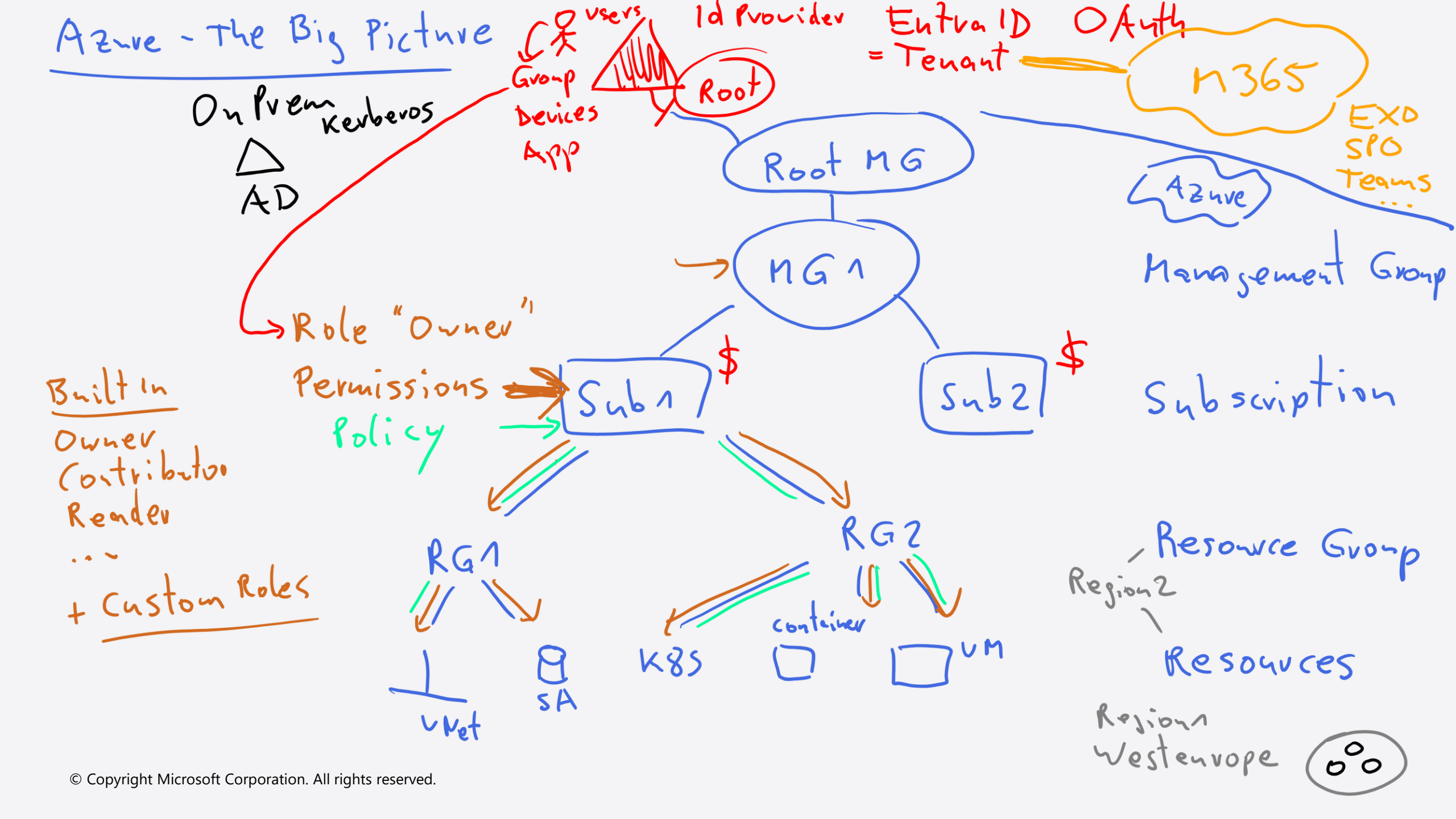
Microsoft

Azure Virtual Desktop Architecture

Introduction

- Azure Virtual Desktop for the enterprise
- Azure Virtual Desktop components
- Personal and pooled desktops
- Service updates for Azure Virtual Desktop
- Azure limitations for Azure Virtual Desktop
- VM sizing
- Azure Virtual Desktop pricing



