

Administration of IBM Business Process Manager Advanced V8.5.7

WB871 (Classroom)

ZB871 (Self-paced)

Course description

In this introductory course, you learn the skills that are needed to install, configure, and administer IBM Business Process Manager Advanced V8.5.7.

IBM Business Process Manager Advanced V8.5.7 includes IBM Process Server, IBM Integration Designer, IBM Process Designer, IBM Process Center, and WebSphere Enterprise Service Bus. This course focuses on IBM Process Server, which is a high-performance business engine at the heart of business process management (BPM) and service-oriented architecture (SOA). The course covers how to configure both Process Center and Process Server in a network deployment environment. You learn about the various deployment topologies that are available for both environments. The course also teaches you about the selection criteria for choosing an appropriate deployment topology. You learn how Business Process Manager uses the service integration bus (WebSphere Platform Messaging) for all asynchronous communications.

To build a highly available Process Server architecture, you must understand how the service integration bus works, and know how to integrate it into the design of a topology. Hands-on exercises on the Ubuntu Linux operating system are provided throughout the course, giving you practical experience with designing, deploying, and troubleshooting a highly available Process Server environment. Through the labs, you configure both Process Center and Process Server in a network deployment environment and verify the configuration. You deploy a basic application and use it to test the capabilities of the Process Server environment. You examine applications in Process Center and deploy applications to both an online and an offline Process Server environment. Finally, you migrate process instances in the Process Server environment.

The exercises in this course run on IBM Business Process Manager Advanced V8.5.7. The lab environment uses the Ubuntu Linux platform.

For information about other related courses, see the IBM Training website:

http://www.ibm.com/training

General information

Delivery method

Classroom or self-paced virtual classroom (SPVC)

Course level

ERC 1.0

Product and version

IBM Business Process Manager Advanced Version 8.5.7

Audience

This course is designed for systems administrators, solutions administrators, and operators who install, configure, manage, and troubleshoot Process Server applications.

Learning objectives

After completing this course, you should be able to:

* Configure and administer a Process Center environment
* Configure and administer a Process Server environment
* Describe the purpose and business value of the tools included in IBM Business Process Manager Advanced V8.5.7: IBM Process Designer, IBM Integration Designer, IBM Process Server, IBM Process Center, and WebSphere Enterprise Service Bus
* Describe IBM Business Process Manager Advanced architecture, concepts, and terminology
* Describe the deployment considerations for IBM Business Process Manager Advanced components
* Describe the Process Server high availability topologies and their selection criteria
* Create a Process Center clustered environment by using the Deployment Environment wizard
* Create a customized properties file by using the IBM Business Process Manager Advanced Configuration Editor
* Create a Process Server clustered environment by using the BPMConfig utility
* Purge content in the Process Center environment
* Purge content in the Process Server environment
* Verify the functions of failover in a clustered environment
* Deploy and manage business applications
* Work with the administrative console and management tools
* Deploy applications to an offline and online Process Server environment
* Migrate process instances
* Implement SSL between the Process Center and Process Server environments
* Troubleshoot the environment

Prerequisites

Before taking this course, you should successfully complete one of the IBM WebSphere Application Server V8.5 Administration courses (course code WA585G or ZA585G) or IBM WebSphere Application Server V8.5.5 Administration courses (course code WA855G or ZA855G). You should also have a general knowledge of:

* The Linux operating system
* Java Platform, Enterprise Edition (Java EE) and Extensible Markup Language (XML)
* Administering multitier business applications

Duration

5 days

Skill level

Basic

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| Classroom (ILT) setup requirements |
| Processor | Intel Pentium 2.5 GHz or faster and 2 CPU cores |
| GB RAM | 20 |
| GB free disk space | 140 |
| Network requirements | None |
| Other requirements | None |

Notes

The following unit and exercise durations are estimates, and might not reflect every class experience. If the course is customized or abbreviated, the duration of unchanged units will probably increase.

