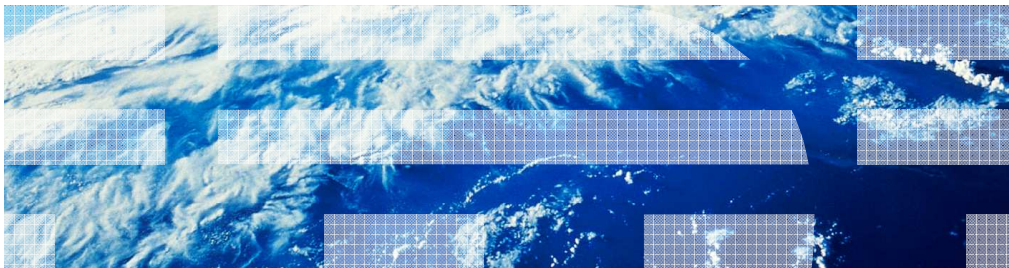




Business Process Management

IBM Business Process Manager V7.5

Introduction to Business Process Manager



WebSphere software

© 2011 IBM Corporation

This presentation provides an introduction to the IBM Business Process Manager V7.5

Goals and agenda

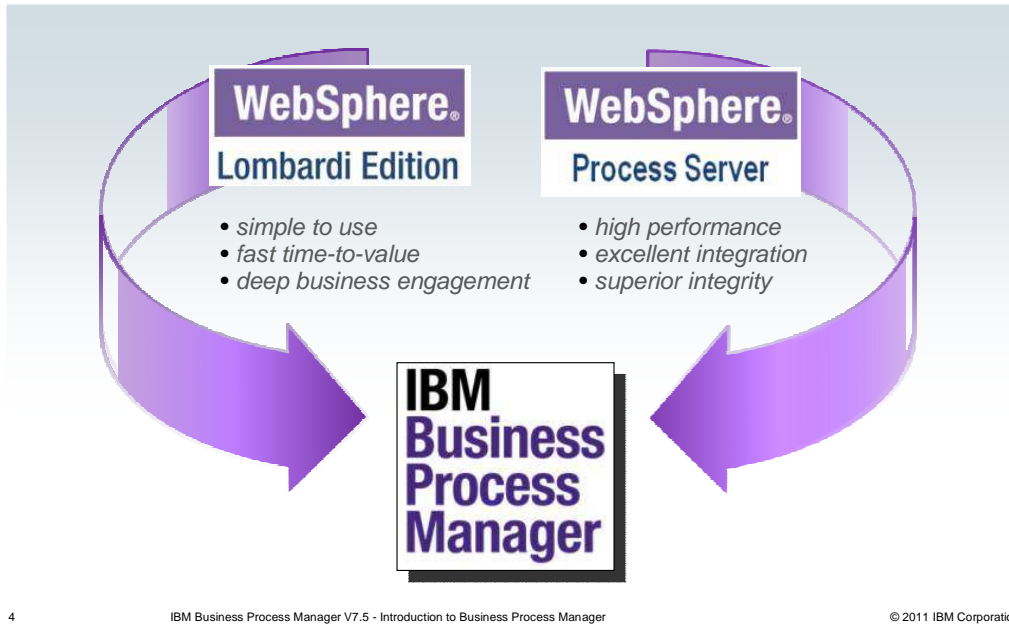
- Goals
 - Introduce the IBM Business Process Manager V7.5
 - Provide a basic understanding of its structure and relationship between the parts
- Agenda
 - Basic introduction
 - Defining the parts
 - A closer look at the parts

The goal of this presentation is to introduce you to the IBM Business Process Manager V7.5 product set. You will learn about how the product is a merger of two previous business process management products from the WebSphere brand and about the various configurations of the product that are offered. The high level architecture is described, introducing the various parts that make up the product and the associated user roles. Each of the parts is then looked at in more detail.

Basic introduction

The next few slides provide a basic introduction to Business Process Manager.

IBM Business Process Manager V7.5: Unifying two market-leading platforms



Before the V7.5 release, IBM had two major products providing business process management capabilities, the WebSphere Lombardi Edition and the WebSphere Process Server. Although there were overlapping capabilities provided by these products, each one excelled in different aspects of business process management enabling.

For example, WebSphere Lombardi Edition provided excellent support for the modeling, design, development and deployment of human-centric business processes. The modeling and development tools were easy to use, which enabled a fast time-to-value when developing processes. It also enabled business users to be directly involved in the modeling and development of processes, thus ensuring the processes that were developed did in fact meet the business need.

In contrast, the WebSphere Process Server excelled at the development and deployment of integration-centric business processes. The development tool, WebSphere Integration Developer, provided graphical tools for composing business processes that can easily access a variety of external systems. In addition, WebSphere Process Server took advantage of the underlying WebSphere Application Server to provide a high performance runtime with security and transactional integrity.

The IBM Business Process Manager is a marriage of these products, providing you with the best of the human-centric and integration-centric capabilities in one integrated runtime environment.

IBM Business Process Manager V7.5

Different configurations match typical entry points or stages in a company's BPM program

BPM Advanced

BPM Standard

BPM Express

Transformation

Complete set of advanced BPM capabilities

- Extended support for high-volume process automation, with high quality-of-service
- Built-in SOA components for extensive enterprise-wide service integration, orchestration

Program

Configured for typical BPM projects

- For multi-project improvement programs, with high business involvement
- Basic system integration support
- Rapid time-to-value: improved user productivity

Project

Configured for a first BPM project

- For small number of users – single server, no clustering
- Low entry price
- Install in a few clicks

The Business Process Manager is packaged in three different configurations, each of which provides functionality appropriate for different stages of business process management adoption by your business. The configurations build on each other, satisfying the need for companies to be able to move up as their commitment to business process management grows.

