Azure Logic Apps – Deep Dive

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About Me

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- Top 50 Microsoft Azure Blogs, Websites & Influencers in 2020

Agenda

- What are Azure Logic Apps?
- Different Connector Types
- Different Trigger and Action Types
- Create Logic Apps
  - Through Azure Portal
  - Through Visual Studio 2019
  - Through Visual Studio Code
- Deploy Logic apps through Azure DevOps
- Connect Azure Logic Apps to on-premises systems
- Pricing

What are Azure Logic Apps?

What are Azure Logic Apps?

Integration platform as a Service (iPaaS)

Schedule, automate, and orchestrate tasks, business processes, and workflows

Design and build scalable solutions for

- App integration
- Data integration
- System integration
- Enterprise application integration (EAI)
- Business-to-Business (B2B) communication

Ready-to-use and custom connectors

Azure Logic Apps

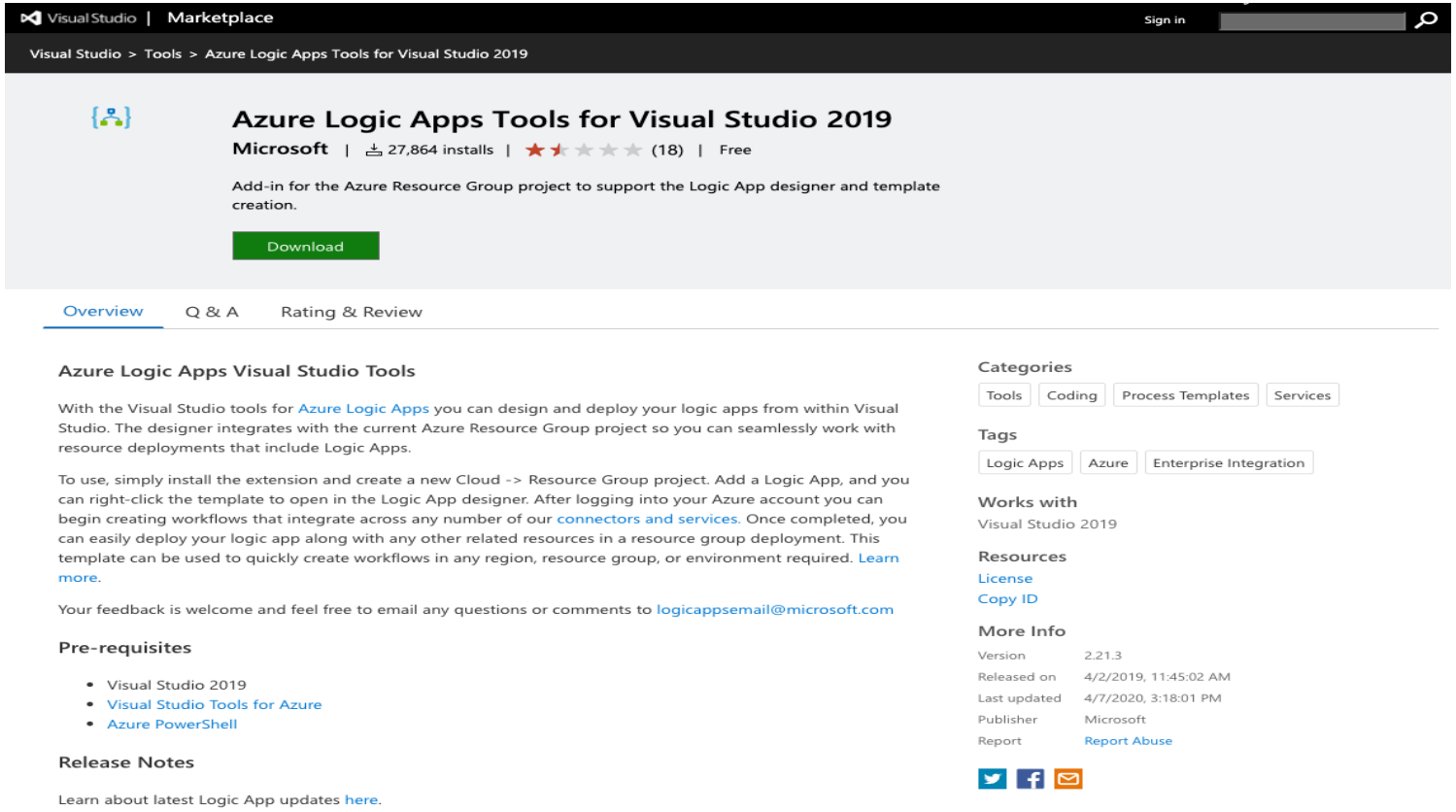
Designer options –

1. UI-based designer
2. Code-based Designer

Deployment options –

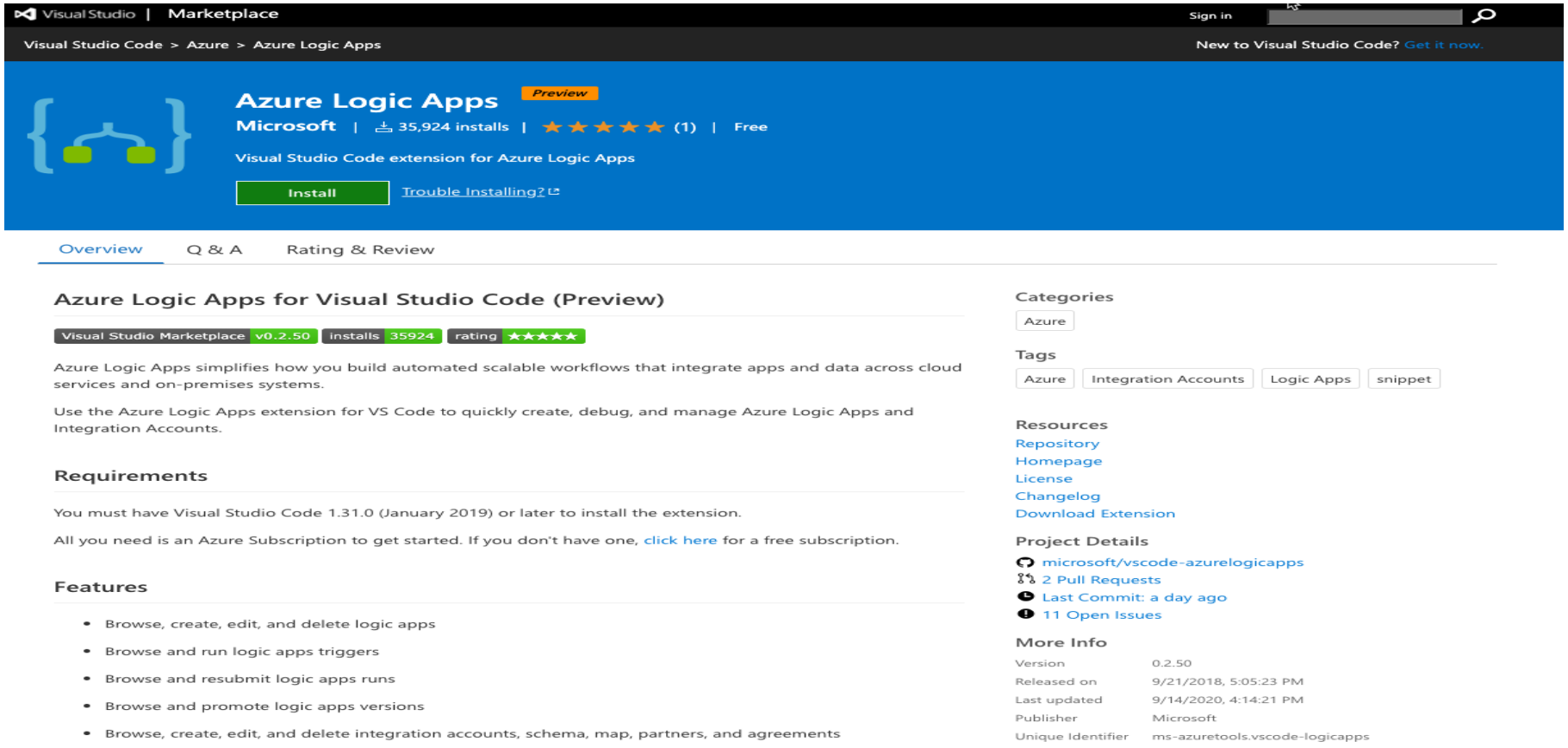
1. Through Azure Portal
2. Through Visual Studio
3. Through ARM templates
   - Using Azure CLI / PowerShell
   - Can be checked into version control and can enable CI/CD.

