

Unlock the Power of PowerShell across your organization

Automate. Delegate. Relax.

Heiko Brenn  @heikobrenn

www.scriptrunner.com



Agenda

A wide-angle photograph of a paved road stretching into the distance under a blue sky with scattered white clouds. In the middle ground, a person wearing a green jacket stands with arms outstretched, looking upwards. The foreground is dark asphalt with white dashed lines.

The Potential of
PowerShell

A wide-angle photograph of a paved road stretching into the distance under a blue sky with scattered white clouds. In the middle ground, a person wearing a green jacket stands with arms outstretched, looking upwards. The foreground is dark asphalt with white dashed lines.

The PowerShell
Challenges

A wide-angle photograph of a paved road stretching into the distance under a blue sky with scattered white clouds. In the middle ground, a person wearing a green jacket stands with arms outstretched, looking upwards. The foreground is dark asphalt with white dashed lines.

Unlock the
Power of
PowerShell

Short profile Heiko Brenn



A screenshot of Heiko Brenn's LinkedIn profile. The profile picture shows a man with glasses and a yellow face mask. The background of the profile header features a road leading towards a bright horizon with the text "POSSH HIGHWAY TO SHELL". Below the header, the profile information includes:

Heiko Brenn
@HeikoBrenn
#PowerShell enthusiast @Script_Runner | Music lover | Drummer for @ScriptyBoyz | Co-Founded @PSUGRheinNeckar
⌚ Germany ⌚ scriptrunner.com 📅 Joined September 2018
786 Following 729 Followers

- Product Expert & Head of International Business
- In the IT industry for 25+ years
- Many years of experience as
 - Administrator
 - Consultant
 - Product Manager
- Responsible for EMEA and North America
 - Technical Sales
 - Consulting
 - Partner Management
- Contact information
 - Phone: +49-162-4879156 and +1-6469806339
 - Email: heiko.brenn@scriptrunner.com
 - LinkedIn: www.linkedin.com/in/HeikoBrenn
 - Twitter: twitter.com/heikobrenn
 - GitHub: github.com/HeikoBrenn



 [linkedin.com/in/HeikoBrenn](https://www.linkedin.com/in/HeikoBrenn)

 github.com/HeikoBrenn

 +49-162-4879156

 heiko.brenn@scriptrunner.com



ScriptRunner®

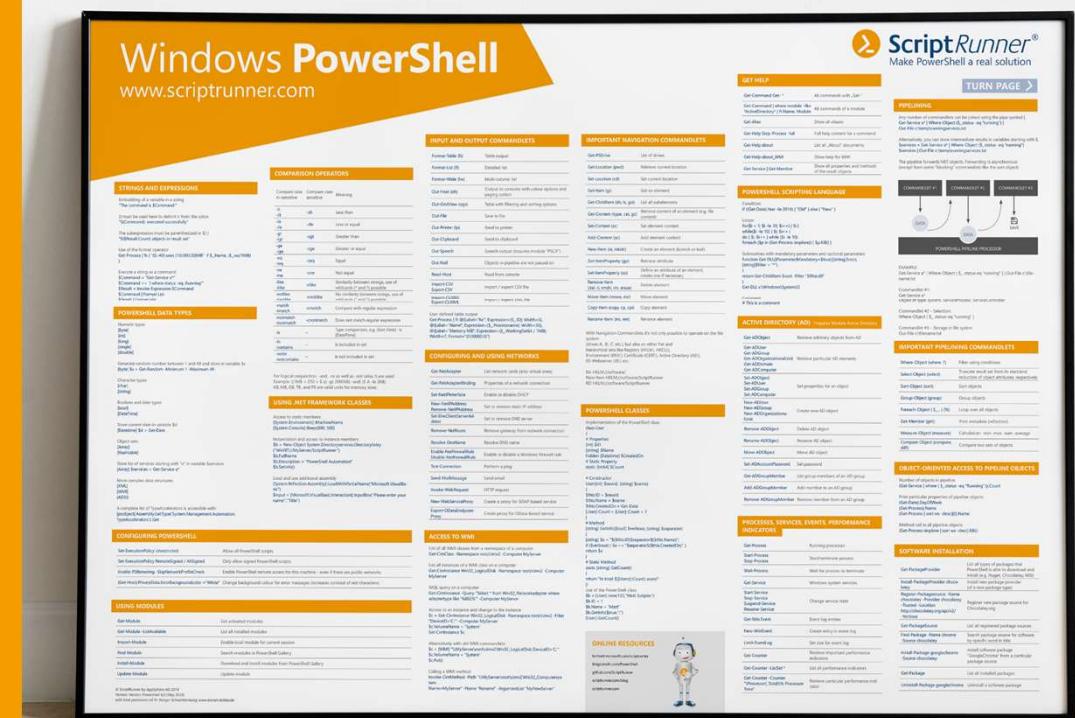
The #1 for PowerShell Management

We ❤️ Community



Get your free PowerShell poster

lp.scriptrunner.com/en/powershell-poster



The Potential of PowerShell



The Potential of PowerShell



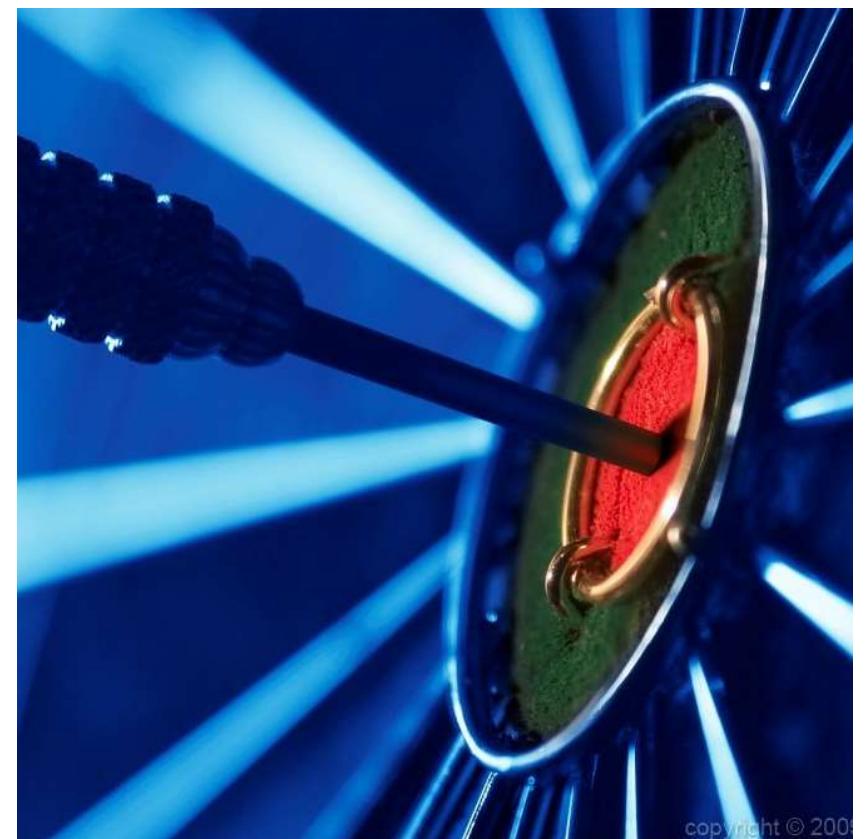
Very mature command-line shell
and scripting language for IT automation

