MAEDS 55 ConfigMgr: Community Tools 2019

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@AUTOMATEMYSTUFF

Ingham Intermediate School District
A Regional Educational Service Agency

MAEDS
NETWORKING ⇔ PEOPLE AND TECHNOLOGY

Session Description

ConfigMgr has one of the best communities I've ever been a part of! Come attend this whirlwind session of community tools to help you manage your ConfigMgr environment. There will likely be tools you're already familiar with and/or using, but I hope you walk away with a new appreciation of the community that you are a part of and the free tools you have at your disposal. This session was inspired by Jörgen Nilsson and Sherry Kissinger from their "Configuration Manager Community Tools 2019" session at MMSMOA 2019, but has my own spin. I wanted to bring these tools back to our community and share my experiences with those tools I've had a chance to work with.

I have used this and endorse it's use.

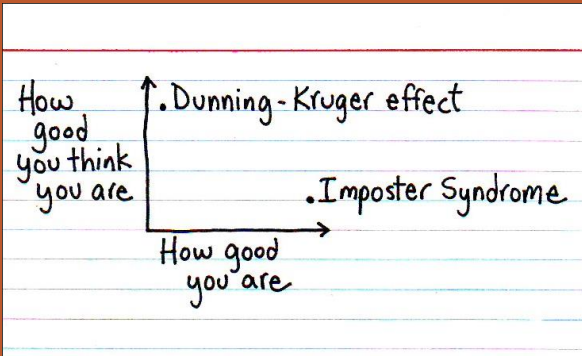I've heard good things, but haven't had time yet.
- OR -
I've used this in the past, but no longer.

This is outside the scope of what I work with.
- OR -
This is something I'm not interested in using.

How good you think you are / Dunning-Kruger effect / Imposter Syndrome / How good you are

Who Am I?

o **20 Years In K12 Technology**
  o Intern, Tech, Coordinator, Engineer

o **Lifelong Learner**
  o /r/sysadmin, /r/k12sysadmin, RSS feeds

o **Relentlessly Inquisitive**
  o Let's Ask The WinAdmins Chat (currently Discord)

o **Problem Solver**
  o Professional Googler

o **Voracious Reader**
  o docs.microsoft.com

o **Community Minded**
  o MAEDS, MISCUG, WMiSMUG, MMS

o **#ImpostorSyndromeBeDamned**
  o Own what you know. Be confident, not arrogant. Ask questions. *Be wrong*. But don't be silent, and don't think you don't belong in the group.

Past Presentations

2013 MAEDS Fall Conference
Attended 'Marketing Yourself' by Kris Young and Kevin Galbraith
"*Our Name, Reputation and Skill Sets Need to be KNOWN*"

2014 MAEDS Spring PD Day
First time presenting and it's a 'ConfigMgr panel' for a half day session.

2014 MAEDS Fall Conference
Presented 'PADT and SCCM'

2015 MAEDS Spring PD Day
Presented 'ConfigMgr panel' for a half day session.

2015 MAEDS Fall Conference
Presented 'Automate ALL THE THINGS with PowerShell App Deployment Toolkit'

2017 MAEDS Fall Conference
Presented 'PowerShell – Intro session for those that have been too afraid to take the plunge'

2018 MAEDS Fall Conference
Presented 'PowerShell - Intermediate Session for Those That Overcame Their Fears and Took the Plunge'

2019 MACUL Pre Con Workshop
Presented 'Office 365 Admin Training'

2019 MISCUG (April)
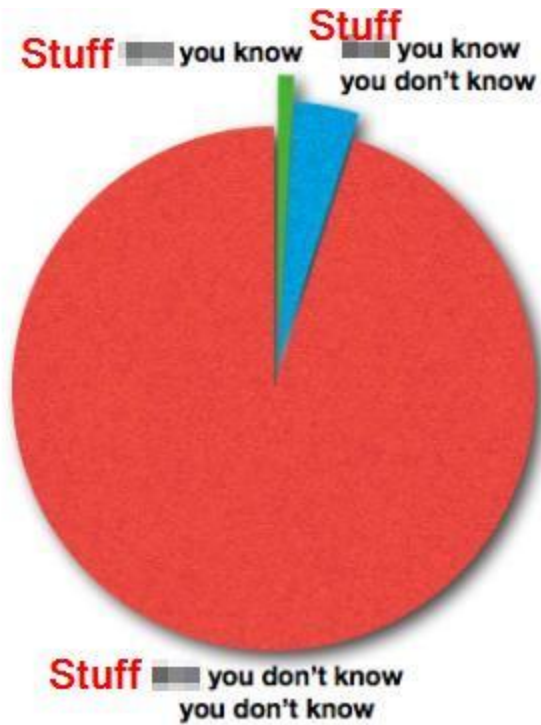Presented 'MISCUG PowerShell App Deployment Toolkit'

2019 WMiSMUG (October)
Presented 'WMiSMUG PowerShell App Deployment Toolkit'

Be The Master

"Teaching does not always feel rewarding. It doesn't need to be. It is a repayment of something that was done for you. It is not a good thing that you do; it is an obligation that you have."

https://donjones.com/2017/10/19/become-the-master-or-go-away/

Stuff [ ] you know

Stuff [ ] you know you don't know

Stuff [ ] you don't know you don't know

The goal of education and experience *(as they would lead you to believe)*

Stuff [ ] you know

Stuff [ ] you know you don't know

The actual goal of education and experience
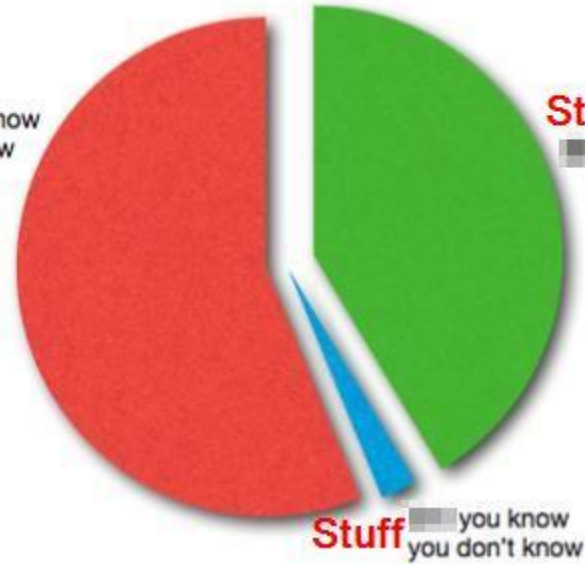
Stuff [ ] you know

Stuff [ ] you don't know you don't know
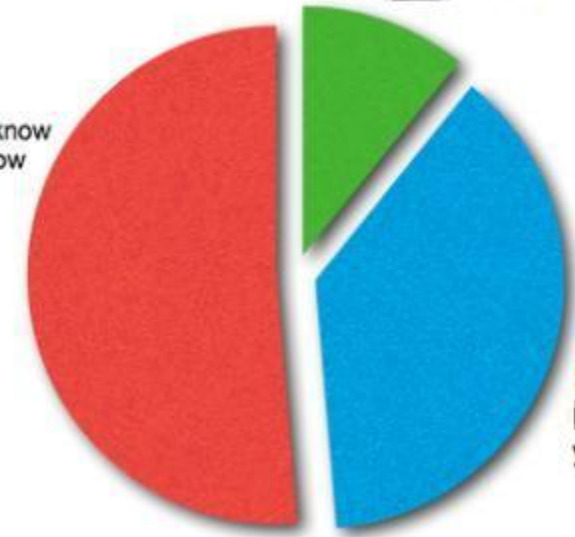
Stuff [ ] you know you don't know

Wisdom and the Art of Being *Not Dangerous*

No One Knows What the F*** They're Doing (or "The 3 Types of Knowledge")
Steve Schwartz • May 13, 2010
https://www.bridge-global.com/blog/3-types-of-knowledge/

5

Community Building

WinAdmins Chat

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http://winadmins.chat/

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or

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https://aka.ms/winadmins

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Who are the WinAdmins?

The WinAdmins are a society of engineers interested in discussion, community, and peer support. We do not represent any one specific organization or country. While we started as a primary Microsoft Windows-focused support group (inspiring the name WinAdmins), over the last several years our discussions have branched to include Mac, cloud, and general networking.

Wait, weren't you on Slack?

Although we were a Slack community for quite a long time, in late 2019 we realized that our needs outgrew what Slack was able to provide for free. As we're not corporately sponsored, and attempts to get a discounted rate failed, we moved to the Discord platform. This decision was not taken lightly and was made after several months of testing six different popular platforms.

Twitter

If only to lurk, make a Twitter account and start following community leaders. You'll find that information makes it's way to Twitter before the folks have time to publish a blog post or get it pushed through corporate red tape for official KBs to be published.

