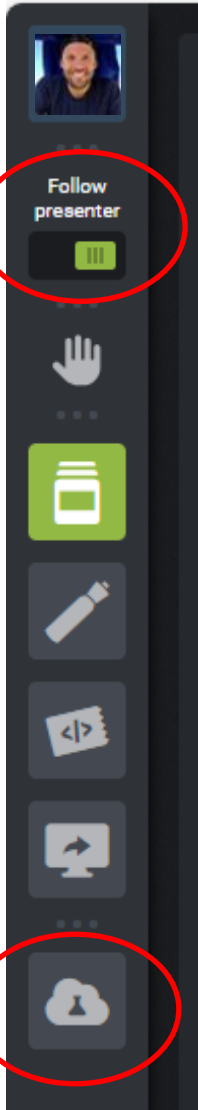




# FME Flow Training - Module S1

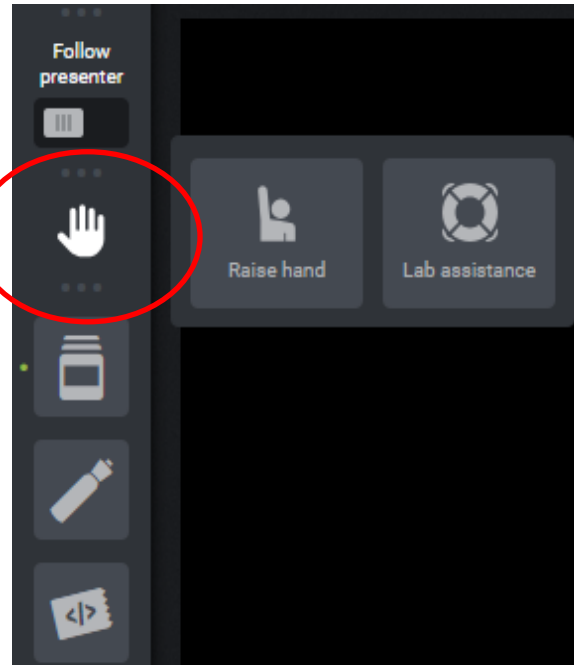
**Authoring – The Basics**

# Training Environment



< keep **'Follow presenter'** on

< **Lab**

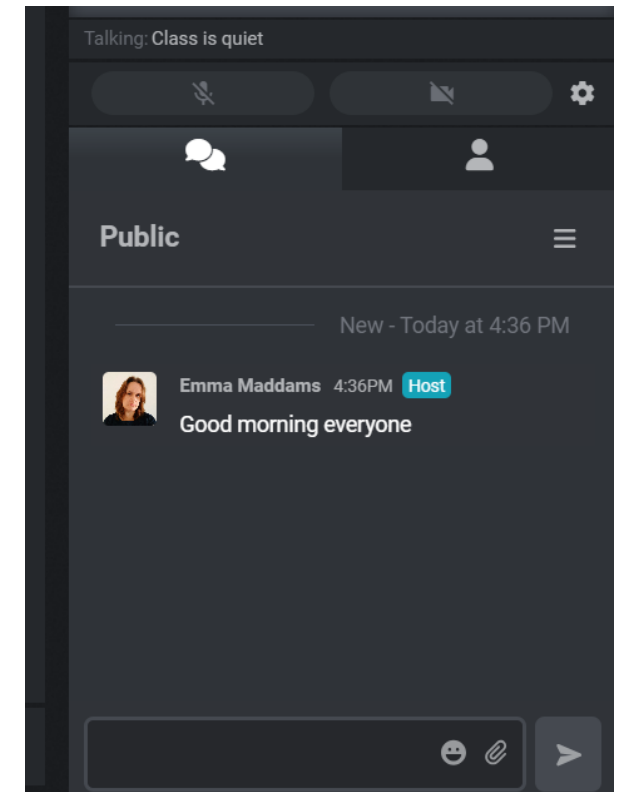


**need help** when using your Lab  
Use either:

- 'Raise hand' or
- 'Lab Assistance'

## Chat

- to everyone
- to trainer



# Training Environment

---

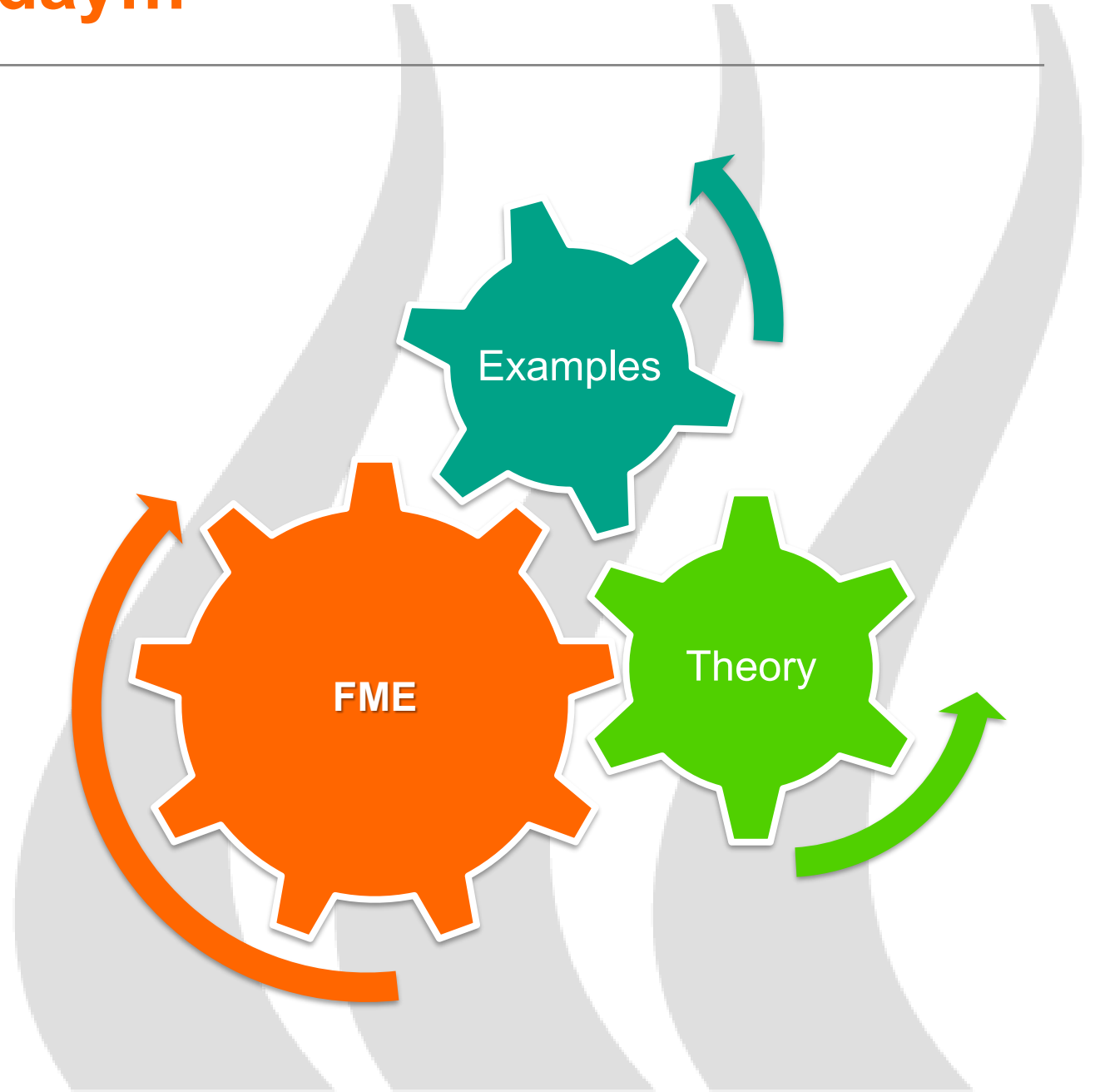


- Training resource folder located on a C-Drive
- Training data folders **C:\FMEFlowData**
  - Data
  - Output
  - Resources
  - Workspaces
- The workbook containing exercises – use download link from Trainer
- FME Flow Web UI credentials
  - Username: admin
  - Password: FMETraining1234

# What we'll be covering today...

---

- Intros
- Agenda
  - FME Flow Overview
  - Publishing to FME Flow
  - Running workspaces on FME Flow
  - Source Data Management
  - Basic Scheduling
  - FME Flow Admin Considerations
    - Users, roles & permissions
    - Versioning





# A little bit of background...



- Based in Birmingham
- Platinum partner
- Spatial data experts
- Provide training and consultancy in FME



- Based in Canada
- Create FME product suite
- Continuously develop products

# FME Product Suite

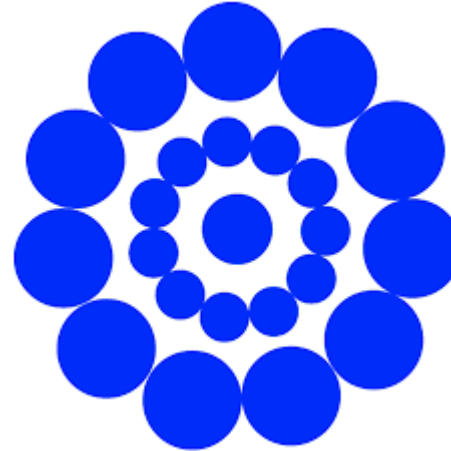


## FME Form

*(formerly FME Desktop)*

Authoring environment that enables you to create data integration workflows.

The FME Form Workbench is where these Workspaces are created and locally run.

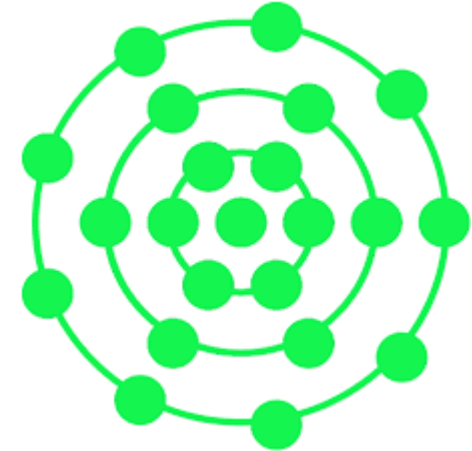


## FME Flow

*(formerly FME Server)*

The enterprise automation environment that enables you to run your data integration workflows on a schedule or in response to events or in real-time.

FME Flow enables users to integrate their data automatically and distribute it to any web, desktop, or mobile application. Users can set up event-driven workflows, send notifications to stakeholders, and provide self-serve data integration.



## FME Flow Hosted

*(formerly FME Cloud)*

FME Flow hosted in the cloud by Safe Software, where users pay only for the computing resources they use. It's scalable and uses a pay-as-you-go model.

Linux based; hosted on Amazon Web Services.

# What is FME Flow?

Connect. Transform. **Automate**



- **Self-Serve**

The ability for the end-user to select & run processes to obtain data that they require – including choosing the format and structure they require

- **Real-Time**

Immediately react to real-time events and notifications and process data when events occur

- **Automation**

Data processing on a specific schedule and to spontaneously move data through different systems and web services. It allows data to move from anywhere, to anywhere, without manual intervention.



