Working in Production

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SOFTWARE ARCHITECT

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Overview

How can I monitor my functions?
- Live, historic and cost

How can I debug my functions?
- Locally in VS2015 and VS Code
- Remote debugging

How can I reference NuGet packages?

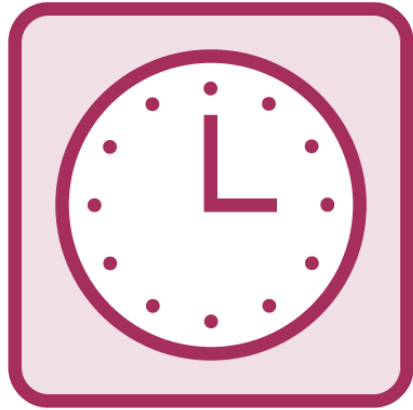**How can I secure my functions?**
- Creating and renewing keys

How can I configure CORS?

How can I learn more?

How Can I Monitor My Functions?

Live

What's happening now?

Historic

What happened this month?

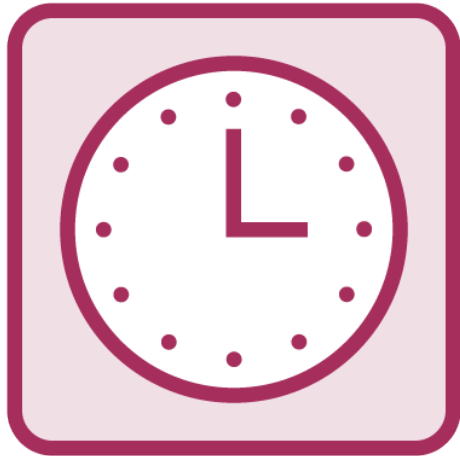**Cost**

How much am I spending?

Demo

Live Monitoring Functions

- Create a timer triggered function
- Live logs in the portal
- Live event stream view
- Log streaming with the CLI

Live Monitoring

- Live stream logs in the portal
- Live event graph
- Live stream logs with the CLI

Demo

Historic Monitoring

- Monitor tab in portal

- WebJobs dashboard in Kudu

- Logs in Table Storage with Storage Explorer

Historic Monitoring

Monitor tab in the portal

WebJobs dashboard in Kudu

Logs in Table Storage

Demo

Monitoring Costs

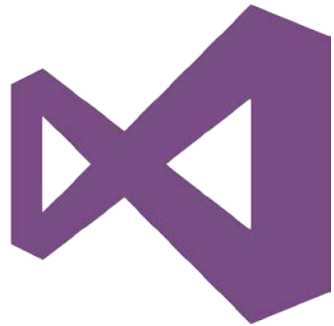- Portal subscription view
- Azure billing API

Monitoring Costs
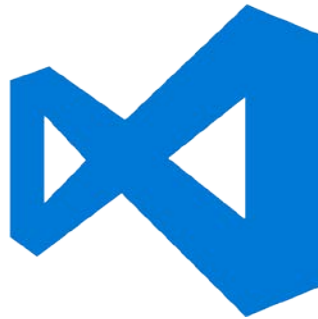
Subscription view in Azure portal

Azure billing API

How Can I Monitor My Functions?

Local Debugging

**Visual Studio
2015**

Local Debugging

**Visual Studio
Code**

Remote Debugging

**Connect to Azure
App Service**

Demo

Local debugging a C# function

- Visual Studio tooling

Demo

Remote debugging Azure functions

- Connect to App Service

Demo

Referencing NuGet Packages
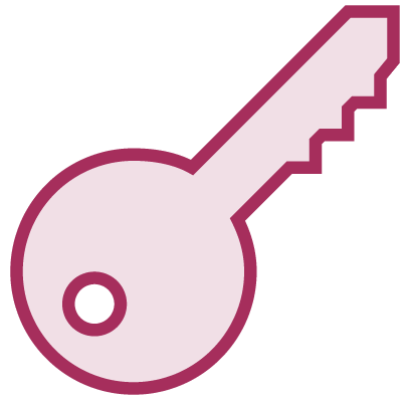
- Editing project.json

How Can I Secure My Functions?

⚡ **Function security depends on trigger type**

Function Key

Caller must provide valid key

Manual Authorization

Examine HTTP headers

Built-in Auth

Third party identity provider

Demo

Working with function keys
- Creating keys
- Renewing keys

Working with Function Keys

Standard HTTP Triggered Functions:

Query String: ?**code**=qm1i7PDMnBeApGqenHg8cRTFH4deQ==

Header: **x-functions-key** qm1i7PDMnBeApGqenHg8cRTFH4deQ==

Webhook Mode Functions:

Either the **default** function key or **_master** admin key

For all other keys:

Query String: ?**code**=qm1i7PDMnBeApGqenHg8cRTFH4deQ==&**clientid**=client1

Headers: **x-functions-clientid** client1

          x-functions-key qm1i7PDMnBeApGqenHg8cRTFH4deQ==

Demo

Configuring CORS

- Calling functions from JavaScript

Summary

How can I monitor my functions?
- Live, historic and cost

How can I debug my functions?
- Locally in Visual Studio and VS Code
- Remote debugging in Azure

How can I reference NuGet packages?

How can I secure my functions?
- Creating and renewing keys

How can I configure CORS?

Azure Functions is Open Source!

GitHub Repository	Contents
Azure/azure-webjobs-sdk-script	Azure Functions runtime
Azure/azure-webjobs-templates	Azure Functions templates
Azure/azure-functions	Azure Functions documentation
Azure/azure-webjobs-sdk	Core Azure Functions runtime and bindings
Azure/azure-webjobs-sdk-extensions	Many additional bindings
ProjectKudu/AzureFunctions Portal	Azure Functions Portal

How can I learn more?

Keep in touch!

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