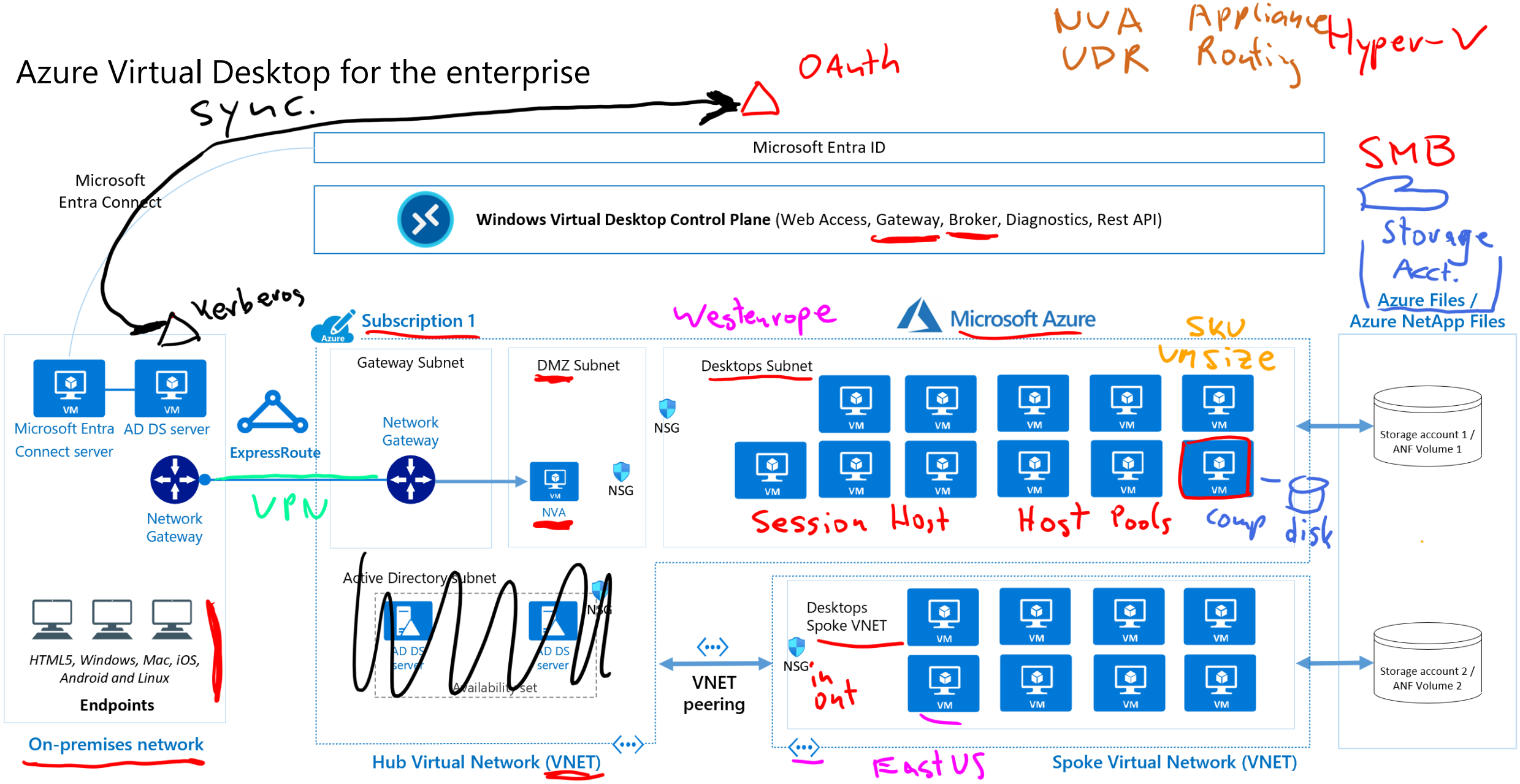
Azure Virtual Desktop for the enterprise

Azure Virtual Desktop is a desktop and application virtualization service that runs in Azure.

