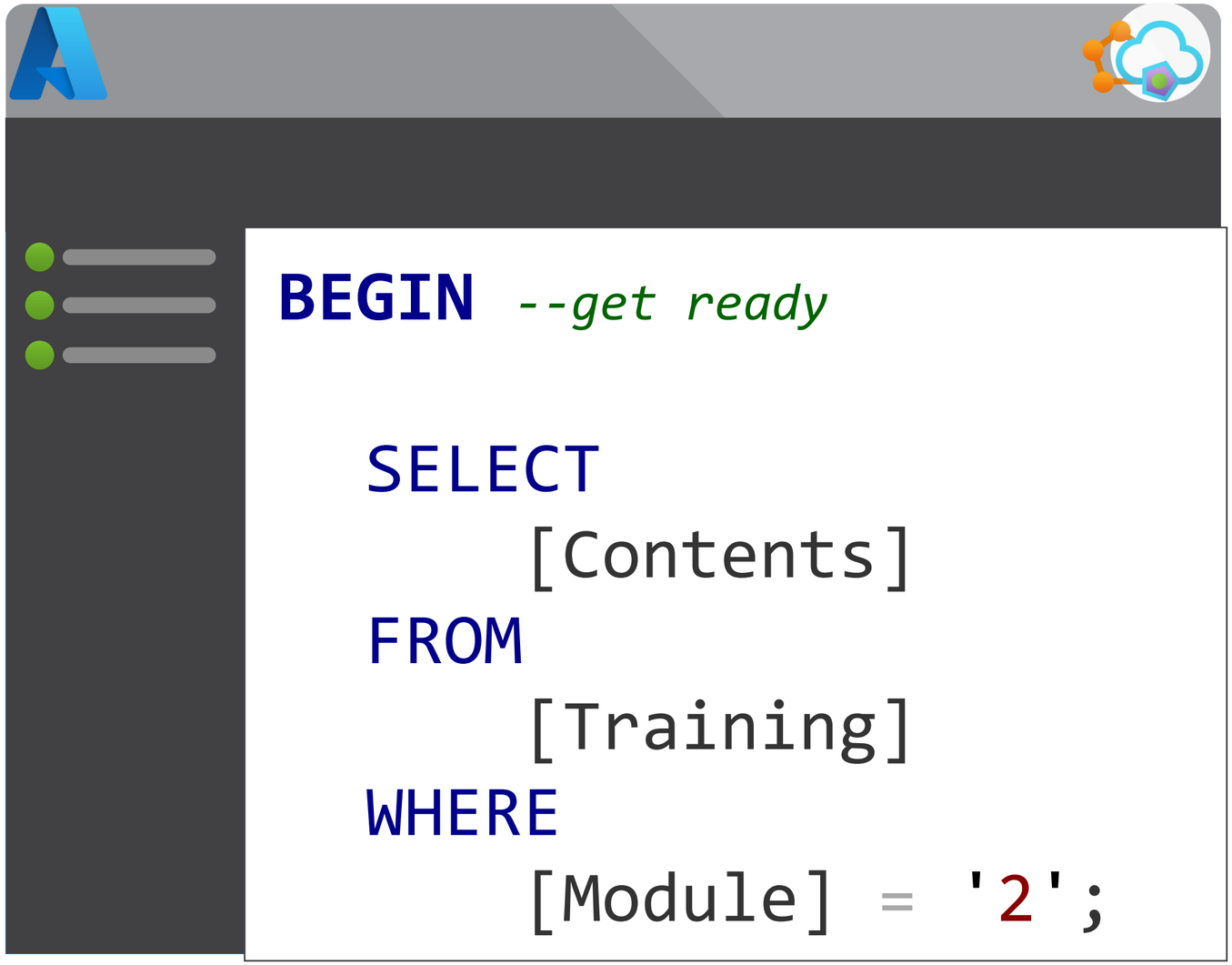
Module 2

Integration Runtime Design Patterns



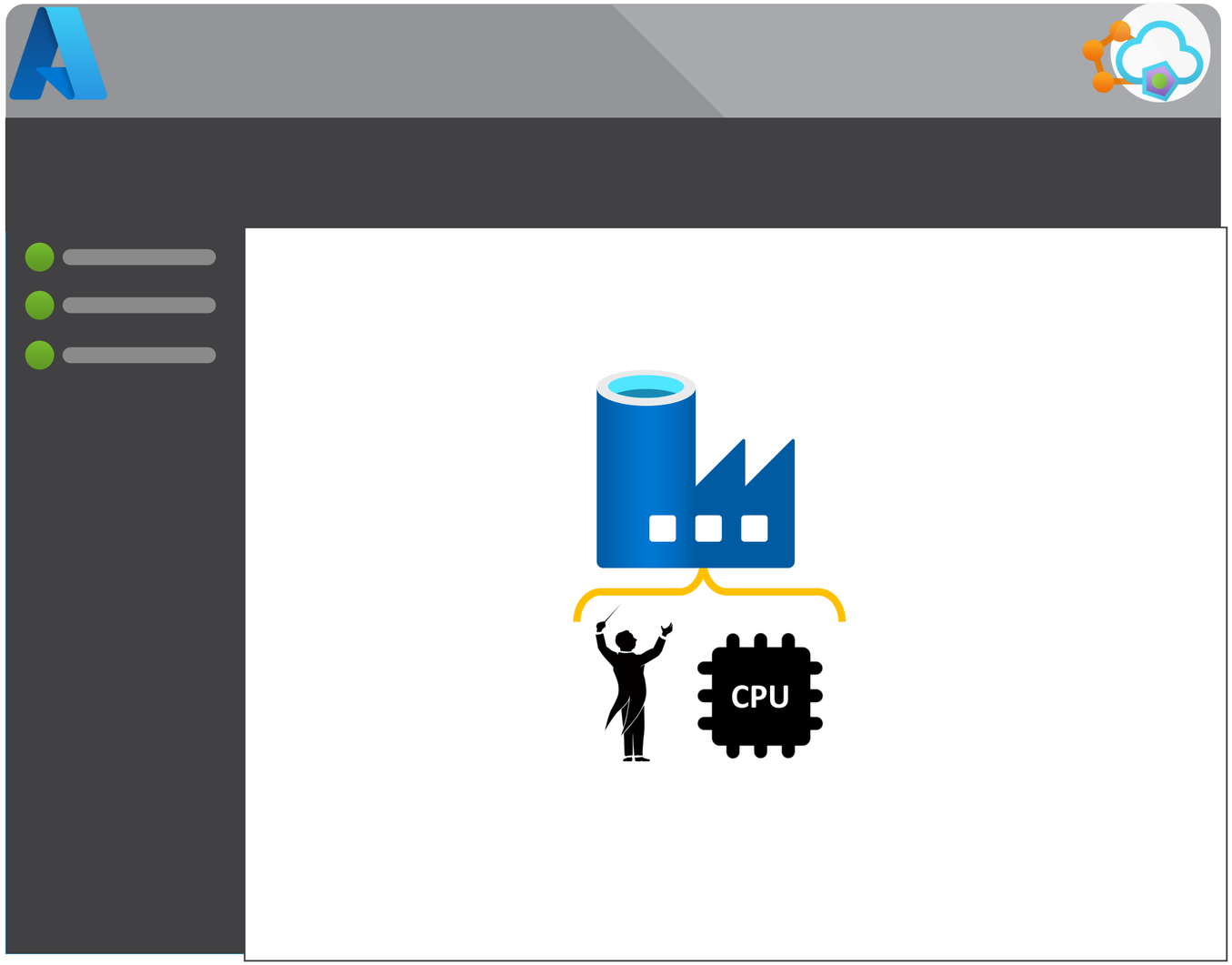
```
BEGIN --get ready

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

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

Module 2

Integration Runtime Design Patterns



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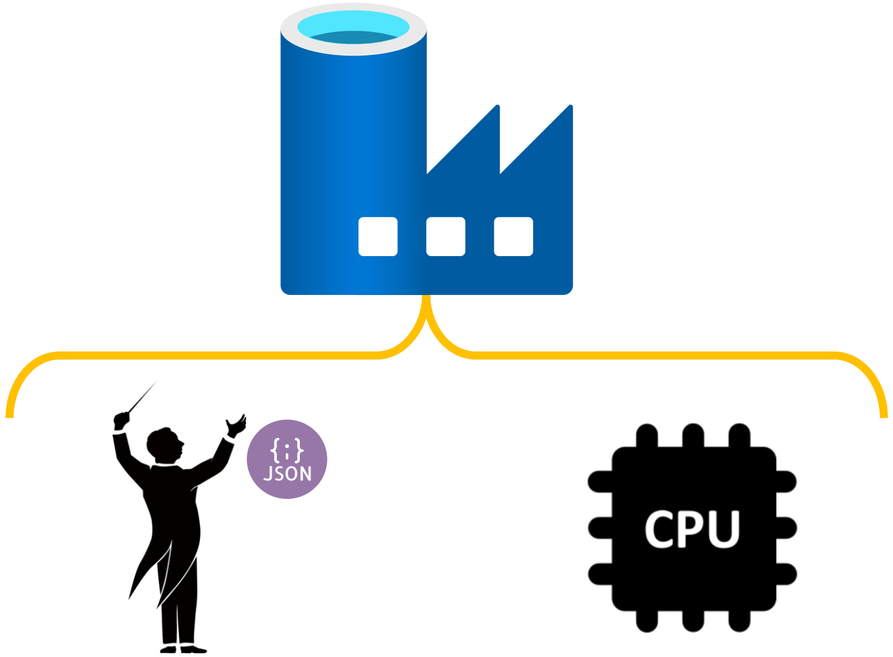
What is an Integration Runtime?

