Розподілені системи та хмарні технології

Serverless

Serverless compute

1. Web App
2. Azure Functions
3. Logic App

Web App

Web App

Built-in auto scale support

Web App

Built-in auto scale support
Container support

Web App

Built-in auto scale support
Container support
Continuous integration/deployment support

Web App

Built-in auto scale support
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Deployment slots

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App Service on Linux

App Service Plan

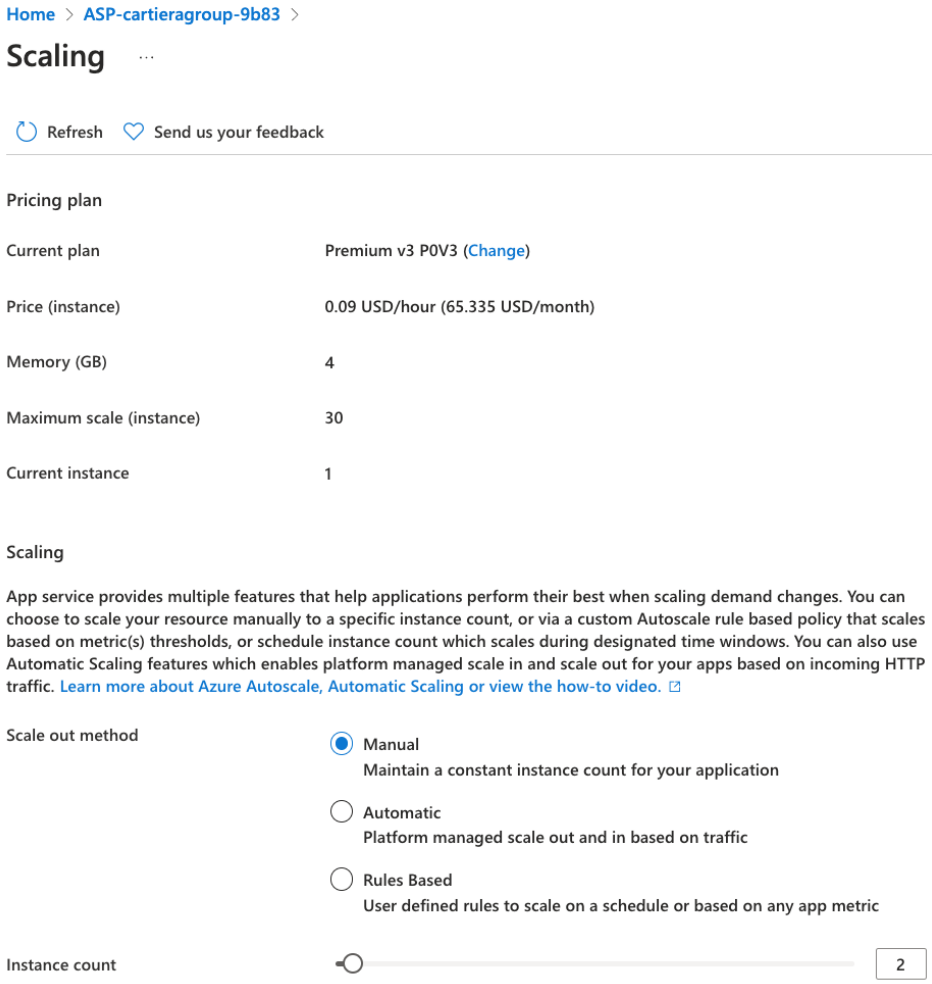
App Service Plan Pricing Tier

Isolated v2 Service Plan	Cores	RAM	Storage	Pay as you go	1 year savings plan	3 year savings plan	1 year reserved	3 year reserved
I1v2	2	8 GB	1 TB	$410.260/month	$320.003/month ~22% savings	$250.259/month ~39% savings	$290.504/month ~29% savings	$221.92/month ~46% savings
I1mv2	2	16 GB	1 TB	$489.830/month	$382.068/month ~22% savings	$298.797/month ~39% savings	$341.670/month ~30% savings	$256.997/month ~48% savings