Great framework to automate
recurring tasks consistently

Simplifies administration of your
entire IT infrastructure

Strong commitment from Microsoft
and many other vendors

Very vital worldwide community



copyright © 2005

Cross-platform PowerShell



PowerShell AnyWhere

Windows PowerShell
since 2006

PowerShell 7
since 2016

.NET Framework

.NET Core

Windows

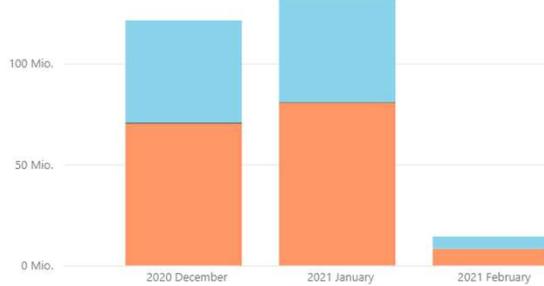
Linux

macOS

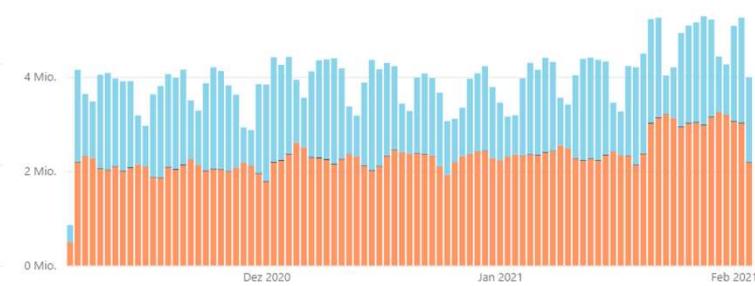
Cross-platform PowerShell



Monthly Usage by OS (90 Day)
userAgent ● Linux ● macOS ● Windows

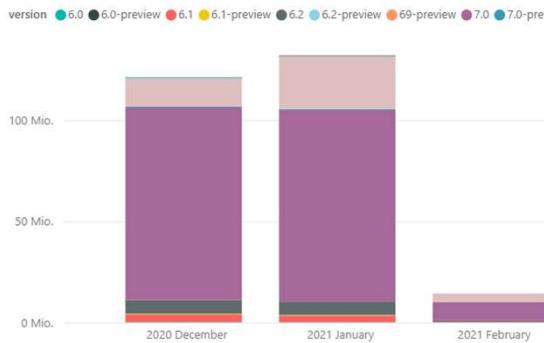


Daily Usage by OS (30 Day)
userAgent ● FreeBSD ● Linux ● macOS ● Windows

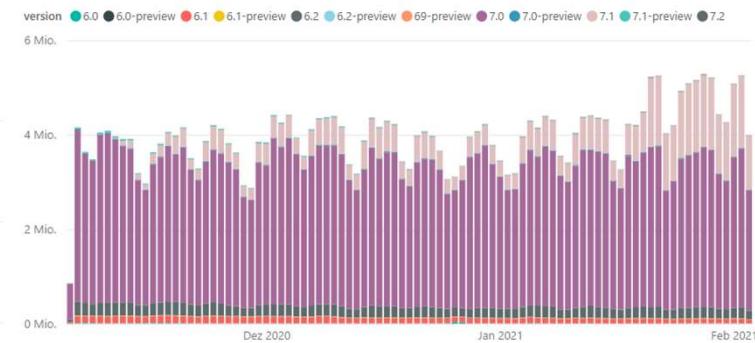


03.02.2021 00:00:00

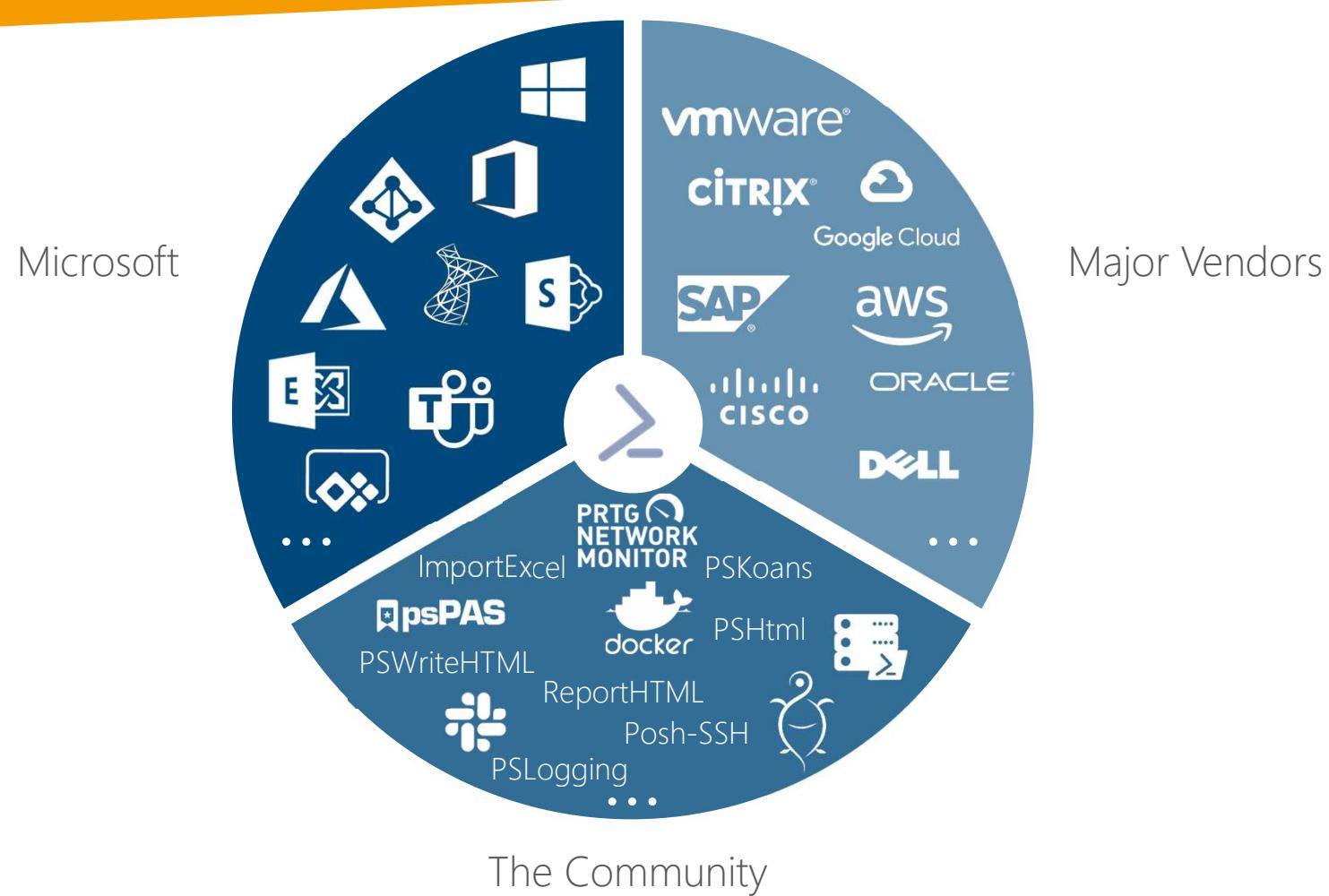
Monthly Usage by Version (90 Day)



Daily Usage by Version (30 Day)



The PowerShell Ecosystem



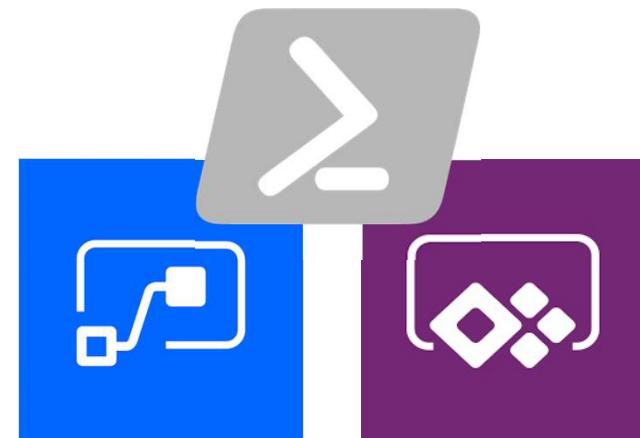
Managing and configuring Flows,
PowerApps, Environments, etc.

Module for administrative features
- Administrator

Module for configuration features
– Maker

Current version: 2.0

~120 Cmdlets



Typical Use Cases for PowerShell modules



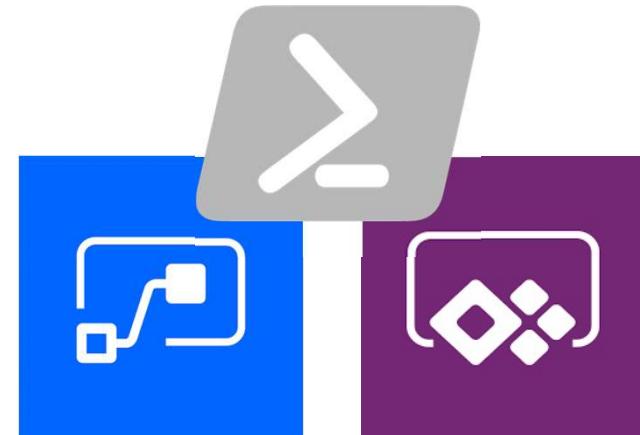
Create/Delete Environments

Add/Remove Users to/from
PowerApps/Flows

Enable/Disable Flows

Get Current Environment/
PowerApps/Flow Settings

Create reports



The PowerShell Challenges



The PowerShell Challenges



How to start?

How to learn?

Ressources?



Which processes and
use cases should I
automate?

How to organize my
scripts?

How to standardize?

...



How to manage my
PowerShell scripts and
modules?

How to securely
manage credentials?

How to enable others
to consume my
scripts?

Does this remind you of the way PowerShell
is used in your organization today?