Creation in Visual Studio 2019



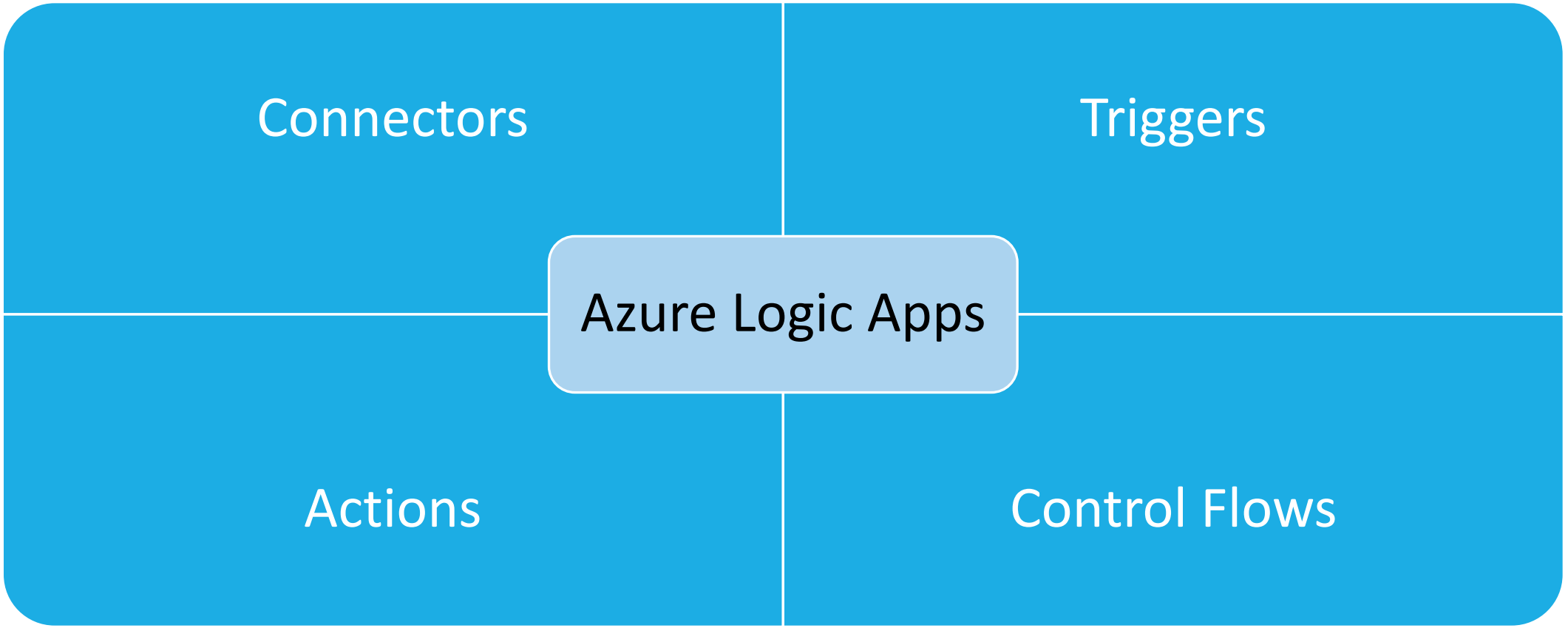
https://marketplace.visualstudio.com/items?itemName=VinaySinghMSFT.AzureLogicAppsToolsForVS2019

Creation in Visual Studio Code

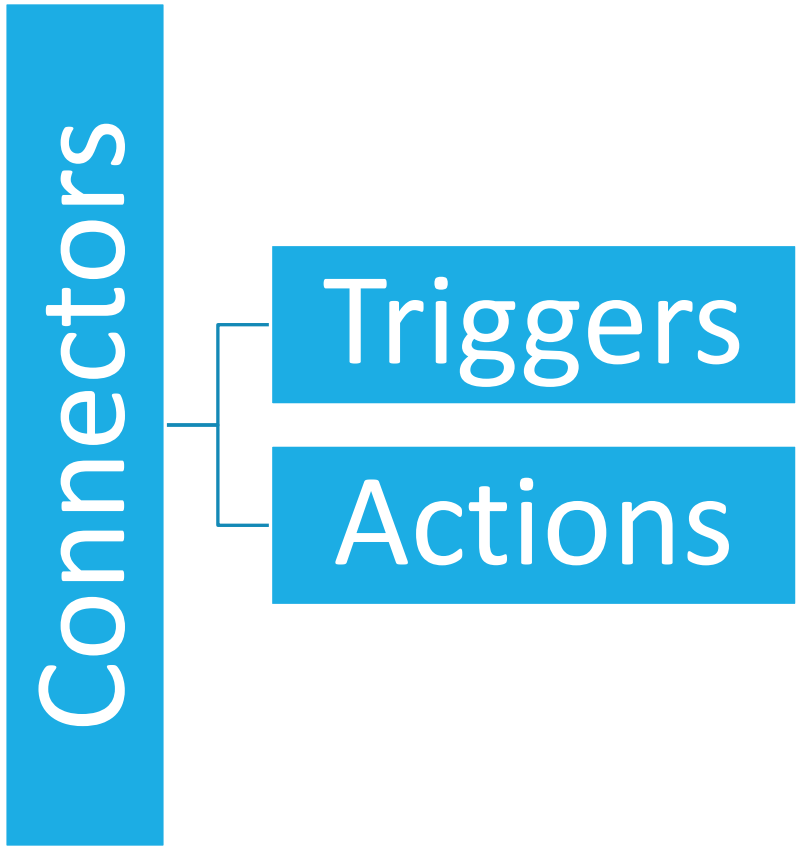


https://marketplace.visualstudio.com/items?itemName=ms-azuretools.vscode-logicapps

