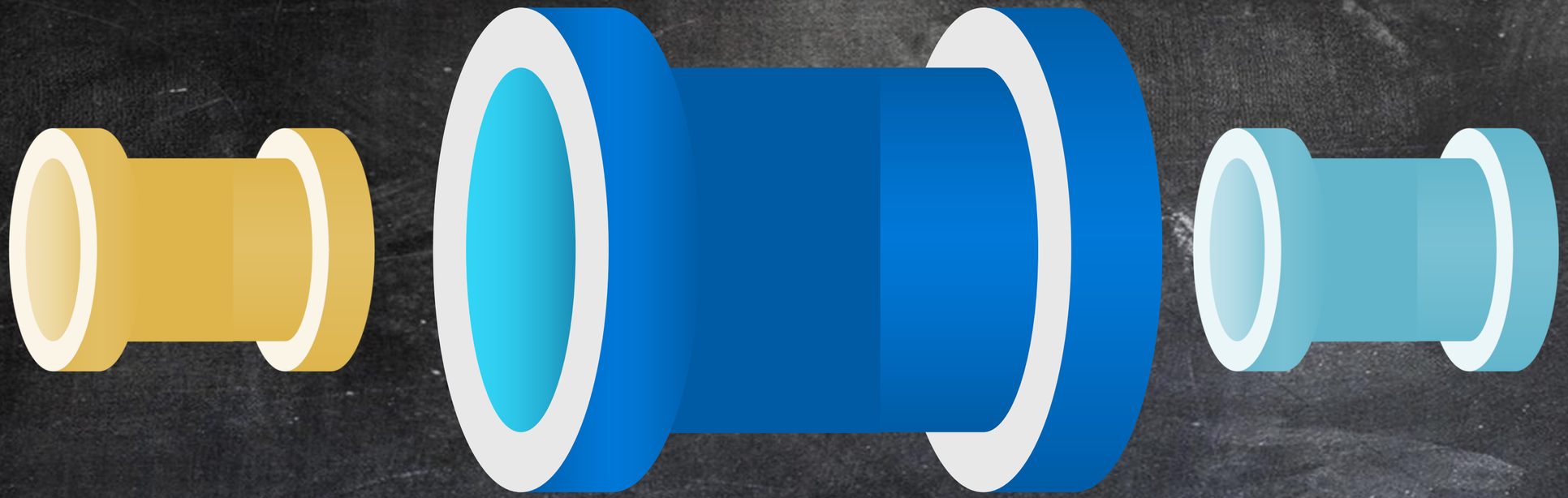
Cloud Formations

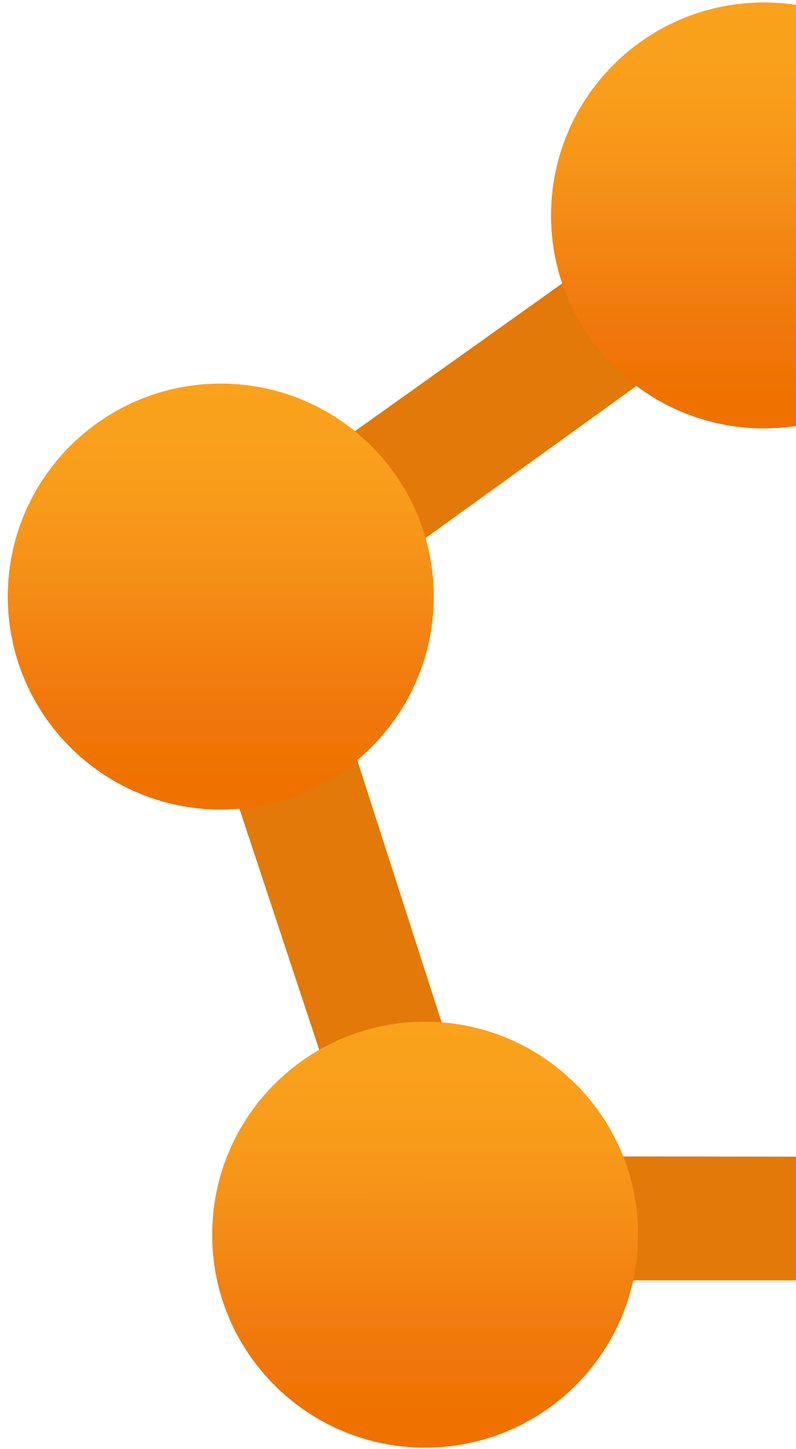
Proudly presents...