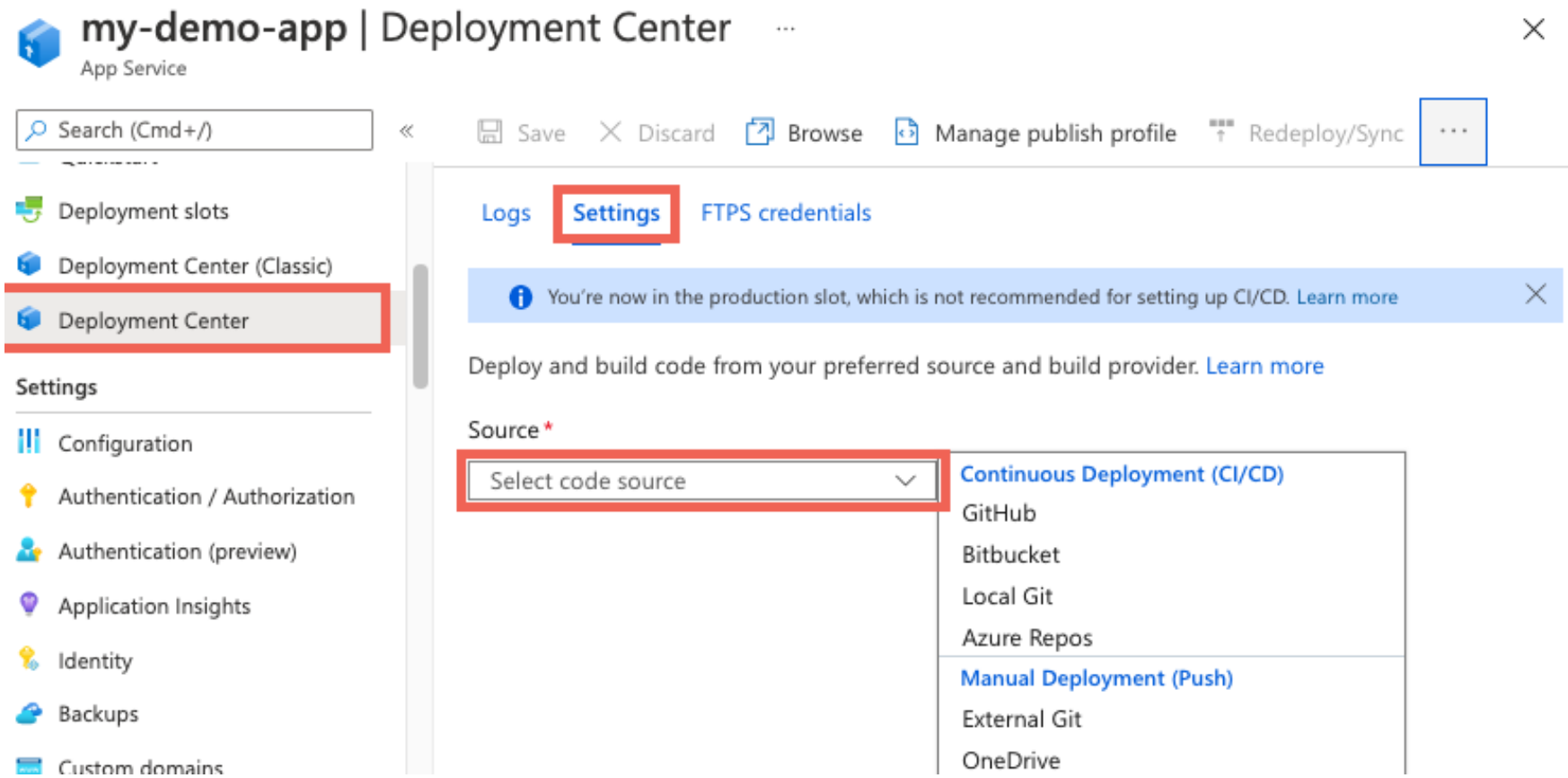
Premium v3 Service Plan	Cores	RAM	Storage	Pay as you go	1 year savings plan *	3 year savings plan*	1 year reserved	3 year reserved
P0v3	1	4 GB	250 GB	$120.45/month	$104.938/month ~13% savings	$92.528/month ~23% savings	$90.170/month ~25% savings	$72.643/month ~40% savings
P1v3	2	8 GB	250 GB	$240.90/month	$209.875/month ~13% savings	$185.063/month ~23% savings	$180.332/month ~25% savings	$145.249/month ~40% savings

Basic Service Plan	Cores	RAM	Storage	Pay as you go
B1	1	1.75 GB	10 GB	$54.75/month
B2	2	3.50 GB	10 GB	$109.50/month