# FME Flow Architecture - Components



**Client**



**Web Application Server**

- incl. *FME Flow Web User Interface*



**FME Flow Core**

- manages content, engines, etc

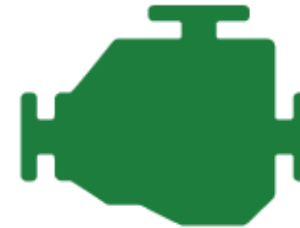


**FME Flow Database**



**FME Flow System Share**

- incl. *Workspace store*



**FME Flow Engines**

- carry out *data processing*

# FME Flow Services



Much of the FME Flow networking capabilities are handled using ‘Services’ – providing a means of communication between the Flow and clients. Each ‘Service’ within FME Flow provides a unique function:

- **Data Download** – provides the results data from the workspace back into the web browser (as a Zip). Where end-user can download it
- **Data Upload** – uploads data to FME Flow
- **Data Streaming** – This continuously processes data as it arrives in real-time. Usually takes an engine and runs constantly
- **Job Submitter** – simply runs the workspace as it would in Form – 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
- **Token Security** – FME Flow Token Security allows you to generate secure tokens that can be shared with users to run specific workspaces - without requiring them to log in with a username and password. These tokens can be configured with an expiry date and revoked at any time, giving you full control over access. This is especially useful for users who don’t have regular access to FME Flow or don’t need a full account, enabling them to trigger workspaces through a link or API request using just the token.
- **REST** – allows you to make calls to the Flow to do a variety of jobs
- **Notifications** – includes triggers, emails, etc

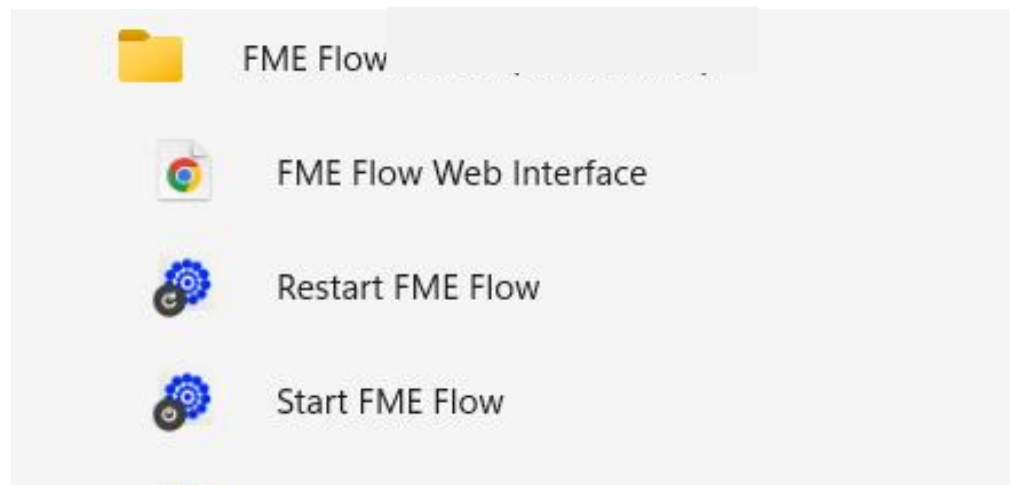
*We’ll take a closer look at these later on...*

# Accessing FME Flow Web Interface



The web interface is accessed either:

- Through your **web browser using a URL**: `http://<host>:<port>/fmeserver`
  - It's not necessary to specify the port number if using port 80: `http://<Host>/fmeserver`
  - when working locally you can reference your FME Flow using '**localhost**'
- When **working locally on the machine where FME Flow is installed**: through the start menu  
*Start > All Programs > FME Flow > FME Flow Web Interface*



# FME Flow Web Interface



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 >

FME Flow 2024.2  
Build 24783 - win64  
Safe Software  
Copyright (c) 1994 - 2024

?

Dashboard

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

Last Published Workspaces

Customer\_...email.fmw  
3 weeks ago

Customer\_...elete.fmw  
3 weeks ago

easyTranslator.fmw  
13 weeks ago

earthquak...usion.fmw  
13 weeks ago


austinDownload.fmw  
13 weeks ago

Last Updated Items

Favorites

You don't have any favorites.

Resources

  
The Book of Data

Hyatt Regency Seattle  
Early Bird pricing is now in effect  
until February 28, 2024!

# Publishing to FME Flow

---



1. **Author** the workspace in FME **Workbench**
2. **Publish** the workspace from FME Workbench to FME Flow
3. **Run** the workspace on **FME Flow**
4. **Maintain** the workspace by **downloading** it from FME Flow, making any required updates in FME **Workbench**, and **re-publishing** it back to FME Flow



# Exercise 1.1



## Publish and Run a workspace on FME Flow

You are a technical analyst in the GIS department of your local city. You have plenty of experience using FME Form, and your department is now investigating FME Flow to evaluate its capabilities

**Goal** - Create a workspace to generate Constraint areas based on SSSI vicinity and publish it to FME Flow.

**Data** - SSSIs (MapInfo TAB)

FME Flow credentials -

username: admin

password: **FMETraining1234**

# Workspace Description Parameters

Connect. Transform. **Automate**

# Workspace Parameters



**Workspace Parameter values** from Workbench are visible within Flow and can provide valuable descriptions to end-users

self-serve constraints creation (C:\FMEFlowData\Output\My Workspaces\SSSI Constraint Self-Serve.fmw) - FME Workbench 2024.2

File Edit View Readers Transformers Writers Run Tools Help

New Open Save Run Stop Undo Redo Select Pan Zoom In Zoom Out 97% Extents Maximize Reader Writer Transform

Navigator X

- SSSIs [MAPINFO]
- Results [MAPINFO]
- Transformers (2)
- Bookmarks
- User Parameters (2)
- FME Flow Parameters
- Deployment Parameters
- Workspace Resources
- Workspace Parameters**
  - Password: <not set>
  - Name: self-serve constraints creation
  - Description
    - Logging
    - Reader/Writer Redirect
    - Scripting
    - Translation
    - Workspace Search...

Transformer Gallery X

- All (481)
- Categorized
- Embedded Transformers
- FME Hub
- Recent (10)
- Search Results

Workspace Parameters

Workspace Name: self-serve constraints creation

Category: No items selected.

Workspace Description

☐ Use Markdown (Recommended for FME Hub)

Overview Help History

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

B I U G-D

Help Presets OK Cancel

Schedules >

Jobs >

Workspaces

Projects >

Connections & Parameters >

Resources

ADMIN

Analytics

<input type="checkbox"/>		building updates.fmw		0	Yesterday at 12:00:21	5
<input type="checkbox"/>		SSSI Constraint Self-Serve.fmw		0	Yesterday at 14:03:54	0
<input type="checkbox"/>		SSSI Constraint.fmw		0	Yesterday at 13:57:34	0

## Run Workspace

Workspace

Repository\*

Training

Workspace\*

SSSI Constraint.fmw

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

Service\*

Data Download

Email Results To

# Exercise 1.2



## Workspace Description Parameters and Republishing a workspace to FME Flow

By populating the Workspace Description Parameters, we can provide valuable descriptive information about workspaces within FME Flow.

**Goal** – Populate the Workspace Parameters within Form Workbench, then republish the workspace to Flow

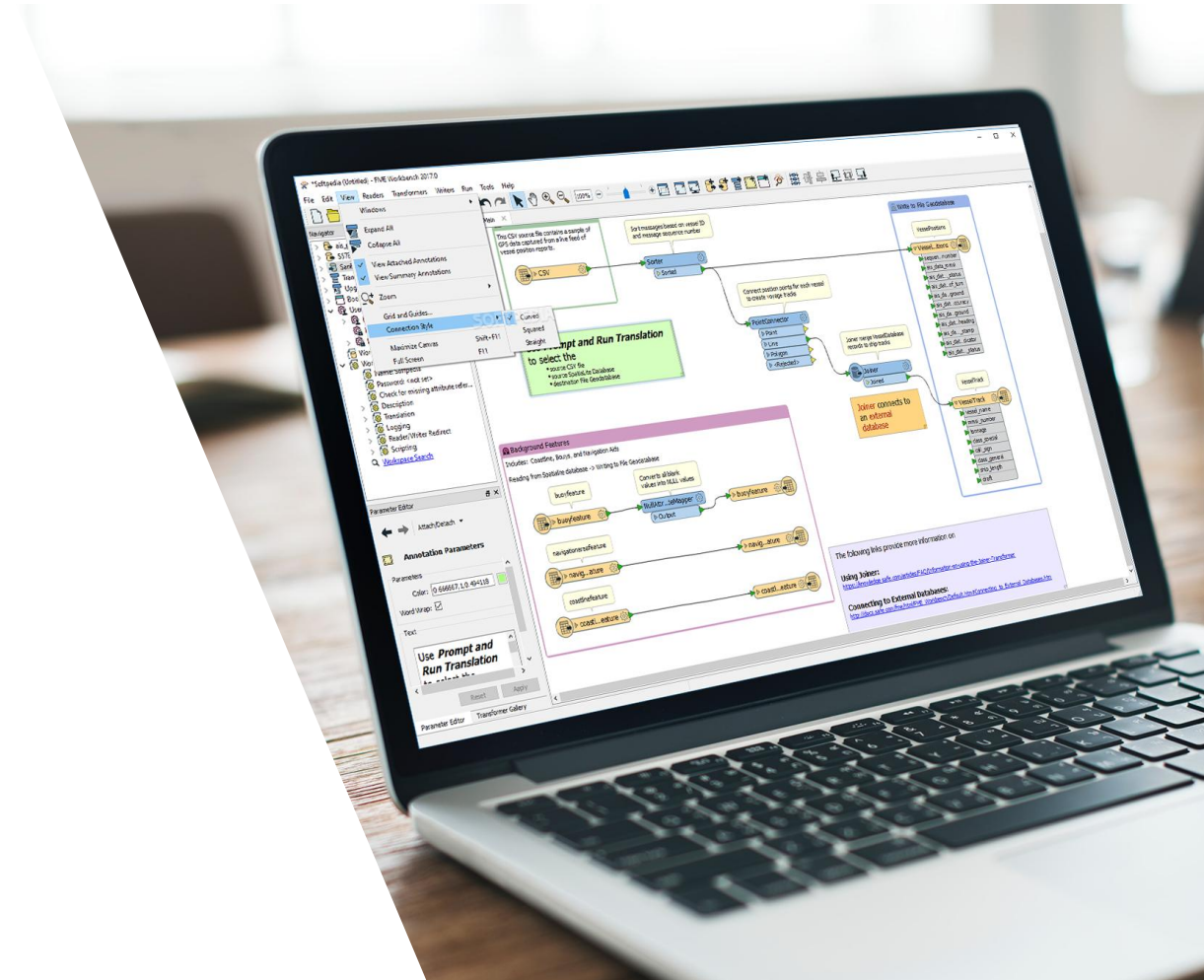
**Workspace** - Either continue to use your SSSI Constraints workspace from the previous exercise or use the starter workspace provided.

**Data** - SSSIs (MapInfo TAB)

FME Flow credentials -

username: admin

password: **FMETraining1234**





# Source Data Management

*Connect. Transform. Automate*



# Source data management

---



- **Source Data**
  - **Network Directories**
  - **Database Connections**
  - **Publishing Source Datasets**
  - **Temporary Data Uploads**
- 
- Nearly every FME workspace starts by reading features from a source dataset.
  - *Generally* what works on FME Form can be published and run on FME Flow.

# Source data management

---



- FME Flow specific source data options:
- **Web-based** (*such as a real-time GeoJSON feed of earthquakes*)
- Stored in **Files/Folders**:
  - Shared Network directory
  - Published Source Datasets (*within FME Flow*)
  - Temporary Uploads (*within FME Flow*)
  - Resources Folders (*within FME Flow*)
- **Database Connections**



Source data can be read from network directories.

Likewise, output data can be written to network directories.

However, there are two reasons why your workspace may fail when reading/writing to network directories:

- **Mapped Drives**
- **Permissions** of the FME Flow Windows Service

# Network directories – mapped drives



## Mapped Drives

On Windows, FME Flow runs as a Windows Service which starts before the operating system defines mapped drives.

Therefore, **FME cannot understand the drive mappings.**

e.g. **Z:\SourceData\MyFile.mdb**

## Resolution

File paths in workspaces can be defined with **UNC paths**

e.g. your Z: drive may map to a computer named 'Flow1' and a directory called 'Data'. Your UNC path would then look like this:

**\\Flow1\Data\SourceData\MyFile.mdb**

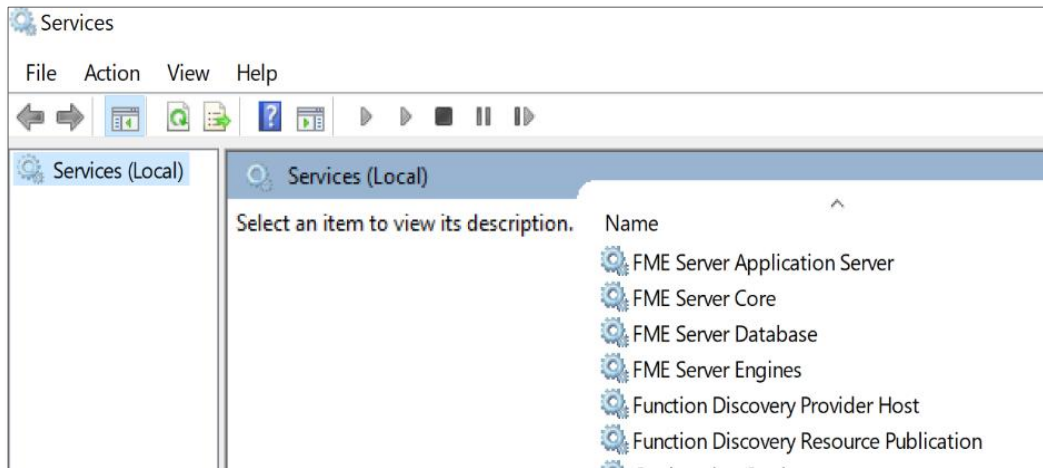
# Network directories – permissions



## Permissions of Windows Services

### Task for Administrator

By default, the **FME Flow Windows Services** run under the local system account, which may not have network permissions.