Integration Pipelines



Module 5 – Pipeline Extensibility

Azure Batch Service



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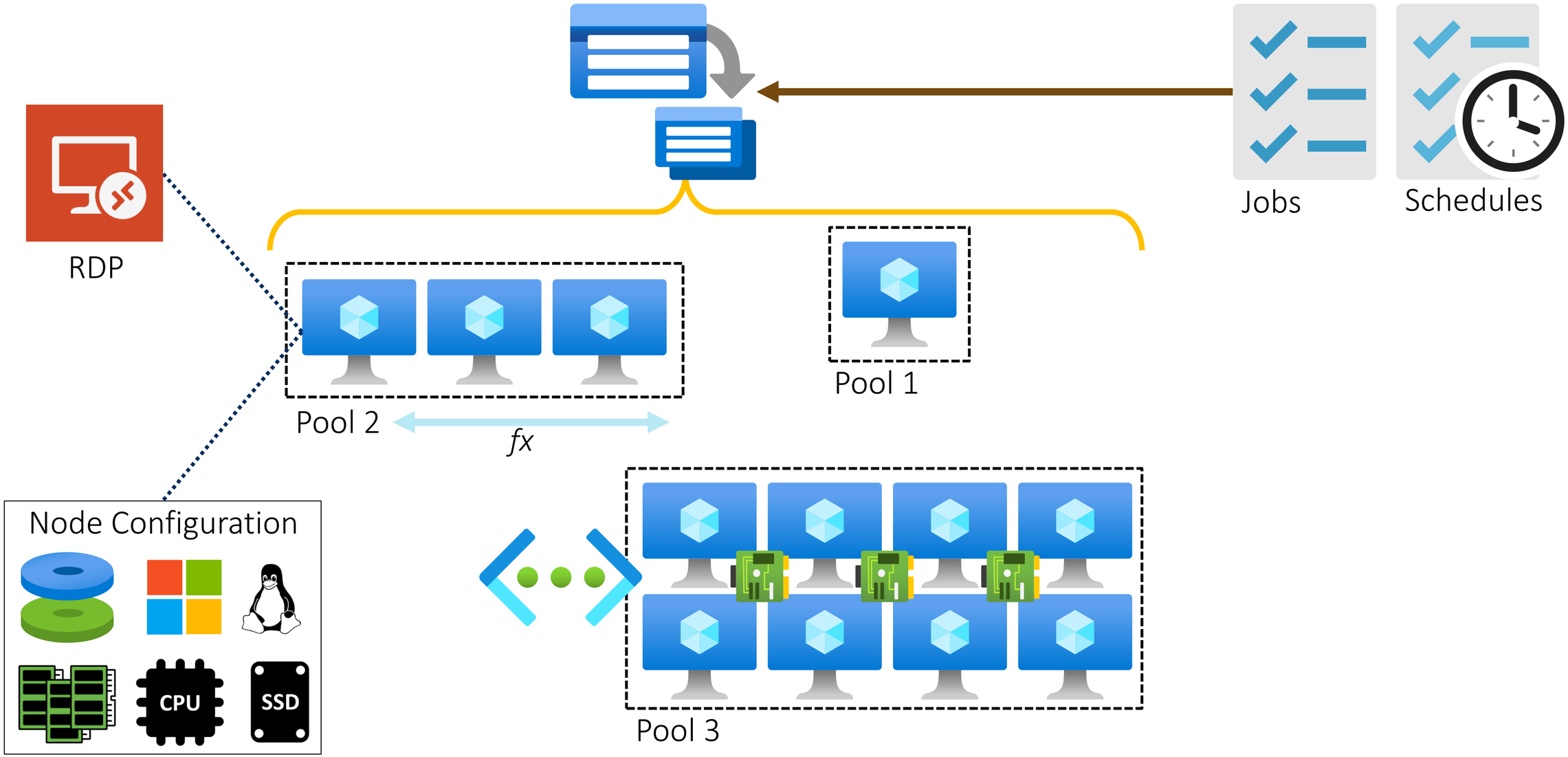
Azure Batch Service



https://docs.microsoft.com/en-gb/azure/batch/batch-automatic-scaling

https://docs.microsoft.com/en-us/azure/batch/batch-compute-node-environment-variables

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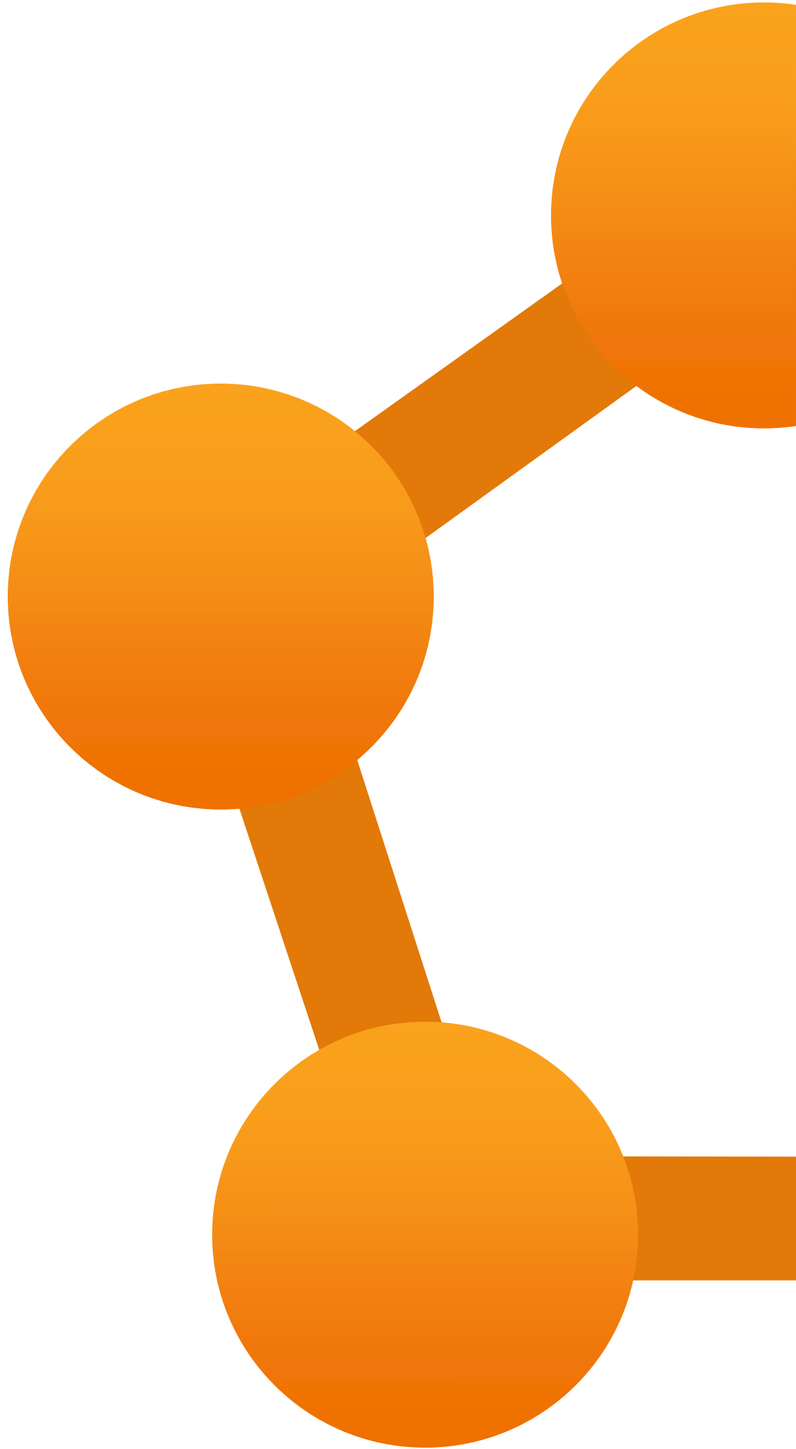
Module 5 – Pipeline Extensibility

