Deploying Autodesk software the easy way
Class ID: IT18200

Speaker: Derek Gauer
Co-Speaker: Ted Martin
You don’t have to be an Information Technology specialist to deploy Autodesk software the easy way.

Autodesk software installs can take sufficient effort to deploy to multiple computers. This class will explore the creation of deployment packages and push technology. This can greatly reduce the amount effort to deploy Autodesk software.

Streamline the deployment of Autodesk software and add-ons using Microsoft System Center Configuration Manager 2012 r2 (SCCM) and script technology. When deploying Autodesk products to two or a thousand computers, you can use these techniques with SCCM. You can also use this same workflow for other similar IT software management tools to deploy Autodesk products.

We will briefly explore the creation of Autodesk packages using the out of the box tools in Autodesk products. We will run through how to create an SCCM software package, and deploying the Autodesk build to a collection of computers. We will also explore how to deploy third party or Autodesk add-ons to the same collection of computers using scripts and SCCM. SCCM has powerful reporting tools to monitor the software deployment status during and/or after the deployment.
Outline of course

1. Introduction of presenters, Design Technology and our experiences deploying Autodesk Software (Design Technology Group at IBI Group)
2. Creation of Autodesk packages for 2016/2017 design suites
3. Creation of batch files to install Autodesk or third party applications
4. SCCM package creation for Autodesk products and add-ons.
5. Deploying your programs
6. Checking the status of the deployment
7. Running a report
IT18200: Deploying Autodesk software the easy way

Who are we?

Derek Gauer
IBI Group Toronto, Ontario, Canada

Design Technology Group
Global Portfolio Manager, Software, Hardware, Support and IT Liaison

Derek Gauer has more than 25 years of CAD management experience, and he has worked at IBI Group for the past 23 years. Mr. Gauer specializes in CAD management, road design (including horizontal and vertical alignment), quantity calculations, and contract document preparation. Mr. Gauer’s current position is the global manager for the hardware, software, and support in the Design Technology Group. His experience of CAD, Building Information Modeling (BIM), and IT has enabled him to integrate over 20 new firms into the IBI Group of companies. He supports over 1,500 users spread across 65 offices in ten countries. His role includes investigating and implementing training methodologies and researching new advancements in software. Mr. Gauer has extensive knowledge of AutoCAD, AutoCAD Map 3d, AutoCAD Civil 3D, Revit, 3ds Max, and InfraWorks 360 software. Mr. Gauer is a member of the Autodesk User Group International (AUGI), Groundbreakers AutoCAD Civil 3D User Group, and the Ontario Revit User Group.

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Who are we?

Ted Martin
IBI Group  Waterloo, Ontario, Canada

Design Technology Group
Global Portfolio Manager, Software, Hardware, Support and IT Liaison

Mr. Martin one of the few full time support staff tasked with global CAD support. Mr. Martin has almost 22 Years of experience with Autodesk product and consulting services. He has a background in Civil and had a brief stint as a mechanical / manufacturing designer prior to joining IBI.

Mr Martin was hired by Cumming Cockburn Limited in 2002 to help rebuild a local presents in Waterloo Ontario Canada and managed CAD and IT operations. In 2004 IBI acquired CCL and he began helping with integrations shortly after that. Since Mr Martin has been a CAD team lead on integrations, this offered lots of opportunities to see customization and work flow in a multitude of applications. Currently he supports over 65 offices and 1,500 users worldwide

Email tmartin@ibigroup.com
Polling question

Question 1: How many of you do manual installs?

Question 2: How many of you automate the installs?
What is a Design Technology group?

Design Technology is a group of former CAD Designers, CAD managers, BIM managers working for the alignment of the overall corporate goals. The Design Technology group or (DT) need to work very closely with the IT group.

Our goals are to:
What is unique about Design Technology (DT)?

• DT works at a user level to resolve all issues related to project deliverables, workflow or software issues.

• DT makes decisions based on calculated evaluations that IT may not have the expertise or time to assess.

• DT controls licensing management and ensures the company is compliant with all design technology license agreements.

• DT tests and evaluates hardware for its functionality within the area of design, maintaining a fiscal balance between cost and performance.

• DT is a specialized subset of IT that marries management ideology, IT technology and most importantly, user sensitivities.
Why not just leave the deploying of software to your IT department?

• IT maybe good at installing some software, but DT has a working knowledge of software and the design requirements for projects.

• DT can test the applications and coordinate the best products and add-ons to deploy globally and locally.

