

Next-level VMware Automation with PowerCLI

Automate | Delegate | Relax

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LET'S CONNECT



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“We enable you to streamline, automate, and delegate all enterprise IT management tasks using PowerShell.”

Simple | Smart | Secure



+49

Headquarters
Ettlingen
Germany

2014

First
ScriptRunner
Release

25

The
ScriptRunner
Team

>1900

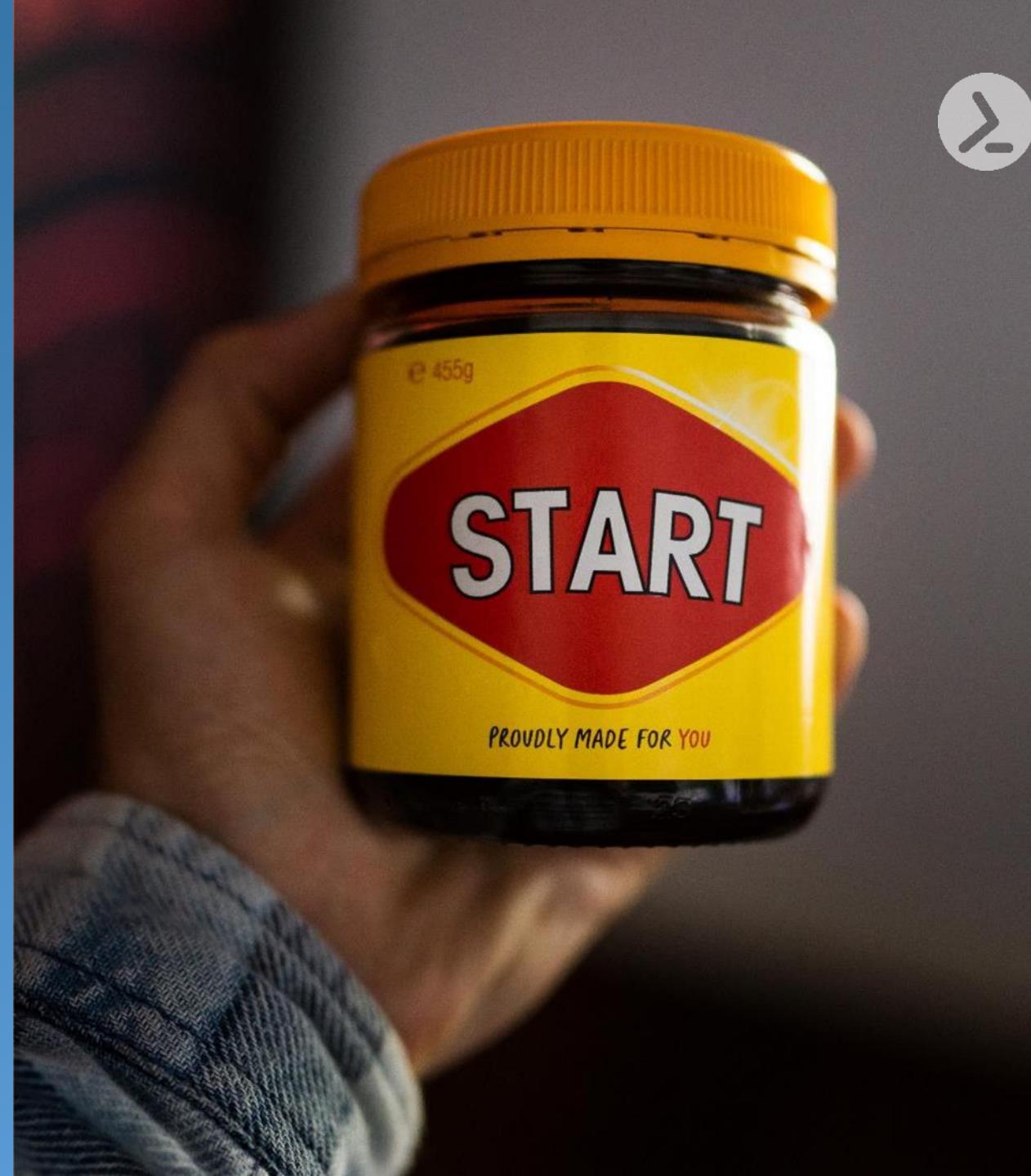
Ready-to-use
PowerShell
Scripts





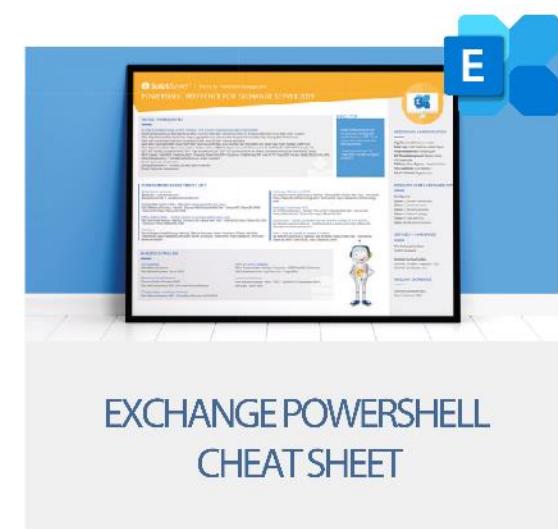
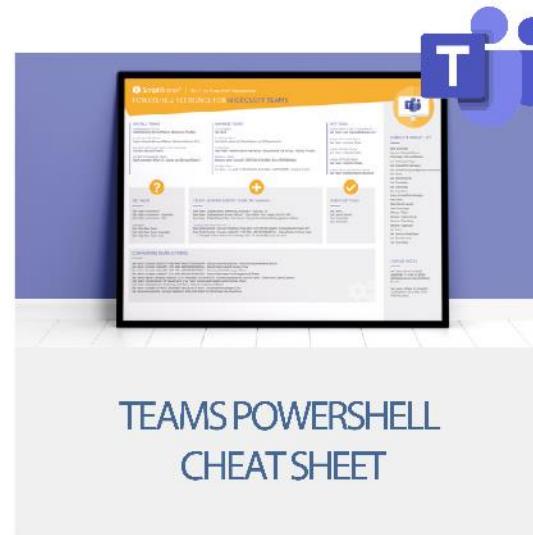
200+ PowerShell scripts for managing VMware.

[github.com/scriptrunner/ActionPacks/
tree/master/VMware](https://github.com/scriptrunner/ActionPacks/tree/master/VMware)



Get your free PowerShell goodies

lp.scriptrunner.com/en/powershell-goodies





Manage
VMware
With
PowerShell



Next-Level
PowerShell
Automation
With
ScriptRunner

LEVEL-UP YOUR IT AUTOMATION GAME – WHY?



Sick and tired of
too many manual tasks

Consistent processes
and better quality at scale

Improved security

Focus on high-value work

