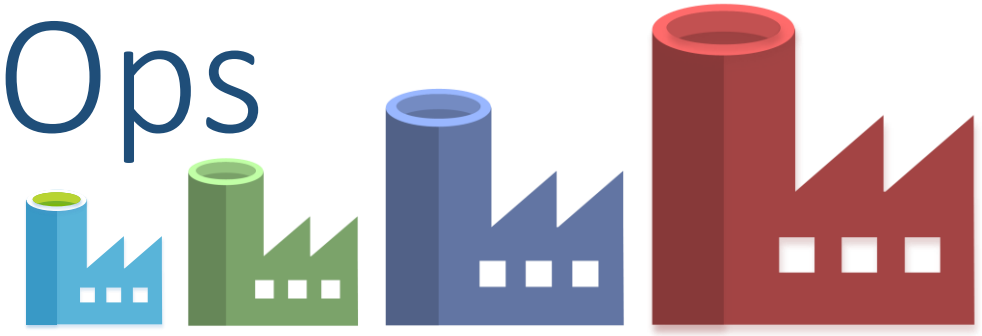
Using Azure DevOps

for Azure Data Factory



Paul Andrew | Principal Consultant & Solution Architect

Microsoft MVP Most Valuable Professional

altius

PASS

All in 10mins

@MrPaulAndrew In/MrPaulAndrew MrPaulAndrew.com

https://github.com/mrpaulandrew

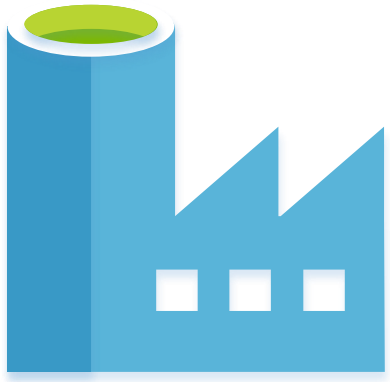
CommunityEvents

Demo code, content and slides from various community events.

