

INSTALLATION NOTES

PHAST™ & SAFETI™

Taking hazard and risk analysis one step further

These installation notes apply to:

Phast Lite 8.4, Phast 8.4,
Safeti Lite 8.4, Safeti 8.4

Version: 8.4

Date: January 2021



Reference to part of this report which may lead to misinterpretation is not permissible.

Date: January 2021

Prepared by: DNV GL – Digital Solutions

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1 WHAT'S IN THIS SHIPMENT

Phast and Safeti users should have received instruction on how to download the installer from the portal.

This shipment includes the following:

- The product is released as a single file setup_x64.exe for the application, plus Licence Manager installation and related documentation.

If anything is missing from your package please contact DNV GL - Digital Solutions Support for help (Software.Support@dnvgl.com).

The next section gives detailed instructions for installing the program, and you should read these instructions before you start the installation process.

2 SYSTEM REQUIREMENTS

Hardware requirements can be hard to define. The following table shows the recommended specifications.

Product	Typical use case	RAM (GB)	CPU		Typical free hard disk space**	CUDA
			Type (or equivalent)	Number of cores		
Phast	modelling a small number of scenarios per study (e.g. vent dispersion, emergency scenario modelling, etc)	2GB	Intel i5	2 or more	5GB	
	modelling a large number of scenarios per study (e.g. as input to QRA, FERA, etc)	8GB	Intel i5	4 or more	10GB	
Safeti, Safeti Offshore, Safeti-NL	performing QRA/FERA for small/medium size sites such as LNG terminals gas terminals	8-32GB*	Intel i7 or i9	4-8 or more	50GB	Enabled
	performing QRA/FERA for large sites such as refineries or multiple pipelines	16-64GB*	Intel i7 or i9	8 or more	100GB	Enabled

* Having more memory will help running large studies.

** Large studies writing detailed risk results will use more disk space.

Other specifications for this version are as follows:

Operating system	64 bit Windows 8.1 or 64 bit Windows 10 or later versions with latest Windows Updates and Windows Security patches.
Internet Browser	IE 7.0x or later. This does not have to be set as your default browser, but you must have at least this version installed to run the program.
Display	1024x768 resolution or higher, 1920x1080 (recommended)
Screen colour depth	65536 (16-bit) and higher
CPU	See below
Media	DVD-ROM drive or internet connection
Pointing device	MS Mouse or compatible
Video card	Any good video card and screen supporting 1920x1080 with latest video driver installed. For Safeti, any CUDA 11 compatible video card recommended with "compute capability 5.0" or higher. See https://en.wikipedia.org/wiki/CUDA for more

	information.
Microsoft Excel	Phast, Safeti Lite, Safeti and Safeti-NL: require Excel only if using import from and export to Excel Safeti Offshore: requires Excel
Microsoft Access	Safeti Offshore: requires Access

Citrix, Microsoft Hyper-V, Oracle VirtualBox, VMware virtualisation tools are not supported.

2.1 COMMENTS ON MEMORY (RAM)

Phast and Safeti can use significant amounts of memory especially for large studies. Having more memory reduces the possibility of reaching physical memory as the number of scenarios in your study grows. If you reach physical memory limits you will most likely see slower run times and could see run-time failures.

2.2 COMMENTS ON HARD DISK

Phast and Safeti makes a lot of use of the hard disk for storing temporary files when loading, saving and running calculations. There are two main considerations:

- **Speed:** An SSD disk (Serial Solid-State disk) is recommended to ensure that read/write times do not cause run-time performance issues. Disk using M.2 NVMe instead of SATA interface would improve greatly the read/write times.
- **Capacity:** It is good practice to keep 25% free disk space. It is important to monitor the state of your hard drive and delete temporary files regularly.

3 DETAILS OF THE INSTALLATION PROCESS

In order to install the program, you must have administration rights for the machine. Contact your System Administrator to check whether you have administration rights, or to obtain these rights.

However, the application does not require the users to have any administration rights. It is recommended that users are part of the standard Windows Normal User Group while running the application.

To avoid installation failures and before starting the installation, there are several issues to be aware of. These are listed in the next section and refer to sections detailed later in this document. The remaining part details the installation stages.

3.1 THINGS TO BE AWARE OF

There are several issues which users and administrators should be aware of before installing this version of the application:

- [Windows Updates](#)
- [Warning for Safeti Users only](#)
- [Windows 8.1, Windows 10 and later versions issues](#)
- [Reboot required on Windows 10 after the installation](#)

- [Licence Manager needs to be Upgraded](#)
- [Installation of older Phast versions](#)
- [Version 6.531 incompatibility](#)
- [Installation location](#)
- [Installation timeout](#)
- [File Permissions and User Rights](#)
- [Installation whilst the User is not connected to the Organisation Network](#)
- [Virtualisation](#)
- [USB Security Key inserted before the application is installed](#)
- [The new Licence Manager does not support Windows Server 2008 R2](#)
- [The licence manager needs to be upgraded](#)
- [The installation fails to restart after rebooting](#)
- [Fails to detect video card's CUDA capacity](#)

See the section [Known Issues](#) for more information on the above subjects. Before running the installation, it is recommended you read the Known Issues section.

3.2 THE MAIN INSTALLATION STAGES

To install the product, please run Setup_x64.exe after being downloaded as instructed above.

3.3 DO I NEED TO OBTAIN A LICENCE IN ORDER TO RUN THIS VERSION?

The existing licence for 8.3.x is valid for this release if you have an active support and maintenance contract. If you do not have a valid one, please read the next sections.

The application has been improved and will assist you in setting up a licence. The next section details the various licensing steps that are required to activate the application.

4 PRODUCT LICENSING

Section 4.1 details the licensing setting up from asking for a licence file to importing it to your computer.

Section 4.2 explains the steps to get a dongle working as a licence key.

Section 4.3 describes how to configure a licence manager in case you have been provided with a concurrent, floating, licence.

Section 4.4 lists some issues with licensing and how to resolve them.

4.1 SETTING UP A LICENCE

Any licences from versions of the application prior to 7.0 are not compatible with this version. You (or the System Administrator) must obtain a licence file for this version, as described in the next section.

You will not need to request a licence file if:

1. You already have a valid licence for this version of the product and any extensions you wish to use. (E.g. Multi-component and 3D Explosions. Or:
2. The Licensing has already been set up by the System Administrator
 - Some types of licence¹ are specific to a machine and all licensing is handled locally on that machine. If you have arranged with DNV GL – Digital Solutions to use this type of licence, you would normally set up the licensing yourself on your machine.
 - Other types of licence are specific to a *Security Key* (sometimes called a dongle) that can be moved between machines or are handled by a network server and not by the individual machines that are running the application. For these types of licence, the System Administrator may handle the process of obtaining the licence file from DNV GL - Digital Solutions, and then making the file available to users of the application.

The process of requesting a licence file is described in the next sections.

If you are going to use a file supplied by your System Administrator, you can omit the stage of requesting a licence file and proceed immediately to the final stage: [running the application to import the licence file](#).

4.1.1 Request a licence file

The following process is a simplified version of a normal licence request process for Windows 10. The process for other operating systems may vary. You do not need any specific user rights to perform it.

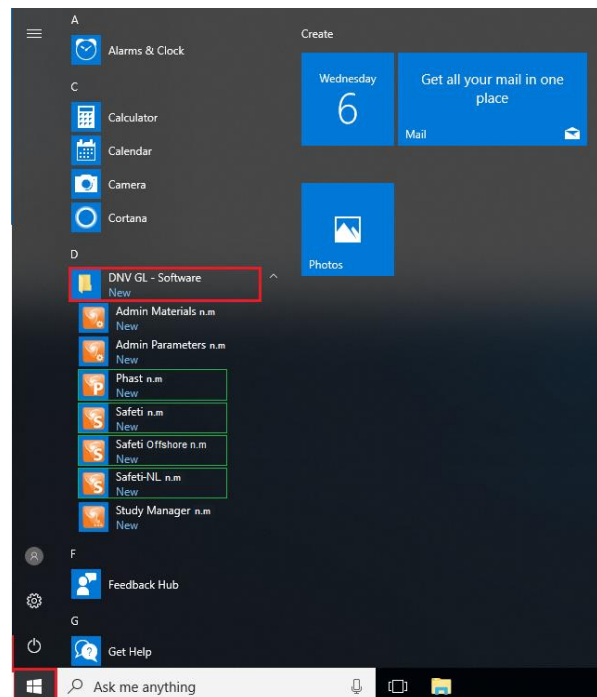
Start the application

To start this version:

- on Windows 10, click on Windows Start button, click on All apps, proceed to DNV GL - Software, expand the list and click on the application shortcut.
- On Windows 8.1 and earlier, click on the Windows Start button highlighted, click on All Programs, proceed to DNV GL - Software, expand the folders for this version and click on the application shortcut.

NOTE 1: To request Phast Licences you must start Phast. Likewise, for Safeti, Safeti Offshore and Safeti-NL Licences you must start the appropriate product.

NOTE 2: the following steps are for Phast licences, requesting Safeti, Safeti Offshore or Safeti-NL Licences have similar steps.



The picture refers to a hypothetical version and products.

¹ Licence types are *Floating* (sometimes called *Concurrent*), *Standalone* and *Security Key*. *Floating* and *Standalone* licences are called *Network* licences in this document and they require specific setting as described in the section [Setting a Windows Service](#). A *Network* licence file contains the line “VENDOR dnvs1m”.

Request a Licence

If you already have a licence file, please move further down to the next section [Importing a licence file](#).

Otherwise click on the "Request a licence" button.

Specify Required Licences

A new dialog will open with the option of selecting the Licences required.

Please tick the licence(s) required from the list.

Please note that the options available depends on the product installed and the started application.