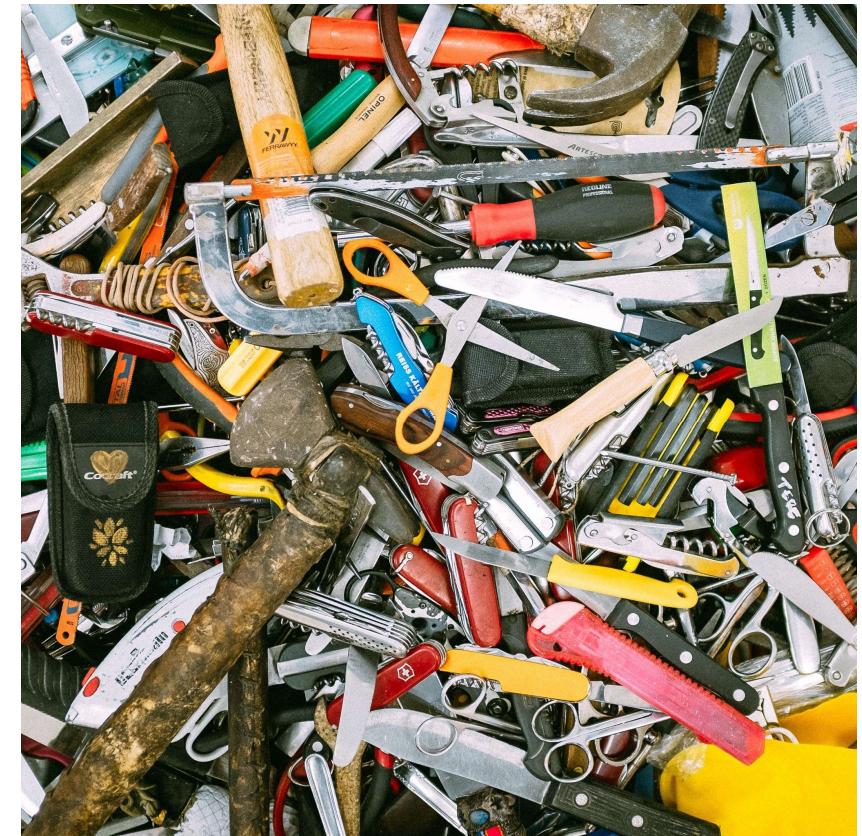
PowerShell chaos

PowerShell know-how bottleneck

No org-wide secure
credential management

PowerShell is only used
in expert circles

The potential of PowerShell
remains untapped



Unlock the Power of PowerShell across your organization



What it takes to successfully automate with PowerShell in the enterprise



Standardization

Centralization

Easy accessibility for non-IT experts

Monitoring

Integration



Accessibility for non-IT experts



BEFORE

A screenshot of the Windows PowerShell ISE interface. The title bar says "Administrator: Windows PowerShell ISE". There are two tabs open: "Untitled3.ps1" and "Exchange_Webinar.ps1". The "Untitled3.ps1" tab contains a large block of PowerShell script code. The code is used to set up auto-replies for multiple mailboxes. It uses variables like \$cmdArgs, \$msg, and \$box, and performs operations like Set-MailboxAutoReplyConfiguration and Get-Mailbox. The code is color-coded for syntax highlighting. The status bar at the bottom shows "Completed" and "Ln 1 Col 36".

```
118 $cmdArgs.Add('ExternalAudience', $replyType)
119 $cmdArgs.Add('InternalMessage', $InternalText )
120 $cmdArgs.Add('ExternalMessage', $ExternalText )
121 if($PSCmdlet.ParameterSetName -eq "Schedule Auto Reply"){
122     $cmdArgs.Add('AutoReplyState', 'Scheduled')
123     $cmdArgs.Add('EndDate', $EndDate)
124     $cmdArgs.Add('StartTime', $StartDate)
125     $msg += "scheduled"
126 }
127 else{
128     $cmdArgs.Add('AutoReplyState', 'Enabled')
129     $msg += "enabled"
130 }
131
132 $Script:resHtml = @()
133 foreach($item in $MailboxIds){
134     try{
135         $box = Get-Mailbox -Identity $item -ErrorAction Stop
136         if($null -ne $box){
137             try{
138                 $null = Set-MailboxAutoReplyConfiguration @cmdArgs -Identity $box
139                 if($GenerateReport -eq $true){
140                     $Script:resHtml += Get-MailboxAutoReplyConfiguration -Identity $box
141                 }
142                 $resultMessage += [System.String]::Format($msg,$box.UserPrincipalName)
143             }
144             catch{
145                 Write-Output "Error occurred at set Mailbox $($item)"
146             }
147         }
148     }
149     catch{
150         Write-Output "Error occurred at get Mailbox $($item)"
151     }
152 }
```

AFTER

A screenshot of a web-based application titled "SelfService" under "Out of Office". The URL is "1.company.net/OutOfOffice/". The page has a header "Create OOF Notifications With ScriptRunner Integration". It contains several input fields:

- "Please select the desired Parameter Set:" dropdown menu showing "Schedule Auto Reply".
- "Please select mailbox(es) Heiko was here:" search bar with results "Angus Young", "Shania Twain", and "Phil Collins".
- "Please select the notification template:" dropdown menu showing "Working From Home|Home Office".
- "Please select the start of absence" date input showing "Feb 4, 2021, 5:21 PM".
- "Please select the end of absence" date input showing "Feb 11, 2021, 5:21 PM".

A green play button icon is located in the bottom right corner of the form area.

Centralizing PowerShell



STANDARDIZATION



COLLABORATION



MONITORING



SECURITY



DELEGATION



AUTOMATION



Unlock the Power of PowerShell



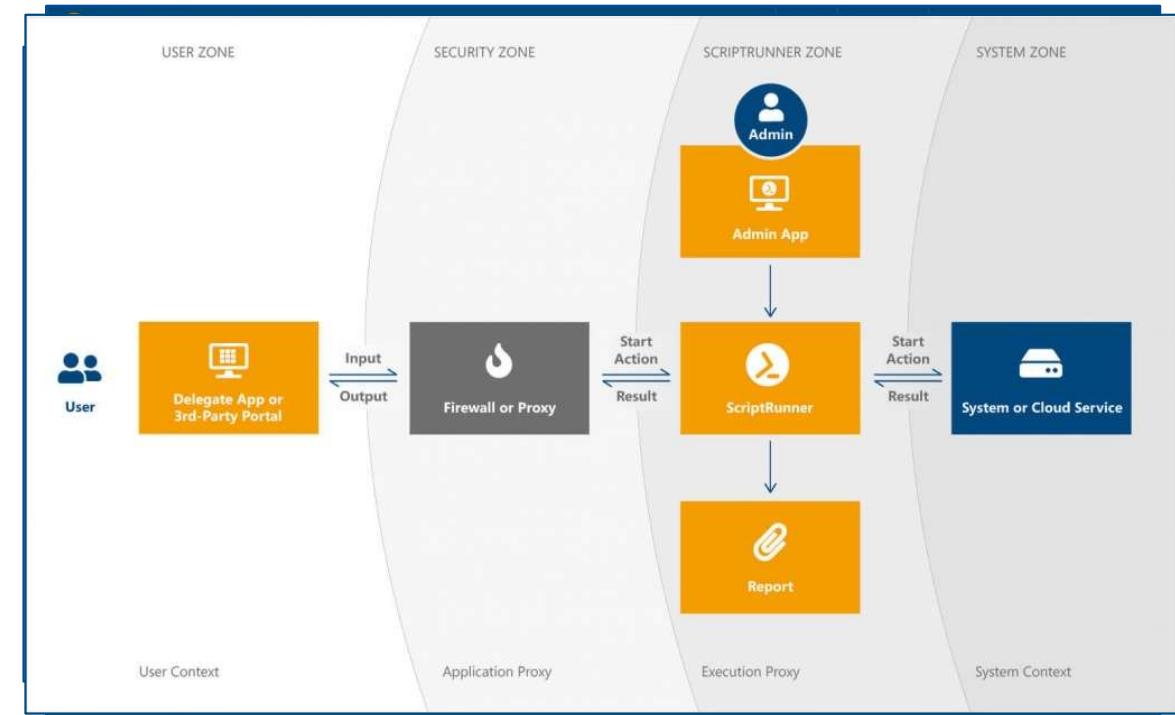
Centralize your PowerShell scripts and modules

