

# ENVITIA

DISCOVER > ANALYSE > ACT

## MapLink Pro Quick Start Guide

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## 1. RELEASE LIMITATIONS

Please also refer to the Release Notes for your platform before using this version of MapLink Pro.

### 1.1. Windows 8.0/8.1 Installation

Installing on Windows 8.0 will result in a minimal set of shortcuts on the Start Screen.

Windows 8.1 does not permit installing any shortcuts directly to the Start Screen, and will be installed to the full Apps Screen instead. The user is expected to pin any favourite shortcuts to the Start Screen.

## 2. WINDOWS INSTALLATION

If you install MapLink Pro from a CD insert the CD in an appropriate drive and run one of the MSI installers. When you have installed MapLink please also install any patches.

There are several installers available:

- **MapLinkPro\_10\_1\_B\_x64.exe**                      64-bit MapLink Pro development. The default for this installation will be the 64bit programs and 64bit Studio Automation.  
Includes MapLink Studio.  
Includes MapLink OGC Services.
- **MapLinkStudio\_10\_1\_B\_x64.exe**                      64-bit MapLink Pro Studio.
- **MapLinkOGCServices\_10\_1\_B\_x64.msi**                      MapLink OGC Services.

Where:

**B** is the Build Number.

Once the installer has started follow the on-screen instructions to install MapLink Pro.

Additional installation information can be found in the following sections:

- Section 2.1 MapLink Pro Installation Process.
- Section 2.2 MapLink Studio Installation Process.
- Section 2.33 MapLink OGC Services Installation process

Additional Notes:

- If you have installed an Evaluation version of the installer you must uninstall the Evaluation version first.
- You cannot install the full version of MapLink Pro and MapLink Studio installations on the same machine. The full version contains MapLink Studio.

## 2.1. MapLink Pro Installation Process

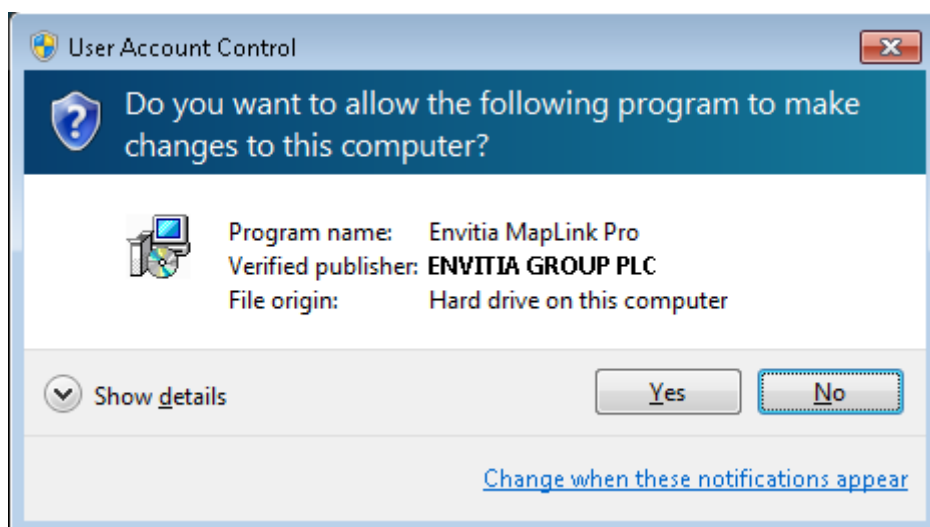
The MapLink Pro installer is a WiX bundle that installs prerequisites, such as the Visual Studio 2015 Update 3 redistributables, to allow MapLink Pro to work.

There may be several install dialogs displayed during this process, all of which need to complete for MapLink Pro to work correctly. Please note that the Visual Studio 2015 redistributable installer must be allowed to complete as the cancel process appears not to be clean.

After starting the installer the following screen is displayed. Please press the Install button.



On pressing Install a Windows UAC dialog should be displayed as show below. Please press 'Yes' to allow the install to occur.

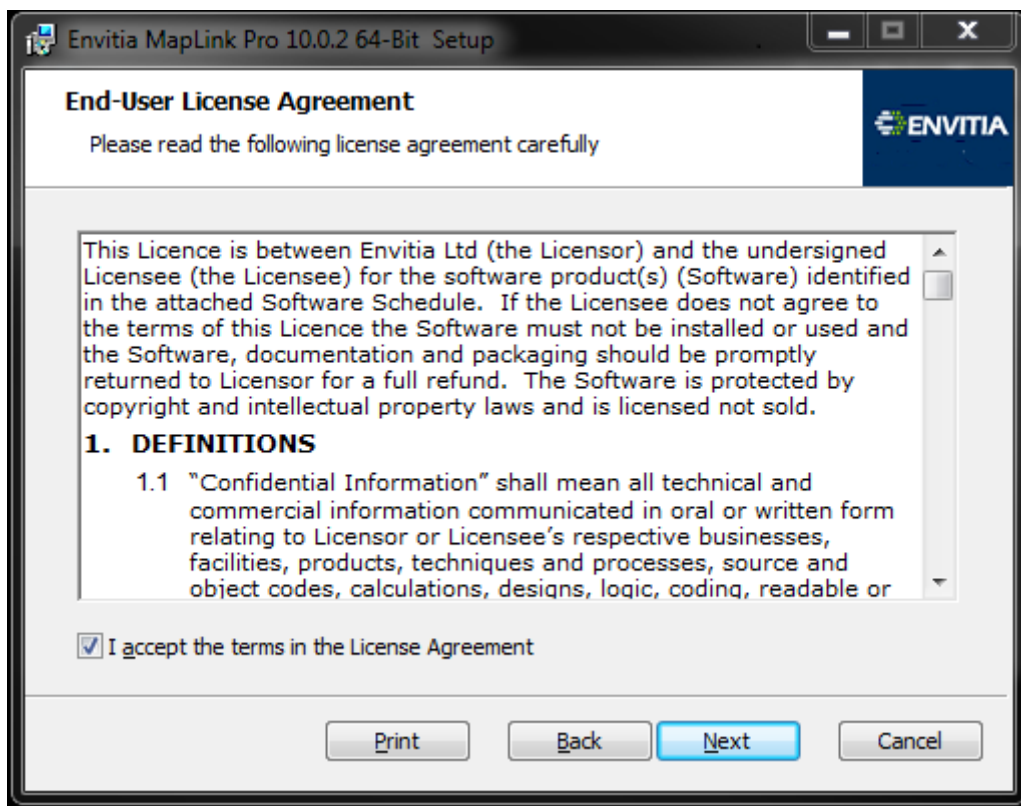


At this point the 'MapLink Pro' installer dialog is displayed. *Please note that the dialog displayed may not appear on-top.*



This first screen of the MapLink Pro installation is a Welcome Screen.

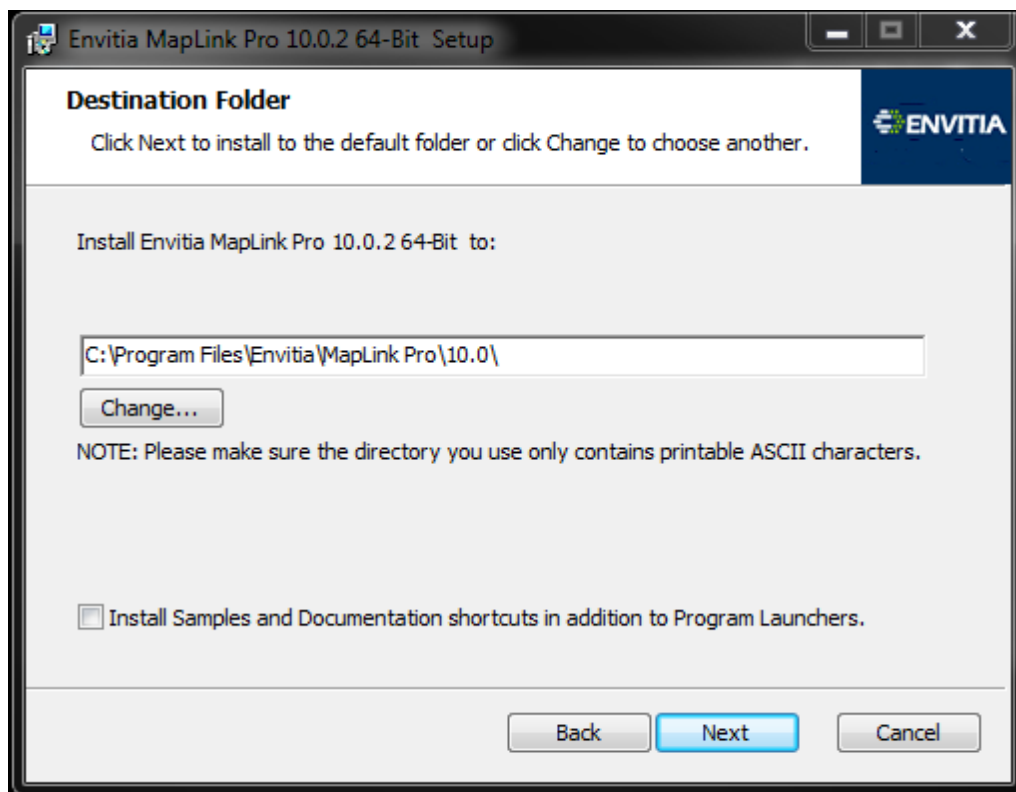
Click 'Next' and then review the licence that is displayed.



