# Business Process Management
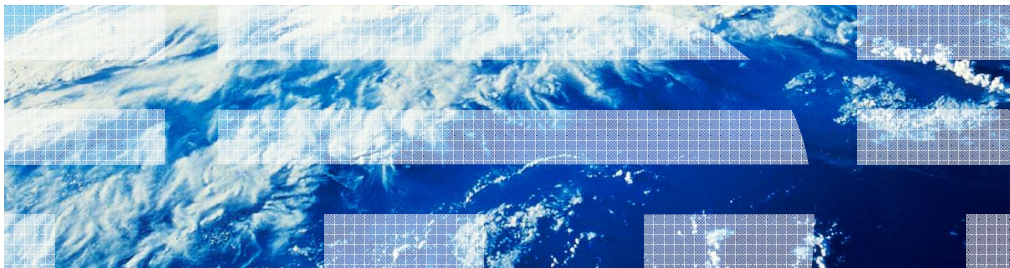## IBM Integration Designer V7.5

## Introduction to Integration Designer
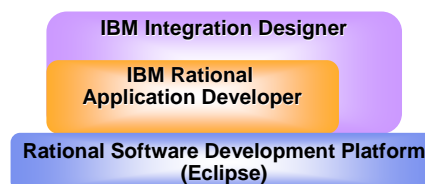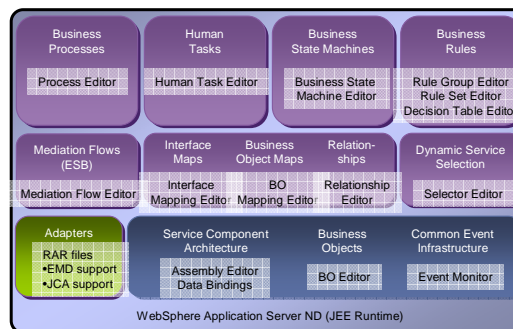
WebSphere software

This presentation provides an introduction to the IBM Integration Designer V7.5 product.

Integration Designer (1 of 2)

- Development environment for building integrated applications based on a service oriented architecture (SOA)
- Authoring tool for Business Process Manager
- IBM Integration Designer = new name for WebSphere Integration Designer
- Based on Rational Application Developer
- Rational Software Development Platform (RSDP)
  - Based on Eclipse;
  - Contains the common components for Eclipse-based products
  - Installed once per system with the first product
    - Only plug-ins for each new product are installed

IBM Integration Designer is the development environment for building integrated business applications targeted for IBM Business Process Manager runtime. IBM Business Process Manager is the next generation business process integration server that provides an application framework for building and running applications based upon a service oriented architecture (SOA).  SOA support in IBM Business Process Manager is based on a new programming model referred to as Service Component Architecture (SCA).  One of the primary purposes of IBM Integration Designer is to provide the appropriate tools to easily build and test SCA-based applications targeted for IBM Business Process Manager runtime.  Both SCA and the tools support for SCA are aimed at helping developers decouple business logic from implementation details. Previously IBM Integration Designer was known as WebSphere Integration Developer (WID).  The new name reflects many additions to the functionality including the first integration with WebSphere Lombardi Edition (WLE) components.

As this graphic shows, IBM Integration Designer is built on the Rational Software Development Platform (RSDP).  RSDP is based on Eclipse technology, and each IBM product built on this platform will co-exist and share plug-ins with other RSDP-based products.  RSDP is installed once per system with the first product that is installed.  As other products built on this platform are installed on the system, only the necessary plug-ins are installed and not reinstalled with each product.  This minimizes hard drive space greatly as more RSDP based products are added to a machine.
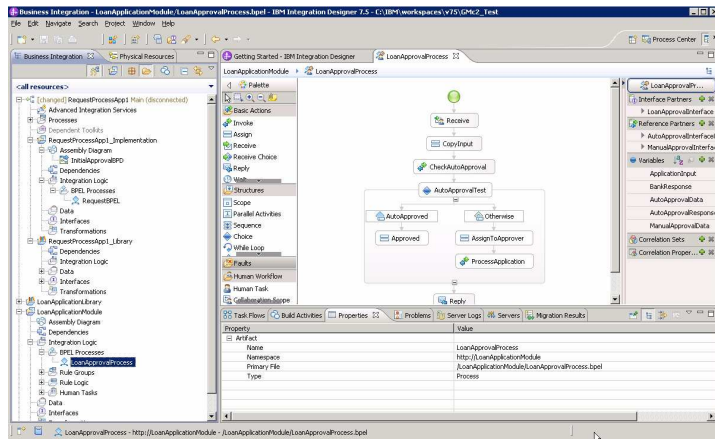
## Integration Designer (2 of 2)