Custom Activities



Cloud Formations

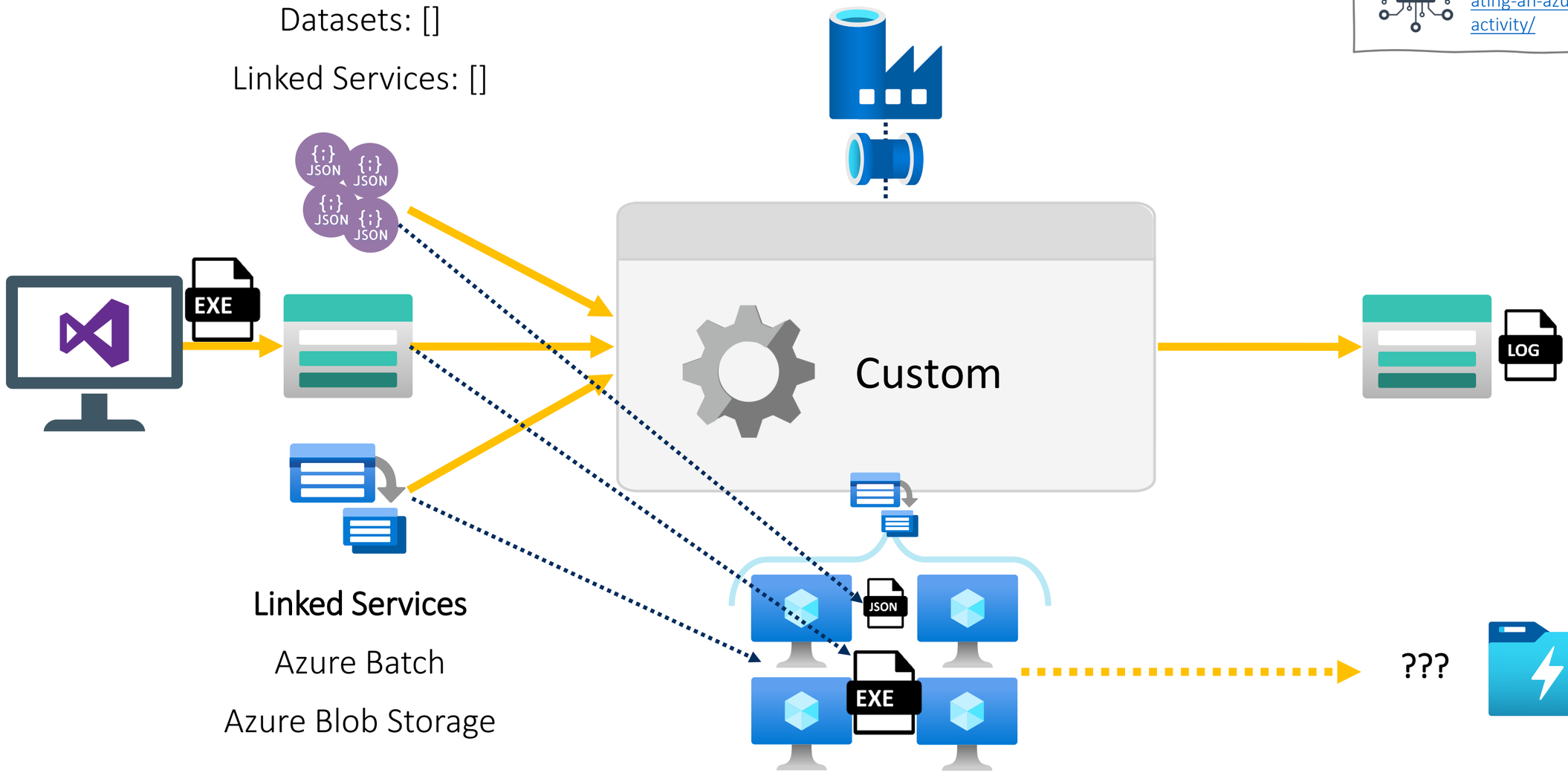
Custom

Extend Data Factory with Dedicated Scalable Compute and Custom Code

References Objects

Datasets: []

Linked Services: []



Linked Services

Azure Batch

Azure Blob Storage

Creating a Custom Activity

https://mrpaulandrew.com/2018/11/12/creating-an-azure-data-factory-v2-custom-activity/

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Custom

Extend Data Factory with Dedicated Scalable Compute and Custom Code

References Objects

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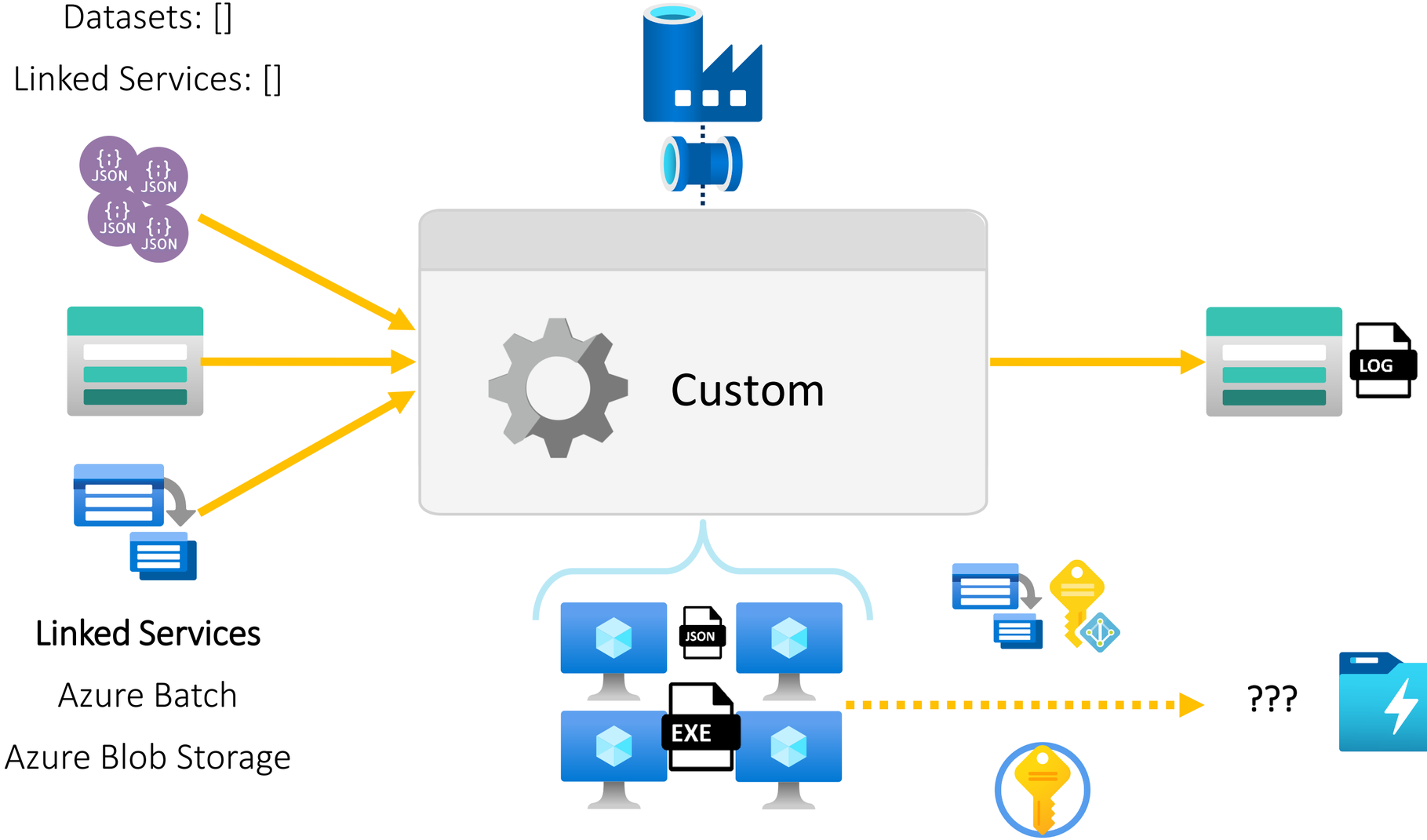
Linked Services: []