ConfigMgr Product Group
https://twitter.com/JasonSandys/lists/configmgr-pg/members

List of #MVPs for @MSIntune and @ConfigMgr
https://twitter.com/CxPCathy/lists/intune-configmgr-mvps/members

Women who work with Configuration Manager/Intune
https://twitter.com/CxPCathy/lists/womeninconfigmgrintune/members

https://twitter.com/jryanwall/lists/deployment/members

User Groups

- Attend
  - show your support
  - prove to vendors the meeting is worth sponsoring

- Offer To Speak
  - you know stuff others don't
  - you see things differently
  - you will present things differently

- Offer To Help
  - arrange for presenters
  - arrange for food
  - handle social media

MISCUG
Michigan System Center User Group

Twitter:
@MISCUG
Website:
http://miscug.org
Location:
Coretek Services
34900 Grand River Ave
Farmington Hills, MI 48335

WMiSMUG
WEST MICHIGAN SYSTEMS MANAGEMENT USER GROUP

Twitter:
@WMiSMUG
Website:
https://wmismug.org/
Location:
Long Term – TBD
Short Term – Kent ISD

Infrastructure Tools

ConfigMgr Prerequisites Tool

Author:
Nickolaj Andersen (@NickolajA)

Download:
https://gallery.technet.microsoft.com/ConfigMgr-2012-R2-e52919cd

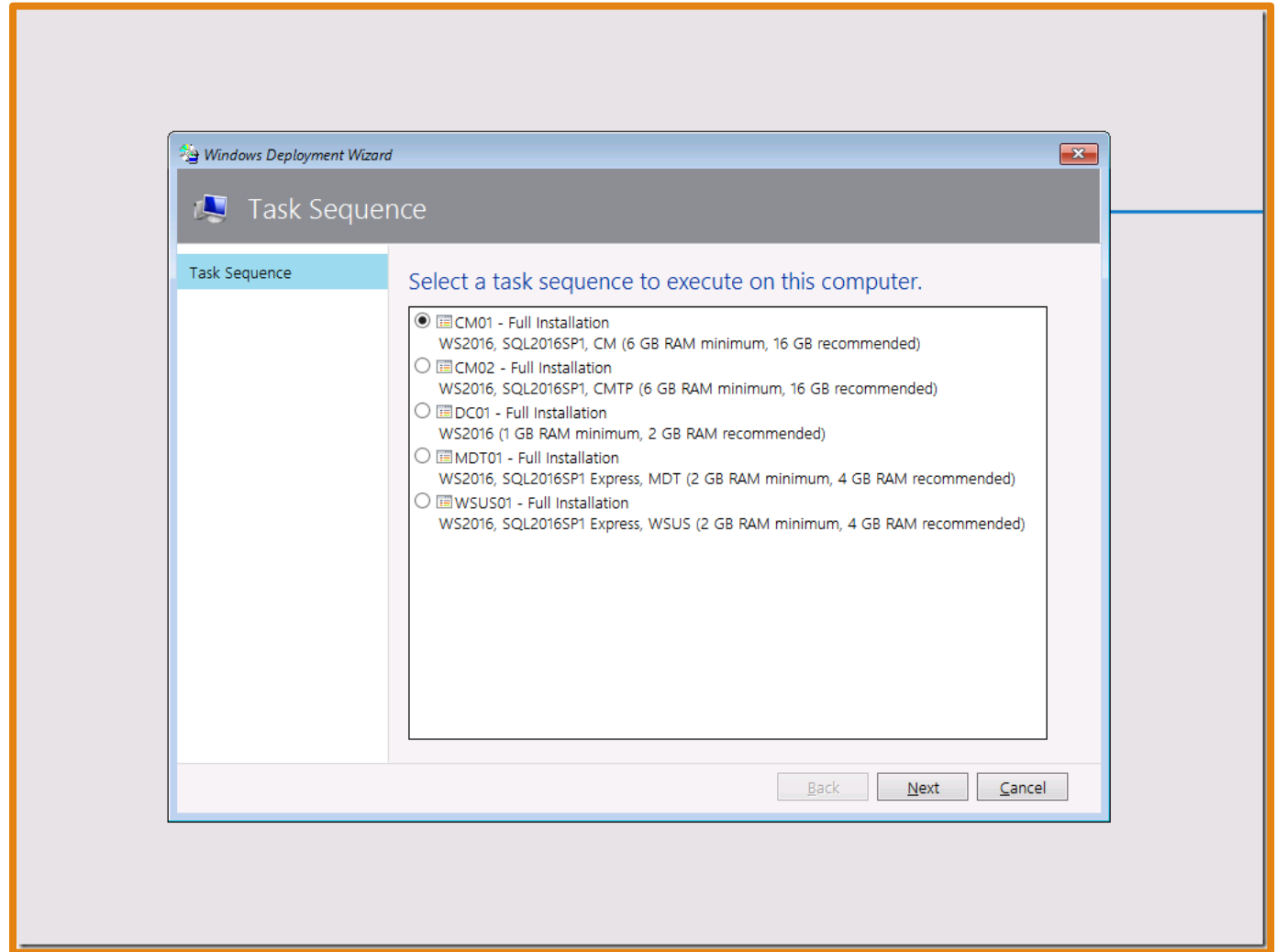~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Author:
Donna Ryan (@TheNotoriousDRR)

Guide:
http://www.thenotoriousdrr.com/index.php/2019/02/18/the-scconfigmgr-configmgr-prerequisite-tool/

Hydration Kit

Author:
Johan Arwidmark (@jarwidmark)

Download:
https://deploymentresearch.com/hydration-kit-for-windows-server-2016-and-configmgr-current-technical-preview-branch/

Windows and Office Deployment Lab Kit

Author:
Microsoft

Download:
https://www.microsoft.com/evalcenter/evaluate-lab-kit

Docs:
https://docs.microsoft.com/en-us/microsoft-365/enterprise/modern-desktop-deployment-and-management-lab

A complete lab environment

The lab provides you with an automatically provisioned virtual lab environment, including domain-joined desktop clients, domain controller, Internet gateway and a fully configured ConfigMgr instance. The lab contains Evaluation Versions of the following products:

- Windows 10 Enterprise, Version 1903
- Windows 7 Enterprise
- System Center Configuration Manager, Version 1902
- Windows Assessment and Deployment Kit for Windows 10, Version 1903
- Microsoft Deployment Toolkit
- Microsoft Application Virtualization (App-V) 5.1
- Microsoft BitLocker Administration and Monitoring 2.5 SP1
- Windows Server 2019
- Microsoft SQL Server 2017

PLUS, the lab is designed to be connected to trials for:

- Microsoft 365 Enterprise E5

Or

- Office 365 Enterprise E5
- Enterprise Mobility + Security

Step-by-step labs

Detailed lab guides take you through multiple deployment and management scenarios, including:

ConfigMgr Lab in Azure

Author:
Microsoft

Docs:
https://docs.microsoft.com/en-us/sccm/core/get-started/azure-template

Author:
Dan Padgett (@danjpadgett)

Guide:
https://execmgr.net/2018/04/13/building-a-configmgr-lab-in-azure/

A LAB IN THE CLOUD? NICE!

If you are anything like me and do not have the ability to create a Lab environment at home (those who flat share will understand) but still would like the option to test new ConfigMgr features away from your production environment, there is a quick and easy solution. Azure DevTest Labs.

https://azure.microsoft.com/en-us/services/devtest-lab/

> 'Azure DevTest Labs helps developers and testers quickly create environments in Azure to deploy and test their applications. Easily provision Windows and Linux machines in Labs using reusable templates and artifacts while minimizing waste and controlling cost.'

Before i harp on, take a quick read of the above page. In summary DevTest Labs allow you to quickly provision a lab environment without having to go through monotonous steps you may have done 1000 times (think Domain, SQL, ConfigMgr). As the page states, some of the benefits are;

- Quickly provision development and test environments
- Minimize waste with quotas and policies
- Set automated shutdowns to minimize costs
- Build Windows and Linux environments

SQL Server Maintenance

Author:
Olla Hallengren

Download:
https://ola.hallengren.com/downloads.html

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Author:
Brad McGehee

Guide:
Automate and Improve Your Database Maintenance Using Ola Hallengren's Free Script

Overview

Ola's script is designed to cover the most common database maintenance tasks, which include:

- The ability to performing full, differential, or log backups (as appropriate) of any system and user databases, using either the native SQL Server backup command, or some third-party backup products, such as SQL Backup, or SQL HyperBac. The script also has the ability to automatically remove older backup files from disk that are no longer needed.