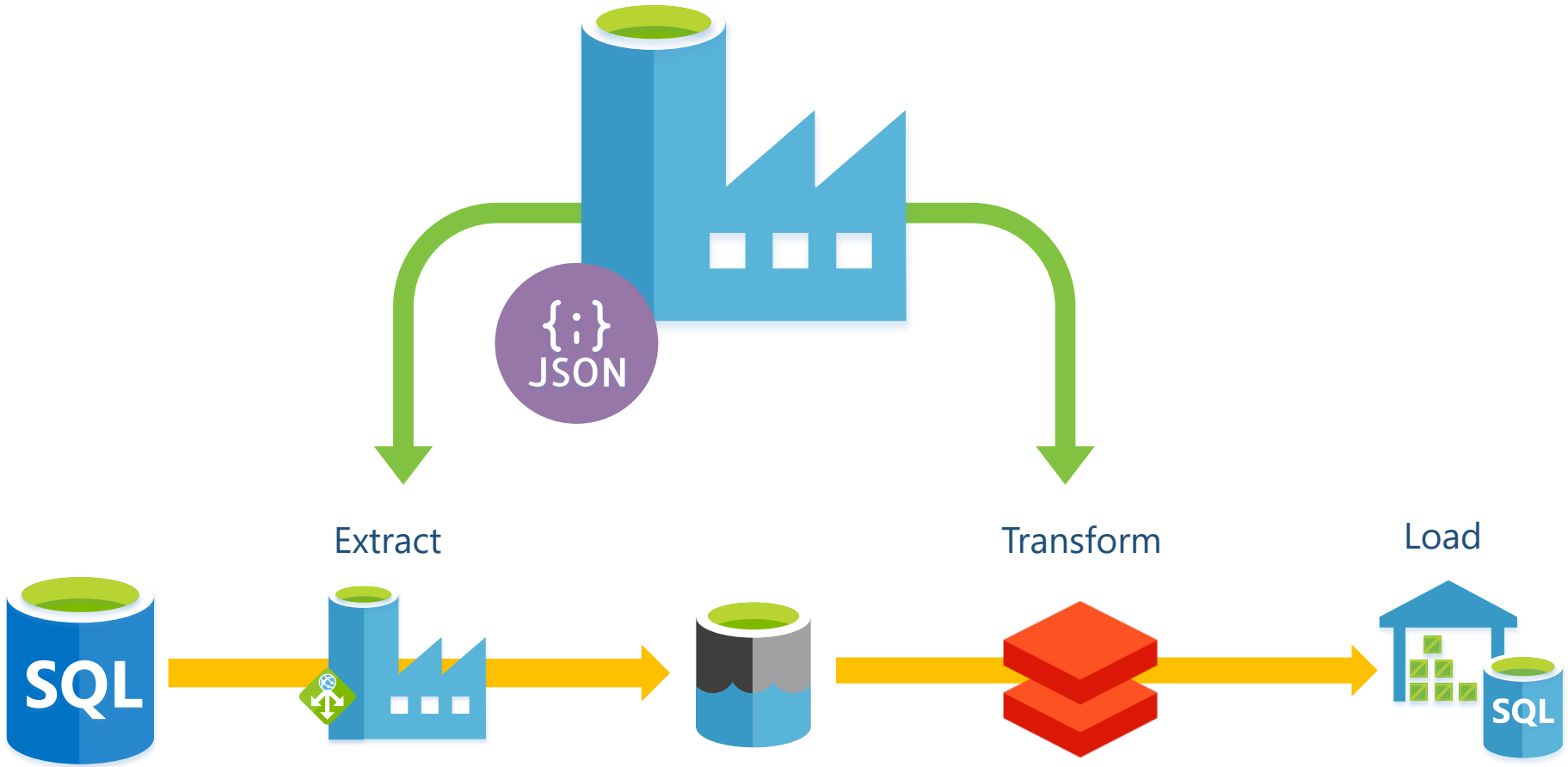
C++

{Event/Location}-{Month}-{Year}

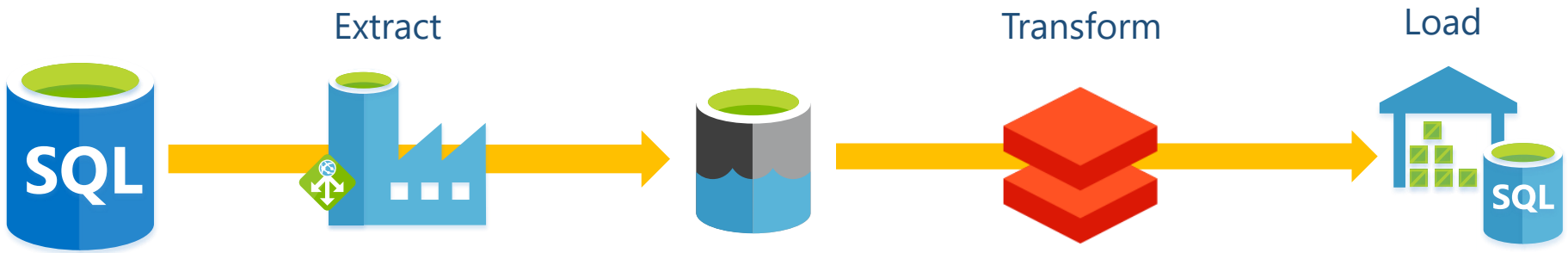
Azure Data Factory
A Quick Overview