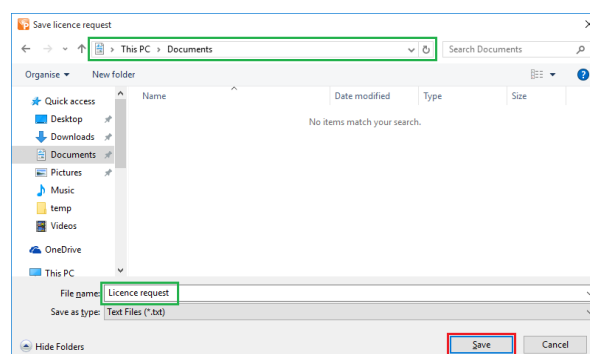
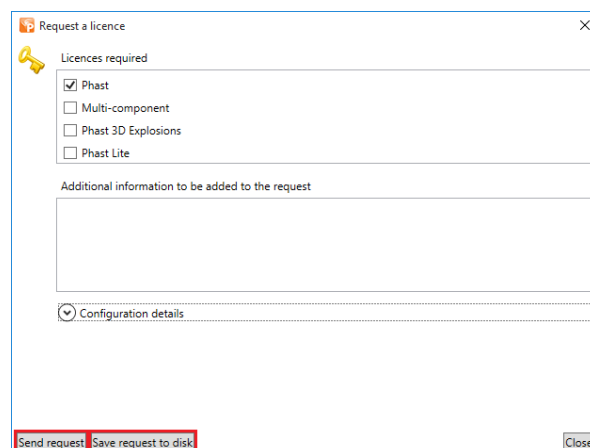
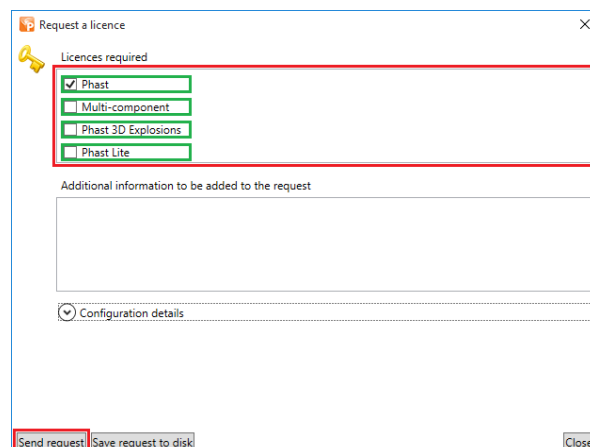
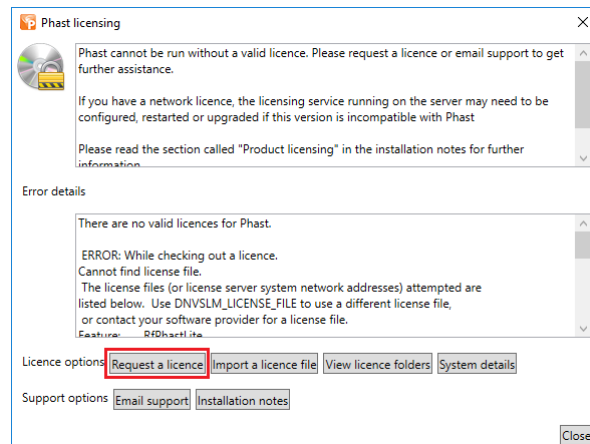
Send Request and Save Request to Disk

Once you have selected the required licences there are two options available depending on how you intend to send the licence details. You can either email the request or save the request to disk and send it later.

Save Request to Disk

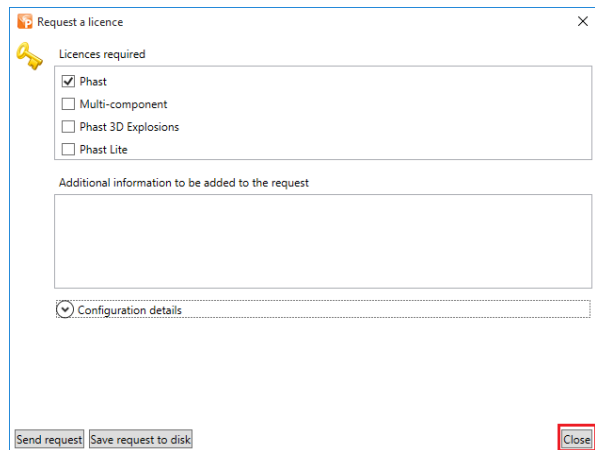
If you are unable to email, then you can choose to Save request to disk and this will save the Configuration Details to a local folder or drive. This can then be transferred or processed later.

NOTE: Before, clicking on Save, please record the file name and location for future reference.



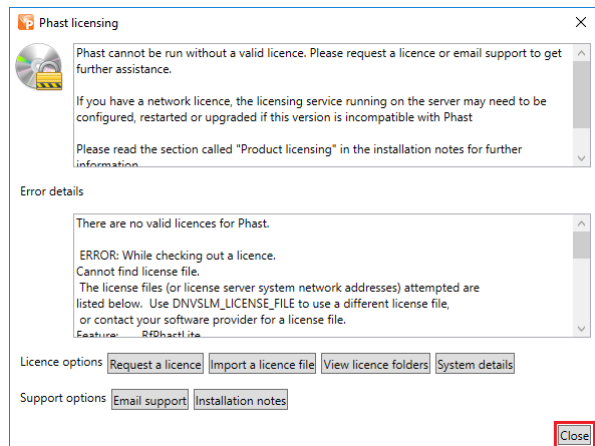
Emailing the Licence Request

Depending on your selected option, do not forget to email the request to DNV GL - Digital Solutions Support
(Software.Support@dnvgl.com)



The 'Request a licence' dialog box contains a 'Licences required' section with four checkboxes: 'Phast' (checked), 'Multi-component', 'Phast 3D Explosions', and 'Phast Lite'. Below this is a text area for 'Additional information to be added to the request'. At the bottom, there is a 'Configuration details' section with a dropdown arrow. The dialog has three buttons at the bottom: 'Send request', 'Save request to disk', and 'Close' (highlighted with a red box).

Close the Dialogs and Wait for the Licence to Arrive



The 'Phast licensing' dialog box displays an error message: 'Phast cannot be run without a valid licence. Please request a licence or email support to get further assistance.' It also provides instructions for network licences and refers to the installation notes. The 'Error details' section shows: 'There are no valid licences for Phast. ERROR: While checking out a licence. Cannot find licence file. The license files (or license server system network addresses) attempted are listed below. Use DNVSLM_LICENSE_FILE to use a different license file, or contact your software provider for a license file. Feature: REDhactlite.' At the bottom, there are two groups of buttons: 'Licence options' (Request a licence, Import a licence file, View licence folders, System details) and 'Support options' (Email support, Installation notes). The 'Close' button at the bottom right is highlighted with a red box.

4.1.2 Importing a licence file

The following pictures may refer to a hypothetical version and products.

If necessary, Start the application

To start this version:

- on Windows 10, click on Windows Start button, click on All apps, proceed to DNV GL - Software, expand the list and click on the application shortcut.
- On Windows 8.1 and earlier, click on the Windows Start button highlighted, click on All Programs, proceed to DNV GL - Software, expand the folders for this version and click on the application shortcut.

NOTE 1: To request Phast Licences you must start Phast. Likewise, for Safeti, Safeti Offshore and Safeti-NL Licences you must start the appropriate product.

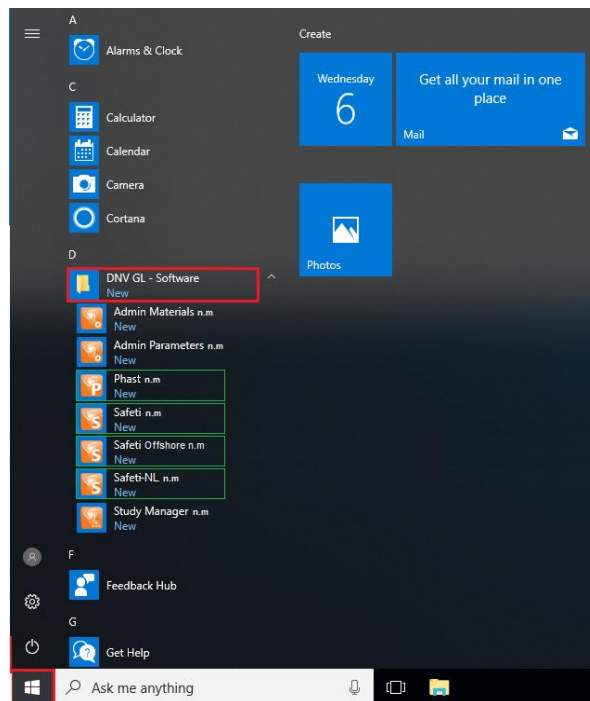
NOTE 2: the following steps are for Phast licences, requesting Safeti, Safeti Offshore or Safeti-NL Licences have similar steps.

