Friday, January 19, 2024 11:35 AM

Below Link for
https://github.com/in28minutes/devops-master-class

In azure DevOps Jobs are run parellel

Github repository contains the backup of all the 8 Azure DevOps pipelines created in the course.
You can bookmark and refer to them if you have any problems.
https://github.com/in28minutes/devops-master-class/tree/master/projects/microservices/01-currency-exchange-microservice-basic/pipeline-backups

Kubernates initial has node on top of it it has PODS on top of it has Container. If 2 container are with in pods then they can talk each other in local host with creating the network by default is bridge network .

If we delete the pods with in new seconds new pods will generated with different ID .
Kubectl delete pods ID. Bascially Kubernates replica set that will continuously monitor the desired number of replica set is needed , If it is less than required then it will automatically starts the new pod

Deployment will make sure that application will not be down while switching over the releases

Kubernates service will allow to receive the traffic via contact IP , since PODS are temporary and it will be deleted , IP address change etc . When we expose the deployment Kubernates service will be auto created with a IP that is been used to communicate

Cluster IP service will not have access to external world

Kubectl get componentstatuses -- Will give the components running inside the master node
Kubectl rollout history deployment <deployment name>

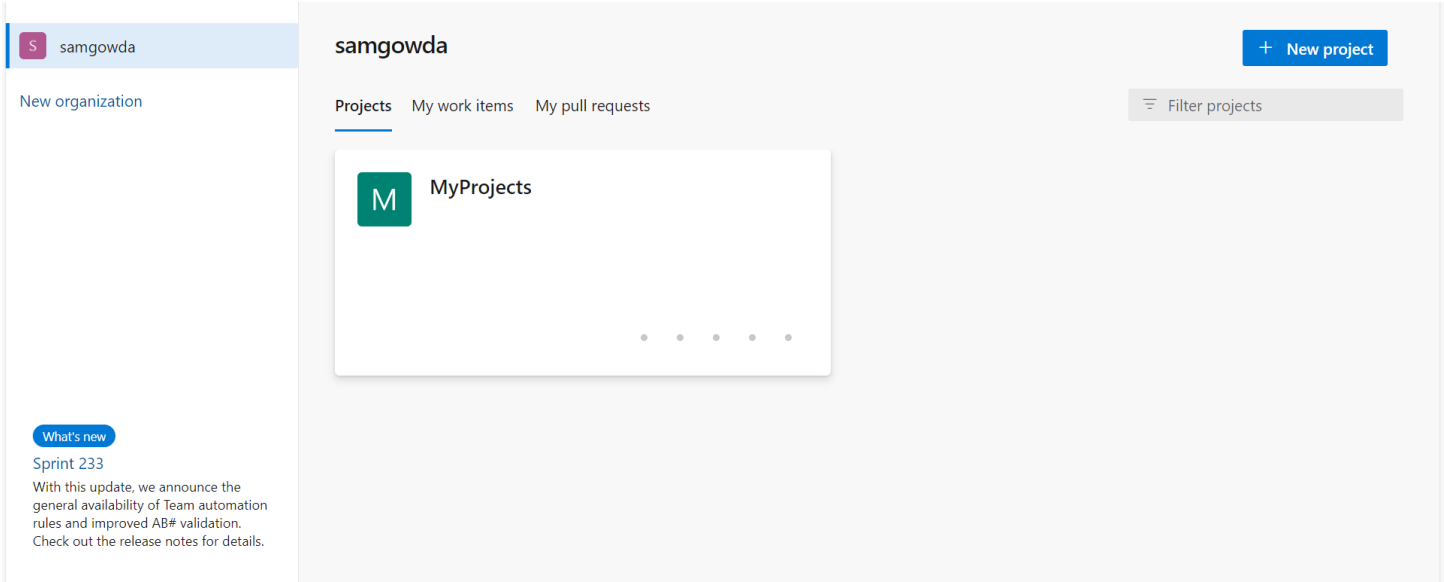
Watch command is use full to hit the request in 2 minutes and see the response
Watch curl <requesturl>

Kubectl diff -f deployement.yaml will give the changes made
minReadySeconds property in yml file will take care
In kubernatees by default yml configuration TYPE is LoadBalancer , In this scenario for each mS one load balancer is created . SO it is costly . To avoid this we need to create the type to Nodeport . IN node port there will be no external IP's assigned
In this scenario we need to create the Ingress to

Azure DevOps

Link for overview of Azure CI & CD : https://devblogs.microsoft.com/devops/announcing-general-availability-of-azure-pipelines-yaml-cd/

Previously Azuer Dev ops is called VSTS(Visual Studio Team Services) .
After you create the account there will be option to create the project under organization . You can create multiple project and organization



IN case if you don't want to run specific pipe line then we need to go to pipe line setting ,

