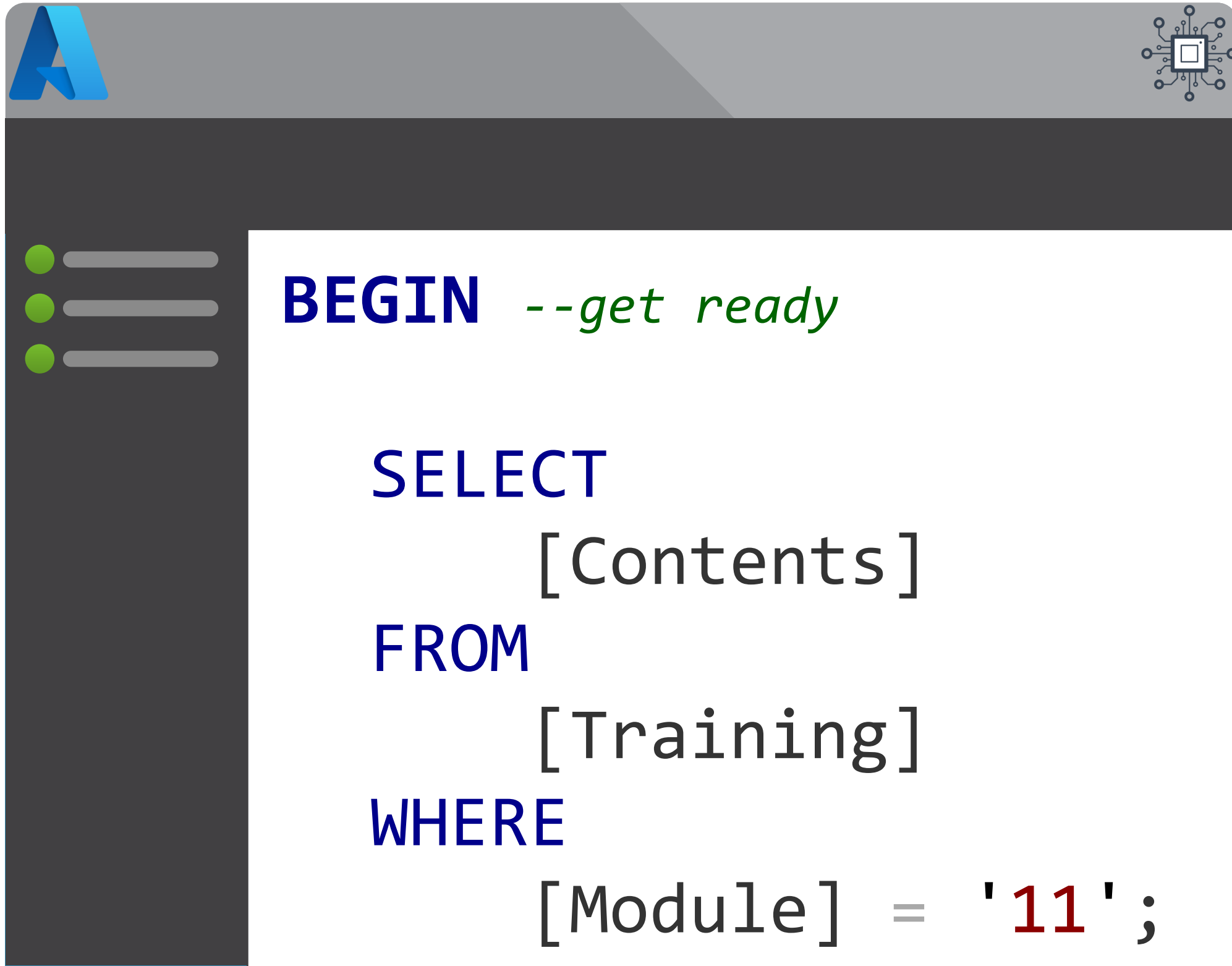


Module 11

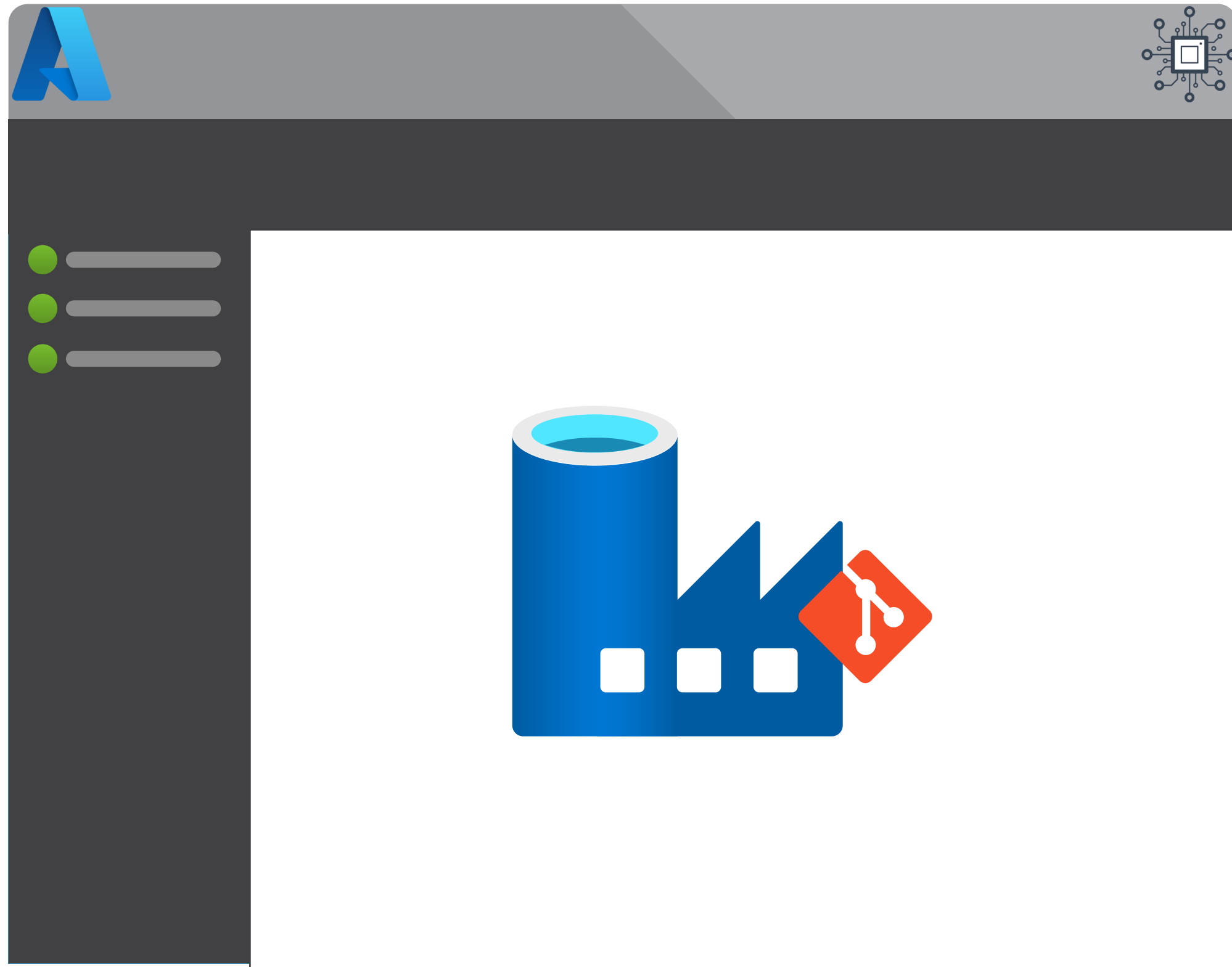
CI/CD



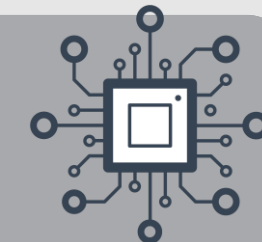
- Source Control vs Developer UI
- Basic ARM Template Deployments
- Advanced Deployment Patterns

Module 11

CI/CD



- Source Control vs Developer UI
- Basic ARM Template Deployments
- Advanced Deployment Patterns




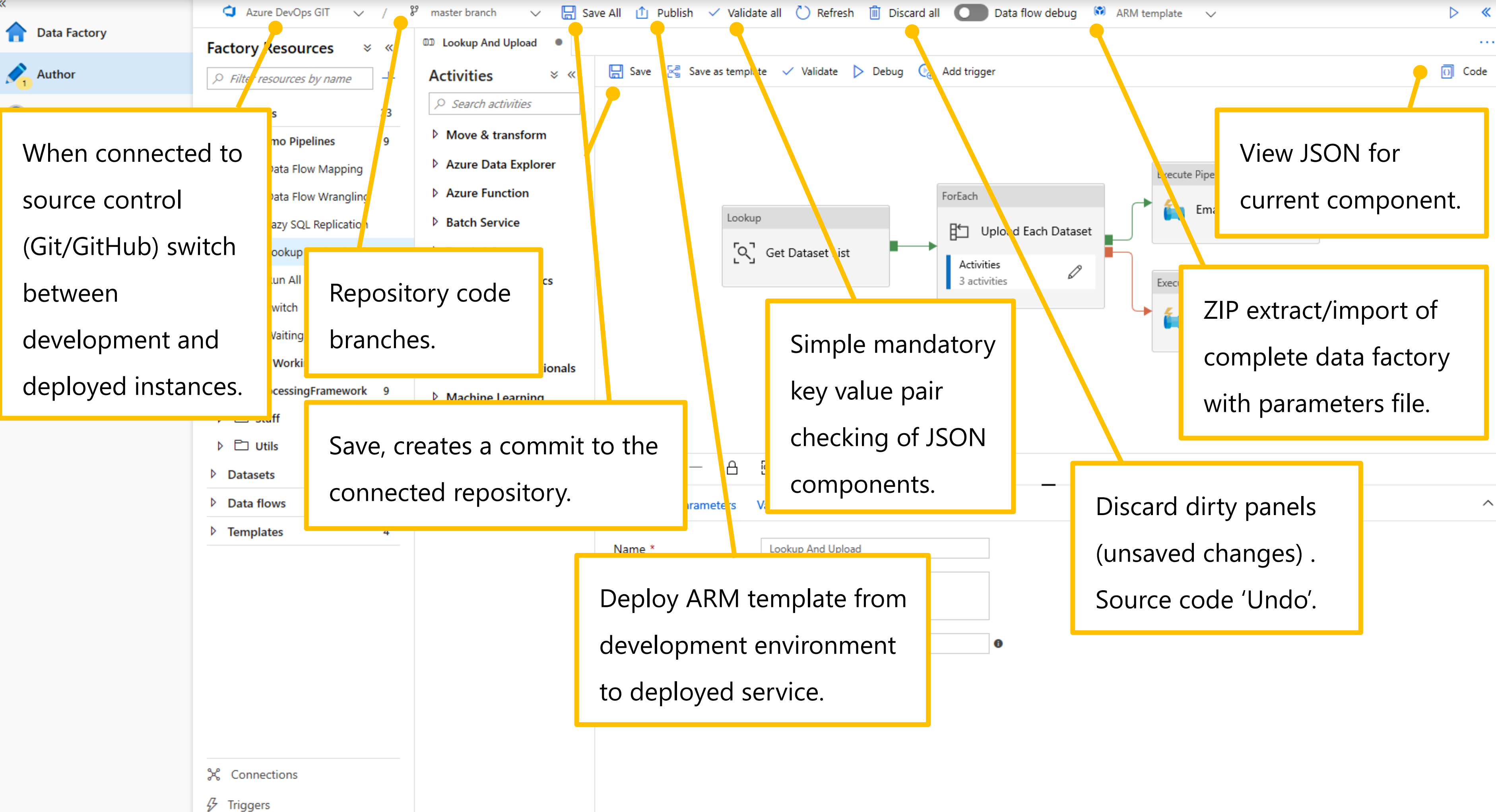
Open Azure Data Factory Studio
Start authoring and monitoring your data pipelines and data flows.

