

CI/CD documentation using Azure DevOps and Azure portal

We create CI/CD on Azure DevOps and deploy it to VM and WebApp on Azure portal, before it create all needed resources

appService1 - Microsoft Azure

portal.azure.com/#@bhaskarmadan123outlook.onmicrosoft.com/resource/subscriptions/d5e0d96-0b66-40df-936a-1a...

Microsoft Azure Search resources, services, and docs (5+)

Home > Resource groups > appService1

appService1 Resource group

Search (Ctrl+/)

+ Add Edit columns Delete resource group Refresh Move Export to CSV Assign tags Delete Export template

Subscription (change): Free Trial Deployments: 2 Succeeded

Subscription ID: d5e0d96-0b66-40df-936a-1a...55943de

Tags (change): Click here to add tags

Filter by name... Type == all Location == all Add filter

Showing 1 to 4 of 4 records. Show hidden types No grouping

Name ↑↓	Type ↑↓	Location ↑↓
ASP-appService1-90e1	App Service plan	Central US
javatpointAppService	App Service plan	East Asia
jstest	App Service	Central US
jstest	Application Insights	Central US

< Previous Page 1 of 1 Next >

https://portal.azure.com/#@bhaskarmadan123outlook.onmicrosoft.com/resource/subscriptions/d5e0d96-0b66-40df-936a-1a...55943de/resourceGroups/appService1/providers/Microsoft.Web/sites/jstest

Home > Virtual machines > ngx-plus-1

ngx-plus-1 Virtual machine

Search (Cmd+/)

Connect Start Restart Stop Capture Delete Refresh

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Resource group (change) NGINX-Plus-HA Azure Spot N/A

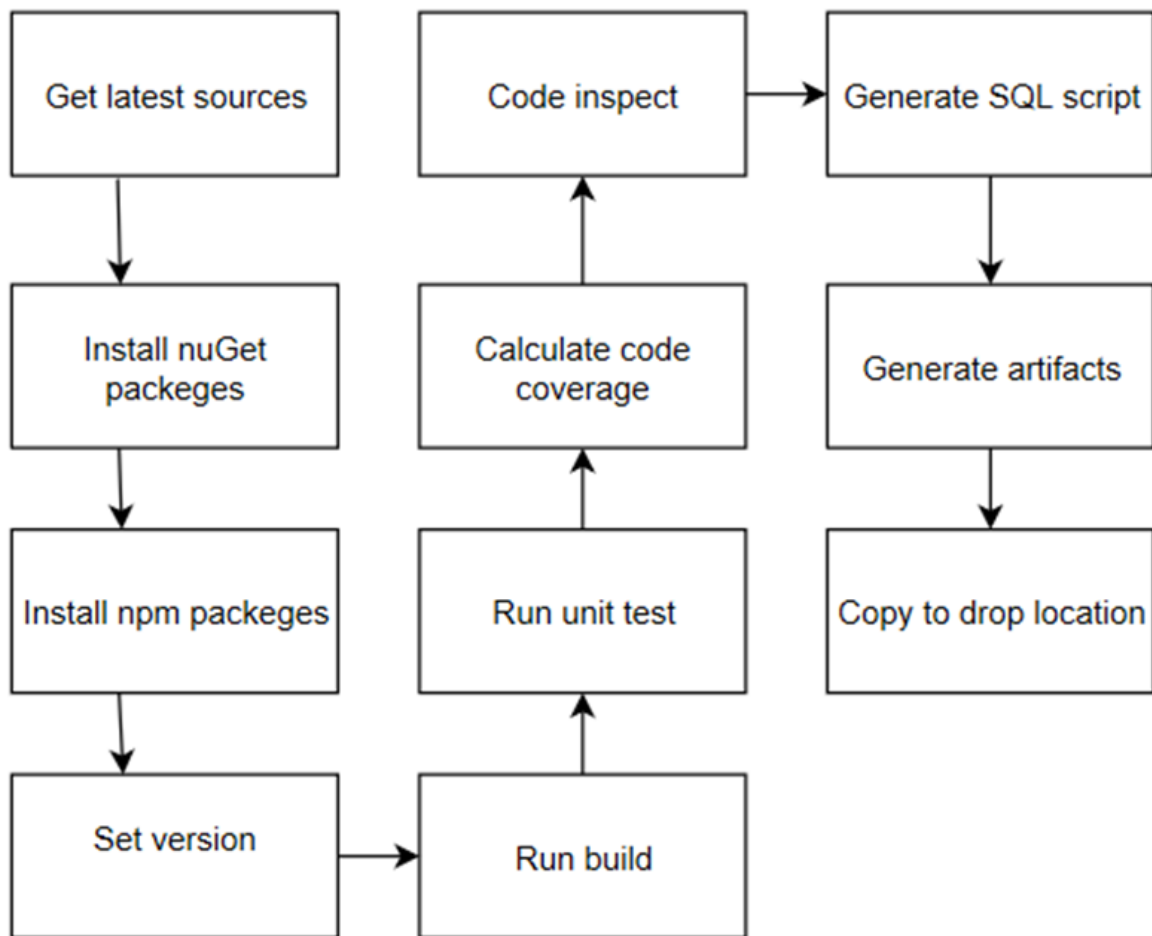
Status Running Public IP address 13.66.134

