Managing Azure for Citrix Admins

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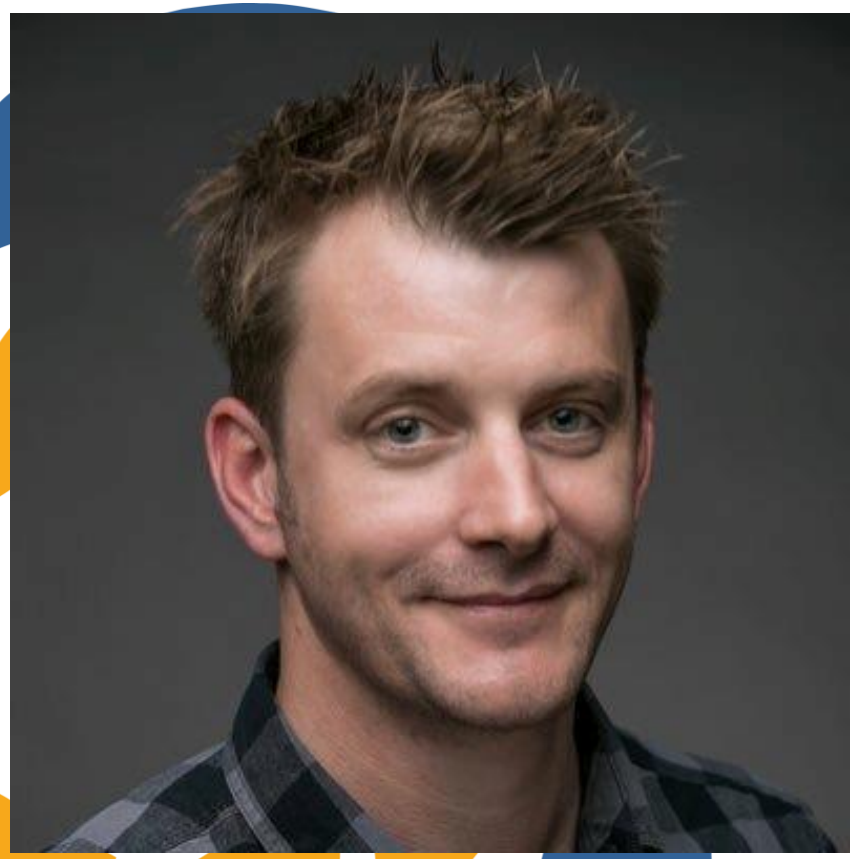
Topics

