**IBM App Connect Enterprise V11 Essentials**

Description: 5300_IBMpos

**ZD013 (Self-paced, with lab)**



Course description

This course introduces IBM App Connect Enterprise V11. It teaches you the essential (foundation) concepts and skills to get you started designing, developing, and deploying enterprise integration solutions by using App Connect Enterprise.

NOTE: This course is also available as web-based course DL09152G, which does not provide a lab environment; instead, you download IBM App Connect Enterprise software and install it on your Windows, Linux, or Mac computer for use in the exercises.

This course is intended primarily for developers, but can be used by others - including line of business people - to learn about creating their own enterprise integration solutions without coding.

The course begins with a section about some key subjects of App Connect Enterprise, which teaches you about the concepts and components of App Connect Enterprise, and about the essential concepts, activities, and tools for developing and administering enterprise integration solutions.

Through hands-on lab exercises, you gain experience in using App Connect Enterprise with App Connect on IBM Cloud to develop and deploy a hybrid integration solution between Salesforce, ServiceNow, and an on-premises stock system application.

This course provides "Further learning" links to learn more about the subjects and other capabilities of App Connect Enterprise.

The lab environment for this course uses the Windows 10 platform.

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

<http://www.ibm.com/training>

General information

Delivery method

Self-paced virtual classroom (SPVC) or web-based training (WBT)

Course level

ERC 1.0

Product and version

IBM App Connect Enterprise version 11

Audience

This course is intended primarily for developers, but can be used by others - including line of business people - to learn about creating their own enterprise integration solutions without coding.

Learning objectives

After completing this course, you should be able to:

* Understand the essential features and uses of IBM App Connect Enterprise to create and manage enterprise integration solutions
* Apply your knowledge to create a hybrid integration between SaaS applications and an on-premises stock system
* Use the Enterprise Toolkit to create a REST API / callable flow for an on-premises custom application (stock system)
* Create and use an integration server as a local runtime on premises
* Deploy a REST API / callable flow into the integration server, and call the REST API to retrieve data from the on-premises stock system
* Use IBM App Connect on IBM Cloud to create an event-driven flow to run the hybrid integration from the cloud, interacting with the SaaS applications, and with the on-premises stock system (through the callable flow)
* Use IBM App Connect on IBM Cloud to test the complete hybrid integration solution
* Optionally, create and use an integration node to manage an integration server in an on-premises multi-server runtime, and use callable flows across separate integration servers in the local runtime
* Optionally, explore the back-end application including the use of custom Java and the logging of data to a local file

Prerequisites

Before taking this course, it would help if you have the following prerequisites:

* Basic knowledge of integration projects
* Basic knowledge of working with REST APIs
* Basic knowledge of using SaaS applications, ideally with Salesforce and ServiceNow

Duration

2 days

Skill level

Basic

Notes

The following unit and exercise durations are estimates, and might not reflect every class experience.

This course is a new course.

Course agenda

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| Course overview  Duration: 10 minutes |

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| Unit 1. (Learn about App Connect Enterprise) An introduction to App Connect Enterprise  Duration: 35 minutes | |
| Overview | This unit introduces foundation concepts and components of IBM App Connect Enterprise, and the advantages of using App Connect Enterprise for hybrid integration solutions. |
| Learning objectives | After completing this unit, you should be able to:   * Explain the enterprise integration capabilities of IBM App Connect Enterprise * Understand the value of App Connect Enterprise for hybrid integration * Understand how parts of your hybrid integration solution can run anywhere - fast * Map the various roles that can be involved in a hybrid integration solution to roles in your organization * Identify which tools are best suited to the various roles and activities in creating and managing a hybrid integration solution * Use the knowledge gained in this introduction to better learn in the follow-on units, and to perform activities with more understanding in the later lab exercises |

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| Unit 2. (Learn about App Connect Enterprise) Development essentials  Duration: 45 minutes | |
| Overview | This unit introduces the essential concepts, activities, and tools for developing enterprise integration solutions with IBM App Connect Enterprise. |
| Learning objectives | After completing this unit, you should be able to:   * Explain the essential concepts, activities, and tools for developing enterprise integration solutions * Understand the following development subjects:   + Applications, your container project   + Message flows, the sequences of processing steps   + Message flow nodes   + Node properties, for configuring nodes   + Ways to act on message data   + Libraries, for reusable routines and resources   + Policies, for reusable control   + Deploying, archiving, and sharing solutions   + Enterprise Toolkit, for developing and managing your integrations * Use the knowledge gained in this unit to better perform development activities with more understanding in the later lab exercises |

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| Unit 3. (Learn about App Connect Enterprise) Administration essentials  Duration: 95 minutes | |
| Overview | This unit introduces the essential concepts, activities, and tools for administering enterprise integration solutions with IBM App Connect Enterprise. |
| Learning objectives | After completing this unit, you should be able to:   * Explain the value of an integration server as an isolated runtime environment for a set of deployed integration solutions * Explain the differences between integration servers in an App Connect Enterprise software runtime and in App Connect on IBM Cloud * Explain the activities for administering integration solutions deployed to App Connect on IBM Cloud * Explain the activities for administering integration solutions deployed to App Connect software runtime, including the following administration subjects:   + Installing and configuring App Connect Enterprise   + Configuring integration nodes and integration servers   + Configuring administration security   + Staring, stopping, and otherwise managing integration servers and integration solution resources that are deployed to an integration server * Explain the administrative tools and techniques for the App Connect Enterprise runtime, and resources deployed to it * Understand where to get documentation help for administration concepts and activities * Use the knowledge gained in this unit to better perform administration activities with more understanding in the later lab exercises |