Failure to agree to the licence means that MapLink Pro will not be installed.

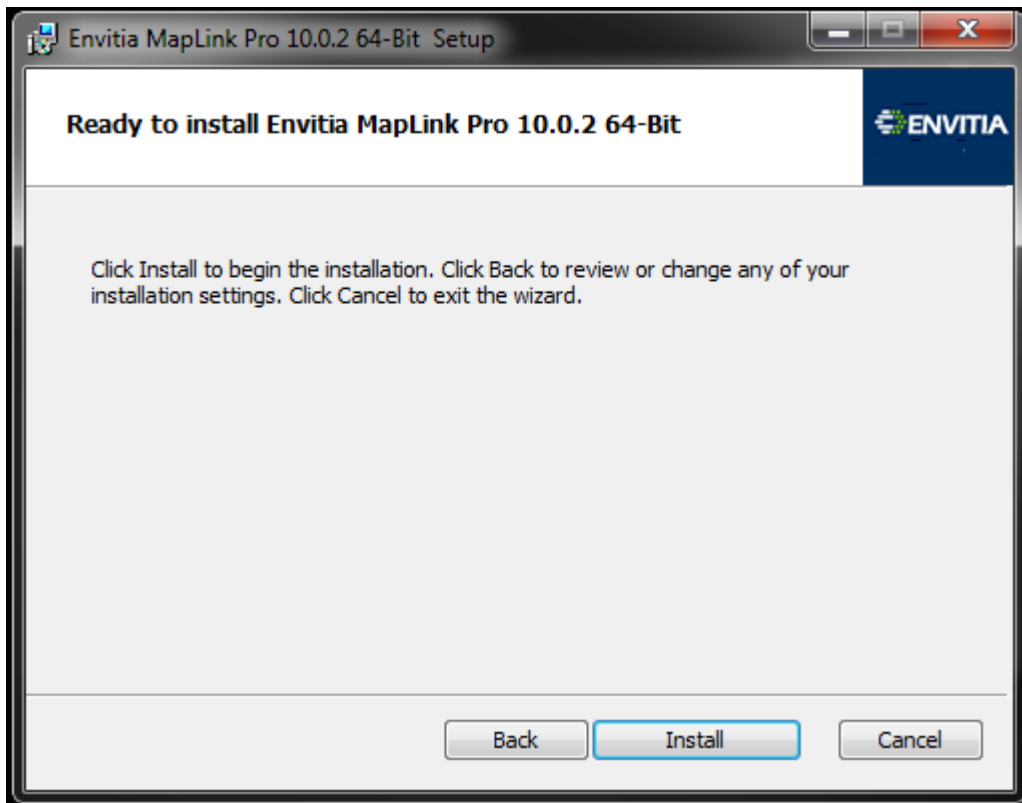
Click 'Next'. You will then be given a choice of where MapLink Pro will be installed to.

**NOTE: Please make sure the directory you use only contains printable ASCII characters.**

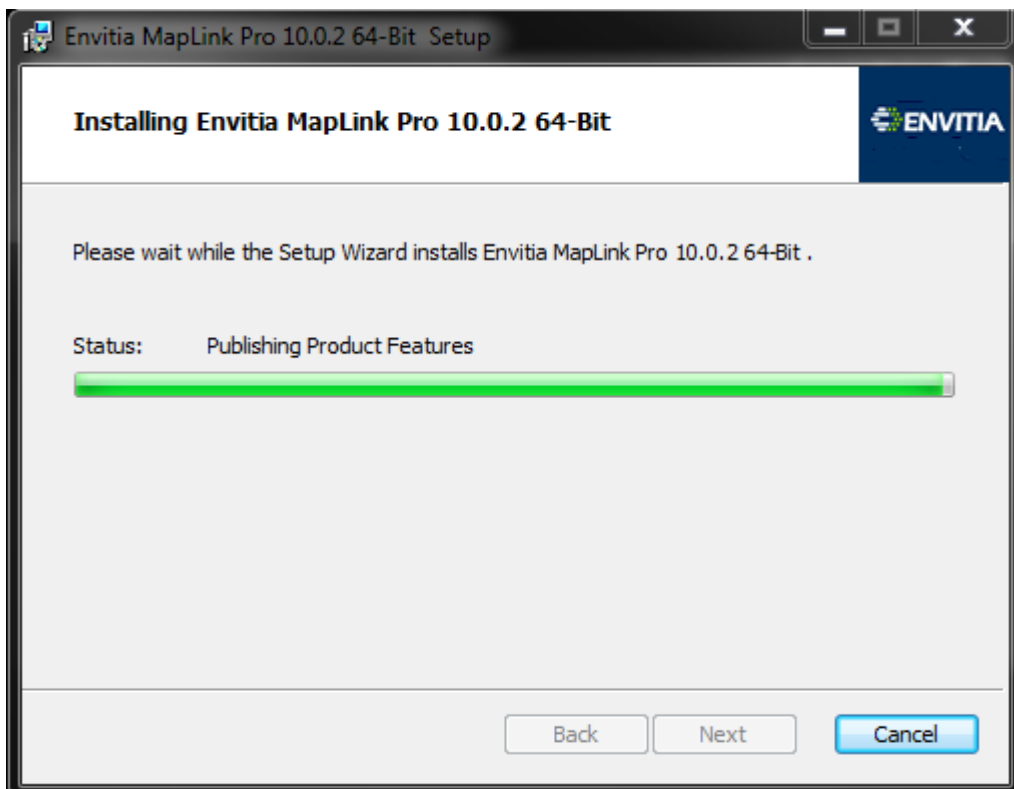


You can also choose to install the Sample and Documentation shortcuts. By default we use a set of Launcher programs to provide access to the Tools, Samples and Documentation; this is to reduce the number of items added to the Windows 8.0/8.1 Start Screen. The Launcher programs provide descriptions for each item listed.

After choosing the program folder click 'Next'.

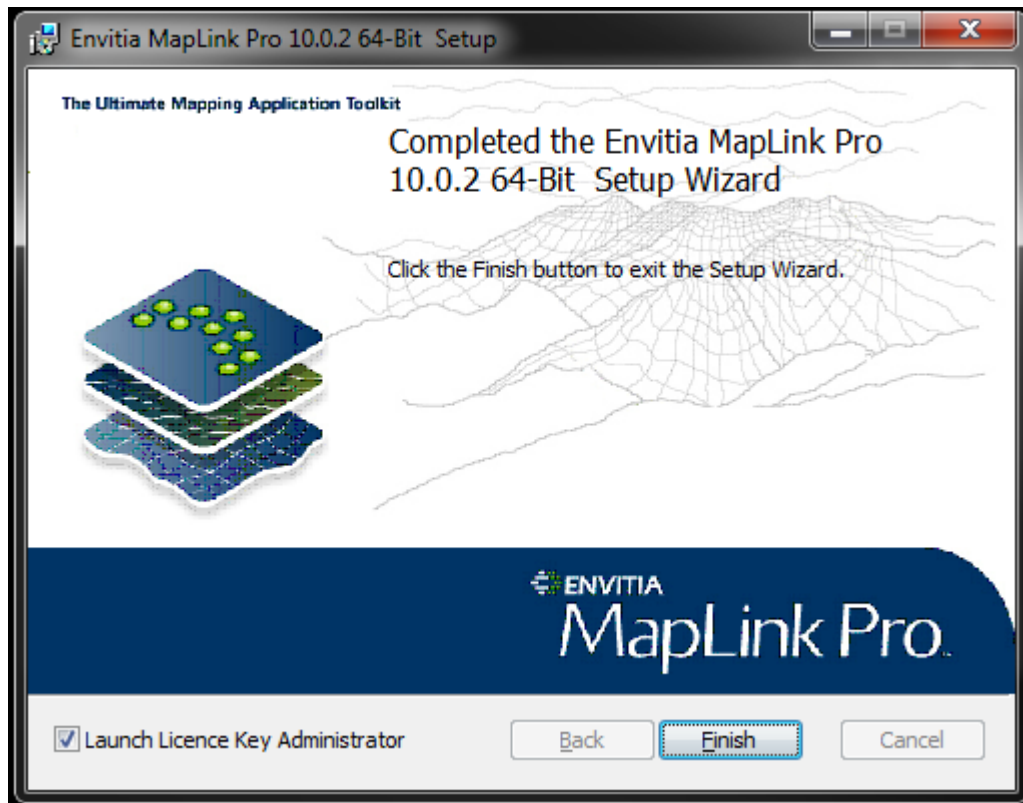


Click 'Install' to begin the installation. You may need to answer yes to a User Account Control dialog before the installation begins.