[Open](#) 



Read documentation
Learn how to be productive quickly.
Explore concepts, tutorials, and samples.

[Learn more](#) 



Data Factory

Author

Monitor

Factory Resources

Filter resources by name

Pipelines23

Demo Pipelines9

Data Flow Mapping

Data Flow Wrangling

Lazy SQL Replication

Lookup And Upload

Run All SSIS Packages

Switch

WaitingPipeline

Working Progress2

ProcessingFramework9

Stuff4

Utils1

Datasets27

Data flows6

Templates4

Connections

Triggers

Lookup And Upload

Activities

Search activities

Databricks

Data Lake Analytics

General

HDInsight

Iteration & conditionals

Machine Learning

Save All

Publish

Validate all

Refresh

Discard all

Data flow debug

ARM template

Save

Save as template

Validate

Debug

Add trigger

Code

Lookup

Get Dataset List

ForEach

Upload Each Dataset

Activities3 activities

Email Alerter

Execute Pipeline

Email Alert - Fail

General

Parameters

Variables

Output

Name *

Lookup And Upload

Description

Simple dynamic demo pipeline

Concurrency

Annotations

+ New

Debug the Control Flow.

Run the pipeline.

Debug the Data Flow.

Get a cluster ready.

Data Factory

Author

Monitor

Factory Resources

Filter resources by name

Pipelines23

Demo Pipelines9

Data Flow Mapping

Data Flow Wrangling

Lazy SQL Replication

Lookup And Upload

Run All SSIS Packages

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Working Progress2

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Templates4

Lookup And Upload

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Search activities

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Data Lake Analytics

General

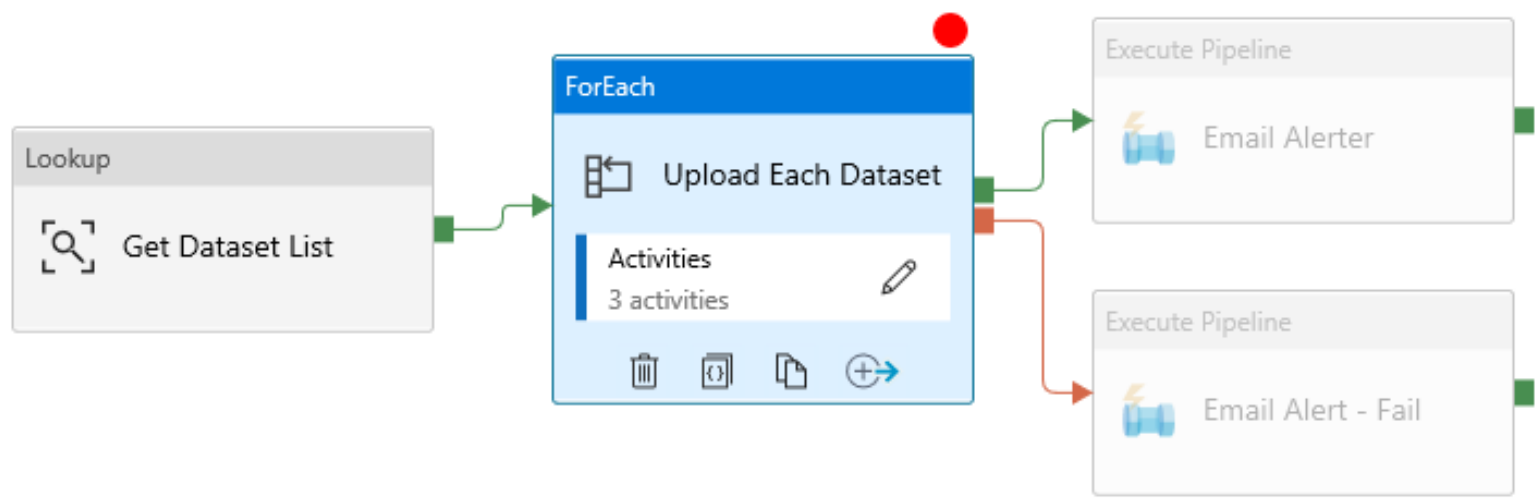
HDInsight

Iteration & conditionals

Machine Learning

Save Save as template Validate Debug Add trigger Code

Debug the Control Flow.
Run the pipeline.



Search + - Lock 100% Zoom In Zoom Out Full Screen

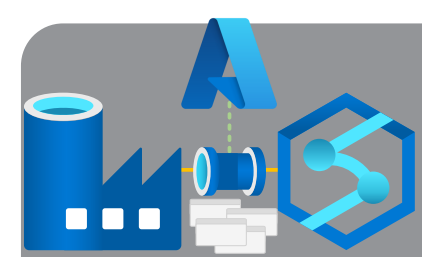
General Settings Activities (3) User properties

Name * Upload Each Dataset [Learn more](#)

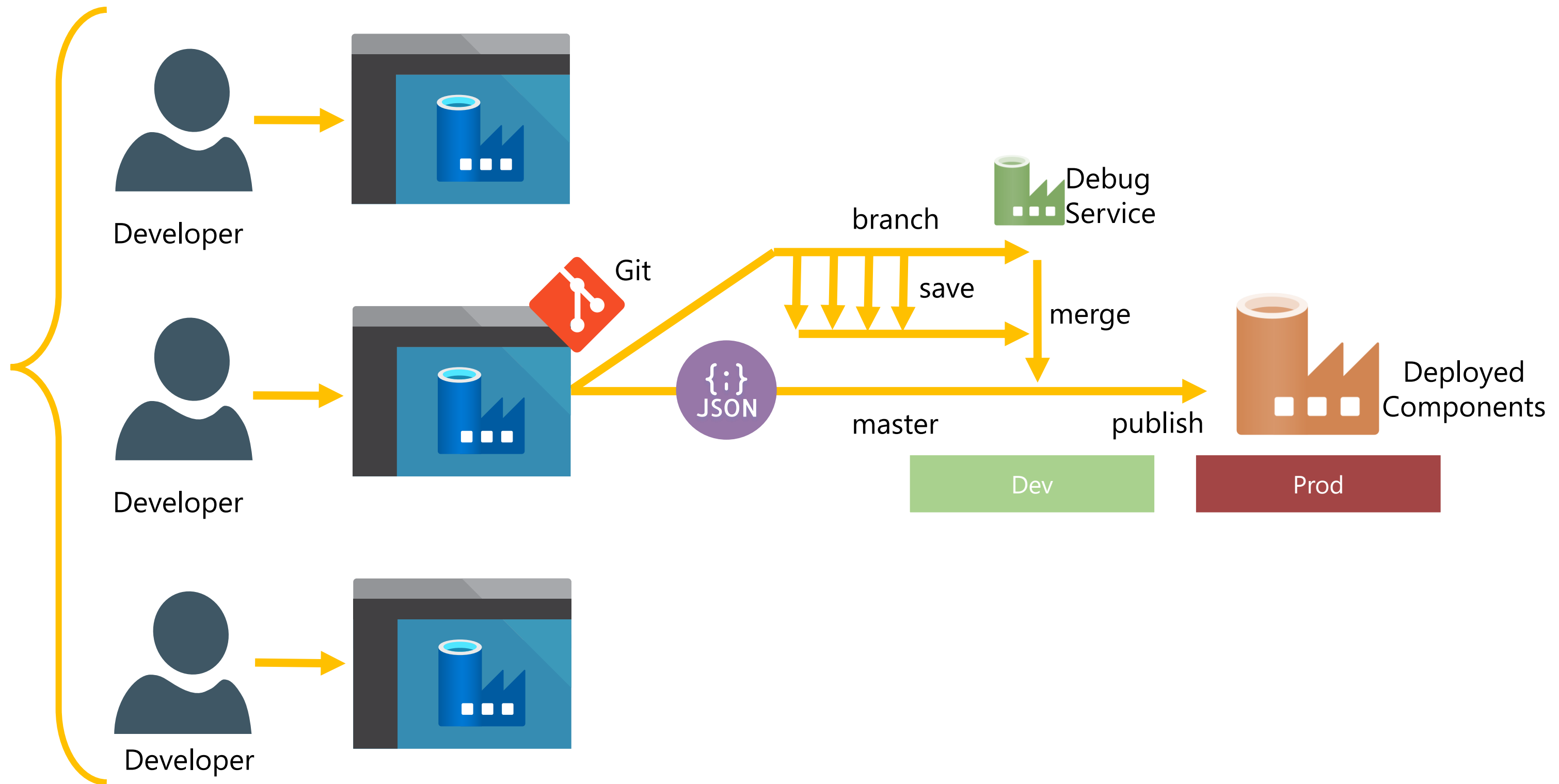
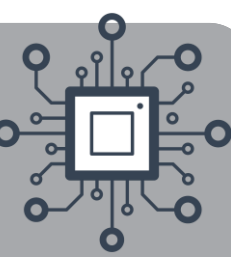
Description

