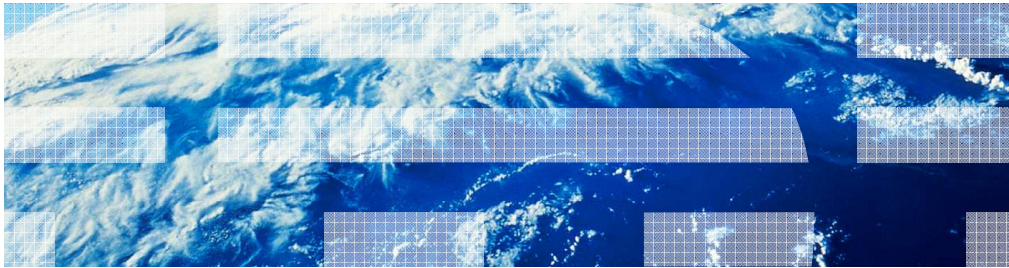


Business Process Management IBM Business Process Manager

BPM Advanced architecture



This presentation provides a quick overview of the architecture for the Advanced configuration of IBM Business Process Manager.

The purpose is to highlight the relationships between the servers, databases and administration tools.

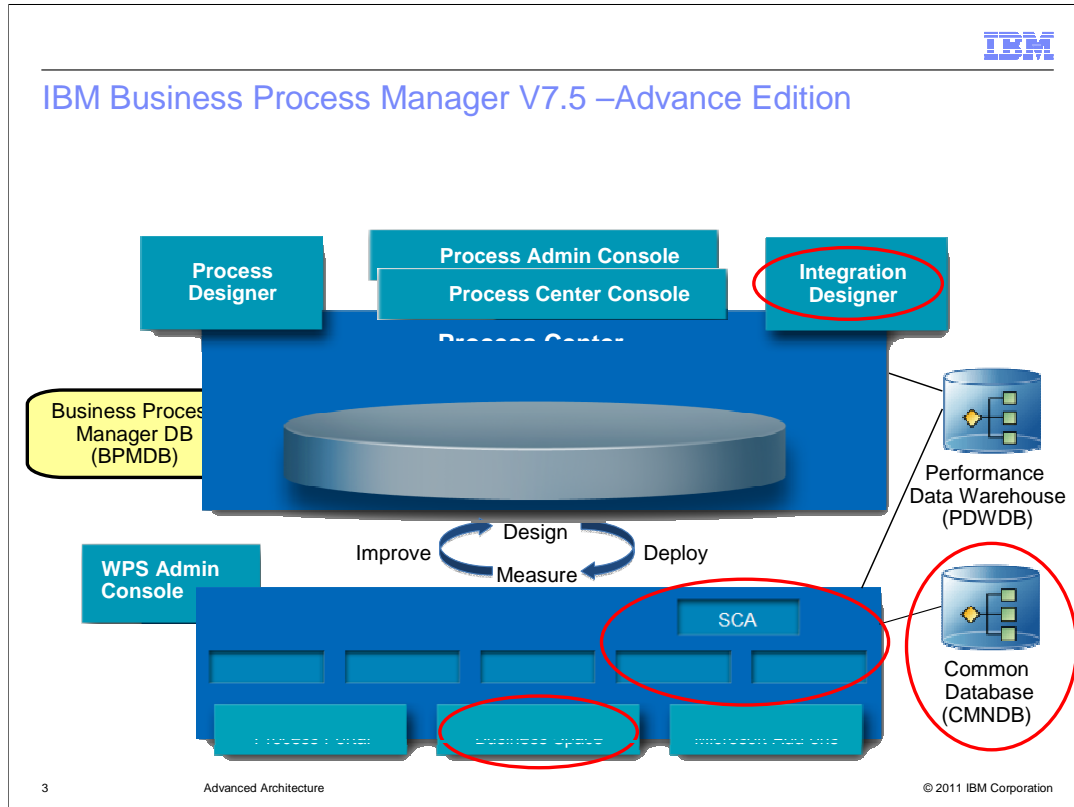
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Four perspectives are discussed.

The Process Center view, the server environments and their databases, server clustering with the Advanced configuration, and then, WebSphere Process Server without the use of the Process Center or Process Designer.

