

FME Flow Administration

Exercise Workbook

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3 Flow Admin – The Basics

3.1 FME Flow Services

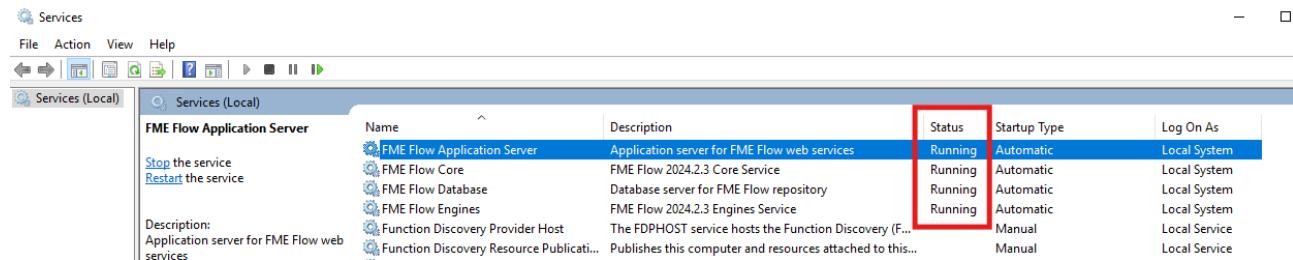
Demonstrates	Confirm the FME Services are running How to Stop and Restart FME Flow Services
Overall Goal	Use FME Flow FME Flow Management options to correctly stop and restart FME Flow Services
Data	None
Workspaces	None

Although the FME Flow System Services start automatically, you can start and stop the services. But it's important that it's done correctly.

3.1.1 Confirm the FME Services are running

The first task is to ensure the FME Services are running. To do so, open *Windows Services* (or the equivalent for your platform) and confirm that the four "FME Flow" Services are running. These are:

- FME Flow Application Server
- FME Flow Core
- FME Flow Database
- FME Flow Engines



On a Windows machine these services should start automatically after installation and reboot of the computer.

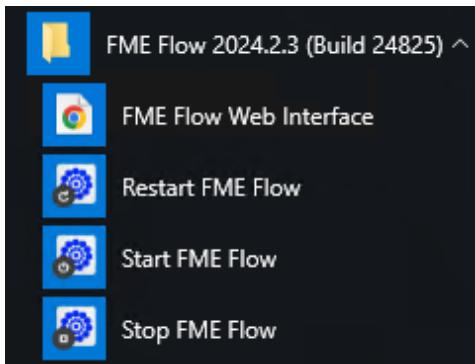
FME Lizard

The order in which the FME Flow Services are stopped and started is extremely important.

Don't be tempted to manually start & stop them through the Windows Services app!

3.1.2 Stop the FME Flow Services

To Stop the FME Flow Services go to *Start > All Programs > FME Flow > Stop FME Flow*



Each FME Flow Service will stop in turn:

```
C:\Windows\System32\cmd.exe
The FME Flow Engines service was stopped successfully.

The FME Flow Core service was stopped successfully.

The FME Flow Application Server service is stopping.
The FME Flow Application Server service was stopped successfully.

The FME Flow Database service is stopping.
```

And within Windows Services we can see that they are no longer Running:

Name	Description	Status	Startup Type	Log On As
FME Flow Application Server	Application server for FME Flow web services	Automatic	Automatic	Local System
FME Flow Core	FME Flow 2024.2.3 Core Service	Automatic	Automatic	Local System
FME Flow Database	Database server for FME Flow repository	Automatic	Automatic	Local System
FME Flow Engines	FME Flow 2024.2.3 Engines Service	Automatic	Automatic	Local System
Function Discovery Provider Host	The FDHOST service hosts the Function Discovery (F...	Manual	Manual	Local Service

Now let's start them up again.

3.1.3 Start FME Flow

To Start the FME Flow Services go to *Start > All Programs > FME Flow > Start FME Flow*

Each of the FME Flow Services will be started in the appropriate order:



```
C:\Windows\System32\cmd.exe
The FME Flow Application Server service is starting.
The FME Flow Application Server service was started successfully.

The requested service has already been started.

More help is available by typing NET HELPMSG 2182.

The FME Flow Core service is starting.
The FME Flow Core service was started successfully.

The FME Flow Engines service is starting.
```

(Do not worry if the text is slightly different to that shown above. The key is that all four services start again)

The cmd window will automatically close when services are restarted.

And within Windows Services we can see that they are now *Running* again

Service Name	Description	Status	Startup Type	Log On As
Enterprise App Management Service	Enables enterprise application management.	Running	Manual	Local System
Extensible Authentication Protocol	The Extensible Authentication Protocol (EAP) service p...	Running	Manual	Local System
FME Flow Application Server	Application server for FME Flow web services	Running	Automatic	Local System
FME Flow Core	FME Flow 2024.2.3 Core Service	Running	Automatic	Local System
FME Flow Database	Database server for FME Flow repository	Running	Automatic	Local System
FME Flow Engines	FME Flow 2024.2.3 Engines Service	Running	Automatic	Local System
Function Discovery Provider Host	The FDHOST service hosts the Function Discovery (F...	Running	Manual	Local Service
Function Discovery Resource Publication...	Publishes this computer and resources attached to this...	Running	Manual	Local Service

Congratulations

By Completing this exercise you have learned how to:

- Confirm the FME Services are running
- Stop and Restart FME Flow Services



3.2 Post Installation Checks

Demonstrates	Post installation checks
Overall Goal	Verify and test the FME Flow installation
Data	SSSIs (MapInfo TAB)
Start Workspaces	Samples > austinApartments.fmw C:\FMEFlowData\Workspaces\Complete\1.02-AuthoringBasics-WorkspaceParametersRepublish-Complete.fmw
End Workspace	C:\FMEFlowData\Output\My Workspaces\SSSI Constraint.fmw

Once installed you will need to verify and test the installation:

- FME Flow Services are running – we've already checked these.
- FME Flow Web UI is active
- FME Flow is available from Desktop
- Engines are running and working

3.2.1 Access FME Flow Web interface

To log in to the FME Flow web interface, either select the *FME Flow Web Interface* option from the *Start menu > FME Flow*

or - in your web browser, enter the address of your FME Flow (set during installation. e.g. <http://localhost:8080/fmeserver>).

If you are following this training on one of our training machines, the URL for your FME Flow will be: **<http://localhost>**

FME Lizard

When FME Flow is installed on either physical or virtual hardware, the address is <http://<servername>/fmeserver>

If you are using FME Cloud, then the address is: <https://<servername>.fmecloud.com/fmeserver>

This will open the web interface login screen for the FME Flow being used.



The image shows a screenshot of the FME Flow user login interface. It features a light gray header with the "FME:Flow" logo. Below the header is a white rectangular form with rounded corners. Inside the form, there are two input fields: the first is labeled "Username" with a small user icon to its left; the second is labeled "Password" with a small lock icon to its left and a "clear" icon to its right. At the bottom of the form is a large blue rectangular button with the white text "Log In".

In the User Login dialog, enter the miso training username and password:

Username: admin

Password: FMETraining1234

Click the *Login* button.

3.2.2 Examine the FME Flow web interface

Welcome to the FME Flow Web Interface. Take a moment to familiarize yourself with this interface. In the top-right corner, you can access the Help menu and your user settings:



The side menu is where all of the FME Flow functions can be accessed. If you need more space, this menu can be collapsed. Note that the side menu will look different depending on which account you are signed into to. In the below image the user is logged in as admin:



FME:Flow

- ▷ Run Workspace
- ⌚ Automations >
- (⌚) Streams >
- 🎛 Flow Apps >
- 📅 Schedules >
- ☰ Jobs >
- 📁 Workspaces
- 📁 Projects >
- 🌐 Connections & Parameters >
- 📁 Resources

ADMIN

- ↳ Analytics
- 👤 User Management >
- ⚙️ System Configuration >
- 💾 Backup & Restore
- 🌀 Engine Management >

Also on the FME Flow Home page you can access Last Published Workspaces, Last Updated Items, Favourite Workspaces, and Help pages. If you clicked away from this page, just click the FME logo in the top corner to get back to the Home page.



Dashboard

Create Automation Create Workspace App Create Schedule Create Project

Last Published Workspaces

Trigger test.fmw 17 weeks ago	easyTranslator.fmw 11 weeks ago	earthquakefusion.fmw 11 weeks ago	austinDownload.fmw 11 weeks ago	austinApartments.fmw 11 weeks ago	FailureSpace.fmw 11 weeks ago	DailyTotalTime.fmw 11 weeks ago
-------------------------------	---------------------------------	-----------------------------------	---------------------------------	-----------------------------------	-------------------------------	---------------------------------

Last Updated Items

NAME	TYPE	OWNER	LAST UPDATED
Delta Automation	Automation	admin	2025-4-30 08:49:15
DashboardStatisticsGathering	Schedule	admin	2024-10-2 18:24:52
Backup_Configuration	Schedule	admin	2024-10-2 18:24:52

Job Overview

STATUS	ID	WORKSPACE	RAN BY	ELAPSED TIME	SOURCE TYPE
Completed	0				
Failed	0				
Queued	0				
Successful	0				
Running	0				

Automations Overview

You don't have any automations with errors or warnings.

Favorites

You don't have any favorites.

Resources

FME Academy

FME Flow Authoring
The FME Flow Authoring course is now available.
May 02 - 05, 2025
9:00 AM - 1:00 PM (PDT)

Sign Up

Software

FME Community

Gather with users globally to network, socialize and learn about FME

FME Academy

Improve your skills with free live and on-demand courses

Support

Find the answers to your questions from our vast collection of resources or connect 1:1

We'll run a workspace shortly, but perhaps first we should make sure FME Flow is running correctly (the fact that we could log in is a good sign) and that we are licensed and have engines running.

3.2.3 Are Engines Running & working

In the *ADMIN > System Configuration* part of the interface menu, select *Licensing*.

This will open up the licensing section. You should see a message informing you that FME Flow is licensed how many engines available:

Licensing

FME Flow is Licensed

[Licensing Documentation](#) | [FME Engines Documentation](#)

[Request New License](#) [Refresh License](#)

Machine Key: Serial Number: Expires: **Never**

Standard Engines

[Upload License File](#)

Max Standard Engines: **6**

CPU-Usage Engines



To examine the Engine details, click on *ADMIN > Engine Management* on the interface menu. Then click on *Engines*.

The screenshot shows the 'Engine Management' page with the 'Engines' tab selected. At the top, it says 'Manage the number of Engines, and view the properties of Engines, Queues, and Streams' and 'Data last updated at 17:03 on May 7th'. Below this is a navigation bar with links: Overview, Engines (which is underlined), Queues, Job Routing Rules, Engine Assignment Rules, Active Periods, and Remote Engines Services. The main section is titled 'Engines' and contains the message 'Engines will appear below when ready. The engine list must be refreshed manually.' To the right are 'Configure' and 'Refresh' buttons. A search bar says 'Search for an engine' and a dropdown says 'Engine Status'. A 'Sort By: Engine Type' dropdown is also present. The 'Standard Engines' section shows 0/2 running, with two entries: 'localhost_Engine1' and 'localhost_Engine2'. The 'CPU-Usage Engines' section shows 0/0 running, with a message 'No CPU-Usage Engines' and a link 'Get started with usage-based pricing, where you only pay for the work that is done. Learn More'.

Here we can see the number of both Standard Engines and CPU-Usage Engines.

Now let's run a workspace to check that the engines are running and working. On the interface menu click on *Run Workspace*

Safe Software include a number of sample workspaces as part of the installation package. We'll run one of these sample workspaces; Safe usually recommend the *austinApartments.fmw*

The screenshot shows the 'Run Workspace' dialog box. On the left is a sidebar with a red box around the 'Run Workspace' option. The main area has a title 'Run Workspace' and a 'Workspace Actions' button. It includes fields for 'Repository*' (set to 'Samples') and 'Workspace*' (set to 'austinApartments.fmw'). A note below says 'This sample workspace reads in data, filters by landmark type, creates a category attribute for feature type fanout, applies styling and then writes to a KML file.' It also lists 'Published parameters allow the user to select:' with 'initial file to import' listed. Below this are sections for 'Service*' (set to 'Data Download'), 'Email Results To', and 'Advanced'. At the bottom is a 'Run' button.



Click the *Run* button to run the workspace.

The workspace will run to completion, and a message to that effect will appear:

The screenshot shows the FME Flow interface. On the left, a sidebar menu includes 'Run Workspace', 'Automations', 'Streams', 'Flow Apps', 'Schedules', 'Jobs' (which is expanded), 'Workspaces', 'Projects', 'Connections & Parameters', and 'Resources'. The main content area is titled 'Run Workspace' and shows a job named 'austinApartments.fmw' with the status 'COMPLETED'. It indicates 'Translation Successful'. Below this, it shows 'JOB ID 680', 'FEATURES WRITTEN 49', and a 'DATA DOWNLOAD URL' link. There are 'Run Again' and 'View Details' buttons.

3.2.4 Check Job history and Logs

Click *Jobs* on the side menu to expand it, then click *Completed* to view a list of the completed jobs.

A list of previously run jobs will open, including the one we just ran:

The screenshot shows the 'Jobs' page in FME Flow. The sidebar has 'Jobs' selected under 'Completed'. The main area shows a table of completed jobs. One job is listed: ID 212, workspace 'austinApartments.fmw', repository 'Samples', ran by 'admin', status 'FINISHED', started 'Today at 10:50:46', finished 'Today at 10:50:50'. There are buttons for 'Remove', 'Edit', and 'View'.

ID	WORKSPACE	REPOSITORY	USERNAME	RAN BY	STATUS	LOGS	STARTED	FINISHED	SOURCE NAME	SOURCE
212	austinApartments.fmw	Samples	admin	admin	✓		Today at 10:50:46	Today at 10:50:50		

Notice some interesting parts of the interface:

This detailed screenshot highlights several interface elements with numbered circles:

- (1) The 'Completed' tab in the navigation bar.
- (2) The 'Filters' button.
- (3) The 'ID' column header in the table.
- (4) The 'FINISHED' column header in the table.
- (5) The 'Edit' and 'View' buttons in the table's header.

The table data is identical to the previous screenshot:

ID	WORKSPACE	REPOSITORY	USERNAME	RAN BY	STATUS	LOGS	STARTED	FINISHED	SOURCE NAME	SOURCE
680	austinApartments.fmw	Samples	admin	admin	✓		Today at 17:10:47	Today at 17:10:50		



1. There are tabs to show Completed Jobs (the default), Queued Jobs, and Running Jobs.
2. There is an option to turn on Filters for the view to allow you to filter the list of jobs to make it easier to find specific ones on a busy server.
3. An icon is used to indicate if jobs succeeded or failed. The green check indicates a successful job and a red x marks a failed job.
4. The jobs are displayed in the chronological order in which they finished (whether successful or not).
5. Additional Columns can be displayed providing more information about the resources used by the job, including; engine, queue, %CPU, CPU time, elapsed time and peak memory usage.

Click on your job to inspect the results in more detail.

The screenshot shows the 'Jobs' page in FME Flow. At the top, it says 'austinApartments.fmw' and 'City of Austin: Apartments and other (SPATIALITE 2 KML)'. Below that, it shows a summary: JOB ID 680, FEATURES WRITTEN 49, TIME STARTED Today at 17:10:47, and TIME FINISHED Today at 17:10:50. There are buttons for 'Download' and 'Resubmit Job'. Below the summary, there are three expandable sections: 'STATUS', 'REQUEST DATA', and 'RESULT DATA', each with a 'View' button. At the bottom, there is a 'Search' bar and a 'Log' section with a timestamp: 2025-5-7 17:10:47 | Current FME version: FME 2024.2.2.0 (20250114 - Build 24020 - WIN64).