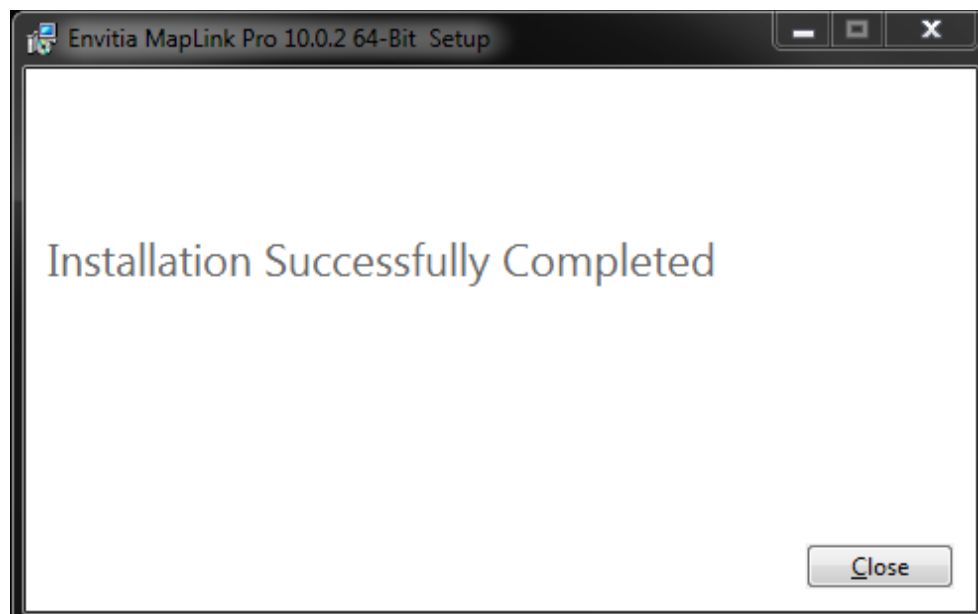
Once the installation is complete, click 'Finish' to exit the MapLink Pro installer.





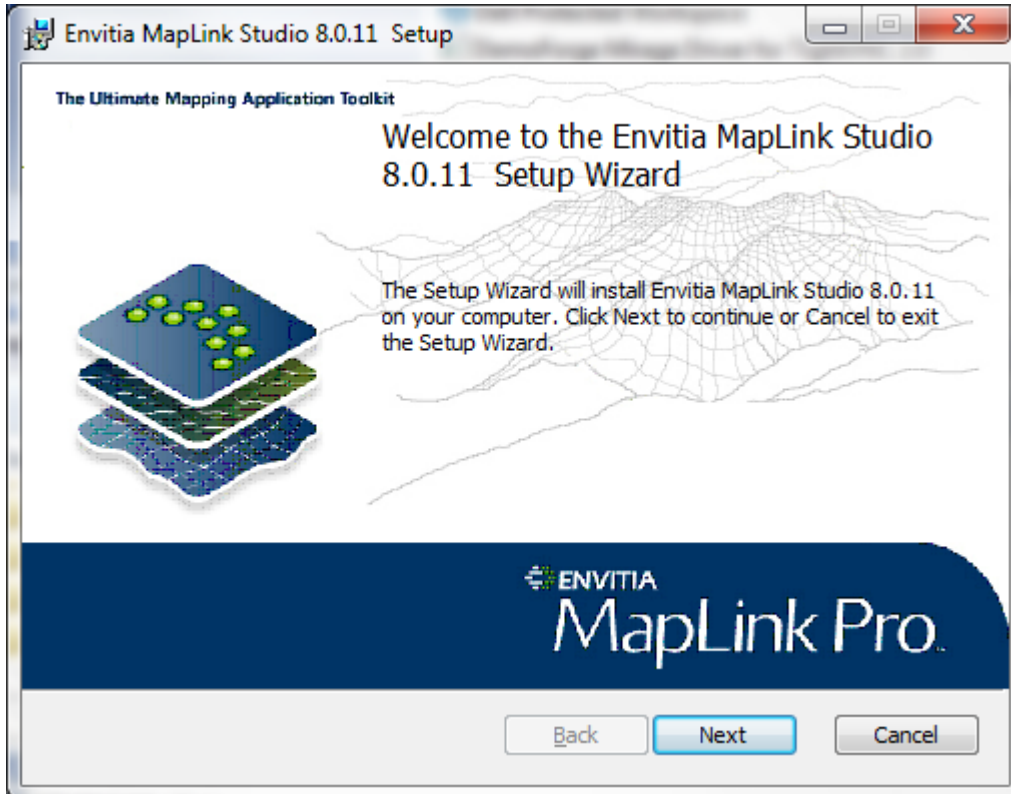
The 'Licence Key Administrator' is started automatically. You may need to answer yes to a User Account Control dialog before the 'Licence Key Administrator' starts.

Remember to close the base installer:

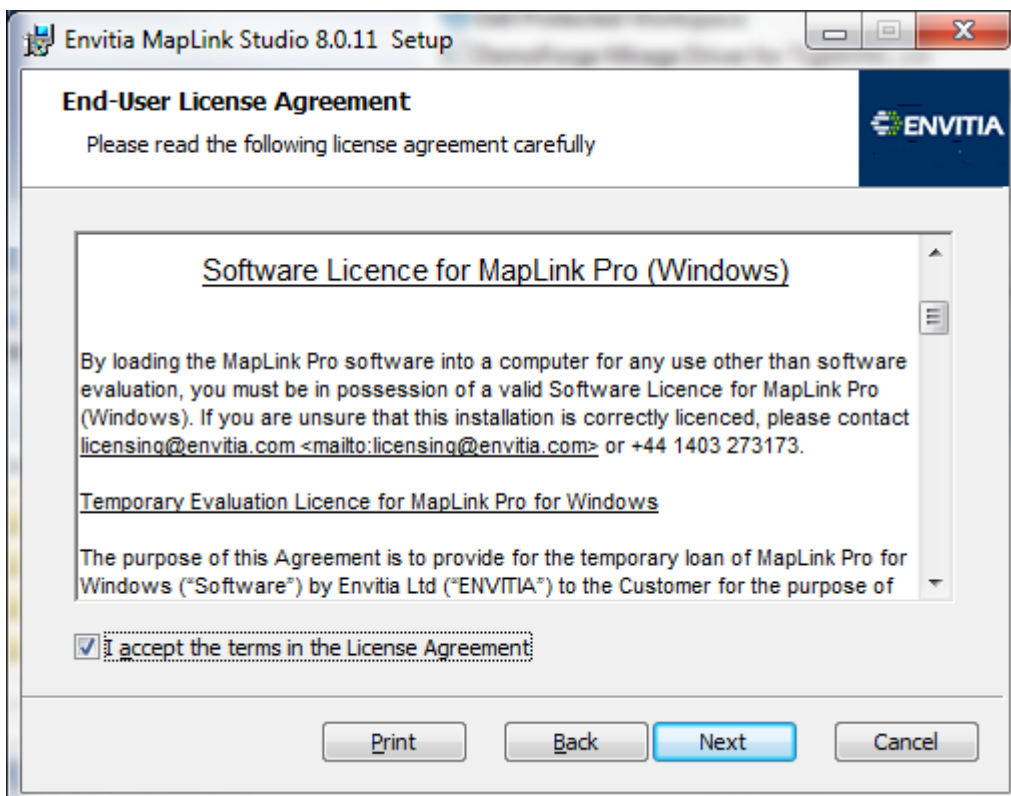


## 2.2. MapLink Studio Installation Process

The MapLink Pro Studio installer is a WiX bundle that installs prerequisites, such as the Visual Studio 2015 Update 3 redistributables, to allow MapLink Pro Studio to work.