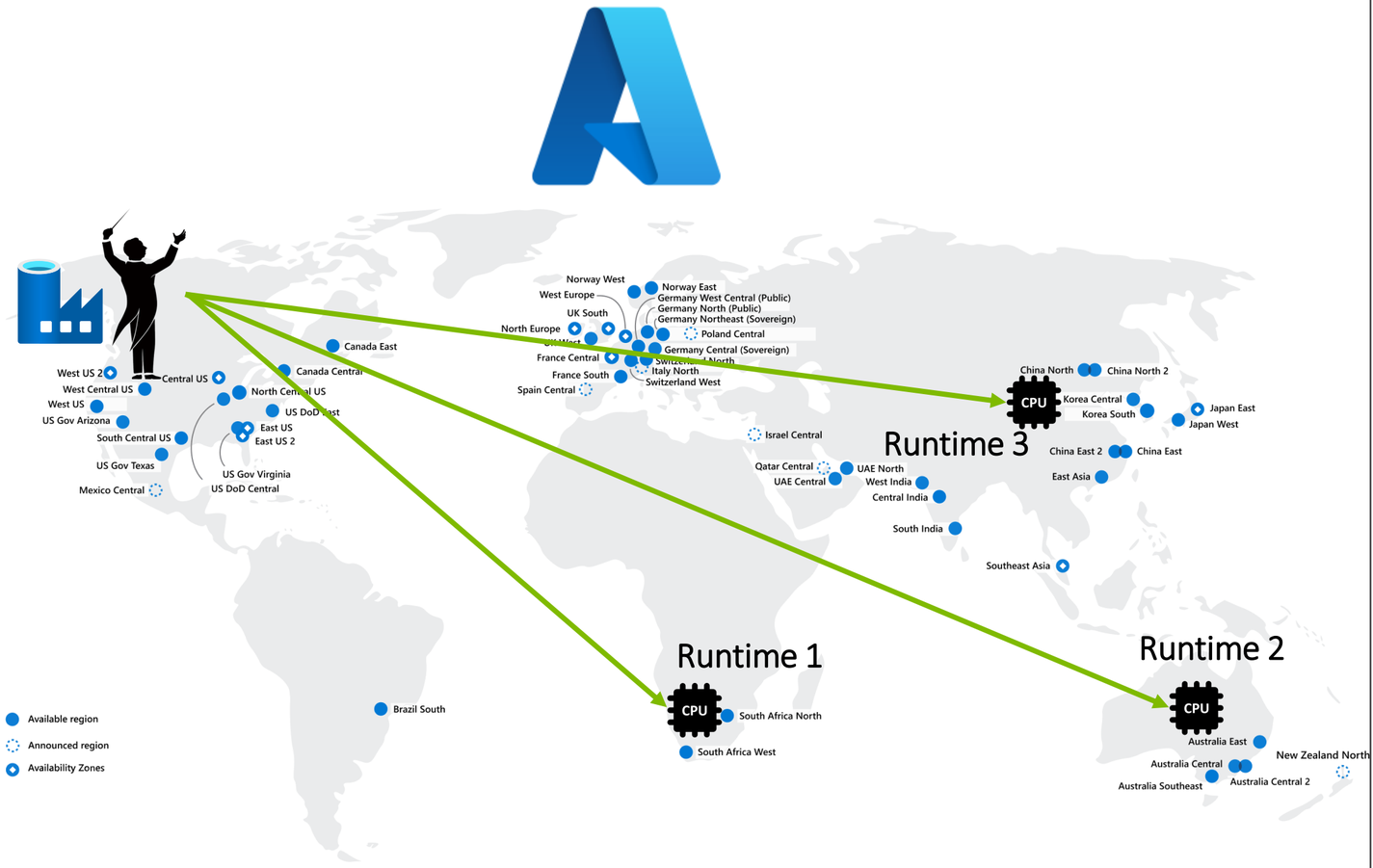


Orchestrator

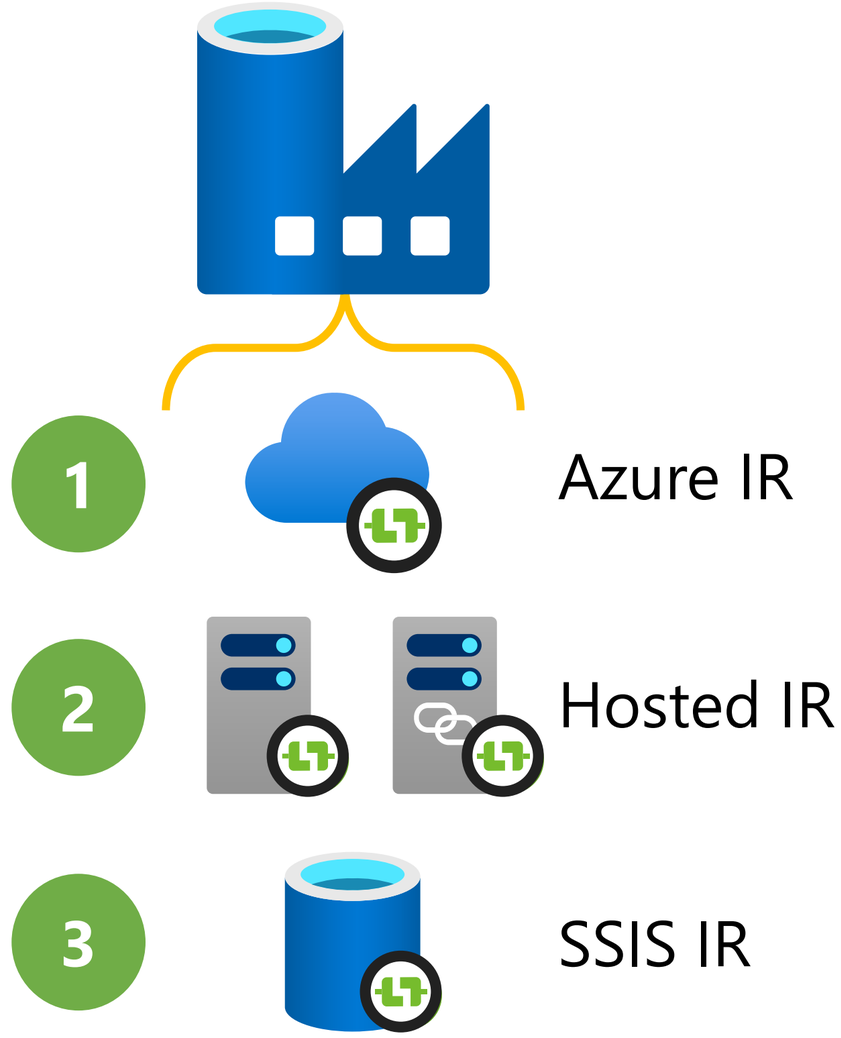
Runtime

Fixed Region

Flexible Region

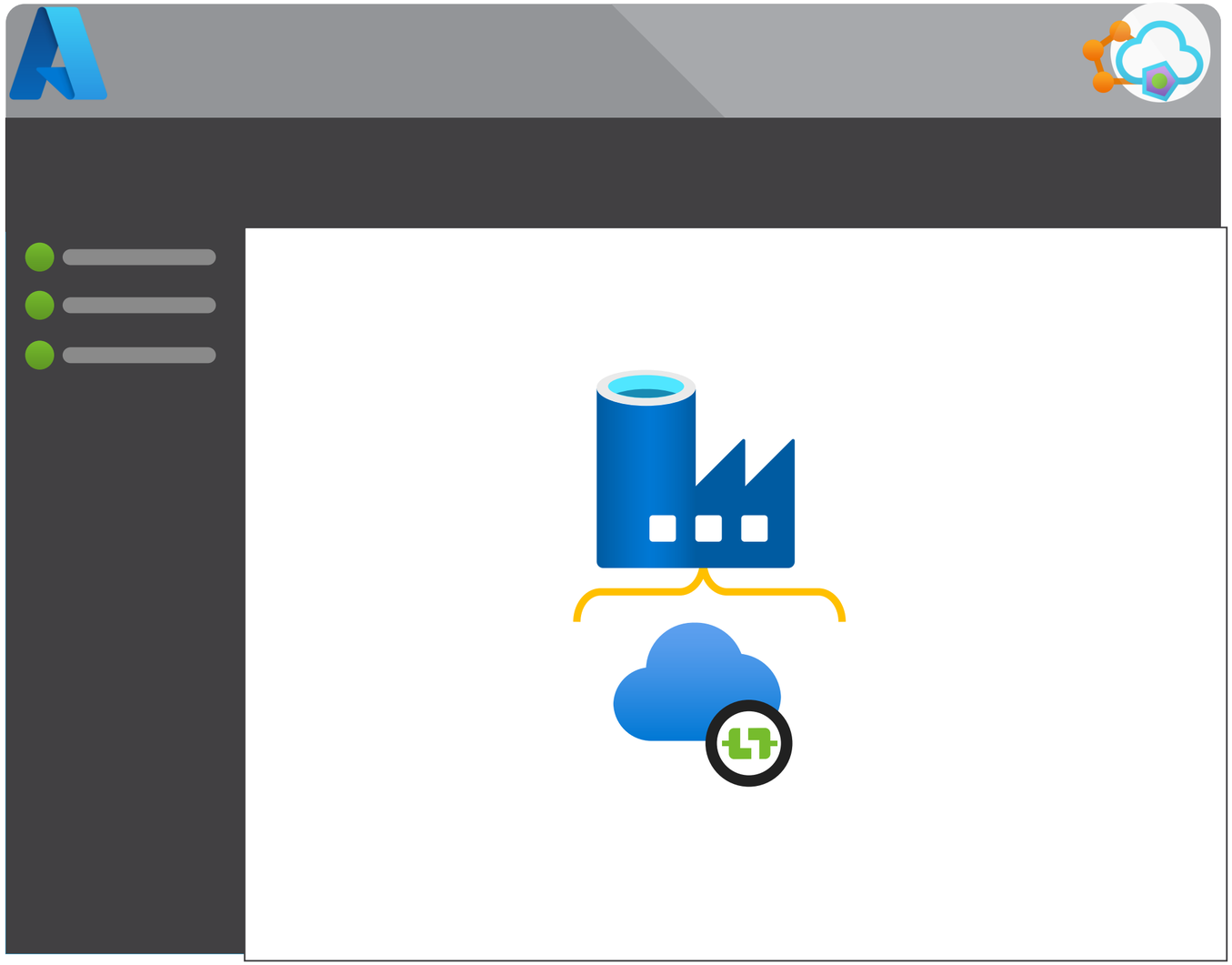


What can an Integration Runtime do?



Module 2

Integration Runtime Design Patterns



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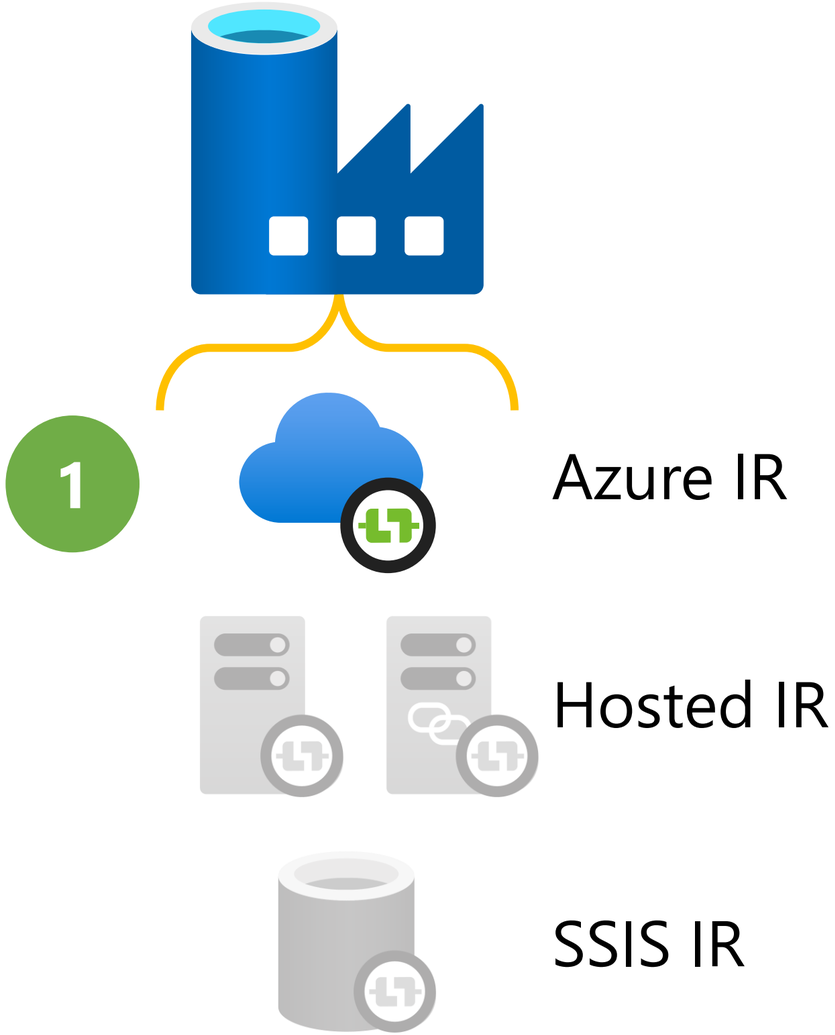
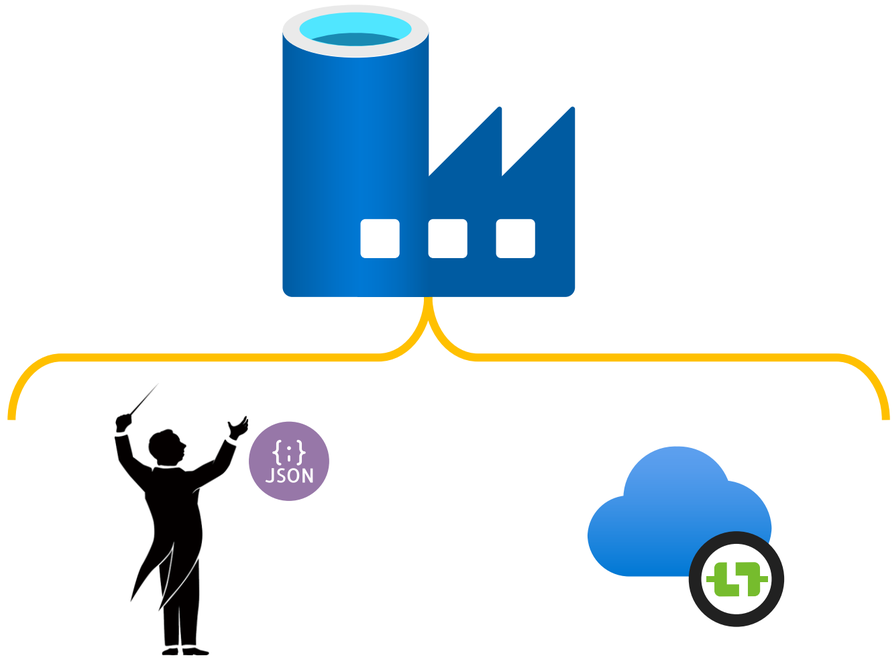


What is an Integration Runtime?