The entry level product is the BPM Express and is good for a group just starting out with business process management. The BPM Express contains functionality that comes from the WebSphere Lombardi Edition heritage. BPM Express can only be installed in a stand-alone server with no clustering and has a very simple installation process. The pricing is low to enable you to get started with a business process management project without having to make a major investment.

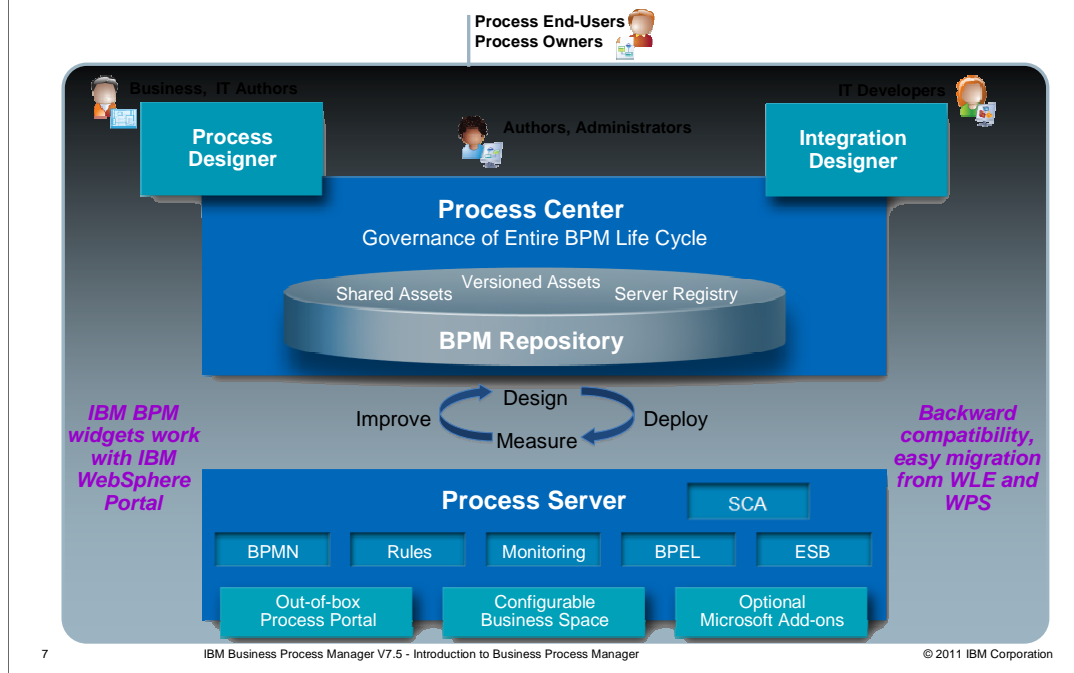
BPM Standard comes next. Similar to the BPM Express, the functionality of the BPM Standard comes from the WebSphere Lombardi Edition heritage. However, it is intended for an organization which might have several BPM projects. It enables clusters of the servers within a WebSphere Application Server deployment manager cell environment.

The top of the food chain is BPM Advanced. It contains functionality from both the WebSphere Lombardi Edition and WebSphere Process Server heritages. This adds a Service Oriented Architecture capability and high volume process automation that is transactional and secure and provides easy access to many types of external systems.

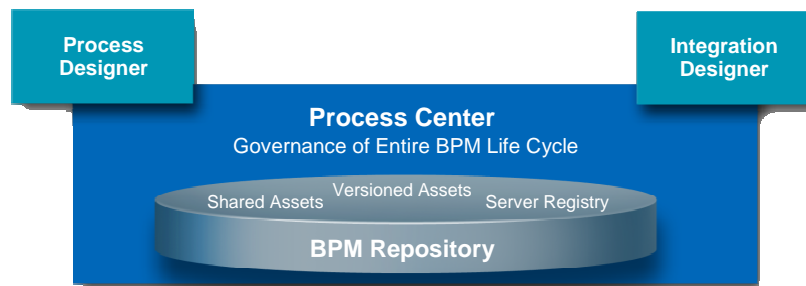
Defining the parts

This section defines the fundamental parts that make up the Business Process Manager.

IBM Business Process Manager V7.5 – BPM Advanced (1 of 6)



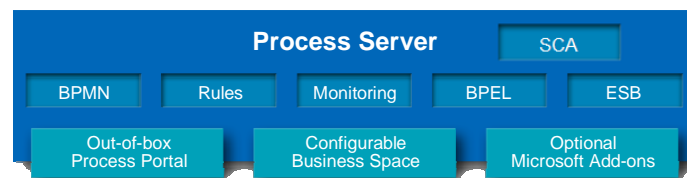
The architecture diagram shown here provides a good introduction to the makeup of the BPM Advanced. Over the next several slides, the different parts of this diagram are explained.



The Process Center provides governance over the entire life cycle of a business process, from initial modeling all the way through to deployment in production. The Process Center maintains a repository containing the process applications artifacts, including assets shared across multiple process applications. Process applications can also be versioned, enabling different levels of the same application to be maintained in the repository and deployed to process servers. The repository also maintains a registry of the process servers in the environment. The Process Center is involved in the modeling and development of process applications, running the applications during initial testing, and deploying of the applications to test and production servers.