XAE, XDE, and Azure

Key Azure Concepts

The Portal & PowerShell

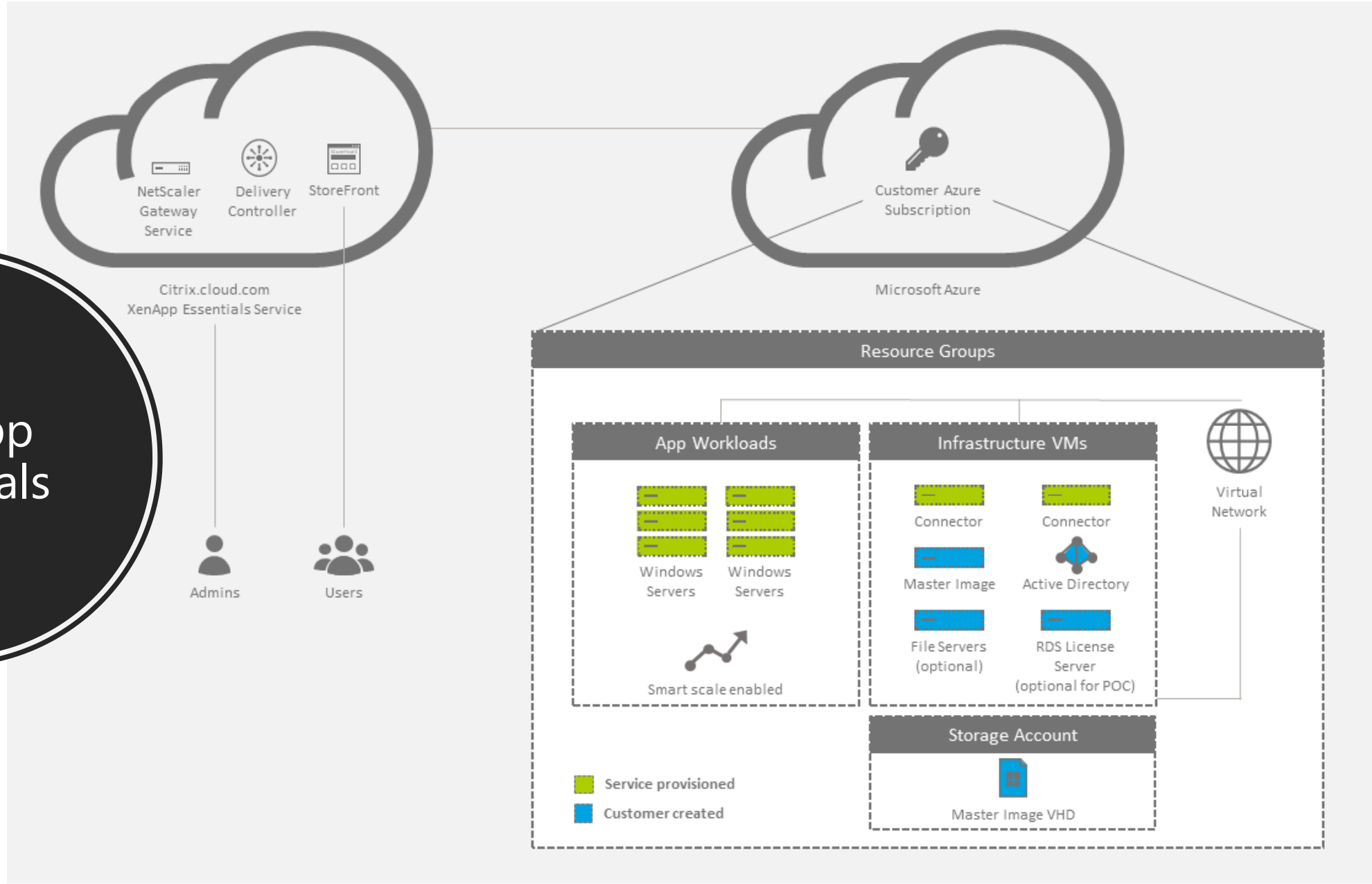
Azure Services & Tools



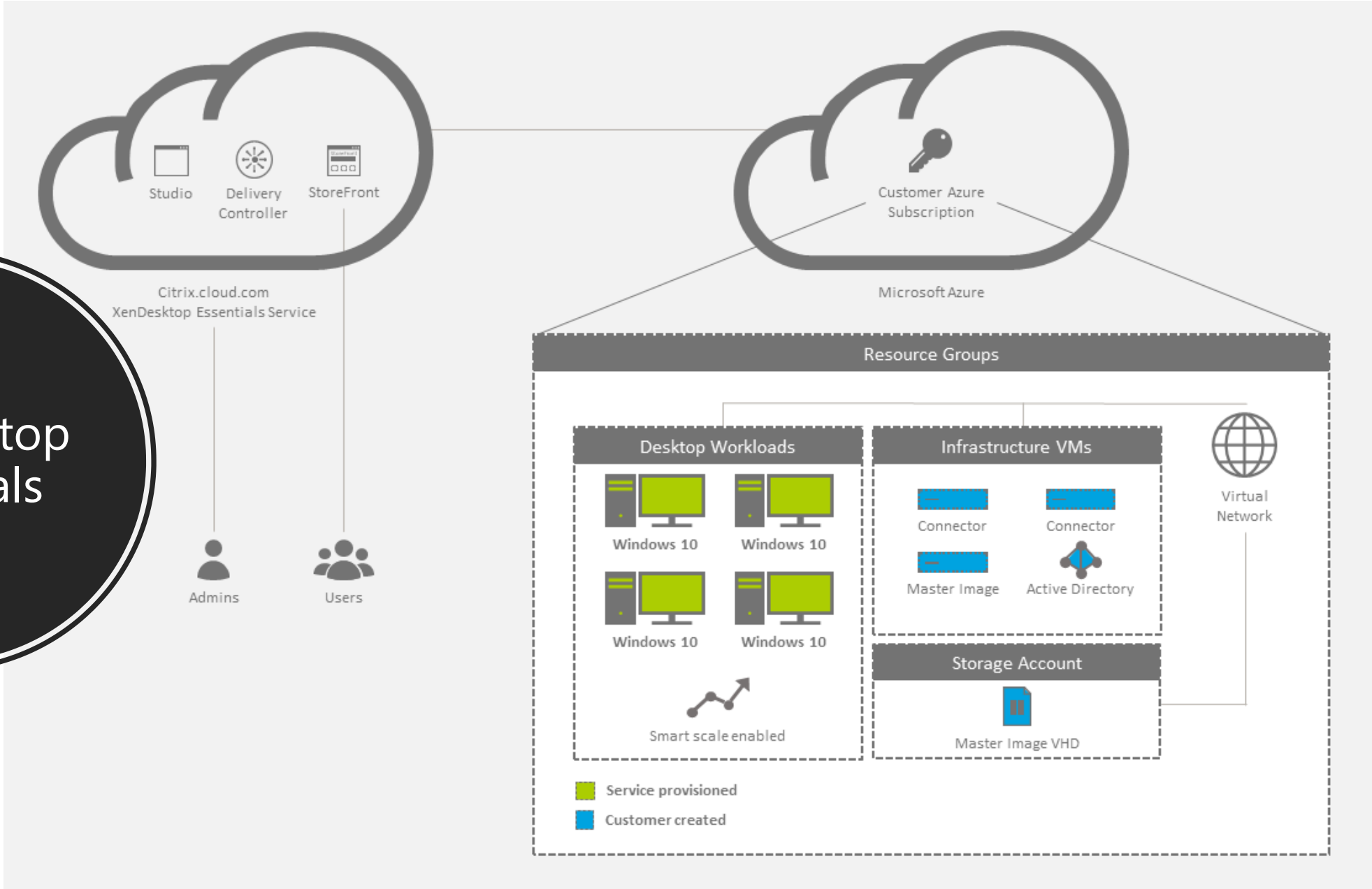
Delivering and Optimizing Citrix from Microsoft Azure

