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
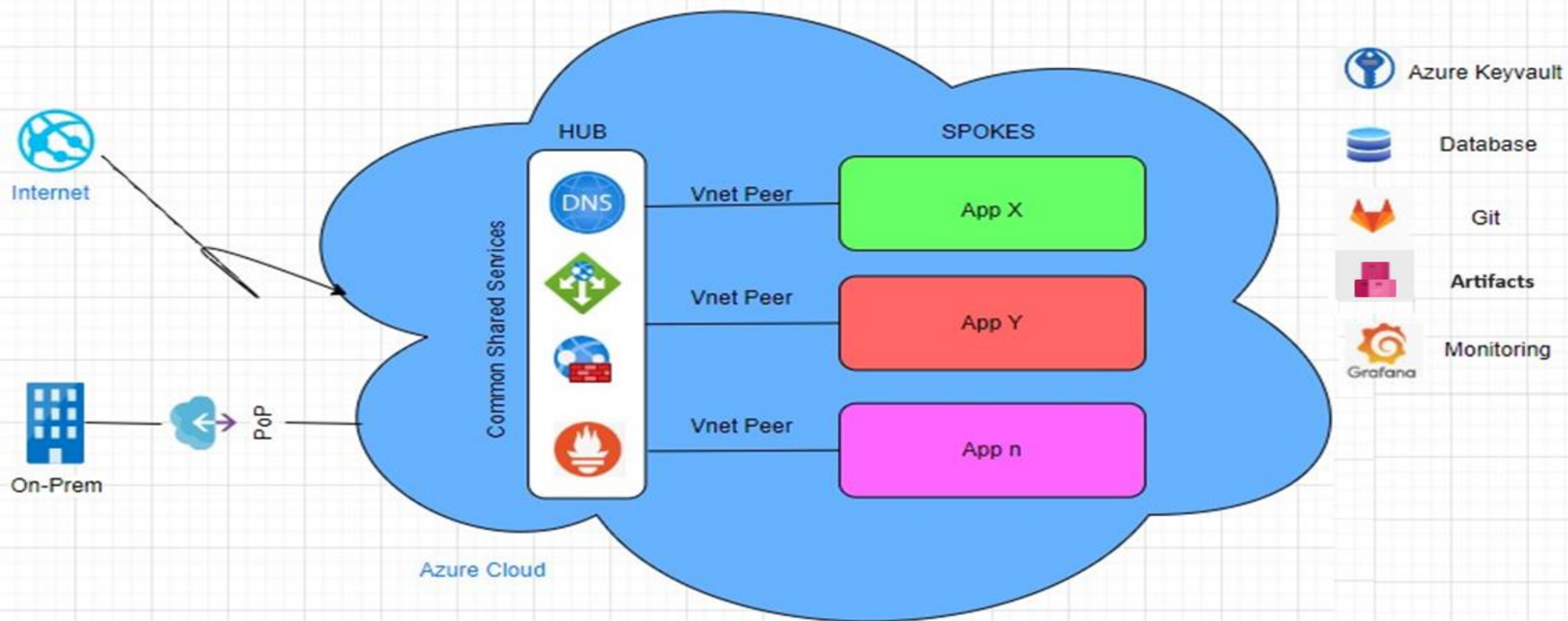
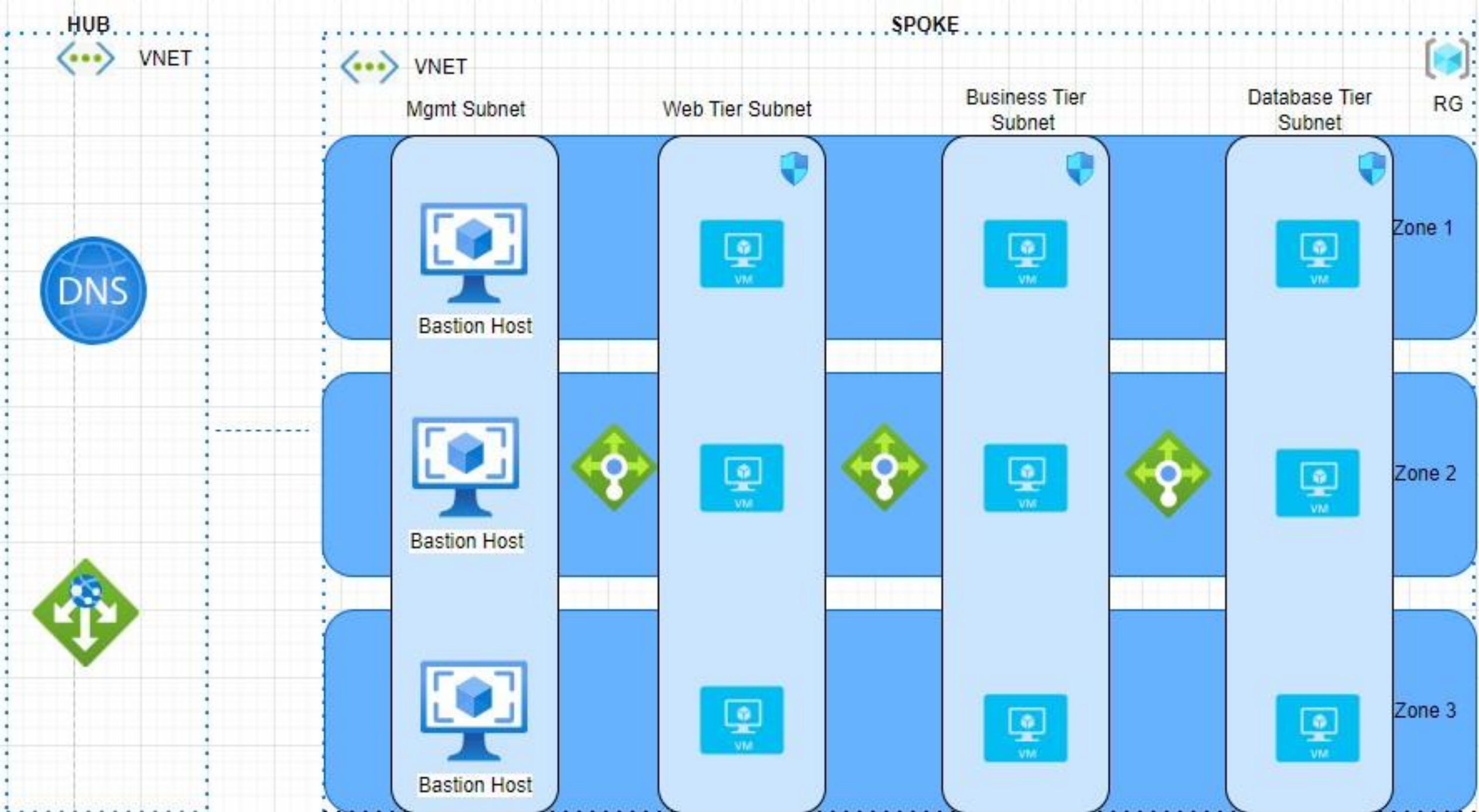# 3 Tier Architecture in Azure Cloud

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

- Network Isolation

- Separation of Concern

- Governance and Compliance

Why Hub & Spoke ?

10000 Feet Overivew

Other Services

HUB

SPOKES

Common Shared Services

DNS

Vnet Peer — App X

Vnet Peer — App Y

Vnet Peer — App n

Internet

On-Prem

PoP

Azure Cloud

Azure Keyvault

Database

Git

Artifacts

Monitoring

Grafana

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

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

```javascript
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);
```

PRESENTATIONTITLE

THANK YOU

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