Certification Exercises | FME Server | 2018

Instruction for Applicant

Applicant Requirements

FME Server Professional Certification applicants must already have a current FME Desktop Certified Professional designation, and are expected to be familiar with the following FME Server components and practices:

- Advanced Run Workspace Parameters
- Backup & Restore (Migration)
- CORS
- Documentation (FME Server Admin Guide)
- FME Server REST API
- FME Server Transformers (FME Desktop)
- FME Server Web Services
- Integrating with Web Apps
- Job Queues
- Licensing FME Server
- Message Streaming Transformers (FME Desktop)
- Notification Services
- Projects
- Published Parameters
- Resources
- Schedules
- Security / Active Directory Configuration
- System Cleanup Tasks
- Troubleshooting (Knowledge Center, safe.com)
- (FME Server) Windows OS Services

Scoring and Expectations

To obtain a 3-year FME Server Certified Professional designation, all Exercise Scenario Requirements must work, and all exam sections must score 70% or higher.

If a scenario only meets some of the requirements, or an exam section scores below 70%, a 1-year pass may be awarded.

If any exercise scenario fails completely, or if any section of the exam scores below 60%, the applicant fails. They can reapply after 6 months.

Upon completion, please reply to our email to notify us. We will not be able to process your application until both your multiple choice exam and exercise scenarios are done.

Part 1: Multiple Choice Exam
Please complete the multiple choice test here first.

Part 2: Exercise Scenarios
- There are 5 scenarios in total. Complete the scenarios in the order listed.
- You have 1 week to complete the scenarios. Your Virtual Machine will time-out after 7 days.
- For each scenario below, provide exact steps taken in a text document, and include an estimate of time taken. Please email the text document to ryan.cragg@safe.com
- Note any confusing instructions. We don't have (or want) trick questions.
- Note if the scenario is something that you've ever had to actually do, or expect to do in the future.
- The Certification Evaluator is a Safe Software staff member.

Applicant's Local Machine
1. Have local installation of FME Desktop 2018.0.1 or newer, available for download here.
   a. An evaluation license can be used, if necessary.
2. Download FMEData2018 here.

Applicant's Virtual Machine
You can create your "FME Server Certification" Virtual Machine (VM) to complete the scenarios from
https://knowledge.safe.com/page/certvm

Once you have created the virtual machine, you can log in using the following credentials:
Username=Administrator
Password=FMElearnings#1

You have 1 week to complete all scenarios. Your VM will time-out after 14 days.

For the FME Server installed on your VM, the login credentials are:
    Username: admin
    Password: admin

Scenario 1

Read the entire exercise before beginning.
This exercise requires a local install of FME Desktop 2018.0.1 or Newer.

Purpose
- Migration (Backup & Restore)
- Installation & Licensing
- Troubleshooting Installation
- Troubleshooting FME Server Web Services

Overall Goals
- Backup FME Server 2017.1 and Restore to an Express Installation of 2018.0 – an upgrade in place, using the same machine.
- Verify that the FME Server Windows Services start while running as the preferred Service Account.
- Verify that remote connections to the FME Server Web Interface work.
- Verify that FME Server Web Services are functioning correctly.

Given
- Remote Machine: Public IP address can be found by searching for "my ip address" on Google
  - Please use this information for all subsequent exercises.
- FME Server Hostname: Check Control Panel\System and Security\System. Do not trust the wallpaper.
  - Username: admin
  - Password: admin
- FME Server 2018.0 installer located at: C:\FMEServerCertification\
  - Note: License FME Server using a Trial License.
- The preferred Service Account is fmeserver@cert.safe.com (with password FMElearnings#1) – please do not make any assumptions about level of granted permissions.
- Installers do not always open all the required Firewall ports

Requirements Being Tested
- The certification evaluator must be able to:
  - Access the FME Server Web Interface from a web browser using the Public IP address on their local machine (i.e. not from within the provided Virtual Machine).
  - Verify that FME Server 2018.0 is installed.
  - Run the Scenarios > scenario1.fmw workspace using the Data Download Web Service, and download the results to the local machine.