You may need to run these Services under different accounts; that has permissions to read and write data to the Network.

Instructions for changing the service user can be found in the Administrator's Guide:

[Running the FME Flow System Services Under Different Accounts \(Windows\)](#)



# Database connections



Database connections can be any of the following:

- published with a workspace from FME Form
- added directly within FME Flow
- assigned to Users/Roles within FME Flow

The screenshot displays the FME Flow interface. On the left is a sidebar with navigation options: Dashboards, ADMIN, Engines & Licensing, Security (highlighted), Users, Roles, Items, Active Directory, and System Cleanup. The main panel is titled 'Resources' and shows a 'Connections' section. At the top of this section are buttons for 'Access' (checked), 'Create', and 'Manage'. Below these are 'Select All' and 'Deselect All' buttons. A search bar is present. The connections are listed in a table:

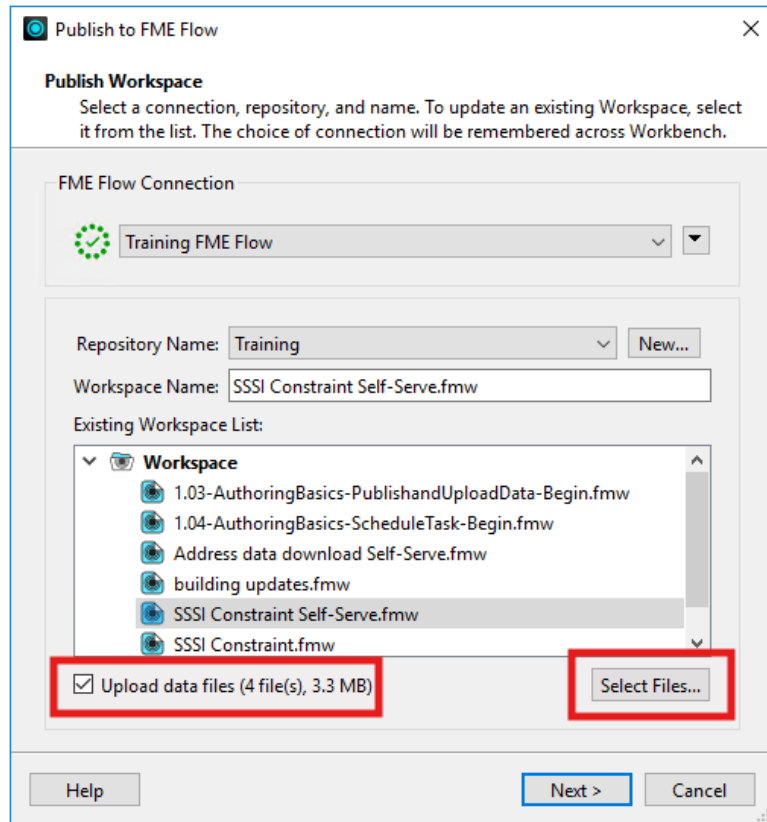
Name	Owner	Full Access	Summary
administrator FME Server	miso	<input type="checkbox"/>	None
PostGres - Full Admin	miso	<input type="checkbox"/>	None
PostGres - ReadOnly	miso	<input checked="" type="checkbox"/>	Full Access

This means that a workspace can be tested in FME Form using the Author's connection parameters, but then switched to a general account once published to Flow.

# Publishing Source datasets



When the source data is **stored as Files** (rather than a feed or database) it can be **Published** to FME Flow along with the workspace (if appropriate).



## Limitations

Although simple, there are major limitations to publishing data with a workspace:

- The data is hidden within FME Flow's system files and is inaccessible to non-FME Flow users
- The workspace cannot be run using any other data than that published with it
- The Flow server will start to fill up with data

# Temporary data Uploads



The Temporary Data Upload functionality **allows the end-user to upload their data at run-time**. This allows the user to specify and upload data as an input to the translation

## Cautions and Limitations

- the data chosen by the end user must match the workspace's **schema definition**, otherwise the translation will fail.
- **All associated files** for the dataset must be uploaded.  
e.g ESRI Shape datasets consist of several files. All must be uploaded, not just the .SHP.
- Temporary uploaded files are only **temporary!**
  - By default FME Flow deletes the Temporary uploaded datasets when they become more than **24 hours** old.

# Exercise 1.3



## Publishing Source Data and Temporary Uploads

The majority of workspaces will use source data that resides in corporate/central holdings.

However occasionally there maybe the requirement to hold some or all of the source data within FME Flow's system files. The source data can be published to FME Flow along with the workspace (if appropriate).

In other scenarios, the end-user may need to upload the source data that needs to be processed.

**Goal** – Utilise alternative data source options of Publish Source Data (along with workspace) and Temporary Data Upload

**Data** - WestMidlands (shp)  
RegionNamePoints (csv)

**FME Flow credentials** -  
username: admin  
password: **FMETraining1234**



# Scheduling

Connect. Transform. **Automate**



# Scheduled tasks



---

Scheduling is the ability to program FME Flow to run a workspace at a specific time in the future.

The schedule can cause the workspace to run once or on a repeating basis.

The interface supports all the capabilities you would expect, including the ability to:

- create new schedules
- remove existing ones
- copy existing ones
- enable and disable existing tasks

# Managing Scheduled tasks



FME:Flow

Run Workspace

Automations

Streams

Flow Apps

Schedules

Create Schedule

Manage Schedules

Jobs

Workspaces

Projects

Connections & Parameters

Resources

## Schedules

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

Filters

Search

Create

Manage Tags

Actions



<input type="checkbox"/>	NAME	TAGS	START TIME	END TIME	RECURRENCE	WORKSPACE	STATUS	TOTAL RUNS	OWNER	SHARE
<input type="checkbox"/>	Backup_Configuration		2025-5-14 14:28:00	N/A	Once a minute	backupConfiguration.fmw	⊖	39	admin	⊕
<input type="checkbox"/>	DashboardStatisticsGathering		2025-6-9 19:55:00	N/A	Once a day	JobHistoryStatisticsGathering.fmw	⊖	0	admin	⊕

<< < 1 > >>

Showing 1 to 2 of 2 entries

100

# Exercise 1.4



## Running a Workspace as a Scheduled Task

If you have a workspace that needs to run regularly (e.g., daily, weekly, hourly), scheduling it eliminates the need for manual execution.

You will create a scheduled task to run your desired workspace at the required interval.

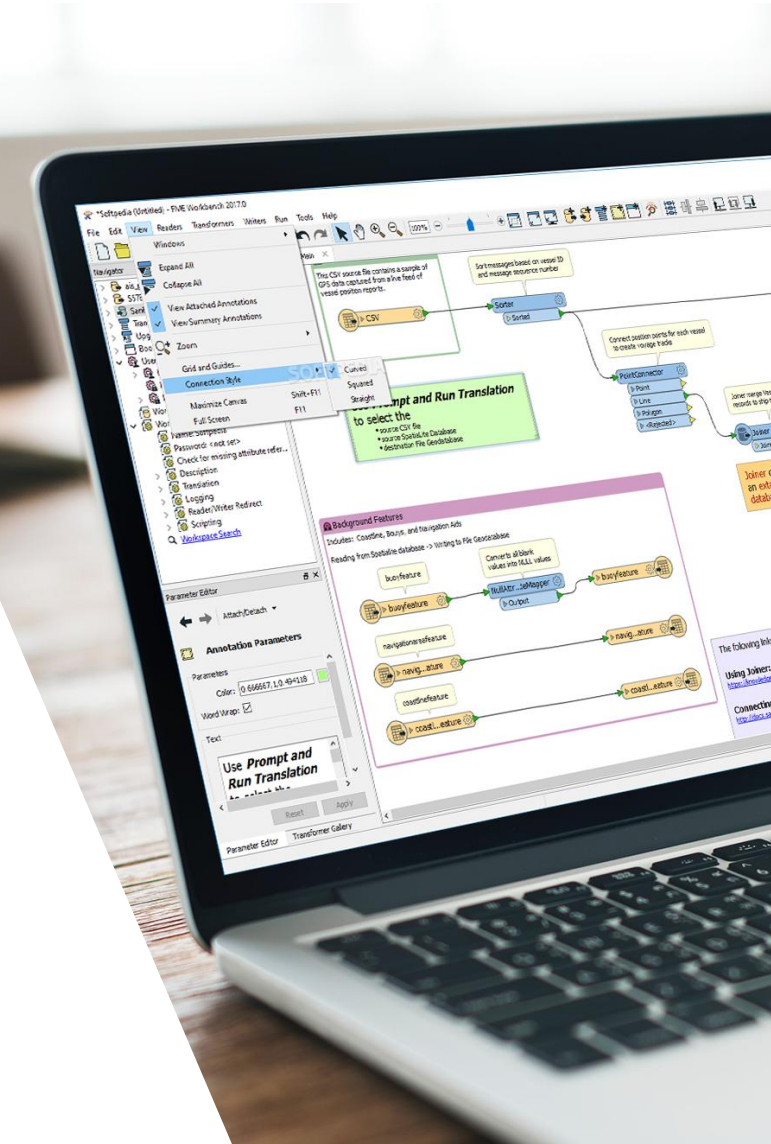
**Goal** – Create a Schedule to run a workspace

**Data** - SSSIs (MapInfo TAB)

**FME Flow credentials** -

username: admin

password: **FMETraining1234**



# Basic Admin Considerations

*Connect. Transform. Automate*

# Users and roles



## FME Flow - Default **User Accounts**:

- **admin**: Assigned to the fmesuperuser and fmeadmin roles
- **author**: Assigned to the fmeauthor role
- **user**: Assigned to the fmeuser role
- **guest**: Assigned to the fmeguest role

## FME Flow - Default set of **Roles**:

- **fmesuperuser**: *For users with unlimited access to the system*
- **fmeadmin**: *For users who need to carry out specific administration tasks*
- **fmeauthor**: *For users who are authoring workspaces to run on FME Flow*
- **fmeuser**: *For users who need to run (but not author) workspaces*
- **fmeguest**: *For temporary users who need a minimal set of permissions*

*You can create any role necessary for your system, assign any specific security settings to it, and create any number of users assigned to that role.*



FME Security can be fully integrated with both:  
**Active Directory** and  
**Integrated Windows Authentication (IWA)**

## Encryption

FME Flow also allows Secure Sockets Layer (SSL) connections in order to encrypt transaction data. This is most important for ensuring sensitive log in information is not exposed and is particularly important when you are using Active Directory.

In brief the process consists of two steps:

Modify web service URLs to use HTTPS instead of HTTP

Enable SSL on the web and/or application Flow.

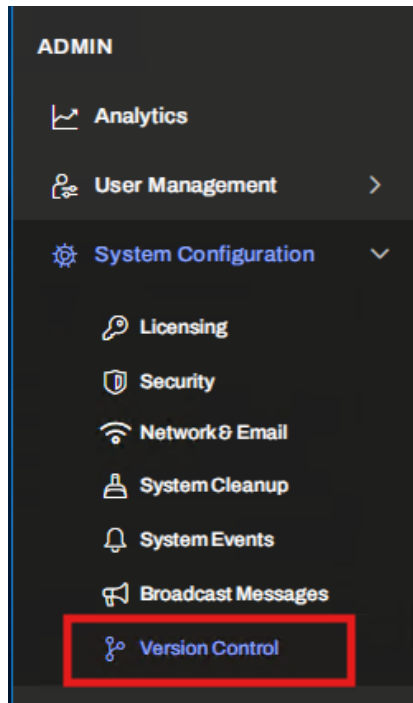
*The FME Flow Administrators Guide explains how this can be achieved.*

# Workspace Versioning



Version Control makes it much easier to keep track of updates made to your workspaces as you make changes and publish them to FME Flow

Version Control is turned off by default on a new FME Flow installation, but can easily be switched on and configured by your FME Flow Administrator in System Configuration



### Version Control

Version Control allows you to access previous versions of Repository files. Optionally, you can maintain external backups of versions on GitHub.