Azure Logic Apps



Connectors



Each connector offers:

- Triggers
- Actions

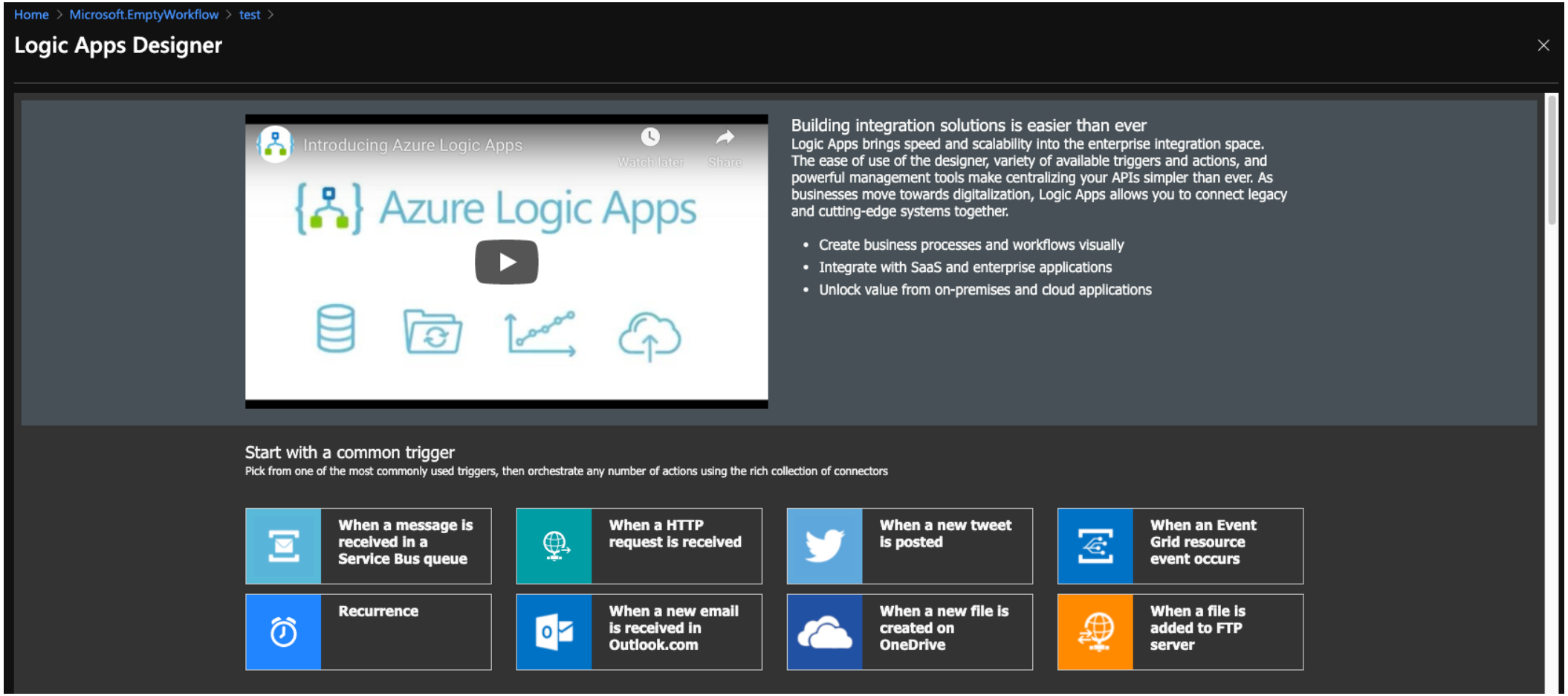
Triggers and Actions form an Activity

Use Control flows to define your workflows built on triggers and actions

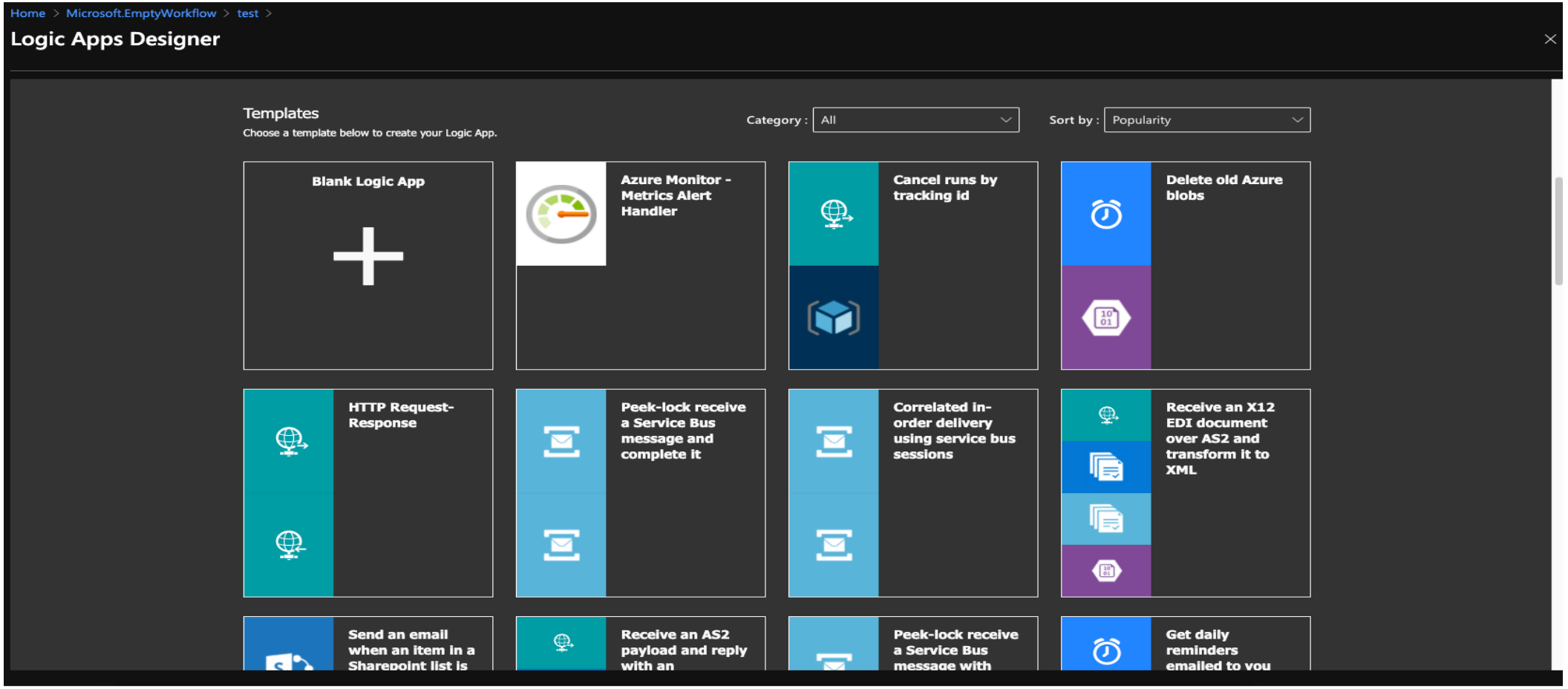
Azure Logic Apps offers 200+ connectors

You can create your own custom connectors

UI Designer in Azure Portal



UI Designer in Azure Portal



Code Designer in Azure Portal

```
"definition": {
  "$schema": "<workflow-definition-language-schema-version>",
  "actions": { "<workflow-action-definitions>" },
  "contentVersion": "<workflow-definition-version-number>",
  "outputs": { "<workflow-output-definitions>" },
  "parameters": { "<workflow-parameter-definitions>" },
  "staticResults": { "<static-results-definitions>" },
  "triggers": { "<workflow-trigger-definitions>" }
}
```

Triggers and Actions

A *trigger* is the first step in any logic app, usually specifying the event that fires the trigger and starts running your logic app.

