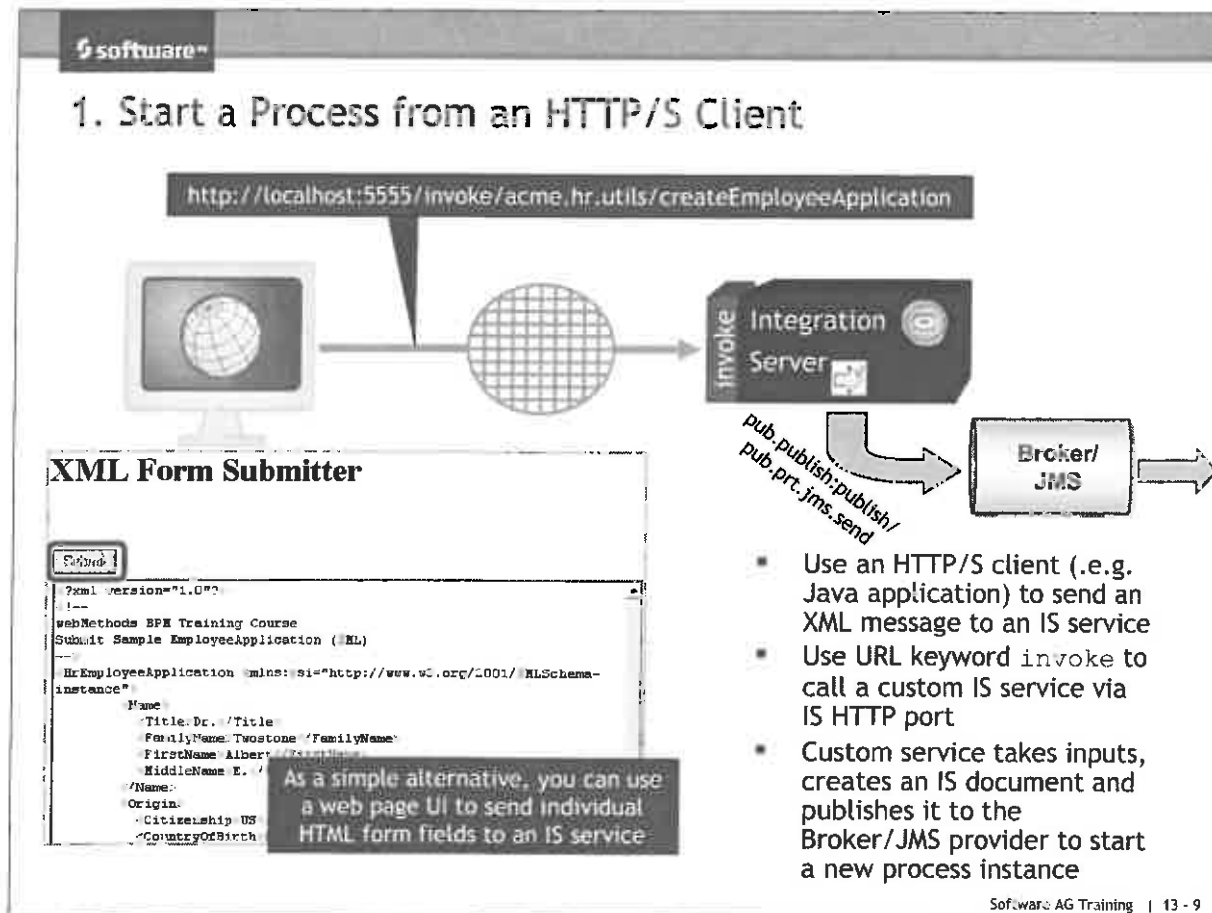
1. HTTP client using IS HTTP/S port
2. REST Client invoking a wrapping IS REST service
3. Web service client, e.g. CAF Portlet, invoking a wrapping IS Web service descriptor (Provider)
4. Incoming e-mail using IS e-mail port
5. Trading Network processing rule
6. Receiving data via various webMethods adapters (e.g. WebSphere MQ, EJB, JDBC, SAP, etc...)
7. Receiving data from file(s) via the IS flat file processor
8. Receiving a message (document) from Broker, or via JMS
9. ...