Integration
Designer

**Basic concepts**
- Process Apps and Toolkits
- Advanced Integration Service
- BPEL and Human Tasks
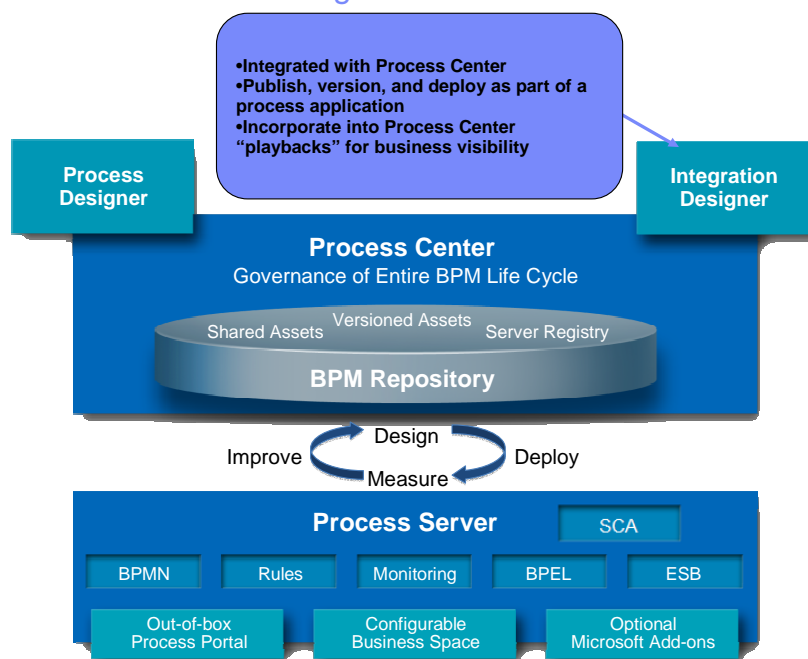- Mediations
- Maps
- Adapters

3          IBM Integration Designer V7.5 - Introduction to Integration Designer          © 2011 IBM Corporation

The Integration Designer is not actually a part of the Business Process Manager product, but rather is a separate product used to develop SCA modules that can be integrated with process applications. The Integration Designer is an Eclipse based development tool that can run connected or disconnected to a Process Center. When connected to the Process Center, SCA modules that are integrated with process applications or toolkits can be worked with. An SCA module that is integrated with a process application or toolkit is referred to as an Advance Integration Service (AIS). The Integration Designer can also be used to develop and test SCA modules that are independent of process applications or toolkits, and this can be done with or without a connection to a Process Center. Some of the