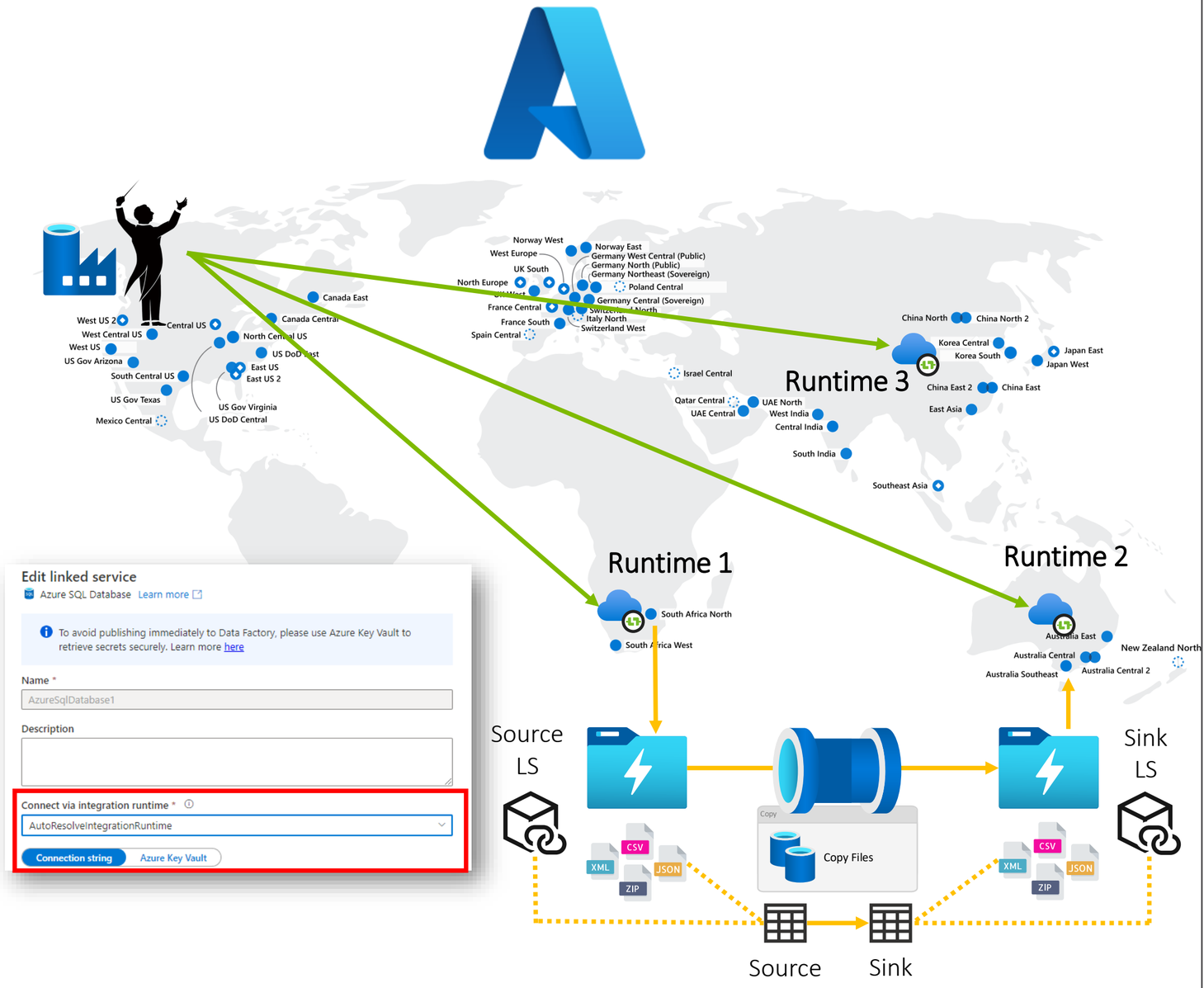
Orchestrator

Fixed Region

Runtime

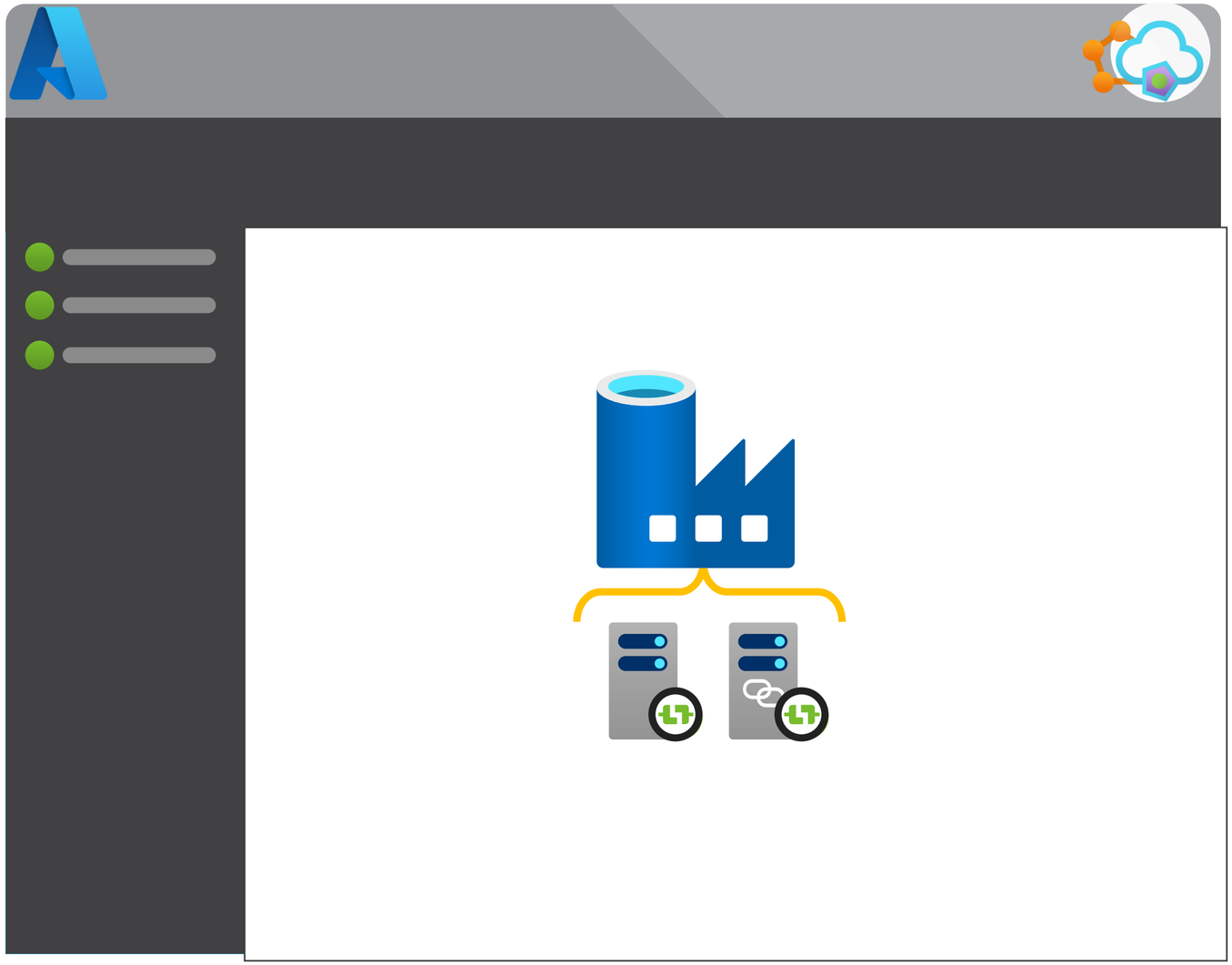
Flexible Region

AutoResolveIntegrationRuntime



Module 2

Integration Runtime Design Patterns



- Compute Types
  - Azure
  - Hosted
  - SSIS
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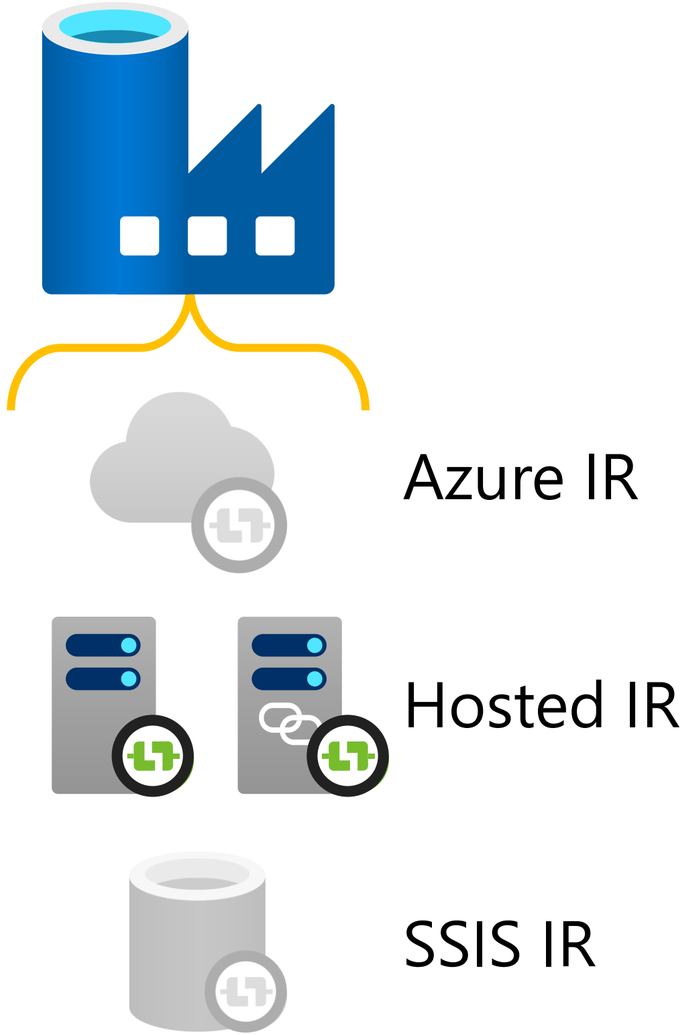
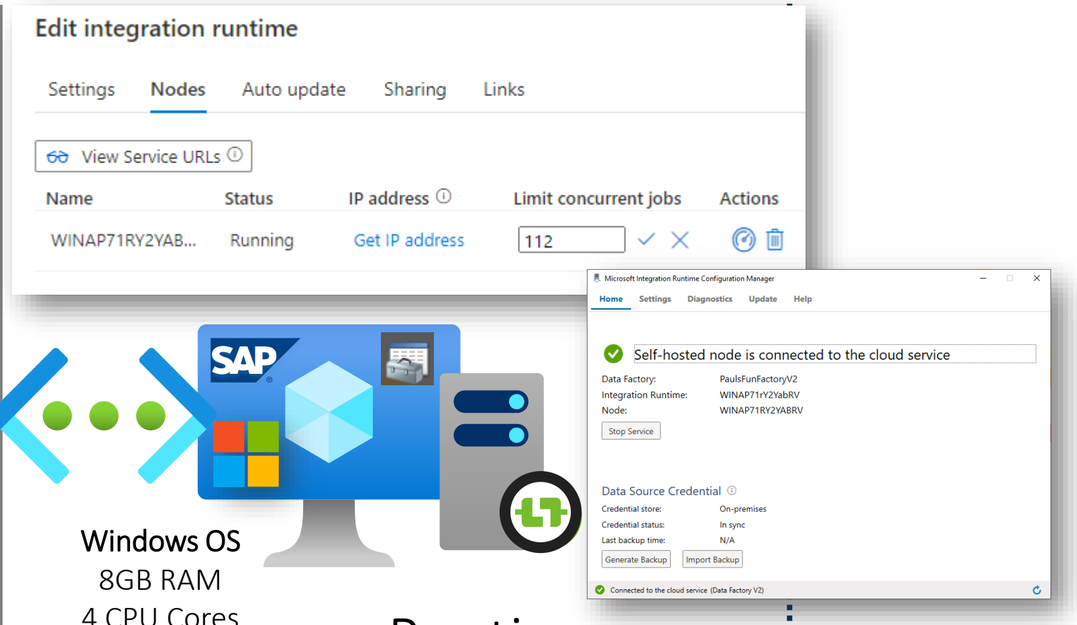
What can an Integration Runtime do?



