

Azure WebJobs



WAZUG, Eindhoven 30th of June 2016

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Agenda

- What are WebJobs?
- How do you create WebJobs?
- How do you deploy them?
- Kudu
- WebJobs SDK
- Real world
- What else?
- Wrap up

What are WebJobs?

- Flexible way to run background jobs
- Can be .cmd, .bat, .exe, .ps1, .sh, .php, .py, .js, .jar
- Execution options: continuous, on demand, scheduled
- Can scale with your website

WebJob – Console App



Demo

How are they stored and started?

WebJobs are stored within the website

- Site\wwwroot\App_Data\jobs\{job_type}\{job_name}


Started in the portal or on-demand

Many Options for Deploying

- Azure Portal
- Visual Studio
- Visual Studio Team Services – Build
- FTP
- Dropbox
- Drag-n-drop in Kudu
- Others ...

Publish WebJobs

Add Azure WebJob

 Microsoft Azure WebJobs

Project name:

ServiceBusMonitorWebJob

WebJob name:

ServiceBusMonitorWebJob

WebJob run mode:

Run Continuously

Run Continuously

Run on a Schedule

Run on Demand

Recur every:

[Learn more](#)

Starting on:

juni 2016

ma	di	wo	do	vr	za	zo
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	1	2	3
4	5	6	7	8	9	10

Starting time:

12:00 AM

Starting time zone:

Ending on:

juni 2016

ma	di	wo	do	vr	za	zo
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	1	2	3
4	5	6	7	8	9	10

Ending time:

12:00 AM


Ending time zone:

OK

Cancel

Connection

Publish Web ? X

 Publish Web

Profile
Connection
Settings

WebAppSteef - Web Deploy

Server: webappsteef.scm.azurewebsites.net:443


Site name: WebAppSteef

User name: \$WebAppSteef

Password:

☒ Save password


Destination URL: http://webappsteef.azurewebsites.net



< Prev Next >

Settings

Publish Web ? X

 Publish Web

Profile

Connection

Settings

WebAppSteef - Web Deploy *

Configuration:

< Prev Next > Publish Close

Deploy

Output

Show output from: Build

```
1>----- Build started: Project: ServiceBusMonitorWebJob, Configuration: Debug Any CPU -----
1> ServiceBusMonitorWebJob -> C:\DutchWorkz\Projects\ServiceBusMonitorWebJob\ServiceBusMonitorWebJob\bin\Debug\ServiceBusMonitorWebJob.exe
===== Build: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped =====
ServiceBusMonitorWebJob -> C:\DutchWorkz\Projects\ServiceBusMonitorWebJob\ServiceBusMonitorWebJob\bin\Debug\ServiceBusMonitorWebJob.exe
Copying all files to temporary location below for package/publish:
obj\Debug\Package\PackageTmp.
Start Web Deploy Publish the Application/package to https://webappsteef.scm.azurewebsites.net/msdeploy.axd?site=WebAppSteef ...
Adding sitemanifest (sitemanifest).
Adding directory (WebAppSteef\app_data).
Adding directory (WebAppSteef\app_data\jobs).
Adding directory (WebAppSteef\app_data\jobs\continuous).
Adding directory (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob).
Adding ACL's for path (WebAppSteef)
Adding ACL's for path (WebAppSteef)
Adding ACL's for path (WebAppSteef/App_Data)
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Azure.WebJobs.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Azure.WebJobs.Host.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Azure.WebJobs.Host.xml).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Azure.WebJobs.ServiceBus.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Azure.WebJobs.ServiceBus.xml).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Azure.WebJobs.xml).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Data.Edm.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Data.Edm.resources.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Data.Edm.xml).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Data.OData.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Data.OData.resources.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Data.OData.xml).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Data.Services.Client.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Data.Services.Client.resources.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.Data.Services.Client.xml).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.ServiceBus.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.ServiceBus.xml).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.WindowsAzure.Configuration.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.WindowsAzure.Configuration.xml).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.WindowsAzure.Storage.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Microsoft.WindowsAzure.Storage.xml).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Newtonsoft.Json.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\Newtonsoft.Json.xml).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\ServiceBusMonitorWebJob.exe).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\ServiceBusMonitorWebJob.exe.config).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\ServiceBusMonitorWebJob.pdb).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\StackExchange.Redis.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\StackExchange.Redis.pdb).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\StackExchange.Redis.xml).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\System.Spatial.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\System.Spatial.resources.dll).
Adding file (WebAppSteef\app_data\jobs\continuous\ServiceBusMonitorWebJob\System.Spatial.xml).
Adding ACL's for path (WebAppSteef)
Adding ACL's for path (WebAppSteef)
Adding ACL's for path (WebAppSteef/App_Data)
Publish Succeeded.
Web App was published successfully http://webappsteef.azurewebsites.net/
```