Actions are the steps that follow the trigger and perform tasks in your logic app's workflow.

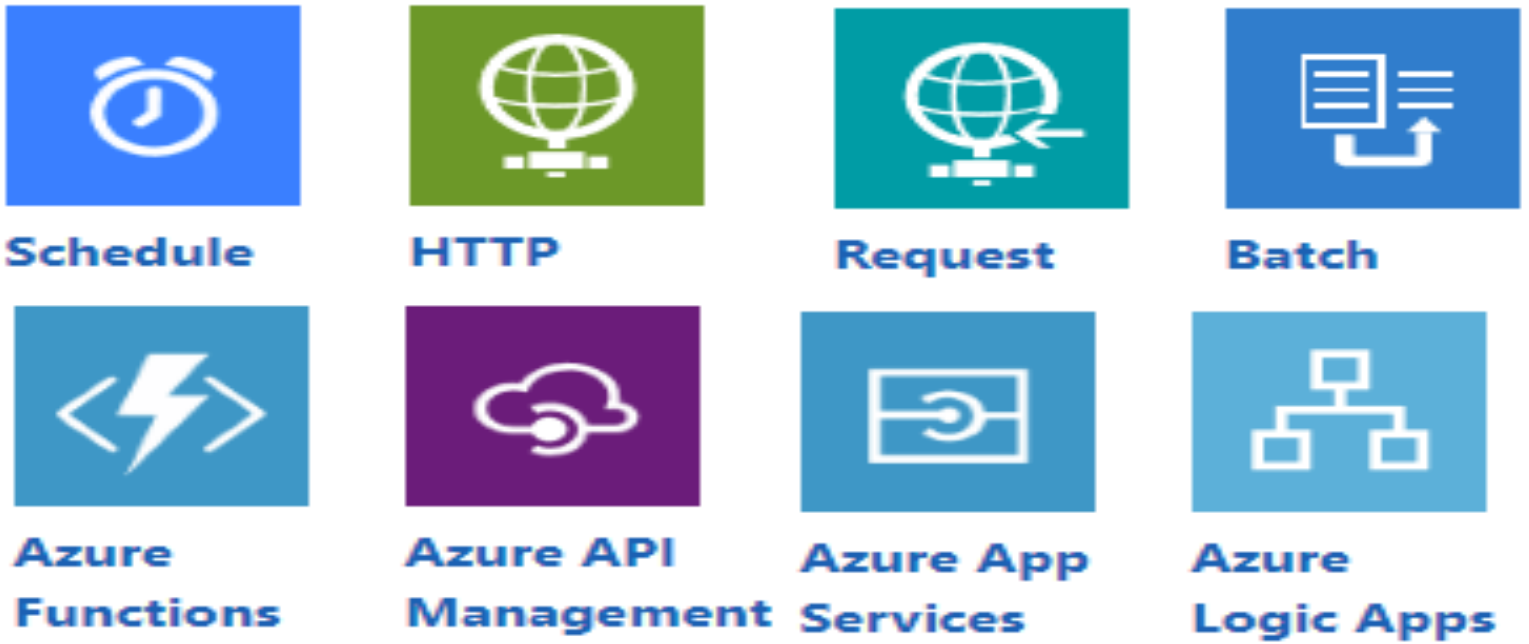
After a trigger fires, Azure Logic Apps creates an instance of your logic app and starts running the *actions* in your logic app's workflow.

3 kinds of triggers –

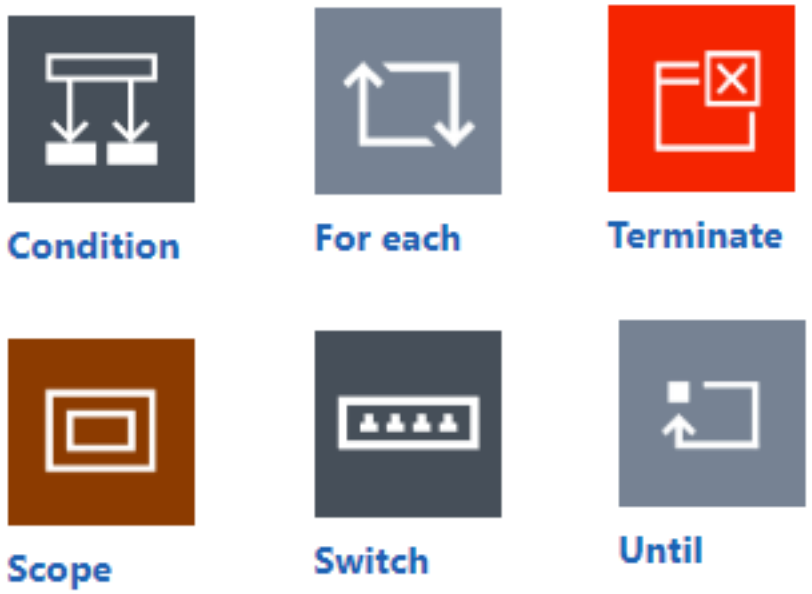
1. Recurrence Trigger
2. Polling Trigger
3. WebHook Trigger