Hosted Integration Runtime

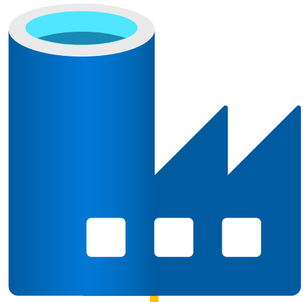
Windows OS
32GB RAM
6 CPU Cores
(12 Logical Cores)
80GB Storage

Data Sources



Windows OS
8GB RAM
4 CPU Cores
80GB Storage

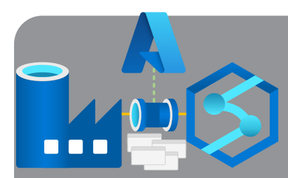
Runtime
Self Hosted

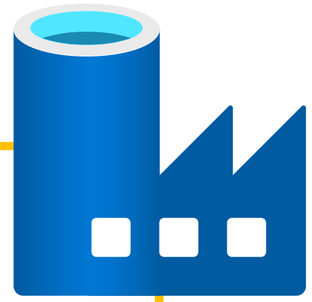


Orchestrator
Fixed Region

Runtime
Flexible Region

Hosted Integration Runtime





SAP

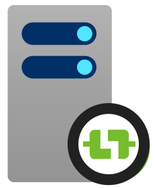
CSV

XML

JSON

ZIP

Microsoft SQL Server



Runtime

Self Hosted

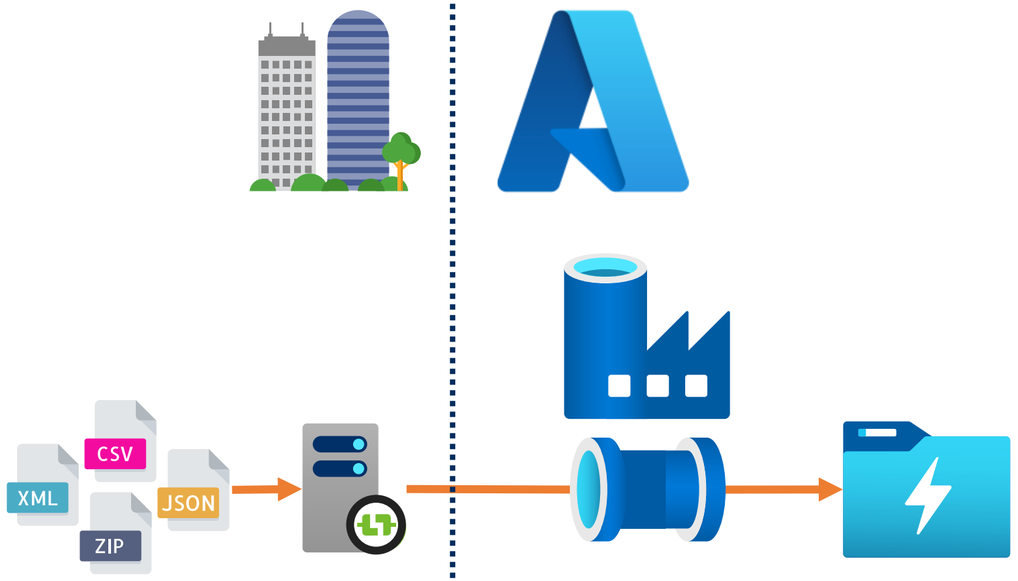
Orchestrator

Fixed Region

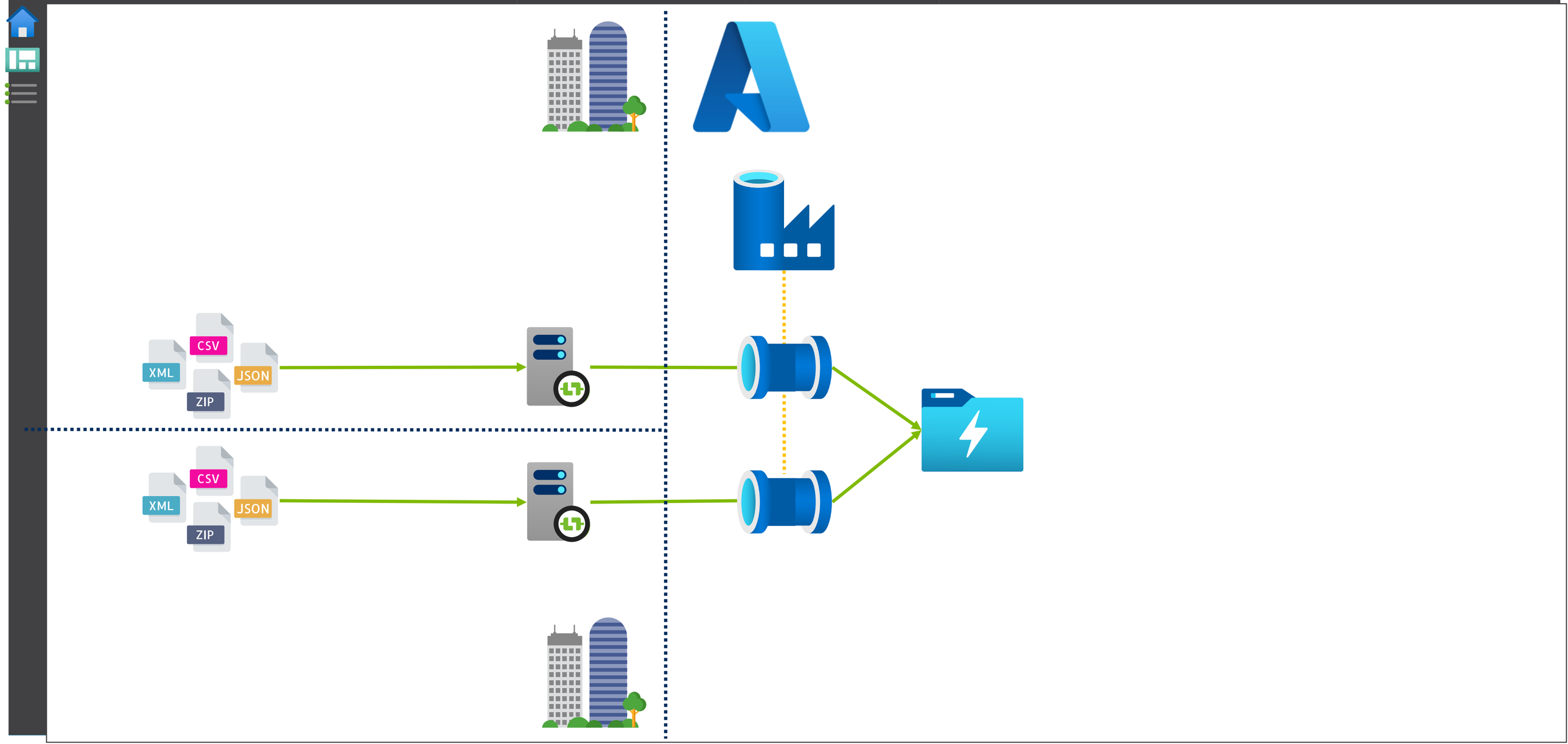