- The ability to perform dynamic index optimization by rebuilding indexes online or offline (depending on the edition of SQL Server you have), reorganizing indexes, updating statistics, or doing nothing at all, based on an index's size and fragmentation level.

- The ability to perform database integrity checks using DBCC CHECKDB, DBCC CHECKFILEGROUP, DBCC CHECKTABLE, DBCC CHECKALLOC and/or DBCC CHECKCATALOG. .

- The ability to delete old job and backup history, including the removal of log files created by maintenance jobs as they run.

- The ability to automatically create jobs that implement each of the above tasks. All you have to do is to decide when to run them and schedule them appropriately. Alternatively, you can specify that jobs are not automatically created, so you can create your own.

Each of the above features can be run with default settings, or various parameters can be changed to customize how the maintenance tasks run on your SQL Server instances. As each job is run, the results are logged immediately to log files and/or log tables so you can see exactly what maintenance is being performed (even as it is happening). In addition, Ola's script includes extensive error-checking to make it easier to troubleshoot any potential problems.
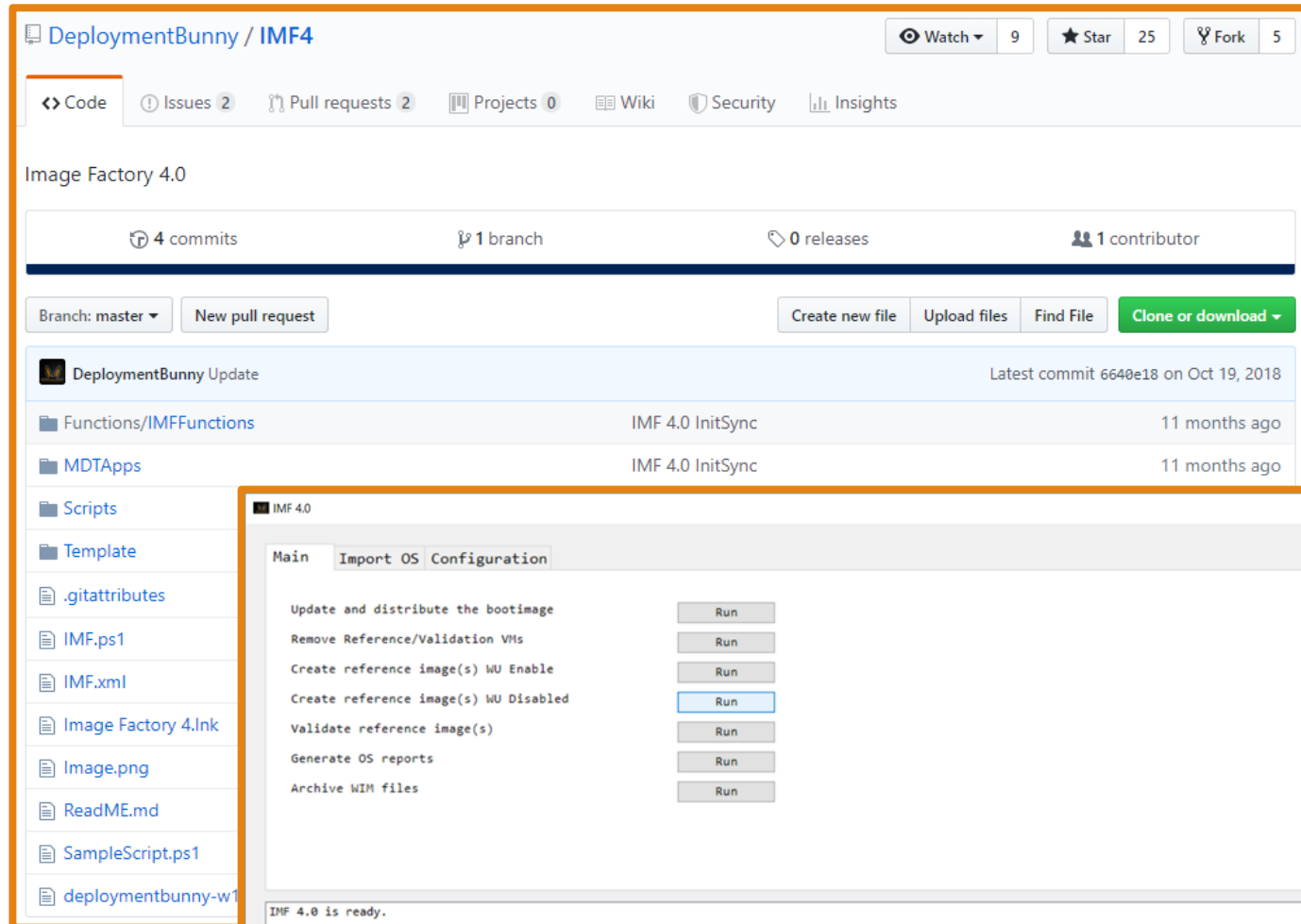
OSD Tools

Image Factory

Author:
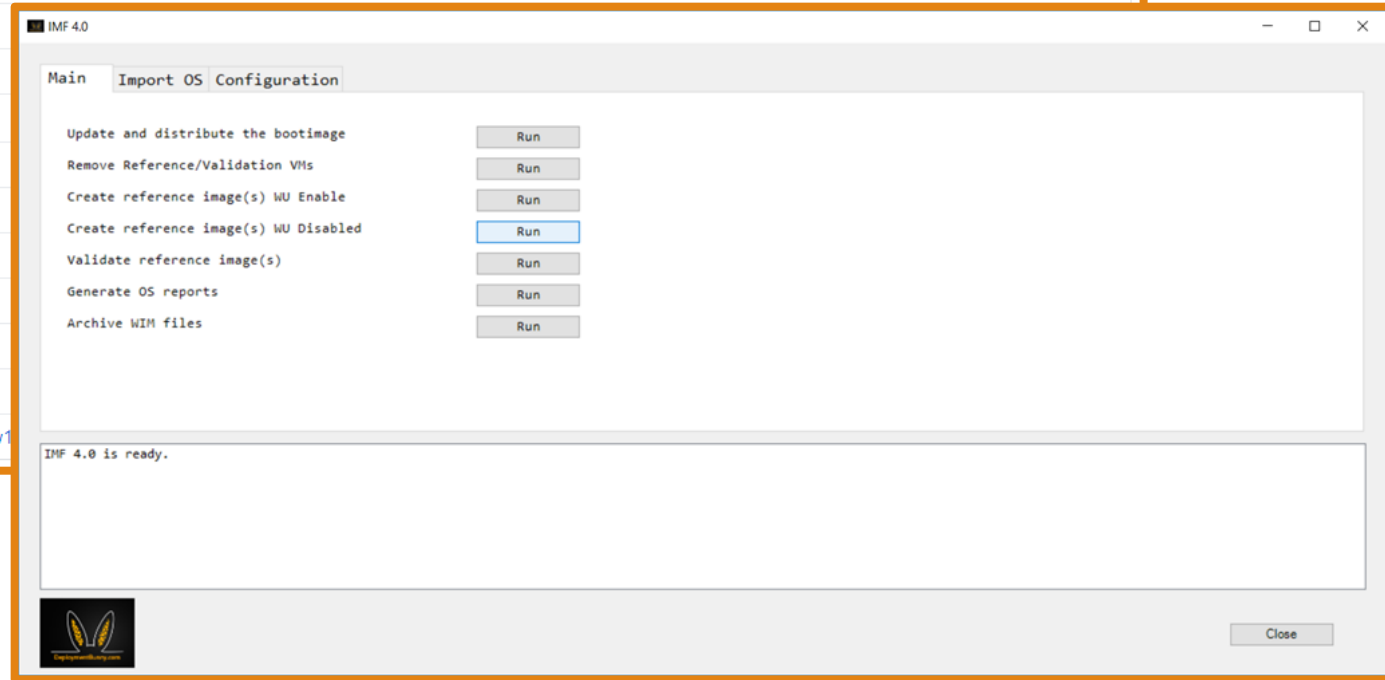Mikael Nystrom (@mikael_nystrom)

Download:
https://deploymentbunny.com/2018/10/19/image-factory-4-0-is-available-for-download/

OSDBuilder

Author:
David Segura (@SeguraOSD)