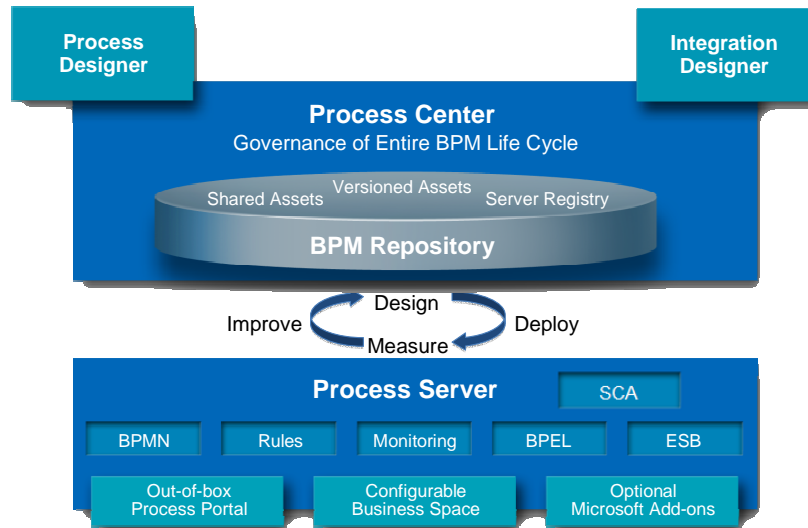
The Process Designer, is the tool used to actually model, develop and do initial testing of process applications. It must be connected to the Process Center to perform these functions.

The Integration Designer, is a separate product from the Business Process Manager. However, it is a critical tool used to develop SOA based services that can be called from process applications. It can run either connected or disconnected from the Process Center, but some functions can only be done when it is connected.



The Process Server is the runtime environment for process applications. It provides a rich and diverse set of functionality for business processes. Some of the key capabilities include Service Component Architecture (SCA), which provides the capability to implement SOA based services that can have a variety of different implementation types and support a variety of communication protocols. Business Process Execution Language (BPEL) provides a high level way to define your business processes that are provided as SCA components. Enterprise Service Bus (ESB) capabilities provide a way to loosely couple service requestors and service providers, allowing for protocol conversion, message transformation and routing. Business Process Modeling Notation (BPMN) is another way to define the flow of a business process. Rules are a way to abstract decision points from code so that they can be more easily adjusted. Monitoring is a way to track in real time how a business process is performing to help identify bottlenecks and potential places for improvement. The process portal is one of a couple of different tools used for management of human tasks. Business space provides a configurable user interface that can be used for a variety of purposes. Finally, the Microsoft add-ons enable integration with Microsoft Office and Microsoft Sharepoint.

IBM Business Process Manager V7.5 – BPM Advanced (4 of 6)



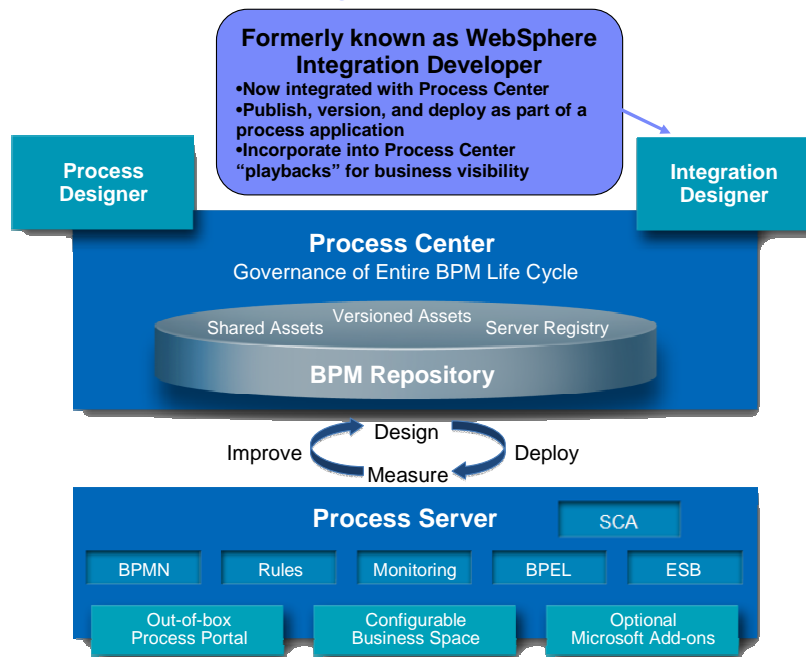
10

IBM Business Process Manager V7.5 - Introduction to Business Process Manager

© 2011 IBM Corporation

You can now see between the Process Center and Process Server there is an illustration of the business process management life cycle. A business process is first designed based on modeling of what the process should do. When modeling, design and development of the business process is complete, it is then deployed from a Process Center to a Process Server where it runs. Monitoring of the business process occurs which allows the key performance indicators to be measured. The measuring of the key performance indicators point out areas of inefficiency in the business process that can be improved. Those improvements can then be made to the model, the business process redeploys, and the cycle continues.

IBM Business Process Manager V7.5 – BPM Advanced (5 of 6)