You'll see a summary at the top showing the number of features written as well as the time it started and finished. There are more timing details under STATUS that include the time the job was submitted, queued, etc. Information about the specific request made to FME Flow can be found under REQUEST DATA. And full results of the translation are under RESULT DATA.

You may also inspect the FME translation log file on this page. Along with download a copy of the Log



FME Lizard

FME Job Logs are stored in the FME Flow shared Resources as follows:

<LogDir>\engine\current\old\jobs\<number>\job_<value>.log

The screenshot shows the FME Flow Web User Interface. The left sidebar has a dark theme with white text. It includes links for Run Workspace, Automations, Streams, Flow Apps, Schedules, Jobs, Workspaces, Projects, Connections & Parameters, and Resources. The 'Connections & Parameters' link is currently selected and highlighted in red. The main content area has a light gray background. At the top, it says 'Resources'. Below that is a brief description: 'Resources store important files for running FME Flow workspaces, including data files, custom formats, transformers, coordinate systems, log files, and backups.' A breadcrumb navigation shows the path: Resources > Logs > engine > current > jobs > 0. There is a search bar with a magnifying glass icon and a placeholder 'Search'. Below the search bar are several buttons: 'New' (blue), 'Actions' (dropdown), 'Upload' (button with a file icon), a refresh icon, and a trash bin icon. A table follows, with columns for 'NAME', 'SIZE', and 'DATE'. The table contains three rows of log files:

	NAME	SIZE	DATE
<input type="checkbox"/>	job_631.log	20.15 KB	2025-4-30 13:12:36
<input type="checkbox"/>	job_632.log	20.18 KB	2025-4-30 13:16:35
<input type="checkbox"/>	job_633.log	18.94 KB	2025-4-30 23:30:01

FME job log files are stored and named using the following format:

\<number>\job_<value>.log

Where value is the job ID and number is the job ID group, which increments by thousand. Logs for job IDs from 0 - 999 are grouped into a 0 directory, Logs for job IDs from 1000 - 1999 are grouped into a 1000 directory, and so on.

To ensure that log files do not consume too much disk storage over time, FME Flow is configured, by default, to delete old log files. You can manage automatic log file cleanup on the [System Cleanup](#) page of the FME Flow Web User Interface.

Note: Low disk space on the drive that holds your FME Flow shared Resources can trigger aggressive cleanup tasks (deleting your log files).

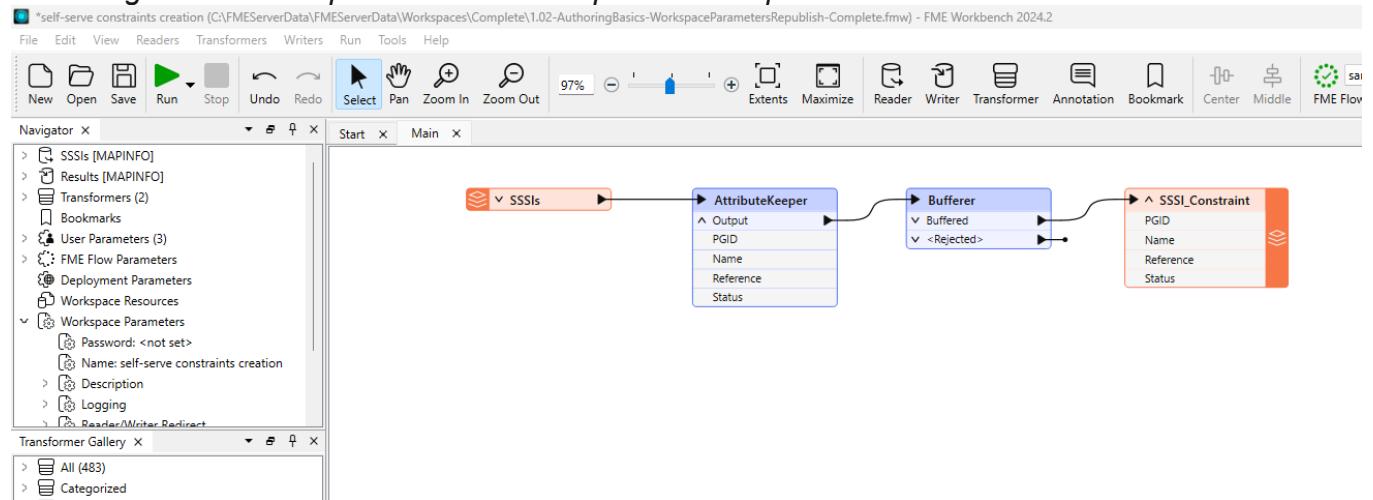
The next post-installation check is to test that FME Desktop Workbench is able to connect and publish workspaces to our FME Flow.



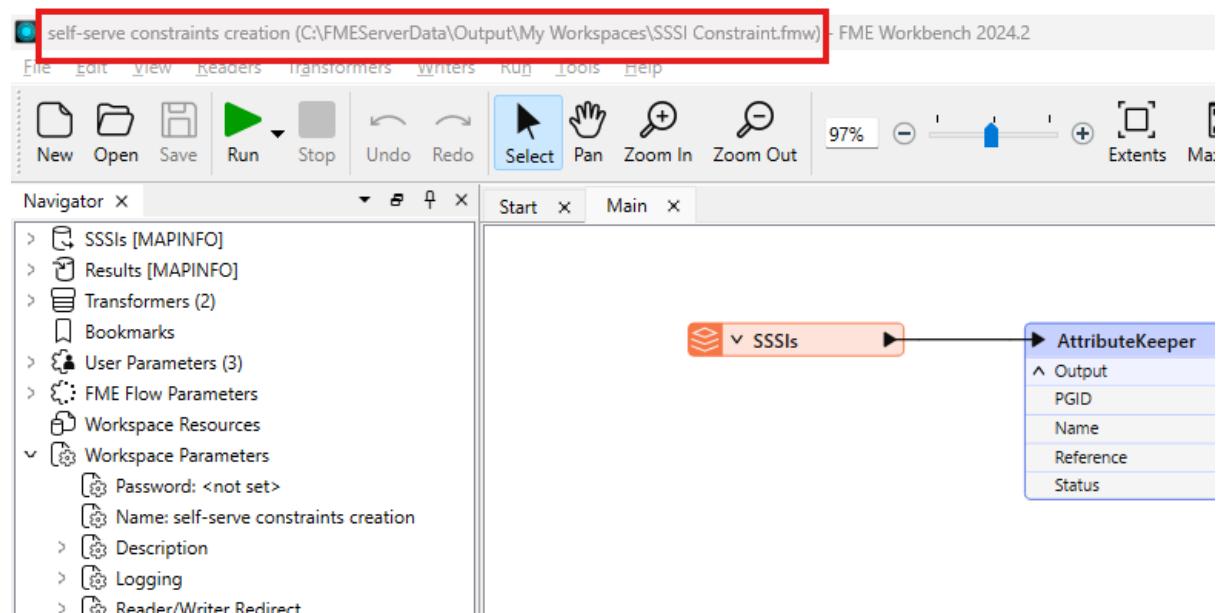
3.2.5 Is FME Flow available from Desktop

Launch the *FME Workbench*, from start menu > Programs > *FME Desktop*

Open the existing workspace: C:\FMEFlowData\Workspaces\Complete\1.02-AuthoringBasics-WorkspaceParametersRepublish-Complete.fmw

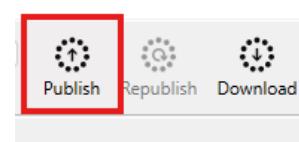


Let's save a new copy, with a more user-friendly name. Use *File > Save As* and save the new workspace to C:\FMEFlowData\Output\My Workspaces and name it '*SSSI Constraint.fmw*'



We'll now publish to FME Flow.

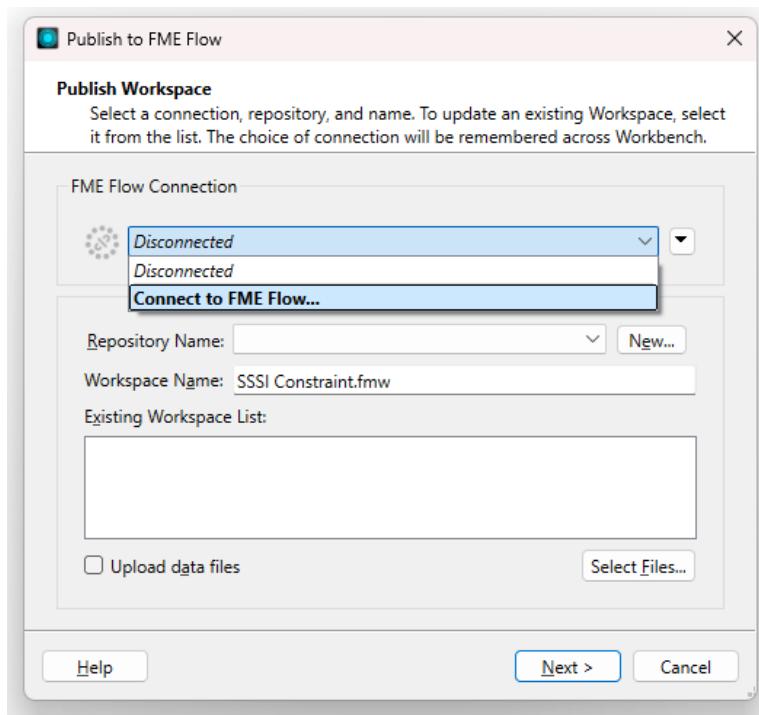
Use either *File > Publish to FME Flow* from the menubar. Or the *Publish to FME Flow* button on the toolbar.



As this is the first time we've connected to our FME Flow, we'll need to create a new

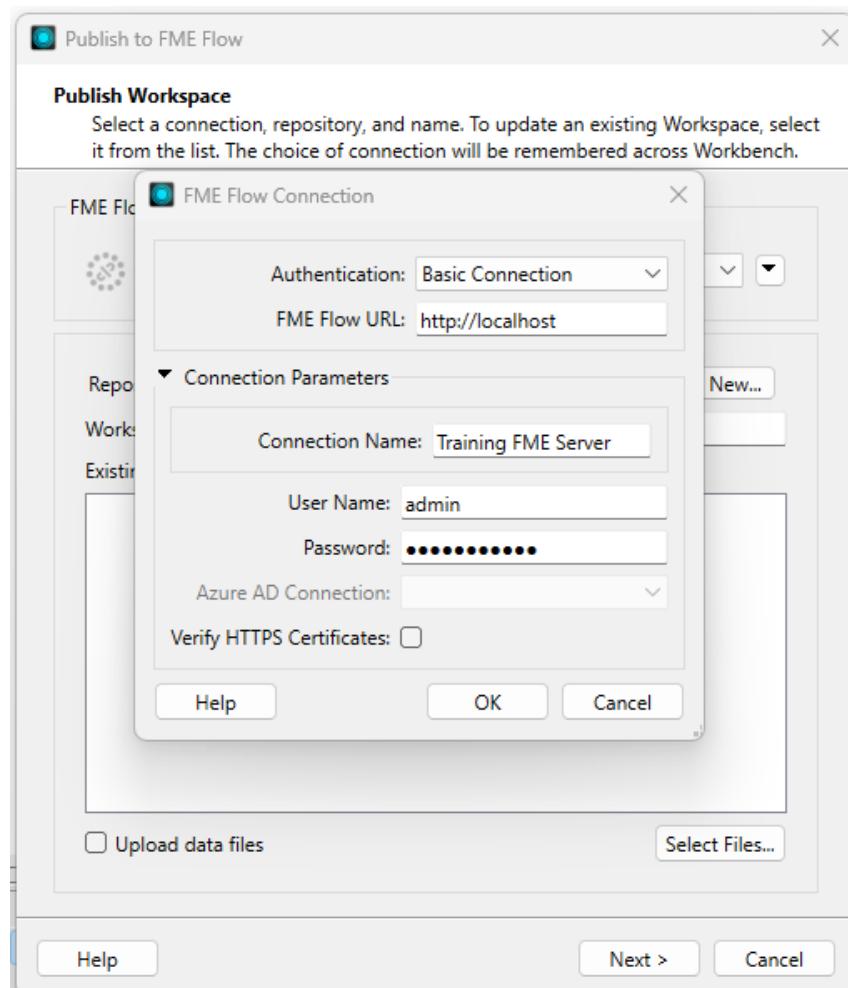


connection, so in the Publish to FME Flow wizard select *Connect to FME Flow...* from the dropdown menu:



Then set the connection parameters for our training instance are as follows:

Connection Name: *Training FME Flow*
Server URL: *http://localhost*
User Name: *admin*
Password: *FMETraining1234*

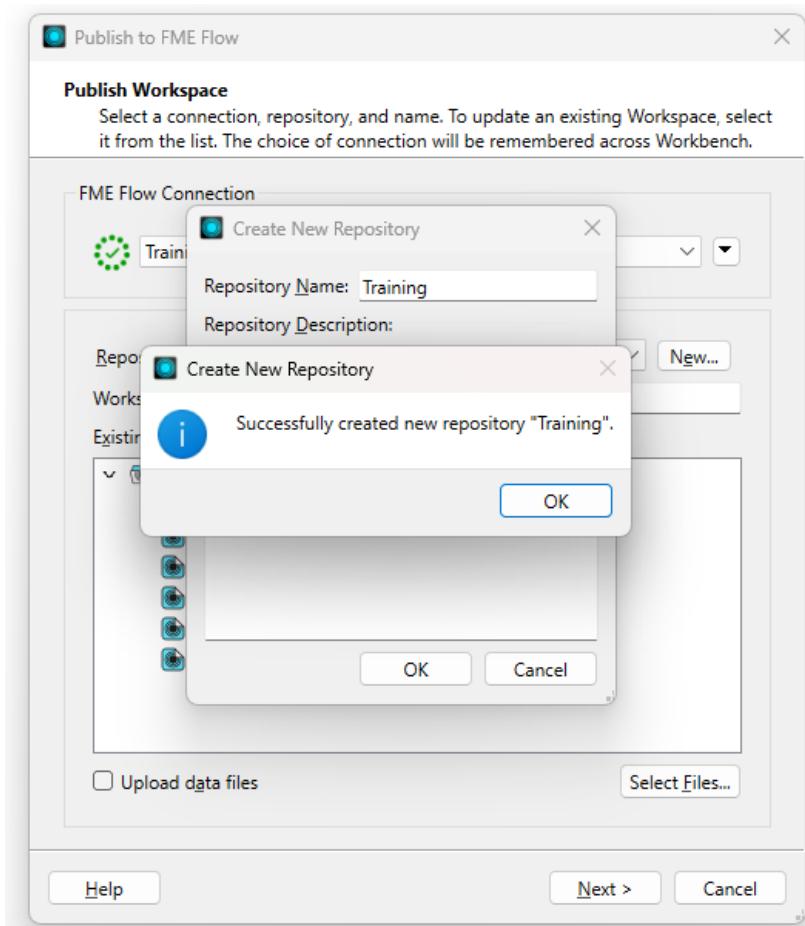


Click **OK** to confirm the connection and return to the previous dialog.