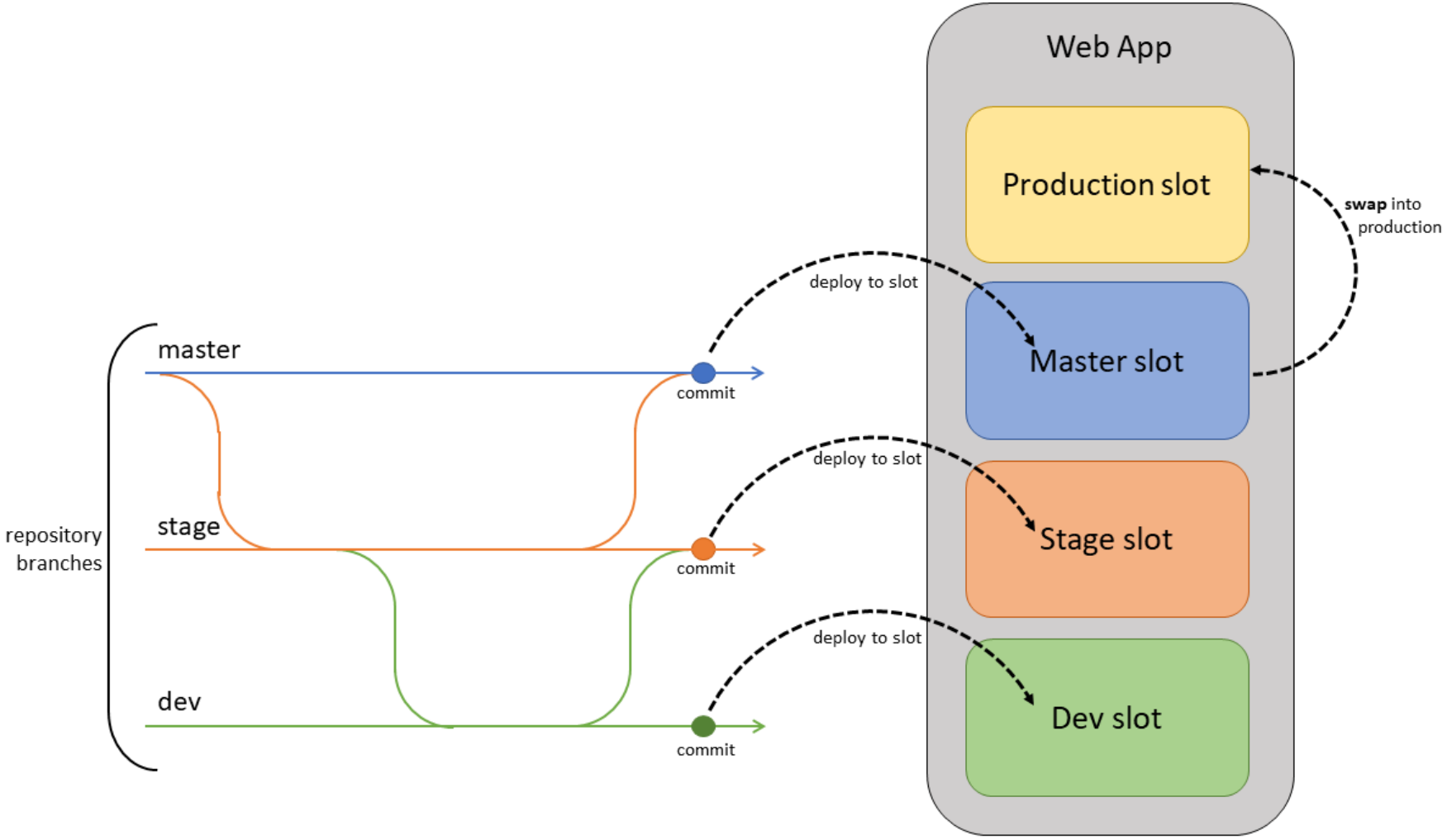
App Service Plan run and scale



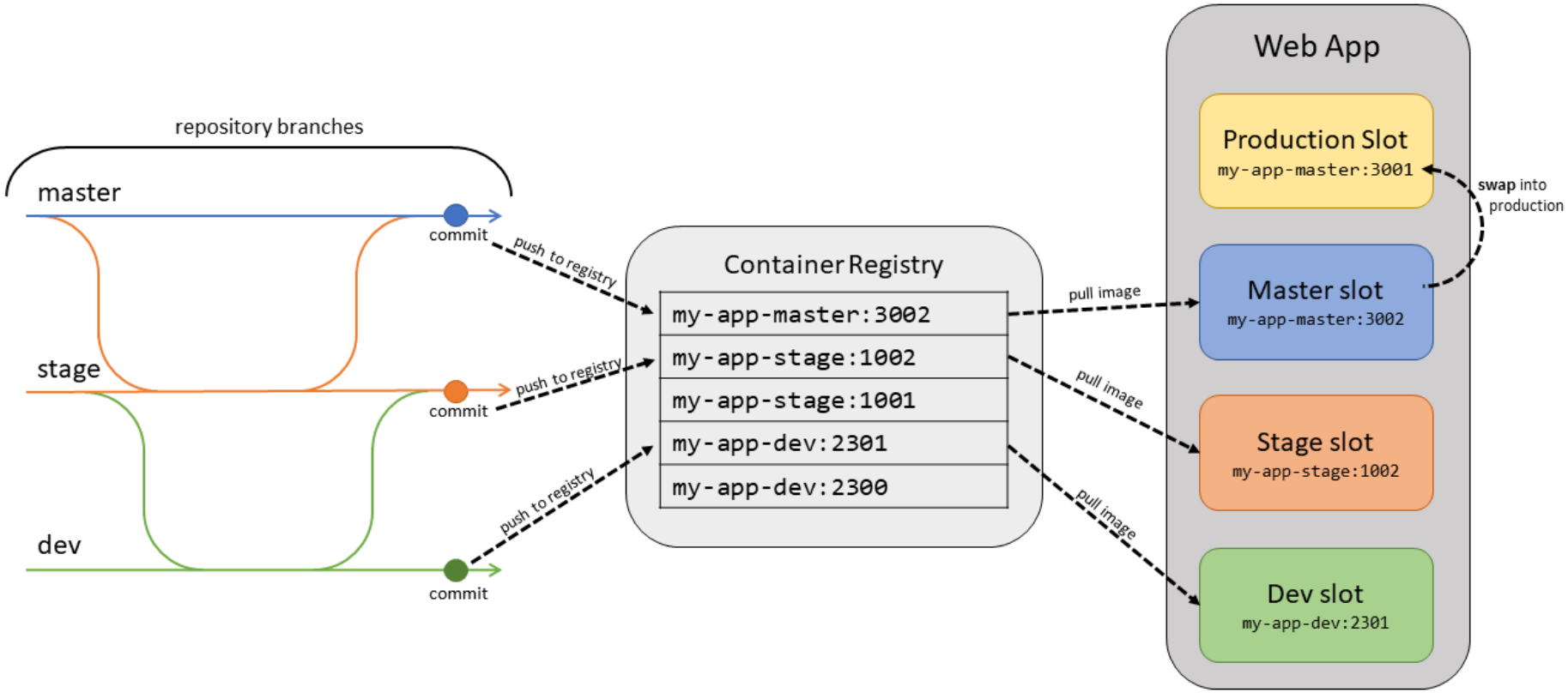
Web App deployment



Web App deployment slots



Web App deployment slots



Built-in authentication and authrization

Provider	Sign-in endpoint	How-To guidance
Microsoft identity platform	/.auth/login/aad	App Service Microsoft identity platform login
Facebook	/.auth/login/facebook	App Service Facebook login
Google	/.auth/login/google	App Service Google login
X	/.auth/login/twitter	App Service X login
Any OpenID Connect provider	/.auth/login/<providerName>	App Service OpenID Connect login
GitHub	/.auth/login/github	App Service GitHub login

Networking

Networking

Inbound traffic configuration

Public network access	Enabled with no access restrictions
App assigned address	Not supported
Private endpoints	Not supported
Inbound addresses	20.105.224.48

Optional inbound services

Azure Front Door	View details

Outbound traffic configuration

Virtual network integration	Not supported
Hybrid connections	Not supported
Outbound DNS	Default (Azure-provided)
Outbound addresses	108.142.57.96, 108.142.57.101, 108.142.57.102, 108.142.57.104, 108.142.57.108, 108.142.57.113, 108.142.56.229, 108.142.56.235, 108.142.56.254, 108.142.57.0, 108.142.57.14, 108.142.57.38, 108.142.57.65, 108.142.57.67, 108.142.57.68, 108.142.57.71, 108.142.57.73, 108.142.57.74, 108.142.57.76, 108.142.57.79, 108.142.57.80, 108.142.57.87, 108.142.57.90, 108.142.57.92, 108.142.57.96, 108.142.57.101, 108.142.57.102, 108.142.57.104, 108.142.57.108, 108.142.57.113, 108.142.57.116, 108.142.57.125, 108.142.57.131, 108.142.57.132, 108.142.57.134, 108.142.57.138, 20.105.224.48 Show Less

Integration subnet configuration

NAT gateway	N/A
Network security group	N/A
User defined route	N/A

Networking

Inbound features

App-assigned address

Access restrictions

Service endpoints

Private endpoints

Outbound features

Hybrid Connections

Gateway-required virtual network integration

Virtual network integration

Networking

Access Restrictions ...