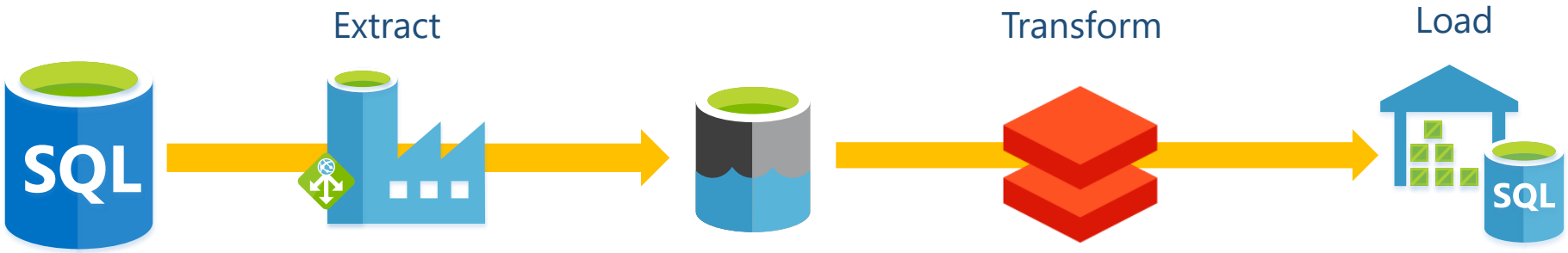
What is Azure Data Factory?



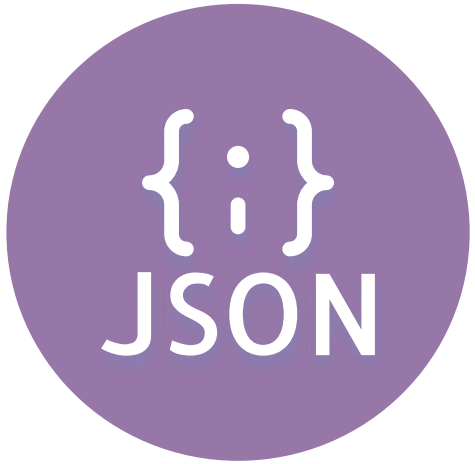
What is Azure Data Factory?