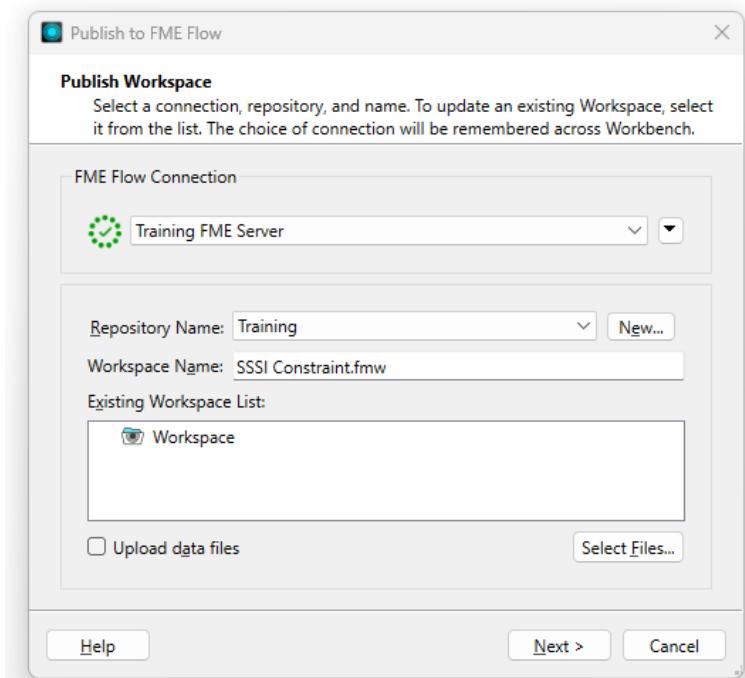
Make sure the newly defined connection is selected in the drop down.

The next dialog prompts you to choose a repository in which to store the workspace. For this exercise, we'll create a new repository.

Next to Repository Name, click the button '**New**'
Create a new repository called '**'Training'**'



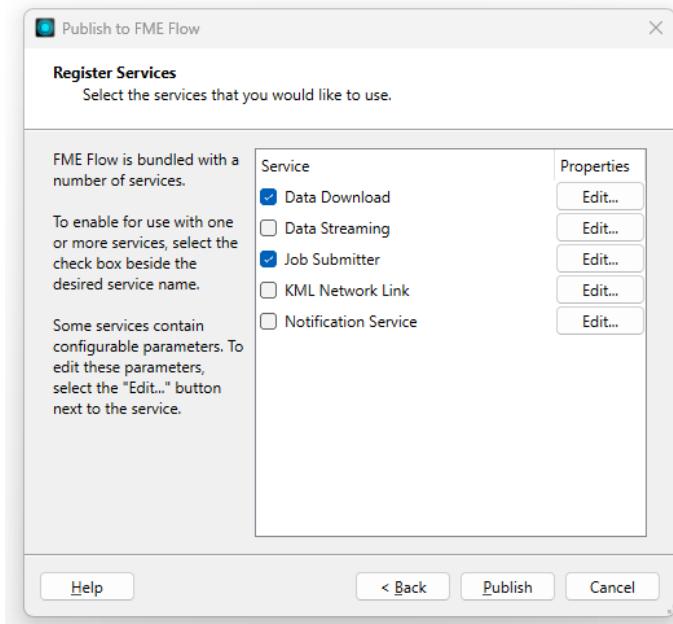
Click 'Next' to publish the SSSI Constraint workspace.





In the final screen of the wizard, we can register the workspace for use with various Services.

Select both the '*Data Download*' and '*Job Submitter*' Services:



Then click '*Publish*'

FME Lizard

FME Flow Web Services - These are different services that your workspace needs to be registered with, when you publish it up to Flow. You have to pay attention when you publish a workspace up to Flow, you can't just push it up to a Repository, you need to specify how you want FME Flow to use this workspace.

Data Download – provides the results data from the workspace back into the web browser (as a Zip). Where end-user can download it

Data Streaming – stream data. Usually takes an engine and runs constantly

Job Submitter – simply runs the workspace as it would in Desktop – so will write results data to destinations specified on Writers

KML Network Link – if you want a link embedded up on Google. You can have that automatically refreshed and data pushed up there

Notifications – includes triggers, emails, etc



After a workspace is transferred to Flow, the Translation log will confirm the successful publication (along with detailing the destination Repository and Services registered):

The screenshot shows the 'Translation Log' interface. At the top, there are tabs for 'Visual Preview' and 'Translation Log'. The main area displays a log message with the following content:

```
Transformer Message
12 | Successfully published to FME Server as 'SSSI Constraint.fmw'.
13 |
14 | Publish Summary
15 |
16 | FME Server URL : http://localhost
17 | Username : admin
18 | Repository : Training
19 | Name : SSSI Constraint.fmw
20 | Direct Link : http://localhost/fmeserver/#/workspaces/run/Training/SSSI%20Constraint.fmw
21 | Uploaded Resources : None
22 | Registered Services : Data Download
23 | Job Submitter
24 | Included Writers in Download : Results [MAPINFO]
25 | Included Writers in Stream : Results [MAPINFO]
26 | Time : Mon Oct 17 16:56:34 2022
27 |
```

We'll now go back to the FME Flow Web interface and run the workspace.

Look under the *Workspaces* section. Here it will list the *Repositories* containing the workspaces.

Select the newly created *Training* repository.

FME Lizard

The 'Direct Link' within the Desktop Workbench log upon publishing the workspace to Flow can be used to directly access the workspace within FME Flow

19		Name	:	SSSI Constraint.fmw
20		Direct Link	:	http://localhost/fmeserver/#/workspaces/run/Training/SSSI%20Constraint.fmw
21		Upload	:	



The screenshot shows the 'Workspaces' section of the FME Flow interface. On the left is a sidebar with navigation links like 'Run Workspace', 'Automations', 'Streams', 'Flow Apps', 'Schedules', 'Jobs', 'Workspaces' (which is selected), 'Projects', 'Connections & Parameters', and 'Resources'. The main area is titled 'Training' and contains a table of workspaces. The first entry is 'SSSI Constraint.fmw', which is described as 'self-serve constraints creation'. It has 0 runs, was last updated today at 15:20:53, and has an average elapsed time of 0. There are buttons for 'Actions', 'Upload', and a preview icon.

Select the recently published workspace; *SSSI Constraint.fmw*

The workspace page shows a few options, the first of which are for the Repository, Workspace, and Service. These should already be filled in with values. This workspace has a few Published Parameters, they are also listed.

The screenshot shows the 'Run Workspace' configuration page. The workspace 'SSSI Constraint.fmw' is selected. The 'Service' dropdown is set to 'Data Download'. Below this, there's a section for 'Published Parameters' where a file named 'SSSIs.tab' is uploaded. The 'Buffer Distance' is set to 500. At the bottom right is a 'Run' button.

Notice: we could also access this page and run the workspace by also selecting the *Run Workspace* section at the top of the side menu, followed by choosing the required workspace.

We'll now run the workspace using the *Job Submitter Service*. (Which simply runs the workspace as it would in Desktop. So, it will write results data to destinations specified on the Writers (or its published user parameters))

Change the Service setting to *Job Submitter*

The source data (SSSI.tab) doesn't need to be changed, so we don't need to make any



changes to that published parameter.

Enter a desired buffer size for the *Buffer Distance* published parameter.

The results data will be written to the location specified in the writer destination published parameter (e.g. C:\FMEFlowData\Output\Results), but this could be changed to write to a new folder if desired by editing the path. e.g. C:\FMEFlowData\Output\Results\run1

Training/SSSI Constraint

Repository: Training

Workspace: SSSI Constraint.fmw

this workspace enables users to define buffer size around SSSIs and generate constraint polygons

Service: Job Submitter

Email results to (optional)

Published Parameters

SSSI dataset (Mapinfo TAB)

Upload Files
Drop files here or [browse file system](#)
OR

Selected Items (1) [+ Enter URL/Path](#)

SSSIs.tab
C:\FMEServerData\Data\GB\

X

Buffer Distance: 500

Destination Folder for output Constraint polygons: "C:\FMEFlowData\Output\Results\run1"

Click the *Run* button (you may need to scroll the page down to see it)

The workspace will run to completion, and a message to that effect will appear:

FME Flow Run Workspace

Run Workspace > Job #13

SSSI Constraint.fmw

COMPLETED
Translation Successful

JOB ID 13 FEATURES WRITTEN 10



Examine the output using File Explorer to navigate to the specified destination folder:

📁 > This PC > OS (C:) > FMEServerData > Output > Results > run1

Name	Type	Size
SSSI_Constraint.DAT	DAT	324 KB
SSSI_Constraint.ID	MapInfo Table File	2 KB
SSSI_Constraint.MAP	MAP File	1,040 KB
SSSI_Constraint.tab	TAB File	1 KB

We have successfully published a workspace from FME Desktop to FME Flow, and were able to successfully run the workspace on FME Flow.

Congratulations

By Completing this exercise you have learned how to:

- Log in to FME Flow Web Interface and check that it is licensed
- Examine Engine details and check they are running
- Run a workspace and inspect the job history and Log files
- Check that FME Flow is available from Desktop



3.3 Backups

Demonstrates	Activate the Backup Schedule task Scheduling using CRON Perform a manual Backup
Overall Goal	Activate scheduled Backup and perform a manual Backup
Data	None
Workspaces	None

The FME Flow Backup & Restore tools enables you to perform the following:

- Back up the configuration of a current instance of FME Flow.
- Restore a backed-up FME Flow configuration to an instance of FME Flow that is of the same or later version.
- View your history of backup and restore activity.

Whilst the FME Flow installation includes a scheduled task for the Backup operation, it is not automatically enabled.

Following the recent installation of FME Flow, as the FME Flow Administrator you are responsible for activating and maintaining the Backup operations.

3.3.1 Activate the Backup Schedule task

FME Flow provides a workspace that you can configure to perform regular (scheduled) backups of your Server configuration to an FME Flow configuration (.fsconfig) file. The backup includes repositories, services, notifications, security settings, schedules, job queues, resources, database connections, and web connections.

To Configure a Scheduled Backup:

Log in to the FME Flow Web User Interface: <http://<host>/fmeserver>

On the menu bar select *Schedules > Manage Schedules*

Notice that there is a *Backup_Configuration* entry, which is currently disabled/stopped:

NAME	TAGS	START TIME	END TIME	RECURRENCE	WORKSPACE	STATUS	TOTAL RUNS	OWNER	SHARE
Backup_Configuration		2012-1-1 02:00:00	N/A	Once a day	backupConfiguration.fmw	Disabled	0	admin	<input type="button" value="Edit"/>
DashboardStatisticsGathering		2016-1-1 00:00:00	N/A	Once a day	JobHistoryStatisticsGathering.fmw	Disabled	0	admin	<input type="button" value="Edit"/>

Click on the *Backup_Configuration* entry

Check the *Enabled* box.



Schedules ?

Schedules > Edit

Editing "Backup_Configuration"

The screenshot shows the 'Edit Schedule' dialog for a 'Backup_Configuration' entry. The form includes fields for Description (optional), Tags (optional), Enabled status, Schedule Type (set to 'Repeat On Interval'), Repeat every (set to 1 day), Date Range (Start at 2012-01-01 02:00, End optional, Does Not Expire checked), and a 'Skip if Job In Progress' checkbox.

Description (optional)	Backup server configuration to an FME Flow Configuration package. By default, the configuration file is saved to the Backup shared resources and the date and time of the backup are appended to the filename.	
Tags (optional)	Select or create new tags	
Enabled	<input checked="" type="checkbox"/>	
Schedule Type	Repeat On Interval	
Repeat every	1	Days
Date Range	Start (optional) 2012-01-01 02:00	<input type="button" value=""/>
	Start Immediately <input type="checkbox"/>	
	End (optional)	<input type="button" value=""/>
	Does Not Expire <input checked="" type="checkbox"/>	
Skip if Job In Progress	<input type="checkbox"/>	

The following published parameters are specific to the Backup_Configuration schedule:

- Append Date: If Yes, the date and time of the backup is appended to the filename.
- Flow Username: The user performing the backup. The user must belong to the fmesuperuser role.
- Flow Password: Password of the user. For our training instance its **FMETraining1234**
- Backup Destination: The file to store the backup. You can specify a Resources location, or another location that is accessible by the engine running the workspace. It can refer to a UNC path.

For now, set the *Schedule Type* to *Repeat On Interval*

We'd like our scheduled backup to run each evening, so set the Start Date and Time to **23:30 tonight**

Then click OK.

When returning to the Manage Schedule page the Backup_Configuration entry will have the Status of Started (which means it's enabled)



3.3.2 Scheduling using CRON

FME Flow supports CRON, which is a time-based job scheduler often found in UNIX-like operating systems. It enables you to schedule jobs to run periodically at certain times of day. Here are some examples:

Expression	Meaning
0 0 12 * * ?	Trigger at 12pm (noon) every day
0 15 10 ? * *	Trigger at 10:15am every day
0 15 10 * * ?	Trigger at 10:15am every day
0 15 10 * * ? *	Trigger at 10:15am every day
0 15 10 * * ? 2005	Trigger at 10:15am every day during the year 2005
0 * 14 * * ?	Trigger every minute starting at 2pm and ending at 2:59pm, every day
0 0/5 14 * * ?	Trigger every 5 minutes starting at 2pm and ending at 2:55pm, every day
0 0/5 14,18 * * ?	Trigger every 5 minutes starting at 2pm and ending at 2:55pm, AND trigger every 5 minutes starting at 6pm and ending at 6:55pm, every day
0 0-5 14 * * ?	Trigger every minute starting at 2pm and ending at 2:05pm, every day
0 10,44 14 ? 3 WED	Trigger at 2:10pm and at 2:44pm every Wednesday in the month of March.
0 15 10 ? * MON-FRI	Trigger at 10:15am every Monday, Tuesday, Wednesday, Thursday and Friday
0 15 10 15 * ?	Trigger at 10:15am on the 15th day of every month
0 15 10 L * ?	Trigger at 10:15am on the last day of every month
0 15 10 ? * 6L	Trigger at 10:15am on the last Friday of every month
0 15 10 ? * 6L	Trigger at 10:15am on the last Friday of every month
0 15 10 ? * 6L 2002-2005	Trigger at 10:15am on every last Friday of every month during the years 2002, 2003, 2004 and 2005



0 15 10 ? * 6#3	Trigger at 10:15am on the third Friday of every month
0 0 12 1/5 * ?	Trigger at 12pm (noon) every 5 days every month, starting on the first day of the month.
0 11 11 11 11 ?	Trigger every November 11th at 11:11am.

Cron Expressions can be tested on www.freeformatter.com

This is useful for scheduling jobs within FME Flow, if you don't want them to run every day.

We'll reconfigure our *Backup_Configuration* schedule to run Monday to Friday only (instead of everyday).

On the menu bar select *Schedules > Manage Schedules*
Click on the *Backup_Configuration* entry

Schedules > Edit

Editing "Backup_Configuration"

Description (optional) Backup server configuration to an FME Flow Configuration package. By default, the configuration file is saved to the Backup shared resources and the date and time of the backup are appended to the filename.

Tags (optional) Select or create new tags

Enabled

Schedule Type Repeat On Interval

Repeat every 1 Days

Date Range Start (optional) 2025-05-09 23:30 Start Immediately

End (optional)

Does Not Expire

Change the *Schedule Type* from 'Repeat On Interval' every Day, to *CRON Expression*

Then set the CRON Expression to: *0 30 23 ? * MON-FRI*



Enabled

Schedule Type CRON Expression

CRON Expression 0 30 23 ? * MON-FRI

Then click OK to commit the changes to the schedule entry.

The screenshot shows the 'Schedules' page in FME Flow. At the top, there are buttons for 'Create', 'Manage Tags', and 'Actions'. Below is a table with columns: NAME, TAGS, START TIME, END TIME, RECURRENCE, WORKSPACE, STATUS, TOTAL RUNS, OWNER, and SHARE. Two entries are listed:

NAME	TAGS	START TIME	END TIME	RECURRENCE	WORKSPACE	STATUS	TOTAL RUNS	OWNER	SHARE
Backup_Configuration		2025-5-9 14:17:00	N/A	0 30 23 ? * MON-FRI	backupConfiguration.fmw	✓	0	admin	
DashboardStatisticsGathering		2016-1-1 00:00:00	N/A	Once a day	JobHistoryStatisticsGathering.fmw	⊖	0	admin	

At the bottom, there are navigation buttons («, <, >, ») and a page number indicator (1). To the right, it says 'Showing 1 to 2 of 2 entries' and has a dropdown for '100'.

