



Citrix Automation mit PowerShell und WPF

Kontakt

Andreas Nick

Info@nick-it.de

@NickInformation

Nick Inform

Dribusch 2

30539 Han

+49 511 165 810 190

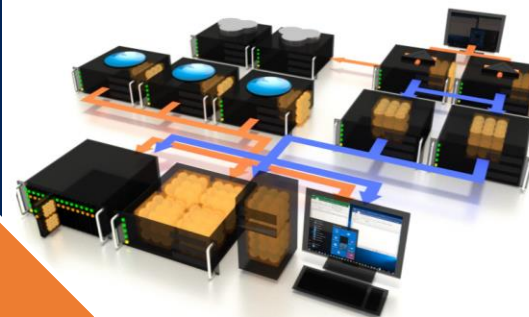
www.nick-it.de

www.software-virtualisierung.de

www.AndreasNick.com

Und viel PowerShell !

Andreas Nick



Softwarevirtualisierung mit

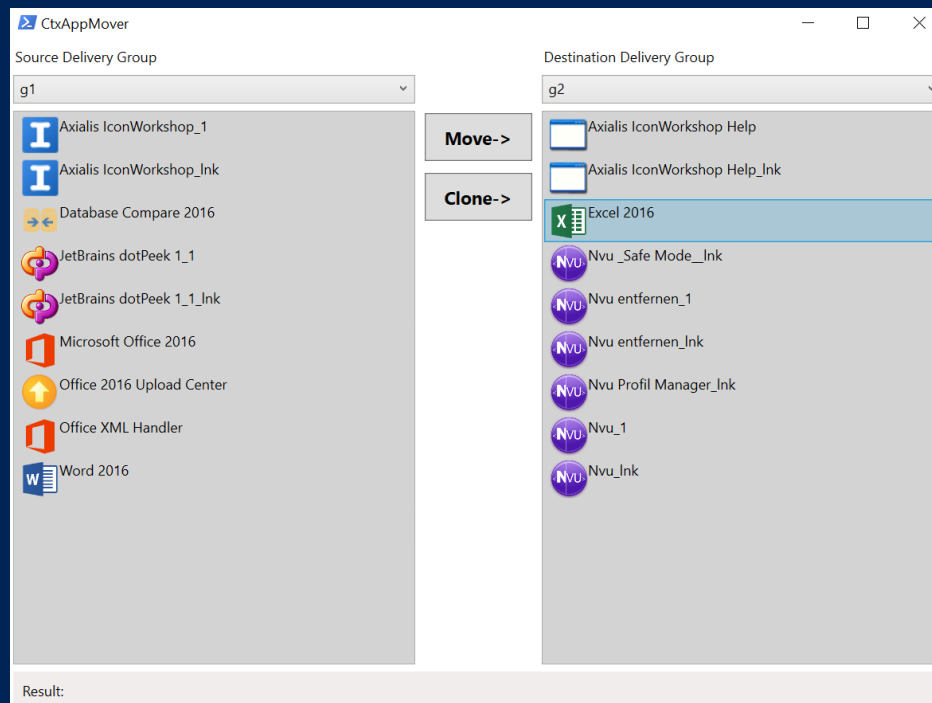
App-V 5

Ein Praxisbuch

- App-V Infrastruktur und Hochverfügbarkeit
- Client und Sequencer umfassend erklärt
- App-V mit SCCM und mit Citrix XenDesktop
- Tools und Troubleshooting

Warum eigene Tools?

- Schneller
- Für einen speziellen Anwendungsfall
- Neue Funktionen
- Erleichterung der Administration



Installation der Citrix Commandlets

- Auf dem XenDesktop Datenträger
- XA717\x64\Citrix Desktop Delivery Controller\...
- Trust_PowerShell !!!

