

SCCM Guides and Resources

System Center - The Basics

Terminology and abbreviations:

SCCM (System Center Configuration Manager) - Microsoft's flagship solution for systems management.

ConfigMgr (Configuration Manager) - This is the Official abbreviation of Configuration Manager (All versions)

MEM (Microsoft Endpoint Manager) - Microsoft's re-branded systems management solution which contains both Intune and ConfigMgr. A single

MEMCM (Microsoft Endpoint Manager Configuration Manager) - Microsoft's re-branded systems management solution which contains both Intune and ConfigMgr.

Architecture

- [System Center Dudes - Best Practices](#)
- [SCCM Architecture Visio Template Download HTMD Blog](#)

Software Updates

Windows 10/Server 2016/Server 2019 Update History

(via Microsoft Support)

- [Anniversary Edition/Server 2016 \(1607/14393.x\)](#)
- [Creators Update \(1703/15063.x\)](#)
- [Fall Creators Update \(1709/16299.x\)](#)
- [April Update \(1803/17134.x\)](#)
- [October Update/Server 2019 \(1809/17763.x\)](#)

WSUS

- [Maintaining the WSUS Catalog by Declining Updates for Better Update Scanning](#)
- [Fully Automate Software Update Maintenance in Configuration ManagerThe complete guide to Microsoft WSUS and Configuration Manager SUP maintenance](#)

Configuration Baselines (Compliance Settings)

Security Baselines

- [Disable SMBv1](#) (powershell script)
- [Enable BitLocker Protection](#)
- Credential Guard Status
- Check for the Spectre/Meltdown vulnerabilities
- [Machines have the LAPS client installed](#)
- [Speculative Execution Side-Channel Vulnerabilities](#)
- [HP CMSL - ConfigMgr CIs](#)

Operating System Deployment

PXE

- [You want to PXE boot? Don't use DHCP options.](#)
- Co-existing DHCP and WDS on same server
- [Tweaking PXE boot times in Configuration Manager 1606 ...](#)
- [Re-install PXE point](#)

SCCM Task Sequence Options - WMI Query for Manufacturer and Model:

This group/step will run if the following conditions are met:

WMI Query [select Manufacturer from Win32_ComputerSystem where Manufacturer = "Dell Inc."](#)

If Any of the conditions are true:

WMI Query [select Model from Win32_ComputerSystem where Model = "Latitude D620"](#)

WMI Query [select Model from Win32_ComputerSystem where Model = "Latitude D830"](#)

SCCM Task Sequence Options - Registry setting for detecting if a Service Pack or Hotfix is needed:

This group/step will run if the following conditions are met:

If All the conditions are true:

Registry

"HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{XYZ}"
(REG_SZ) not exists

SCCM Task Sequence Options - Registry setting for detecting a specific version:

This group/step will run if the following conditions are met:

If All the conditions are true:

Registry

"HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{XYZ}" (REG_SZ) exists

Registry

"HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{XYZ}\DisplayVersion" (REG_SZ) less than "1.2.3"

SCCM Task Sequence Options - Working with VMware to install VS Additions at the end of Task Sequence

This group/step will run if the following conditions are met:

WMI Query for VMware: [select Model from Win32_ComputerSystem where Model = "VMware Virtual Platform"](#)

NOTE: For VMware I choose not to detect any drivers and do NOT install unsigned drivers under the **Apply Device Drivers** step. Else the machine would detect the wrong drivers and Blue Screen with IRQL_NOT_LESS_OR_EQUAL STOP: 0x0000000A. I mounted the VS Tools and imported the MSI Package into SCCM.

WMI Query for Microsoft Virtual Server 2005: [select Model from Win32_ComputerSystem where Model = "Virtual Machine"](#)

I also use these queries to skip the Auto Device Drivers step when deploying to Virtual Machine.

