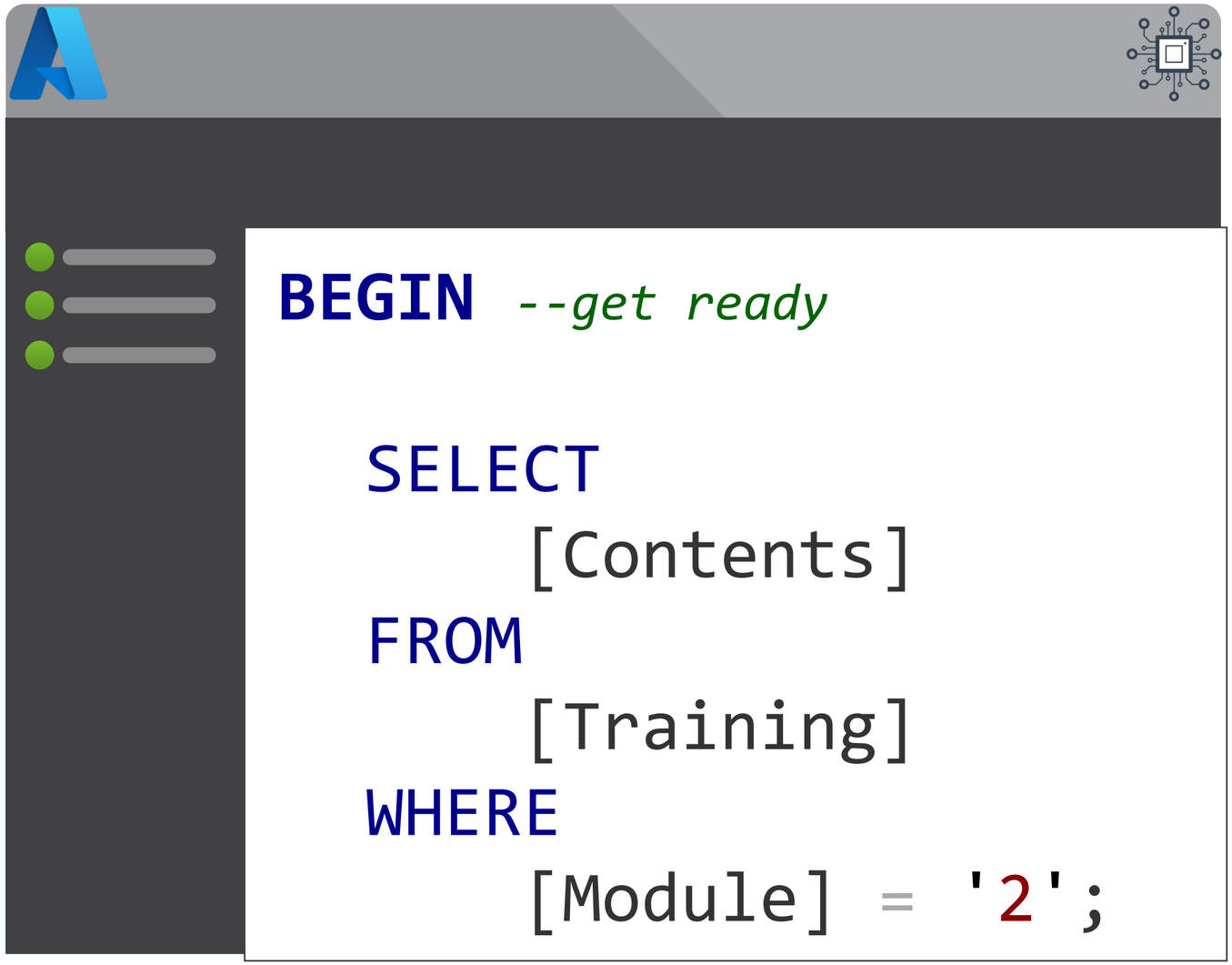
Module 2

Integration Runtime Design Patterns



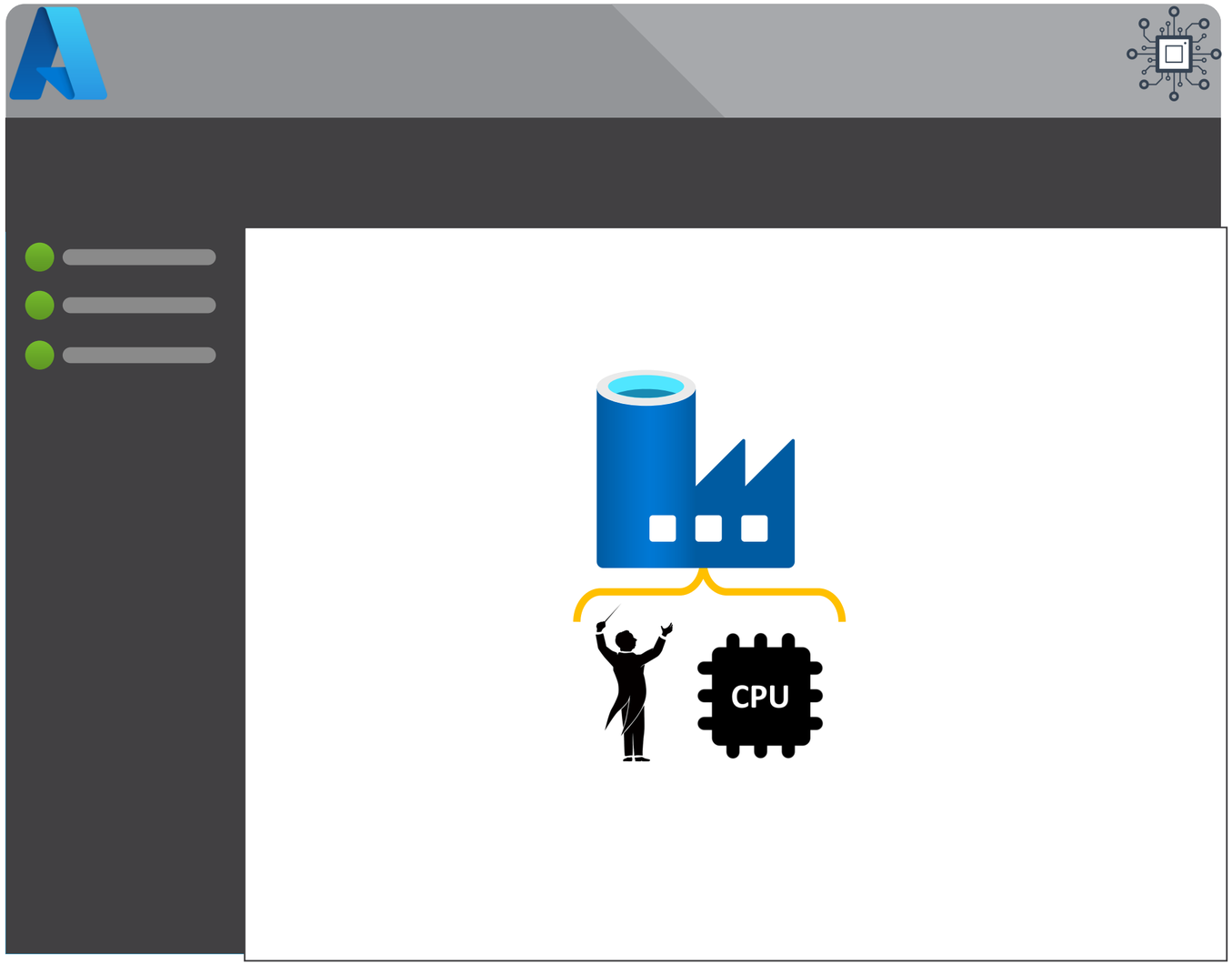
```
BEGIN --get ready

    SELECT
        [Contents]
    FROM
        [Training]
    WHERE
        [Module] = '2';
```

- Compute Types
  - Azure
  - Hosted
  - SSIS
- Patterns & Configuration

Module 2

Integration Runtime Design Patterns



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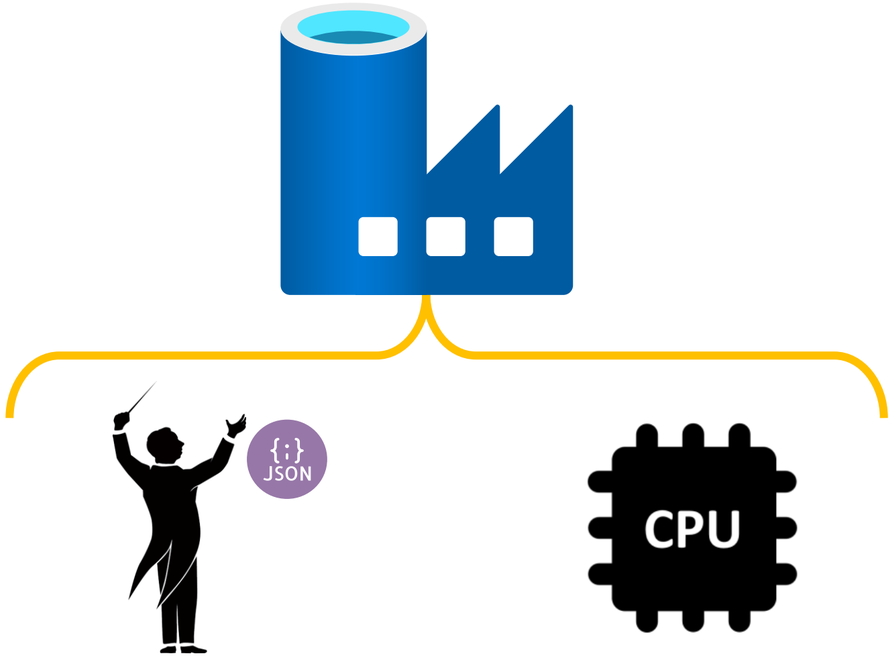
What is an Integration Runtime?