Linked Services

Azure Batch

Azure Blob Storage

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Custom

Extend Data Factory with Dedicated Scalable Compute and Custom Code

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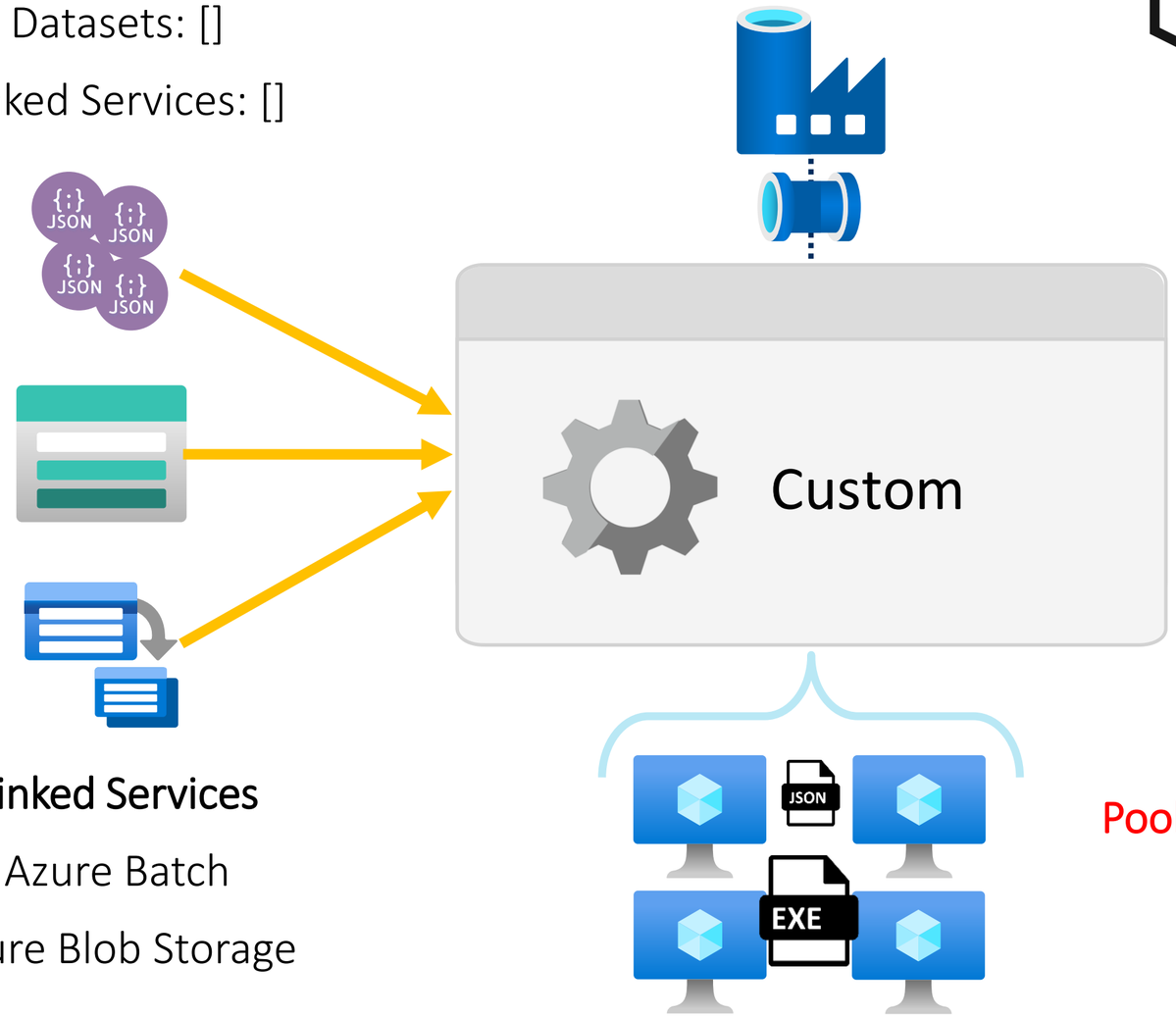
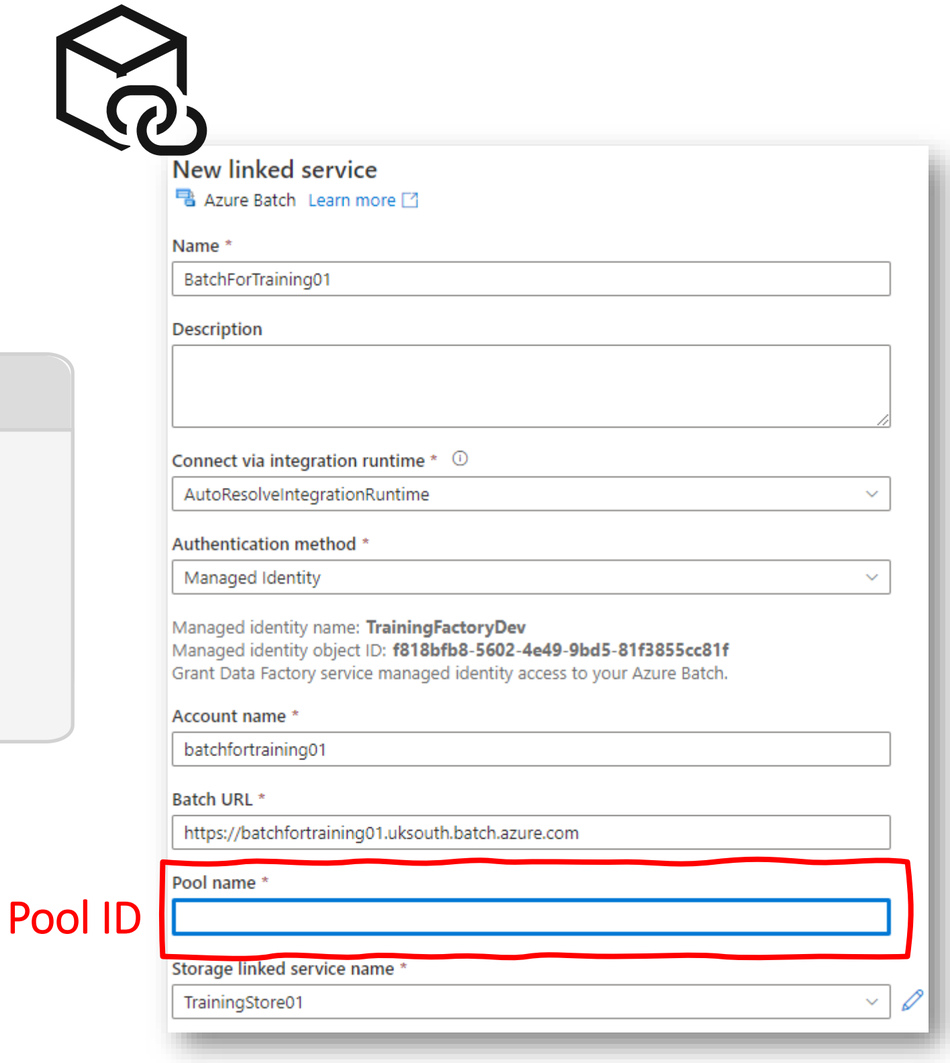