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

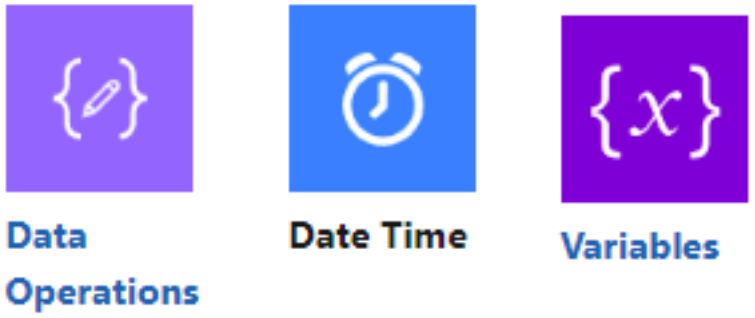
Built-in Connectors



Control Workflow



Data Manipulation



Standard Connectors

Enterprise Connectors

IBM 3270

IBM MQ

SAP

Demo

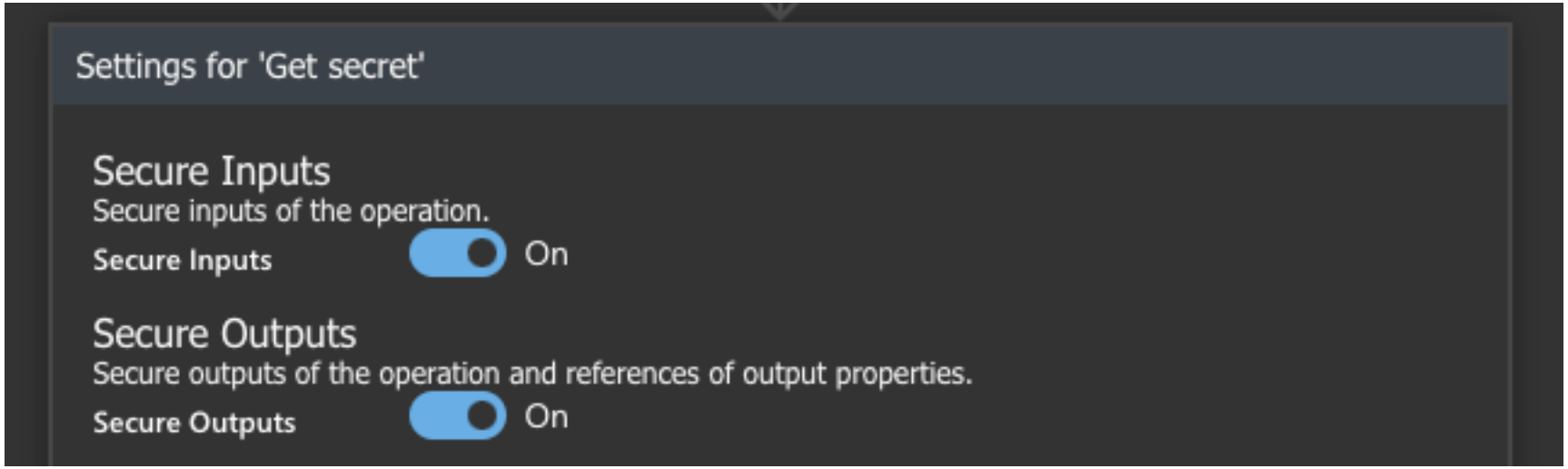
Azure Logic Apps - IAM

Two built-in roles-

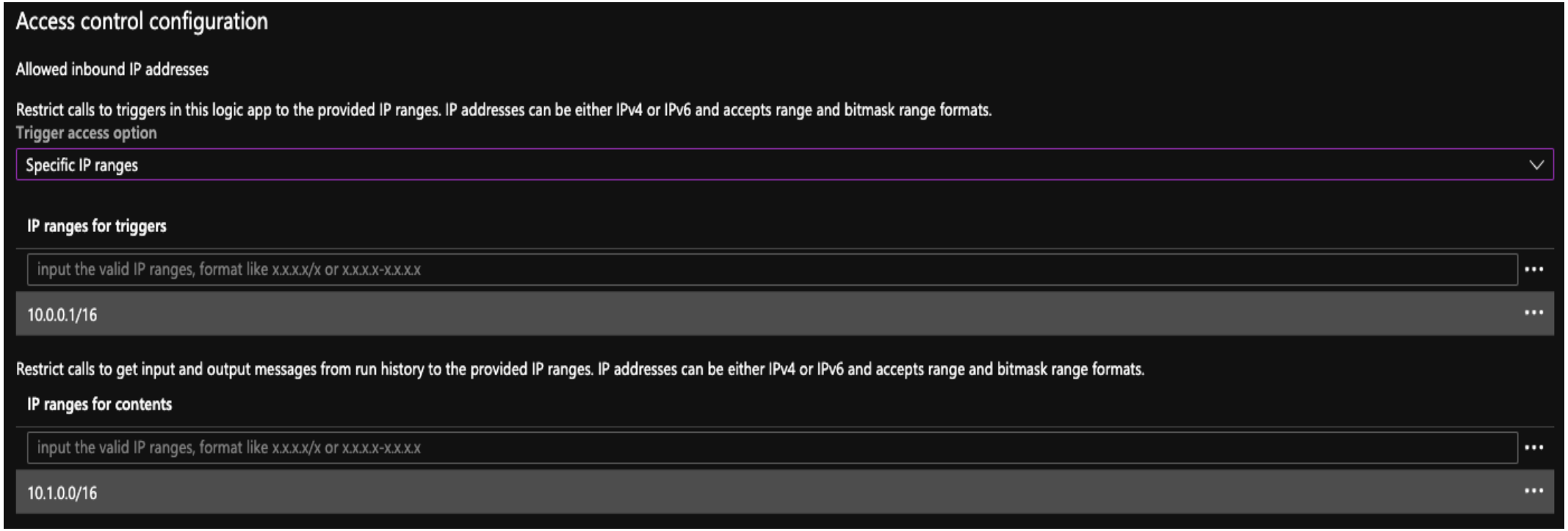
1. **Logic App Contributor** – can manage logic apps, but, can't give access to others
2. **Logic App Owner** – can read, enable and disable logic apps, but, can't modify

Use ***Azure resource locks*** for accidental modification or deletion of Azure logic apps

Securing Run History Data by obfuscation



Restricting access from specific IP ranges



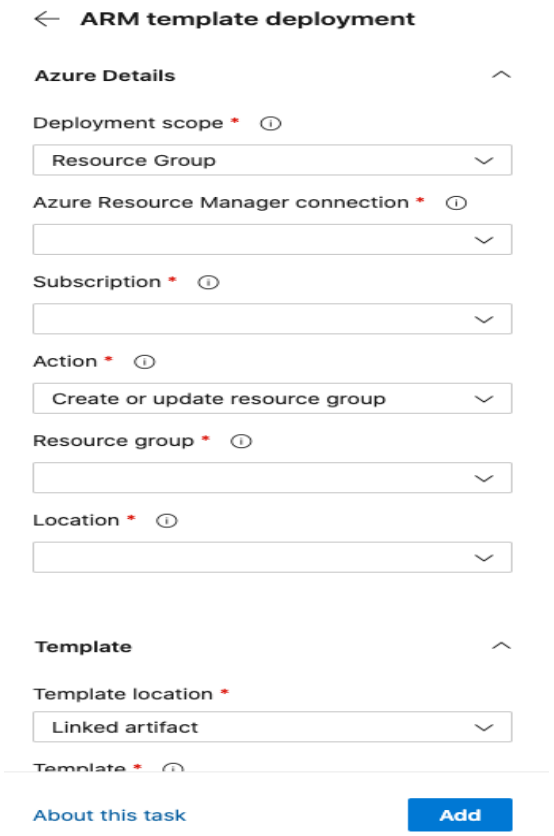
Continuous Delivery

Logic Apps essentially uses ARM templates (JSON)