This will trigger the backup to run at 23:30, every day between Monday and Friday.

3.3.3 Perform a Manual Backup

Your organization has decided to upgrade FME Flow to the latest version just released. You want to make sure all the configurations, settings, and resources you have made to your current FME Flow will be transferred over to the new FME Flow installation. By backing up your current FME Flow and then migrating the configurations and settings to the new version you will save lots of time!

When migrating FME Flow, you need to back up your current FME Flow configurations.

Before configuring backups you need to download the Encryption Key. Under System Configuration, Security, select *System Encryption*.



The screenshot shows the FME Flow interface with the sidebar open. Under the 'ADMIN' section, the 'System Configuration' item is expanded, showing options like Licensing, Security (which is selected), Network & Email, System Cleanup, System Events, Broadcast Messages, and Version Control. The main content area is titled 'Security' and contains sections for Password Expiration, Password Policy, Password Reuse, Reset Password, Multiple Web Sessions, and System Encryption. The System Encryption section includes an 'Encryption Mode' dropdown set to 'Standard (Recommended)', a warning message about generating or uploading a new key, and three buttons: 'Generate Key', 'Upload Key', and 'Download Key'.

Generate Key and then Download Key.

Once that is done, we can then create a backup.

On the left sidebar, click *Backup & Restore*.
Then under *Type* dropdown, click on *Backup*.
Then click *Create Backup*.

The screenshot shows the FME Flow interface with the sidebar open. The 'Backup & Restore' item in the 'System Configuration' section is highlighted with a red box. The main content area is titled 'Backup & Restore' and shows a table with columns for ID, ACTION, START TIME, RESULT, and INVOKED BY. A modal window is open over the table, showing a dropdown menu labeled 'Type' with options: Choose a type, Restore, and Backup. The 'Backup' option is selected. The 'Create Backup' button is visible at the bottom right of the modal.

You can alter the *Filename* applied to the backup file about to be generated.
Ensure the *Backup To* parameter is set: to *Download*



Backup & Restore ⓘ

History > Backup FME Flow

Backup FME Flow

Create a backup to save the current state of this FME Flow

Export Details

File name: delt09_2025-5-9-T145427_b24627

Export location: Download Resources

Security Settings

Warning: Ensure the unique system encryption key for this instance of FME Flow is identical on the importing FME Flow instance. The key can be downloaded/uploaded in [System Encryption](#). The key is required to restore the configuration. Data that is encrypted under a lost key cannot be recovered.

Standard Security Mode Enabled

When Standard Security Mode is enabled, the [encryption key file](#) is required to restore the configuration. Please confirm you have downloaded the encryption key file.

Yes, I have the required encryption key *

Save File

Click “Yes I have the required encryption key” and then hit “Save File” to start the FME Flow backup process.

Backup & Restore ⓘ

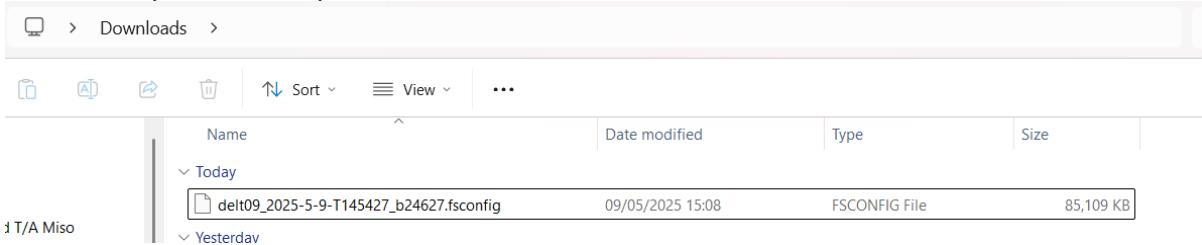
Download Submitted

It may take a few minutes to prepare your file before starting the download. You can view the export log on the History page once the download is complete.

The download will continue to run if you leave this page.

View History

When complete, backup file will download to *This PC > Downloads*



Create a new folder in here for your training backup files:
C:\FMEFlowData\Output\Results



3.3.4 Backup Configuration Files

It is also a best practice to manually back up any FME Flow configuration files you have altered to a safe location outside of the FME Flow installation directory. Certain configurations are not included in the primary backup procedure and you may want to reference the changes made to these files.

C:\Program Files\FMEFlow\

FME Flow Core	fmeFlowConfig.txt fmeCommonConfig.txt fmeFlowWebApplicationConfig.txt fmeWebSocketConfig.txt	<FMEFlowDir>\Server\
FME Engines	fmeEngineConfig.txt	<FMEFlowDir>\Server\
FME Flow Database	fmeDatabaseConfig.txt	<FMEFlowDir>\Server\
Process Monitoring	processMonitorConfigCore.txt processMonitorConfigEngines.txt	<FMEFlowDir>\Server\

Also, if you have configured FME Flow for HTTPS (we haven't for our training installation):

server.xml web.xml context.xml cacerts and any created tomcat.keystore files	<FMEFlowDir>\Utilities\tomcat\conf\
---	-------------------------------------

If we were trying to migrate our current FME Flow configurations, these are the files that we would want to have copies of for reference later on when restoring FME Flow configurations.

Save these files with your backup configuration file to easily find during a restore.

3.3.5 Backup Log Files (optional)

Like configuration files, FME Flow Log Files are not automatically backed up. FME Flow log files can be found on the *Resources* page of the web interface, in the *Logs* folder.

For this exercise, we will backup only a couple of the log files. Go to *Resources> Logs> core > current* and place a checkmark in the boxes beside *fmeconfiguration.log*, *fmeconnection.log*, and *fmeprocessmonitorcore.log*.



FME Flow

Resources

Resources > Logs > core > current

	NAME	SIZE	DATE
<input type="checkbox"/>	publishers		2025-5-7 16:35:38
<input type="checkbox"/>	subscribers		2025-5-7 16:35:27
<input type="checkbox"/>	tasks		Today at 15:08:24
<input checked="" type="checkbox"/>	fmeconfiguration.log	20.95 KB	Today at 15:08:31
<input checked="" type="checkbox"/>	fmeconnection.log	3.63 KB	2025-5-7 16:35:17
<input type="checkbox"/>	fmmdirctoryserver.log		2025-5-7 16:35:15
<input checked="" type="checkbox"/>	fmeprocessmonitorcore.log	204.26 KB	Yesterday at 16:03:52
<input type="checkbox"/>	fmescheduler.log	9.74 KB	Today at 14:25:01
<input type="checkbox"/>	fmeserver.log	201.23 KB	Today at 15:27:20
<input type="checkbox"/>	fmesharedresource.log	5.87 KB	Today at 08:25:46

Showing 1 to 10 of 10 entries 100

Click *Actions > Download*

A zip file will be downloaded to *This PC > Downloads*

Let's also download logs from our previous jobs.

Go to *Files and Connections> Resources> Logs> engine> current > jobs*

Resources

Resources > Logs > engine > current > jobs > 0

	NAME	SIZE	DATE
<input type="checkbox"/>	job_13.log	10.73 KB	Today at 13:56:12
<input type="checkbox"/>	job_14.log	15.43 KB	Today at 14:25:03
<input type="checkbox"/>	job_14_log.ffd	1.51 KB	Today at 14:25:03

Showing 1 to 3 of 3 entries 100



FME job log files are stored and named using the following format:
\<number>\job_<value>.log

Where value is the job ID and number is the job ID group, which increments by thousand. Logs for job IDs from 0 - 999 are grouped into a 0 directory, Logs for job IDs from 1000 - 1999 are grouped into a 1000 directory, and so on.

Select the *Jobs* folder and Click *Actions > Download*

The screenshot shows the FME Flow 'Resources' interface. The navigation path is 'Resources > Logs > engine > current'. On the left, there's a list of items: a folder named 'jobs' (selected) and a file named 'fmeprocessmonitorengine.log'. Below the list is a page navigation bar with '1' highlighted. On the right, a context menu is open over the 'jobs' folder, containing the following options: Copy, Remove, Download, Move, Properties, and View. To the right of the menu, there's a small table showing two entries with columns for 'DATE' and 'TIME'. At the bottom right of the menu, it says 'Showing 1 to 2 of 2 entries' and has a dropdown set to '100'. The top right of the interface has a question mark icon and a user profile icon.

You can then save all these downloaded log files in the same location where you saved your BackupFMEServer configuration and your configuration files:
C:\FMEFlowData\Output\Results

Log files from FME Flow can be backed up but *cannot be restored* to a new instance of FME Flow. However, it is still a good idea to backup log files in case you need to reference them later on. If you do not backup your log files, they will disappear when you uninstall FME Flow.

FME Lizard

If you want to backup the entire logs folder, you can find it on your file system inside the resources folder of the FME Flow System Share.

Location on a default installation:

C:\ProgramData\Safe Software\FME Flow\resources\logs



3.3.6 Verify Backup for Migration

At this point, during a regular migration workflow, this is when you verify the backup in your new FME Flow installation. **For the purposes of this exercise, we will end the exercise here.**

It is vitally important that you verify the FME Flow backup (by installing a new instance of FME Flow and applying the Backup), *before* you uninstall the original FME Flow.

When restoring the configuration files that are manually backed up, it is strongly suggested to go through each configuration file instead of simply copying the old configuration file into the new FME Flow directory - file structures and parameters may have changed between releases!

Once you uninstall the original FME Flow there isn't an easy way to backtrack unless you regularly perform backups of your entire file system.

If you're doing an upgrade on the same machine you won't be able to test this as you cannot install multiple versions of FME Flow on the same machine.

For this reason, miso would always recommend installing the new version on a new server and thoroughly testing before migrating. Typically when organisations attempt an in-situ upgrade, the risk of complications or post upgrade issues is higher.

FME Lizard

Backup & Restore is available only to users who belong to the fmesuperuser security [role](#).

Congratulations

By Completing this exercise you have learned how to:

- Activate the Backup Schedule task
- Scheduling using CRON
- Perform a manual Backup of your FME Flow instance
- Backup additional Configuration Files
- Backup Log Files



4 Flow Admin – Customisation and Maintenance

4.1 User Management & Permissions

Demonstrates	Review existing FME Flow Users, Roles and their permissions Creating New FME Flow Users and limiting their actions Setting security options in FME Flow
Overall Goal	Create a new user with limited privileges in the FME Flow web interface
Data	None
Workspaces	None

Your company has recently hired a new analyst who will be accessing FME Flow. The new employee doesn't quite fit into the current FME Flow Roles you have in place so you need to create a new role for them.

4.1.1 Connect to FME Flow

Open the FME Flow web interface, either through the Web Interface option on the Windows Start Menu or directly in your web browser and log in using the username and password:

Server URL: *http://localhost*

User Name: *admin*

Password: *FMETraining1234*

Then navigate to *User Management > Users* to see a list of your current users.

NAME	FULL NAME & EMAIL	ROLES	TYPE	STATUS
admin	Administrator	fmesuperuser, fmadmin	System	Active
AdminTest	AdminTest	fmadmin	System	Active
author	Author	fmauthor	System	Inactive
guest	Guest	fmeguest	System	Inactive
user	User	fmuser	System	Inactive



4.1.2 Create a New User

Let's create a new FME Flow user account for the new analyst. Click *New* to add a new user:

The screenshot shows the 'User Management' interface with the 'Users' tab selected. At the top right, there is a blue button labeled '+ Create'. This button is highlighted with a red rectangular box. Below it, there is a search bar and a table listing existing users. The first user listed is 'admin' with the role 'Administrator'.

When prompted, create a new user with the following parameters:

- Username: *NewUser*
- Full Name: *NewUser*
- Password: *NewPassword1*

The screenshot shows the 'New User' creation form. It includes fields for Username ('NewUser'), Full Name ('NewUser'), Account Enabled (switched on), Sharing Enabled (switched on), and Require Password Change on Next Login (switched off). There are also fields for Email ('Email *recommended') and Assigned Security Roles (optional), which is currently empty. The 'Password' section contains a 'Manage Password Policy' button, which reveals a box with two checked requirements: 'Must have a minimum of 12 characters' and 'Must not contain username'. Below this is a 'Confirm Password' field.

4.1.3 Configure Permissions

Now that we have the credentials for our new user account specified, let's set the permissions for what features and items in FME Flow they have access to.



By selecting the *Load Template* button, you have the option to copy permissions from an existing role.

The screenshot shows a user creation interface. At the top, there are fields for 'Username' (containing 'fmeuser') with a note 'Must not contain username', 'Confirm Password' (containing 'password'), and a password strength meter. Below this is a 'Permissions' section. A red box highlights the 'Load Template' button. The permissions listed are:

Module	Access	Create	Manage	More
Analytics	<input type="checkbox"/>			
Automations	<input type="checkbox"/>	<input type="checkbox"/>		<input type="button" value="▼"/>
Broadcast Messages			<input type="checkbox"/>	
Connections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="▼"/>

Select *fmeguest* from the Load Template options.

This can help speed up security configurations.

Notice that *Run Workspace* and *Jobs* have been now granted Access.

Configure permissions to match the following:

- **Jobs:** Access
- **Projects:** Create
- **Repositories:** Create
- **Run Workspace:** Access
- **Schedules:** Create

Notice how by selecting Create, the Access privilege is automatically granted.



Flow Workspace Apps	Access <input type="checkbox"/>	Create <input type="checkbox"/>	<input checked="" type="button"/>
Jobs	Access <input checked="" type="checkbox"/>	Manage <input type="checkbox"/>	<input type="button"/>
Licensing & Engines		Manage <input type="checkbox"/>	
Network Configuration		Manage <input type="checkbox"/>	
Packages	Access <input type="checkbox"/>	Upload <input type="checkbox"/>	
Projects	Access <input type="checkbox"/>	Create <input checked="" type="checkbox"/>	<input type="button"/>
Publications	Access <input type="checkbox"/>	Create <input type="checkbox"/>	<input type="button"/>
Queue Control		Manage <input type="checkbox"/>	
Repositories	Access <input type="checkbox"/>	Create <input checked="" type="checkbox"/>	<input type="button"/>
Resources	Access <input type="checkbox"/>	Create <input type="checkbox"/>	<input type="button"/>
Run Workspace	Access <input checked="" type="checkbox"/>	Advanced <input type="checkbox"/>	
Schedules	Access <input type="checkbox"/>	Create <input checked="" type="checkbox"/>	<input type="button"/>
Security Configuration		Manage <input type="checkbox"/>	
Services		Manage <input type="checkbox"/>	<input type="button"/>

We will now grant appropriate access to specific Resources. We need to limit access to certain resource folder, as we don't want the new user to be able to access all of them.

For **Resources** set it to **Access**

Then expand down the menu, to refine the settings to a finer degree.

Set the parameters so that the new user has *Full Access* to *Data* and *Temp* folders, but only *Can View* the *Logs* resource folder:



User Management

Packages Access Upload

Projects Access Create

Publications Access Create

Queue Control Manage

Repositories Access Create

Resources Access Create

Search

NAME	OWNER	ACCESS	LIST	WRITE	UPLOAD	REMOVE	SUMMARY
Backup	admin	<input type="checkbox"/>	<input type="button" value="None"/>				
Dashboards	admin	<input type="checkbox"/>	<input type="button" value="None"/>				
Data	admin	<input checked="" type="checkbox"/>	<input type="button" value="Full Access"/>				
Engine	admin	<input type="checkbox"/>	<input type="button" value="None"/>				
Logs	admin	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Can View"/>
NPG Deltas	admin	<input type="checkbox"/>	<input type="button" value="None"/>				
NPG Output	admin	<input type="checkbox"/>	<input type="button" value="None"/>				
System	admin	<input type="checkbox"/>	<input type="button" value="None"/>				
Temp	admin	<input checked="" type="checkbox"/>	<input type="button" value="Full Access"/>				

Select OK at the bottom to create the user.