Covered by this chapter

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Notes: _____

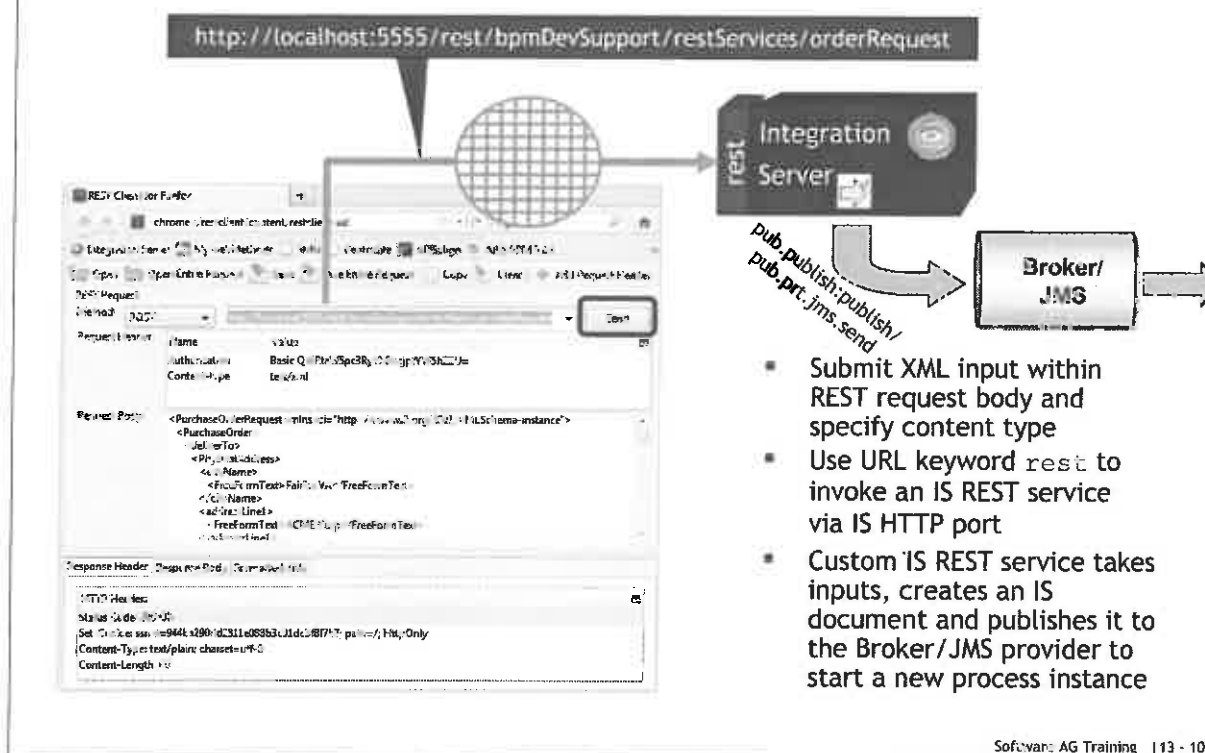
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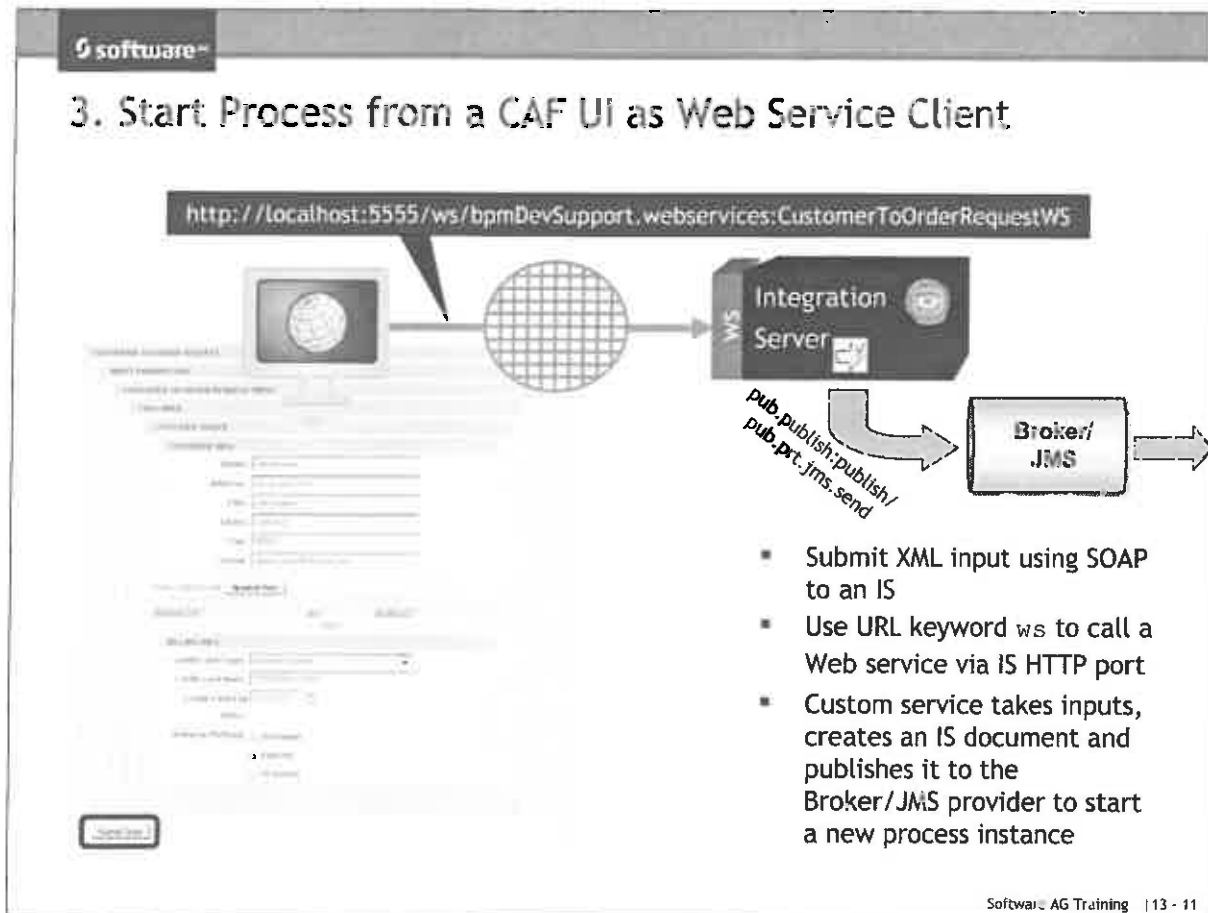
Notes: _____

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2. Start Process using an IS REST Service



Notes:



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Creating CAF UI to Start a Process via SOAP- Overview

Prerequisites:

- Existing IS service publishing the document required by the process Start Message Event
- IS Web Service Descriptor of type Provider for the IS service mentioned above

Steps to be performed:

- a. Add Portlet to CAF Portlet application
- b. Add Web Service Connector and default UI to Portlet
- c. Publish CAF application and expose Portlet to MWS
- d. Test the generated user interface
- e. "Doctor" the generated user interface