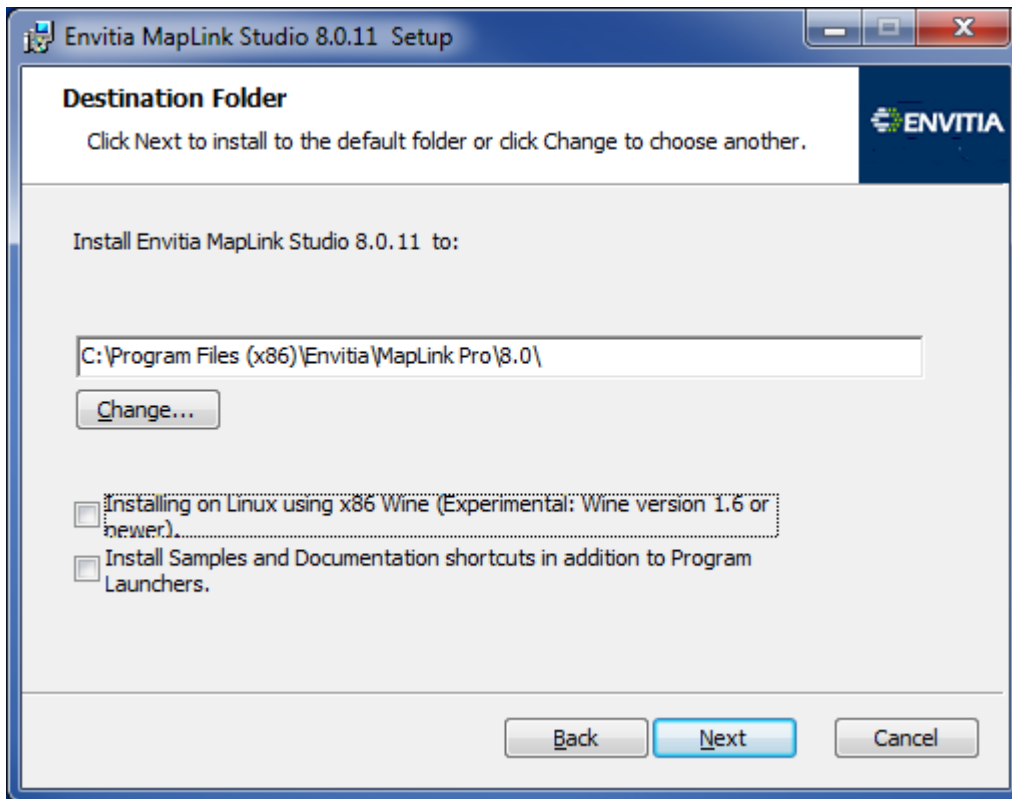


Click 'Next' and then review the licence that is displayed.



Failure to agree to the licence means that MapLink Studio will not be installed.

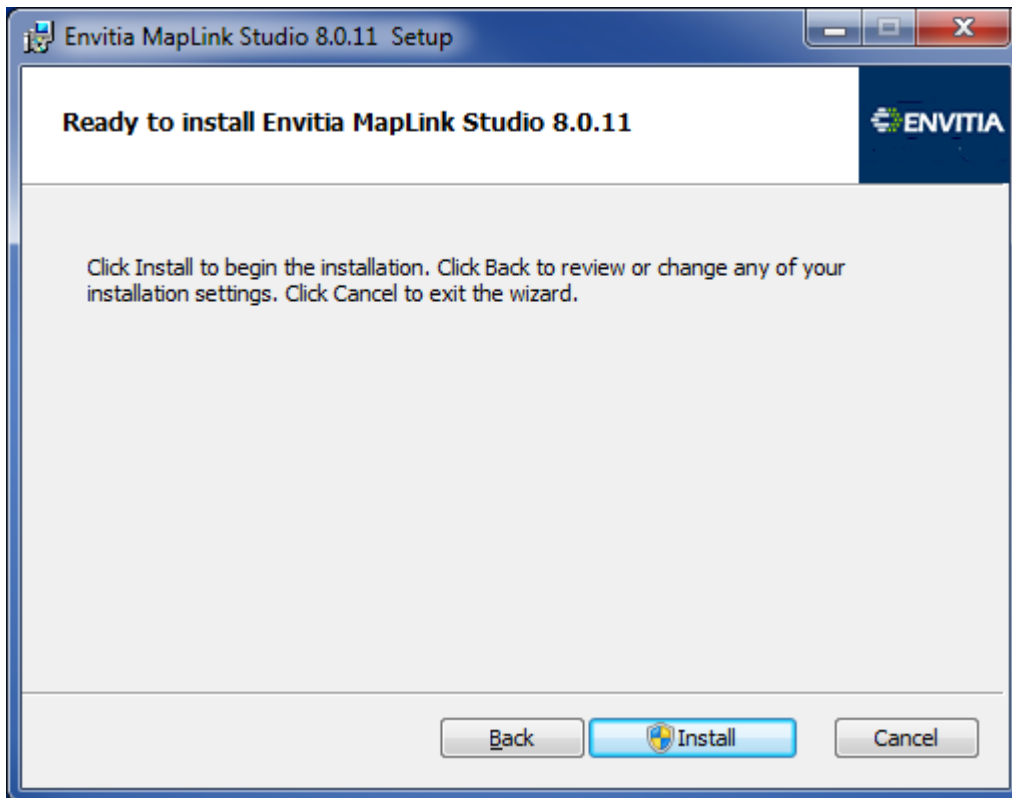
Click 'Next'. You will then be given a choice of where MapLink Pro will be installed to.



If you are installing MapLink Studio on Wine please refer to section **Error! Reference source not found..**

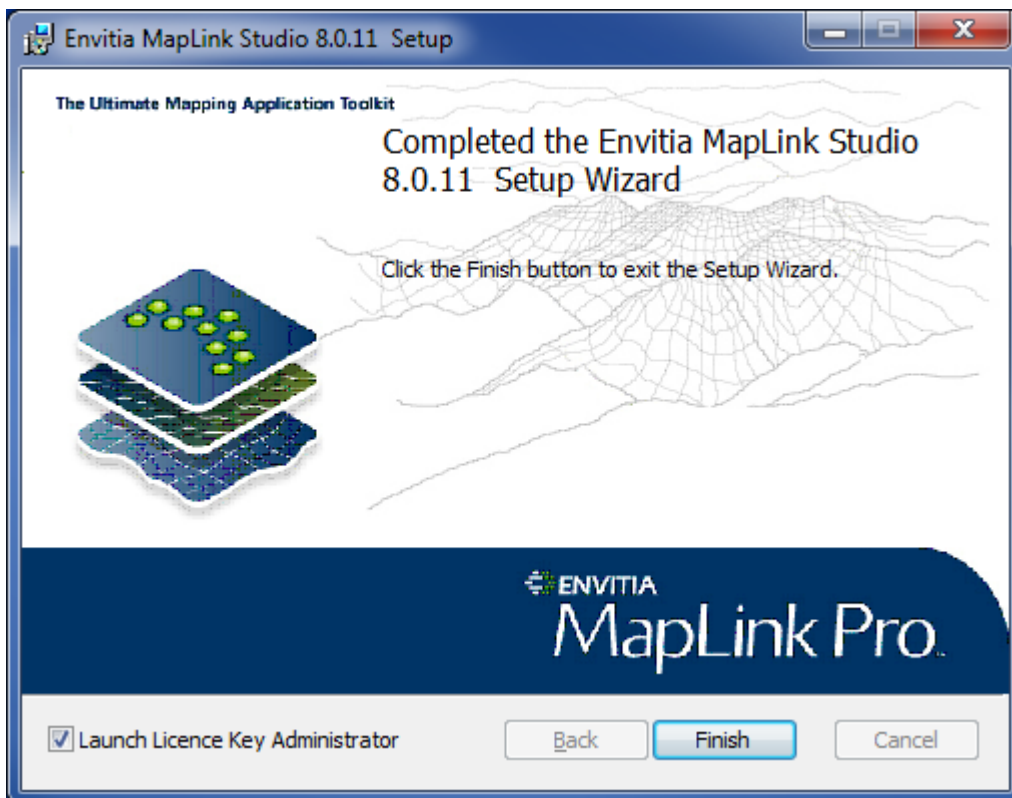
You can also choose to install the Sample and Documentation shortcuts. By default we use a set of Launcher programs to provide access to the Tools, Samples and Documentation; this is to reduce the number of items added to the Windows 8.0/8.1 Start Screen. The Launcher programs provide descriptions for each item listed.