Manage credentials & permissions securely

Automatically transform PowerShell scripts into Web GUIs

Delegate recurring tasks to help desk and end users

Integrate with ITSM, Monitoring & Workflow systems and more



The ScriptRunner Portal



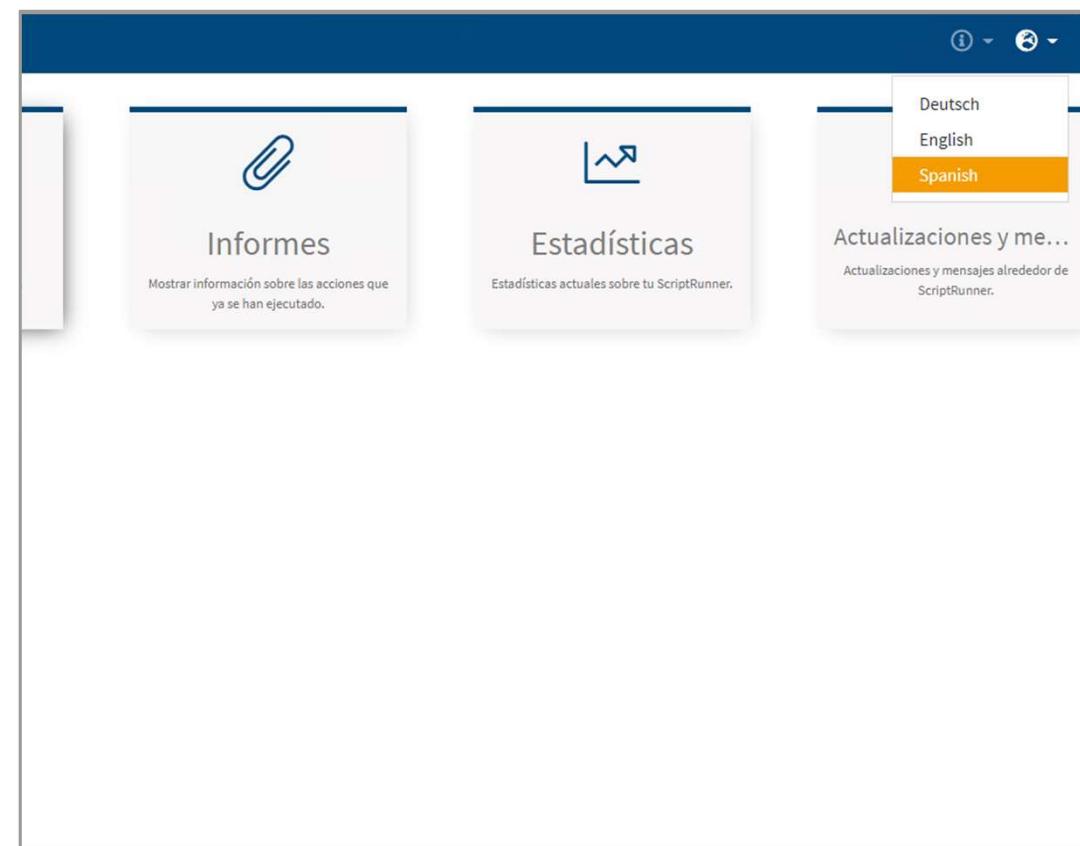
The PowerShell Management Central

Role-based access
Consistent user experience

Many customization options

Everyone can consume PowerShell Scripts
No PowerShell know-how required

Multi-language support



ScriptRunner Portal Widget



Deploy self-service tasks for end users

Run ScriptRunner Actions in
familiar web application

Easy integration

Embedded Actions seamlessly adapt
look and feel of existing website

Supports ScriptRunner
validations and queries

Please enter a description (optional)

Please enter a value

Please select the members of this Team

Search...

Angus Young × Shania Twain × Peter Gabriel ×

Phil Collins ×

20 Values - Please select

-- Select all -- Select all items

Angus Young

SMTina Turner

Shania Twain Selected

The screenshot shows a user interface for selecting team members. At the top, there's a search bar with placeholder text 'Please enter a value'. Below it is a list of selected team members: 'Angus Young', 'Shania Twain', and 'Peter Gabriel', each with a close button ('×'). Underneath is another list with one item: 'Phil Collins'. A message '20 Values - Please select' is displayed. At the bottom, there's a 'Select all' button and a 'Select all items' button. The list of names is scrollable, with 'Angus Young' and 'Shania Twain' currently visible.