This course is an update of the following previous course:

* WB870: *Administration of IBM Business Process Manager Advanced V8.5.5*

Course agenda

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| Course introductionDuration: 15 minutes |

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| Unit 1. Overview of IBM Business Process Manager AdvancedDuration: 1 hour |
| Overview | This unit provides an introduction to the principles of business process management (BPM). You learn the capabilities of IBM Business Process Manager Advanced V8.5.7 for deploying BPM solutions. |
| Learning objectives | After completing this unit, you should be able to:* Describe the concepts of business processes and business process management (BPM)
* Describe business integration roles in IBM Business Process Manager Advanced
* Describe the IBM product editions that support the development of business processes
* Describe the capabilities of IBM Business Process Manager Advanced
* Describe IBM Business Process Manager Advanced on Cloud
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| Unit 2. IBM Business Process Manager Advanced installationDuration: 1 hour |
| Overview | This unit provides an overview of IBM Business Process Manager Advanced installation. You learn various methods to install the product, create profiles, and verify and troubleshoot the installation. |
| Learning objectives | After completing this unit, you should be able to:* Install IBM Business Process Manager Advanced silently
* Create profiles by using the Profile Management Tool and the manageprofiles command
* Verify product installation and profile creation
* Troubleshoot a failed installation and a failed profile creation
* Uninstall IBM Business Process Manager Advanced
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| Exercise 1. Installing IBM Business Process Manager AdvancedDuration: 30 minutes |
| Overview | This exercise covers the silent installation of IBM Business Process Manager Advanced. You create a response file and use that response file to install the product. |
| Learning objectives | After completing this exercise, you should be able to:* Create a response file for a silent installation
* Install IBM Business Process Manager Advanced
* View the installation log file
* Confirm the installation
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| Unit 3. IBM Business Process Manager Advanced architecture overviewDuration: 30 minutes |
| Overview | This unit provides a technical overview of IBM Business Process Manager Advanced architecture. |
| Learning objectives | After completing this unit, you should be able to:* Define network deployment concepts and terminology
* Define clusters and cluster members
* Describe administrative interfaces and tools
* Define administrative flow
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| Unit 4. IBM Business Process Manager Advanced componentsDuration: 45 minutes |
| Overview | This unit provides an overview of the IBM Business Process Manager Advanced components. |
| Learning objectives | After completing this unit, you should be able to:* Describe the main components of IBM Business Process Manager Advanced
* Describe the deployment considerations for the databases
* Describe the service integration bus and messaging engine
* Describe the applications that are used to manage a clustered environment
* Describe the Performance Data Warehouse
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| Unit 5. IBM Business Process Manager Advanced deployment topologiesDuration: 1 hour |
| Overview | This unit provides an overview of the IBM Business Process Manager Advanced deployment topologies and deployment environment creation. |
| Learning objectives | After completing this unit, you should be able to:* Explain the purpose of a deployment environment
* Identify and explain the clustered topologies for IBM Business Process Manager Advanced:
	+ Single cluster
	+ Application, Remote Messaging, and Remote Support
* Explain how to create a deployment environment by using multiple tools
* Explain how to create a deployment environment by using the BPMConfig utility
* Use the IBM Business Process Manager Advanced Configuration Editor
* Explain IBM Business Process Manager Advanced Pattern
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| Exercise 2. Configuring the Process Center environmentDuration: 1 hour and 30 minutes |
| Overview | This exercise covers the creation of a Process Center cell. A Process Center deployment manager and custom profiles are created. The custom profile is federated to the deployment manager cell and the configuration is verified. |
| Learning objectives | After completing this exercise, you should be able to:* Create the Process Center deployment manager and a custom profile
* Federate the custom profile
* Edit the soap.client.props file
* Verify the database configuration
* Create the three required databases
* Create a Process Center deployment environment
* Verify the creation of the database tables
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| Unit 6. Introduction to IBM Process CenterDuration: 1 hour and 15 minutes |
| Overview | This unit teaches you how to use Process Center to deploy, test, and manage process applications. |
| Learning objectives | After completing this unit, you should be able to:* Describe the purpose and business value of Process Center
* Define the components of Process Center
* Describe how to manage the Process Center repository
* Describe how to use the Process Center Console to deploy, test, and manage process applications
* Manage access to Process Center
* Purge data in the Process Center environment
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| Exercise 3. Administering Process Center Duration: 1 hour and 15 minutes |
| Overview | This exercise examines a Process Center topology configuration and uses the Process Center Console to examine and deploy process applications. |
| Learning objectives | After completing this exercise, you should be able to:* Administer the Process Center environment
* Administer the Process Center repository
* Use the Health Center to verify the deployment environment
* Export, delete, and import a process application
* Use the Process Center Console to deploy a snapshot
* Use Business Process Choreographer Explorer to start a process instance
