

Tag 2

Guten Morgen!

brainymotion
smart trainieren.
sicher können.



Module 2: Administration

Agenda:

1. Azure Architecture Fundamentals ✓
- ➔ 2. Administration Fundamentals
3. Virtualization Fundamentals
4. Network Infrastructure Fundamentals
5. Storage Management Fundamentals
6. Identity Services Fundamentals

PowerShell Remote

~~Telnet~~

5985
5986 SSL
Port
~~23~~

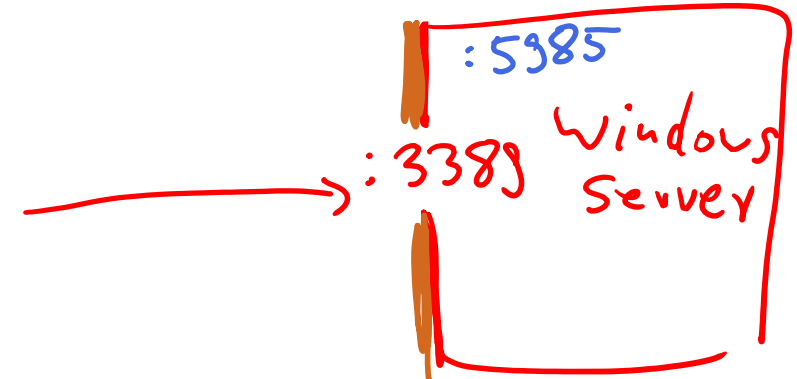
RDP Remote Desktop Proto 3389
SSH Secure Shell 22
(Linux and Windows Server)

Local

Network

Remote

Windows 11
: Client
Port



Windows FW
Azure: NSG

2. Administration

Lessons:

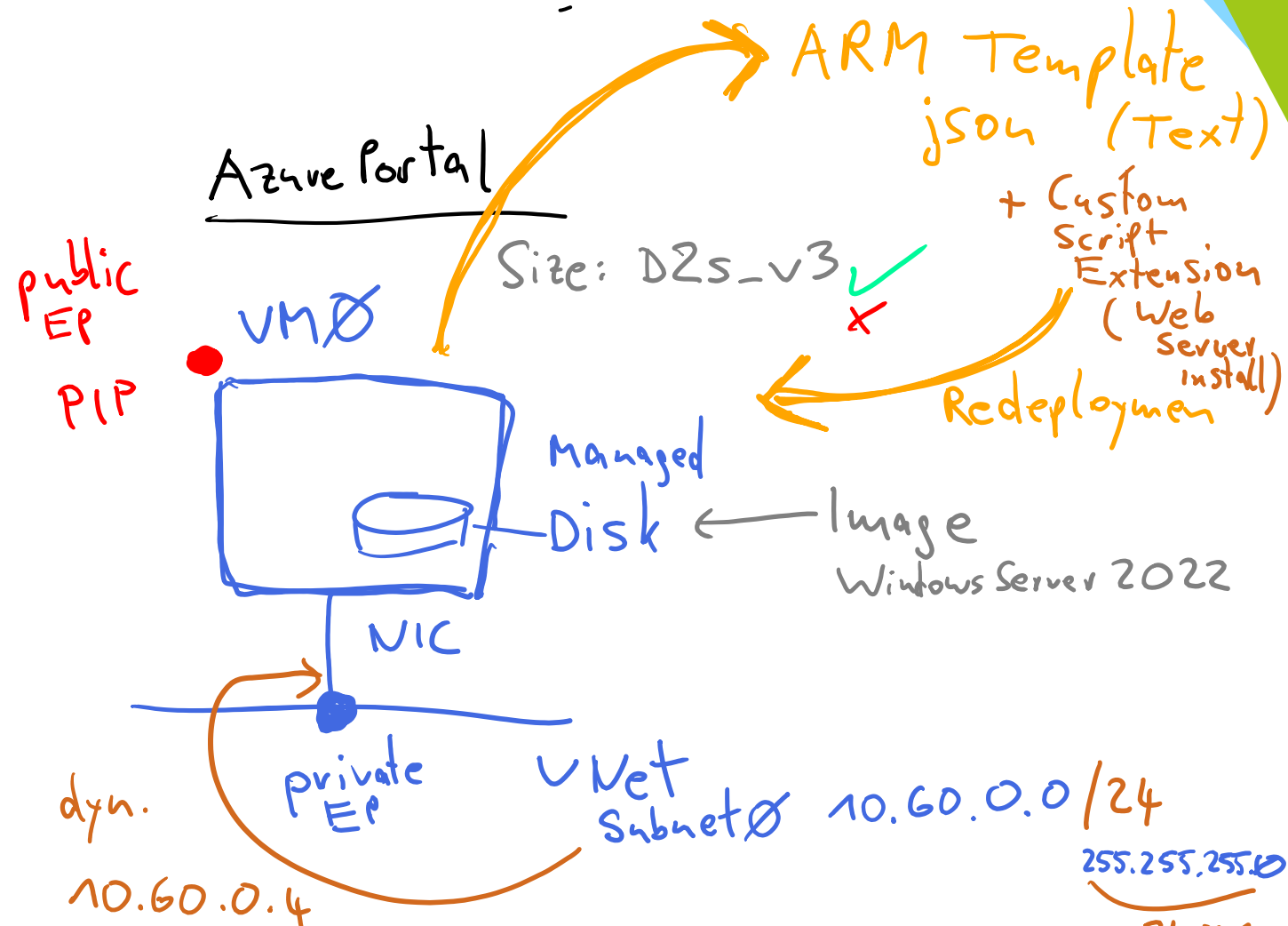
- ✓ Administration in Windows Server
- ✓ Administration in Azure