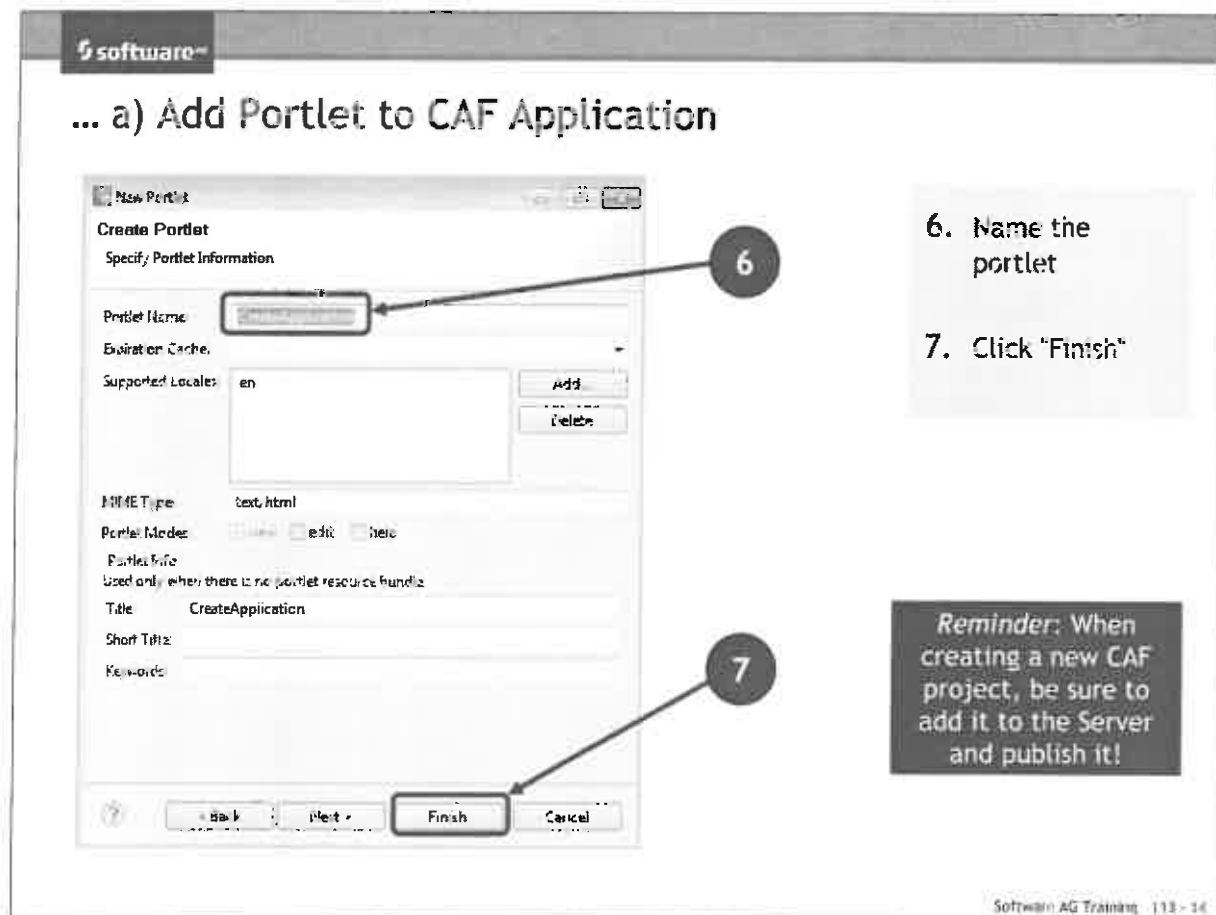
Notes: _____

a) Add Portlet to CAF Portlet Application...

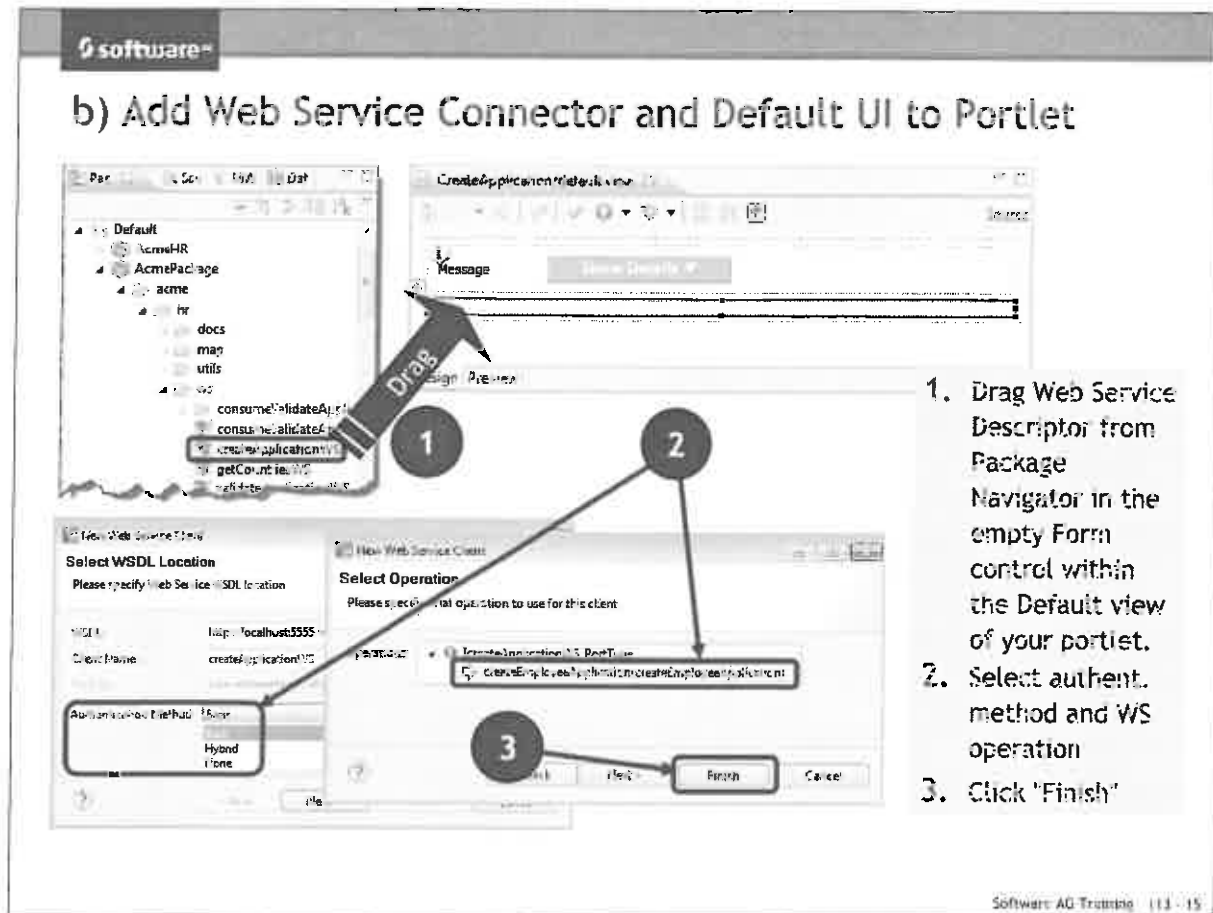
1. Open Solutions view from UI Development perspective, drill down to User Interfaces
2. Create or select a CAF Portlet project
3. Choose "New Portlet" from context menu
4. Select Portlet type "Generic"
5. Click "Next"

