12dModel

Installing the Release Version of 12d Model 12

For 12d Model 12 C1k

January 2018

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1 Installation of 12d Model 12 Release Version

1.1 Requirements for Installing & Running12d Model 12d

Before Installing and running ***12d Model 12,*** you need the following:

(a) You must have ***Administrator*** privileges to install ***12d Model***

(a) Approximately 2 Gigabytes of disc space is required for the installation to succeed.

(b) A ***12d Model*** dongle for your computer

If ***12d Model 11*** is already running on your computer, the ***CodeMeter*** (or ***Wibu***) dongle you already have will work with the new version of ***12d Model 12*** *once you have a nodes file for* ***12d Model 12***.

If ***12d Model*** has NOT been running on your computer then DO NOT ATTACHE THE DONGLE TO YOUR COMPUTER until after the dongle drivers have been installed as part of the installation procedure.

(c) An email with the ***12d Model 12*** authorization file ***nodes.12d12n*** attached, or a folder with the ***12d Model 12*** authorization file ***nodes.12d12n*** or ***nodes.4d*** in it.

(d) This document which has the internet links to the required executables and files

(e) Access to the internet to download the required executables and files

Also note that:

(a) ***12d Model 12*** will not install on Windows XP or Windows Vista

(b) ***12d Model 12*** will not run with the ***Hardlock*** dongles which were used for V10 and earlier

If you have a ***12d Hardlock*** dongle, please contact your ***12d Model Reseller*** to obtain a replacement ***CodeMeter*** dongle.

(c) ***12d Field*** will only run on ***CodeMeter*** dongles

If you are running ***12d Field*** and have a ***12d Wibu or 12d Hardlock*** dongle, please contact your ***12d Model Reseller*** to obtain a replacement ***CodeMeter*** dongle.

(d) A three-button mouse is essential to efficiently use ***12d Model***

Please check that you have all the above items before commencing the installation.

1.2 64 bit or 32 bit Version of 12d Model?

Microsoft has a 64 bit Windows and a 32 bit Windows operating system and there are both 64 bit and 32 bit versions of ***12d Model***.

In 64 bit Windows, Microsoft has allowed for both 32 bit and 64 bit versions of the same software to coexist on the same computer, so you could install both the 32 bit and the 64 bit version of ***12d Model***.

The **64 bit** ***12d Model*** only runs on **64 bit Windows** and supports any of the ***12d Model*** point sizes from 5K through to 5M and **Bigfoot**.

The **32 bit** ***12d Model*** runs on both **32 bit** and **64 bit Windows** and only supports the ***12d Model*** point sizes from 5K through to 5M. That is, all point sizes **except Bigfoot**

So to run ***12d Model*** **Bigfoot**, you must run **64 bit** ***12d Model*** on **64 bit Windows**.

1.3 Installing the Release Version of 12d Model 12

These notes are for installing the **Release** version of ***12d Model 12***.

A. Disk Space required for installing 12d Model 12

Approximately 2 Gigabytes of disc space will be required for the installation to succeed.

Before installing ***12d Model***, it is best to reboot the computer.

Your login must have ***Administrator*** privileges.

B. Do not attach the 12d dongle before installing dongle drivers

The **12d CodeMeter** or **12d Wibu** dongles must **NOT be attached** to the computer before the dongle drivers are installed in Step 1.

C. Installing

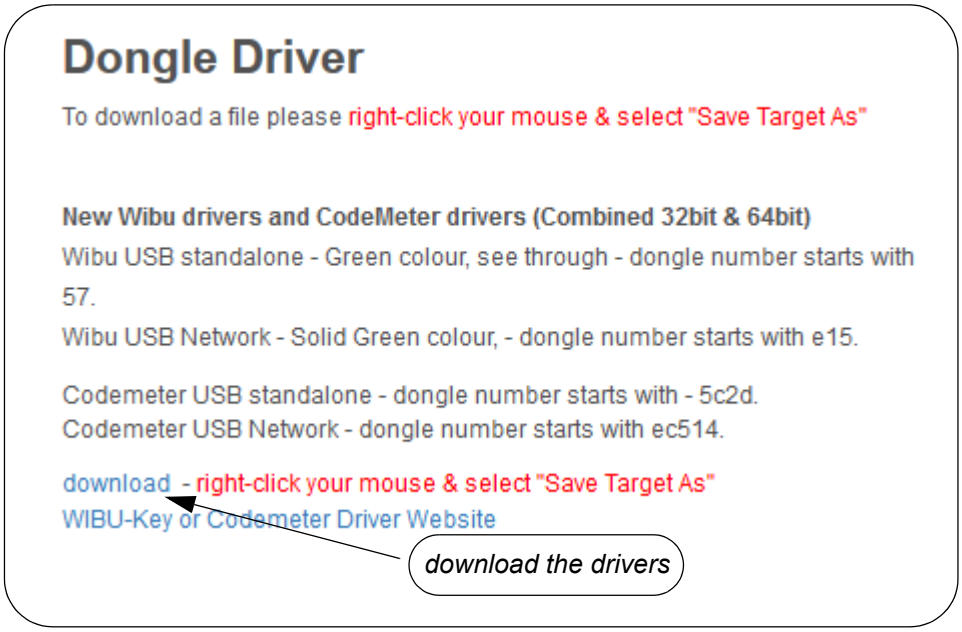
The following ***Steps 1*** to ***4*** will take you through the Installation of CodeMeter/Wibu dongle drivers, the installation of ***12d Model*** and the setting up of the ***nodes.4d*** file.

Step 1. Install the CodeMeter or Older Wibu Drivers

WARNING You need to have System Administrator rights to install the CodeMeter/Wibu drivers

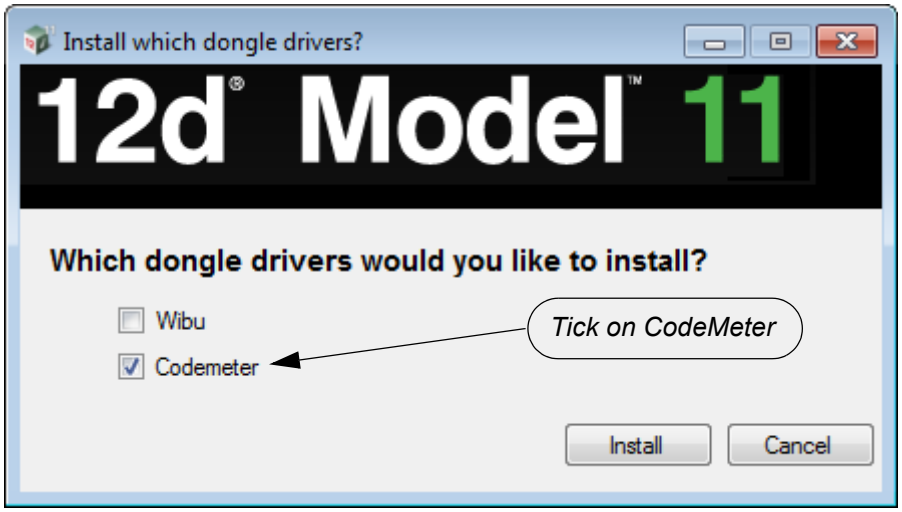
The first step is to install the *CodeMeter/Wibu drivers* using *12d_dongles_installation_date.exe* which is downloaded from the **Dongle Driver** section www.12d.com/multimedia/dongledriver.html of the **12d Solutions** web site www.12d.com.

Note: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

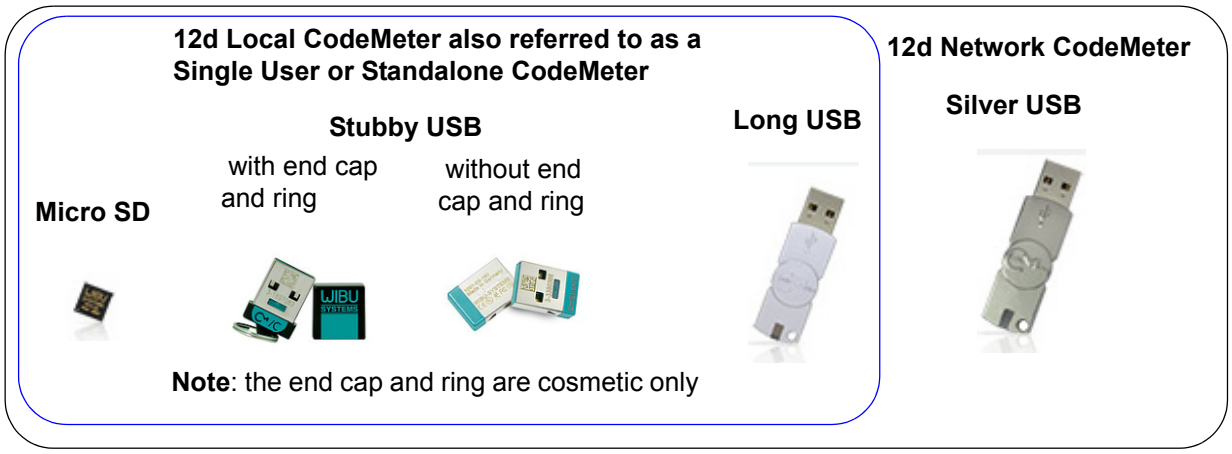


Once you have downloaded *12d_dongles_installation_date.exe,* click on it to begin the installation process.

The **Install which dongle drivers?** panel will appear.

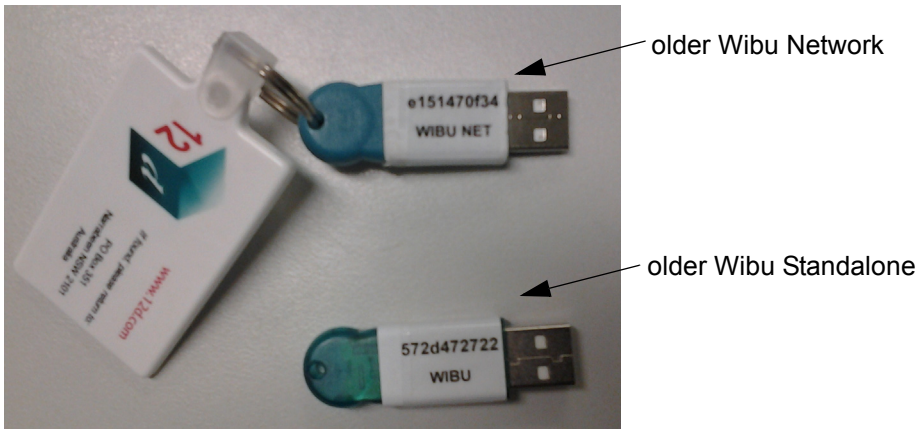


If you only have one type of newer **CodeMeter** (variety of colours and sizes) which will be referred to as just **CodeMeter,** or the older **Wibu** (green USB, translucent green USB), then you only need to install the drivers for those dongles.



Note: for a **Stubby USB**, the end cap and ring are cosmetic only and can be pulled off to make it into a **Stubby USB** without the end cap and ring. This does not affect the performance of the **Stubby USB**.

.



If you have both *CodeMeter* and the older *Wibu* dongles then both sets of drivers ***must*** be installed.

(a) If you have only **CodeMeter** ticked on then clicking on **Install** will install the CodeMeter drivers.

Go to Installing the CodeMeter Drivers:

(b) If you have only **Wibu** ticked on then clicking on **Install** will install the Wibu drivers.

Go to Installing the Wibu Drivers:.

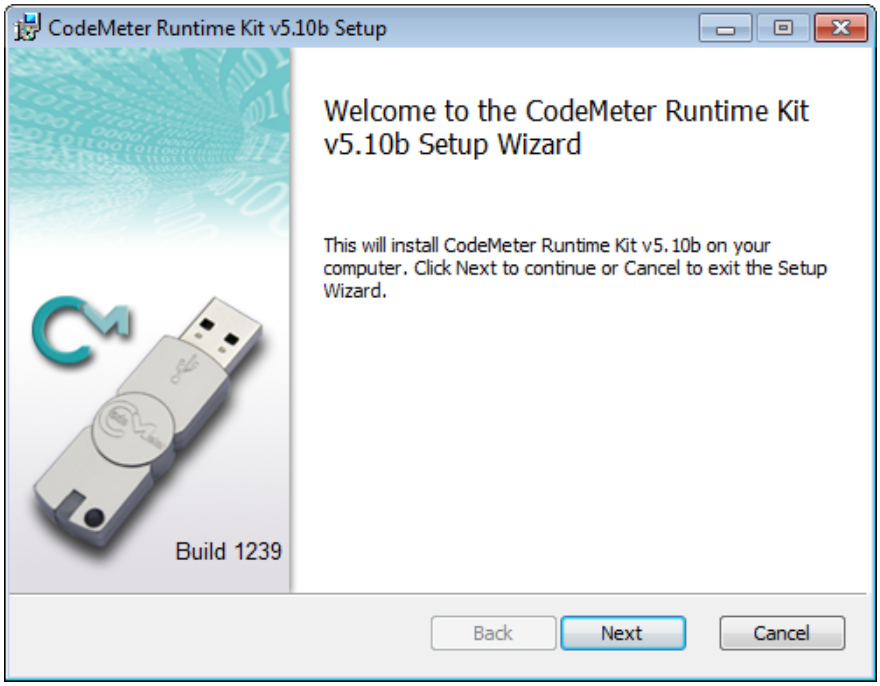
(c) If you have both **CodeMeter** and **Wibu** and ticked on then clicking on **Install** will first install the Wibu drivers and then continue on to installing the CodeMeter drivers.

Go to Installing the Wibu Drivers:

Installing the CodeMeter Drivers:

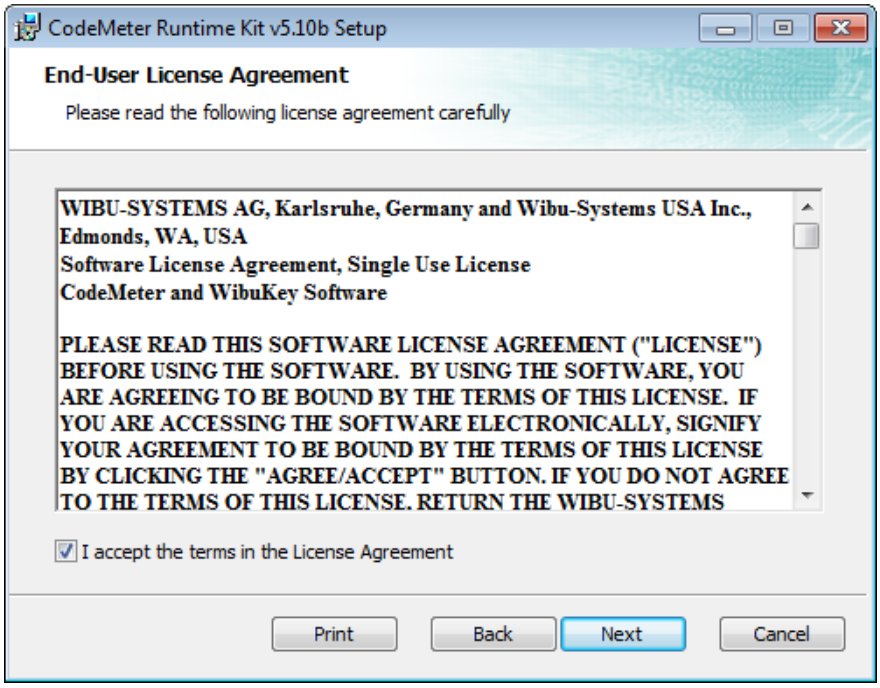
The script to install the **CodeMeter** drivers begins.