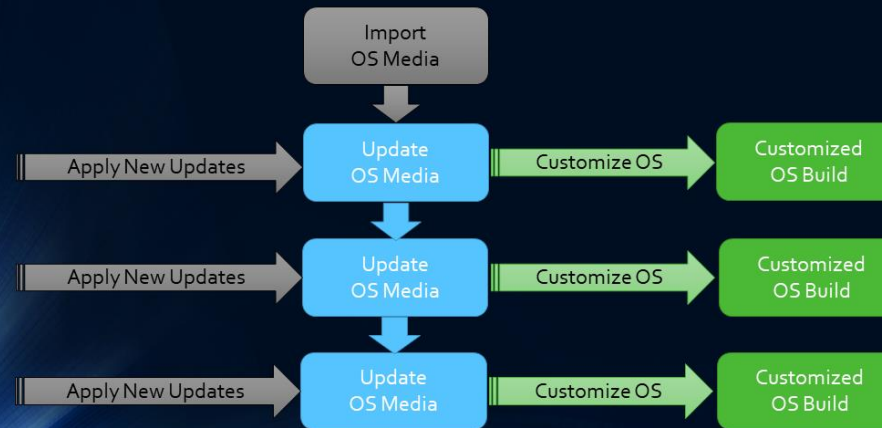Download:
https://osdbuilder.osdeploy.com/

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Author:
Nathan Bridges (@nathanjbridges)

Guide:
https://www.moderndeployment.com
/quick-start-guide-windows-10-waas-
servicing-updates-via-osdbuilder/

Monthly OS Update Cycle

High-Level Goals

- Ensure monthly Windows 10 (or Server OS) updates are included in the ISO/WIM image SCCM-MDT packages used by OS deployment.
- Ensure the latest **OneDriveSetup.exe** is included in Windows 10 ISO media (Optional – recommended).
- Enable/Disable Windows 10 or Server OS Features such as .NET 3.5, SMBv1 and more.
- Use OSDBuilder to fully patch and perform offline servicing of the Windows 10 ISO media with the latest .NET, Adobe Flash, Servicing Stack update, Dynamic Update, and Latest Cumulative update.

Driver Automation Tool

Author:
Maurice Daly ([@modaly_it](#))

Download:
[https://gallery.technet.microsoft.com/scriptcenter/Driver-Tool-Automate-9ddcc010](#)

Modern BIOS Management

Author:
Maurice Daly (@modaly_it)
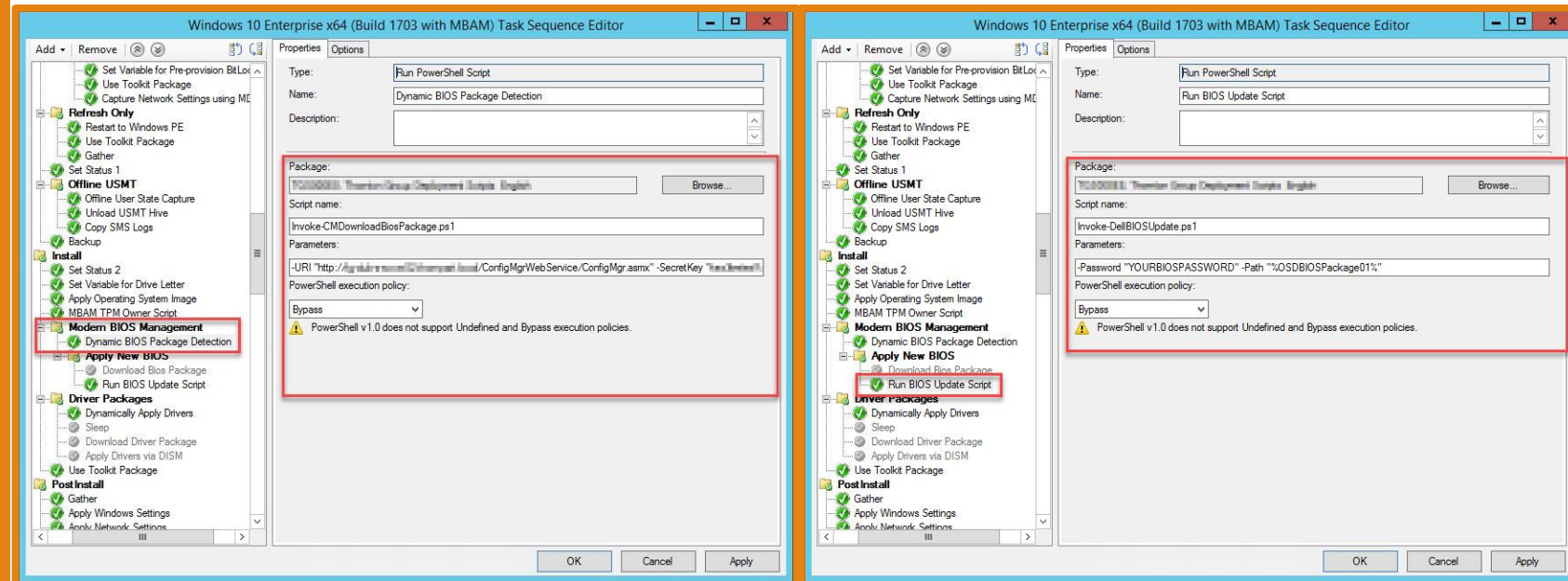Nickolaj Andersen (@NickolajA)

Download:
https://www.scconfigmgr.com/modern-bios-management/

Modern BIOS Management uses a custom built PowerShell script that is invoked during operating system deployment. This script automatically detects the manufacturer, SystemSKU/BaseBoard value (used instead of model), operating system version and architecture being deployed and matches that information against the system being deployed in order to determine the matching BIOS package that should be downloaded.

After successful completion of the Invoke-CMDownloadBIOSPackage.ps1 step, a task sequence variable (OSDBiosPackage) will be set if a matching update package is found. The next step is to initialise the BIOS update process, this is done using manufacturer specific scripts listed below. Dell, Lenovo and HP are supported.

Modern Driver Management

Author:
Maurice Daly (@modaly_it)
Nickolaj Andersen (@NickolajA)

Download:

OSDBackground

Author:
Johan Schrewelius

Download:
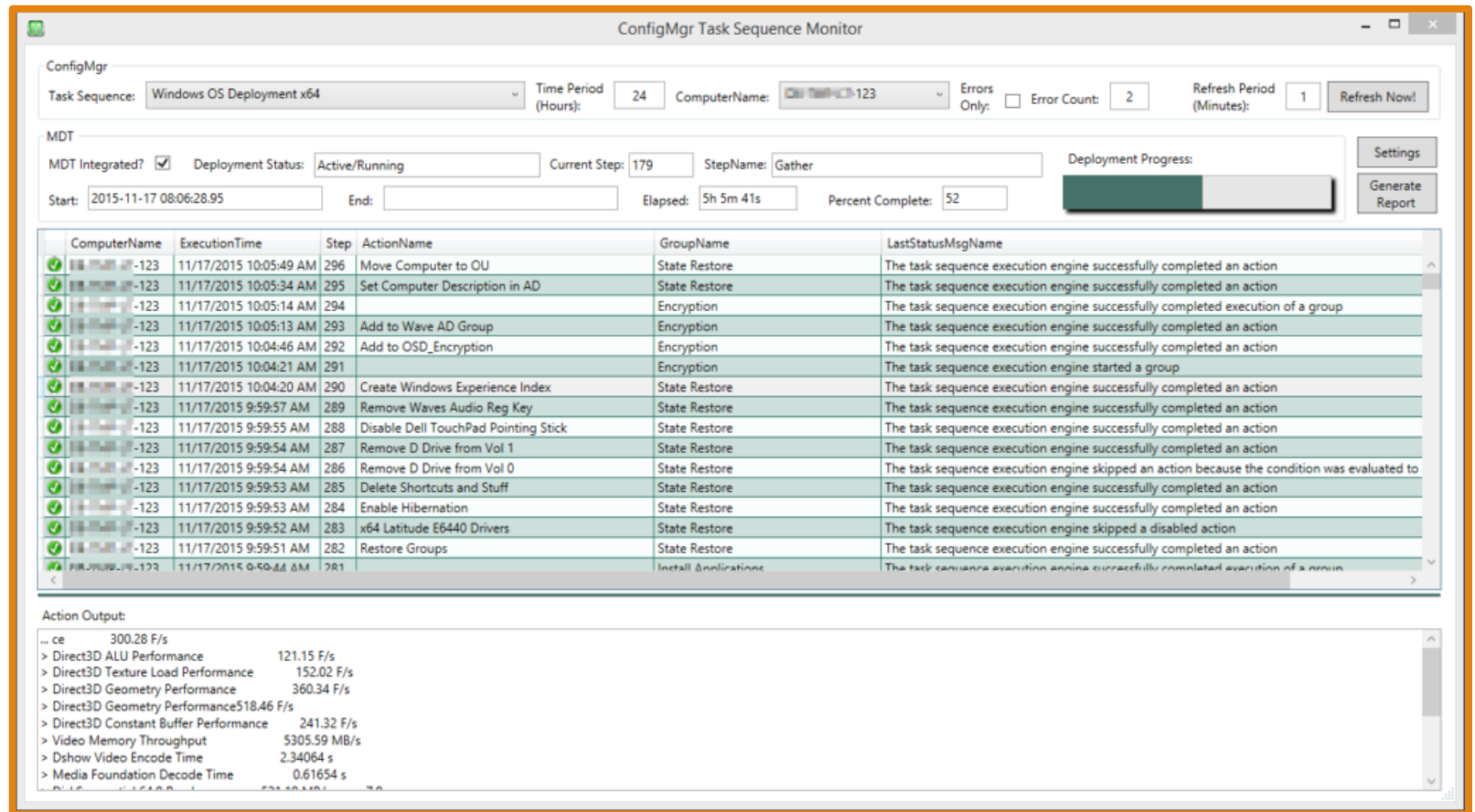https://gallery.technet.microsoft.com/
Replacement-for-BGInfo-0095cff3