• IT may be too busy to deploy critical design software during project ramp up. New versions of Revit may be required on projects that are outside a corporate standard. DT can download, build and deploy with short notice.

• DT proactively monitors patches and hotfixes and can set up pushes resolving critical issues ahead of any impact for users.
Why not just leave the deploying of software to IT?

• Real world example
  • Recent example from our company: we needed to deploy the performance fix for Civil 3D 2014 and 2016 to over 400 computers in many offices and countries. We were able to do this efficiently and quickly using SCCM.
Why use Microsoft System Center Configuration Manager 2012 r2© (SCCM)

- Faster (about twice as fast to install applications)
- You can push to one or thousands of computers, it is like your own personal robot to do installs
- You can uninstall applications
- You can run reports
Why use Microsoft System Center Configuration Manager 2012 r2© (SCCM)

- Autodesk recommends it.
Creation of Autodesk packages in Autodesk 2016/2017 design suite packages. 

Login into your subscription account. 
https://accounts.autodesk.com/Logon

Download your products. 

Go to all products & services and select the products to download.
Creation of Autodesk packages in Autodesk 2016/2017 design suite packages

Start creating a deployment

Double click on the downloaded file and start creating the package
Creation of Autodesk packages in Autodesk 2016/2017 design suite packages

Configure deployment

Type in your deployment configure name and administrative path. Use a Universal Naming Convention (UNC) or mapped drive for the server location. For example \server1\deployments\Autodesk_BDSP_2017
Creation of Autodesk packages in Autodesk 2016/2017 design suite packages

License agreement

Select your Country or Region. Read your license and services agreement. Click next
Creation of Autodesk packages in Autodesk 2016/2017 design suite packages

Product Information

Select license access type. Enter your license info and product key. Add your required servers if it is a network license.
Creation of Autodesk packages in Autodesk 2016/2017 design suite packages

Modify deployment

Select and configure your products to be installed
Configuration of Autodesk packages in Autodesk 2016/2017 design suite packages

Configure AutoCAD
Creation of Autodesk packages in Autodesk 2016/2017 design suite packages

Create the deployment

Click create to build your deployment.
Creation of Autodesk packages in Autodesk 2016/2017 design suite packages

Deployment is finished.
Creation of Autodesk packages in Autodesk 2016/2017 design suite packages

Add updates as required.

Updates can be added later using a command script.
Creation of command or batch files to install Autodesk or third party applications

- You can create simple batch files in notepad to deploy add-ons, third party apps, service packs and customization.
- Download the add-on and extract to c drive or server location.

- This example is Autodesk Revit model Review 2017.
Creation of command or batch files to install Autodesk or third party applications

- Review setup files and find msi files.
Creation of command or batch files to install Autodesk or third party applications

- Typically msi files for add-ons are located in the x64 folder for Autodesk add-ons.
Creation of command or batch files to install Autodesk or third party applications

- Create your Command or batch files in Notepad or notepad plus. Make sure you extension is either .cmd or .bat.

- Example 1 Batch file created in notepad to install Revit add-on

  msiexec /i
  "\\server1\deployments\AutoDesk_BDSP_2017\Revit_Addon\RevitMdlRev_v1_2017_Win_64bit_dlm\x64\RMR.msi" /qn
Creation of command or batch files to install Autodesk or third party applications

AU 2016_IT18200_Revit-addon_sample.cmd
Creation of command or batch files to install Autodesk or third party applications

- Example 2 Batch file created in notepad to install Civil 3d add-on
- Extract C3D_2016_PROD_PACK_1_ENGLISH_64.exe to folder \Img\x64\Components\ with WinRAR or 7-Zip
- msiexec /i "\\server1\deployments\C3D_2016_PROD_PACK_1_ENGLISH_64\Autodesk_AutoCAD_C3D_2016_Productivity_Pack1.msi" /qn
Creation of command or batch files to install Autodesk or third party applications

```bash
msiexec /i "\server1\deployments\C3D_2016_PROD_PACK_1_ENGLISH_64\Autodesk_AutoCAD_C3D_2016_Productivity_Pack1.msi" /qn
```

AU 2016_IT18200_Civil3d-addon_sample.cmd
Creation of command or batch files to install Autodesk or third party applications

Commonly used MSIEXEC command line switches:

<table>
<thead>
<tr>
<th>Switch</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>/qn</td>
<td>Performs the install/patch with no user interface (silent install).</td>
</tr>
<tr>
<td>/qb</td>
<td>Quiet with a file installation progress bar during installation/service pack update.</td>
</tr>
<tr>
<td>/qr</td>
<td>Quiet with a progress thermometer on the standard wizard dialog (no questions)</td>
</tr>
</tbody>
</table>
SCCM packages creation

