BCNET

Shared IT Services for Higher Education & Research

Conference 2018

Welcome!

Best Practices and Challenges with System Center Configuration Manager

Welcome to our joint panel

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Overview of System Center Configuration Management

What is System Center Configuration Management (ConfigMgr or SCCM) ?

It is a systems management software product developed by Microsoft and released in 1994 under the name of Systems Management Server.

It got renamed in 2007 with the release of System Center Configuration Manager 2007. The latest production version is SCCM 1802.

Overview of System Center Configuration Management

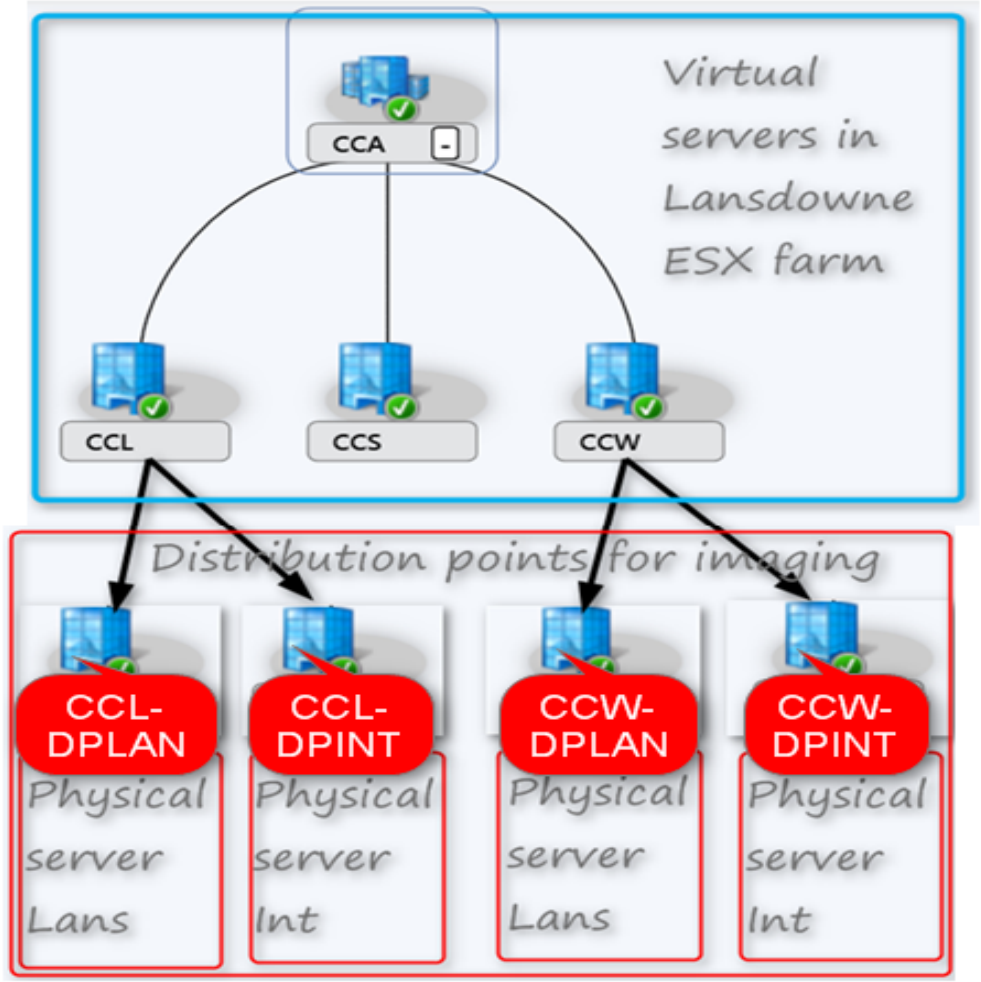
Here are SCCM's key features:

- Antivirus – System Center Endpoint Protection
- Application Delivery (software package deployment)
- Asset Intelligence / Reporting
- Compliance & Settings Management
- Operating System Deployment
- Power Management
- Remote Control
- Software Update Management
- Software Metering
- Unified Device Management (can be integrated with Intune)