Save Refresh

App access

Public access is applied to both main site and advanced tool site. Deny public network access will block all incoming traffic except that comes from private endpoints. Learn more

Public network access

- (•) Enabled from all networks (This will clear all current access restrictions)
- ( ) Enabled from select virtual networks and IP addresses
- ( ) Disabled

Site access and rules

Main site | Advanced tool site

You can define lists of allow/deny rules to control traffic to your site. Rules are evaluated in priority order. If no created rule is matched to the traffic, the "Unmatched rule action" will control how the traffic is handled. Learn more

Unmatched rule action

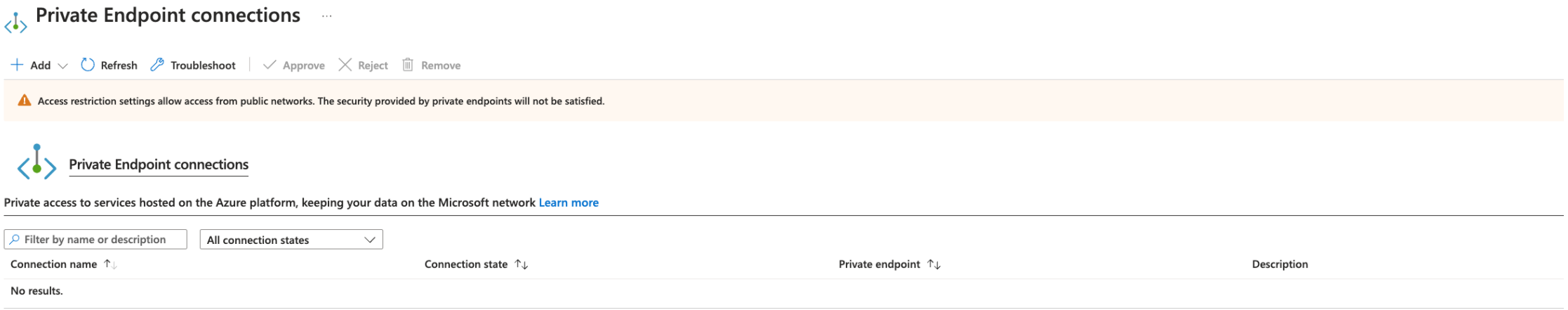
- (•) Allow
- ( ) Deny

Add Delete

Filter rules | Action : All

Priority ↑	Name	Source	Action	HTTP headers
2147483647	Allow all	Any	Allow	Not configured

Networking


Private Endpoint connections
Add
Refresh
Troubleshoot
Approve
Reject
Remove
Access restriction settings allow access from public networks. The security provided by private endpoints will not be satisfied.
Private Endpoint connections
Private access to services hosted on the Azure platform, keeping your data on the Microsoft network Learn more
Filter by name or description
All connection states
Connection name
Connection state
Private endpoint
Description
No results.

Networking

Hybrid connections ...

Refresh | Troubleshoot | Download connection manager

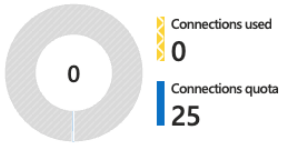
Hybrid connections

App Service integration with hybrid connections enables your app to access a single TCP endpoint per hybrid connection. Here you can manage the new and classic hybrid connections used by your app. Learn more

App service plan (pricing tier):

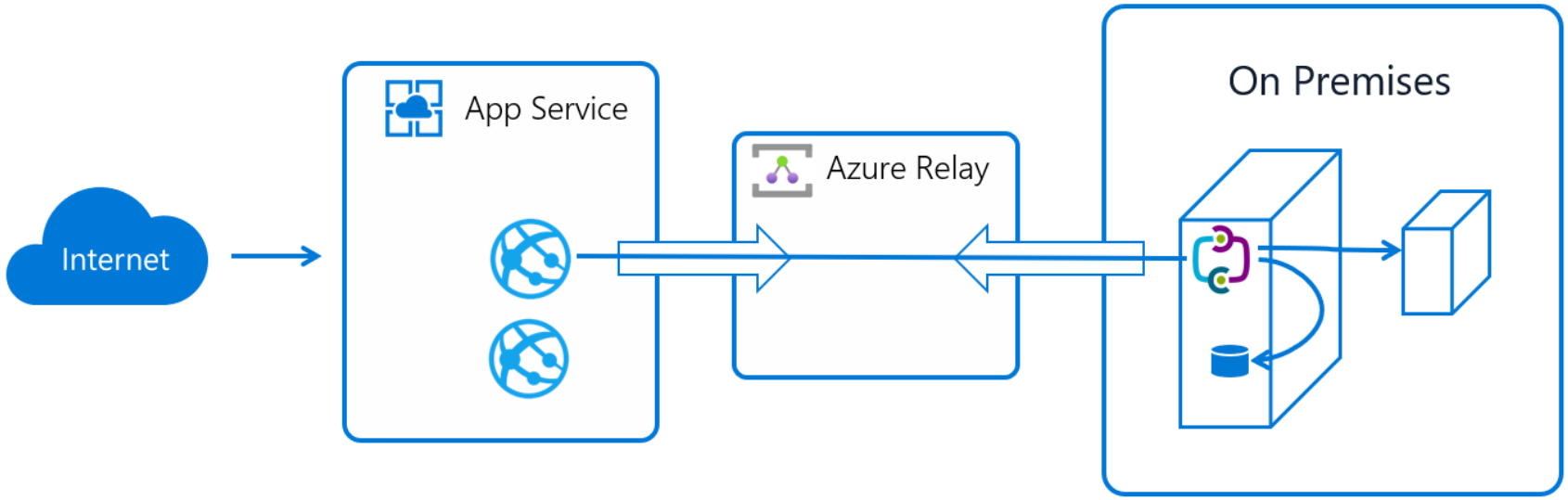
Location:
West Europe

Connections used:

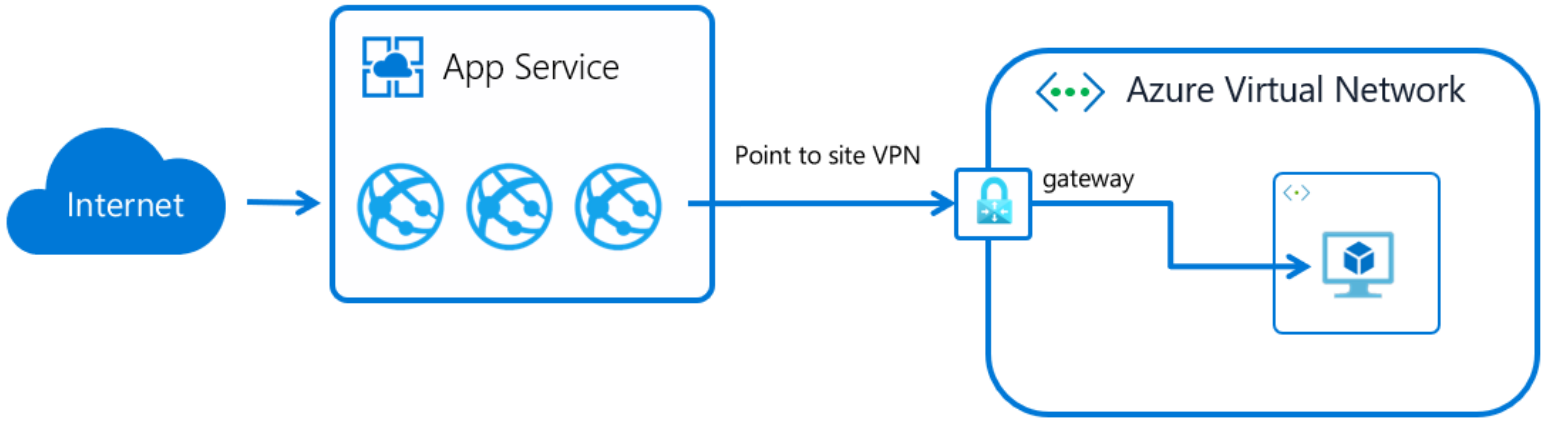


New hybrid connections are not supported on free and shared sku. Scale up to use this feature.