Linked Services

Azure Batch

Azure Blob Storage



Pool ID

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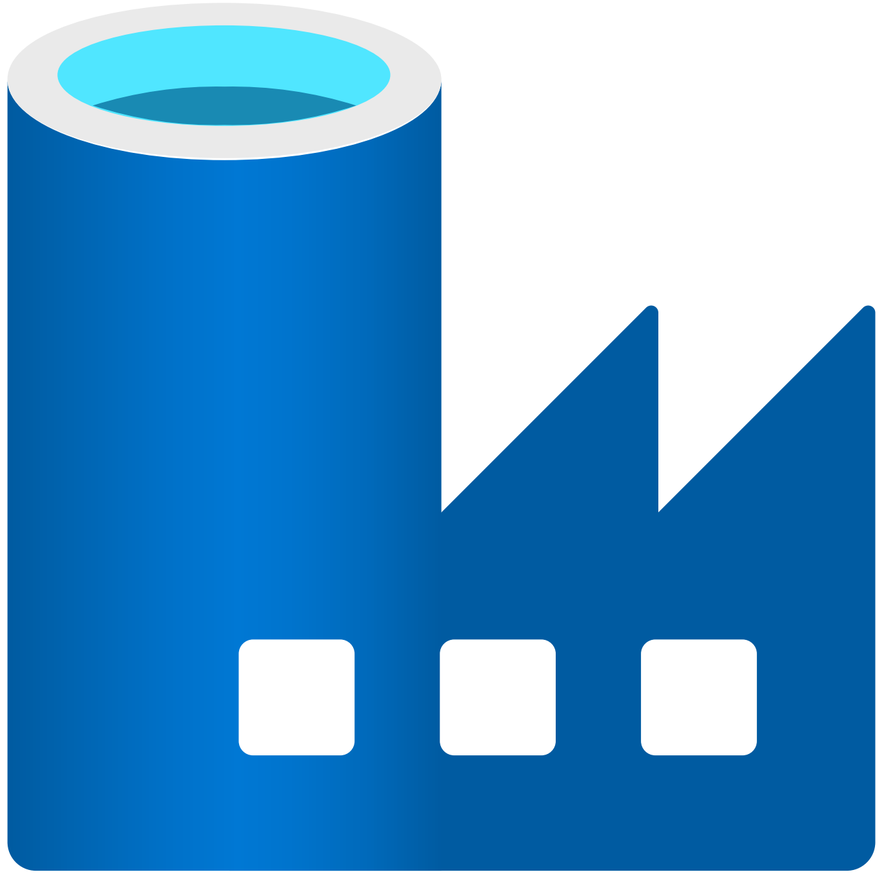
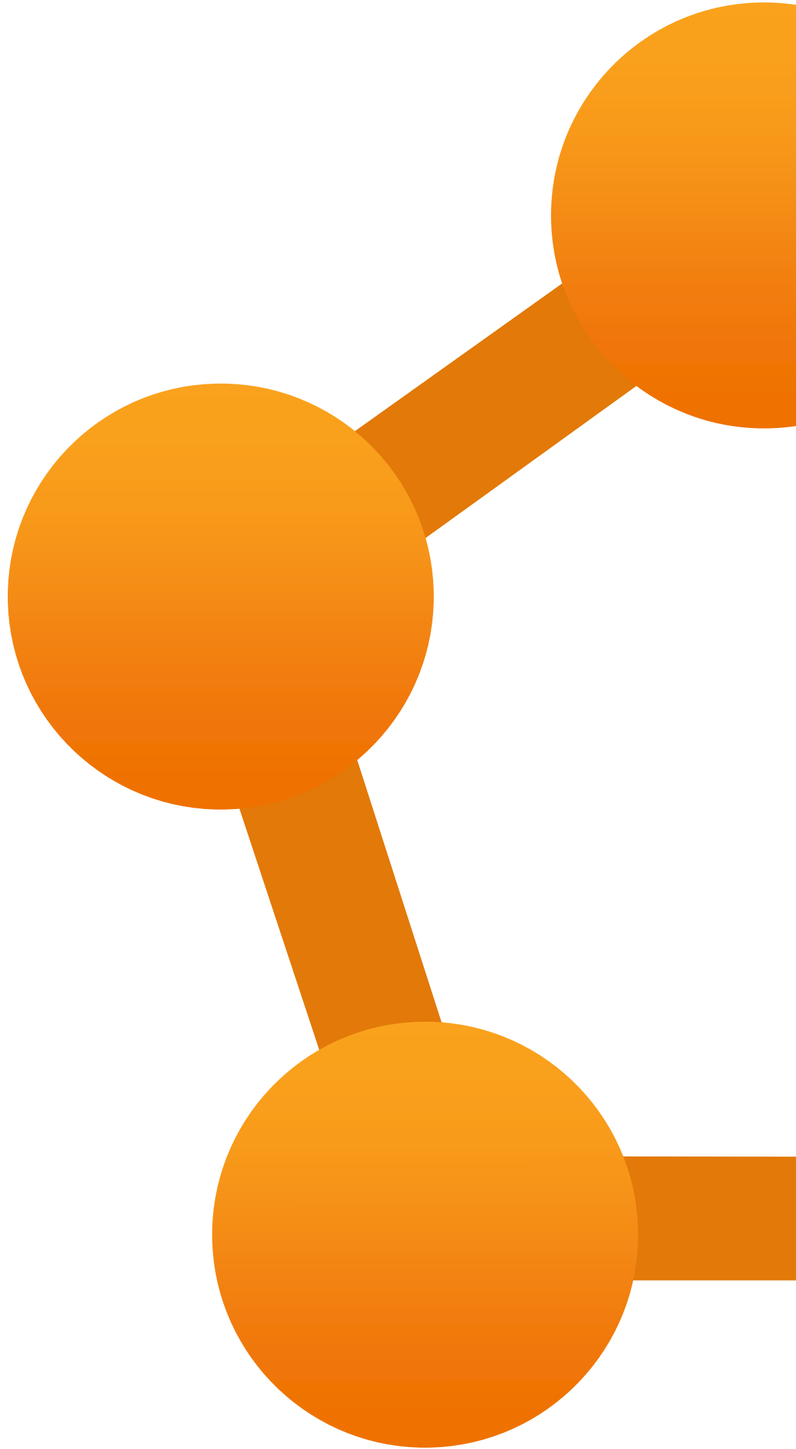
Azure Portal



Module 5 – Pipeline Extensibility

Azure Management API



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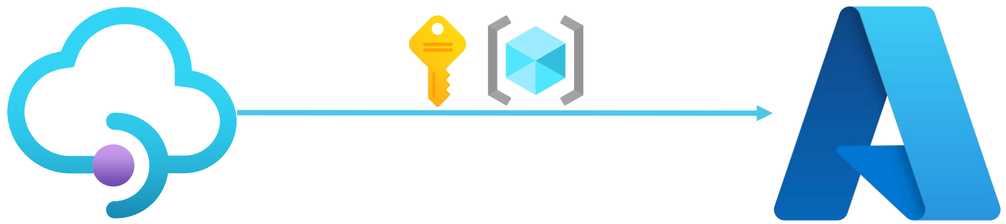
Management API's

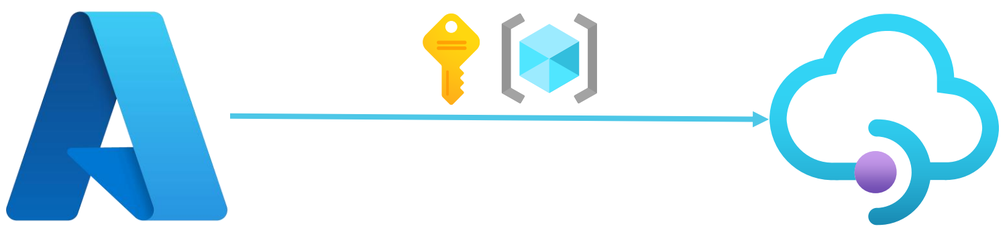
Azure Management API



Make REST calls to interface with your Azure Resources

REST

Azure API Manager



Build your own REST interface as an Azure Resource

REST

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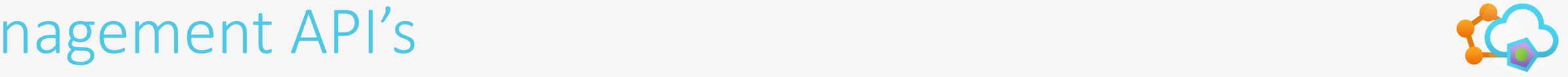
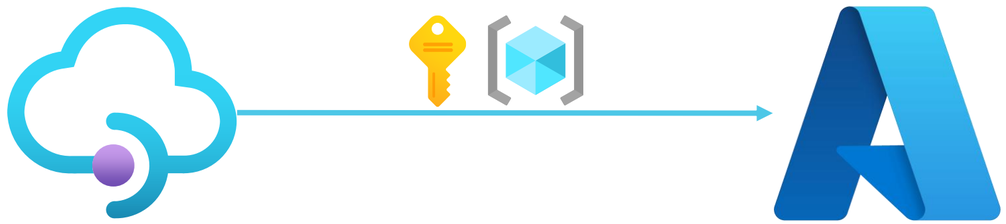
Management API's



Azure Management API



Make REST calls to interface with your Azure Resources

REST

Azure API Manager

Build your own REST interface as an Azure Resource

REST

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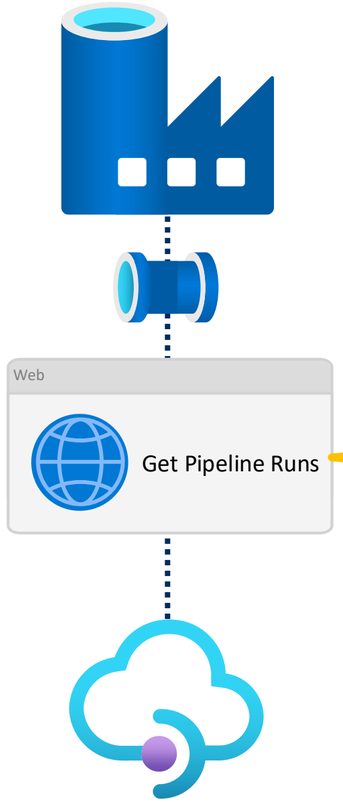
Orchestrate Everything