Marius Sandbu & Dave Brett

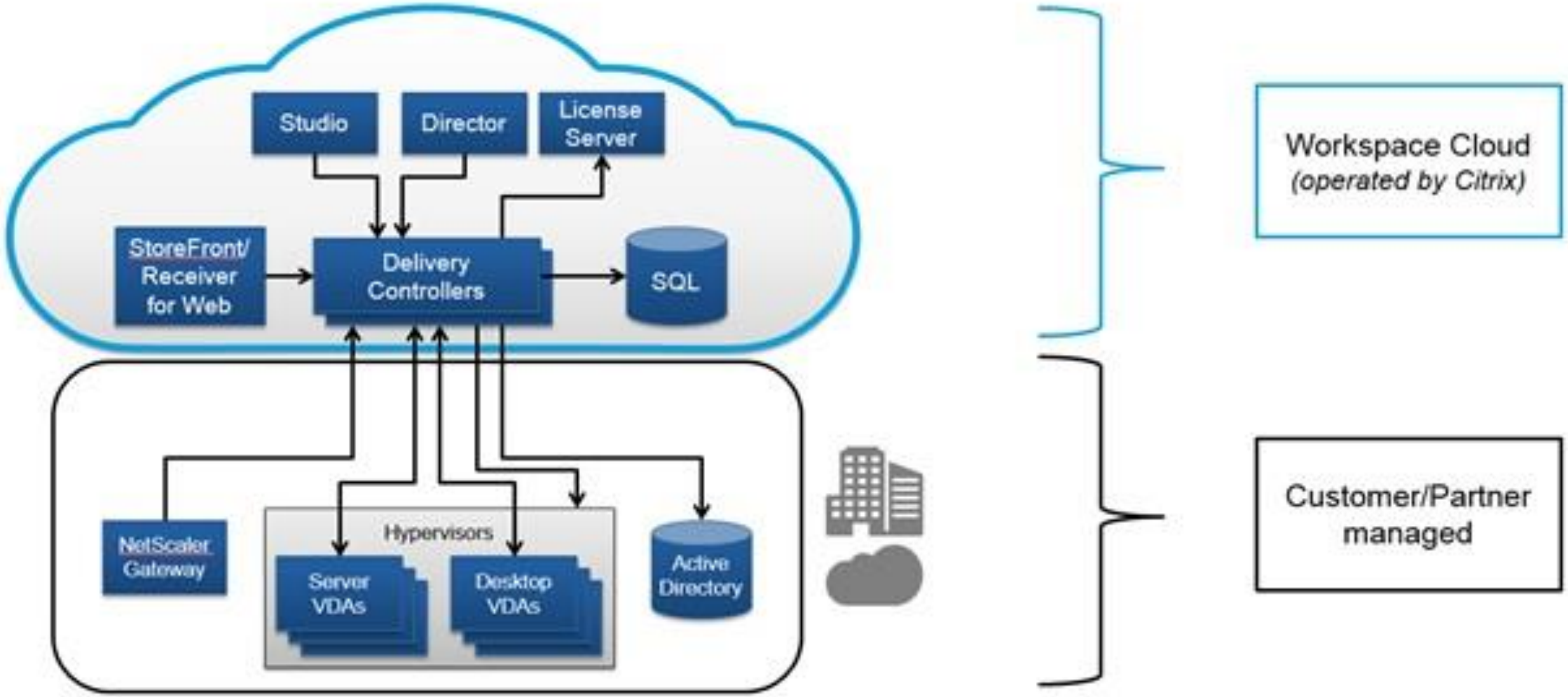
XenApp Essentials

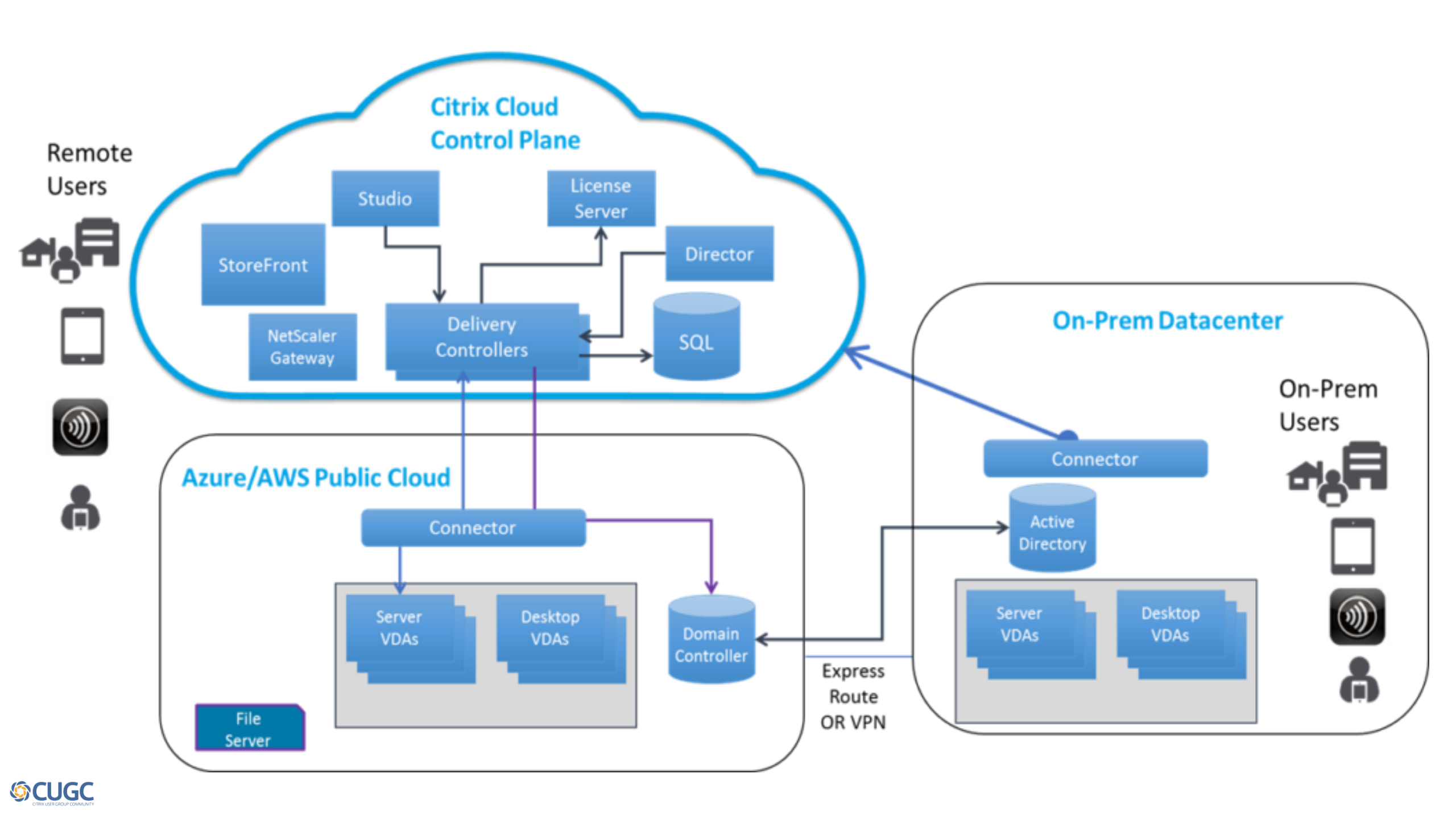


XenDesktop Essentials



Apps and Desktops Service





- Direct Internet
- VPN
- ExpressRoute
- SD-WAN

Connectivity

- Tenant
- EA
- Limits

Subscription

- Portal
- RESTful API's
- VS (IDE)

Manage

- Provisioning
- Orchestration
- Lifecycle

Resource Manager (ARM)

- Logical groupings
- RBAC

Resource Groups

- Identity Management
- Users, groups, devices, etc.

Active Directory (AAD)