Dashboards & Reports



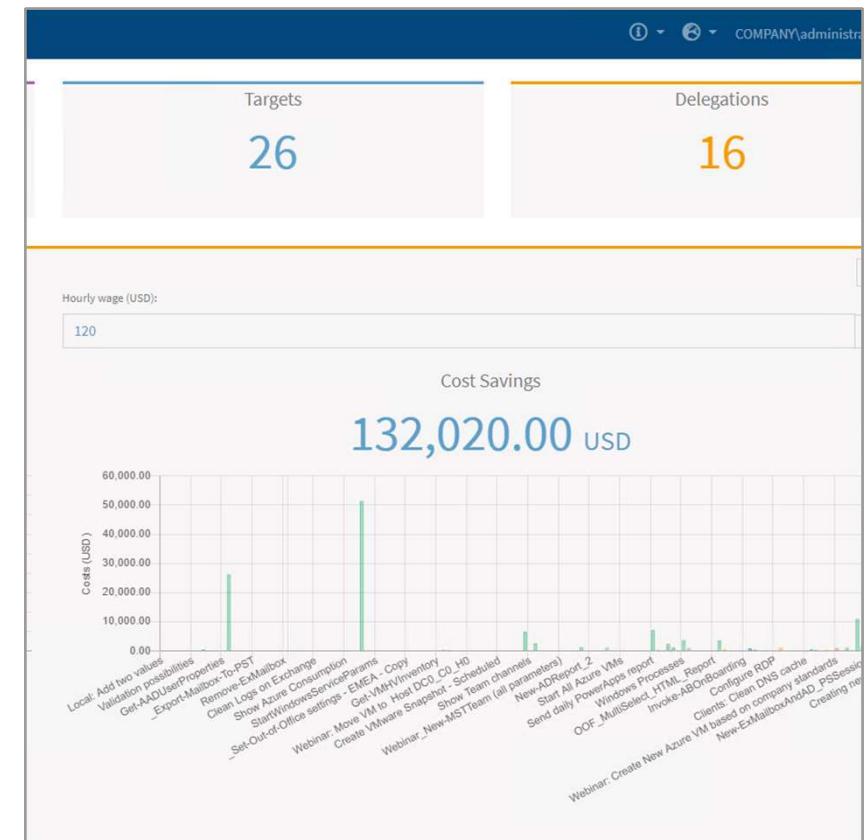
Multiple reports and result messages already available (i.e. processing reports)

Infrastructure reports

Processing Dashboard

Efficiency Dashboard
Visualize your cost and time savings

Configure time saved per Action and hourly wage



Power Platform and ScriptRunner



Trigger ScriptRunner Actions with a Power Automate Flow

Custom Connector enables ScriptRunner Actions

Custom Connector communicates with MS On-premises data gateway

SR Web Service Connector receives REST call and triggers SR Action

Create Swagger file with SR Actions in SR Admin App

A screenshot of the ScriptRunner Admin App interface. At the top, there is a list of connectors:

- Matrix42 Workspace Management
- Nagios / Icinga Monitoring
- PRTG Monitoring
- SAP
- ServiceNow ITSM
- Test WebService

The "Test WebService" connector is highlighted with a yellow background. Below the connector list is a dark grey footer bar containing four icons: a trash can labeled "Delete", a checkmark labeled "On", a power button labeled "Off", and an export icon labeled "Export OpenAPI".

Hundreds of free
and ready-to-use
PowerShell scripts.