CodeMeter Setup *CodeMeter Runtime Kit Setup*



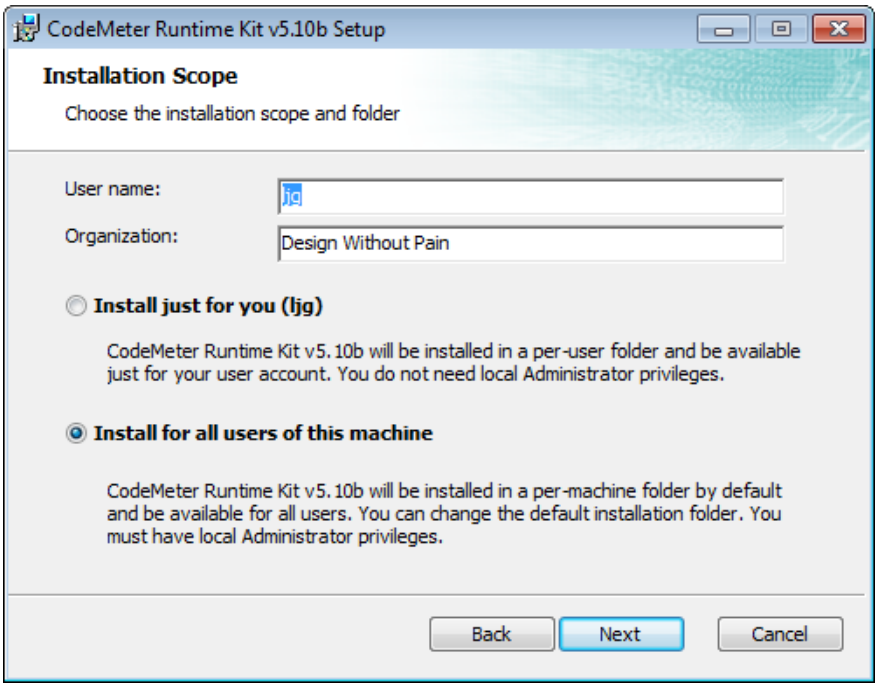
Select ***Next*** to continue

End-User License Agreement *CodeMeter Runtime Kit Setup*



Read the License Agreement and if you are happy with it,
tick I accept the terms in the License Agreement and then select ***Next*** to continue

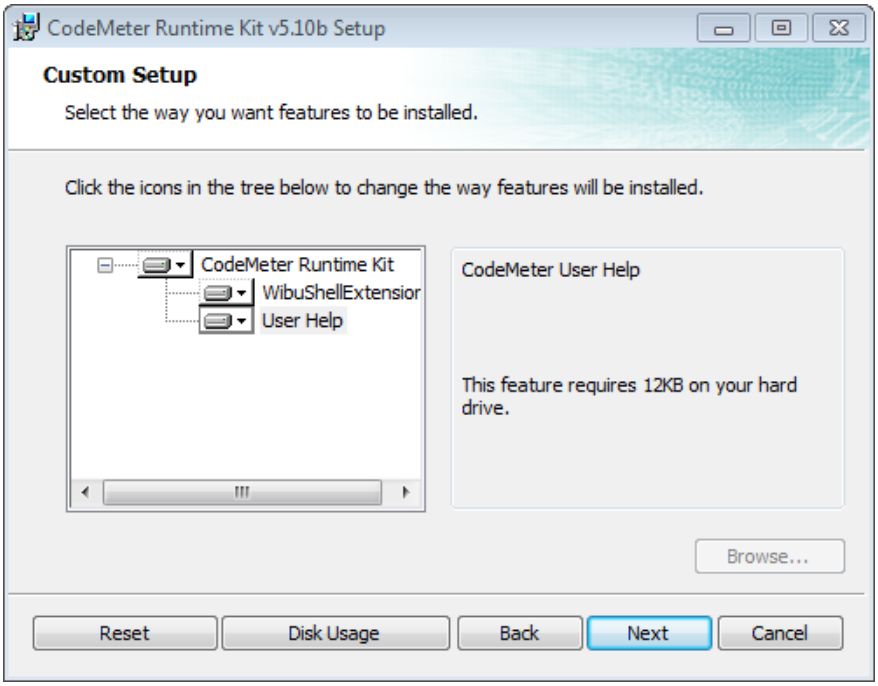
Installation Scope *CodeMeter Runtime Kit Setup*



Enter your **User name** and **Organisation**.

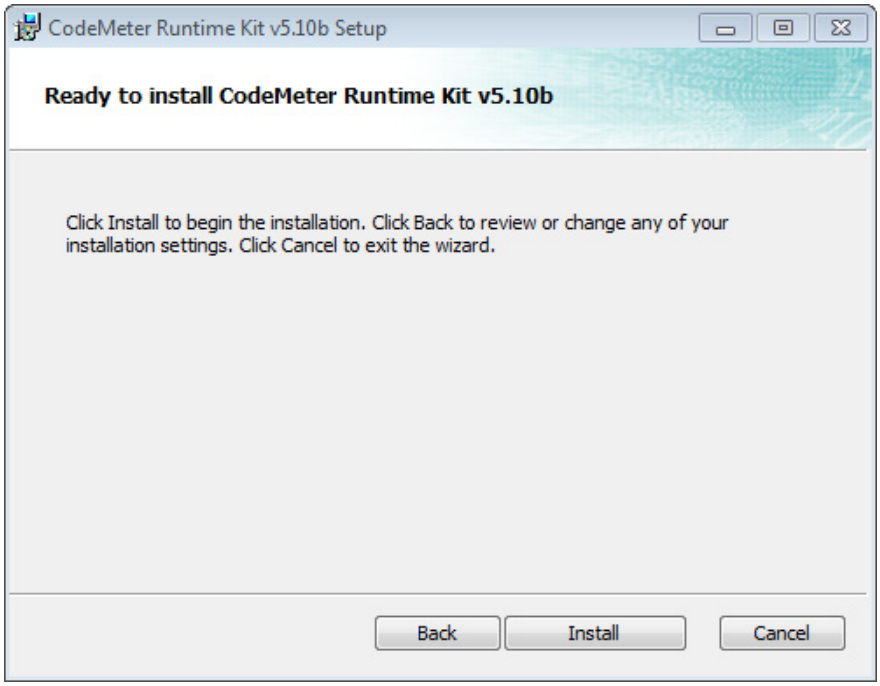
Click on either **Install just for you** or **Install for all users of this machine** and then select ***Next*** to continue

Custom Setup *CodeMeter Runtime Kit Setup*



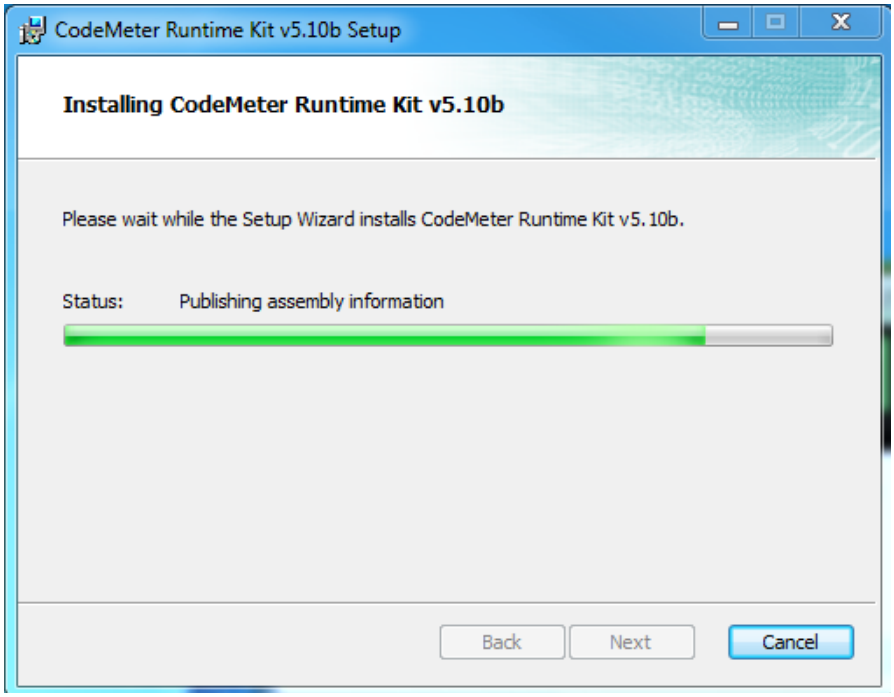
Select ***Next*** to continue

Ready to Install *CodeMeter Runtime Kit Setup*



Select ***Install*** to continue

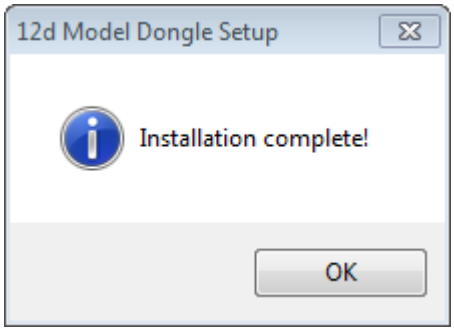
Installing *CodeMeter Runtime Kit Setup*



Completed *CodeMeter Runtime Kit Setup*

Select ***Finish*** to end

The **CodeMeter** dongle drivers have now been installed and the **12d Model Dongle Setup** screen will appear.



click ***OK***

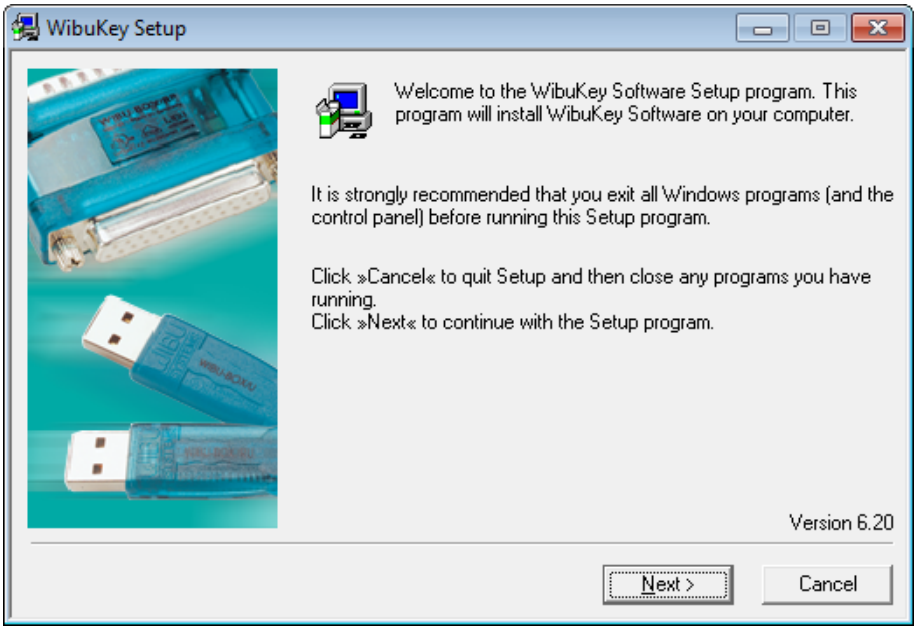
Note: A **CodeMeter** icon, that is used to bring up the **CodeMeter Control Center**, is also installed on your task bar.

Continue to Step 2. Attach the Dongle.

Installing the Wibu Drivers:

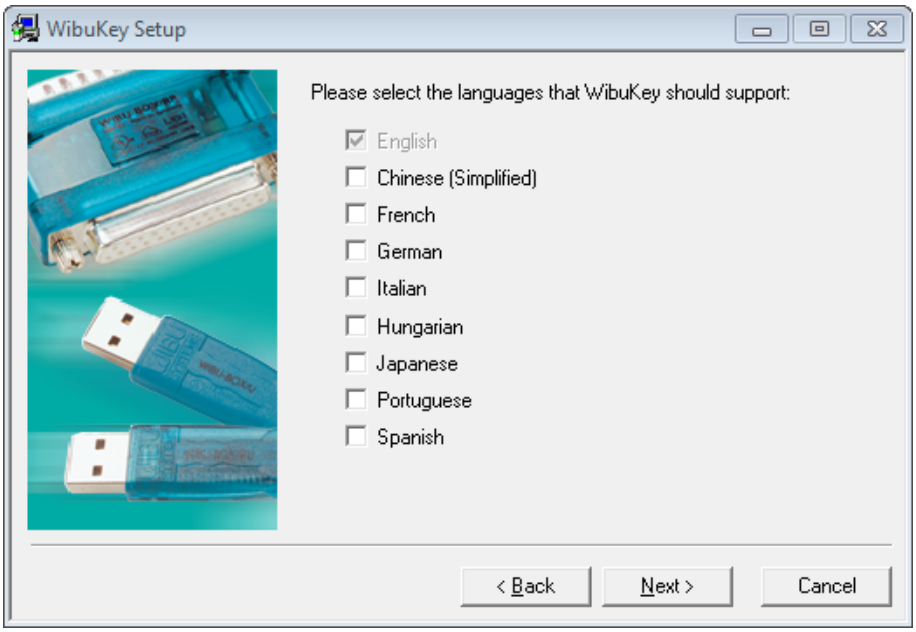
The script to install the old **Wibu** dongle drivers begins.

WIBU-KEY Setup *Welcome to WIBU-KEY Software Setup*



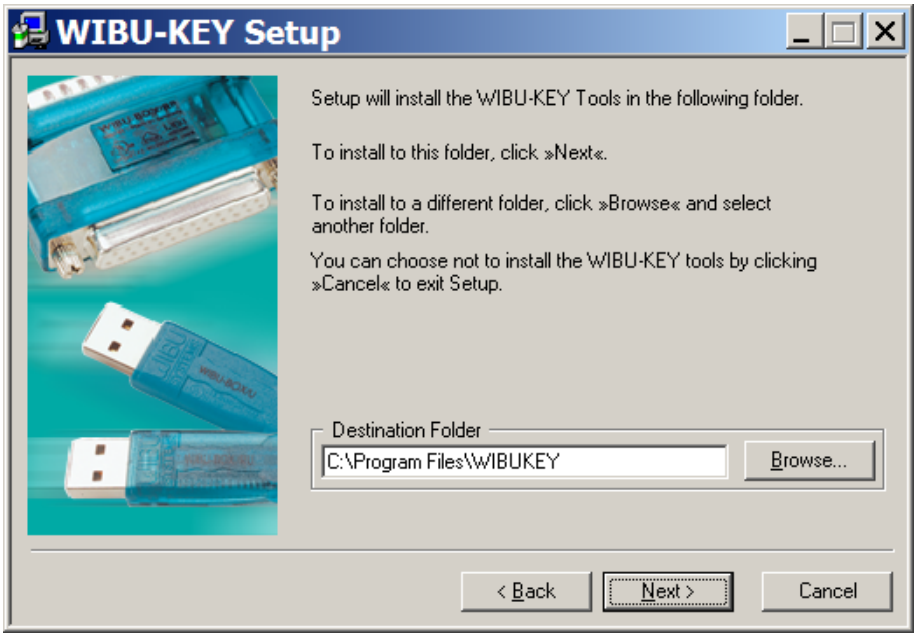
select ***Next*** to continue

WIBU-KEY Setup *Language Selection*



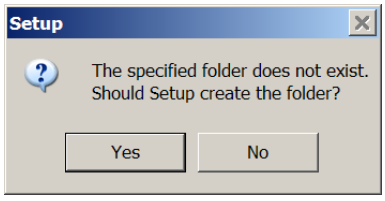
tick your language and then select ***Next*** to continue

WIBU-KEY Setup *Installation folder*



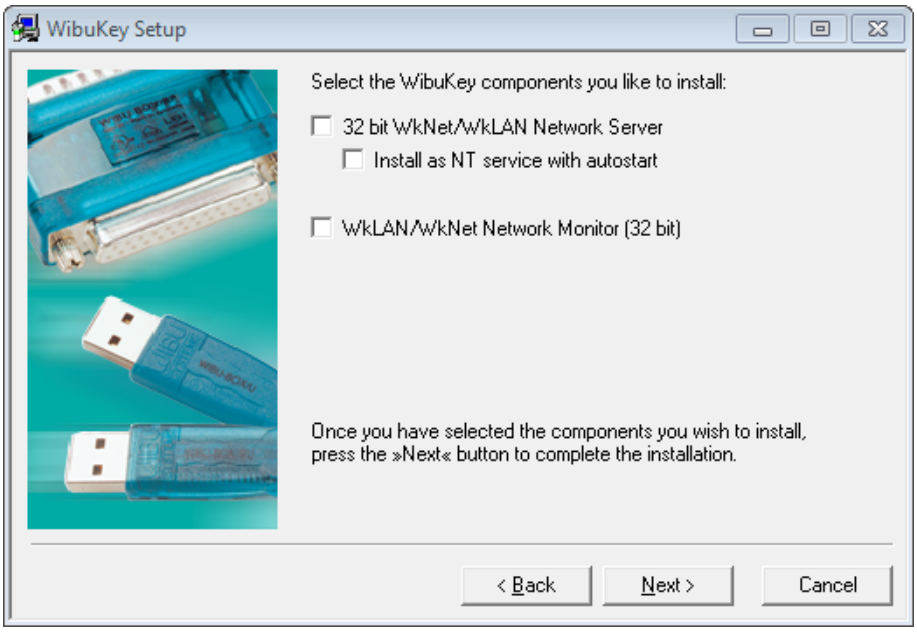
select ***Next*** to continue

WIBU-KEY Setup *Installation folder doesn't exist*



click Yes to continue

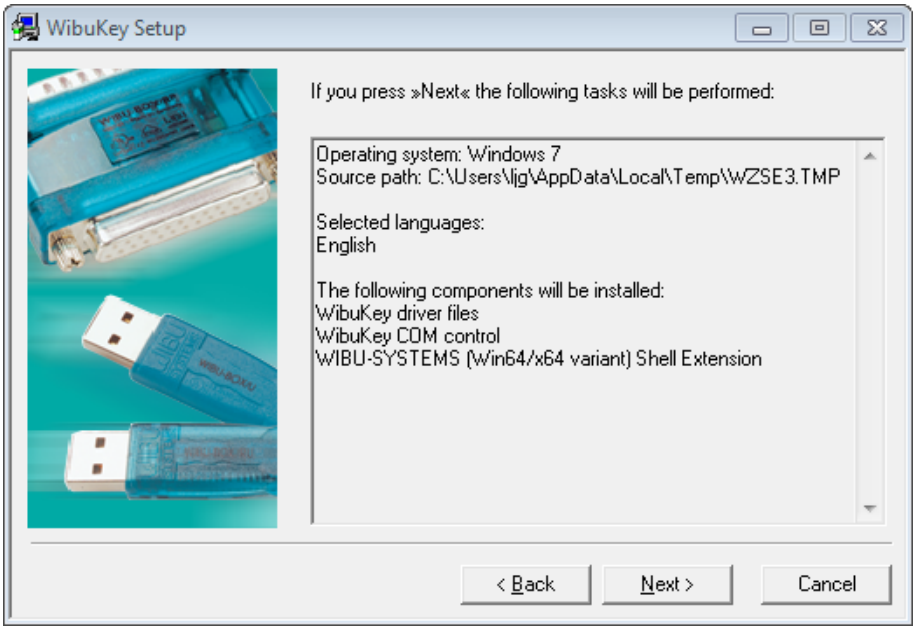
WIBU-KEY Setup *Component Selection*



For a standard install, nothing needs to be ticked on (the WibuKey components are for monitoring a Wibu network dongle).