ARM
Azure Resource
Manager

EP
Endpoint

PIP
Public IP

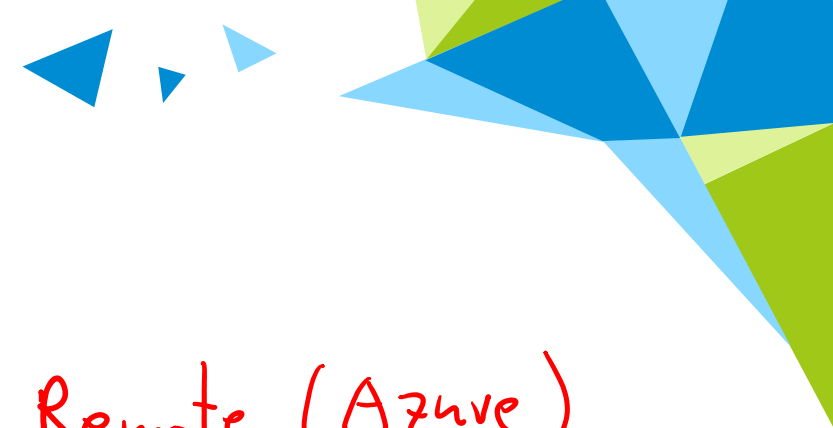
Lab



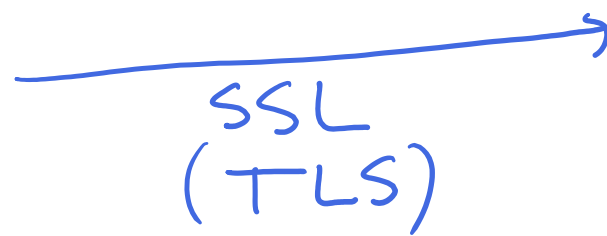
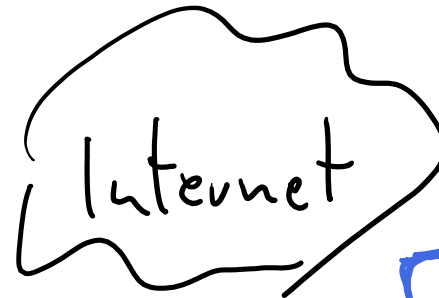
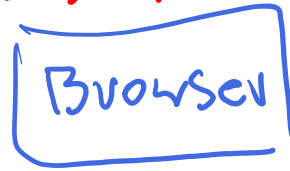
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Bastion Host