ConfigMgr Task Sequence Monitor

Author:
Trevor Jones

Download:
https://gallery.technet.microsoft.com/ConfigMgr-Task-Sequence-fefdc532

Client Health Tools

Client Startup Script

Author:
Jason Sandys (@JasonSandys)

Download:
https://home.configmgrftw.com/configmgr-client-startup-script/

What this script does

- Checks to ensure WMI connectivity
- Checks the running and startup state of identified services
- Remediates running and startup state of identified services
- Checks for the Admin$ share and enables admin shares if they are disabled in the registry
- Check for identified registry values
- Sets registry values if they do not exist or do not match
- Adds a specified account to the local administrators group
- Checks for an installation of the client agent
- Checks the version of client agent
- Checks to ensure the ConfigMgr agent is set to Automatic startup and is running
- Installs the client agent if it is not installed or if the version is old
- Checks the client agent's cache size and resets it if needed
- Checks the client agent's site assignment and reinstalls the client agent if not assigned (which implies some type of client corruption)
- Drops a file into a shared folder location if there are any uncorrectable issues found for manual review
- Logs all activity to the client

What this script does not do

Fix WMI. Fixing WMI is a "big" task that I could not hope to ever tackle; however, incorporating a WMI fix script is an easy thing to do using the new WMIScript and WMIScriptOptions options. See the **Using WMIDiag** section below for more details on using this script.

ConfigMgr Client Health

Author:
Anders Rödland (@andersrodland)

Download:
https://www.andersrodland.com/configmgr-client-health/

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Author:
Bryan Dam (@bdam555)

Guide:
https://damgoodadmin.com/2018/11/01/how-i-learned-to-love-the-client-health-script/

Features

ConfigMgr Client Health detects and fixes following errors:

- ConfigMgr client is not installed.
- ConfigMgr client is assigned the correct site code.
- ConfigMgr client is upgraded to current version if not at specified minimum version.
- ConfigMgr client not able to forward state messages to management point.
- ConfigMgr client stuck in provisioning mode.
- ConfigMgr client maximum log file size.
- ConfigMgr client cache size. Fixed size (MB) or percentage of disk space.
- ConfigMgr client certificate error.
- ConfigMgr client hardware inventory not running.
- ConfigMgr client CcmSQLCE.log exists and client is not in debug mode.
- Corrupt WMI.
- DNS server record matches local IP's
- Drivers – Reports faulty or missing drivers on client.
- Logging to SQL database and / or file share
- Pending reboot check
- User-friendly reboot of computer with 3rd party reboot app when in pending reboot or computer uptime is more than specified in config.
- Services for ConfigMgr client is not running or disabled.
- Other services can be specified to start and run and specific state.
- Windows Update Agent not working correctly, causing client not to receive patches.
- Windows Update Agent missing patches that fixes known bugs.

Client Health PowerBI Report

Author:
Jeff Boluan (@jbolduan)

Download:
https://winblog.it.umn.edu/2018/05/23/sccm-client-health-powerbi-report-version-1/
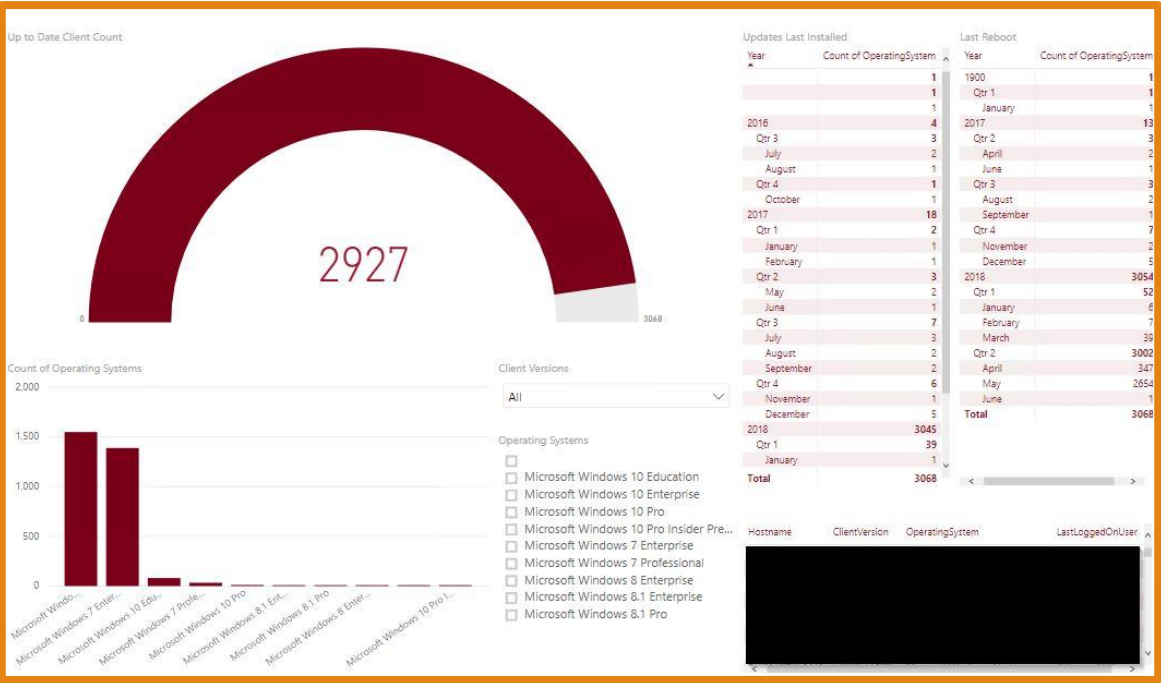
Application Deployment Tools

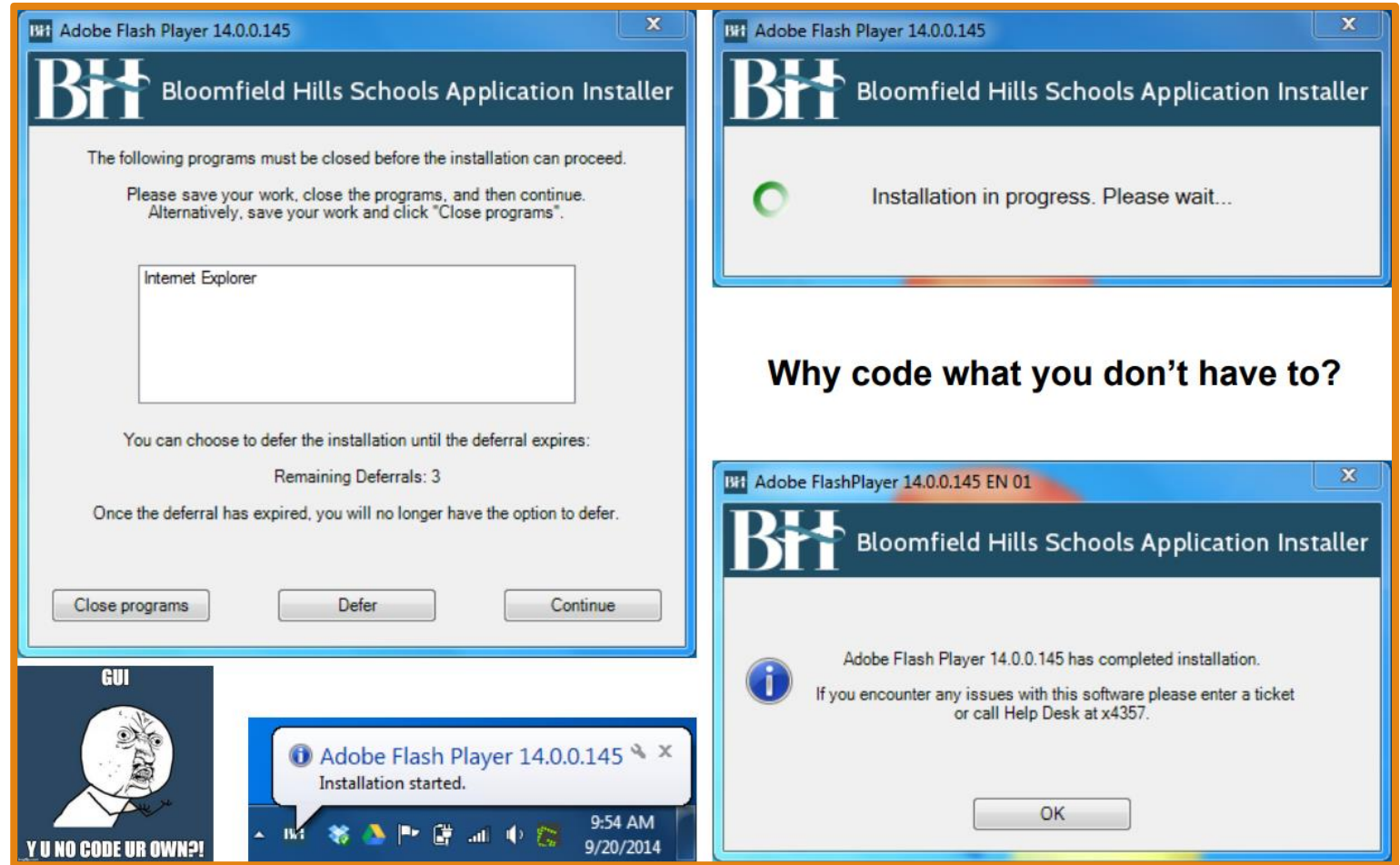# PowerShell App Deployment Toolkit (PADT)