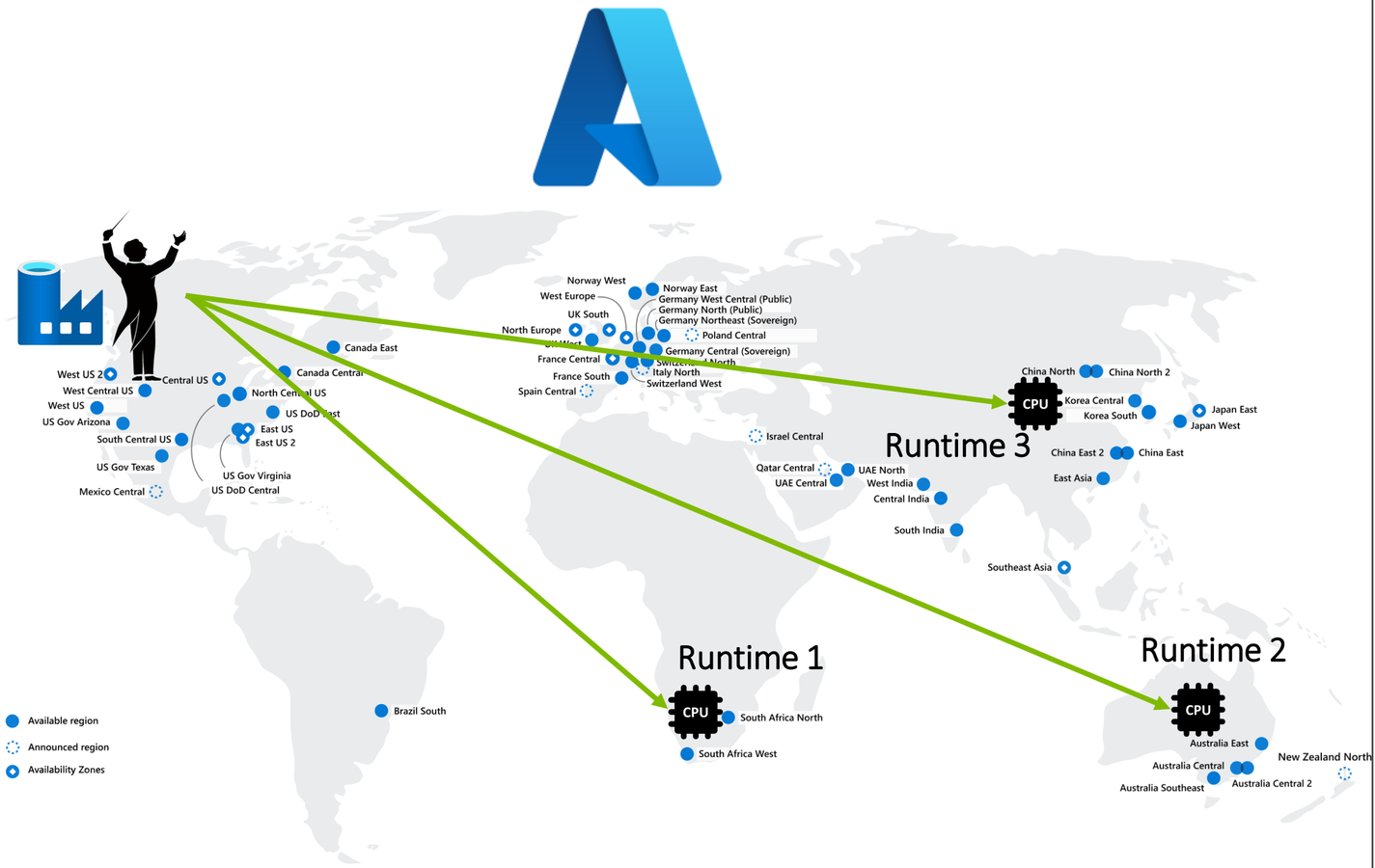


Orchestrator

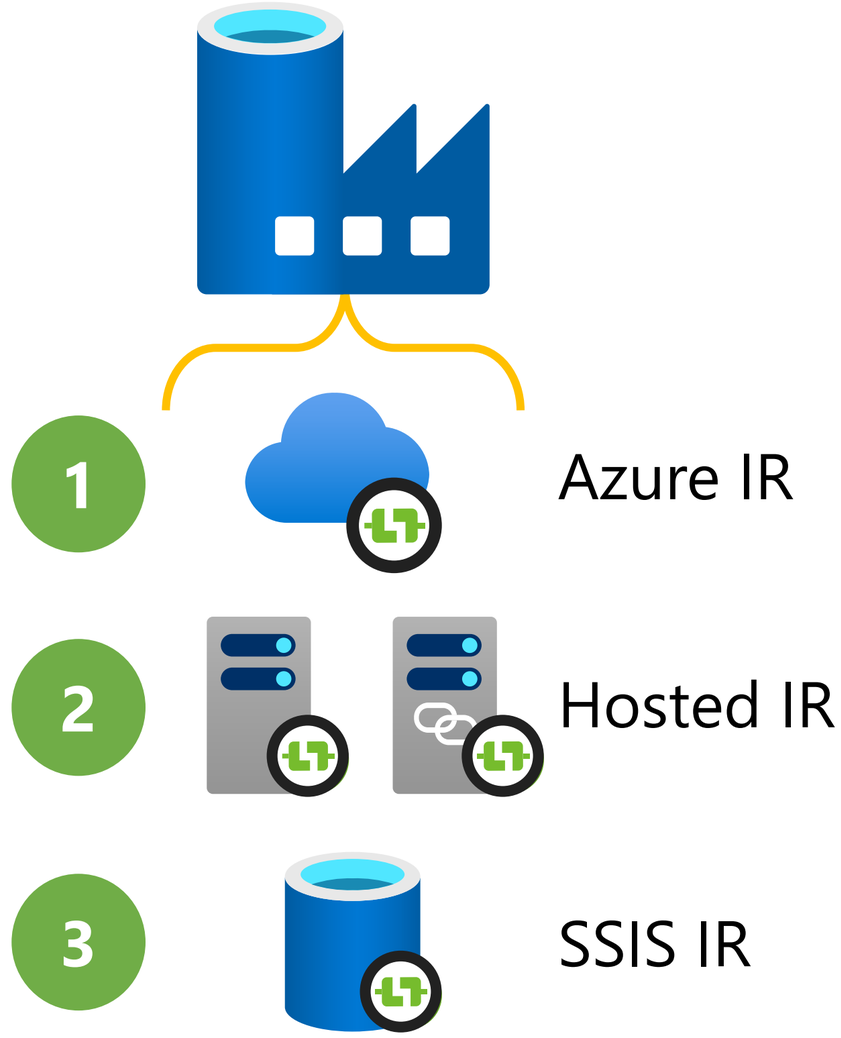
Runtime

Fixed Region

Flexible Location



What can an Integration Runtime do?



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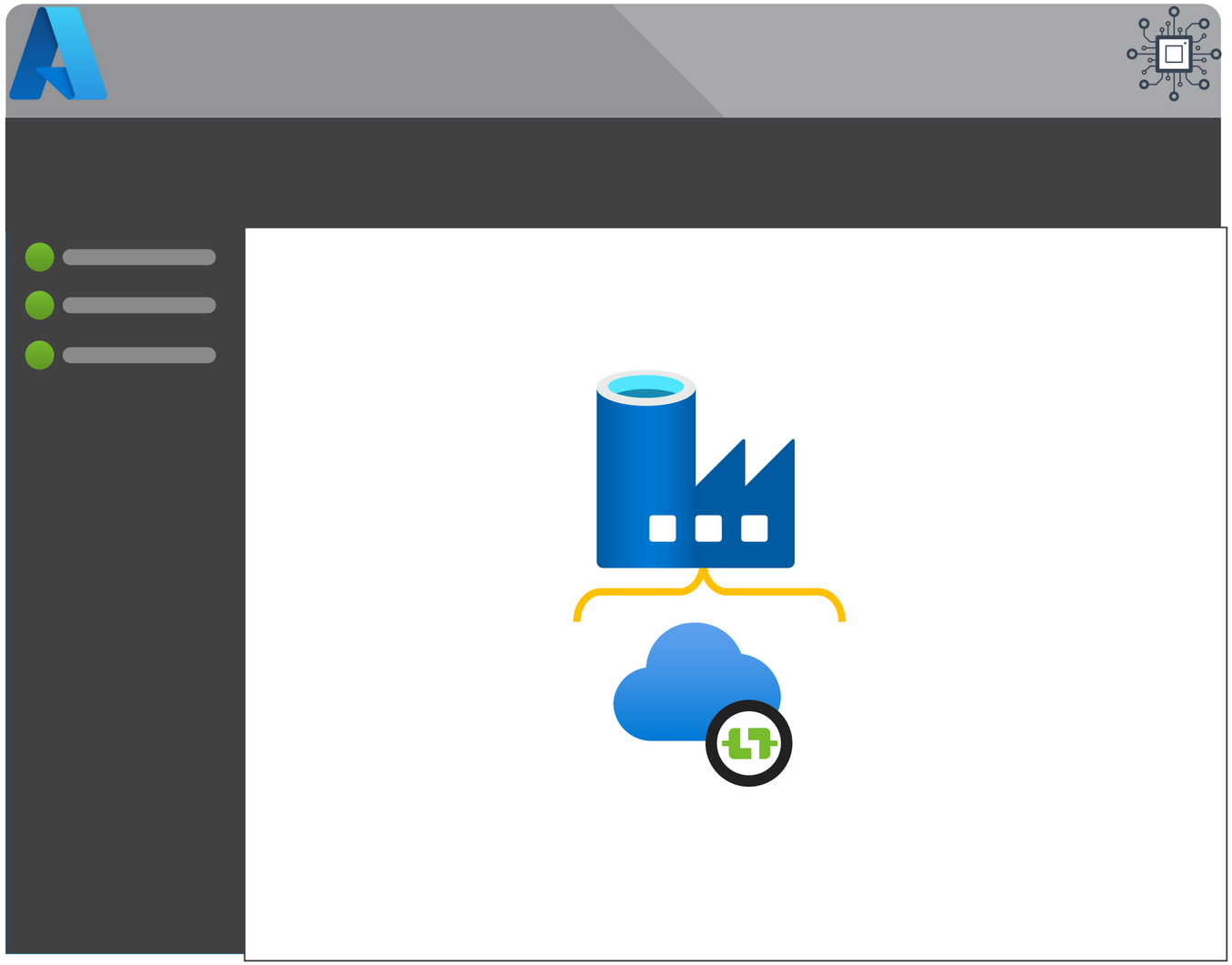
Integration Runtime Design Patterns



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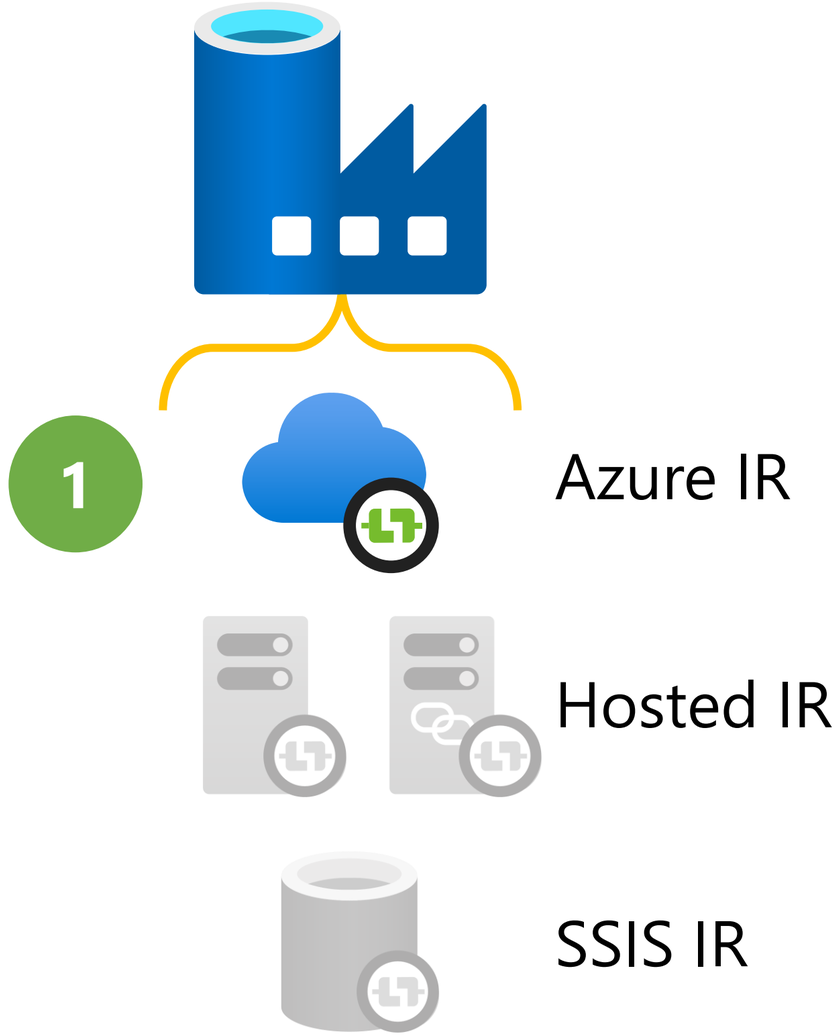