4.1.4 Test the New User Account

It's important to verify the options we set have been honoured.

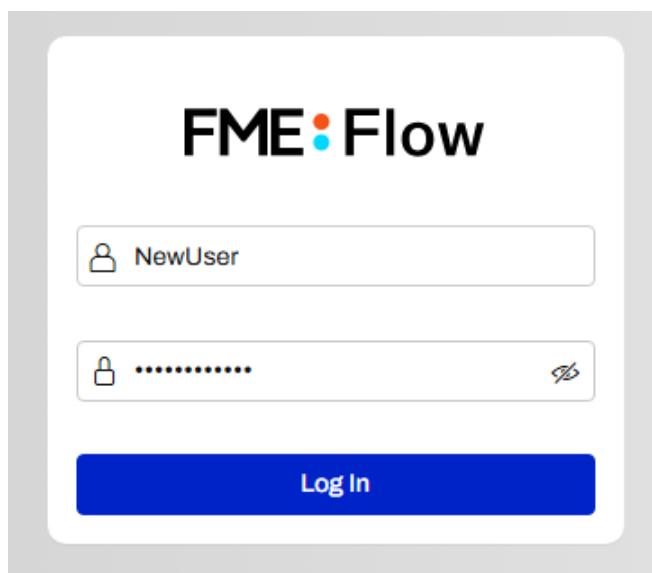
Logout of the admin account



The screenshot shows the FME Flow User Management interface. On the left is a sidebar with options: Run Workspace, Automations, Streams, Flow Apps, Schedules, Jobs, and Workspaces. The main area is titled "User Management" and has tabs for Users, Roles, and Items. A search bar is present. Below it is a table with columns: NAME, FULL NAME & EMAIL, and ROLES. Two users are listed: "admin" (Administrator, roles: fmesuperuser, fmeadmin) and "AdminTest" (AdminTest, role: fmeadmin). On the far right, a dropdown menu for "admin" shows options: Change Password, Update Email, Reset Preferences, Manage Tokens, Enable Dark Mode, and Log Out. The "Log Out" button is highlighted with a red box.

Then login using the credentials for the new user account we just created:

Username: *NewUser*
Password: *NewPassword1*



Notice how this user only sees a limited set of menu options: Run Workspace, Schedules, Jobs, Projects and Resources.



The screenshot shows the FME Flow application interface. On the left is a dark sidebar with navigation links: 'Run Workspace', 'Schedules' (which is currently selected and highlighted in blue), 'Jobs', 'Workspaces', 'Projects', and 'Resources'. The main content area is titled 'Dashboard'. It features a 'Create Schedule' button with a plus sign. Below it is a section titled 'Last Published Workspa' with a message 'You have not published any workspace'. At the bottom is a section titled 'Last Updated Items'.

Let's try to access the Schedules. Click on *Schedules > Manage Schedules*.

The screenshot shows the 'Schedules' page within the FME Flow application. The sidebar remains the same as the previous dashboard view. The main area is titled 'Schedules'. It includes a 'Filters' section with a search bar and buttons for '+ Create' and 'Manage Tags'. Below this is a table with columns: NAME, TAGS, START TIME, END TIME, RECURRENCE, WORKSPACE, STATUS, TOTAL RUNS, OWNER, and SHARE. A message 'No Items Available' is displayed at the bottom of the table area.

We can create new schedule items but can't view or access the *Backup_Configuration* or *DashboardStatisticsGathering* tasks belonging to the Administrator.

Let's now take a look at Resources.

Notice that:

- we can access the *Logs* folder but can't create anything new within it.
- We can access the *Data* and *Temp* folders, and can create/upload new content within them both

Also, within *Workspaces*, we can only access the *Samples* repository

Let's logout as NewUser and switch back to Admin:

Username: admin

Password: FMETraining1234

Whereas if we are the administrator, we have access to all areas and functionality:



FME Flow

Dashboard

Create Automation + Create Workspace App + Create Schedule + Create Project +

Last Published Workspaces

SSSI Constraint.fmw 3 days ago	Trigger test.fmw 17 weeks ago	easyTranslator.fmw 31 weeks ago	earthquak...usion.fmw 31 weeks ago	austinDownload.fmw 31 weeks ago
--------------------------------	-------------------------------	---------------------------------	------------------------------------	---------------------------------

Last Updated Items

NAME	TYPE	OWNER	LAST UPDATED
Backup_Configuration	Schedule	admin	2025-5-9 14:43:38
Delta Automation	Automation	admin	2025-4-30 08:49:15
DashboardStatisticsGathering	Schedule	admin	2024-10-2 18:24:52

Job Overview

Automations Overview

Favorites

You don't have any favorites.

Resources

Gain new skills & knowledge to solve your data challenges from 300+ live & on-demand webinars:

Register Today

Safe Software

Congratulations

By Completing this exercise you have learned how to:

- Create a new user on an FME Flow installation
- Set permissions from an existing FME Flow Role
- Test a newly created account to ensure it works correctly
- Review an existing FME Flow Users, Roles and their permissions



4.2 Job Queues

Demonstrates	Creating a job queue and assigning jobs to queues
Overall Goal	Send a job through a specific FME Engine
Data	None
Start Workspace	C:\FMEFlowData\Workspaces\4.02-Admin-JobQueues-Begin.fmw
End Workspace	C:\FMEFlowData\Workspaces\Complete\4.02-Admin-JobQueues-Complete.fmw

Queue control is configured through three mechanisms that work together to ensure the right engines run your jobs.

- Job Routing Rules: The criteria for a job to meet in order to qualify for a specific queue. Criteria can be based on performance metrics of workspaces, which are reported on the Workspaces page. Or, the criteria can be based on other properties of workspaces, such as name or repository.
- Engine Assignment Rules: The assignment of engines to queues based on properties of engines or queues. Alternatively, engines can be assigned to queues by engine name.
- Queues: The FME Flow mechanism that holds jobs and routes them to engines based on job routing and engine assignment rules.

Your GIS department is using FME Flow and carrying out jobs with the web interface. However, jobs are always being queued, even the quick translations. You are wondering if there is a way to set aside one of the FME Flow Engines for quick translations, so that you and your fellow technical analysts do not have to wait too long for your smaller jobs to complete.

With job queues, you can allocate specific engines to specific tasks. So, let's set that up.

4.2.1 Setup Training Repository

If it doesn't already exist, create a new Repository called *Training* within the Workspaces section:

The screenshot shows the FME Flow interface with the 'Workspaces' section selected. On the left, a sidebar lists various workspace components like Run Workspace, Automations, Streams, Flow Apps, Schedules, Jobs, Workspaces, Projects, Connections & Parameters, Resources, and Analytics. The 'Workspaces' item is highlighted. The main area is titled 'Workspaces' with a search bar and a toolbar containing 'Create', 'Upload', 'Edit', and 'Remove' buttons. A table lists existing repositories: 'Dashboards' (FME Flow Dashboards Repository, owner admin), 'Samples' (FME Flow Samples Repository, owner admin), 'Training' (highlighted with a red box, owner admin), and 'Utilities' (FME Flow Utilities Repository, owner admin). The 'Create' button is visible at the top of the repository list.



4.2.2 Create a Job Queue

Job queues are created in the FME Flow web interface. Under the Admin section of the main menu navigate to *Engine Management > Queues*. **Note:** The engine names will be specific to the machine Flow is installed on, so may differ from the “localhost_Engine1” as shown here:

The screenshot shows the FME Flow web interface. On the left, there's a dark sidebar with various navigation options like 'Jobs', 'Workspaces', 'Projects', etc. Under 'ADMIN', there are 'Analytics', 'User Management', 'System Configuration', and 'Backup & Restore'. A prominent red box surrounds the 'Engine Management' section, which includes 'Overview', 'Engines', and 'Queues'. The 'Queues' link is also highlighted with a red box. The main content area has a header 'Engine Management' with a 'Data last updated at 17:09 on May 12th'. Below it, tabs for 'Overview', 'Engines', 'Queues' (which is active and highlighted), 'Job Routing Rules', 'Engine Assignment Rules', 'Active Periods', and 'Remote Engine Services'. A second red box highlights the 'Queues' tab. The 'Queues' section title is 'Queues' with a subtitle 'Queues are where submitted jobs run and wait in line to run.' It features a 'Create' button, 'Edit Priorities', 'Reset Statistics', and a refresh icon. There's a search bar, filters for 'Job Status' and 'Engine Type', and a sorting option 'Sort By: Most Jobs Running'. Below this, a table shows one entry: 'Default' (selected), '0 Running', '0 Queued', 'Priority: 6 (Medium)', and two engine names: 'localhost_Engine1' and 'localhost_Engine2'. At the bottom, it says 'Showing 1 to 1 of 1 entries' with navigation arrows. The 'Streams' section below is titled 'No Active Streams' with a note that streams require an engine.

Click on the *Create* button to create a new queue.

This is a zoomed-in view of the 'Queues' section from the previous screenshot. The 'Create' button is highlighted with a red box. The rest of the interface elements are visible but smaller.



Give it the name, e.g. *Quick Translations* and assign a job *Priority* of 5.
Give it the Description of '*FME Flow Queue for Quick Translations*'
Click **OK**.

Engine Management ?

Data last updated at 16:44 on May 12th

Overview | Engines | **Queues** | Job Routing Rules | Engine Assignment Rules | Active Periods | Remote Engine Services

Queues > Create

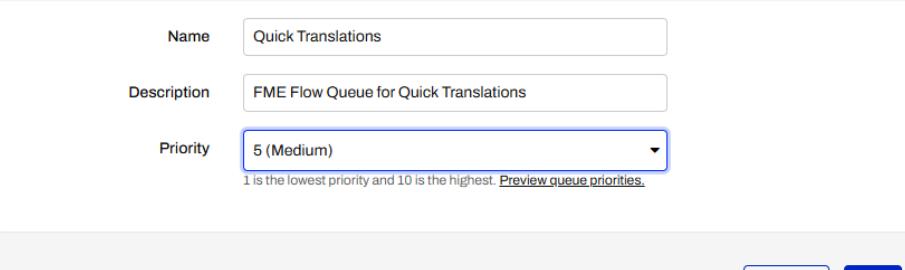
Create Queue

Queues are where submitted jobs run and wait in line to run. Engines are assigned to queues based on routing rules and priority.

Name	Quick Translations
Description	FME Flow Queue for Quick Translations
Priority	5 (Medium)

1 is the lowest priority and 10 is the highest. [Preview queue priorities](#).

Cancel **OK**



The new entry will be added to the Engine Management page:

Engine Management ?

Data last updated at 17:10 on May 12th

Overview | Engines | **Queues** | Job Routing Rules | Engine Assignment Rules | Active Periods | Remote Engine Services

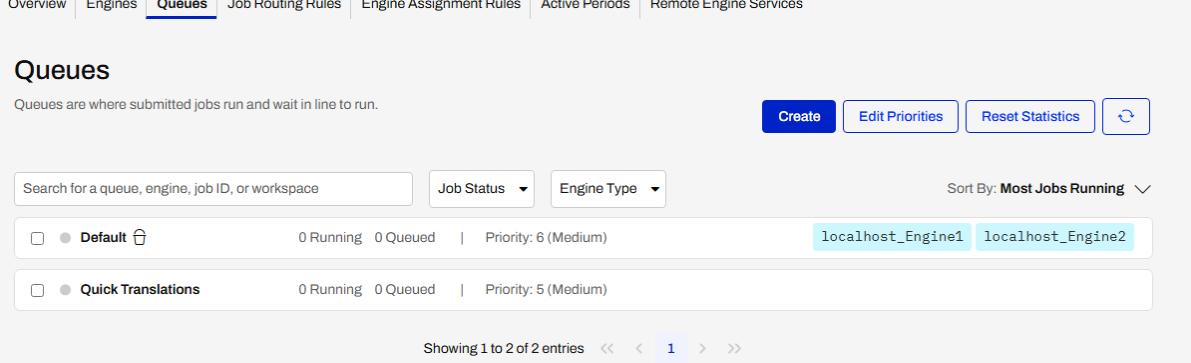
Queues

Queues are where submitted jobs run and wait in line to run.

Create **Edit Priorities** **Reset Statistics**

Search for a queue, engine, job ID, or workspace	Job Status	Engine Type	Sort By: Most Jobs Running
<input type="checkbox"/> <input checked="" type="radio"/> Default	0 Running 0 Queued Priority: 6 (Medium)	localhost_Engine1 localhost_Engine2	
<input type="checkbox"/> <input checked="" type="radio"/> Quick Translations	0 Running 0 Queued Priority: 5 (Medium)		

Showing 1 to 2 of 2 entries << < 1 > >>



Queue control is a mechanism for targeting FME Engines to run specific jobs. The reasons for using queue control include:

- Controlling the priority of job requests.
- Sending a job to an FME Engine in close proximity to a data source.
- Reserving FME Engines for scheduled tasks.
- Reserving Dynamic Engines for specific jobs.
- Reserving some FME Engines for quick jobs, and others for high-load jobs.
- Sending a job to an FME Engine that supports a particular format.



4.2.3 Assign Jobs to Queue

Next, we need a way of assigning all the Quick Translations jobs (from our Training repository) to the Quick Translations queue. This can be handled in a couple of ways:

- If you have specific Repositories set up to store the Quick Translations jobs, you can set up a Job Routing Rule to send all jobs from those repositories to the Quick Translations queue
- Alternatively, the queue can be set when configuring the job. This is useful if there are specific jobs that need to be sent to the Quick Translations queue. For example, if you use the job in an Automation or a Schedule, you can set the Job Queue from the *Advanced* options for the Workspace.

For the purposes of this exercise we'll treat the Training repository as the repository containing our Quick Translation workspaces. (we'll publish a workspace into there later, and test)

Click on *Job Routing Rules* then click on the *Create* button

The screenshot shows the 'Engine Management' interface. At the top, there's a navigation bar with tabs: Overview, Engines, Queues, **Job Routing Rules**, Engine Assignment Rules, Active Periods, and Remote Engine Services. The 'Job Routing Rules' tab is highlighted with a red box. Below the tabs, there's a header with a question mark icon, a user profile icon, and a 'Data last updated at 17:11 on May 12th' message. The main content area has a table header with columns: NAME, RULE, QUEUE, TYPE, ENABLED, and PRIORITY. A blue 'Create' button with a plus sign is located in the top right corner of this area, also highlighted with a red box. The table body below the header shows the message 'No Items Available'.

Set the parameters as follows:

Type = *Repository*
Repositories = *Training*
Queue = *Quick Translations*



Engine Management



Data last updated at 17:11 on May 12th

Overview | Engines | Queues | **Job Routing Rules** | Engine Assignment Rules | Active Periods | Remote Engine Services

[Job Routing Rules](#) > Create

Create Job Routing Rule

Name	Job Routing Rule
Type	Repository
Repositories	Training
Queue	Quick Translations
Enabled	<input checked="" type="checkbox"/>

Cancel **OK**

Click OK to submit.

Finally, we need to configure the Engine Assignment Rules to attach the correct engines to the Quick Translations queue.

4.2.4 Assign FME Engines

At the moment, any jobs that are run on FME Flow will be sent to the Default queue. Now that the job queue has been created, specific FME Engines – and repositories – can be assigned to the queue.

Looking at the *Engines* page, all engines will have a property with the host name for the engine machine.