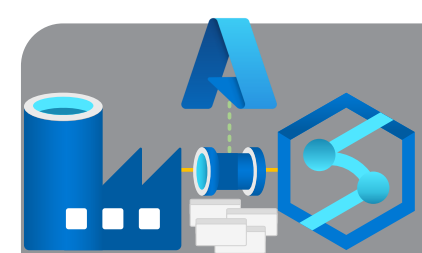
Connections

Triggers

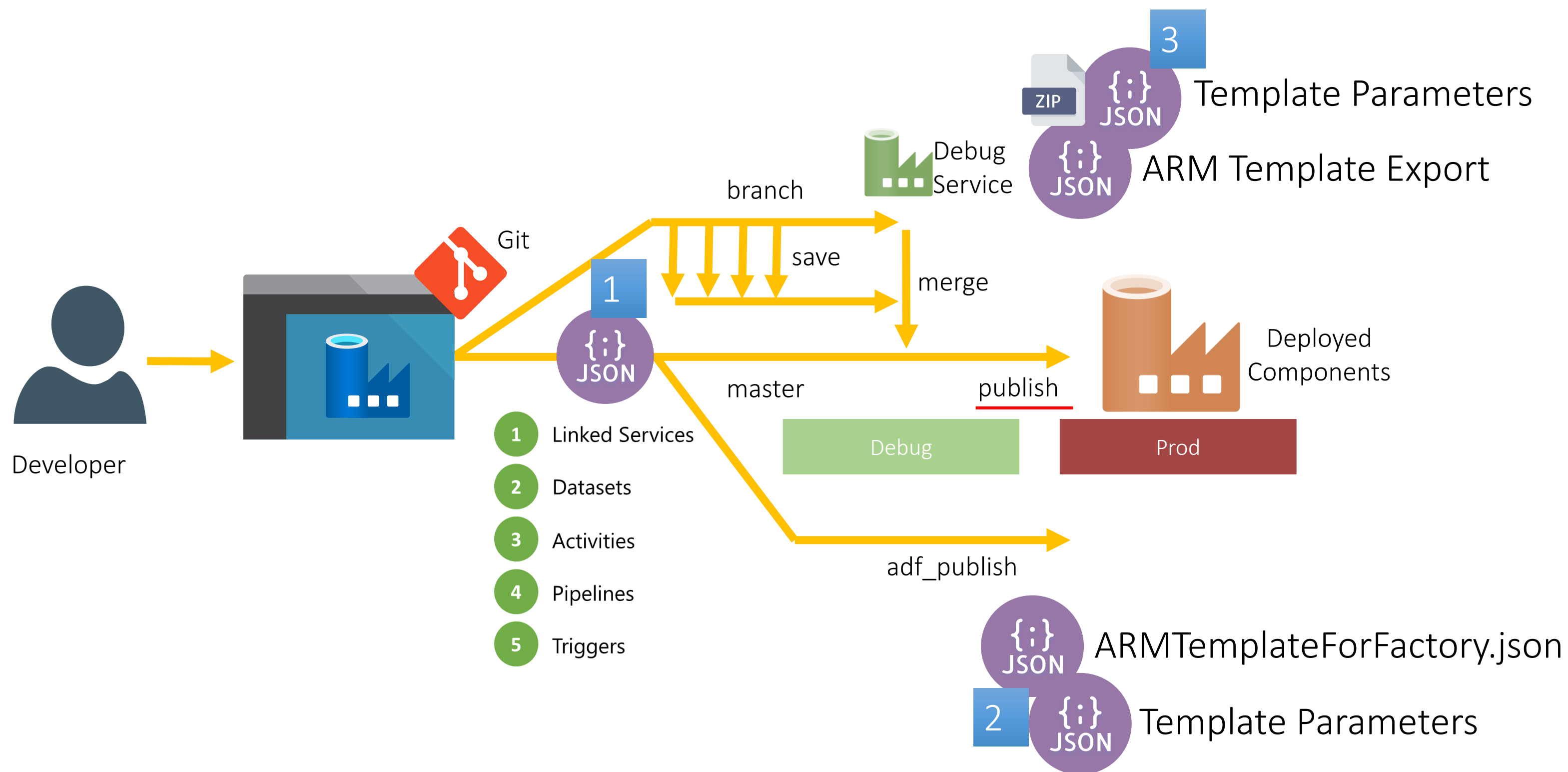
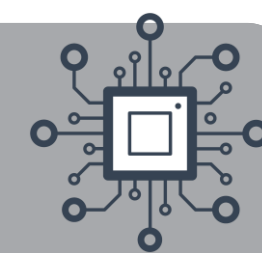


Data Factory Continuous Integration



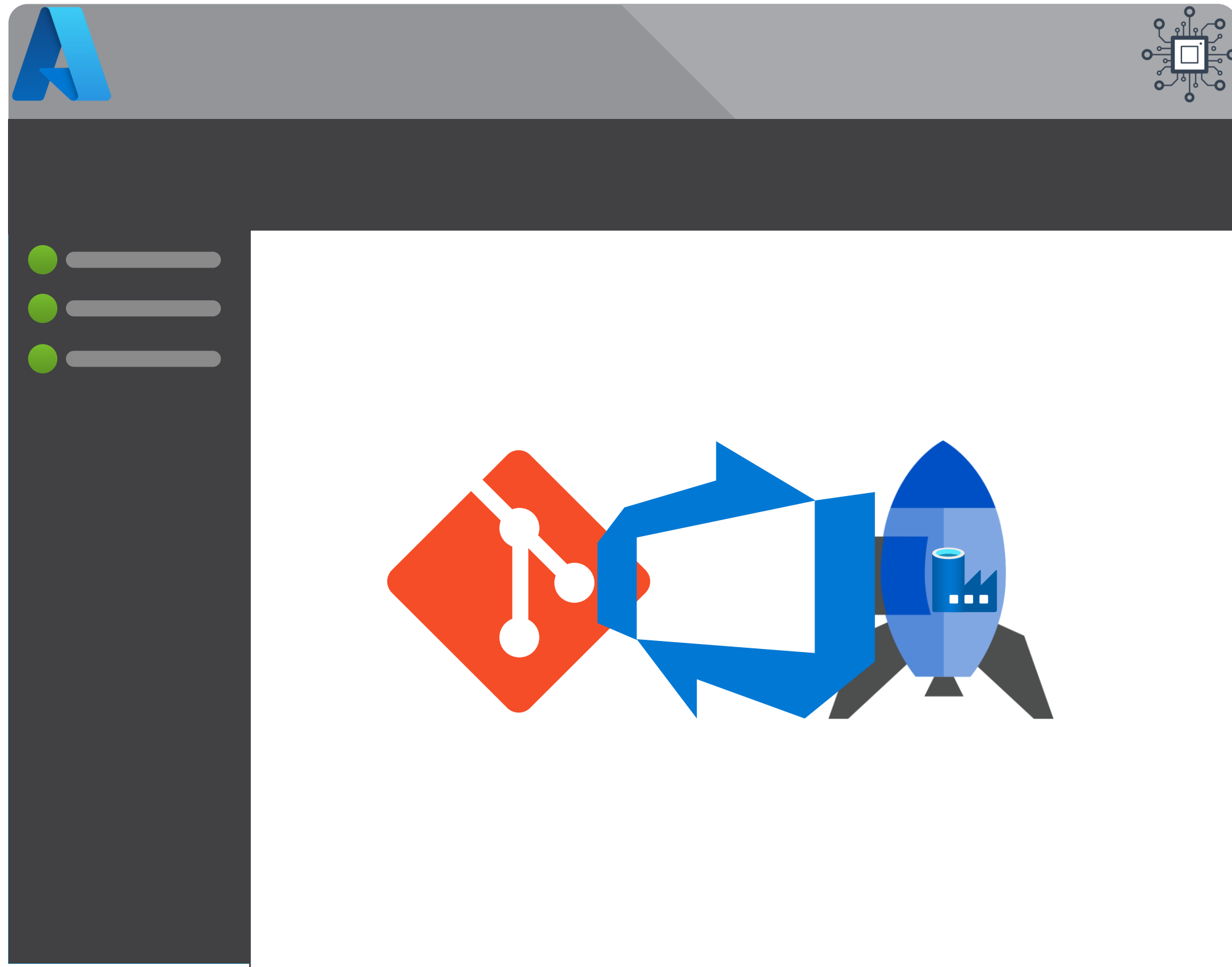


Getting Our ADF Source Code

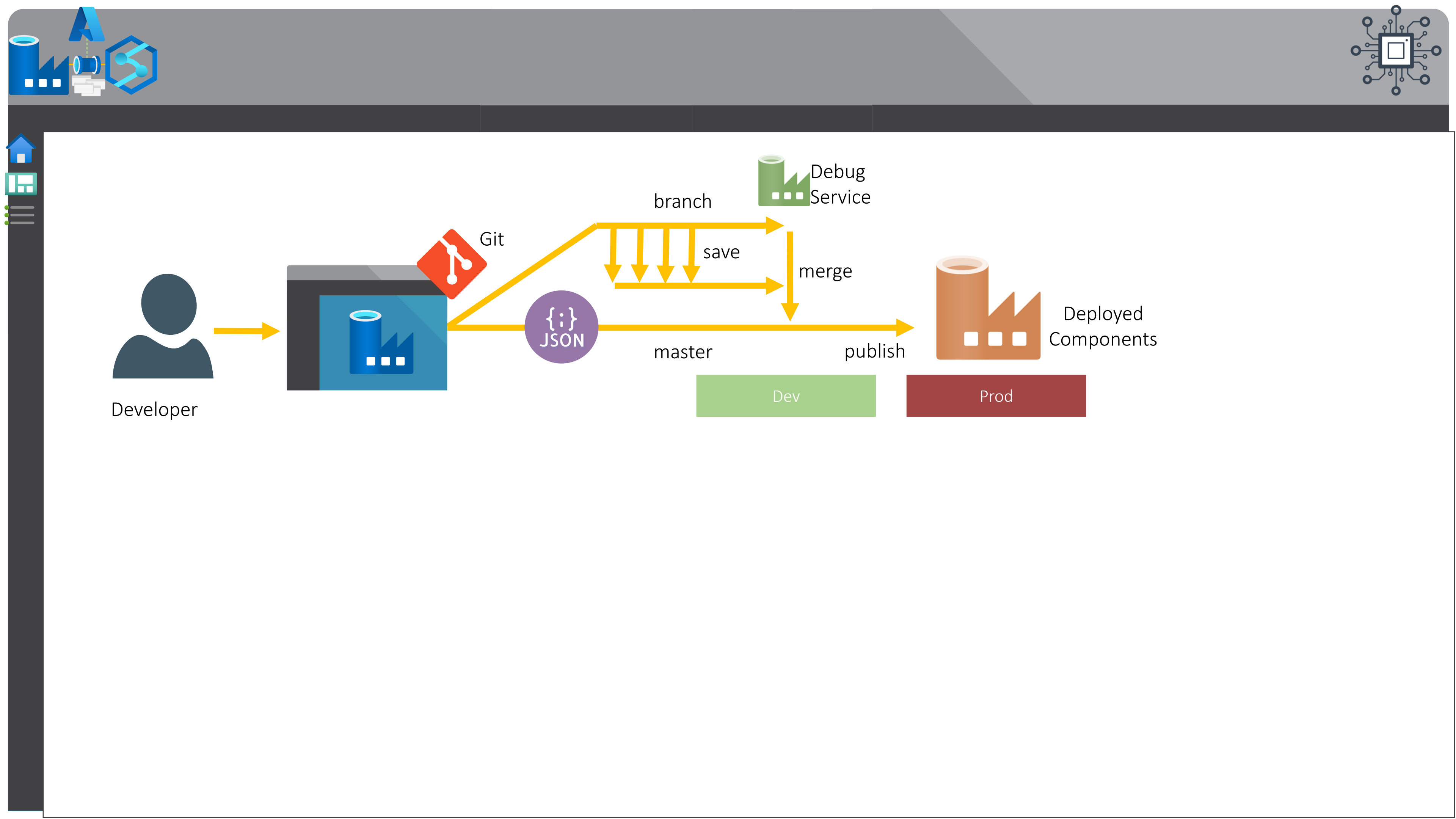


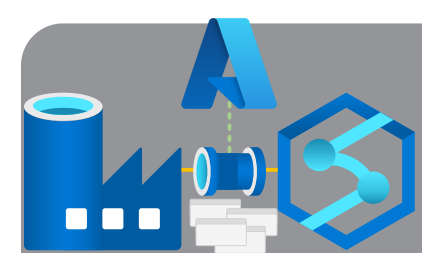
Module 11

CI/CD

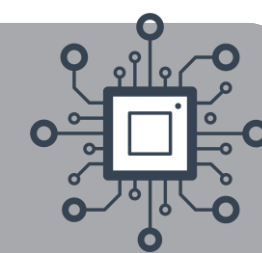


- Source Control vs Developer UI
- Basic ARM Template Deployments
- Advanced Deployment Patterns