Variable in Azure Pipeline is created at Job , steps and stages . In azure we have predefined pipeline variables . We can make use of them to get the information . Below is the link
Azure Pipeline Variables-Link

Terraform
It is IAC - Infrastructure as Code tool
Is used to provision services on the cloud like load balancer , VM

Application Insight

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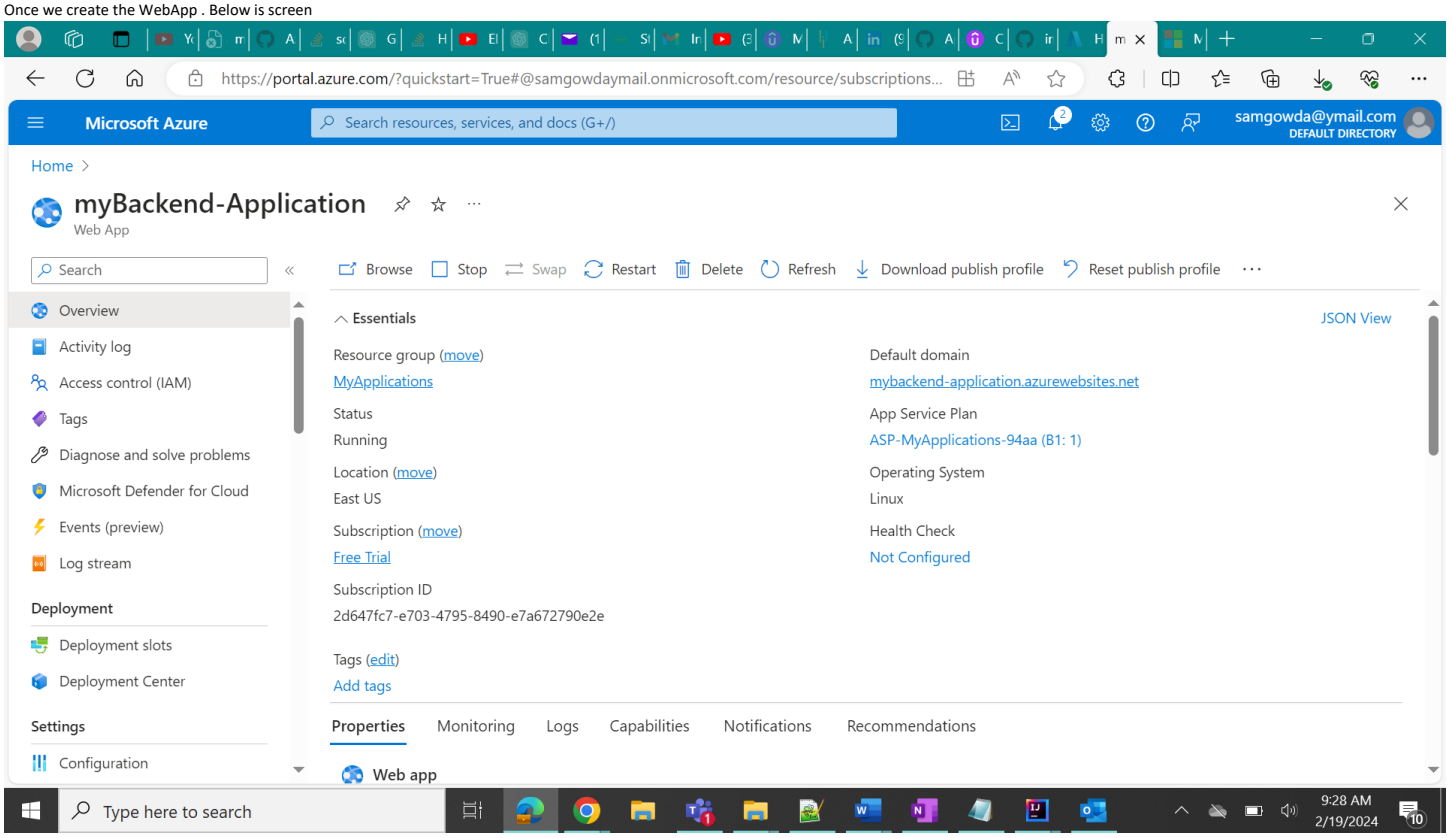
We need to configure the key application insights service key in to application properties and add the dependency to POM XML