Author:
Sean Lillis (@seanels)
Dan Cunningham (@sintaxasn)

Download:
http://psappdeploytoolkit.com/

PowerShell App Deployment Toolkit GUI

Author:
Tom Degreef (@TomDegreef)

Download:
http://www.oscc.be/sccm/configmgr/
powershell/posh/Powershell-App-
deployment-toolkit-GUI/

Application Tester for Hyper-V or VMWare

Author:
Ryan Ephgrave (@EphingPosh)

Download:
https://gallery.technet.microsoft.com/Automatically-test-d96c8ec4
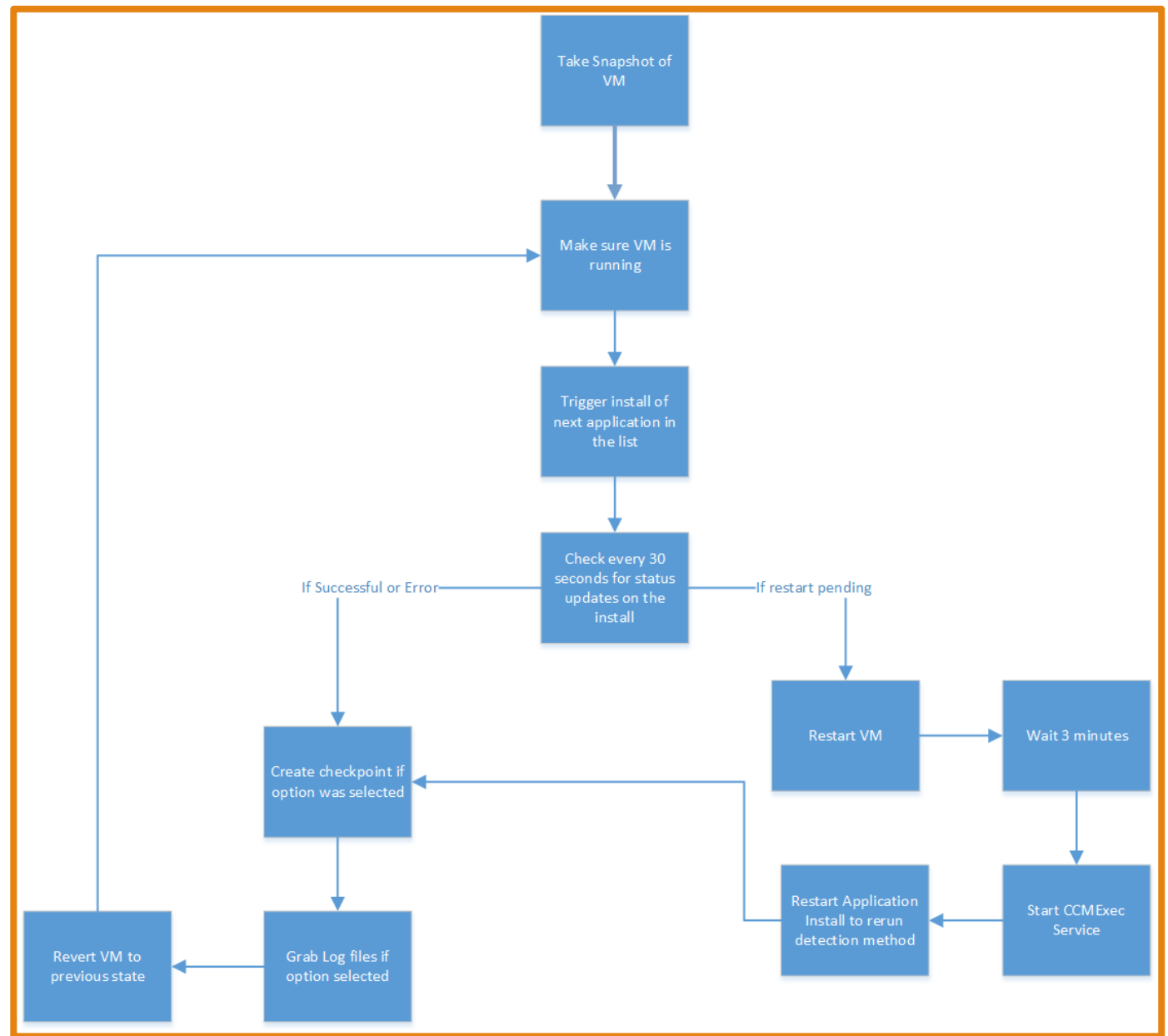
RuckZuck

Author:
Roger Zander (@roger_zander)

Download:
http://ruckzuck.tools/
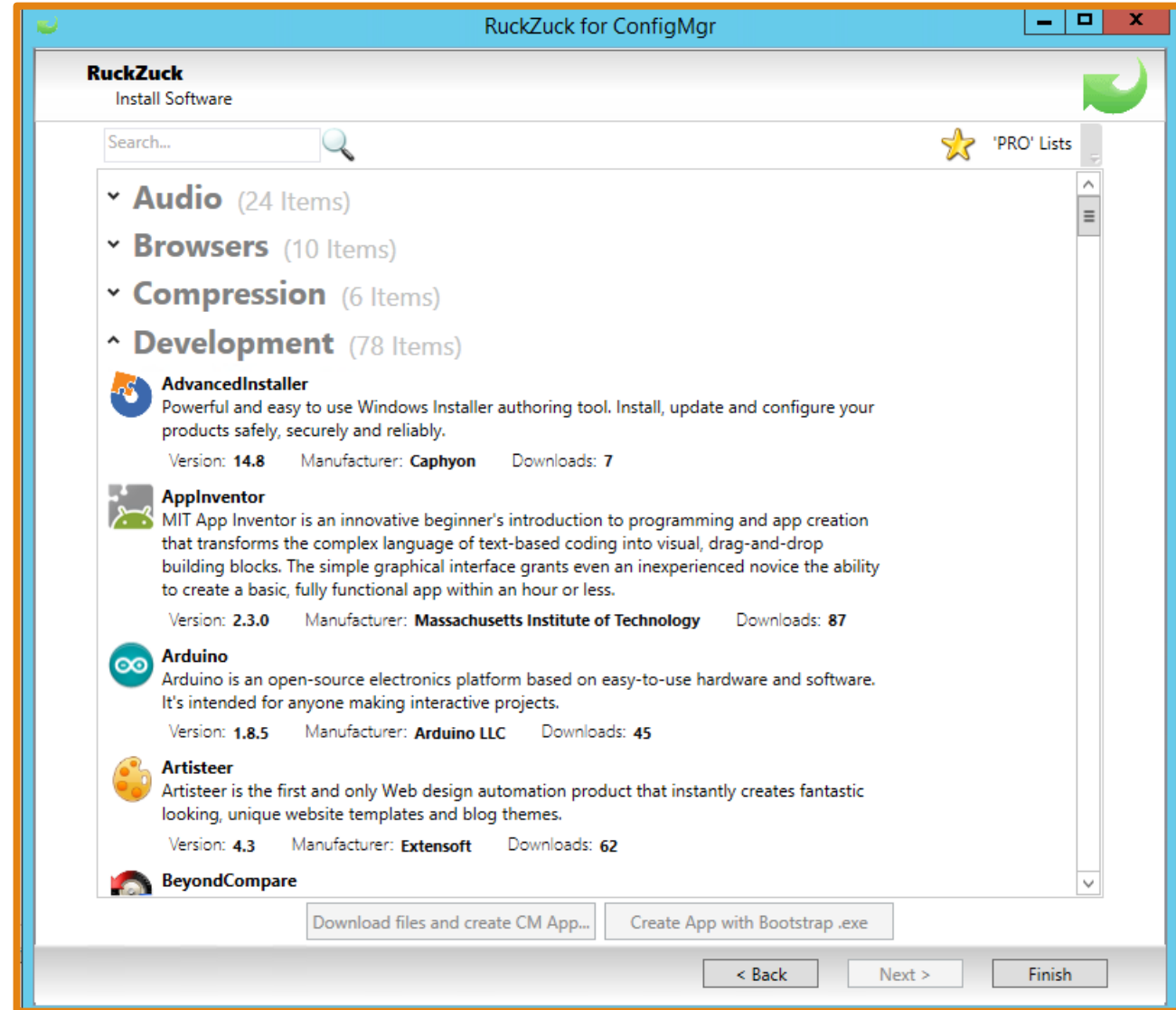
Chocolatey

