



The Endpoint Manager Community Toolbox

Workplace Ninja Summit 2022



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SECURE & MODERN WORKPLACE



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APP MANAGEVENT.COM
2022 | OCTOBER 7 NETHERLANDS

dinext.



About me...

Ronni Pedersen

- Cloud Architect, APENTO
- Microsoft MVP: Enterprise Mobility
- MCSE/MCSA/MCITP/MCTS and more... 😊
- ITIL Foundation Certified
- Microsoft Certified Trainer (MCT)

Contact Info

- Mail: rop@apento.com
- Twitter: [@ronnipedersen](https://twitter.com/ronnipedersen)



About me...

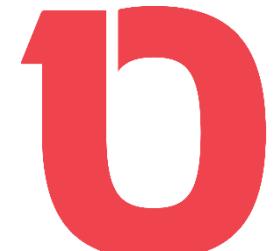


Jörgen Nilsson

- Principal Consultant, Onevinn
- Microsoft MVP: Enterprise Mobility
- MCSE/MCSA/MCITP/MCTS
- ITIL Foundation Certified
- Microsoft Certified Trainer (MCT)

Contact Info

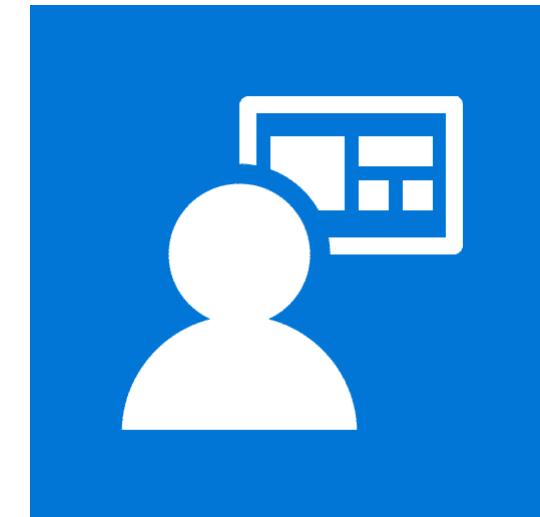
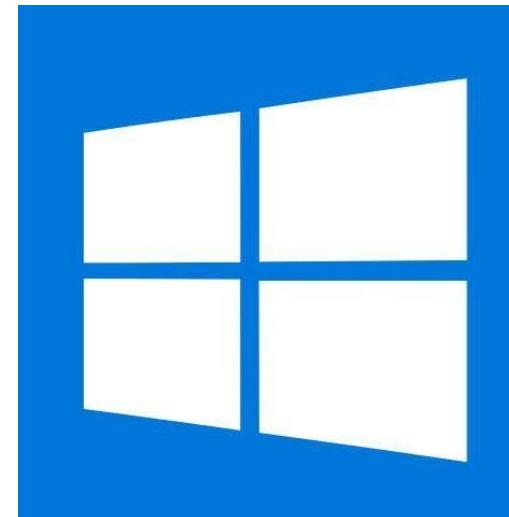
- Mail: Jorgen.nilsson@onevinn.se
- Twitter: [@ccmexec](https://twitter.com/ccmexec)





Takeaways

www.wpninjas.eu





Why do we need Community Tools?

www.wpninjas.eu

- Fill the feature gaps
- Save Time
- Automation
- Increase quality



They are our heroes!

Endpoint Manager Community Tools

Microsoft Intune (Cloud native)





DCToolbox

www.wpninjas.eu

- PowerShell Module
 - Microsoft 365 Security
 - Conditional Access
 - And more...

```
TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

PS C:\Users\DanielChronlund> Get-DCHelp

A PowerShell toolbox for Microsoft 365 security fans.

-----
Author: Daniel Chronlund
Version: 1.0.2

This PowerShell module contains a collection of tools for Microsoft 365 security tasks, Microsoft Graph trust strategies, attack and defense scenarios, etc.

The home of this module: https://github.com/DanielChronlund/DCToolbox

Please follow me on my blog https://danielchronlund.com, on LinkedIn and on Twitter!
@DanielChronlund

To get started, explore and copy script examples to your clipboard with:
```

<https://danielchronlund.com/2020/11/09/dctoolbox-powershell-module-for-microsoft-365-security-conditional-access-automation-and-more/>

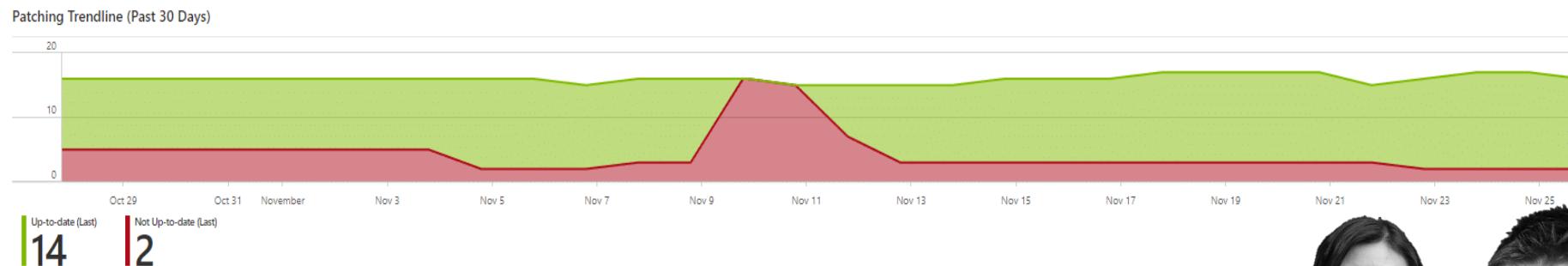


Windows Update Compliance Workbook

www.wpninjas.eu

- Update Compliance Dashboard
- Breakdown of Windows OS patching
- Insights on Errors, Safehold issues and Delivery Optimization
- Windows 11 Readiness Status

[Update Summary](#) [Details by Device](#) [Details by Update](#) [Update Issues](#) [Delivery Optimization](#) [Feature Updates](#) [Patching Alert](#) [Windows 11 Readiness](#)



<https://msendpointmgr.com/2021/11/26/windows-update-compliance-workbook-community-edition/>

*Version 2.0 is almost ready!
Will be announced tomorrow
Session: "Enhance your Intune reporting..."*





Version 2.0 Preview

www.wpninjas.eu

[Update Summary](#) [Quality Update History](#) [Details by Device](#) [Details by Update](#) [Update Issues](#) [Delivery Optimization](#) [Feature Updates](#) [Windows 11 Readiness](#) [Microsoft Office, Edge & Third Party](#)

✓ Update Compliance Health

Update compliance is operational on your devices.

⌚ Active Device Count

19

Intune managed devices (> ago(90d))

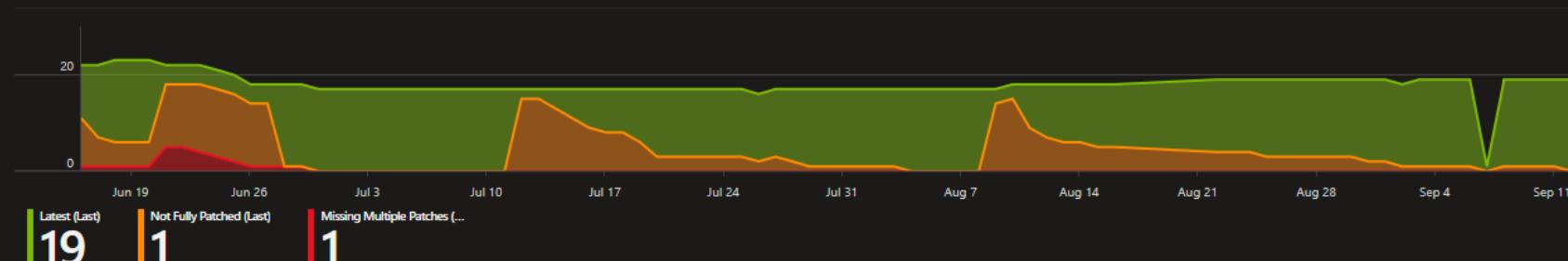
ℹ️ Windows Update for Business

Windows Update for Business is reporting that not all of your devices are registered. This can be due to your update workload configuration, and/or retired devices in your environment.

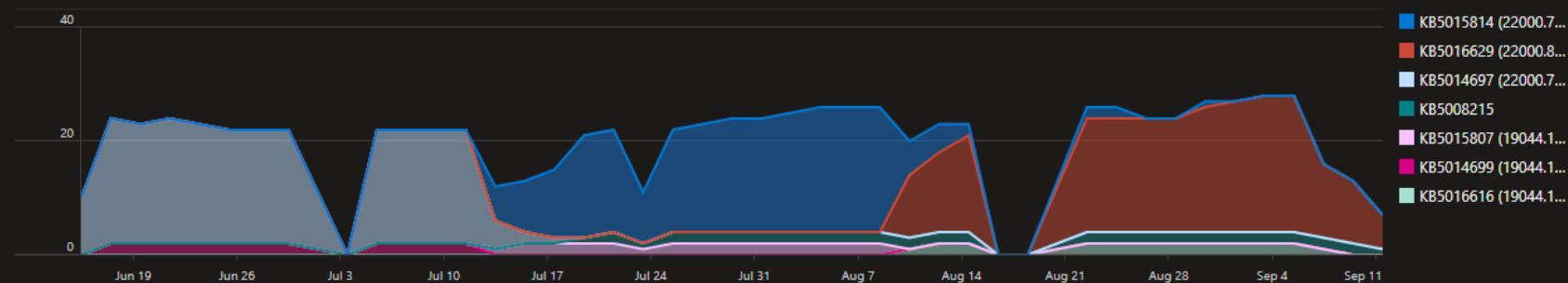
☁️ WUfB Devices

25

Quality Update Patch Trend



Successful Quality Update Installs - Per Day





Customer example

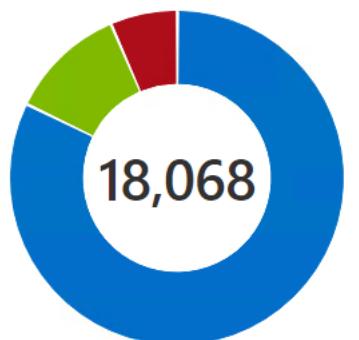
www.wpninjas.eu

Windows Feature updates

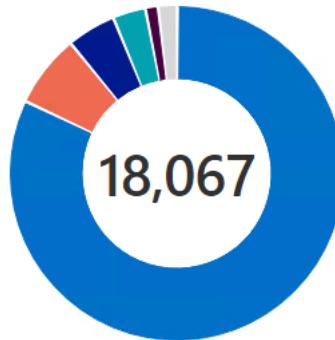


Profile	Versions	Success	Error	In progress	Rollback initiate...	Cancelled
Feature Update for devices running old versions of Windows	Windows 10, version 21H2	17	1	112	0	0
Feature Updates - Ring 0 (Windows 11 21H2)	Windows 11, version 21H2	32	1	15	0	0
Feature Updates - Ring 1 (Windows 10 21H2)	Windows 10, version 21H2	448	14	111	0	0
Feature Updates - Ring 2 (Windows 10 21H2)	Windows 10, version 21H2	945	4	189	0	0
Feature Updates - Ring 3 (Windows 10 21H2)	Windows 10, version 21H2	11810	115	3616	1	0
Feature Updates - Windows 11 Opt In Devices	Windows 11, version 21H2	0	0	0	0	0

Windows Supported Build Count



Windows Build Versions



Windows 11 Readiness Scan Status by Manufacturer

Manufacturer	Capable	NotCapable	Unknown
TOSHIBA	0	649	13
Xen	0	1129	773
Dell Inc.	10706	1639	814
Alienware	1	0	0
Microsoft Corporation	7	1	0
OEM	0	1	0
VMware, Inc.	0	3	0



Intune Device Details GUI

www.wpninjas.eu

- Shows relevant device info
- Targeted apps and configuration profiles
- Including how Apps and Configuration Profiles are targeted
- Autopilot information
- And much more

IntuneDeviceDetails ver 2.95

Connected as: Type search text or select Quick Filter from dropdown

Showing information from device Selected device for report

W10AAD1 Last sync -10 days ago

Found 10 devices

1. Search devices 2. Create report

Unknown assignments for Reload cache and run report Basic info only (Skip Apps)

Manufacturer: Microsoft Corporation	OS/Version: Windows 11 21H2 Ent	Compliance: compliant	Windows Autopilot: enrolled: True
Model: Virtual Machine	Language: en-US	isEncrypted: True	GroupTag:
Serial: 6592-5997-7599-2496-1220-4	Storage: 34GB / 79GB	Last Sync: 10 days ago	Enrollment Restriction: Enrollment Status Pac
WiFi MAC: 00155D104127	Ethernet MAC: Primary User: Jane@demiranda.nu		Autopilot Depl. Profil

Recent check-ins: Jane@demiranda.nu 2022-05-18 17:38:25

Latest Checked-In User Group Memberships

Device Group Memberships Primary User Group Memberships

DisplayName	Group
All Devices	Sec1
Autopilot - Standard Convert	Sec1
CM-Google Chrome installed	Sec1
Edge Kiosk	Sec1
Intune - MS Security baseline check	Sec1
Intune Office Apps - Req	Sec1

Application Assignments

context	Application type	displayName	Version
User	win32LobApp	Google Chrome	88.57.1
User	microsoftStoreForBusinessApp	GoToMeeting	
User	win32LobApp	Install-Language-Languages-SE.ps1	
User	win32LobApp	LWatermark	1.0.211
User	officeSuiteApp	Microsoft 365 Apps - Visio	
User	officeSuiteApp	Microsoft 365 Apps for Windows 10 and later	
User	windowsMobileMSI	PWInfo	1.0.182

Configurations Assignments

context	Configuration type	displayName	Device
Device	Settings Catalog	ASR	Jane@i...
Device	Settings Catalog	ASR	Jane@i...
Device	Microsoft Defender for Endpoint	ATP	Jane@i...
Device	BitLocker	BitLocker	Jane@i...
Device	Custom	Disable Internet Explorer standalone	Jane@i...
Device	Windows health monitoring	Intune data collection policy	Jane@i...
Device	Trusted certificate	Root Certificate	Jane@i...