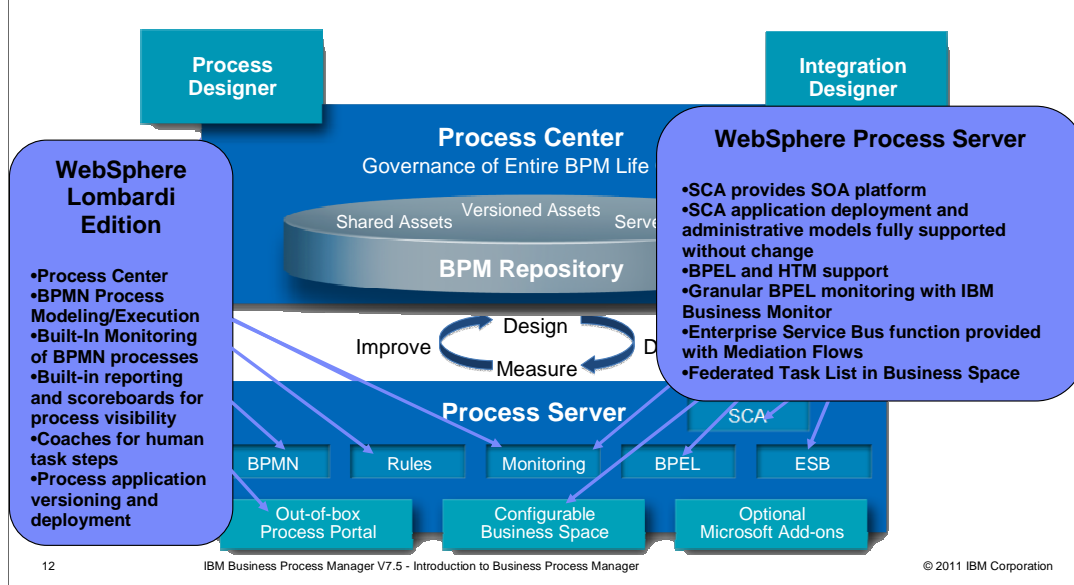
11

IBM Business Process Manager V7.5 - Introduction to Business Process Manager

© 2011 IBM Corporation

This slide shows the enhancements made to the IBM Integration Designer V7.5, which was formerly the WebSphere Integration Developer V7.0. The 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.

IBM Business Process Manager V7.5 – BPM Advanced (6 of 6)



The heritage from WebSphere Lombardi Edition V7.2 and WebSphere Process Server V7.0 is shown in this chart. The Process Center with repository and the Process Designer come from the Lombardi Edition, along with the capability for process application versioning and deployment.

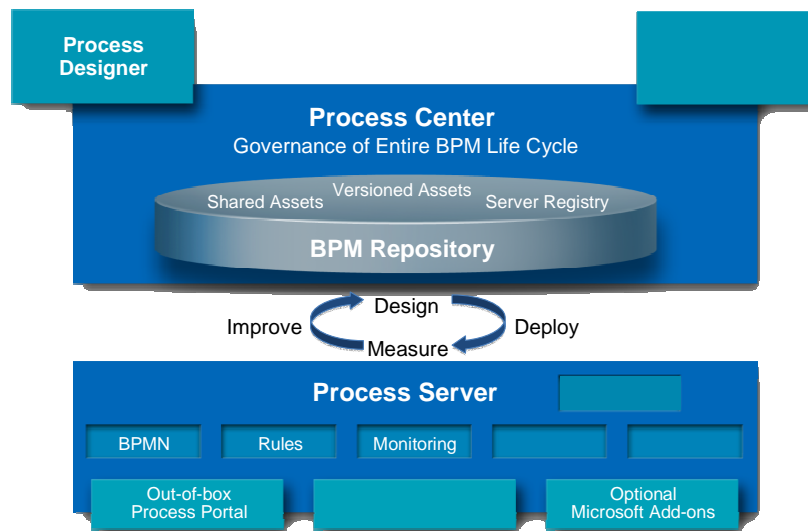
The Process Server is an integrated runtime bringing together the functionality of both Lombardi Edition and WebSphere Process Server in a single JVM.

From Lombardi Edition there is modeling and execution of business processes using Business Process Modeling Notation (BPMN). There is built-in monitoring of those BPMN processes along with reporting functionality such as scoreboards to provide visibility into the processes. Human task interaction is provided through the use of coaches along with Process Portal for managing of the tasks.

Coming from WebSphere Process Server is a robust Service Oriented Architecture platform provided through Service Component Architecture (SCA). SCA modules that are not integrated with a process application continue to be deployed and administered as they were in V7.0 and SCA modules that are integrated with a process application are deployed and managed by the Process Center. Business Process Execution Language (BPEL) and Human Task Management (HTM) applications continue to provide a highly functional business process and task management model. There is granular monitoring integrated with the IBM Business Monitor. Mediation flow components provide a fully functional Enterprise Service Bus (ESB) capability for the loose coupling of service requestors and service providers.

The Federated Task List, built using Business Space, combines the task management for BPMN and BPEL HTM tasks into a single user interface.