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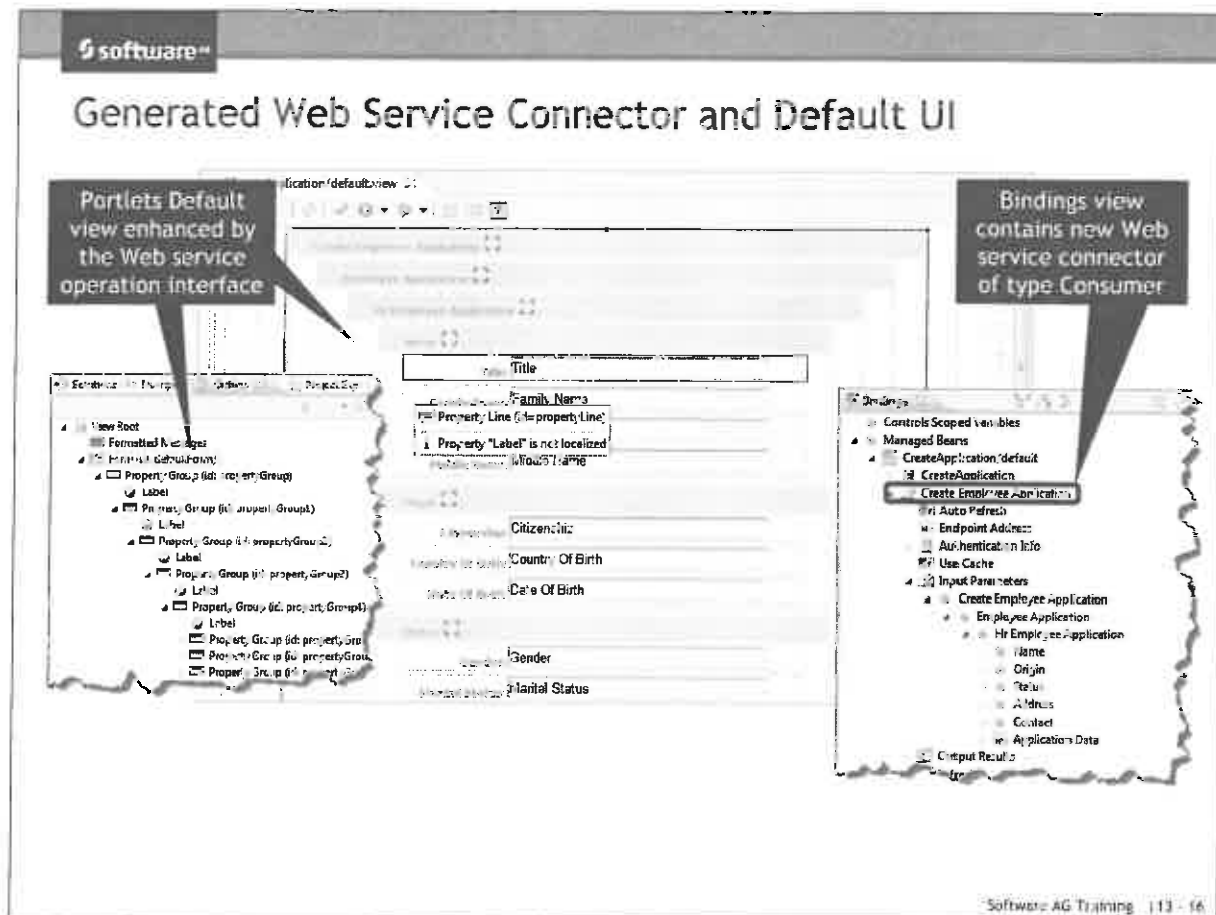
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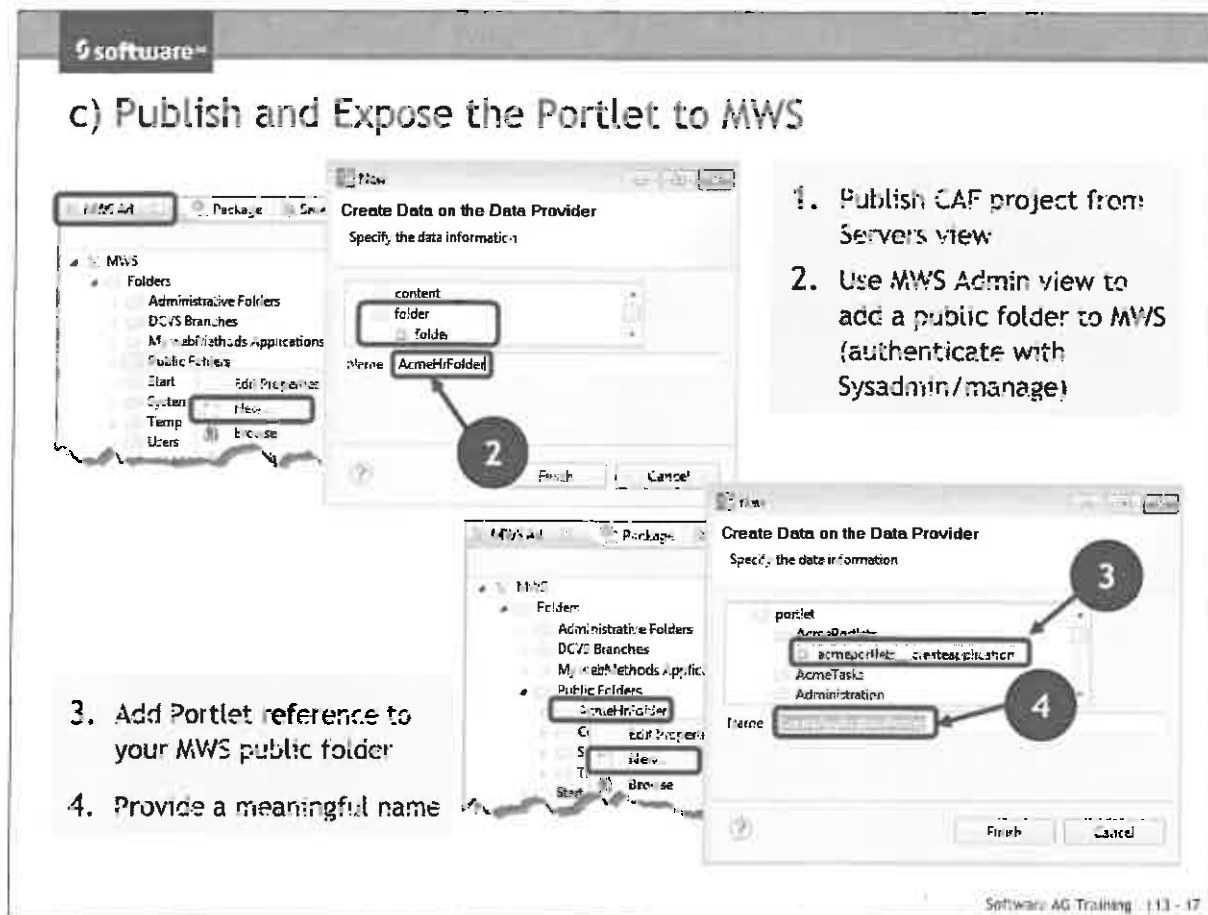
Notes:



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d) Test the Generated User Interface

The screenshot shows the webMethods IDE interface. At the top, there's a 'webMethods' logo and a search bar. Below the logo, there's a navigation bar with 'Home', 'About', 'Contact', 'Feedback', and 'Help'. The main content area displays a form titled 'CREATE EMPLOYEE APPLICATION'. The form has several sections: 'INPUT PARAMETERS', 'CREATE EMPLOYEE APPLICATION', 'EMPLOYEE APPLICATION', and 'HR EMPLOYEE APPLICATION'. The 'NAME' field is highlighted with a red box. A red arrow points from a callout box to the 'NAME' field. The callout box contains the text: 'All input is generated as Text Input controls - not user-friendly and prone to user error'.

- Login to `http://localhost:8585` as "Sysadmin"/"manage"

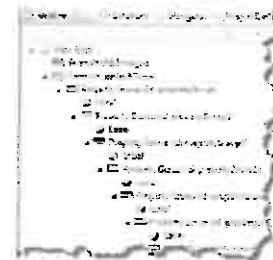
Notes: _____

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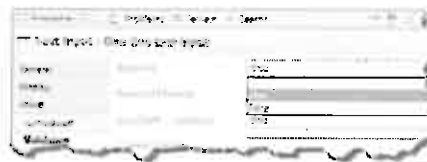
e) "Doctor" the Generated User Interface



- Remove nested structures and unwanted fields
- Customize Control Rendering
- Change Control types
 - e.g. insert Date/Time Picker control



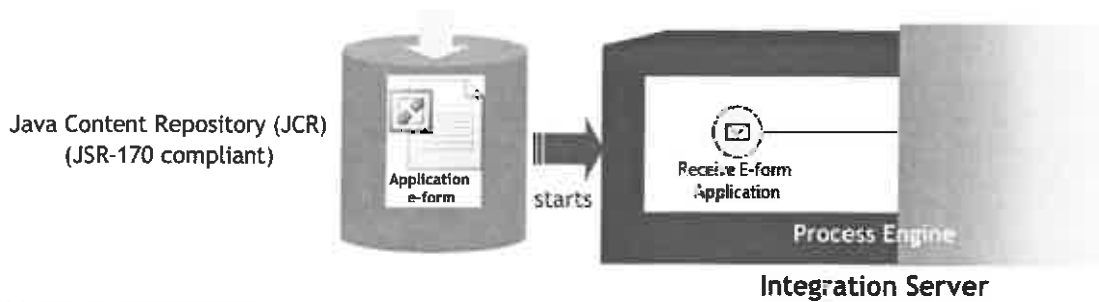
- **Validate input:**
 - Field required/not required
 - Use of Validators
- **Implement Auto Populating of controls**
 - e.g. initialize a Dropdown control



Doctoring the UI
same as User Task UI
customization.

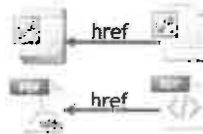
Notes:

Processes Started by E-forms



- BPMS supports the following e-forms:

- Microsoft InfoPath
- Adobe LiveCycle e-forms



- E-forms can be associated with publishable IS documents

- E-form is received from a Java Content Repository (JCR)
- Data is automatically converted into associated IS document that is published to the Broker which starts a new process instance

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Notes: _____

[illegible]

Setup E-form Support for Processes

- a) Provide a JSR-170-compliant Java Content Repository (e.g. MWS)
- b) Configure E-forms Server Environment in My webMethods
- c) Deploy E-forms Server Environment to IS
- d) Import IS document types from e-form templates
- e) Configure Start Message Event to receive an IS document related to an e-form template
- f) Build & Upload process model to create E-form Listener



Notes: _____

- a) Provide a Java Content Repository (JSR-170 compliant)
 - You can use MWS as Java Content Repository
 - Content provided in MWS public folders
 - Recommendation:
 - One folder for each e-form type
 - One folder for e-form templates
 - Maintain Public Folders using MWS Administration (Sysadmin) or via WebDAV