Data Factory Components

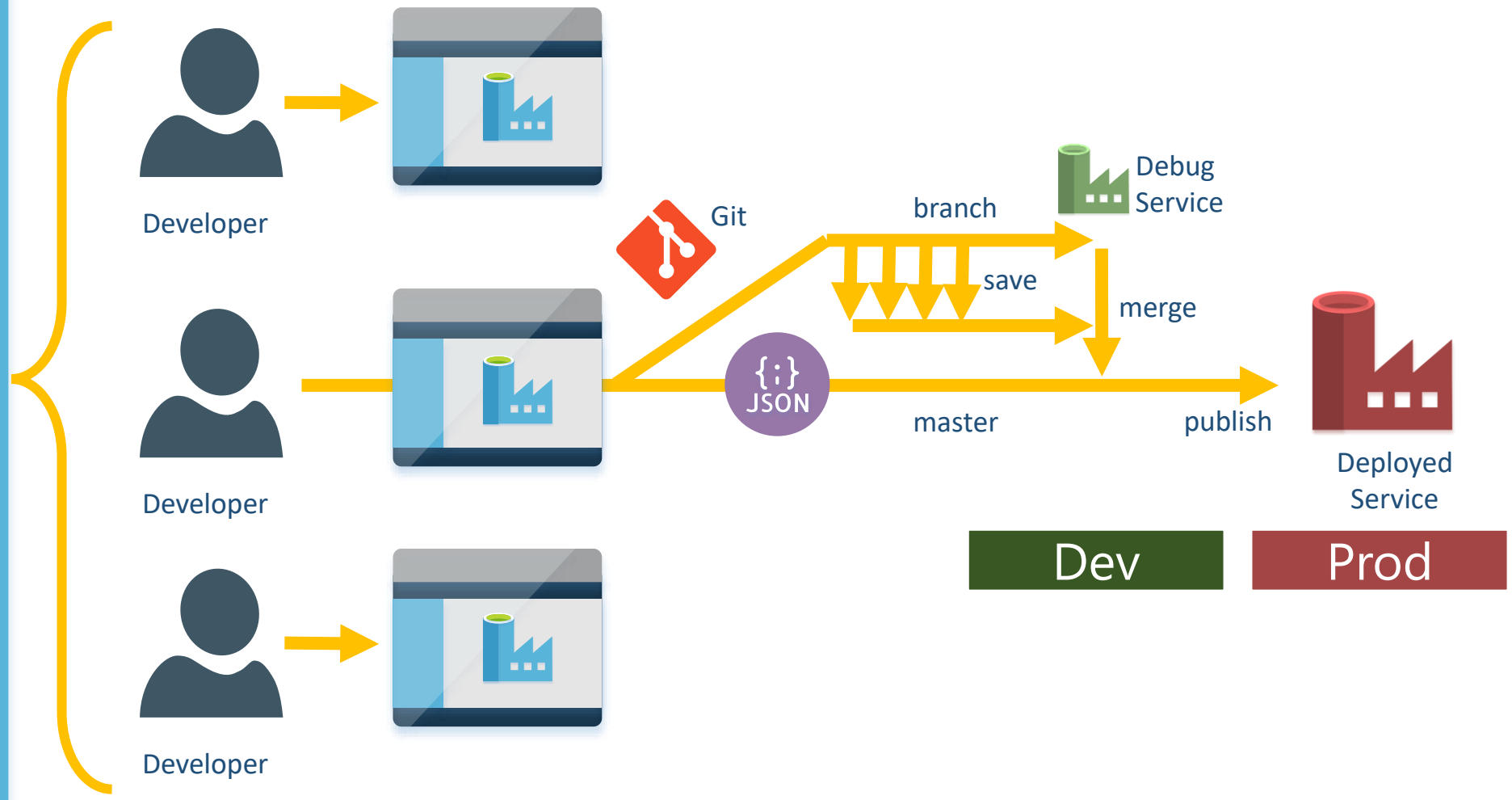


1. **Linked Services**
2. **Data Sets**
3. **Activities**
4. **Pipelines**
5. **Triggers**