IBM Business Process Manager V7.5 – BPM Express/Standard



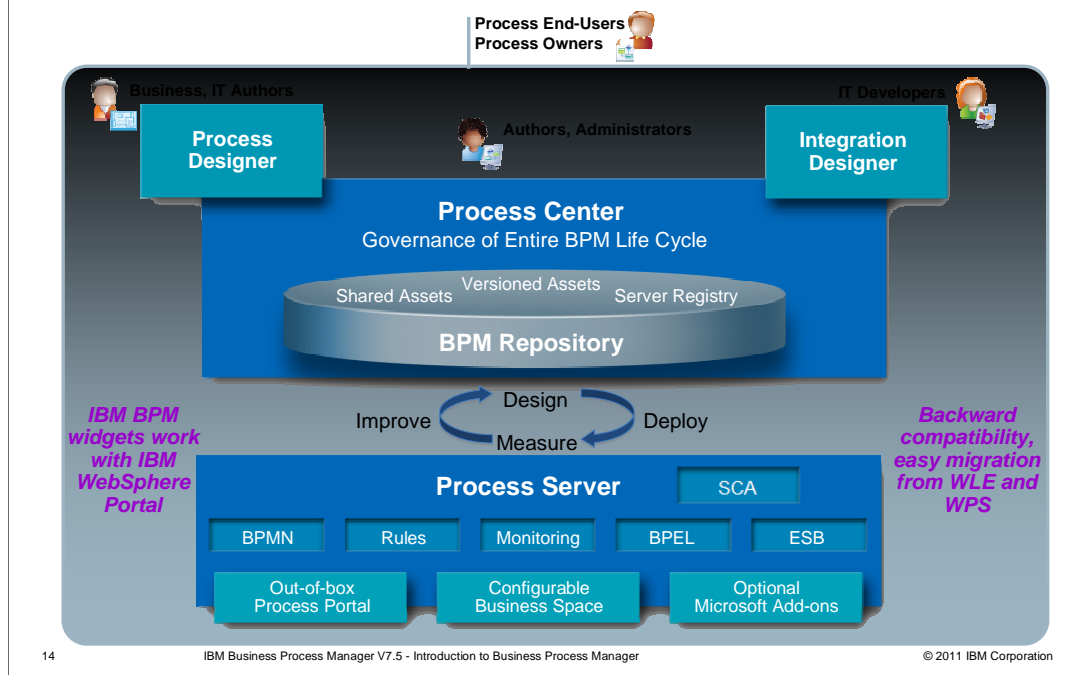
13

IBM Business Process Manager V7.5 - Introduction to Business Process Manager

© 2011 IBM Corporation

All of the previous slides addressed BPM Advanced. This slide shows the capabilities of both BPM Express and BPM Standard. Essentially, all of the elements that came from the WebSphere Integration Developer and WebSphere Process Server are not present in BPM Express and BPM Standard. Therefore BPEL, HTM, SCA, ESB and business space are not available and Integration Designer is not used for development.

IBM Business Process Manager V7.5 – BPM Advanced



This is the original architecture chart you were shown at the beginning of this section. Now that you have an understanding of the parts that make up the Business Process Manager, the various user roles can be explained. These are shown across the top of the diagram.

The Process Designer is used by authors of business processes, which are primarily business users and IT authors. Authors also use the Process Center. Another major user role for the Process Center is that of administrator, for the management of servers and deployment of process applications. The Integration Designer is used by IT developers, who are considered to have a deeper and more technical background than IT authors. Finally, the resulting business processes are used by the process owners and process end-users.

When thinking of user roles, it is important to understand that there is not necessarily a one to one correspondence between a person and a role. For example, the development of a business process that calls an SCA service. One scenario is that the business or IT author defines an interface for a service in Process Designer, and then notifies another person who is an IT developer, that the service needs to be implemented in Integration Designer. After it is implemented and delivered back to the Process Center, the business or IT author makes use of the service from Process Designer. However, another possible scenario is that an individual might act in both the IT author role and IT developer role; in this case, the same person does the work in Process Designer and in Integration Designer and is basically doing both of the roles.

A couple of additional points are provided in this slide. First, the BPM business space widgets can be used from WebSphere Portal.

Secondly, is that the Business Process Manager V7.5 provides compatibility with earlier versions and migration from WebSphere Process Server and WebSphere Lombardi Edition applications developed on the previous releases.

A closer look at the parts

This next section goes into more detail on each of the parts that make up Business Process Manager.

The Process Center

Basic concepts

- Process Apps and Toolkits
- Repository
- Playback Server
- Tip and Snapshots
- Deployment

Authors
Administrators

16
IBM Business Process Manager V7.5 - Introduction to Business Process Manager
© 2011 IBM Corporation

The basic concepts of the Process Center are reviewed here. A screen capture of the Process Center illustrates the user interface, showing a list of the process applications. You can see the tabs at the top of the window which let you also work with toolkits, servers and perform administration.

The Process Center has a repository in which process applications and toolkits are maintained. A process application is a container for process models and their implementations. A process application contains artifacts, such as one or more process models which are called Business Process Definitions (BPD), services required to implement activities or integrate with other systems, SCA modules and libraries, toolkits, monitor models and any other items required to run the process. Toolkits are used to provide a shared library of items that are used by multiple process applications.

The Process Center is a fully functioning Process Server, sometimes referred to as the playback server. The playback server is used to deploy and test the current level of a process application that is under development, which is referred to as the tip. When a process application tip has been tested in the playback server and is ready to be deployed, a snapshot of the process application is taken. It is only snapshots of process applications that can be deployed to process servers.

The Process Center also maintains a list of Process Servers, which can be classified as a test server, stage server or production server. The Process Center is used to deploy snapshots of process applications to Process Servers.

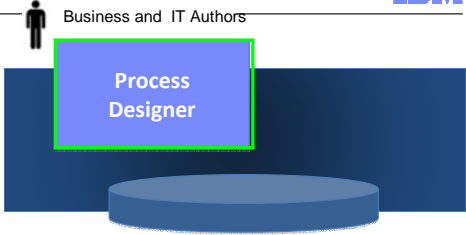
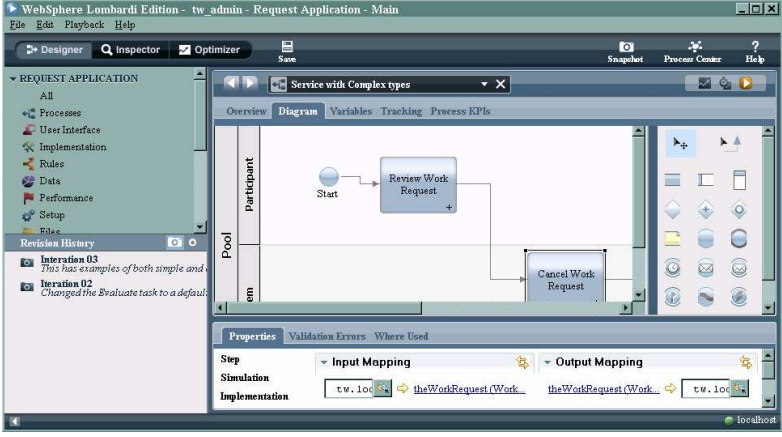
IBM

Business and IT Authors

The Process Designer

Basic concepts

- Process Apps and Toolkits
- Designer
- Inspector
- Optimizer


17 IBM Business Process Manager V7.5 - Introduction to Business Process Manager © 2011 IBM Corporation

The basic concepts of the Process Designer are reviewed here. A screen capture of the Process Designer user interface is shown with a Business Process Definition (BPD) in the editor. The Process Designer is an Eclipse based tool for developing and testing process applications and toolkits. It can only be used when connected to a Process Center which provides the repository for storing process applications and toolkits and provides the playback server for testing them.