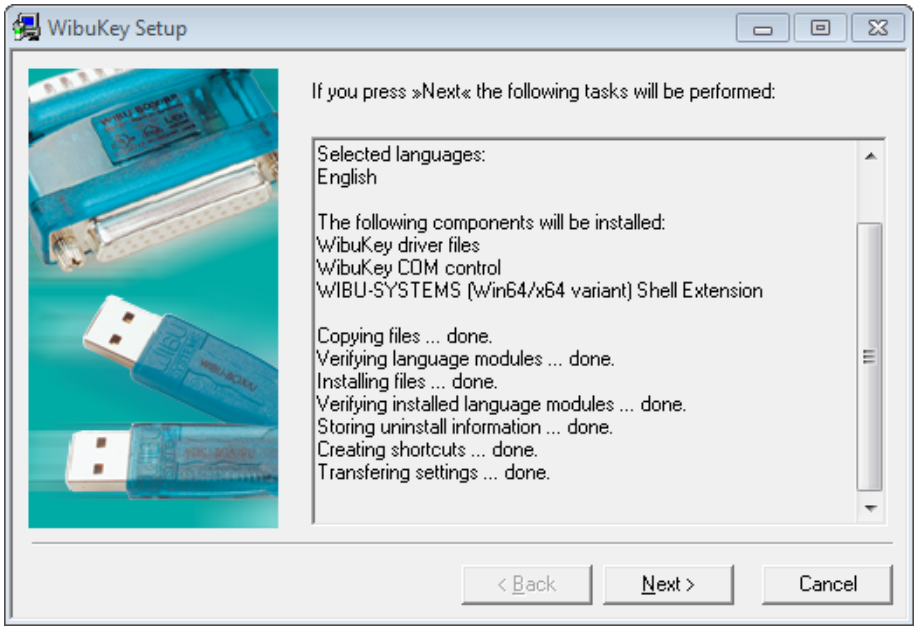
make sure nothing is ticked and then select ***Next*** to continue

WIBU-KEY Setup *Tasks to be Performed*



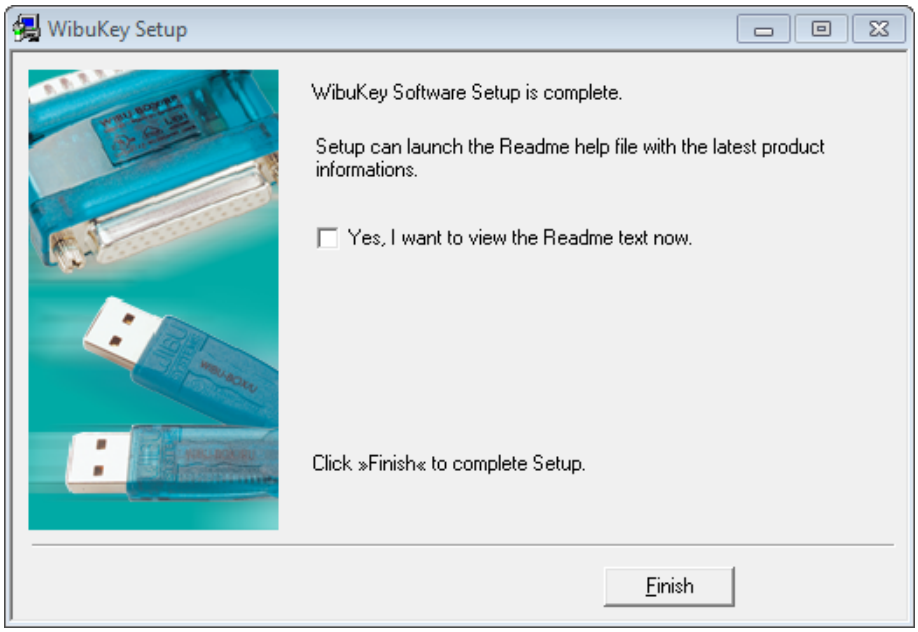
select ***Next*** to continue

WIBU-KEY Setup *Tasks done*



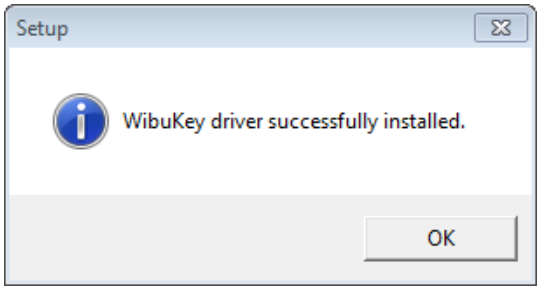
select ***Next*** to continue

WIBU-KEY Setup *Setup Complete*



leave **Yes, I want to view the Readme text now** unticked and select ***Finish***

Setup OK *Setup OK*

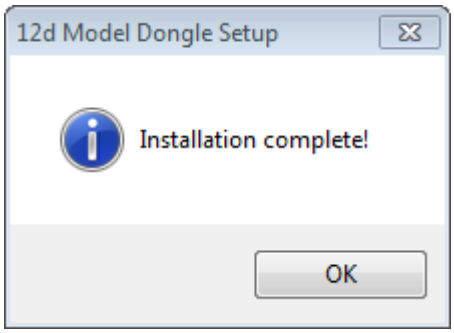


click ***OK***

The WIBU dongle drivers have now been installed

If both **CodeMeter** and **Wibu** were ticked on then the installation of the CodeMeter drivers will then begin. See Installing the CodeMeter Drivers:,

Otherwise the **12d Model Dongle Setup** screen will appear.



click ***OK***

Continue to Step 2. Attach the Dongle.

Step 2. Attach the Dongle

The ***12d Model*** dongle (CodeMeter or old Wibu) can now be attached to the computer.

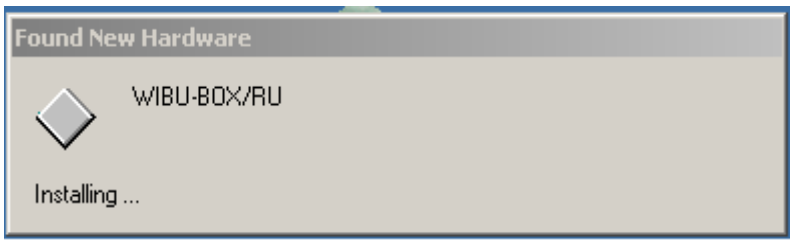
For USB dongles:

Warning: you must have System Administration rights the first time you attach a USB dongle to any USB port:

When a USB dongle is attached for the first time to any USB port, Windows will detect that it is new hardware and needs to load the dongle drivers for that USB port - this will require System Administration rights.

Since the dongle drivers have already been loaded onto your computer, when the USB dongle is attached to a new USB port, it will be recognised as new hardware

and Windows should automatically install the correct dongle driver.



IMPORTANT NOTE IF THE WIBU DONGLE IS NOT RECOGNISED:

If the WIBU dongle is not recognised and you get the **Found New Hardware** screen

please go to the section on how to find the Wibu drivers

NOTE - even though your dongle is working on one USB port, if you try and attach the dongle to a new USB port, the dongle drivers will need to be installed for the new USB port. You will need System Administration rights to install the dongle drivers on the ***new*** USB port.

The dongle must be attached to the USB port at all times, otherwise ***12d Model*** will stop running.

SPECIAL NOTE ON CERTIFYING CODEMETERS

The **12d CodeMeters** must communicate over the Internet with a **Wibu Time Server** every two months to check that there is no problem with the ***CodeMeter*** that your ***12d Model*** license is using. This is called **Certifying** the **CodeMeter**.

For Certification to occur, a computer that can access the **CodeMeter** must also have access to the Internet to run the **Certification**.

One month before the end of the two month period, ***12d Model*** brings up the **Certify CodeMeter Dongle** panel which gives the number of days, minutes and seconds remaining until Certification is required.

If you area using a new CodeMeter from your ***12d Model Reseller***, then it will usually come already Certified.

For more information on Certifying, see 5 Certifying CodeMeters on page 44.

Continue to Step 3. Installing 12d Model 12 Release Version.

Step 3. Installing **12d Model 12** Release Version

The installer for ***12d Model 12*** is downloaded from the internet.

(a) Installing 12d Model from the Download Files:

To Run 12d Model 12 on 64 bit Windows:

If you are running ***12d Model*** on ***64 bit Windows***, then you need to download the ***12d Model 64 bit*** installer which installs a **64-bit** *12d.exe*.

To download the installer, click on

http://downloads.12dmodel.com/v12/12d_Model_12_C1k/12d_Model_12_C1k_64_Setup.exe

Note: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

When running 12d Model 12 on 32 bit Windows:

If you are running ***12d Model*** on ***32 bit Windows***, then you need to download the ***12d Model 32 bit*** installer which installs a **32-bit** *12d.exe*.

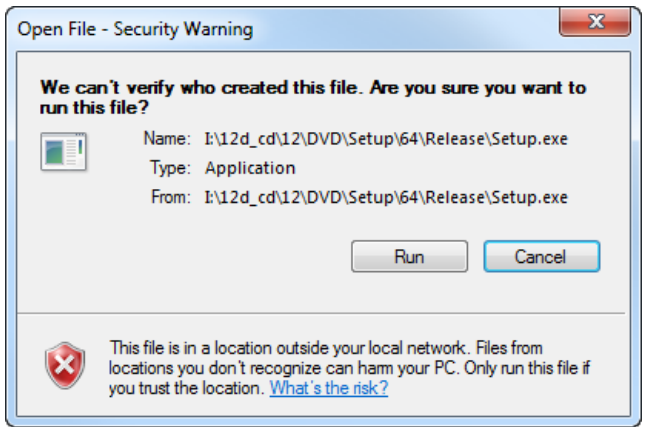
To download the installer, click on

http://downloads.12dmodel.com/v12/12d_Model_12_C1k/12d_Model_12_C1k_32_Setup.exe

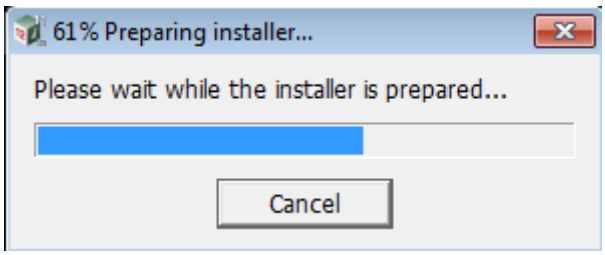
Note: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

Once the installer is downloaded, click on it (or run it) and the ***12d Model*** installation begins.

You may get a message warning you about not being able to verify who created the file:



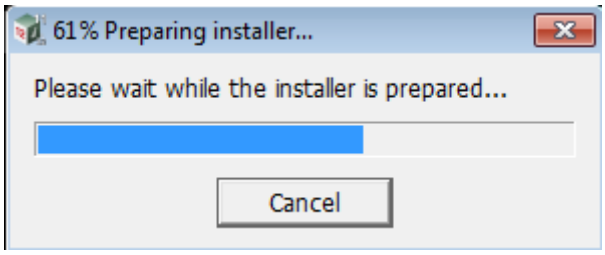
Click on **Run** so that the installation can begin.



Continue to Installing 12d Model.

Installing 12d Model

The ***12d Model 12*** installation starts by unpacking the information in the installation exe and then the installation begins.

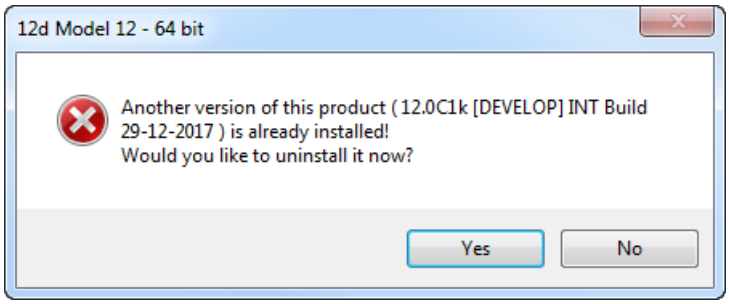


Note - the following screens are for the **64 bit** install but the **32 bit** install is identical except the words **64 bit** are replaced by **32 bit**.

If a ***12d Model 12*** of the same bit type is already installed on your computer, it must be uninstalled before the installation can proceed.

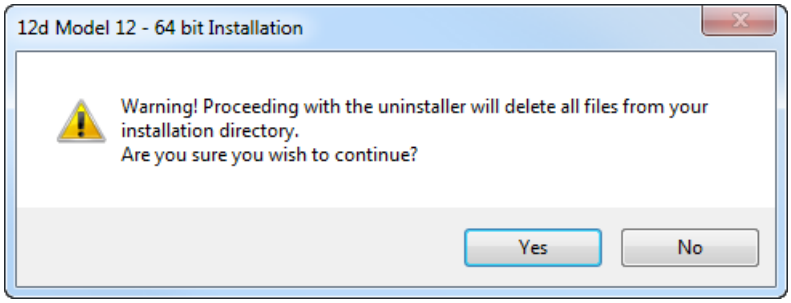
If the Installer detects this case, you will be asked if the Installer can **uninstall the existing version**. Unless this is done, the installation can not proceed.

Note: The uninstall deletes everything in the ***12d\12dmodel\12.00*** folder in ***Program Files*** (or in Program Files (x86) for a 32-bit Install on a 64-bit O/S) so you should never modify any of those files.



Click on **Yes** to continue.

You then receive a **Warning** that the files will be deleted.

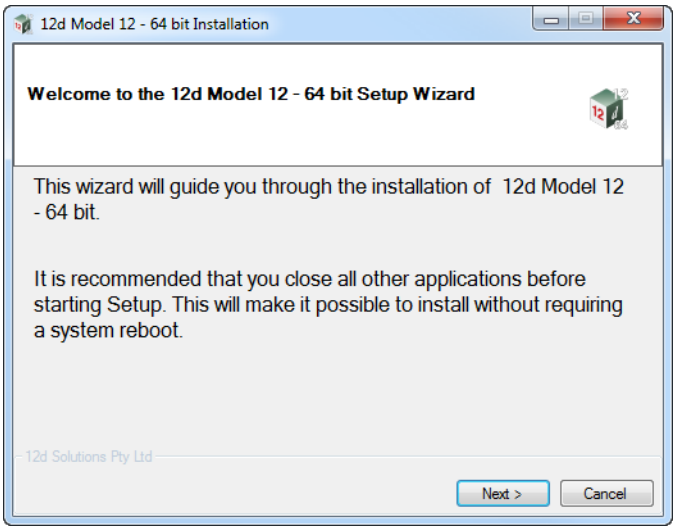


Click on **Yes** to continue.

All the files in the ***12d\12dmodel\12.00*** folder in ***Program Files*** (or in Program Files (x86) for a 32-bit Install on a 64-bit O/S) will then be deleted, and the ***12d Model xx*** entry removed from the Windows Registry.

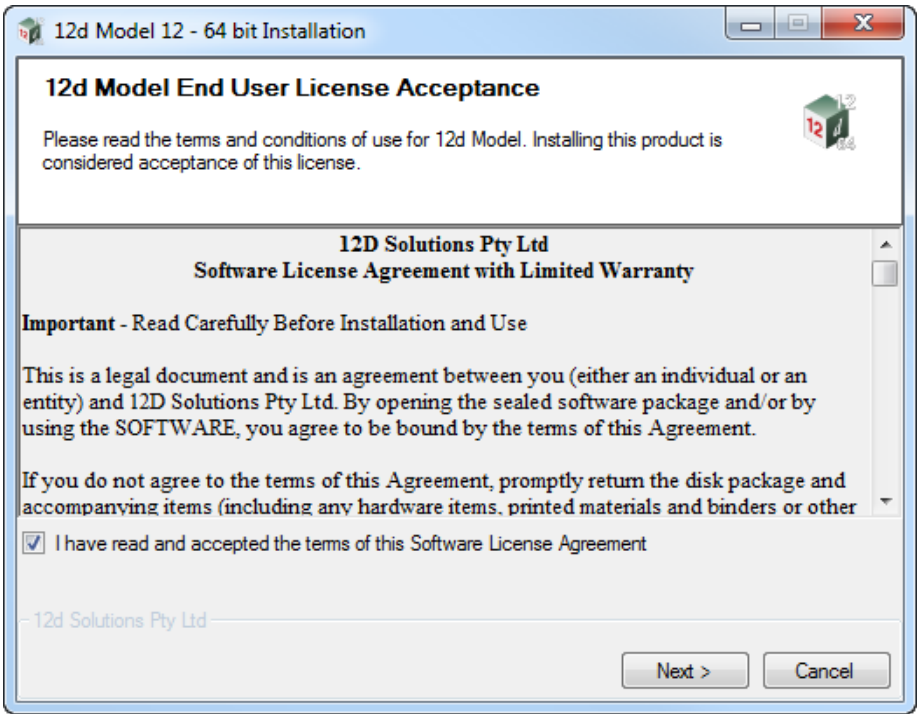
The installation of the new ***12d Model*** can now begin and the **Welcome** screen is displayed.

