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Administration of IBM Streams v4.0
Information

Length: 2.0 Days
Ref: DW732G-X
Delivery method: Classroom
Price: EUR

Overview

This course enables the student to acquire the skills necessary to administer an IBM Streams system. The course covers creating Streams domains and instances, using ZooKeeper in a high availability environment, viewing the state of Streams domain and instance services, stopping and starting processing elements, viewing the jobs and processing elements that are running, and a variety of other topics. In addition it covers defining resource tags, adding a resource to a Streams domain and instance, setting the access control list for security objects to give permission to users to work with those objects, and submitting and cancelling Streams jobs.

Public

Those who will be Administering IBM Streams

Prerequisites

- Knowledge of Linux administration.
- Attending Programming for InfoSphere Streams V4 with SPL would provide a good foundation.

Objective

- Describe the IBM Streams architecture
- Describe the tooling included with Streams
- Explain how high availability works in Streams
- Describe the difference between basic and enterprise domains
- Explain ZooKeeper and usage within Streams
- Describe Streams prerequisites and explain Streams install/post-install process
- Explain how to create, update, and remove domains and instances

- Explain how to monitor domains, instances, and resources
- Describe process to add resources to domains and instances
- List the different tags that come with Streams and describe what each tag means
- Explain how to submit and monitor Streams jobs
- Describe how processing elements can be monitored within Streams
- Explain how to capture a job topology for offline viewing
- Describe the authentication methods that can be configured within Streams
- List some of the Streams security objects
- Explain what roles are and describe the default Streams roles
- Explain how access permissions work within Streams
- Describe job groups and their use
- Explain resource load protection and how to enable it
- Describe the process to backup a Streams environment
- Explain steps to take to recover from potential failures
- Describe some techniques that can be used to administer processing elements
- Explain where Streams log and trace files are stored and techniques to analyze them

Topics

1: IBM Streams overview and architecture

- Describe IBM Streams and list some use cases
- Describe the IBM Streams architecture
- List and describe the service components of the Streams architecture
- Explain what Apache ZooKeeper is and how it is used with Streams
- Explain how high availability works in Streams
- Describe the tooling included with Streams
- Explain the REST and JMX APIs

2: Streams initial administration

- Describe the difference between basic and enterprise domains

- Explain embedded versus external ZooKeeper and usage within Streams
- List the available Streams authentication mechanisms
- Describe the Streams prerequisites and explain the Streams installation process
- Explain post-installation tasks, including installation of Streams Studio and Microsoft Excel add-in

3: Administering domains and instances

- Explain how to create domains and instances using the GUI and command line tools
- Describe how to update and remove domains and instances
- Explain how to monitor domains, instances, and resources via the command line tooling
- Describe process to add resources to domains and instances
- List the different tags that come with Streams and describe what each tag means

4: Working with jobs

- Explain how to submit a Streams job using the command line and the GUI tools
- List a variety of techniques that can be used to monitor Streams jobs
- Describe how processing elements can be monitored within Streams
- Explain how to capture a job topology for offline viewing
- Explain how to change the default ports on the management API and web management services

5: Streams security

- Describe the authentication methods that can be configured within Streams
- List some of the Streams security objects
- Explain what roles are and describe the default Streams roles
- Explain how access permissions work within Streams
- Describe job groups and how they can be used to limit who can perform job-related tasks

6: Performance, troubleshooting, recovery administration

- Explain resource load protection and how to enable it
- Describe the process to backup a Streams environment
- Explain steps to take to recover from potential failures
- Describe some techniques that can be used to administer processing elements
- Explain where Streams log and trace files are stored and techniques to analyze them