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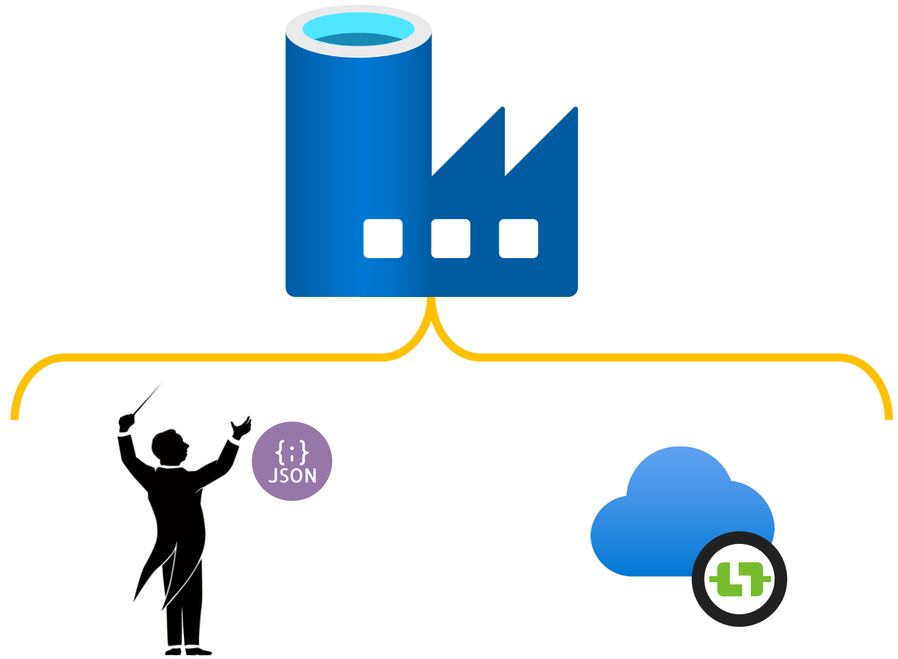


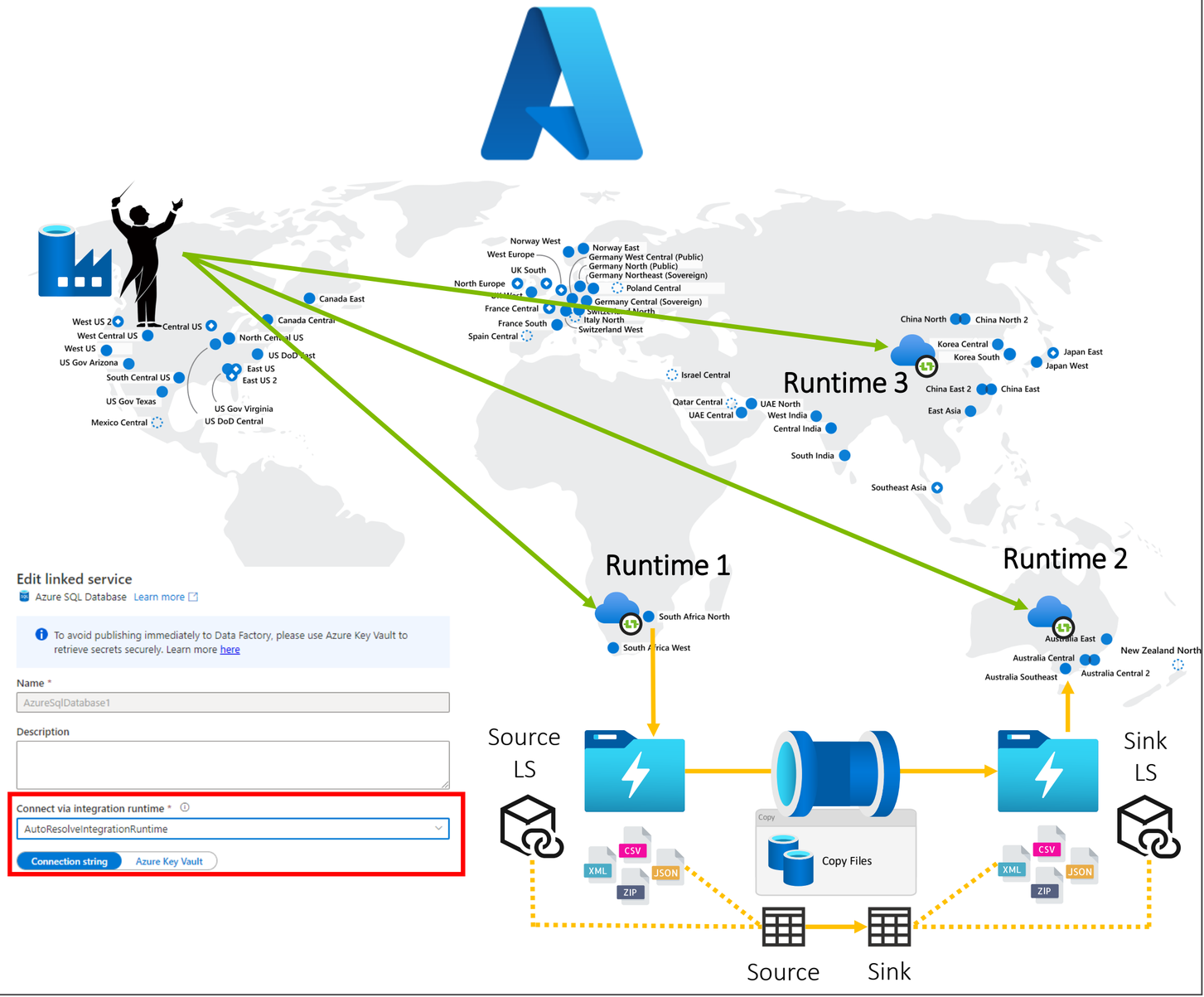
Orchestrator

Fixed Region

Runtime

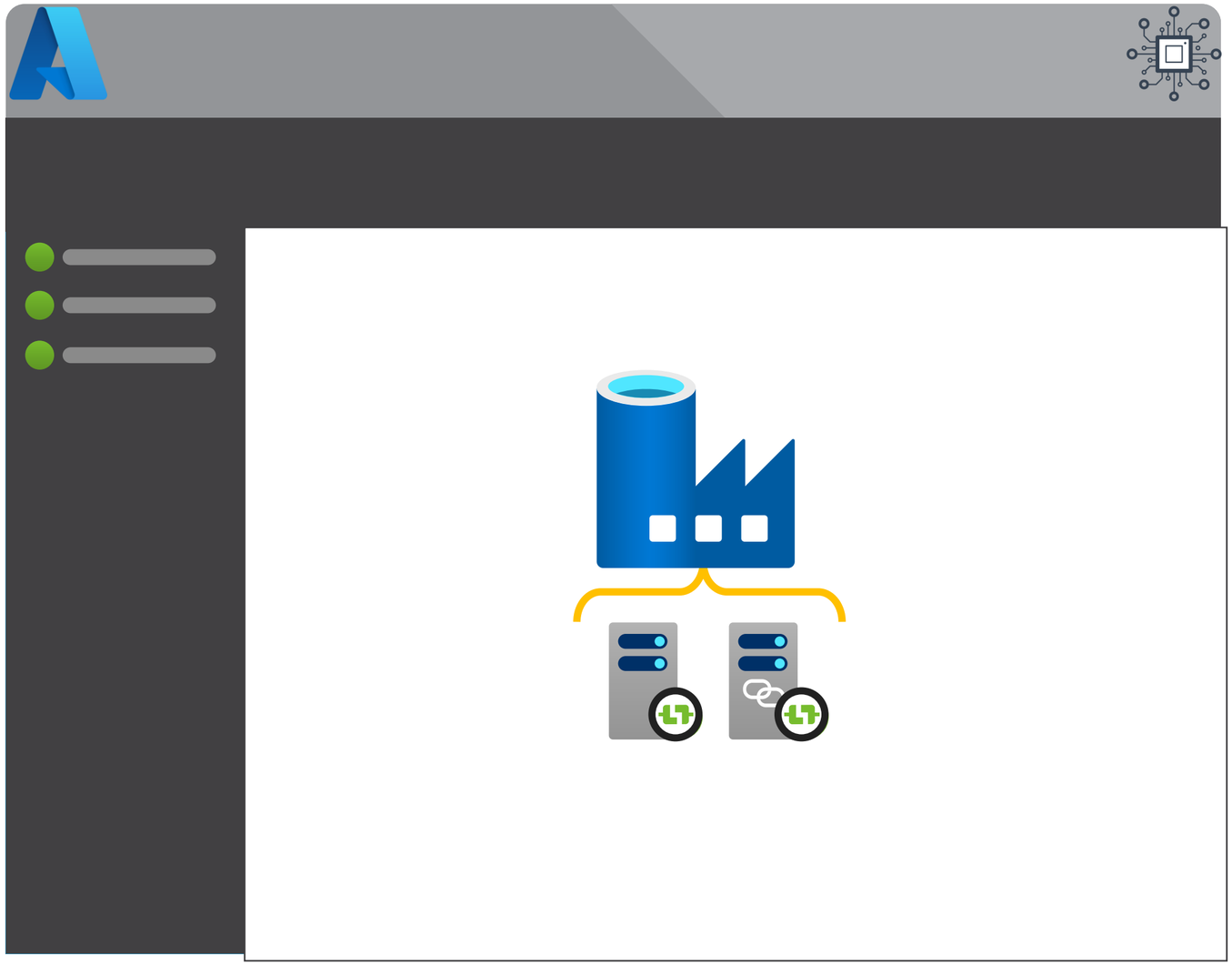
Flexible Location

AutoResolveIntegrationRuntime



Module 2

Integration Runtime Design Patterns



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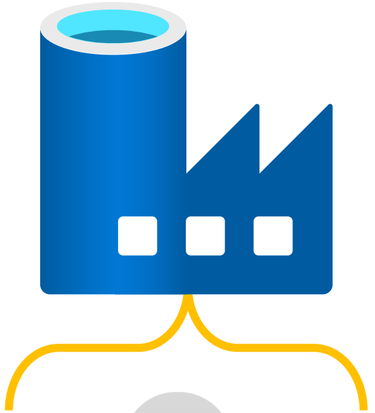
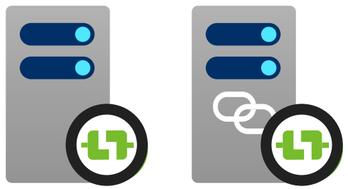


Azure IR

2



Hosted IR

SSIS IR

Hosted Integration Runtime

Windows OS
32GB RAM
6 CPU Cores
(12 Logical Cores)
80GB Storage

Edit integration runtime

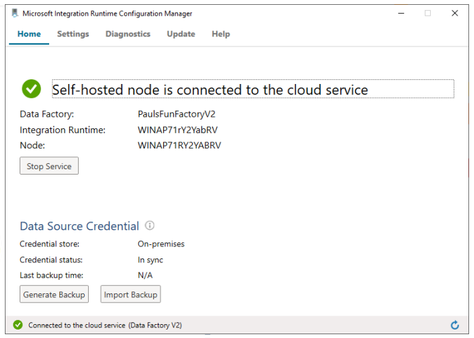
Settings | Nodes | Auto update | Sharing | Links

View Service URLs

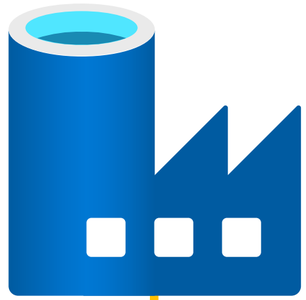
Name	Status	IP address	Limit concurrent jobs	Actions
WINAP71RY2YAB...	Running	Get IP address	112	