#### Configuration

Enabled ☒

#### Remote Settings

Fetch From RemotePush To Remote

**Remote Repository URL**  
Web URL for the remote Git repository you wish to push commits to.

**Remote Token**  
Account personal access token generated by GitHub.

Save



# Authoring and Version Control



Once activated, Versioning tools become available to workspace authors

- In **Form** whilst Publishing a workspace up to Flow the author can choose to 'commit' a version
- Also, within the Repositories in Flow it's possible to commit a workspace to versioning

Training

Search

Actions Upload History **Commit**

	TYPE	NAME	FILES	LAST UPDATED	TOTAL RUNS	AVERAGE PEAK MEMORY USAGE
<input checked="" type="checkbox"/>		1.03-AuthoringBasics-PublishandUploadData-Begin.fmw	6 (6.46 MB)	2025-6-7 11:39:19	2	79.55 MiB
		1.04-AuthoringBasics-ScheduleTask-Regin.fmw				

This is useful if you want to publish and test your workspace on FME Flow before committing the new version

Publish to FME Flow

**Publish Workspace**  
Select a connection, repository, and name. To update an existing Workspace, select it from the list. The choice of connection will be remembered across Workbench.

FME Flow Connection  
 Training FME Flow

Repository Name: Training **Commit...**

Workspace Name: 1.01-AuthoringBasics-PublishandRun-Complete.fmw

Existing Workspaces

**Version Options**  
Enter a version description to add to history.  
History is stored on FME Flow and allows you to retrieve and restore this version in the future.

☒ Add to Version History

Version 2.0 - better performance

OK Cancel



# Authoring and Version Control



- View Version History

To see the full version history of committed changes, go to *Workspaces*, find the workspace you want to inspect / have just published, and click *History*

<input type="checkbox"/>	TYPE	NAME ^	FILES	LAST UPDATED	TOTAL RUNS	AVERAGE PEAK MEMORY USAGE
<input checked="" type="checkbox"/>		1.03-AuthoringBasics-PublishandUploadData-Begin.fmw	0	Today at 18:02:02	2	79.55 MiB

- Restore a Previous Version

Open the version history for that workspace and click Download for the version required.

This will download a copy of that workspace to your computer. You can then open it using Workbench and publish that version back to FME Flow.

## History for 1.03-AuthoringBasics-PublishandUploadData-Begin.fmw

June		
1.03-AuthoringBasics-PublishandUploadData-Begin.fmw	98edb1ac	
Version 10 - new Tester transformer added admin committed a few seconds ago		
June		
1.03-AuthoringBasics-PublishandUploadData-Begin.fmw	a4fc1fd6	
Version 9 admin committed 4 minutes ago		
June		

Close



**Thanks for joining**

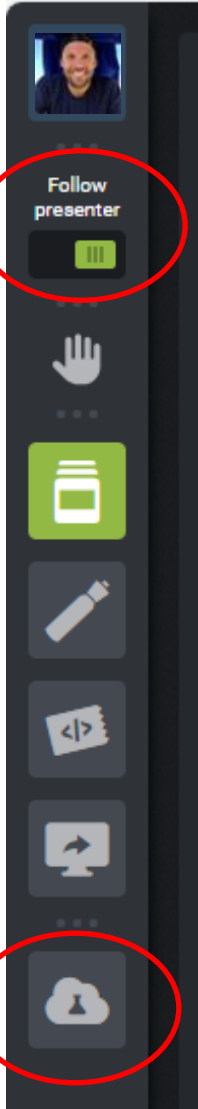


# FME Flow Training - Module S2

**Authoring - Automations and Flow Apps**

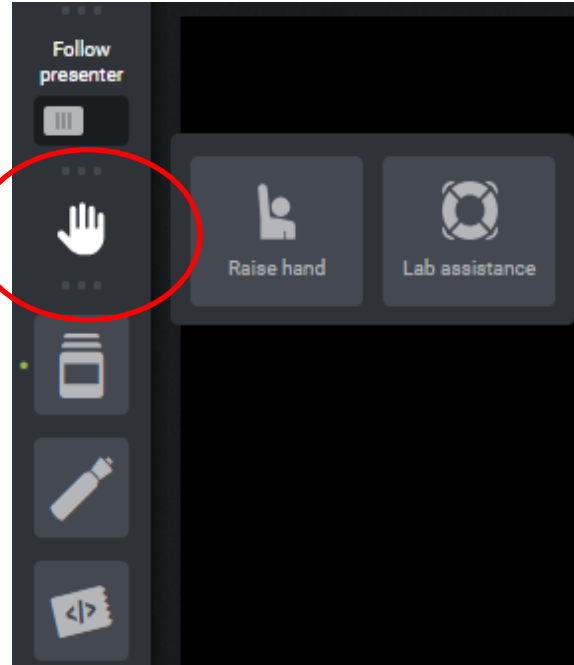


# Training Environment



< keep **'Follow presenter'** on

< **Lab**

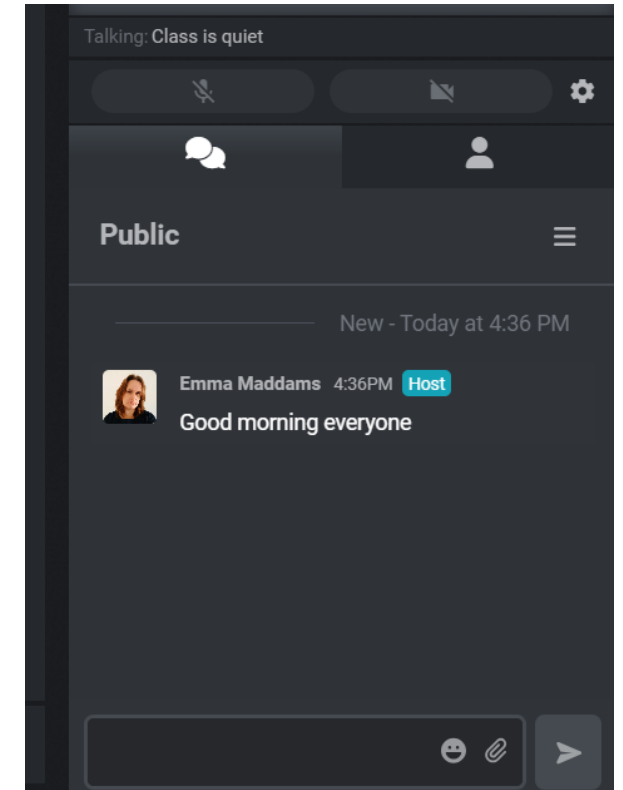


**need help** when using your Lab  
Use either:

- 'Raise hand' or
- 'Lab Assistance'

## Chat

- to everyone
- to trainer



# Training Environment

---

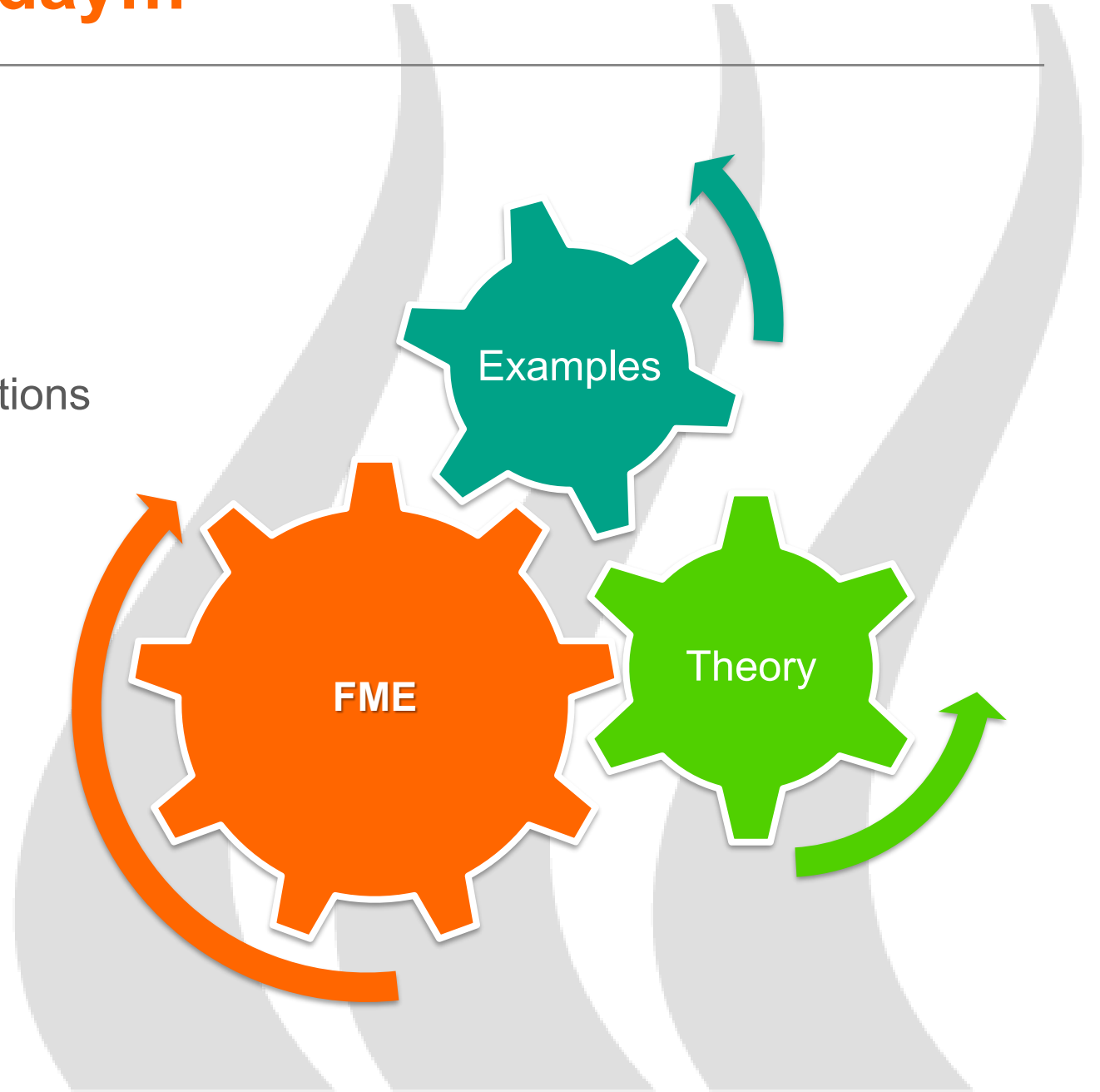


- Training resource folder located on a C-Drive
- Training data folders **C:\FMEFlowData**
  - Data
  - Output
  - Resources
  - Workspaces
- The workbook containing exercises - use download link from Trainer
- FME Flow Web UI credentials
  - Username: admin
  - Password: FMETraining1234

# What we'll be covering today...

---

- Agenda
  - Automations
    - Triggers, Actions and External actions
    - Authoring Job Chains
    - Classic Notifications
  - FME Flow Apps
  - Self-Service
  - Message Streams



# Automations

Connect. Transform. **Automate**

# Automations



---

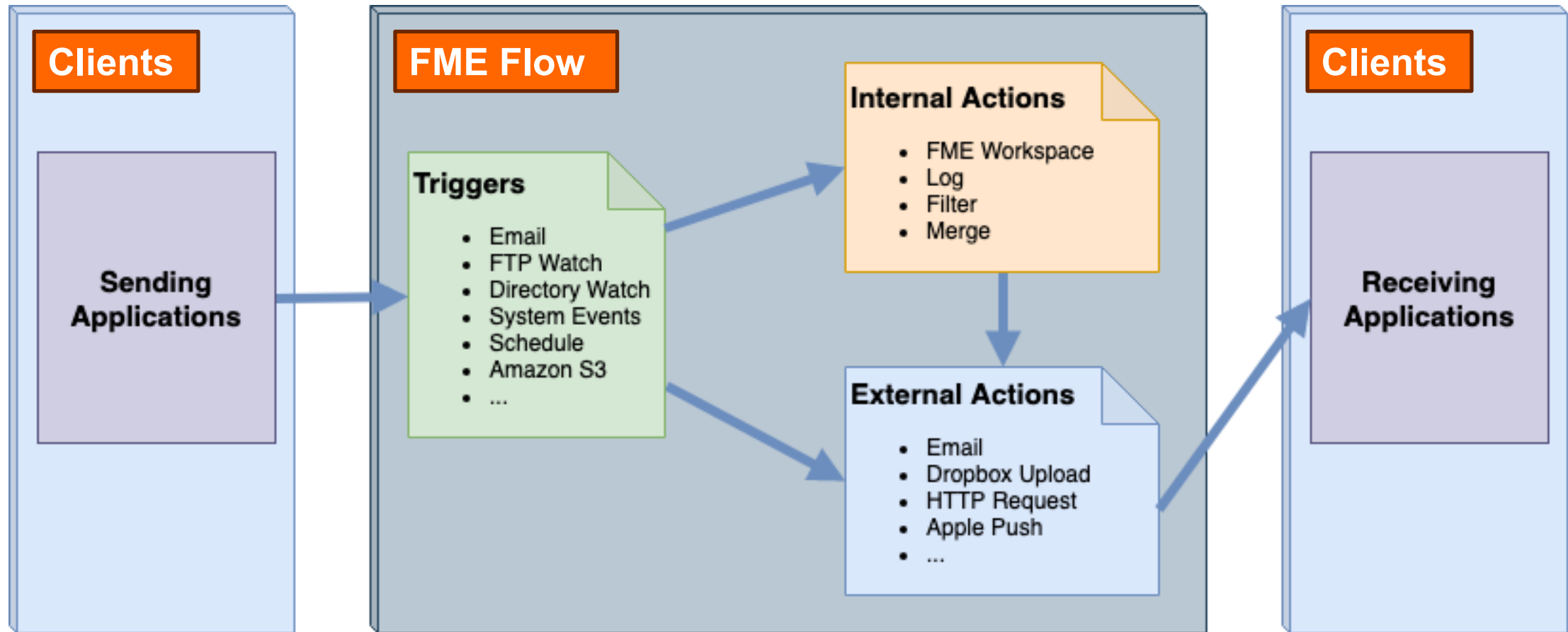
Automations allows you to incorporate a variety of triggers and actions into a single workflow. They should be used when you want to:

- chain together a number of different notification elements
- build multiple reactions to a single event
- send messages about something that has happened

Automations in FME Flow are made up of two different components: incoming triggers and outgoing actions



# Automation pattern



# What is an automation?

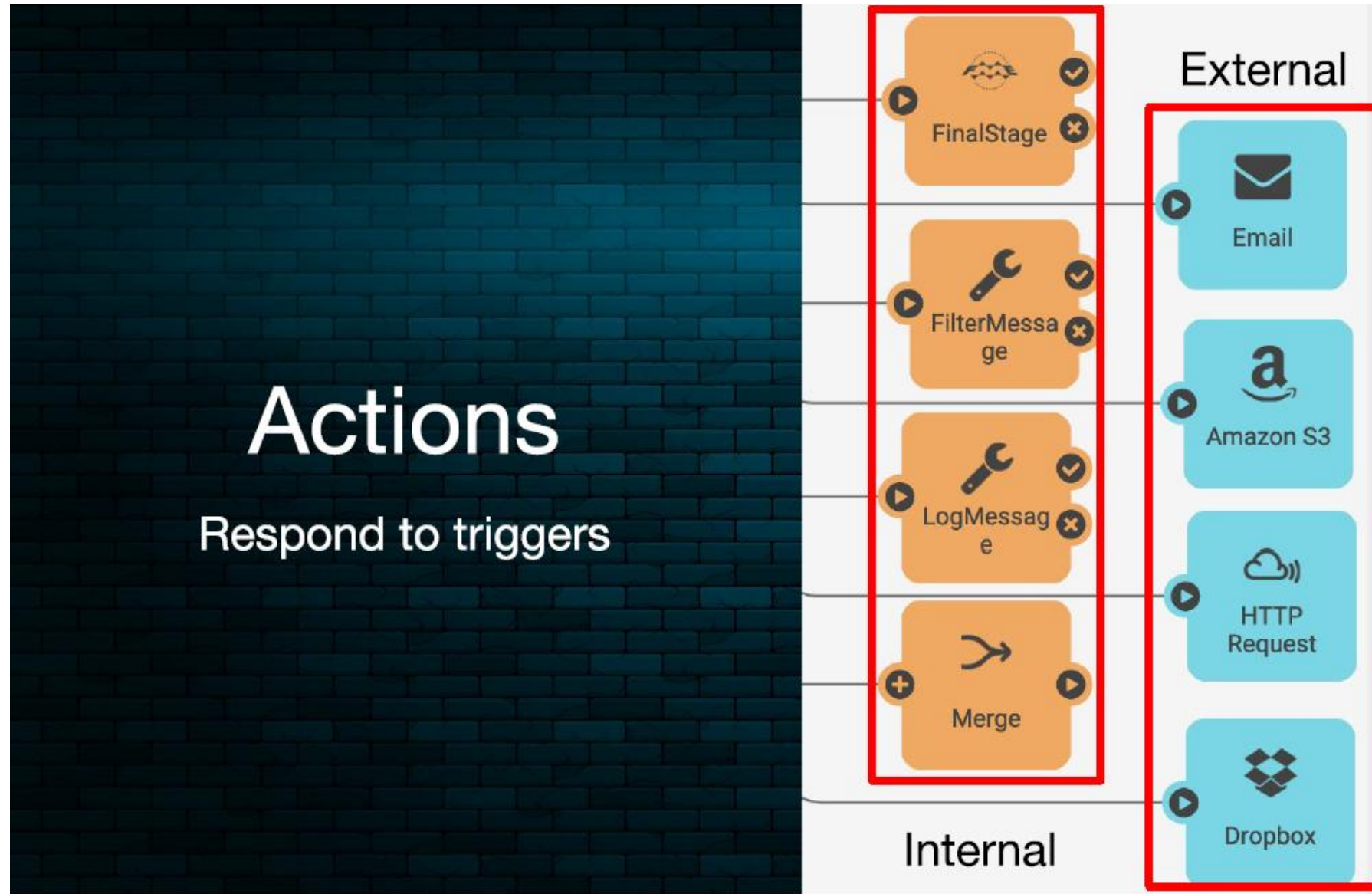


## Triggers

An **event** that **triggers** an automation



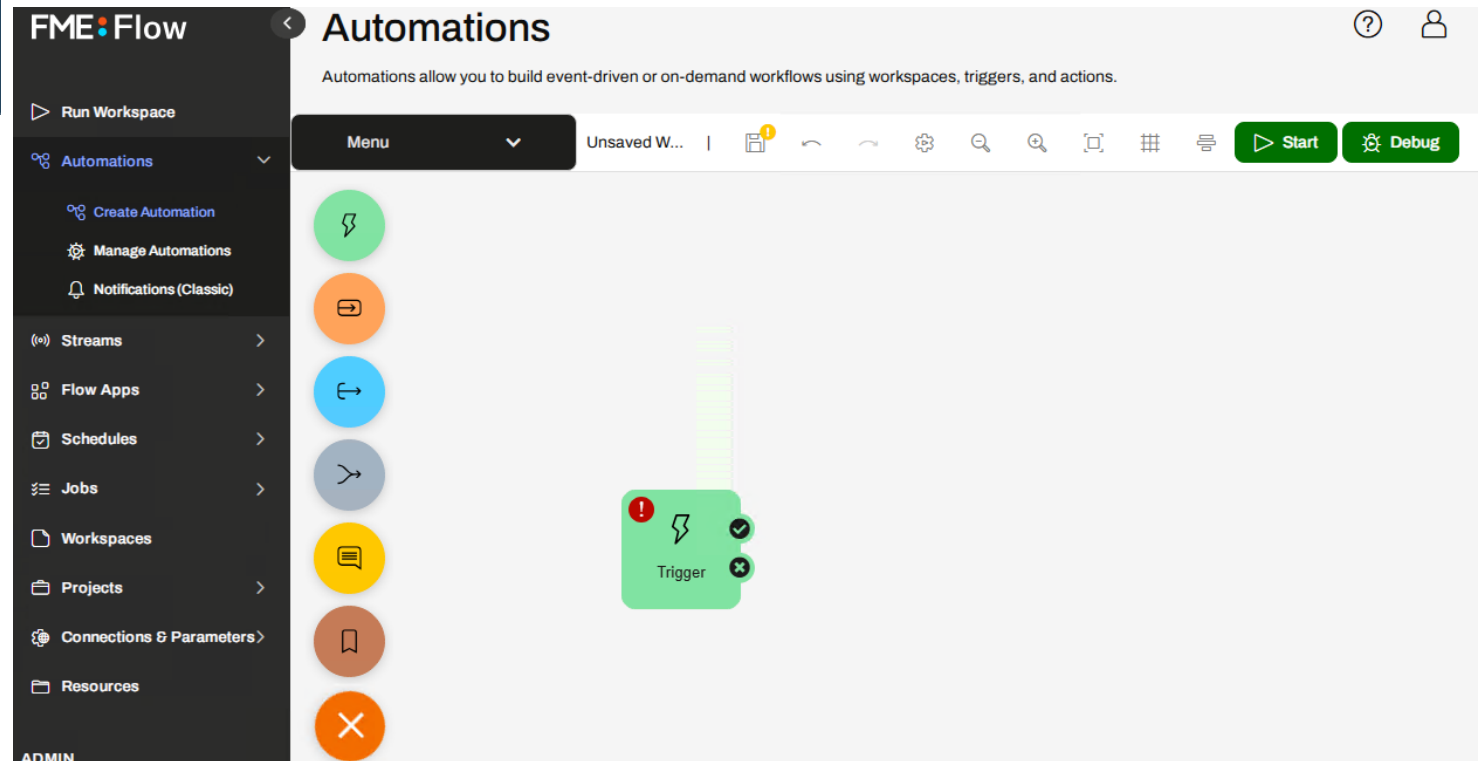
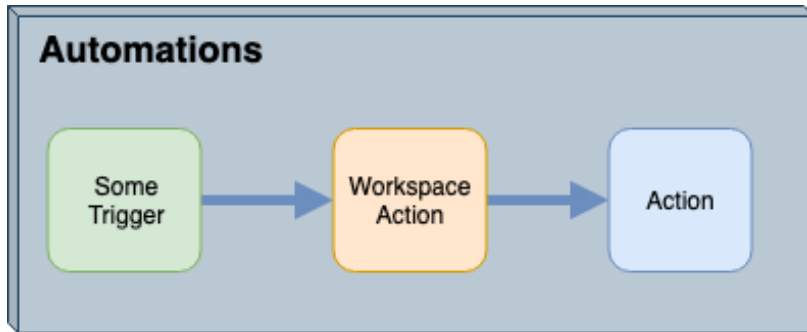
# What is an automation?



# Workspaces as triggers and actions



- Our automation workflow:





## Automation Triggers

Manual Trigger  
Amazon S3 Bucket  
Amazon SNS Topic  
Amazon SQS Message  
Azure Event Grid Event  
Dropbox Directory  
Email - IMAP  
Email - SMTP  
FME Flow Schedule  
FME Flow System Event  
FME Flow Topic  
FTP Directory  
JMS Message  
Resource or Network Directory  
UDP Message  
WebSocket Message  
Webhook

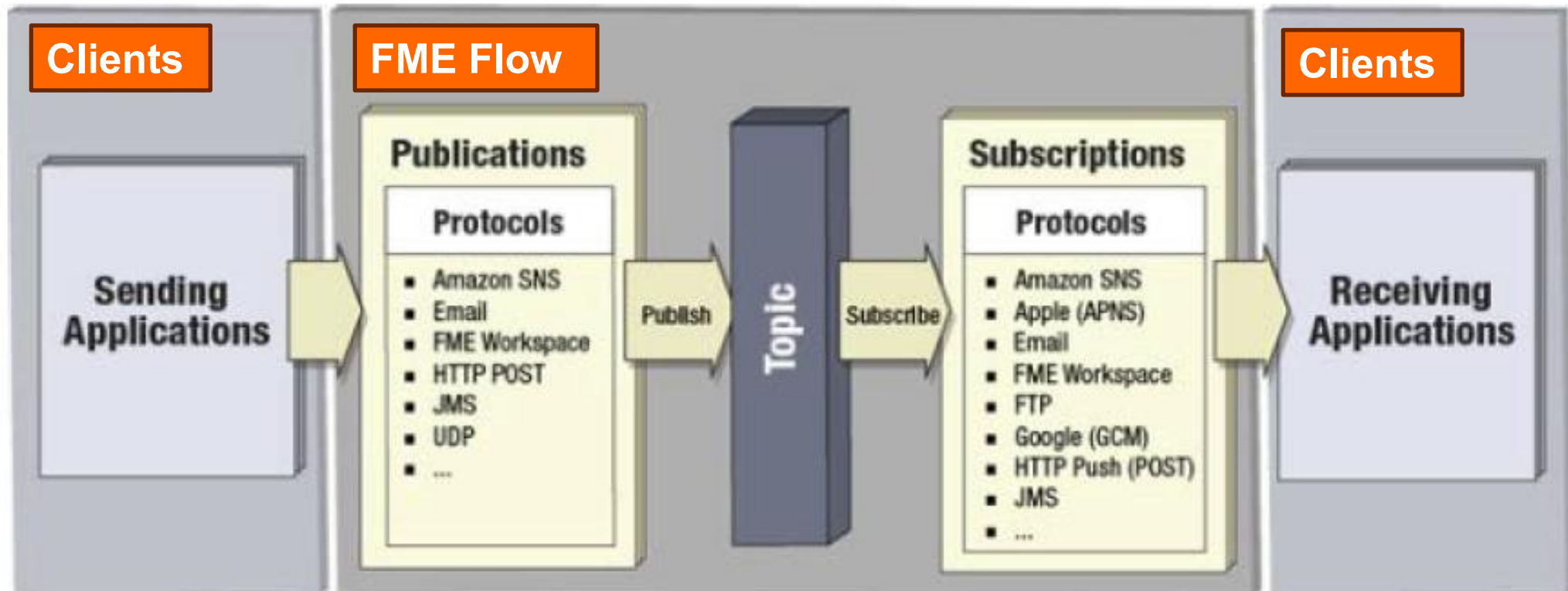
## Automation External Actions

Amazon S3 Bucket  
Amazon SNS Topic  
Amazon SQS Queue  
Azure Event Grid Topic  
Dropbox Directory  
Email  
FME Flow Topic  
FTP Directory  
HTTP Request  
JMS Message  
SFTP Directory  
WebSocket Channel

# Classic Notifications (an FYI)



- **Publications:** Event handlers that listen for incoming notifications
- **Subscriptions:** Event handlers that dispatch outgoing notifications
- **Topics:** Subjects that describe what a notification is about





# Manual Trigger



An Automation can be manually triggered instead of relying on another process to start it off. This is good for testing, and also for manually pushing through something that needs to be done immediately.