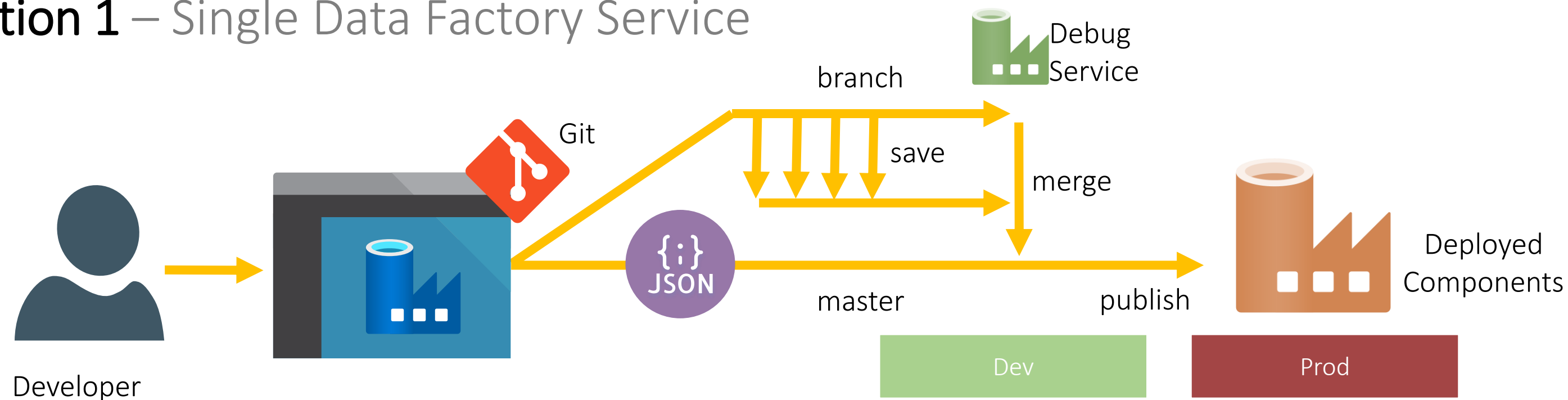




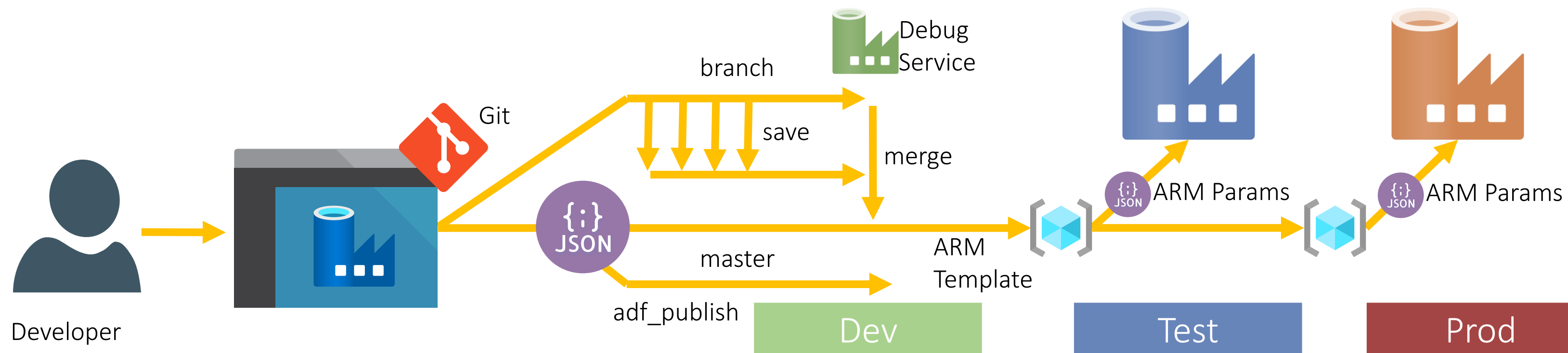
Data Factory Continuous Delivery



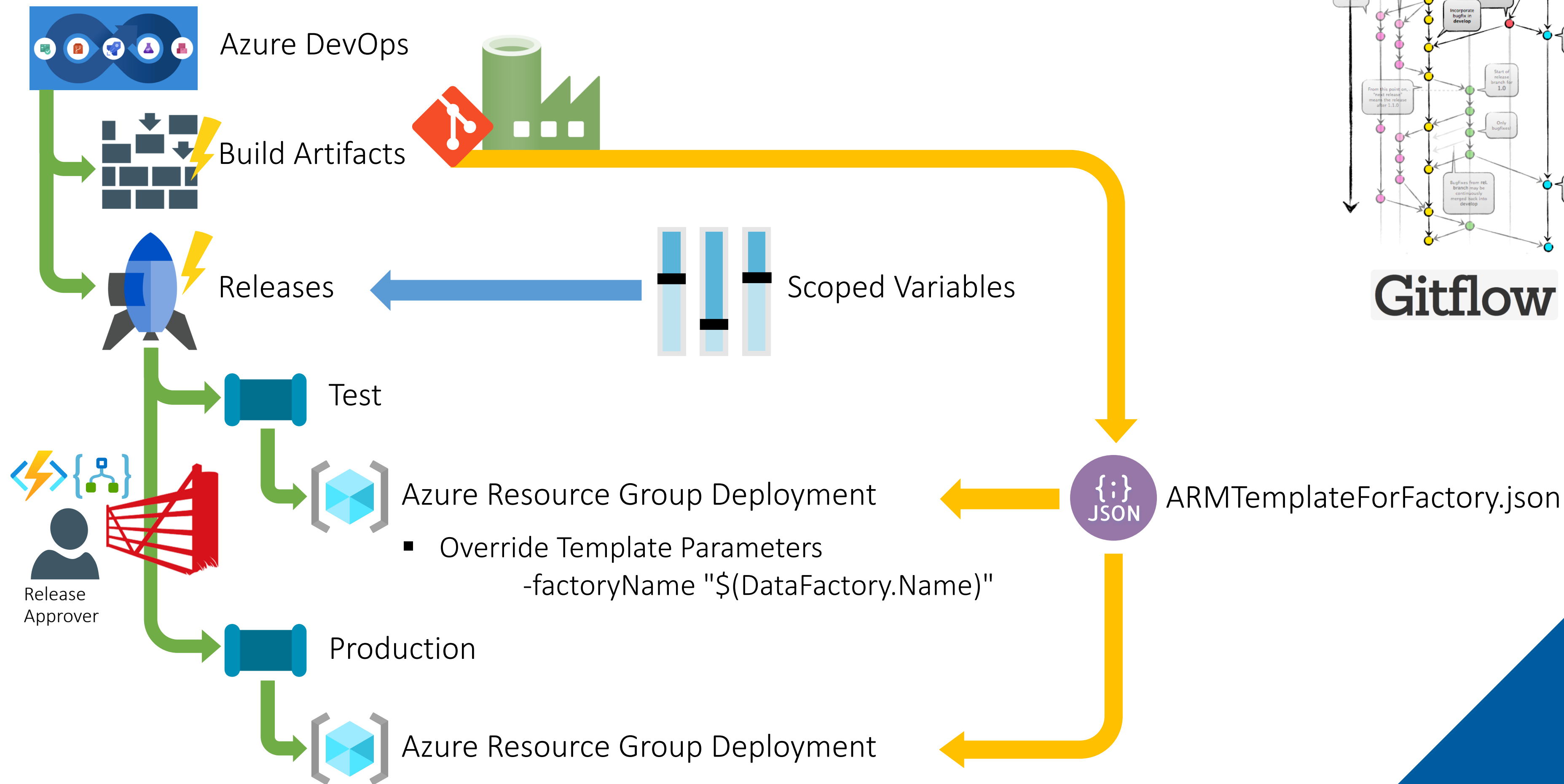
Option 1 – Single Data Factory Service



Option 2 – ARM Templates for Multiple Data Factory Services

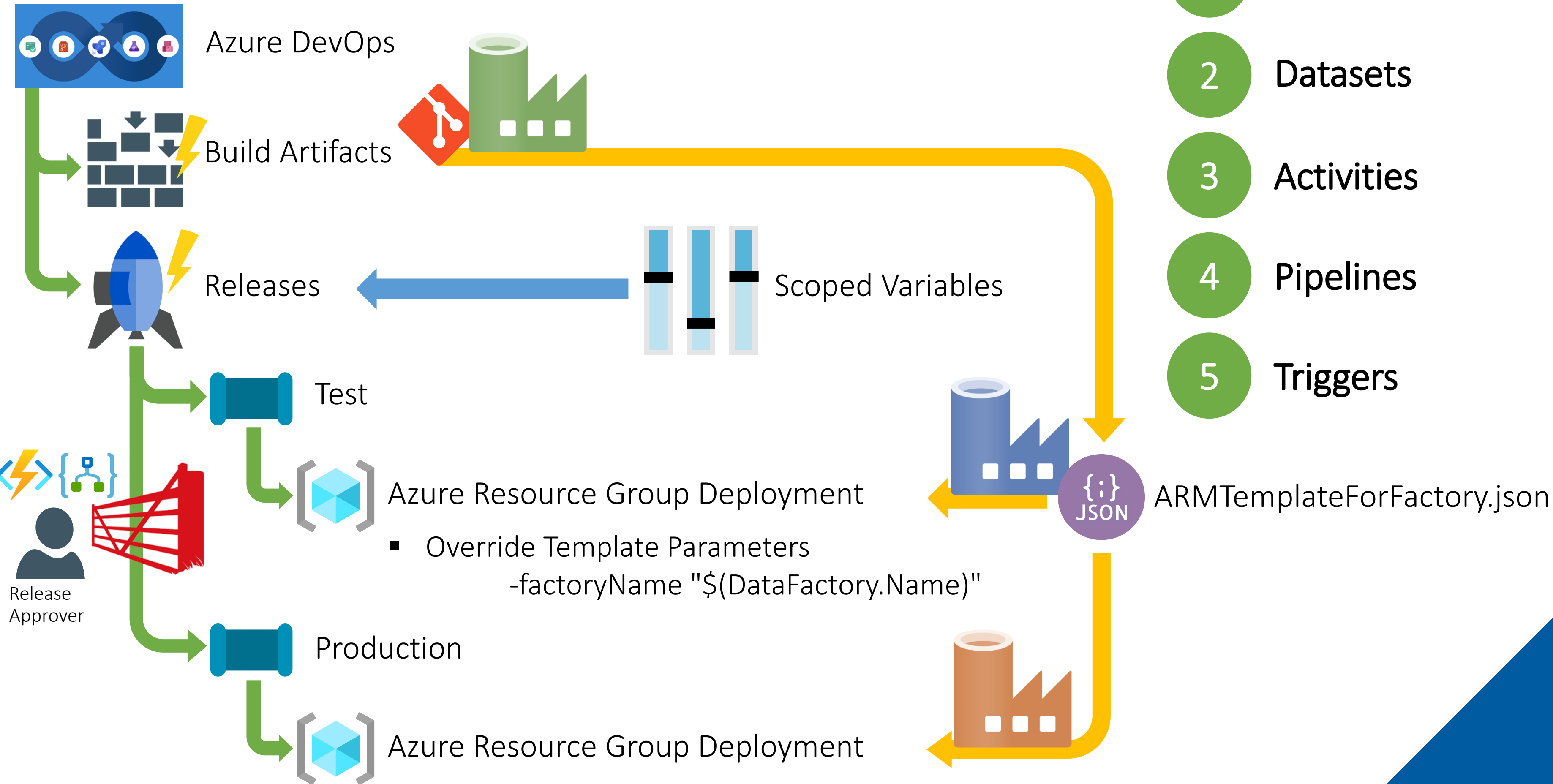


Data Factory Continuous Delivery



Data Factory Continuous Delivery