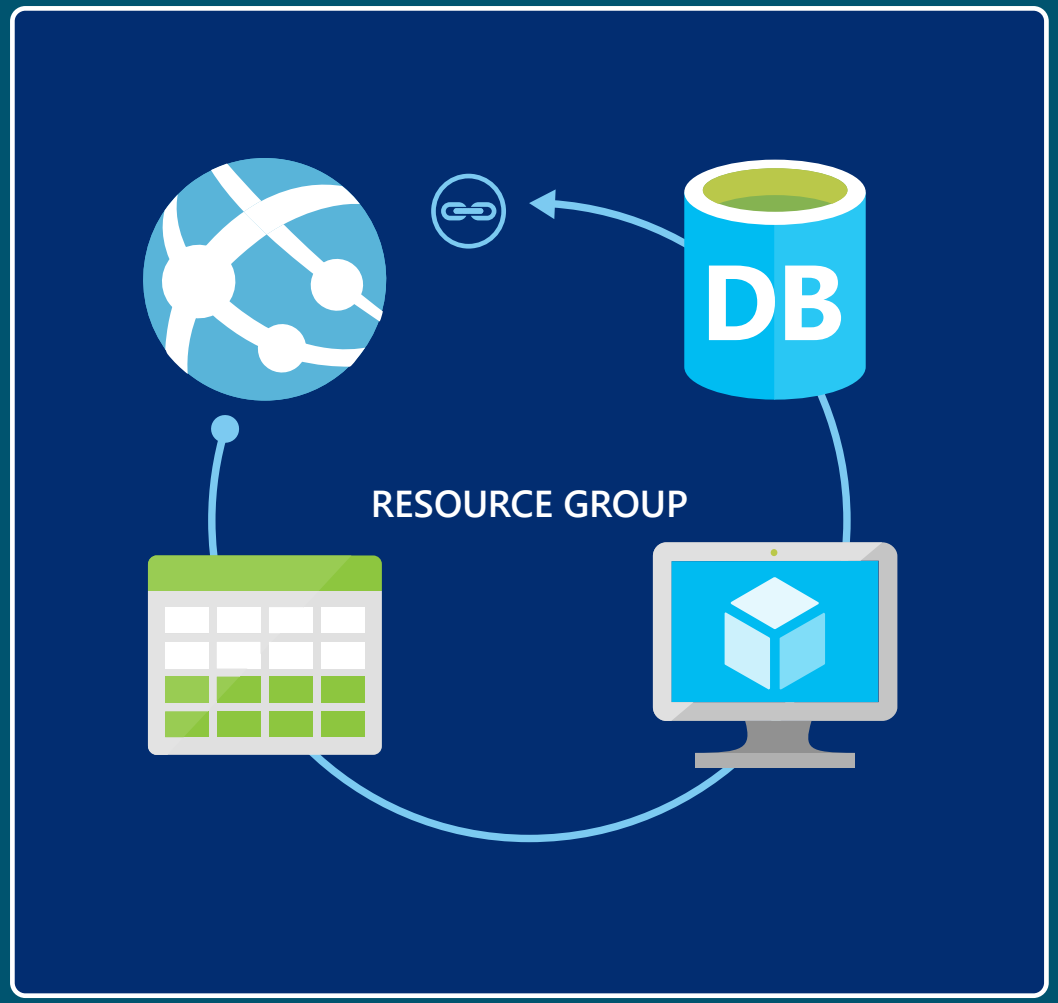
Azure Resource Manager

Application Lifecycle Container

Declarative solution for Deployment and Configuration

Consistent Management Layer

Fading Fast… ASM



Resource Groups

- → Tightly coupled containers of multiple resources of similar or different types
- → Every resource *must* exist in one and only one resource group
- → Resource groups can span regions

Coupling for Resources

Resource Group is a unit of management

→ **Lifecycle:** deployment, update, delete, status

→ **Identity:** resources can talk to each other

→ **Grouping:** Metering, billing, quota: applied & rolled up to group

Resource Group Lifecycle

Question:

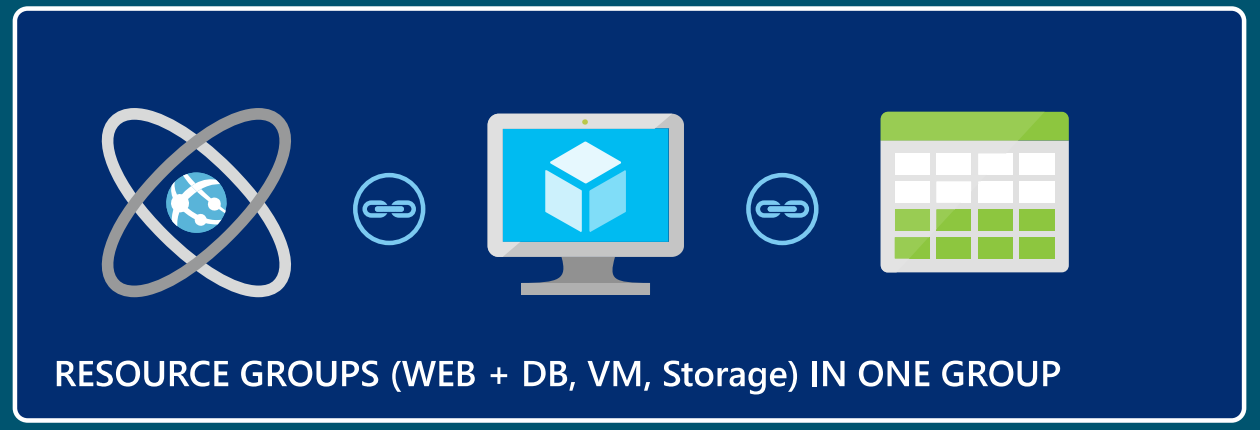
Should these resources be in the same group or a different one?

Hint:

Do they have common lifecycle and management?

Answer:

Up to you.



OR

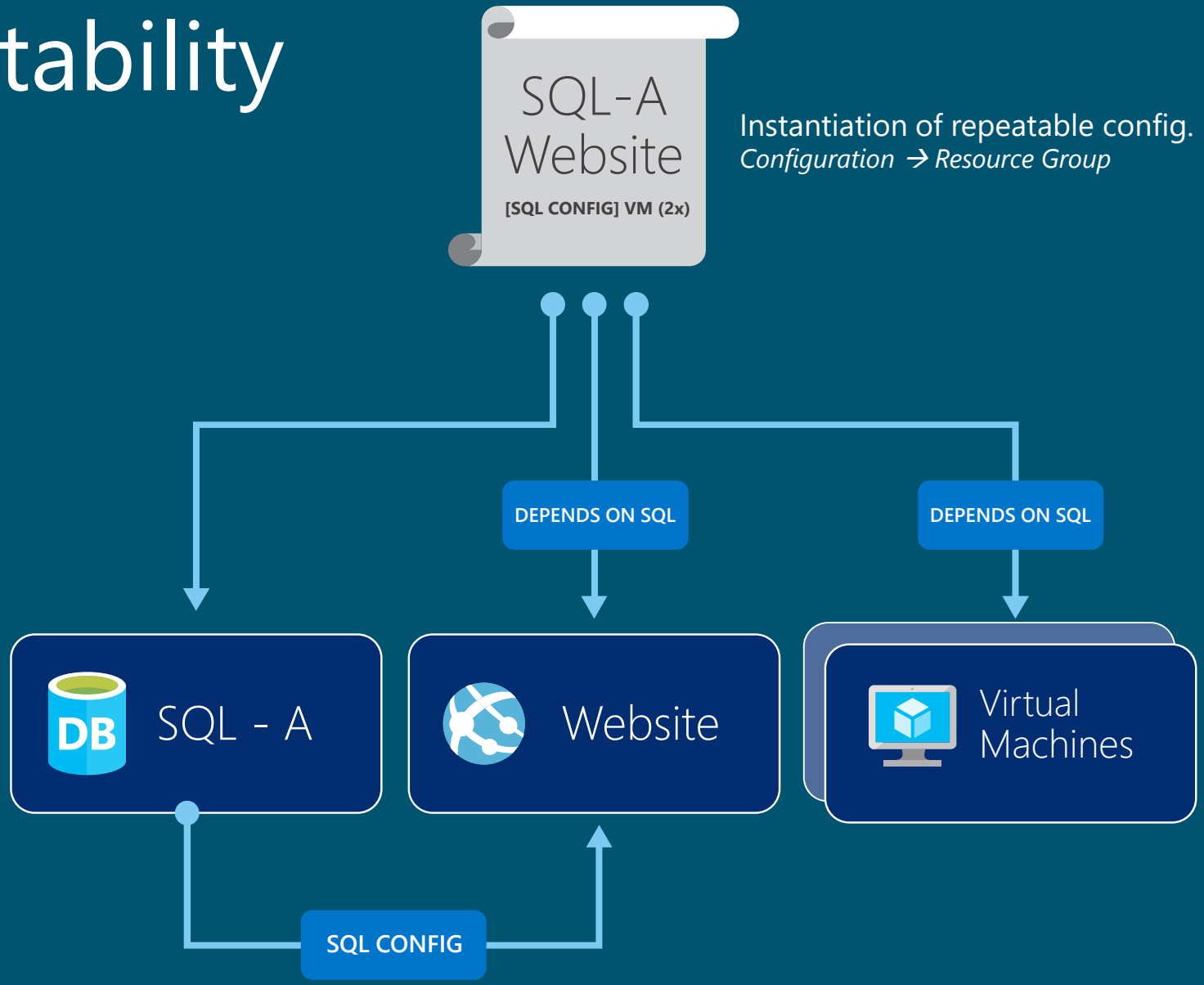
Power of Repeatability

Azure Templates can:

- Ensure Idempotency
- Simplify Orchestration
- Simplify Roll-back
- Provide Cross-Resource Configuration and Update Support

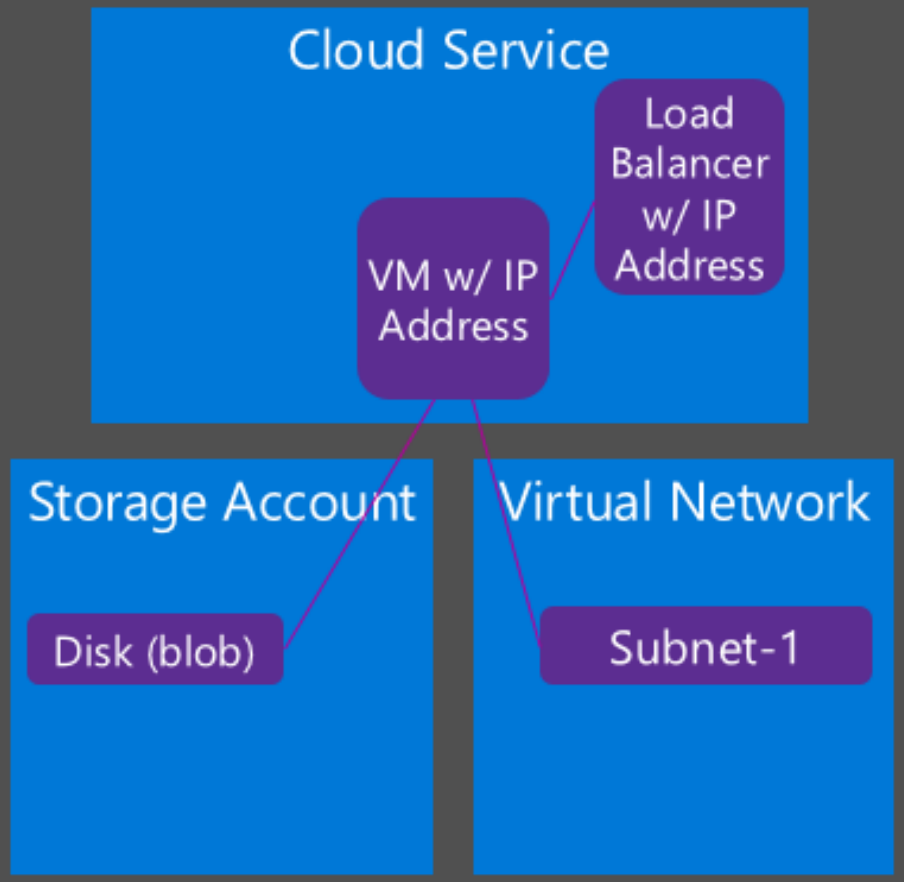
Azure Templates are:

- Source file, checked-in
- Specifies resources and dependencies (VMs, WebSites, DBs) and connections (config, LB sets)
- Parametized input/output