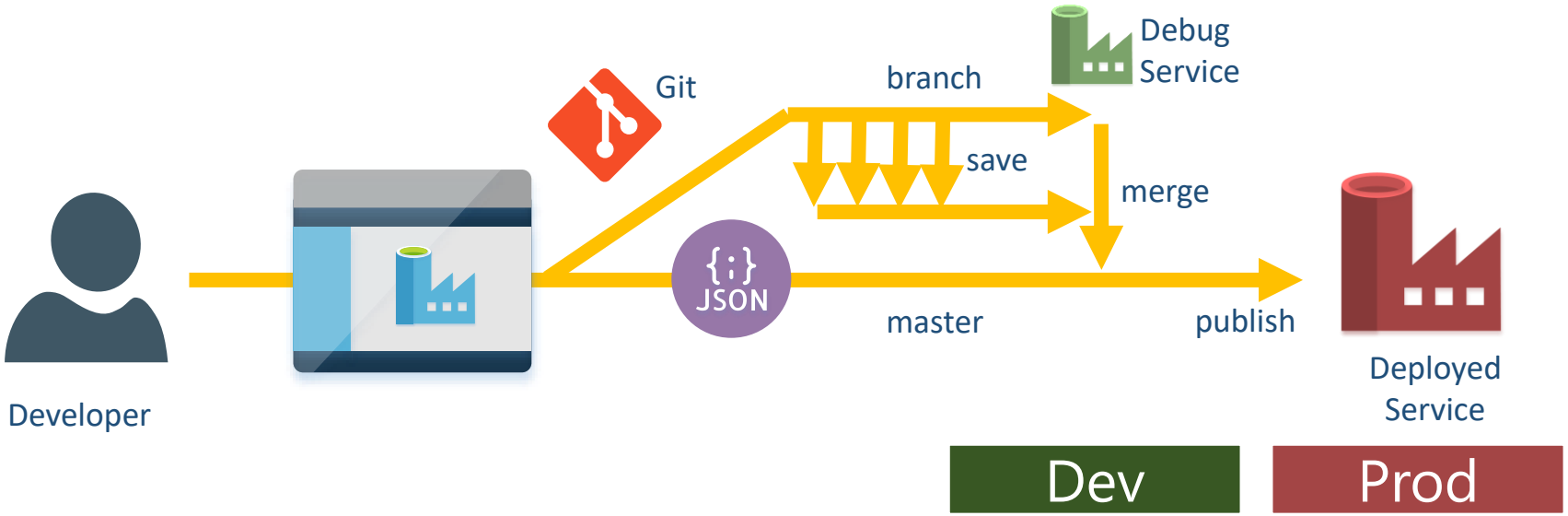


Data Factory DevOps – CI/CD

Data Factory Continuous Integration

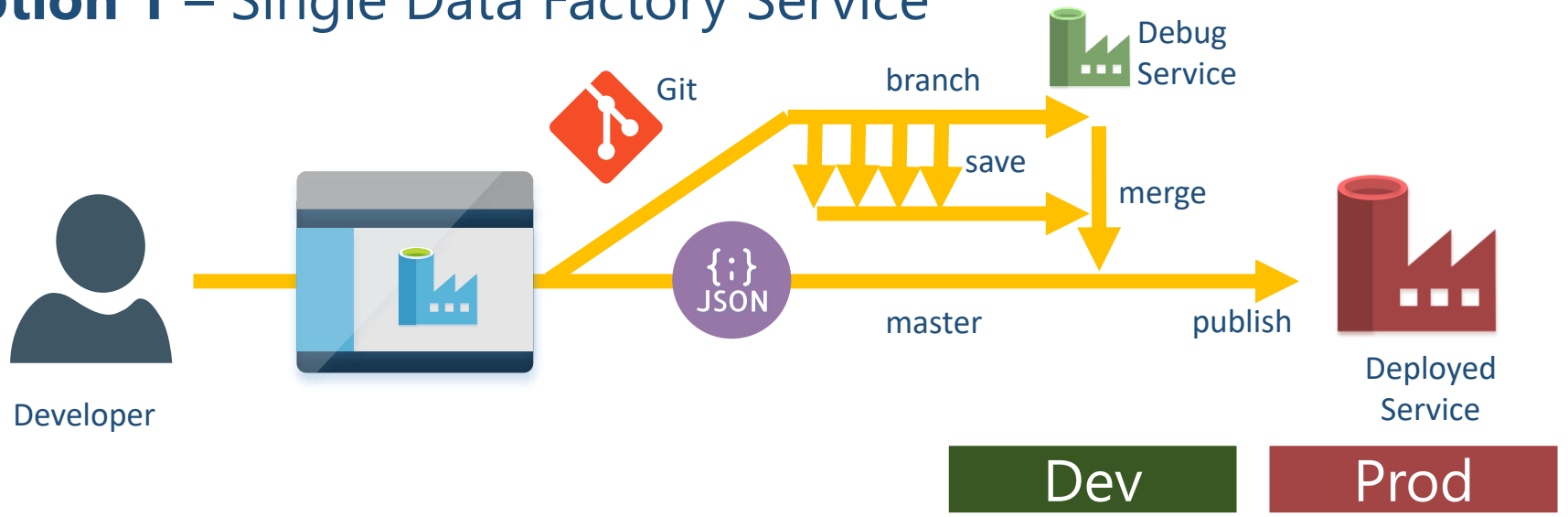


Data Factory Continuous Delivery

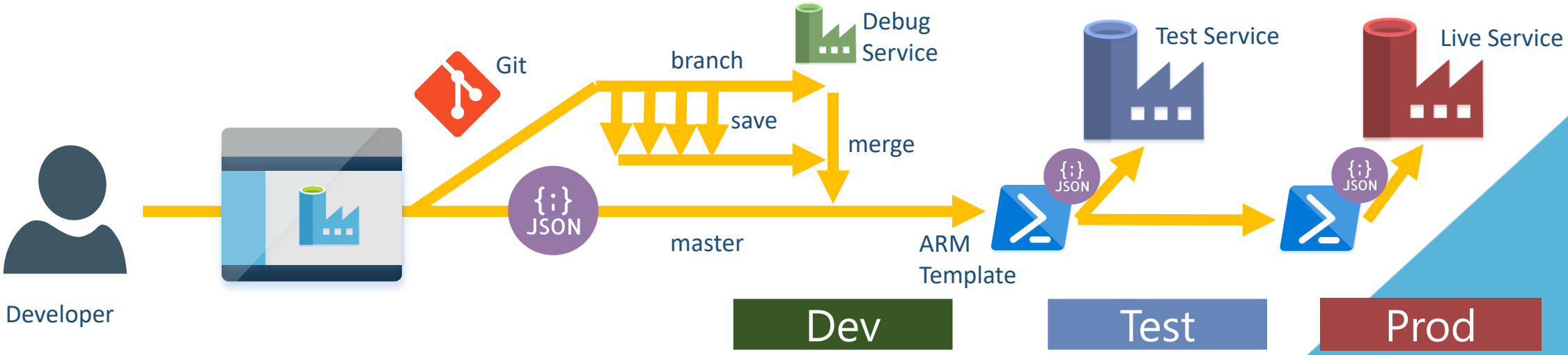


Data Factory Continuous Delivery

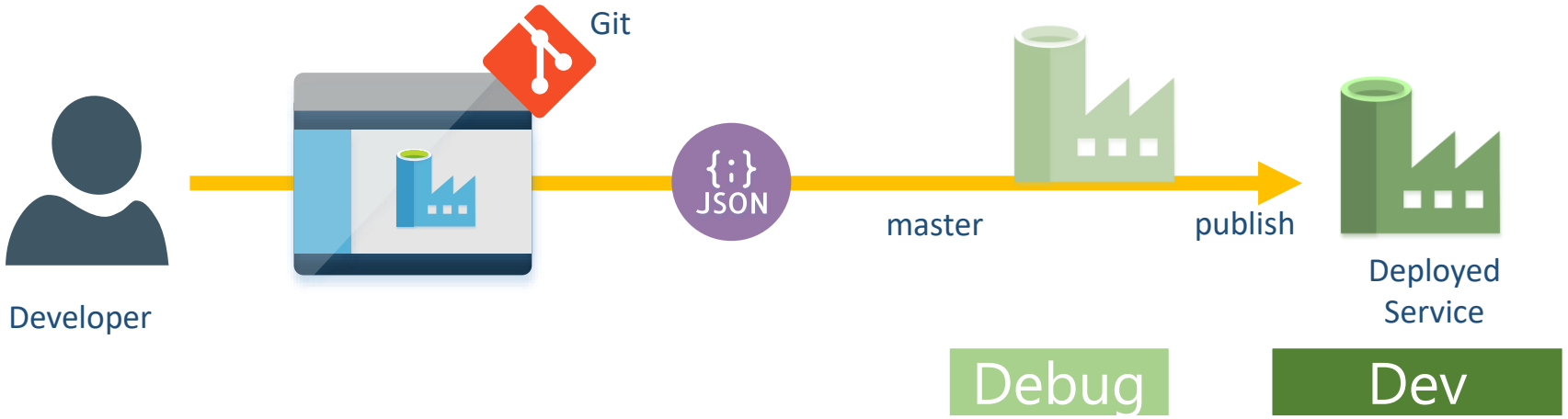
Option 1 – Single Data Factory Service



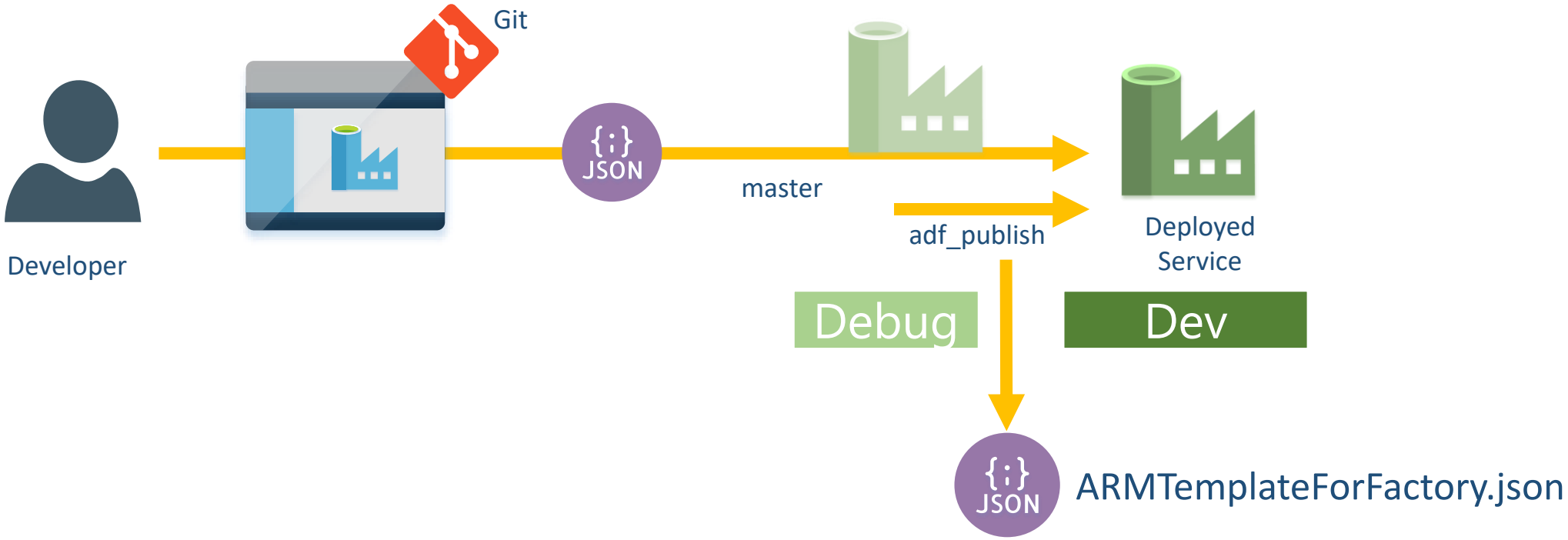
Option 2 – ARM Templates for Multiple Data Factory Services