Importing a Licence

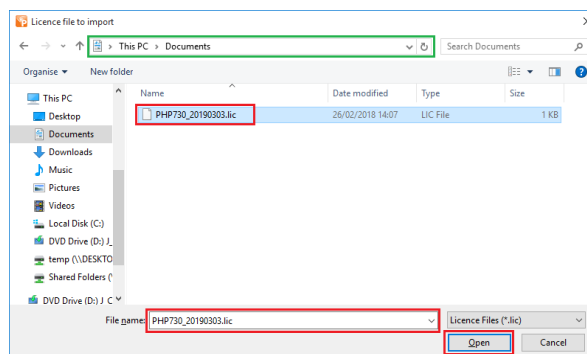
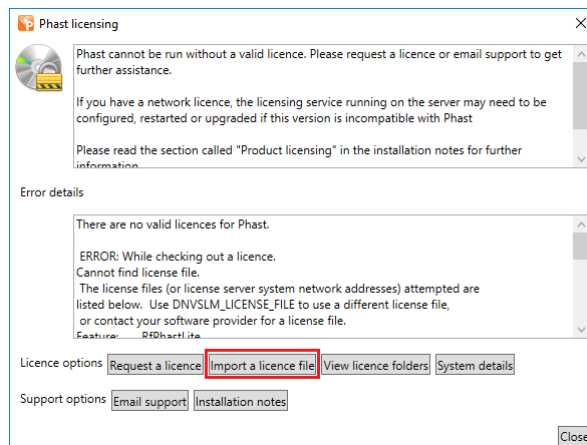
To import a licence please click on Import a licence file

Browse to a Licence File

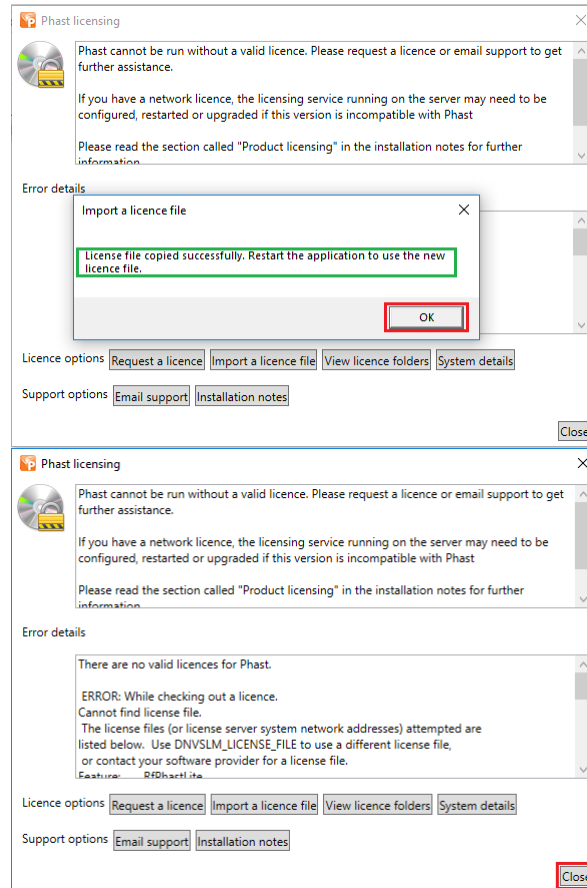
Then browse to the licence file and click Open to import.



The picture refers to a hypothetical version and products.

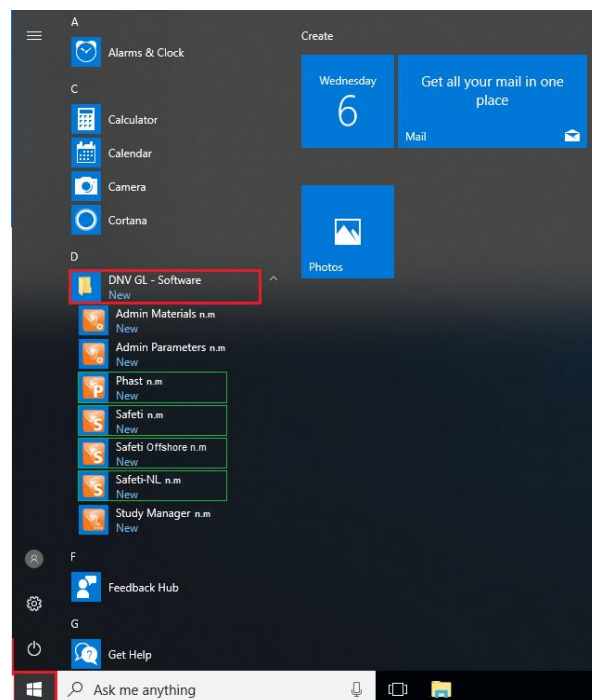


Close the Dialogs



Restart the application (Optional)

If the licence is valid for this computer, the application should start without prompting for a licence. If not, please contact DNV GL - Digital Solutions Support (Software.Support@dnvgl.com)



The picture refers to a hypothetical version and products.

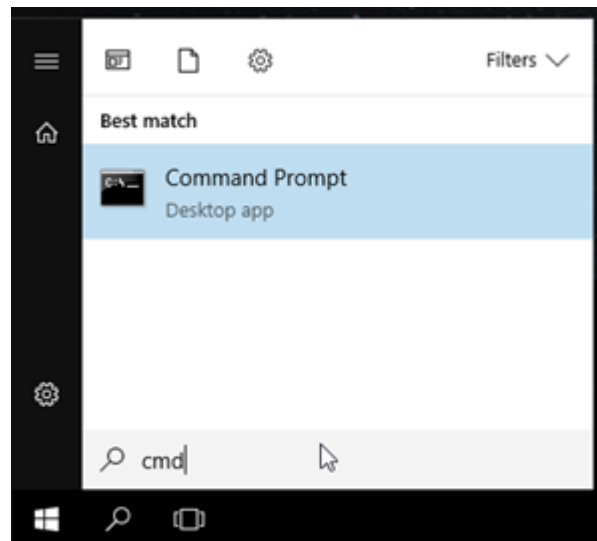
4.2 USB LICENCE DONGLES

To improve licensing our technology has been upgraded. All users with USB licence dongles will need to update their driver before using the new version of our applications. To do this you may ask your IT department to do the following actions or if you would prefer to do them yourself you will need local

administration rights.

Open a command prompt

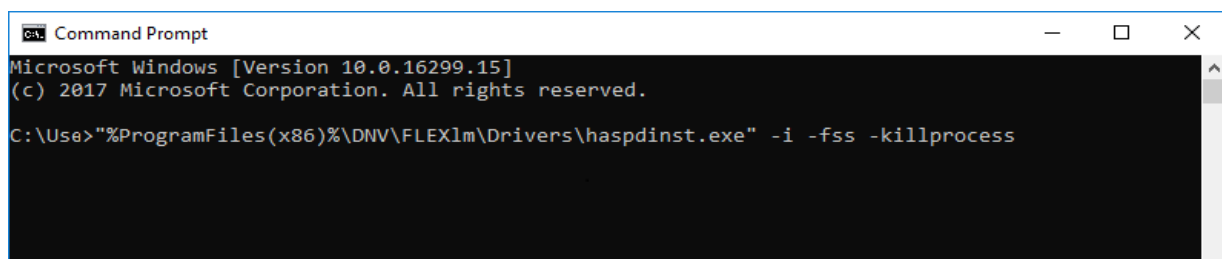
In the Start menu type cmd and click on Command Prompt



Install driver

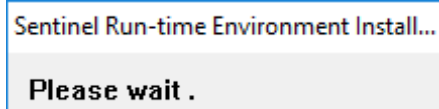
Type the command appropriate to your operating system.

```
"%ProgramFiles(x86)%\DNV\FLEXlm\Drivers\haspdinst.exe" -i -fss -killprocess
```



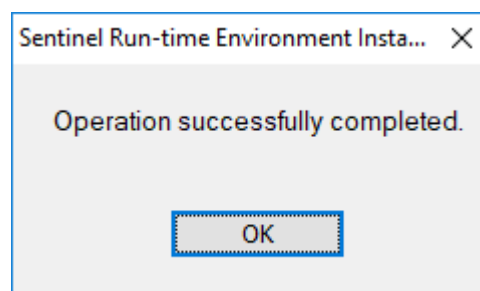
During driver installation

A small window will appear during the driver installation



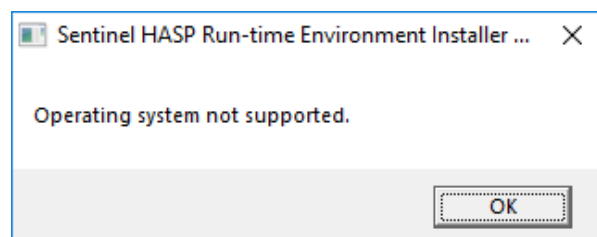
After successful installation

On successful completion of the driver installation a message dialog will pop up for you to OK



Possible error

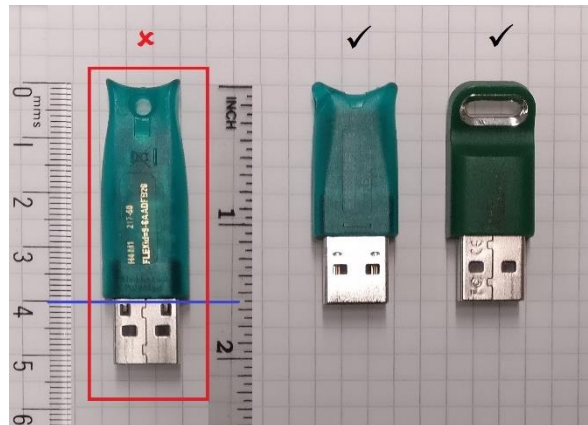
An error will occur if you haven't installed this version before running this upgrade. In this instance please contact DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com)



Known issue – you may need to request a new dongle

The dongle type with 4cm (1.5") long green handle (labelled FLEXID 9-6) is no longer supported and will not work with the latest version. Contact support if you have this type of dongle (Software.Support@dnvgl.com).

The more recent dongles with a 2.5cm (1") long green handle are valid and do not need replacement.



4.3 SETTING A WINDOWS SERVICE FOR CONCURRENT LICENCES

In order to run Flexera's LMTools, you must have administration rights for the machine. Contact your System Administrator to check whether you have administration rights, or to obtain these rights.

This step is only necessary for *Network*¹ licences and generally made on a server and not on a user's PC.

You should not perform the following steps if your licence is a *Security Key* or *Standalone* licence.

IMPORTANT NOTE: The Licence Manager is installed from a separate installer, search for the installer from the [DNV GL – Digital Solutions download website](#). A specific installation notes document is also included. The section assumes the Licence Manager is installed.

Known issue

The licensing manager running on the server must be upgraded in order for this version to check out a license successfully. Please read the section [LICENCE MANAGER NEEDS TO BE UPGRADED](#) for more details.