Welcome *Welcome message*



Select ***Next*** to continue with the installation

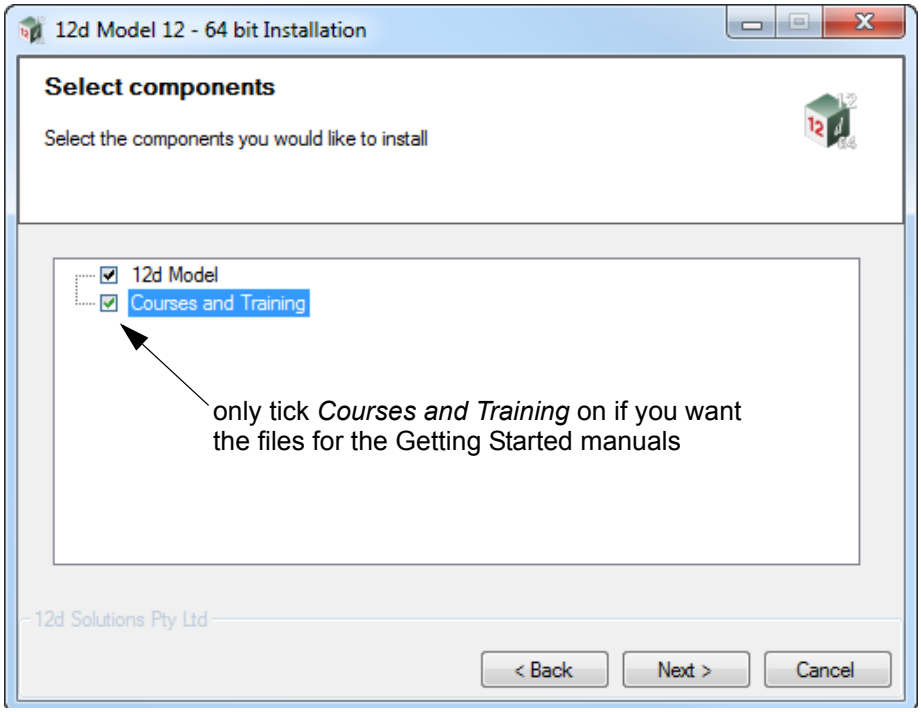
Software License Agreement *12D Solutions license agreement*



If you agree with the License conditions, **tick** on ***I have read and accept the terms of the Software License Agreement***.

Select ***Next*** to continue with the installation

Select Components

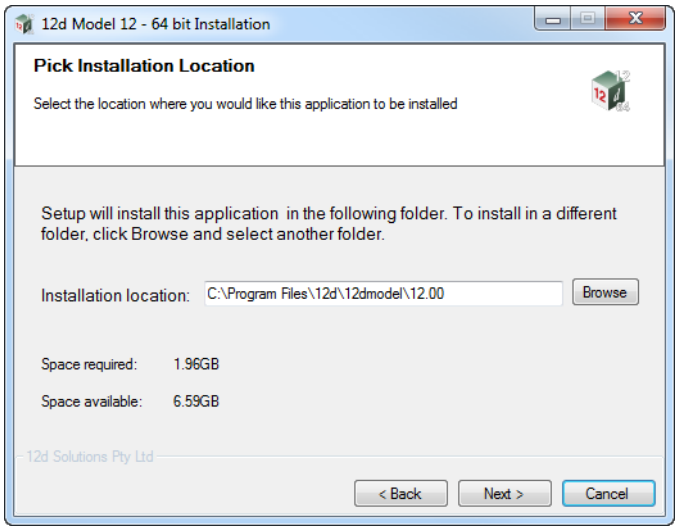


Tick on ***12d Model*** to install ***12d Model***.

Only tick on ***Courses and Training*** if you want to install the files for the ***Getting Started*** manuals.

Select ***Next*** to continue with the installation

Installation Location



Continue with the default installation folder for the software:

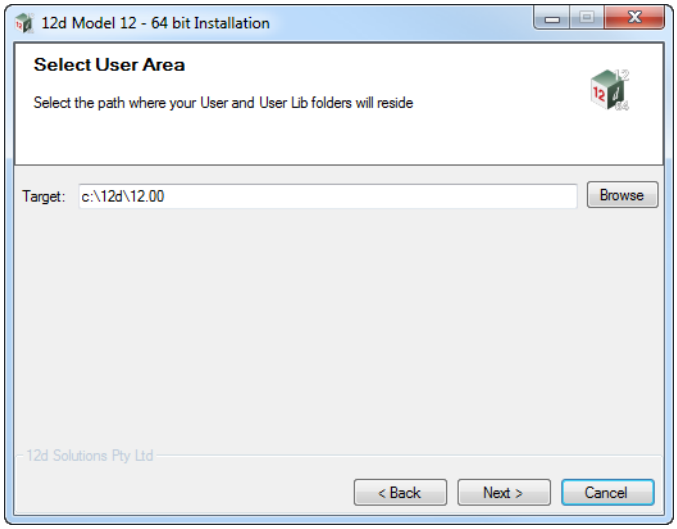
for 64 bit version: c:\Program Files\12d\12dmodel\12.0

for 32 bit version: c:\Program Files (x86)\12d\12dmodel\12.0

or click on ***Browse*** to browse to another folder for the installation

Select ***Next*** to continue with the installation

User Area



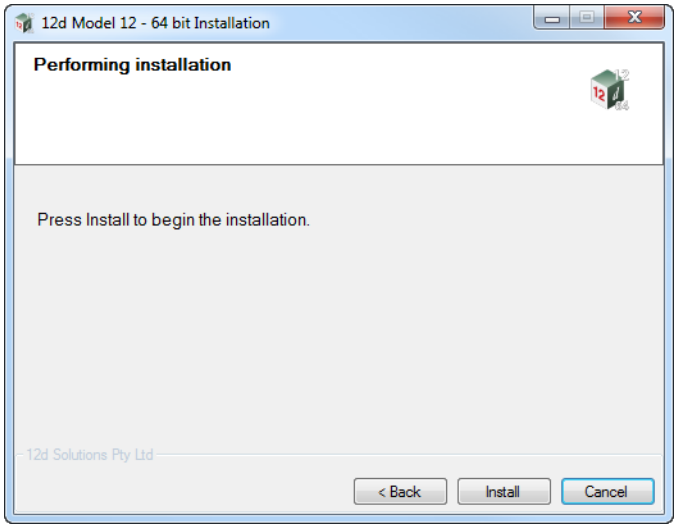
Continue with the default folder for the ***User Area*** for the software:

c:\12d\12.0

or click on ***Browse*** to browse to another folder for the User Area.

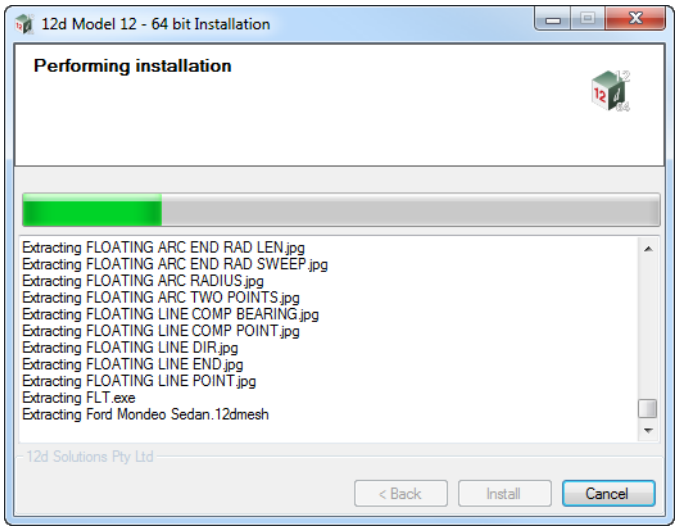
Select ***Next*** to continue with the installation

Ready to Install

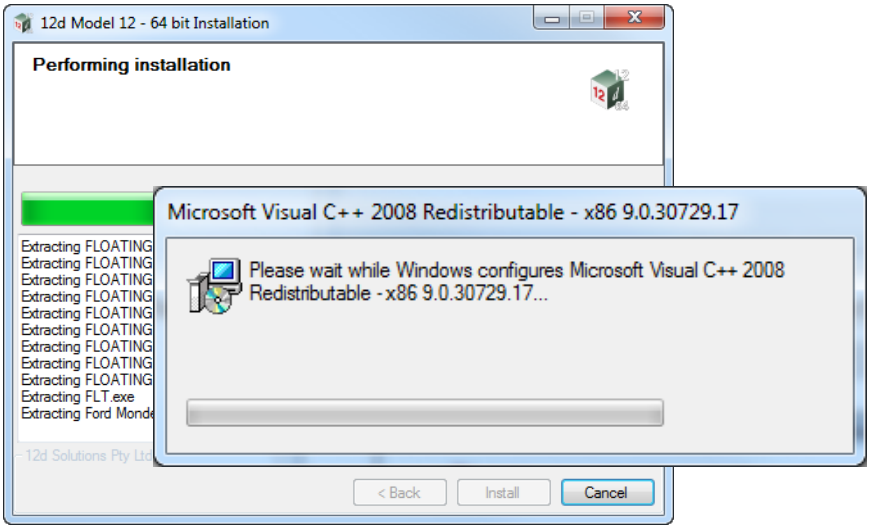


Select ***Install*** to begin the actual installation

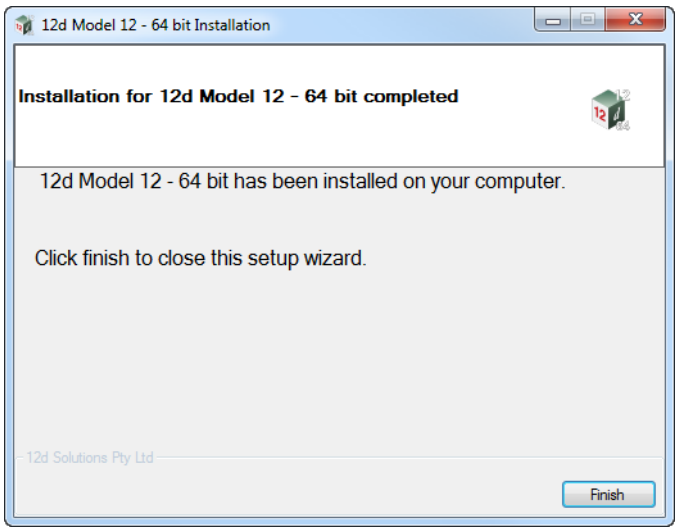
The software will be copied and installed onto the computer.



The Microsoft C++ Redistributables will be automatically installed (64 and 32 for 64-bit install)



Setup Complete



End of the installation. Select ***Finish*** to complete the installation

This completes the installation of the ***12d Model*** software.

12d Model will not function without an authorisation file called ***nodes.4d***.
The final step is to install and test the ***nodes*** file. Go to Step 4. Installing the Nodes.4d file.

The folders and icons that are created in the installation are given in the sections:

1.4 Folders Created by the Installation

1.5 Icons Created by the Installation,

Continue to Step 4. Installing the Nodes.4d file.

Step 4. Installing the ***Nodes.4d*** file

12d Model will not create new projects or open an existing project without an authorisation file called ***nodes.4d*** with valid information in it.

The information inside ***nodes.4d*** controls

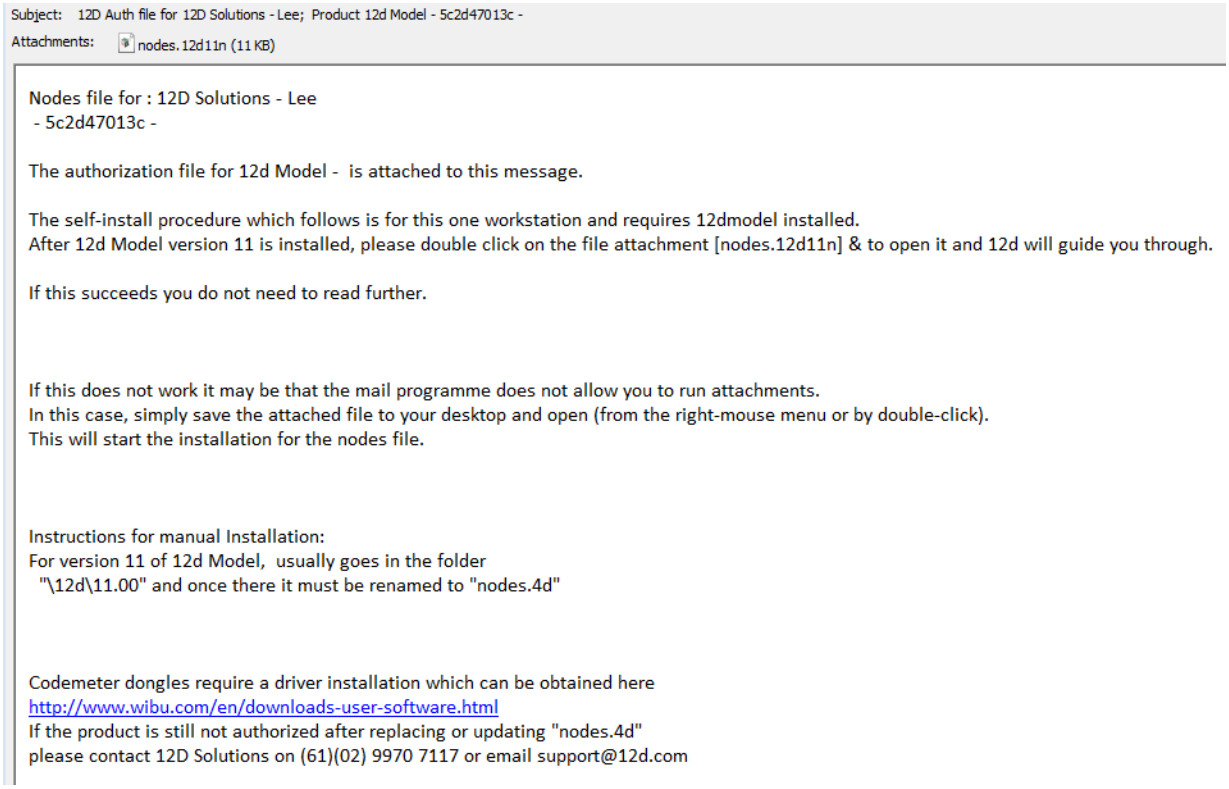
(a) ***which 12d dongles*** are authorised to run ***12d Model***

(b) what ***version*** of ***12d Model*** will run for a dongle

(c) what ***modules*** are authorised to run for a particular 12d dongle

To authorise ***12d Model*** to run with ***your 12d dongles***, a file called ***nodes.12dxxn*** where ***xx*** is the ***12d Model*** version number, will have been emailed to you by your local ***12d Model*** Reseller.

For example, for ***12d Model 11*** the file will be called ***nodes.12d11n***



Subject: 12D Auth file for 12D Solutions - Lee; Product 12d Model - 5c2d47013c -
Attachments: nodes.12d11n (11 KB)

Nodes file for : 12D Solutions - Lee
- 5c2d47013c -

The authorization file for 12d Model - is attached to this message.

The self-install procedure which follows is for this one workstation and requires 12dmodel installed.
After 12d Model version 11 is installed, please double click on the file attachment [nodes.12d11n] & to open it and 12d will guide you through.

If this succeeds you do not need to read further.