SCCM Services at Camosun College

Staff and faculty site WS's	Student Labs Workstations	Servers
System Center Endpoint Protection	System Center Endpoint Protection	System Center Endpoint Protection
Hardware inventory	Hardware inventory	Hardware inventory
Software Inventory	Software Inventory	Software Inventory
Windows Updates	Windows Updates	Windows Updates
Windows 10 Servicing	Windows 10 Servicing	
Software Deployment	Software Deployment	
OS Gold image capturing	OS Gold image capturing	
OS Deployment (Windows 10)	OS Deployment (Windows 10)	
Windows Store for Education	Windows Store for Education	

SCCM infrastructure at Camosun College



Configuration
Central Administration Site
• Site server for staff/faculty workstations (HTTPS DP)
• Two HTTP distribution points for imaging (one for each campus)
• Site server for student lab workstations (HTTPS DP)
• Two HTTP distribution points for imaging (one for each campus)
• Site server for Servers

Future plans for SCCM at Camosun College

Staff and faculty site WS's	Student Labs Workstations	Servers
Office 365 Client Management ?	Office 365 Client Management ?	
Integration with Intune ?	Integration with Intune ?	
Windows Defender ATP ?	Windows Defender ATP ?	

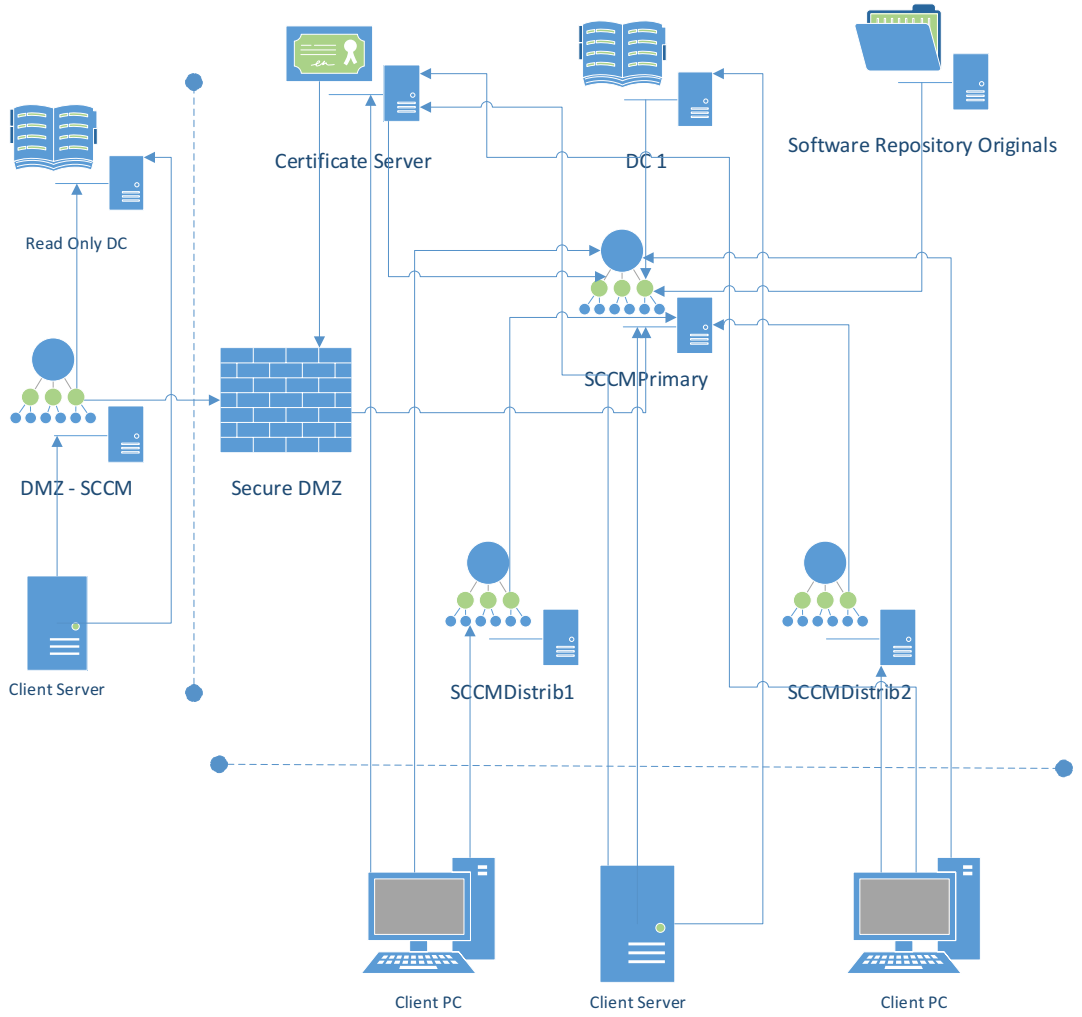
Capilano University – SCCM setup

- Currently running SCCM 1802
- We use Software Center for software distribution and software self-service
- SCEP (System Center Endpoint Protection) is our current antivirus although
- SCCM is integrated with Microsoft Deployment Toolkit (MDT)
- The Windows Server Update Service(WSUS) is integrated into SCCM
- We don’t use Intune at this point in time
- We have 3 staff members that maintain the system but also do all the software packaging, client health, Windows and 3rd party software updates
- Managing approximately 2500 clients (workstations and servers)

Capilano University – SCCM setup

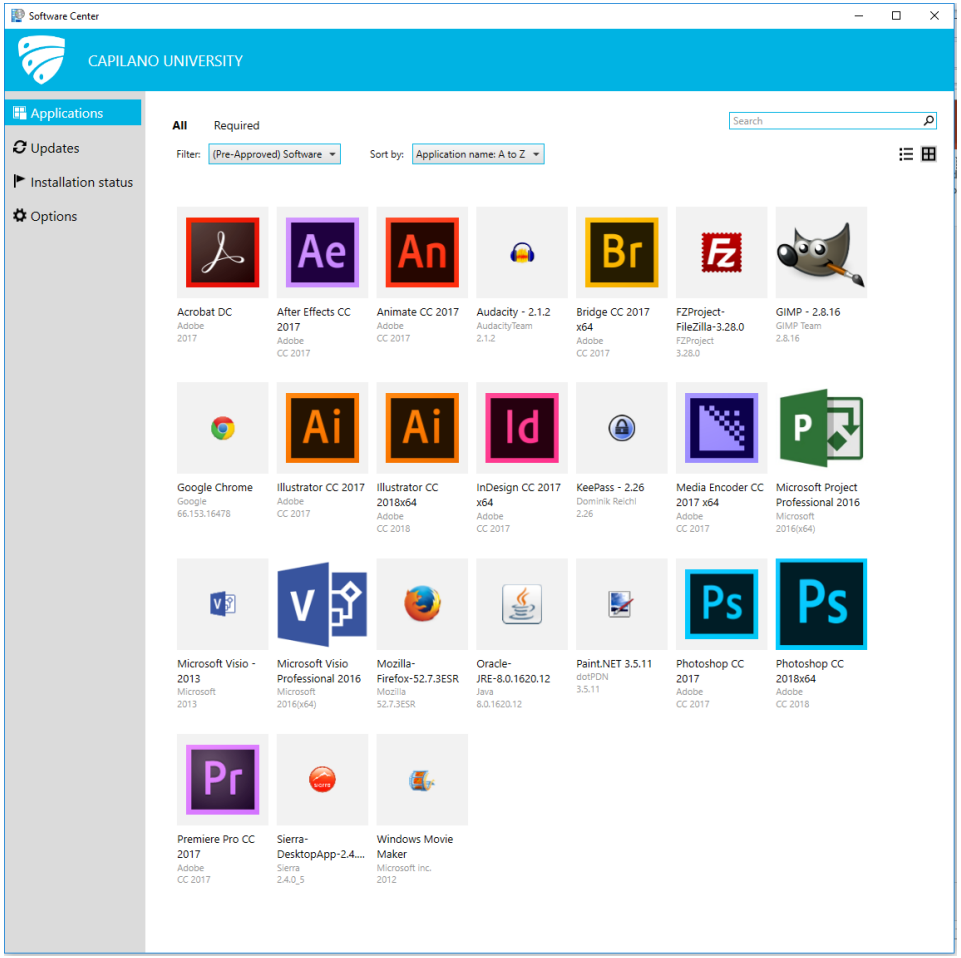
Current setup by role:

Application Catalog web service point	1
Application Catalog website point	1
Asset Intelligence synchronization point	1
Component server	4
Distribution point	3
Endpoint Protection point	1
Fallback status point	1
Management point	2
Reporting services point	1
Service connection point	1
Site database server	1
Site server	1
Site System	4
State migration point	2
Software update point	2



Capilano Univ. – Future plans

- The use of Windows 10 Servicing Plans
- Expanding the use of Software Center
- Possible integration with Intune to manage laptops



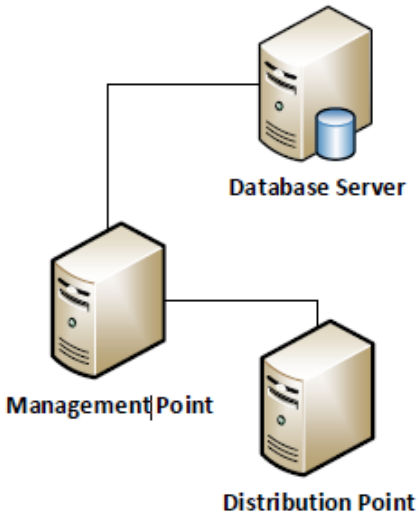
University of British Columbia – current state and plans

- Currently running SCCM 1706 managing 6500 endpoints
- Two primary staff responsible for the service. Some driver packs is completed by operations staff.
- 100 plus hardware types supported
- 80+ apps in Software Center for software distribution and software self-service
- OS patching with WSUS on SCCM with acceptance testing
- Software metering
- BIOS updates for Spectre/Meltdown
- Upgrade Readiness, Device Health, Update Compliance via Azure

University of British Columbia – upcoming enhancements

- Update to 1802
- OS upgrades through Software Center
- Lab deployments via zero touch
- Azure Cloud Management Gateway