Device details updated 2022-05-29 19:47:37



Paavola@yodamit.fi - Microsoft MVP
https://github.com/petripaavola/IntuneDeviceDetailsGUI



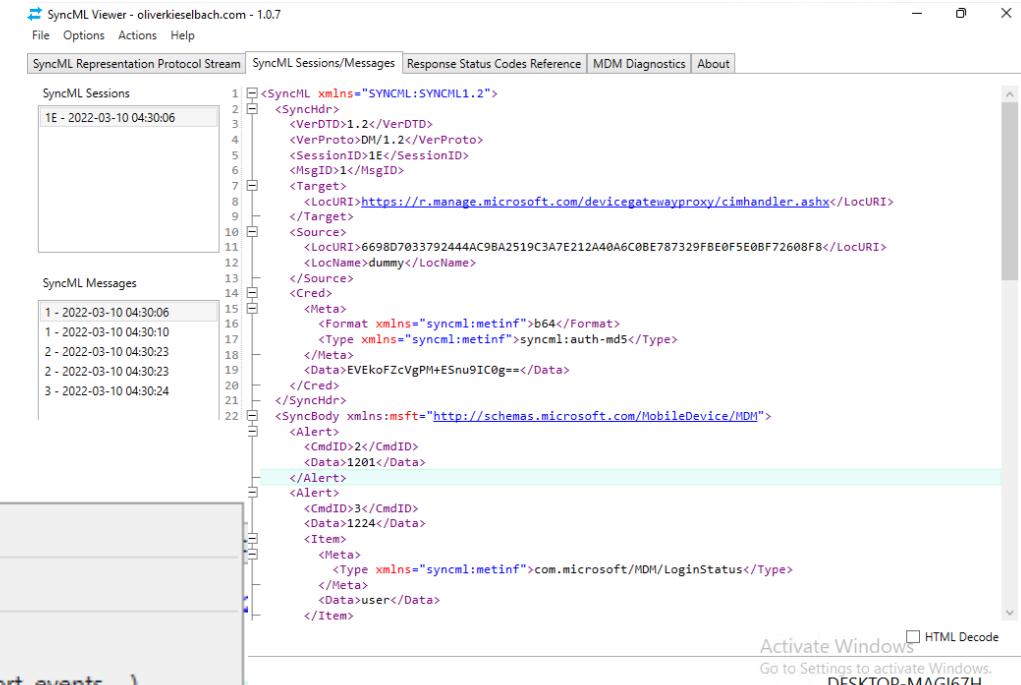
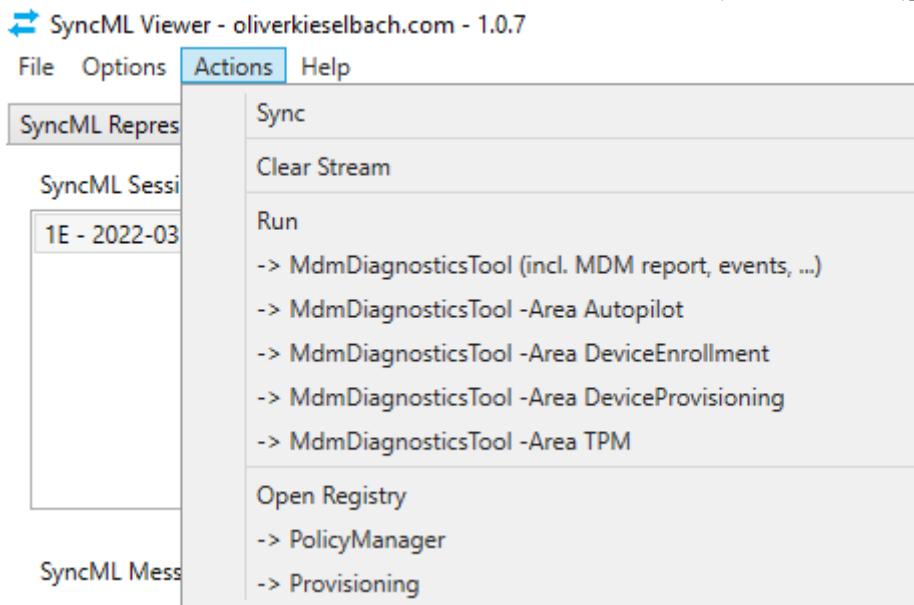
<https://github.com/petripaavola/IntuneDeviceDetailsGUI>



SyncMLViewer & Intune TS tool

www.wpninjas.eu

- Easily troubleshoot the Syncml stream
- MDM Sync
- Run MDMDiagnosticstool
- Open registry



<https://github.com/okieselbach/SyncMLViewer>



Intune debugging

www.wpninjas.eu

Show apps for redeploy

Filter

Add criteria ▾

Scope	DisplayName	Id	LastUpdatedTimeUtc	ProductVersion	LastError	Scopeld
Device	Remote Help	2043db9d-f484-4b49-9709-fd79f0555a78	2022-05-19 10:43:56		0	00000000-0000-0000-0000-000000000000
Device	Universal Print Printer Provisioning	238ec4cc-5901-4fa9-9edc-bfd70945d743	2022-05-19 10:43:56		0	00000000-0000-0000-0000-000000000000
Device	Zoom Client for meetings	43cf39ee-1d49-45c8-8778-dd019599ddb6	2022-05-19 10:43:56		0	00000000-0000-0000-0000-000000000000
Device	CMTrace	50d65d25-45b4-44e7-898e-cf992e19083b	2022-05-19 10:43:56		0	00000000-0000-0000-0000-000000000000
Jane@demiranda.nu	Remote Help	2043db9d-f484-4b49-9709-fd79f0555a78	2022-06-01 09:22:26		0	dfb2446d-79a0-4752-bdfc-64fa0624f275
Jane@demiranda.nu	Universal Print Printer Provisioning	238ec4cc-5901-4fa9-9edc-bfd70945d743	2022-06-01 09:22:26		0	dfb2446d-79a0-4752-bdfc-64fa0624f275
Jane@demiranda.nu	Google Chrome	272ff829-30da-4247-b21d-2d6fa0dfa739	2022-05-01 10:26:23		0	dfb2446d-79a0-4752-bdfc-64fa0624f275
Jane@demiranda.nu	Zoom Client for meetings	43cf39ee-1d49-45c8-8778-dd019599ddb6	2022-06-01 09:22:26		0	dfb2446d-79a0-4752-bdfc-64fa0624f275
Jane@demiranda.nu	CMTrace	50d65d25-45b4-44e7-898e-cf992e19083b	2022-06-01 09:22:26		0	dfb2446d-79a0-4752-bdfc-64fa0624f275
Jane@demiranda.nu	ConfigureChatAutoInstall	52a1f70a-741d-4317-9a4a-045846c6cb90	2022-06-01 13:18:03		0	dfb2446d-79a0-4752-bdfc-64fa0624f275
Jane@demiranda.nu	RemoveApps	ddfc9e19-1718-47df-bd2e-0c7a8ad336e6	2022-06-01 13:18:03		0	dfb2446d-79a0-4752-bdfc-64fa0624f275

<https://github.com/mmelkersen/EndpointManager/tree/main/Intune%20Debug%20Tools>

Mattias Melkersen
Microsoft MVP





CloudLAPS Community Edition

www.wpninjas.eu

CloudLAPS Home Search Privacy

CloudLAPS Home Search Privacy [rop@apento.com](#) Sign out

Search for local administrator password

For physical devices, specify the serial number of a device.
For virtual machines, specify the computer name instead.

Search for:

Computer name: TABLET-HR0R49UN

Serial number: 0B337

User name: LocalAdmin

Password: rwQG-CNLCAc@G?5(

Last update: 3/14/2022 7:53:57 PM +00:00

- Native Azure AD Solution
- Rotating the passwords
- Powered by Proactive Remediation
- Access to Passwords through a web-based portal

Nickolaj Andersen
Microsoft MVP





CloudLAPS guide on YouTube

www.wpninjas.eu

- Part 1: Getting Started with CloudLAPS
- Part 2: CloudLAPS Demo and Admin Experience
- Part 3: CloudLAPS Update! - Upgrade experience walkthrough



Dean Ellerby
Microsoft MVP

<https://www.youtube.com/channel/UCvGu4Al0ZxB0NV7o-yUuQ2A>





Lightweight LAPS Solution for Intune (LeanLAPS)

www.wpninjas.eu

- Manages Local Admin Password
- Proactive remediations
- Powershell tool

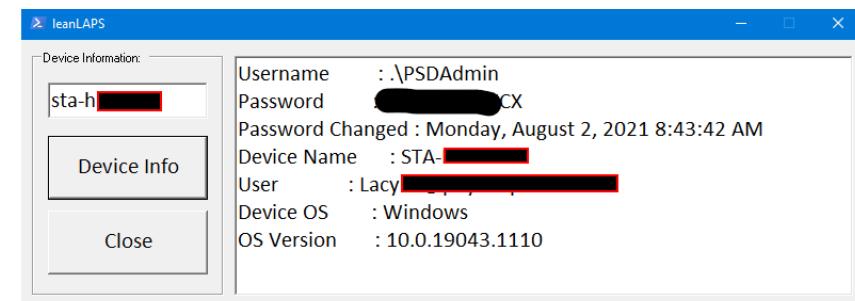
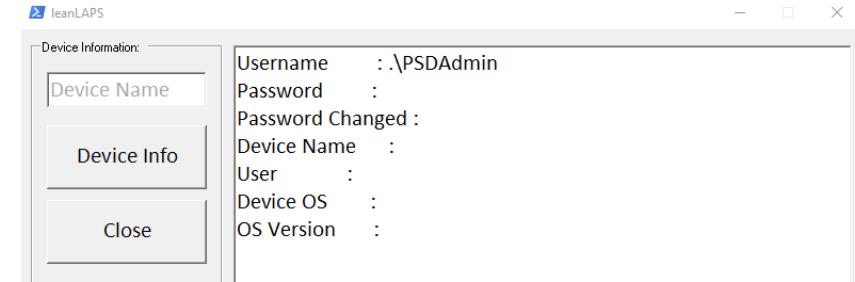
Proactive remediations ...

⟳ Refresh + Create script package ⚡ Columns

Your Microsoft proactive remediation scripts have successfully loaded.

Create and run script packages on devices to proactively find and fix the top support issues in your organization. Use this table to see the status of your deployed script packages and to monitor the detection and remediation results. Results are shown as number of devices affected. [Learn more](#).