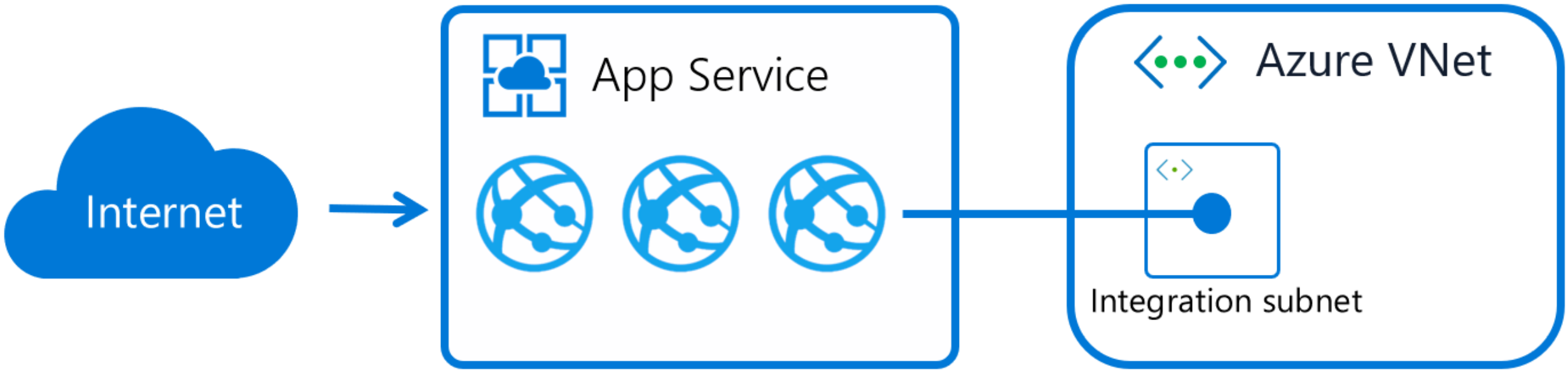
Networking



Networking

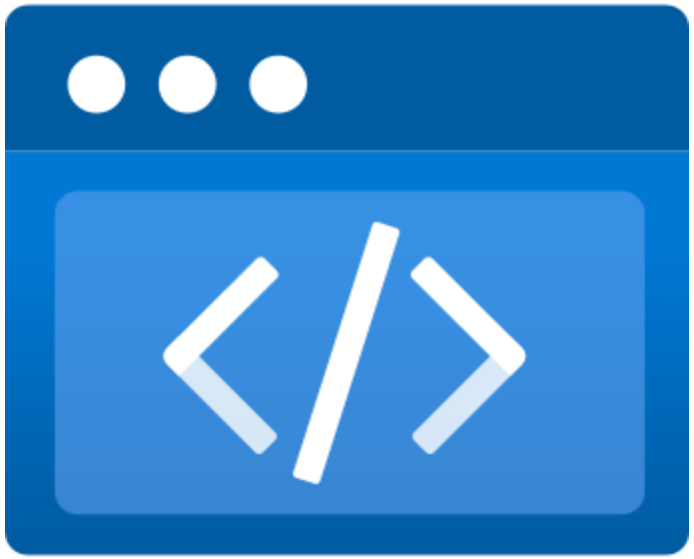

Internet
App Service
Point to site VPN
Azure Virtual Network
gateway

Networking

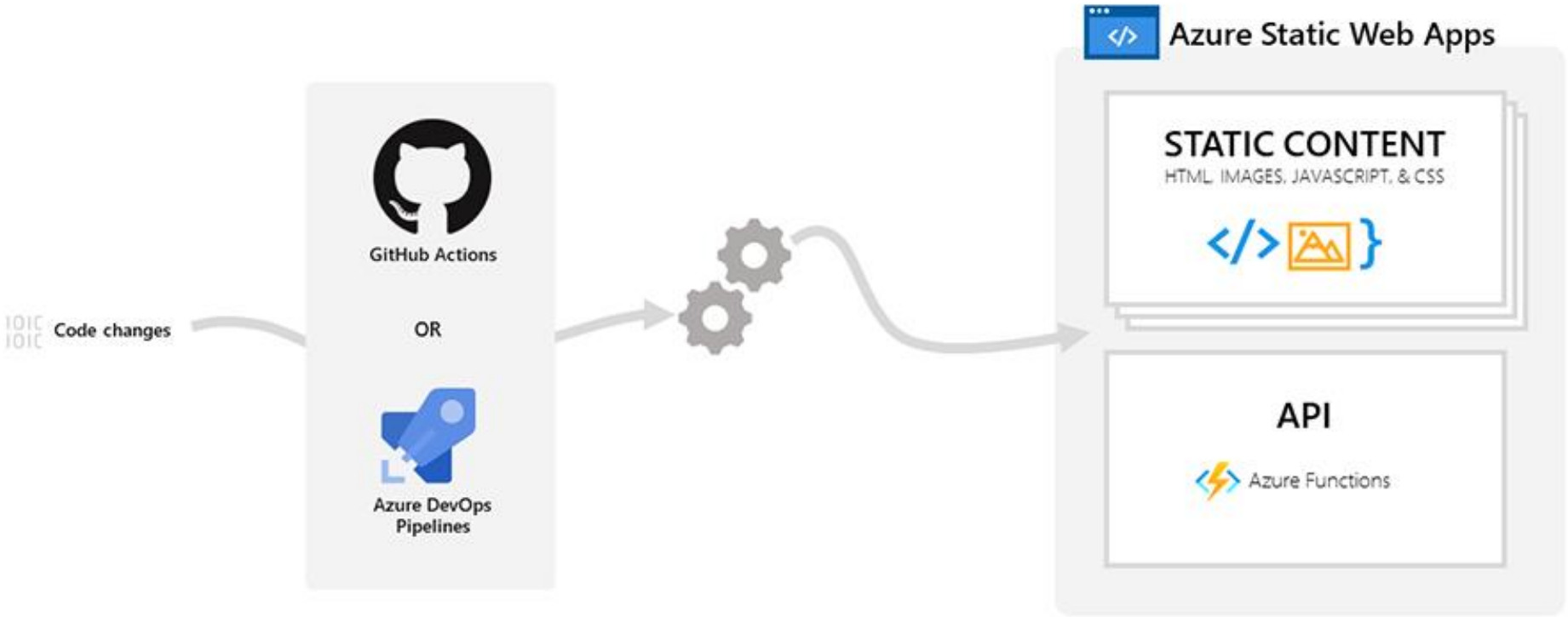


Networking

Static Website



Static Website



Azure Functions

Use cases

Storage: You can listen from events from databases like Azure Cosmos DB when a new row is inserted, for example.

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Events: Event Grid and Event Hubs produce events that can trigger your code.

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Events: Event Grid and Event Hubs produce events that can trigger your code.
HTTP code: Web requests and webhooks can trigger HTTP code.
Queues: Queue messages can be processed, as well.
Timer: Code can be invoked with a certain time interval.

Bindings

Use bindings to connect to data sources. Bindings are ways to simplify coding for input and output data. While you can use client SDKs to connect to services from your function code, Functions provide bindings to simplify these connections. Essentially bindings are connection code you don’t have to write. You can integrate with many services on Azure and solve integration problems and automate business processes.

Bindings comes in two flavors, input, and output. An output binding provides a way to write data to the data destination; for example, placing a message on a queue or a new row in a database. Input bindings can be used to pass data to your function from a data source different than the one that triggered the function.

Features

- Flexible hosting plans
- Dynamic scaling.
- Event based architecture.