Can be version controlled in a repo and can be deployed through pipelines

Azure logic apps deployment samples at -

https://github.com/Azure-Samples/azure-logic-apps-deployment-samples

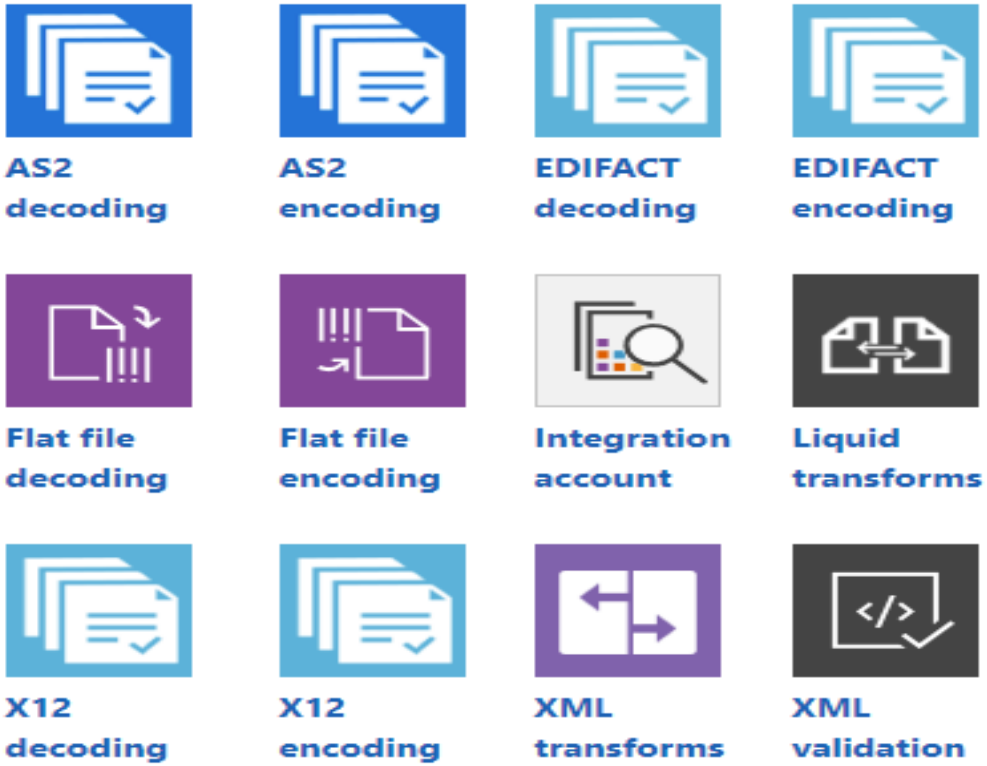


Demo

On-premises Connectors

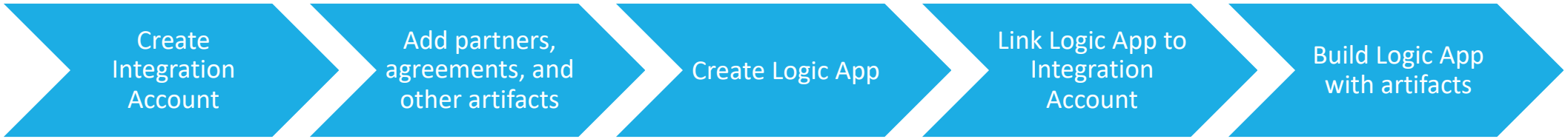
https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-gateway-install

Integration Account Connectors



https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-enterprise-integration-create-integration-account

Enterprise Integration Pack / B2B



Integration Service Environment (ISE)

