Local validation Preparation tool

This tool is intended to help customers preparing their physical system to validate their SCCM/MDT boot in factory images. With the goal to minimize validation errors giving all customers a generic way of preparing their physical system.

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# 1 Introduction

Due to a lot of questions and getting asked whether we could create a “Proof of Concept” to help customers preparing their systems for local validation I’ve been working on a few scripts. The scripts are helping the customers to prepare their systems on;

* Partitioning
* Dynamic Driver Injection
* Dynamic Patching
* Forcing Disabling the Internal NIC at end of preparation preparing
* CFI Launch
* CFI\_Cleanup
* Extracting and boot MDT ISO from local harddrive

The scripts are created by following the “normal” validation steps but preventing us the need to share our validation ghost files with the customer. Still it will be as close as possible to a normal validation. Next to that forcing a few steps like the disabling and enabling of the internal network card will prevent certain errors causing rework in a later stadium.

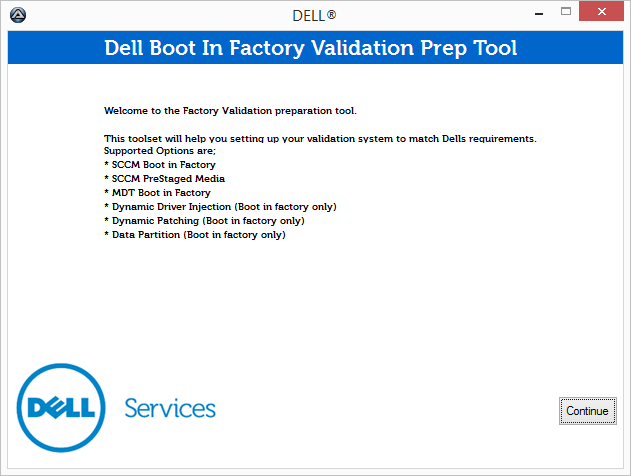
**PLEASE NOTE:** The scripts are still work in progress and improvements might be needed. But since the basics are working quite solidly now I wanted to share to receive feedback!

# 2 Tool Description

The tool is intended to be used with an USB key. The base of the key used is the one from ImageAssist. The required files will be copied into the Dell Tools and just like the ImageAssist key it will start the batchfile calling the added scripts.

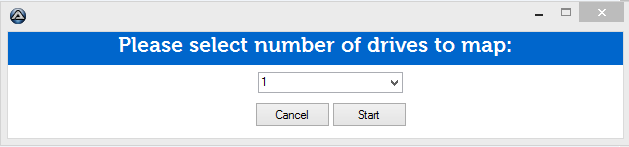
## 2.1 Welcome Splash

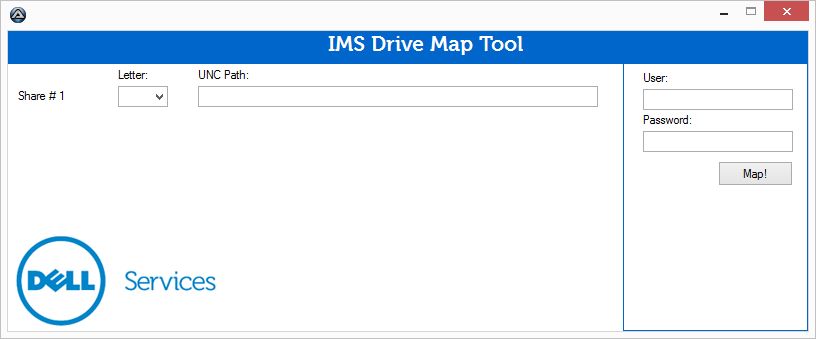
This is used to inform the customers what the tool is capable off. To continue they will click the “Continue” button.