Hub-Spoke

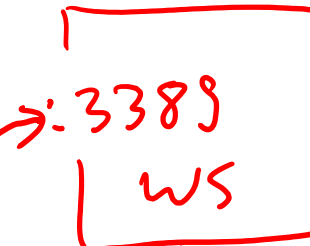


Local
Windows 11



VNet
"Hub"

Remote (Azure)



VNet
"Spoke"

Peering

Bastion
= Gateway SSL → RDP
PaaS
= Jump Server

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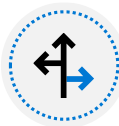
Lesson 1: Windows Server Administrations



Windows Server Administrations Basics



Overview Server Manager ^{RPC} ^{GUI} ✓



Overview Windows Server Admin Center ^{Project Honolulu} ^{web} ^{HTTPS} ✓



Overview of Server Administration with PowerShell ^{Powershell Script} ^{CLI} ✓

Overview Server Manager (1 of 2)

- Server Manager initially opens to the dashboard, which provides quick access to:

→ Add roles and features

• Add other servers to manage

• Create a server group

• Connect this server to cloud services

Management
Consoles
(mmc)

Web-Server

SSO

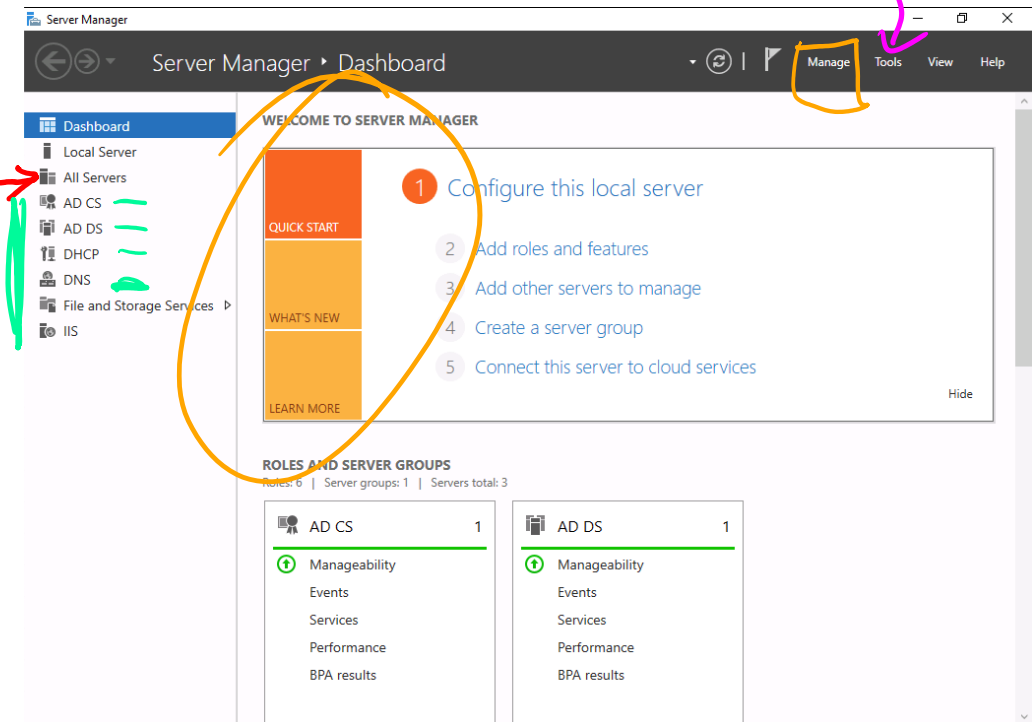
Active Directory AD



User



Comp (Member Server)





Overview Server Manager (2 of 2)

- Server Manager allows server administrators to:
 - Manage the local server and remotely manage multiple servers
 - Configure the local server
 - Get basic information about installed hardware
 - Query event logs
 - Monitor status of services
 - Perform best practice analysis
 - Check performance monitors