The screenshot shows the FME Flow interface with the 'Engines' tab selected in the navigation bar. The main content area is titled 'Engines' and contains a message: 'Engines will appear below when ready. The engine list must be refreshed manually.' Below this is a search bar and a dropdown menu for 'Engine Status'. Under 'Standard Engines', there are two entries: 'localhost_Engine1' and 'localhost_Engine2'. Under 'CPU-Usage Engines', it says 'No CPU-Usage Engines'.

Engines can be assigned to queues based on either engine properties, or engine names. Engine properties by default are the OS, the build of FME Flow, the license type, etc. Users are also able to add their own engine properties.

Jobs are routed to queues based on user-defined rules. The traditional method of routing by repository is still available, but in newer versions of FME Flow there is the additional option to route based on workspace statistics. Workspace statistics track runtime information such as peak memory usage, % CPU utilization and more.

We'll setup a straight-forward engine assignment to our Quick Translations queue.

Select *Engine Management > Engine Assignment Rules*

The screenshot shows the 'Engine Assignment Rules' tab selected in the navigation bar. The main content area has a toolbar with a 'Create' button (which is highlighted with a red box) and other buttons like 'Set Limit' and 'Actions'. Below the toolbar is a table header with columns: NAME, RULE, QUEUES, TYPE, ENABLED, and ACTIVE PERIODS. The table body contains the message 'No Items Available'.

Click the *Create* button.

Change the Type to *Name*.

You'll then be able offered the Engines in a drop-down. Select one of the available engines.

Finally, from the Queues dop-drop, select *Quick Translations*



Engine Management



Data last updated at 17:21 on May 12th

Overview | Engines | Queues | Job Routing Rules | **Engine Assignment Rules** | Active Periods | Remote Engine Services

[Engine Assignment Rules](#) > Create

Create Engine Assignment Rule

Name	Engine Assignment Rule
Type	Name
Engines	localhost_Engine2
Queues	Quick Translations
Enabled	<input checked="" type="checkbox"/>
Active Periods	

Cancel **OK**

Click OK to submit.

The Engine assignment rule has now been setup.

Engine Management



Data last updated at 17:23 on May 12th

Overview | Engines | Queues | Job Routing Rules | **Engine Assignment Rules** | Active Periods | Remote Engine Services

+ Create **Set Limit** **Actions** **Print**

<input type="checkbox"/> NAME	RULE	QUEUES	TYPE	ENABLED	ACTIVE PERIODS
<input type="checkbox"/> Engine Assignment Rule	localhost_Engine2	Quick Translations	Name	<input checked="" type="checkbox"/>	

<< < 1 > >> Showing 1 to 1 of 1 entries 100

So, to summarise, we have completed the following steps:

- Created a Job Queue – called Quick Translations
- Created a Job Routing Rule – to assign jobs from the Training repository workspaces to the Queue called Quick Translations
- Assigned one Engine to our Queue Quick Translations



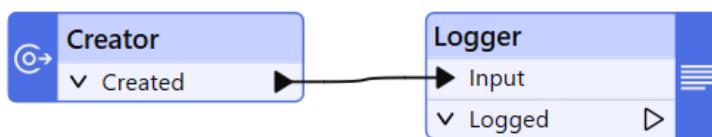
Next, we will test our Job Queue configuration. We'll create a workspace in FME Desktop, publish to FME Flow (into the Training repository), run the workspace and check that the appropriate engine is used to run the job.

4.2.5 Create Workspace in Desktop and Publish to Flow

To confirm that the job queue is operating correctly, we can run a workspace in FME Flow that specifies the Quick Translations queue. For this exercise, we do not need a complicated workspace, just a small workspace that will run in a quick time.

Open FME Workbench and open the existing workspace:
`C:\FMEFlowData\Workspaces\4.02-Admin-JobQueues-Begin.fmw`

Add a Creator transformer and connect it to a *Logger* transformer.

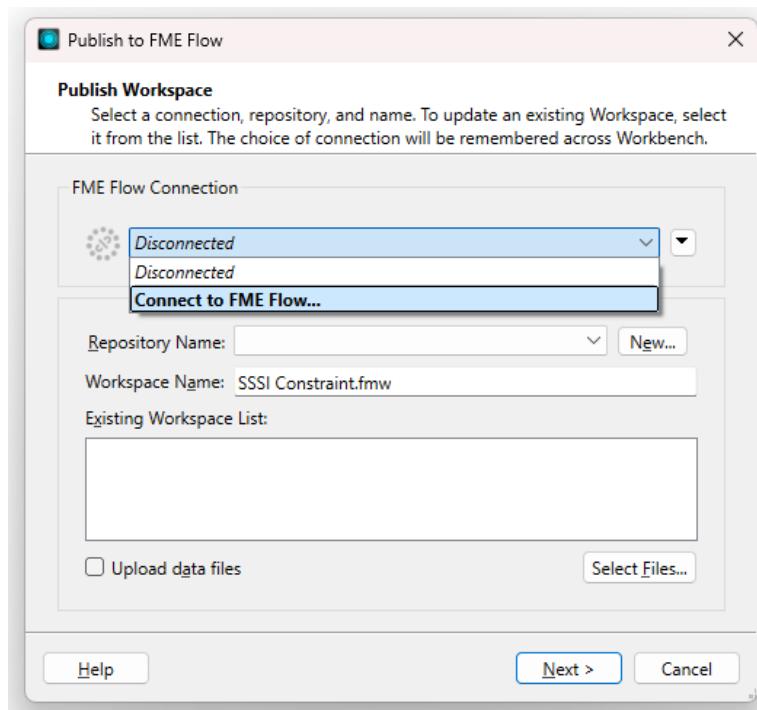


Then save a new copy of the workspace:
`C:\FMEFlowData\Output\My Workspaces\JobQueue_Test.fmw`

We'll need to create a new Flow connection, so in the FME Flow Connection section select *Publish*:



In the dropdown select Connect to FME Flow



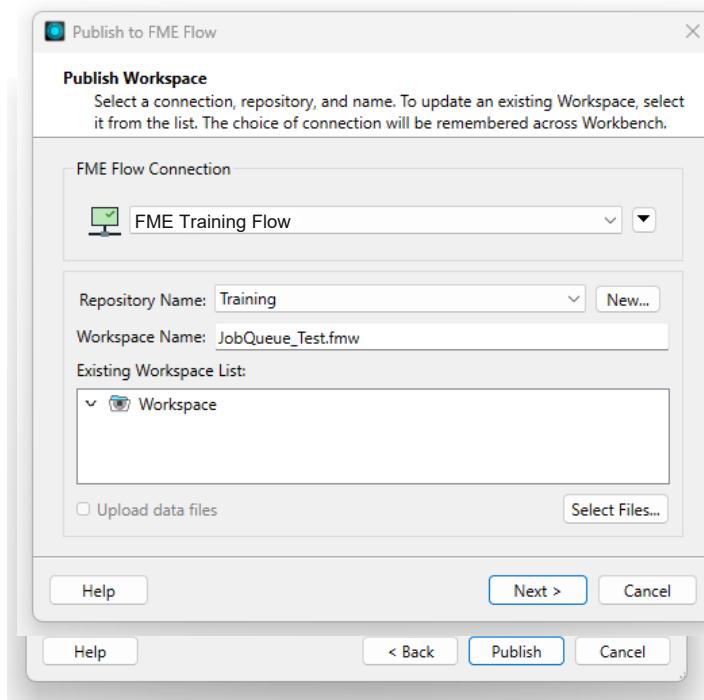


Then set the connection parameters for our training instance as follows:

Connection Name: *Training FME Flow*
Server URL: *http://localhost*
User Name: *admin*
Password: *FMETraining1234*

Publish the workspace to:

- Repository Name: *Training* (If Training is not there, select “New...” and create it)
- Workspace Name: *JobQueue_Test.fmw*
- Service: *Job Submitter*



4.2.6 Run Workspace to Test Job Queue

Back in the FME Flow Web Interface, navigate *Run Workspace* and select the *JobQueue_test.fmw* found within the *Training* repository.



FME:Flow

Run Workspace

Automations

Streams

Flow Apps

Schedules

Jobs

Workspaces

Projects

Connections & Parameters

Resources

Run Workspace

Training/JobQueue_Test

Workspace Actions ▾

Repository: Training

Workspace: JobQueue_Test.fmw

Service: Job Submitter

Email results to (optional)

Advanced

Run

Once the workspace has successfully completed, examine the Completed Jobs entry, within *Jobs > Completed*

FME:Flow

Run Workspace

Automations

Streams

Flow Apps

Schedules

Jobs

Completed

Queued

Running

Dashboards

Jobs

Completed | Queued | Running

Filters

ID	WORKSPACE	REPOSITORY	USERNAME	RAN BY	STATUS	LOGS	STARTED	FINISHED	SOURCE NAME	SOURCE TYPE
16	JobQueue_Test.fmw	Training	admin	admin			Today at 18:13:06	Today at 18:13:06		

<< < 1 > >>

Showing 1 to 1 of 1 entries 100 ▾

Within the Job's log, the engine used to run the job will be identified. However, a more efficient way to check which Engines have been used to run jobs, is to modify the columns displayed within the Jobs page:

Click on the *Customize Columns* button



The screenshot shows a list of completed jobs. At the top right of the table header, there is a button labeled 'Customize Columns' with a gear icon. This button is highlighted with a red box. Below the table, there are filters for 'STARTED', 'FINISHED', 'SOURCE NAME', and 'SOURCE TYPE', along with date pickers for 'Today at'.

Then add *Engine* to the *Customize Columns* section:

A modal dialog titled 'Customize Columns' is shown. It lists several columns with checkboxes: 'Username', 'Ran By', 'Status', 'Logs', 'Engine' (which is checked and highlighted with a red box), 'Started', 'Finished', 'Source Name', and 'Source Type'. At the bottom are 'Restore Default', 'Cancel', and 'Apply' buttons.

Then click *Apply*

The Engine column has now been added to the Jobs page, so we can easily see which engine was used to process each job.

The 'Jobs' page is shown again, but now the 'ENGINE' column is present in the table header. The table row for job ID 16 shows 'localhost_Engine2' in the ENGINE column, which is highlighted with a red box. The table also includes columns for ID, WORKSPACE, REPOSITORY, USERNAME, RAN BY, STATUS, LOGS, STARTED, FINISHED, and SOURCE NAME.

You want to make sure that the JobQueue_Test job was routed to the correct engine and not just the first available engine.



Also, within the Job details (click on the job), within the REQUEST DATA section, it confirms the Queue:

The screenshot shows the 'Jobs' page in FME Data Inspector. A specific job, 'JobQueue_Test.fmw', is selected. The 'REQUEST DATA' section is highlighted with a red box. In this section, under 'TRANSFORMATION MANAGER DIRECTIVES', there is a table where the 'Queue' parameter is set to 'Quick Translations'. This row is also highlighted with a red box.

PARAMETER	VALUE
Job Id	16
Queue	Quick Translations
Max Job Runtime	-1
Max Time In Queue	-1

When testing, you may consider submitting the job multiple times for an added verification step, and peace of mind, but this isn't necessary of course!

FME Lizard

When working with queue control, keep in mind the following:

- You can assign priorities to queues. Depending on timing, jobs that route to higher-priority queues may be submitted before those in lower-priority queues.
- A job routing rule can apply to only one queue. However, a queue can be assigned to multiple rules. If a job meets the criteria for more than one rule, the rules that takes precedence are listed in order on the Job Routing Rules tab.
- When a job is submitted, it may qualify for more than one queue. However, if that same job is resubmitted, it is assigned the same queue from which it ran previously.
- Jobs that do not route to any user-defined queues route to the Default queue.
- For a metric-based job routing rule to take effect, the workspace must have run enough times since statistics are initially collected or reset to generate a statistically significant sample. The required minimum number of jobs to run for a significant sample may vary between 30 to 100, depending on variability of data



and the degree of precision required by the rule (for example, minutes versus seconds). The more variable the input data, and the higher degree of precision that is required of this data, the larger the sample size that is required. If a job routing rule does not reference a statistically significant sample of jobs run, the next applicable rule takes effect, by priority, or the job routes to the Default queue.

- *Explicitly defining a queue, such as on the Run Workspace page under “Advanced”, a Run a Workspace action, in Schedules, or through Job Directives, effectively bypasses job routing rules.*
- *You can view the queues to which your FME Engines are assigned on the Engines tab. Additionally, to assist in balancing engine load, you can set a limit on the number of queues to which engines can be assigned.*

Congratulations

By Completing this exercise you have learned how to:

- Create a Job Queue
- Successfully route a job through a specific engine



4.3 Versioning Workspaces

Demonstrates	How to version a workspace that has been published to FME Flow
Overall Goal	Version a workspace
Start Workspace	C:\FMEFlowData\Workspaces\4.03-Admin-Versioning-Begin.fmw
End Workspace	C:\FMEFlowData\Workspaces\Complete\4.03-Admin-Versioning-Complete.fmw

Your GIS department has two staff members that regularly author and make changes to their own workspaces and others when necessary. On a few occasions, changes were made to workspaces that caused a workspace to fail after the edit was made. The original working workspace was not backed up and was lost. This resulted in extra time to uncover the cause and restore the previous working workspace.

Version control allows you to access previous versions of your Repositories files

Your Management has learned about the Version Control feature in FME Flow and wonder if it might reduce these issues from occurring. Your task is to enable Version Control and ensure it is functioning correctly.

4.3.1 Enable Version Control

Open the FME Flow web interface, either through the Web Interface option on the Windows Start Menu or directly in your web browser, and log in using the username **admin** and password **FMETraining1234**.

You can enable Version Control in FME Flow by navigating to the *ADMIN > System Configuration* section, then selecting *Version Control*.

The screenshot shows the FME Flow web interface with the left sidebar menu expanded. Under the 'ADMIN' section, the 'System Configuration' item is selected, which is currently expanded to show sub-options: Licensing, Security, Network & Email, System Cleanup, System Events, Broadcast Messages, and Version Control. The 'Version Control' option is highlighted with a blue background. The main content area is titled 'Version Control'. It contains a toggle switch labeled 'Enabled' which is turned off. Below the switch is a section titled 'Remote Settings (optional)' with two buttons: 'Push To Remote' and 'Fetch From Remote'. There are two input fields: 'Remote Repository URL' and 'Remote Token', both of which are currently empty. A 'Save' button is located at the bottom right of this section.



Switch the *Enabled* toggle to on (so that it displays blue). This has now enabled the Version Control functionality.

We do not need to update the *Remote Settings* for basic local Version Control functionality. So leave those parameters blank. You do not need to select “Save” and it is disabled at this point anyway.

The screenshot shows the FME Flow interface with the 'Version Control' page open. The left sidebar includes 'Workspaces', 'Projects', 'Connections & Parameters', 'Resources', 'Analytics', 'User Management', 'System Configuration' (which is expanded to show 'Licensing', 'Security', 'Network & Email', 'System Cleanup', 'System Events', 'Broadcast Messages', and 'Version Control'), and 'ADMIN' options. The main 'Version Control' page has a title bar with a question mark icon and a user profile icon. It features an 'Enabled' toggle switch (which is blue, indicating it's turned on). Below it is a 'Remote Settings (optional)' section with two input fields: 'Remote Repository URL' and 'Remote Token', both of which have placeholder text ('URL (optional)' and 'Token'). There are also 'Push To Remote' and 'Fetch From Remote' buttons. A large 'Save' button is located at the bottom right of the configuration area.

FME Lizard

To use version control, once enabled, you must explicitly commit files.

Optionally, when you configure version control with a remote Git repository on GitHub, you can maintain backups of your versions outside of FME Flow. These backups are useful if you perform a backup and restore operation of your FME Flow (including as part of an upgrade), because version history is not maintained in the restored FME Flow.