Search by script package name			
Script package name	Author	Status	Without issues ⓘ
Restart stopped Office C2...	Microsoft	● Not deployed	0
Update stale Group Policies	Microsoft	● Not deployed	0
LeanLAPS	Lieben Consultancy	● Not deployed	0



<https://www.lieben.nu/liebensraum/2021/06/lightweight-laps-solution-for-intune-mde/>





SCRIPT VIEWER FOR MICROSOFT ENDPOINT MANAGER

www.wpninjas.eu

- View all your PowerShell scripts in Intune
- Great for troubleshooting

Script Viewer for Microsoft Endpoint Manager

CONNECT ENDPOINT MANAGER Install ConfigMgr Client

```
## #####  
## SCCM Client Installer ##  
#####  
  
# Installs the SCCM client (if not already installed) via Cloud Management Gateway downloading binaries from Azure  
  
# Check if SCCM client is already installed  
$CCMClient = Get-ChildItem HKLM:\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall | Where {$_.GetValue('DisplayName') -eq "}  
  
If (!($CCMClient))  
{  
  
    # Create temp directory if not exist  
    If (!(Test-path $env:SystemDrive\Temp))  
    {  
        $null = New-Item -Path $env:SystemDrive -Name Temp -ItemType Directory -Force  
    }  
  
    # Disable TF First Run Wizard
```

Filename: Install-SCCMClient.ps1 | Run as 32-bit: False | Enforce signature check: False | Run as account: system |
Created: 06/08/2020 21:21:35 | Modified: 06/08/2020 21:21:35 | Description:
Select a script TenantId: 7319f1ed-[REDACTED]-8443-d9b052ab9100 Account: trevor@smsagent.blog...

<https://smsagent.blog/2022/05/11/script-viewer-for-microsoft-endpoint-manager/>



Intune & Azure AD Conditional Access

Automatic Documentation

www.wpninjas.eu

- Automatic Intune and Conditional Access Documentation to simplify the life of admins and consultants.
 - Configuration Policies
 - Compliance Policies
 - Device Enrollment Restrictions
 - Terms and Conditions
 - Applications (Only Assigned)
 - Application Protection Policies
 - AutoPilot Configuration
 - Enrollment Page Configuration
 - Custom Roles



Intune & Conditional Access Documentation

<https://github.com/ThomasKur/IntuneDocumentation>





Micke-K Intune Management

www.wpninjas.eu

- Copy
- Export
- Import
- Backup
- Duplicate
- Compare
- Document
- Delete

and much more!

The screenshot shows the 'Intune/Azure PowerShell Management' application window. On the left, a sidebar titled 'Intune Manager' lists various management options. The 'Settings Catalog' option is selected and highlighted in grey. The main pane is titled 'Settings Catalog' and contains a table with three columns: 'name', 'description', and 'id'. Two entries are listed:

name	description	id
Settings Catalog		a3efc2e8-9e04-4d99-bba9-66e0ff1fdee3
Test		8fbba202f-5b8d-4d9e-a37d-33f9ca1f9bc1

At the bottom of the main pane, there are five buttons: 'Document', 'View', 'Copy', 'Import', and 'Export'.

<https://github.com/Micke-K/IntuneManagement>





Intune Drive Mapping Generator

www.wpninjas.eu

Generates Intune Ready PowerShell scripts

- Map file shares
- Create a Scheduled Task
- No scripting skills required
- Walkthrough video

Intune Drive Mapping Generator Generator Documentation

Intune Drive Mapping Generator

Generate Intune ready PowerShell scripts to map file shares on Windows 10 clients. Without scripting effort.

0. (Optional) Export your existing group policy configuration which contains the network drive configuration to an xml file
1. Upload the configuration or generate a new one from scratch in the [intune-drive-mapping-generator](#)
2. Download your generated PowerShell script
3. Deploy the PowerShell script with Microsoft Intune

[Walkthrough Video by Intune Training](#) [View this project on GitHub](#)

<https://intunedrivemapping.azurewebsites.net/>

Nicola Suter
@nicolonsky





Win32App Migration Tool

www.wpninjas.eu

- Do the scoping and heavy lifting for you as you consider building Win32apps in Intune while using your ConfigMgr apps as a reference.
- Inventory ConfigMgr Applications and Deployment Types, build .intunewin files and create Win32apps directly in the MEM admin center.

	BETA	RELEASE	GA
PowerShell Module	X	X	X
Gather Application Details	X	X	X
Gather Deployment Details	X	X	X
Gather Content	X	X	X
Export Logo	X	X	X
Create .intunewin	X	X	X
Gather Application Behaviour		X	X
Gather Requirements		X	X
Gather Detection Rules		X	X
Configuration manager Console Extension		X	X
Create Win32app in Intune			X
- Populate Common Application Details			X
- Assign Application Logo			X
- Populate Install Command			X
- Populate Uninstall Command			X
- Populate Requirements			X
- Populate Detection Rules			X

Win32 App Migration Tool Development Release Cycle



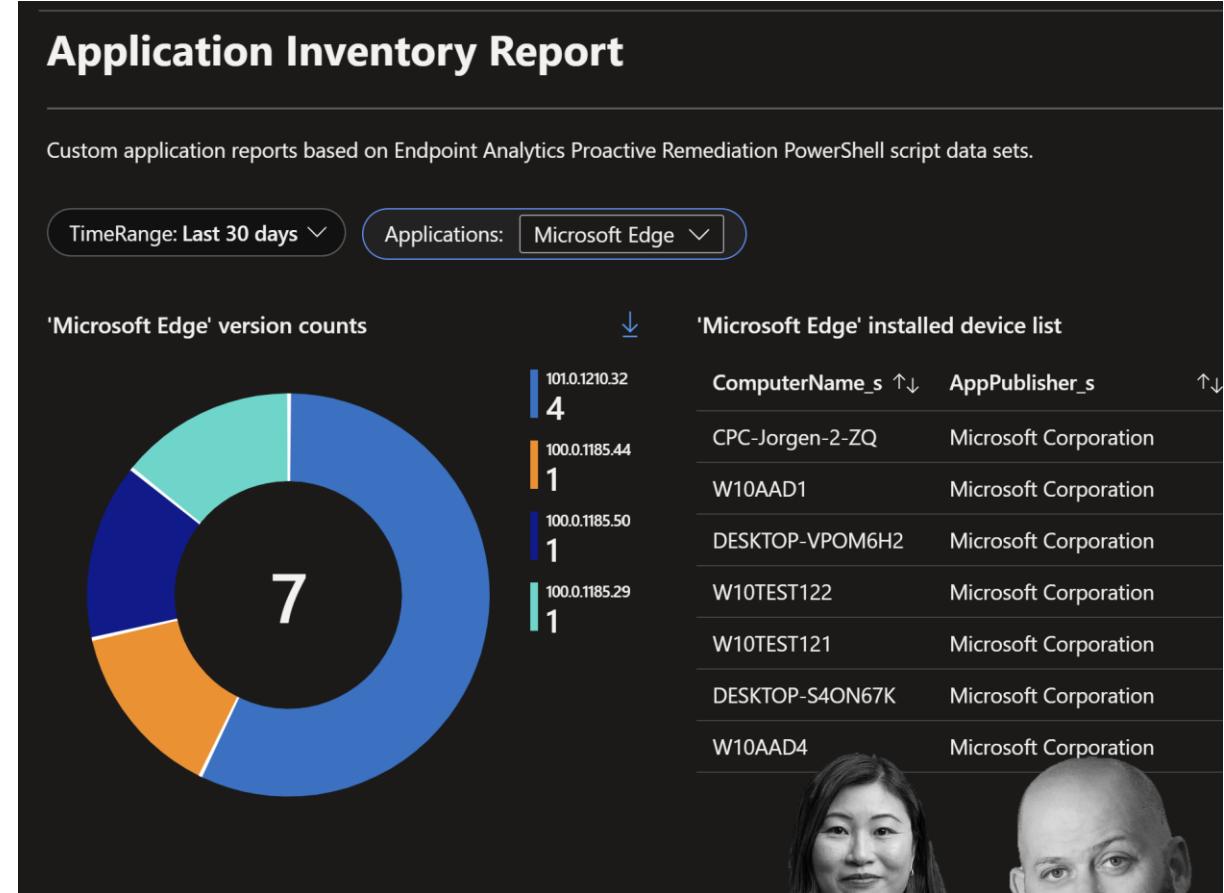
Ben Whitmore



Enhance Intune Inventory data with Proactive Remediations and Log Analytics

www.wpninjas.eu

- Proactive Remediation script
- Device Inventory & Application inventory
- Write information to Log analytics
- Sample Workbooks



<https://msendpointmgr.com/2022/01/17/securing-intune-enhanced-inventory-with-azure-function/>

Microsoft Endpoint Manager Community Tools

(Microsoft Intune + Configuration
Manager)





Windows 10/11 Toast Notification

www.wpninjas.eu

The image shows three separate Windows toast notifications side-by-side, each with a different message and a background image of a forest landscape.

- Left通知:** 标题为“Good afternoon Martin”，副标题为“Software Center • www.imab.dk”。正文：“Don't let your password expire!”。下方文字：“Your password for the imab.dk domain is about to expire. Save yourself the trouble and change your password today.”。操作按钮：“Settings”和“Dismiss”。
- 中间通知:** 标题为“Good afternoon Martin”，副标题为“Software Center • www.imab.dk”。正文：“Windows 10 upgrade available! There's a new Windows upgrade available. Do yourself a favor and install it yourself... or we will do it for you :-).”下方文字：“Don't worry! You will receive an adequate amount of reminders before any actions are taken automatically.”。操作按钮：“Install”、“Snooze”和“Dismiss”，以及一个下拉菜单显示“15 Minutes”。
- 右通知:** 标题为“Good evening Martin”，副标题为“Software Center • www.imab.dk”。正文：“Your computer needs to restart! For security and stability reasons, we kindly ask you to restart your computer as soon as possible.”下方文字：“Restarting your computer on a regular basis ensures a secure and stable Windows. Thank you in advance.”。操作按钮：“Restart now”和“Dismiss”。

Martin Bengtsson, Microsoft MVP

<https://www.imab.dk/windows-10-toast-notification-script/>

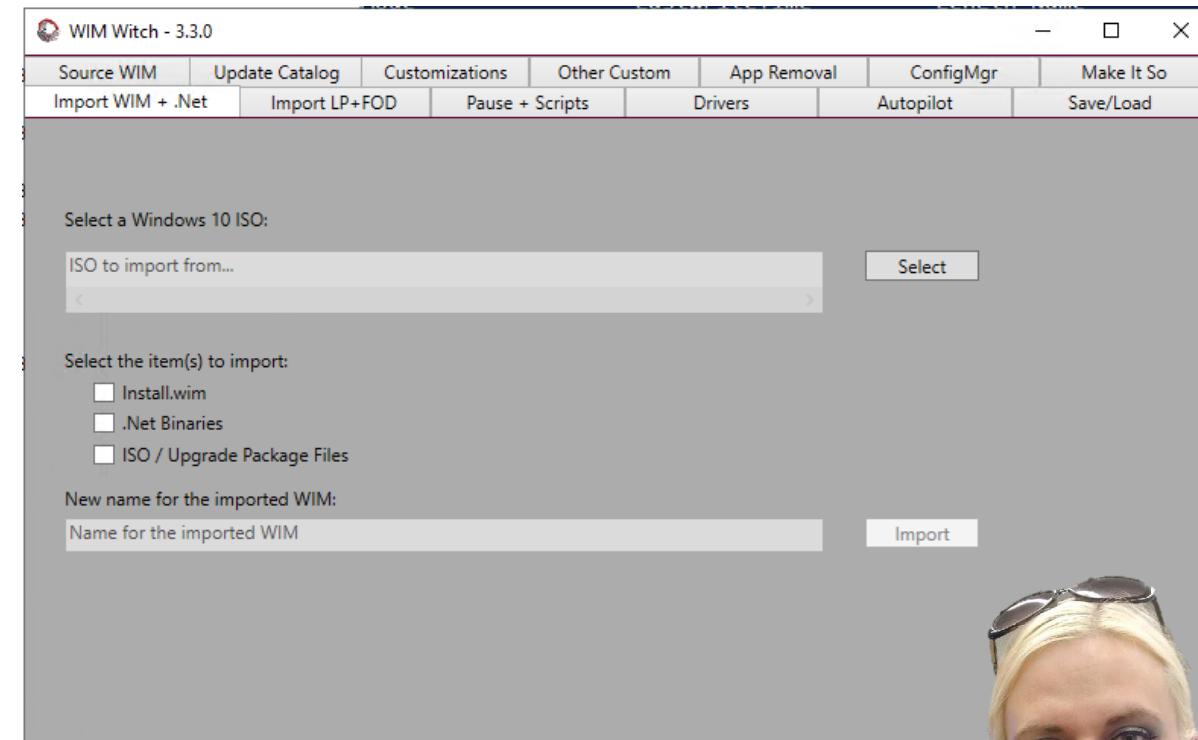




Wim Witch – Donna Ryan

www.wpninjas.eu

- UI driven image customization tool
- Create/update customize .wim
- Autopilot support
- Driver support
- Language support
- Remove Built-in apps
- Add .NET Framework 3.5
- And more....