IBM Business Process Manager V7.5 –Advance Edition



The heart of the IBM Business Process Manager V7.5 is the Process Center and Process Center Server. The Process Center constitutes all the tools and interfaces for creating and managing the business process and servers, while the Process Center Server is the runtime component where the business processes run. You interact with the Process Center through the Process Designer, the Process Center console and the Process Administration console.

The Process Designer is a full function, Eclipsed based application used for creating and editing business processes and managing the server environments.

The Business Space is a web 2.0 framework for a common user experience. It is highly configurable and comes with a complete set of widgets for running and managing business processes.

The Process Center console is a browser based application that lets you manage assets, servers and relationships, but does not provide the capability for creating and editing the business processes.

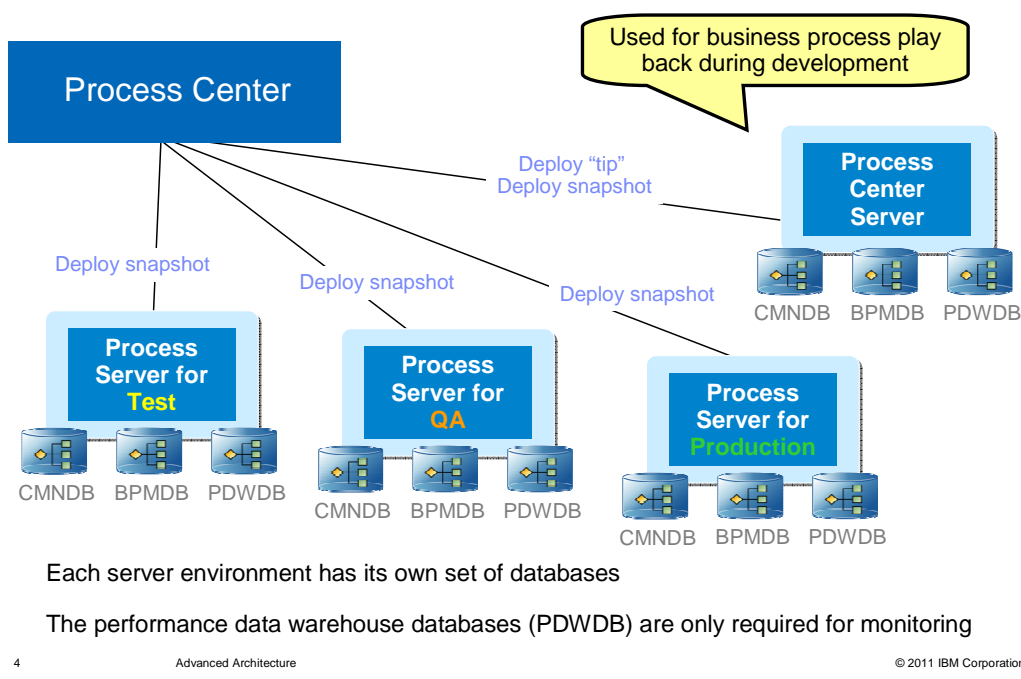
The Process Administration console is also a browser based application that lets you manage server runtime features such as caches, variables, events, in addition to users and groups.

The WebSphere Process Server Administration console is specific for the process server. It provides the administrative functions needed to fine tune the server runtime, create server clusters, manage data sources, and security.

BPM Advanced brings in the additional capabilities of the WebSphere Process Server and the Integration Designer, which are highlighted with the red circles. All of the features that are part of BPM Standard are still available. What is important to notice here is the addition of the common database and the Integration Designer. The Integration Designer provides the tools for creating the SOA based services that can be called from a business process developed with the Process Designer. The common database is used for the SOA services at runtime.

The new capabilities include Service Component Architecture (SCA), Business Process Execution Language (BPEL), the Enterprise Service Bus (ESB) and the IBM Business Space. Using the Integration Designer, you can build your services using any combination of these components and have them easily associated with a business process you create in the Process Designer.