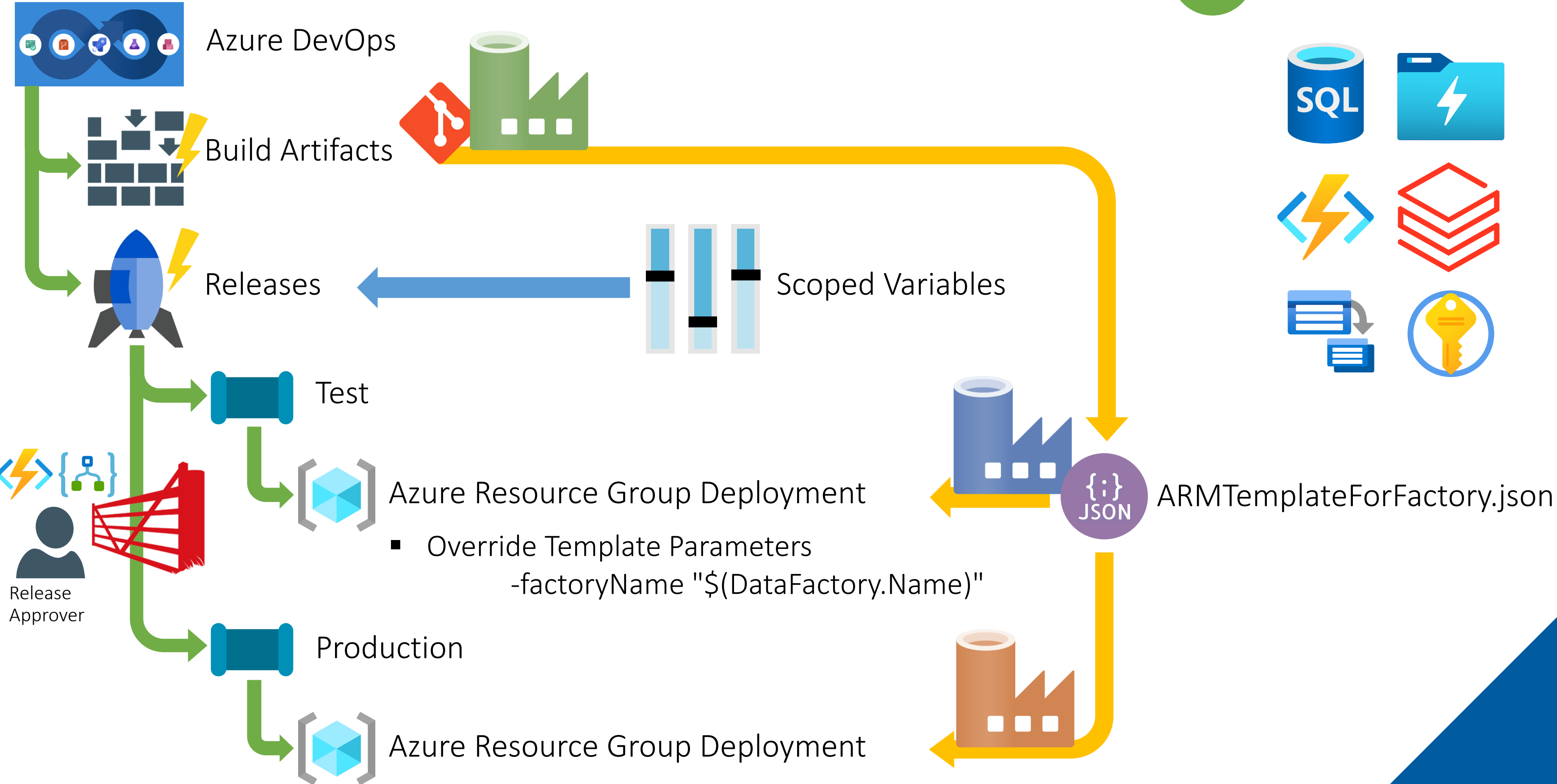
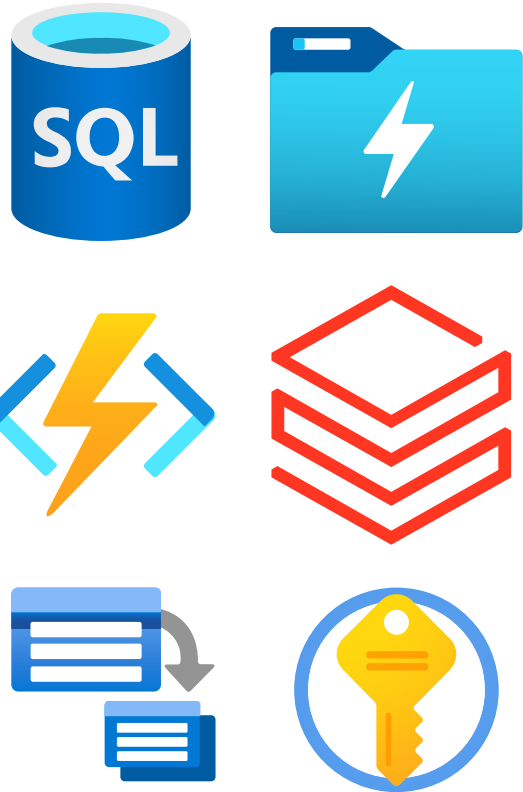
- 1 Linked Services
- 2 Datasets
- 3 Activities
- 4 Pipelines
- 5 Triggers



Data Factory Continuous Delivery

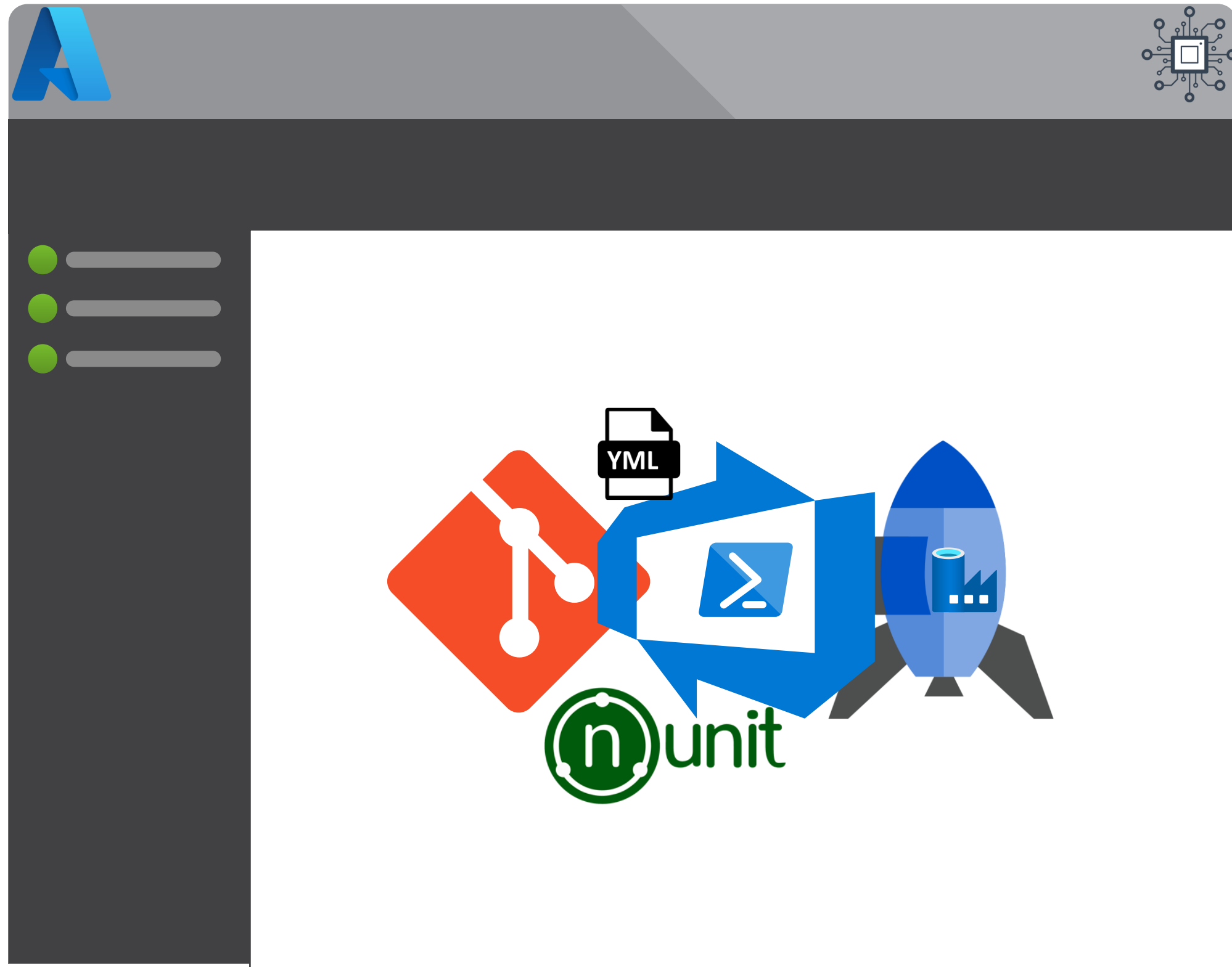
1

Linked Services



Module 11

CI/CD

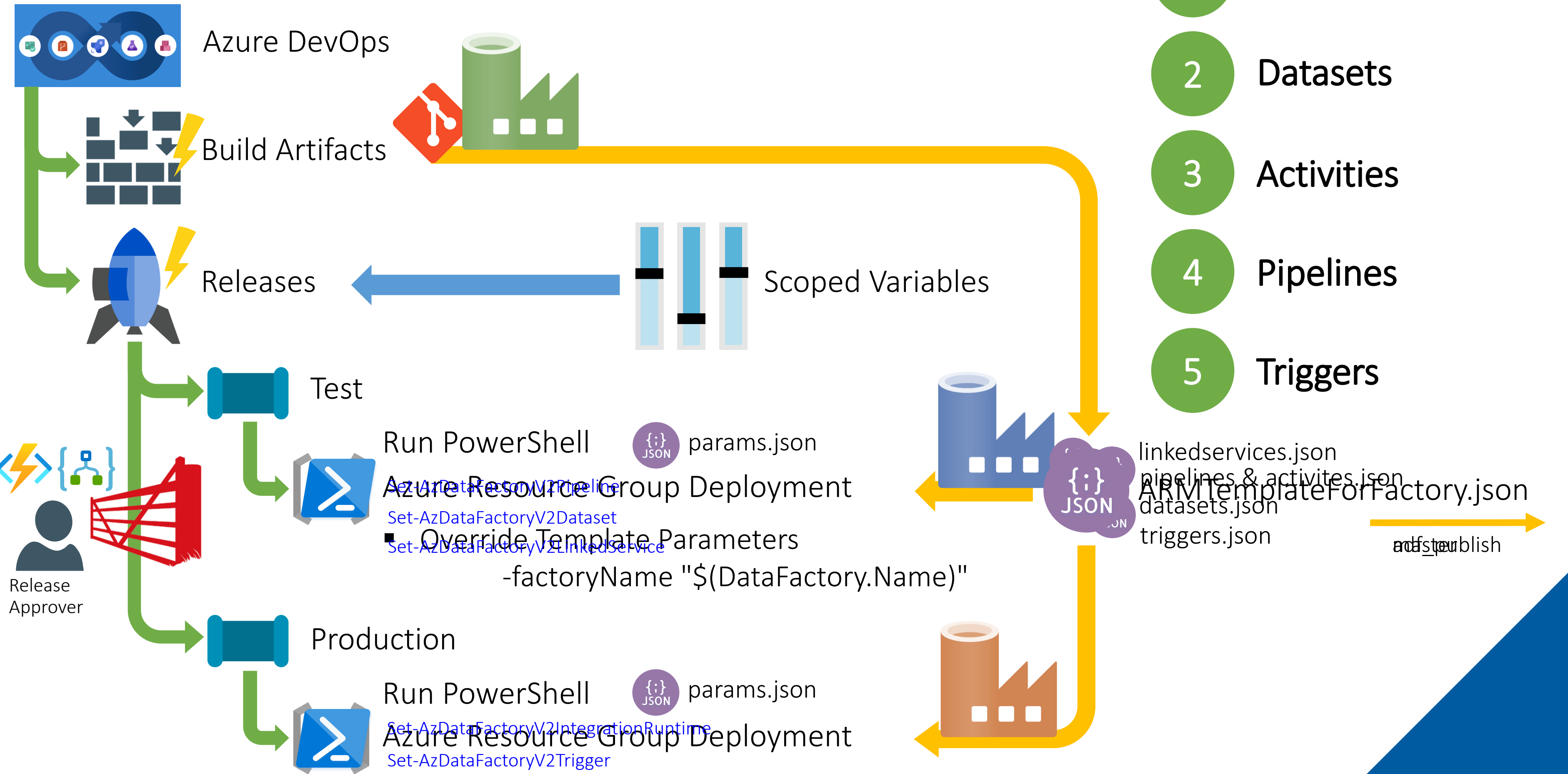


- Source Control vs Developer UI
- Basic ARM Template Deployments
- Advanced Deployment Patterns