Common use cases:

- **Security and regulation applications**: financial services, healthcare, and government.
- **Elastic workforce**: remote workers, contractors, and partner access.
- **Employees**: *bring your own device* (BYOD), mobile users, call centers, and branch workers.
- **Specialized workloads**: design and engineering, legacy apps, and software development test.

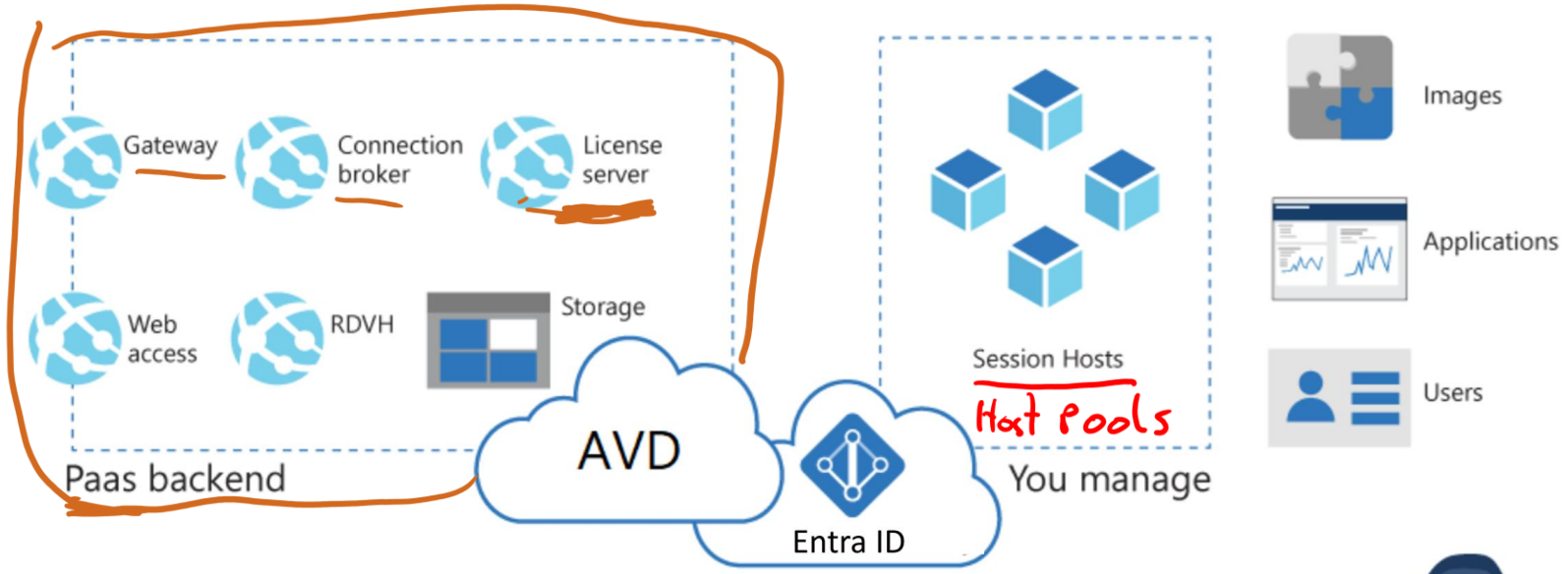
Azure Virtual Desktop for the enterprise



Azure Virtual Desktop components

Azure Virtual Desktop components (Azure managed)