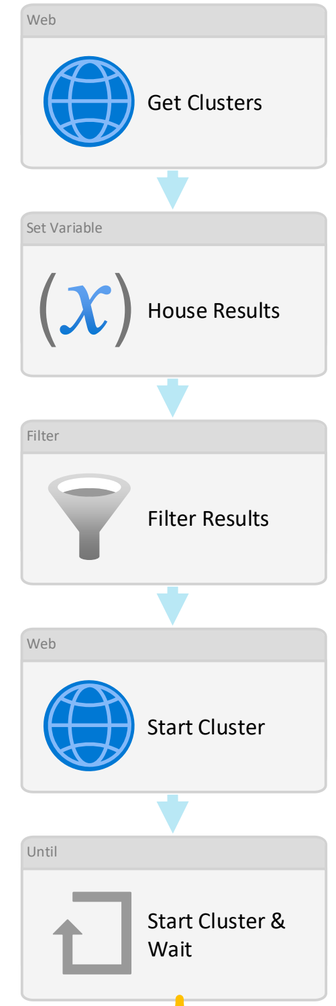


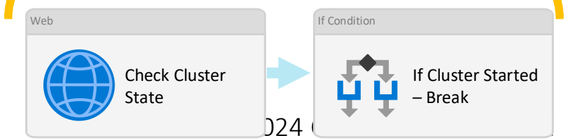
URL https://management.azure.com/subscriptions/
@{variables('SubscriptionId')}/
resourceGroups/
@{variables('ResourceGroupName')}/
providers/
Microsoft.DataFactory/
factories/
@{pipeline().DataFactory}/
queryPipelineRuns?
api-version=2018-06-01

Body
```
{
  "lastUpdatedAfter": "@{adddays(utcnow(),int(variables('QueryRunDays')))}",
  "lastUpdatedBefore": "@{utcnow()}",
  "filters": [
    {
      "operand": "PipelineName",
      "operator": "Equals",
      "values": [
        "@{pipeline().parameters.PipelineName}"
      ]
    }
  ]
}
```

Auth https://management.core.windows.net

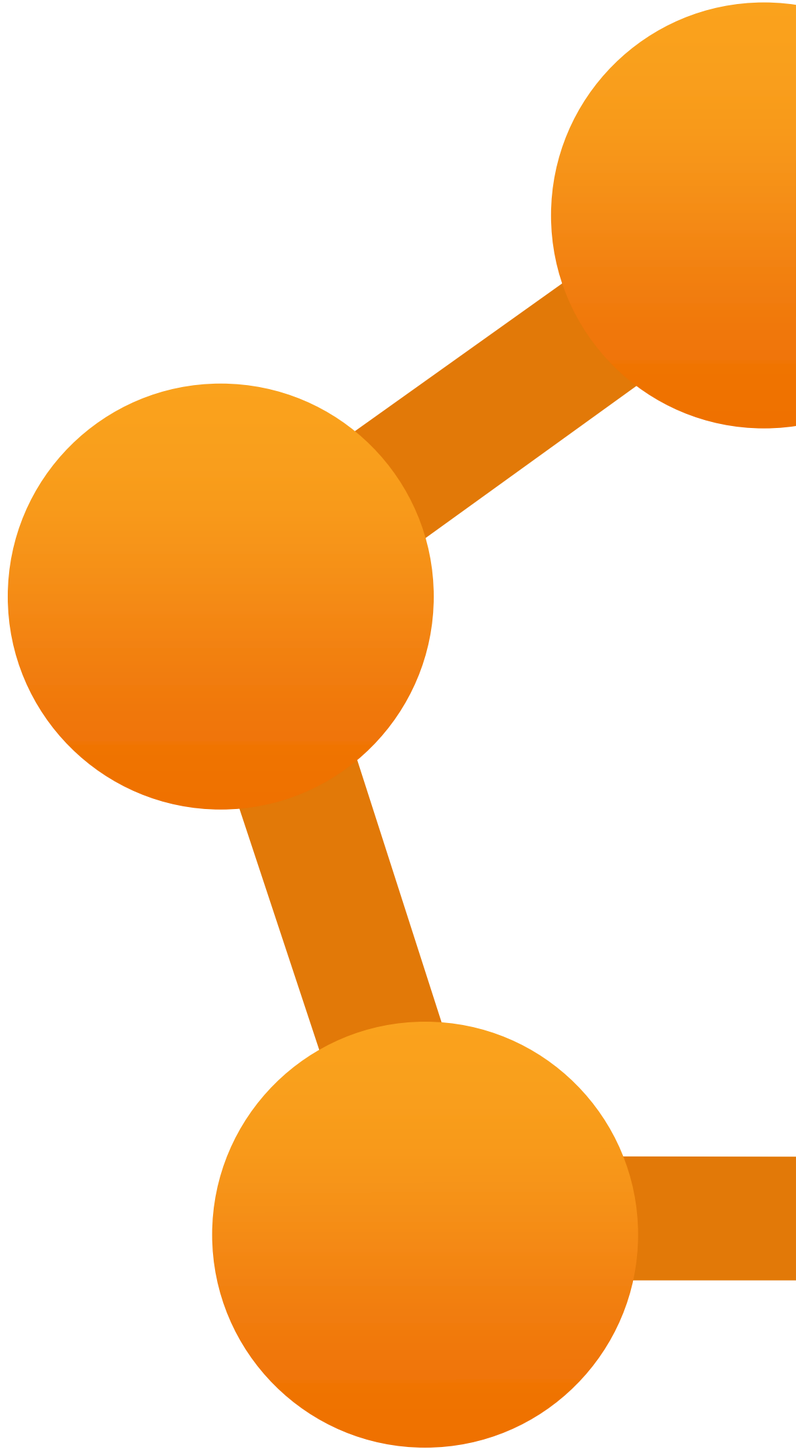
Managed Identity





Module 5 – Pipeline Extensibility

Functions



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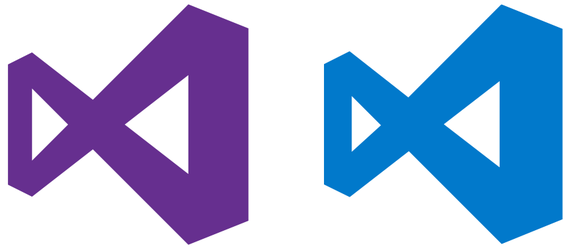
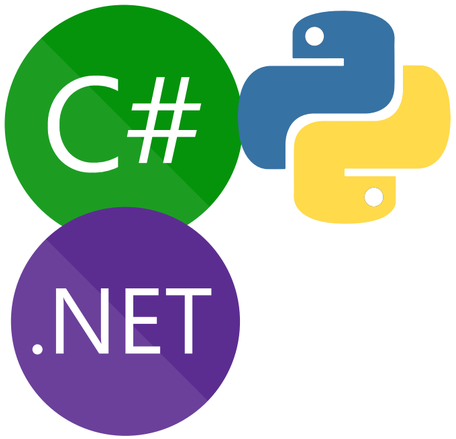
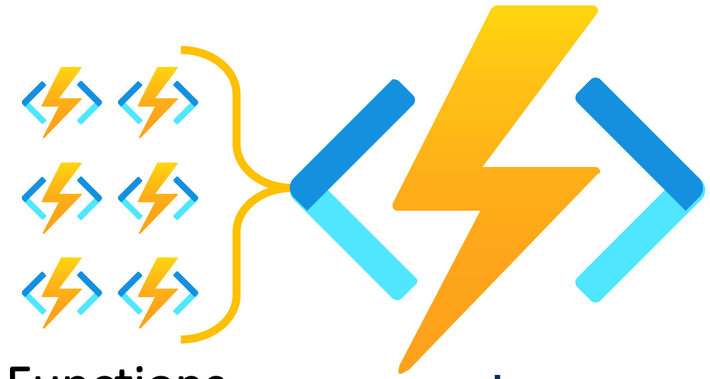
Azure Functions App