	Orchestration_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket
	Broker_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket
	AppLibrary_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket
	Storefront_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket
	MachineCreation_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket
	ADIdentity_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket
	Monitor_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket
	Configuration_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket
	Analytics_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket
	Host_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket
	DelegatedAdmin_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket
	Trust_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket
	ConfigurationLogging_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket
	EnvTest_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket
	UserProfileManager_PowerShellSnapIn_x64.msi	Z:\packages\Citrix\XA717\x64\Citrix Desktop Deliver...	Typ: Windows Installer-Paket

Einbinden der Citrix Commandlets

- Import der Citrix Comandlets
- PowerShell-Snapins sind Binärdateien (.dll), die Cmdlets und Provider implementieren. In diesem Fall für Citrix

```
Add-PSSnapIn Citrix.*
```

```
Add-PSSnapIn Citrix.Broker.*
```

- Wie werden die gefunden? Über den PSModulepath

```
PS C:\Users\Administrator> $env:PSModulePath
C:\Users\Administrator\Documents\WindowsPowerShell\Modules;C:\Program Files\WindowsPowerShell\Modules;C:\Windows\system32\WindowsPowerShell\v1.0\Modules;C:\Program Files (x86)\Microsoft SQL Server\110\Tools\PowerShell\Modules\;C:\Program Files\Citrix\Telemetry Service\C:\Program Files\Citrix\Broker\Modules\C:\Program Files\Citrix\XenDesktopPoshSdk\Module\itrix.XenDesktop.Admin.V1\
PS C:\Users\Administrator>
PS C:\Users\Administrator>
```

Dokumentation und Hilfe

Get-Command Citrix*

```
PS C:\Users\Administrator> Get-Command -Module Citrix*
```

CommandType	Name	Version	Source
Function	Get-CtxIcon	1.0	Citrix.Common.Commands
Cmdlet	Add-AcctADAccount	7.17.0.20	Citrix.ADIdentity.Admin.V2
Cmdlet	Add-AcctIdentityPoolScope	7.17.0.20	Citrix.ADIdentity.Admin.V2
Cmdlet	Add-AdminPermission	7.17.0.20	Citrix.DelegatedAdmin.Admin.V1
Cmdlet	Add-AdminRight	7.17.0.20	Citrix.DelegatedAdmin.Admin.V1
Cmdlet	Add-AppLibAppDiskScope	7.17.0.21	Citrix.AppLibrary.Admin.V1
Cmdlet	Add-AppLibIsolationGroupPackage	7.17.0.21	Citrix.AppLibrary.Admin.V1
Cmdlet	Add-AppLibTaskMetadata	7.17.0.21	Citrix.AppLibrary.Admin.V1