Runtime

Flexible Region

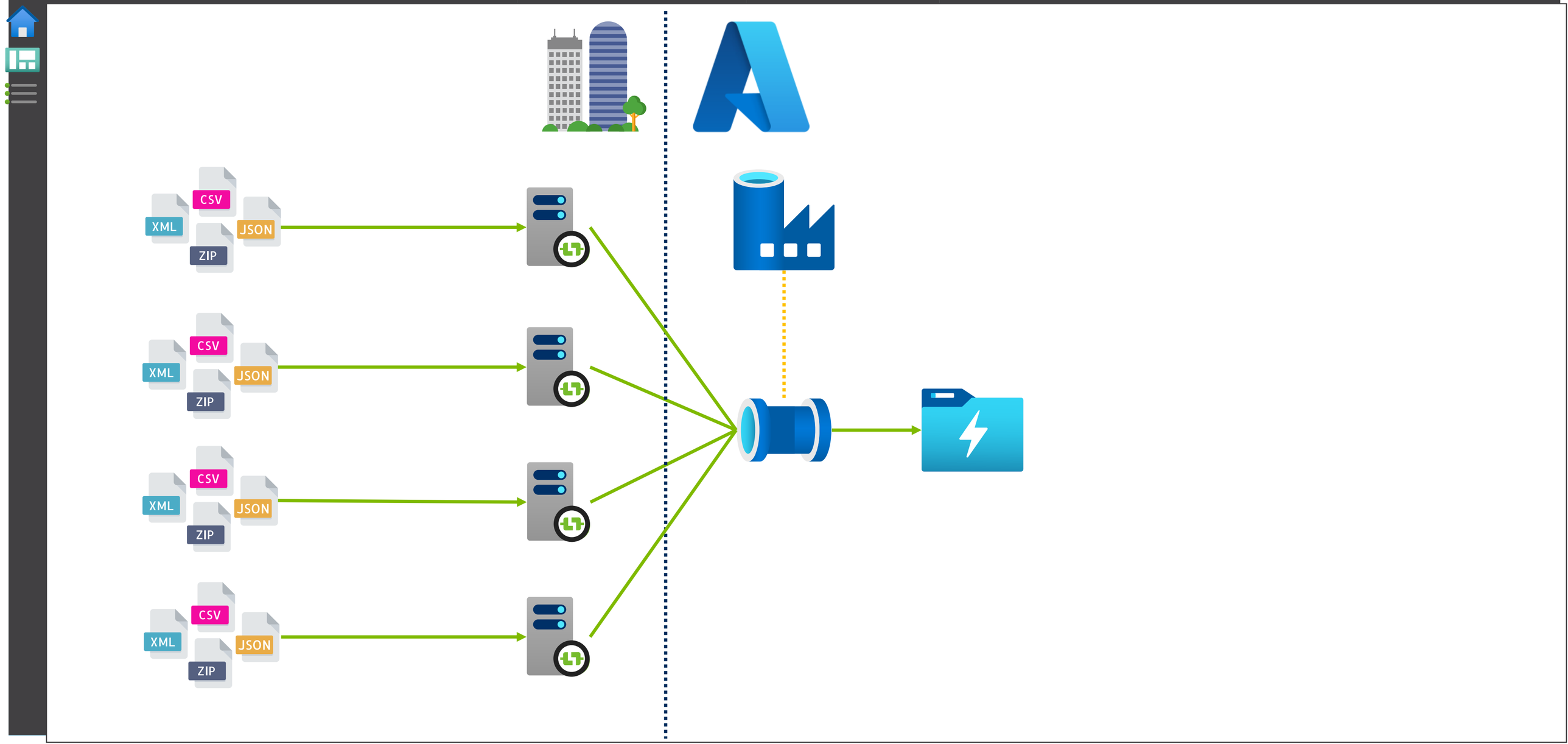
Single Hosted IR



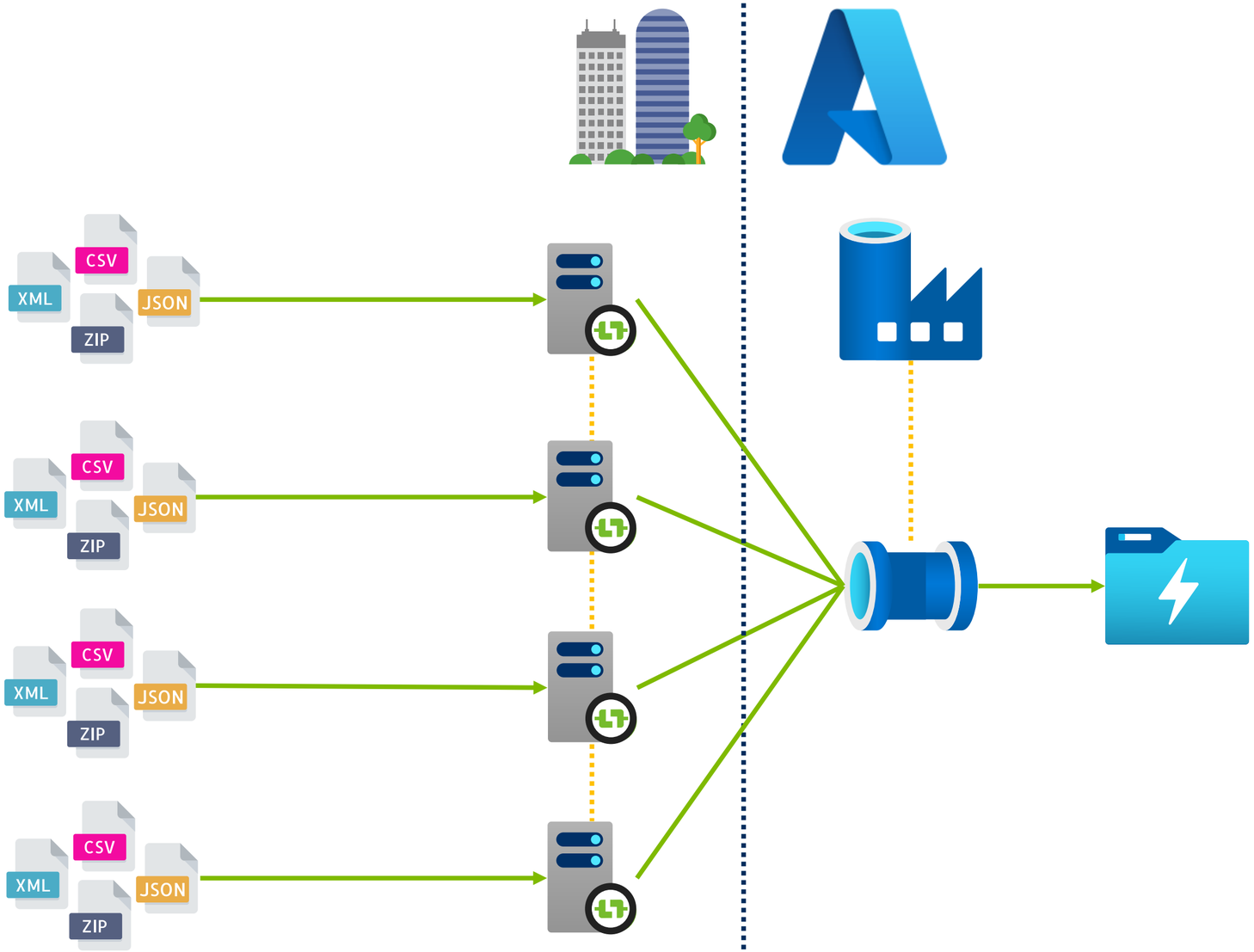
Multiple Hosted IR's at Different Sites



Multiple Hosted IR's as Separate Endpoints

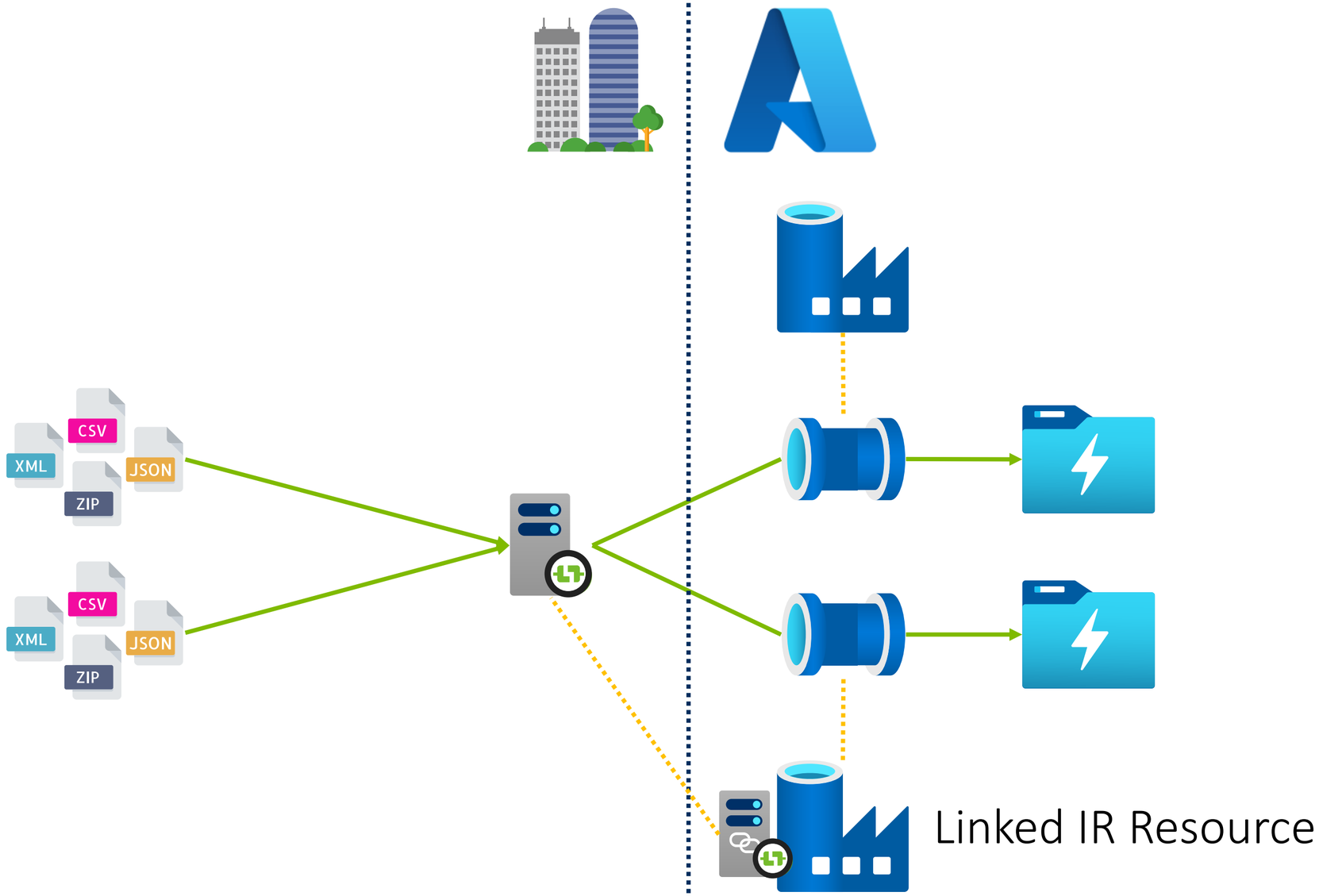


Single Hosted IR with Multiple Nodes

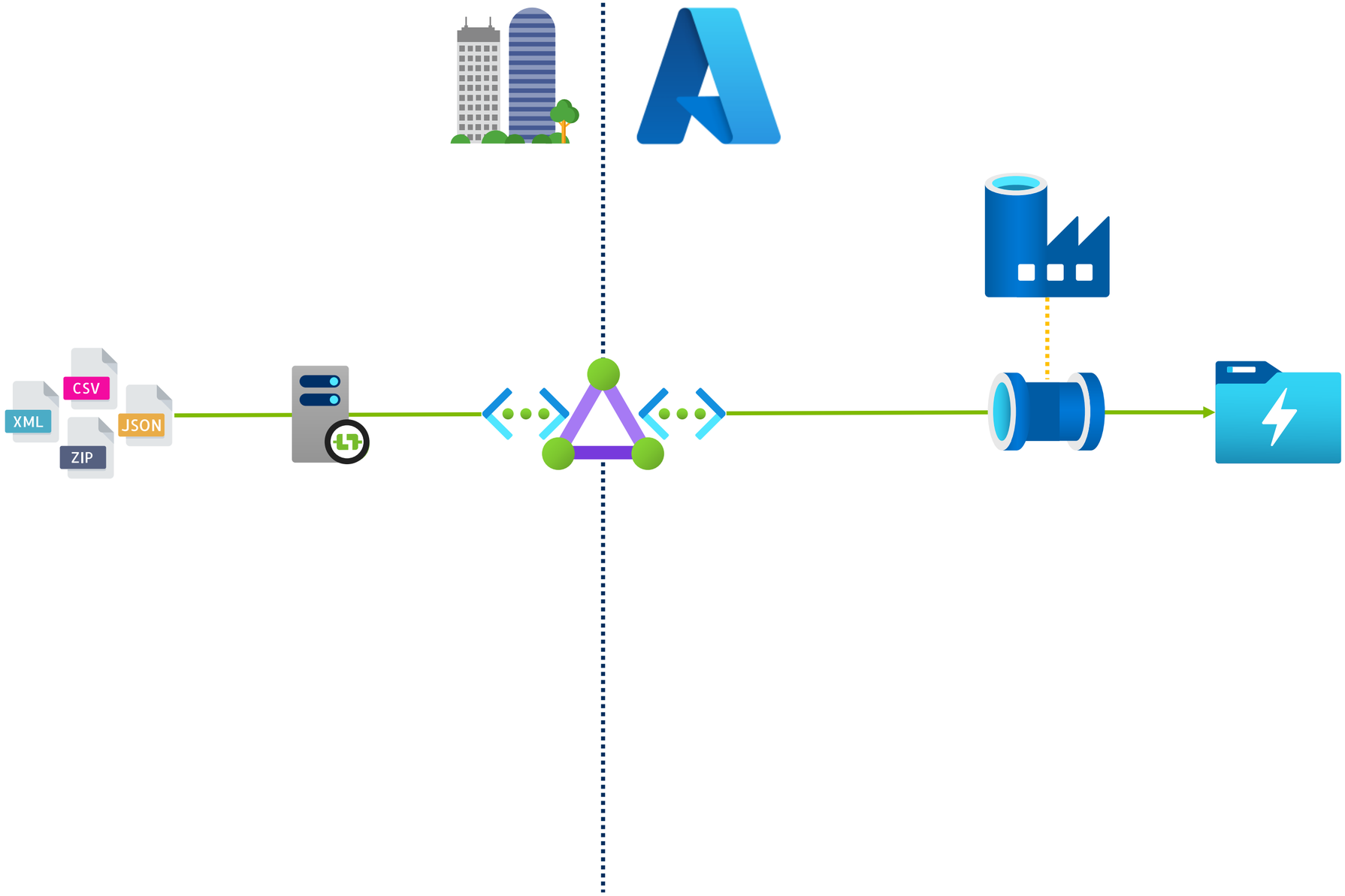


* Max of 4 Nodes per IR Endpoint

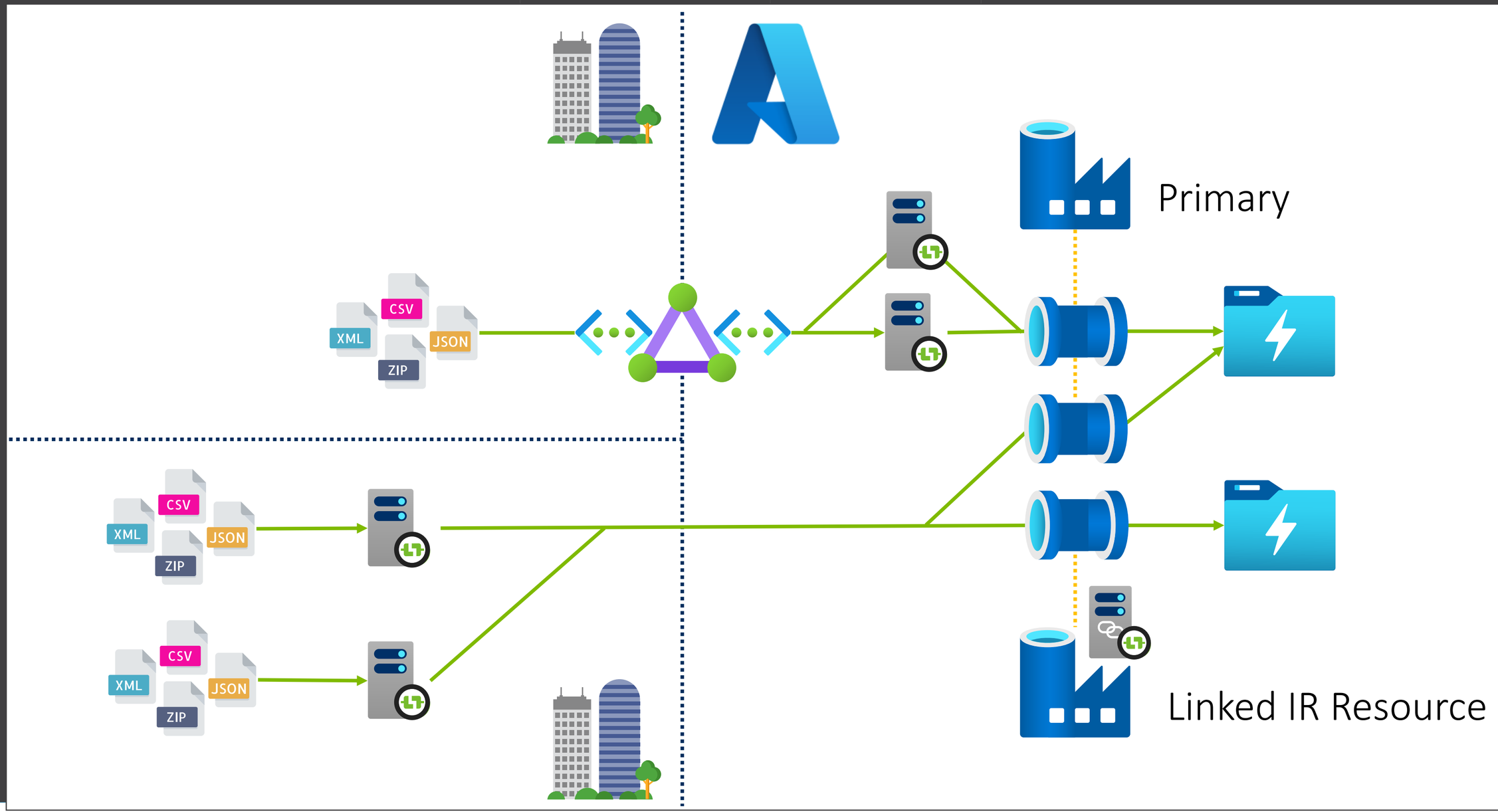
Single Hosted IR Linked to Multiple Data Factories



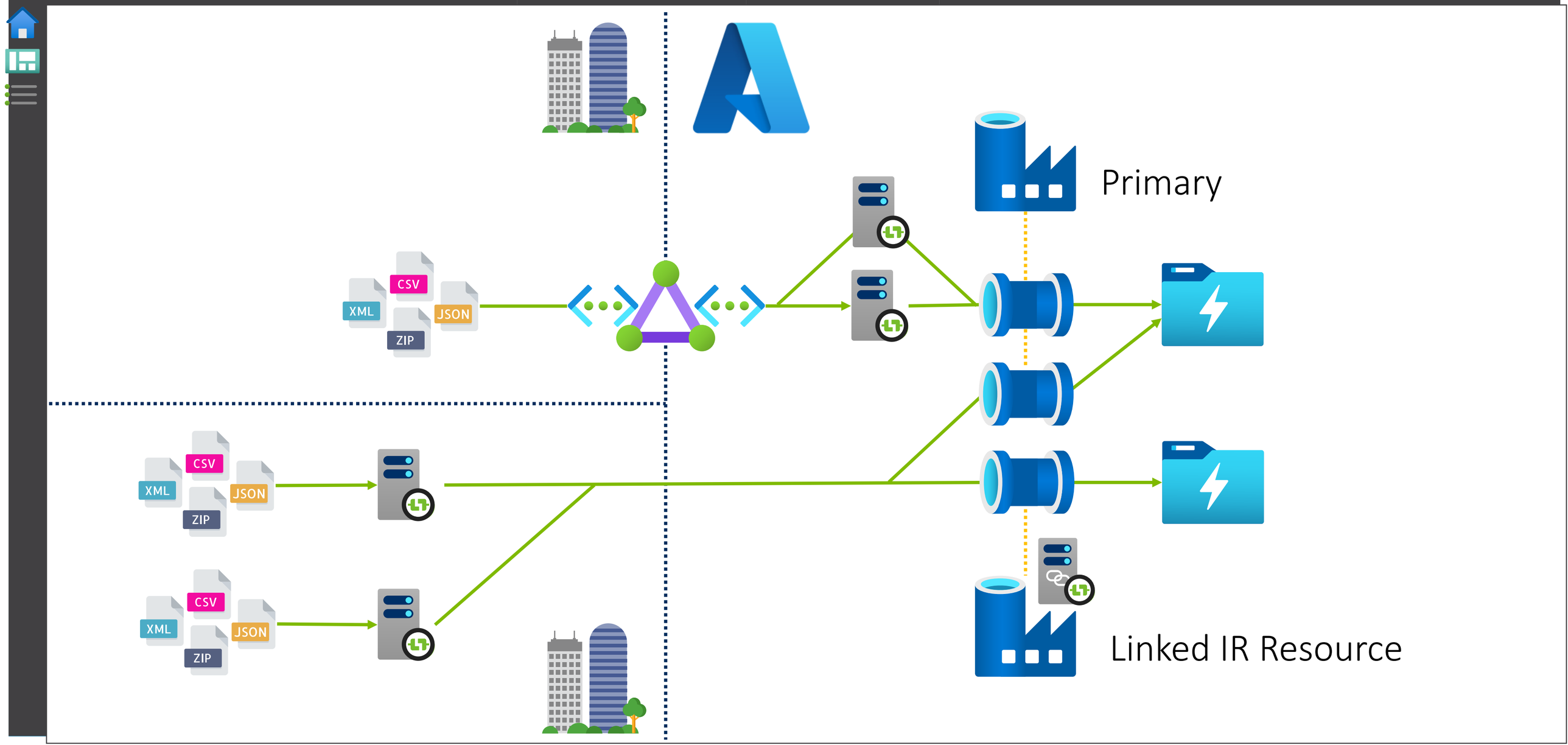
Hosted IR’s with Express Route Connections



Hosted IR Combinations