Start the Advanced Tool: LMTools

Depending on your operating system, LMTools is available from

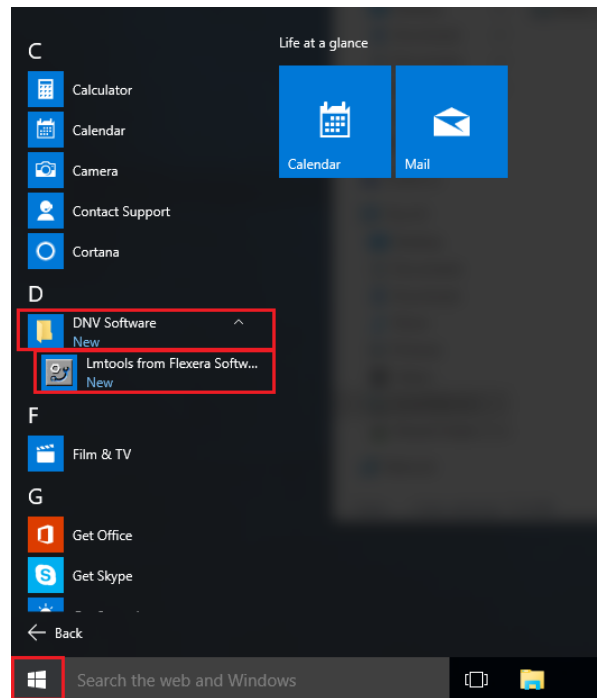
32 bit OS:

C:\Program Files\DNV\FLEXIm\Utils

64 bit OS:

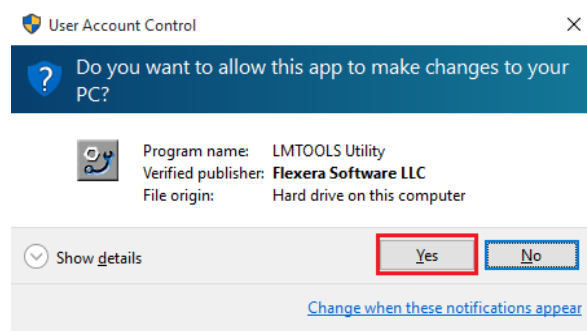
C:\Program Files (x86)\DNV\FLEXIm\Utils

If you have run Licence Manager Installer, a shortcut is created in the Start Programs as shown on the right.



If prompted, accept the User Account Control

If you have not been granted the proper admin rights, you may be prompted to an administrator's name and password instead.

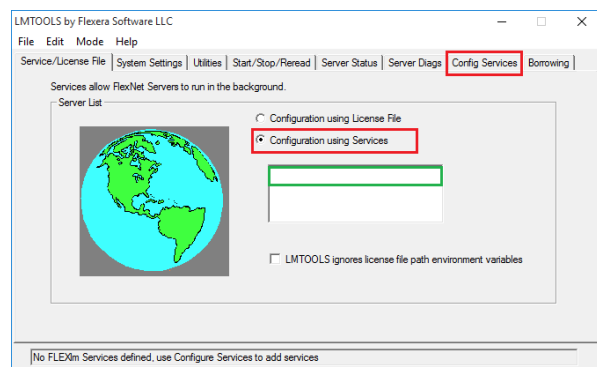


LMTools from Flexera Software (formerly Macrovision)

Select Configuration Using Services

If there are any services in the list, please contact DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com).

Click on the tab Config Services in order to enter the service details

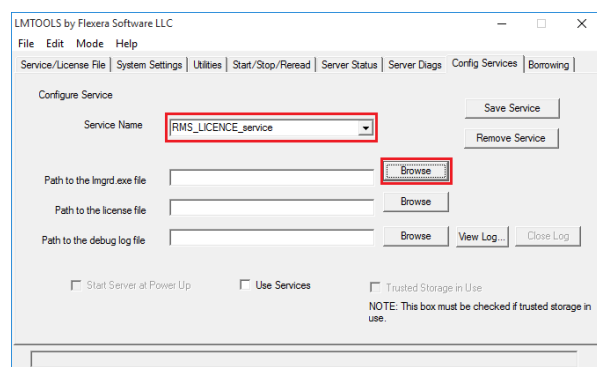


Define the Licensing Service Name

Either:

- Select from the dropdown list RMS_LICENCE_service or
- Type RMS_LICENCE_service if the name does not exist (please note the British spelling).

Click on the first button Browse in order to specify the location of the Imgrd.exe file

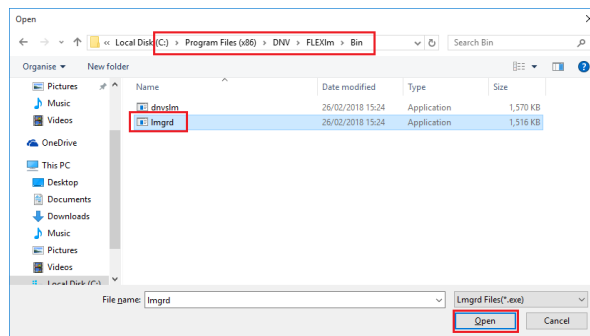


Select Application Imgrd File Location

The application Imgrd file (sometimes displayed as Imgrd.exe) is in

C:\Program Files (x86)\DNV\FLEXIm\Bin

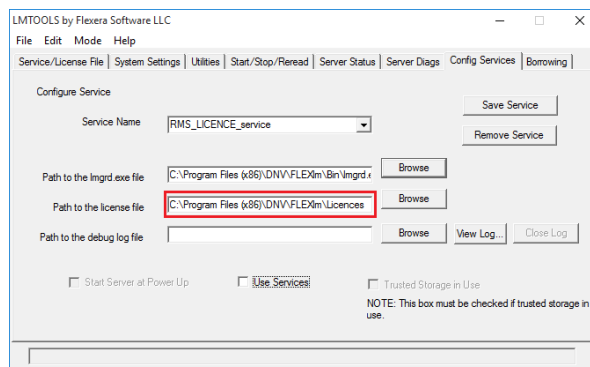
Click on Open to select the Imgrd file and return to LMTools.



Specify the Licence File Location

- Select and copy from the field "path to the Imgrd file" entered from the previous step
- Paste it into the field "Path to the licence file"
- Replace Bin\Imgrd.exe with Licences (please note the British spelling)

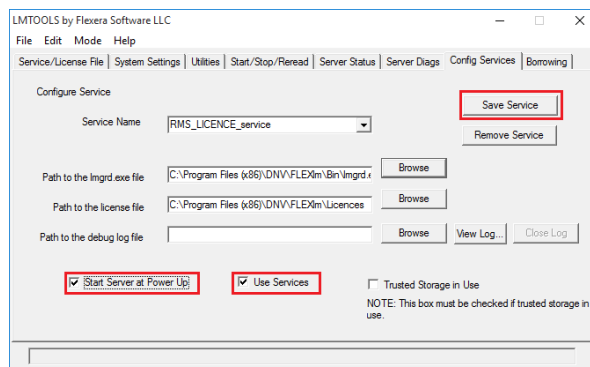
Note: Clicking on *Browse* is not recommended as browse can only select a file not a path.



Select the Service Activation

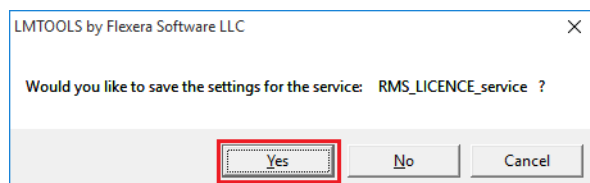
- Tick-mark Use Services
- Tick-mark Start Server at Power Up

Click on Save Service to create the service



Accept to Save the Settings

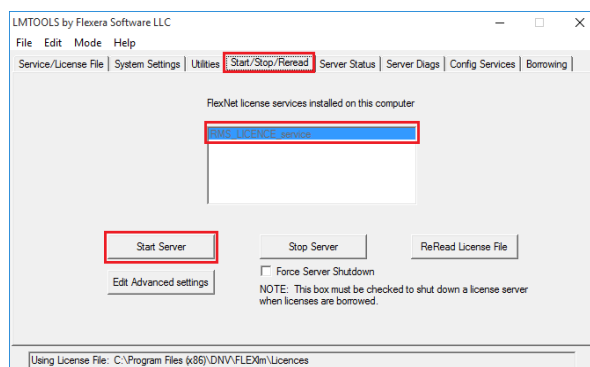
Click on Yes to save the settings



Start the Service

- Click on the tab Start/Stop/Reread
- Select the service RMS_LICENCE_service

Click on Start Server to start the service



Check the Service Status

Check whether the service started successfully. If not please double-check the service settings made in this section.

- Otherwise your system is configured for managing the licence.

In case of failure, please contact DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com)

Click on the top right button to exit from LMTools.

Optional Additional Check

Most of the time, LMTools reports a successful start. However, the related processes may fail due to various reasons (such as an invalid licence file or conflicting service setting). It may take a minute for all the processes to be active.

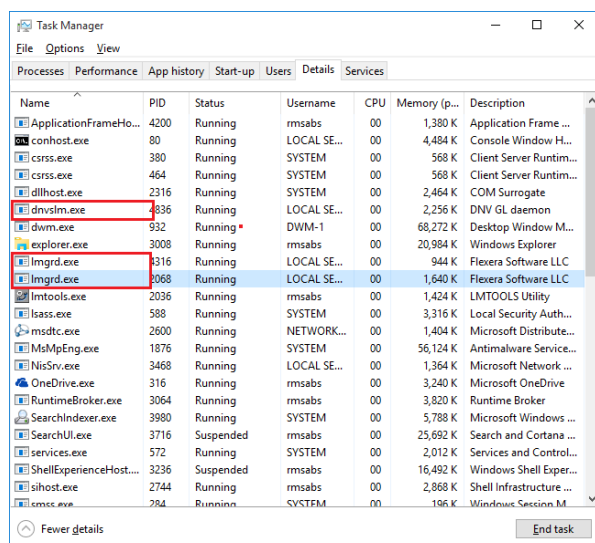
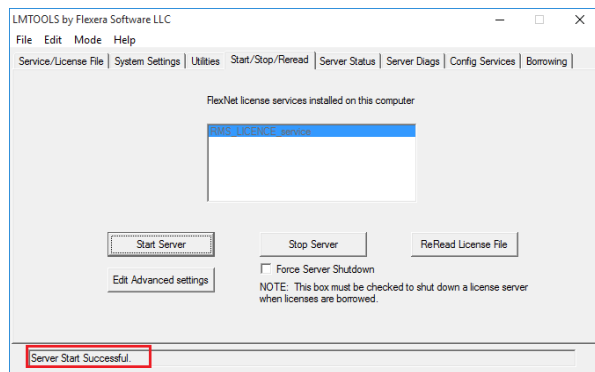
It is worth checking that all processes are running using Windows Task Manager.