OS Image Management

- <https://www.msigeek.com/2635/unmount-and-clean-up-a-wim-image-using-deployment-image-servicing-and-management-dism>
- If Offline Update Integration from the SCCM Console doesn't work: <https://futureimpossible.com/add-windows-cumulative-to-your-windows-image-with-powershell/>
- Creating Customized Windows 10 Reference Image and Media (ISO, WIM, capture with Task Sequence Media, etc.) (ISO, WIM, capture with Task Sequence Media, etc.)
- <https://osdbuilder.osdeploy.com/>
- Powershell module for servicing of WIM files

CM Pivot

CM Pivot is a utility that provides access to real-time state of devices in your environment. It immediately runs a query on all currently connected devices in the target collection and returns the results. Then filter and group this data in the tool.

- [CM Pivot Documentation](#)
- [System Center Dude's CM Pivot overview](#)
- [Some useful CM Pivot Queries](#)
- [CMPivot Architecture from HTMD Blog](#)

Application Management

Use the PowerShell Application Deployment Toolkit (PSADT): it's a useful PowerShell wrapper script to help you install applications with great flexibility: check running processes, prompt users to close apps if running, reboot/process kill countdown timers, pop-ups and more. Link in [Scripts/Tools](#) section.

When running PowerShell scripts, a script may need to run using a specific version of powershell to correctly it correctly accesses registry and program files entries:

32-bit as C:\Windows\SysWOW64\WindowsPowerShell\v1.0\powershell.exe

64-bit as C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe

Backup

- [Microsoft SCCM Backup and Recovery Guide](#)

SQL

Move database

- [How to move the ConfigMgr 2012 site database to a new SQL server](#)
- [Moving the ConfigMgr Current Branch database to another server \(as in back to the primary site server\)](#)
- [SCCM SQL Server Database Migration | Part 2 | ConfigMgr HTMD Blog](#)

A tip in case you hit the problem of "Failed to create/backup SQL SSB certificate" in ConfigMgrSetup.log:

- [SCCM database move: Failed to create/backup SQL SSB certificate](#)

SQL DB in-place Upgrade for ConfigMgr

- [How To Upgrade SCCM SQL Server To 2019 | Primary Site Database HTMD Blog](#)

Troubleshooting Guides

Application Installation Workflow

- [Troubleshooting SCCM Task Sequence Failures](#)
- [OSD Troubleshooting: smsts.log Locations](#)
- [Configuration Manager Client Action Cycles \(and What They Do\)](#)
- [Troubleshooting SCCM Hardware inventory](#)
- [SQL Server TCP Port failed when Installing SCCM](#)

References/Resources

Microsoft References

- [System Center Configuration Manager Documentation](#)
- [System Center Configuration Manager Tech Community](#)
- [SQL Views for ConfigMgr Current Branch](#)
- [Log Files Overview](#)
- [Configuration Manager Perf and Scale Guidance Whitepaper \(Preview\)](#)
- [Uservice Config Mgr \(For Feature Request, Improvements, etc.\)](#)
- [Best Practice for Software Updates](#)
- [Niall Brady \(MVP\)](#)
- [Bryan Dam \(MVP\)](#)
- [Justin Chalfant](#)
- [Garth Jones \(@GarthMJ\) / Twitter](#)
- [Anders Rødland](#)
- [David Seguras](#)
- [Chris Buck](#)
- [Garth Jones \(MVP\)](#)
- [Anoop C Nair \(@anoopmannur\) / Twitter](#)
- [/r/SysAdmin/](#)
- [ChangeWindows \(Tracking of Microsoft's WaaS OS builds - great for Windows 10\)](#)

Blogs/Guides

- <https://windows-noob.com/>
- <http://eskonr.com/>
- <https://www.anoopcnaair.com/>
- <https://www.systemcenterdudes.com/>
- <https://ccmexec.com/>
- <http://www.sconfigmgr.com/>
- <https://sccmf12twice.com/>
- <http://rzander.azurewebsites.net/>