Beispiel:

```
Get-Help Get-BrokerMachine
```

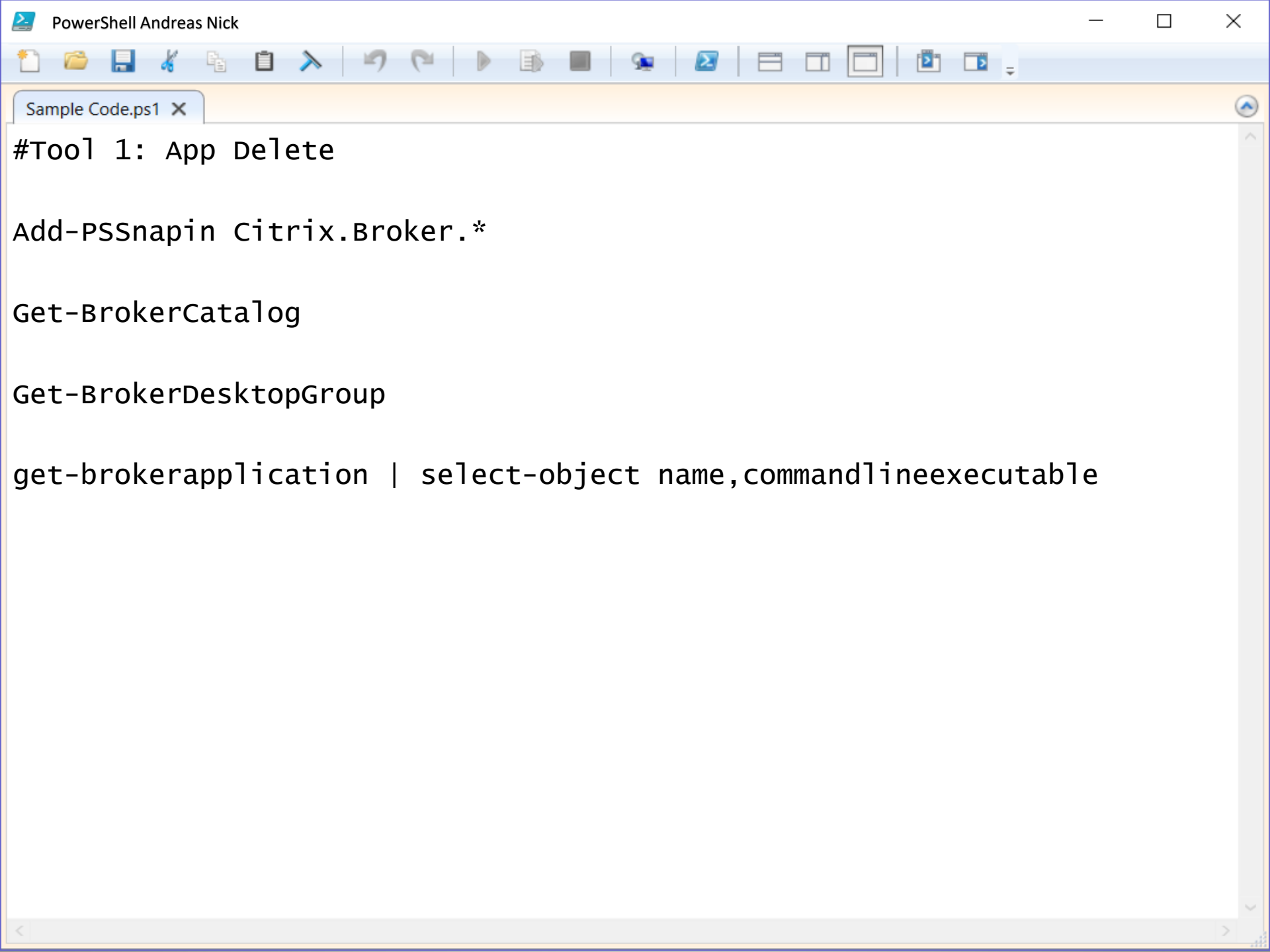
```
Get-Help Get-BrokerMachine -example
```

Im Web docs.citrix.com:

<https://docs.citrix.com/de-de/xenapp-and-xendesktop/7/cds-reference-wrapper-rho/cds-sdk-wrapper-rho/cds-sdk-cmdlet-help.html>



Einfache Beispiele One-Liner (Demo)



Sample Code.ps1

```
#Tool 1: App Delete  
  
Add-PSSnapin Citrix.Broker.*  
  
Get-BrokerCatalog  
  
Get-BrokerDesktopGroup  
  
get-brokerapplication | select-object name,commandlineexecutable
```


Sample Code.ps1 X

```
#Tool 2: #Machines Update GPO and Tags
```

```
Add-PSSnapin Citrix.Broker.*
```

```
get-brokmachine
```

```
get-brokmachine | select MachineName, IPAddress,  
SummaryState | Out-GridView
```

```
get-brokmachine | select MachineName, DNSName,  
IPAddress, SummaryState | Out-GridView -PassThru -Title  
"Machine update Tool" | % { Invoke-Command -ComputerName  
$_.DNSName {gpupdate /force;Restart-Service  
BrokerAgent;}}
```



Mit WPF

Windows Presentation Foundation

Nutzen der XAML in Powershell

- Übersetzen der XAML in XML
- Exportieren der XAML Variablen
- Füllen der Binding-Variablen
- UI anzeigen
- Oder: ISE-Steroids und Visual Studio

```
$xaml = @"
<Window
  xmlns="http://schemas.microsoft.com/winfx/2006/xaml"
  xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
  MinWidth="400"
  MinHeight="400"
  Width="400"
  Height="400"
  ResizeMode="CanResizeWithGrip"
  Title="Update GPO and Citrix GPO"
  Topmost="True">
  <Grid Margin="10,40,10,10">
    <Grid.ColumnDefinitions>
      <ColumnDefinition width="Auto"/>
      <ColumnDefinition width="*/>
    </Grid.ColumnDefinitions>
    <Grid.RowDefinitions>
      <RowDefinition Height="Auto"/>
      <RowDefinition Height="*/>
      <RowDefinition Height="50"/>
    </Grid.RowDefinitions>
    <TextBlock Grid.Column="1" Margin="10">
      <TextBlock Grid.Column="0" Grid.Row="1">
        <DataGrid Name="ComboService" Grid.Column="0" Grid.Row="1">
          <StackPanel Orientation="Horizontal">
            <Button Name="ButOK" MinWidth="80">OK</Button>
            <Button Name="ButCancel" MinWidth="80">Cancel</Button>
          </StackPanel>
        </DataGrid>
      </TextBlock>
    </TextBlock>
  </Grid>
</Window>
"@
```