- **Web Access:** users access virtual desktops through an HTML5-compatible browser
- **Gateway**: connects remote users to Azure Virtual Desktop apps and desktops from any internet-connected device
- Connection Broker: manages user connections to virtual desktops and apps
- **Diagnostics**: event-based aggregator that marks each user or administrator action
- **Extensibility components:** manage Azure Virtual Desktop using Windows PowerShell or REST APIs



Monitor
LA

Azure Mgmt
PowerShell
Azure CLI
ARM API

Az.* module
az Tool - Bash shell
Powershell Shell

Admin

ARM Templates (json)

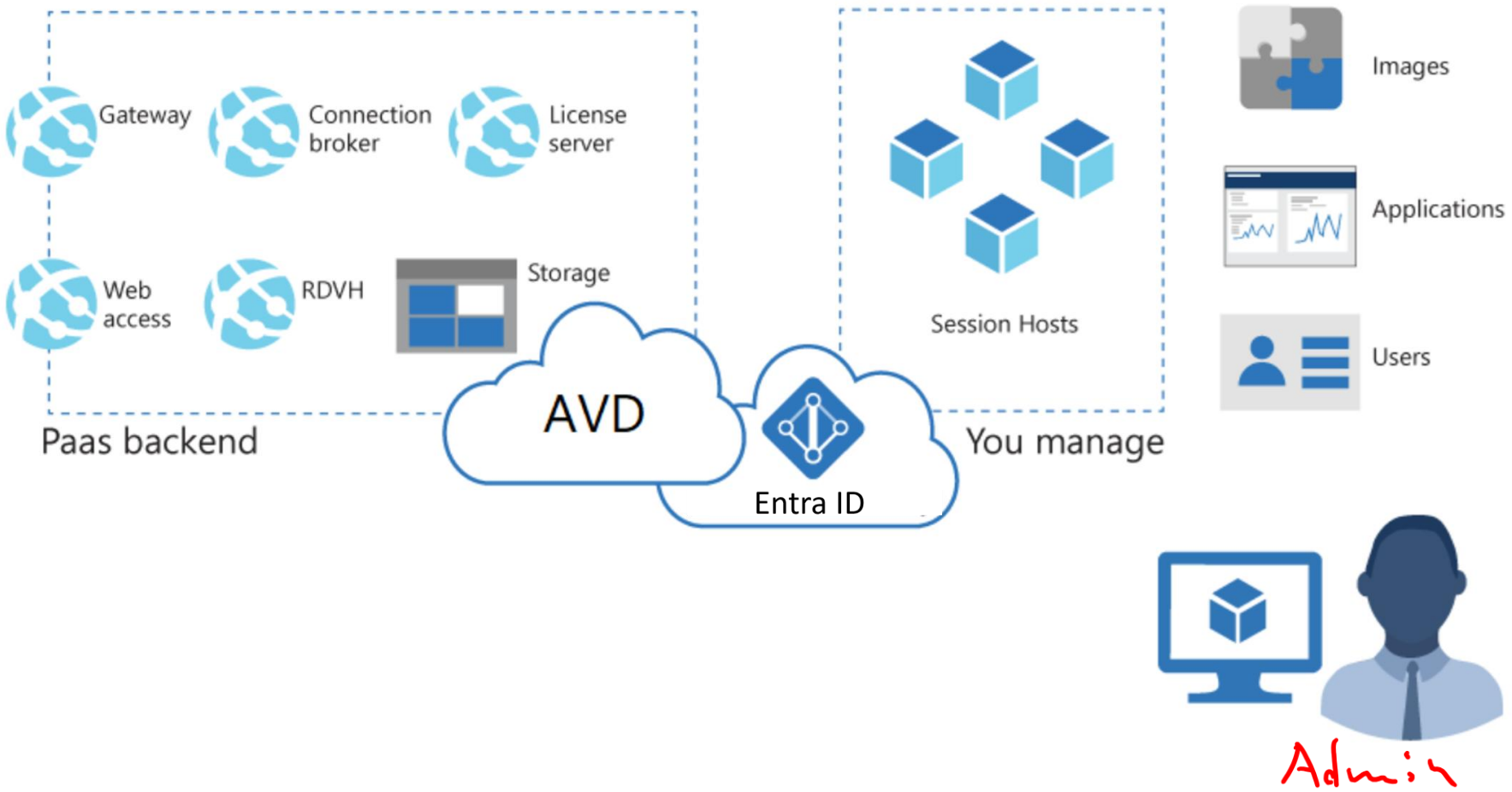
Bicep Lang (TF)