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| Unit 4. (Starting the hands-on lab) Introduction: Create integrations with IBM App Connect  Duration: 10 minutes | |
| Overview | This unit introduces the business scenario and objectives for the hands-on lab to create a hybrid integration with IBM App Connect Enterprise. |
| Learning objectives | After completing this unit, you should be able to:   * Understand the business scenario and objectives for the hands-on lab to create a hybrid integration with IBM App Connect Enterprise |

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| Exercise A. (Starting the hands-on lab) Prepare: Set up online accounts  Duration: 30 minutes | |
| Overview | In this exercise, you get online accounts for IBM App Connect on IBM Cloud, Salesforce, and ServiceNow, and configure Salesforce Opportunities for use in the exercises of this lab. |
| Learning objectives | After completing this exercise, you should be able to sign in to your own accounts - App Connect on IBM Cloud, Salesforce, and ServiceNow - ready for the follow-on exercises in this lab. |

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| Exercise B. (Starting the hands-on lab) Connect to your eLab  Duration: 20 minutes | |
| Overview | In this exercise, you connect to your dedicated eLab (the virtual machine that has all the on-premises based components installed) for use in the exercises of this lab. |
| Learning objectives | After completing this exercise, you should be able to:   * Understand the basics of working with the eLab environment * Start your dedicated eLab, ready for the follow-on exercises in this lab. |

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| Exercise 1. Create a stock system API for the local runtime  Duration: 1 hours and 40 minutes | |
| Overview | In this exercise, you use the Enterprise Toolkit to create a stock system API to run on premises, and enable it to be invoked by either a REST API request or as a callable flow:   * Create a REST API (application project): * Define the REST API interface from scratch, including:   + Import DFDL schemas into the workspace   + Create the model definition for the API, and add resources to the model * Implement a REST API operation, by editing a subflow that maps the API request and response and handles the exchange of messages with the Stock System. * Extend the subflow as a callable flow that can be called by flows running in App Connect on IBM Cloud (or elsewhere) |
| Learning objectives | After completing this exercise, you should be able to:   * Explain use of the Enterprise Toolkit to create a REST API from scratch * Understand the hands-on experience of creating a REST API from scratch * Explain use of the Enterprise Toolkit to create a callable flow * Understand the hands-on experience of creating a callable flow |

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| Exercise 2. Deploy the REST API and verify the behavior locally  Duration: 30 minutes | |
| Overview | In this exercise, you use the Enterprise Toolkit to deploy the REST API to the local dedicated runtime and then calling the API from a web browser, including:   * Create and start an independent integration server as the local dedicated runtime * Deploy the StockSystem project to the integration server * Use the integration server’s web user interface to look at the deployed StockSystem API * Call the StockSystem REST API in a web browser, to verify that the REST API and its message flow are working successfully |
| Learning objectives | After completing this exercise, you should be able to:   * Explain use of commands to create and start independent integration servers * Explain use of the Enterprise Toolkit to deploy applications to an integration server * Explain use of the web user interface to view details of deployed applications * Understand the hands-on experience of creating and starting an integration server * Understand the hands-on experience of deploying and testing a REST API |

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| Exercise 3: Implement a hybrid integration between Salesforce, ServiceNow, and an on-premises system Duration: 1 hours and 40 minutes | |
| Overview | In this exercise, you use IBM App Connect on IBM Cloud to create and host an event-driven flow between Salesforce, ServiceNow, and the on-premises StockSystem (by calling an endpoint in the local runtime of App Connect Enterprise). |
| Learning objectives | After completing this exercise, you should be able to:   * Explain how to configure App Connect to connect to Salesforce and ServiceNow (and similarly to other SaaS apps) * Explain how to set up secure connectivity between App Connect on IBM Cloud and an on-premises App Connect Enterprise runtime * Explain the use of App Connect on IBM Cloud to create an event-driven flow * Explain how to view callable flows that can be accessed from App Connect on IBM Cloud, and how to configure use of a callable flow from an event-driven flow * Understand the hands-on experience of creating an event-driven flow that is to be started by a scheduler, and performs batch process actions on SaaS applications, and calls another flow to retrieve data |

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| Exercise 4: Test the hybrid integration  Duration: 20 minutes | |
| Overview | In this exercise, you start the event-driven flow in IBM App Connect on IBM Cloud, which retrieves Salesforce opportunities that have custom attributes and, if an opportunity's product is in stock, create a ServiceNow incident for the opportunity. You can then check your ServiceNow Incidents page for the new incidents created by the hybrid integration. In App Connect on IBM Cloud, you can also explore details about the batch processing, including examining log messages recorded by App Connect. |
| Learning objectives | After completing this exercise, you should be able to:   * Explain how to start and manage an event-driven flow in App Connect on IBM Cloud * Explain how to explore more information about a flow, in the batch status and in log messages recorded by App Connect for the flow * Understand the hands-on experience of running an event-driven flow * Understand that App Connect can integrate data and actions between Salesforce and ServiceNow, and retrieve data from an on premises system to adapt the data and actions for SaaS applications |

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| Course review and what’s next  Duration: 20 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 * Access the IBM Training website * Identify other IBM Training courses that are related to this topic * Locate appropriate resources for further study |

For more information

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

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