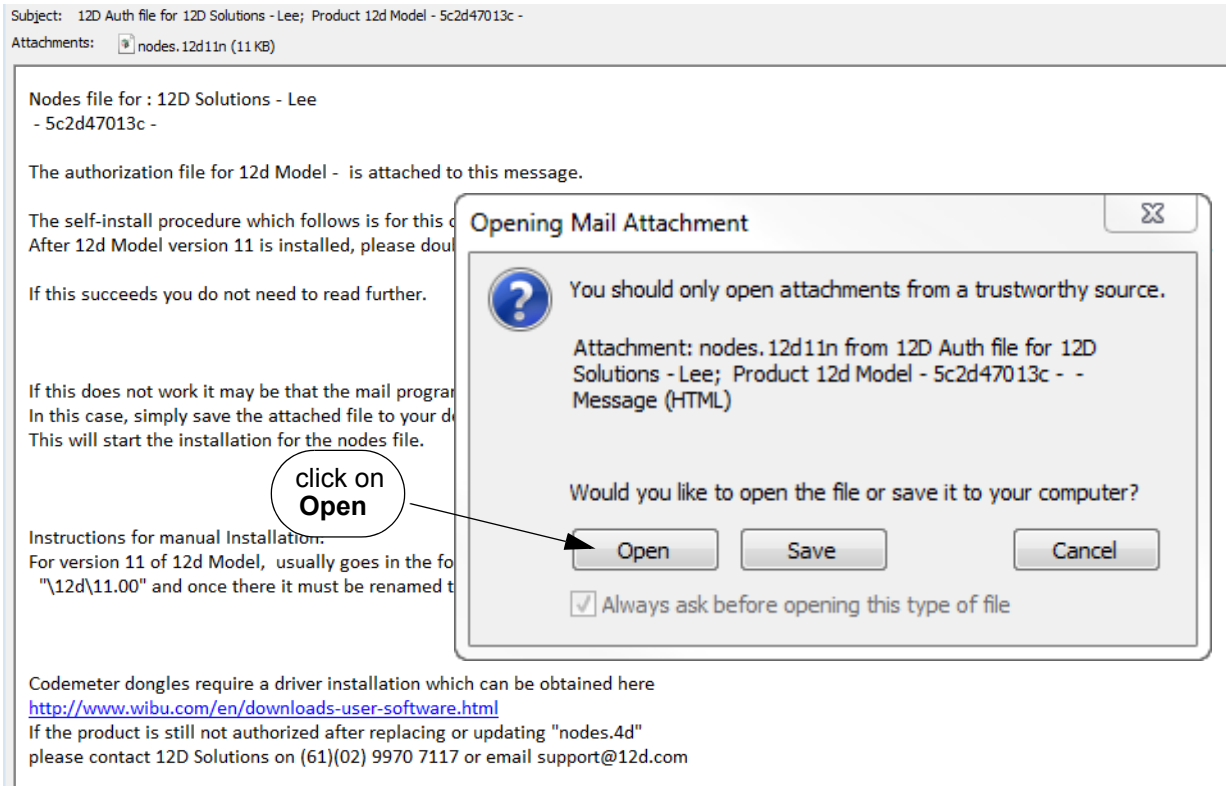
If this does not work it may be that the mail programme does not allow you to run attachments.
In this case, simply save the attached file to your desktop and open (from the right-mouse menu or by double-click).
This will start the installation for the nodes file.

Instructions for manual Installation:
For version 11 of 12d Model, usually goes in the folder
"\12d\11.00" and once there it must be renamed to "nodes.4d"

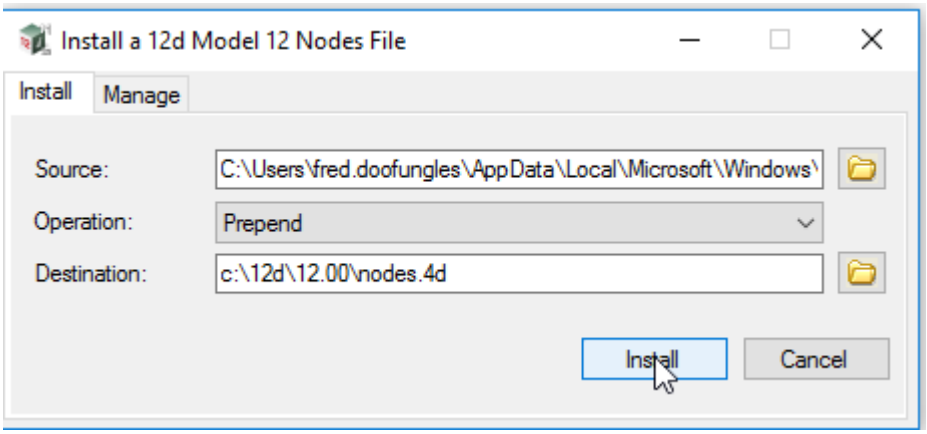
Codemeter dongles require a driver installation which can be obtained here
http://www.wibu.com/en/downloads-user-software.html
If the product is still not authorized after replacing or updating "nodes.4d"
please contact 12D Solutions on (61)(02) 9970 7117 or email support@12d.com

Installing ***12d Model xx*** on a computer sets up a *Windows* file association so that a ***nodes.12dxxn*** file is recognised and brings up the **Install a 12d Model xx Nodes File** panel which is used is to install a ***nodes.4d*** file in the correct location.

In the email, double click on the files ***nodes.12dxxn*** and the **Opening Mail Attachment** panel comes up.



Click on ***Open*** and then the **Install a *12d Model xx* Nodes File** panel appears



The choices for **Operation** are:

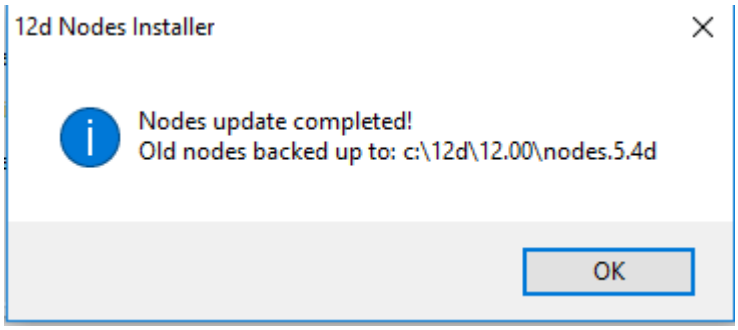
Prepend *- if a* ***nodes.4d*** *file already exists, the information in the* ***nodes.12d12n*** *file is added to the beginning of the existing nodes file. A backup up copy of the existing* ***nodes.4d*** *is created.*

Replace *- if a* ***nodes.4d*** *file already exists, it is replaced by a new* ***nodes.4d*** *file with the information in the* ***nodes.12dxxn*** *file in the new nodes file. A backup copy of the existing* ***nodes.4d*** *is created.*

Append *- if a* ***nodes.4d*** *file already exists, the information in the* ***nodes.12dxxn*** *file is added to the end of the existing nodes file. A backup copy of the existing* ***nodes.4d*** *is created.*

Select ***Replace***, ***Append*** *or* ***Prepend*** and then click **Install**.

The new/updated ***nodes.4d*** file is created in the **Destination** folder (default is ***C:\12d\xx.00***) and if a **nodes.4d** file already existed, a backup copy of it is made.



Note - if you don't have the file ***nodes.12dxxn*** attached to an email but instead have the file in a folder accessible from your computer, then you can do the following:

If there is a ***nodes.12dxxn*** file, double click on that file and the **Install a 12d Model Nodes File** panel should appear and you continue as per the instructions above.

If that doesn't work, start up ***12d Model xx*** and click on the **Nodes.4d** button at the bottom of the **Open a Recent Project** panel. This will also bring up the **Install a 12d Model Nodes File** panel and you can browse for the ***nodes.12dxxn*** file in the **Source** panel field. You can then continue as per the instructions above.

CONGRATULATIONS - 12d Model has now been successfully installed.

If ***12d Model*** did ***not*** install correctly and an Authorization Error panel came up, go to the section, 6 Errors Installing and Authorising, of these notes.

To obtain documentation for ***12d Model***, go to 3 Documentation on page 35.

Expanded Important Note on *Nodes.12d12n* and *Nodes.4d*

The ***12d Model 12 nodes.12d12n*** file will normally be emailed to you.

During the installation of ***12d Model 12***, an association is created for files ending in ***.12d12n*** so after the installation, opening the ***nodes.12d12n*** on the email will bring up the ***Install a 12d Model Nodes File*** program which can copy the information in the *nodes.12d12n* file to the required area (normally *C:\12d\12.00*) and ***nodes.4d*** file.

If you do not have the ***nodes.12d12n*** attached to an email but instead have it in a folder and have installed ***12d Model 12***, double clicking on the ***nodes.12d12n*** file will also bring up the ***Install a 12d Model Nodes File*** program which can copy the information in the *nodes.12d12n* file to the required area (normally *C:\12d\12.00*) and ***nodes.4d*** file.

Or if the ***12d Model 12*** icon is clicked on, the **Open a Recent Project** panel comes up and clicking on the **Nodes** button will also bring up the ***Install a 12d Model Nodes File*** program which can copy the information in the *nodes.12d12n* file to the required area (normally *C:\12d\12.00*) and ***nodes.4d*** file

Please **do not change** the **name** of the created ***nodes.4d*** file. ***12d Model*** will only search for an authorization file called *nodes.4d.*

1.4 Folders Created by the Installation

(a) For ***64 bit 12d Model*** on **Windows 64 bit** operating systems:

The ***12d Model*** installation loads the ***12d Model software*** into the folder

C:\Program Files\12d\12dmodel\12.00

OR

(b) For **32 bit *12d Model*** on **Windows 32 bit** operating systems

The ***12d Model*** installation loads the ***12d Model software*** into the folder

C:\Program Files\12d\12dmodel\12.00

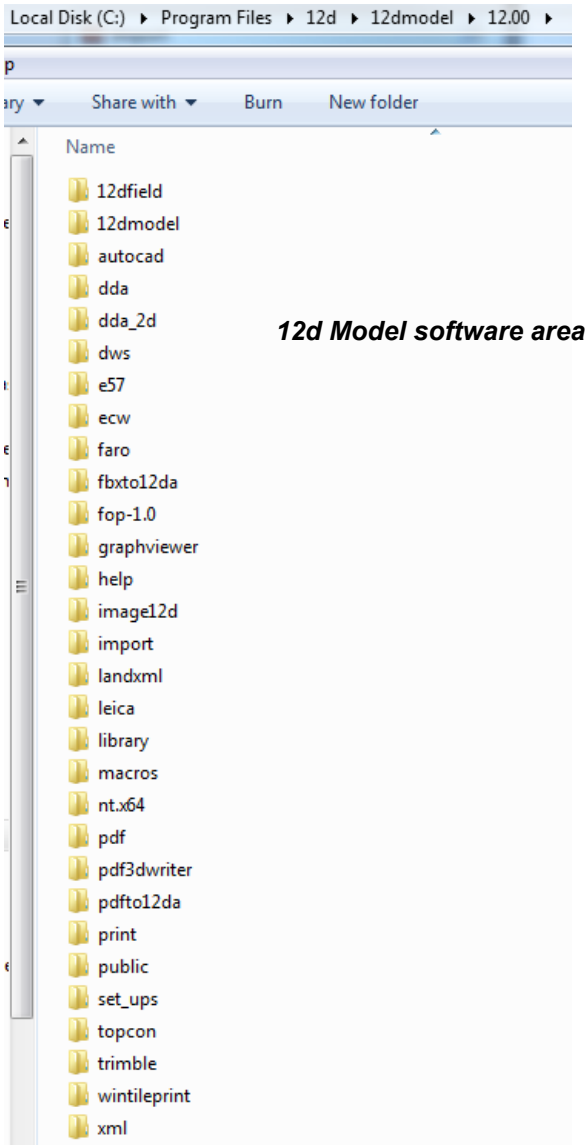
OR

(c) For **32 bit *12d Model*** 32 bit (for versions up to 5M) on **Windows 64 bit** operating systems:

The ***12d Model*** installation loads the ***12d Model software*** into the folder

C:\Program Files (x86)\12d\12dmodel\12.00

12d Model users normally only have ***read*** access to the *Program Files* and/or *Program Files (x86) folders*.



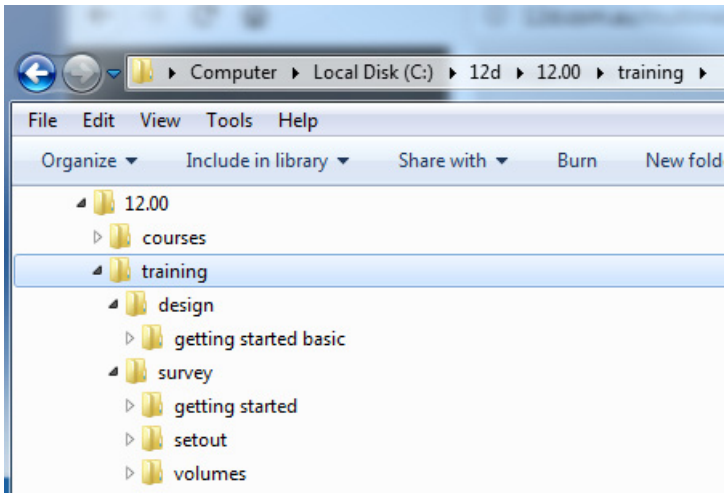
12d Model software area under Program Files

The ***12d Model*** installation on either 32 bit or 64 bit WIndows, also creates an area

C:\12d\12.00

which during the installation is given read/write access for the user.

If the **Courses and Training** component was ticked, then the installation will place the training data used with the *Getting Started for Design and Getting Started for Surveying* manual in the folder **12d\12.00** (or the folder you selected)



12d Model user areas

The folder **12d\12.00** is also the default folder where the *nodes.4d* file will be installed, and is also the default area where a user creates their own subfolders ***User*** and ***User_Lib*** for their user configurations of ***12d Model***.

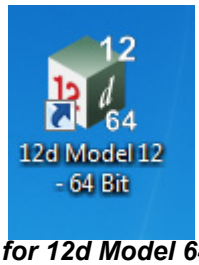
Warning

An Uninstall will NOT delete any of the training material loaded into **12d\12.0\training** and **12d\12.0\courses** by a previous installation.

The ***12d Model 12*** Install (32 bit and 64 bit) will overwrite any files of the same name in these areas.

1.5 Icons Created by the Installation

The installation loads the appropriate components and creates the ***12d Model 12*** icon



icon for 12d Model 64 bit exe

icon for 12d Model 32 bit exe

The ***12d Model 12 - 64*** *and* ***12d Model 12 - 32*** icons fire up ***12d Model*** and attach to the folder *12d\12.00*.

1.6 Copying Existing User, User_Lib and env.4d

If you have ***12d Model 11*** installed on your computer, then you will probably want the files in the folders User and User_Lib, and env.4d to be used for ***12d Model 12***.

(a) The folder **User** contains your files that are to replace those that ***12d Model*** installs in *Set_ups* (e.g. names.4d, linestyl.4d) and if you already have some, you will probably also want to use them for ***12d Model 12***.

For ***12d Model 11***, the default place for **User** is *c:\12d\10.00\User* but it could also be pointed to by the environment variable USER_4D.

If there is an existing **User** folder, you need to create a new **User** folder for ***12d Model 12*** and copy to it any files that you want for ***12d Model 12***.

The default place for the new **User** in ***12d Model 12*** is *c:\12d\12.00\User* but if USER_4D in your *V11 env.4d* was used to point to your V11 **User** then you will need to change USER_4D in your V12 *env.4d* to point to your V12 **User** folder

You may need to copy the whole of **User** to the new area.

(b) The folder **User_Lib** contains your own library files and you will probably also want to use them for ***12d Model 12***.

For ***12d Model 11***, the default place for **User_Lib** is *c:\12d\10.00\User_lib* but it could also be pointed to by the environment variable USER_LIB_4D.

If there is an existing **User_Lib** folder, you need to create a new **User_Lib** folder for ***12d Model 12*** and copy to it any files that you want for ***12d Model 12***.

The default place for the new **User_Lib** in ***12d Model 12*** is *c:\12d\12.00\User_Lib* but if USER_LIB 4D in your V11 *env.4d* was used to point to your V11 **User_Lib** then you will need to change USER_LIB_4D in your V12 *env.4d* to point to your V12 **User_Lib** folder

You may need to copy the whole of **User_Lib** to the new area.

(c) Are you using a Network Dongle ?

If you are using a **12d Network** dongle then your env.4d contains the environment variable to tell ***12d Model*** that it has to search for a network dongle, and possibly which computer it is on.

So for the network case you definitely need to either copy your V11 env.4d to the V12 User, or at least update the information in V12 env.4d to point to your Network dongle.

2 Network CodeMeters

A ***12d Local CodeMeter*** *(also known as a* ***Standalone*** *or* ***single-user CodeMeter)*** is a CodeMeter that is attached to a computer and only allows ***12d Model*** to be run on **that computer only**.