<https://msendpointmgr.com/wim-witch/>

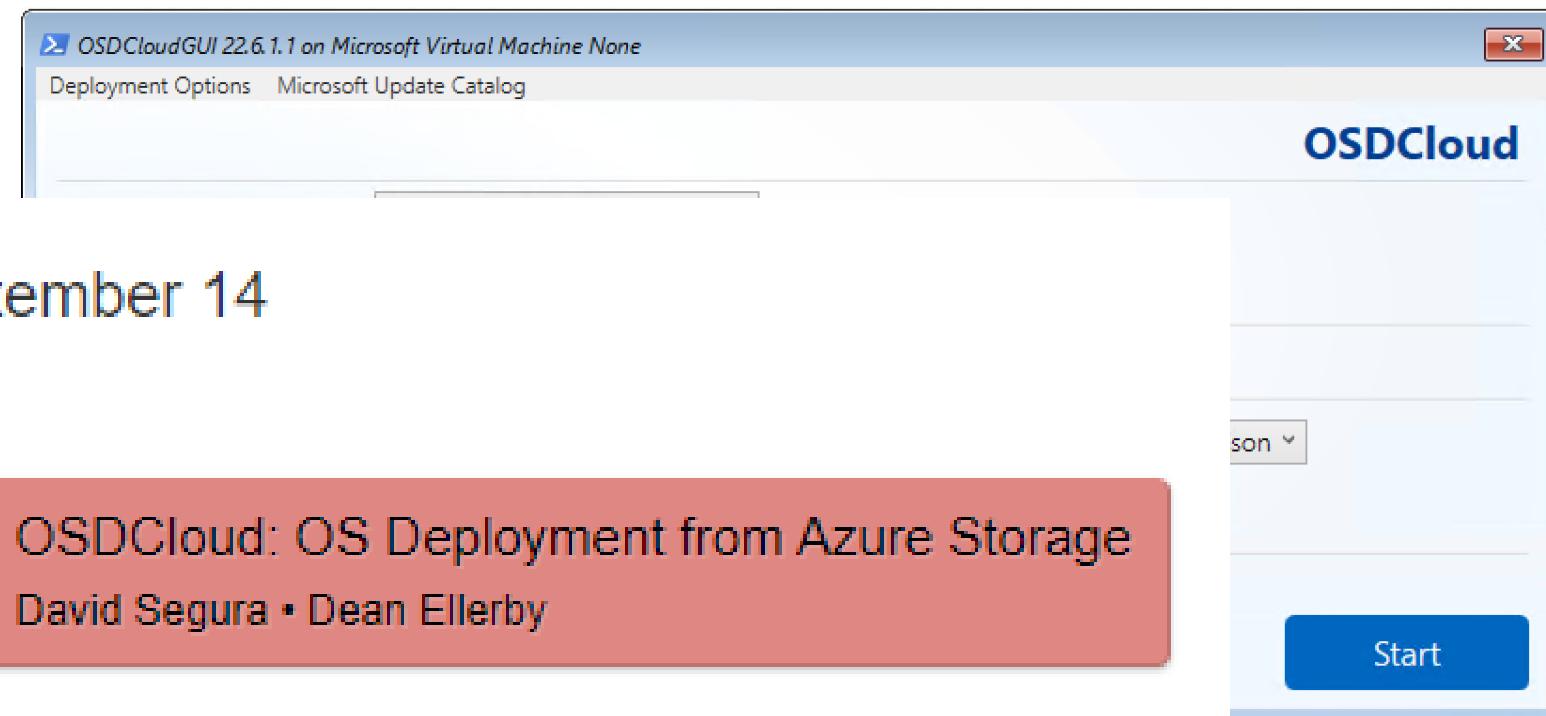




OSDCloud – David Segura

www.wpninjas.eu

- Bootable WinPE/WinRE
- Wi-Fi support
- Add drives
 - Wmv
 - HP
 - Dell
 - Surface
 - ...
- Autopilot
- Downloads OS from Microsoft



<https://www.osdcloud.com/>



PowerShell App Deployment Toolkit

www.wpninjas.eu

- Project launched in August 2013 by Seán Lillis and Dan Cunningham

Adobe Acrobat Reader DC 17.012.20093

PowerShell App Deployment Toolkit

The following programs must be closed before the installation can proceed.

Please save your work, close the programs, and then continue.
Alternatively, save your work and click "Close Programs".

Adobe Acrobat Reader DC
Internet Explorer

You can choose to defer the installation until the deferral expires:

Remaining Deferrals: 2

Once the deferral has expired, you will no longer have the option to defer.

[Close Programs](#) [Defer](#) [Continue](#)

Restart Required: Adobe Acrobat Reader DC 17.012.20093

PowerShell App Deployment Toolkit

In order for the installation to complete, you must restart your computer. Please save your work and restart within the allotted time.

Your computer will be automatically restarted at the end of the countdown.

Time remaining:

1:39:52

[Restart Later](#) [Restart Now](#)

	Adobe Acrobat Reader DC 17.012.20093 Installation started. Windows PowerShell ISE
	Adobe Acrobat Reader DC 17.012.20093 Installation complete. Windows PowerShell
	Adobe Acrobat Reader DC 17.012.20093 Installation failed. Windows PowerShell

Community Tools - Microsoft Endpoint Manager Configuration Manager





ConfigMgr Prerequisites Tool

www.wpninjas.eu

- Configuration Manager configuration
 - Roles
 - Download pre-reqs
 - ADK
- Active Directory configuration
 - Extend Schema
 - Create Container
- SQL Server configuration
 - Configure SQL Memory
 - Validate Collation
 - Pre-create DB



<https://msendpointmgr.com/configmgr-prerequisites-tool/>



MASHPIA – Daniel Gråhns / Nicklas Eriksson

www.wpninjas.eu

- Install HP drivers and related Software during OS Deployment or drivers update.
- Automate download of drivers, bios and software
- Create and distribute packages in Configuration Manager
- Easily update the drivers/software to the latest version automatically



import-models.csv - Notepad

File Edit Format View Help

ProductCode	Model	WindowsVersion
859F	HP EliteOne 800 G5 All-in-One	2009
8619	HP EliteDesk 705 G5 Desktop Mini	2009

<https://github.com/EGGLAS/ConfigMgr/tree/master/Driver%20Management/HPIA>



HPIA Task Sequence Editor

www.wpninjas.eu

Find Scope

Add Remove

Type: Run PowerShell Script
Name: Apply HPIA
Description:

Select a package with a PowerShell script:
Package:
Script name:

Enter a PowerShell script:
 Script status: Script is entered.

Parameters:

PowerShell execution policy: Output to task sequence variable:

Start in:

Time-out (minutes):

Run this step as the following account

Setup Operating System
HPIA
Hewlett-Packard Software Framework
Apply HPIA
Restart Computer
Second Pass
Apply HPIA
Restart Computer

Administrator: Windows PowerShell

```
PS E:\HP Repository> .\importHPIA.ps1
Info: Successfully loaded ConfigFile from E:\HP Repository\Config.xml
Info: HPCML was enabled to autoinstall in ConfigFile, starting to install HPCML
WARNING: The version '1.4.7' of module 'PackageManagement' is currently in use. Retry the operation after closing the applications.
Info: HPCML was successfully updated
Info: HPIA Download folder exists, no need to create folder
Info: HPIA was enabled to autoinstall in ConfigFile, starting to autoupdate HPIA
File E:\HP Repository\HPIA Download\sp112809.exe already exists, will not overwrite.
```



TSbackground

www.wpninjas.eu

- Displays a custom background during OSD
- Built-in password protected command prompt and debug mode
- Displays useful information
- Displays elapsed time
- Customizable .XAML
- UI test tool
- No more F8 support in boot images!!!!
- F8 prompt password or AD Authentication
- Built-in Remote Control



TSBackground Remote Control

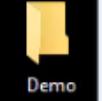
Recycle Bin

Picker ClientName 4000 Connect Disconnect

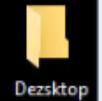
Task Mgr CMD Cmtrace smsts.log Debug



Power BI Desktop



Demo



Dezktop



Postman



Microsoft Edge Beta





Driver Automation Tool

www.wpninjas.eu

- Provides driver downloads for Dell, Lenovo and HP
- Create a BIOS update package
- Create a Driver Package based on the machine model and filename
- Imports the associated drivers into the newly created Driver Package

The screenshot shows the MSEndpointMgr Driver Automation Tool interface. At the top, there's a navigation bar with links like 'Driver Automation Tool Version 6.4.7', 'MSEndpointMgr', and 'Driver Automation'. Below the navigation bar, the main title 'MSEndpointMgr' is displayed next to a circular logo. The main content area is titled 'Make, Model and OS Selection'. It includes three main sections: 'Platform / Download Type', 'Operating System Selection', and 'Manufacturer Selection'. In the 'Platform / Download Type' section, 'Download Only' is selected under 'Deployment Platform' and 'Drivers' is selected under 'Download Type'. In the 'Operating System Selection' section, 'Windows 10 1909' is selected under 'Operating System' and '64 bit' is selected under 'Architecture'. In the 'Manufacturer Selection' section, 'Lenovo' is checked, while 'Dell', 'Hewlett-Packard', and 'Microsoft' are unchecked. A 'Find Models' button is located to the right of the manufacturer selection. Below these sections, there's a table titled 'Model Selection - HP Driver Catalogue' with columns for 'Selected', 'Manufacturer', 'Model', 'Windows Version', and 'Architecture'. The table lists various Lenovo ThinkCentre models. At the bottom of the interface, there are buttons for 'Reset Tool', 'Import', and 'Select All'.



[Driver Automation Tool - MSEndpointMgr](#)



Driver Automation Tool: Version 7.0.0

MSEndpointMgr

Driver Automation Tool

Automates the process of downloading, extracting and importing Driver and BIOS updates into Configuration Manager, Intune, MDT and other OS deployment solutions

Make & Model Selection OEM Driver Catalogs Common Settings ConfigMgr Settings MDT Settings ConfigMgr Packages ConfigMgr Web Service Diags

Custom Package Creation Intune BIOS Control Process Log About

Intune BIOS Control

BIOS Management Onboarding

Selected	OEM	Model	Production	Latest	SKU Values
<input checked="" type="checkbox"/>	HP	EliteBook 830 G8 Notebook PC	1.06.02	1.06.02	880d
<input type="checkbox"/>	HP	EliteBook 840 G7 Notebook PC	1.06.01	1.06.01	8723
<input type="checkbox"/>	HP	Elite Dragonfly G2 Notebook PC	1.06.03	1.06.03	8716
<input type="checkbox"/>	HP	ZBook Firefly 14 G7 Mobile Workstation	1.06.01	1.06.01	8723
<input type="checkbox"/>	HP	ZBook Firefly 14 G7 Mobile Workstation	1.07.01	1.06.01	8724
<input type="checkbox"/>	HP	Elite Slice for Meeting Rooms	2.53	2.53	81c3
<input type="checkbox"/>	HP	Elite Slice for Meeting Rooms	2.53	2.53	8396
<input type="checkbox"/>	HP	EliteBook 855 G8 Notebook PC	1.06.03	1.06.03	8895
<input type="checkbox"/>	HP	EliteBook 735 G6 Notebook PC	1.17.00	1.17.00	8589

Select All Select None Refresh Azure XML Values

Reset Tool Start Download | Extract | Import

UPDATE...

MSEndpointMgr

It is time to update your BIOS!

Bios Update Notification

Firmware update needed!

For security reasons it is important that the firmware on your machine is up to date. This update requires a reboot of your device

Please save your work and restart your device today. Thank you in advance.

1 hour

Restart Now Snooze



UI++ Jason Sandys

www.wpninjas.eu

- OSD frontend
- Preflight checks
- AD authentication
- App tree
- Computer naming
- OU, time zone.....

The screenshot shows the UI++ Preflight application interface. On the left, there is a sidebar with the UI++ logo and a navigation menu. The main area displays a hierarchical app tree with categories like Group A, Group B, and Group C, each containing various applications such as Adobe Reader XI, Internet Explorer 11, Roy, Micro, .NET, and Notepad. Above the app tree, a message says "Please choose your software" with a checked checkbox icon. To the right of the app tree, a section titled "Preflight checks" lists several system requirements with green checkmark icons to their right:

- WLAN Disconnected
- Not on battery
- Minimum memory > 1GB
- CPU Supports Windows 8+

At the bottom of the main panel, a message states "All checks successfully passed." and features a large green checkmark icon. In the bottom right corner, there is a portrait photo of a smiling man.