Data Factory Continuous Delivery

- Option 3

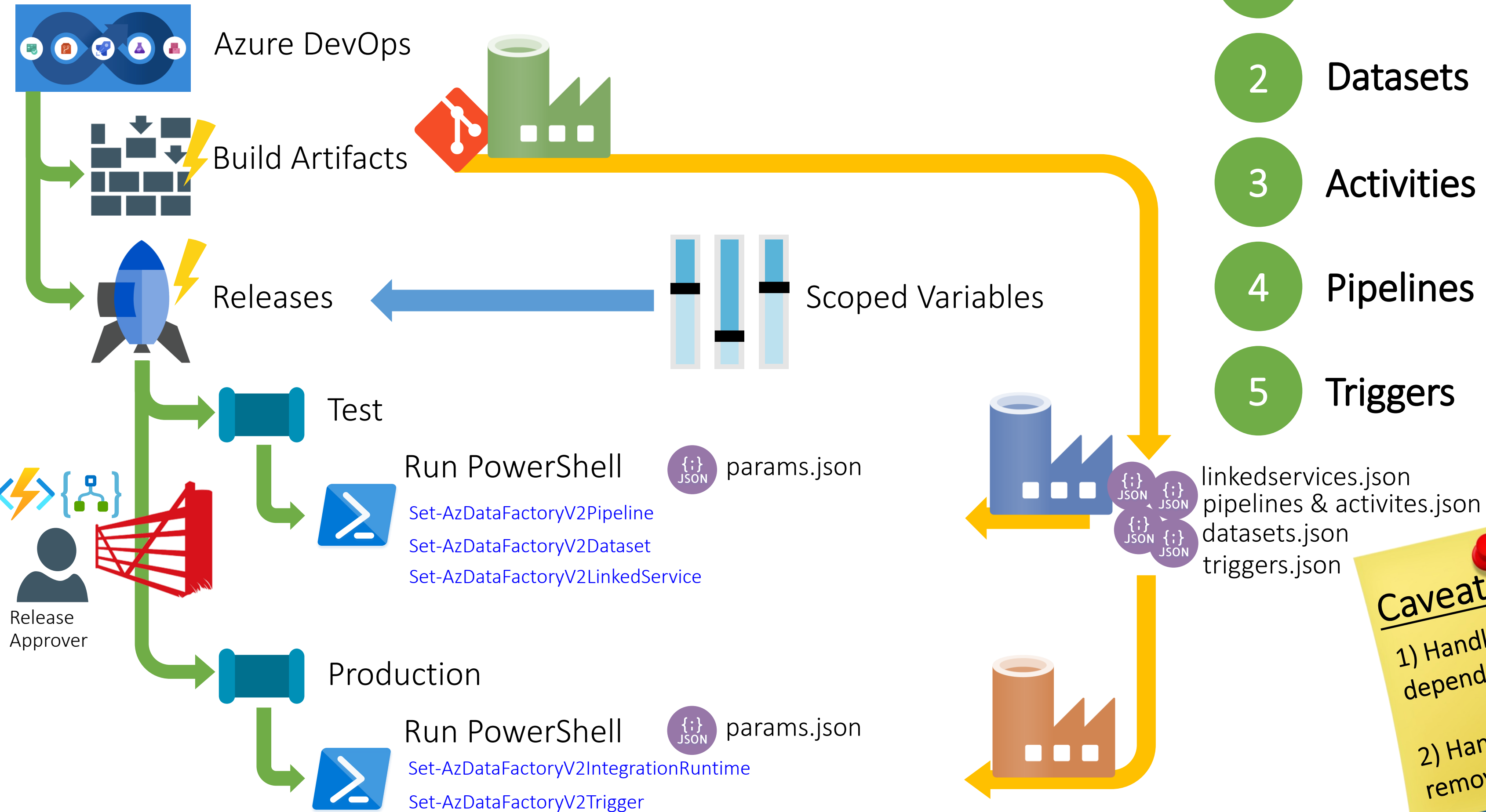
- 1 Linked Services
- 2 Datasets
- 3 Activities
- 4 Pipelines
- 5 Triggers



Data Factory Continuous Delivery

- Option 3

- 1 Linked Services
- 2 Datasets
- 3 Activities
- 4 Pipelines
- 5 Triggers



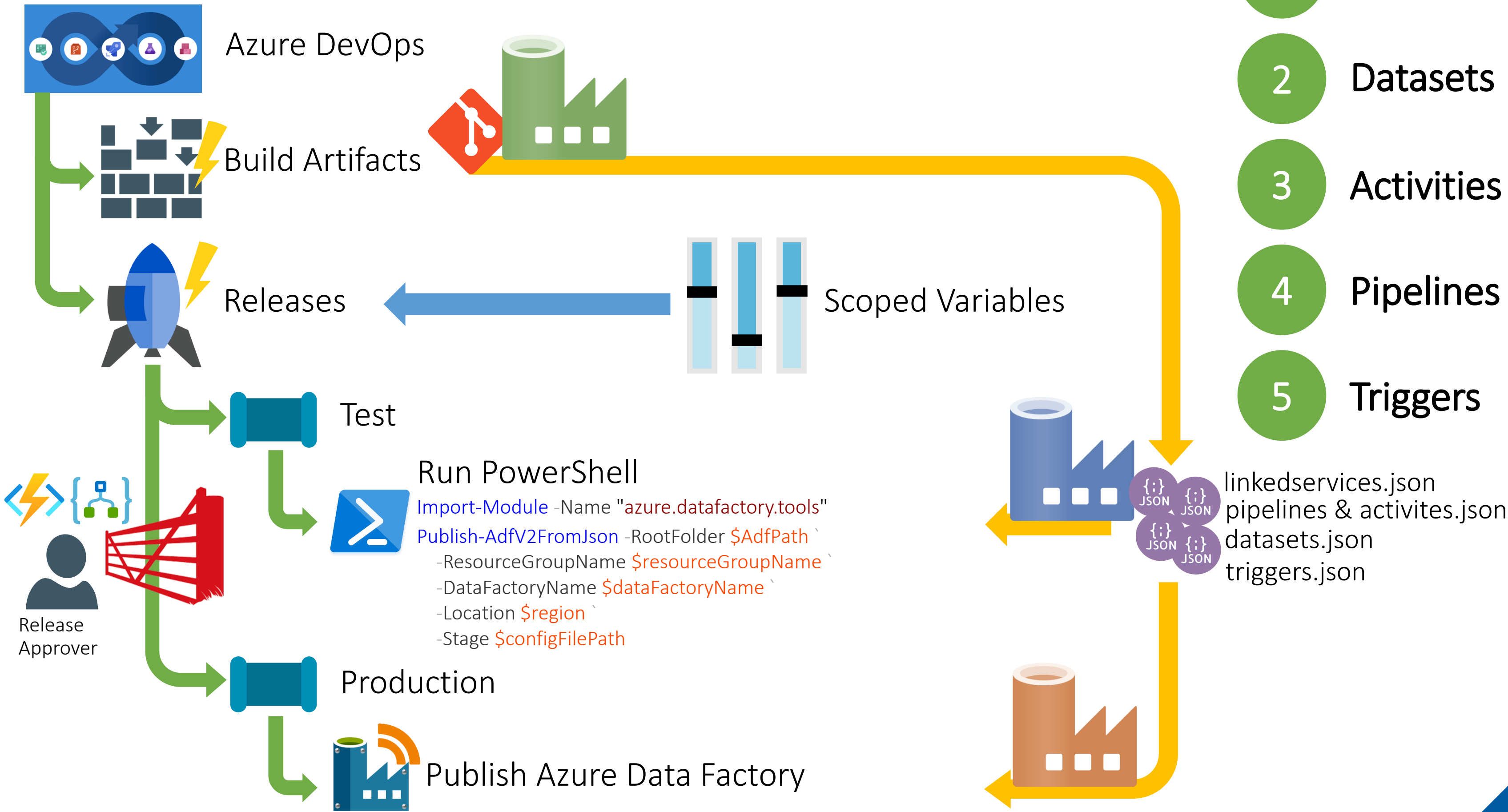
Caveats

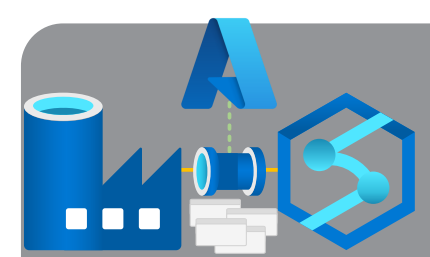
- 1) Handle own dependencies.
- 2) Handle own removals.

Data Factory Continuous Delivery

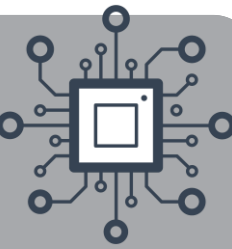
- Option 4

- 1 Linked Services
- 2 Datasets
- 3 Activities
- 4 Pipelines
- 5 Triggers





Deployment Options Summary

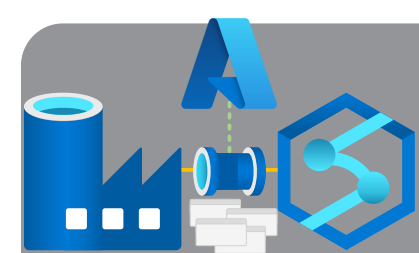


Option 1 – Use a single Data Factory service.

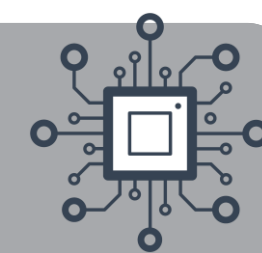
Option 2 – ARM Templates for multiple Data Factory services (environments).

Option 3 – Use PowerShell cmdlets for each ADF artifact.