Run SCCM console from workstation or server
SCCM packages creation

Open Software Library
SCCM packages creation

Create Autodesk folder and select folder

Click create package
SCCM packages creation

Specify the information about the package
SCCM packages creation

<table>
<thead>
<tr>
<th>Name</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command line</td>
<td>AutoDesk_R16 / setup /silent /user = username /language = en-US</td>
</tr>
<tr>
<td>Startup Ids.</td>
<td>\ProgramFiles (x86)\Autodesk\AutoCAD 2016 \Setup.exe</td>
</tr>
<tr>
<td>Run</td>
<td>Normal</td>
</tr>
<tr>
<td>ProgramAction</td>
<td>Only when a user is logged on</td>
</tr>
<tr>
<td>RunMode</td>
<td>Run with user rights</td>
</tr>
<tr>
<td>Drive Mode</td>
<td>Runs with UNC name</td>
</tr>
<tr>
<td>Allow unattended and silent setup</td>
<td>No</td>
</tr>
</tbody>
</table>

Since Autodesk software are generally deployed silently to multiple computers at the same time, the software needs to run silent (Hidden). Whether or not a user is logged on, and with administrator rights.
SCCM packages creation

Copy command switching and startup folder from the Autodesk deployment shortcut
SCCM packages creation

Specify the requirements for this standard program

Confirm the settings and click next.
SCCM packages creation

Click close and the package and program wizard is completed.
SCCM packages creation

Create new device collection

Navigate to Assets and compliance- Overview-Device collection – Software deployment – Au 2017
SCCM packages creation

Create new device collection
SCCM packages creation

Create new device collection

Specify details for this collection – Limit collection as necessary.
SCCM packages creation

Define membership rules for the collection. Add direct rule or query rules

Example query rule to find computers with Revit 2014, so newer products can be installed

Query Language – Query Statement

```
select SMS_R_SYSTEM.ResourceID, SMS_R_SYSTEM.ResourceType, SMS_R_SYSTEM.Name, SMS_R_SYSTEM.SMSUniqueIdentifier, SMS_R_SYSTEM.ResourceDomainORWorkgroup, SMS_R_SYSTEM.Client from SMS_R_System inner join SMS_G_System_INSTALLED_SOFTWARE on SMS_G_System_INSTALLED_SOFTWARE.ResourceId = SMS_R_System.ResourceId where SMS_G_System_INSTALLED_SOFTWARE.ARPDisplayName like "Revit 2014%"
```
SCCM packages creation

Confirm the settings – click next.

Collection is complete.
SCCM packages creation

Collection is now displayed
SCCM packages creation

Deploy your program

Deploy your program – right click on the deployment

Specify general information for this deployment
SCCM packages creation

Select software to deploy

Specify general information for this deployment
SCCM packages creation

Specify the content destination or click next

Specify settings to control how this software is deployed.
SCCM packages creation

Specify the schedule for this deployment.

Assignment Schedule
SCCM packages creation

Create custom schedule

Assignment Schedule – Click ok
SCCM packages creation

Specify the schedule for this deployment is complete – Click next

User Experience- Select the user experience for the installation of this software on the selected devices.
Specify how to run the content for this program according to type of boundary the client is connected to.
SCCM packages creation

User experience – Select the user experience for the installation of this software on the selected devices. Click next
SCCM packages creation

Summary – Confirm the settings for this new deployment – click next.
SCCM packages creation

Completion – The deployment software wizard competed successfully. Click close.
SCCM packages creation

On the workstation, you will see the available software if you selected user experiences correctly.
Check the status of the deployment

Monitor overview of deployment – Deployment Status

Completion Statistics
- Success: 10
- In Progress: 2
- Error: 5
- Requirements Not Met: 0
- Unknown: 0

Related Objects
- Collection
- Applications
- Content Status
Run reports and queries

Reports can be run from:
- Monitoring – Overview – Reporting- reports
- Reports can be customized
Run reports and queries

Queries can be run from:
Monitoring – Overview – Queries

Queries are very customizable.
SCCM other advantages

- Deploy from distribution points
- Run reports and queries
- Monitoring
- Alerts
- Compliance
- Deploy other windows software
The end
How did I do?

- Your class feedback is critical. Fill out a class survey now.
- Use the AU mobile app or fill out a class survey online.
- Give feedback after each session.
- AU speakers will get feedback in real-time.
- Your feedback results in better classes and a better AU experience.