The Designer tab puts you into the editor where you do the development of process applications and toolkits. The editor uses a drag-and-drop model for adding activities and other components to the canvas from the palette. A wiring tool is used to show the flow between the components. The palette is divided into swim lanes which define which participants are authorized to perform which activities.

The Inspector tab puts you into a set of panels that allow you to test the tip of your process application in the playback server. It enables an iterative approach to process development, allowing you to step through and debug a process application or a segment of a partially implemented process application. As you run process applications in the Inspector, process instances are created which can be managed through the Inspector.

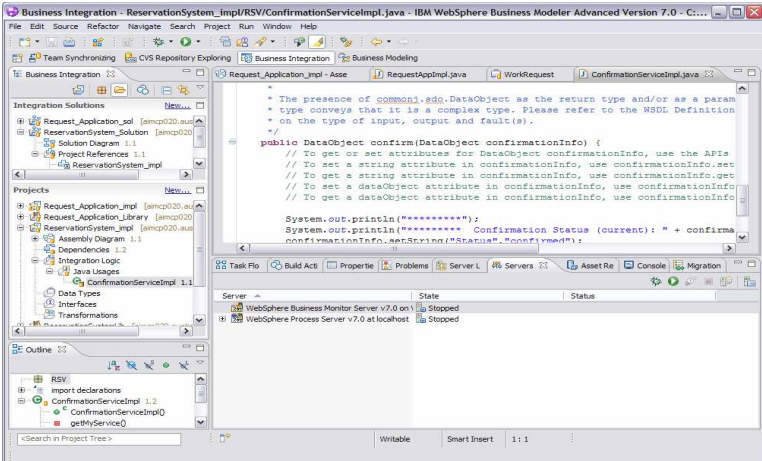
The Optimizer tab provides a set of panels that enable you to simulate processes while you are developing them, enabling you to understand how well the process models might perform. The Optimizer also enables you to analyze your processes after they are up and running using historical data stored in the Business Performance Data Warehouse.

IT Developers 

The Integration Designer

Integration Designer

- Process Apps and Toolkits
- Advanced Integration Service
- BPEL and HTM
- Mediations
- Maps
- Adapters

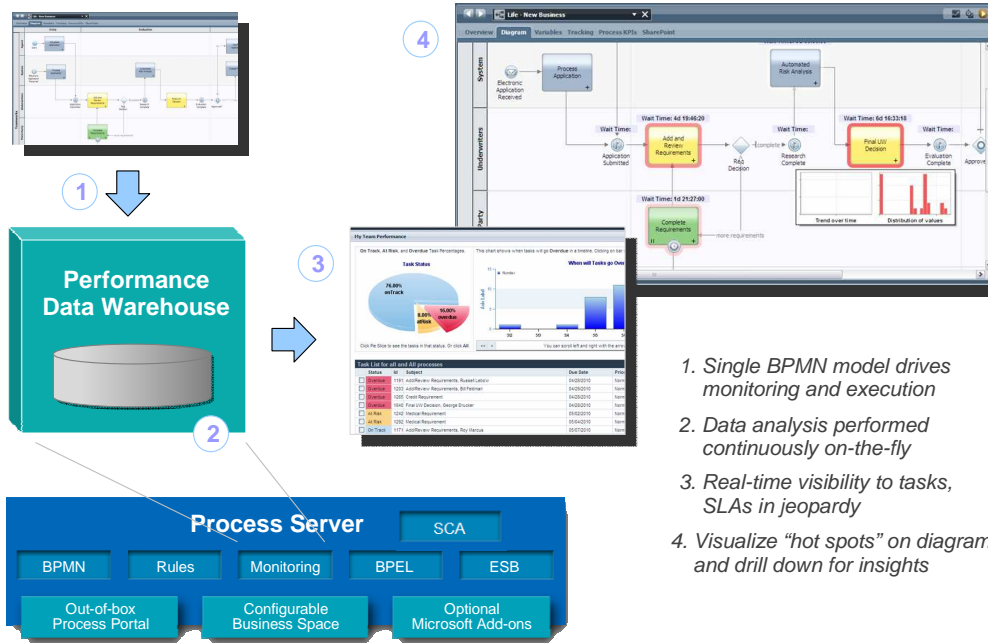


18 IBM Business Process Manager V7.5 - Introduction to Business Process Manager © 2011 IBM Corporation

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 they are used from within mediation flow components. Adapters enable communication with a variety of external systems through SCA imports and exports.

Built-in Performance Data Warehouse



19

IBM Business Process Manager V7.5 - Introduction to Business Process Manager

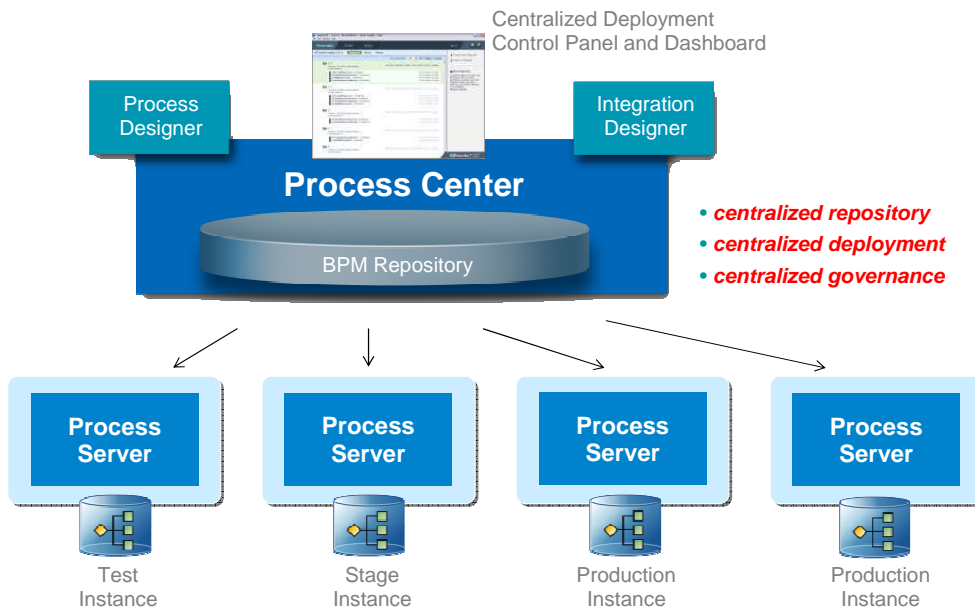
© 2011 IBM Corporation

Process applications have a built-in monitoring capability that captures data in the Performance Data Warehouse. This data can then be used to provide reports regarding the effectiveness of business processes.