The screenshot displays the 'Automations' interface. At the top, there's a header with a back arrow, the title 'Automations', and icons for help and user. Below the header, a descriptive text states: 'Automations allow you to build event-driven or on-demand workflows using workspaces, triggers, and actions.' A toolbar contains a 'Menu' dropdown, 'Unsaved W...' text, and icons for save, settings, search, zoom, and grid. Two green buttons, 'Start' and 'Debug', are on the right. The main workspace shows a green 'Trigger' block with a red exclamation mark, a lightning bolt, and check/cross icons, highlighted by a red box. A 'Manual Trigger Details' panel is open on the right, also highlighted by a red box. It features a 'Trigger\*' dropdown menu with 'Manual Trigger (max 1 per Automation)' selected. Below this, there are tabs for 'Parameters' and 'Output Attributes'. Under 'Parameters', the 'Prompt for JSON on Trigger' checkbox is checked. At the bottom right of the panel are 'Cancel' and 'Apply' buttons.



“Email” is a protocol that may be used by both Trigger and Action components in an Automations workflow. Email - Triggers receive incoming emails from external clients, and Email Actions send emails out to an external account.

FME Flow supports two email-related protocols:

- **SMTP** (Simple Mail Transfer Protocol) is the ability to directly receive an email through an email Flow built into FME Flow, or indirectly send an email through an SMTP service, for example, a Gmail account
- **IMAP** (Internet Message Access Protocol) is an indirect process that connects to an email account on a Flow elsewhere. When that account receives an email, the IMAP protocol passes it on to FME Flow.



- **SMTP Triggers**

These are used when data is sent to FME Flow via a direct email. FME Flow receives an email and triggers an Action in response.

Such triggers are possible because FME Flow includes a built-in email Flow as one of its components. However, this does require that the hostname and domain of your FME Flow should resolve to a publicly accessible IP or DNS.

- **IMAP Triggers**

IMAP (Internet Message Access Protocol) is a variation on email for incoming notifications.

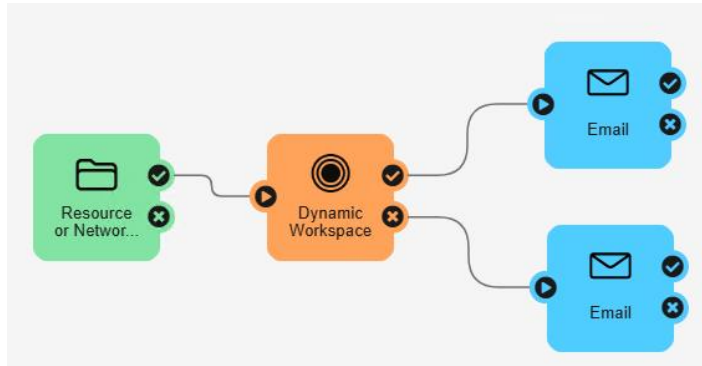
Instead of using the built-in email Flow, an IMAP Trigger connects to another email Flow and monitors it for incoming email.

When a new email arrives in that account, the Automation is triggered.

# Email as Actions



Email Actions are where FME Flow sends an email in response to a Trigger or Internal Action.



e.g. at the end of your automation workflow to notify of successful or failed processing

These emails need to be sent via an existing (external) SMTP email Flow - as the built-in email Flow in FME Flow is only for incoming mail, as is the IMAP protocol.

There are a number of parameters for outgoing mail - because the full SMTP Flow connection parameters need to be defined. However, there is an option to load a template for some of the most common email services.

### Email Details

Action\*

Email (send) ▼

Parameters Output Attributes Retry

▼ Load Template

SMTP Server\*

Mail exchange server domain name or IP address used for sending email.

smtp.live.com

SMTP Server Port\*

Mail exchange TCP port used for sending email.

25

SMTP Account ?

admin

SMTP Password ?

.....

# Authoring Job Chains

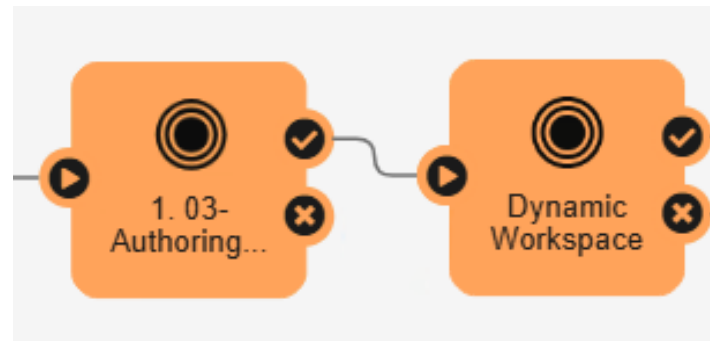


Workflow Management is a technique for controlling workspaces in sequence or branching with in-built logic.

A chain of jobs is one that runs jobs in a particular sequence; either one after the other or in parallel:

- **Run Jobs in Sequence**

These jobs will run sequentially, so the first job will run to completion before the next action in the chain starts.

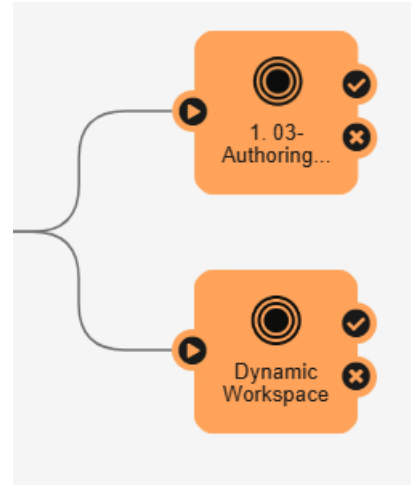


# Authoring Job Chains



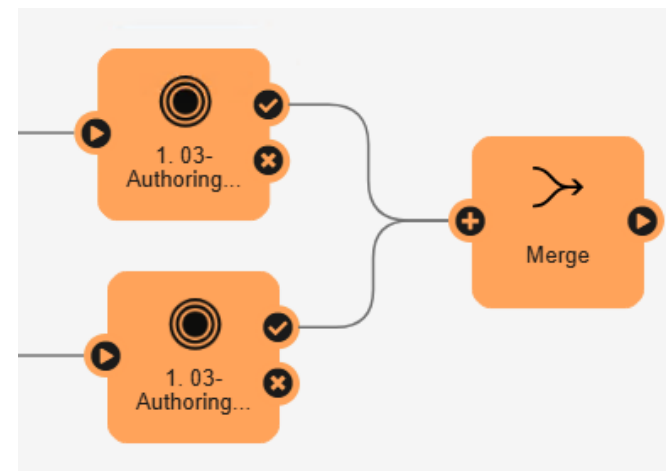
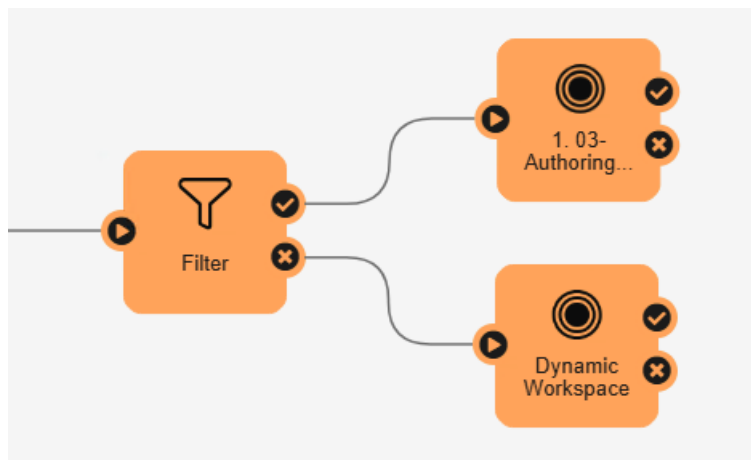
- **Run Jobs in Parallel**

Both jobs will be submitted at the same time



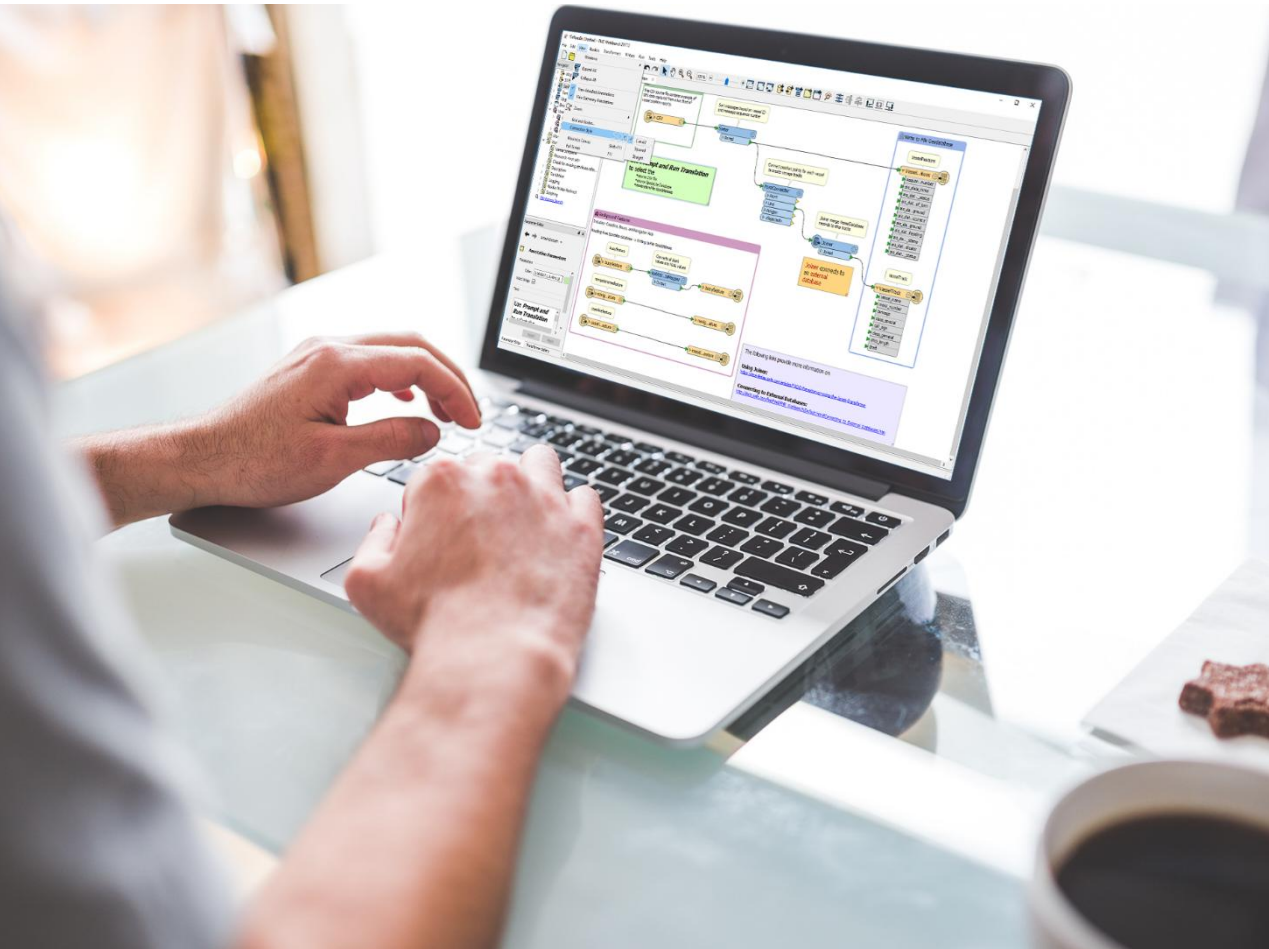
- **Conditional Processing**

There are two Action types that are particularly useful when building additional logic into Automations; Filter and Merge





# Exercises 2.1



## Automation Workflow

As a technical analyst in the GIS department, you want to start experimenting with Automations in FME Flow. The Directory Watch protocol seems like a good place to start, and you were already thinking about a shared folder where users place Shapefile datasets for adding to, or updating, the corporate database

**GOAL** – Create an automation workflow using a *Directory to Watch* to generate a trigger when new files are detected

### FME Flow credentials -

username: admin

password: **FMETraining1234**

# Exercises 2.2



## Processing Directory Watch

As a technical analyst in the GIS department, you want to start experimenting with Automations in FME Flow. So far you have successfully setup a Directory Watch to generate a trigger when users upload building footprint update datasets.