More fun :-)



THE POWERCLI MODULE



Available for 10+ years

Automate all aspects of
vSphere management

Hundreds of CmdLets

Current version: 13.2
7,2 million downloads (PSGallery)

Supports Windows PowerShell
and PowerShell 7



EXAMPLE POWERSHELL USE CASES



Create | Manage | Remove VMs

Start | Stop | Restart | Set VMs

Manage Snapshots

Infrastructure Maintenance

Creating Reports



TWO WAYS OF USING POWERSHELL





STANDARDIZATION, AUTOMATION AND DELEGATION OF RECURRING TASKS

AUTO-CREATED
USER FRIENDLY
WEB FORMS

SECURE
CREDENTIAL
ADMINISTRATION

CENTRALIZED SCRIPTS AND
MODULES MANAGEMENT

INTERACTIVE, SCHEDULED
AND EVENT-DRIVEN
SCRIPT EXECUTION

COMPREHENSIVE
MONITORING AND
REPORTING



CENTRALIZED SCRIPT MANAGEMENT



ScriptRunner®

Dashboard Run Authorize & Delegate Monitoring Configuration Scripts + Create

Showing 199 of 1241 scripts

Scripts

- Clone-VMHVTTemplate.ps1
- Clone-VMHVVirtualMachine.ps1
- Convert-VMHVTTemplate.ps1
- Copy-VMHVHardDisk.ps1
- Dismount-VMHVTools.ps1
- Export-VMHVHostProfile.ps1
- Format-VMHVHostDiskPartition.ps1
- Get-All_VMs.ps1
- Get-MSTTeam_Html.ps1