To make use of this capability, start by using Process Designer to define the variables that you want to track and then send tracking definitions to the Performance Data Warehouse. The Performance Data Warehouse creates a database table to hold the tracked data. As you run instances of your processes on the Process Center server or a Process Server, the tracking data is retrieved for each tracked variable at regular intervals and is stored in the Performance Data Warehouse database.

You create reports in the Process Designer that query the Performance Data Warehouse to retrieve the data for the tracked variables. Reports that you define display as scoreboards in the Process Portal or a customized portal. You can also query the Performance Data Warehouse to generate reports with external tools, such as Microsoft Access.

IBM Business Process Manager V7.5 – Centralized process governance



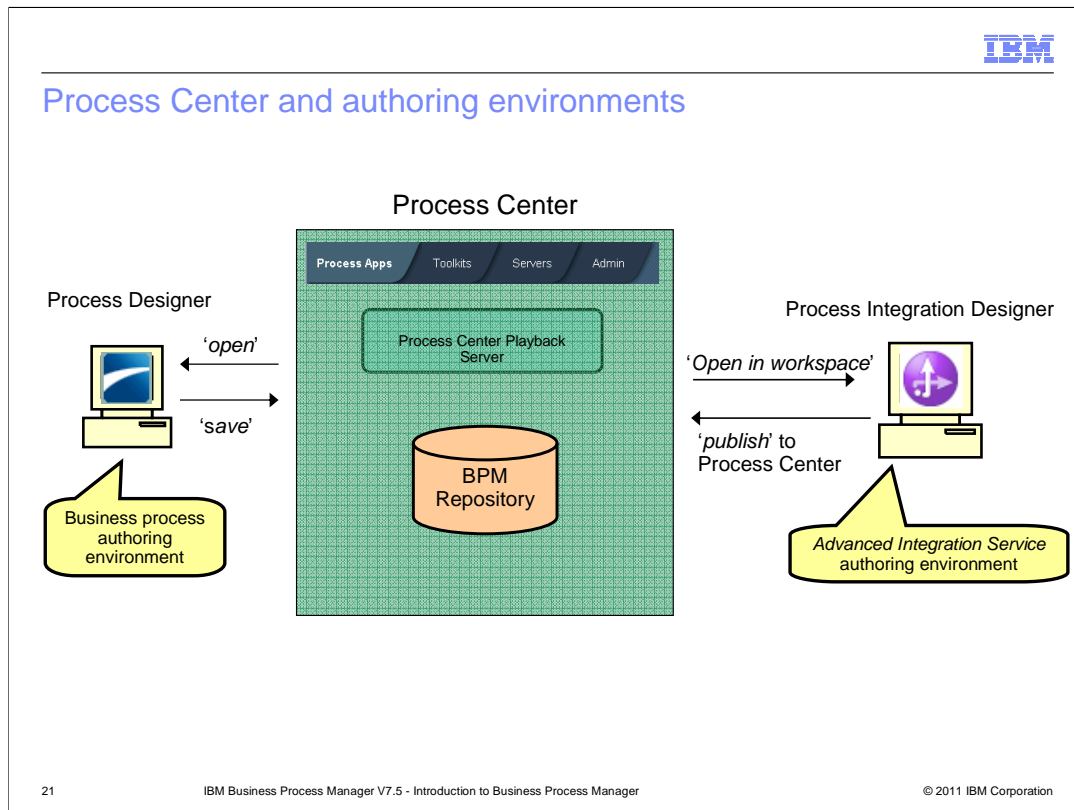
20

IBM Business Process Manager V7.5 - Introduction to Business Process Manager

© 2011 IBM Corporation

The Process Center manages the centralized repository for process applications and provides for their centralized deployment and governance. Process Servers are registered with the Process Center as either test, stage or production servers and this designation influences some aspects of how the Process Center interacts with the server. All deployment of process applications is done from the Process Center to a registered Process Server. This is done by an administrator interacting with the administration user interface of the Process Center. If a Process Server is offline from the Process Center, the Process Center can be used to create a deployment package that can then be used to deploy the process application onto the offline server.

Process Center and authoring environments



21

IBM Business Process Manager V7.5 - Introduction to Business Process Manager

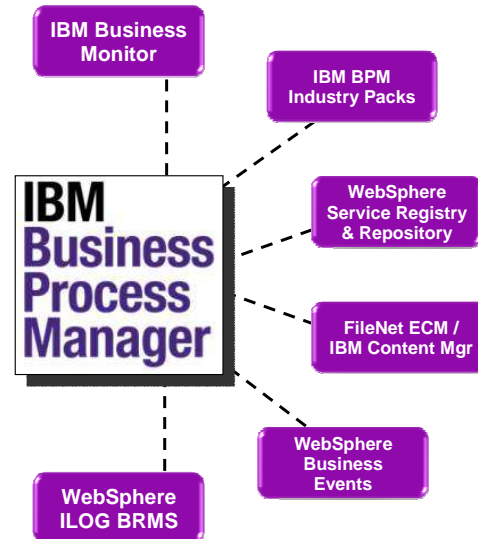
© 2011 IBM Corporation

The purpose of this slide is to highlight the difference in how the two authoring tools interact with the Process Center. The Process Designer follows a tightly coupled model. The artifacts that it works with are stored directly in the BPM repository. When editing an artifact, it is taken from the repository when opened and stored back in the repository when saved. For process applications, these changes affect the tip and are immediately deployed to the playback server.