University of Victoria – SCCM setup

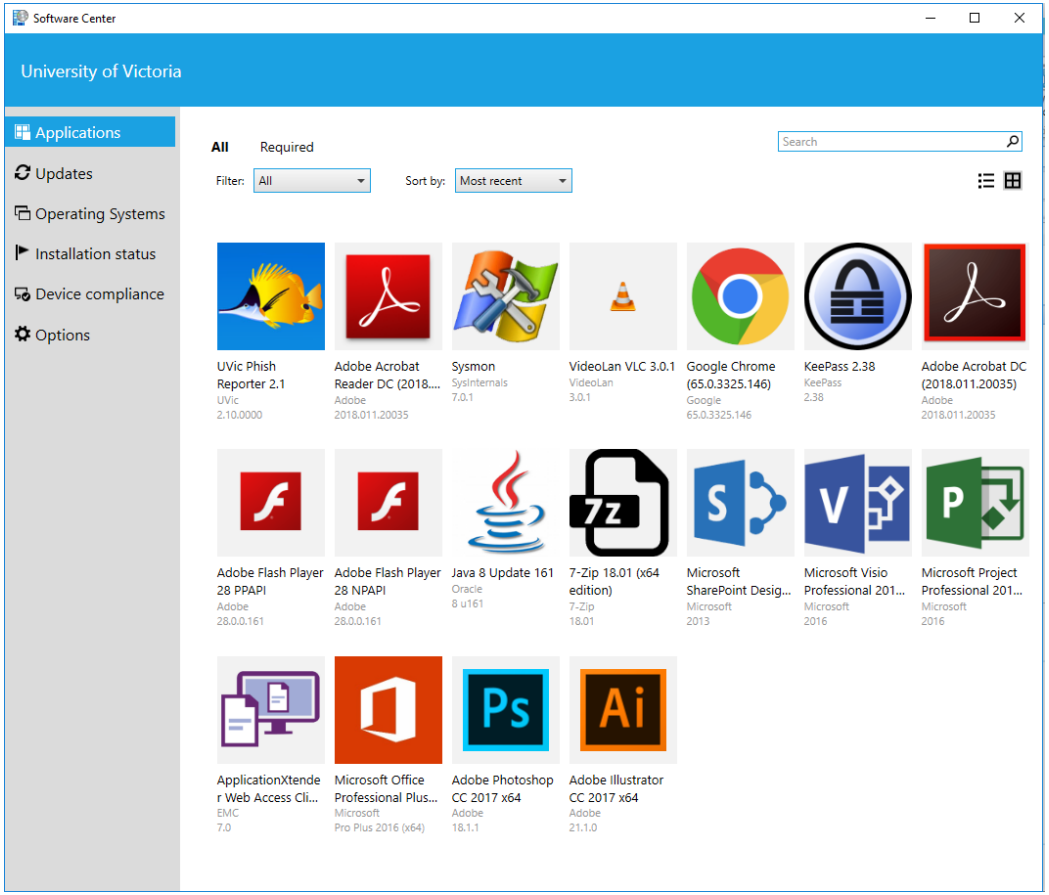


- Running on all managed PC workstations -~3000
- Currently running SCCM 1710
- Simple configuration: 1 primary site, no secondaries
- Test and Pre-prod environments
- Software Center used for software and firmware distribution to managed workstations
- OSD with pre-built images in our managed lab environments and for specialized setups, such as digital signage
- Not WSUS integrated with SCCM yet, all OS updates are WSUS
- Not using Intune, SCEP or MDT integration or using on servers
- No dedicated staff for SCCM

University of Victoria

Future Plans

- Upgrade to 1802
- Windows 10 Servicing
- Software metering
- Expand Operating System Deployment



Best practices

- Follow Microsoft best practices whenever possible
- Don’t overly complicate device collections. Keep it simple.
- Document your build process – even following MS guides, there are things you may need to do that aren’t documented well.
- Test, test, test – pushing anything to multiple machines – be sure to test well
- Be careful with supersedence – it will update existing installs even if those installs were ‘available’ and not required.
- Ensure no conflicts in settings – eg. Maximum size of inventory collection needs to be large enough to allow hardware inventory as first inventory collection is large
- Monitor component status closely – lots of thing that can go wrong and should be addressed sooner rather than later
- Multiple SMEs, spread the load – get training, it helps; dedicated staff ideally

Best practices (cont.)

- Use Active Directory groups in general as much as possible when creating collections
- Use Software Center for freeware / site licensed software distribution
- Stagger software updates by Alpha, Beta, staff, student groups
- Keep your SCCM environment up to date
- Configure your SCCM client server communication to go over https
- Integrate MDT with SCCM for a better OSD experience
- Use automatic deployment rules for distributing software updates to workstations and servers
- Use applications as much as possible instead of packages
- Separate your driver packages by OS, Architecture and Model
- Have regular weekly meetings to go over any workstation management issues, in particular SCCM.

Challenges

- No Active Directory discovery due to shared AD environment with non-managed clients – SCCM client install done via group policy
- Some challenges with installing client via GP – bootstrap issues etc.
- Challenges with client communications –eg. offline for a long time
- Hardware inventory challenges – just stopped or only inventorying deltas with no initial full hardware inventory: corrupt WMI repository; difficult to track through logs.
- Some 3rd party software doesn't work well with SCCM application deployments/updates – eg. Adobe Reader/DC/CC
- Nothing is fast – SCCM is relatively slow to do most of its tasks – we have made some tasks faster, but haven't tried pushing to really short intervals.

Challenges (cont.)

- Manage mobile device (laptops and tablets)
- Maintain client health
- Maintain windows updates compliance
- New hardware certification (find the appropriate drivers)
- Antivirus effectiveness is an unknown
- Reporting sometimes stops working
- Hard to find relevant reports
- Understanding Windows 10 Servicing
- Keeping up with the Windows release naming convention (☺)
- User State Migration didn’t work very well last time we tried it
- No automatic device cleanup for stale objects (as far as we know)
- Windows updates don’t always work as expected

Questions and Information you want to share

Thank you for attending.

Please share your ideas and experiences with us and the rest of the audience.