



# Automatisierung der Erstellung von Softwarepaketen mit PowerShell

Andreas Nick

Twitter: @nickinformation

Email: a.nick@nick-it.de

Blogs: [www.software-virtualisierung.de](http://www.software-virtualisierung.de) [www.andreasnick.com](http://www.andreasnick.com)

# Agenda

- What is App-V?
- Packaging automation in the 1709 Windows Assessment and Deployment Kit
- New module "Auto Sequencer"
- Requirements
- Baseimage: Convert-WindowsImage WIM2VHD

# What is App-V?

- An integral part of Windows 10 Enterprise since Windows 10 1603
- For application deployment in a virtualized form (.appv instead of .msi)

# App-V in Windows 10 und Server 2016

```
PS> enable-appv
```

```
PS> get-appvstatus
```

```
PS> Get-Help Appv
```



# Windows Assessment and Deployment Kit

- The sequencer is used to record an application - since windows 10 1603 component of the ADK
- The Auto Sequencer is a part of the Windows Creators Update (1703) and now a part of the ADK



# Auto Sequencers Commandlets

```
PS> Connect-AppVSequencerVM
```

```
PS> New-BatchAppVSequencerPackages
```

```
PS> New-AppVSequencerVM
```

# Requirements

Powershell Remoting with Enable-PSRemoting on the remote host:

```
PS> Enable-PSRemoting -SkipNetworkProfileCheck -Force
```

Hyper-V Roll:

```
PS> Enable-WindowsOptionalFeature -Feature 'Microsoft-Hyper-V-All' -Online
```

Virtueller Switch:  
vswitch

```
PS C:\temp\MSDN Windows 10 1703> Convert-WindowsImage -SourcePath .\en_windows_10_enterprise_version_2017_x64_dvd_10189290.iso -VHDFormat VHD -VHDPartitionStyle MBR

Windows(R) Image to Virtual Hard Disk Converter for Windows(R) 10
Copyright (C) Microsoft Corporation. All rights reserved.
Version 10.0.9000.0.amd64fre.fb1_core1_hyp_dev(mikeol).141224-3000 Beta

INFO : Opening ISO en_windows_10_enterprise_version_1703_updated_march_2017_x64_dvd_10189290.iso...
INFO : Looking for D:\sources\install.wim...

INFO : Image 1 selected (Enterprise)...
INFO : Creating sparse disk...
INFO : Attaching VHD...
INFO : Disk initialized with MBR...
INFO : Disk partitioned...
INFO : Volume formatted...
INFO : Access path (E:\) has been assigned...
INFO : Applying image to VHD. This could take a while...
INFO : Signing disk...
INFO : Image applied. Making image bootable...
INFO : Fixing the Device ID in the BCD store on VHD...
INFO : Drive is bootable. Cleaning up...
INFO : Generating name for VHD...
INFO : Closing VHD...

INFO : Closing Windows image...
INFO : Closing ISO...
INFO : Done.
PS C:\temp\MSDN Windows 10 1703>
```

# Baseimage

Convert-WindowsImage -> Windows ISO to Windows VHD:

- <https://gallery.technet.microsoft.com/scriptcenter/convert-windowsimageps1-0fe23a8f>

```
PS> Install-Module -Name Convert-WindowsImage
```

```
PS> Import-Module c:\temp\Convert-  
WindowsImage.ps1
```

```
PS> Convert-WindowsImage -SourcePath  
. \en_windows_10_enterprise_version_1703_updat  
ed_march_2017_x64_dvd_10189290.iso -VHDFormat  
VHD -VHDPartitionStyle MBR
```

# Deploy the baseimage to Hyper-V

```
PS> New-AppVSequencerVM -VMName SEQ3 -ADKPath  
'C:\temp\psconf\ADK-1703'  
-VHDPATH  
'C:\temp\psconf\newimage\15063.0.amd64fre.rs2  
_release.170317-1834_Client_Enterprise_en-  
US.vhd'  
-VMMemory 2048MB -CPUCount 1 -VMSwitch  
Standardswitch
```



# Auto Sequencer configuration XML

```
<?xml version="1.0"?>
<Applications>
  <Application>
    <AppName>Free_AppDeploy_Repackager</AppName>
    <InstallerFolder>C:\packages\msi</InstallerFolder>
    <Installer>Free_AppDeploy_Repackager.msi</Installer>
    <InstallerOptions>/qn</InstallerOptions>
    <Cmdlet>>true</Cmdlet>
    <Enabled>>true</Enabled>
  </Application>
</Applications>
```

```
<Applications>
  <Application>
  ..
  </Application>
  <Application>
  ..
  </Application>
</Applications>
```

# Start Auto Sequencing

```
PS> import-module 'C:\Program Files  
(x86)\windows Kits\10\Microsoft Application  
Virtualization\Auequencer\New-  
AppVSequencerVM\New-AppVSequencerVM.psm1'
```

```
PS> New-BatchAppVSequencerPackages -  
ConfigFile C:\packages\autoseq.xml -VMName  
SEQ1 -OutputPath C:\packages\output\
```

# Demo

<https://github.com/AndreasNick/AppV-Auto-Sequencer-example>

Create baseimage

Deploy baseimage to Hyper-V

Automatic Create a new App-V Package



TopDeploy  
epackager

-a---

Directory: C:\Users\Public\Documents\SequencedPackage



# Pros and cons

- Advantage:
  - Part of the ADK
  - Easy to use
- Disadvantage:
  - No templates (appvt) to allow COM, and CoW
  - Always Full Load(?)
  - Currently no German systems and therefore possible restrictions with German character sets
  - bugs

# Summary

- with the Auto Sequencer it is possible to automatically switch your entire environment to App-V
- A VHD image and a Hyper-V environment is necessary
- There are better approaches with more possibilities
- However, it is interesting to see how Microsoft solves the issue

# Next Steps

- Now: 15 min break
- Download the ADK and install it yourself
- Activate App-V with „enable-appv“
- Grab a coffee
- Stay here to enjoy next presentation
- Change track and switch to another room
- Ask me questions or meet me in a breakout session room afterwards

**Questions?**



# about\_Author

My App-V Book:

<https://tinyurl.com/appvbuch>

Andreas Nick

Nick Informationstechnik GmbH  
Dribusch 2

30539 Hannover

+49 511 165 810 190

