

Powershell für .NET

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BASEL ▪ BERN ▪ BRUGG ▪ DÜSSELDORF ▪ FRANKFURT A.M. ▪ FREIBURG I.BR. ▪ GENÈV
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■ Agenda

1. Powershell Basics

2. Advanced Powershell

■ Remoting / WMI / COM / .NET

3. PS Integration

■ Windows / IIS / SQL Server / TFS / Azure /
Sharepoint

4. Demo Twitter

Powershell Basics

■ Key Features

- Automation
- PS Remoting
- PS Workflow
- .NET, COM, WMI, Perfcounters, EventLog, etc.
- Integration in Products
 - Windows, IIS, SQL Server, TFS, Microsoft Azure, Sharepoint.

■ The Shell

- Powershell.exe

- ISE

■ Basics

■ Verb-Noun Commandlets

Get-Process

Get-NetFirewallProfile

Set-Acl

Set-AuthenticodeSignature

Add-PhysicalDisk

Remove-BitLockerKeyProtector

Show-EventLog

■ Basics

- Help
- Objects
- Pipelining
- Output

■ More Basics

- Comparison: -eq, -ne, -lt, -gt, -le, -ge, -contains, -notcontains
- Arrays, HashTables
- If-else, switch
- For, foreach, while, do-while
- Functions

```
Function Invoke-WMIQuery {  
    $wmiClass = ($WMI_txtbx.Text).Trim()  
    Try {  
        $Data = Get-WmiObject -ComputerName $ComputerName  
        $OutputBox.Foreground = "white"  
        $OutputBox.Text = $Data | Out-String  
    } Catch {  
        $OutputBox.Foreground = "Red"  
        $OutputBox.Text = $_.Exception.Message  
    }  
}
```

Demo Basics

Advanced Powershell

■ Powershell Remoting

- Enter-PSSession

- ...-Computername LTMME02

- Invoke-Command –Computername
LTMME01, LTMME02, LTMME03 –
Scriptblock { <cmd> }

■ COM Interop

- Speech

- Excel Interop

■ Windows Management Instrumentation (WMI)

“...a set of extensions to the Windows Driver Model that provides an operating system interface...”

■ Basics: Providers

■ Get-PSProviders

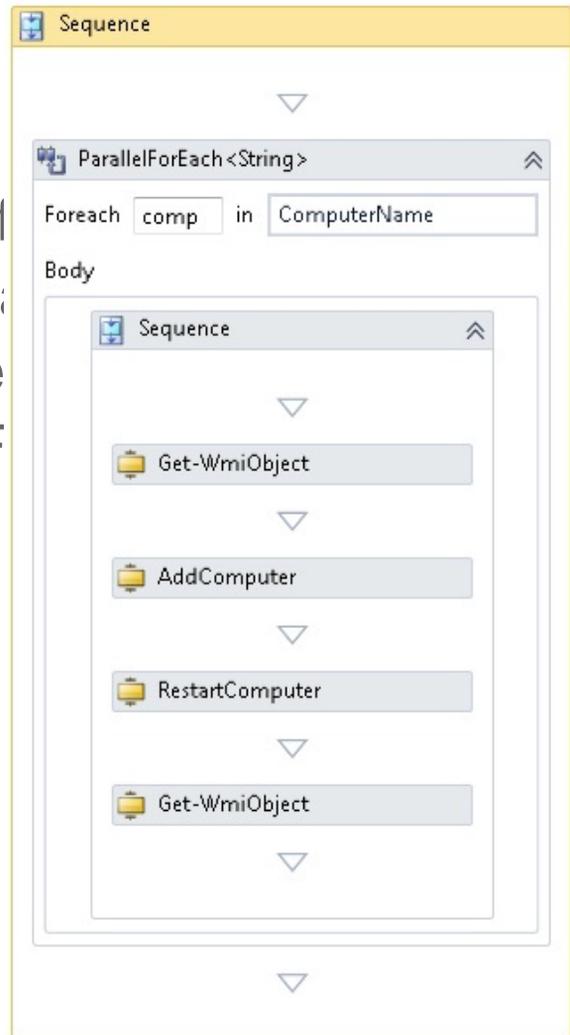
- Environment
- FileSystem
- Function
- Registry
- Certificate
- IIS
- SqlServer
- ...