VMware All owners

Clone-VMHVTTemplate.ps1 Checked out by me Public

Save Check in script Revoke script editing + Create action

CONFIGURATION General Header information Code editor

INFORMATION Change history Used by

Code editor

```
75 [string]$VMHost,
76 [Parameter(ParameterSetName = "byID")]
77 [Parameter(ParameterSetName = "byName")]
78 [ValidateSet("Thin", "Thick", "EagerZeroedThick")]
79 [string]$DiskStorageFormat = "Thick"
80 )
81
82 #Import-Module VMware.PowerCLI
83
84 try{
85     $Script:vmServer = Connect-VIServer -Server $VIserver -Credential $VICredential -ErrorAction Stop
86
87     if($PSCmdlet.ParameterSetName -eq "byID"){
88         $Script:source = Get-Template -Server $Script:vmServer -Id $SourceTemplateID -ErrorAction Stop
89     }
89 else{
90     $script:source = Get-Template -Name $SourceTemplateName -Server $Script:vmServer -ErrorAction Stop
91 }
92
93 $Script:store = Get-Datastore -Name $Datastore -Server $Script:vmServer -ErrorAction Stop
94 $Script:center = Get-Datcenter -Name $Datcenter -Server $Script:vmServer -ErrorAction Stop
95 $Script:vmhost = Get-VMHost -Server $Script:vmServer -Name $VMHost -ErrorAction Stop
96
97 $Script:Output = New-Template -Name $TemplateName -Template $Script:source -Location $Script:center `
98 -VMHost $Script:vmhost -Datastore $Script:store -Confirm:$false -Server $Script:vmServer `
99 -DiskStorageFormat $DiskStorageFormat -ErrorAction Stop | Select-Object *
100
101 if($SRXEnv) {
102     $SRXEnv.ResultMessage = $Script:Output
103 }
```



SECURE CREDENTIAL MANAGEMENT



Credentials Showing 23 of 23 Credentials

+ Create

Create credential x

User credential or client secret
Use name and password or secret

WinRM client certificate
Use a WinRM client certificate from the local certificate store

Password server
Retrieve the secret from a central password server

PowerShell Secret Management
Retrieve the secret from the Secret Management vault (experimental)

SSH key
Use an existing SSH key file or create a new one

AzureVM Credentials

Exchange Service Account

Exchange Service Account (Pleasant)

GitHub

Hyper-V Service Account

Microsoft Graph Target

MyActiveDirectory

O365 Tenant Service Account

Type Username Owner Tags

Search...

MS Graph Target 007

Save Run test Delete

Microsoft services

General

Microsoft services

Advanced settings

INFORMATION

Used by

Activate service

Microsoft Graph

Sign-in method

Certificate Client secret

Tenant ID

Application ID

Credential

Uses the credential selected above which must contain the client secret as password.

PowerShell module

Microsoft.Graph.Mail

Must be installed on the execution host

Deactivate service

The screenshot shows the ScriptRunner 'Credentials' interface. On the left, a sidebar lists various credential types: User credential or client secret, WinRM client certificate, Password server, PowerShell Secret Management, SSH key, AzureVM Credentials, Exchange Service Account, Exchange Service Account (Pleasant), GitHub, Hyper-V Service Account, Microsoft Graph Target, MyActiveDirectory, and O365 Tenant Service Account. The 'Microsoft Graph Target' credential is selected and expanded in a modal window on the right. The modal title is 'MS Graph Target 007'. It contains tabs for 'Save', 'Run test', and 'Delete'. Under 'Microsoft services', the 'General' tab is selected. The 'Information' section shows the credential is used by 'Used by'. The 'Activation' section has a 'Activate service' button. The 'Microsoft Graph' section includes fields for 'Tenant ID' and 'Application ID', both of which are blurred. The 'Credential' section notes that the selected credential must contain the client secret as password. The 'PowerShell module' section lists 'Microsoft.Graph.Mail' and includes a note that it must be installed on the execution host. A 'Deactivate service' button is at the bottom of the modal.

