I.2 Create Azure App Service Web Apps

jeudi 16 septembre 2021 14:20

Create an Azure App Service Web App

1. Create an **App Service Plan**

- **Region**
- VM **number**
- VM **Size**
- **Pricing Tier** :
  - Free/Shared : 1 go, 60 min
  - Basic : from 1,75go/100 ACU(Azure compute unit) to 7go/400 ACU, but manual scale
  - Standard : 5 autoscale instance, 10 backup/day
  - Premium/PremiumV2/PremiumV3 : 20 autoscale instance, 20 staging slots, 20 backup/day
  - Isolated: Single tenant system, isolated network, internal load balancing

az appservice plan create --name WEB_APP_NAME --resource-group RESOURCE_GROUP_NAME --sku SKU_NAME

2. **Create webapp in azure, using the App service plan**

az webapp create --name WEB_APP_NAME --resource-group RESOURCE_GROUP_NAME --**plan** APP_SERVICE_PLAN_NAME

From **docker** image in ACR :

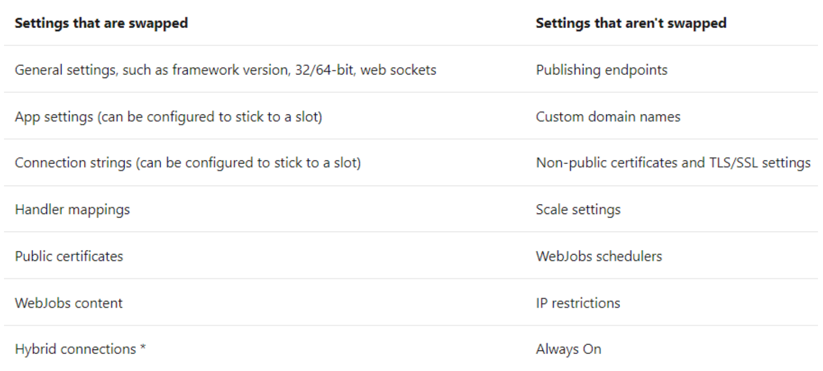
```
az webapp create
      --resource-group myResourceGroup
      --plan myAppServicePlan
      --name <app-name>
      --deployment-container-image-name <registry-name>.azurecr.io/appsvc-tutorial-custom-image:latest
```

Or directly from the app created locally (place in the directory containing the code):

```
az webapp up
       --sku F1
       --name <app-name>
       --os-type <os>
```

Deployment slots

Can be used in Standard, Premium or Isolated plan tier.
App content & configurations can be swapped.
To validate app changes.
To warm-up the app before prod -> eliminate downtime/latency.
If problem, swap again.



Settings that are swapped	Settings that aren't swapped
General settings, such as framework version, 32/64-bit, web sockets	Publishing endpoints
App settings (can be configured to stick to a slot)	Custom domain names
Connection strings (can be configured to stick to a slot)	Non-public certificates and TLS/SSL settings
Handler mappings	Scale settings
Public certificates	WebJobs schedulers
WebJobs content	IP restrictions
Hybrid connections *	Always On

Virtual network integration *	Diagnostic log settings
Service endpoints *	Cross-origin resource sharing (CORS)
Azure Content Delivery Network *	

Custom warm-up

```
<system.webServer>
    <applicationInitialization>
        <add initializationPage="/" hostName="[app hostname]" />
        <add initializationPage="/Home/About" hostName="[app hostname]" />
    </applicationInitialization>
</system.webServer>
```

Or via the following app settings :

- `WEBSITE_SWAP_WARMUP_PING_PATH`: The path to ping to warm up your site. Add this app setting by specifying a custom path that begins with a slash as the value. An example is `/statuscheck`. The default value is `/`.
- `WEBSITE_SWAP_WARMUP_PING_STATUSES`: Valid HTTP response codes for the warm-up operation. Add this app setting with a comma-separated list of HTTP codes. An example is `200,202` . If the returned status code isn't in the list, the warmup and swap operations are stopped. By default, all response codes are valid.

Enable diagnostics logging

```
az webapp log config
    --name MyWebapp
    --resource-group MyResourceGroup
    --web-server-logging off
```

Deploy code to a web app

The code is in a local zip:

```
dotnet publish
cd pub
Zip –r site.zip *
az webapp deployment source config-zip \
  --src site.zip \
  --resource-group learn-32f93c43-419e-4381-9230-32a59ab5d922 \
  --name <your-unique-app-name>
```

The code is in an docker image in an ACR :

```
az webapp config container set
    --name <app-name>
    --resource-group myResourceGroup
    --docker-custom-image-name <registry-name>.azurecr.io/appsvc-tutorial-custom-image:latest
    --docker-registry-server-url https://<registry-name>.azurecr.io
```

Configure web app settings including SSL, API settings, and connection strings

SSL :