Serverless Scalable Bespoke Executions

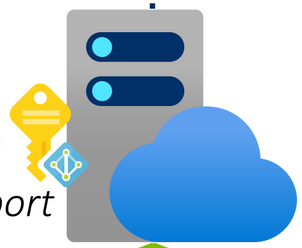






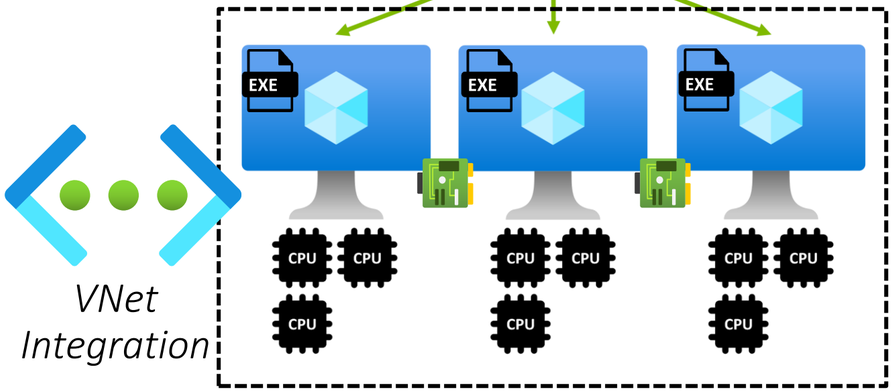
Functions App

Functions



Managed Identity Support

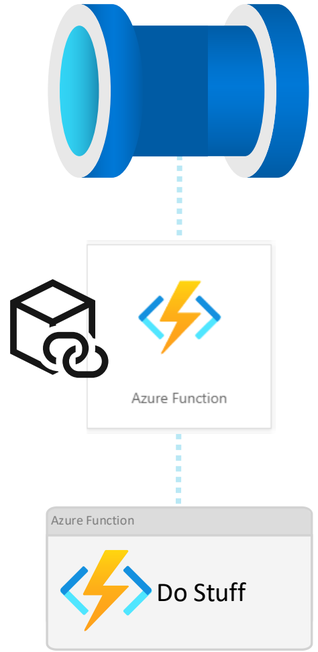
App Service Plan



VNet Integration

App Service Hosts

Scale Up & Scale Out



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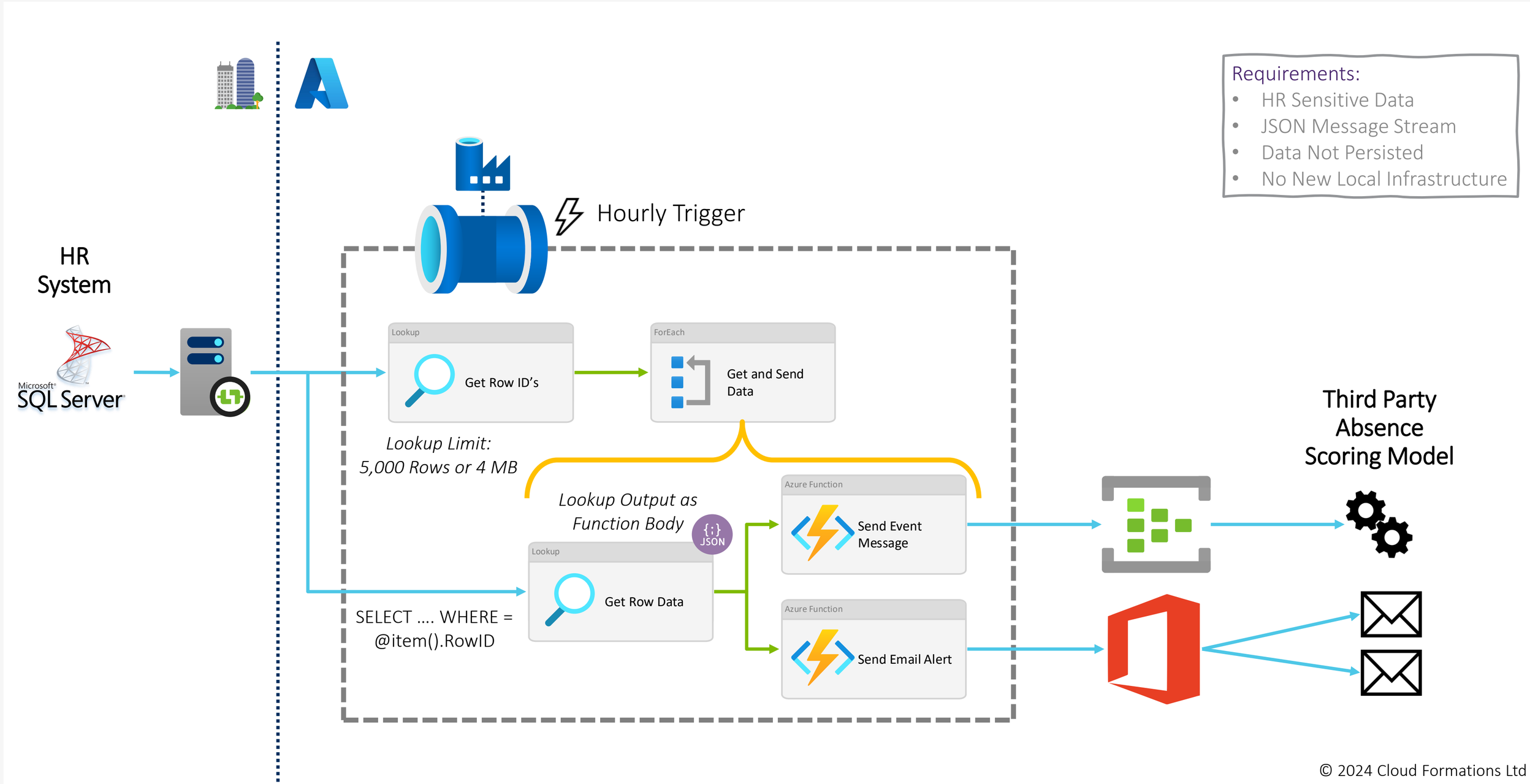
Local Batch Data to Third Party Event Stream



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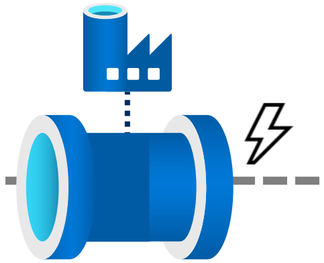
Traditional ETL Stack with Semantic Model



Daily Trigger

Requirements:
- Runtime Compute Scaling
- Model Partition Handling (Within Service Tier Limits)