IaC

Portal

Azure Virtual Desktop components (Customer managed)

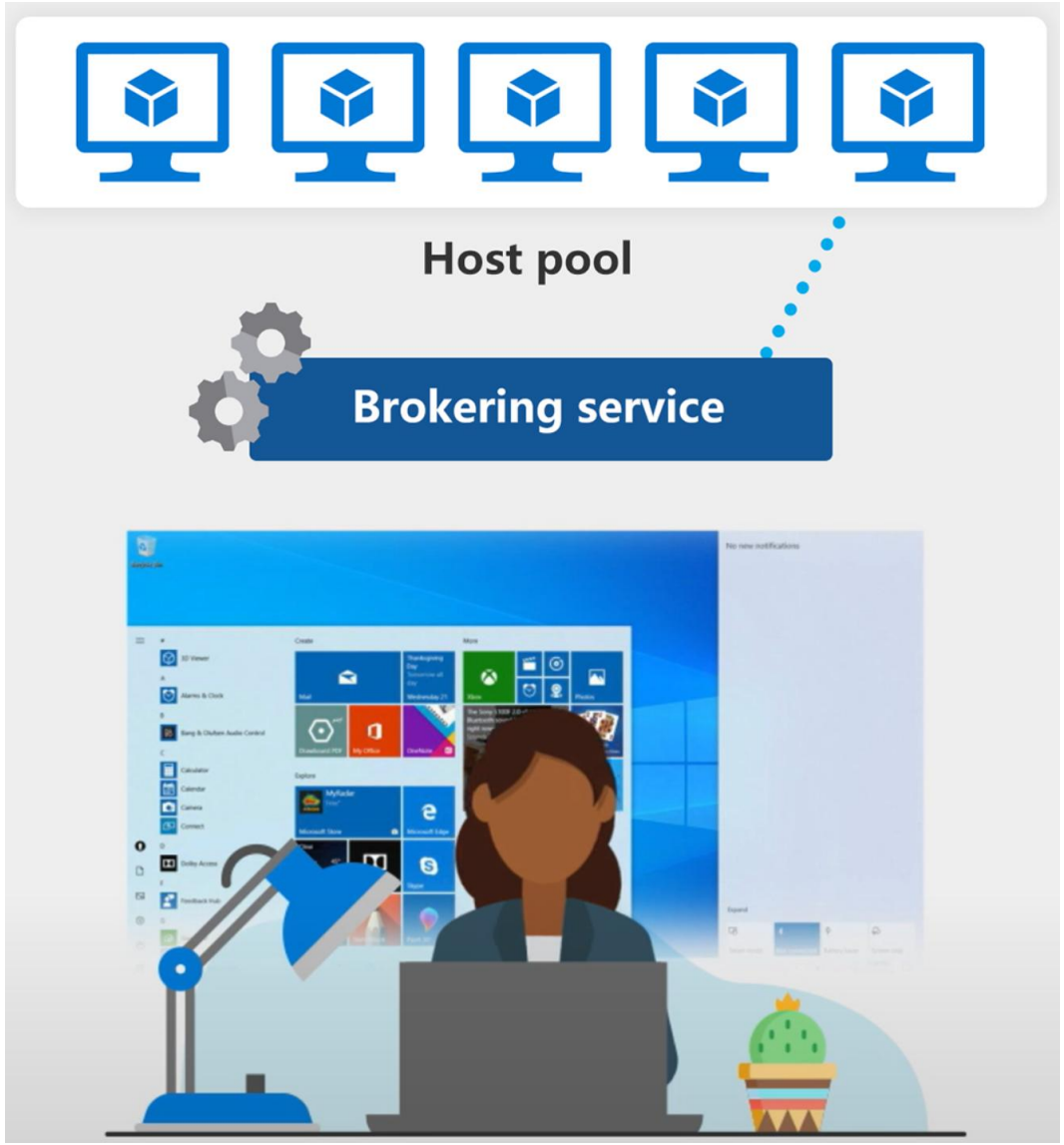
- **Azure Virtual Network:** Connect an Azure Virtual Desktop to an on-premises network using a VPN or Azure ExpressRoute.
- **Entra ID:** Azure Virtual Desktop uses Entra ID for identity and access management.
- **Azure Virtual Desktop session hosts:** A host pool can run the operating systems.