After choosing the program folder click 'Next'.



Click 'Install' to begin the installation. You may need to answer yes to a User Account Control dialog before the installation begins.

Once the installation is complete, click 'Finish' to exit the installer.



The 'Licence Key Administrator' is started automatically. You may need to answer yes to a User Account Control dialog before the 'Licence Key Administrator' starts.

### 2.2.1. Licencing

Once you have licenced MapLink Studio do not change the Windows version as this will invalidate the licencing.

### 2.2.2. Fonts

MapLink Studio and the MapLink tools use quite a number of different fonts. You may need to install additional fonts or modify the tslfonts.dat file to match fonts on your Linux distribution.

The file tslfonts.dat contains some hints as to where True Type fonts can be obtained from.

The file tslfonts.dat can be found in the MapLink Studio installation config directory.

## 2.3. MapLink OGC Services Installation process

The MapLink OGC Services installer is a minimal installation, which just contains the MapLink Gateway, WMS/WPS Servers, and a set of plugins for these servers. This installation is only available as a 64-bit installation, however the MapLink OGC Services are also included in the full MapLink Pro installation.

The procedure for installing the MapLink OGCServices installer is the same as the MapLink Pro and MapLink Studio installation procedures, with the following differences:

- Only a minimal set of runtime libraries will be installed, enough to support the provided WMS and WPS plugins. For developing custom WMS and WPS plugins, the full MapLink Pro installation will be required with the appropriate licences.
- Only a minimal set of start menu shortcuts will be created.
- The MapLink OGC Services installation may be installed alongside a MapLink Pro or MapLink Studio installation. It is important however that the OGC Services are not installed to the same location as the other installers. The OGC Services installer will display a warning if another MapLink installation is detected.

In order to use the web services included in this installer, the MapLink OGC Services will need to be deployed in either Microsoft IIS or Apache Tomcat.

The procedure for deploying these services is described in the document:

'MapLink OGC Services Deployment User Guide'

This document, and all others included in the installation may be accessed via the MapLink Pro Documentation shortcut in the start menu.

### 3. LINUX INSTALLATION

The Linux installation is provided in one of the following formats:

- As a compressed tar
- DVD/CD
- ISO image

In all cases copy the contents of the distribution to a disk location and read the 'Release Notes' section 'For X11 Developers'.

You will need to install a version of MapLink Studio, on Windows (see 2.2 and **Error! Reference source not found.**), to be able to create Maps.

#### 3.1. Documentation and Samples

The documentation is contained in the 'docs' directory.

The samples are contained in the 'samples' directory.

#### 3.2. Linux Evaluation

The MapLink Pro Linux evaluation is node locked and requires a working eth0. This does not need to be connected to the internet.

Please send the output of the following command, in a plain text file, to Envitia so that we can generate a 30 day evaluation key:

```
/sbin/ifconfig -a
```

Any requests/questions related to licensing or any other questions can be put via phone or email to Envitia.

Phone: +44 1403 273 173

Email: [licensing@envitia.com](mailto:licensing@envitia.com)

## 4. ANDROID INSTALLATION

Please read the 'Readme.html' for instructions on installation.

You will need to install a version of MapLink Studio to be able to create Maps.

### 4.1. Android Licencing

The main functionality of the MapLink Pro CoreSDK, and each additional SDK/runtime component are protected by a licence key, and must be unlocked before use. Licence keys are obtained directly from Envitia support, and are handled separately from the windows licencing functionality.

Licence keys may be full, or evaluation keys. Evaluation keys are time-limited, and will display a watermark when used in an application.

Any requests/questions related to licensing or any other questions can be put via phone or email to Envitia.

Phone: +44 1403 273 173

Email: [licensing@envitia.com](mailto:licensing@envitia.com)

## 5. UNINSTALLING/REMOVING MAPLINK PRO

### 5.1. Windows

On Windows use the 'Programs and Features' entry on the Control Panel. Do not attempt to uninstall using any other method.

The installer will leave the licence files behind. These should not be deleted as deleting the files will cause problems if you install any other products from Envitia as the licence information will not be present where it is expected to be.

### 5.2. Linux/Android

The installations can be deleted.



## 6. LICENCE KEY ADMINISTRATION

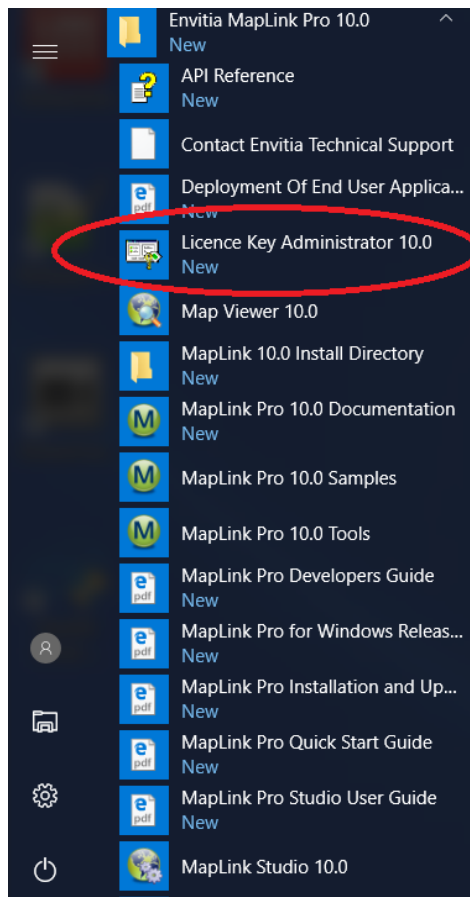
The Windows products must be licenced using the Licence Key Administrator before it can be used.

In order to obtain a licence key, open the Envitia Licence Key Administrator under 'Envitia MapLink Pro 10.0' from the Start Menu or via the Start Screen on Windows 8/8.1.

Any requests/questions related to licensing or any other questions can be put via phone or email to Envitia.

Phone: +44 1403 273 173

Email: [licensing@envitia.com](mailto:licensing@envitia.com)



**Figure 1 Licence Key Administrator (Windows 10)**

The help page for the administrator appears describing the Licence Key process, together with the Licence Key Administrator window (shown on the next page).

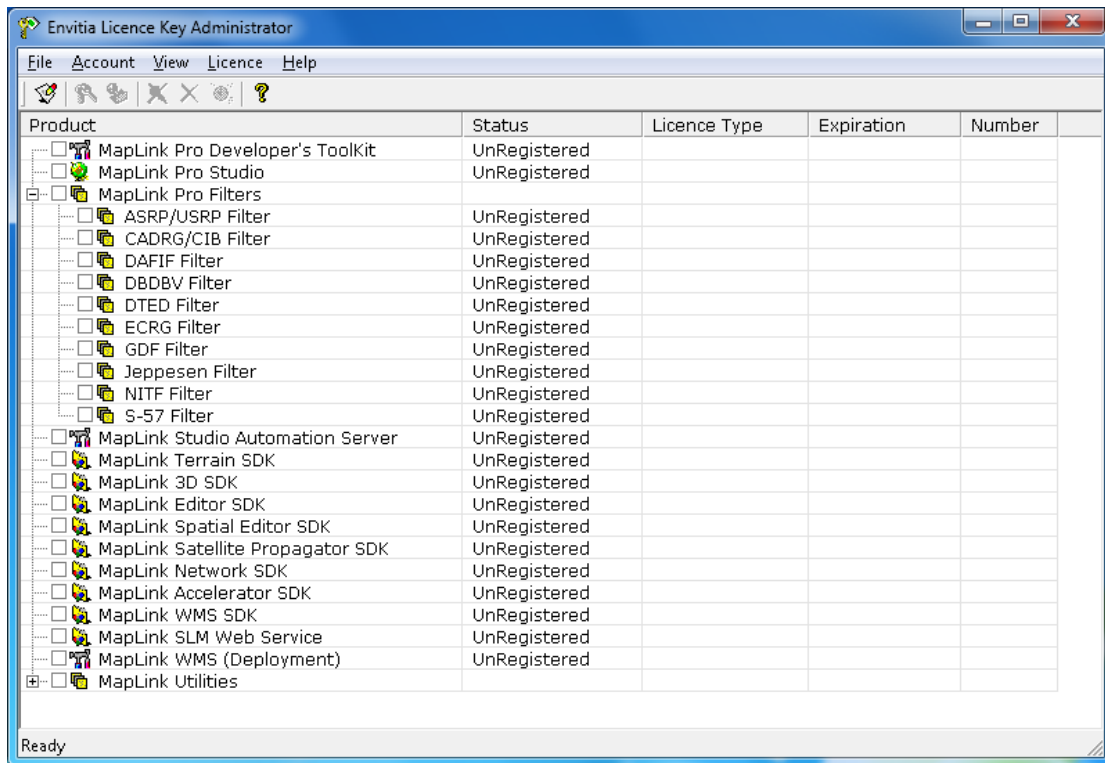


Figure 2 Licence Key Administrator

On Windows Vista and newer Windows operating systems you may be prompted with a User Account Control dialog box. If this appears select 'Yes' to allow the Licence Key Administrator to run.

