Enterprise Integration using Azure Serverless

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Principal cloud architect
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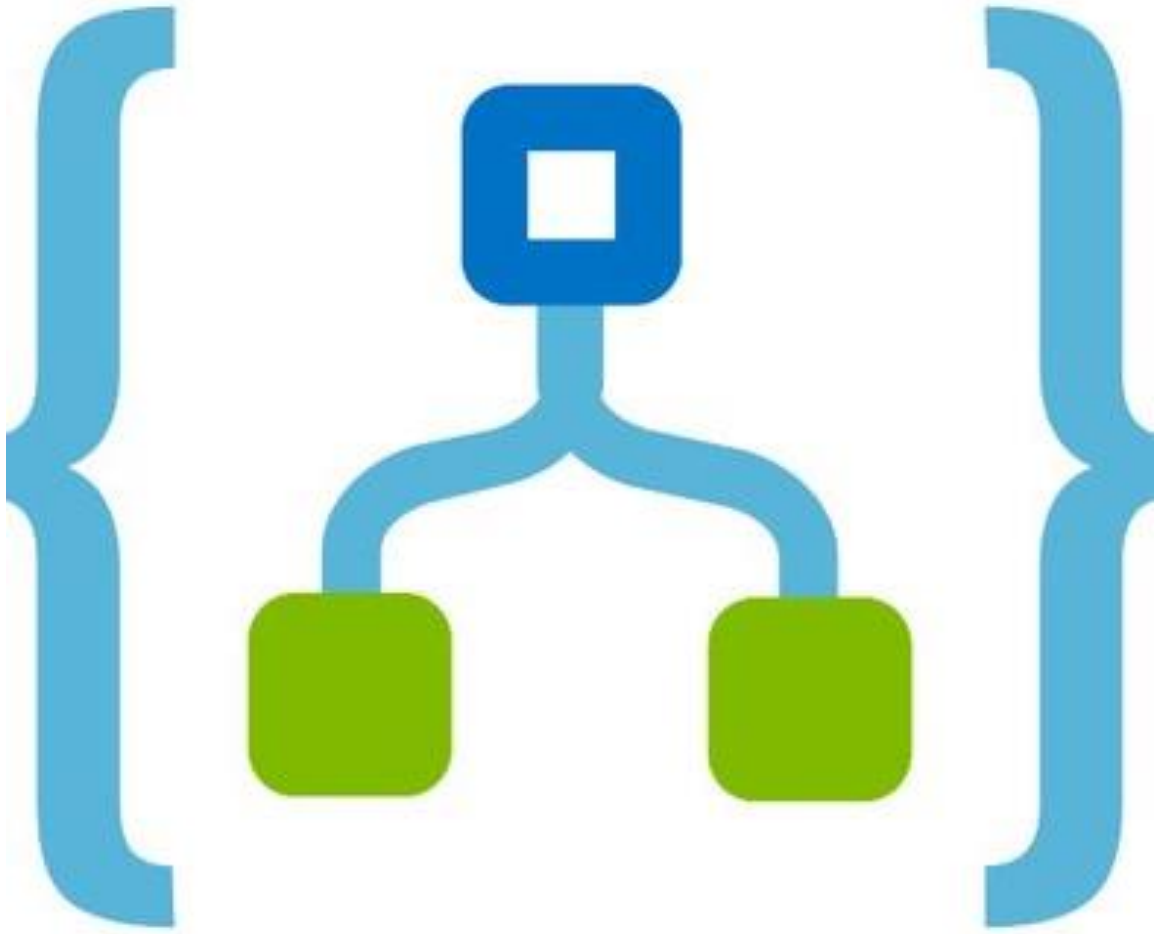
Enterprise integration challenge

- Workflow capabilities to integrate process with few code effort
- Data mapping capability
- Connect heterogenous environments & systems
- Cross system monitoring and logging
- Source control, deployment pipeline, DEVOPS practices in general