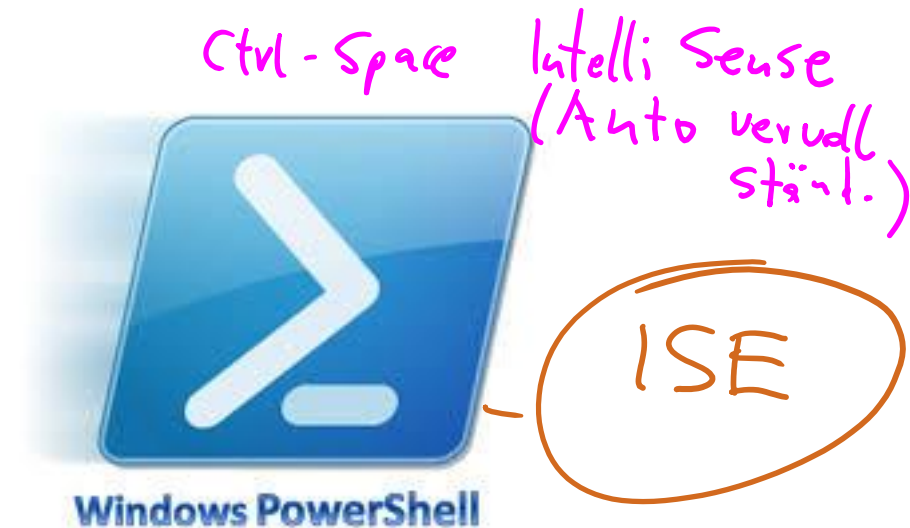
Overview of Server Administration with PowerShell (1 of 2)

Windows Powershell 5.1
Windows | Linux | Mac OS | ARM Proc | PowerShell 7.3. Open Source!

- Windows PowerShell is a command line shell and scripting language that allows task automation and configuration management
- Windows PowerShell cmdlets execute at a Windows PowerShell command prompt or combine into Windows PowerShell scripts

Variable $\$$ PSVersionTable

Get-Date
Get-Wetter
Verb Noun



Overview of Server Administration with PowerShell (2 of 2)

- Cmdlets: **Get-Command**
 - Are small commands that perform specific functions
 - Can be combined to perform multiple tasks
 - Can be piped together to perform multiple operations

dafür gibt es den
Alias gcm
(Don't use Aliases!)
dir → Get-ChildItem

- Modules:
 - Cmdlets specific to a product are packaged together and installed as modules
 - Some are installed with the product and some need to be added manually