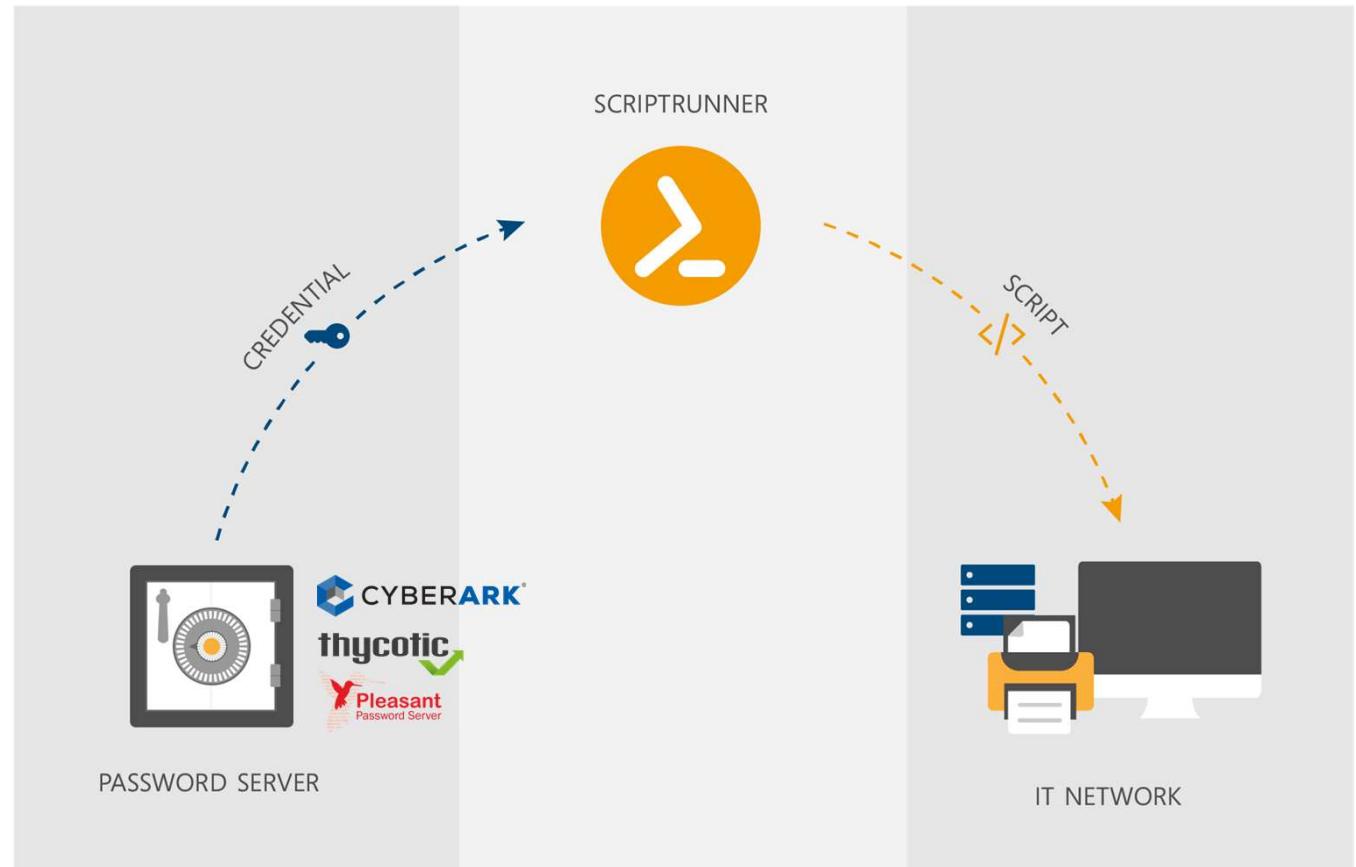
github.com/scriptrunner/ActionPacks



Password Server Support

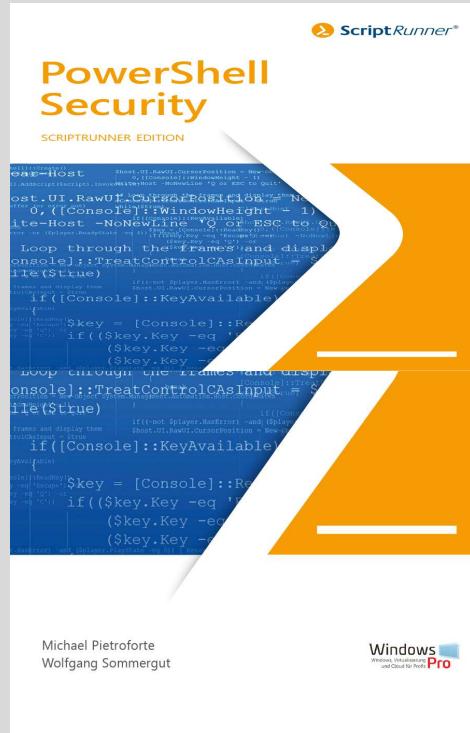


- Centralized password safes
 - CyberArk Password Vault
 - Pleasant Password Server
 - Thycotic Secret Server
- No credentials are stored locally
- Automatic password rotation
- One single secure password repository for multiple ScriptRunner instances



Free ebook: PowerShell Security

lp.scriptrunner.com/en/powershell-security-guide



PowerShell Security

Table of contents

1	PowerShell as a hacking tool: Prevent abuse of scripts	8
1.1	Lax default configuration of PowerShell	9
1.2	Hacking tools for PowerShell	10
1.3	General blocking of PowerShell	12
1.4	Circumvention through alternative shells	14
1.5	Secure PowerShell with integrated mechanisms	15
2	Restrict execution of scripts	20
2.1	Setting an execution policy	20
2.2	Siging PowerShell scripts	25
2.3	Reduce PowerShell risks with Constrained Language Mode ..	36