Location West US 2 Private IP address 10.0.0.4

Subscription (change) NGINX-Plus-HA-subscription Public IP address (IPv6) -

CI step it's a process of build, test and publish artifacts to blob storage:


schema of CI process:





realization of CI process:


Build


Run on agent


 Azure PowerShell script: TURN ON MACHINE
Azure PowerShell


 Inline Powershell
Run Inline Powershell


 Use NuGet 4.4.1
NuGet Tool Installer


 NuGet restore
NuGet


 Prepare analysis on SonarQube
Prepare Analysis Configuration


 npm install
npm


 npm run build
npm


 Copy Files to: wwwroot
Copy Files


 Build solution
Visual Studio Build


 Test Assemblies
Visual Studio Test


 Run Code Analysis
Run Code Analysis

 SQL script generation
Command Line

 Copy ARM templates and Scripts to: drop
Copy Files

 Publish Artifact
Publish Build Artifacts

 Publish Quality Gate Result
Publish Quality Gate Result

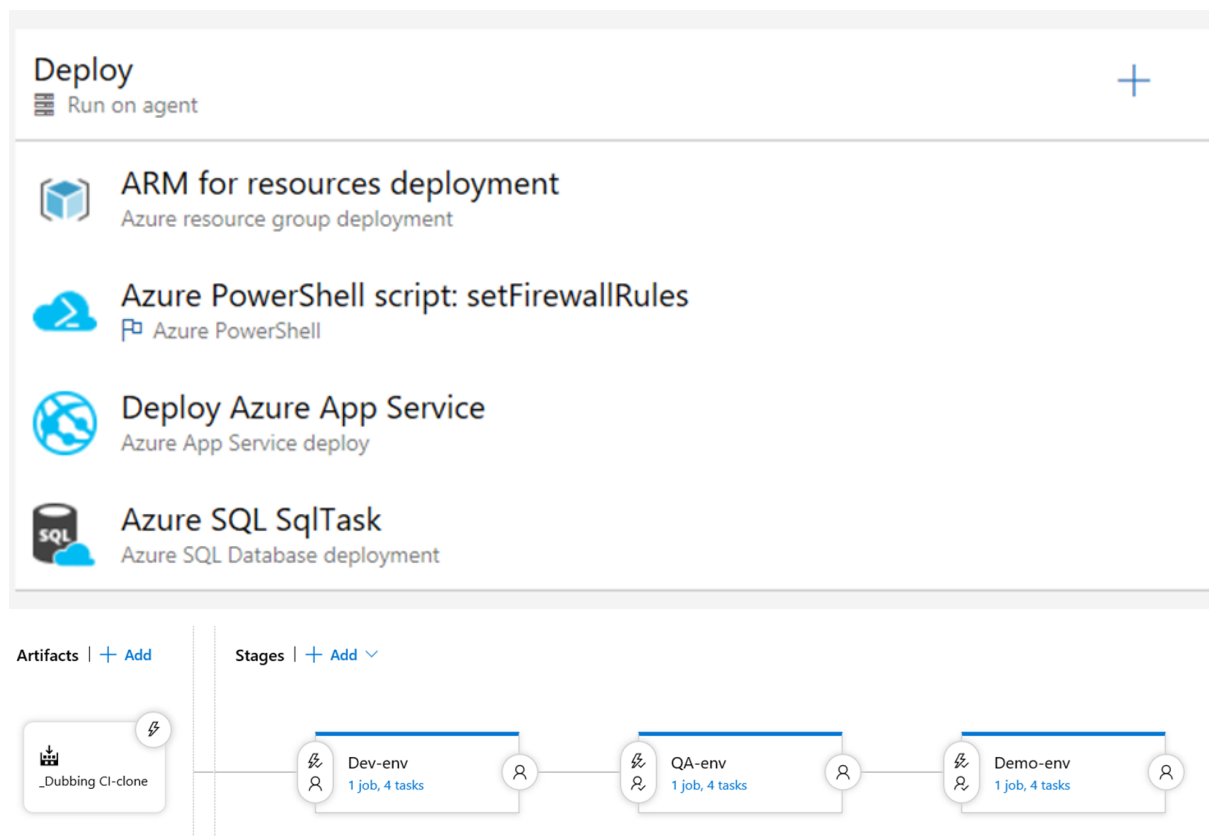
 Azure PowerShell script: OFF MACHINE
Azure PowerShell

- pipeline triggers when new changes income to branch

- pull latest sources
- install packages
- build app
- run code coverage and code quality
- generate sql scripts
- publish artifacts

CD enables rapid and frequent software releases by automating the deployment process. It reduces manual intervention and streamlines the release pipeline, allowing organizations to deliver new features and updates to end-users more quickly.

For CD we implement a release pipeline on Azure DevOps for dev, stage and prod envs.



- CD pipeline triggers when new build version come
- ARM templates configure out resources
- Set firewall rules for all resources and traffic management

- Deploy build artifact to VM/WebApp
- Migrate DB

After full CI/CD runs we need to check access to our app from internet

In conclusion we got full automates infrastructure where have CI/CD process with code quality and security