Kudu

- Engine behind git deployments and WebJobs
- Can be run outside of Azure
- Provides dashboard functionality for a website

Project Site

<https://github.com/projectkudu/kudu>

Paths & Files

File/Path	
disable.job	Existence of file stops the job. Deleting it starts the job.
settings.job	Allows you to indicate: is_singleton to scale with website. { "is_singleton": true } or { "is_singleton": false }
site\wwwroot\App_Data\jobs\continuous	Path for continuous web jobs
site\wwwroot\App_Data\jobs\triggered	Path for on demand and scheduled web jobs
data\jobs	Data directories for jobs
job_log.txt	Text file of web job log
status_{hash}	Status file
WebJobsSDK.marker	Singleton lock file

Kudu



Demo

WebJob SDK

- A method can be “triggered” by some event
- Route parameters and bindings help simplify inputs and outputs
- A few options for logging that surface information in the Azure Portal

WebJob SDK – Triggers and Bindings

- Queues (Storage and ServiceBus)
- Blobs
- Tables

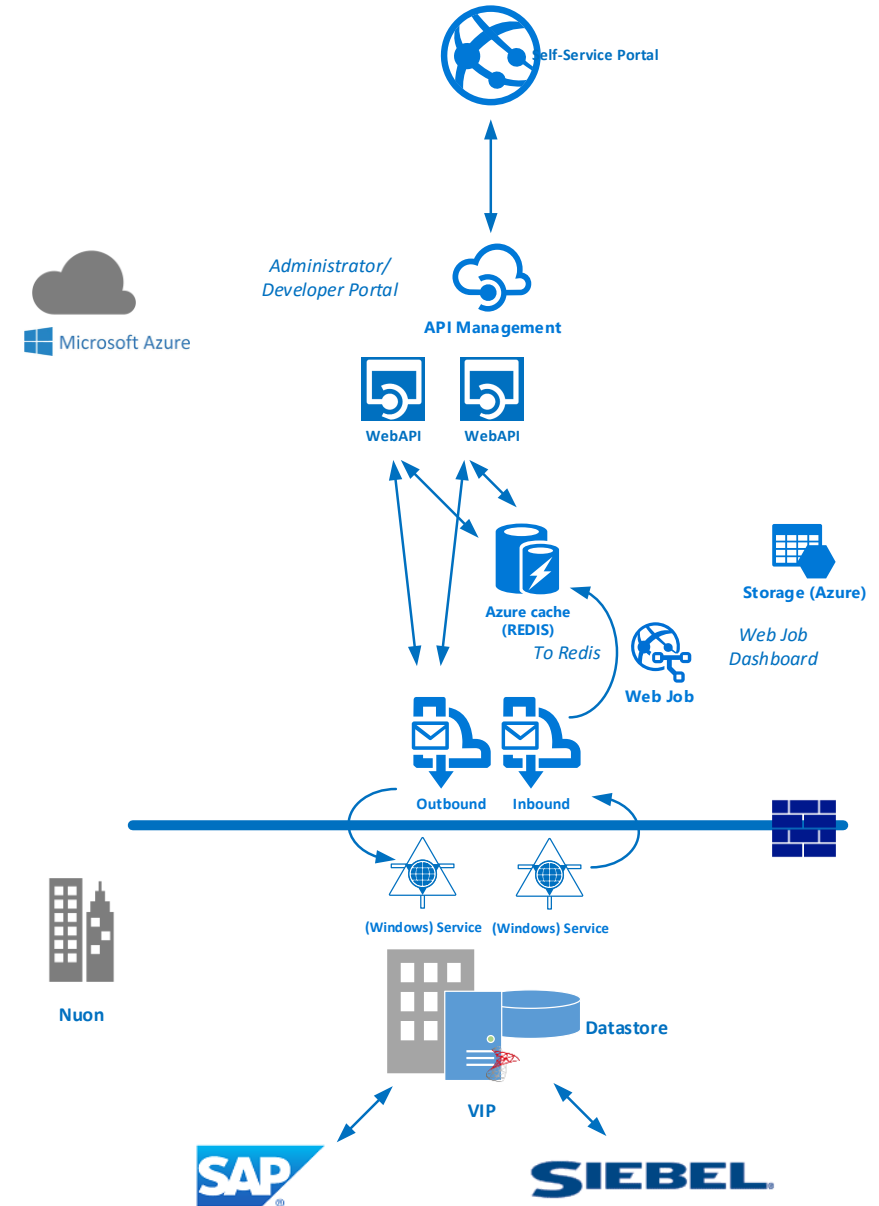
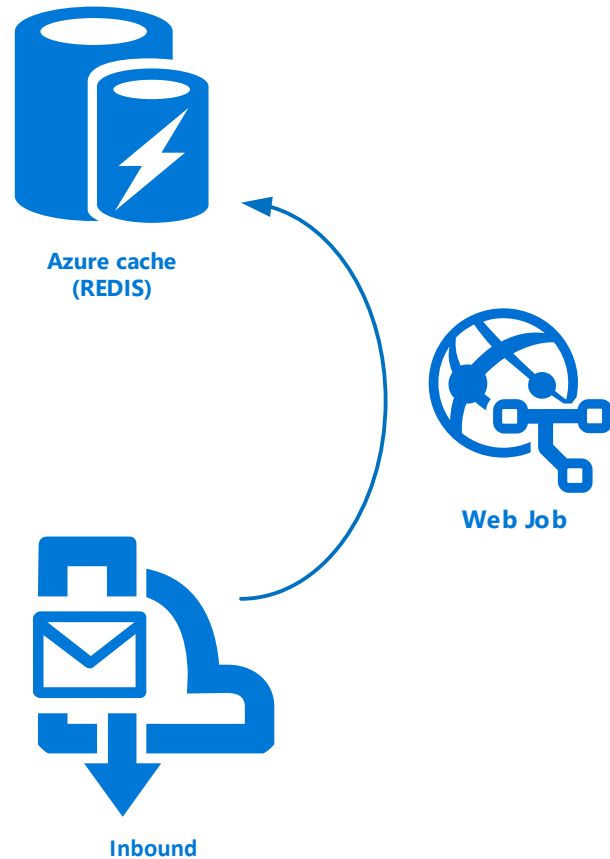
Project Site:

<https://github.com/Azure/azure-webjobs-sdk>

- Now as Microsoft.Azure.WebJobs NuGet

Real world scenario - 1

Push customer data to Redis Cache



Real world scenario (POC)- 2

MPR Data parser



Queues

- azure-webjobs-blobtrigger-05098feb8ab04c45963415f807a474fd
- azure-webjobs-blobtrigger-086397b26f8240b4a18c708ceef9d85c
- azure-webjobs-blobtrigger-109754fa3e68421891f25bf9f133d052
- azure-webjobs-blobtrigger-1d7a167d1fa34aa39bcd797deb5759bd
- azure-webjobs-blobtrigger-1f2ac02bfa0b4e429f1c403fcac5390f
- azure-webjobs-blobtrigger-2ddc47b358d14f97acb430a3bc279c79
- azure-webjobs-blobtrigger-4abad5f25d25411e9959c2bb3b0520a1
- azure-webjobs-blobtrigger-4d7685d98340427cafaa184e7929c5e6
- azure-webjobs-blobtrigger-593129dea32f4f30b405f7c507be5fb3
- azure-webjobs-blobtrigger-5abf6927525143359051de5849636e80
- azure-webjobs-blobtrigger-693c2ae3a01e4a4fba8e7bf55faca0a6
- azure-webjobs-blobtrigger-87f72d30a02c477ea59c310c0ae082eb
- azure-webjobs-blobtrigger-a05c87d58dee4e4d96be952ac836edf0
- azure-webjobs-blobtrigger-b126b20507d84f8590db72c66343d38c

WebJobs In Action



Demo

WebJob SDK Extensions

- TimerTrigger
- FileTrigger
- SendGrid
- ErrorTrigger
- WebHooks

Project Site:

<https://github.com/Azure/azure-webjobs-sdk-extensions>

Alternatives

- Azure Functions
 - *Server less coding*
 - *Configuration*
- Azure Logic Apps
 - *Configuration*
 - *Custom API*

The diagram illustrates a configuration flow. At the top, a panel titled 'recurrence' (with a clock icon) contains a 'FREQUENCY*' dropdown menu set to 'Hour' and an 'INTERVAL*' text input set to '1'. An arrow points down from this panel to a second panel titled 'GetByTypeEDI' (with a document icon). This second panel contains four text input fields: 'TYPEEDI*' with 'MPR', 'CONTAINERIN*' with 'edimpr', 'CONTAINEROUT*' with 'mpr', and 'BLOBNAME*' with 'TestEDI2.VEE'.

LogicApp



Demo

Wrap up

- Flexible means of task automation
- Scalable
- Mature
- Kudu
- SDK

Resources

- Azure WebJobs resources: <http://bit.ly/1KdUkIH>
- <https://github.com/Azure/azure-webjobs-sdk-samples>

Contact

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