3	Secure communication	48
3.1	Installing OpenSSH on Windows 10 and Server 2019	48
3.2	PowerShell remoting with SSH public key authentication	57
3.3	Creating a self-signed certificate	64
3.4	Remoting over HTTPS with a self-signed certificate	71
4	Just Enough Administration	81
4.1	JEA Session Configuration	81
4.2	Defining and assigning role functions	92
5	Audit PowerShell activities	98
5.1	Log commands in a transcription file	98
5.2	Scriptblock logging: Record commands in the event log	106

ScriptRunner – How to run scripts



Manually



Scheduled



Automatically

Web-based user interaction

Time-controlled tasks

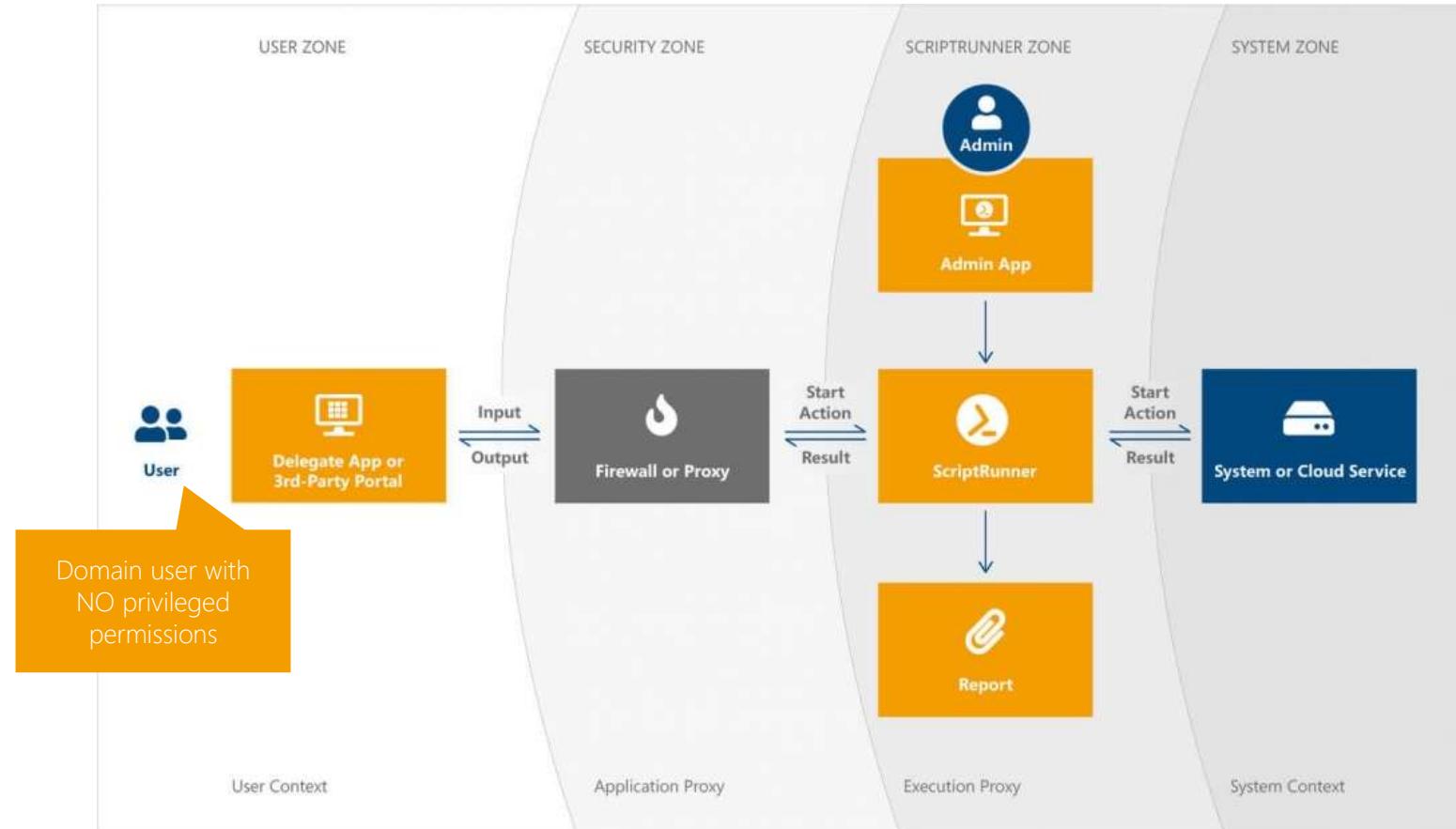
Event triggered by 3rd party systems

Demo

ScriptRunner



ScriptRunner – Secure Delegation



<https://www.scriptrunner.com/de/software/system/>

ScriptRunner test report fom a Microsoft MVP



Adam Bertram aka Adam The Automator
Microsoft MVP Cloud and Datacenter Management