Data Sources

Windows OS
8GB RAM
4 CPU Cores
80GB Storage



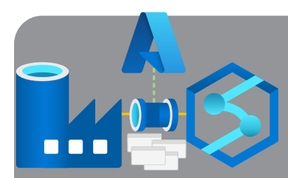
Runtime
Self Hosted

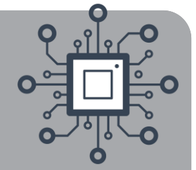


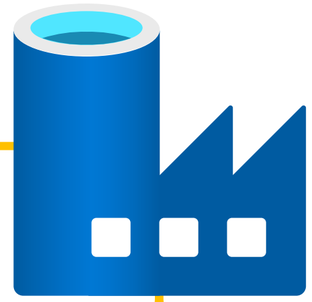
Orchestrator
Fixed Region

Runtime
Flexible Region

Hosted Integration Runtime



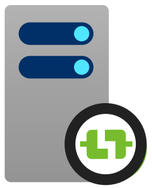




SAP

CSV XML JSON ZIP

Microsoft SQL Server



Runtime

Self Hosted

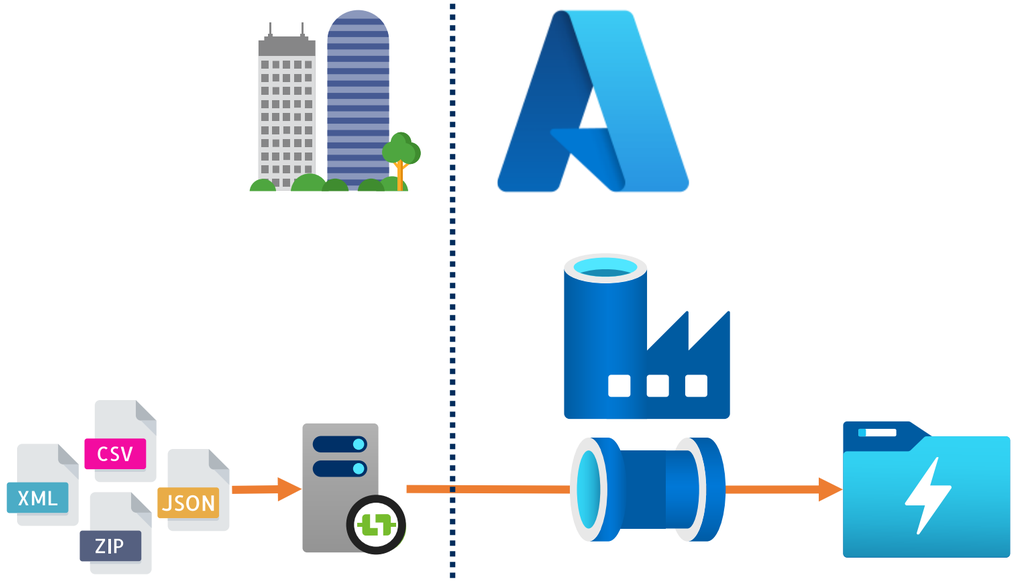