[UI++ \(configmgrftw.com\)](http://configmgrftw.com)



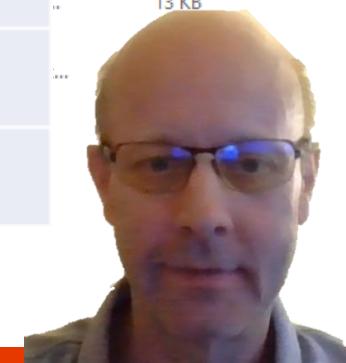
IPUInstaller - by Johan Schrewelius

www.wpninjas.eu

- DeploymentScheduler + IPUInstaller
- Uses updated media
- Post commands
- Driver updates
- Errorhandling

Name	Date modified	Type	Size
Branding	2021-02-07 13:43	File folder	4 KB
DefaultApps	2021-02-07 13:43	File folder	2 KB
Edge	2021-02-07 13:43	File folder	1 KB
RemoveApps	2021-02-07 13:44	File folder	11 KB
RemoveEdgeWelcome	2021-02-07 13:44	File folder	10 KB
StartMenu	2021-02-07 13:44	File folder	13 KB
StartMenuFiles	2021-02-07 13:44	File folder	

Technology	Installation	Reboot	User Downtime	Total time
Task Sequence	14	9	25	23
Windows Servicing	38	4	4	42
IPUInstaller	12	3	3	15





ConfigMgr Task Sequence Monitor -

www.wpninjas.eu

- Standalone
- Task sequence monitor
- Integrates with MDT
- Excellent for troubleshooting
- Fast

CONFIGMGR TASK SEQUENCE MONITOR

CONFIGMGR

Task Sequence: Windows 11 Time Period (Hours): 24 ComputerName: W10TEST126 Errors Only: Error Count: 3 Refresh Period (Minutes): 1 RE

MDT

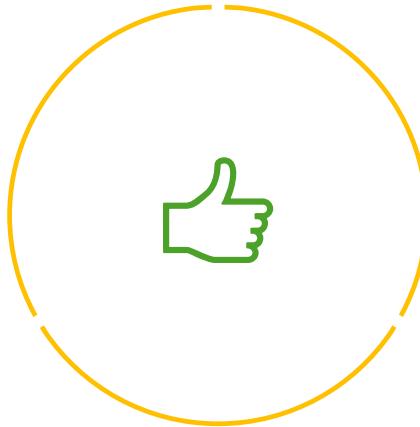
MDT Integrated? Deployment Status: Current Step: StepName: Deployment Progress:

Start: End: Elapsed: Percent Complete:

COMPUTERNAME	EXECUTIONTIME	STEP	ACTIONNAME	GROUPNAME	LASTSTATUSMSGNAME
W10TEST126	3/14/2022 9:16:28 AM	58	Setup Windows and Configuration Manager	Setup Operating System	The task sequence execution engine performed a system reboot initiated by an action
W10TEST126	3/14/2022 9:15:57 AM	58	Setup Windows and Configuration Manager	Setup Operating System	The task sequence execution engine successfully completed an action
W10TEST126	3/14/2022 9:15:38 AM	57	CopyToHD	Setup Operating System	The task sequence execution engine successfully completed an action
W10TEST126	3/14/2022 9:15:34 AM	0	CopyToHD		
W10TEST126	3/14/2022 9:15:34 AM	56		Setup Operating System	The task sequence execution engine started a group
W10TEST126	3/14/2022 9:15:34 AM	55	I am feeling Lucky!	Install Operating System	The task sequence execution engine skipped a disabled action
W10TEST126	3/14/2022 9:15:34 AM	54	Dell Optiplex 7010	Install Operating System	The task sequence execution engine skipped an action because the condition was evaluated to be
W10TEST126	3/14/2022 9:15:34 AM	53	WinPe HP	Install Operating System	The task sequence execution engine skipped an action because the condition was evaluated to be
W10TEST126	3/14/2022 9:15:34 AM	52	Dell Latitude E7450 Win10 x64	Install Operating System	The task sequence execution engine skipped an action because the condition was evaluated to be
W10TEST126	3/14/2022 9:15:34 AM	51	TSBStatus 02	Install Operating System	The task sequence execution engine successfully completed an action
W10TEST126	3/14/2022 9:15:34 AM	50		Correct Missing Mouse Cursor	The task sequence execution engine successfully completed execution of a group
W10TEST126	3/14/2022 9:15:34 AM	49	Unmount Registry SOFTWARE Hive	Correct Missing Mouse Cursor	The task sequence execution engine successfully completed an action
W10TEST126	3/14/2022 9:15:33 AM	48	Disable Suppressed Mouse Cursor	Correct Missing Mouse Cursor	The task sequence execution engine successfully completed an action
W10TEST126	3/14/2022 9:15:33 AM	47	Load Registry SOFTWARE Hive	Correct Missing Mouse Cursor	The task sequence execution engine successfully completed an action
W10TEST126	3/14/2022 9:15:33 AM	46		Correct Missing Mouse Cursor	The task sequence execution engine started a group

Action Output:

Click any step to see the action output.



Thank You



Workplace Ninja Summit 2022



Links

www.wpninjas.eu

- Windows Update Compliance Workbook
<https://msendpointmgr.com/2021/11/26/windows-update-compliance-workbook-community-edition>
- LIGHTWEIGHT LAPS SOLUTION FOR INTUNE (MEM)
<https://www.lieben.nu/liebensraum/2021/06/lightweight-laps-solution-for-intune-mde/>
- Intune Management <https://github.com/Micke-K/IntuneManagement>
- Enhance Intune Inventory data with Proactive Remediations and Log Analytics
<https://msendpointmgr.com/2021/04/12/enhance-intune-inventory-data-with-proactive-remediations-and-log-analytics/>
- Cloud Laps Community Edition - <https://msendpointmgr.com/cloudlaps/>
- SyncMLViewer - <https://github.com/okieselbach/SyncMLViewer>
- Intune and Azure AD Conditional Access documentation -
<https://github.com/ThomasKur/IntuneDocumentation>
- ConfigMGR Prereq tool
<https://msendpointmgr.com/configmgr-prerequisites-tool/>



- SQL Maintenance Solution
<https://ola.hallengren.com>
- Driver Automation Tool
[Driver Automation Tool – MSEndpointMgr](#)
- MashPIA
<https://github.com/EGGLAS/ConfigMgr/tree/master/Driver%20Management/HPIA>
- [TSBackground](#)
<https://onevinn.schrewelius.it/Apps01.html>
- Client Center
<https://github.com/rzander/sccmclctr>
- Reg2CI
<Https://reg2ps.azurewebsites.net>



RegKey2Mof

www.wpninjas.eu

- UI to extend HW inventory
- Generates
 - Configuration.mof
 - Classes import file
- Makes it so much easier!!

The screenshot shows the RegKey2Mof application window. On the left is a tree view of registry keys under 'Patch My PC'. On the right is a configuration panel for the 'Patch My PC' key.

Tree View (Left):

- OBS Studio
- ODBC
- OEM
- OpenSSH
- Partner
- Patch My PC
 - Options
 - Policies
 - Realtek
 - RegisteredApplications
 - RTLSetup
 - Setup
 - Synaptics
 - SynclinkIntegrationClients
 - TechSmith
 - Windows
 - WOW6432Node

Configuration Panel (Right):

Group: Custom **ClassName:** Patch My PC **Version:** 1.0

Value names with spaces, dashes or parenthesis will be changed

Enable 64bits for Regkeys not written in Wow6432Node
 Dynamic instances (Only takes fields found in the first child)
 64bits Only

Code Preview (Bottom):

```
// RegKeyToMOF by Mark Cochran (with help from Skissinger, SteveRac, Jonas Hettich, Kent Agerlund & Barker)
// this section tells the inventory agent what to collect
// 5/2/2022 6:25:19 AM

#pragma namespace ("\\\\.\\root\\cimv2")
#pragma deleteclass("PatchMyPC", NOFAIL)
[DYNPROPS]
Class PatchMyPC
{
    [key] string KeyName;
    String PATH;
};

[DYNPROPS]
Instance of PatchMyPC
{
    KeyName="RegKeyToMOF_32";
    [PropertyContext("Local\HKEY_LOCAL_MACHINE\\SOFTWARE\\Patch My PC(PATH"),Dynamic,Provider("RegPropProv"))] PATH;
};

#pragma namespace ("\\\\.\\root\\cimv2")
#pragma deleteclass("PatchMyPC_64", NOFAIL)
[DYNPROPS]
```



Reg2CI – Roger Zander

www.wpninjas.eu

- Reg2CI
- Convert reg files to:
- PowerShell CI
 - Check Script
 - Remediation Script

Registry to PowerShell converter

Version 1.0.2.0 (09.May.2017)

Registry:

PowerShell:

..and you will get the PowerShell code here...

Get check Script

Get remediation Script





TSCommander

www.wpninjas.eu

- Replaces OS Deployment webservices
- Task sequence editor extension
- Service that executes the commands
- Commands sent as Status Messages
- Works over CMG

Properties Options

Type: Run server command

Name: Run server command

Description:

Server command:

- Add To AD Group(s)
- Add To Collection(s)
- Add To ManagedBy
- Clear Computer Description in AD
- Clear Laps Password Timestamp
- Clear PXE Flag
- Delete Discovered System
- Disable Computer Account in AD
- Move Computer To OU
- Remove From AD Group(s)
- Remove From Collection(s)
- Remove From OSD Collection(s)
- Remove User Device affinity(s)
- Run custom script
- Set Computer Description in AD

<https://onevinn.schrewelius.it/>





SQL Maintenance Solution

www.wpninjas.eu

- Ola Hallengren
- Simply the best SQL maintenance solution
- Should be used for:
 - SCCM DB
 - WSUS DB
- Will increase performance
- Check for updates as it always gets better

SQL Server Maintenance Solution

Menu

[Home](#)
[SQL Server Backup](#)
[SQL Server Integrity Check](#)
[SQL Server Index and Statistics Maintenance](#)
[Downloads](#)
[Version History](#)
[Frequently Asked Questions](#)
[Organizations that Use the Solution](#)
[Sign Up for the Newsletter](#)
[License](#)
[Contact](#)

GitHub



Awards



SQL Server Backup, Integrity Check, and Index and Statistics Maintenance

The SQL Server Maintenance Solution comprises scripts for running backups, integrity checks, and index and statistics maintenance on all editions of Microsoft SQL Server 2008, SQL 2017, and SQL Server 2019. The solution is based on stored procedures. The solution has been designed for the most mission-critical environments, and it is used in many organizations. Free Tool in the [2013](#), [2012](#), [2011](#), and [2010](#) SQL Server Magazine Awards. The SQL Server Maintenance Solution is [free](#).

"Personally, I'd recommend that you stop using Database Maintenance Plans entirely, and switch to a much more robust maintenance implementation using TSQL scripts. A free solution can be found at [ola.hallengren.com](#)." - [Jonathan Kehayias](#)

Getting Started

Download [MaintenanceSolution.sql](#). This script creates all the objects and jobs that you need.

Learn more about using the SQL Server Maintenance Solution:

- [DatabaseBackup](#): SQL Server Backup
- [DatabaseIntegrityCheck](#): SQL Server Integrity Check
- [IndexOptimize](#): SQL Server Index and Statistics Maintenance

The SQL Server Maintenance Solution is available on [GitHub](#).

Sign up for the [newsletter](#) to be alerted about updates to the solution.

SQL Server Smart Backup to Multiple Files

Are you backing up to multiple files to improve backup performance? Are you running into the size limitations, when backing up to Azure Blob Storage?

I have had the option to backup to multiple files for a long time. The challenge has just been that you have got the same number of backup files for all databases, small or large.

I am now introducing two new options to do backup to multiple files.