## 2.2 Mapping Drives Script

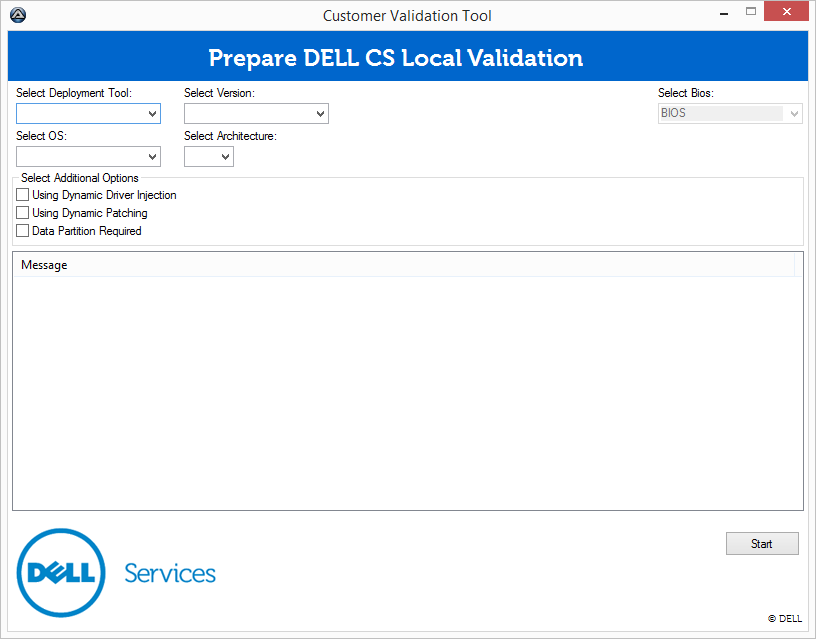
To make it possible to access the driver-files and patches on a network location a script was created to be able to map up to 5 different shares using the same credentials. This script will let you know if it has been mapped successfully or if something went wrong.





## 2.3 Preparation Script

This is actual the main script preparing the system based on the selections the customer has made. It is important for the customer to make the right selections otherwise the preparation might not work as expected.



### 2.3.1 SCCM Boot in Factory

For the preparation of a SCCM boot in factory image the script will do the following actions.

**Preparing the harddrive (MBR/UEFI)**

Based on the selections made there are a few options. If the “Data partition Required” option is not selected it will create a basic C-drive and D-drive. Since the D-drive is required for a few steps. If the “Data partition Required” option is checked the customer will be able to add his required harddisk sizes in MB’s. Furthermore for the UEFI/GPT partitioning it will create the required extra partitions.

**Using Dynamic Driver Injection**

When selecting the Dynamic Driver Injection option a new input field will be created with a button. Clicking this button enables you to select the family cab file to be used for the system tested on. On starting the script it will;

* Extract the Cab-file to D:\ExportedDrivers
* Remove the x86 drivers if x64 is selected and vv.

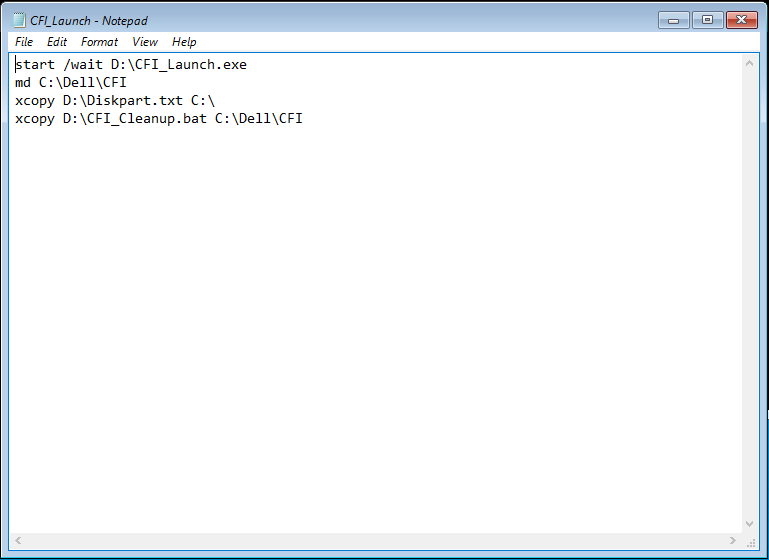
**Using Dynamic Patching**

When selecting the Dynamic Patching option a new input field will be created with a button. Same as with the Dynamic Drivers step you will be able select the location where the msu files are stored. When starting the script it will;