* Use the Process Admin Console to examine process instance details and statistical information
* Use the Process Inspector to examine details for a process instance
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| Unit 7. Overview of Process PortalDuration: 30 minutes |
| Overview | This unit provides an overview of Process Portal. |
| Learning objectives | After completing this unit, you should be able to:* Explain the use of Process Portal
* Work with assigned tasks
* Use the Team Performance dashboard
* Use the Process Performance dashboard
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| Exercise 4. Administering Process PortalDuration: 45 minutes |
| Overview | This exercise examines the features of Process Portal. |
| Learning objectives | After completing this exercise, you should be able to:* Explore Process Portal capabilities
* Use Process Portal to claim a task
* Work with tasks
* Explore the Process Performance dashboard
* Explore the Team Performance dashboard
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| Exercise 5. Purging content in Process CenterDuration: 1 hour and 30 minutes |
| Overview | This exercise examines the various methods that are available to purge data that is no longer needed in the Business Process Manager environment. |
| Learning objectives | After completing this exercise, you should be able to:* Archive and delete process applications
* Manage and delete snapshots, both named and unnamed
* Configure an automated method for deleting unnamed snapshots
* Use the Process Admin Console to monitor the environment
* Use Process Portal to monitor process applications
* Purge data in the Process Center environment
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| Unit 8. Introduction to IBM Process ServerDuration: 1 hour |
| Overview | This unit provides an overview of Process Server and defines its three basic areas. |
| Learning objectives | After completing this unit, you should be able to:* Explain the role of Process Server and WebSphere Enterprise Service Bus in the SOA development cycle
* Explain the purpose and business value of using the Process Server and WebSphere Enterprise Service Bus functional components:
	+ SOA core components
	+ Supporting service components
	+ Service components
* Describe the role of mediation services in Process Server and WebSphere Enterprise Service Bus
* Define the concept of mediation modules
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| Exercise 6. Configuring the Process Server environmentDuration: 1 hour and 30 minutes |
| Overview | This exercise covers the creation of a Process Server cell. A Process Server production three cluster topology is created by using the IBM Business Process Manager Advanced Configuration Editor and the BPMConfig utility. The IBM Business Process Manager Advanced Configuration Editor is used to graphically modify a properties file. The BPMConfig utility is used to create profiles, the required databases and tables, and the three cluster deployment environment for a production environment. |
| Learning objectives | After completing this exercise, you should be able to:* Use the IBM Business Process Manager Advanced Configuration Editor to create a deployment environment
* Customize a sample deployment environment properties file
* Generate a deployment environment by using the BPMConfig utility
* Start the deployment environment by using the BPMConfig utility
* Use the Health Center to verify the deployment environment
* Explore the deployment environment
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| Unit 9. Business process choreographyDuration: 1 hour |
| Overview | This unit describes the concepts and use of business process choreography, the architecture of the business process container and human task container, and installation and configuration. |
| Learning objectives | After completing this unit, you should be able to:* Describe basic workflow concepts
* Explain the need for business process choreography
* Describe the difference between long-running and microflow (short-running) business processes
* Explain business process choreography architecture
* Describe various features of the Business Process Choreographer Explorer
* Describe the clients that are available for human tasks
* Describe the people directory support that is available for human tasks in Process Server
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| Unit 10. Application deployment conceptsDuration: 1 hour and 15 minutes |
| Overview | This unit describes the process of deploying and managing business process applications. |
| Learning objectives | After completing this unit, you should be able to:* Describe the installation of a business process
* Describe the runtime behavior of business processes
* Describe the administrative options and the types of client access that are available for business processes
* Describe the uninstallation of a business process
* Define the purpose and function of the serviceDeploy tool
* Describe the process of using the Failed Event Manager to manage failed events
* Describe how to migrate process instances and generate a migration policy file
* Purge data in the Process Server environment
* Configure business process choreography cleanup
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| Exercise 7. IBM Process Server administrationDuration: 1 hour and 15 minutes |
| Overview | This exercise examines how to install and administer applications on Process Server. You use the Business Process Choreographer Explorer to interact with business processes that are deployed to the server. |
| Learning objectives | After completing this exercise, you should be able to:* Use the administrative console to start and stop clusters
* Use the administrative console and wsadmin to install a business process application
* Work with the administrative console to manage applications
* Use the Business Process Choreographer Explorer to work with process instances
* Use the serviceDeploy command to create an enterprise archive (EAR) file
* Use the Failed Event Manager to query and manage failed events
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| Exercise 8. Purging content in Process ServerDuration: 1 hour and 30 minutes |
| Overview | This exercise examines the various methods that are available to purge data that is no longer needed in the Business Process Manager Process Server environment. |