The Integration Designer follows a loosely coupled push pull model. The artifacts for a process application or toolkit are pulled from the repository into the Integration Designer workspace when an open in workspace is requested. Integration Designer is then used to edit the artifacts in the workspace. When editing is complete, the process application or toolkit is pushed back to the repository by doing a publish.

Connecting to other products

- Monitoring model export for IBM Business Monitor integration
- New IBM BPM based assets added to IBM BPM Industry Packs
- Built-in browser for WebSphere Service Registry and Repository
- Built-in connector for FileNet ECM or IBM Content Mgr
- Process “triggers” can be initiated from WebSphere Business Events
- Built-in connector to WebSphere ILOG JRules for executing rules external to the Process Application

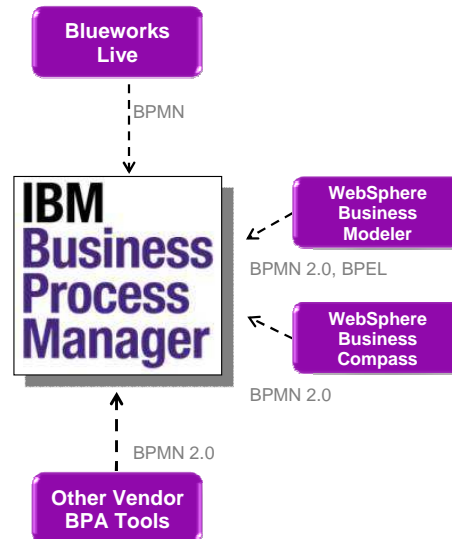


This slide looks at some of the other products that Business Process Manager can interact with.

Monitor models can be associated with BPEL or BPMN business processes to export data to the IBM Business Monitor. The IBM Business Process Manager Industry Packs are built using Business Process Manager. The WebSphere Service Registry and Repository can be used to manage endpoints for services that are then used by mediations to provide dynamic routing capabilities. There is an adapter for FileNet and IBM Content Manager that can be used with SCA imports and exports. WebSphere Business Events can be used to initiate triggers for starting business processes. And there is a built-in connector that enables when WebSphere ILOG JRules is to be invoked for processing rules external to the process application.

Importing process models

- Import BPMN models from Blueworks Live directly into Process Center
- Import models from WebSphere Business Modeler and Compass 7.0.0.4 into Process Center using BPMN 2.0
- Import models from other vendor modeling and analysis tools into Process Center using BPMN 2.0
- Continue to import BPEL models into Integration Designer from Modeler



This slide looks at various sources for process models that can be imported.

BPMN process models produced by Blueworks Live can be imported into the Process Center. WebSphere Business Modeler V7.0.0.4 and WebSphere Business Compass V7.0.0.4 can export BPMN 2.0 models that can be imported into Process Center. Any vendor's modeling tool that exports BPMN 2.0 can be used for importing into Process Center. In addition, WebSphere Business Modeler can be used to import BPEL models into Integration Designer.

Summary

- Basic introduction
- Defining the parts
- A closer look at the parts

This presentation introduced you to the IBM Business Process Manager V7.5 product set. You learned about how the product is a merger of two previous business process management products from the WebSphere brand and about the various configurations of the product that are offered. The high level architecture was described, introducing the various parts that make up the product and the associated user roles. Each of the parts was then looked at in more detail.



Feedback

Your feedback is valuable

You can help improve the quality of IBM Education Assistant content to better meet your needs by providing feedback.

- Did you find this module useful?
- Did it help you solve a problem or answer a question?
- Do you have suggestions for improvements?

Click to send email feedback:

mailto:iea@us.ibm.com?subject=Feedback_about_BPMv75_BusinessProcessManager_Introduction.ppt

This module is also available in PDF format at: [../BPMv75_BusinessProcessManager_Introduction.pdf](..../BPMv75_BusinessProcessManager_Introduction.pdf)

You can help improve the quality of IBM Education Assistant content by providing feedback.



Trademarks, disclaimer, and copyright information

IBM, the IBM logo, ibm.com, and WebSphere are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of other IBM trademarks is available on the Web at "[Copyright and trademark information](http://www.ibm.com/legal/copytrade.shtml)" at <http://www.ibm.com/legal/copytrade.shtml>

THE INFORMATION CONTAINED IN THIS PRESENTATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. in the United States, other countries, or both.

THE INFORMATION CONTAINED IN THIS PRESENTATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. WHILE EFFORTS WERE MADE TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION CONTAINED IN THIS PRESENTATION, IT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IN ADDITION, THIS INFORMATION IS BASED ON IBM'S CURRENT PRODUCT PLANS AND STRATEGY, WHICH ARE SUBJECT TO CHANGE BY IBM WITHOUT NOTICE. IBM SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES ARISING OUT OF THE USE OF, OR OTHERWISE RELATED TO, THIS PRESENTATION OR ANY OTHER DOCUMENTATION. NOTHING CONTAINED IN THIS PRESENTATION IS INTENDED TO, NOR SHALL HAVE THE EFFECT OF, CREATING ANY WARRANTIES OR REPRESENTATIONS FROM IBM (OR ITS SUPPLIERS OR LICENSORS), OR ALTERING THE TERMS AND CONDITIONS OF ANY AGREEMENT OR LICENSE GOVERNING THE USE OF IBM PRODUCTS OR SOFTWARE.

© Copyright International Business Machines Corporation 2010. All rights reserved.