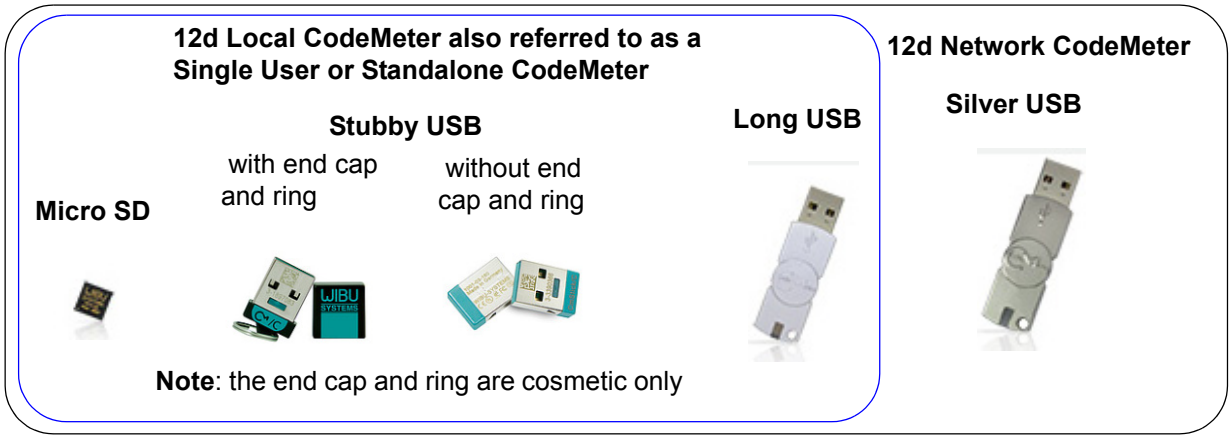
If the ***12d Local CodeMeter*** is to be used on another computer then the ***12d Local CodeMeter*** must be moved to the other computer. This means that ***12d Model*** will no longer run on the computer that no longer had the ***12d Local CodeMeter***.

This is the default installation for ***12d Model***.

A ***12d Network CodeMeter*** is a CodeMeter that controls a number of ***12d Model*** licenses and the ***12d Network CodeMeter*** can potentially be accessed by **any other computer on the network** and allows copies of ***12d Model*** to be run on those computers without needed a ***12d Local CodeMeter***.

Note: When using a ***12d Network CodeMeter,*** **each** running copy of ***12d Model*** using a ***12d Network CodeMeter*** on a computer requires **a license** from the ***12d Network CodeMeter***.

12d Network CodeMeters are metallic and a silver colour, and are labelled with a number starting with ***ec***.



If your computer is not using a ***12d Local CodeMeter*** and is only using a ***12d Network CodeMeter*** to obtain ***12d Model*** licenses then ***12d Model*** and the CodeMeter Drivers **still need to be installed on the computer** that is wanting to run ***12d Model***.

BUT the ***12d Model*** installation installs a ***dongles.4d*** file that assumes that ***12d Model*** is only using a ***12d Local CodeMeter*** and has no access to a ***12d Network CodeMeter***.

So to access a ***12d Network CodeMeter***, the ***dongles.4d*** file needs to be modified.

The ***nodes.4d*** file you use will also need to contain an authorization for the ***12d Local CodeMeter***.

Note: a computer can be set up to look for both a ***12d Local CodeMeter*** and a ***12d Network CodeMeter.***

Instructions for modifying the ***dongles.4d*** file and the ***nodes.4d*** file are given in the ***Installing 12d Network Codemeters*** pdf. See 3.7 Installing 12d Network Codemeters.

3 Documentation

See

3.1 12d Model Reference Manual
3.2 Getting Started for Design Manual
3.3 Getting Started for Surveying Manual
3.4 12d Model Programming Language Manual
3.5 12d XML File Format
3.6 12d A File Format
3.7 Installing 12d Network Codemeters

3.1 12d Model Reference Manual

The ***12d Model Reference*** manual contains the technical information required for using ***12d Model*** includes information such as:

(a) the tools and concept used in ***12d Model***

(b) descriptions of the ***12d Model*** screen layout, views and toolbars

(c) information on each ***12d Model*** menu

(d) technical information on the fields in each ***12d Model*** panel

(e) information on all the set up files for ***12d Model***. E.g. for colours and linestyles

(f) information on the 12d XML and 12da formats

Although the ***12d Model Reference*** manual contains some information on each of the field in panels, it is the technical information about what is valid values etc and is not intended to be a full description on how all the options work together. That is, it is **NOT a training manual**.

The ***12d Model Reference*** manual also acts as a ***context sensitive*** **Help** system when ***12d Model*** is running.

That is, when ***12d Model*** is running:

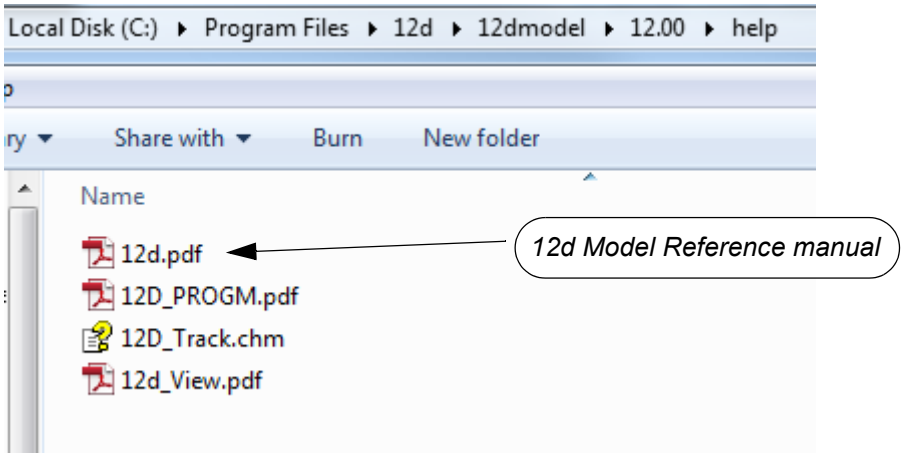
(a) for most menus in ***12d Model***, when the menu is on the screen and has the Windows focus, pressing F1 will open the ***12d Model Reference*** manual at that menu

(b) for most panels in ***12d Model***, when the panel is on the screen and has the Windows focus, pressing F1 will open the ***12d Model Reference*** manual at that panel. Or if the panel has a **Help** button, clicking on the **Help** button opens the ***12d Model Reference*** manual at that panel.

(c) by clicking on the option ***Help =>12d Model***

The ***12d Model Reference*** manual is also accessed from within ***12d Model*** by clicking on the option ***Help =>12d Model***.

The ***12d Model Reference*** *is* a pdf file called ***12d.pdf*** and when ***12d Model*** is installed, *12d.pdf* is copied into the ***Help*** folder.



To download a zipped copy of the**12d Model Reference** manual,12d.pdf, click on the following link and then unzip the downloaded file

http://downloads.12dmodel.com/v12/12d_Model_12_C1k/12d_ref_Jan_18.zip

Note: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

Continue to 3.2 Getting Started for Design Manual or return to 3 Documentation.

3.2 Getting Started for Design Manual

12d Model is supplied with a comprehensive on-line ***12d Model Reference*** manual which describes the function of each menu option in detail. However, it is a ***Reference*** manual and makes no attempt to describe how to use ***12d Model*** for production surveying and civil engineering work.

The ***12d Model Getting Started for Design*** manual is designed to show you how to work with the context sensitive help system, and then as the first section of Training, help you start to learn how to use ***12d Model*** to achieve typical civil engineering tasks.

Wherever possible, The ***12d Model Getting Started for Design*** manual uses examples to clarify usage. It compliments rather than replaces the ***12d Model Reference*** manual. In general, information in the ***12d Model Reference*** manual will not be duplicated here.

The ***12d Model Getting Started for Design*** manual is **NOT** installed with ***12d Model*** and needs to be downloaded.

To download a pdf copy of the ***12d Model Getting Started for Design*** manual, click on the following link

http://downloads.12dmodel.com/v12/12d_Model_12_C1k/12dm_getting_started_for_design_jan_18.pdf

Note: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

Continue to 3.3 Getting Started for Surveying Manual or return to 3 Documentation.

3.3 Getting Started for Surveying Manual

12d Model is supplied with a comprehensive on-line ***12d Model Reference*** manual which describes the function of each menu option in detail. However, it is a ***Reference*** manual and makes no attempt to describe how to use ***12d Model*** for production surveying and civil engineering work.

The ***12d Model Getting Started for Surveying*** manual is designed to show you how to work with the context sensitive help system, and then as the first section of Training, help you start to learn how to use ***12d Model*** to achieve typical surveying tasks.

Wherever possible, The ***12d Model Getting Started for Surveying*** manual uses examples to clarify usage. It compliments rather than replaces the ***12d Model Reference*** manual. In general, information in the ***12d Model Reference*** manual will not be duplicated here.

The ***12d Model Getting Started for Surveying*** manual is **NOT** installed with ***12d Model*** and needs to be downloaded.

To download a pdf copy of the ***12d Model Getting Started for Surveying*** manual, click on the following link

http://downloads.12dmodel.com/v12/12d_Model_12_C1k/12dm_getting_started_for_surveying_jan_18.pdf

Note: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

Continue to 3.4 12d Model Programming Language Manual or return to 3 Documentation.

3.4 12d Model Programming Language Manual

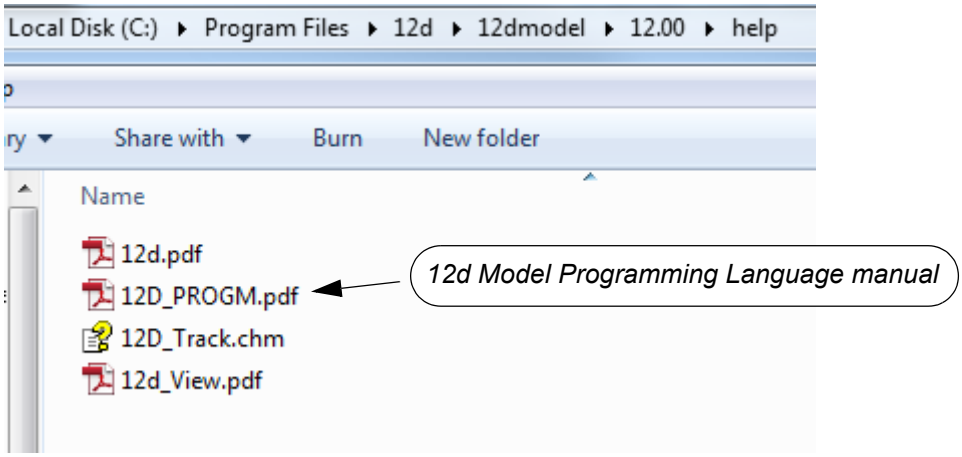
The ***12d Model Programming Language*** (12dPL), is a powerful programming language designed to run from within ***12d Model***. It is also known as 4DML from when the product was called ***4d Model***.

Its main purpose is to allow users to enhance the existing ***12d Model*** package by writing their own programs. These programs are often called ***macros***.

The ***12d Model Programming Language*** manual is a reference manual and does not try to teach programming techniques. Instead this manual sets out the syntax, restrictions and supplied functions available in 12dPL.

is also accessed from within ***12d Model*** by clicking on the option ***Help =>12d Model***.

The ***12d Model Programming Language*** manual is a pdf file called ***12d_prog.pdf*** and when ***12d Model*** is installed, *12d_prog.pdf* is copied into the ***Help*** folder.



The ***12d Model Programming Language*** manual can be accessed from within ***12d Model*** by clicking on the option ***Help =>12d Macro Manual***

To download a pdf copy of the ***12d Model Programming Language*** manual,12d_prog.pdf, click on the following link

http://downloads.12dmodel.com/v12/12d_Model_12_C1k/12d_progm_Jan_18.pdf

> **Note**: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

Continue to 3.5 12d XML File Format or return to 3 Documentation.

3.5 12d XML File Format

The ***12d XML*** file format is a text file definition from **12d Solutions** which is used for reading and writing out string data from ***12d Model. 12d XML*** files normally end in ***.12dxml***.

The ***12d XML*** file is a Unicode file.

The documentation for ***12d XML*** is part of the ***12d Model Reference*** manual (see 3.1 12d Model Reference Manual) but the chapter as also been separated out so the entire ***12d Model Reference*** manual is not needed.

To download a pdf copy of the ***12d Model 12d XML*** manual, click on the following link

http://downloads.12dmodel.com/v12/12d_Model_12_C1k/12d_XML_File_Format_Jan_18.pdf

> **Note**: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

Continue to 3.6 12d A File Format or return to 3 Documentation.

3.6 12d A File Format

The ***12d A*** (12d Archive) file format is a text file definition from **12d Solutions** which is used for reading and writing out string data from ***12d Model. 12d A*** files normally end in ***.12da***.

The ***12d A*** file is a Unicode file.

The documentation for ***12d A*** is part of the ***12d Model Reference*** manual (see 3.1 12d Model Reference Manual) but the chapter as also been separated out so the entire ***12d Model Reference*** manual is not needed.

To download a pdf copy of the ***12d A File Format*** manual, click on the following link

http://downloads.12dmodel.com/v12/12d_Model_12_C1k/12d_A_File_Format_Jan_18.pdf

> **Note**: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

Further Notes:

1. ***12da*** was originally an Ascii file and stood for ***12d Ascii*** but now that the 12da file is a Unicode file, ***12da*** stands for ***12d Archive***.
2. 12da has now been superseded by 12d XML (see 3.5 12d XML File Format)

Continue to 3.7 Installing 12d Network Codemeters or return to 3 Documentation.

3.7 Installing 12d Network Codemeters

A ***12d Network CodeMeter*** controls a number of ***12d Model*** licenses and the ***12d Network CodeMeter*** can potentially be accessed by **any other computer on the network** and allows ***12d Model*** to be run on those computers without needed a ***12d Local CodeMeter***.

If your computer is to use a ***12d Network CodeMeter*** then ***12d Model*** and the CodeMeter Drivers still need to be installed on the computer but the ***dongles.4d*** file will need modifying and a different ***nodes.4d*** may be needed.

Instructions for modifying the ***dongles.4d*** file and the ***nodes.4d*** are given in the ***Installing 12d Network Codemeters*** manual.

To download a pdf copy of the ***Installing 12d Network Codemeters*** manual, click on the following link

http://downloads.12dmodel.com/v12/12d_Model_12_C1k/Installing_12d_Network_Codemeters_Jan_18.pdf

> **Note**: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

Continue to 4 What's New in 12d Model 12 or return to 3 Documentation.

4 What's New in 12d Model 12

This chapter contains links to information on many of the new things in ***12d Model 12***.

See

4.1 What's New Summary for 12d Model C1k Only

4.2 What's New Summary for 12d Model C1k Only - Dated

4.3 What's New Summary for 12d Model 12

4.4 What's New Summary for 12d Model 12 by Subversion

4.5 What's New in 12d Model 12 pdf

4.6 Video Playlist from What's New in 12d Webinars

4.7 What's New Summary from 12d Conference 2016

4.8 Powerpoint Show on Some What's New in V12

4.1 What's New Summary for 12d Model C1k Only

The ***What's New Summary for C12j*** gives a one line summary of the New Features, Improvements and Bugs Fixed in ***12d Model 12 C1k*** sorted by Components:

http://downloads.12dmodel.com/V12/12d_Model_12_C1k/Whats_New_Summary_in_12d_Model_12_C1k_split_bugs_21_Jan_18.htm

Note: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

4.2 What's New Summary for 12d Model C1k Only - Dated

The ***What's New Summary for C12j Dated*** gives a one line summary of the New Features, Improvements and Bugs Fixed in ***12d Model 12 C1k*** but reverse sorted by date of additions.

http://downloads.12dmodel.com/V12/12d_Model_12_C1k/Whats_New_Summary_in_12d_Model_12_C1k_split_dated_bugs_21_Jan_18.htm

Note: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

4.3 What's New Summary for 12d Model 12

The ***What's New Summary All of 12d Model 12*** gives a one line summary of all the New Features and Improvements in ***12d Model 12*** and sorted by Component:

http://downloads.12dmodel.com/V12/12d_Model_12_C1k/Whats_New_Summary_in_12d_Model_12_all_21_Jan_18.htm

Note: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

4.4 What's New Summary for 12d Model 12 by Subversion

The ***What's New Summary All of 12d Model 12*** gives a one line summary of all the New Features and Improvements in ***12d Model 12*** but it is broken up into each subversion:

http://downloads.12dmodel.com/V12/12d_Model_12_C1k/Whats_New_Summary_in_12d_Model_12_all_split_21_Jan_18.htm

Note: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

4.5 What's New in 12d Model 12 pdf

The ***What's New in 12d Model 12 pdf*** gives detailed information on many of the new options and features in ***12d Model 12***.

http://downloads.12dmodel.com/V12/12d_Model_12_C1k/Whats_New_in_12d_Model_12_24_Dec_16.pdf

Note: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

4.6 Video Playlist from What's New in 12d Webinars

The ***What's New in 12d Model Video Playlist*** is three youtube videos of the ***What's New in 12d Model 12 Webinars*** given in May 2016

https://www.youtube.com/playlist?list=PLvBKANuJGV678MwMrU81rh-pxYY_GdjCP

Note: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

4.7 What's New Summary from 12d Conference 2016

The ***What's New in 12d Model Video Playlist*** is a youtube video of the presentation by Dr Lee Gregory, Managing Director and Co-Founder of 12d Solutions, welcoming delegates to the ***12d International Conference 2016***, and then going through many of the new features in ***12d Model 12***. Richard Stoliar also presents some of the new features in ***12d Synergy 3***.

https://www.youtube.com/watch?v=AFVmDed8ndw&index=2&list=PLvBKANuJGV66MlVG-7JKWGVIQRDA0uO1m

Note: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

4.8 Powerpoint Show on Some What's New in V12

The ***What's New 12d Model 12 Powerpoint Show*** *(pps file)* is a powerpoint going through some of the new options and features in ***12d Model 12***.

http://downloads.12dmodel.com/V12/12d_Model_12_C1k/Whats_New_in_12d_Model_12_Forum_Dec_16.pps

Note: If clicking on the link does not start up your Browser then copy the text of the link into your Browser.