Here's how it can be used to back up databases, with a size of 10240 MB or larger, to 8 files, and smaller databases to one file.

```
EXECUTE dbo.DatabaseBackup  
@Databases = 'USER_DATABASES',  
@Directory = 'C:\Backup',  
@BackupType = 'FULL',  
@Compress = 'Y',  
@CheckSum = 'Y',  
@NumberofFiles = 8,  
@MinBackupSizeForMultipleFiles = 10240
```

Here's how it can be used to dynamically calculate the number of backup files, so that each file is getting at max 10240 MB.

```
EXECUTE dbo.DatabaseBackup  
@Databases = 'USER_DATABASES',  
@Directory = 'C:\Backup'
```



<https://ola.hallengren.com>

Extra Tools





Client Center – Roger Zander

www.wpninjas.eu

- Client-side troubleshooting
- Reinstall applications
- Inventory
- Trigger tasks
- Settings

And everything else you can imagine
..(almost)

<https://github.com/rzander/sccmclctr>

The screenshot shows the 'Client Center for ConfigMgr (OpenSource Version)' application window. At the top, there is a toolbar with various icons for Agent Actions (Inventory, HW Inv, SW Inv, DDR), Custom Actions (Machine Policy, User Policy, Update Evaluation, Open Console, Powershell, Maintenance, App.Mgmt.), Tools (Tools, run PS + PS), and a 'Connect' button. Below the toolbar, there's a navigation menu with 'Overview' selected, showing links to Agent Settings, Components, Cache, Install / Repair, and Client Health. A central panel displays a computer monitor icon with three stars and a pen, labeled 'Version: 1.0.6.1' and 'Assembly: 1.0.6.32517'. To the right, there is a detailed license page for 'Client Center for Configuration Manager' from 2020 by Roger Zander. The license includes sections for Definitions, Grant of Rights, and Conditions and Limitations, along with a 'Donate' button and payment method icons (VISA, MasterCard, SEPA). At the bottom, there are links for Monitoring, Inventory, Software Distribution, and Agent Settings, and a status message: 'Unable to ping the target device... !'.



Deployment Sheduler - Johan Schrewelius

www.wpninjas.eu

- Custom “Software Center”
- Custom Scheduling
- Restart scheduling
- Wizards, custom planning
- Feedback

The screenshot shows the 'Deployment scheduler - 1.0.21034.1' application window. The title bar includes the CCMEXEC logo and the text 'CCMEXEC TP'. The main interface has a sidebar with icons for 'Required Apps', 'Available Apps', 'Updates', 'Restart center', 'Wizards' (which is selected), and 'Feedback'. The main content area displays the message 'No updates or applications required at this time.' Below this, there's a date and time field showing '2022-03-14 16:50' with a 'Save' button, and a status message 'No updates or applications can be scheduled' with an 'Install now' button. At the bottom, there's a section titled 'Recurring Updates and Applications service cycle' with a note about weekly automatic installs and restarts. A table allows setting auto update times for each day of the week from Sunday to Saturday.

Run auto update on:	Hour	Minute
<input type="checkbox"/> Sunday	00	00
<input type="checkbox"/> Monday	00	00
<input type="checkbox"/> Tuesday	00	00
<input type="checkbox"/> Wednesday	00	00
<input type="checkbox"/> Thursday	00	00
<input type="checkbox"/> Friday	00	00
<input type="checkbox"/> Saturday	00	00

<https://onevinn.schrewelius.it/Apps01.html>





ConfigMgr Client Health – Anders Rödland

www.wpninjas.eu

- Checks many components
- Optional remediation
- Logs to a SQL DB
- Reporting Services report
- Configuration Manager Console Integration

<https://www.andersrodland.com/configmgr-client-health/>

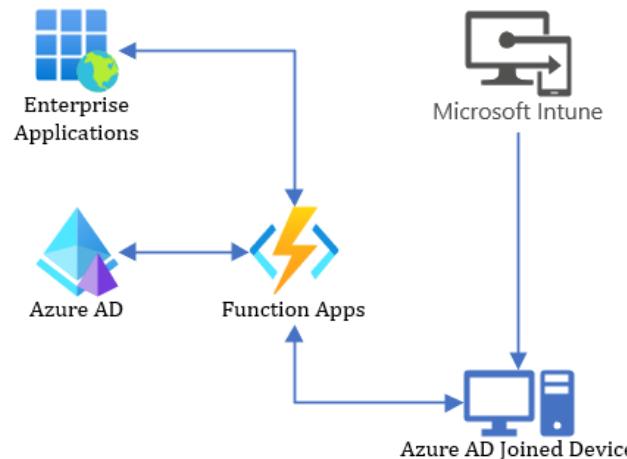
```
PowerShell version: 5.1.16299.15. Script executing with Administrator rights.
ConfigMgr Client Health 0.7.6 starting.
Script last ran: 01/01/0001 00:00:00
WMI Check: OK
Compliance States: OK.
Configuration Manager Client is installed
SMSTSManager: OK
ConfigMgr Client Site Code: OK
ConfigMgr Client Cache Size: OK
WARNING: ConfigMgr Client Max Log Size: Configuring to 4096 KB
ConfigMgr Client Max Log History: OK (1)
ConfigMgr Client Provisioning Mode: OK
ConfigMgr Client Certificate: OK
ConfigMgr Hardware Inventory scan: OK
Software Metering - PrepDriver: OK
DNS Check: OK
BITS: OK
GPO Cache: Broken (Event Log)
GPO Cache: Repaired (Event Log)
StateMessage: OK
Adminshare Admin$: OK
Adminshare C$: OK
WARNING: Drivers: 1 unknown or faulty device(s)
WARNING: Missing or faulty driver: Microsoft Hyper-V Virtual Machine Bus Provider
Free space C: OK
Restarting service CcmExec...
WARNING: Waiting for service 'SMS Agent Host (CcmExec)' to stop...
WARNING: Waiting for service 'SMS Agent Host (CcmExec)' to stop...
WARNING: Waiting for service 'SMS Agent Host (CcmExec)' to stop...
WARNING: Waiting for service 'SMS Agent Host (CcmExec)' to stop...
Pending Reboot: OK
Clearing ConfigMgr orphaned Cache items.
Failed Clearing ConfigMgr orphaned Cache items.
Starting Built-in Configuration Manager Client Health Evaluation
Setting last ran to 05/15/2018 04:45:21
Updating local logfile with results
Updating fileshare logfile with results
Updating SQL database with results
```



Password Reminder

www.wpninjas.eu

- Password Reminder
- Proactive Remediation
- Toast Notification



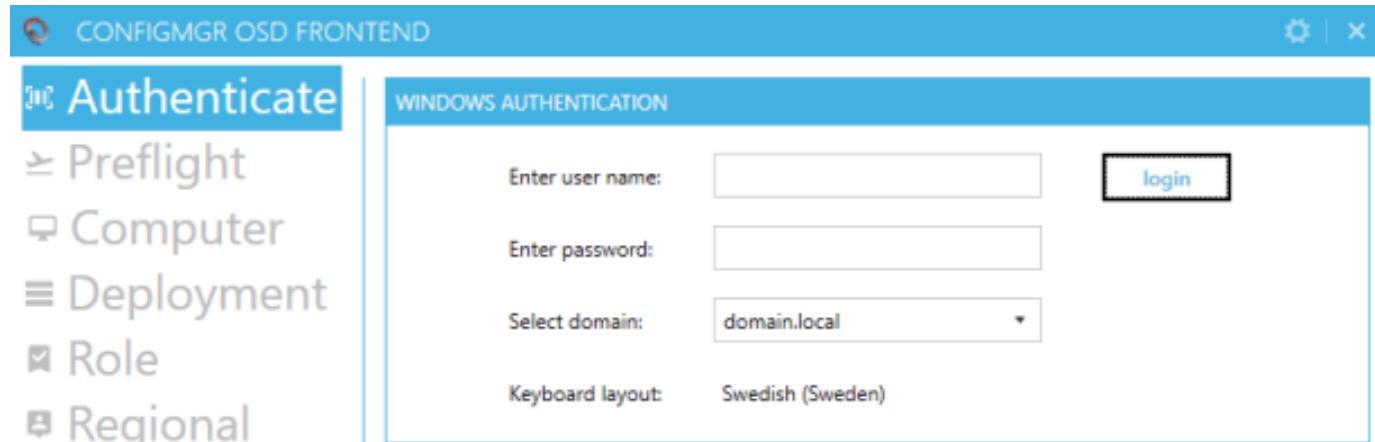
<https://www.smthwentright.com/2022/03/07/password-reminder-with-proactive-remediation-for-aad-joined-devices/>



ConfigMgr OSD Front end

www.wpninjas.eu

- Uses a webservice in the back end
- Replaces UDI
- With MDT or without
- Roles, apps, user



The screenshot shows the 'CONFIGMGR OSD FRONTEND' application window. On the left, a sidebar menu lists 'Authenticate' (selected), 'Preflight', 'Computer', 'Deployment', 'Role', 'Regional', 'Applications', and 'User'. Below the sidebar is a small blue network icon. The main area is titled 'WINDOWS AUTHENTICATION' and contains fields for 'Enter user name:' (with a dropdown arrow), 'Enter password:' (with a dropdown arrow), 'Select domain:' (set to 'domain.local'), and 'Keyboard layout:' (set to 'Swedish (Sweden)'). A 'login' button is located at the bottom right of the main form. At the very bottom of the window, there are three small rectangular buttons labeled 'previous', 'next', and 'cancel'.

<https://gallery.technet.microsoft.com/ConfigMgr-OSD-FrontEnd-100-55209031>





ConfigMgr Remote Compliance – Trevor Jones

www.wpninjas.eu

- Run compliance report remotely

The screenshot shows the 'ConfigMgr Remote Compliance' application window. At the top, there's a navigation bar with 'View Client Logs', 'Help', and 'About' buttons. To the right of the navigation bar are four buttons: 'Get Configurations' (purple), 'Evaluate' (light purple), 'View Report' (light purple), and 'Refresh' (purple). Below the navigation bar, the 'ComputerName' is set to 'ek1012'. Underneath this, there are two rows of configuration data:

Name	Version	Last Evaluation	Compliance State	Evaluation Status	Is Machine Target?	User Cont
Corporate access	1	Unknown	Compliant	Unknown	False	EKCLIENT
Corporate Policy	3	Unknown	Compliant	Unknown	False	EKCLIENT

At the bottom of the application window, there's a 'Logging' section containing two log entries:

```
[17:19:51] [Information] Retrieving configurations from ek1012
[17:20:06] [Information] Found SID for logged-on user: S-1-5-21-3728791760-769952176-1399011249-500
```

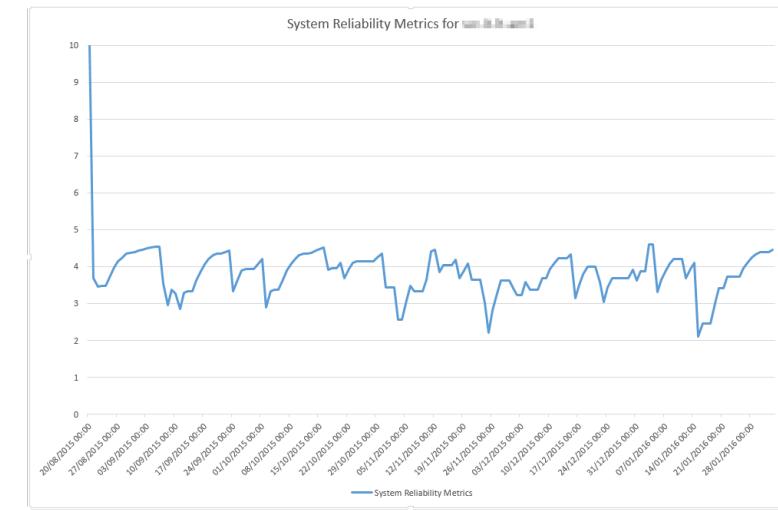
<https://gallery.technet.microsoft.com/ConfigMgr-Remote-Compliance-2a9e55f3>



Reliability Viewer for Windows

www.wpninjas.eu

- Application crashes
- Software Update installations
- Msilnstaller events
- Unexpected system shutdowns
- Blue-screens
- Driver installations
- Hardware failure



Reliability Viewer for Windows

Reliability Records

Product Name: * Computer Name: [REDACTED]
Source: Microsoft-Windows-WER-SystemErrorReport EventID: * Log: *
User: * Get Reliability Records

TimeGenerated	Source	ProductName	EventID	Log	User
28-Jan-2016 09:25:06	Microsoft-Windows-WER-SystemErrorReporting	Windows	1001	System	
26-Jan-2016 02:43:36	Microsoft-Windows-WER-SystemErrorReporting	Windows	1001	System	
26-Jan-2016 02:40:39	Microsoft-Windows-WER-SystemErrorReporting	Windows	1001	System	
20-Jan-2016 02:20:06	Microsoft-Windows-WER-SystemErrorReporting	Windows	1001	System	
18-Jan-2016 09:07:12	Microsoft-Windows-WER-SystemErrorReporting	Windows	1001	System	
15-Jan-2016 02:35:00	Microsoft-Windows-WER-SystemErrorReporting	Windows	1001	System	
15-Jan-2016 11:22:02	Microsoft-Windows-WER-SystemErrorReporting	Windows	1001	System	

Message:

The computer has rebooted from a bugcheck. The bugcheck was: 0x000000d1 (0xfffffe0220af4e068, 0x0000000000000002, 0x0000000000000001, 0xffff800bb8da8c5). A dump was saved in: C:\WINDOWS\MEMORY.DMP. Report Id: 95b847cd-6205-466c-93b9-3d71d4839d38.