Orchestrator

Fixed Region

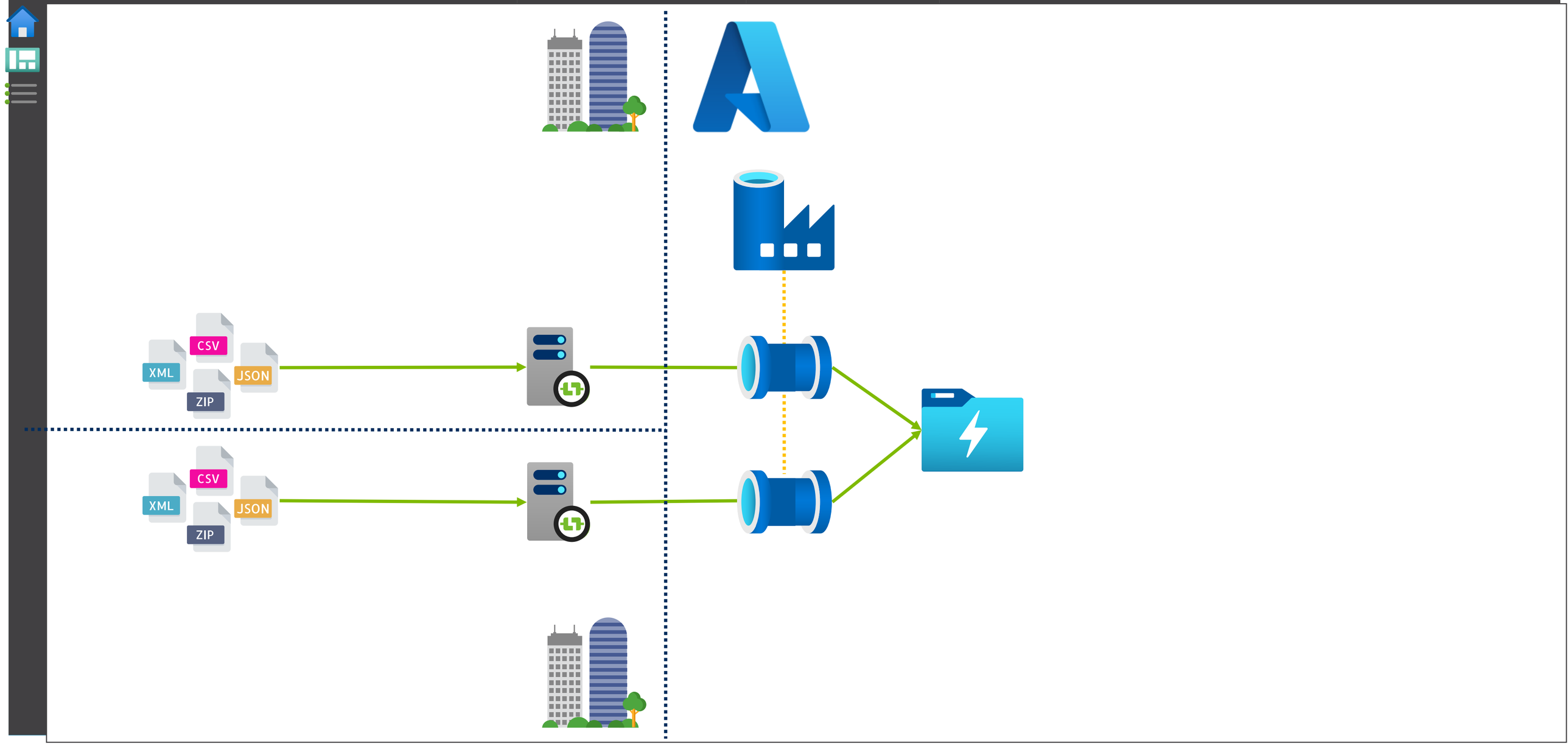
Runtime

Flexible Region

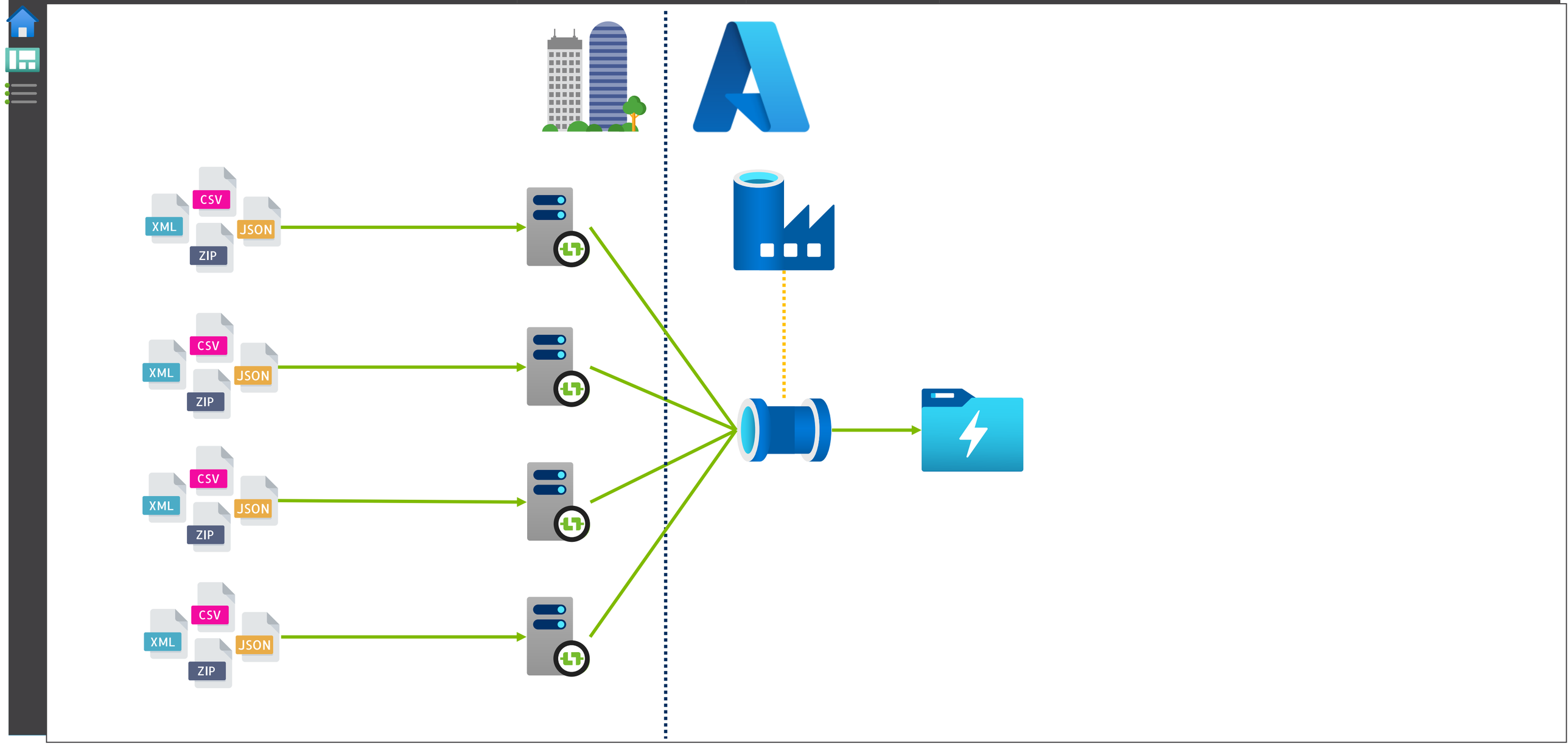
Single Hosted IR



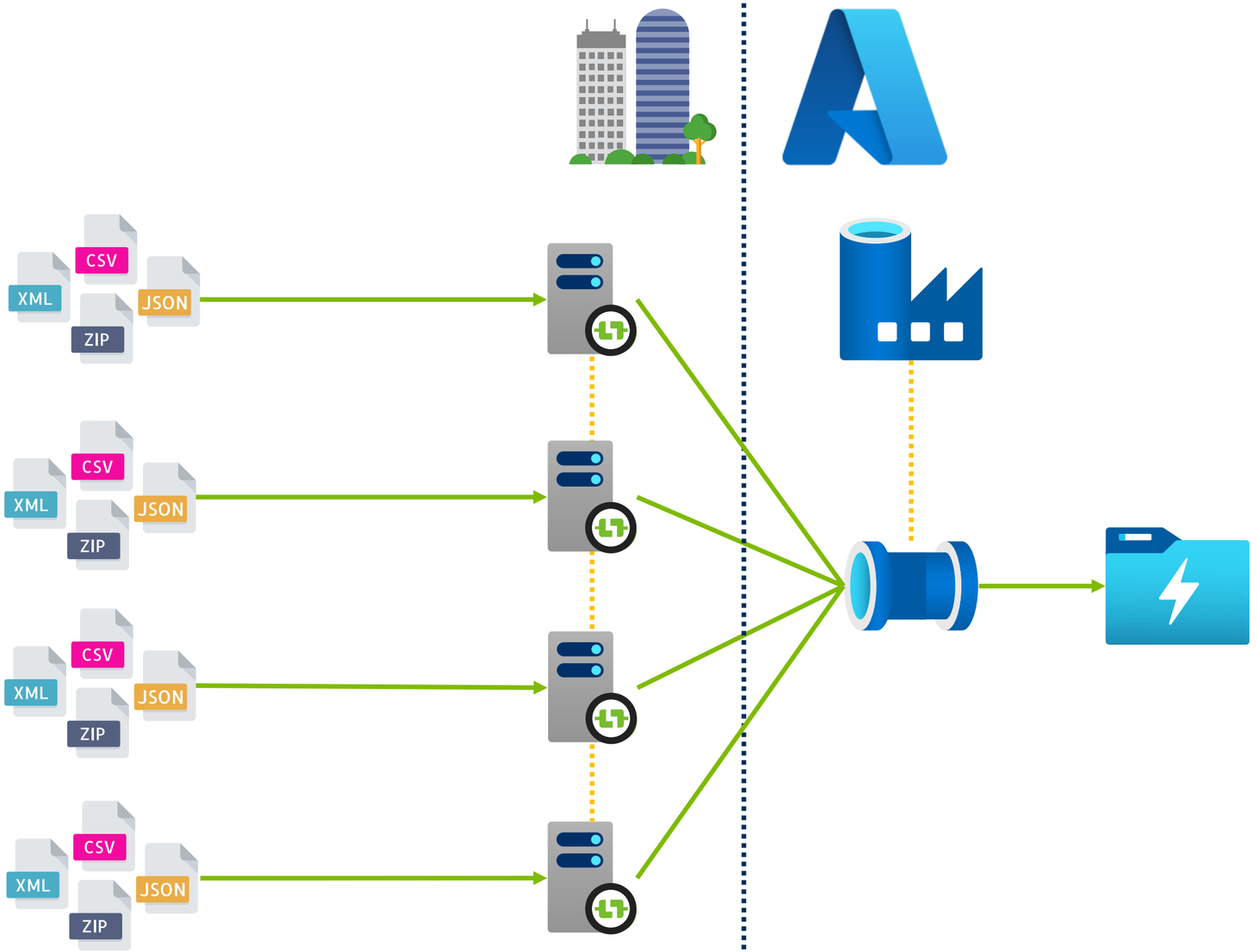
Multiple Hosted IR's at Different Sites



Multiple Hosted IR's as Separate Endpoints

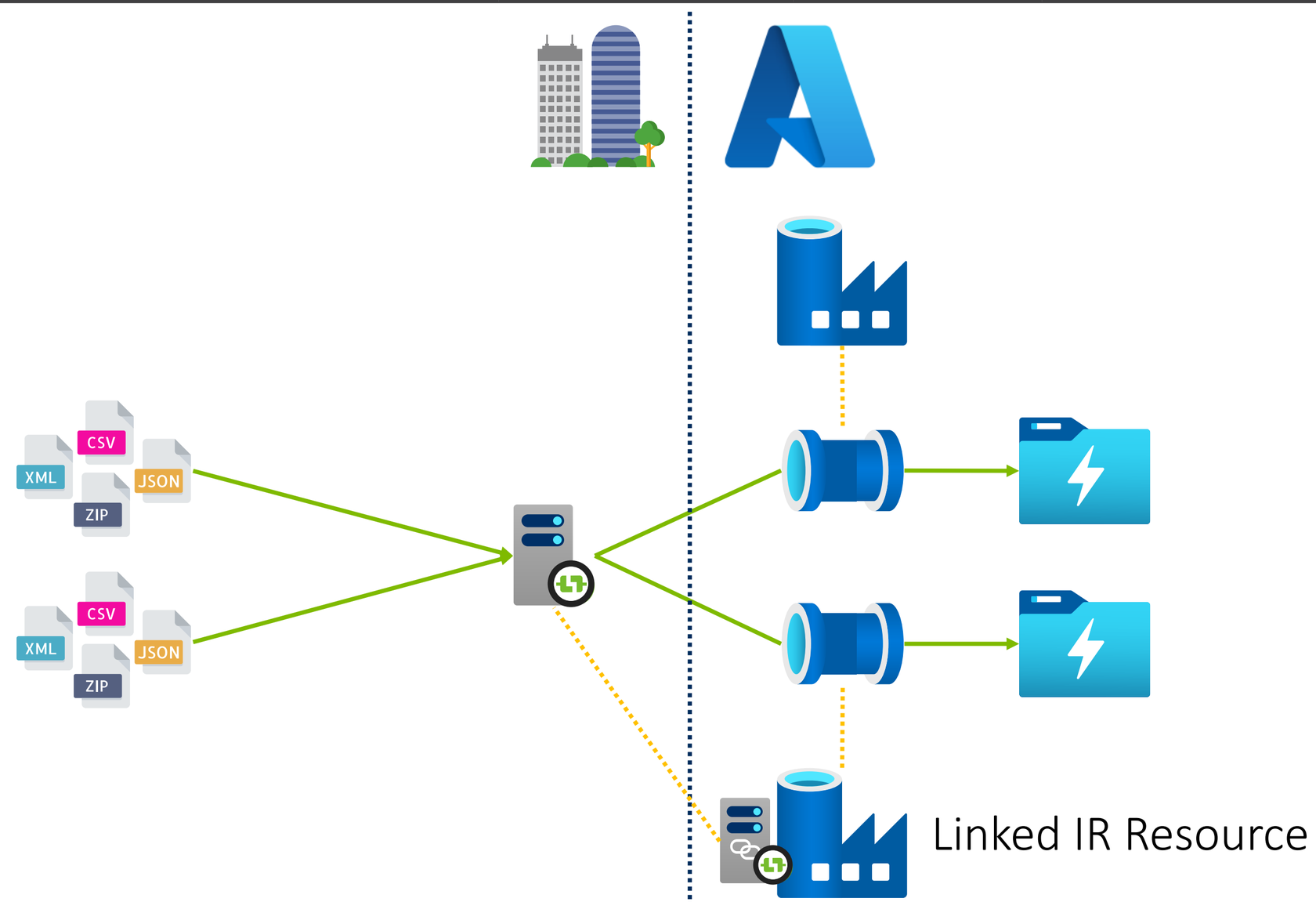


Single Hosted IR with Multiple Nodes

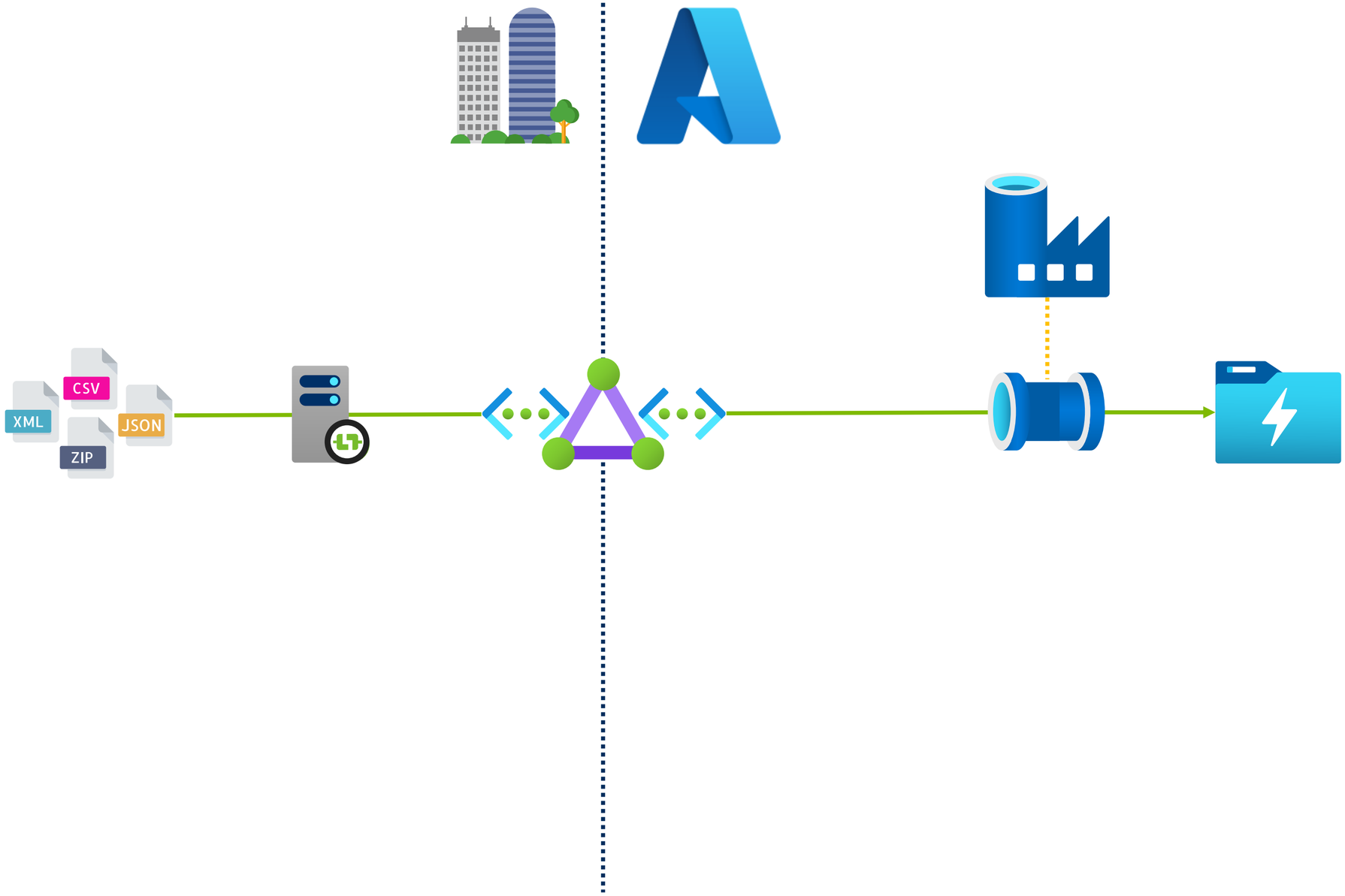