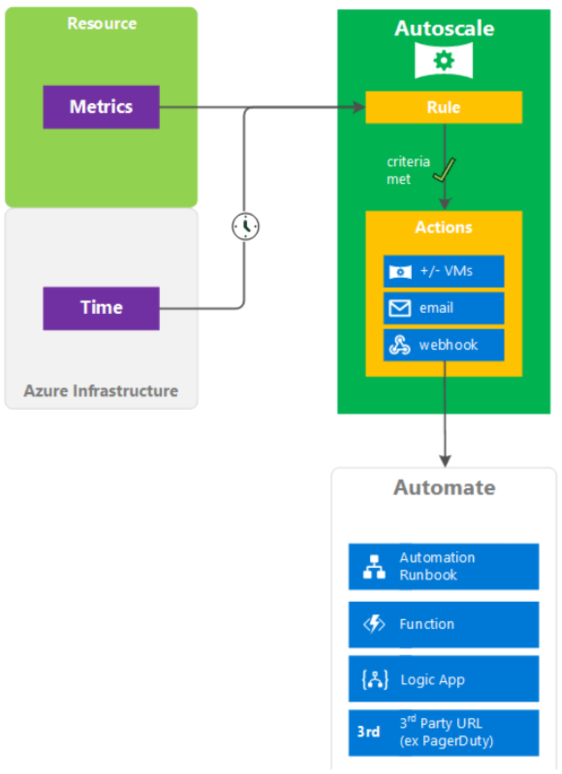
```
# Upload the SSL certificate and get the thumbprint.
thumbprint=$(az webapp config ssl upload
        --certificate-file $pfxPath
        --certificate-password $pfxPassword
        --name $webappname
        --resource-group $resourceGroup
        --query thumbprint
         --output tsv)

# Binds the uploaded SSL certificate to the web app.
az webapp config ssl bind
        --certificate-thumbprint $thumbprint
        --ssl-type SNI
        --name $webappname
        --resource-group $resourceGroup
```

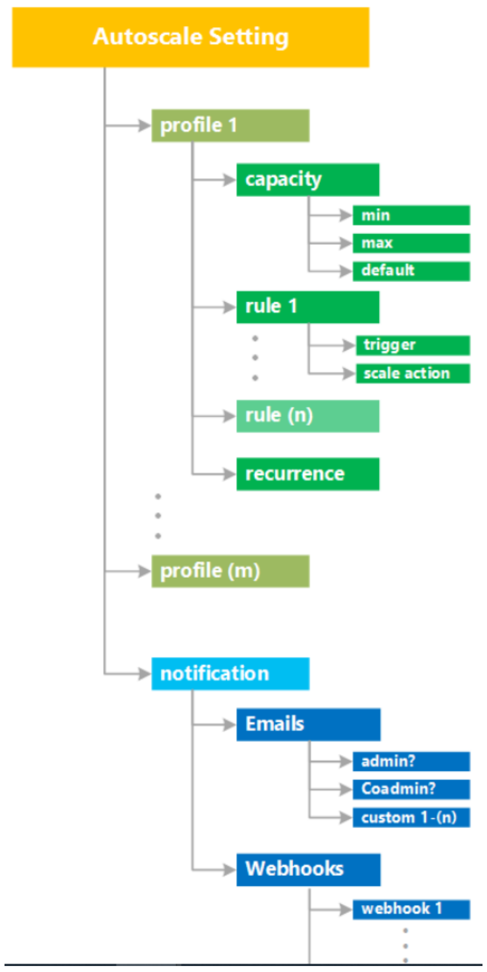
Connection String : (Ex avec une CS de type mysql)

```
az webapp config connection-string set -g MyResourceGroup -n MyUniqueApp -t mysql \
 --settings mysql1='Server=myServer;Database=myDB;Uid=myUser;Pwd=myPwd;'
```

Accepted values (-t) : ApiHub, Custom, DocDb, EventHub, MySql, NotificationHub, PostgreSQL, RedisCache, SQLAzure, SQLServer, ServiceBus

Implement autoscaling rules including scheduled autoscaling and autoscaling by operational or system metrics





Scheduled autoscaling :

```
az monitor autoscale profile create
    --autoscale-name MyAutoscale
    --count 2
    --max-count 10
    --min-count 1
    --name Christmas
    --recurrence week sat sun
    --resource-group MyResourceGroup
    --start 2018-12-24
    --subscription MySubscription
    --timezone "Pacific Standard Time"
```

Autoscaling **by system metric** :

Out => monter
In => descendre
Horizontal : VM instances
Vertical : VM power

```
az monitor autoscale create -g {myrg} --resource {resource-id} --min-count 2 --max-count 5 \
  --count 3 --email-administrator

az monitor autoscale rule create -g {myrg} --autoscale-name {resource-name} --scale out 1 \
  --condition "Percentage CPU > 75 avg 5m"

az monitor autoscale rule create -g {myrg} --autoscale-name {resource-name} --scale in 1 \
  --condition "Percentage CPU < 25 avg 5m"
```

Get autoscale settings by name and resource group :

```
az monitor autoscale show --name <settings name> --resource-group <group name>
```