~~Scenario 2~~ Skip until further notice

~~Read the entire exercise before beginning.~~
~~This exercise requires a local install of FME Desktop 2018.0.1 or Newer.~~

~~Purpose~~
- ~~Security / Active Directory~~
- ~~Web Mapping App Integration~~
- ~~FME Server REST API~~
- ~~Job Queues~~

~~Overall Goals~~
- ~~Configure Active Directory using the Service Account and import the webapp User.~~
- ~~Configure the security settings for an FME Server User (webapp).~~
- ~~Update the FME Server credentials in an example web mapping application (based on~~ ~~this demo~~~~).~~
- ~~Prioritize the Jobs invoked by the web mapping application.~~
- ~~Provide a simple report or summary of Job history.~~

~~Given~~
- ~~The Active Directory Hostname is cert.safe.com and the Port is 389.~~
  - ~~There is No Encryption and Authentication Type is Basic.~~
- ~~The preferred Active Directory Service Account is fmeserver@cert.safe.com (with password FMElearnings#1)~~
- ~~The FME password for the webapp Active Directory User is FMEServer2018~~
- ~~The web mapping application is located at: C:\Program Files\Apache Software Foundation\Tomcat 9.0\webapps\ROOT\scenario2\js\datadistribution.js~~
- ~~URL for the installed web application server is http://<IP-Address>:8888/scenario2/~~
- ~~FME Server Project containing useful components to complete this exercise is located at: C:\FMEData\Resources\ServerCertification\Scenario2\project\~~

~~Requirements Being Tested~~
- ~~The certification evaluator must be able to:~~
  - ~~Access the web mapping application on their own machine.~~
  - ~~Submit a job for processing and receive the data download results.~~
  - ~~Confirm that jobs submitted by the web mapping application~~
    - ~~have priority over jobs submitted in the FME Server Web Interface.~~
    - ~~are submitted and processed by the webapp Active Directory Account~~
    - ~~are not running on the FME Cloud Demo Server (https://demos-safe-software.fmecloud.com)~~

Scenario 3

Read the entire exercise before beginning.
This exercise requires a local install of FME Desktop 2018.0.1 or Newer.

Purpose
● Notification Services (Email)
● Published Parameters
● Resources

Overall Goals
● Configure FME Server to receive email and process CAD file attachments.
● Configure an email to automatically send back to the user with file converted to PNG.
● Handle errors or incorrect submissions and notify the user via email.

Given
● FME Server Project containing useful components to complete this exercise is located at: C:\FMEData\Resources\ServerCertification\Scenario3\project\
● Gmail can be used to create a free email account if preferred.

Requirements Being Tested
● The certification evaluator must be able to:
○ Send an email to CADQA@<IP-Address> with a CAD drawing and receive an email back containing the converted PNG file.
○ Send an email to CADQA@<IP-Address> without a CAD drawing, or with an unsupported file format, and receive an appropriate response via email.

Scenario 4

Read the entire exercise before beginning.
This exercise requires a local install of FME Desktop 2018.0.1 or Newer.

Purpose
● Notification Services (Directory Watch)
● Resources
● System Cleanup
● Projects

- FMEServerNotifier

Overall Goals
- Create a notification workflow in FME Server that watches a folder in FME Server Resources for new files and runs a workspace in response.
- Configure FME Server to remove files added to that directory that are older than 1 day.
- Package the solution into an FME Server Project.

Given
- FME Server Project containing useful components to complete this exercise is located at: C:\FMEData\Resources\ServerCertification\Scenario4\project\

Requirements Being Tested
- The certification evaluator must be able to:
  - Import the FME Server Project into their own FME Server installation and
    - upload a file to the FME Server Resources 'Scenario4' folder and observe that a workspace runs in response.
    - observe that the workspace does NOT run if a file in 'Scenario4' is removed or modified.
    - observe that files uploaded to the 'Scenario4' folder *would be* removed after 1 day (after importing the project).

Scenario 5

Read the entire exercise before beginning.
This exercise requires a local install of FME Desktop 2018.0.1 or Newer.

Purpose
- Message Streaming Transformers
- Notification Services (WebSocket Subscriber)
- Job Queues
- Advanced Run Workspace Parameters

Overall Goals
- Connect to an existing Message Stream and process messages with an FME Workspace.
- Send the processed messages to FME Server.
- Configure FME Server to re-broadcast these messages as a WebSocket stream.
- Configure the workspace to run in a dedicated Job Queue.

Given
- WebSocket Message Stream URL is wss://demos-safe-software.fmecloud.com/websocket

- The sd_plane or sd_ship Stream ID can be used.
- FME Server Project containing useful components to complete this exercise is located at: C:\FMEData\Resources\ServerCertification\Scenario5\project\

Requirements Being Tested
- The certification evaluator must be able to:
    - Run the workspace Scenario5-WebSocketStream in FME Server that connects to the existing WebSocket message stream.
    - Connect to your WebSocket stream using ws://<IP-Address>:7078/websocket and Stream ID scenario5
    - Verify that the message stream contains the same (or slightly modified) data from wss://demos-safe-software.fmecloud.com/websocket
    - Observe that the workspace will automatically restart if there is a simulated FME Server Engine crash.