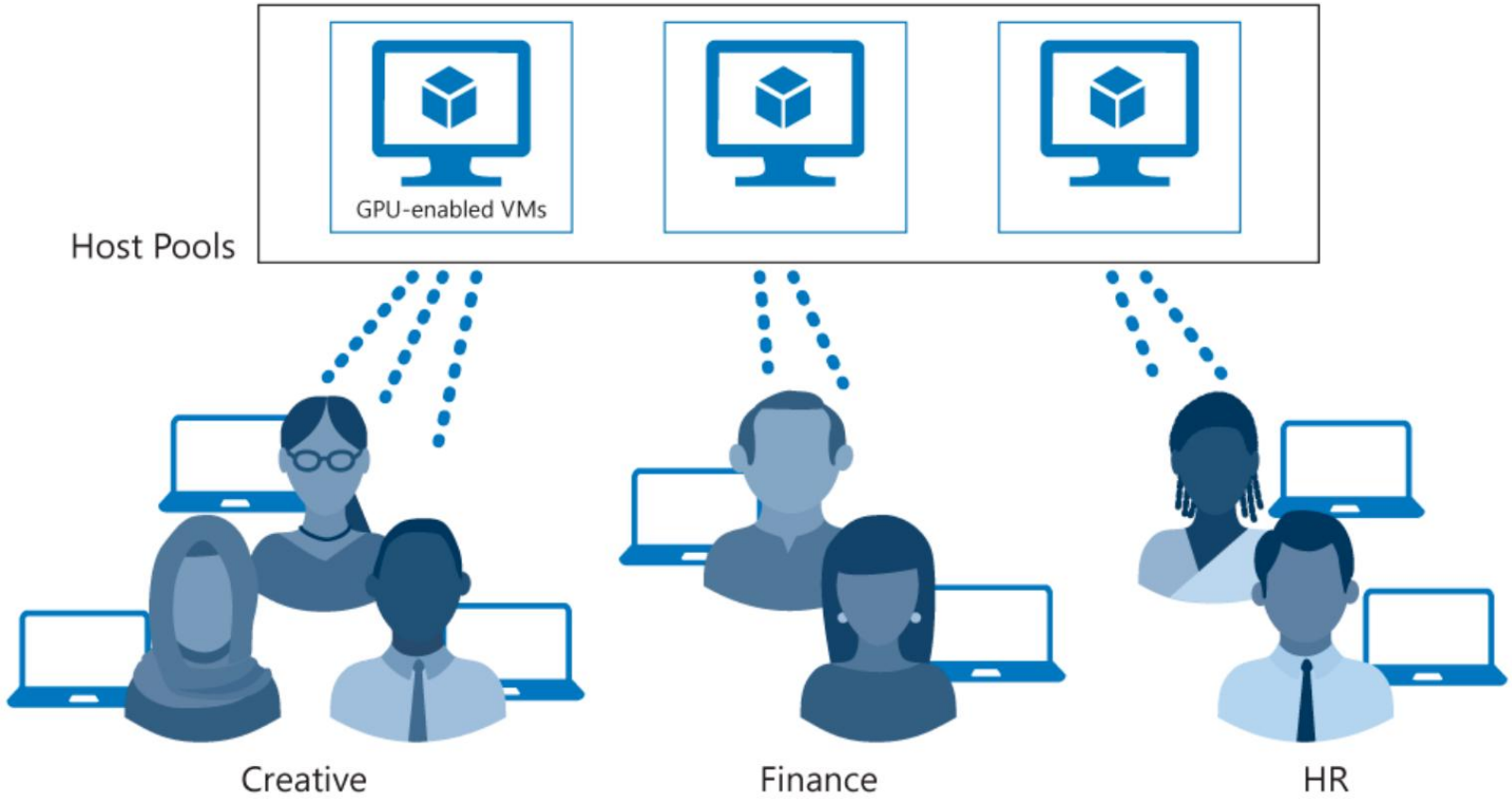
Personal and pooled desktops

- Host pools are a collection of one or more identical virtual machines (VMs) within Azure Virtual Desktop environments.
- Personal desktop solutions (sometimes called persistent desktops) allow users to always connect to the same specific session host.
- Users can modify their desktop experience to meet personal preferences and save files in the desktop environment.

→ Windows 365 Lizenz



Each host pool can contain an app group that users can interact with as they would on a physical desktop.



Service updates for Azure Virtual Desktop

Options for updating Azure Virtual Desktop desktops

- Microsoft Endpoint Configuration Manager (MECM) updates server and desktop operating systems.
- Windows Updates for Business updates desktop operating systems like Windows 10 or Windows 11 multi-session.
- Azure Update Manager updates server operating systems.
- Azure Log Analytics checks compliance.
- Deploy a new (custom) image to session hosts every month for the latest Windows and applications updates. You can use an image from the Azure Marketplace or a custom Azure managed image.

