2016 FME Server Optimized Deployment Guide

Purpose

To shortcut the learning curve required with producing an Optimized Enterprise Deployment of FME Server.

Optimized Enterprise Deployment

Multi-Stage Deployment

- Use multiple stage deployment (dev > test > prod - can be up to 7 stages) for:
    - publishing workspaces (documentation).
    - applying configuration changes to FME Server software including upgrades (documentation under development).
    - applying configuration changes to Operating System
- Centralized testing - authors publish to dev server and then request publish to test and then prod?
- Test Suite - for product upgrades, operating system changes, etc.

Installation

Area	Topic	Reason	Documentation
Disaster Recovery	Planning for Disaster Recovery	Recover from catastrophic data center failures	Disaster Recovery explained (Admin guide)
Fault-Tolerance	Planning for Fault-Tolerance	Remove single points of failure.	Planning for Fault-Tolerance (Admin Guide)
	Failover - Active/Passive	Remove single points of failure.	Active-Passive Architecture (Admin Guide)
	Redundancy - Active/Active	Remove single points of failure.	Active/Active Architecture (Admin Guide)
Authorization and Access Control	ActiveDirectory	Manage one set of credentials per employee using a centralized system.	Connecting to ActiveDirectory (Admin guide)
	Integrated Windows Authentication (SSO)	You don't have to enter your password, which you may not even know.	Configuring Integrated Windows Authentication (Admin guide)
	FME Engine service LogOn Account.	Ensure the FME Engine processes can read/write to required directories.	
	FME Server Core service LogOn Account.	Ensure the FME Server Core processes can read/write to	

		required directories.	
	FME Server Application Server service LogOn Account.	Ensure the FME Server Application Server processes can read/write to required directories.	
	FME Server Install directory	Otherwise programs or people could corrupt the installation.	
	FME Server System Share Directory	Otherwise programs or people could corrupt the installation.	
	Database access	Otherwise anyone within your firewall can connect to the FME Server System Database and corrupt it.	no documentation available Edit the pg_hba.conf file to only allow access to the database from the machines where the FME Server Core and FME Engines are installed.
Security	HTTPS/SSL	Protect sensitive information and prevent hacking the system.	Configuring for HTTPS/SSL (Admin Guide)
	Reverse proxy / DMZ (if public facing)	Limit exposure of your internal systems to the internet.	Use a Reverse proxy with FME Server (Knowledge Center)
Scalability	Via multiple installs - Active/Active	Process more FME Workspaces concurrently.	Planning for High Capacity (Admin Guide) Increasing Job Throughput > Multiple FME Servers

	Via multiple FME Engines - same and different machine	Process more FME Workspaces concurrently.	Planning for Scalability (Admin Guide) > Increasing Job Throughput > Multiple Engines on the same Machine. Planning for Scalability (Admin Guide) > Increasing Job Throughput > Adding Engines on Separate Machines.
	Prioritizing Jobs	Process the most important jobs first.	Planning for Scalability (Admin Guide) > Increasing Job Performance > Job Priority
	Dedicate FME Engines to specific types of jobs.	Ensure that specific types of jobs get an appropriate level of processing power and wait time.	Planning for Scalability (Admin Guide) > Increasing Job Performance > Job Routing
Job Reporting	Display data in a dashboard. Email alerts/reports to stakeholders.		• Job Statistics Dashboards 2016.1 • Job Completion Notifications
Monitoring	Awareness of system problems	Otherwise, the system may encounter an unexpected problem and go unnoticed for a period of time.	no documentation available Programmatically running the installation verification procedure using the REST API is a good start; specifically running a job from the Samples repository. Any monitoring tool that can call a REST API will work.

Gotchas

Best resource for help: FME Server Troubleshooting Guide

About 80% of the gotchas are a variant of connectivity problems between clients or components.

- Network
    - Firewall
    - Port
    - DNS resolution
    - CORS
- Authorization and Access Control
    - Service account permissions
    - File system permissions
    - Active Directory
    - Integrated Windows Authentication

Optimized Data Transformation

Area	Topic	Reason	Documentation
Reuse	Published parameters as an interface to workspaces	Get different results from a single workspace.	Working with Published Parameters
	Workspace Chaining pattern	Reuse workspaces in multiple workflows.	FME Server Workflow Management
	Custom transformers (embedded vs. linked)	Build once, share with others.	Embedding or Linking a Custom Transformer
Centralized Change Management	Linked custom transformers	Edit once and propagate to all workspaces.	
	Database Connections *Available in 2016.0*	Edit once and propagate to all workspaces.	FME Workbench Doc FME Server Doc
	Web Connections *Available in 2016.1*	Edit once and propagate to all workspaces.	FME Workbench Doc FME Server Doc
	Schema Mapping	Manage rule-based schema manipulation outside of the workspace.	SchemaMapper Tutorial
	Dynamic Schema	Manage the destination schema for datasets outside of the workspace.	Dynamic Workflow Tutorial

	Source Control - SVN, Github *Not supported directly*		
	Configuration Changes - SVN, Github *Not supported directly*	Manage changes to FME Server configurations changes and tweaks (Dev>Test>Prod)	