Horizontal vs Vertical Environment Processing



Hosted IR's vs Environments

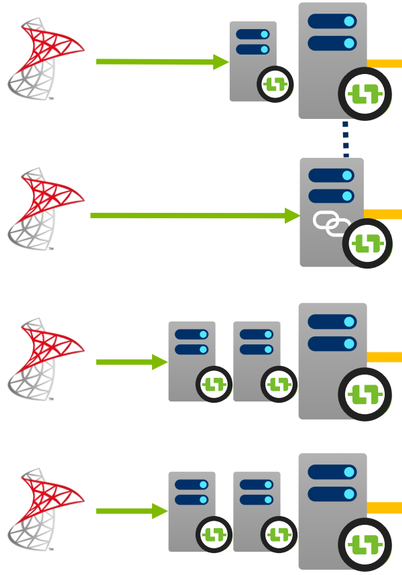
Dev

Test

PreProd

Prod

SQL Server Instances



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

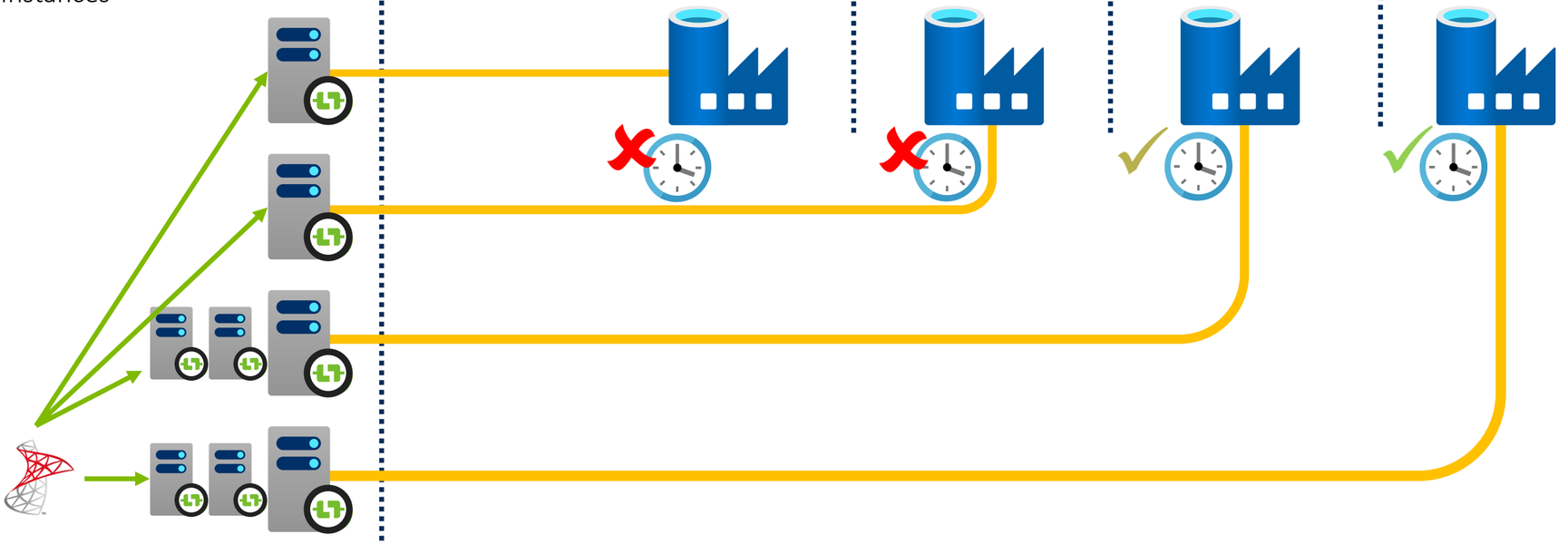
Dev

Test

PreProd

Prod

SQL Server Instances



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Hosted IR's vs Environments

Dev

Test

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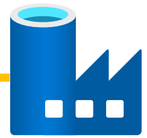
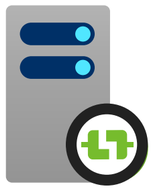
SQL Server Instances



