ONLINE TECHNICAL CHALLENGE

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AGENDA

Challenge 1 - 3 Tier Architecture in Azure Cloud

Challenge 2 - Query Meta Data in Azure

Challenge 3 - Get the value using coding

Introduction

For the technical discussion, these slides has prepared by me to share my understanding and my inputs with architectural diagram , coding and key points for requested challenges . I will be sharing the details with reason “*why*“& for “*what*” the tooling's /resources , etc are been used

CHALLENGE # 1

A 3-tier environment is a common setup. Use a tool of your choosing/familiarity create these resources on a cloud environment (Azure/AWS/GCP). Please remember we will not be judged on the outcome but more focusing on the approach, style and reproducibility

3 Tier Architecture in Azure Cloud

- Overview of Network Topology
- Hub & Spoke Model
- Subnet + Network Access
- Deploying different stages (DEV , QA , STG & PROD)
- Other Azure Services

Why Hub & Spoke ?

- Network Isolation
- Separation of Concern
- Governance and Compliance

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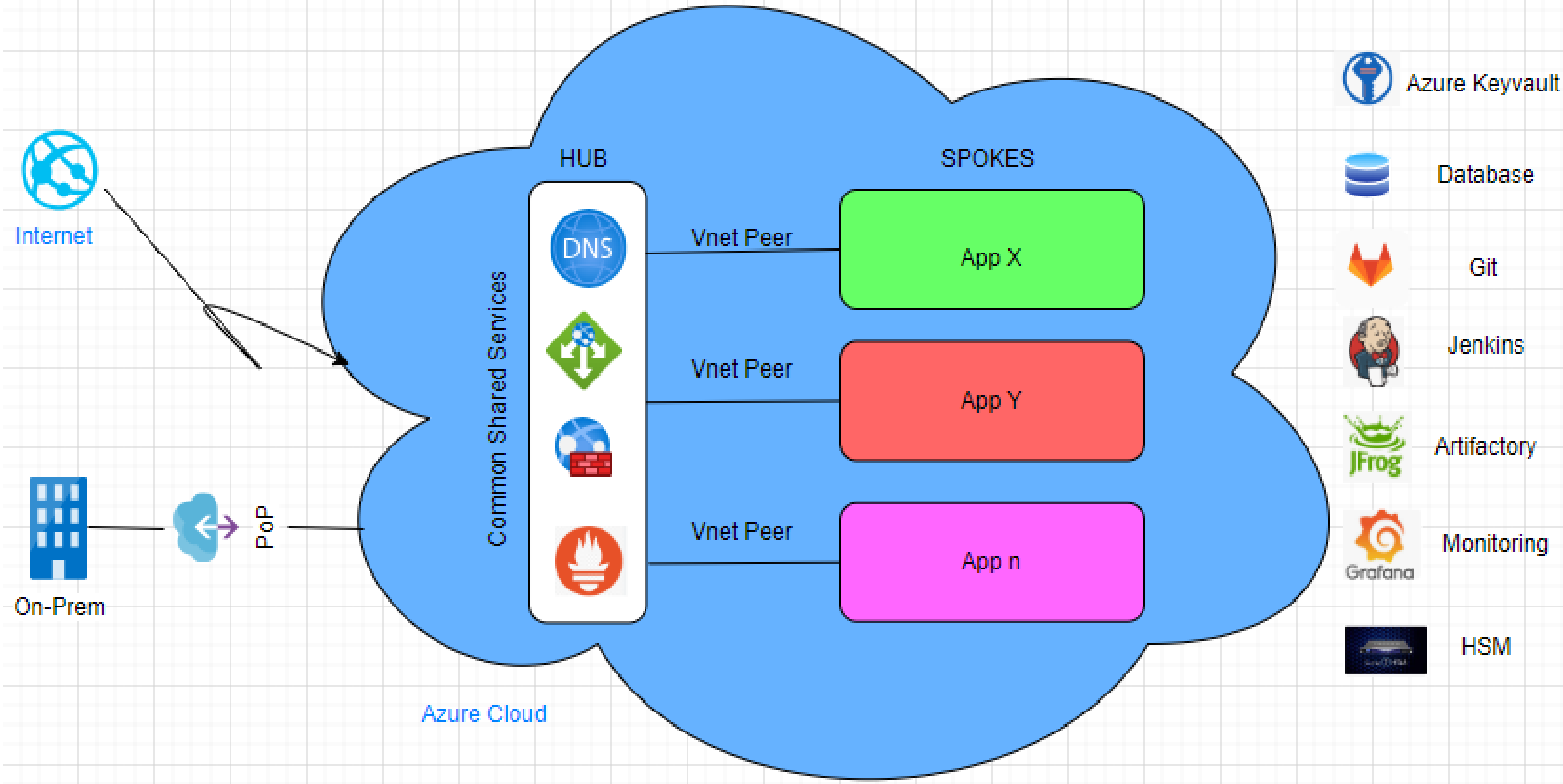
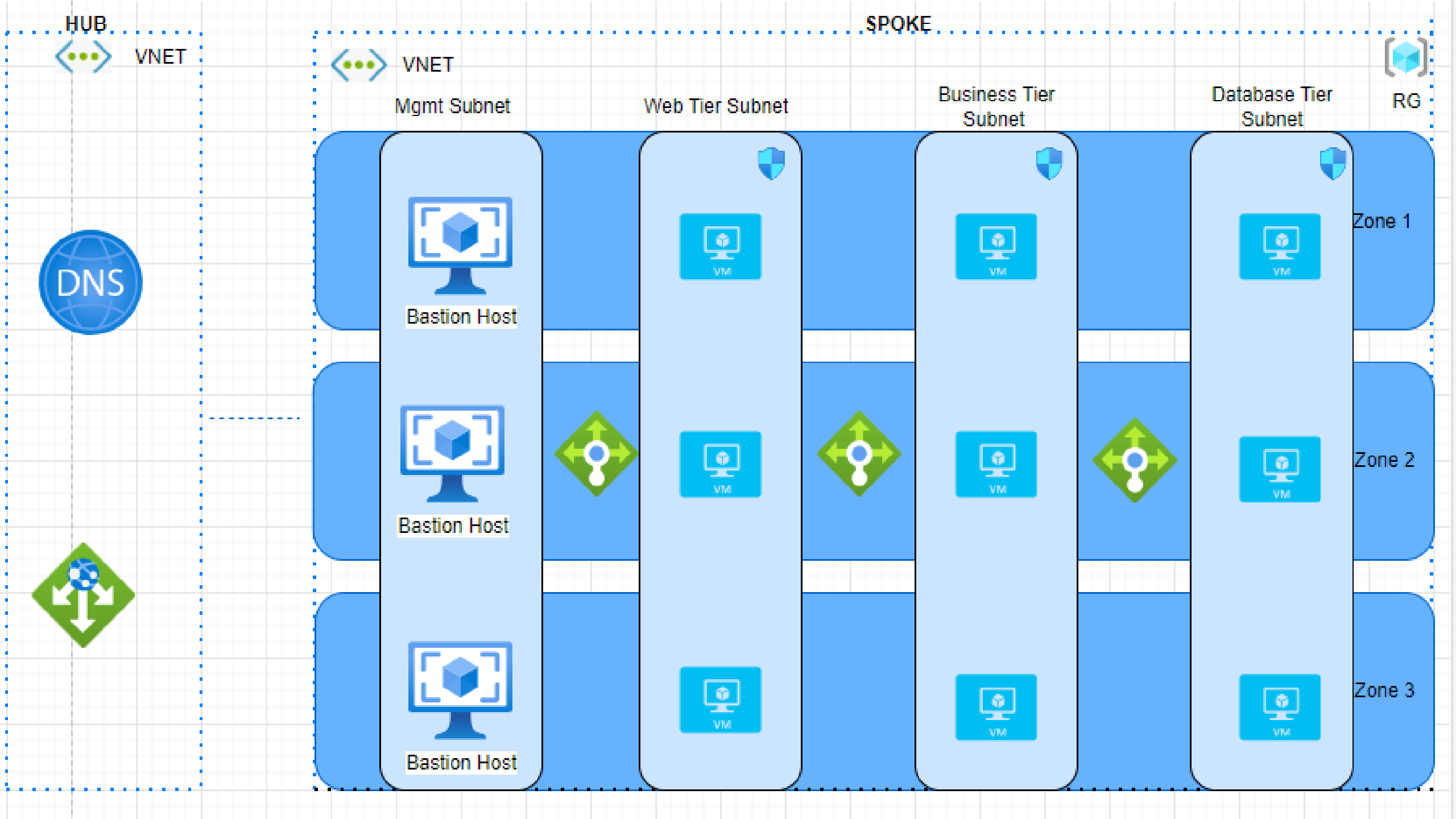