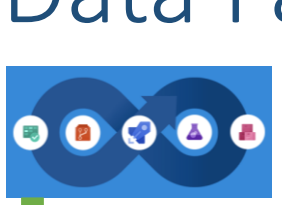
Data Factory Publish



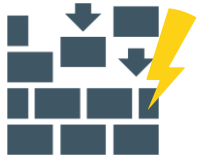
Data Factory Publish



Data Factory Continuous Delivery

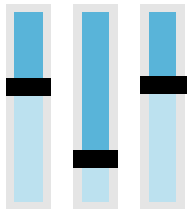


Azure DevOps

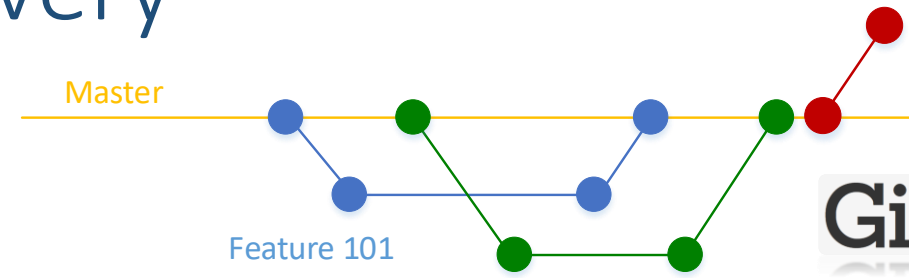


Build Artifacts

Releases

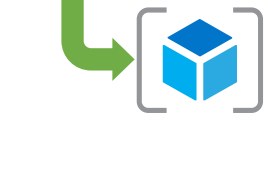


Scoped Variables



Gitflow

Release Approver



Test

ARMTemplateForFactory.json

Azure Resource Group Deployment

- Override Template Parameters

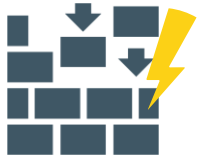
  -factoryName "$(DataFactory.Name)"

Production

Azure Resource Group Deployment

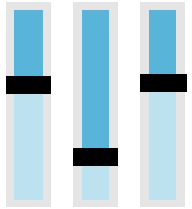
Data Factory Continuous Delivery

Azure DevOps



Build Artifacts

Releases



Scoped Variables

Test

Azure Resource Group Deployment

- Override Template Parameters

  -factoryName "$(DataFactory.Name)"

