DRIVER AUTOMATION TOOL
Release 4.1.0

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1   INTRODUCTION

The Driver Automation Tool is an open source PowerShell script which uses WinForms to render an intuitive graphical user interface for the purpose of downloading driver and BIOS packages into Systems Center Configuration Manager and MDT.

The script uses source feeds from a number of vendors including Dell, HP, Lenovo, Microsoft and Acer to present a list of their client systems. Once model selection has taken place and the OS has been picked, the script automates the following processes:

- Driver/BIOS file download(s)
- Driver/BIOS file extraction
- Packaging of the extracted files
- Importation of the package into Configuration Manager / MDT
- Distribution of the package to distribution points (Configuration Manager)

2   PREREQUISITES

- PowerShell v4.0 or greater
- Internet access
- Security rights to the Systems Center Configuration Manager environment
- Remote access to your SCCM site server
- SCCM PowerShell module for SCCM downloads
- MDT PowerShell module for MDT downloads
- 7-Zip for Acer downloads

3   RUNNING THE SCRIPT

Simply extract the entire contents of the ZIP file to a folder and launch the included exe or alternatively launch the DriverAutomationTool.ps1 script directly. Note that when launching the script directory it should be run from an elevated PowerShell window using the -ExectuionPolicy Bypass switch to avoid security warnings, example;

PowerShell.exe -ExecutionPolicy Bypass -File C:\Tools\DriverAutomationTool.ps1

3.1   COMMAND LINE SWITCHES

When running the script, the following command line options are available:

- **-NoXMLOutput**
  Variable type: Boolean
  This option allows you to skip the XML settings export process for ad-hoc operations

- **-RunSilent**
  Variable type: Boolean
  This option allows for a once off silent running of the script without scheduling

Note: The Run-DriverAutomationToolSVC.ps1 file requires configuration output from the GUI so it should not be run directly.

4   GUI MODE

By default, when you run the DriverAutomationTool.ps1 script it will launch in full GUI mode. This is where the process of connecting to your SCCM environment begins, with the exception of using the tool for MDT only.

On the initial launch, you will have a GUI like the one pictured below;

4.1   CONNECTING TO YOUR SCCM ENVIRONMENT

To connect to your SCCM environment you must specify the name of your site server in the site server text box and click on the "Connect to ConfigMgr" button. When you do so, several processes will take place in the background to ensure that you have access to the required PS cmdlets and the site server, while also attempting to discover the site code.

4.2   DEPLOYMENT PLATFORM

After connecting to your SCCM environment or alternatively if you are just using this tool for MDT, you can progress to making selections for the import process, such as the type of download and the OS which to match model listings against.

- **Deployment Platform**

    o **ConfigMgr – Driver Pkg**
      In this mode driver imports will use the Driver Package method, with each of the INF's being individually imported and presented in the GUI

- o **ConfigMgr – Standard Pkg**
  In this mode driver imports will use the standard program type package method. This method can then be used with our Modern Driver Management process and our Web Service for dynamic deployment of drivers
- o **MDT**
  Used for MDT import jobs
- o **Both – SCCM Driver / Standard Pkg**
  Used for imports both into SCCM and MDT
- o **Download Only**
  Drivers will be downloaded but not imported

4.3   OPERATING SYSTEM SELECTION

You must select an operating system and architecture for the script to run in either normal or silent mode.

4.4   MANUFACTURER SELECTION

The manufacturer selection is dynamic and based upon OS support from each of the supported vendors. For example, HP is the only manufacturer supporting Windows 10 build numbers within their XML feed, hence HP will be greyed out if the Operating System selected is "Windows 10", and all other vendors will be greyed out where "Windows 10 xxxx" is selected as the Operating System.

Simply select the vendor you wish to download files from and click on the "Find Models" button for a full list of models matching support on the Operating System selected. Select each of the models you wish to download drivers for and click on the "Add To Import List" button.

Note that Dell and Lenovo models will auto populate the Selected Models list when using SCCM as the script will match models based on the WMI entries on the site server.

4.5 DRIVER STORAGE SELECTION

- **Repository Path**
  This path is used for the storage of BIOS packages and driver download cabs / extracted drivers
- **Package Path**
  This path is used for the storage of driver packages post extraction

Important
Both the Repository and Package paths should be specified and in different share locations. There is no need to create subfolders within the UNC share for the manufacturers or models as this is undertaken by the script at run time.

4.6 DISTRIBUTION

Selection of individual SCCM distribution points or distribution point groups take place in this section. You also have the option of enabling Binary Differential Replication for your packages.

4.7 DRIVER CLEAN UP OPTIONS

On this tab you will find various options to clean up content post run time.

5 NORMAL / SILENT OPERATION

After the initial selection of your models, operating system, import type etc you have the option to either commence the download process by clicking on the **"Start Download and Import Process"** button or opt to schedule the job for silent running.

5.1 NORMAL OPERATION

By clicking on the "Start Download and Import Process" button, all output will be passed through to the Job Process Log, keeping you up to date with the various processes running.

Contained inside the folder from which the script is launched you will notice there is now a "Logs" directory. Within you will find a verbose output log file (**DriverAutomationTool.log**) which can view with your preferred log viewer, CMTrace for example.