Return to 4 What's New in 12d Model 12.

5 Certifying CodeMeters

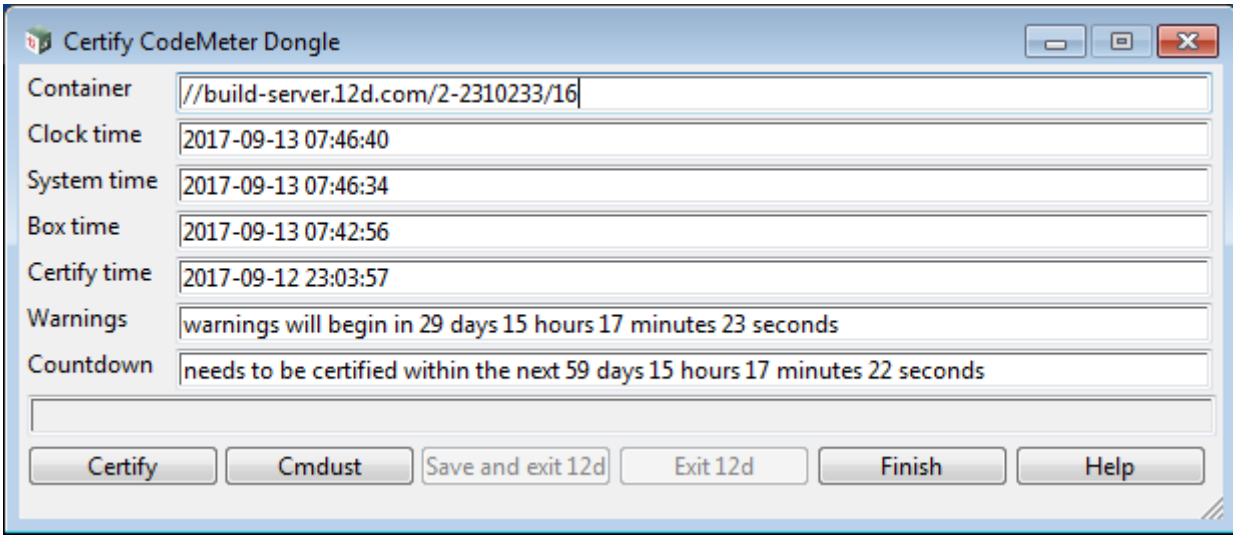
The Wibu **CodeMeter** Container (also called CodeMeter Container or CodeMeter dongle or just CodeMeter) use the **Certified Time** capability of the CodeMeter and the CodeMeter must communicate over the Internet with a certified Wibu Time Server every two months to check that there is no problem with the ***CodeMeter Container*** that your ***12d Model*** license is coming from.

For Certification to occur, a computer that can access the CodeMeter must also have access to the Internet to run the Certification.

One month before the end of the two month period, ***12d Model*** will bring up the **Certify CodeMeter Dongle** panel which gives the number of days, minutes and seconds remaining until Certification is required.

The **Certify CodeMeter Dongle** panel can also be brought up by the option

Project =>Management =>Dongles =>Certify CodeMeter



Clicking on the button **Certify** will attempt to certify the CodeMeter.

Please contact your ***12d Model*** *Reseller* if you are having problems certifying your CodeMeter.

Important Note

There is an environment variable **AUTO_CERTIFY_DONGLE_4D** and if it is set on then when the warning period is active for the CodeMeter (dongle) being used by ***12d Model***, ***12d Model*** will automatically attempt to certify the CodeMeter and if successful, no intervention by the user is required.

For more information on Certifying CodeMeters, see:

5.1 Displaying the Certified Time
5.2 Updating the Certified Time
5.3 Time Servers for Certified Time
5.4 Port Address for CodeMeter Communication

5.1 Displaying the Certified Time

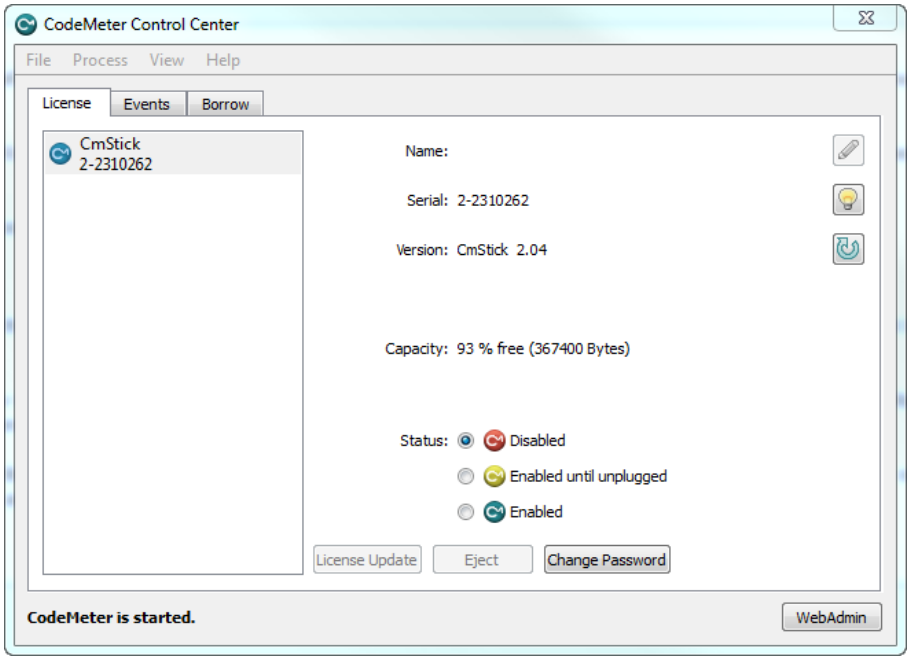
The time that the CodeMeter was last certified (the *Certified Time)* can be displayed in the **CodeMeter WebAdmin** panel.

The **CodeMeter WebAdmin** panel is accessed by from the **CodeMeter Control Center**.

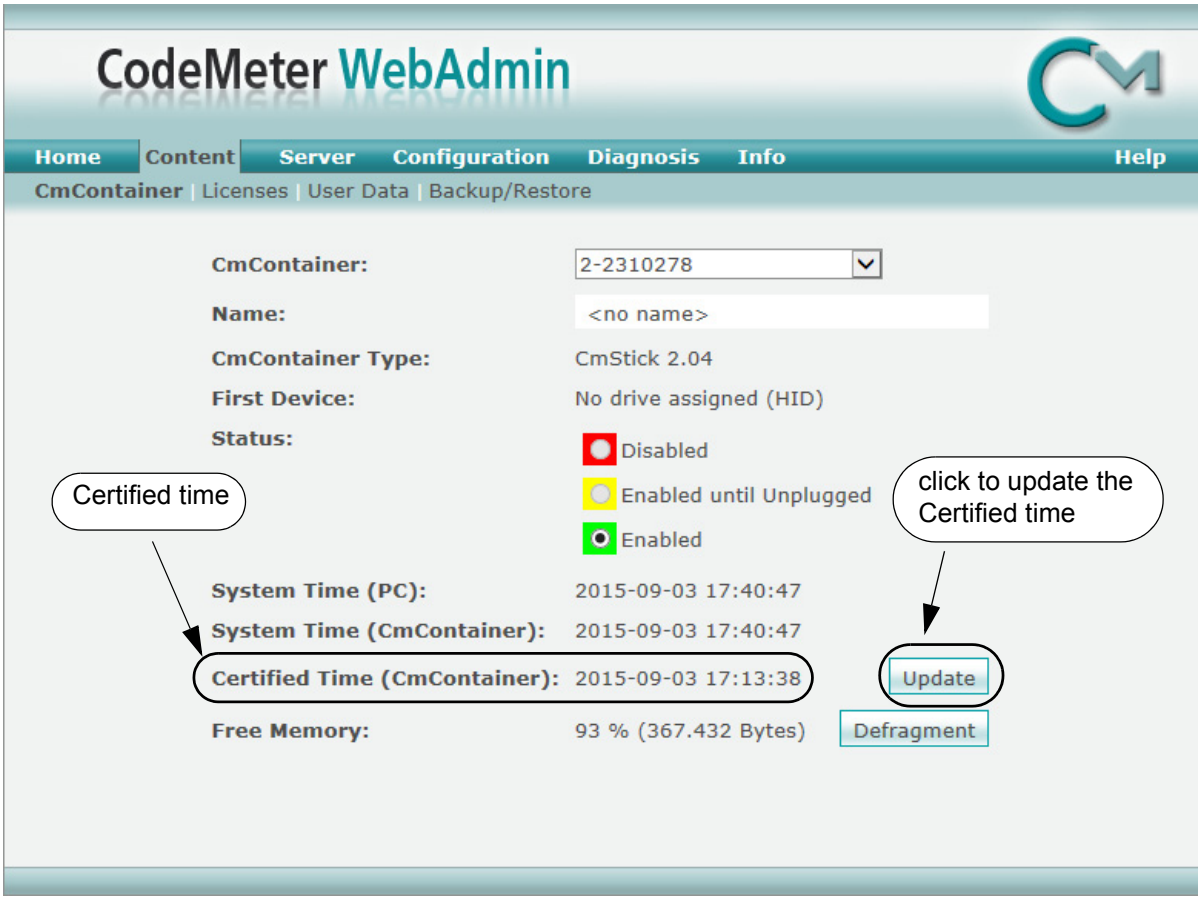
The **CodeMeter Control Center**. panel is brought by clicking on the **CodeMeter** icon that was installed on your task bar to bring up the

The **CodeMeter Control Center** shows any Codemeters that are attached to the this computer.

.



and clicking on the WebAdmin button bring up the **CodeMeter WebAdmin** panel.



After getting up the **CodeMeter WebAdmin** panel, click on the **Content >CmContainer** tab and the Certified time will be displayed.

The **Certified time** can be updated to the current date by clicking on the **Update** button.

Note: If there is more than one CodeMeter on your computer, select the one that you want to examine in the **CmContainer:** field.

5.2 Updating the Certified Time

To update the **Certified Time** in the **Network CodeMeter**, you need access over the Internet to a **CodeMeter Time Server** (see 5.3 Time Servers for Certified Time).

This Internet communication is done through a set IP port (see 5.4 Port Address for CodeMeter Communication).

The **Certified Time** can be updated either

(a) **manually** - see 5.2.1 Manually Updating the Certified Time

or

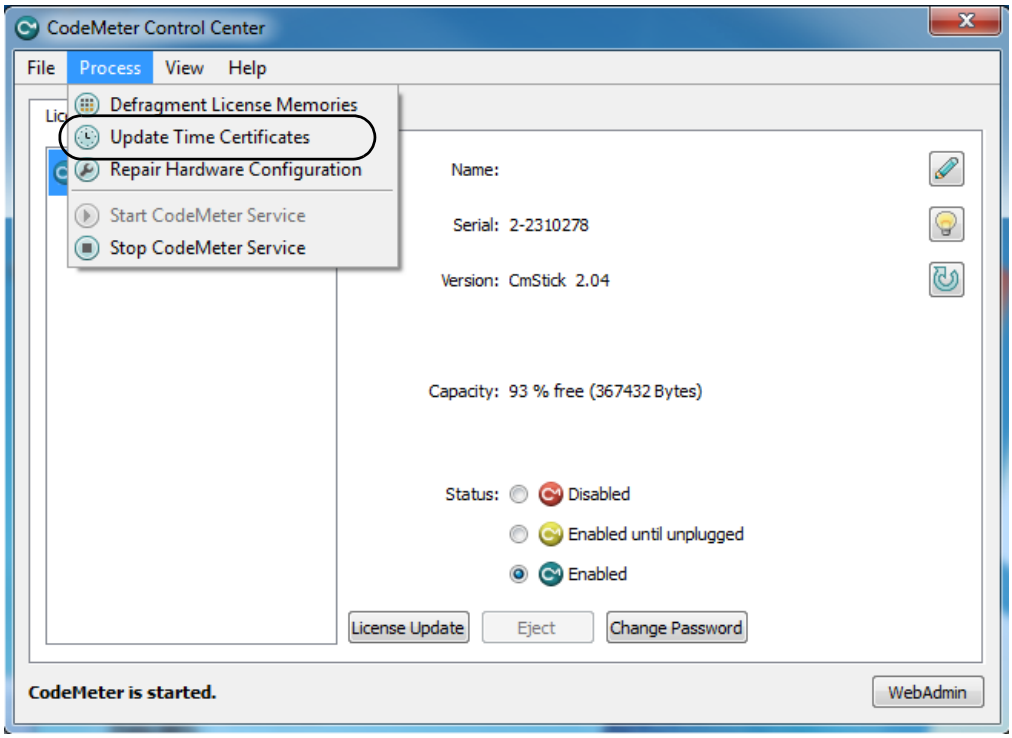
(b) **automatically** - see 5.2.2 Automatically Updating the Certified Time.

5.2.1 Manually Updating the Certified Time

To update the **Certified Time** in the **Network CodeMeter**, you need access over the Internet to a **CodeMeter Time Server** (see 5.3 Time Servers for Certified Time). This Internet communication is through a set IP port (see 5.4 Port Address for CodeMeter Communication).

The Certified Time in a Network CodeMeter can be updated manually by either:

(a) **CodeMeter Control Center** - click on **Process >Update Time Certificates**

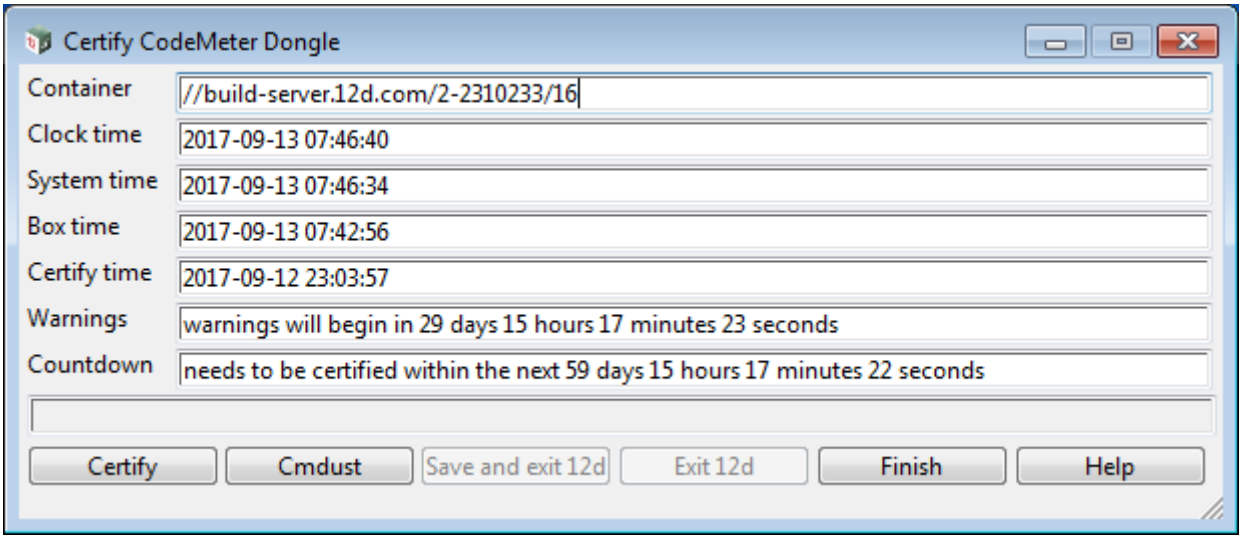


(b) **CodeMeter WebAdmin** - click on **Update** on the **Content >CmContainer** tab

(c) **From inside *12d Model***

The **Certify CodeMeter Dongle** panel can be brought up in ***12d Model*** by the option

Project =>Management =>Dongles =>Certify CodeMeter



Clicking on the **Certify** button will attempt to certify the CodeMeter.