ARMTemplateForFactory.json

Release Approver

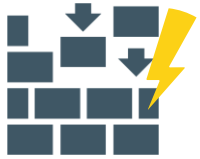
Production

Azure Resource Group Deployment

1. **Linked Services**
2. **Data Sets**
3. **Activities**
4. **Pipelines**
5. **Triggers**

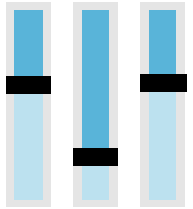
Data Factory Continuous Delivery

Azure DevOps



Build Artifacts

Releases



Scoped Variables

Test

Azure Resource Group Deployment

- Override Template Parameters

  -factoryName "$(DataFactory.Name)"

ARMTemplateForFactory.json

Release Approver

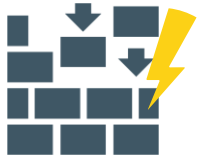
Production

Azure Resource Group Deployment

1 **Linked Services**

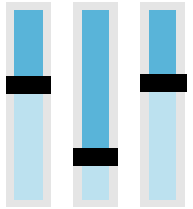
Data Factory Continuous Delivery

Azure DevOps



Build Artifacts

Releases



Scoped Variables

1. **Linked Services**
2. **Data Sets**
3. **Activities**
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5. **Triggers**

Test

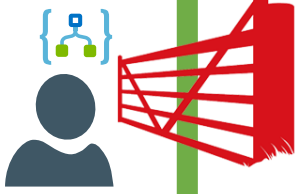

```
Set-AzDataFactoryV2Pipeline
Set-AzDataFactoryV2Dataset
Set-AzDataFactoryV2LinkedService
```

~~Azure Resource Group Deployment~~

~~ARMTemplateForFactory.json~~

- Override Template Parameters params.json

  -factoryName "$(DataFactory.Name)"



Release Approver

Production

```
Set-AzDataFactoryV2IntegrationRuntime
Set-AzDataFactoryV2Trigger
```

~~Azure Resource Group Deployment~~

linkedservices.json

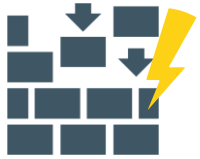
pipelines & activites.json

triggers.json

datasets.json

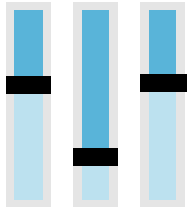
Data Factory Continuous Delivery - Bonus Option 3

Azure DevOps



Build Artifacts

Releases



Scoped Variables

Test

Run PowerShell params.json

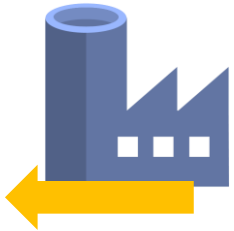
```
Set-AzDataFactoryV2Pipeline
Set-AzDataFactoryV2Dataset
Set-AzDataFactoryV2LinkedService
```

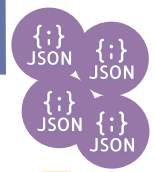
Release Approver

Production

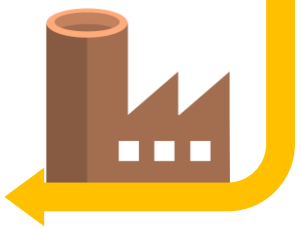
Run PowerShell params.json

```
Set-AzDataFactoryV2IntegrationRuntime
Set-AzDataFactoryV2Trigger
```





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



1. Linked Services
2. Data Sets
3. Activities
4. Pipelines
5. Triggers

Caveats

1) Handle own dependencies.

2) Handle own removals.

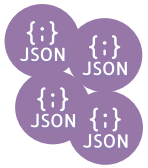
Data Factory DevOps Summary

How many environments do we have?

What deployment tool do we want to use?

What built artefacts are we going to use?

ARMTemplateForFactory.json



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

Thank you for listening…

Paul Andrew

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PASS

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