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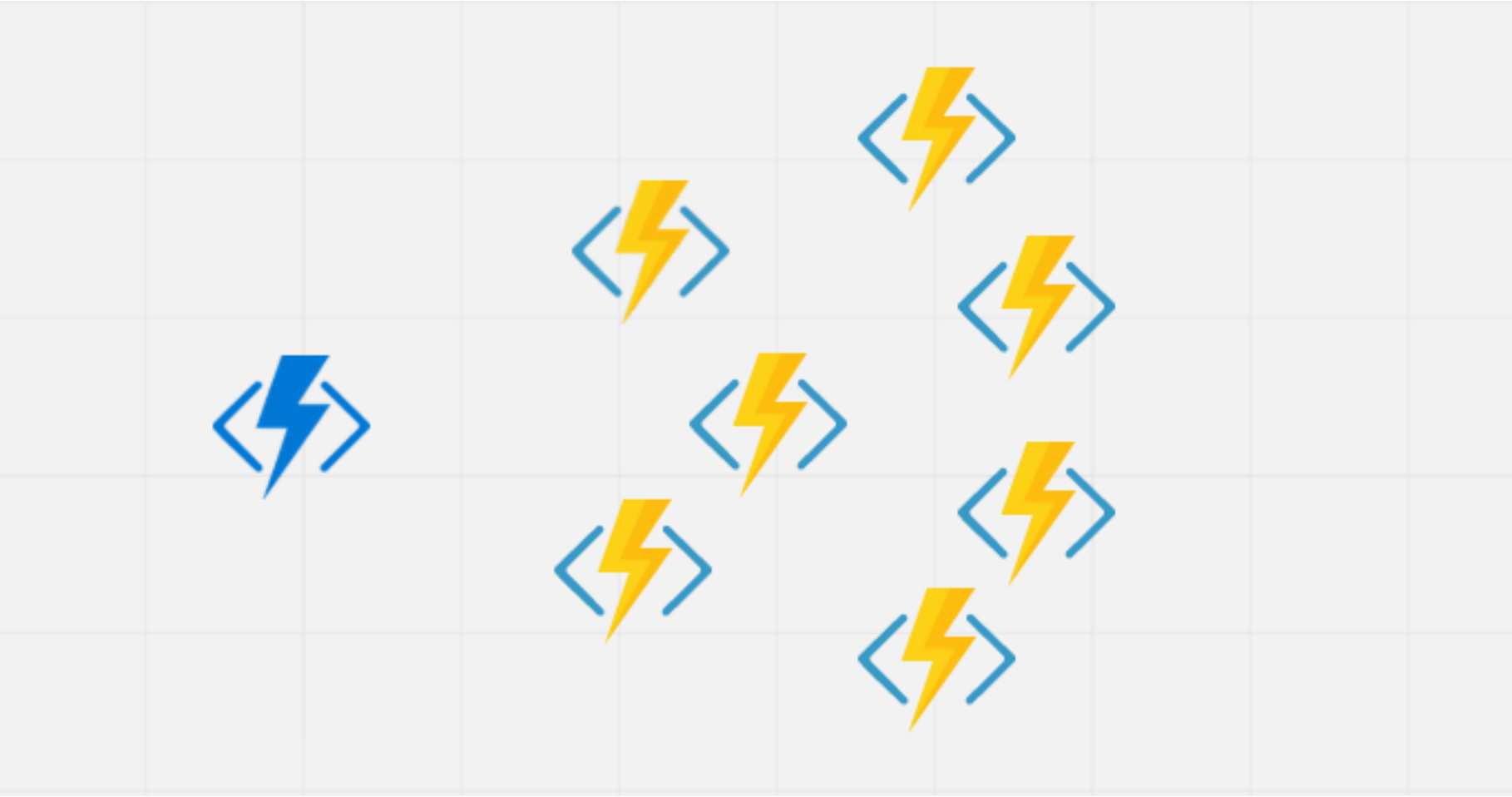
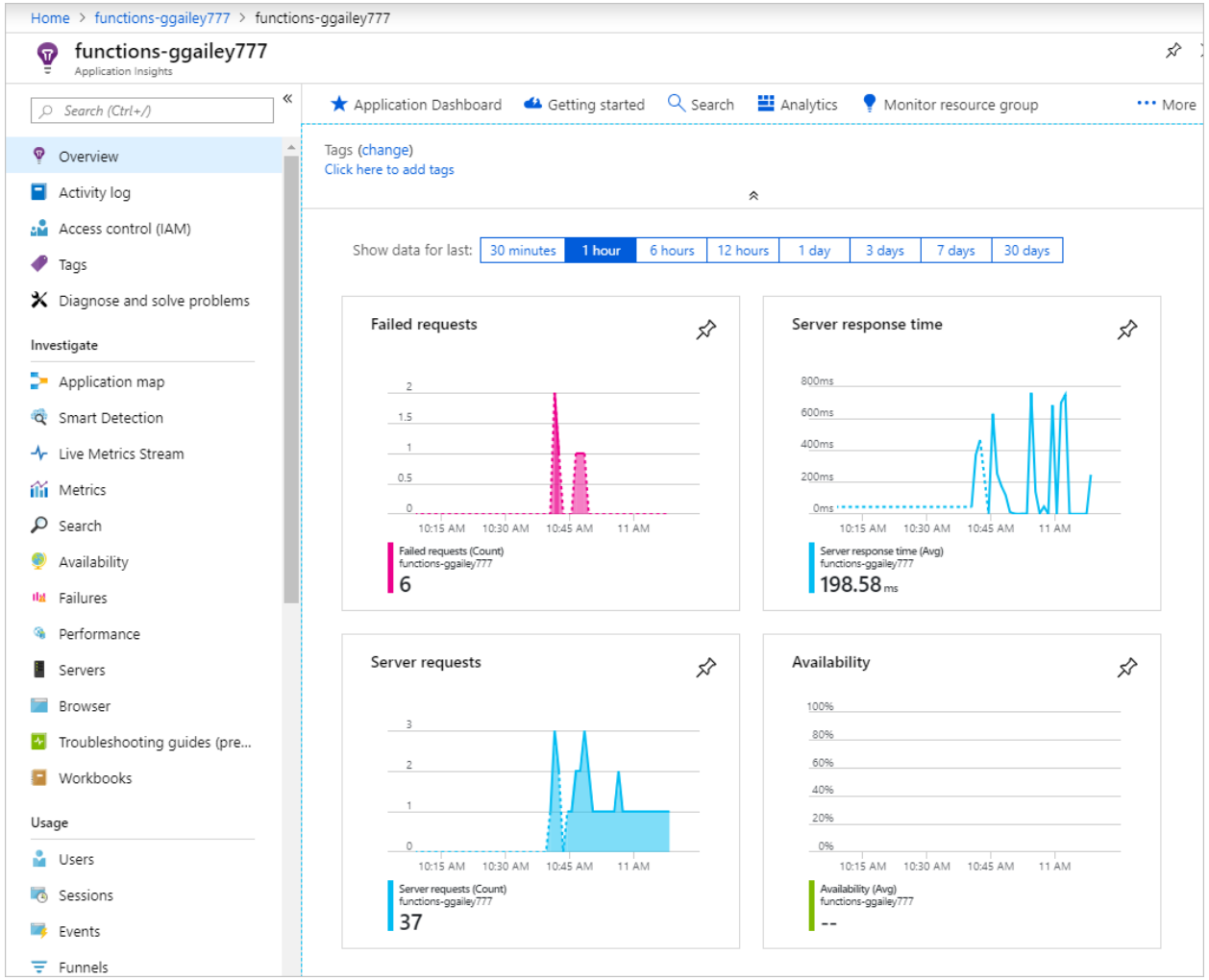
Scaling