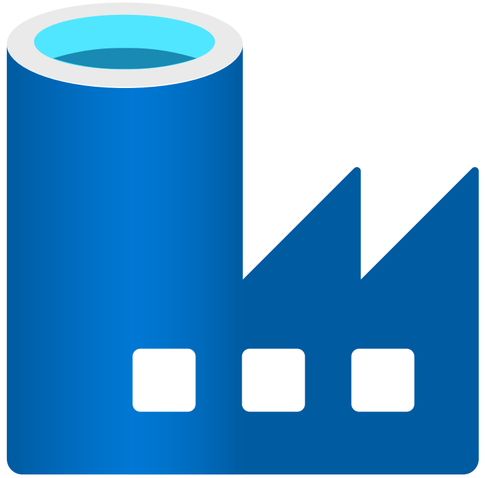
Common

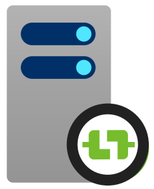
Orchestration vs Compute



Hosted IR

SSIS IR (Preview)



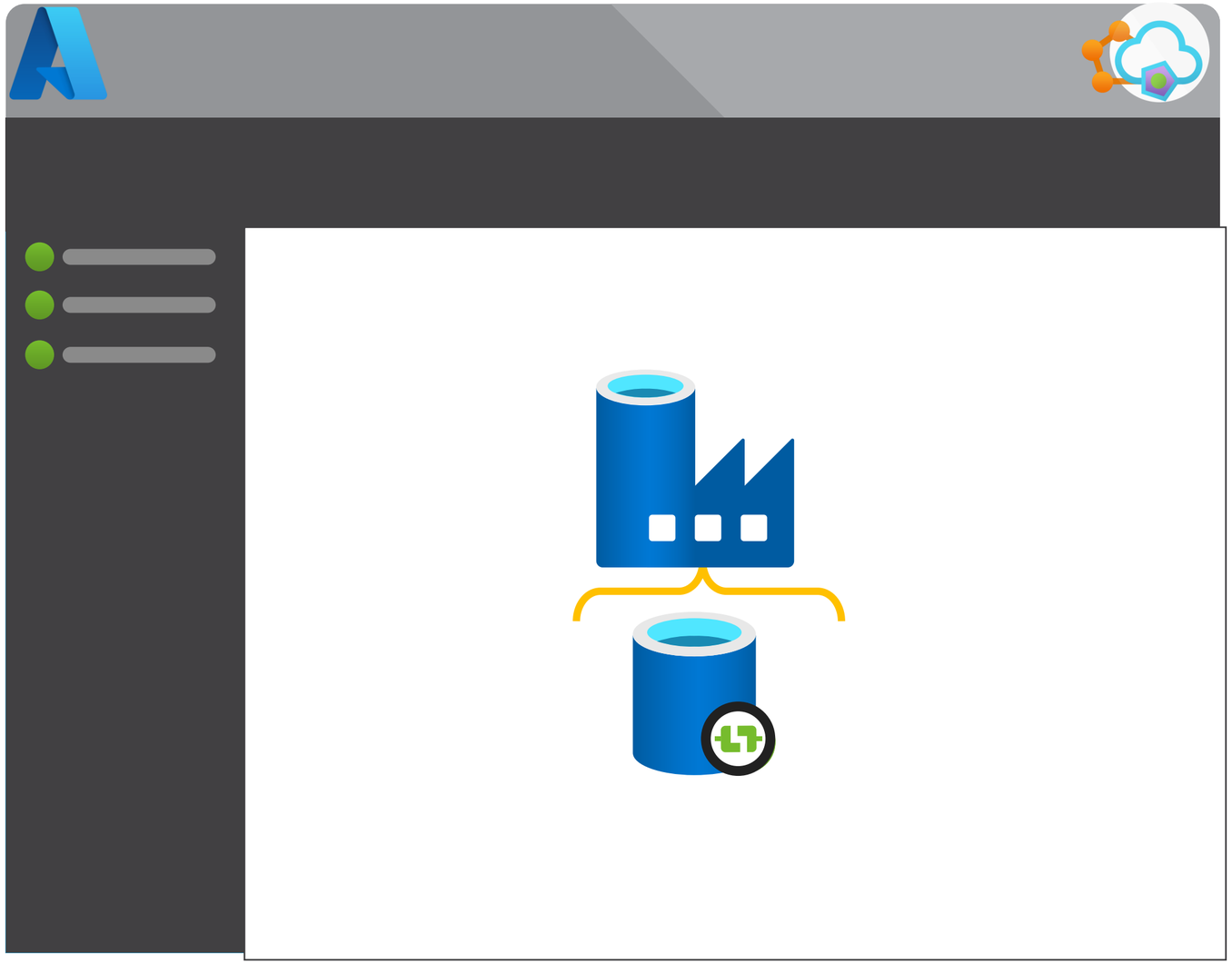


Hosted IR

SSIS IR

Module 2

Integration Runtime Design Patterns



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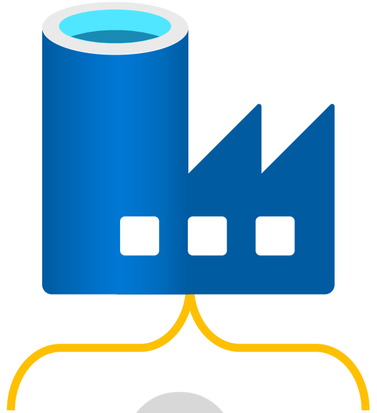
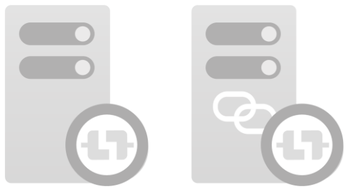


Azure IR



Hosted IR

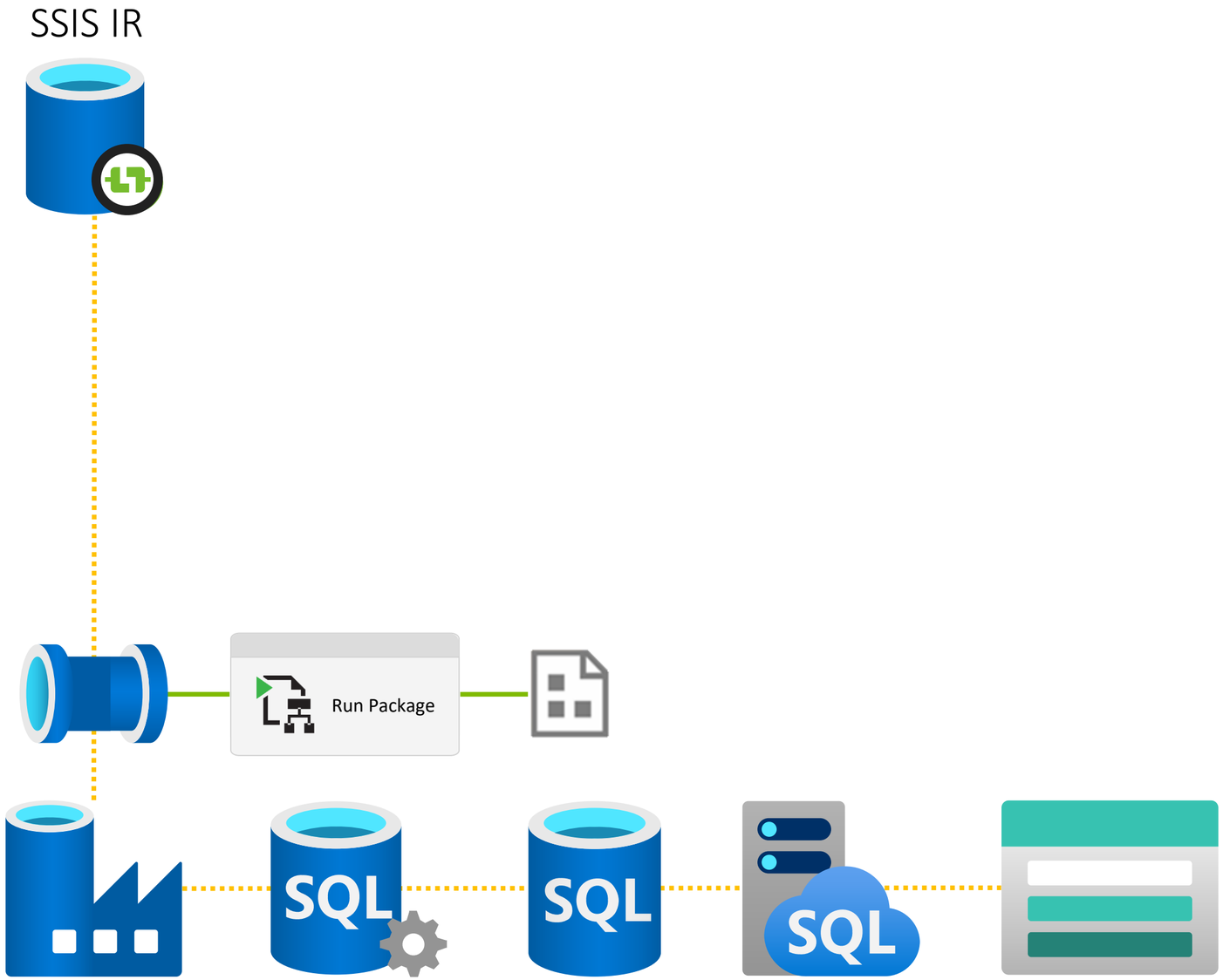
3

SSIS IR

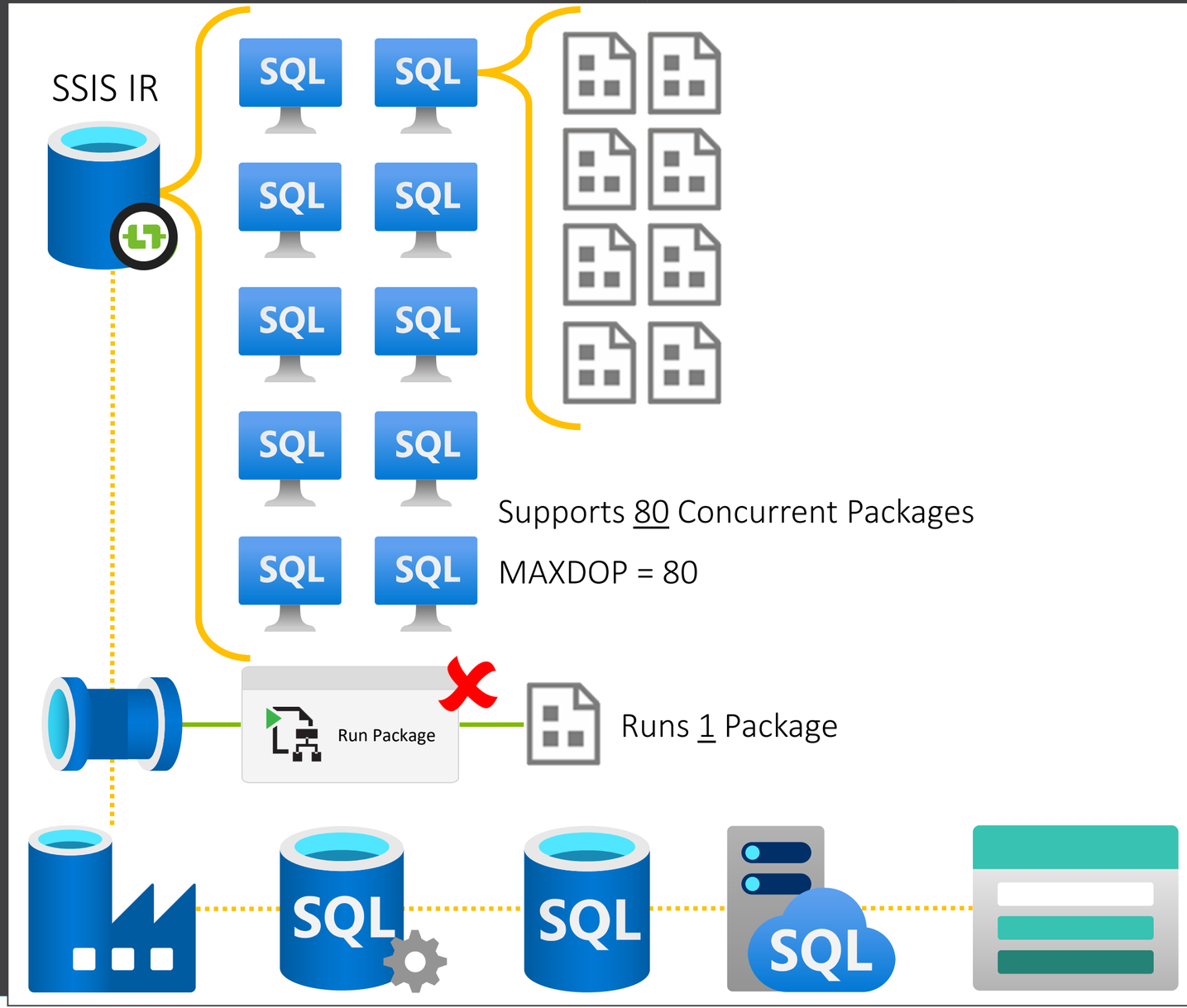
Running an SSIS Package in Azure

SSIS IR

Running an SSIS Package in Azure