Three processes should be running as shown on the right in the tab Processes:

- Two lmgrd.exes and
- One dnvsml.exe

If dnvsml.exe does not appear after a minute, please contact DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com)

Click on the top right button to exit from Task Manager.



4.4 LICENCE ISSUES

This section lists some licence issues and how to resolve them.

- Licence expired: If you have a maintenance with us, the registered user should have received the new licence by email. If not, please contact DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com).
- Wrong host ID: either your licence is for another PC or your PC is running under a different configuration (typically docked or undocked or connected or not to intranet/internet or through a different network device). If the licence has working under a previous configuration, please try to revert to the previous successful environment. If this is not possible or the licence is for another PC, please contact DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com).

- Licence not appropriate for the product run, for example installing Safeti although your licence is for Phast. Please run only the licenced product or contact our sales representative for further help.
- USB dongle plugged but the licence ID is reported as not found. Please check:
 - The dongle is plugged directly to the USB port (daisy plugging is generally not supported)
 - The dongle light is on, if not please remove it, install the dongle driver if not already installed and reinsert it possibly on a different USB port.
 - You are using the right type of dongle (old dongles are not compatible with our new system), see section [Dongle issue](#) for more details.
 - The USB dongle was inserted before its proper driver is installed. See section [Dongle inserted before driver installed](#) for more details.
 - The wrong dongle driver has been installed. Windows updated its functionalities and made some security updates. In this case you may have to download the latest driver. Please contact DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com).
- Concurrent/floating licence does not work. Here are some typical issues and possible solutions:
 - The licence manager has been upgraded. See section [The licence manager needs to be upgraded](#) for further details.
 - The ports used to communicate to the server may be closed for security reasons. Please ask your Helpdesk for assistance or contact DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com).
 - The server is not reachable. This is an internet or network configuration issue (e.g. you may need to use VPN to connect to your organisation network). Please ask your Helpdesk or contact DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com).

If none of the above is relevant to your case, please contact DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com).

5 SHARED ADMINISTRATION FILES

This section explains the specific configurations that may be necessary based on your standard, project needs or practices.

Prior versions provided a standalone installation for the Administration Files. This option was not flexible enough for some customers' needs. This version supports various alternatives.

There are typically three types of files:

1. Supporting files: These files should not be changed.
2. Parameter files: Changing them may allow user to select non-standard parameter values such as the specific local atmospheric pressure.
3. Material files: Some material data may need to be changed to reflect your organisation's specific or agreed values (e.g. for the constituents of a mixture).

Changing from the standard configuration requires a common location (typically a network folder) and a specific setting to inform this version where the files are located.

The default Administration Files location is C:\ProgramData\DNVGL\Phast_Safeti_8_4_0\Admin on Windows 8.1 and later versions (on older systems this is C:\Documents and Settings\All users\AppData\DNVGL\Phast_Safeti_8_4_0\Admin).

5.1 VARIOUS ADMINISTRATION FILES CONFIGURATIONS

The main installation includes the Administration Files. However, based on your standards, project needs and practices the default location for these files may not be appropriate.

The following sections details two main types of administration files settings.

5.2 USE OF THE STANDARD ADMINISTRATION FILE

This setting is already implemented, there is nothing to change, the application can be used immediately after it has been installed and licenced. If any of these Administration Files should be transferred to another machine, the copy must be made manually. There is no control over any edit if the user knows the Administrator password.

5.3 SHARED ADMINISTRATION FILES

This setting requires specific actions (described later in this section) and a simple change of the application's configuration on each PC that needs to share these common files.

This setting can enforce corporate standards as every user of the application will share the same parameter and material data.

This type of setting also allows the Administration Files to be specific to a project.

Depending on the file permissions, e.g. set by IT engineers or knowledgeable people, only a specific person or group of people may be allowed to change these files even if the user knows the Administrator password.

However, depending on the method used to share the files, a disconnected PC may prevent the application from working. Several methods are listed below:

1. Shared folder: Administration files are copied to the shared folder which may have restricted write permission. The machine running this version must be connected to these administration files during the application and administrator tools execution. This is not a good option if some users must run the application offline i.e. not connected to the organisation network.
2. Synchronised folder: The administration files are located on the network and as soon as the user's machine is connected to the network any updated administration file is synchronised. This can be a two-way synchronisation or most probably one way (typically from the shared location to the local machine). The Administration Files location on the local machine can be the default location (in this case no specific application's configuration is necessary). This option allows the user machine to be disconnected from the corporate network.

Describing how to configure a file synchronisation tool is outside the scope of this document, please refer to your software or ask your IT Helpdesk for assistance.

3. Deployed Administration Files: IT use deployment technology to push updates to local user's machines. This can be an option if shared folder and synchronisation are not valid options. As getting IT involvement may be hard to push the update, this method is probably acceptable if the corporate-controlled files are rarely changed. The deployed Administration Files location on the local machine can be the default location (in this case no specific application's configuration step is necessary).

The following table offers a summary of the various options:

Option	Appropriate for	Specific setting
Standard configuration	The Administration Files used are local to the machine and any changes do not have to be spread to other machines running this version	Changes must be manually copied to other machines
Project-based files	The Administration Files should be specific to a project and several projects may be running in parallel	User, knowledgeable user or IT may be able to configure the application to use the relevant Administration file set.
Corporate-controlled files	Only one set of Administration Files must be used throughout the organisation.	IT configures the application to use the approved shared folder through deployment technology.

The remaining sections described the specific setting for each of the above options and how to set a shared folder.

5.4 STANDARD CONFIGURATION

The application has already been configured to use this option. No changes must be made and the application can be run immediately.

Project-based files and Corporate-controlled files Configurations

The configuration is done in two main steps:

1. Copy the Standard Administration Files to the shared folder
2. Configure the application to use the shared Administration Files

5.5 COPYING THE STANDARD ADMINISTRATION FILE TO THE SHARED FOLDER

Both project-based and corporate-controlled administration files must have a defined network folder. Defining, creating a shared folder and drive mapping are outside the scope of this document (please ask your IT Helpdesk for assistance).

This document assumes the shared folder is mapped as P:\. Please adjust the remaining steps to match your specific environment.

The standard location of the default Administration Files is:

%ProgramData%\DNVGL\Phast_Safeti_8_4_0\Admin

In the case of a special operating system configuration another location may have been used, please ask your IT Helpdesk for help.

Note: %ProgramData% (C:\Documents and Settings\All users\AppData on Vista and C:\ProgramData on Windows 8.1 and later versions) is a hidden folder.

The new folder's location may vary, dependent on your own IT policies and preferences, but a sensible name may help to maintain and identify it. It is suggested that the sub-path Phast_Safeti_8_4_0\Admin is kept. For project-based versions the use of a specific project share or sub-path is recommended like ProjectNNN\Phast_Safeti_8_4_0\Admin. In the following example the shared drive letter is P: (for Projects) which is a specific share for ProjectNNN.

The DOS commands are for a standard English Windows 8.1 installation:

```
MKDIR P:\Phast_Safeti_8_4_0\Admin
```

```
COPY %ProgramData%\DNVGL\Phast_Safeti_8_4_0\Admin P:\Phast_Safeti_8_4_0\Admin
```

Additional folder/file settings may be required to control who can edit these files. Please use file properties or ask your IT Helpdesk for assistance.

5.6 SET THE APPLICATION TO USE THE SHARED ADMINISTRATION FILES

This step is to inform this version to use the shared Administration Files location instead of the standard path.

This step is not necessary if the files are synchronised and deployed to the default location.

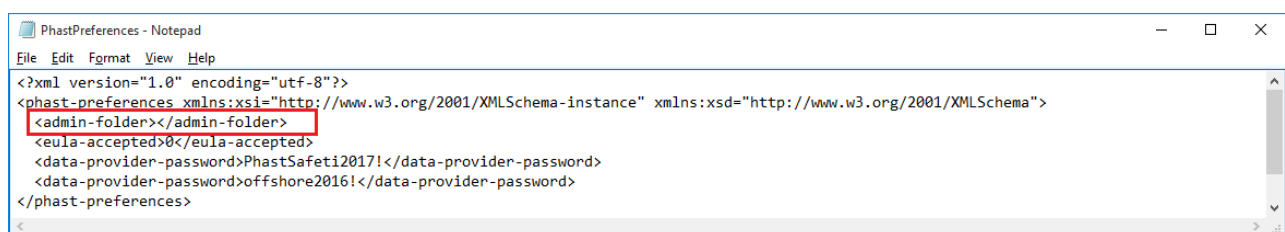
When the application starts, it reads the file PhastPreferences.xml in the standard Administrator Files location for the actual location. The file PhastPreferences.xml is in:

- Windows 8.1 and later versions: C:\ProgramData\DNVGL\Phast_Safeti_8_4_0\Admin
- Older OS: C:\Documents and Settings\All users\AppData\DNVGL\Phast_Safeti_8_4_0\Admin

In the case of a special operating system configuration another location may have been used, please ask your IT Helpdesk for help.

Note: C:\Documents and Settings\All users\AppData on Vista and C:\ProgramData on Windows 8.1 and later versions are hidden folders.