* Max of 4 Nodes per IR Endpoint

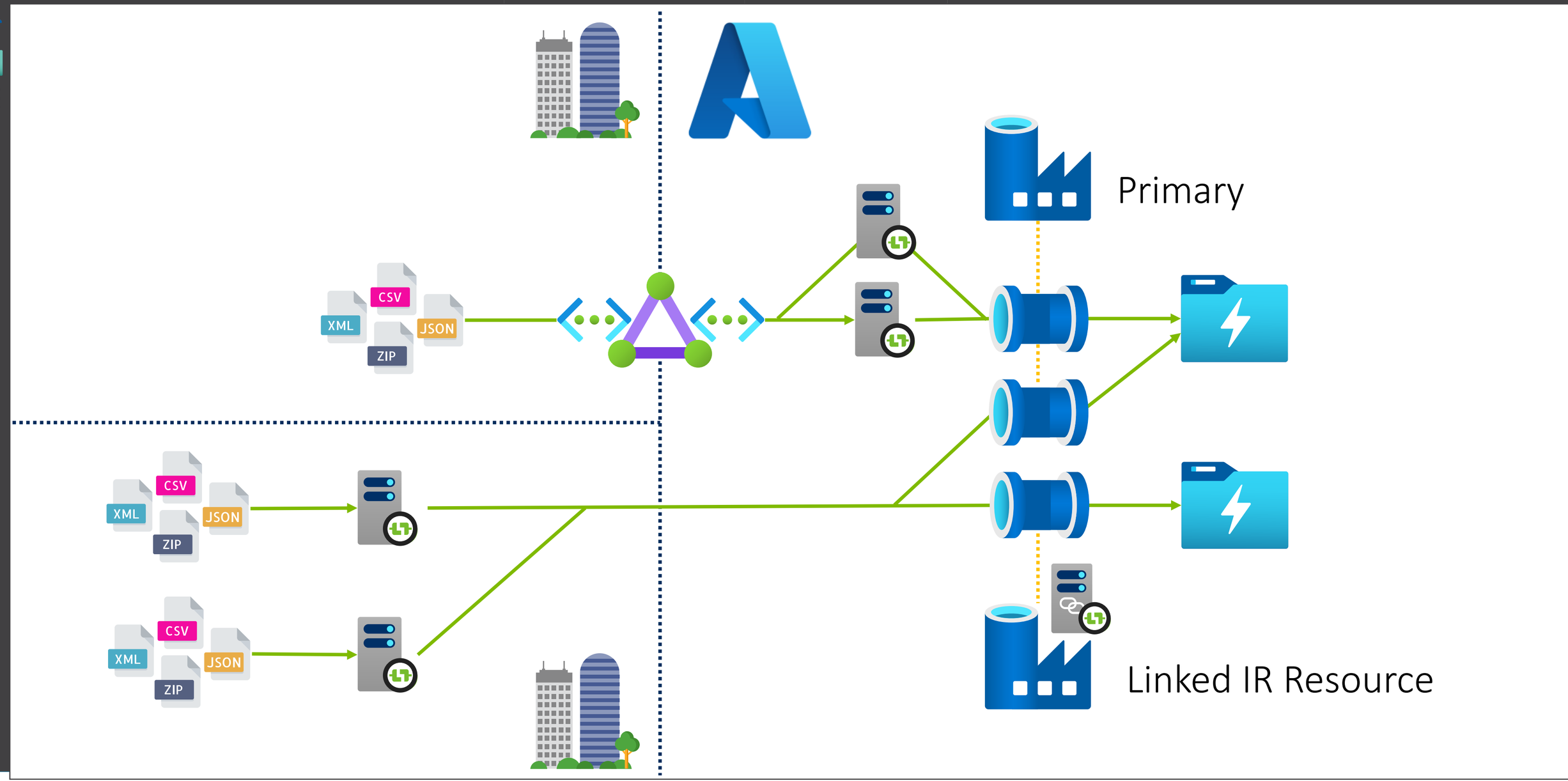
Single Hosted IR Linked to Multiple Data Factories



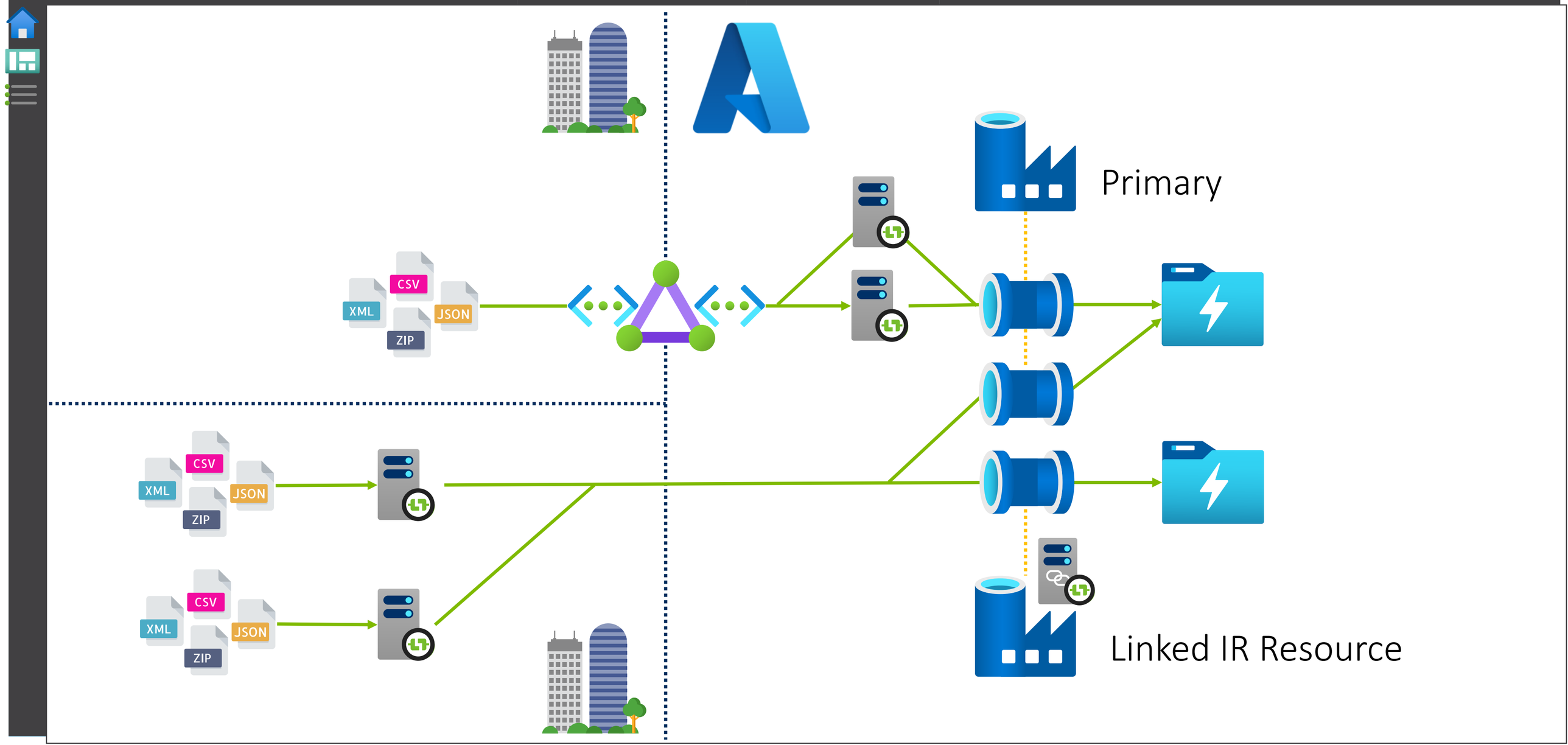
Hosted IR's with Express Route Connections



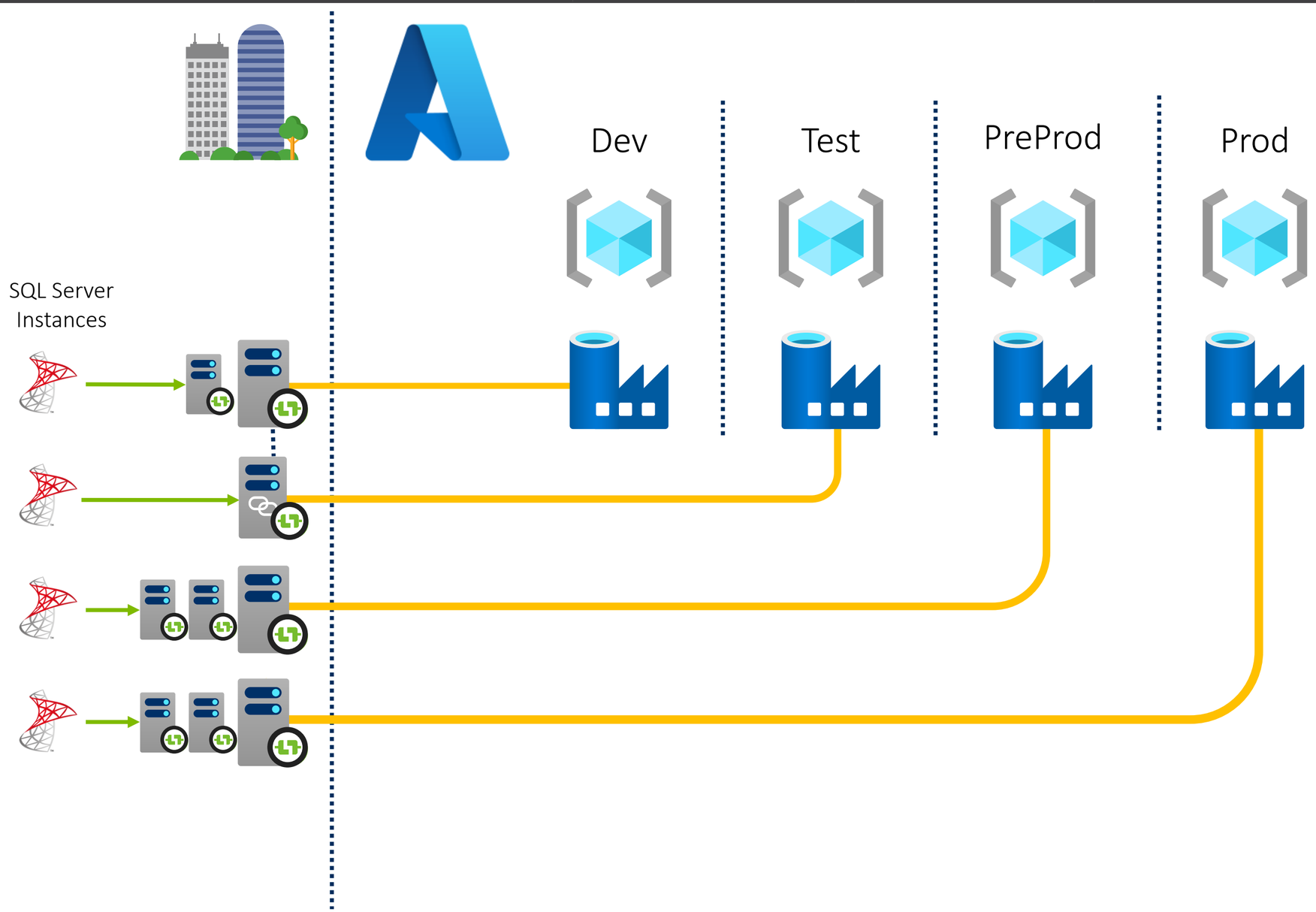
Hosted IR Combinations



Horizontal vs Vertical Environment Processing



Hosted IR's vs Environments



25x Sites
4x Environments

2x IR's for Dev
1x Linked IR for Test (from Dev)