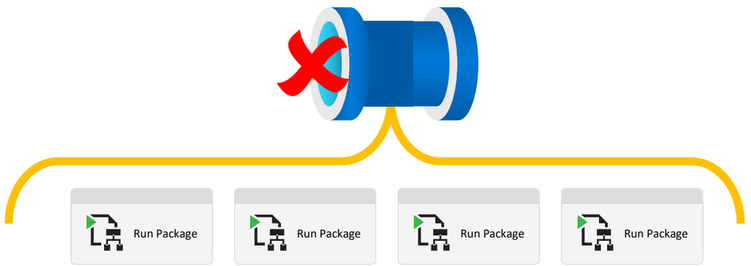


Problem: Using All Of The SSIS IR Compute



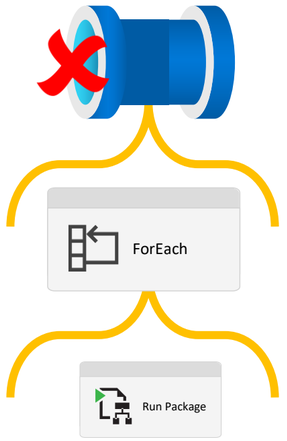
Parent Package

Child Packages x80



Pipeline x1

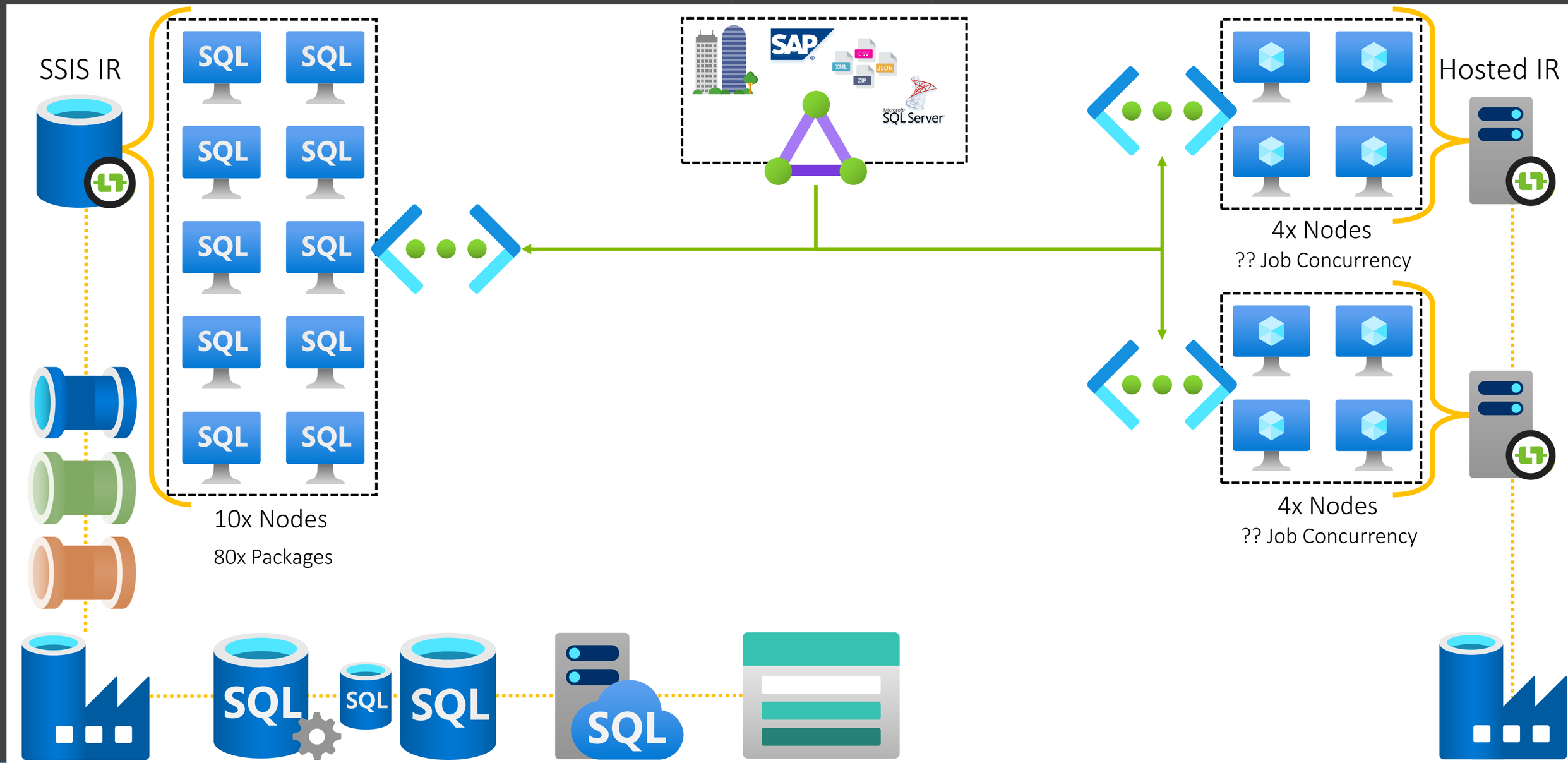
Activities x80



Pipeline x1

ForEach
Max Batch
(50)

What are the advantages of using this pattern?



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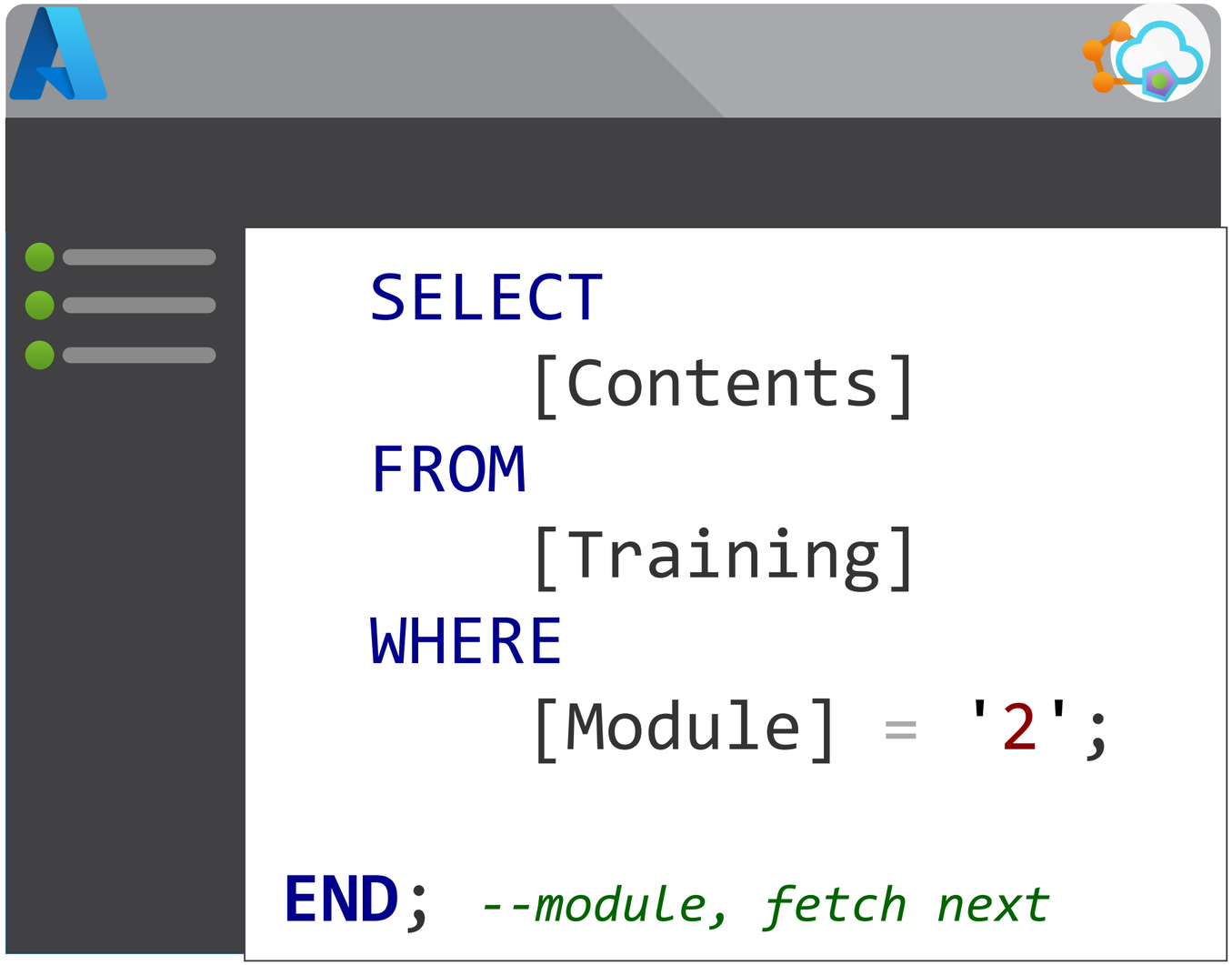

```
    SELECT
        [Contents]
    FROM
        [Training]
    WHERE
        [Module] = '2';

END; --module, fetch next
```

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