PASSWORD SERVER SUPPORT



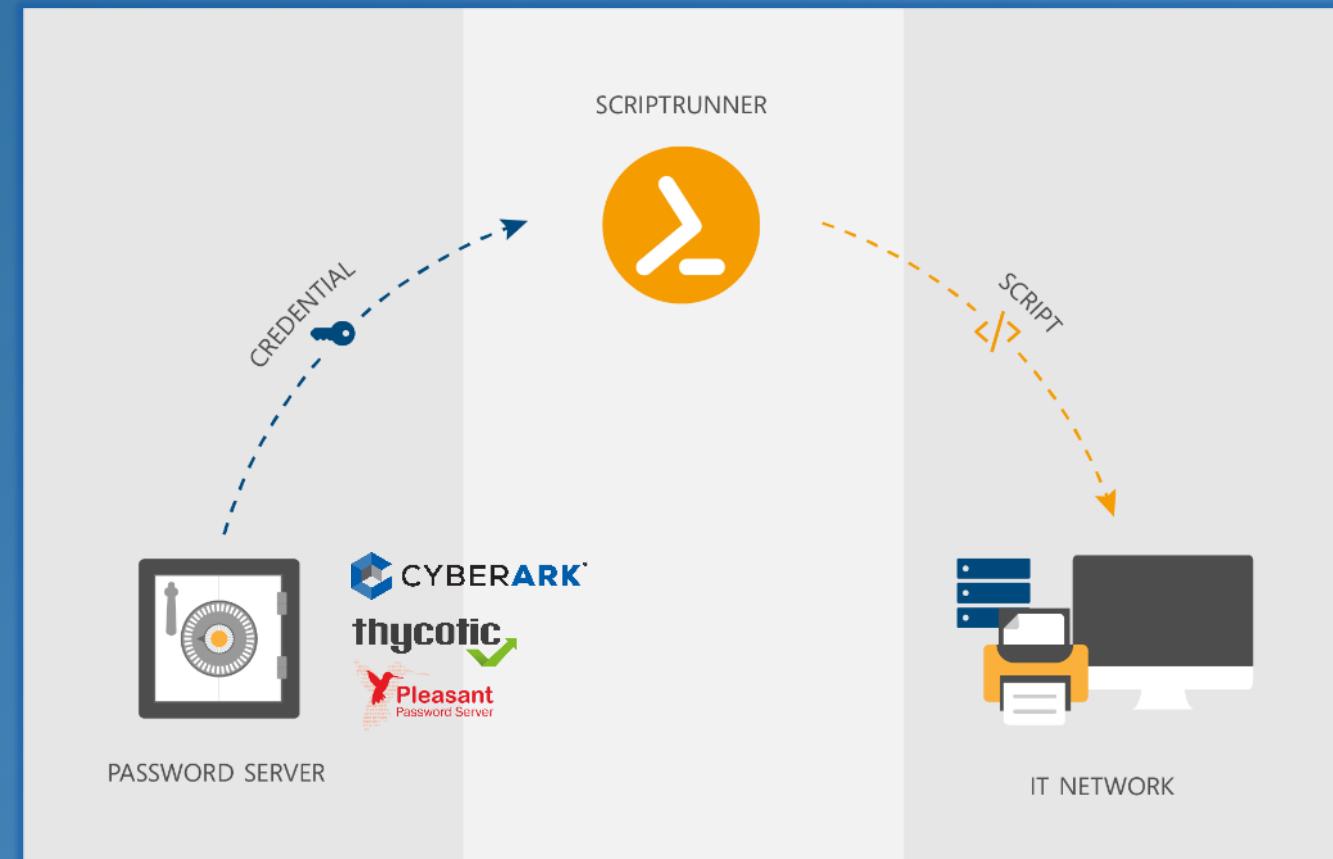
Connectors for CyberArk, Pleasant and Thycotic