■ .NET

- Access any class from .NET
- Web Services
- Load Assembly and Show UI
- WPF Samples

■ PS Workflows

- Based on .NET Workflow
- Long-running, persistent
- Interrupt, suspend, resume
- Sequence, Parallel, ForEach



PS Integration

■ Working with Windows

■ Roles & Features

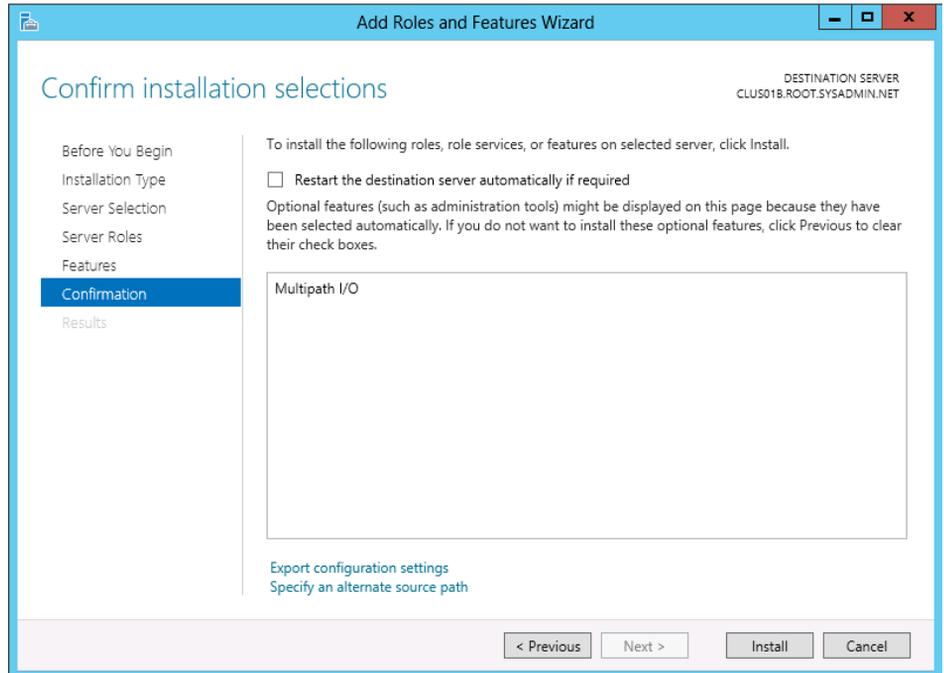
```
Get-WindowsFeature/Install-  
WindowsFeature/Uninstall-  
WindowsFeature
```

```
Install-WindowsFeature Web-Server  
-IncludeAllSubFeature -  
IncludeManagementTools
```

```
'WebSrv01', 'WebSrv02', 'WebSrv03'  
| ForEach-Object  
{ Install-WindowsFeature Web-Server  
-IncludeAllSubFeature -  
IncludeManagementTools -  
ComputerName $_ }
```

■ Working with Windows

Install-WindowsFeature
-ConfigurationFilePath
d:\WebServerConfigFile.xml



■ Working with IIS

Import-Module webAdministration

- Add, change, remove
 - Application pools
 - Web Sites
 - Virtual Directories
 - Web Applications
 - Website Bindings
- Backup & Restore
 - Web Configuration

■ Working with SQL Server

Import-Module SQLPS or launch from SSMS

- Execute T-SQL
- Backup & Restore DBs
- Generate Scripts for DB, Tables, Procedures

■ Working with TFS

■ Get info

- Work Items
- Source Control

■ Manage

- Workspaces
- Changesets, Shelvesets, Pending Changes
- Build Definitions
- ...

■ Working with Sharepoint

- Install Sharepoint

- Manage

 - Site Collections

 - Lists

 - ...