SCA component types that can be developed include BPEL business processes, human tasks, Java components and mediation flows. Maps for transforming data are an important part of enabling integration scenarios and can they are used from within mediation flow components. Adapters enable communication with a variety of external systems through SCA imports and exports.
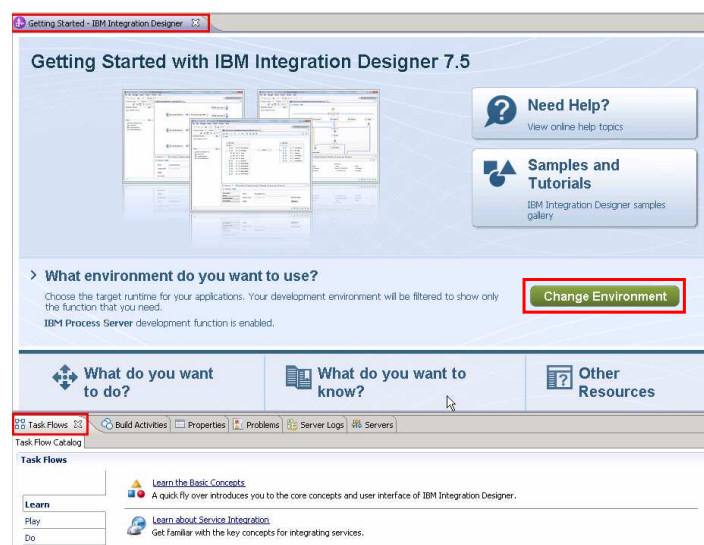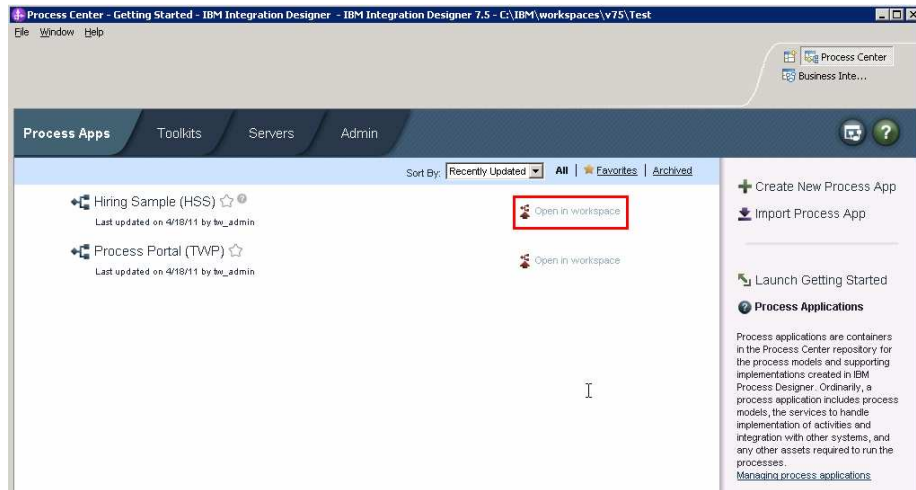
When used with IBM Business Process Manager – Advanced Edition, Integration Designer now is able to connect to a Process Center so that integration-centric SCA services developed in Integration Designer can interact with human-centric process applications and toolkits developed in Process Designer. When an SCA module is associated with a process application or toolkit, publishing it from Integration Designer to Process Center causes it to be added to the repository. This enables the SCA module to be run in the Process Center for testing and deployed to Process Servers for test and production.

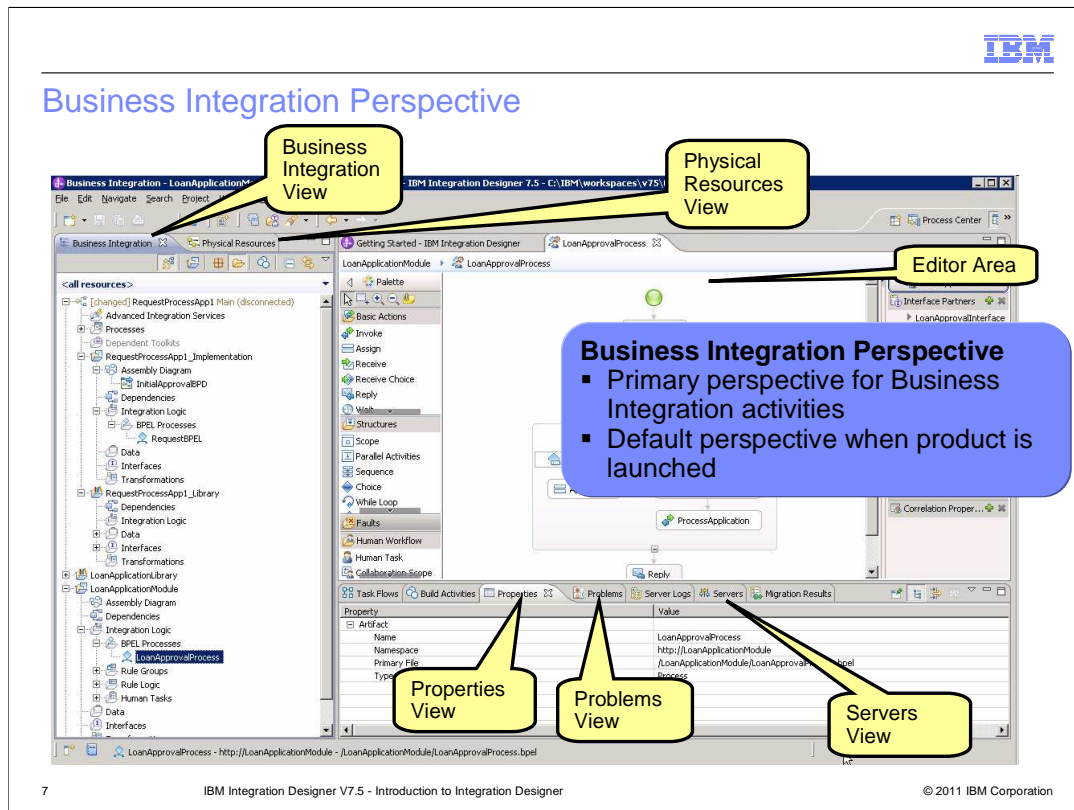Business Integration Perspective – Getting Started