PowerShell

2005 v1
2008 v2

Jeff Snover

Get-Module
verb Noun

-Listavailable

parameter

| Measure-Object
pipeline

brainymotion Command

Lesson 3: Azure Portal Administration



Azure Portal Administration



Use the Azure Portal



Use Azure Cloud Shell



Use Azure PowerShell



Use Azure CLI

Use the Azure Portal

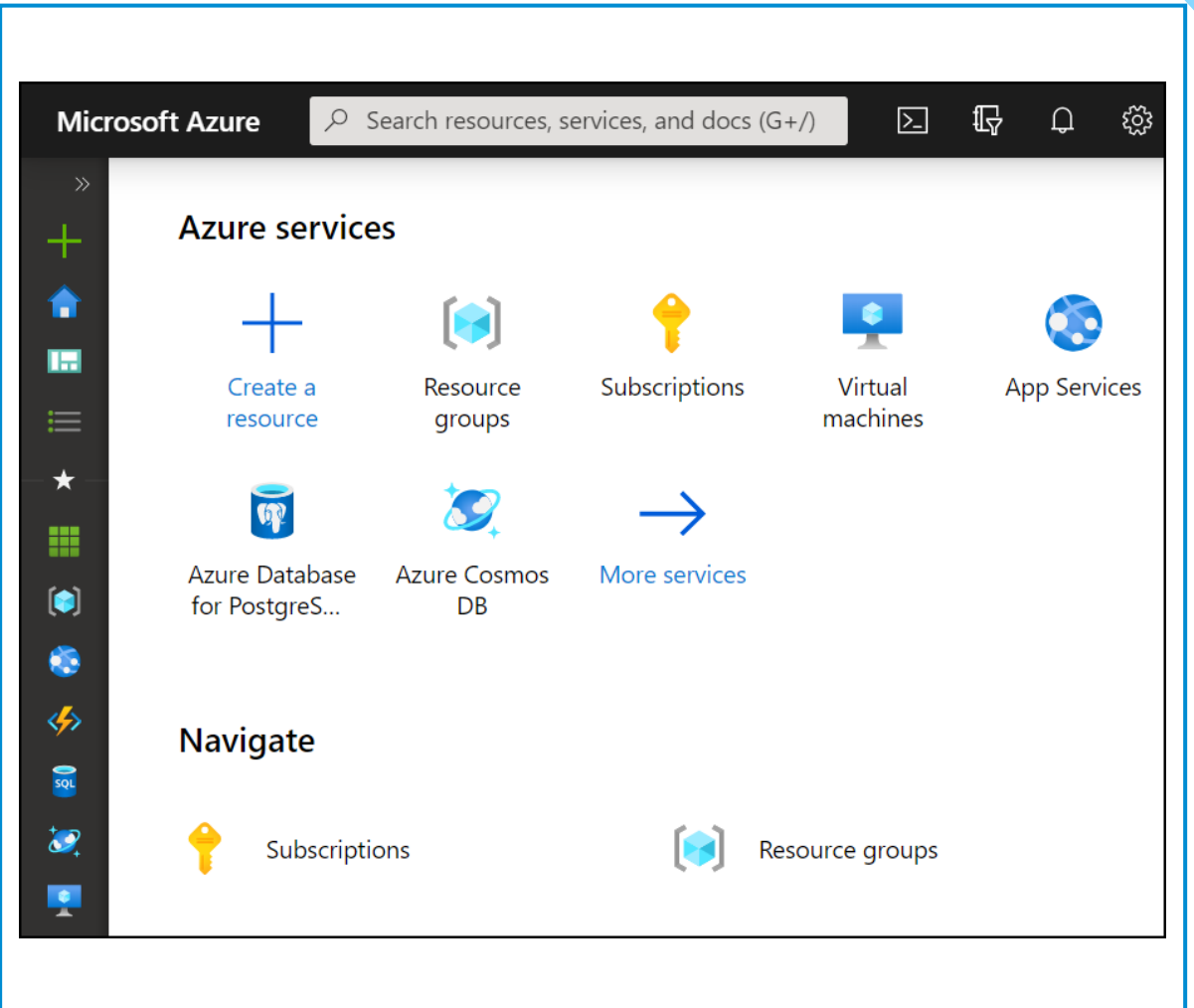
Search resources, services, and docs

Manage resources

Create customized dashboards and favorites

Access the Cloud Shell

Receive notifications



Use Azure Cloud Shell

Interactive, browser-accessible shell

Offers either Bash or PowerShell

Is temporary and provided on a per-session, per-user basis

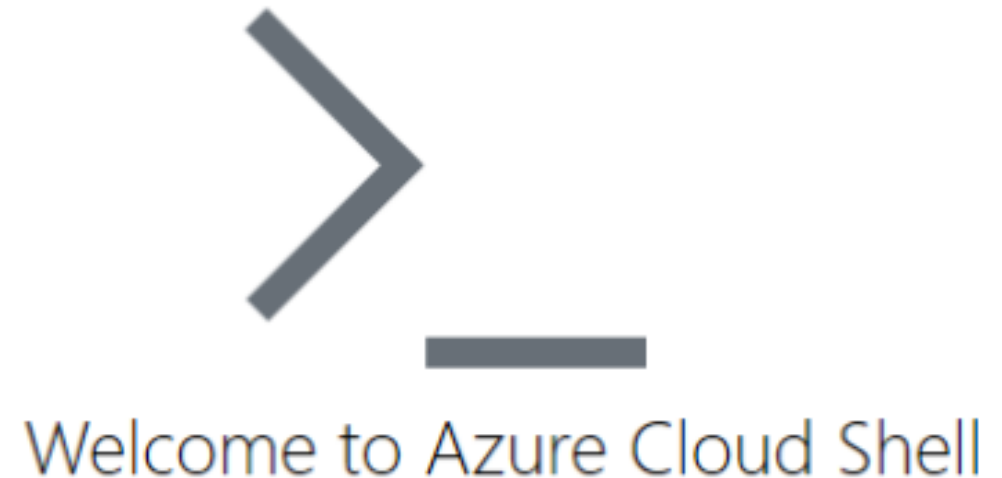
Requires a resource group, storage account, and Azure File share