The Licence Key Administrator window shows all the products of MapLink Pro. First of all, fill in your account information by selecting **Account -> Information** from the menu or **Edit Account Details** from the toolbar. Fill in all the fields but the ones marked in red are compulsory.

**Account Information**

Please supply the following contact details. These are used by the Licence Administrator when requesting Licence Keys.

Note: The email field is required for requesting a licence key via email.

**Fields marked in red are compulsory**

Contact Details

**Company Name:**

**User Name:**

**Address:**

**Country:**

**ZIP/Post Code:**

**e-mail:**

Phone:

Fax:

Figure 3 Account Information

## 6.1. Request a Licence

Select the checkboxes of the products to be licenced. You may notice that some products are dependent on others. For example, the Developer's Toolkit requires Studio to be licenced and, of course, the SDKs require the Developer's Toolkit to be licenced.

**Note : When requesting a permanent licence, only select the products you have purchased. Selecting other products may delay the processing of your request and you will not receive licences for these additional products.**

Select **Licence -> Request Licence Key(s)** from the menu, or **Licence Key Request** from the toolbar.

The Licence Key Type should be set to Evaluation or Permanent, depending on whether you have purchased a MapLink Pro licence. If it is a permanent licence, enter the Order Number.

**Figure 4 Licence Key Request**

Licences can be requested by email, fax or telephone.

Selecting **e-mail** automatically sends an email to Envitia using your default email application. If, for any reason, the email is not sent automatically or the PC has no access to the internet, please select the **Phone** option.

Selecting **FAX** prints out the licence request, ready to be faxed to Envitia.

Selecting **Phone** displays a Notepad window containing the licence request. This information can be printed out. Telephone Envitia with this information.

You can manually send an email to [licensing@envitia.com](mailto:licensing@envitia.com) using the request generated by the **Phone** option.

In the Licence Key Administrator window, the checkboxes will become unselectable and the Expiration of the products will change to Key Pending.

Contact details are:

Phone: +44 1403 273 173

Email: [licensing@envitia.com](mailto:licensing@envitia.com)

## 6.2. Install a Licence

When you have received the licence key select **Licence -> Import Licence Key(s)** from the menu or **Import Licence Key** from the toolbar.

Figure 5 Import Licence

Depending on the method the licence key was requested, it is imported from a file or by hand.

If the licence key has been received by email, make sure the attached licence key file (\*.lkf) is saved to somewhere on your computer. Select **Open Licence File** and browse to where the file is stored. Select the file and select **Open**. The key will automatically be imported.

If the licence key has been received by fax or by phone, you will need to enter the key by hand. Select **Enter key supplied by Envitia** and enter the key in the window. The key will be automatically imported.

The Licence Key Administrator window will show the products to be registered and the expiration date set to either Permanent or 30 days from the installation date.

You are now ready to use MapLink Pro.

## 6.3. Moving a Licence

If you wish to install MapLink Pro on a different machine you will need to 'de-authorise' the current machine or purchase an additional developers licence.

Once the machine has been de-authorised a licence for the new machine can be granted.

The 'Envitia Licence Key Administrator' help provides details on how to perform this task.

## 7. DEVELOPING AN APPLICATION

There is plenty of documentation to help you develop your MapLink Pro application. The two best sources of information are the '*MapLink Pro Developer Guide*', which details the usage of the MapLink APIs, and the '*API Reference*' which details each of the API classes.

These can be accessed via the MapLink Pro Documentation Launcher start menu shortcut. More information about the provided documentation can be found in Section 7.2.

The source code for the MapLink Sample Programs can be found in `<INSTALL_DIR>\samples:`

- NT – Windows samples, using MFC
- QT – Windows & X11 samples, using QT
- X11 – X11 samples
- Wizards – Visual Studio wizards, for creating basic MapLink applications

### 7.1. Training, Consultancy and Sub-Contracting

Envitia provides a range of training options to help you get the best from MapLink Pro and MapLink Studio. These courses greatly help to accelerate your development, produce optimised applications more quickly and to explore alternative ways of achieving your objectives.

Dedicated consultancy can also be provided either on-site or remotely, allowing our experienced developers to guide you towards the most appropriate approach to your application arena. Customers frequently find this useful when adding additional new functionality to their systems.

Envitia can also help accelerate your development by developing the MapLink Pro component of your application for you or by undertaking a more extensive part of your project for you. Envitia has extensive experience of developing applications internally and for external customers.

If you wish to discuss these opportunities, please contact Sales:

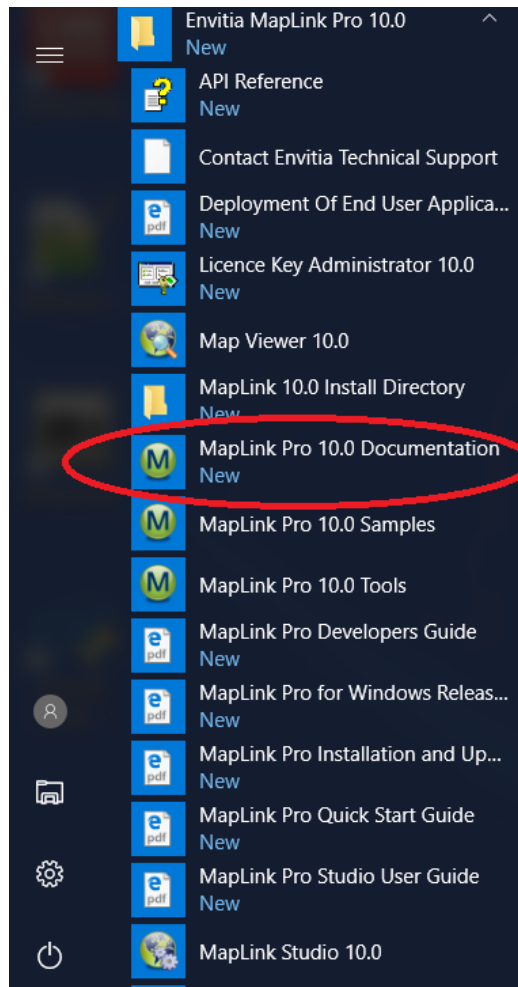
- E-mail: [sales@envitia.com](mailto:sales@envitia.com)
- Phone: +44 1403 273173

## 7.2. Documentation

The MapLink Pro documentation can be found via the Start menu on Windows 7/10 and on the Start Screen on Windows 8/8.1.

The documentation can be viewed via 'MapLink Pro 10.0 Documentation' program indicated below.

When the program runs select the document entry you are interested in and the entry will expand. Press the 'Launch' button to display the help. A PDF viewer is required for most of the documentation.



**Figure 6 Documentation Location (Windows 10)**

The documentation for the X11 targets can be found in the docs directory on the supplied CD.

The main documentation covers:

- API Reference Help.
- MapLink Studio Help.
- MapLink Studio User Guide.
- MapLink Pro Developer's Guide.
- MapLink Pro Deployment of End User Applications
- MapLink Pro Installation and Upgrade Notes
- MapLink Pro for Windows Release Notes.
- MapLink Pro Windows 3<sup>rd</sup> Party Licences.
- MapLink Pro Windows Licence.
- MapLink OGC Services Deployment User Guide.
- MapLink WMS CADRG plug-in Users Guide.
- S63 Reference Workflow Sample.
- MapLink S63 & S53 SDK Developers Guide.
- Print Template Studio Help.
- Symbol Studio Help.
- Image Studio Help.
- Licence Administrator Help.