* Copy the MSU-files to D:\ExportedDrivers

**Creating CFI\_Launch.bat**

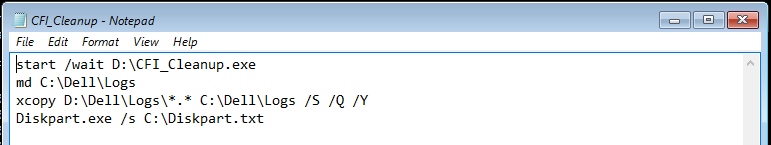
This script will create a CFI\_Launch.bat file to be run at the requird point. It will create the file to D:\. To make the customer aware the step is running it will open notepad and continuing on close. Since the SCCM process is wiping the C-drive on applying the image the files required on the C-drive will be copied during CFI\_Launch – step. Also to make sure the internal NIC is enabled again on running the CFI\_Launch step it will be raising the warning to enable the internal NIC on the next reboot.



**Creating CFI\_Cleanup.bat**

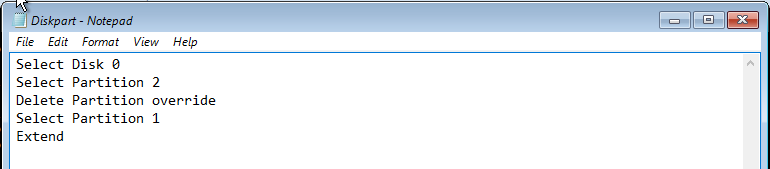
CFI\_Cleanup.bat will be firstly be put on the D-drive to copy it to the right location during CFI\_Launch. CFI Cleanup will;

* Copy the logs of this tool to the specified folder
* Run Diskpart to clean the system.

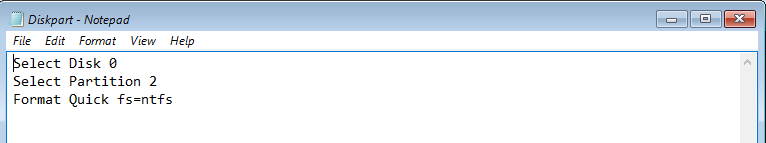


**Creating Diskpart.txt used by CFI\_Cleanup**

During running the script it will create the diskpart.txt depending on the selection made in the tool. When not having Data Partition Required checked it will create a default diskpart.txt. This will remove the second partition and extend the data partition.

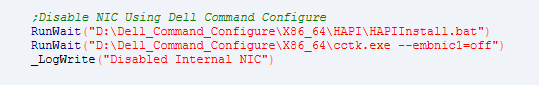


When having the Data Partition Required checked it will run a diskpart.txt required to keep the data partition.



**Disabling the Internal NIC**

The script will at the end disable the internal Network Card using Dell Command | Configure (formerly CCTK).



### 2.3.2 MDT Boot in Factory

For the preparation of a MDT boot in factory image the script will do the following actions.

**Preparing the harddrive**

By default the harddisk will be prepared to use only a C-partition, when a customer requires a D-partition in the end this will be available. Next to that additional folders will be created for the process.

Furthermore for the UEFI/GPT partitioning it will create the required extra partitions.

**Using Dynamic Driver Injection**

When selecting the Dynamic Driver Injection option a new input field will be created with a button. Clicking this button enables you to select the family cab file to be used for the system tested on. On starting the script it will;

* Extract the Cab-file to C:\Deploy\ExportedDrivers
* Remove the x86 drivers if x64 is selected and vv.