CMTrace is part of the Systems Center 2012 R2 Configuration Manager Toolkit and downloadable from the following URL - https://www.microsoft.com/en-us/download/details.aspx?id=50012

Below is an example of the contents of the log file generated;
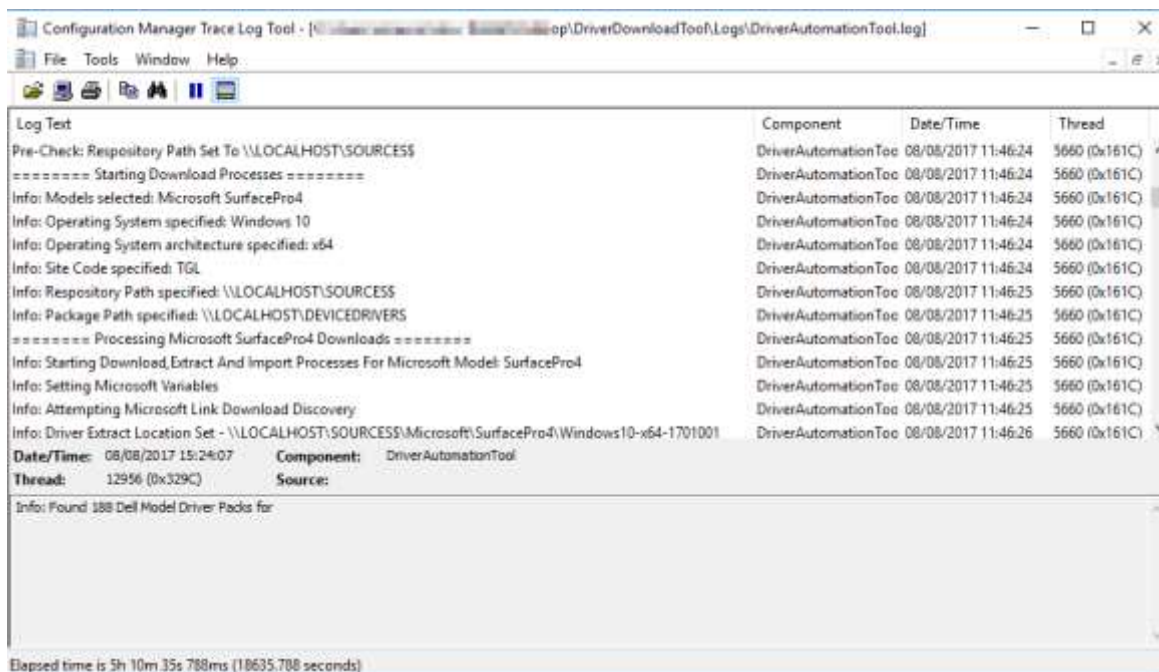
5.2 SILENT OPERATION

For silent operation, you will need to specify a location for the script to run from along with a starting time and service account details. The service account specified should have rights to your SCCM environment.

When you click on the Schedule Job button, the script will run a function to validate your credentials against Active Directory. Once the account is valid, it will copy the Run-DriverAutomationToolSvc.ps1 script to the directory specified and set the scheduled start time.
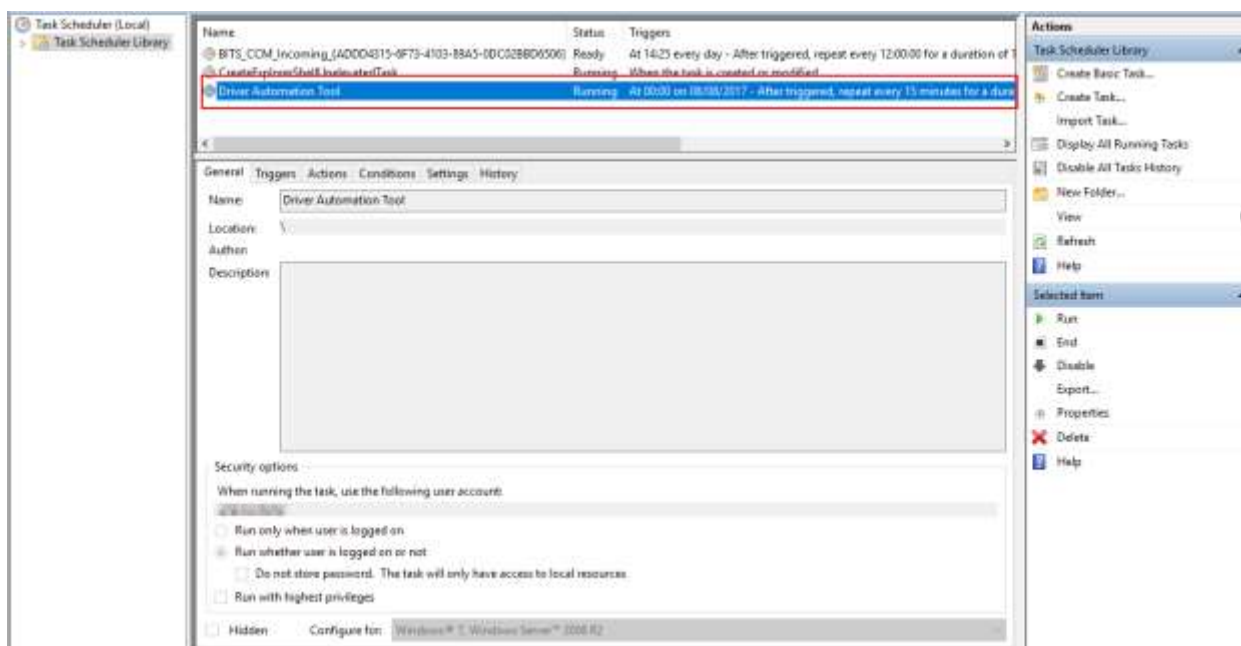
By default, the script will run every 15 minutes, this is to cater for any time outs that occur with XML feeds, downloads etc. You can of course modify this by changing the settings in the task scheduler.

Logging of the operations is provided in a log file located in the Logs subfolder.