Author:
Rob Reynolds ([@ferventcoder](#))

Download:
https://chocolatey.org/how-chocolatey-works
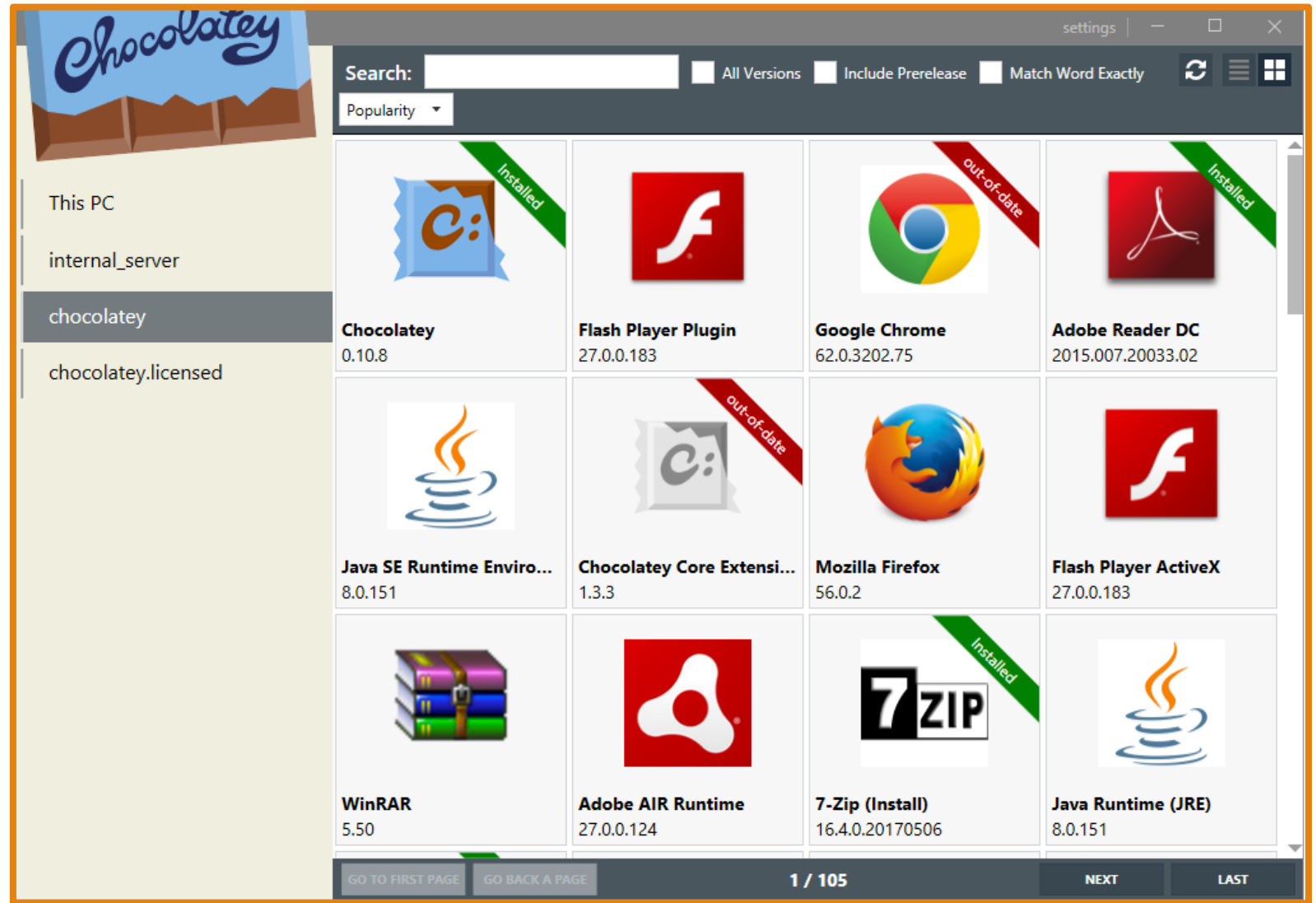
Patch My PC

PAID

Author:
Justin Chalfant

Download:
https://www.microsoft.com/evalcenter/evaluate-lab-kit

Docs:
https://docs.microsoft.com/en-us/microsoft-365/enterprise/modern-desktop-deployment-and-management-lab

Reg2CI/Reg2PS

Author:
Roger Zander (@roger_zander)

Download:
https://github.com/rzander/Reg2CI/releases

https://reg2ps.azurewebsites.net/

Reg2CI

Reg2CI is a Command-Line Tool to convert .POL (Policy) or .REG Files (Registry) into System Center Configuration Manager CI's (Configuration Items). This Project was moved from https://reg2ci.codeplex.com/

Usage

Command-Line Parameters:

```
Reg2CI.exe <Reg File> <Cab File> <Name of the CI> [/X86]
Reg2CI.exe <POL File> <Cab File> <Name of the CI> [/X86] [/USER]
```

REG2PS WebSite

Convert your .reg Files online to PowerShell scripts: https://reg2ps.azurewebsites.net/

Registry to PowerShell converter

Version 1.0.3.5 (4.May.2019)

Registry:

```
Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\SOFTWARE\InghamISD\ApplicationVerification]
"3150VideoDriverRepair"="True"
"District_Start_Menu_Win10"="true"
"IISD_Set_Screen_Black_Logo_v2"="True"
```

PowerShell:

```
# Reg2CI (c) 2019 by Roger Zander
if((Test-Path -LiteralPath "HKLM:\SOFTWARE\InghamISD\ApplicationVerification") -ne $true) {  New-Item "HKLM:\SOFTWARE\InghamISD\ApplicationVerification" -force -ea SilentlyContinue };
New-ItemProperty -LiteralPath 'HKLM:\SOFTWARE\InghamISD\ApplicationVerification' -Name '3150VideoDriverRepair' -Value "True" -PropertyType String -Force -ea SilentlyContinue;
New-ItemProperty -LiteralPath 'HKLM:\SOFTWARE\InghamISD\ApplicationVerification' -Name 'District_Start_Menu_Win10' -Value "true" -PropertyType String -Force -ea SilentlyContinue;
New-ItemProperty -LiteralPath 'HKLM:\SOFTWARE\InghamISD\ApplicationVerification' -Name 'IISD_Set_Screen_Black_Logo_v2' -Value "True" -PropertyType String -Force -ea SilentlyContinue;
```