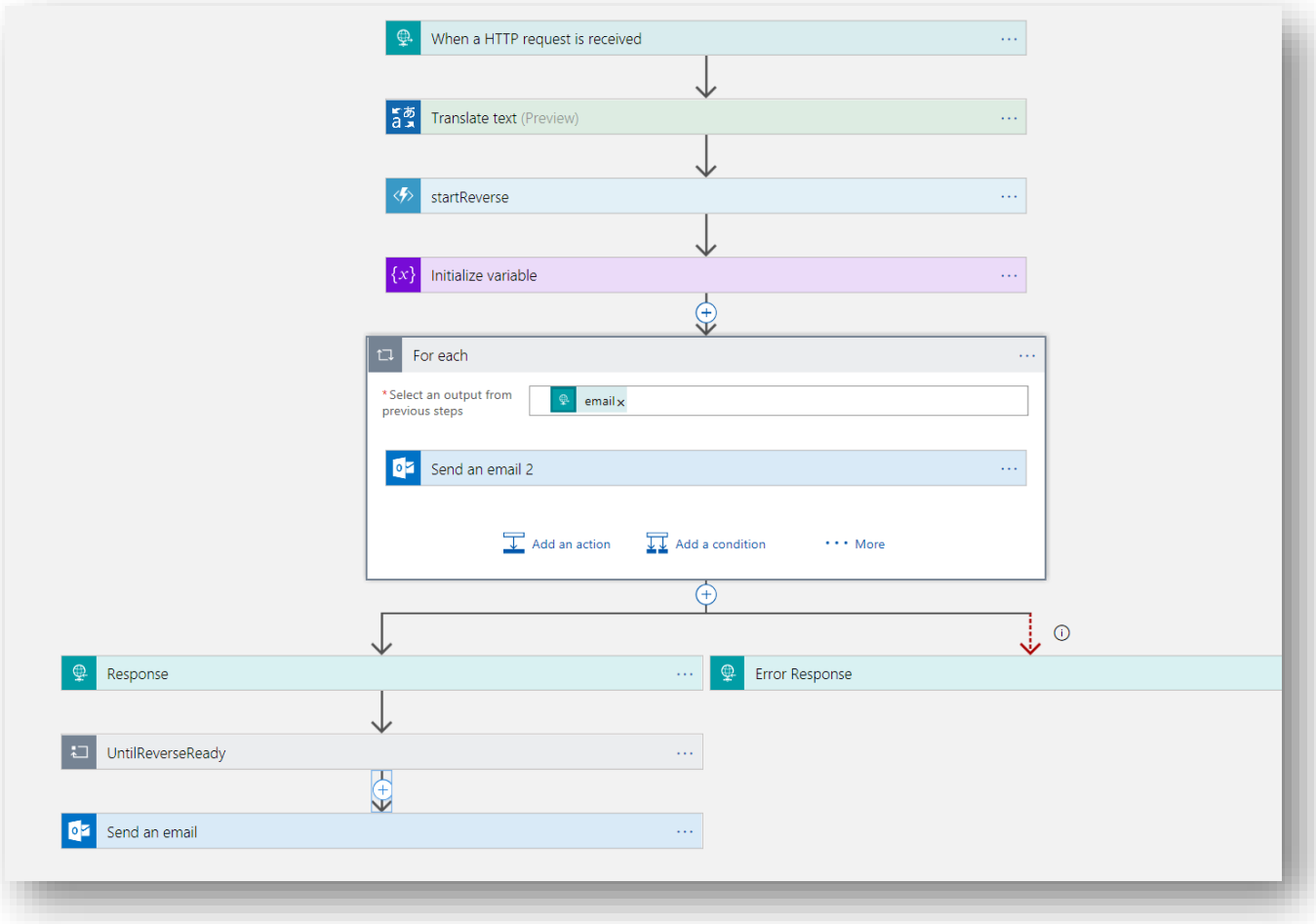
- Support hybrid environments native cloud and on-premise
- Isolate execution environment

Introduction to Logic App

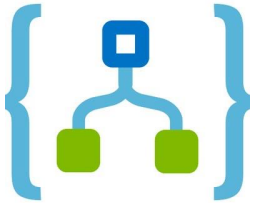


Logic Apps

- Workflow in the cloud
- Powerful control flow
- Connect disparate applications
- No code designer for rapid creation
- Also works within Visual Studio for added CI/CD



Logic Apps



- **Workflow** - Logic Apps provides a graphical way to model your business processes as a series of steps or a workflow.