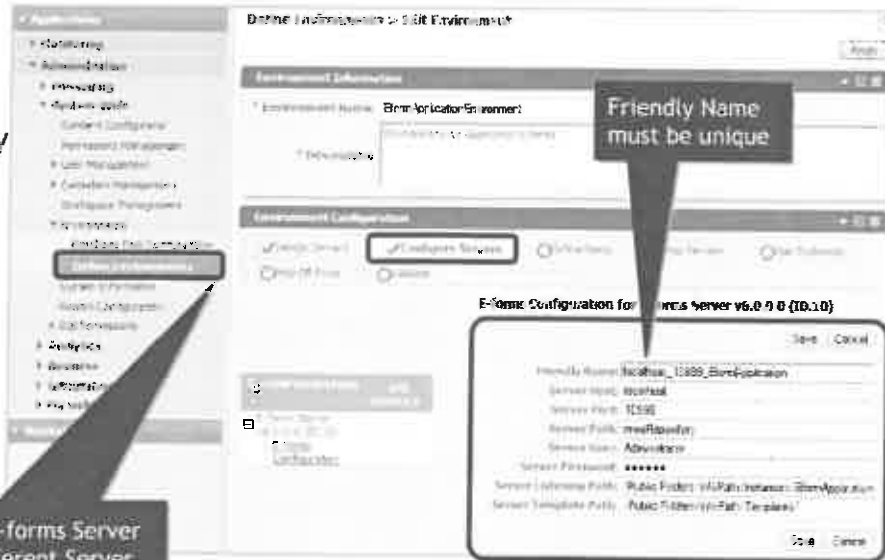
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b) Configure E-forms Server Environment in My webMethods

Configure:

- E-forms Server (JCR)
- JCR connectivity
- Listening Paths for Forms and Templates (= MWS public folder)
- Target location (Host/ IS with Process Engine)

Configure separate E-forms Server Environments for different Server Listening Paths!



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[illegible]

c) Deploy E-forms Server Environment to IS

- E-forms Server Environment configuring E-forms Server (JCR) must be deployed to the IS instance defined in the environment settings
- Target Integration Server/Process Engine must be running



- After successful deployment E-forms Server is started in an IS

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Notes:

d) Import Document Types from E-form Templates

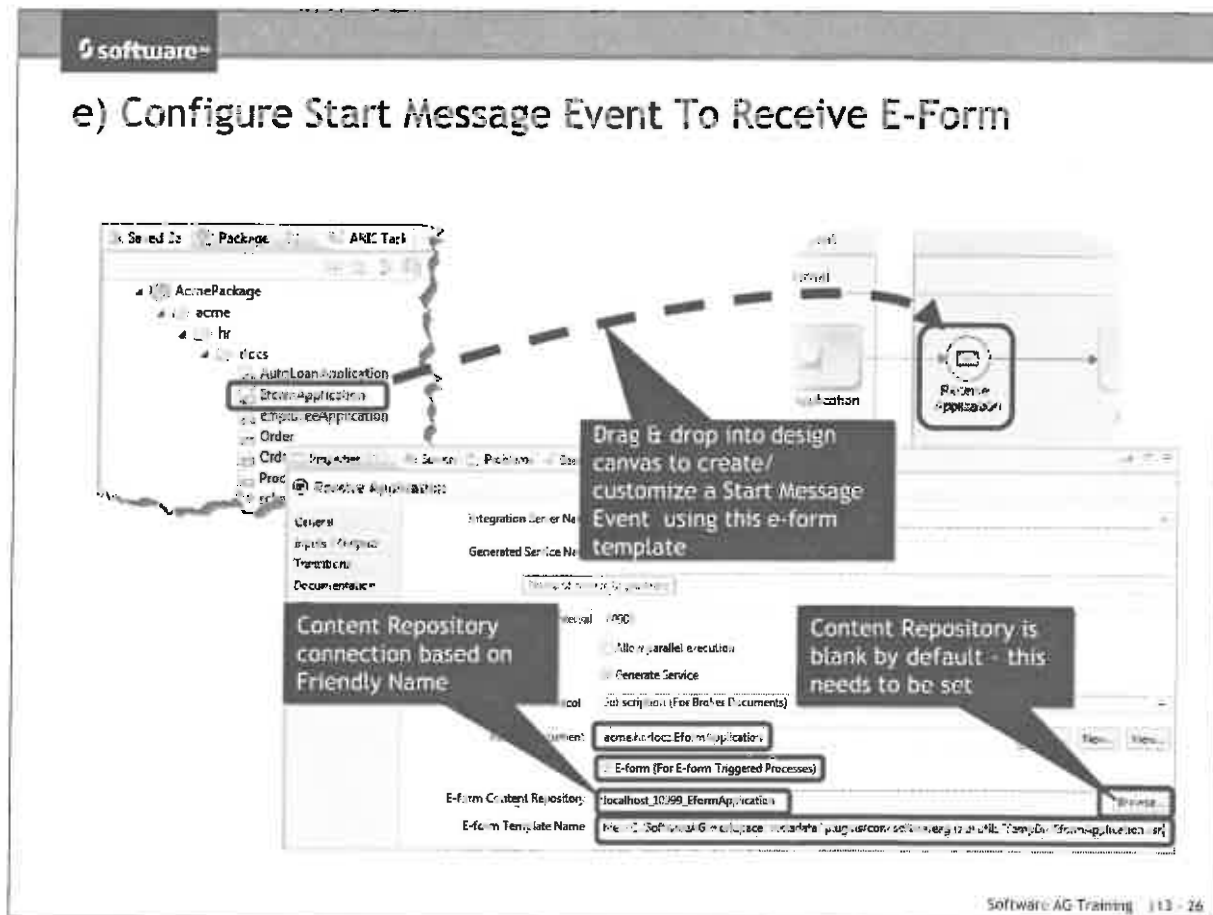
- Designer: Import new Document types from E-forms used in business process:

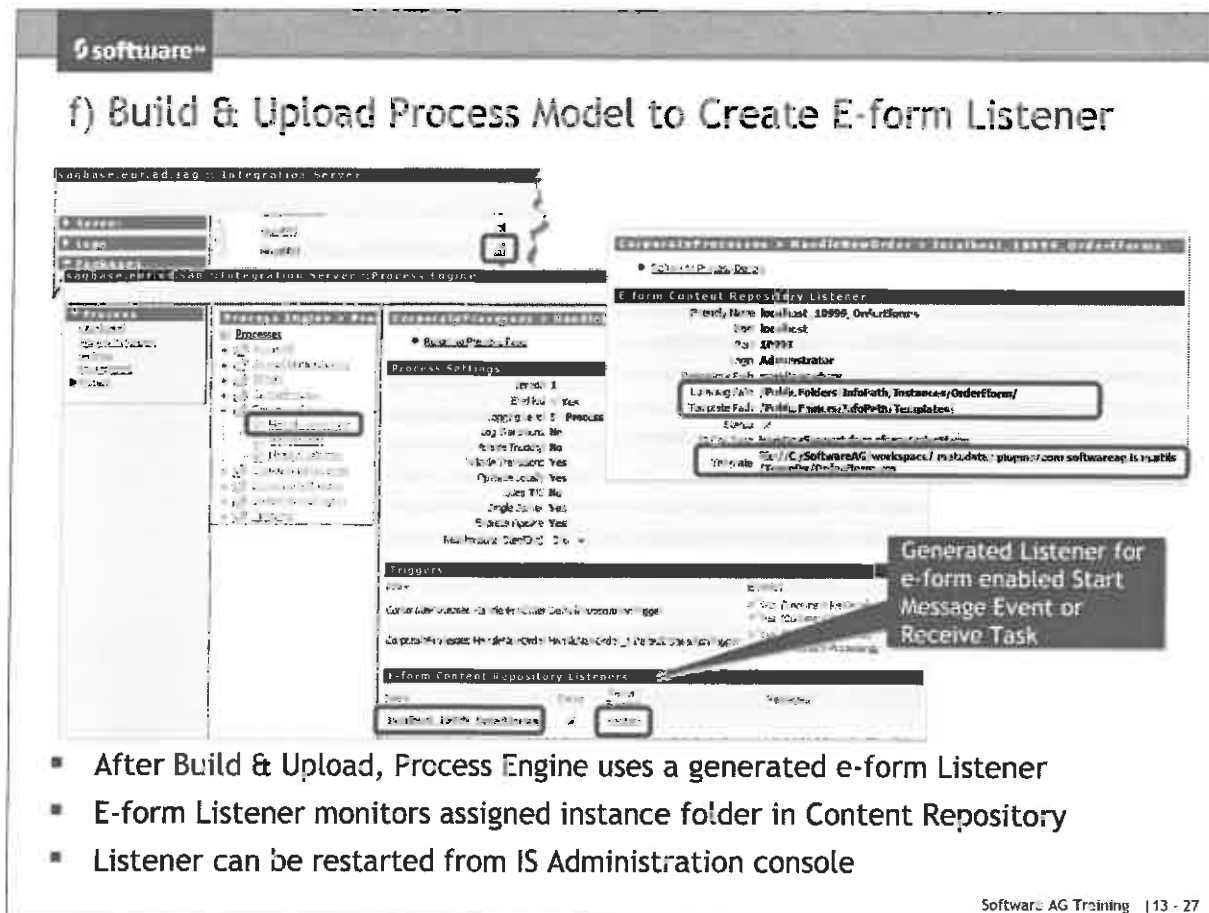
The screenshots illustrate the steps of the 'New Document Type' wizard:

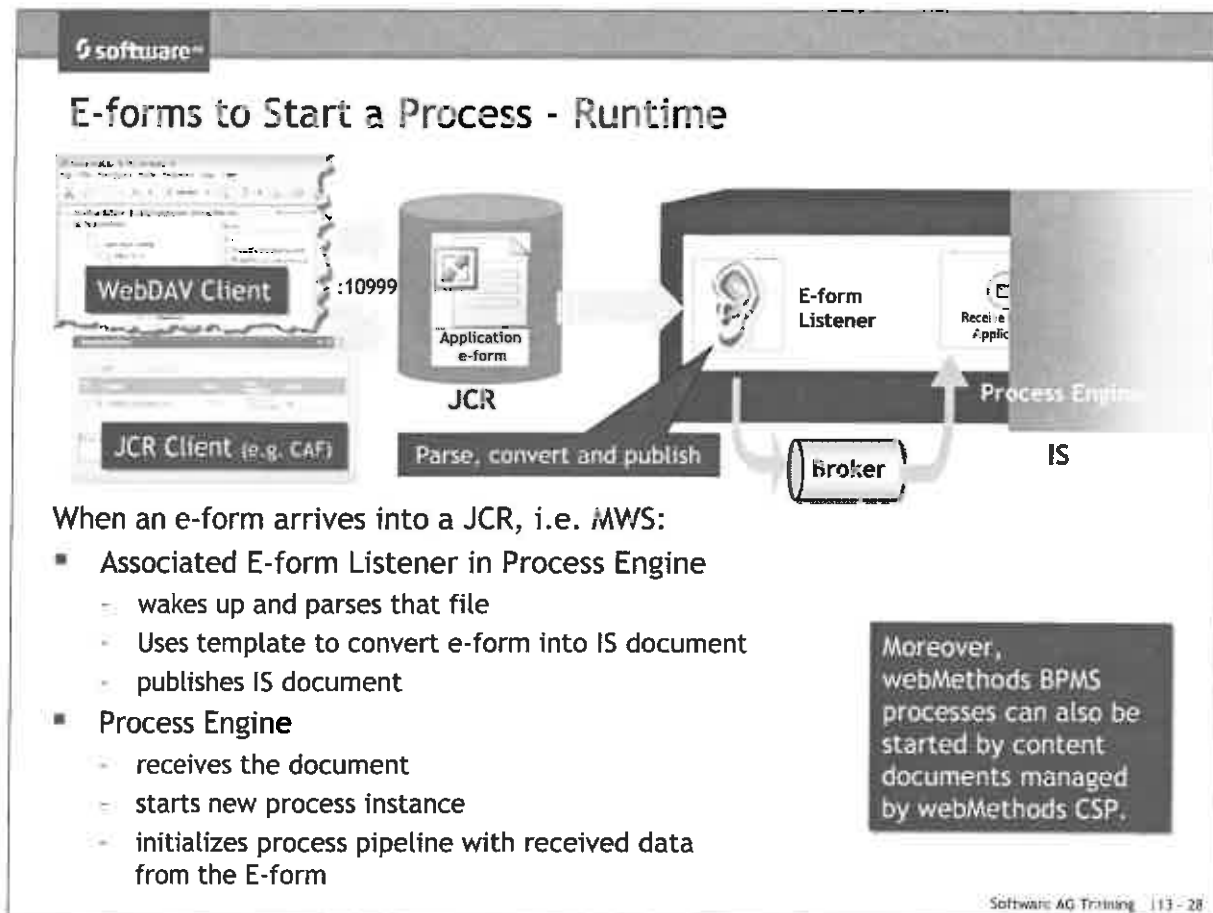
- Select the Source Type:** The 'From File System' option is selected under 'Select the source'.
- Select Source:** The 'Click Next to browse the Content Repository.' step shows a file path: 'C:\workshop\XML\Forms\workbook\localhost_9013\localhost_10999'.
- Select Root Node:** The 'Click Next to provide an optional description template.' step shows a list of nodes, with 'FormApplication' selected as the root node.