To specify a non-standard location that is to state the shared folder for this version of the application, the file PhastPreferences.xml is edited and the non-standard location of the shared Administration Files inserted in between the highlighted property `<admin-folder></admin-folder>` (the property may have been replaced by `<admin-folder />`, in this case you must replace it with its expended string `<admin-folder></admin-folder>` before editing the property as described below):



In our example, the property in the file

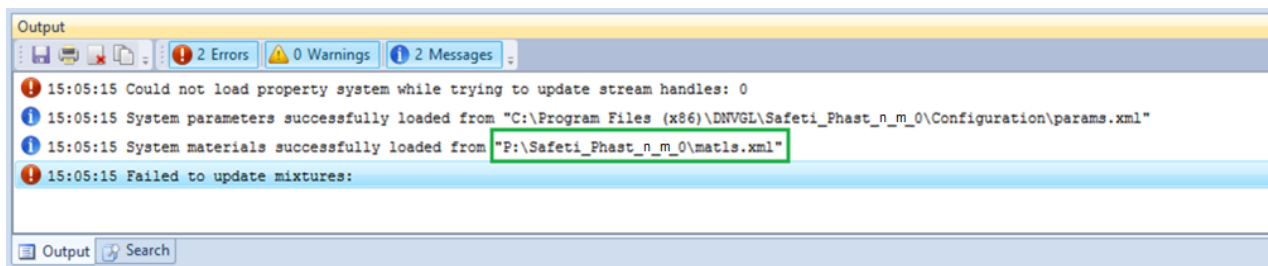
C:\ProgramData\DNVGL\Phast_Safeti_8_4_0\Admin\PhastPreferences.xml content will become (as shown in the picture below):

```
<admin-folder>P:\Phast_Safeti_8_4_0</admin-folder>
```

For enforced corporate-controlled Administration Files, the file PhastParameters.xml can be deployed from the corporate IT system (SMS, Active directory, etc.).

For project-based Administration Files, a person or a group of people or even any project team member can edit the file to specify the location of the project-based Administration Files.

As soon as the application or any Admin Tools (Admin Parameters and Admin Materials) is restarted, the new location will be used, and this can be checked from the output pane as shown below:



The picture above refers to the hypothetical version n.m.

5.7 HOW TO RESTORE THE ORIGINAL STANDARD ADMINISTRATION FILES

Restoring the administration files to their original version including the location of the Administration Files is done by copying the files in the References\Admin folder from the application folder to the standard administration files location.

By default, the application folder is for:

- C:\Program Files\DNVGL\Phast_Safeti_8_4_0

The Standard Administration Files location is:

- C:\ProgramData\DNVGL\Phast_Safeti_8_4_0\Admin

It is highly recommended that the files in the Standard Administration Files location are backed up before overwriting them.

First, if the common Administration Files were deployed or synchronised (for details, see the section [Shared Administration Files](#) in this document), the method for sharing must be undone; for example the synchronisation method must be stopped.

For a standard 64-bit Windows, the two commands are (where the COPY command is over one single line, is shown on the screen dump image below):

```
ATTRIB -R "C:\ProgramData\DNVGL\Phast_Safeti_8_4_0\Admin\*.*"
```

```
COPY /Y "C:\Program Files\DNVGL\Phast_Safeti_8_4_0\References\Admin" "%ProgramData%\DNVGL\Phast_Safeti_8_4_0\Admin"
```

```
ATTRIB -R "C:\ProgramData\DNVGL\Phast_Safeti_8_4_0\Admin\*.*"
```

The number of files copied depends on the product being installed.

As soon as the application or any Admin Tools (Admin Parameters and Admin Materials) is restarted, the default location will be used, and this can be checked from the output pane as shown below:

6 SILENT INSTALLATION

For deployment in a corporate environment, it is possible to install the application in silent mode. In any case, the command must be "run as administrator".

To install the application in silent mode, run setup_x64.exe with the following parameters.

```
Setup_x64.exe /s /w /l1033 /v" /passive"
```

The additional parameter for /l (the letter ell, not the digit one) can be 1033 (English), 1034 (Spanish) and 2052 (Chinese).

The exact details on the process, technology and the command to use are outside the scope of this document. From a standard DOS script, the typical command could be:

```
start /wait setup_x64.exe /s /w /l1033 /v" /passive"
```

7 REMOVING THE APPLICATION

Should it be necessary to uninstall this version, the uninstallation must be performed in the correct order, to avoid possible problems when re-installing this version of the application or installing other versions of the application on the same computer.

The aim of this section is to list the steps required to perform a clean uninstallation of this version. These steps are for a standard Windows 8.1 installation. Other operating systems may vary.

7.1 STEPS TO FOLLOW FOR UNINSTALLING THIS VERSION

It is highly recommended that users seek the help of their IT administrator in performing the following procedures since some steps may damage the user's computer. Do not hesitate to contact DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com).

1. In the Windows Start menu launch the Control Panel and choose Program and Features.
2. Browse through the list and find the relevant "Phast & Safeti n.m"
3. Click on remove "Phast & Safeti n.m"
4. Remove "DNV GL GMO Add-in" (for PC with old versions of the application, the name is "DNVS GMO Add-in").
5. Remove "Geomedia Objects"
6. Close the Uninstall a program window
7. In Windows explorer find the folder "C:\Program Files (x86)\Geomedia Objects" and delete it if the folder exists.
8. The following steps must be performed by a knowledgeable software professional (like an IT engineer) as the registry editor tool can damage the machine. It is only necessary if another version of Geomedia Objects from Intergraph needs to be installed (like the one included in an old version of the application such as Phast 6.531).
 - a. Start the registry editor
 - b. Delete the following three entries from the registry if any of them exists:
HKEY_CURRENT_USER\Software\Intergraph\Application\Geomedia Objects
HKEY_LOCAL_MACHINE\SOFTWARE\Intergraph\Applications\Geomedia Objects_06.01
HKEY_LOCAL_MACHINE\SOFTWARE\Intergraph\Geomedia Objects
 - c. In the registry editor, browse to the key:
HKEY_LOCAL_MACHINE\SOFTWARE\Intergraph\Applications\DefaultJCache
If the key value is set to "Geomedia Objects_06.01", then delete this key

8 KNOWN ISSUES

8.1 INSTALLATION OF OLDER VERSIONS

The installation of old versions must be done sequentially from the oldest to the newest. Failing to follow

this principle may prevent further installations and/or uninstallations and render currently working versions unusable.

If this version is installed and you need to use Phast 6.6 which is not installed, you must uninstall this version and all its pre-requisites first, if necessary, uninstall version 6.7, before installing version 6.6, then if necessary 6.7 and finally this version. It is recommended to reboot when prompted, after the uninstallations.

8.2 VERSION 6.531 INCOMPATIBILITY

Phast and Safeti 6.531 use Intergraph Geomedia 4.2 which is not compatible with later versions of the application, including this version.

It is essential that Phast 6.531 and early versions are uninstalled before starting to install this version. Alternatively, using a PC without version 6.531 would allow old studies to be run from their original application.

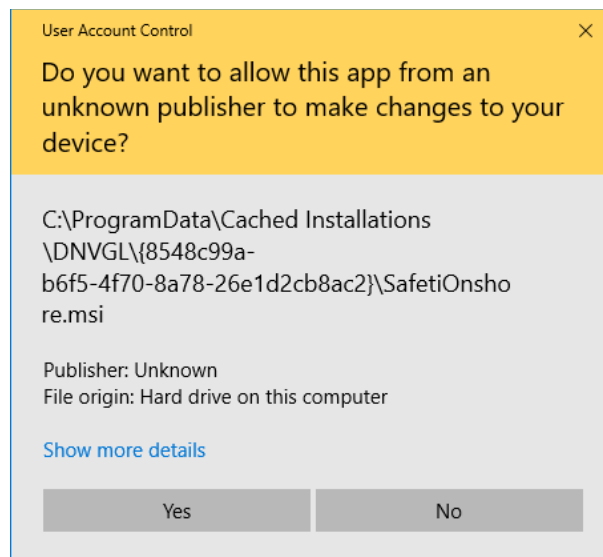
8.3 INSTALLATION LOCATION

By default, the application is installed in "C:\Program Files\DNVGL\Phast_Safeti_8_4_0".

Using the Installer, it is possible to specify a different path albeit it is not recommended as the application expects that its parent folder is "Phast_Safeti_8_4_0", for example the installation path D:\Folder\Phast_Safeti_8_4_0 is acceptable whereas D:\Folder or D:\Folder\Phast_Safeti_8_4_0_ would cause the application to fail.

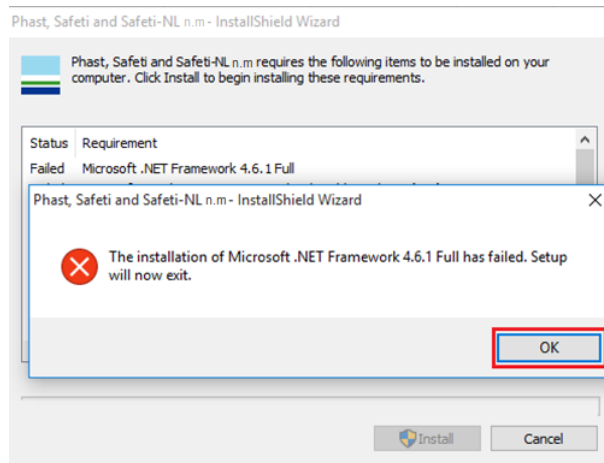
8.4 INSTALLATION TIMEOUT

On Microsoft Vista, Windows 7 and later, each main installation step triggers a security message like:



If this message is not acknowledged by clicking on Yes within 90 seconds, the installation will abort.

- During the pre-requisite installation, the following message will appear:



The picture above refers to the hypothetical version n.m.

Click on OK to continue.

- During the main Installation, if the security warning is not acknowledged by clicking on Yes, the installation will abort and the following dialog will be displayed. To continue, please click on Finish.



The picture above refers to the hypothetical version n.m.

In both cases, you will have to restart the main installation by clicking on setup_x64.exe again (or the main installation link from the installation page). Then the remaining pre-requisites (required third-party components) will be installed and the main installation will be called automatically.

8.5 FILE PERMISSIONS AND USER RIGHTS

This version requires three types of permissions and rights:

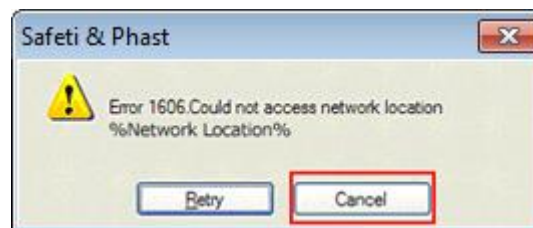
- System "administrator" rights for installing the software. This is a temporary requirement to allow the user to install the product. The user account can be assigned to an IT person or a normal user who is given administrator rights for the duration of the installation. When running the application, the user does not need any administrator rights.
- 'Full Access' to 'Authenticated Users' to the Study Folder Files Location, by default C:\Users\Public\Documents on windows 7 and later versions (C:\Documents and Setting\All Users\Documents on older operating systems). During the installation, the setup program sets the Study Folder Files Location correctly. However, if your organization has some special setting and enforces them, the setting may be overwritten, and the application will fail while processing

a study file. Please contact DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com) if you experience such a problem.