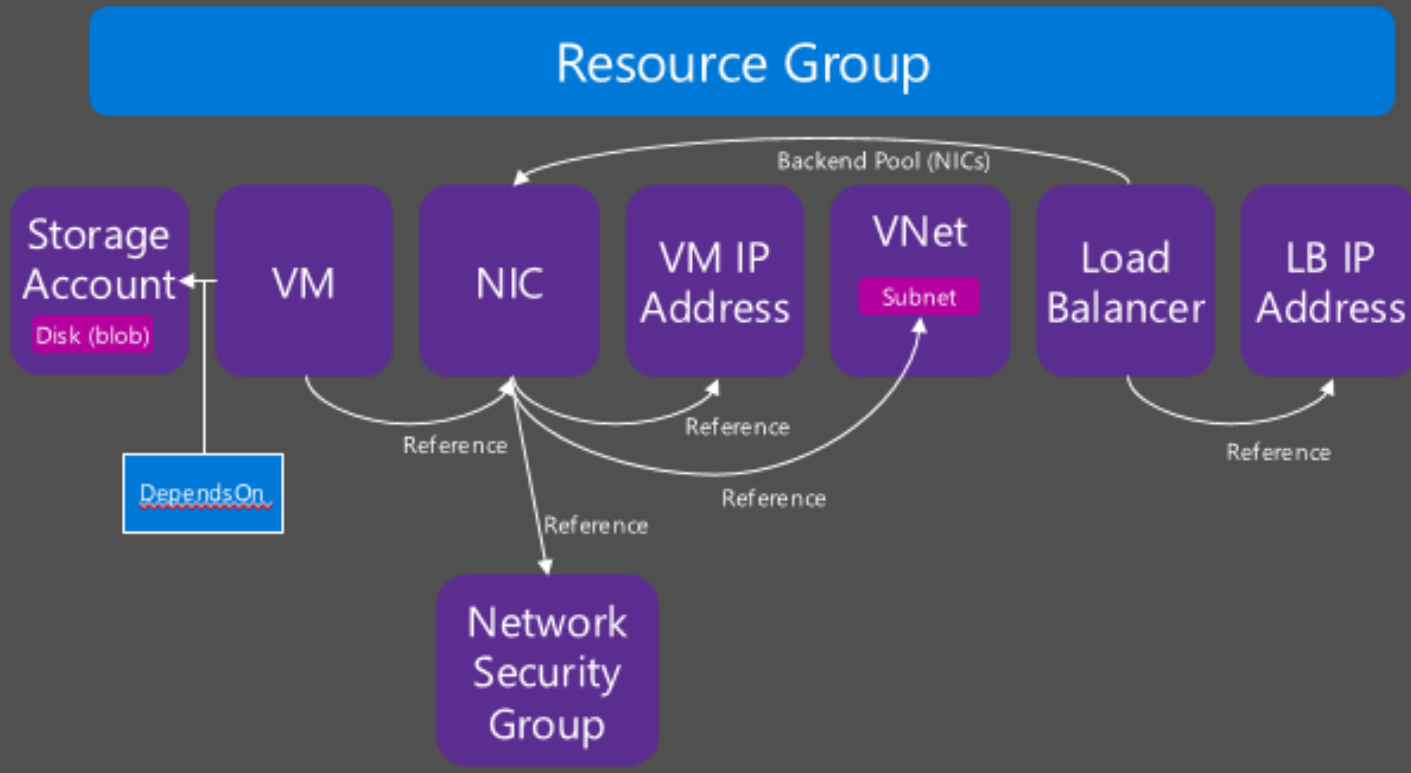


Azure Networking: ASM vs. ARM

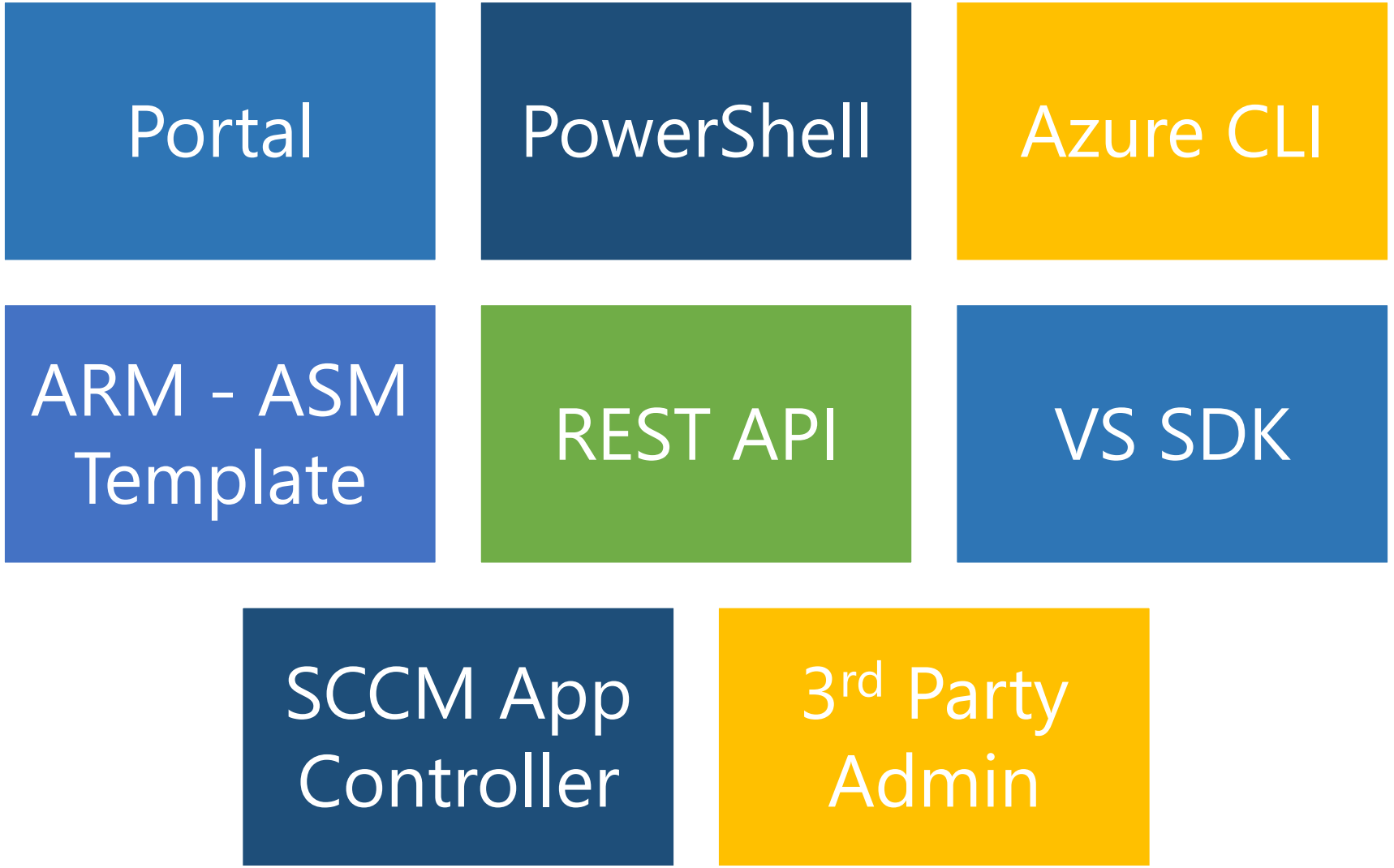
ASM (v1)



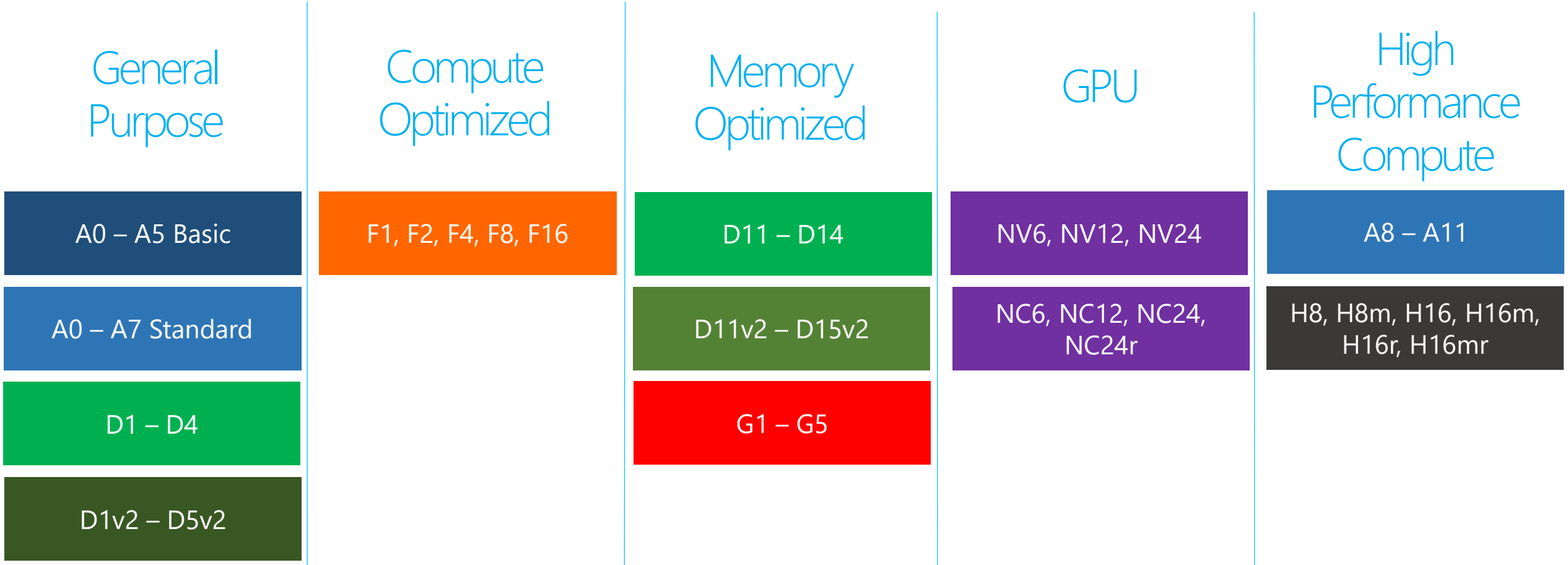
ARM (V2)



Many Ways to Create a VM



Choosing a VM Size



**Not all sizes available in all regions*

Storage Disks

Standard Storage

- Cloud-scale reliable storage
- Maximum 500 IOPS, 60 MB per second throughput per disk
- Available in all VM Sizes

Premium Storage

- High-performance, low-latency disk support, ideal for I/O intensive workloads
- Maximum 5000 IOPS, 200 MB per second throughput per disk
- Only supported in “S” series VMS (DS, DSv2, GS, FS)
- Locally redundant storage only

Azure File Storage

- Mount Azure Storage as network share volumes
- Can be accessed via SMB 3.0 or REST APIs
- Up to 1000 IOPS, up to 60 MB/second throughput per share
- Max share size = 5TB, Max file size = 1 TB.