- **Managed Connectors** - Your logic apps need access to data and services. Managed connectors are created specifically to aid you when you are connecting to and working with your data. See the list of connectors available now in managed connectors.

- **Triggers** - Some Managed Connectors can also act as a trigger. A trigger starts a new instance of a workflow based on a specific event, like the arrival of an e-mail or a change in your Azure Storage account.

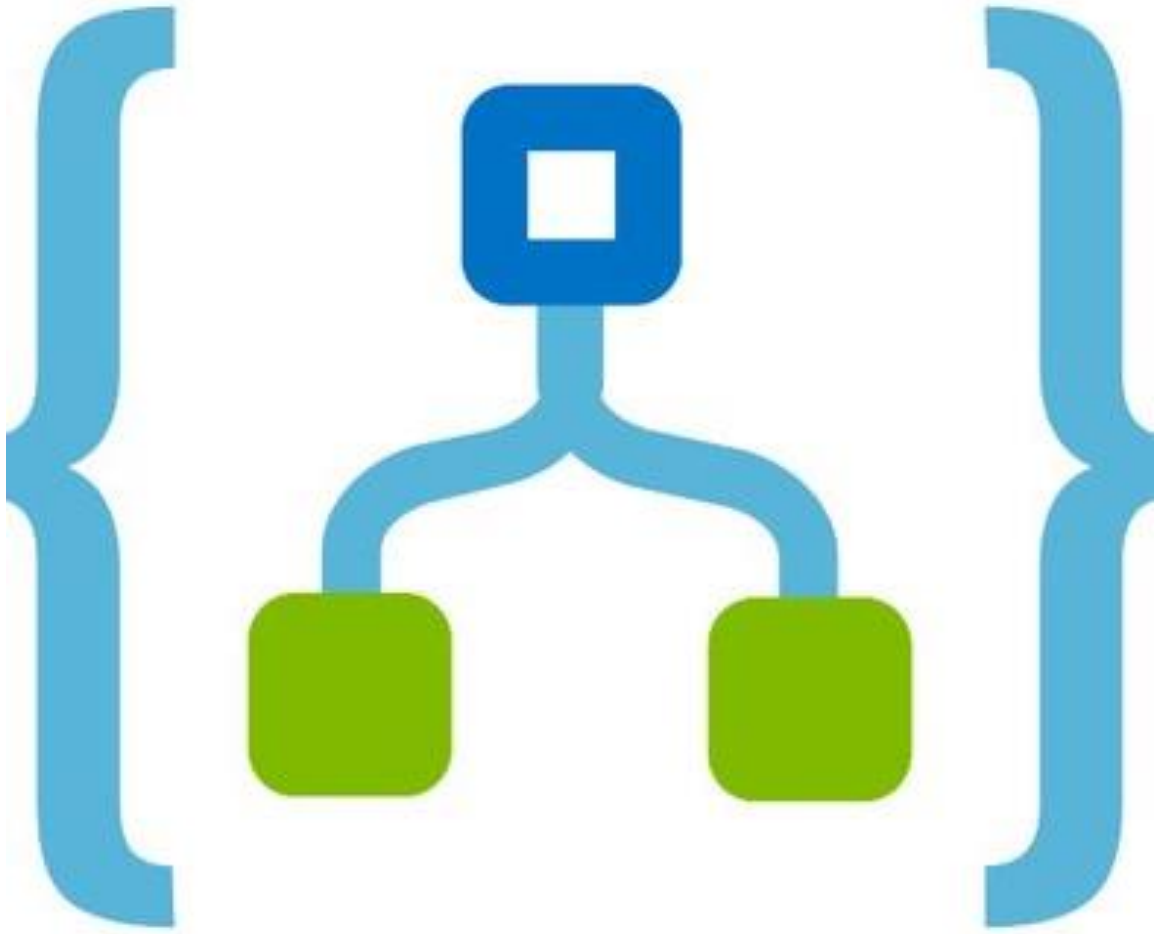
- **Actions** - Each step after the trigger in a workflow is called an action. Each action typically maps to an operation on your managed connector or custom API apps.