The automation now needs to process the uploaded building footprint files (Shapefiles) and update the corporate Building Footprint holding (a Geodatabase).

**GOAL** – Modify the Directory Watch automation to process the uploaded building footprint update files

**FME Flow credentials -**

username: admin

password: **FMETraining1234**

# Self-Service

Connect. Transform. **Automate**



# FME Flow Apps

Connect. Transform. **Automate**



Flow Apps allow other users within your organisation to run workspaces without prior knowledge of FME or an FME Flow account.

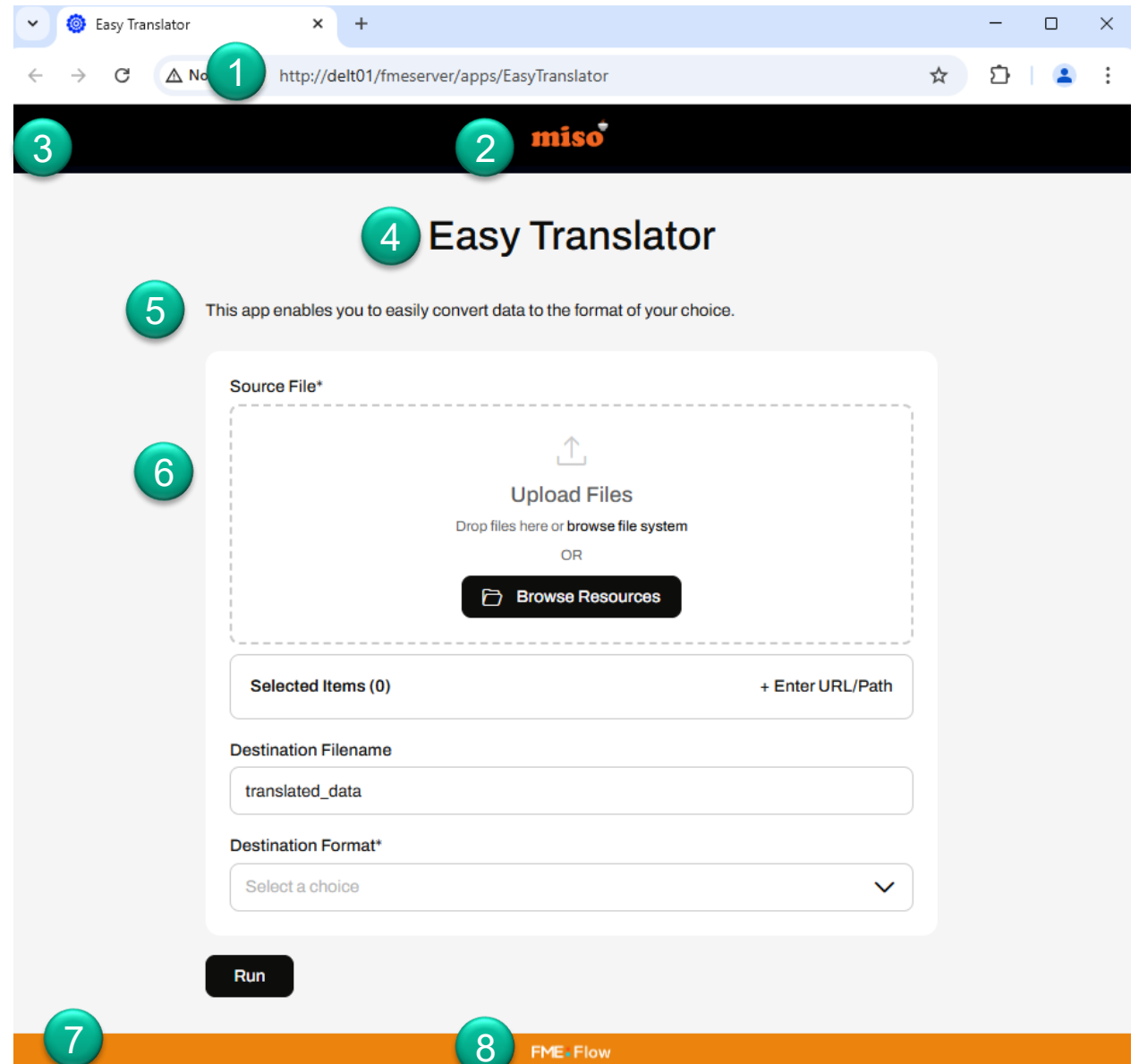
- **Workspace Apps** – Create a user-friendly interface to run your workspaces
- **Gallery Apps** – Create a landing page for a collection of Workspace Apps and URLs. This enables users to access multiple apps from a single organized page.
- **Automation Apps** - A web-accessible tool that allows authorized users to run automations triggered manually, using a secure, shareable URL and customizable interface

Flow Apps are both easy to build and customize as they require no prior knowledge of HTML, JavaScript, or CSS.

# Flow Apps: Workspace Apps



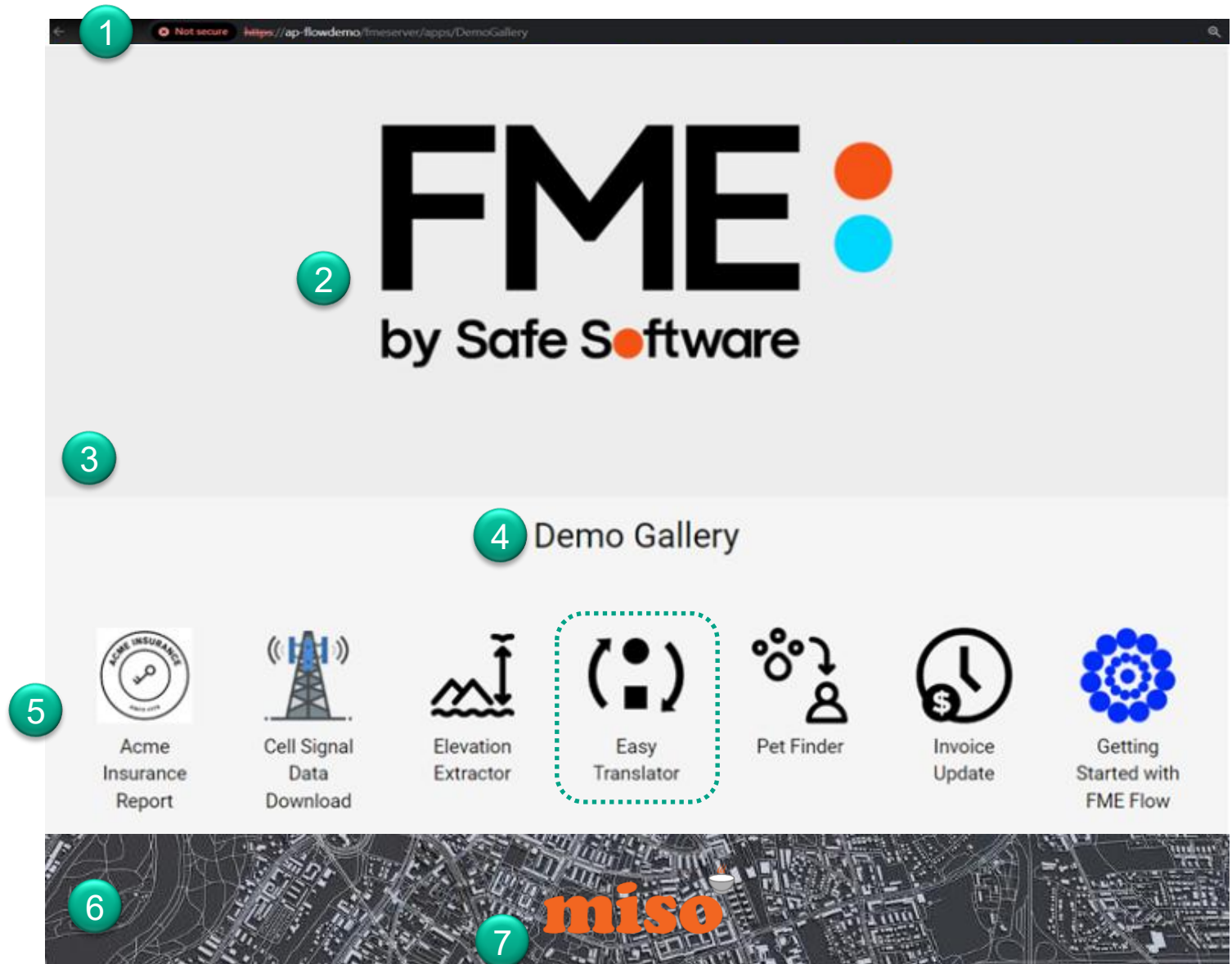
1. Name / URL
2. Header Logo
3. Header Banner Image / Colour
4. Title
5. Description
6. User Parameters to Run workspace
7. Footer Banner
8. Footer Logo



# Flow Apps: Gallery Apps



1. Name / URL
2. Header Logo
3. Header Banner Image / Colour
4. Title
5. Links to Flow Apps  
(e.g 'Easy Translator' Workspace App)
6. Footer Banner
7. Footer Logo