3x IR's for PreProd
3x IR's for Prod

8x Virtual Machines per Site
200x Virtual Machines Total

Hosted IR's vs Environments

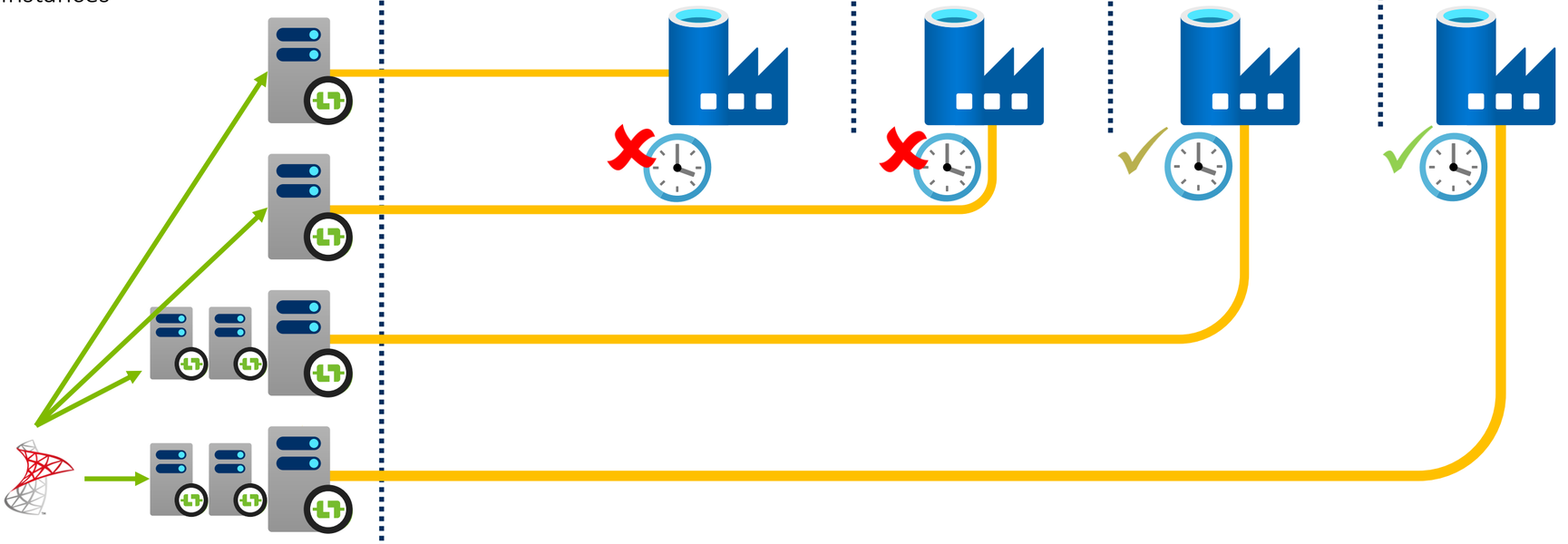
Dev

Test

PreProd

Prod

SQL Server Instances



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Hosted IR's vs Environments

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Prod

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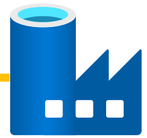
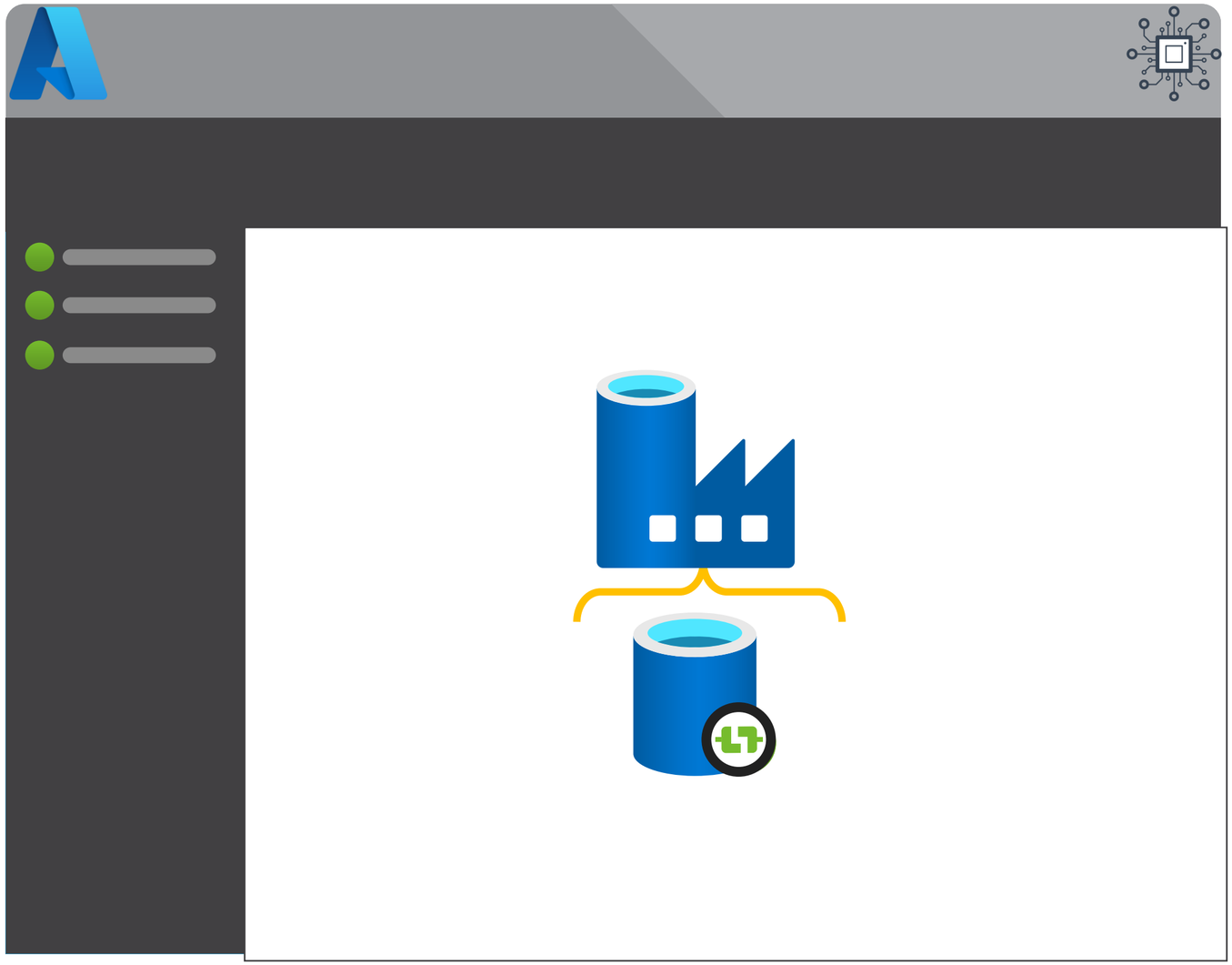


Common

Module 2

Integration Runtime Design Patterns



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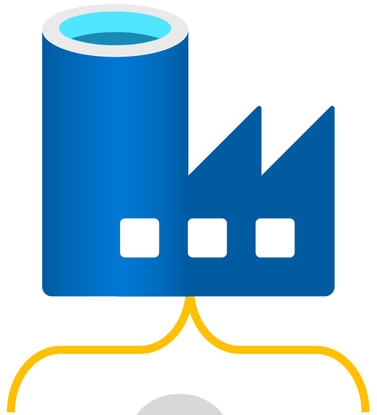
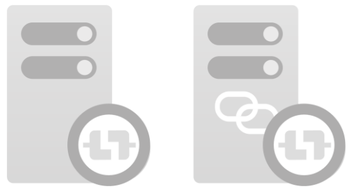