Getting Started with IBM Integration Designer 7.5

Integration Designer opens in either a business integration perspective or a process center perspective. This slide is shows the business integration perspective and focuses on one of the first things you will notice in every new workspace; the getting started view in the editor area.  From this screen you can access information about the product overview, cheat sheets, tutorials, samples, new features, migration information, and web resources. If you close the getting started view, you can always open it again by selecting Help > Getting Started from the menu bar.  Clicking the green Change Environment button allows you to change capabilities and menu items for Integration Designer.  Current capabilities focus on IBM Process Server, WebSphere Enterprise Service Bus, and WebSphere DataPower.  At the bottom-left, you see the Task Flows view.  This view allows you to learn more about IBM Integration Developer concepts, play with the concepts, or do some lab tutorials.

Process Center Perspective

The Process Center perspective is new as of Integration Designer V7.5. It not only provides a way to view Process Applications and Toolkits inside the Process Center, but also a way to bring Process Applications and Toolkits into the Integration Designer environment for implementing and editing.
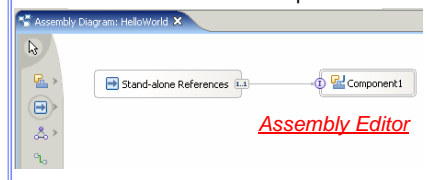
The primary perspective in IBM Integration Designer is the Business Integration perspective. The Business Integration perspective provides simple, uncluttered views of essential resources so you can build business solutions.  The majority of your business integration work is done from this perspective. The screen capture on this slide shows the perspective and highlights several of the important views.  The business integration view, or tab, is the primary view within the Business Integration perspective and is the view you will use to manage business process projects. The Physical Resources view shows all of the file-level resources in their natural form. When you open a resource from the Business Integration view with an editor, the resource is displayed in the editor area. Most of the time you will edit any details in the Properties view, see any errors in the Problems view, and manage server interaction with the Servers view.
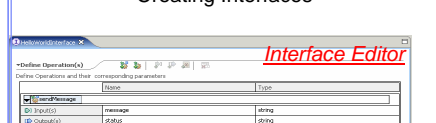
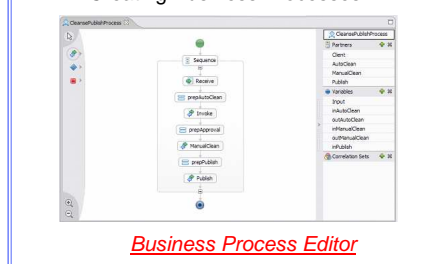## Features Overview: Visual Tools

**Creating business objects**

*Business Object Editor*

**Assemble Service Components**

*Assembly Editor*

**Creating Interfaces**

*Interface Editor*

**Creating Business Processes**

*Business Process Editor*

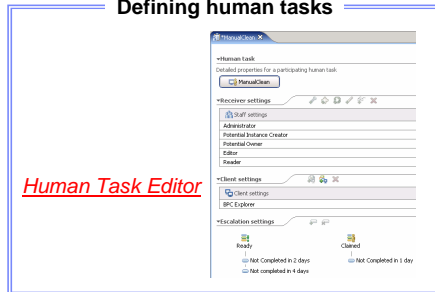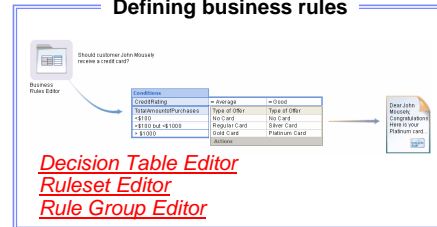IBM Integration Designer V7.5 - Introduction to Integration Designer     © 2011 IBM Corporation