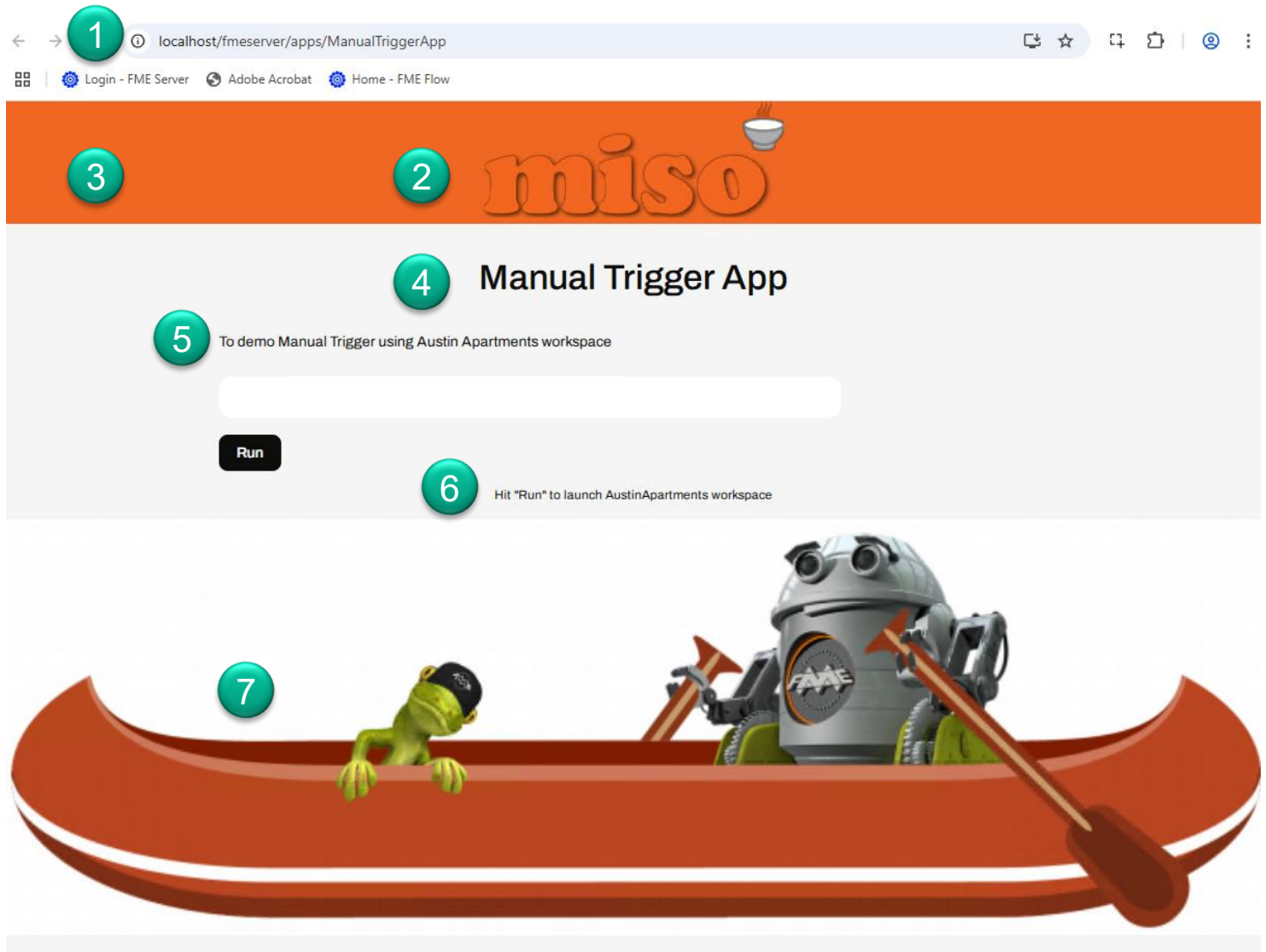




# Flow Apps: Automation Apps



1. Name / URL
2. Header Logo
3. Header Banner Image / Colour
4. Title
5. Description
6. Footer Banner
7. Footer Logo



# Exercise 2.3



## Create FME Flow App (Workspace App)

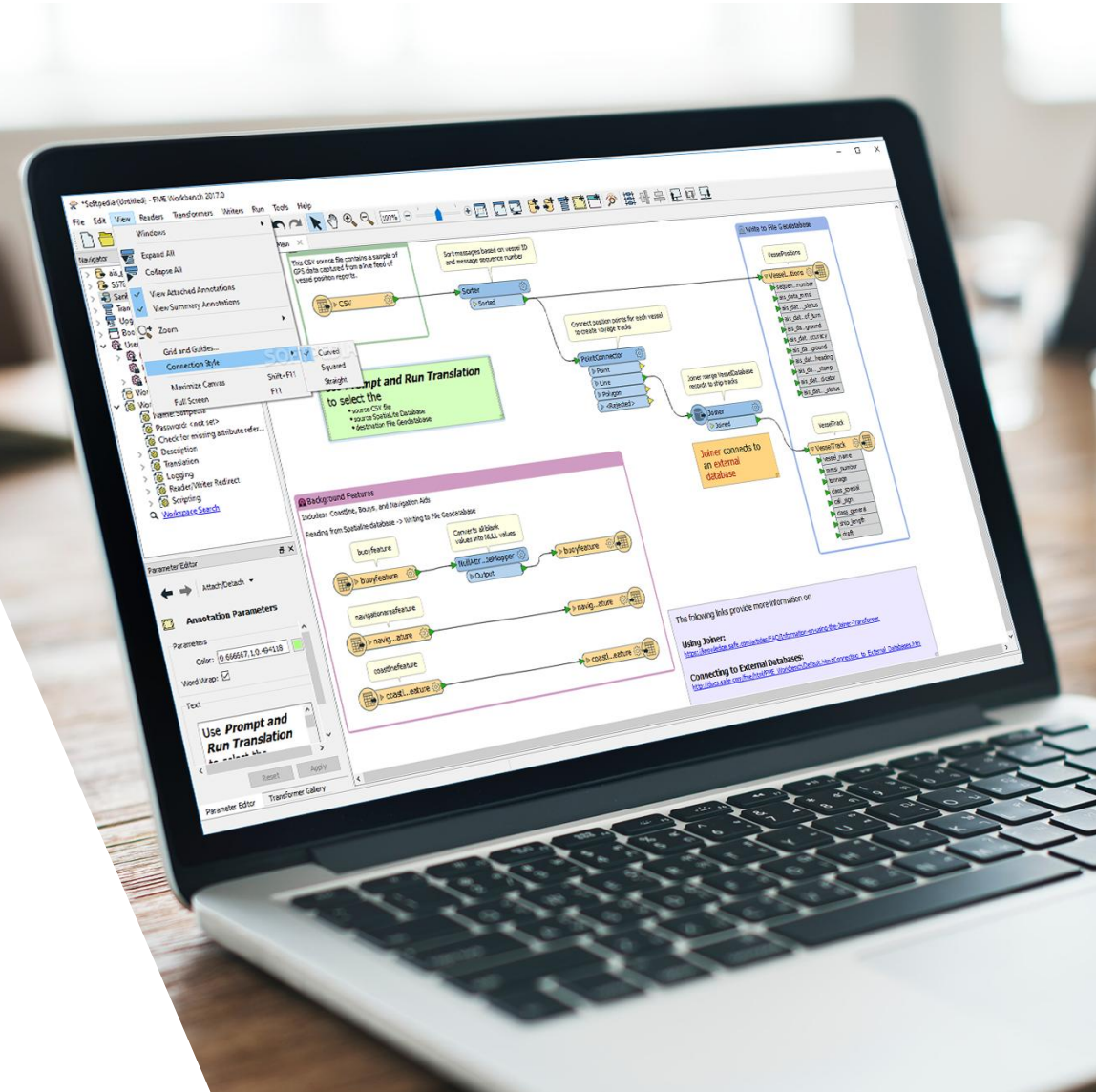
Let's create an FME Flow App so that anyone with the URL can run the SSSI Constraint workspace to obtain constraint polygons whenever they need to. They won't even need an FME Flow account!

**Goal** – Share a workspace with non-FME users using an FME Flow App

**FME Flow credentials -**

username: admin

password: **FMETraining1234**



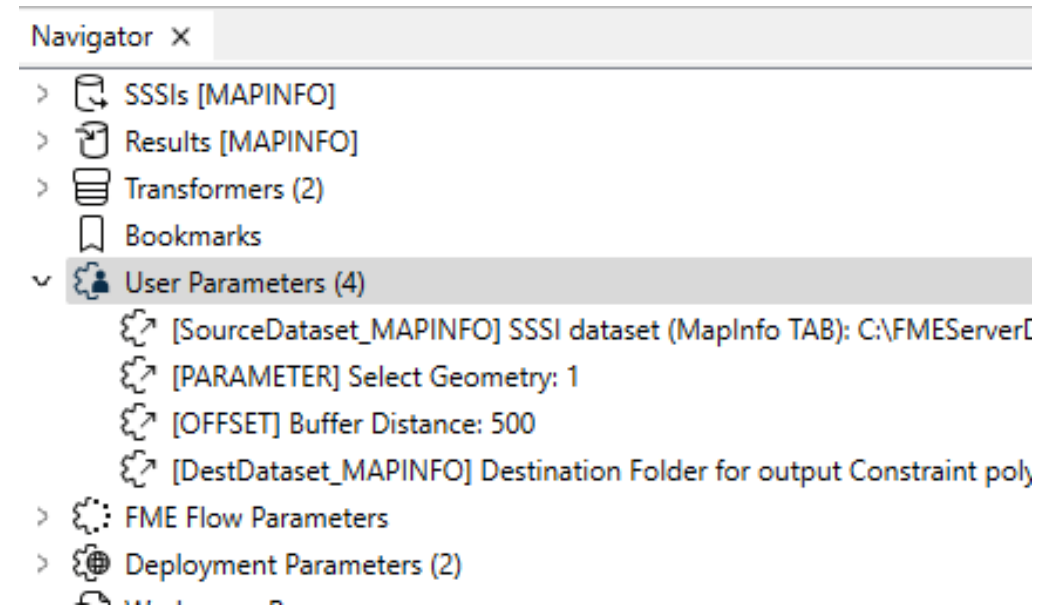
# Advanced Self Service



Workspace parameters are the key to controlling self-serve and the Data Download service.

Common Published Parameter uses:

- What coordinate systems to deliver data in
- What feature types (layers) to deliver
- What geographic area (Bounding Box or Area of Interest) to deliver
- Any other Reader, Writer, or Transformer parameters of use to the user



Any Published Parameters present in your workspace within FME Form will be exposed within FME Flow.

# Exercise 2.4



## Data Download Self-Serve

As a technical analyst in the GIS department of a city, you have just commenced an initiative to allow other departments to download address data for defined areas, rather than having to ask you to create bespoke data supplies for them.

So far you have created a workspace that allows users to choose the format for their data download.

Now you need to add a Geometry published parameter to let users interactively choose their area of interest.

**Goal** - Create an FME Flow Data Download facility for address data, allowing the user to choose the desired output format and define an area of interest on a map

### FME Flow credentials -

username: admin

password: **FMETraining1234**



# Message Streams

Connect. Transform. **Automate**

# Message Streams

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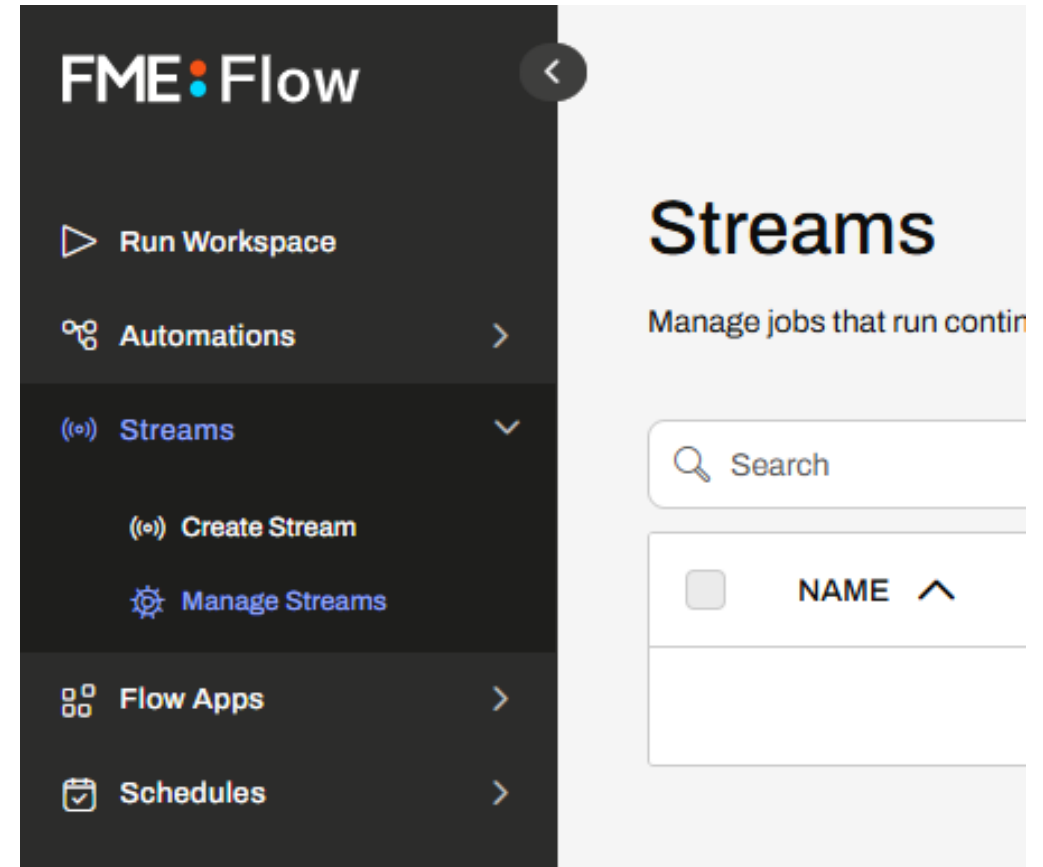
- Message streaming is a real-time technique like Automations. However, where Automations receive/send one-off messages, message streaming involves a continuous flow of information.
- Instead of a workflow being run once for each message, handling a message stream involves creating a workspace that will connect to the stream and run continuously receiving messages as soon as they are sent.

# Message Streams



- Use the Streams page to manage jobs you want to run continuously.

- Streams provide the following additional advantages:
  - When you create a stream, the FME Engines you assign to run its jobs are dedicated to that stream.
  - You can configure a stream and then pause it.
  - The Streams page shows you all the jobs you run continuously, so you can manage them in one convenient place.



For more information on Getting Started with Streams, visit:

<https://support.safe.com/hc/en-us/articles/25407472101005-FME-and-Stream-Processing>



# Resources

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Community pages and  
forums



Knowledge Base



Each Other

A blurred office scene. In the foreground, a wooden desk holds a laptop, a clear plastic water bottle, and a brown paper cup. In the background, a person in a blue shirt is seated, gesturing with their hand while holding a microphone, suggesting a presentation or meeting. The text "Good luck with FME" is overlaid in white.

**Good luck with FME**