Azure IR



Hosted IR

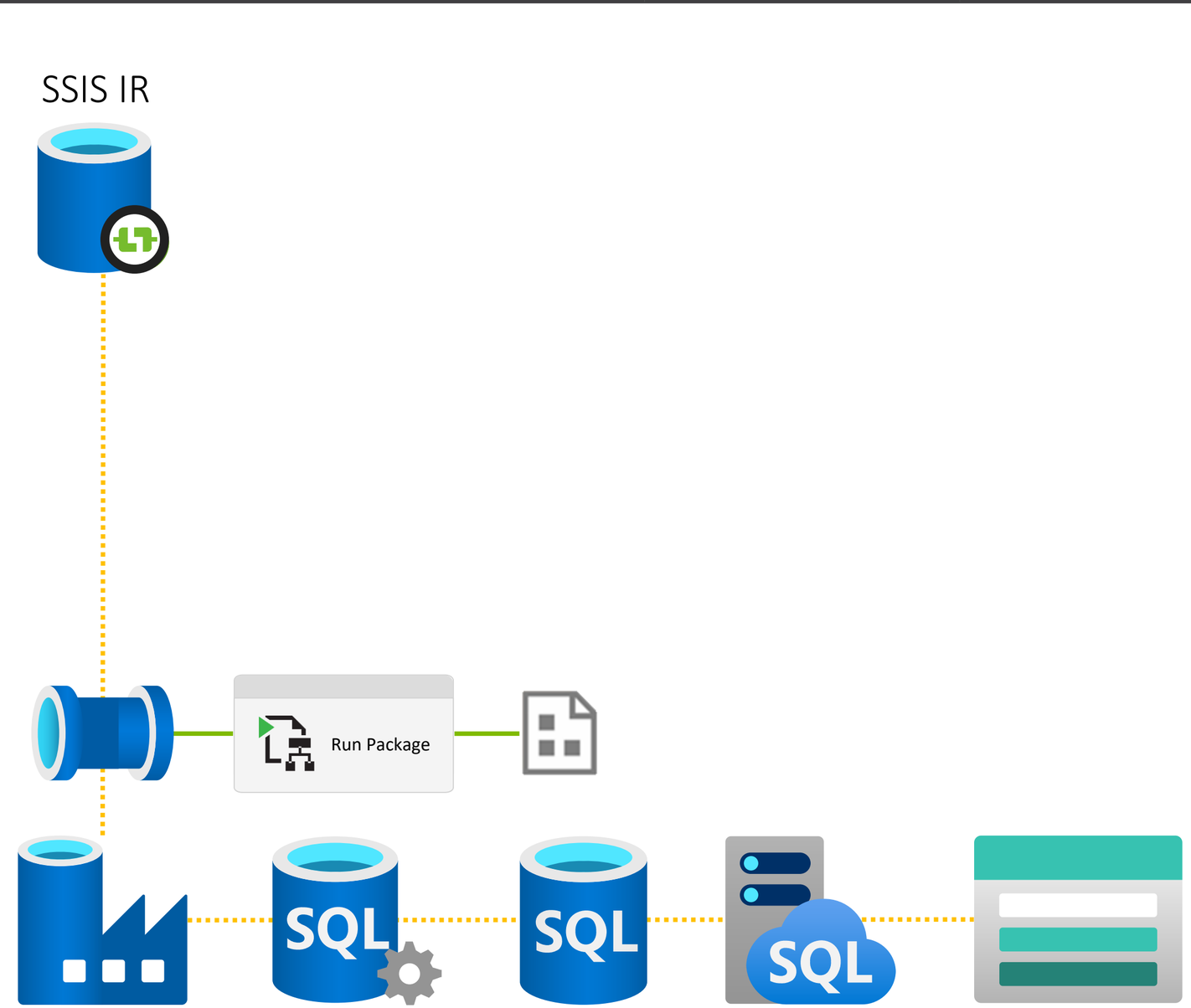
3

SSIS IR

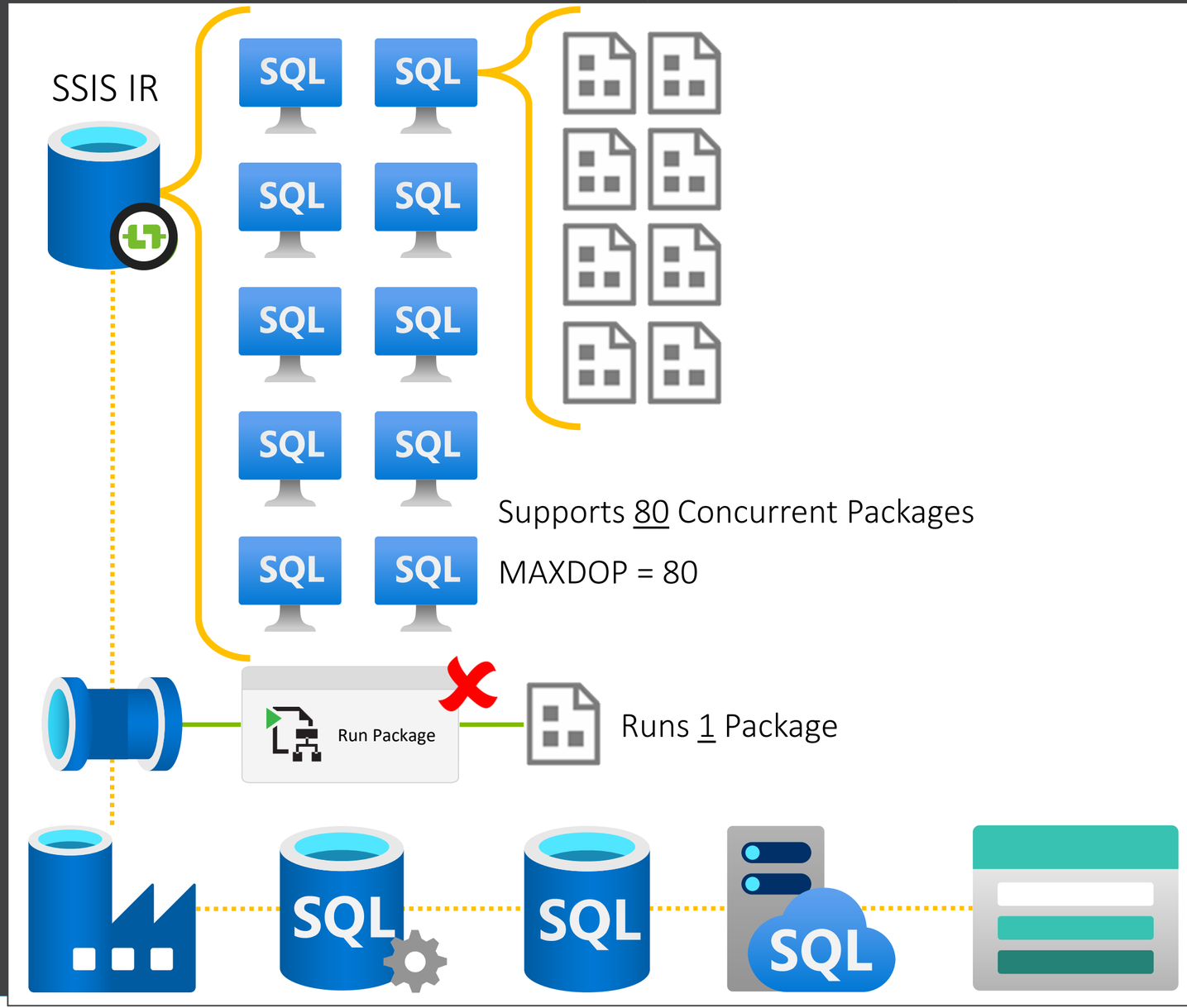
Running an SSIS Package in Azure

SSIS IR

Running an SSIS Package in Azure

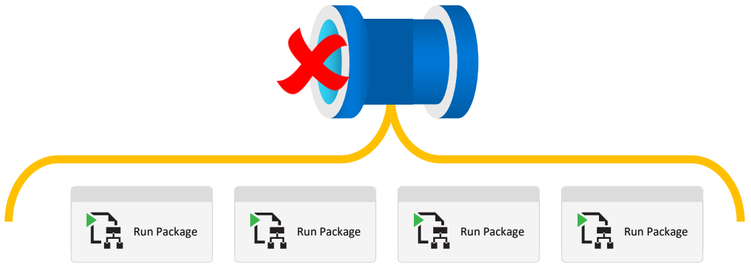


Problem: Using All Of The SSIS IR Compute



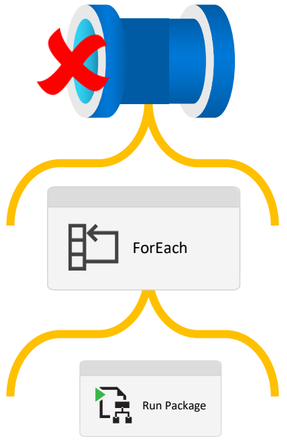
Parent Package

Child Packages x80



Pipeline x1

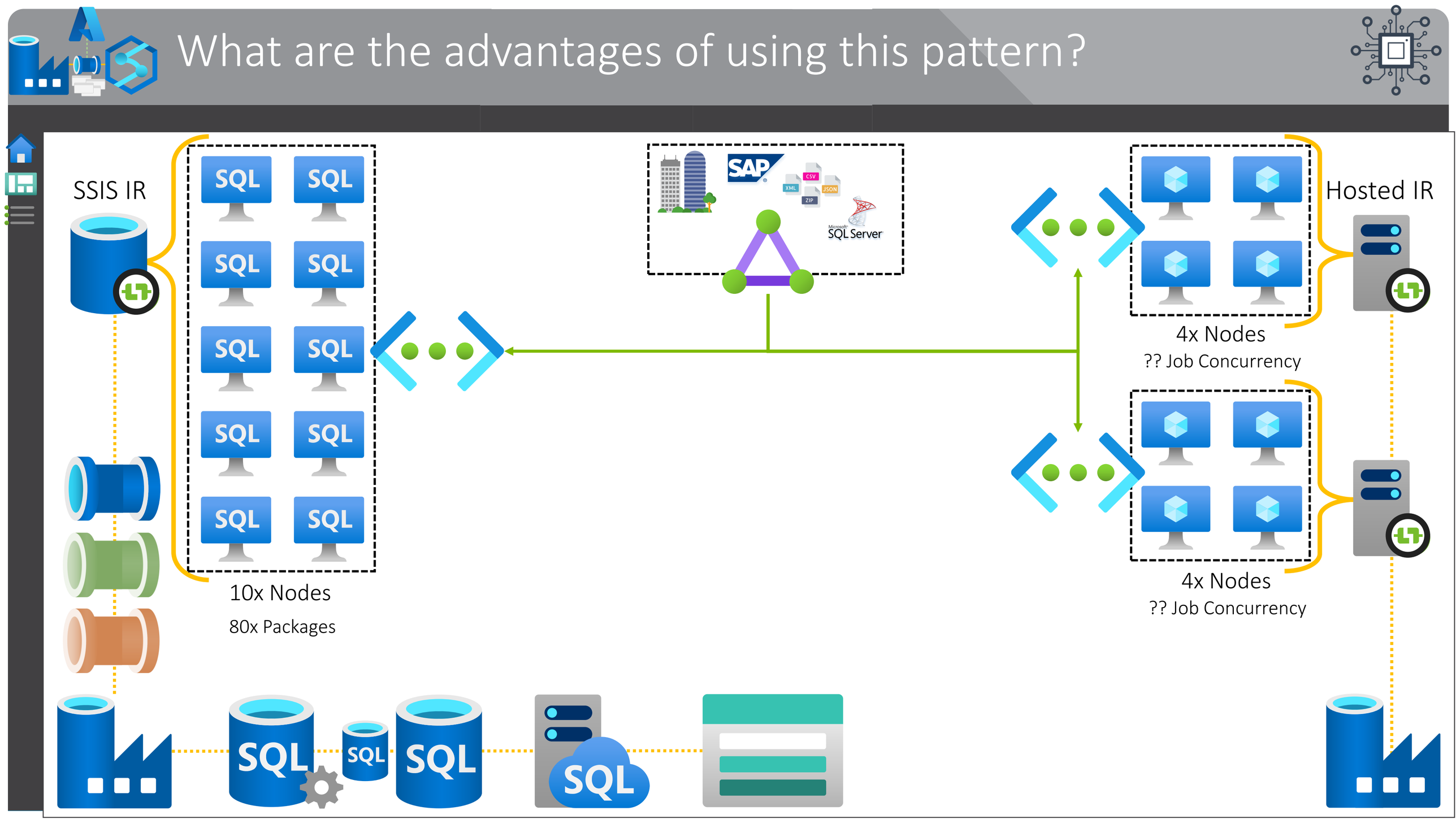
Activities x80



Pipeline x1

ForEach
Max Batch
(50)

What are the advantages of using this pattern?



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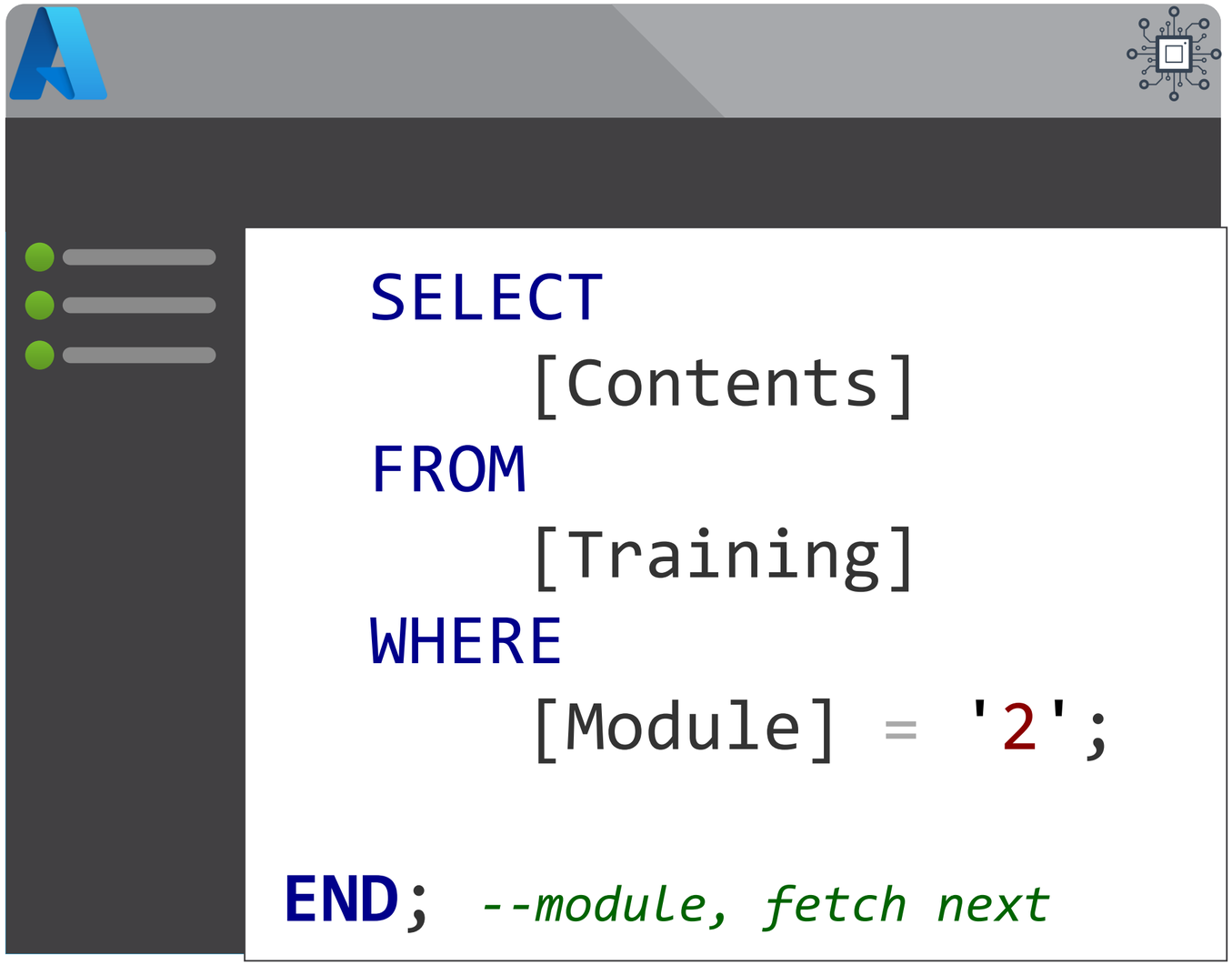

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    FROM
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    WHERE
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END; --module, fetch next
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