**Using Dynamic Patching**

When selecting the Dynamic Patching option a new input field will be created with a button. Same as with the Dynamic Drivers step you will be able select the location where the msu files are stored. When starting the script it will;

* Copy the MSU-files to C:\Deploy\ExportedDrivers

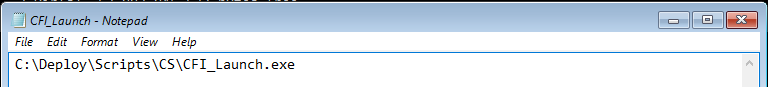
**Creating CFI\_Launch.bat**

The script will be creating the CFI\_Launch.bat file in “C:\Deploy\Scripts\CS”. Also to make sure the internal NIC is enabled again on running the CFI\_Launch step it will be raising the warning to enable the internal NIC on the next reboot.



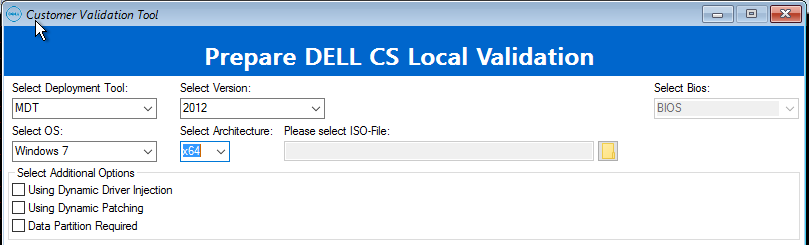
**Creating CFI\_Cleanup.bat**

The script will be creating the CFI\_Cleanup.bat file in “C:\Deploy\Scripts\CS”.



**Extract ISO to C-Drive**

The customer can also select the created ISO and extract it to the C-drive. Then the customer doesn’t need to add the usb-key on booting and everything is running from the local drive.

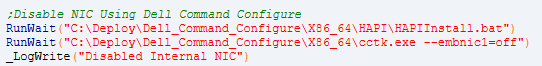


**Setting up BCD UEFI**

To be able to boot the UEFI ISO’s the script will edit the BCD making it possible to boot the system using the GPT/UEFI setup.

**Disabling the Internal NIC**

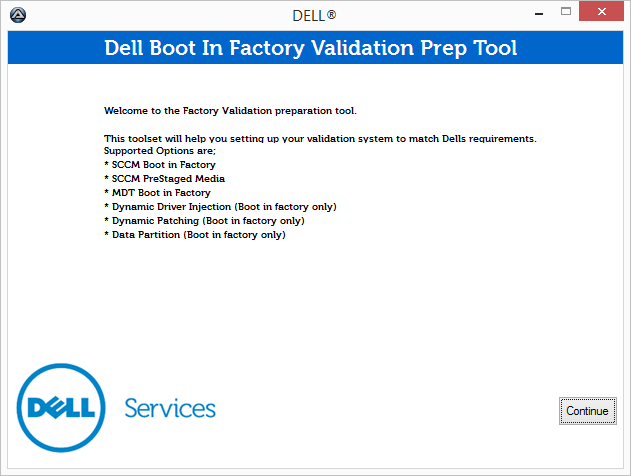
The script will at the end disable the internal Network Card using Dell Command | Configure (formerly CCTK).



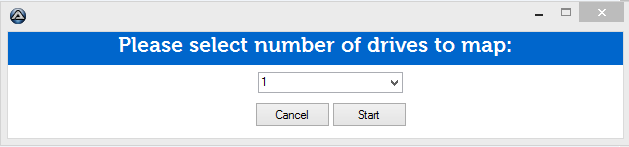
# 3 How to use

Step 1 - Boot from media

Step 2 - Welcome Screen appears (Click Continue)



