

## **Final Project - Summary**

### **Azure Batch**

#### **Problem Statement:**

During different times of the year, CompanyA has a need to provide access to their web site during seasonal spikes. The use case that will be presented as an example is creating multiple web servers to provide for that demand, by quickly spinning up additional VMs. Utilizing Azure Batch, CompanyA can quickly respond to demand by customers and react with a single stream to create as many vms as needed to meet that demand. It also allows for them to not have to retain the infrastructure on-premise while not being utilized during non-seasonal peaks. This reduces their spend rate for such infrastructure where they only spend for the machines that they require during those spikes within the cloud.

#### **Overview of the Technology:**

To solve the above problem, I will utilize the Azure Batch service to schedule the deployment of multiple vms to host the Company's website and when no longer required, spin down those vms to reduce billing costs when demand no longer requires those assets. Azure batch builds on the compute stack, hence vms can be Windows or Linux and perform various tasks needed on-demand. Jobs with tasks are performed on the vms when they are deployed. There is also a job scheduler that can be employed to run various jobs/tasks at different times.

#### **Pre-requisites:**

- 1) Create a resource group
- 2) Create a storage account
- 3) Create a VNET
- 4) Create a batch account

#### **High Level Steps:**

- 1) Upload input files and the applications to process those files to Storage Account
- 2) Create Batch pool of compute nodes
- 3) Download input files and applications to Batch
- 4) Monitor task execution
- 5) Upload task output
- 6) Download output files – in our case review the website

#### **Data Source:**

Free Website code

[https://www.000webhost.com/templates/Music\\_Club\\_Party/template\\_18/download](https://www.000webhost.com/templates/Music_Club_Party/template_18/download)

Microsoft Azure CLI Batch

<https://docs.microsoft.com/en-us/cli/azure/batch?view=azure-cli-latest>

Microsoft: Run your first Batch job with the Azure CLI

<https://docs.microsoft.com/en-us/azure/batch/quick-create-cli>

Azure SDK for Python

<http://azure-sdk-for-python.readthedocs.io/en/latest/ref/azure.batch.html>

**Hardware Used:**

MacBookPro

**Software Used:**

Azure Portal (<https://www.centos.org/download/>)

Azure CLI v2 (<https://docs.microsoft.com/en-us/cli/azure/install-azure-cli-macos?view=azure-cli-latest>)

Azure Batch CLI extensions (<https://github.com/Azure/azure-batch-cli-extensions> )

Sublime Text 3 (<https://www.sublimetext.com/3> )

**YouTube Links:**

2 Min: <https://youtu.be/7gx0x4jA7TQ>

15 Min: <https://youtu.be/-Qj3BdCGIjU>