- **Enterprise Integration Pack** - For B2B integration scenarios, Logic Apps includes capabilities from BizTalk. The Enterprise Integration Pack connectors allow you to easily include validation, transformation, and more in to your Logic App workflows. Ex: EDI - Electronic Data Interchange or EAI - Enterprise Application Integration

DEMO

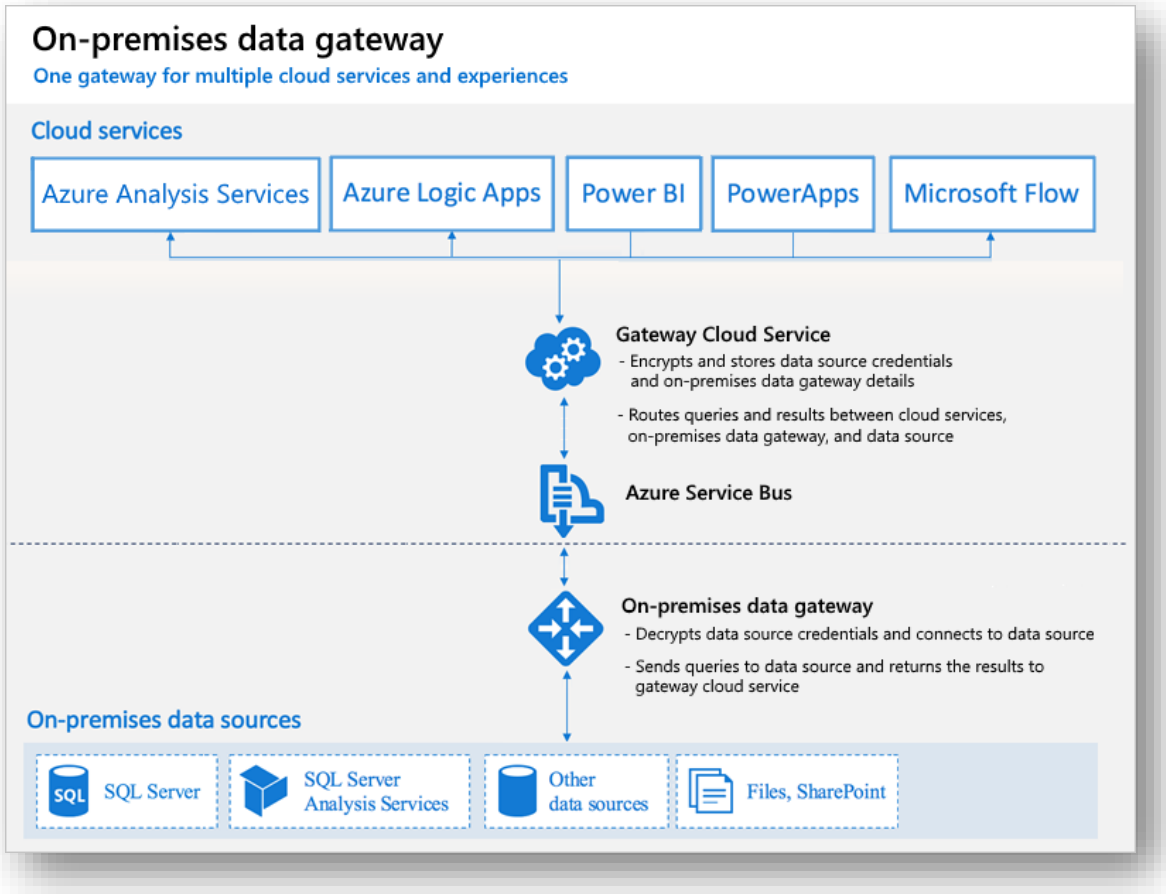
Logic App basics

On-premise data access



Logic Apps on-premises data gateway

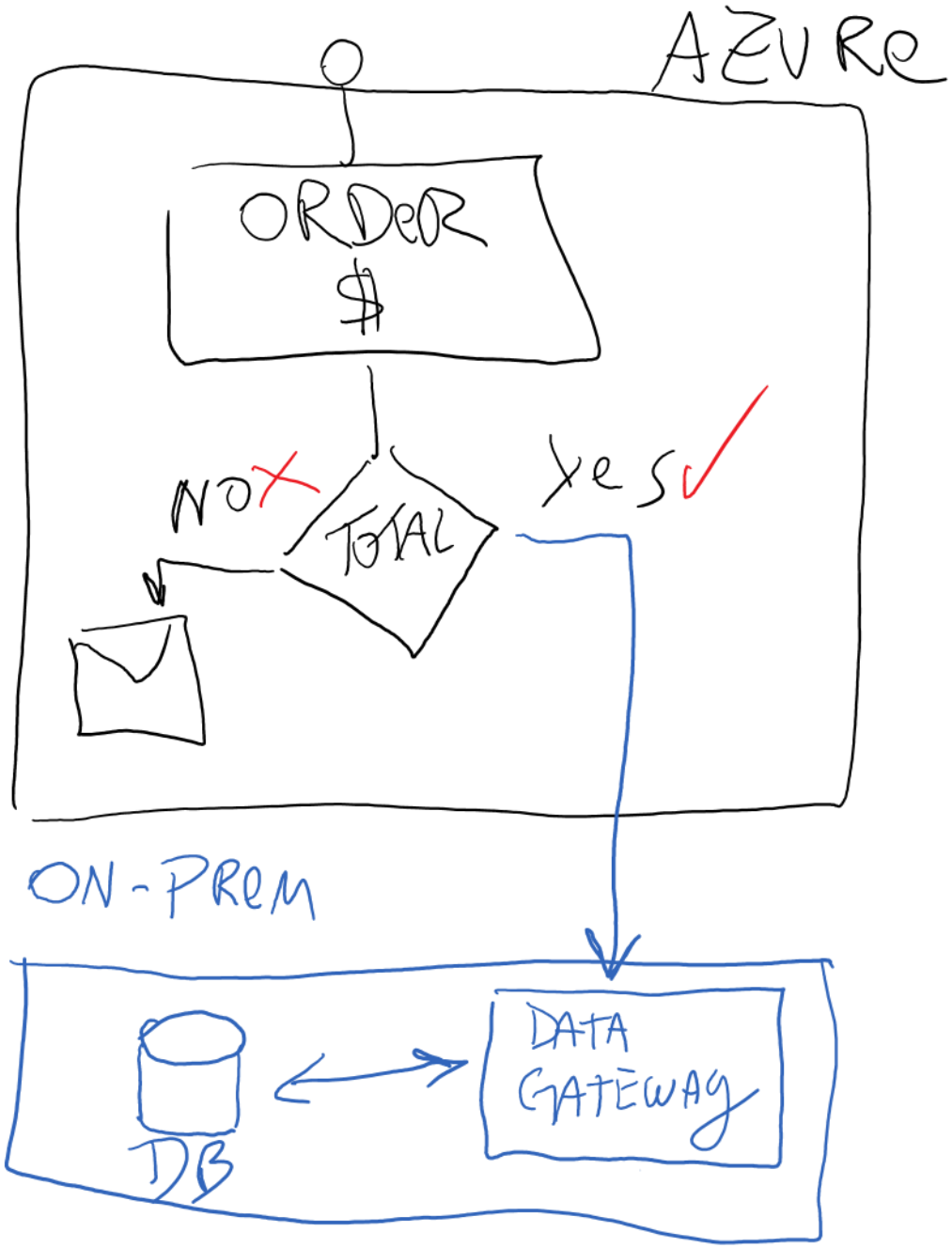
- Secure communication between your logic app, the gateway cloud service, and your on-premises data source
- Gateway cloud service encrypts and stores your data source credentials and gateway details
- Routes queries and their results between your logic app, the on-premises data gateway, and your data source on premises
- Uses only outbound connections
- Doesn't store any data. All data that travels through the gateway is encrypted