Note

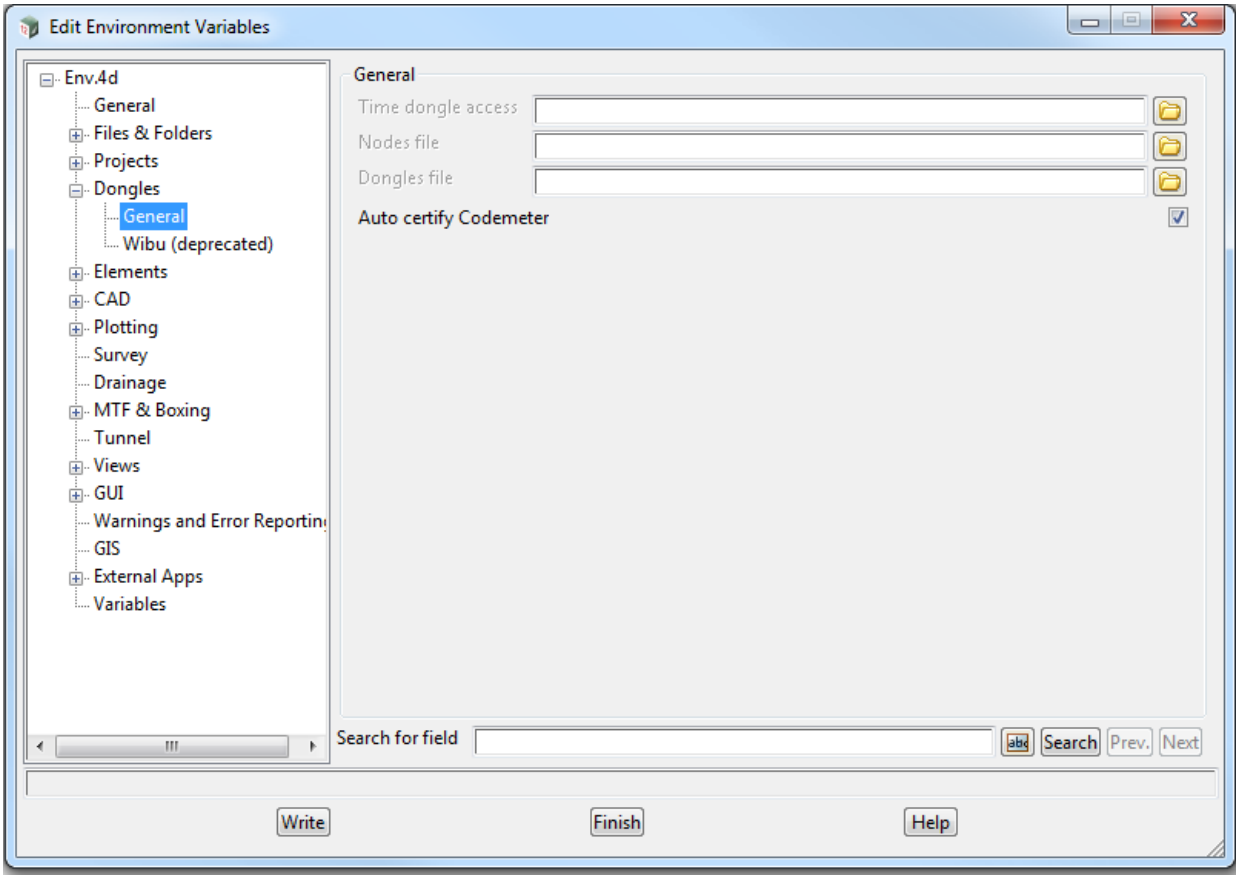
One month before the end of the two month period (the warning period), ***12d Model*** brings up the **Certify CodeMeter Dongle** panel and displays the number of days, minutes and seconds remaining until Certification is required.

5.2.2 Automatically Updating the Certified Time

You can have ***12d Model*** automatically attempt to certify the dongle whenever it is within the warning period (within one month of the two months after the Certified Time).

If you set the environment variable **AUTO_CERTIFY_DONGLE_4D** to**1**, whenever ***12d Model*** is started up, if it is in the warning period then ***12d Model*** will automatically attempt to certify the dongle. And if successful, no user intervention is required.

The environment variable AUTO_CERTIFY_DONGLE_4D is set by the **Edit Environment Variables** panel. which is brought up by the **Projects =>Management =>env.4d** option.



Note

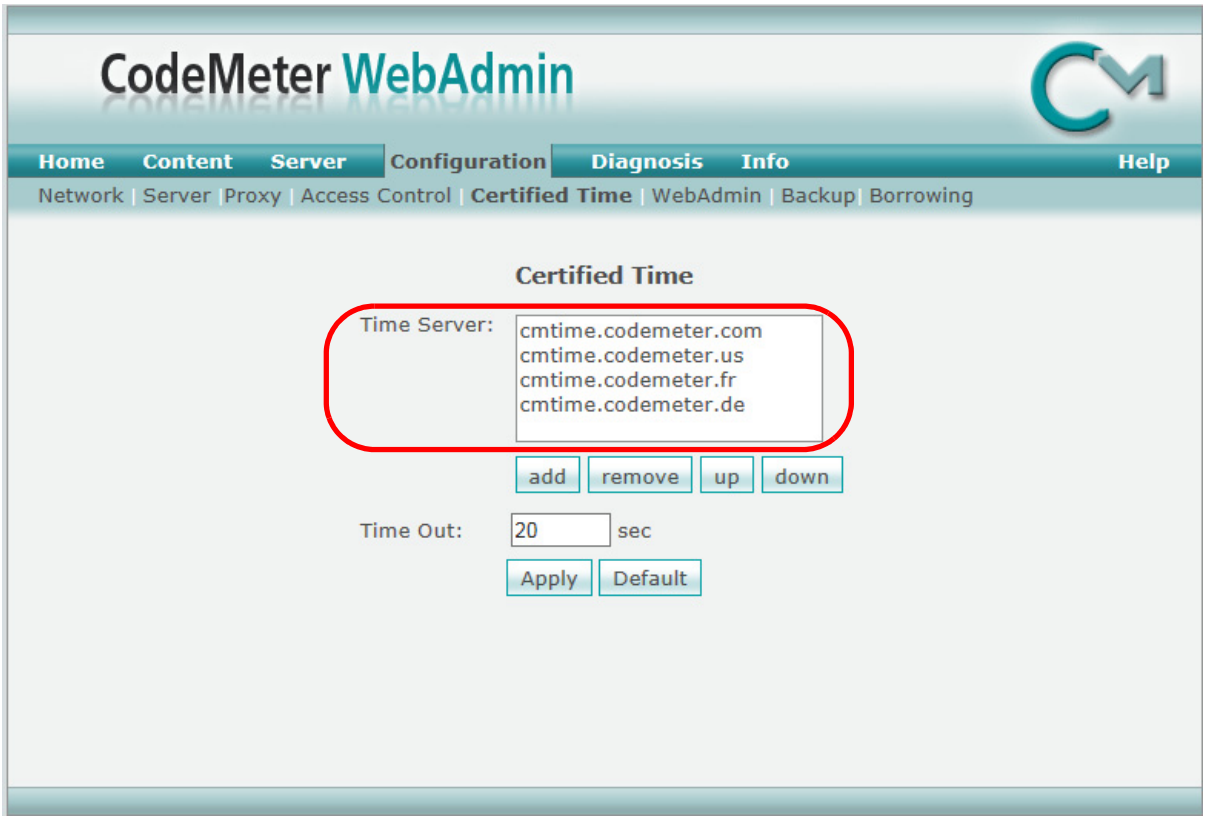
Any computer which has the environment variable AUTO_CERTIFY_DONGLE_4D set to 1 can certify the Network CodeMeter that it is using to obtain a **12d dongle**.

5.3 Time Servers for Certified Time

When you certify a CodeMeter it searches for a CodeMeter Time Server to update the Certified Time in the CodeMeter.

For a particular CodeMeter on a Server, the Internet or IP addresses of the CodeMeter Time Servers that are searched to set the **Certified Time** are given in the **Configuration >Certified Time** tab of the **CodeMeter WebAdmin** panel.

The Servers to search are given in the list labelled **Time Server:**. The list is searched in order from the top to the bottom.



Timer Server:
This shows the list of the **CodeMeter Timer Servers** to search to Certify Time for the CodeMeter. The Timer Servers can be specified by either an Internet address or an IP address.

Servers in the list are added or removed using the **add** or **remove** buttons, and a highlighted entry in the list is moved up or down with the **up** and **down** buttons.

Clicking **Apply** saves these entries in the Windows Registry of the Server that the CodeMeter is on.

5.4 Port Address for CodeMeter Communication

The **CodeMeter License Server** uses a specific IP port (defaulted on 22350) to communicate with your computer and the network. This network port is registered at **IANA** (Internet Assigned Numbers Authority) and is uniquely assigned for CodeMeter® communication.

Please make sure that your firewall is not blocking this port.

Enable the used IP port 22350 and make sure it is accessible by CodeMeter®, *i.e.* share the communication for this IP port.

6 Errors Installing and Authorising

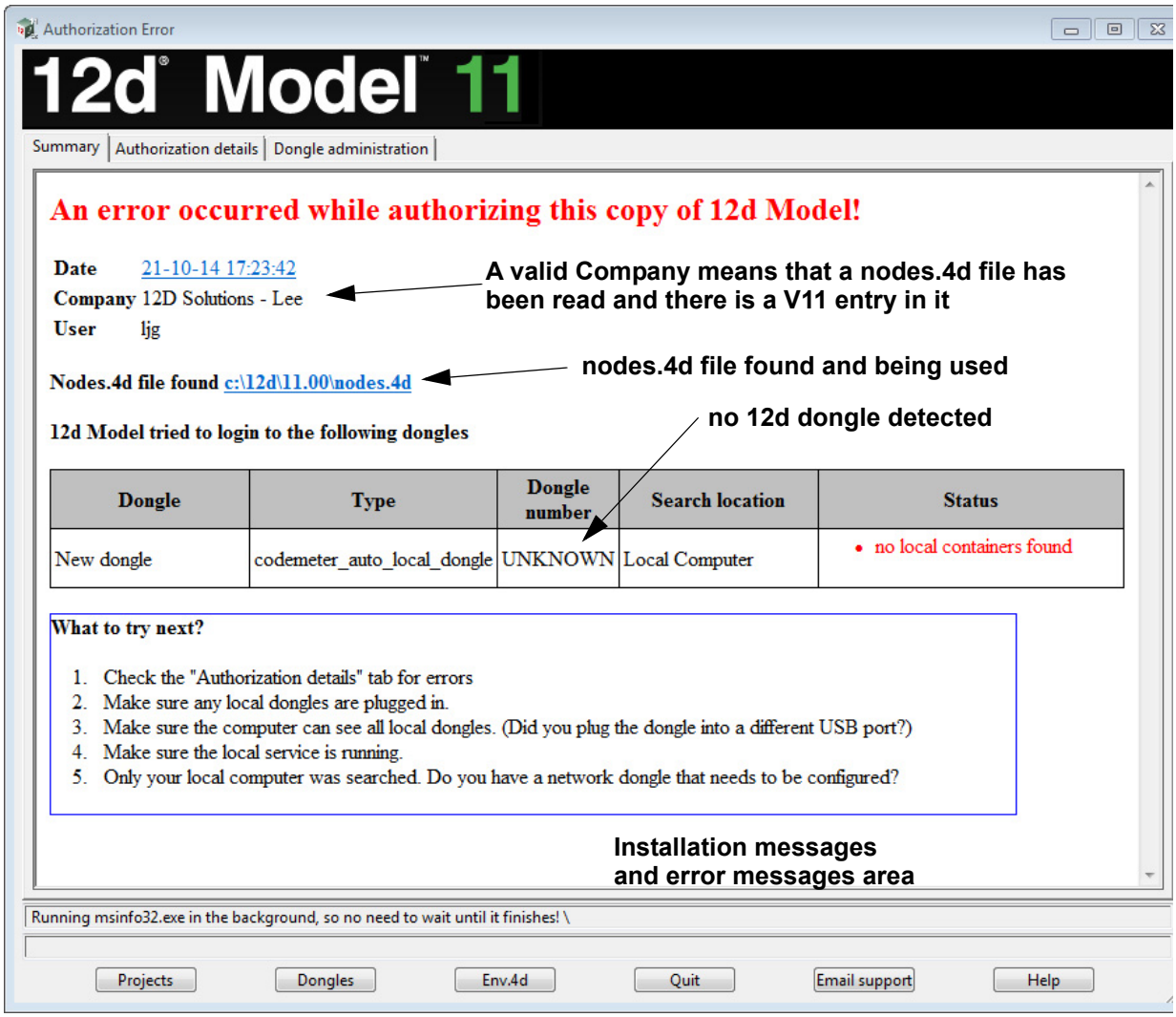
See

6.1 12d Model XX Not Authorising
6.2 Licence Expiry Warning
6.3 Dongle Missing

6.1 12d Model XX Not Authorising

If there is an ***error*** with the installation, then the **Error Authorizing Release Version** panel appears with the error messages in the panel message area.

For example, for ***12d Model 11***



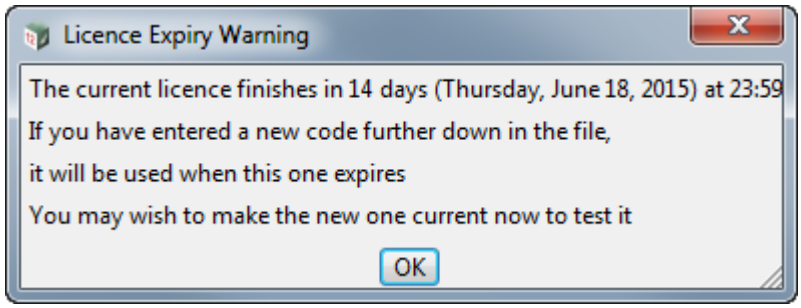
In the above panel, the UNKNOWN in the **Dongle number** column shows that no ***12d*** dongle has been detected.

If there is no error message on the panel or it is still not obvious what the problem is, please contact your ***12d Model Reseller***.

6.2 Licence Expiry Warning

The ***nodes.4d*** file that controls ***12d Model***, only validates ***12d Model*** to run for a certain period of time.

If when running ***12d Model***, the **Licence Expiry Warning** panel appears:

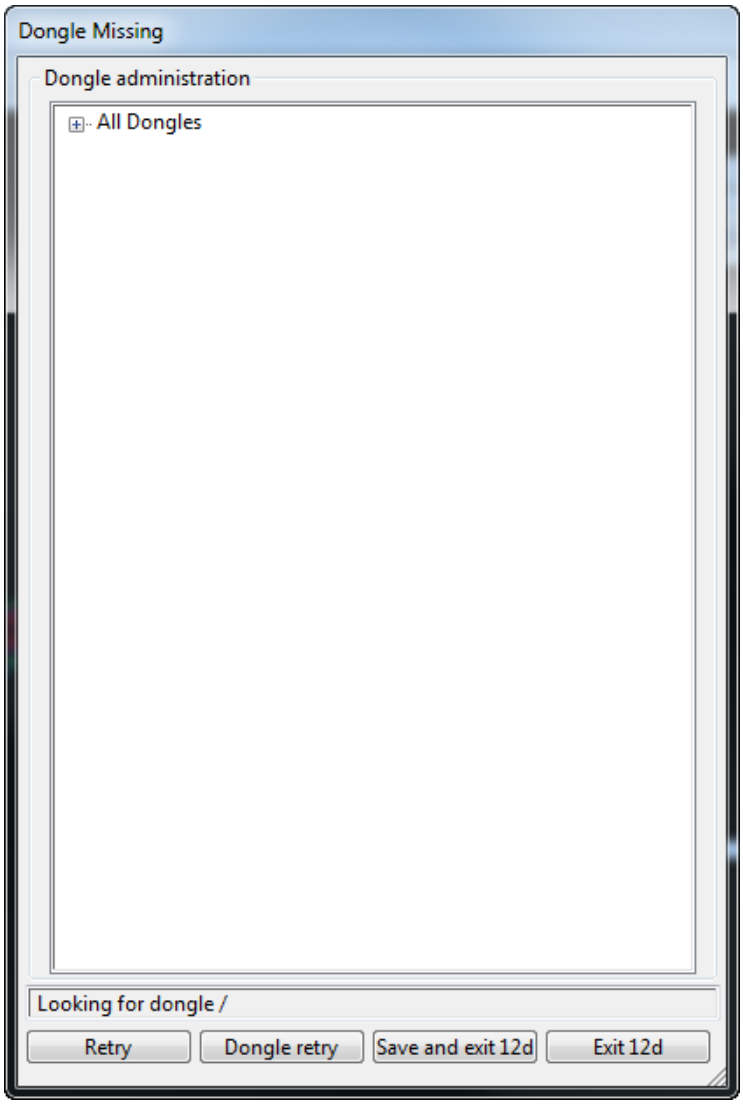


it simply means that the ***nodes.4d*** file needs to be updated.

Please contact your ***12d Model*** *Reseller* to obtain a new *nodes file* before the given date. If this is not done then ***12d Model*** will no longer run until you do obtain and install a new nodes file.

6.3 Dongle Missing

If when running ***12d Model***, the **Dongle Missing** panel appears:



it simply means that the ***12d*** dongle can no longer be seen by ***12d Model***.

Please check that your ***12d*** dongle is still attached to your computer, or if you are using a network dongle, that your network is still active.

Then click on **Retry**, and if that doesn't work, click on **Dongle retry**.

Even if you still can not see the dongle, ***12d Model*** will allow you to save your current work so that nothing is lost by clicking on the **Save and exit** 12d button.