Disks vs Images

OS Images

- Microsoft
- Partner
- User

Base OS image for new Virtual Machines
Sys-Prepped/Generalized/Read Only
Created by uploading or by capture

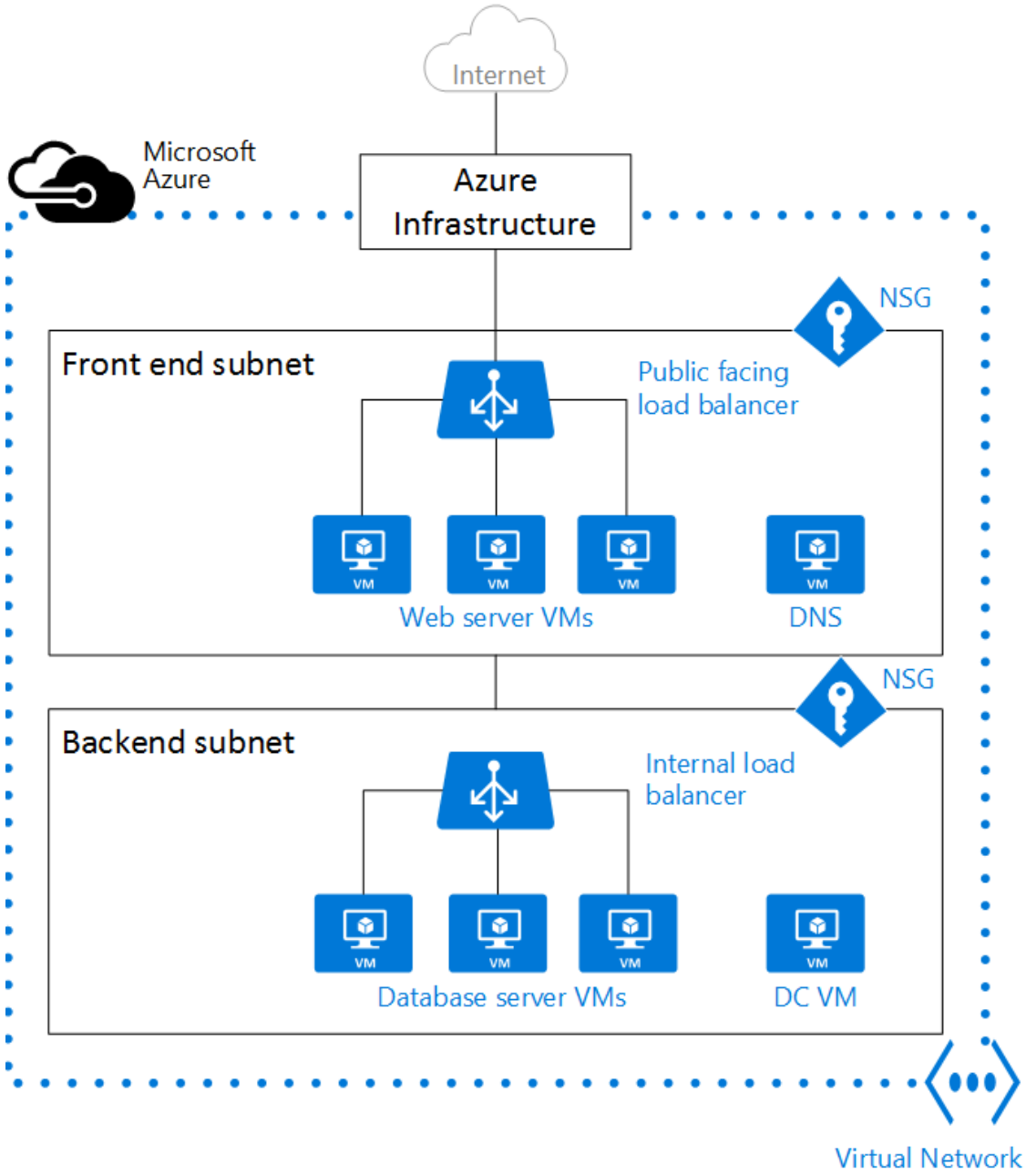
Disks

- OS Disks
- Data Disks

Writable Disks for Virtual Machines
Created during VM creation or during upload of existing VHDs.