Notes: _____

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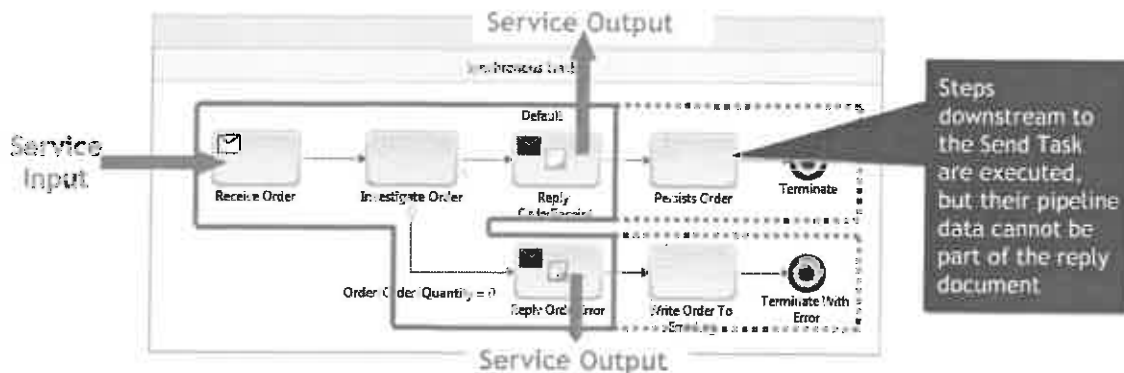
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Notes:

Starting Processes using the Simple Service Protocol (SSP)

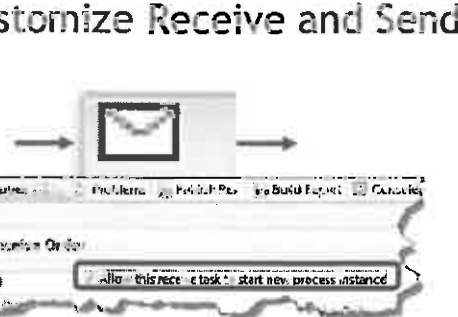


- Process segments between a Receive Task Activity and a Send Task Activity can be invoked and executed as a synchronous (Web) service
- Prerequisites:
 - Receive Task has been setup to use Simple Service Protocol
 - Send Task(s) refer(s) to Receive Task
 - Process segment does not contain User Task Activities or any other delaying services (recommended)
 - Multiple Send Task Activities replying to one Receive Task Activity must share the same doctype and must execute mutually exclusive

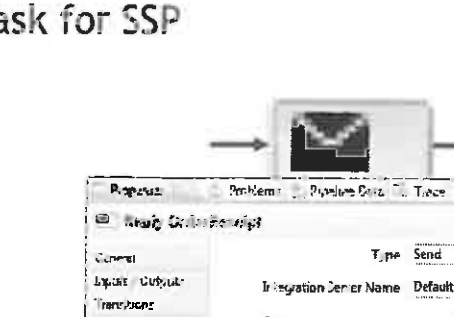
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Notes:

Customize Receive and Send Task for SSP



- Select input document type and SSP Receive Protocol at Receive Task
- Can be first process task or an intermediate Receive Task
- Build creates specific IS Service



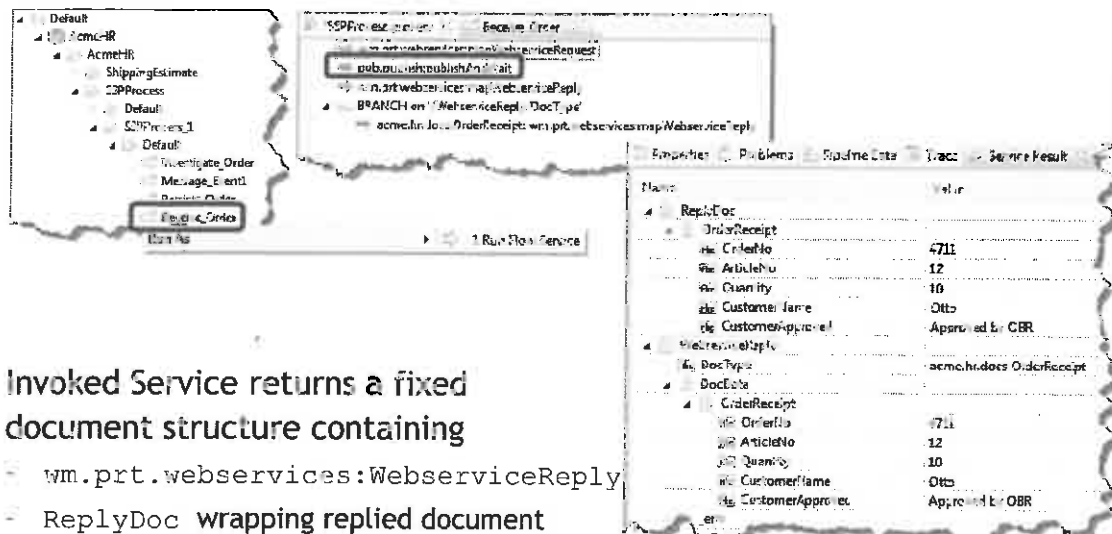
- Select reply document type and Receive Task
- If selected Receive Task uses SSP, Send Task replies to invoking services

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Notes:

Synchronous Process Invocation

- After Build and Upload, generated IS service for Receive Task can be used to invoke the process in a synchronous manner



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Notes: _____

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