

Web Services Support in IBM DataPower V7.5

WE754 (Classroom)

ZE754 (Self-paced)

Course description

This course teaches you the developer skills that are required to configure WS-Security features and use WSDLs to generate web service proxy services on IBM DataPower Gateway V7.5.

The initial focus of DataPower was on XML and web services workloads, and it continues that support today. As part of that support, DataPower provides the ability to digitally sign and encrypt a message, validate a message’s signature, and decrypt an encrypted message. These functions are delivered as processing actions within the service policy. In this course, you learn about these message integrity and confidentiality capabilities, and practice using them in a lab exercise.

Web service operations typically work with WSDL files. DataPower generates a web service proxy directly from a WSDL, bypassing much of the basic configuration of a service to support that WSDL. This course also covers this service type of web service proxy, and gives you an opportunity to work with one in a lab exercise.

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 DataPower Gateway V7.5.1

Audience

This course is designed for integration developers who configure XML and SOAP-based services on IBM DataPower Gateways.

Learning objectives

After completing this course, you should be able to:

* Use the XML Signature and XML Encryption capabilities within DataPower to support WS-Security functions in your DataPower services
* Configure a web service proxy by using a WSDL file to proxy web services-based applications
* Configure the service policy of a web service proxy that supports different behaviors at the various levels of the WSDL

Prerequisites

Before taking this course, you should successfully complete course *Essentials of Service Development for IBM DataPower Gateway V7.5* (WE751G) or *Essentials of Service Development for IBM DataPower Gateway V7.5* (ZE751G). You should also be familiar with basic XML, SOAP, and WS-Security concepts.

Duration

0.5 days

Skill level

Intermediate

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 related material in course WE711, *Accelerate, Secure, and Integrate with IBM DataPower V7.1*.

Course agenda

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| Course introduction  Duration: 15 minutes |

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| Unit 1. XML and web services security overview  Duration: 45 minutes | |
| Overview | This unit briefly describes the features of the web services security specification. This specification uses XML encryption and XML signatures to provide message level security to ensure message confidentiality and integrity. The primary focus of the unit is to describe how the DataPower gateway supports XML encryption and XML signatures within DataPower services. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the features of the WS-Security specification * Enable message confidentiality by using XML encryption * Provide message integrity by using XML signatures |

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| Exercise 1. Web service encryption and digital signatures  Duration: 1 hour | |
| Overview | In this exercise, you learn how to perform web services security functions by using the IBM DataPower Gateway. The DataPower gateway supports security-related tasks that both a client and a server need to perform. You use SoapUI to send signed and encrypted messages to the MPGW. The MPGW decrypts and verifies the message. On the response, the MPGW signs and encrypts the message before it returns it to SoapUI. |
| Learning objectives | After completing this exercise, you should be able to:   * Configure a multi-protocol gateway to decrypt and encrypt an XML message * Configure a multi-protocol gateway to verify and sign an XML message * Test encryption and digital signatures by using the SoapUI tool |

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| Unit 2. Web service proxy service  Duration: 1 hour | |
| Overview | This unit describes the web service proxy service and its role in a web-services-based network. It explains the configuration steps that are required to create and manage a web services proxy. It also explains advanced web service configuration steps, such as proxy-level security, SOAPAction policy, and web service endpoint. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the web service proxy architecture * List and explain the configuration steps that are needed to create a web service proxy * Create and configure a web service proxy policy at various levels of the WSDL file |

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| Exercise 2. Configuring a web service proxy  Duration: 1 hour | |
| Overview | In this exercise, you create a web service proxy (WS-Proxy) service that virtualizes or proxies a back-end web service. A web service proxy can mask the actual endpoint of the web service. You configure the web service proxy by uploading a WSDL document for the service. After you create the web service proxy, you configure the service policy with rules and actions for each service that is defined within your proxy. |
| Learning objectives | After completing this exercise, you should be able to:   * Configure a web service proxy to virtualize an existing web service * Configure the service policy within the web service proxy |

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| Unit 3. Course summary  Duration: 15 minutes | |
| Overview | This unit summarizes the course and provides information for further 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, see **ibm.com**/training

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

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