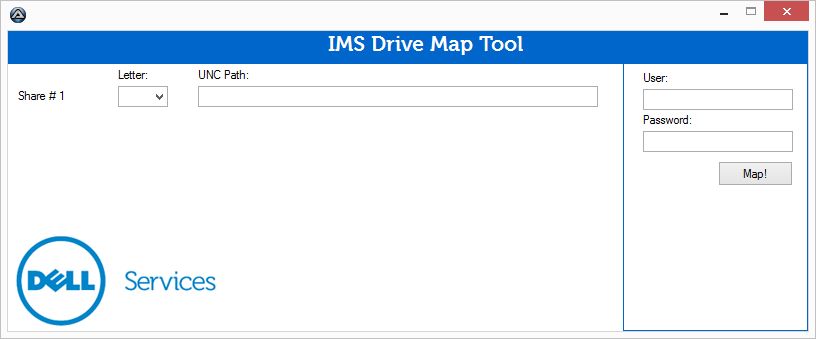
Step 3 – Drive mapping script appears



Step 3.1 - Cancel if no drive mapping needed (go to step 4)

Step 3.2 - Select amount of mappings to make and click “Start” (normally 1 or 2 but can up to 5)

Step 3.3 - Main mapping screen appears



Step 3.4 - Fill out fields and click “Map!” (Will close automatically)

Letter: Select from pulldown menu

UNC Path: [\\server\share](file:///\\server\share)

Username: domain\user

Password: \*\*\*\*\*\*\*\*

Step 4 - Main screen appears

Step 4.1 - Select mandatory options:

“Select Deployment Tool” - SCCM/MDT

“Select Version”

“Select Deployment Type” (SCCM only)

“Select OS”

“Select Architecture”

“Select Bios”

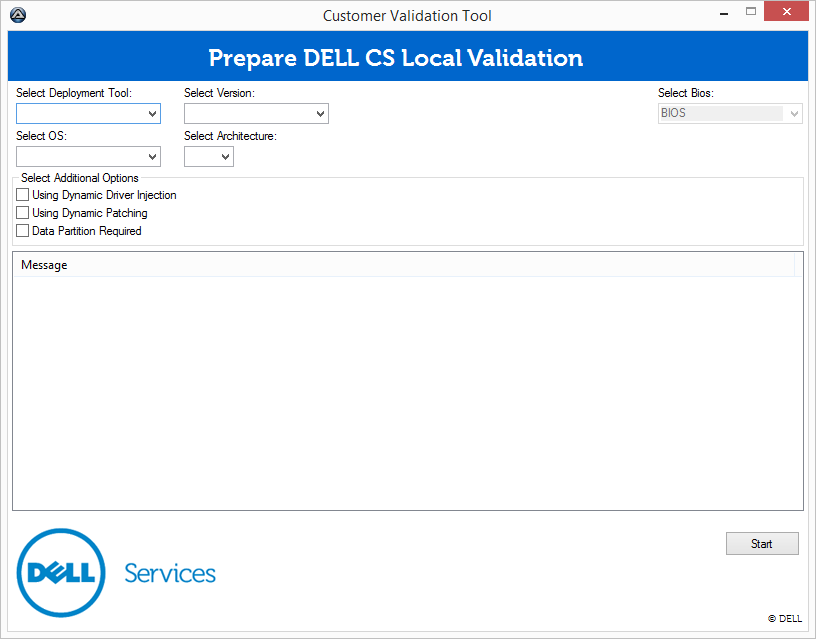
Select optional options:

“Select MDT ISO” – Select the ISO-file (MDT only)

“Using Dynamic Driver Injection” – Select driver cab/zip to use

“Using Dynamic Pachtic” – Select folder containing msu-files

“Data Partition Required” – Set sizes in MegaBytes

 Then click “Start”

**NOTE:**

After completion you’ll need to:

* For SCCM – boot from Standalone Media
* For MDT
  + Boot from local harddrive (if iso selected - recommended)
  + Boot from MDT media (if no iso selected)

(This message will be added in an update of the tool)