⏩ Get check Script   ⏩ Get remediation Script

REG2PS on GitHub... Copyright © 2019 by Roger Zander
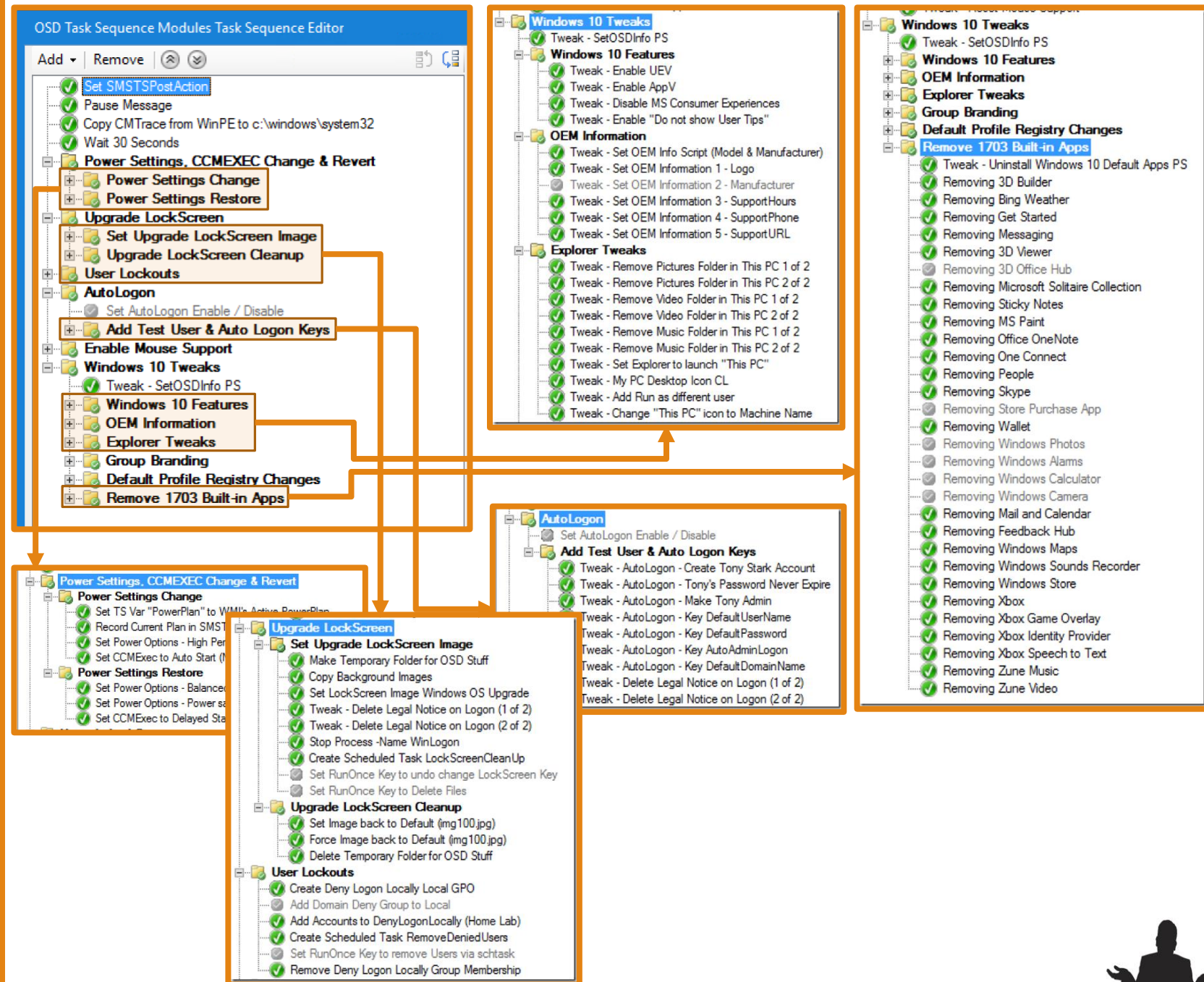
Bdam WSUS Script

Author:
Bryan Dam ()

Operational Collections

Author:

Gary Block's Task Sequence Collection

Author:
Gary Block

Download:
https://garytown.com/configmgr-task-sequence-collection

Free Monthly SCCM Reports

Author:

2. Free SCCM reports – Garth Jones

Every month, MVP Garth Jones releases a free ConfigMgr report for download. Published reports are voted on by the community and the one with the most votes is what the community gets. All you need to do is sign up for a free account on the Enhansoft website. This gives you voting access and the ability to download several reports as well as request the download for the current month's report. If you just want the report, you'll need to fill in your information every time using this **link**.

PsTools: PsExec

Author:
Mark Russinovich (@markrussinovich)

Download:
https://docs.microsoft.com/en-us/sysinternals/downloads/pstools

Author:
Adam Bertram (@adbertram)

Docs:
https://adamtheautomator.com/psexec-ultimate-guide/

If there was a command-line utility that could compete with robocopy in terms of usefulness, it's PsExec. The Sysinternals PsExec utility is as ubiquitous as they come in an IT admin arsenal. This tool allows administrators to remotely run commands just as if they were on the local computer.

To cover the PsExec tool in depth, it was fitting to cover this coveted tool in an ATA Ultimate Guide. In this guide, you will learn what psexec is, what it's capable of any many examples of how to use this useful tool.

```
PS51> psexec -s cmd

PsExec v2.2 - Execute processes remotely
Copyright (C) 2001-2016 Mark Russinovich
Sysinternals - www.sysinternals.com


Microsoft Windows [Version 10.0.17134.950]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>whoami
nt authority\system
```

```
C:\>psexec -i \\contosodc1 notepad

PsExec v2.2 - Execute processes remotely
Copyright (C) 2001-2016 Mark Russinovich
Sysinternals - www.sysinternals.com
```

```
C:\>psexec \\contosodc1 hostname

PsExec v2.2 - Execute processes remotely
Copyright (C) 2001-2016 Mark Russinovich
Sysinternals - www.sysinternals.com


CONTOSODC1
hostname exited on contosodc1 with error code 0.

C:\>
```
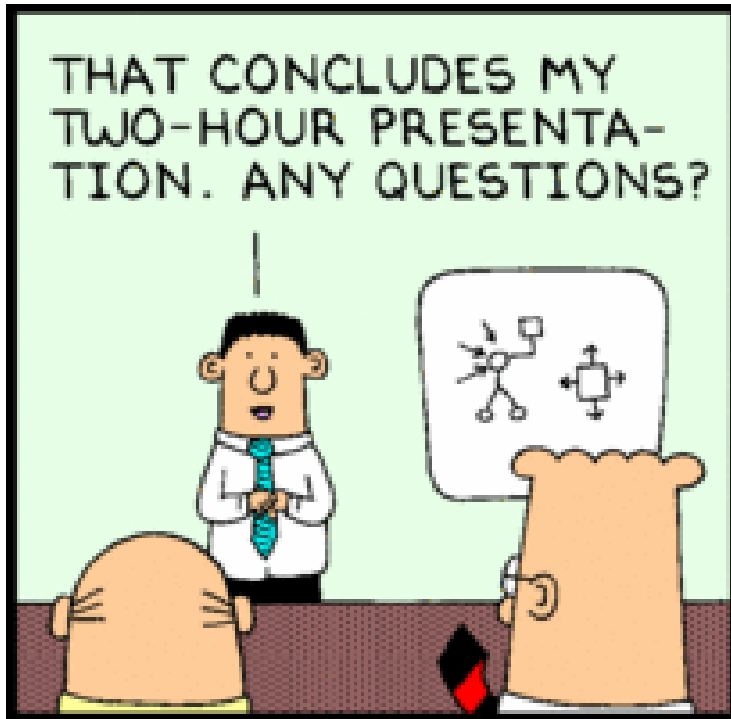
```
C:\>psexec \\contosodc1 cmd

PsExec v2.2 - Execute processes remotely
Copyright (C) 2001-2016 Mark Russinovich
Sysinternals - www.sysinternals.com


Microsoft Windows [Version 10.0.17763.678]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\windows\system32>
```
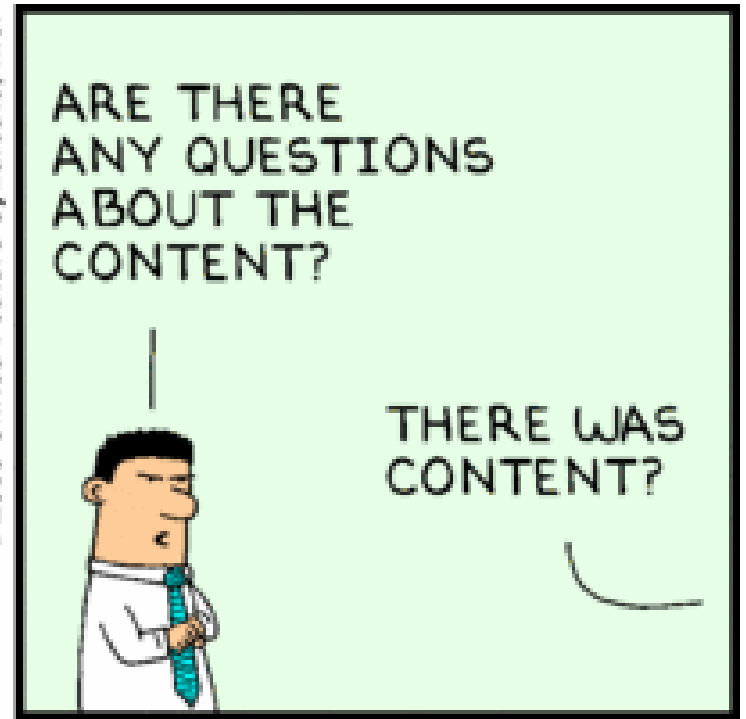
The End