### 7.2.1. MapLink Developer's Guide

This document guides you through the components and concepts of MapLink Pro, including what is required to build an application.

Section 5 leads you through writing and building your first MapLink application.

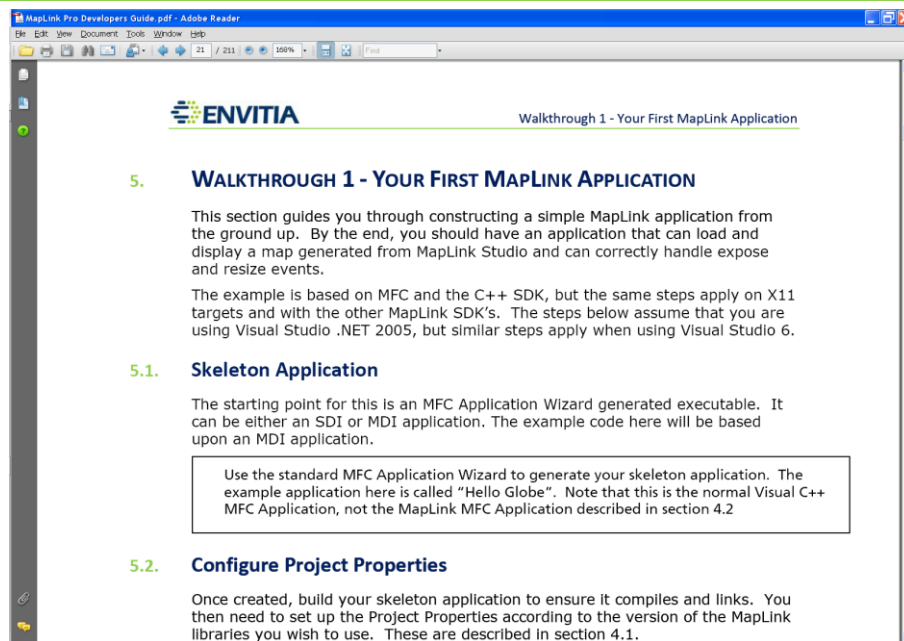


Figure 7 MapLink Pro Developer Guide

Once you have written and built this application, you can use some of the sample data to test it. Run your application and then select **File -> Open** from the main menu. Sample maps can be found under `<INSTALL_DIR>\samples\MapForSamples`. Under here, `VMapUK\VMAP0.map` is a good sample to start with. You will see the chosen map displayed in your application.

The Developer Guide then leads you through enhancing your application and using other MapLink SDKs.

### 7.2.2. API Reference

More detailed information can be found in the *API Reference*, a Windows CHM based document with a description of all MapLink APIs. There are two API CHM documents; one for C++ and one for .NET

Please Note: Not all SDKs are available on all platforms. If you have a specific requirement for an SDK on a platform please contact Sales.

In addition to the CHM documentation the textual information can be found in the C++ header files.

The document can be accessed in a number of ways:

- Browsing through the class diagrams.
- Looking through the documentation tree.
- Searching for key words.



**MapLink Pro 10.0**  
World Class Spatial Information Technologies

**MapLink Pro Documentation**

The Ultimate Mapping Application Toolkit

### Introduction

MapLink Pro provides a large range of Software Developer Kits (SDKs). These provide support for a variety of mapping capabilities, including Terrain Analysis, Geometry Editing, 3D and Web Services. MapLink Pro has more than 10,000 deployed systems worldwide. The geospatial toolkit of choice for the world's leading System Integrators.

- Designed and optimised for tactical display environments.
- Operates in a wide range of frameworks and integrates with legacy systems.
- Provides a lower total cost of ownership by maximising code reuse.
- Extensive support for the developer community reduces time to market.

### Key Features

MapLink Pro allows System Integrators and Original Equipment Manufacturers to embed high performance mapping components within their systems. It provides a toolkit for developing situational awareness applications with moving map data, imagery, terrain and 3D visualisation. It results in significantly faster developments and will integrate with many platforms.

- High performance visualisation
- Cross Platform support
- Extensive data format support
- Powerful APIs and geospatial capabilities
- Flexible data preparation tools

### High Performance Visualisation

MapLink Pro features a high performance drawing surface which utilises OpenGL 2.1 minimum, 3.2 or newer recommended on both Windows and Linux. OpenGL is a high performance, open, vendor-neutral, multiplatform graphics standard. MapLink Pro provides the highest performance for demanding operational environments.

### Empowering Developers

MapLink Pro ships with tools, documentation and sample code. This makes it easier for developers to rapidly build new applications or extend existing code.

MapLink Pro is GUI agnostic. This allows you to integrate the MapLink Pro Drawing Surface into almost any GUI framework.

Please see the ref developerguide\_page "developer guide" for technical documentation.

### Licence

The MapLink Pro is subject to various ref licence\_page "licences".

Please review the licence documentaion.

### Documentation

MapLink Pro has extensive additional documentation which is highlighted in the following sections.

The documentation is included with the Developer installation as a series of PDF documents.

Figure 8 MapLink C++ API Documentation

MapLink API Documentation : (c) 1997 - 2016 Envitia Group PLC

**Class Diagram: Logical View / Toolkit Summary**

- MapLink Pro Developer's Toolkit
- MapLink Terrain API
- MapLink Spatial Editor API
- MapLink Editor API
- OGC Technologies
- Maritime SDKs
  - MapLink S63 API
  - MapLink S52 APIs
- 3D SDKs
  - MapLink 3D API

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**Figure 9 MapLink .NET API Documentation**

## 8. RELEASE NOTES

The Release Notes contain important information on;

- Platform information
- Enhancements.
- Bug fixes.
- Limitations.
- Previous Release notes.

### 8.1. Deployment of End User Applications

This document contains information about how to deploy an application and copyright statements.

### 8.2. Installation and Upgrade Notes

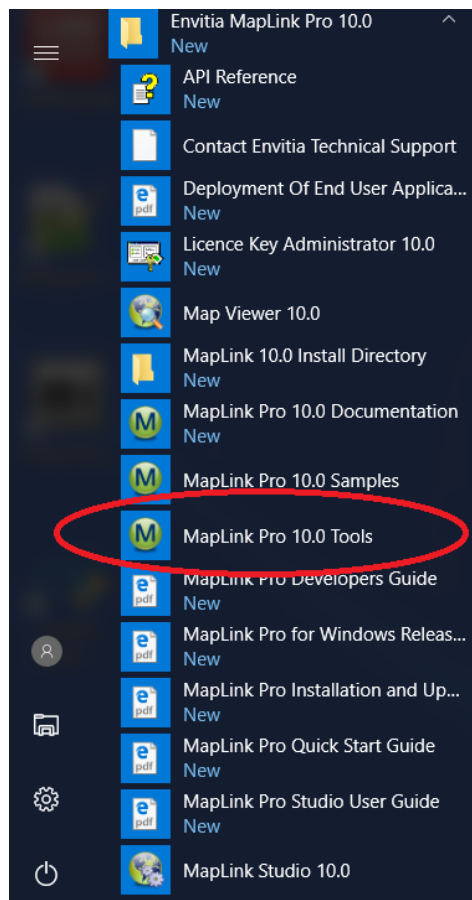
This document contains information about installing and upgrading from a previous MapLink Release.

### 8.3. Tools

MapLink Pro comes with a number of Tools:

- MapLink Studio  
Used for creating high performance maps and terrain databases.  
Please see Section 9 - Processing a Map.
- Map Viewer  
Used to view and check the maps created.
- Terrain Viewer  
Used to view and check terrain databases.
- Rendition Editor  
Used to edit the feature rendering of a map and for adjusting the view points of the layers in a map.
- Symbol Studio  
Used for creating new vector symbols for use in applications and maps.
- Image Studio  
Used for geolocating and warping images.
- Licence Key Administrator  
Used to managing MapLink Pro Licences.
- Print Template Studio  
Used for creating templates for printing maps (from TSLNTSurface drawing surface).

The tools are available as either 32bit or 64bit. The tools can be started via the Start button/Screen by running the 'MapLink Pro 10.0 Tools' program indicated below. When the program runs select the tool entry you are interested in and the entry will expand. Press the 'Launch' button to run the tool.