- By default, the application's Admin Files are installed in the "All Users" profile (C:\ProgramData\DNVGL\Phast_Safeti_8_4_0\Admin\ on Windows7 and more recent versions and C:\Documents and Settings\All Users\Application Data\DNVGL\Phast_Safeti_8_4_0\Admin\ on older operating systems), so any user of the PC can read and write (with an appropriate application's Administrator password) those files.

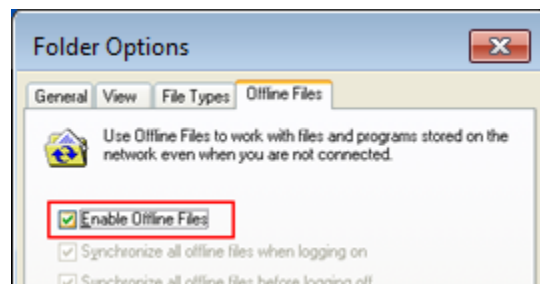
8.6 INSTALLATION WHILST THE USER IS NOT CONNECTED TO THE ORGANISATION NETWORK

Installation may fail if the user is working offline. In this case the installation will produce the following error or similar message:



There are various workarounds to overcome this issue:

- Connect to your network. If you are at your office, connecting to the missing network resource by joining your domain/network (plugging in an Ethernet cable or switching on your wireless connection) or if you are not in the office, using a Virtual Private Network connection over the internet will overcome the issue.
- In some cases, making offline files available can overcome the issue as it simulates the presence of the network resource when you are not connected to the network. To switch on Offline Files capability, start Windows File Explorer and choose the menu item Tools > Folder Options > Offline Files. Check the box Enable Offline Files.



You can then proceed with the installation. It is advisable to switch the unused offline files capability off again once this version is installed if it is not your usual practice.

8.7 VIRTUALISATION

There are several issues with running this version of the application on a virtualization operating system (Citrix, VMware, Oracle VirtualBox, Virtual PC, XP Mode under Windows 7, etc.). This version is not supported under any virtualised operating system.

8.8 USB SECURITY KEY INSERTED BEFORE THIS VERSION IS INSTALLED

If the USB Security Key, sometimes called dongle, is inserted into the USB port before this version is

installed, this will cause the key not to be recognized. After the installation is completed the USB Security Key can be inserted into the USB port and it will be automatically recognized by the system. Failure to follow this process would require the driver currently used by the operating system to be uninstalled. Please contact DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com).

8.9 Windows Updates

Some of the Microsoft redistributable files we use require a special Windows update on Windows 7, 8 or 8.1. If your operating system has its Windows Update activated, this pre-requisite should have automatically been installed and you will not need to take any action. However, if your operating system is not up-to-date, the Windows update described in the following web page must be installed.

<https://support.microsoft.com/en-us/help/2999226/update-for-universal-c-runtime-in-windows>

The required Windows update is specific to an operating system and only the relevant update must be downloaded and installed. Additional pre-requisites may be required first, they are detailed in the web page. Please ask knowledgeable a system engineer and/or your corporate IT for advice.

8.10 REBOOT REQUIRED ON WINDOWS 10 AFTER THE INSTALLATION

If your version of Windows 10 is not up-to-date with the Windows Updates and Security Patches, after the installation of the software, a reboot is required. Without rebooting the licence cannot be found and a prompt for licence will always be made and will fail. Users will also be prompted to accept the EULA each time the software is started. If this prompt reoccurs, a reboot will be required to resolve this issue.

8.11 WINDOWS 8.1, WINDOWS 10 AND LATER VERSIONS ISSUES

You may experience two different issues while installing the software.

- Microsoft .NET 3.5 must be installed manually, it is not installed by default on Windows 8.1, 10 and later versions. **.NET 4.0 and later versions do not include .NET 3.5 functionalities.**
- On Windows 8 and probably on more recent versions, the installation may fail if the operating system is not up-to-date with Windows updates and security patches.
- On Windows 10 early versions, the installation process may fail to restart after any reboot. In this case, please restart the installation by clicking to setup_x64 (setup_x64.exe if extensions are shown on your system).

The next two sections detail the steps to perform, prior to starting the installation, in order to avoid these two issues.

8.11.1 Microsoft .NET 3.5

You must be a local administrator account to perform the actions detailed in this section.

It is also assumed that you have good Windows knowledge. If not, please seek advice from your organisation's IT Helpdesk.

.NET Framework 3.5 not Installed

By default, .NET Framework 3.5 is not installed on Windows 8 and later versions. However, the main installation requires .NET Framework 3.5 to be installed before setup_x64.exe is run. You will either need to download the Framework or use the appropriate Windows installation DVD.

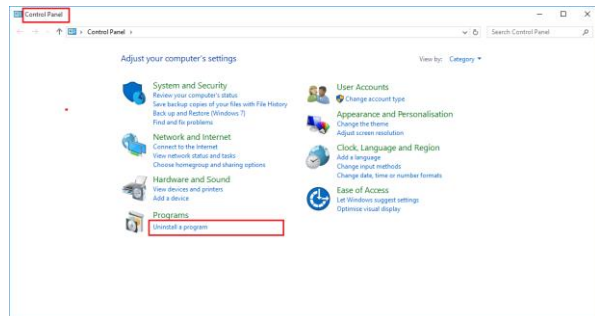
Further details can be found from <https://docs.microsoft.com/en-us/dotnet/framework/install/dotnet-35-windows-10>.

How to Check whether .NET Framework is Installed

Start Control Panel

Click on Settings, Control Panel from the right pane (depending on your environment, Control Panel may be accessed elsewhere).

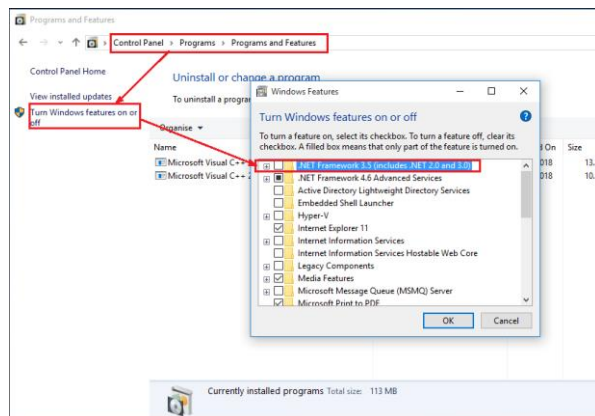
Click on Uninstall a program



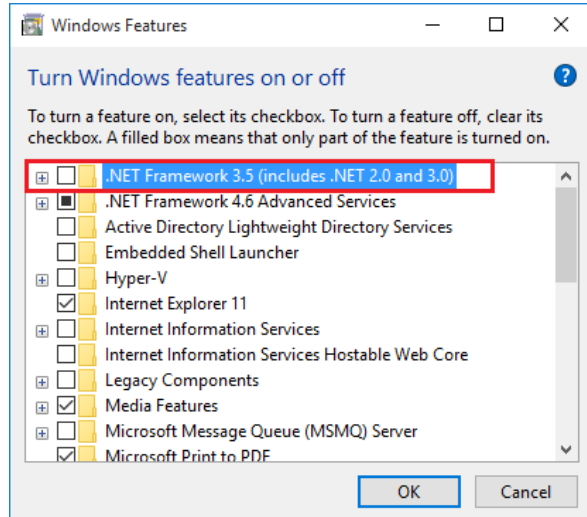
Check Whether .NET Framework 3.5 is Installed

From the Programs and Features dialog, click on "Turn Windows features on or off"

- Browse the Windows Features list
- Check whether ".NET Framework 3.5" is installed (ticked), right



In this example, ".NET Framework 3.5" is not installed (it is un-ticked) and will need to be installed before setup_x64.exe is run. See next sections for installing .NET 3.5.



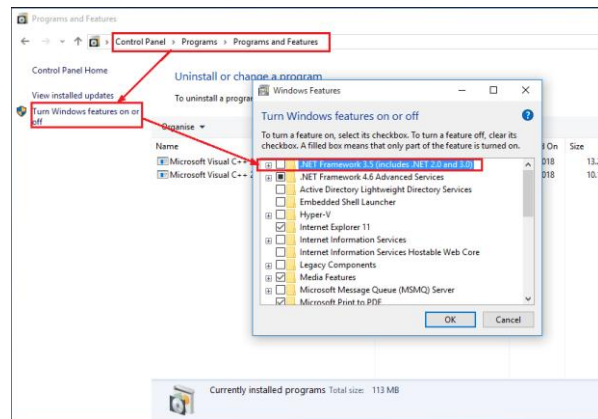
Installing .NET Framework 3.5 while the Computer is Connected to the Internet

As the download size is around 60MB, a stable, high speed connection is recommended.

Go to the Windows Features list

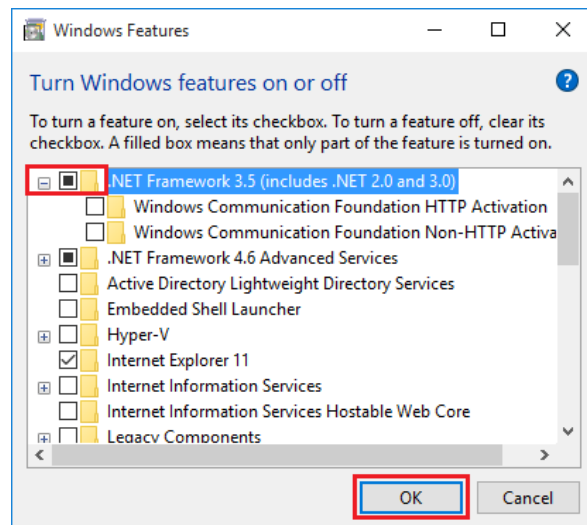
In the Control Panel dialog, click on "Uninstall a program"

In the Programs and Features dialog, click on "Turn Windows features on or off"



Expand and tick mark ".NET Framework 3.5"

As shown on the right the sub-features do not have to be selected.