| Learning objectives | After completing this exercise, you should be able to:* Purge data in the Process Server environment
* Delete BPMN and BPEL instances in the Process Server environment
* Delete snapshots in the Process Server environment
* Configure the business process choreography cleanup service and cleanup jobs
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| Unit 11. Overview of deployment scenariosDuration: 45 minutes |
| Overview | This unit provides an introduction to deploying and managing process applications in both online and offline Process Server environments. |
| Learning objectives | After completing this unit, you should be able to:* Explain online and offline Process Server environments
* Work with an offline Process Server
* Deploy a process application to an offline Process Server
* Explain the various XML configuration files
* Deploy a process application to an online Process Server
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| Exercise 9. Managing offline and online process serversDuration: 1 hour and 30 minutes |
| Overview | This exercise examines the differences between an offline Process Server and an online Process Server and how to deploy process applications to each of these environments. You also modify the configuration for an offline Process Server and move it to an online Process Server. Process applications are also deployed to the Process Server. |
| Learning objectives | After completing this exercise, you should be able to:* Create an offline server by using the Process Center Console
* Deploy a snapshot to an offline Process Server
* Change the configuration of an offline Process Server to an online Process Server
* Configure SSL communication in the network deployment environments
* Manage an online Process Server
* Deploy a snapshot to an online Process Server
* Deploy an installation package to Process Server
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| Exercise 10. Migrating process instancesDuration: 45 minutes |
| Overview | This exercise examines how to migrate process instances when deploying new snapshots to the online Process Server environment. |
| Learning objectives | After completing this exercise, you should be able to:* Create snapshots
* Deploy snapshots to an online Process Server environment
* Migrate snapshots
* Create a migration policy for orphaned tokens
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| Unit 12. Advanced administration conceptsDuration: 1 hour and 15 minutes |
| Overview | This unit describes various options for extending the basic IBM Business Process Manager Advanced deployment topologies to add more processing capabilities. You learn about the high availability manager, how to create messaging engine policies, and log file high availability. |
| Learning objectives | After completing this unit, you should be able to:* Explain the reasons for extending a topology
* List options for increasing cluster member capacity in a cell
* Expand a topology
* Explain the purpose of the high availability manager and the concept of core groups
* Explain the structure and purpose of the default messaging and transaction manager policies
* Explain how policies are applied at run time
* Define the transaction manager high availability policy type and identify how transaction policies are applied
* Explain the Process Federation Server
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| Exercise 11. Advanced Process Server administrationDuration: 1 hour |
| Overview | This exercise covers more Process Server administration tasks. First, an extra Process Server node and cluster member are created in the MECluster by using the BPMConfig command. Then, a messaging engine policy is created for the BPM.PServer\_DE.Bus and a preferred server is defined. Finally, transaction log file failover and recovery function are configured for each of the configured clusters. |
| Learning objectives | After completing this exercise, you should be able to:* Add a member to the messaging cluster
* Create messaging engine policies
* Verify the configuration of the messaging cluster and the start behavior of the messaging engines
* Configure transaction and recovery log high availability
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| Unit 13. SecurityDuration: 1 hour |
| Overview | This unit explains some of the key security concepts and how they relate to an IBM Business Process Manager Advanced server environment. |
| Learning objectives | After completing this unit, you should be able to:* Describe the key WebSphere Application Server security concepts
* Describe the user registries that are available in IBM Business Process Manager Advanced
* Explain how to interact securely with IBM Business Process Manager Advanced
* Describe some common security holes and how to fix them
* Explain how to synchronize users and groups
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| Unit 14. Problem determinationDuration: 1 hour |
| Overview | This unit provides an overview of problem determination methods and tools. |
| Learning objectives | After completing this unit, you should be able to:* Describe problem determination
* Identify resources for problem determination
* Describe tools for troubleshooting
* Describe how to configure logs and trace
* Explain how to use tracing to determine problems
* Describe common troubleshooting facilities
* Use High Performance Extensible Logging capabilities
* Use cross-component trace capabilities
* Identify common database configuration pitfalls
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| Unit 15. Course summaryDuration: 15 minutes |
| Overview | This unit summarizes the course and provides information for future study. |
| Learning objectives | After completing this unit, you should be able to:* Explain how the course met its learning objectives
* Identify other IBM Training courses that are related to this topic
* Access the IBM Training website
* Locate appropriate resources for further study
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For more information

To learn more about this course and other related offerings, and to schedule training, see **ibm.com**/training

To learn more about validating your technical skills with IBM certification, see **ibm.com**/certify

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