SCCM Client TCP Port tester – Trevor Jones

www.wpninjas.eu

- Checks all necessary TCP ports allow inbound traffic
- No UDP support

The screenshot shows a Windows application window titled "ConfigMgr Client TCP Port Tester". The interface includes a toolbar with icons for file operations, a dropdown menu, and a "GO" button. The main area is divided into sections: "Local Ports" and "CLIENT PORTS (INBOUND)". The "CLIENT PORTS (INBOUND)" section contains a table with columns: PORT, STATUS, and PURPOSE. The table rows show the following data:

PORT	STATUS	PURPOSE
80	✓	HTTP Communication
443	✗	HTTPS Communication
445	✓	SMB
135	✓	Remote Assistance / Remote Desktop
2701	✓	Remote Control
3389	✓	Remote Assistance / Remote Desktop

At the bottom of the table, a message reads "Completed!"

<https://smsagent.blog/2019/03/07/configmgr-client-tcp-port-tester/>



Agenda

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Key takeaways:

- **Goal 1**
- **Goal 2**





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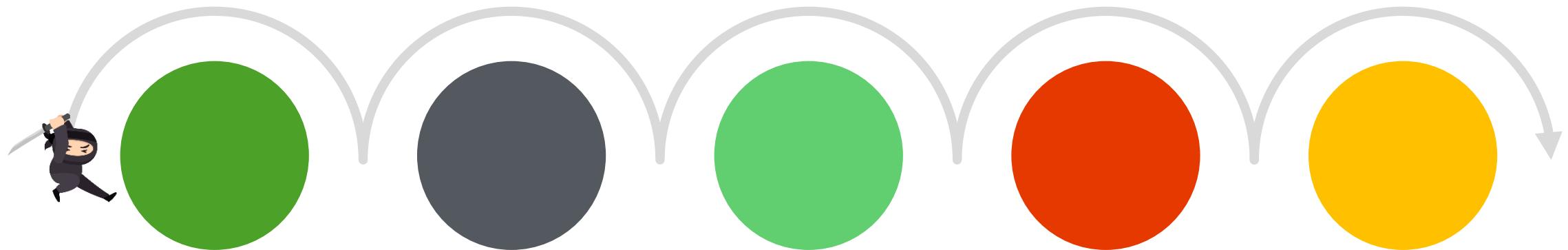
Code

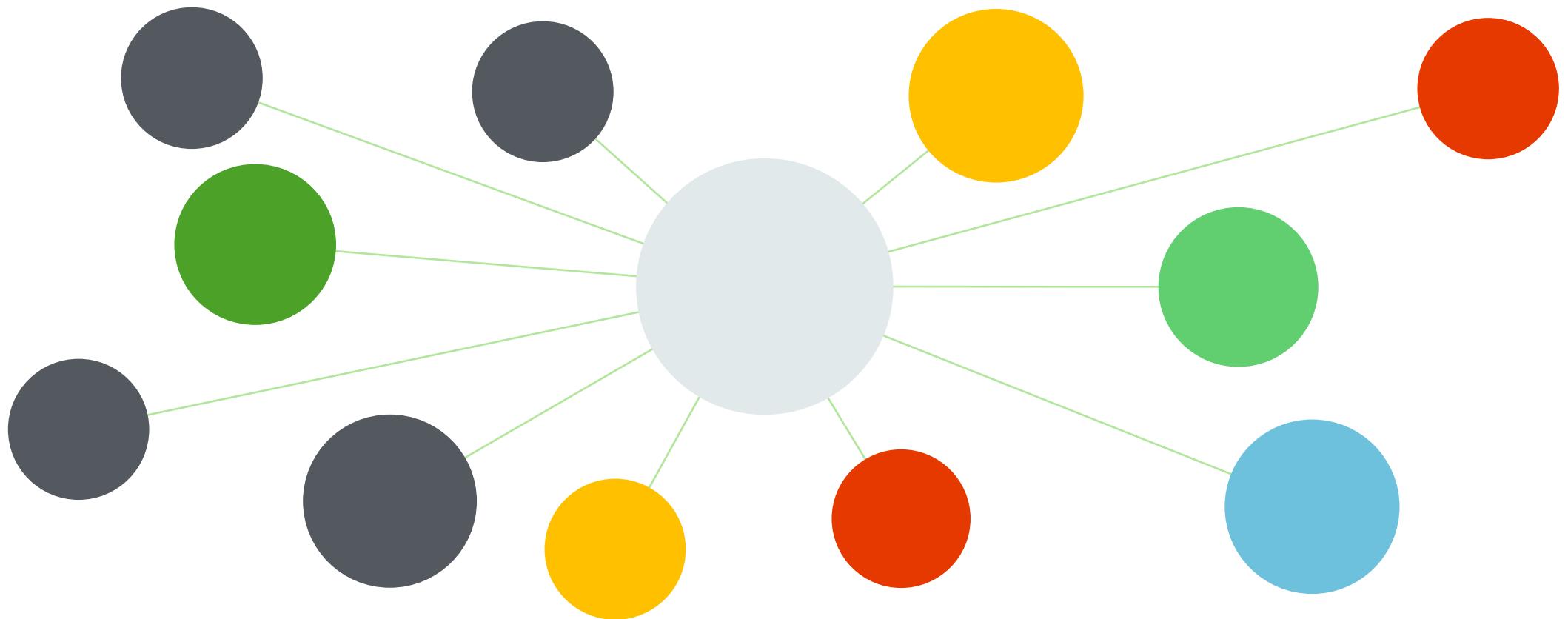
www.wpninjas.eu



- Demo









01

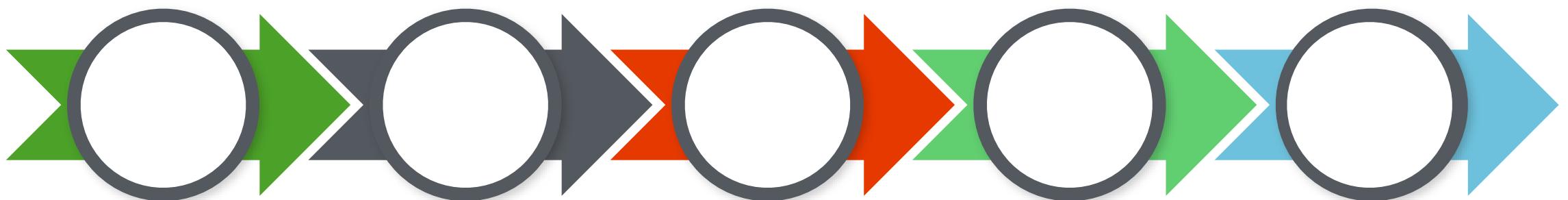
04

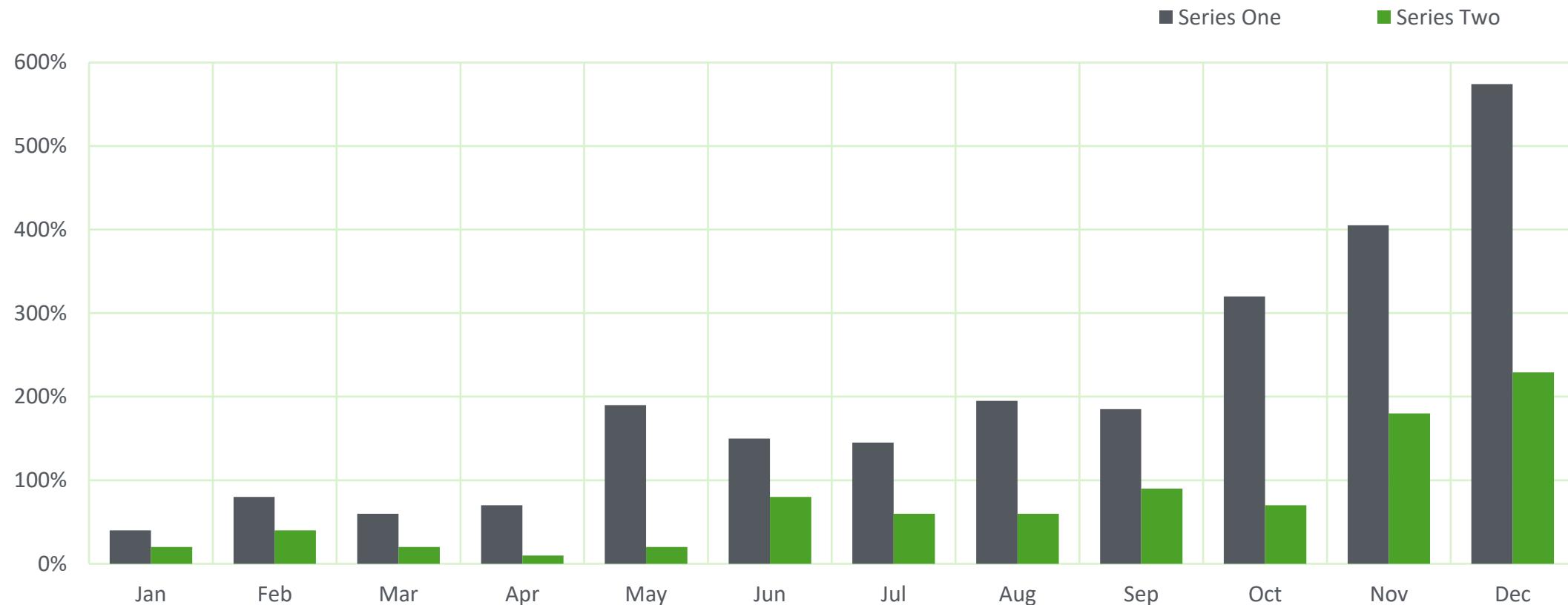
02

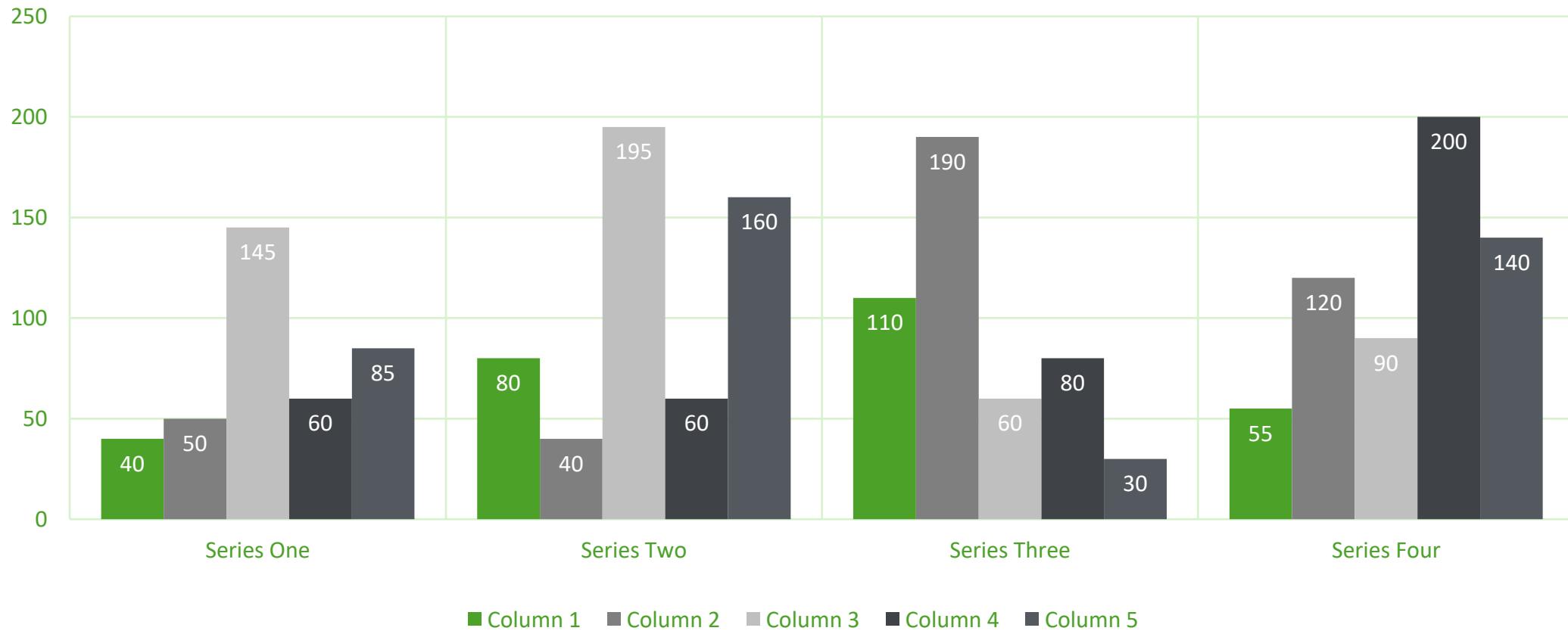
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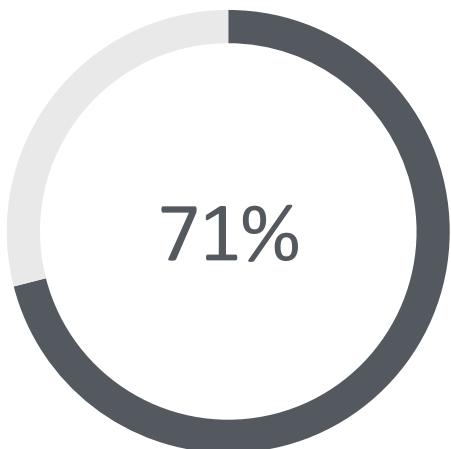
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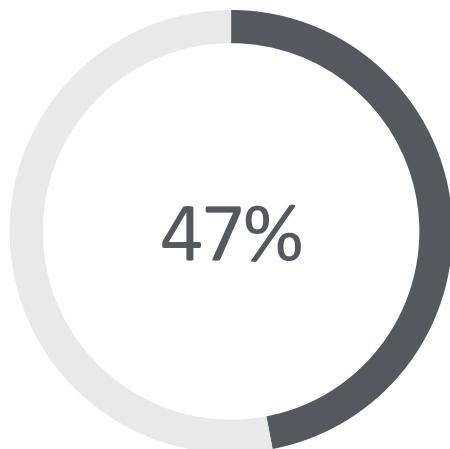