Set Variable
Set Run Date Values

Azure Function
Scale Up Database

Lookup
Get Fact Tables

ForEach
Process Facts

Azure Function
Scale Down Database

Users - Data Refreshed

Azure Function
Send Email Alert

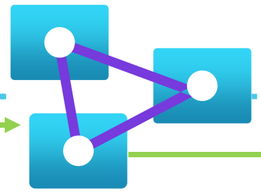
Azure Function
Create Fact Partition

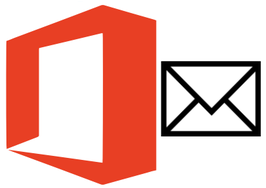
Azure Function
Process Partition

Azure Function
Delete Partition

Azure Function
Send Email Alert

Table Failure





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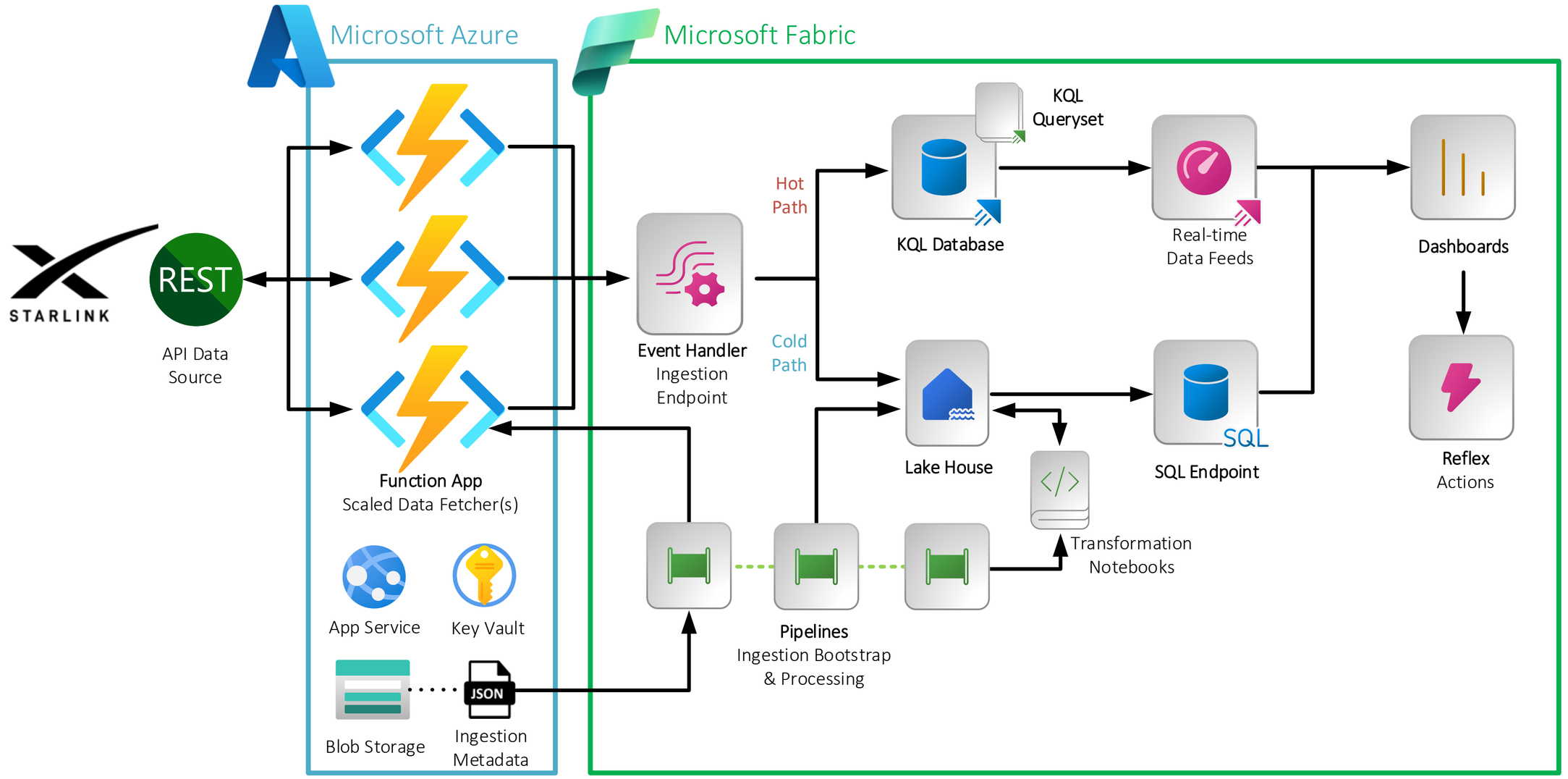
Turning a Batch Data Source Into a Realtime Data Flow



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Microsoft Fabric User Data Functions

Microsoft Fabric user data functions are custom reusable code snippets that you can create and run within the Microsoft Fabric platform. These functions allow you to perform complex data transformations and business logic by integrating with various Fabric resources, such as Data Warehouses, Lakehouse's, and Mirrored Databases.

User Data Functions

Currently in Private Preview

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https://support.fabric.microsoft.com/en-ca/blog/10474

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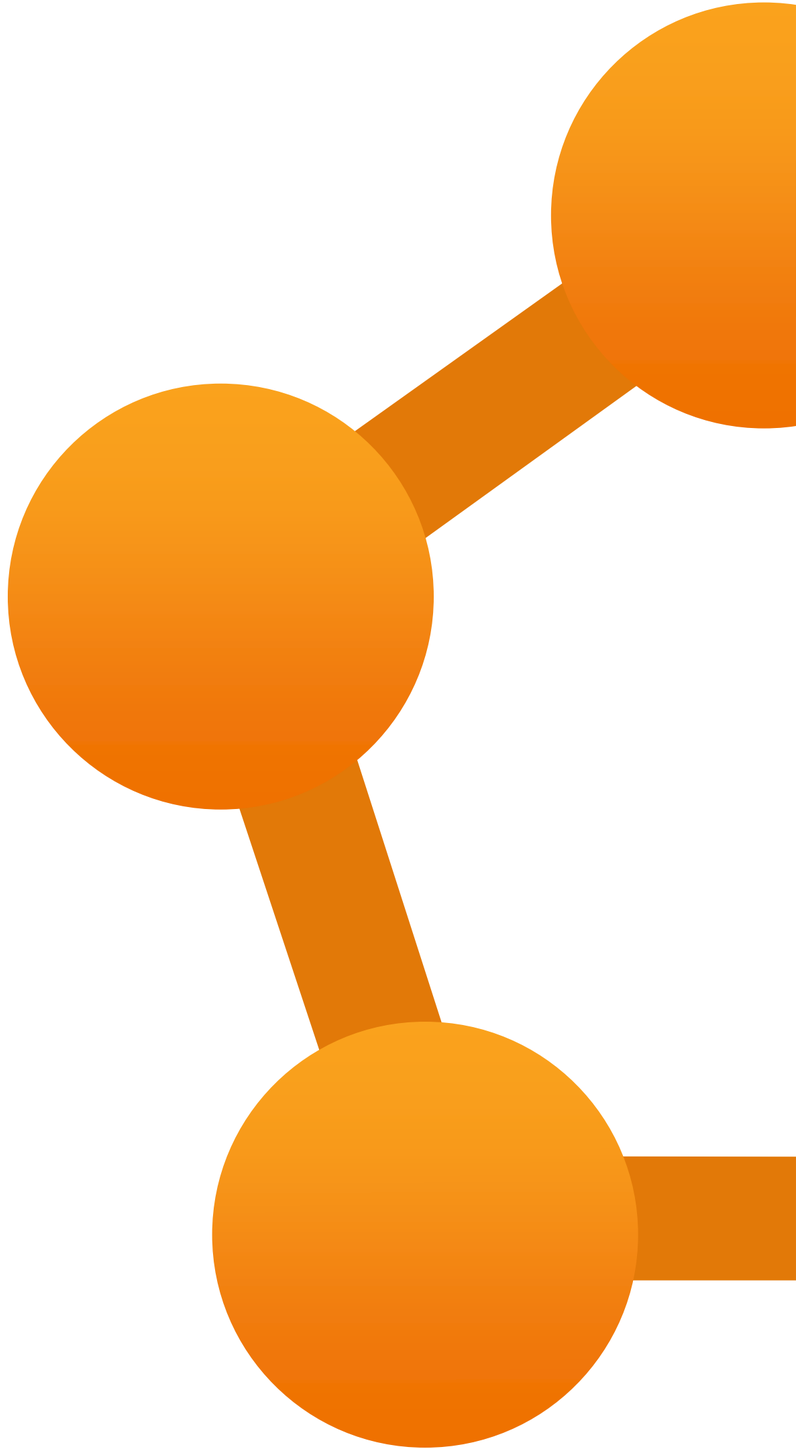
Module 5

Pipeline Extensibility ✓

Any questions?



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