"ScriptRunner is a master of organizing, categorizing and delegating scripts."

"ScriptRunner is a real DevOps tool for PowerShell scripters."

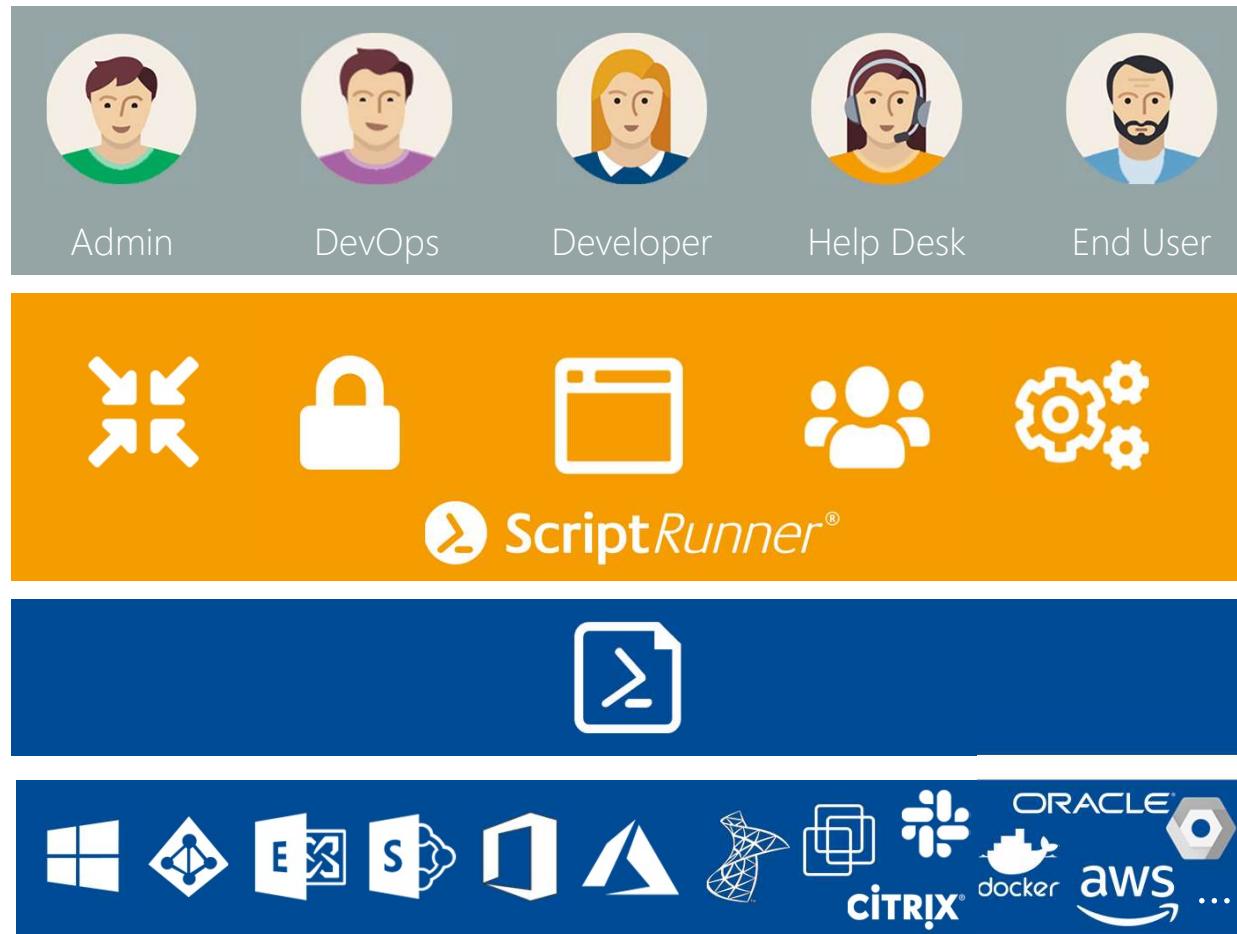
"Compared to large automation platforms, ScriptRunner is significantly cheaper"

"to get the same functionality of ScriptRunner, it would require several applications to get a similar feature set"

"If you are looking into automating your administration and support processes easily and securely, you will find a powerful and professional tool here."

<https://www.adamtheautomator.com/scriptrunner-bringing-powershell-to-devops/>

Unlock the Potential of PowerShell across your organization



Unlock the Power of PowerShell across your organization



Manager

Our organization becomes more productive

Deliver great scripts in a secure environment



DevOps

Delegate recurring tasks and save time



Administrator



Deliver more & better services in less time



HelpDesk

Develop scripts for more use cases/users



Developer



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 a online session
with me.

[lp.scriptrunner.com/meetings/heiko-
brenn/demo-en](https://lp.scriptrunner.com/meetings/heiko-brenn/demo-en)



PowerShell Saturday Bootcamp

Make PowerShell A Real Solution In 5 Steps

Saturday, February 20th

GMT - 11:00 am

CET - 12:00

EST - 06:00 am (for real early birds ☺)



Put
ScriptRunner
to the test.
30 days for
free.

lp.scriptrunner.com/en/demo-download

www.scriptrunner.com



Ludwig-Erhard-Straße 2 | 76275 Ettlingen | Germany

Tel: +49 7243 20715-0
Mail: info@scriptrunner.com