- <https://deploymentresearch.com>
- <https://deploymentbunny.com/>
- <http://blog.colemberg.ch/>
- <https://home.configmgrftw.com/blog/>
- <https://damgoodadmin.com/>
- <https://www.andersrodland.com/>
- <https://www.osdeploy.com/>
- <https://www.enhansoft.com/blog/author/garth>
- <https://setupconfigmgr.com>
- <https://thesysadminchannel.com/>
- <https://www.cvedetails.com/>
- <https://ruckzuck.tools/>
- <http://www.mssccm.com/>
- <https://www.ghacks.net/category/windows/>
- <https://www.neowin.net/news/tags/microsoft>
- <https://www.catalog.update.microsoft.com/Home.asp>
- <https://www.zerodayinitiative.com/blog> (review of monthly patches Adobe/MS/etc.)
- <https://triplesixseven.com/Triple Six Seven>
- <https://www.imab.dk/>
- <http://blackwaterconfig.com/>
- <https://www.windows-noob.com/forums/>
- <https://www.petervanderwoude.nl>
- <https://www.niallbrady.com/>
- <https://blog.ctglobalservices.com/category/configuration-manager-sccm/>
- <http://configmgr2012.com/>
- <https://thinkdeploy.blogspot.com/>
- <https://askgarth.com/>

Scripts/Tools

- [lazywinadmin/PowerShell](#)
- [winadminsdotorg/SystemCenterConfigMgr](#)
- [Client Center for Configuration Manager](#)
- [Client Health Script](#)
- [SCCM doc](#)
- [s script](#)
- [asjimene/SCCM-Application-Packager](#)
- [PowerShell App Deploy Toolkit](#)
- <https://github.com/rzander/sccmclctr>
- [Windows Sysinternals](#)
- [Collection Commander](#)
- [Collection Hierarchy Visualizer for CM](#)
- [thecatdidit/PowerShell Useful scripts](#)

Automatic Deployment Rule Set Examples and Best Practices

Modeled primarily off of a [guide](#) from [DamGoodAdmin](#) - This was drafted in Dec 2018, hence older Windows version references and the like/

CM Version: 1802
Client Count: ~2100
OS Breakdown: Win10:99.8%|Win7:0.2% (all x64)

ADR Rulesets

- MS Office (LAST YEAR)
- MS Office (CURRENT CYCLE - LAST 28 DAYS)
- Windows OS (LAST SIX MONTHS)
 - Cumulative Updates and SSUs older than six months are not needed
- Windows OS (CURRENT CYCLE - LAST 28 DAYS)
- ADR-specific settings
 - Language: English
 - Severity: **ALL** values (Critical, Important, Low, Moderate, None - Microsoft has been problematic with how they classify update severity)
 - Filters (using *Title* criteria in ADR settings - for *Windows OS* ADRs)
 - -ARM64
 - -x86-based
 - -Windows Malicious Software Removal Tool
 - *MS Office* Products
 - Office 2013/2016/2019
 - *Windows OS* Products
 - Windows 10 (1607,1703,1709,1803)
 - 1803 and Later Servicing/Drivers (we are planning a Win10 build unification using 1803)
 - Visual Studio 2015 (some devs needs this re: report rendering)

Deployment Targets

- Testing Group
 - Maintaining a group of at least 30 workstations.
 - Mix of power users, VMs, test workstations
- All Workstations

Deployment Procedure

- Two primary patch cycles
 - Office Patch Tuesday (1st Tuesday of the month)
 - "BIG" Patch Tuesday (2nd Tuesday of the month)
- Strategy
 - Office PT: *OfficeCurrentCycle* ADR deployed to Testing Group
 - Run ADR again after a 7-day soak period, deploy to all others
 - "BIG" PT: *WinCurrentCycle* ADR deployed to Testing Group
 - Run ADR again after a 14-day soak period, deploy to all others
 - Weekly ADR of *CurrentCycle* rulesets to keep them current, pick up revised KBs, etc.
 - End of month run of *Last Year/6 Months* ADR rulesets to ensure a full body of patches for new and existing, errant workstations
- QC/Monitoring
 - Run daily reports specific to each monthly OS update KB (e.g. [KB4471324](#) against query-based collection of Win10 1803 clients)
 - Run daily report of patch deployment errors
 - Weekly random pick of 10 clients that are manually evaluated (to confirm accuracy of report data, etc.)
 - Our Infosec team utilizes Nexpose to scan everything on our network. We review the scores with them each week, pinpoint any urgent needs and deal with false positives for users who have certain software exceptions.
 - SUG cleanup 24-48 hours after an ADR has been run to ensure quality data