Click on OK to download and install .NET Framework 3.5 by following the various dialogs (details are outside the scope of this document).

When the installation is completed, please close all Windows related to Control Panel. This concludes the installation of .NET Framework 3.5 by downloading it from the internet.

The setup_x64.exe can be run now.

Installing .NET Framework 3.5 when the Computer is not Connected to the Internet

In this case you must have the Windows 8 installation DVD inserted into the DVD drive. You must also have elevated privileges (like an administrator account).

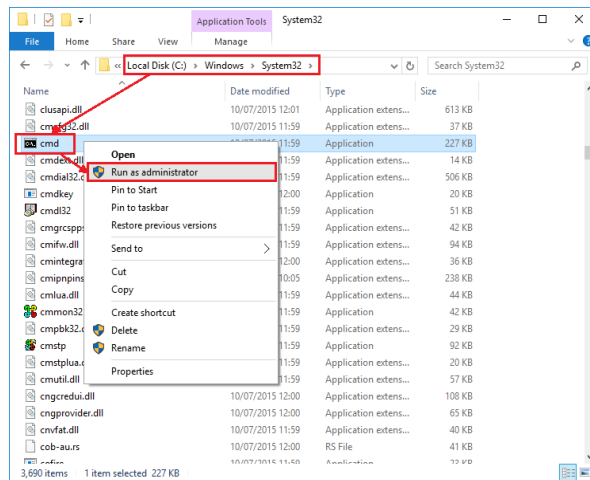
"Run as Administrator" cmd.exe (Windows Command Processor)

Using File Explorer, browse to C:\windows\System32

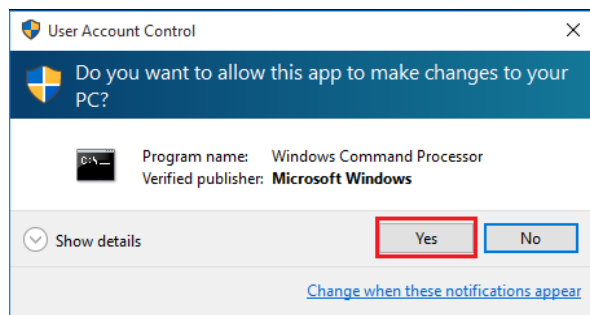
Search for cmd.exe (depending on your settings, .exe may not appear as shown on the right)

Right-click on the file cmd.exe

Select Run as administrator (you may be prompted for an administrator account and password)



Click on Yes if this Standard Security Dialog Appears

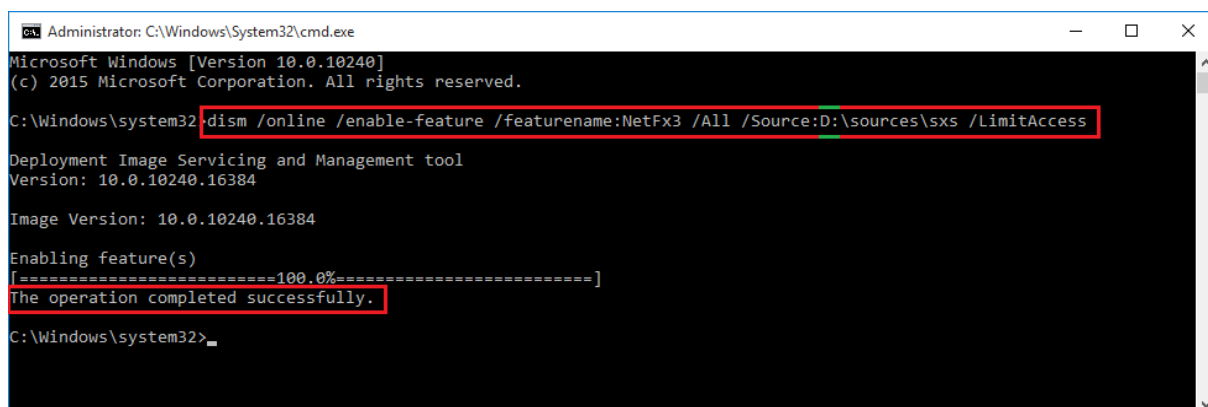


Install .NET Framework 3.5 from the Windows 8 Installation DVD.

From the Windows Command Processor window, type the following line and press enter to actually run it:

```
dism /online /enable-feature /featurename:NetFx3 /All /Source:D:\sources\sxs /LimitAccess
```

where D: is the drive letter for the Windows 8 Installation DVD.



On Completion

If the operation completed successfully, you can start the main installation again as described in the installation section.

On Failure

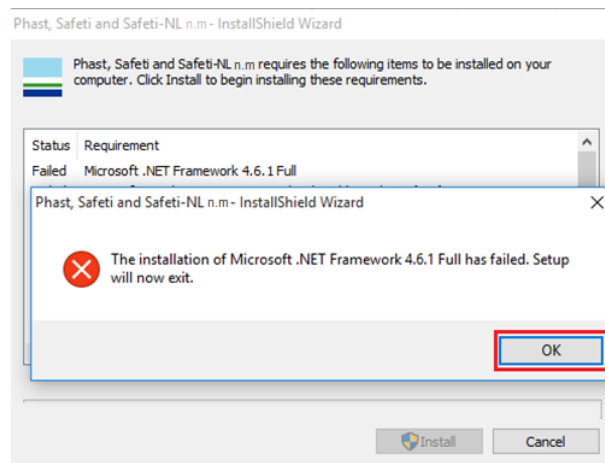
In case of failure, please contact your IT department for help or DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com)

8.11.2 Out-of-date operating system

Few pre-requisites may expect specific Windows updates and security patches. For example, the software requires the update KB2919355 on the initial Windows 8.1 release. In this environment, If the update not installed, an error will be reported, you must terminate the installation, update your operating system and then rerun the installer. Listing all cases is outside the scope of this document.

In order to avoid any installation failure, it is strongly suggested you make sure your operating system is up-to-date with Windows updates and security patches.

A typical error if the operating system is not up-to-date with updates



The picture above refers to the hypothetical version n.m.

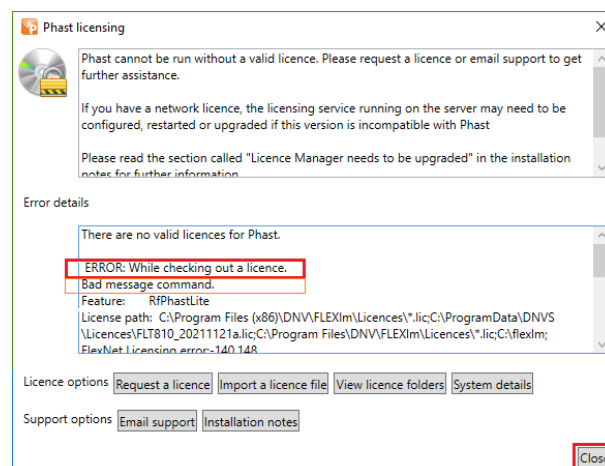
Please click on OK, exit from the installation when prompted and proceed with the next section.

How to install latest Updates

The Windows Updates are made from the Control Panel. Please ask your IT help desk for assistance. When done, make sure the system has fully been completed the updates by rebooting the PC and proceed with the installation as described in [the installation section](#).

8.12 The licence manager needs to be upgraded

If you have a network licence (also referred as concurrent or floating), typically a corporate licence for several users managed and counted from a server, the licensing manager running on the server must be upgraded for the this version to check out a license successfully.



This is due to the upgrade of FlexNet 11.14 (formerly FLEXlm from Flexera Software) in this version. Until the server is upgraded, the licence control will fail at the start with the dialog prompting for

importing a licence as shown in the screen capture above.

KNOWN ISSUE: This version of FlexINet 11.14 does not support Windows Server 2008 R2. The new Licence Manager must be installed on a more recent Windows operating system.

This version includes a specific installer for the DNV GL Licence Manager which is backward compatible with previous releases of our products. Before upgrading to this Licence Manager release, the version currently installed on the server must be uninstalled (it is suggested to stop the RMS Licence Service first).

In this case, please read the Licence Manager installation notes provided with the installer and accessible from the Installation page from the DVD or from the customer portal.

If the server has been upgraded to this new Licence Manager and users still experience licence issue, please contact DNV GL - Digital Solutions Support for advice (Software.Support@dnvgl.com).

8.13 The installation fails to restart after rebooting

On Windows 10 early versions, the installation process may fail to restart after any reboot. In this case, please restart the installation by clicking to setup_x64 (setup_x64.exe if extensions are shown on your system).

8.14 Fails to detect video card's CUDA capacity

While running risk calculations in Safeti you may notice the warning IRISK 1101 if the CUDA capacity is not be detected due to an old video driver is installed. The latest driver for Nvidia card can be downloaded from <https://www.nvidia.com/Download/index.aspx>

For your information, this version of Safeti uses a later version (version 11) of CUDA than previous versions of Safeti for individual risk calculations. If you wish to benefit from the speed up in calculations this facilitates, you will need to ensure your CUDA version is updated to the latest driver version.

ABOUT DNV GL

Driven by our purpose of safeguarding life, property and the environment, DNV GL enables organizations to advance the safety and sustainability of their business. We provide classification and technical assurance along with software and independent expert advisory services to the maritime, oil and gas, and energy industries. We also provide certification services to customers across a wide range of industries. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping our customers make the world safer, smarter and greener.

DIGITAL SOLUTIONS

DNV GL is the world-leading provider of software for a safer, smarter and greener future in the energy, process and maritime industries. Our solutions support a variety of business critical activities including design and engineering, risk assessment, asset integrity and optimization, QHSE, and ship management. Our worldwide presence facilitates a strong customer focus and efficient sharing of industry best practice and standards.