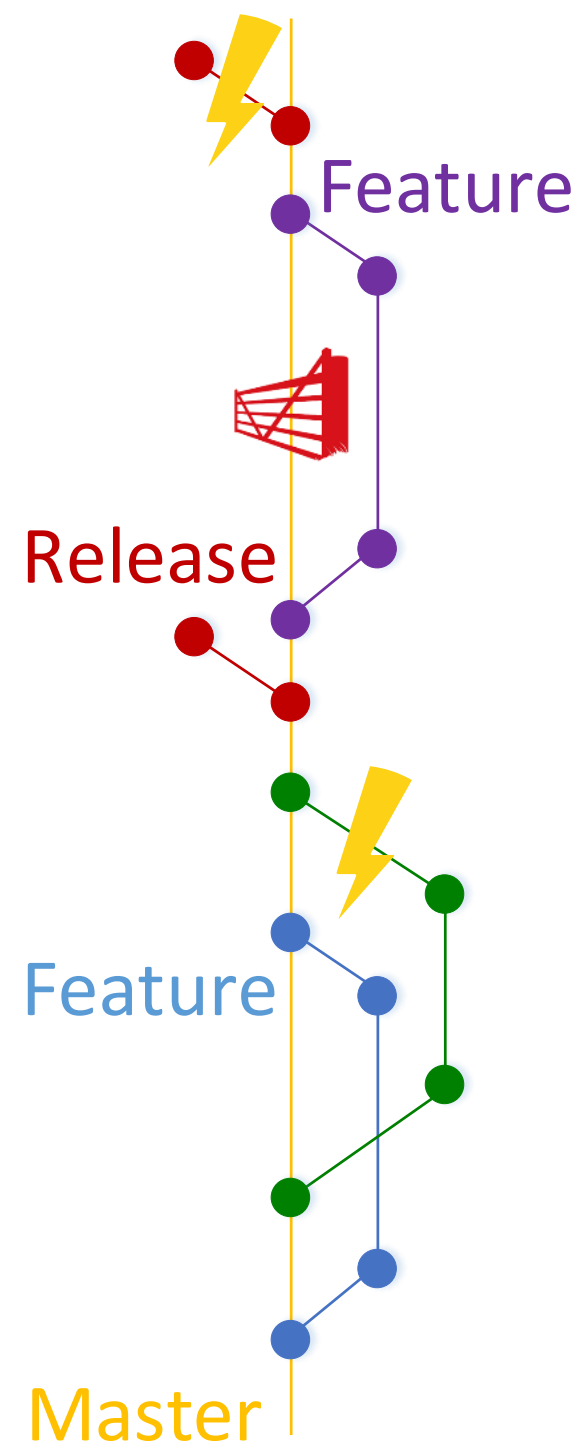
Option 4 – Use a PowerShell module or custom Azure DevOps task.



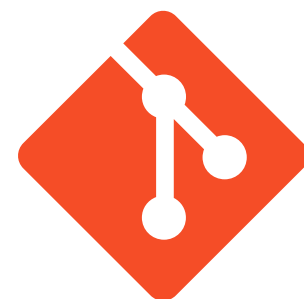
Data Factory DevOps Story Summary



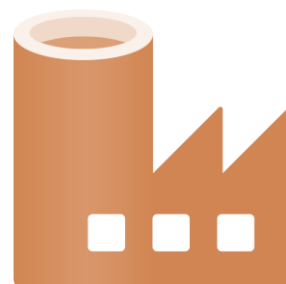
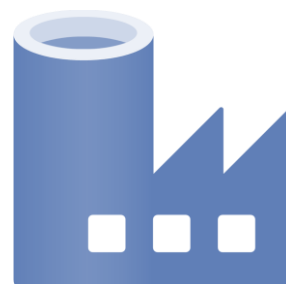
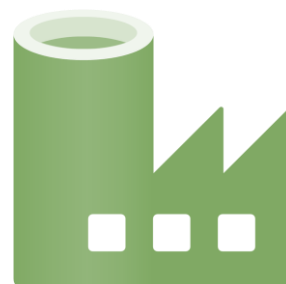
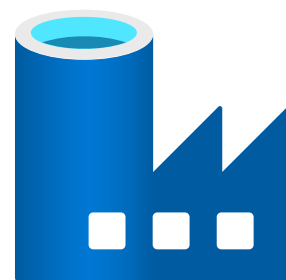
What is your code branching strategy?



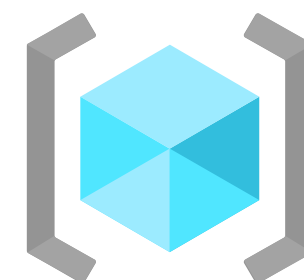
Which source control tool to use?



How many environments do we want?



What deployment method do we want to use?



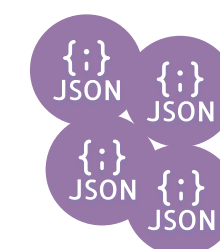
What artifacts are we going to use?...

OR

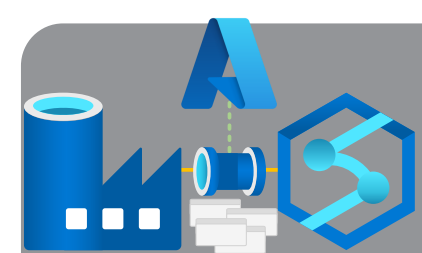
How much control do you want?



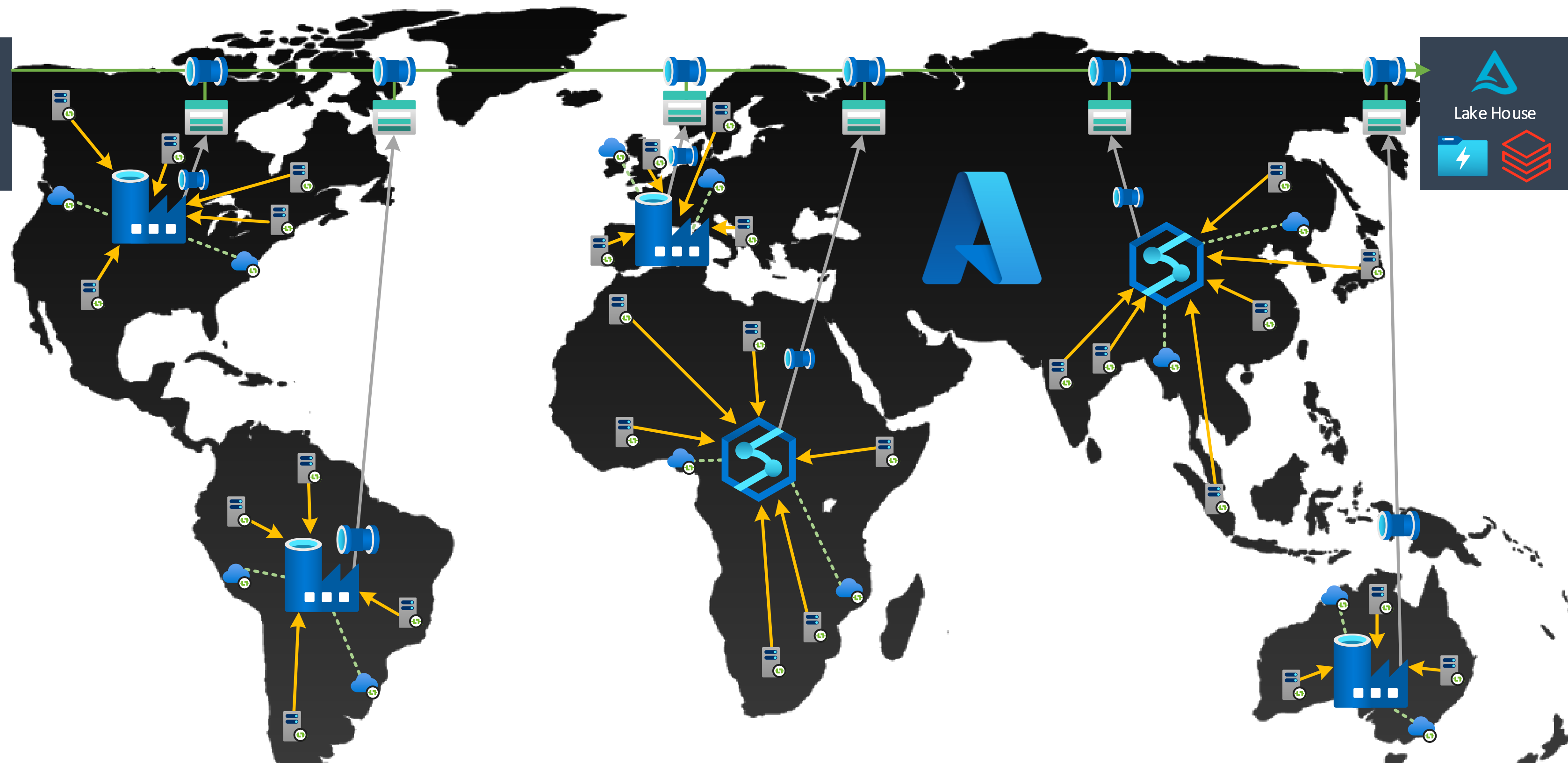
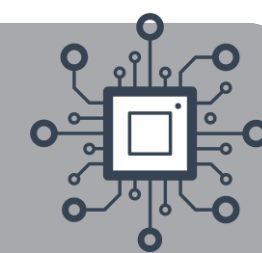
ARMTemplate ForFactory.json

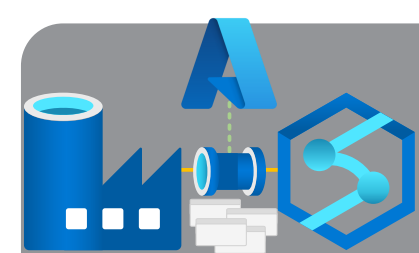


linkedservices.json
pipelines &
activites.json
datasets.json
triggers.json

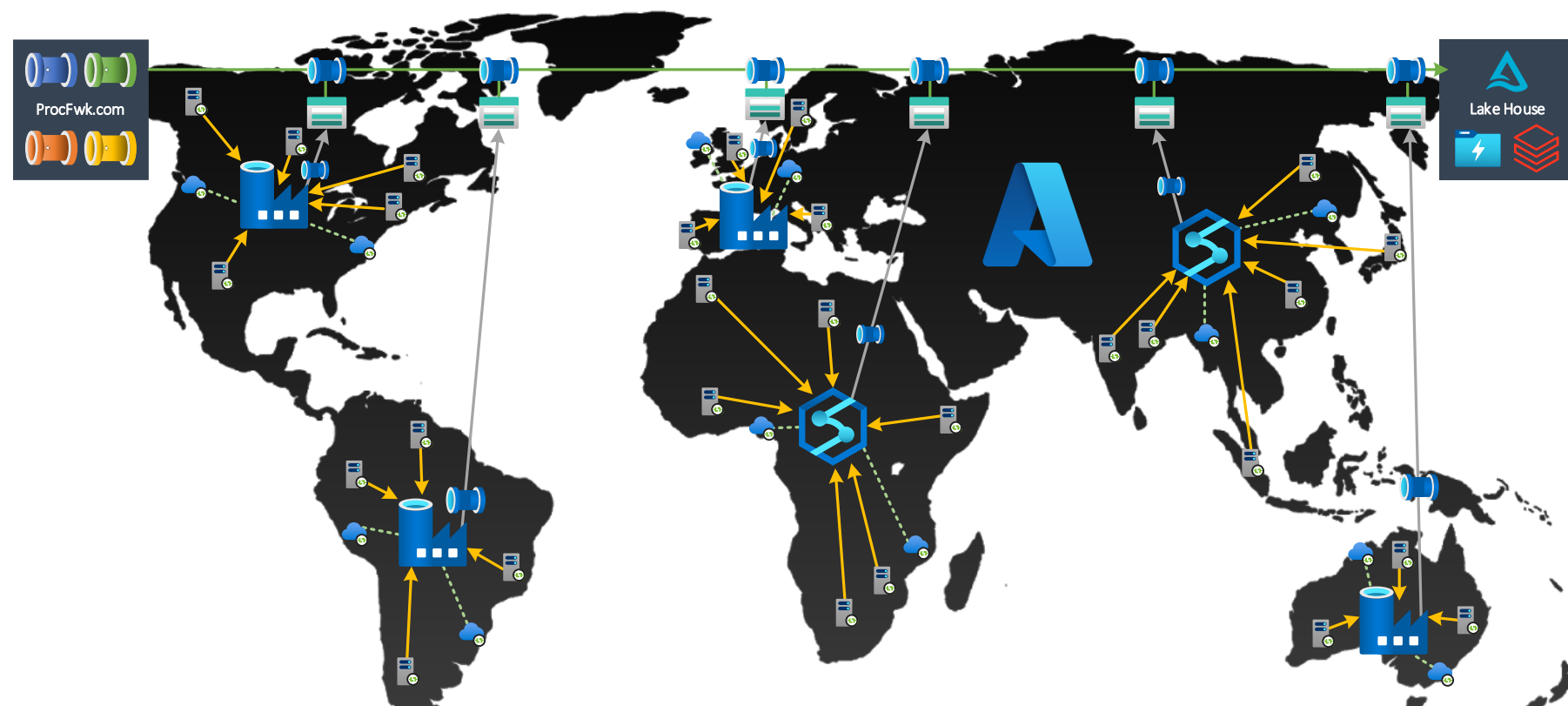
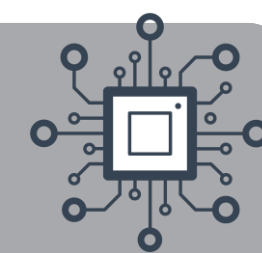