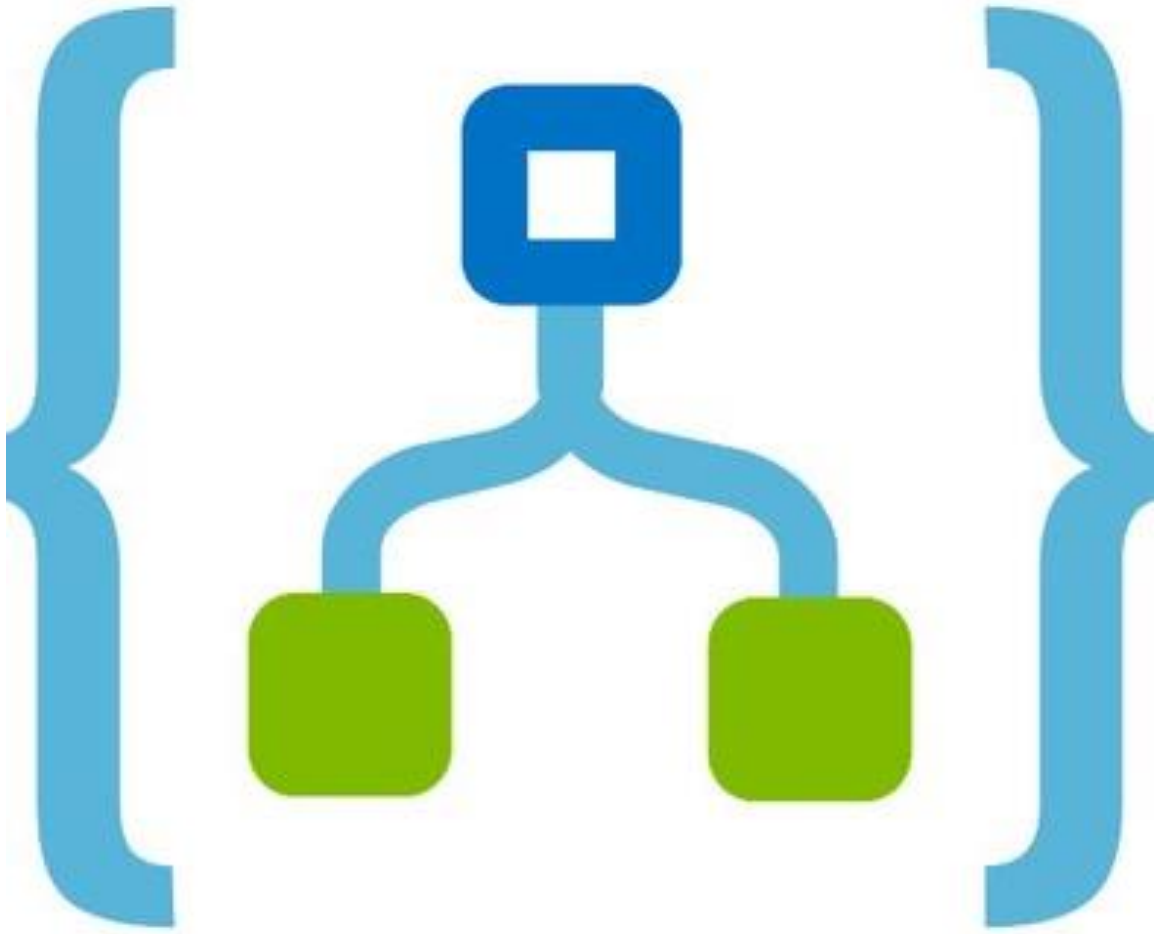
DEMO

on-premises data gateway

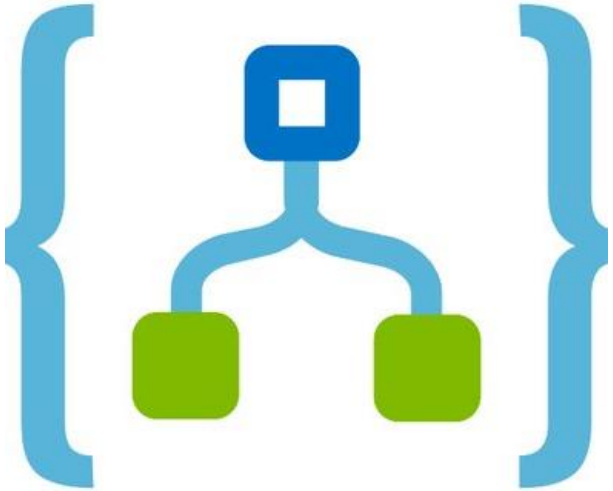
for Azure Logic Apps



Azure Integration Service Environment

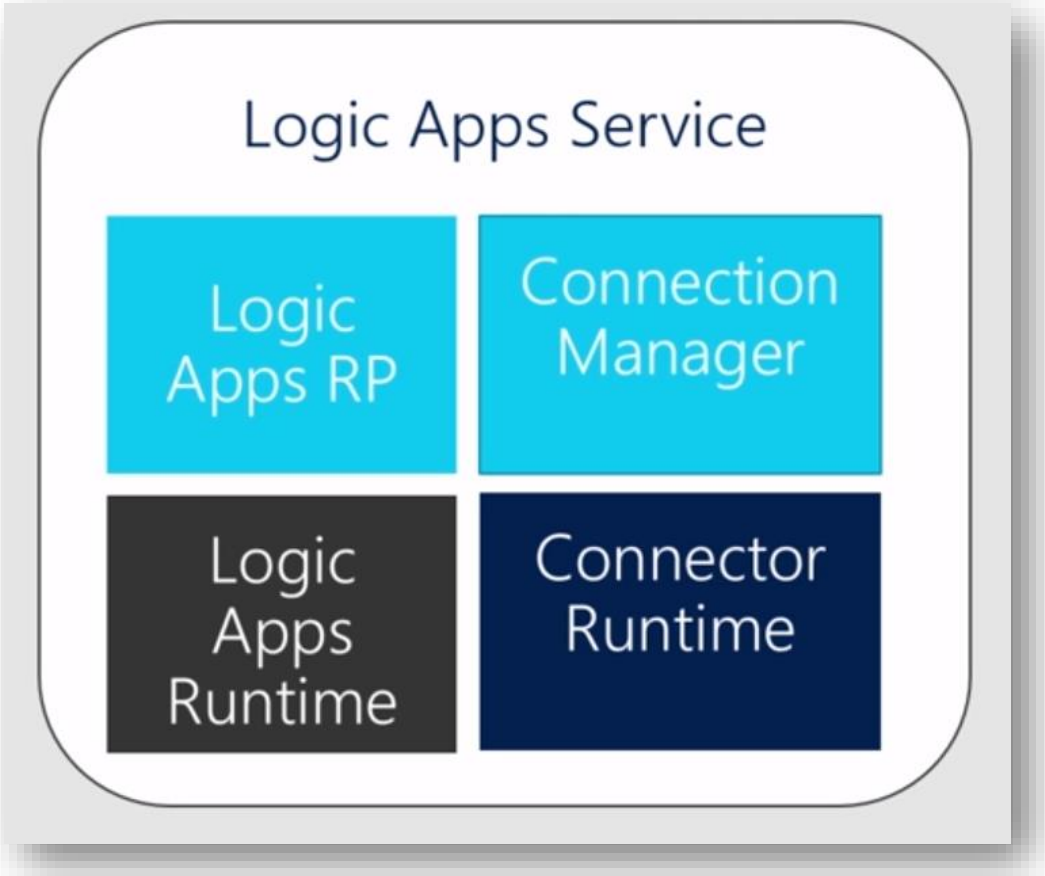


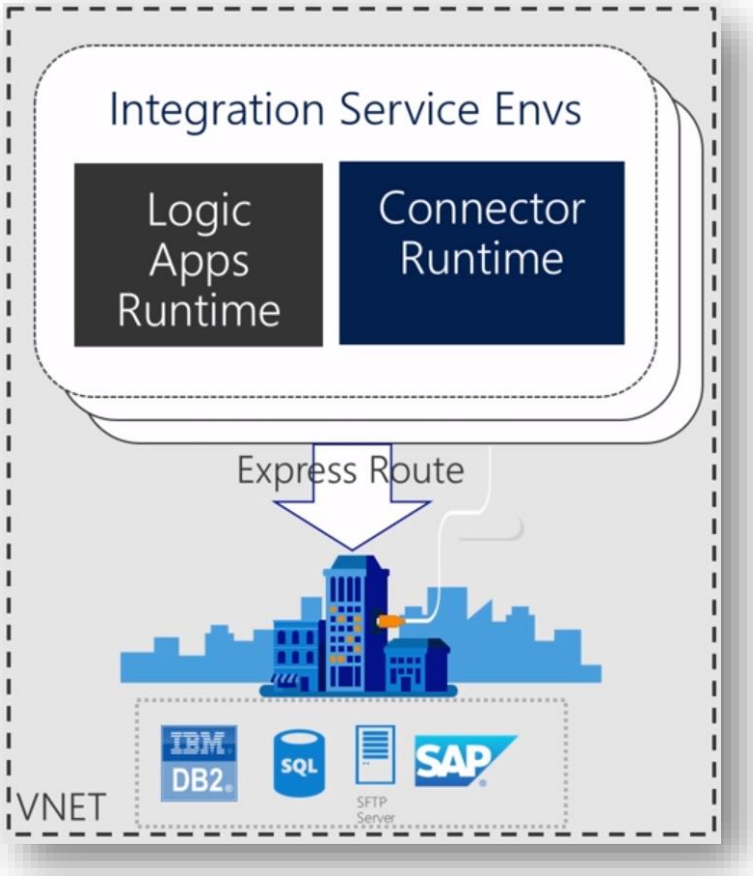
Integration Services Environments



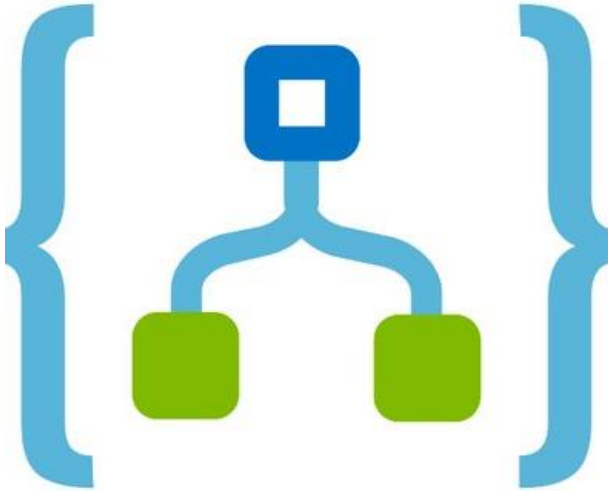
- Dedicated compute
- Isolated storage
- Flat Cost
- Private static outbound IPs
- Custom inbound domain names
- VNET connectivity
- On-premises integration via an ExpressRoute.

Integration Services Environments





ISE Deployment Model



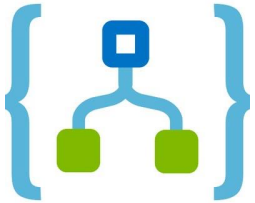
- Base Unit
  - ~75 M action execution / month
  - 1 Standard integration account
  - 1 enterprise connector
    - Includes unlimited connections
  - VNET connectivity
- Each additional processing units:
  - Additional ~50M executions/Months

DEMO

integration service environment (ISE)

for Azure Logic Apps

References



- Sample code

https://github.com/liarjo/LogicApps-MIT-demo

- Azure Logic Apps Documentation

https://docs.microsoft.com/en-us/azure/logic-apps/

- Access to Azure Virtual Network resources from Azure Logic Apps by using integration service environments (ISEs)

https://docs.microsoft.com/en-us/azure/logic-apps/connect-virtual-network-vnet-isolated-environment-overview

- Secure access in Azure Logic Apps

https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-securing-a-logic-app


Q&A

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Logic Apps Price & Limitations

Pricing details

Every time a Logic App definition runs the triggers, action and connector executions are metered.