Server environments and databases



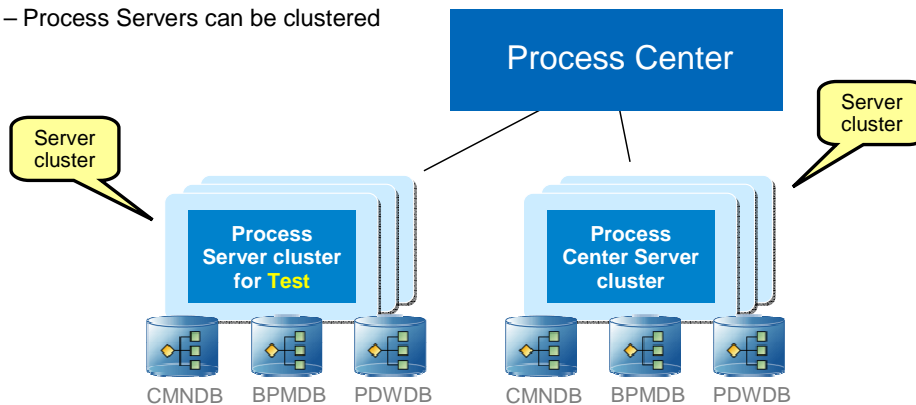
As mentioned in the previous slide, the Process Center server is the runtime component for the Process Center. When working with the Process Designer you can run the current version of your business process in the Inspector. When you do this, you are running the tip in the Process Center server.

As your development progresses, you will need to deploy your business process applications to different environments. First, to the test environment, then the quality assurance environment and finally the production environment.

Each environment will have its own set of databases.

Server clustering with BPM Advanced

- With the Advanced configuration...
 - Both horizontal and vertical scaling are supported
 - Process Center Server can be clustered
 - Process Servers can be clustered



[Clustering theory and concepts - V6.1](#)

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Advanced Architecture

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Server clustering is fully supported with BPM Advanced, including the Process Center Server.

The next thing to take away from this slide is that the database sets are for the clusters.

With the Advanced configuration there is the addition of the Common database.

The clustering support is provided by the base WebSphere Application Server framework. To learn more about it select the link,

Clustering Theory and concepts - V6.1. Although this was written for V6.1 the theory and concepts are still applicable.

<for the PDF if needed>

http://publib.boulder.ibm.com/infocenter/ieduasst/v1r1m0/topic/com.ibm.iea.wpi_v6/wpswid/6.0.2/Clustering/WPIv6_Clustering.static/player.html?

WebSphere Process Server only

- Process Center and Process Designer are not required for J2EE, SCA, and BPEL applications.
- WebSphere Process Server Adminconsole
 - To manage J2EE, SCA, and BPEL applications
- Business Process Choreographer Explorer
 - To run and debug BPEL business processes
- Integration Designer
 - To author J2EE, SCA and BPEL applications
- Standalone or clustered configurations supported



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Advanced Architecture

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There is one more Advanced configuration that needs to be mentioned. Just as BPM Standard and BPM Express can be used without the advanced integration services, the WebSphere Process Server can be used without the Process Center or the Process Designer.

With the WebSphere Process Server only configuration, one or more process server profiles are created, either stand-alone or clustered. They are used to host J2EE, SCA, and BPEL applications. The WebSphere Process Server Adminconsole is used to deploy and manage the applications and the Integration Designer is used to create, test and debug them. There is one other tool that is available for running and debugging the BPEL business processes. It is the Business Process Choreographer Explorer.

Summary



- Architecture
 - Process Center view
 - Single point of governance
 - Has a Process Center Server for the development runtime
 - Server environments and databases
 - Each server environment has its own set of databases.
 - With BPM Advanced there are three databases
 - Server clustering
 - Integration Designer for creating and testing SOA services
 - Service Component Architecture (SCA)
 - Business Process Execution Language (BPEL)
 - Enterprise Service Bus (ESB)
 - Business Space – user experience
 - WebSphere Process Server view

This has been a very brief overview of the architecture for Business Process Manager Advanced.

The key things to take away from this presentation are:

The Process Center provides a single point of management for development and runtime and there is a special process server, called the Process Center Server, that is part of the Process Center.

Each server environment requires its own set of databases and with the Advanced configuration, there are three databases per environment.

The Integration Designer can be used to create and test SOA services that can be called from your business processes.

These SOA services are generally in the form of SCA services but can also be web Services.

With the integration designer you can build BPEL business processes that can be exposed as SCA services and thus integrate your human centric business processes with high through-put automatic processes.

The SOA services that you create using the Integration Designer do not have to be used by the Process Center and Designer. They can be run in WebSphere Process Servers in either a standalone or clustered configuration, independently of the Process Center. In this case the WebSphere Process Server Adminconsole, and the Business Process Choreographer Explorer are used to manage and run the applications.

The final piece is the Business Space. The Business Space is a Web 2.0 framework for a common user experience. It is highly configurable and comes with a complete set of widgets for running and managing business processes.



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