FME Lizard

Pushing Updates - When you configure version control with a remote Git repository, you must push your latest file updates to the repository if you want to maintain backup copies outside of FME Flow.



Fetching Updates - When you fetch updates from the remote Git repository, you update the latest history of revisions from other team members who have pushed updates. You should perform a fetch before you perform a push to ensure your history is current.

Note - Fetching updates does not change your working copy of any Repositories files. To update your working copy, download a revision, and republish it to FME Flow.

Note - You can view updates only for repositories you have added to your FME Flow, and on which you have Read permission. For more information, see *Users or Roles*.

4.3.2 View Workspaces in Repositories

Navigate to the *Training* repository within *Workspaces*

There is now a new *History* section relating to the workspace Version Control:

The screenshot shows the FME Flow interface with the sidebar navigation. Under 'Workspaces', the 'Training' repository is selected. The main area displays a table of workspace details. The 'History' button in the toolbar is highlighted with a red box.

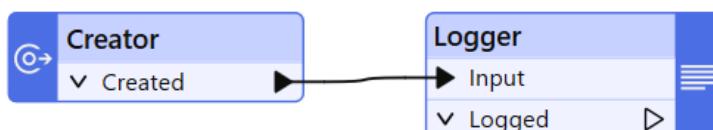
Type	Name	Files	Last Updated	Total Runs	Average Elapsed Time	Average % CPU	Average CPU Time	Average Peak Memory Usage
Job Queue	JobQueue_Test.fmw	0	Today at 18:10:25	2	00:00:01.39	64.74	00:00:00.90	7.36 MiB
SSSI Constraint	SSSI Constraint.fmw	0	2025-5-9 13:56:00	1	00:00:01.77	63.56	00:00:01.12	6.77 MiB

4.3.3 Create a Workspace

Next, lets create a simple workspace that you can use to test the Version Control feature.

Open FME Desktop Workbench and open the existing workspace:
C:\FMEFlowData\Workspaces\4.03-Admin-Versioning-Begin.fmw

After the Creator transformer add a Logger to the workspace.



Then save a new copy of the workspace:



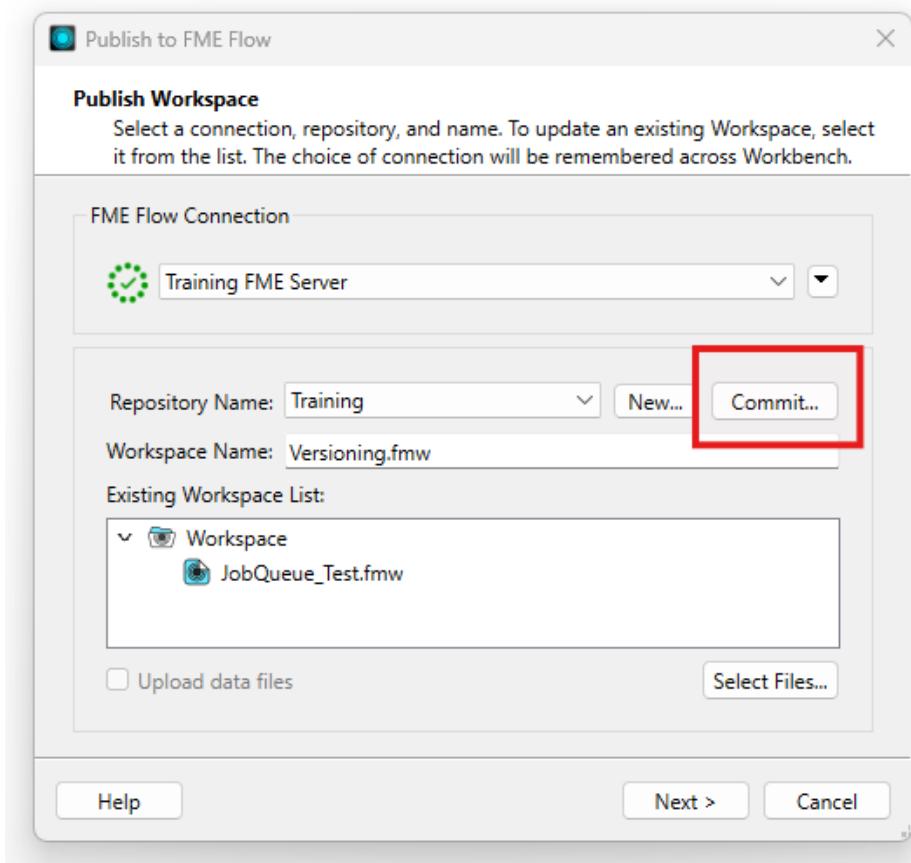
C:\FMEFlowData\Output\My Workspaces\Versioning.fmw

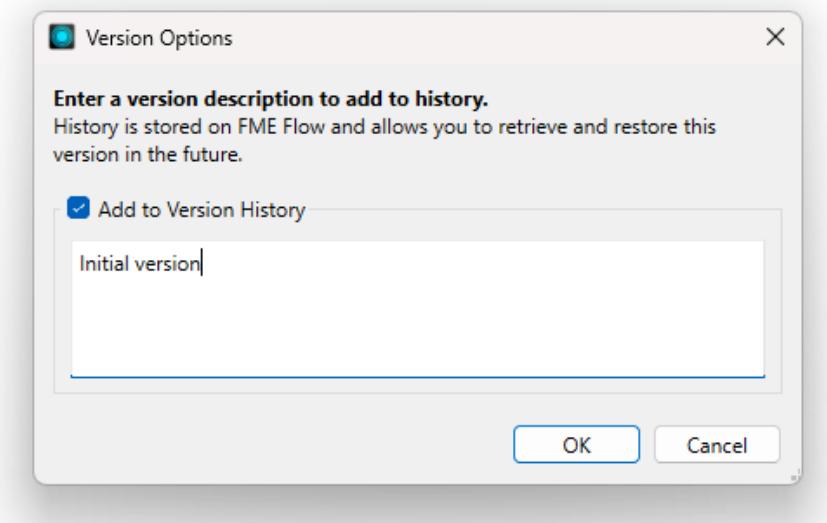
Publish the workspace to FME Flow by selecting *Publish* to FME Flow from the File menu in FME Workbench:

When prompted in the Publish to FME Flow Wizard, connect to your FME Flow then publish the workspace to:

- Repository Name: *Training*
- Workspace Name: *Versioning.fmw*

Click the *Commit...* button





Click OK

Click Next and then select the Register Service of *Job Submitter*. Then *Publish*.

4.3.4 Review Version History in the Web UI

Return to the FME Flow web interface. Then navigate to the *Training* repository within Workspaces

Next click the *checkbox* next to the workspace called *Versioning* (that you created in the previous steps), then click the *History* button.

Type	Name	Files	Last Updated	Total Runs	Average Elapsed Time	Average % CPU	Average CPU Time	Average Peak Memory Usage
Job Queue	JobQueue_Test.fmw	0	Today at 18:10:25	2	00:00:01.39	64.74	00:00:00.90	7.36 MiB
Versioning	Versioning.fmw	0	Today at 18:53:44	0		0		

The following dialog should be displayed showing the recent Version Control entries for this Repository.



History for Versioning.fmw

Search History

May

Versioning.fmw
Initial version
admin committed 2 minutes ago

6d264cc7

OK

Click **OK** to dismiss the dialog.

4.3.5 Downloading a Versioned Workspace

When it is necessary to download a versioned workspace, and you want to retrieve a particular version you must do this from the Web UI. FME Workbench cannot select a versioned workspace through the Download Wizard. Download the Version 0.1 of the Workspace we just published.

Back in the FME Flow Web UI, navigate to *Workspaces > Training*

Next tick the box next to the *Versioning.fmw*.

Click on the *History* button

Let's download this workspace and open it in FME Desktop. In the dialog below, click on the *Download icon*

History for Training

Search History

May

Versioning.fmw
Initial version
admin committed 3 minutes ago

6d264cc7

OK

The workspace will now download.

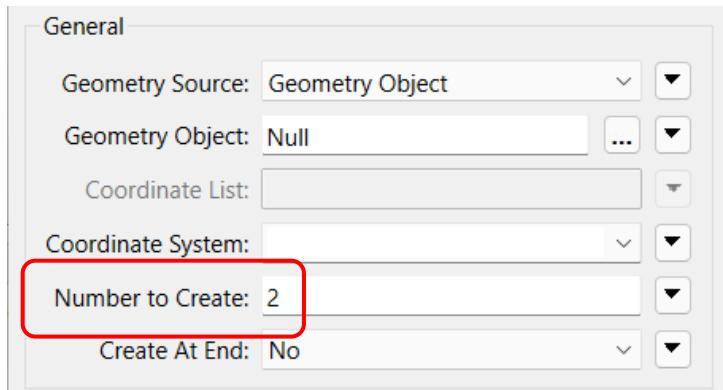
4.3.6 Edit Workspace and Republish Same Workspace

Next, we want to make a small edit to the workspace and republish it to FME Flow. We will then visit the Web UI and Version the workspace thereafter having successfully tested that it works.

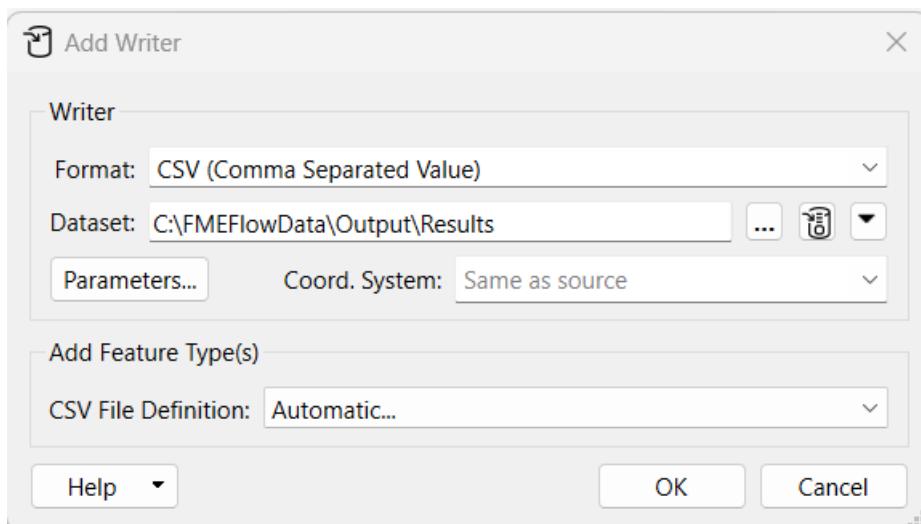


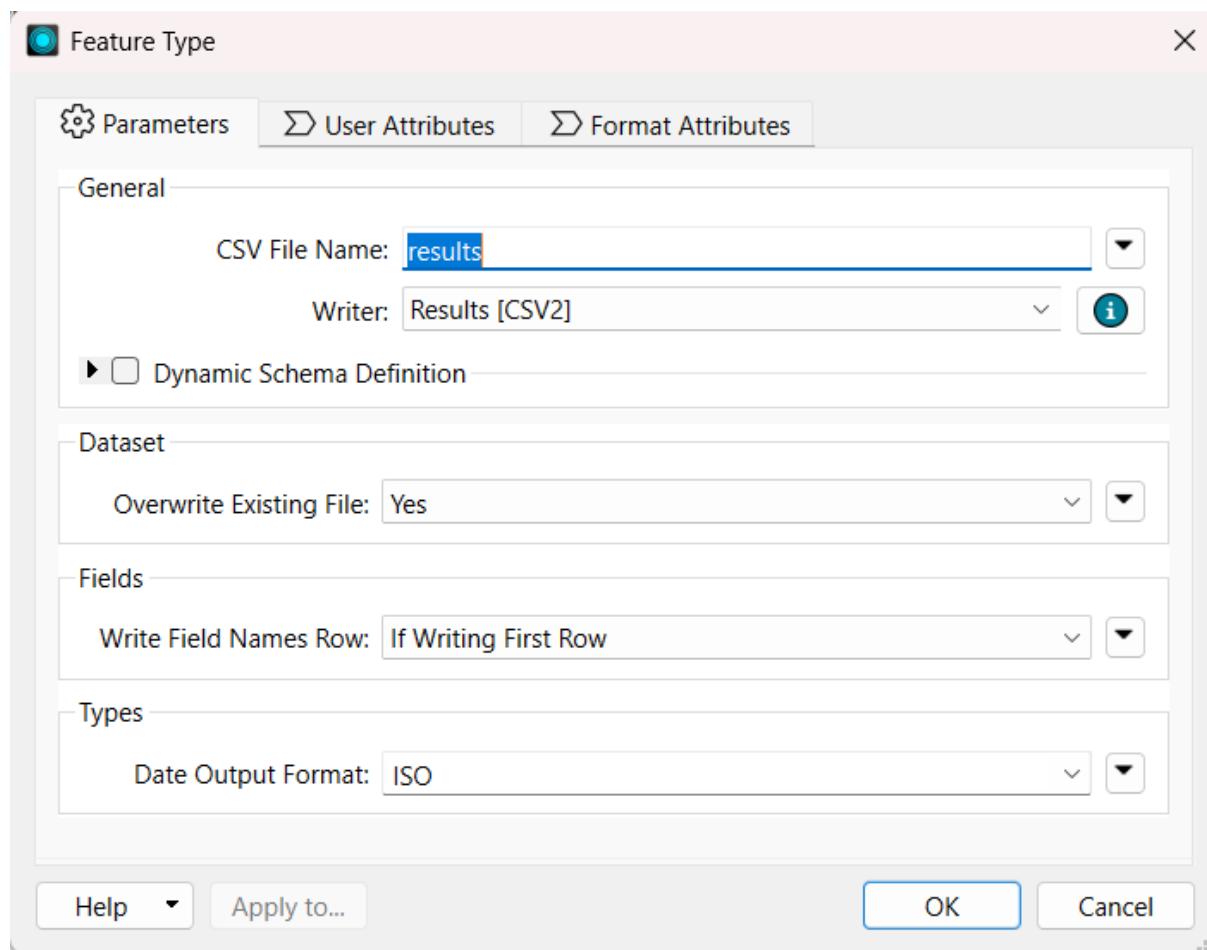
Open the workspace that we just downloaded into FME Desktop Workbench.

Edit the Creator transformer to create 2 features:



Now lets add a CSV Writer, and create a CSV file called 'results.csv' outputting to the directory C:\FMEFlowData\Output\Results



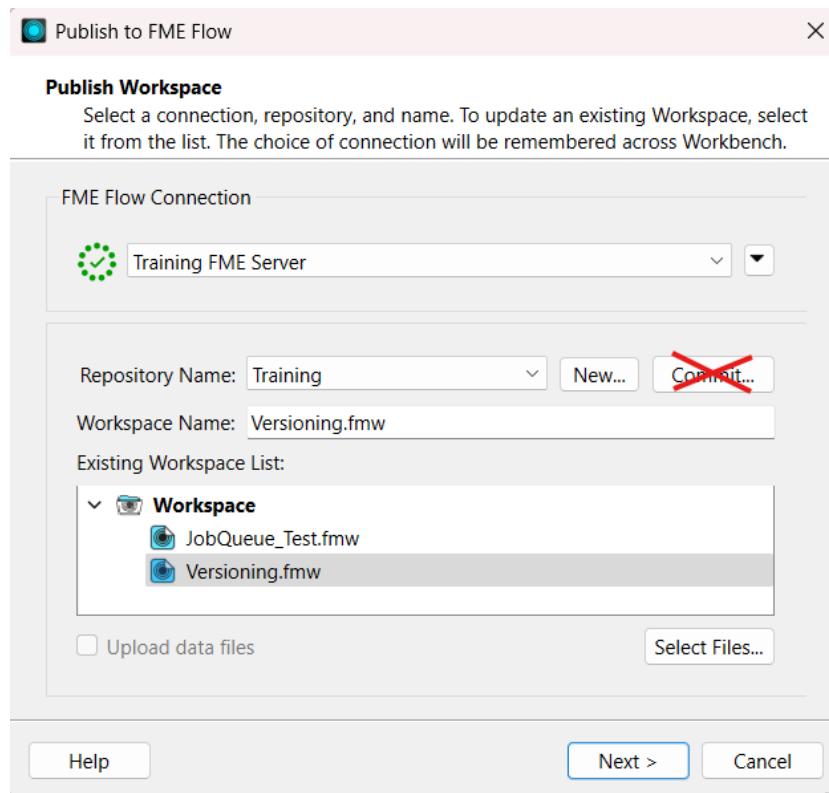


Connect the CSV writer feature type to the Logger:



Save the workspace and *Run* the workspace (to test it). Now *Publish* it to FME Flow.