Azure limitations for Azure Virtual Desktop

Azure Virtual Desktop limitations

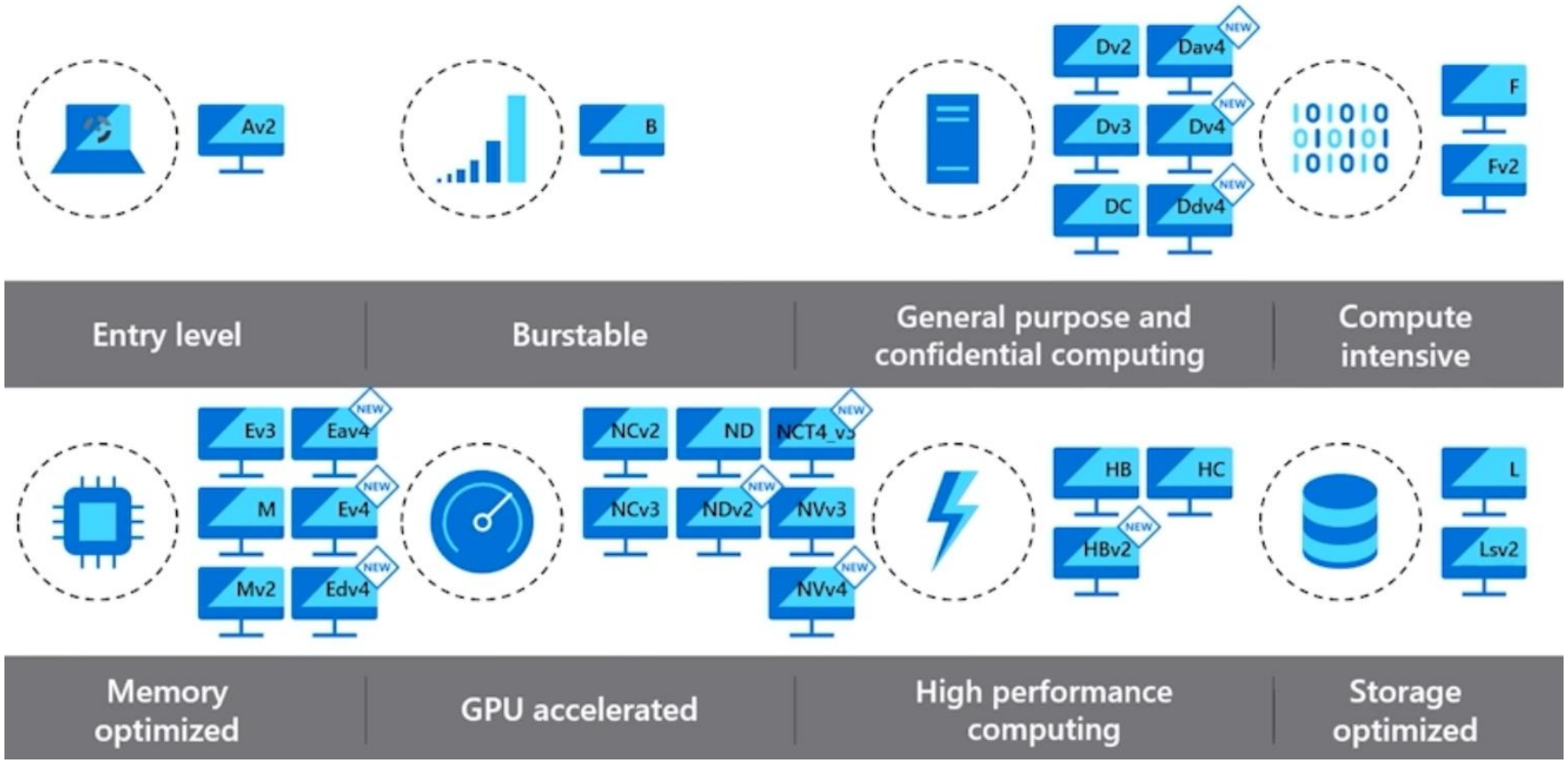
Azure Virtual Desktop object	Per Parent container object	Service limit
Workspace	Azure Active Directory tenant	1300
HostPool	Workspace	400
Application group	Azure Active Directory tenant	500*
RemoteApp	Application group	500
Role assignment	Any Azure Virtual Desktop object	200
Session host	HostPool	10,000

For the most recent limitations, see: https://learn.microsoft.com/en-us/azure/architecture/example-scenario/wvd/windows-virtual-desktop, and https://learn.microsoft.com/en-us/azure/azure-resource-manager/management/azure-subscription-service-limits

Virtual machine (VM) sizing

↳ session Host

Use the virtual machine sizing guidelines for the maximum suggested number of users per virtual central processing unit (vCPU) and minimum VM configurations.



Azure Virtual Desktop pricing

Pricing

- **Windows 10 or Windows 11 multi-session**: By delivering a multi-session desktop experience for users that have identical compute requirements, you can let more users log onto a single VM at once, resulting in considerable cost savings.
- **Azure Hybrid Benefit**: If you have Software Assurance, you can use Azure Hybrid Benefit for Windows Server to save on the cost of your Azure infrastructure.
- **Azure Reserved Instances**: You can prepay for your VM usage and save money. Combine Azure Reserved Instances with Azure Hybrid Benefit for up to 80 percent savings over list prices.
- **Session host load-balancing**: When setting up session hosts, **Breadth-first** is the standard default mode, which spreads users randomly across session hosts. **Depth-first** mode fills up a session host server with the maximum number of users before it moves on to the next session host. You can adjust this setting for maximum cost benefits.

Summary

Summary

What you learned:

- Explain the Azure Virtual Desktop components.
- Describe the Azure Virtual Desktop architecture.
- Choose between personal and pooled desktops.
- Identify the Azure limitations for Azure Virtual Desktop.
- Describe the options for Azure Virtual Desktop pricing.

End of presentation