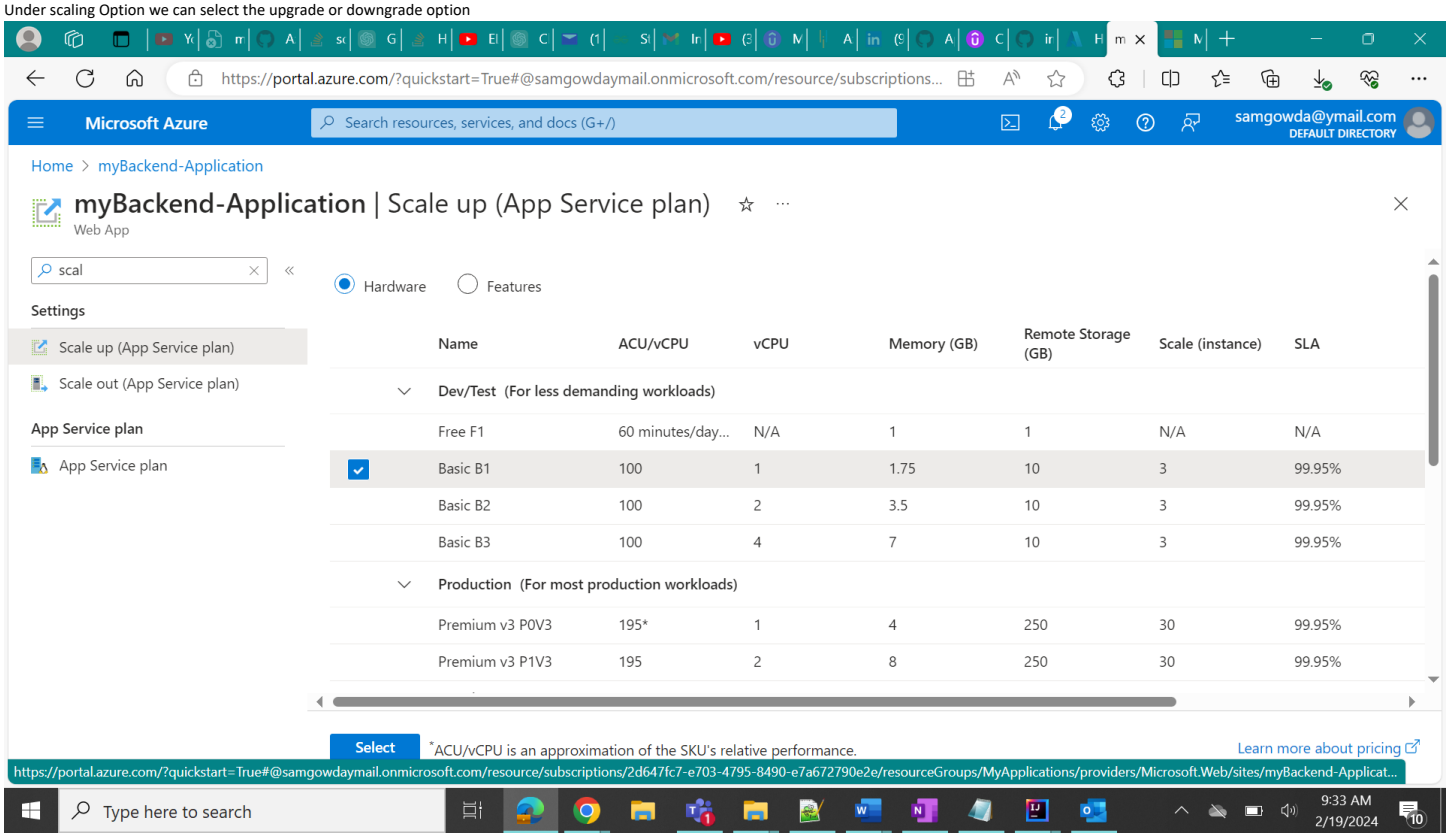
As part of the application deployment process , We need to create the web app service where we need to select the operating system and java based app . Type of VM's needed

Once we create the WebApp . Below is screen



Under configuration option we can specify the environment variable .

Under scaling Option we can select the upgrade or downgrade option



Selecting the right app service is the key element in Azure for cost optimization . ACU (Azure computing Unit) .

Isolated Option used to build your own network . So it will be more secure

Under the App service created you can search with Advanced option and click on go will . Then u can use appropriate option to view the log Az webapp log tail --name <applicaitonname> -- resource-group <resorucegroup name > this command for viewing from command promt .	

Best Practices of Azure

1. To avoid cost you can delete the resource group that is not been used

2. Select Best VM for each environment example B1, B2 or V1 , V2
3. Set billing Alert
4. Check the cost every day by going manually to azure website

TO deploy the code to Azure

Add azure webapp maven plugin dependency in pom.xml

use az login command to log in to azure using command line , it will redirect to windows page where you need to enter the user name and password

mvn azure-webapp:deploy - command for deploy project , make sure you are in project directory where pom.xml is present

ARR Affinity option is under app services , We can make it off for web application so that load will be distributed across the multiple instances .

Basic VM does not have auto scale , SO we need to select V1 series under scape up option we need to select the custom autoscale .

Microsofst Insight is needed to register for V1 auto sale that needs to be registered under subscription

Sunscription -> microsoftInsigths ---> register

IN production we need to configure scale out and scale up

Deployment slots is for deploying the code to different environment : WE need to add deployment slot tag in pom .xml