Provides access to Azure Virtual Network resources from Azure Logic Apps

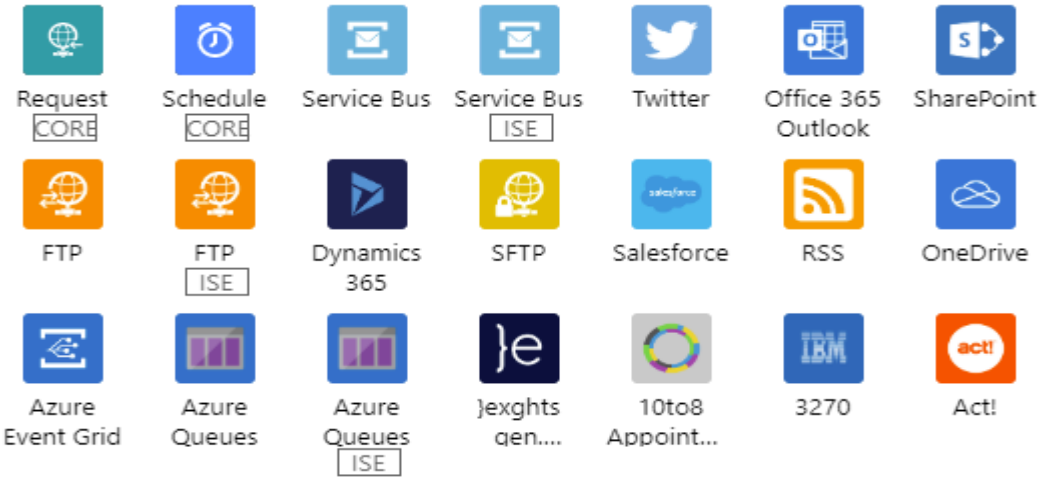
Comes with dedicated resources

Runs separately from the "global" multi-tenant Logic Apps service

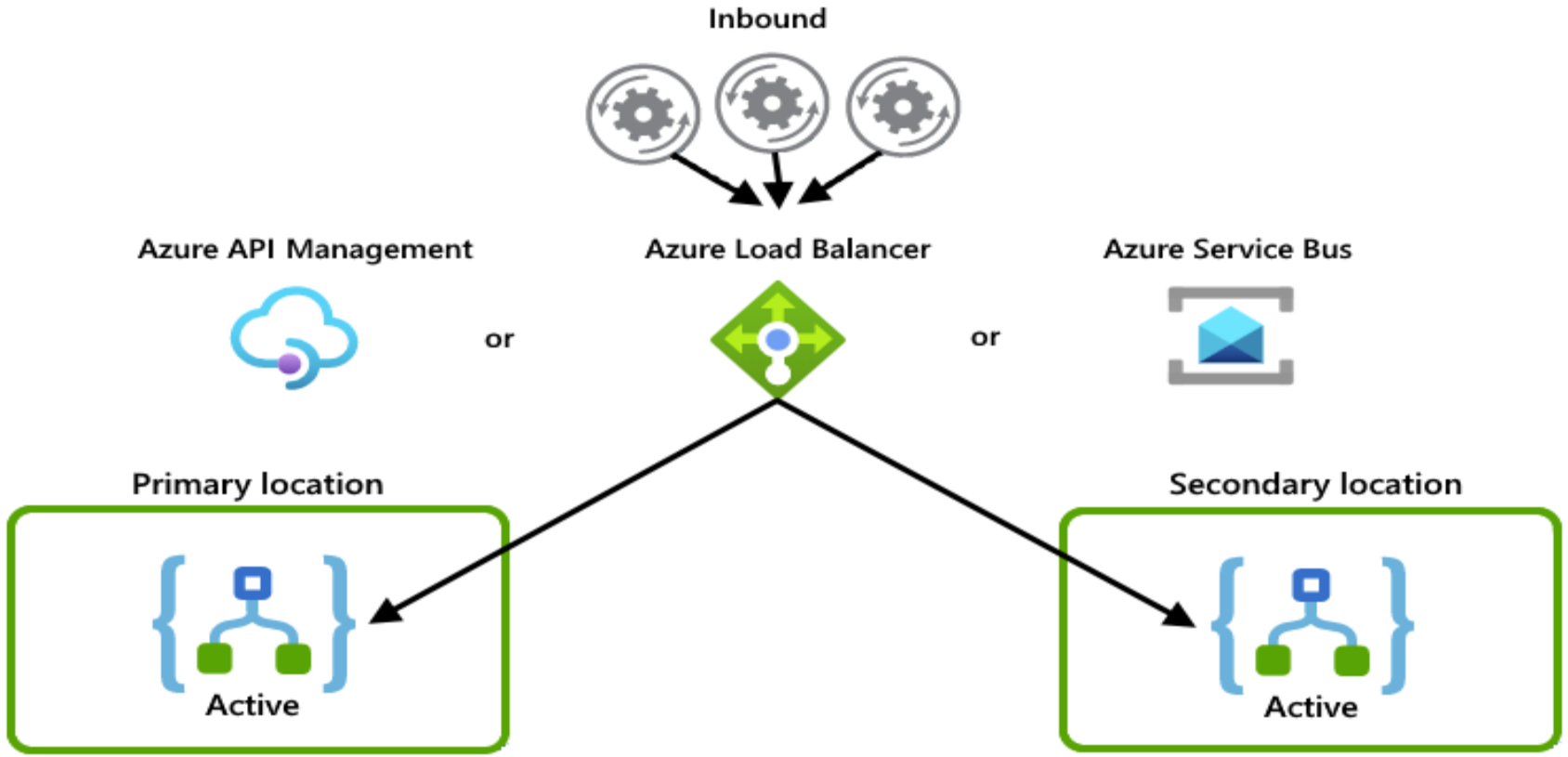
Deployed into your Azure virtual network

Static IP Addresses for Logic apps

Increased limits compared to multi-tenant logic apps

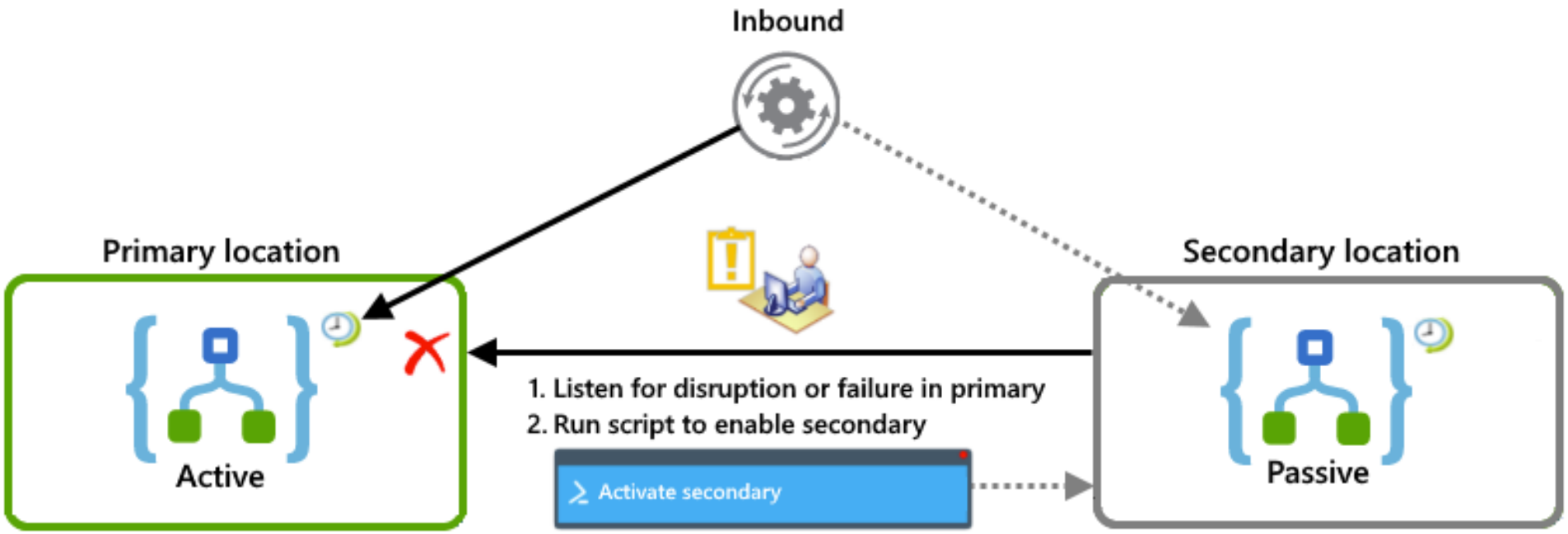


Business Continuity / Disaster Recovery



https://docs.microsoft.com/en-us/azure/logic-apps/business-continuity-disaster-recovery-guidance