Erstellung der Datenbindungen

- get-brookermachine
- Datenbindung (Get-Brookermachine)
- Befehlsausführung (Schalter)
- Get-Brookermachine liefert ein Array mit PowerShell Objekten
- `get-brookermachine | select MachineName, DNSName, IPAddress, SummaryState`

Aktion

Binden von Schaltfunktionen

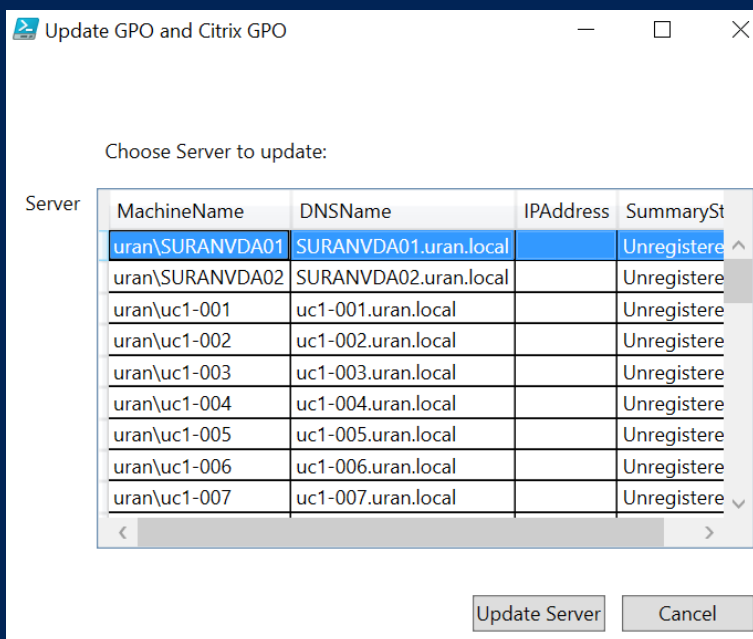
```
$window = Convert-XAMLtoWindow -XAML $xaml -NamedElement  
'ButCancel', 'ButOk', 'ComboService' -PassThru
```

```
function Update-Server{  
    param ($DnsName)  
    Invoke-Command -ComputerName $DNSName {  
        gpupdate /force  
        Restart-Service BrokerAgent -Verbose  
    } -Verbose | Out-Host  
}  
  
#Own Code here  
$window.ButOk.add_Click{  
    #Action  
    $window.ComboService.SelectedItem | % {Write-Host $("GPUUpdate "+$_.DNSName) -ForegroundColor Yellow }  
    $window.ComboService.SelectedItem | % { Update-Server -DNSName $_.DNSName }  
    Write-Host "Set ItemSource" -ForegroundColor Yellow  
    $window.ComboService.ItemsSource = Get-BrokerMachine | select MachineName, DNSName, IPAddress, SummaryState  
}  
  
$window.ButCancel.add_Click{  
    $window.DialogResult = $false  
}
```



Demo

Resultat: Ein einfaches schnelles Tool



```
PS C:\Users\Administrator\Desktop> .\GPOUpdate.ps1 -ServerName SURANVDA01.uran.local
Updating policy...
```

```
Computer Policy update has completed successfully.
```

```
User Policy update has completed successfully.
```