Authenticates automatically

Integrated graphical text editor

Is assigned one machine per user account

Times out after 20 minutes



Bash | PowerShell

Use Azure PowerShell

Module Az.Compute ✓

New-AzVm`

PowerShell Gallery Az
Az.*

```
-ResourceGroupName "CrmTestingResourceGroup" `
-Name "CrmUnitTests" `
-Image "UbuntuLTS" `
...
```

- Connect to your Azure subscription and manage resources
- Adds the Azure-specific commands
- Available inside a browser via the Azure Cloud Shell
- Available as a local installation on Linux, macOS, or Windows
- Has an interactive and a scripting mode

PowerShell
Bash

Storage Account
max 5 GB

Use Azure CLI

```
az vm restart -g MyResourceGroup -n MyVm
```

- Cross-platform command-line program
- Runs on Linux, macOS, and Windows
- Can be used interactively or through scripts
- Commands are structured in *_groups_* and *_subgroups_*
- Use *find* to locate commands
- Use *--help* for more detailed information

Review Resource Manager Benefits

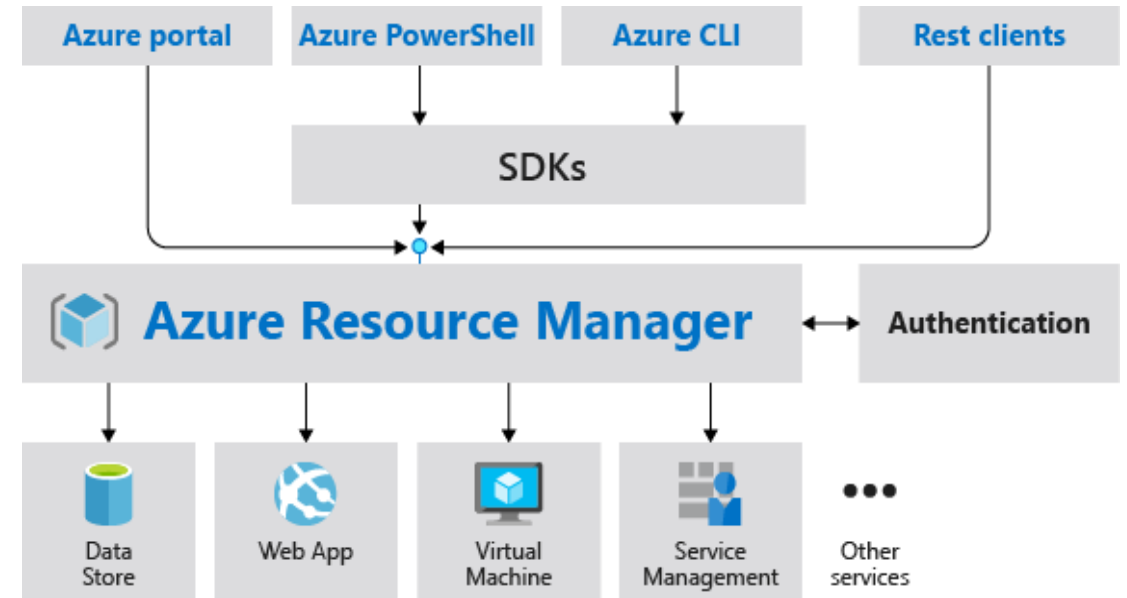
Provides a consistent management layer

Enables you to work with the resources in your solution as a group

Deploy, update, or delete in a single, coordinated operation

Provides security, auditing, and tagging features

Choose the tools and APIs that work best for you



The End