Business Continuity / Disaster Recovery



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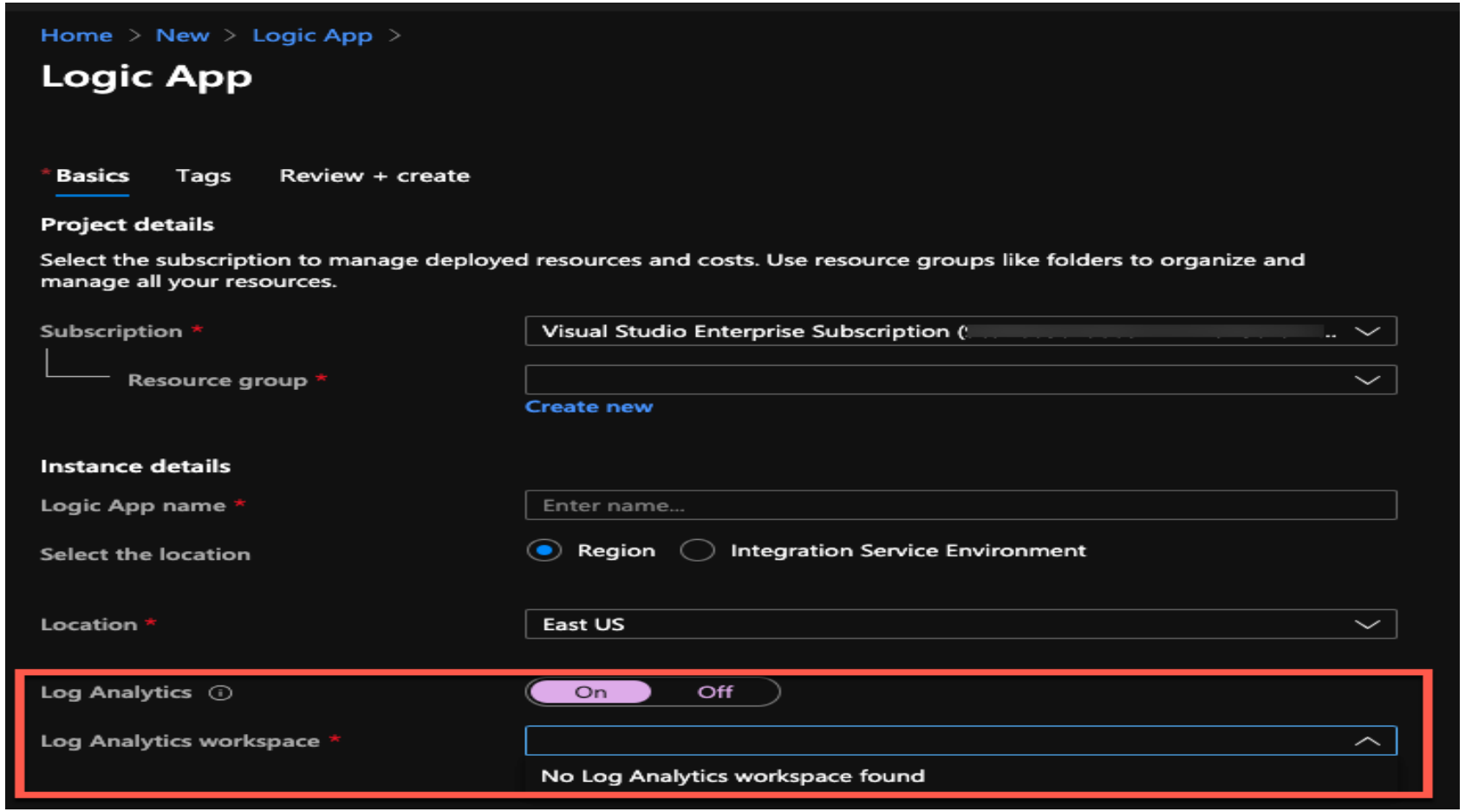
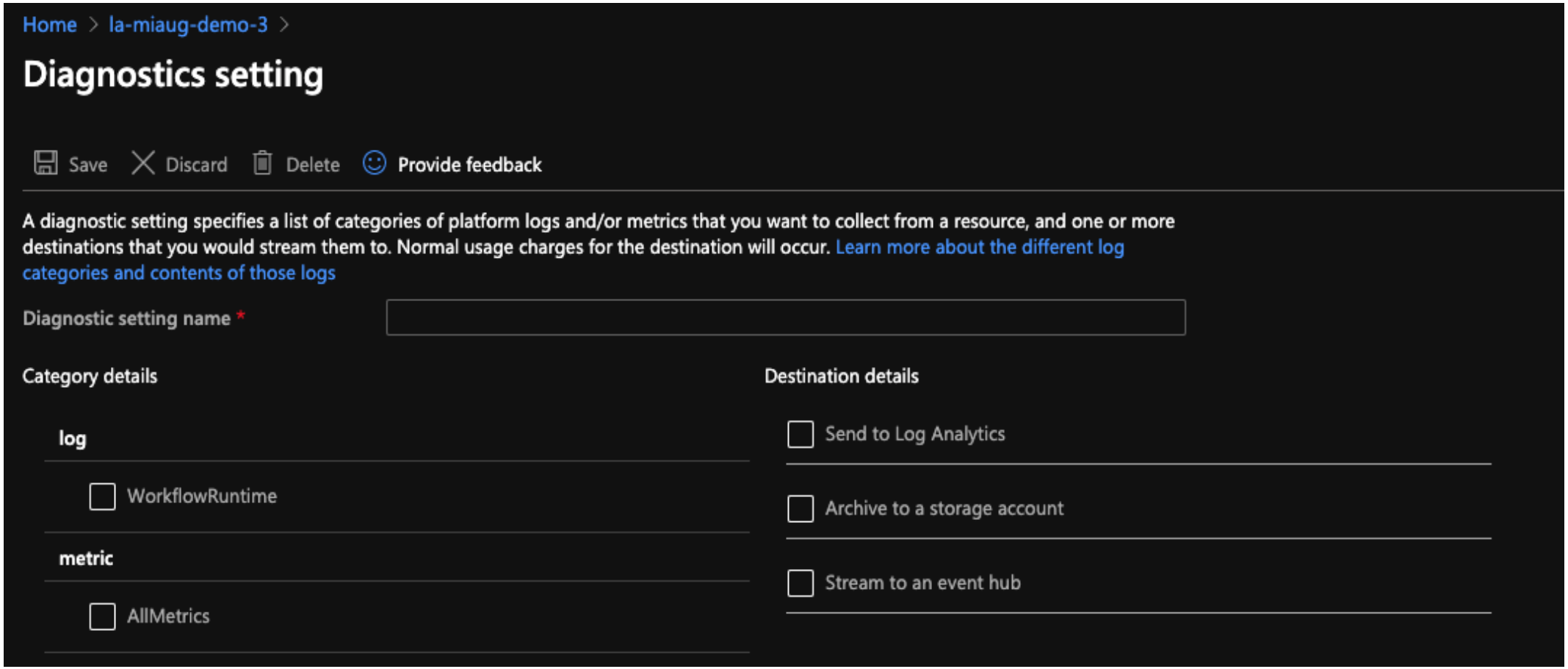
Monitoring Azure Logic Apps



Monitoring Azure Logic Apps



Azure Logic Apps Pricing

For azure logic apps, all the triggers, actions 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

ISEs and Integration accounts are billed differently

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

Azure Logic Apps Pricing

ISEs are billed differently

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

Data retention: $0.12 GB/month

Azure Logic Apps Updates (in Preview)

Logic Apps will now run on a new containerized runtime, the same runtime powering Azure Functions, providing hosting flexibility to:

- Run on Functions, App Service, Kubernetes, Docker and any cloud.
- Deploy multiple workflows to a single Logic App simplifying automated deployments and CI/CD pipelines.
- Enable enterprise features such as private endpoints, simpler and more cost effective VNET access, deployment slots and more.

New Visual Studio code extension that allows local development.

Integration with Github Actions for better developer tool consistency.

Stateless workflows that can significantly enhance performance for request/ response scenarios.

Modern and compact design making it easier to author larger, more complex workflows and view more steps at once without scrolling.

https://azure.microsoft.com/en-us/updates/logic-apps-updated-with-new-hosting-options-improved-performance-and-developer-workflows/

Benefits

Visually build workflows with easy-to-use tools

First-class support for enterprise integration and B2B scenarios

Write once, reuse often

Built-in extensibility

Pay only for what you use

Azure Logic Apps vs. Power Automate

Azure Logic Apps –

- Targeted for IT Pros / Developers
- Advanced workflows / integration
  - SAP Connector
  - Integration Accounts
  - B2B connectors
  - Liquid Connectors
- Designers:
  - Azure portal-based
  - Visual Studio designer
- Part of Azure ecosystem
- Continuous Integration/Delivery

Power Automate (prev. Microsoft Flow) –

- Targeted for power users / citizen developers
- Simple workflows / integration
- Designers:
  - Web-based designer
- Part of Power Platform

https://docs.microsoft.com/en-us/azure/azure-functions/functions-compare-logic-apps-ms-flow-webjobs

Q&A


thank
you