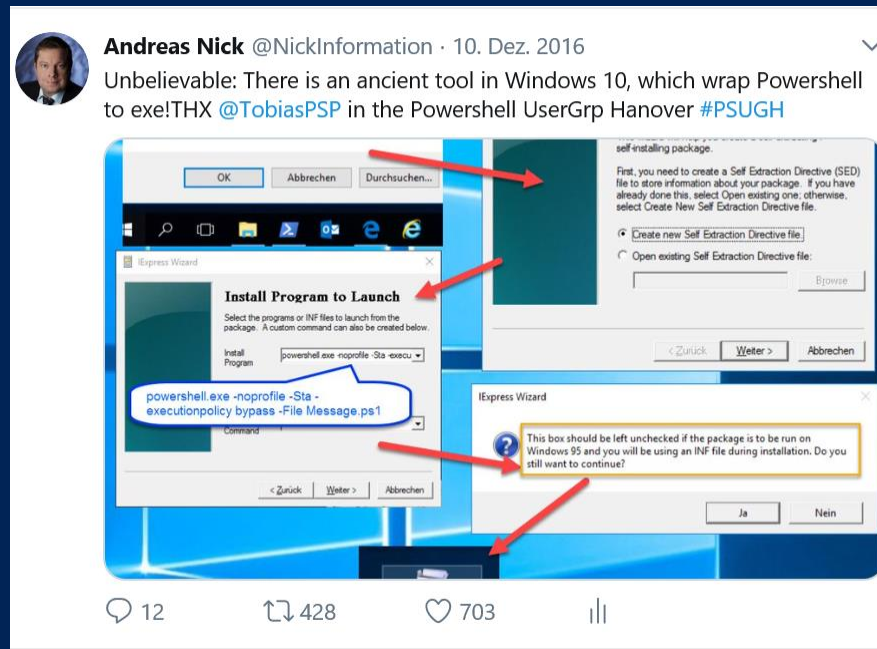
```
VERBOSE: Performing the operation "Restart-Service" on target "Citrix Desktop Service (BrokerAgent)".
Set ItemSource
```

Bonus:

Mit Bordmitteln PowerShell 2 Exe?

Geht
nicht?

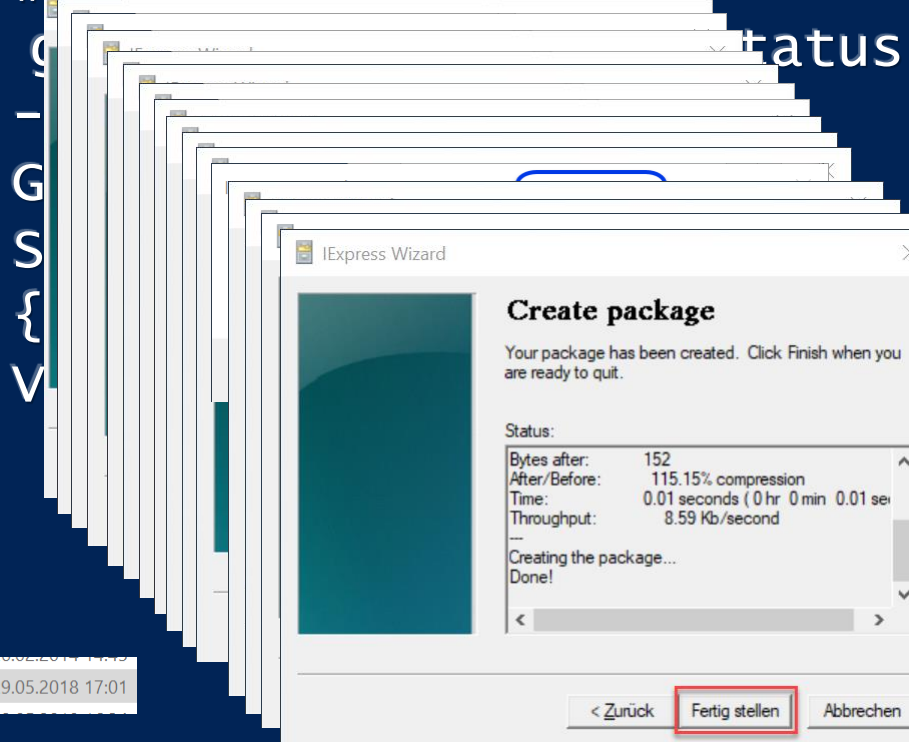
Geht!



Mit iexpress! Aus PowerShell eine Exe

- Skript erstellen
- Powershell als Admin und „iexpress“ starten
- Den Workflow durchlaufen
- Exe starten

```
#restarterTool.ps1
```





Fragen?