No local credentials

Automatic password rotation

Single secure password repository in multi-server scenarios

Support for Azure KeyVault (planned)



SECURE DELEGATION



ScriptRunner executes scripts and connects to backend systems

No user access to backend systems, scripts, modules and credentials

Flexible and secure tasks delegation to help desk teams and end-users

Easy access via ScriptRunner Portal and Self-Service Portals

Complete separation of PowerShell environment and user context

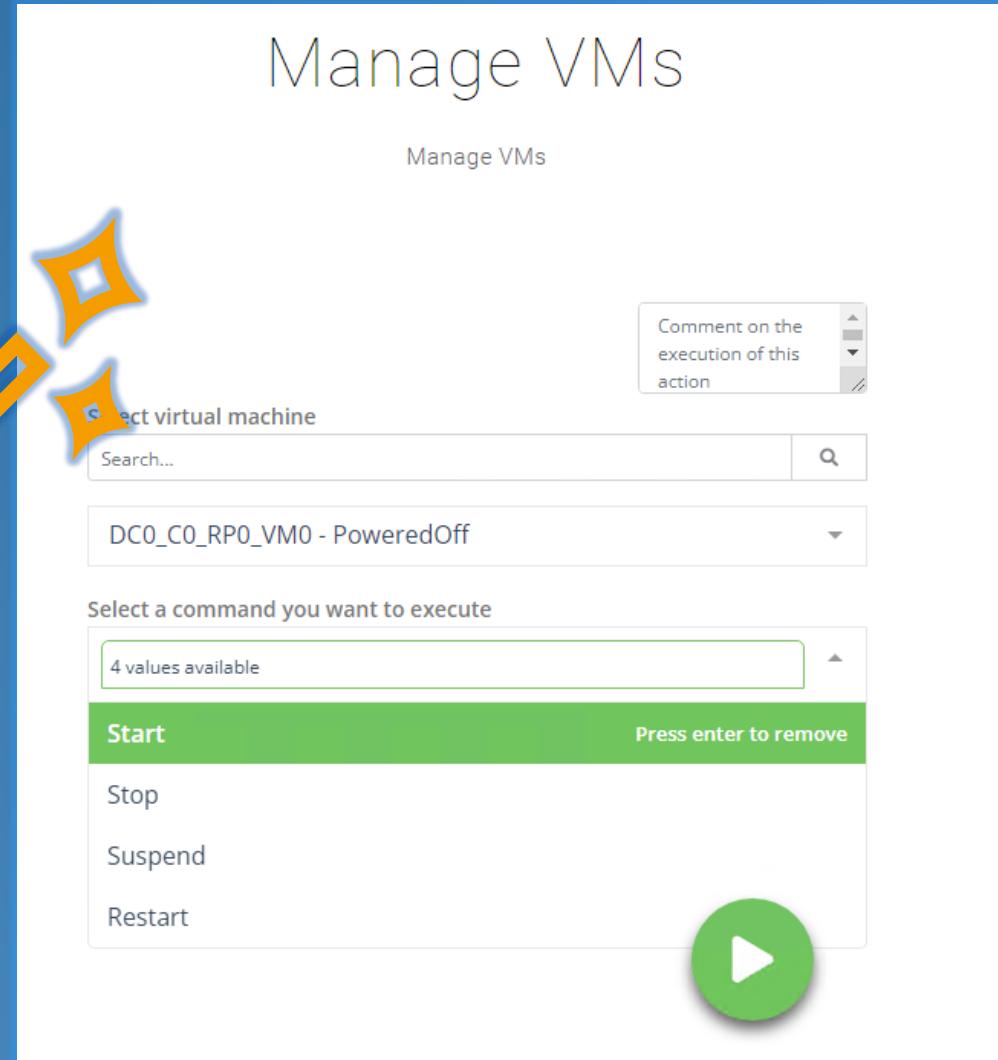


POWERSHELL FOR EVERYONE



The Script

```
80 #Import-Module VMware.Automation.Core
81 #Import-Module VMware.PowerCLI
82 $user = $SRXEnv.SRXStartedBy
83 $client = $SRXEnv.SRXStartedIP
84 $action = $SRXEnv.SRXDisplayName
85
86 try{
87     $Script:vmServer = Connect-VIServer -Server $VIserver -Credential $VI
88
89     if($PSCmdlet.ParameterSetName -eq "byID"){
90         $Script:machine = Get-VM -Server $Script:vmServer -Id $VMId -Err
91     }
92     elseif($PSCmdlet.ParameterSetName -eq "byName"){
93         $Script:machine = Get-VM -Server $Script:vmServer -Name $VMName -
94     }
95
96     switch($Command){
97         "Start"{  
98             $null = Start-VM -VM $Script:machine -Server $Script:vmServer  
99         }  
100        "Stop"{  
101            $null = Stop-VM -VM $Script:machine -Server $Script:vmServer  
102        }  
103        "Suspend"{  
104            $null = Suspend-VM -VM $Script:machine -Server $Script:vmServ
105        }  
106        "Restart"  
107        {  
108            $null = Restart-VM -VM $Script:machine -Server $Script:vmServ
109        }  
110    }  
111
112
113    if($SRXEnv) {  
114
115        $action01 = 'http://winsrv-poc1.company.net/scriptrunner'  
116        $SRXEnv.ResultMessage = "Command #$Command# successfully executed"
117    }
118
119
120
```



The User Experience

FLEXIBLE ROLE-BASED DELEGATION



The screenshot shows the ScriptRunner Active Directory Self-Services interface. The left sidebar has a 'Authorize & Delegate' section selected. The main content area shows the 'Delegations' tab under 'CONFIGURATION'. The 'Delegations' section lists several actions assigned to the user:

- AD: Show Active Directory User Properties (Get-ADUser)
- Advanced Active Directory Report
- Reset password for Active Directory user
- Change Active Directory User Properties

Below this, there is a list of local actions:

- Local: Add two values
- AD: Show Active Directory User Properties (Get-ADUser) (highlighted in orange)
- Simulate Set-ADUserPropertiesDemo
- Test-Cascaded ADQueries
- Get-ExMailboxProperties
- Remove-PrintJob
- Validation possibilities

A message at the bottom right says 'Press enter to remove'.

COMPREHENSIVE MONITORING AND REPORTING



ScriptRunner®

Live Monitor

Running scripts: 3

Advanced Active Directory Report

Cancel execution

```
99: WARNING: Cannot resolve the manager, on the group 'Bass-AU'.
100: Done!
101: Working on Organizational Units Report...
102: Done!
103: Working on Users Report...
104: Done!
105: Working on Group Policy Report...
106: Done!
107: Working on Computers Report...
108: Done!
109: Compiling Report...
110:
```

Action or scripted query Started Target Runtime Started by Server

Simple Active Directory Report a few seconds ago AD local Running... COMPANY\tina ScriptRunner

Actions: 2
Scheduled: 1
Queued: 0
Queries: 1

Filter by servers...

UNLOCK THE POWER OF POWERSHELL ACROSS YOUR ORGANIZATION



Manager

Consistent processes
Better quality
Saving costs

Deliver great scripts in
a secure environment



DevOps

Delegate recurring
tasks and save time



Administrator

Deliver more & better
services in less time



HelpDesk



Developer

Develop scripts for
more use cases/users



EndUser

Faster task completion
with self-services



Put ScriptRunner
to the test.
30 days for free.

lp.scriptrunner.com/en/demo-download





Let's talk about your
automation use cases.
Book an online session
with me.

lp.scriptrunner.com/meetings/heiko-brenn/demo-en



Simplify your
VMware management
with ScriptRunner.

lp.scriptrunner.com/en/vmware





THANK YOU FOR ATTENDING

#KeepOnScripting