Monitoring


Home > functions-ggailey777 > functions-ggailey777
functions-ggailey777
Application Insights
Search (Ctrl+/)
Application Dashboard
Getting started
Search
Analytics
Monitor resource group
More
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Investigate
Application map
Smart Detection
Live Metrics Stream
Metrics
Search
Availability
Failures
Performance
Servers
Browser
Troubleshooting guides (pre...
Workbooks
Usage
Users
Sessions
Events
Funnels
Tags (change)
Click here to add tags
Show data for last:
30 minutes
1 hour
6 hours
12 hours
1 day
3 days
7 days
30 days
Failed requests
Failed requests (Count)
functions-ggailey777
6
Server response time
Server response time (Avg)
functions-ggailey777
198.58 ms
Server requests
Server requests (Count)
functions-ggailey777
37
Availability
Availability (Avg)
functions-ggailey777
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Azure Functions Components

- Function triggers

Azure Functions Components

- Function triggers
- Function bindings

Azure Functions Components

- Function triggers
- Function bindings
- Function runtime

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- Function triggers
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- Function runtime
- API Management

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- Deployment slots

Azure Functions Components

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- Function runtime
- API Management
- Deployment slots
- Function app configuration

More use cases :)

- Reminders and notifications

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- Scheduled tasks

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More use cases :)

- Reminders and notifications
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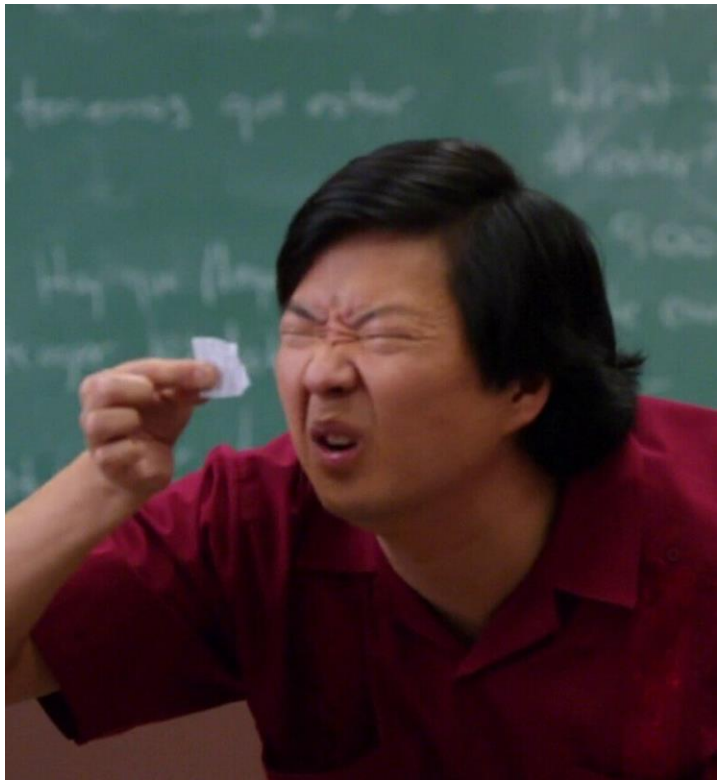
- Processing data in real-time
- Analyse IoT stream
- Serverless workflow

Triggers

Type	Purpose
Timer	Execute a function at a set interval
HTTP	Execute a function when an HTTP request is received
Blob	Execute a function when a file is uploaded or updated in Azure Blob storage
Queue	Execute a function when a message is added to an Azure Storage queue
Azure Cosmos DB	Execute a function when a document changes in a collection
Azure SQL	Execute a function when a row changes in a table
Event Hub	Execute a function when an event hub receives a new event
Event Grid	Execute a function based on Event Grid subscriptions

Binding

Type	1.x[1]	2.x and higher[2]	Trigger	Input	Output
Blob storage	✓	✓	✓	✓	✓
Azure Cosmos DB	✓	✓	✓	✓	✓
Azure Data Explorer		✓		✓	✓
Azure SQL		✓	✓	✓	✓
Dapr[4]		✓	✓	✓	✓
Event Grid	✓	✓	✓		✓
Event Hubs	✓	✓	✓		✓
HTTP & webhooks	✓	✓	✓		✓
IoT Hub	✓	✓	✓		
Kafka[3]		✓	✓		✓
Mobile Apps	✓			✓	✓
Notification Hubs	✓				✓
Queue storage	✓	✓	✓		✓
Redis		✓	✓		
RabbitMQ[3]		✓	✓		✓
SendGrid	✓	✓			✓
Service Bus	✓	✓	✓		✓
SignalR		✓	✓	✓	✓
Table storage	✓	✓		✓	✓
Timer	✓	✓	✓		
Twilio	✓	✓			✓



Time trigger

CRON expression

The order of the six fields in Azure is:

```
{second} {minute} {hour} {day} {month} {day of the week}
0 */5 * * * * //trigger that executes every five minutes
```

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CRON expression

Special character	Meaning	Example
*	Selects every value in a field	An asterisk "*" in the day of the week field means *every* day.
,	Separates items in a list	A comma "1,3" in the day of the week field means just Mondays (day 1) and Wednesdays (day 3).
-	Specifies a range	A hyphen "10-12" in the hour field means a range that includes the hours 10, 11, and 12.
/	Specifies an increment	A slash "*/10" in the minutes field means an increment of every 10 minutes.

CRON expression

CRON expression

Field	Allowed Values
minute	0-59
hour	0-23
Day of the month	1-31
month	1-12 or JAN-DEC
Day of the week	0-6 or SUN-SAT

HTTP Trigger

HTTP endpoint

Functions with HTTP trigger

Output binding

HTTP Trigger

An HTTP trigger is a trigger that executes code when it receives an HTTP request. HTTP triggers have many capabilities and customizations, including:

- Providing authorized access by supplying keys.
- Restricting which HTTP verbs are supported.
- Returning data back to the caller.
- Receiving data through query string parameters or through the request body.
- Supporting URL route templates to modify the function URL.

HTTP Trigger