Hub & Spoke Integration Architecture

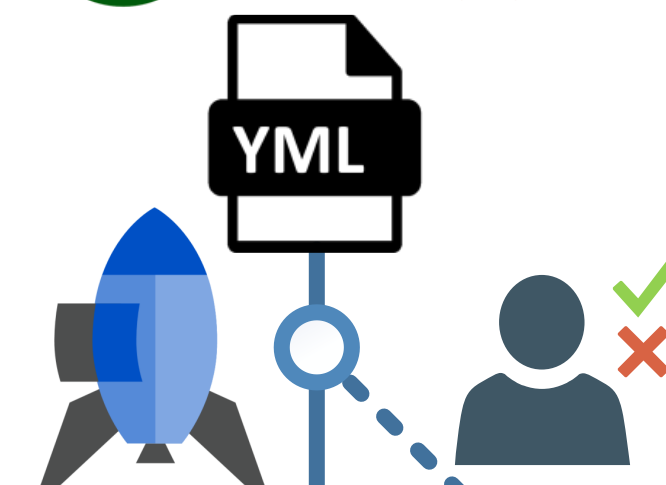




How Small Can Deployments Be?

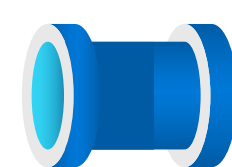


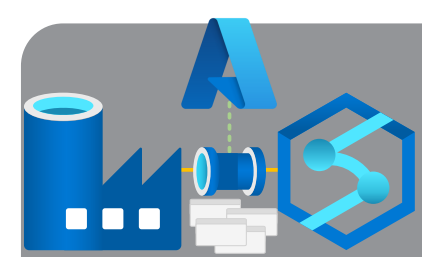
```
UPDATE [procfwk].[Pipelines] SET [Enabled] = 1  
WHERE [PipelineId] = SCOPE_IDENTITY();
```



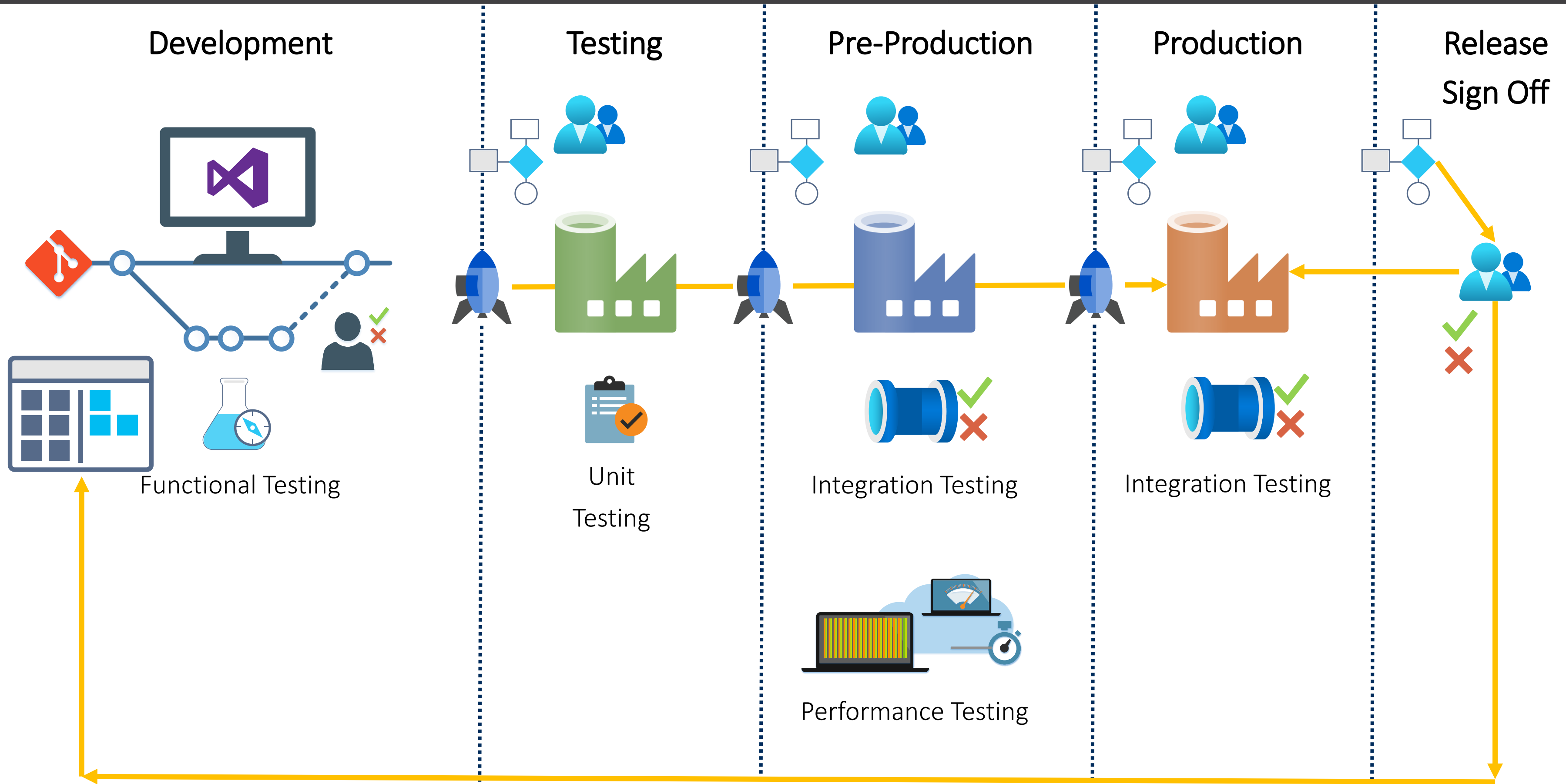
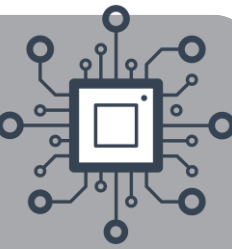
```
MERGE INTO [procfwk].[Pipelines] AS tgt  
USING  
  @Pipelines AS src  
ON tgt.[OrchestratorId] = src.[OrchestratorId]  
AND tgt.[PipelineName] = src.[PipelineName]  
AND tgt.[StageId] = src.[StageId]  
/* ----- */
```

```
UPDATE [procfwk].[Pipelines] SET [Enabled] = 0  
WHERE [PipelineId] = SCOPE_IDENTITY();
```



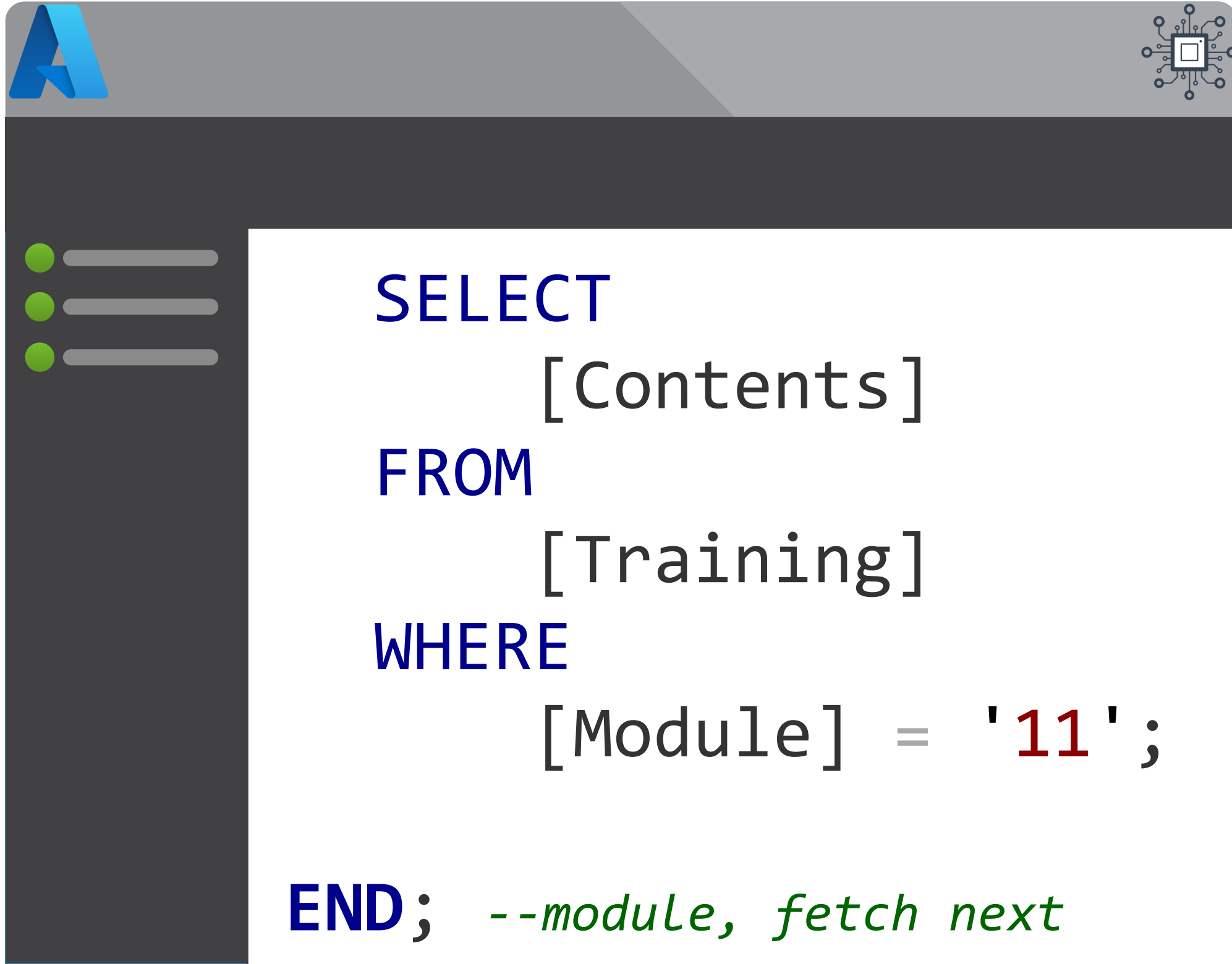


Deployment Life Cycle & Gateway



Module 11

CI/CD



- Source Control vs Developer UI
- Basic ARM Template Deployments
- Advanced Deployment Patterns