**Figure 10 MapLink Pro Tools (Windows 10)**

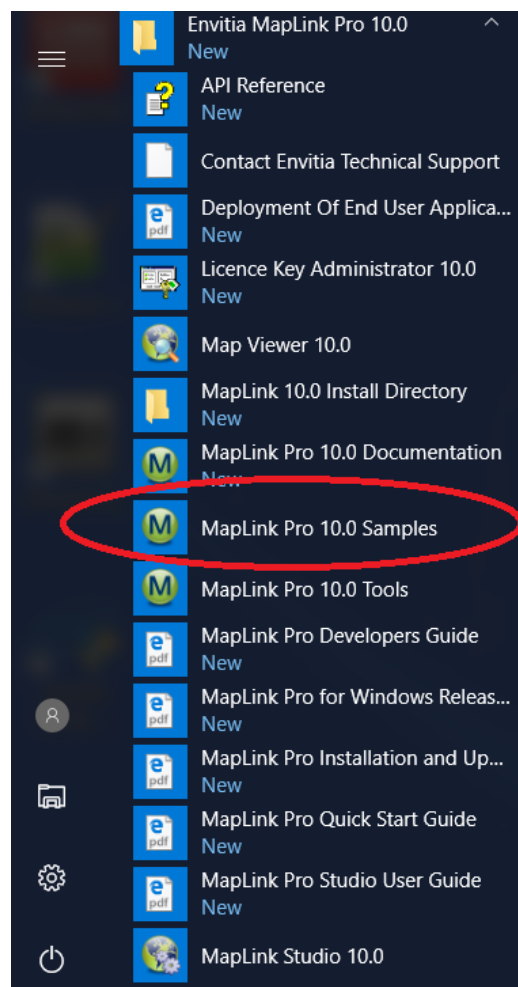
The 'MapLink Pro 10.0 Tools' program is installed on all versions of Windows.

## 8.4. Sample Programs

Numerous samples are provided to demonstrate the functionality of the various SDKs that make up MapLink Pro.

The source code is included for the supplied examples for you to use and learn from. The Windows samples are in most cases applicable to X11 targets as the MapLink API has been written to minimise the differences between platforms to a very small number of classes.

The samples can be found in this directory: `<INSTALL_DIR>\samples\`, or the Samples can be started via the Start button/Screen by running the 'MapLink Pro 10.0 Samples' program indicated below. When the program runs select the Sample entry you are interested in and the entry will expand. A description of the sample will be displayed along with a button to 'Launch' the sample and a button 'Code' to display the folder containing the sample source code.



**Figure 11 Samples Location (Windows 10)**

The 'MapLink Pro 10.0 Samples' program is installed on all versions of Windows.

## 9. PROCESSING A MAP

If you have your own map data to use, you will need to process the data before you can use it in your application. Processing allows the data to be optimised for display. MapLink Pro provides some sample source data. This can be found under `<INSTALL_DIR>\data`.

MapLink Pro can process data via MapLink Studio, or via the Direct Import mechanism at runtime.

MapLink Pro can also handle data processed by other Envitia products. Contact [sales@envitia.com](mailto:sales@envitia.com) for more information.

### 9.1. MapLink Studio

MapLink Studio provides a powerful and flexible environment for the fusion of a wide range of vector and raster map data with transformation and re-projection into a single integrated map.

Some of the key capabilities are to:

- Fuse vector and raster maps, imagery and terrain, from disparate sources and in differing coordinate systems.
- Preview the input data to determine the quality/coverage.
- Define the default colour and style of the presented vector maps.
- Segment and filter the data for maximum performance.
- Prepare complex, multi-layer maps/terrain sets in a range of fixed and dynamic coordinate systems for use in runtime systems.
- Prepare templates for runtime map preparation environments.

More information can be found in *MapLink Studio User Guide*, including exercises using sample data.

Sample MapLink Studio projects can be found in `<INSTALL_DIR>\Projects`.

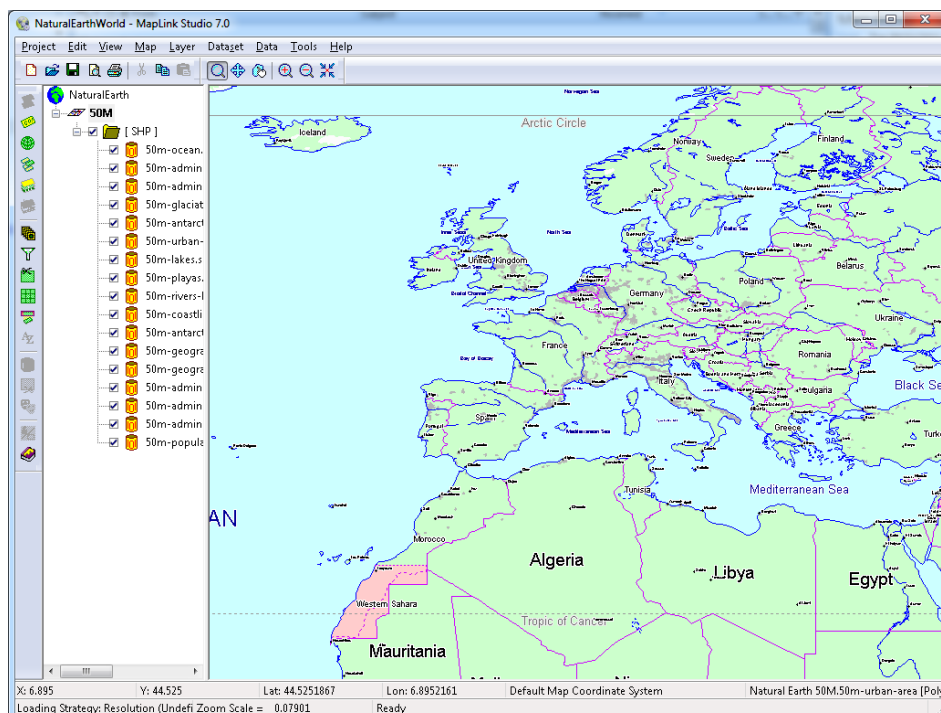


Figure 12 MapLink Studio - creating a map

## 9.2. MapLink Studio SDK

An optional Software Development Toolkit provides access to MapLink Studio capabilities via a COM automation interface. This allows MapLink Pro customers to embed map data processing capabilities within their applications.

## 10. DIRECT IMPORT

As well as using pre-processed data, MapLink Pro can also import many data formats directly. This provides a more flexible method of ingesting data, particularly for applications where pre-processing of data is not appropriate.

The controlling application is responsible for how the maps are displayed, including such things as the rendering of vector data.

In addition to the normal direct import, highly specialised import mechanisms exist for a few formats, these are:

- DMED data via the Terrain SDK.
- Specialised Data-Layers (a concept for display of data) to ease use and display of data:
  - The TSLKMLDataLayer is designed to display KML/KMZ on 2D drawing surfaces.
  - The TSLS63DataLayer is designed for handling S-63 or S-57 data correctly (including updates).
  - The TSLCADRGDataLayer for drawing CADRG/CIB very fast at runtime.
  - TSLFilterDataLayer for loading re-projecting and drawing; GeoTIFF, NITF/NSIF, Raster.
  - Vector Data may be imported via TSLUtilityFunctions::importData/appendData for S-57, Shapefile, MIF/MID, KML, OS MasterMap, OS Vector Map Local.
  - General Raster Data may be loaded and displayed via TSLRasterDataLayer or TSLRasterFilterDataLayer.
  - Vector data in a database (Oracle) may be displayed using the TSLDatabaseLayer.
  - The TSLCustomDataLayer can be used to create custom geospatial data layers, implemented in the application.
  - The TSLWMSDataLayer may be used to display data from an OGC WMS Server.
  - The TSLWMTSDataLayer may be used to display data from an OGC WMTS Server

Some of the Direct Import mechanisms require runtime 'licence keys'. Please contact your Envitia sales representative for additional information.



## 11. WMS & WFS

Web services are becoming a popular way of delivering data to applications. MapLink Pro is certified with the OGC WMS (Web Map Service) standards and also supports WFS (Web Feature Service) client functionality.

With both services, the servers may be located on the Internet or it could be on the local area network. The server provides an efficient way of serving map data to a local system by centralising data storage. MapLink Pro options also include the creation of an OGC compliant WMS server, that can serve MapLink maps, CADRG, historical or user specific map data into any OGC client.

MapLink Pro also includes a client side SDK for ingesting data from a WMS or a WFS Server and its subsequent display via the Core MapLink functionality. This can include combining this served data with other sources already held locally.