This time, **DO NOT** use the commit button on the publish wizard. You will get a warning that the workspace already exists in the repository, this is ok since we have version control enabled. Click *Replace* to update the workspace. We will commit the workspace using the Web UI in the next step.



4.3.7 Version the Workspace using FME Flow Web UI

We've published the workspace and our colleague has confirmed the workspace runs. Now we will create a new version for the workspace using the Web UI. Log into FME Flow Web UI with the admin user.

Navigate to *Workspaces* in the left menu and navigate to the *Training* repository. (refresh your web browser if already on that page)

*Tick the box next to the *Versioning* workspace and click the *Commit* button.*

	Type	Name	Files	Last Updated	Total Runs	Average Elapsed Time	Average % CPU	Average CPU Time	Average Peak Memory Usage
<input type="checkbox"/>	Job Queue	JobQueue_Test.fmw	0	Today at 18:10:25	2	00:00:01.39	64.74	00:00:00.90	7.36 MiB
<input checked="" type="checkbox"/>	Job Queue	Versioning.fmw	0	Today at 19:02:39	0		0		

This will open the Commit Item dialog.
Enter a commit comment and click the Commit button.



Workspaces ?

Workspaces > Training > Versioning

Commit Item

Repository	Training
Item	Versioning.fmw
Commit Comment (optional)	Version 1.1 CSV writer added

Commit

You should receive the following success confirmation that the Version was created.

Workspaces ?

Workspaces > Training > Versioning

✓ **SUCCESS**

Version was committed successfully

Go back to Training

(NOTE: if you get an error it is likely that the workspace had no changes made to it. Republish the workspace from FME Workbench and ensure an edit was made and saved in the workspace.)

Return to the *Training repository*. Then review the *Version History* for the workspace again.

This time you should see the new Version listed.



Workspaces > Training

Training

Search

TYPE

OK

Showing 1 to 2 of 2 entries 100

You have successfully enabled and tested Version Control for FME Flow!

FME Lizard

Note that version control does not, by itself, enable you to update your local working copy of Repositories files. Instead, version control allows you to download previous versions. Once downloaded, you can update your working copy by republishing to FME Flow.

You must belong to the fmesuperuser security role to enable version control initially. Once enabled, version control permissions can be granted to others on the Users page or Roles page. A user with Manage permission in Version Control can disable or enable version control.

Congratulations

By Completing this exercise you have learned how to:

- Enabled Version Control
- Tested Version Control from FME Workbench
- Downloaded a Versioned workspace Versioned a workspace in FME Flow's Web UI
- Reviewed the history of a Versioned workspace





4.4 Cleanup Tasks - Delete Old Backups

Demonstrates	How to set up a schedule to delete old backups
Overall Goal	Create new cleanup task
Start Workspace	None
End Workspace	None

You have set up your Flow to regularly run backups. This is good practice to provide resilience.

However, the backups are stored on the server / machine that Flow is installed on, and will use up precious storage space as the backups accumulate. If the file storage limit is reached then Flow will begin to error.

You need to create a cleanup task to regularly remove older, unneeded, backups, to free-up storage space and prevent older backups from clogging-up space.

4.4.1 Trigger the Backup schedule

In a previous exercise we configured the *Backup_Configuration* in *Schedules*.

Now we are going to set it up to run immediately.

Go to *Schedules > Manage Schedules* and select “Backup_Configuration”

NAME	TAGS	START TIME	END TIME	RECURRENCE	WORKSPACE	STATUS	TOTAL RUNS	OWNER	SHARE
Backup_Configuration		2025-5-14 11:51:00	N/A	Once a day	backupConfiguration.fmw	Green circle	3	admin	Share icon
DashboardStatisticsGathering		2016-1-1 00:00:00	N/A	Once a day	JobHistoryStatisticsGathering.fmw	Grey circle	0	admin	Share icon

Ensure the *Enabled* check box is selected.

Configure *Schedule Type* to be “Repeat on Interval” and set *Repeat every* to be “1 Hours”

The select *Start Immediately*, to get it going now.



Editing "Backup_Configuration"

Schedule Details

Description

Backup server configuration to an FME Flow Configuration package. By default, the configuration file is saved to the Backup shared resources and the date and time of the backup are appended to the filename.

Tags

Select or create new tags

Enabled

Schedule Type*

Repeat On Interval

Repeat every*

1

Hours

Date Range

Start

End

Start immediately

Does Not Expire

Skip if Job In Progress

Skip next scheduled job if previous scheduled job is not completed.

Under *Workspace* select the *Repository* of “Utilities” and choose the *backupConfiguration.fmw*.

Workspace

Repository*

Utilities

FME Flow Utilities Repository

Workspace*

backupConfiguration.fmw

Backup FME Flow configuration to an FME Flow Configuration package (.fsconfig) file. By default, the configuration file is saved to the Backup shared resources folder and the date and time of the backup are appended to the

Scroll down to Published Parameters and ensure your *Flow Password* is populated with the admin login password: FMETraining1234

Then hit Save.



Published Parameters [Reset Values](#)

Append Date*
Yes

Flow Username*
admin

Flow Password*
.....

Backup File Name with File Extension (.fsconfig)*
/FlowConfigPackage.fsconfig

Resource Name*
FME_SHAREDRESOURCE_BACKUP

Notifications >

Advanced >

[Trigger](#) [Cancel](#) [Save](#)

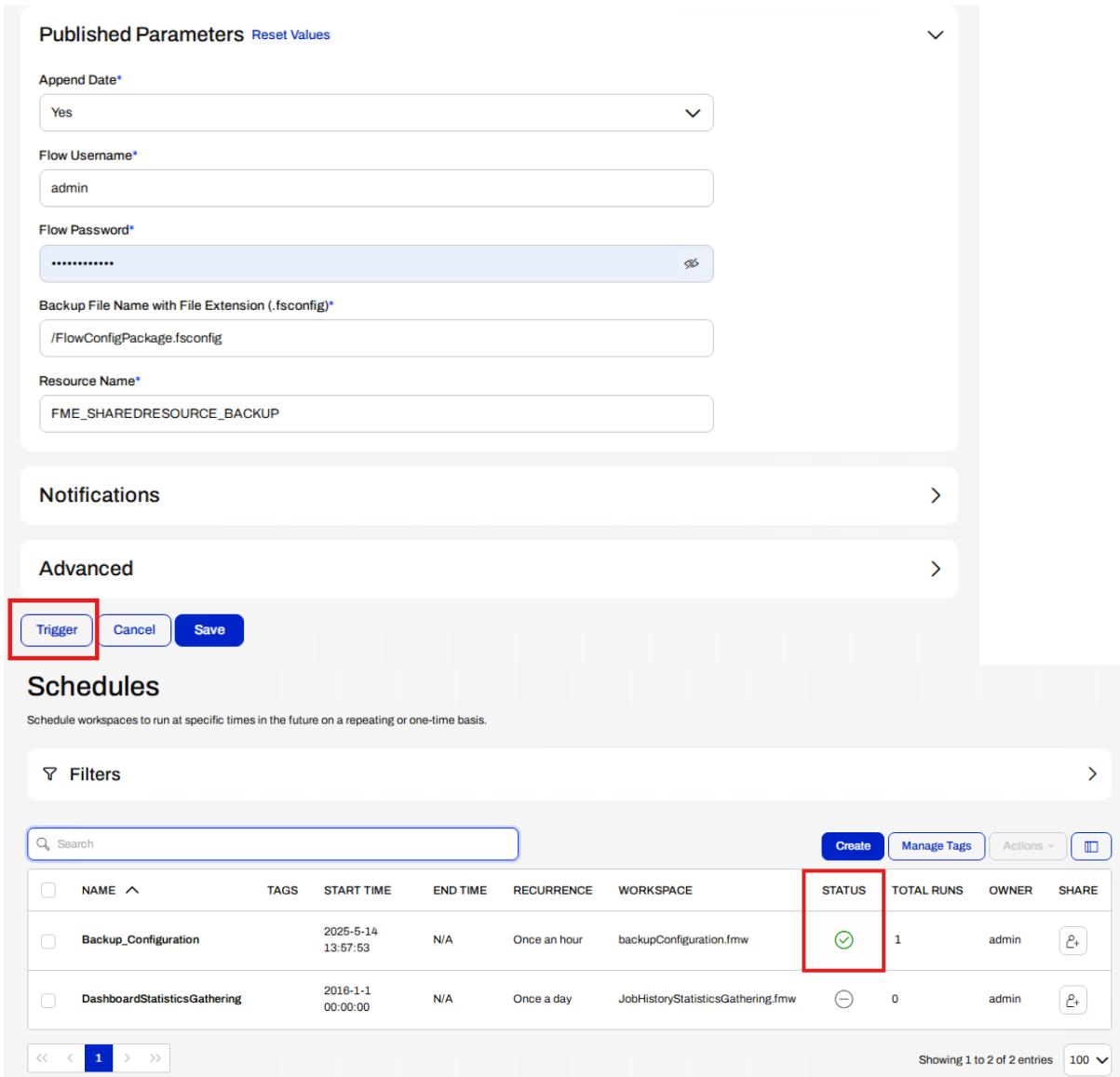
Schedules

Schedule workspaces to run at specific times in the future on a repeating or one-time basis.

[Filters](#)

<input type="checkbox"/>	NAME ^	TAGS	START TIME	END TIME	RECURRENCE	WORKSPACE	STATUS	TOTAL RUNS	OWNER	SHARE
<input type="checkbox"/>	Backup_Configuration		2025-5-14 13:57:53	N/A	Once an hour	backupConfiguration.fmw		1	admin	P+
<input type="checkbox"/>	DashboardStatisticsGathering		2016-1-1 00:00:00	N/A	Once a day	JobHistoryStatisticsGathering.fmw		0	admin	P+

<< < [1](#) > >> Showing 1 to 2 of 2 entries 100 ▾



The **STATUS** column should now have a green tick in it. And **TOTAL RUNS** should now be “1”. (It may actually have run twice, do not worry: this is normal.)

4.4.2 Check Scheduled Backup has run

Under Jobs and Completed you will see the backupConfiguration workspace has run.



The screenshot shows the FME Flow interface with the 'Jobs' section selected. A red box highlights the 'Completed' tab under the 'Jobs' dropdown menu. The main table displays one completed job entry:

ID	WORKSPACE	REPOSITORY	USERNAME	RAN BY	STATUS	LOGS	STARTED	FINISHED	SOURCE NAME	SOURCE TYPE
12	backupConfiguration.fmw	Utilities	admin	admin	✓		Today at 14:07:43	Today at 14:07:43	Backup_Configuration	Schedules

Below the table are navigation buttons (« « < > »») and a message indicating 1 entry.

You may see 2 entries here triggered within a few seconds of each other. This is normal.

To see where the backup has been saved go to *Resources* and select *Backup*. You should see a recently created backup file.

The screenshot shows the FME Flow interface with the 'Resources' section selected. A red box highlights the 'Backup' link under the 'Resources' dropdown menu. The main table displays one backup file entry:

NAME	SIZE	DATE
FlowConfigPackage_202505141336.fsconfig	40.18 MB	Today at 14:36:39

Below the table are navigation buttons (« « < > »») and a message indicating 1 entry.

In this example it is 40.18MB, with the screen shot created on a new install of Flow without anything on it yet, therefore you can imagine how this would quickly build up into a significant amount of storage space with each subsequent backup especially when you have more workspaces etc saved on it.



4.4.3 Schedule System Cleanup

Go to *ADMIN > System Configuration > System Cleanup* and click on *Create*.

The screenshot shows the FME Flow interface with the 'System Configuration' section selected. The 'System Cleanup' page is displayed, showing a list of existing cleanup tasks. At the top right of the table, there is a blue 'Create' button with a white outline, which is highlighted with a red box.

Under *Task Details* provide a name for your task. This will appear in the list of cleanup tasks, for the purposes of this exercise we will call it “Backup_Delete” so that it appears at the top of the alphabetical order list.

Under *Category* select Utilities.

Provide a description for this task.

In the *Source Folder* box hit the ellipses and select the Backup folder:

The screenshot shows a modal dialog titled "Select folder for Source Folder". Inside, there is a list of shared resources under the heading "NAME":

- Backup**: This shared resource is the backup directory
- Dashboards**: This shared resource is the dashboards directory
- Data**: This shared resource is the data directory
- Engine**: This shared resource is the engine directory

At the bottom of the dialog, there is a "Source Folder" input field containing the path \$(FME_SHAREDRESOURCE_BACKUP)/, a "Cancel" button, and a blue "OK" button.

Then hit *OK* to add “\$(FME_SHAREDRESOURCE_BACKUP)/*” to the box.

Ensure the tick-box is selected for *Enabled*.

Under *Filter Settings* specify the required interval for file removal. Eg 4 weeks.



System Cleanup

Manage the cleanup of resource files and jobs.

[Tasks](#) | [Scheduled Cleanups](#) | [Configuration](#)

[System Cleanup](#) > [New Cleanup Task](#)

Create New Cleanup Task

Task Details

Name*

Backup_Delete

Category*

Utilities

Description

To delete old and unwanted backups

Source Folder*

\$(FME_SHAREDRESOURCE_BACKUP)/



Enabled

Filter Settings

Filter Type*

None

Pattern*

Specify a file name-ending string to include or exclude from the task.

Remove Files Older Than*

4

Weeks



[Cancel](#) [Create](#)

Hit **Create** to save the schedule. This will now appear in the list.

System Cleanup

Manage the cleanup of resource files and jobs.

[Tasks](#) | [Scheduled Cleanups](#) | [Configuration](#)

Search

[Create](#)

[Duplicate](#)

[Remove](#)

[Enable](#)

[Disable](#)



<input type="checkbox"/>	NAME ^	CATEGORY	SOURCE	MAX AGE	FILTER	ENABLED
<input type="checkbox"/>	Backup_Delete	Utilities	\$(FME_SHAREDRESOURCE_BACKUP)/	4 weeks	None	
<input type="checkbox"/>	Delete_Automation_Debug_Temp_Files	Utilities	\$(FME_SHAREDRESOURCE_SYSTEM)temp/automations	2 weeks	None	
<input type="checkbox"/>	Delete_Automation_Production_Logs	Utilities	\$(FME_SHAREDRESOURCE_LOG)automations/old	1 week	None	



This ensures that anything older than 4 weeks in the *Resources > Backup* folder is deleted.

FME Lizard

It is good practice initially to monitor both the size of the accumulated backups and calculate how many of them you require. For example, if you need to roll back to an earlier backup, how far back in time do you think you will need to go to?

Generally, administrators tend to either run the backup process once per day or once per week, and then set the cleanup task to delete backups older than 2 to 8 weeks. However, your requirements may be completely different from these.

Congratulations

By Completing this exercise you have learned how to:

- Trigger the Backup schedule
- Check the Scheduled Backup has run
- Schedule a System Cleanup task