The next two slides provide an overview of the primary features and associated visual tools found in IBM Integration Designer. The business object editor is used to build and edit Business Objects and Business Graphs. The assembly editor is the primary editor for building and assembling SCA applications.  The interface editor is used to build WSDL port-type interfaces used to define some SCA service components. The Business Process editor allows developers to visually create and manipulate BPEL business processes.
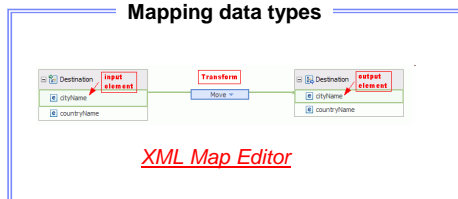
Features Overview: Visual Tools (Continued)
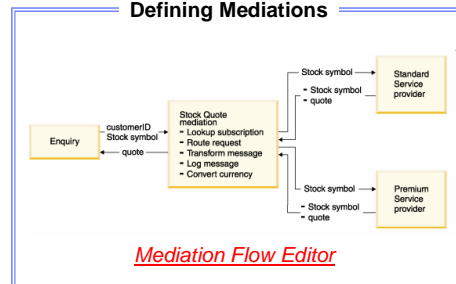
**Defining human tasks** — *Human Task Editor*

**Defining business rules** — *Decision Table Editor*, *Ruleset Editor*, *Rule Group Editor*

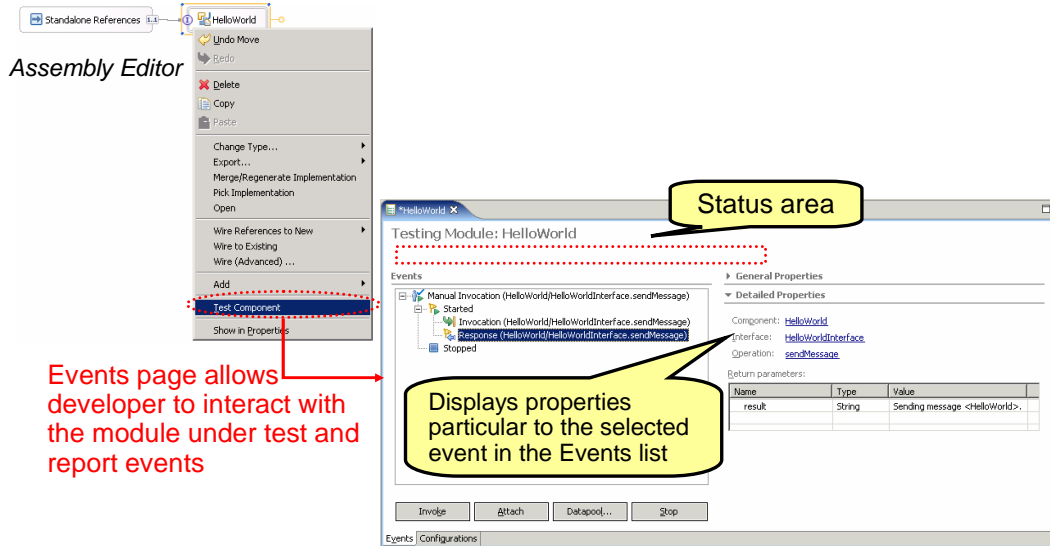**Mapping data types** — *XML Map Editor*

**Defining Mediations** — *Mediation Flow Editor*

The Human Task editor allows developers to visually compose services that interact with human participants. This editor is described in the Human Task Manager presentation. For business rules, there are several editors associated with building business rules, including the Decision Table Editor, Ruleset Editor, and Rule Group editor. The XML Map editor transforms data between an input called the source and and an output called the target. The Mediation Flow editor is used to intercept and modify messages that are passed between existing services (providers) and clients (requesters) that want to use those services.

## Integration Test Client



*Assembly Editor*

Events page allows developer to interact with the module under test and report events

Status area

Displays properties particular to the selected event in the Events list

IBM Integration Designer V7.5 - Introduction to Integration Designer      © 2011 IBM Corporation

The integration test client is a feature in IBM Integration Designer that allows developers to unit test SCA projects and components with a convenient user interface. The primary page in the integration test client interface is the events page. It is from this page that developers interact with the component under test to provide inputs and view the resulting output from a test run. The Configurations page allows developers to customize the test with options like fine grained trace and emulators.

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