	PRICE PER EXECUTION
Actions	$0.000025
Standard Connector	$0.000125
Enterprise Connector	$0.001

Data retention: $0.12 GB/month

Integration Service Environment PREVIEW

Fully isolated and dedicated environment for connecting securely to cloud and on-premises applications at high scale.

	PRICE PER HOUR
Base unit 1 Enterprise connector and 1 standard integration account included.	$3.33
Scale unit Increases base unit throughput with up to 3 additional scale units.	$1.67

Prices reflect 50% preview discount. For additional scale units, please contact azureipaas@microsoft.com.

https://azure.microsoft.com/en-us/pricing/details/logic-apps/

Run duration and retention

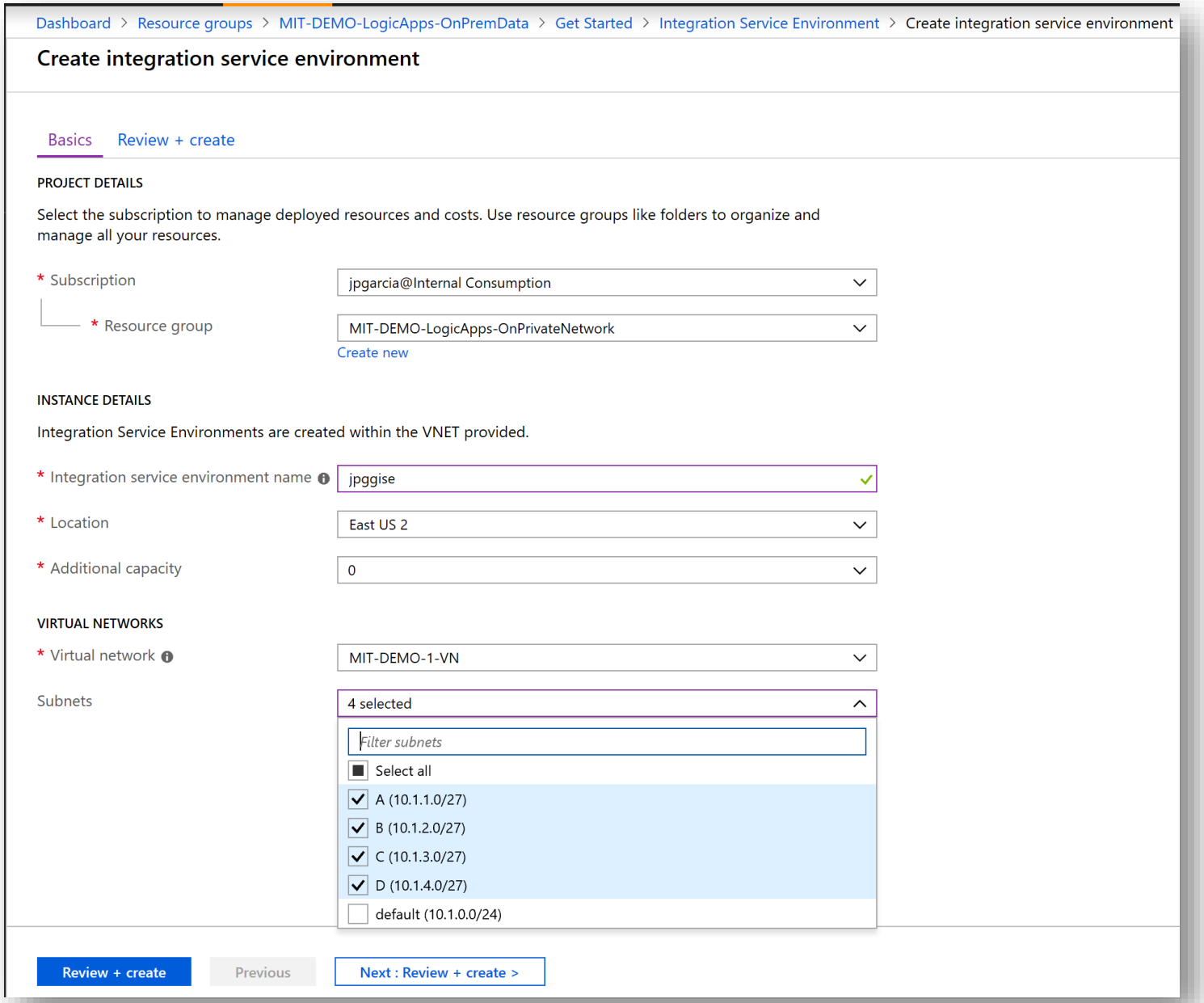
These limits apply to a single logic app run.

