Azure Virtual Desktop (Twitter - @askaresh)

1 Getting Started

- Azure Subscription
  - 1 Create you account and increase the quotas for deployments
  - 2 Create a Resource Group
    - Add role - Virtual Machine User Login - the AD group to allow AAD login to the Virtual Machine
  - 3 Create Virtual Networks and Subnets
    - Mgmt. Netw
    - DMZ Netw
    - Desktop Netw
  - 4 Create Virtual Network Gateway or Express Route
    - Exchange IP routes between the networks
    - Route Network Traffic (Btw Azure/On-premise Subnets)
  - 5 Create Local Network Gateway
    - How to connect back with on-premise
    - Used together along with virtual network gateway
    - Public IP of the on-premise is used
    - Address space is the local on-premise subnets
  - 6 Create a Connection
    - Under virtual network gateway - Connections
    - Site to Site (IPSEC) + shared key
    - Production environment should have a ExpressRoute. Make sure you select the rightsized for the network throughput
- On-premise
  - Connect to VPN or/else ExpressRoute
    - Depends on router/network config
  - You have Active Directory and File Shares already deployed

2 Deployment

- Create the backend servers
  - Domain Controllers
  - File Servers
    - Add additional Data Disk
- Virtual Network
  - Point to on-premise DNS for name resolution or/else the default will point to Azure
- Join the DC/FS to the domain
- Synchronize AD with AAD
  - Add custom domain names (E.g. askaresh.com
  - Azure AD Connect Software on AZ-DC
    - Password Hash Synchronization
    - New service account within AAD
    - Permission for Service account - Global Administrator
    - Login to AZ Portal with the Service account to validate the password or set the password
    - Check - continue without matching all UPN suffixes
    - Users are represented only once across all directories

3 Master Images

- Windows 10 Multi Session
  - Create the VM in Azure Portal - D2sm instance
  - Select these details properly during VM creation
    - Select the Image type properly - Windows 10 Multi session Gen2
    - Select the Premium SSD disk for OS Disk in production
    - No Data Disk + Select Proper Network + Tags
  - After the VM Golden Image creation login to the image using Azure Bastion
  - Install Windows Updates
  - Install FSLogix on the master image
  - Install Edge, Chrome, NP++, Putty and OneDrive Per machine install
  - Customize the Image with few optimizations mentioned on Microsoft Doco. You can also port them all into a GPO
  - Optional - Configuration
    - GPO - Restrict users accessing the temporary drive
    - GPO - Set limit for disconnect sessions
    - GPO - Set time limit for logoff remote app sessions
    - GPO - Set rules for remote control of RDS users sessions
    - Configure Windows Defender extension exclusions for FSLogix
    - Optional take a snapshot of the template before the Sysprep task
  - Generalize the image OOBE + Generalize + Shutdown
  - Template is ready
- Windows 10 1909 Enterprise
  - Create the VM in Azure Portal - D2sm instance
  - Select these details properly during VM creation
    - Select the Image type properly - Windows 10 Multi session Gen2
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  - Generalize the image OOBE + Generalize + Shutdown
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- Windows Server 2019 Datacenter
  - Create the VM in Azure Portal - D2sm instance
  - Select these details properly during VM creation
    - Select the Image type properly - Windows 10 Multi session Gen2
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4 Capturing Image and publishing in Azure + Azure Compute Gallery formerly known as (SIG) + Register AVD Provider

- Capture Image
  - Under Virtual Machines Select the Image and click on Capture
  - Automatically deletes after creating
  - Repeat these steps on all master Image
- Azure Compute Gallery (ACG)
  - Create the ACG - put it under the Resource Group
  - Add new - VM image definitions
    - OS Type - Windows OS
    - OS State - Generalized
    - VM Generation - Gen 2
  - Provide a Version + Select the Image (Previously Created) + Expiry Date + Multi-regions
- Register AVD Provider
  - Subscription - Providers - Microsoft.DesktopVirtualization

5 Host Pools (HP)

- Go to Azure Virtual Desktop
- Click on Create a host pool
  - Select the subscription and Resource Pool - Provide a HP Name
  - Metadata Location - Unfortunately there is no Australia or Asia (while drafting this mind map)
  - HP Type - Pooled + LB Alog - Breadth First + Max Sessions Limit - 50 (Size out these numbers properly in adv.)
  - Virtual Machine
    - Name Prefix - The name that VM will get under HP
    - Select the Availability Options - Dev purpose select no availability
    - Image Type - Gallery - Select the Image we created earlier + select the size of the VM that will be deployed
    - Number of VM's - XX + OS Disk - SSD
    - Select the dedicated Desktop Network - Virtual Network
    - Domain Join - Active Directory or now AAD
    - Virtual Machine Local account details - Username/Password
  - Create a New Workspace + Review and Create the HP
- targetisaadjoined:i:1
  - Add the advanced RDP Properties to allow non AAD joined machine to access

6 Application Groups (AG)

- These are the application pools of Horizon for Published Applications
- Optional - Delete the AG created by the HP Wizard
- New AG
  - Select the subscription and Resource Pool - Provide a HP Name
  - Application Group Type - Remote App (Published Application) and Desktop
  - Give is a proper Name to identify the AG type
  - This is Desktop no App Assignment is required
  - Select the AAD or AD - User or Group that needs entitlements
  - Review and Create

7 Workspaces

- Select the subscription and Resource Pool - Provide a Workspace Name - All the App Groups we tried here.
- Select the Application Group to be associated for this Workspace - We can select the one we created in the previous step
- Review and Create

Windows Desktop Client

- Download the Windows Desktop Client of your choice - Depending upon your device
- Click Sign-in and enter your AAD/AD credentials
- All you Entitlements and Icons will be displayed
- Click on the desktop and you will be prompted for credentials enter them and you will have your virtual desktop or applications