HUB
VNET
DNS
SPOKE
VNET
RG
Mgmt Subnet
Web Tier Subnet
Business Tier Subnet
Database Tier Subnet
Bastion Host
Bastion Host
Bastion Host
VM
Zone 1
Zone 2
Zone 3

Azure Service and other supporting services/tooling's

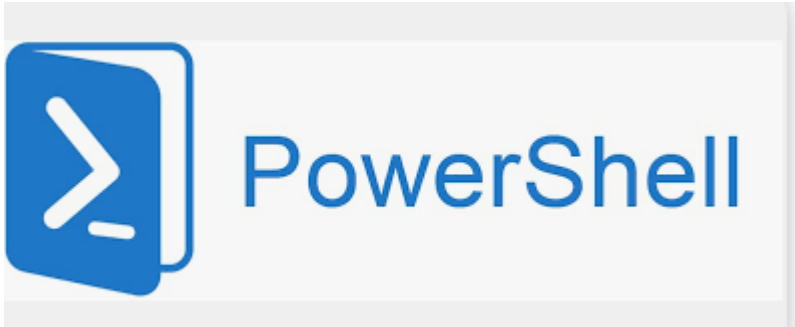
CHALLENGE # 2

We need to write code that will query the meta data of an instance within AWS or Azure or GCP and provide a Json formatted output. The choice of language and implementation is up to you.

Querying meta data using PowerShell

- Used Azure PowerShell to query the azure VM instance meta data
- Walkthrough the real time command execution
- Azure Instance Metadata Service
- Json format can be also retrieved from portal on resources
- Commands

```
az vm show --name testvm --resource-group test_rg --query 'networkProfile.networkInterfaces[].id'
az vm show --name testvm --resource-group test_rg | ConvertTo-Json
```



CHALLENGE # 3

We have a nested object. We would like a function where you pass in the object and a key and get back the value. The choice of language and implementation is up to you.

Example Inputs object = {“a”:{“b”:{“c”:”d”}}}

key = a/b/c

object = {“x”:{“y”:{“z”:”a”}}}

key = x/y/z value = a

Demo

- Used Java script to execute the command and I will walk you through the java function and will execute the command real time and explain it line by line

- Demo using online fiddle-meta to execute the function and check the results

Java Script

```
function getValueFromJson(obj, keys) {
                var key = keys.split("/");
  console.log("keyArr test", key);
  var value = obj;
  for (var i=0; i<key.length; i++) {
                value = value[key[i]];
    console.log("value", value);
  }
  return value;
}

var obj = {'x':{'y':{'z':'a'}}};

var res = getValueFromJson(obj, "x/y/z");

console.log("Result ", res);
```

PRESENTATION TITLE

THANK YOU

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