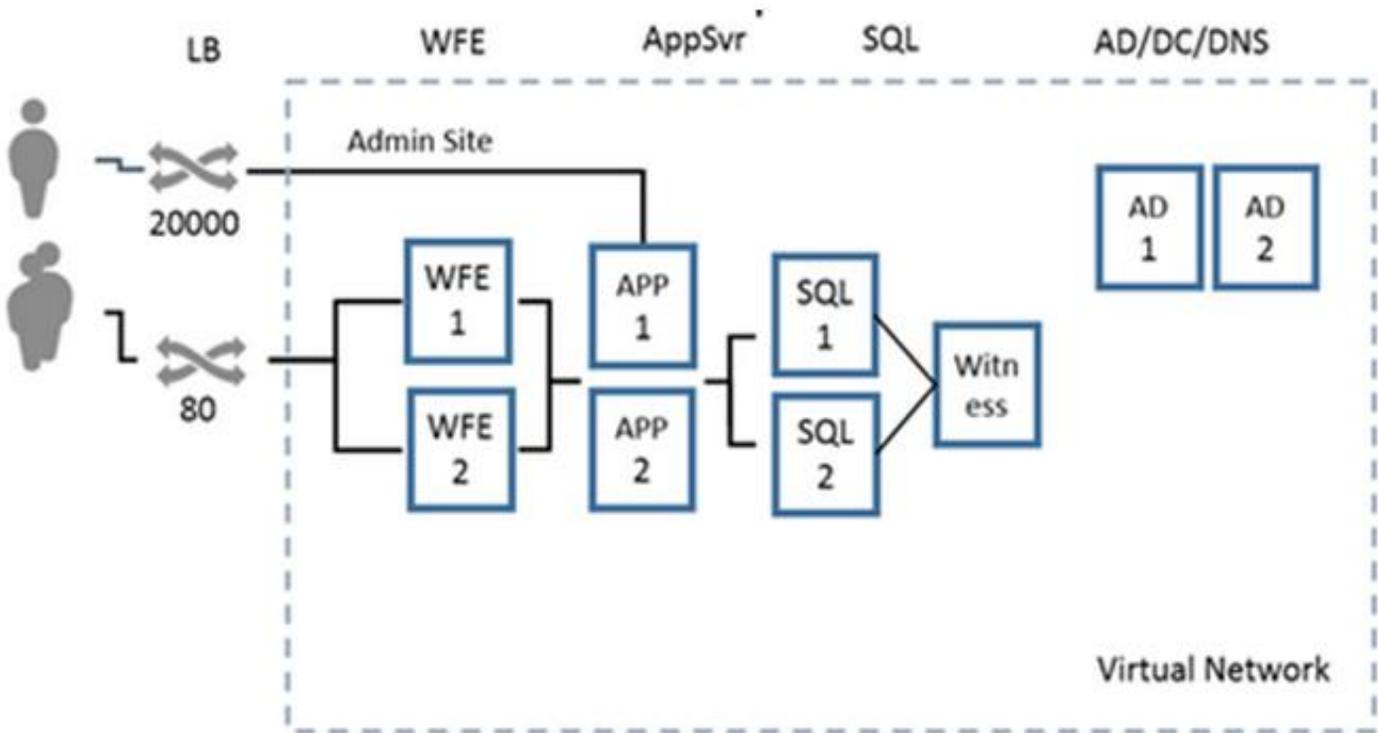
- Import/Export

■ Working with Microsoft Azure

■ Manage

- Storage
- VMs
- WebSites
- Resources
- Active Directory
- ...

■ Create multi-tier IaaS environments



Demo KUDU

/ + | 3 items   

	Name	Modified	Size
	data	22.12.2015, 13:06:21	
	LogFiles	18.12.2014, 23:59:27	
	site	22.12.2015, 13:06:21	



Use old c

Kudu Remote Execution Console

Type 'exit' then hit 'enter' to get a new powershell process.

Type 'cls' to clear the console

PS D:\home> get-process

Handles	NPM(K)	PM(K)	WS(K)	VM(M)	CPU(s)	Id	ProcessName
58	8	4688	5164	32	0.03	51976	cmd
152	15	11520	16180	124	0.17	55252	DaaSRRunner
245	21	36852	36616	196	1.27	51328	powershell
4694	115	142412	179084	761	6,595.22	17788	w3wp
817	92	78196	88704	727	4.63	54100	w3wp

PS D:\home>

Demo Twitter

Q & A

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