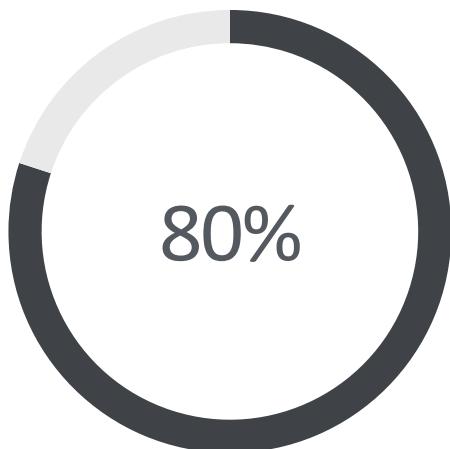
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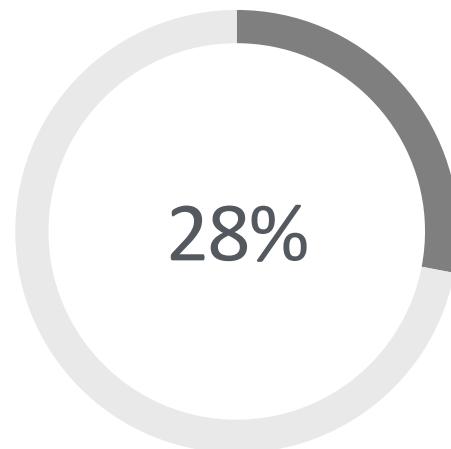
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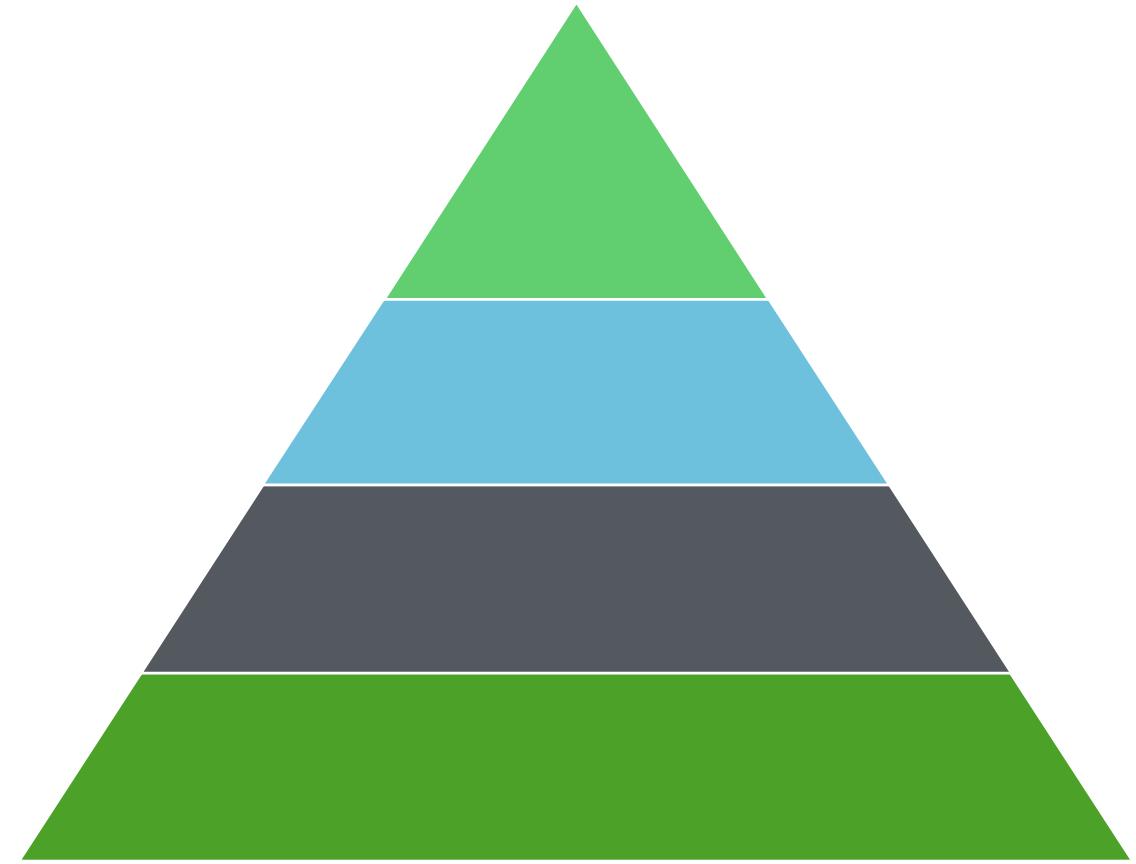
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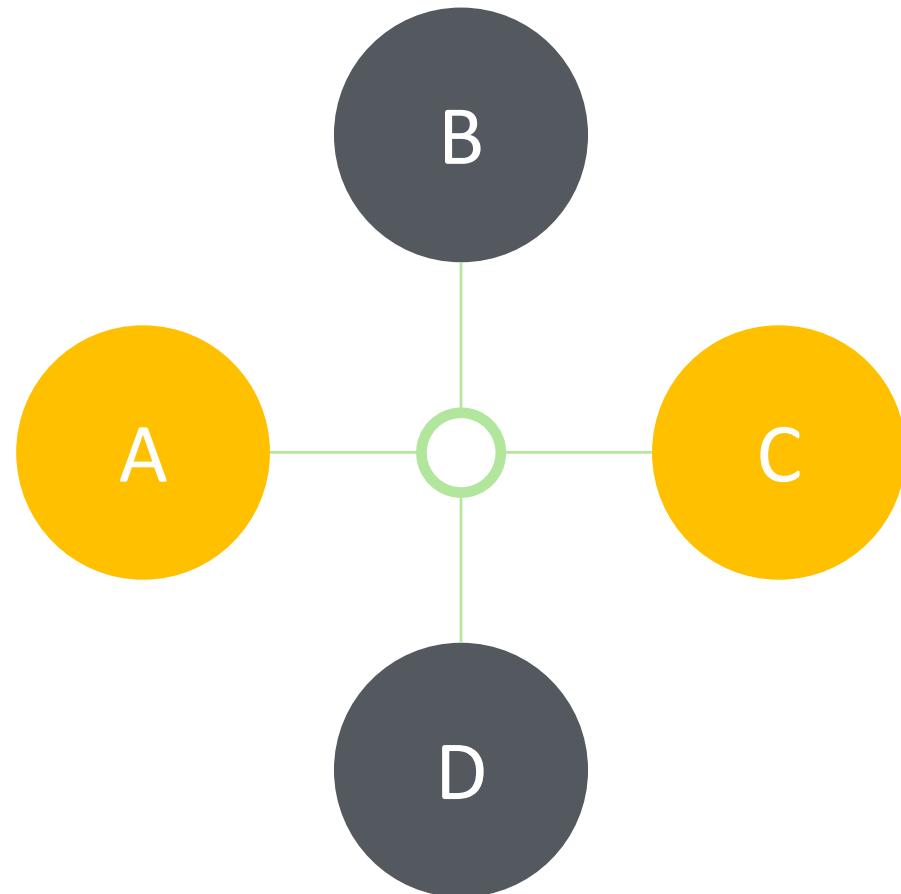
Sed ut perspiciatis unde omnis
iste inventore veritatis.



	Colum 01	Colum 02	Colum 03	Colum 04
First Row	140,590	140,590	140,590	140,590
Second Row	240,452	240,452	240,452	240,452
Third Row	278,564	278,564	278,564	278,564
Forth Row	360,455	360,455	360,455	360,455
Fifth Row	420,451	420,451	420,451	420,451
Total	1,440,520	1,440,520	1,440,520	1,440,520















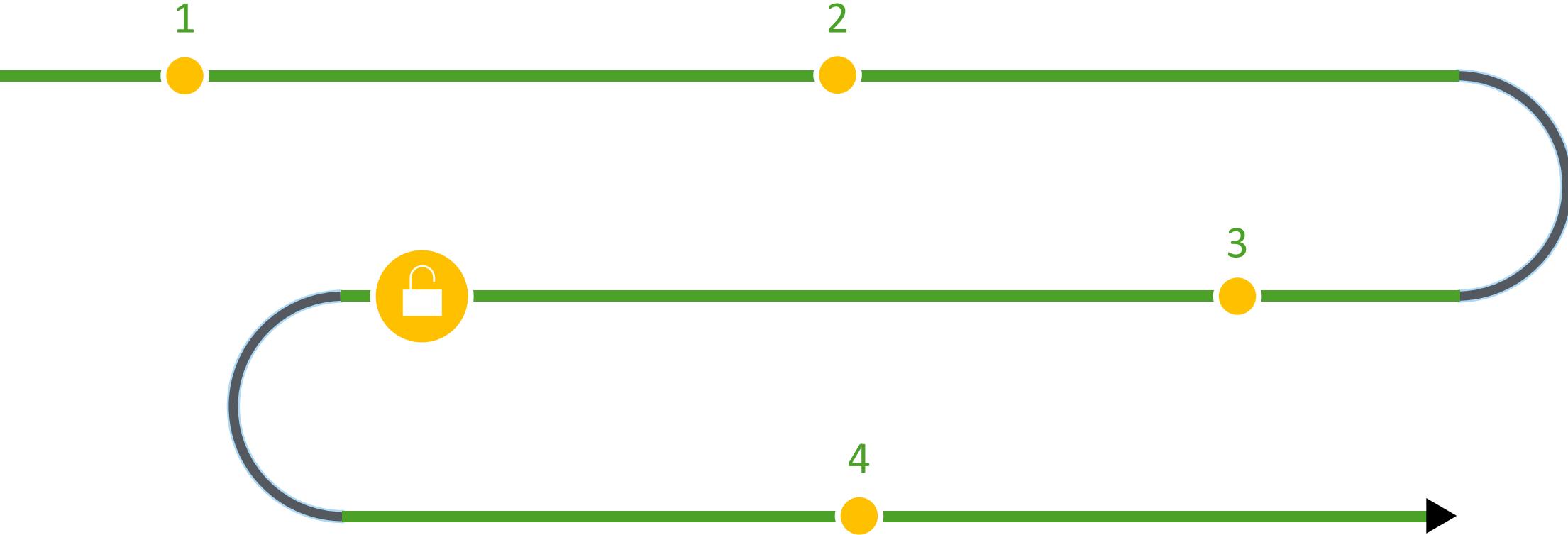


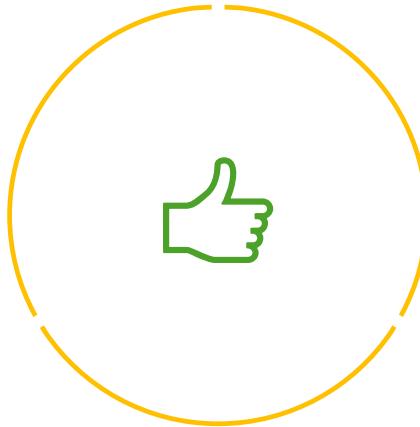
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