Name	Limit
Run duration	90 days
Storage retention	90 days from the run's start time
Min recurrence interval	1 second For logic apps with an App Service Plan: 15 seconds
Max recurrence interval	500 days

Integration service environment (ISE)

Name	Limit	Notes
Base unit execution limit	10,000 action executions per 5 minutes, which is ~80 million action executions per month	
Scale unit execution limit	5,000 action executions per 5 minutes, which is ~40 million action executions per month	
Maximum scale units that you can add	3	

https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-limits-and-config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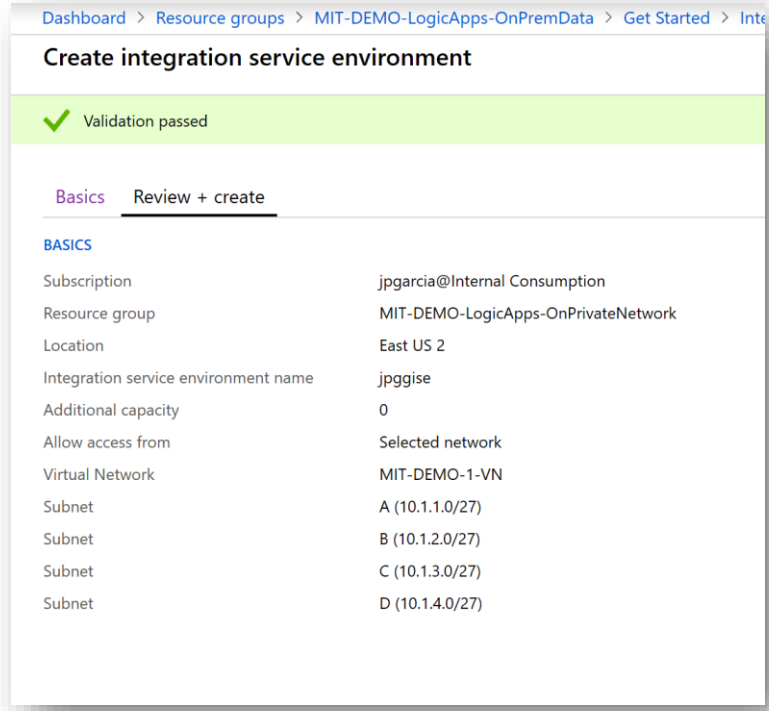
Create integration service environment
Basics
Review + create
PROJECT DETAILS
Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.
* Subscription
jpgarcia@Internal Consumption
* Resource group
MIT-DEMO-LogicApps-OnPrivateNetwork
Create new
INSTANCE DETAILS
Integration Service Environments are created within the VNET provided.
* Integration service environment name
jpggise
* Location
East US 2
* Additional capacity
0
VIRTUAL NETWORKS
* Virtual network
MIT-DEMO-1-VN
Subnets
4 selected
Filter subnets
Select all
A (10.1.1.0/27)
B (10.1.2.0/27)
C (10.1.3.0/27)
D (10.1.4.0/27)
default (10.1.0.0/24)
Review + create
Previous
Next : Review + create >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Create integration service environment
Validation passed
Basics
Review + create
BASICS
Subscription
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Resource group
MIT-DEMO-LogicApps-OnPrivateNetwork
Location
East US 2
Integration service environment name
jpggise
Additional capacity
0
Allow access from
Selected network
Virtual Network
MIT-DEMO-1-VN
Subnet
A (10.1.1.0/27)
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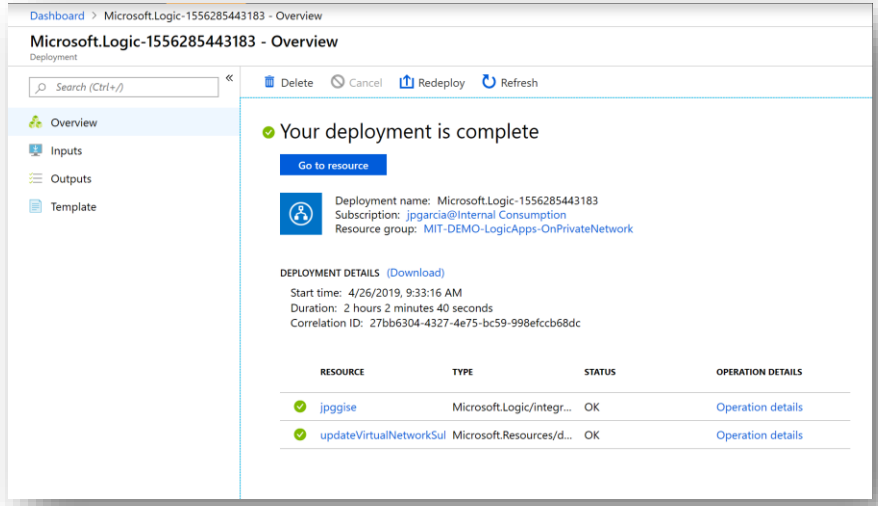
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Microsoft.Logic-1556285443183 - Overview
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Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Refresh
Your deployment is complete
Go to resource
Deployment name: Microsoft.Logic-1556285443183
Subscription: jpgarcia@Internal Consumption
Resource group: MIT-DEMO-LogicApps-OnPrivateNetwork
DEPLOYMENT DETAILS (Download)
Start time: 4/26/2019, 9:33:16 AM
Duration: 2 hours 2 minutes 40 seconds
Correlation ID: 27bb6304-4327-4e75-bc59-998efccb68dc
RESOURCE
TYPE
STATUS
OPERATION DETAILS
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Operation details
updateVirtualNetworkSul
Microsoft.Resources/d...
OK
Operation details