Virtual Networks

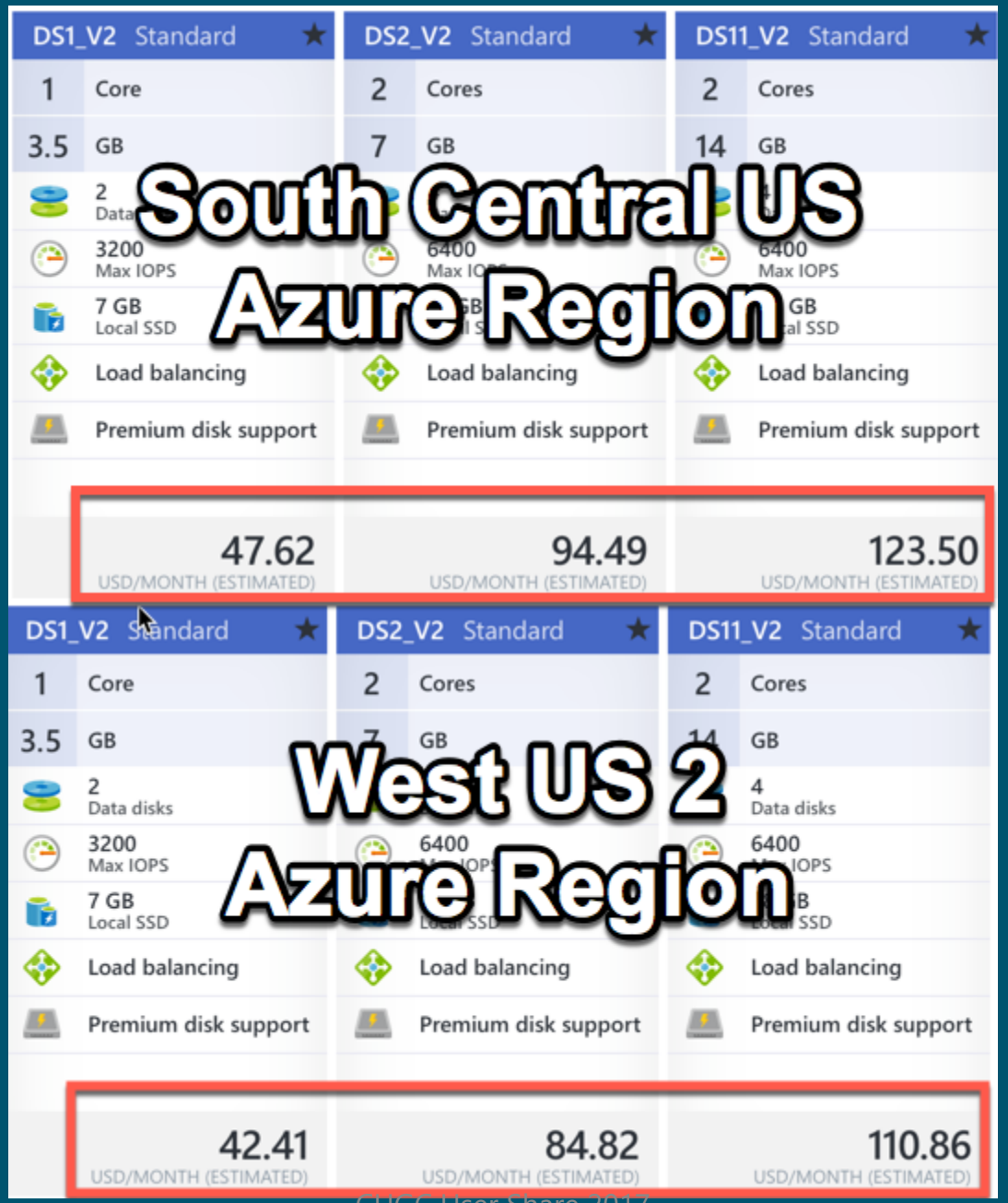
- "Bring your own network"
- Provides security and isolation by creating a private network inside of Azure
- Supports:
  - Defining subnets
  - "Peering" with other non-overlapping VNETs in the same region
  - Defining Network Security Groups (ACL rules)
- Allows you to create complex and/or sophisticated network topologies around your VM's



Control Your Spend

https://azure.microsoft.com/en-us/pricing/calculator/

****Different regions, different prices! *(http://map.buildazure.com)*


DS1_V2 Standard
1 Core
3.5 GB
2 Data
3200 Max IOPS
7 GB Local SSD
Load balancing
Premium disk support
47.62 USD/MONTH (ESTIMATED)
DS2_V2 Standard
2 Cores
7 GB
6400 Max IOPS
Load balancing
Premium disk support
94.49 USD/MONTH (ESTIMATED)
DS11_V2 Standard
2 Cores
14 GB
6400 Max IOPS
Load balancing
Premium disk support
123.50 USD/MONTH (ESTIMATED)
South Central US Azure Region
DS1_V2 Standard
1 Core
3.5 GB
2 Data disks
3200 Max IOPS
7 GB Local SSD
Load balancing
Premium disk support
42.41 USD/MONTH (ESTIMATED)
DS2_V2 Standard
2 Cores
6400 Max IOPS
Load balancing
Premium disk support
84.82 USD/MONTH (ESTIMATED)
DS11_V2 Standard
2 Cores
14 GB
4 Data disks
6400 Max IOPS
Load balancing
Premium disk support
110.86 USD/MONTH (ESTIMATED)
West US 2 Azure Region

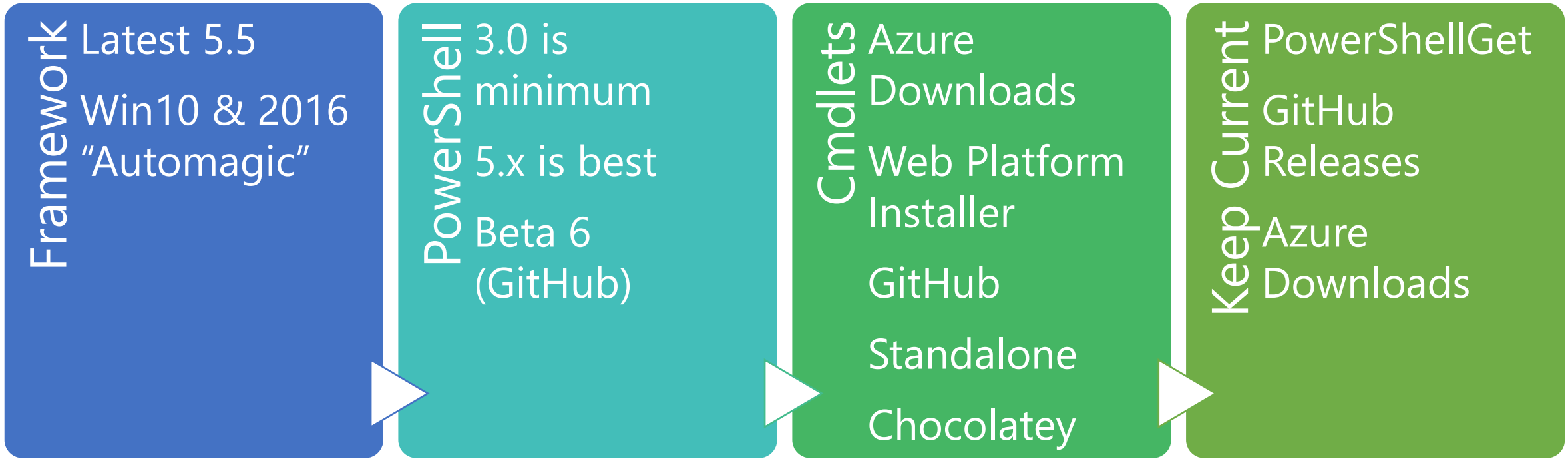
Be Aware of your Limits

https://docs.microsoft.com/en-us/azure/azure-subscription-service-limits

Resource	Default Limit	Max Limit
Cores per sub	20	10,000
VMs per sub (RM)	20 per region	10,000 per region
VM total cores (RM)	20 per region	10,000 per region
VM per series	20 per region	10,000 per region
Resource Groups per sub	800	800
RM API Reads	15000 per hour	15000 per hour
RM API Writes	1200 per hour	1200 per hour
RM API Request Size	4194304 bytes	4194304 bytes
VMs per cloud service (ASM)	50	50

The Azure Portal

Setting Up PowerShell



PowerShell DSC - Learn It!

PowerShell Management Methods

- ASM (Classic) – Built-In access via WinRM
- ARM – Requires Config pre or post VM (w/certs)
- Internal
  - Windows Jump Box
  - Linux OMI Provider via PSRP
  - SMT
- External
  - RDP / SSH
  - HTTPS WinRM tcp/5986 – PoSH Remoting (Certs)
  - SMT

Azure Tools and Services

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