Enterprise Dynamics Installation Guide

Enterprise Dynamics 10

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INCONTROL

Steps To Install

This document describes the installation procedure for Enterprise Dynamics version 10.

> ⚠ Your software is protected with an online license activation system. For the software to work, you require a working internet connection.
> Before installation, read this document and the **system requirements**.

> ⚠ When you have multiple types of licenses available in your (network) environment (either local, LAN or WAN), please run the **License Selector Tool** to select your license. If your license location changes (e.g a new container or new license server), you will receive a license error. For any license errors, please run the **License Selector Tool** which in many cases will resolve your issue.

> ⚠ When the location (e.g. a new or renamed server or new license container) or your type of license changes, you also need to select the appropriate license using the License Selector. The LicenseSelector.exe is located in your installation directory.

> 📋 • Enterprise Dynamics 10 is proven compatible with Windows 11, Windows 10, Windows 8, Windows 7 and Windows Vista. You must have Administrator rights to install the software.
> • Installing Enterprise Dynamics on a network can be done in two ways. One is to install the application on all client computers. The other is to install the application on the server, and to run it from the client computer.

Stand alone installation

To install the software:

1. You receive the software digitally. You find a download link in the license document. On the download page, select the installer that matches your product and is compatible with your intended installation Operation System. Launch the installer when the download is complete.

2. Follow the steps in the installation wizard. When you are asked for the type of installation, leave this selection unchanged (stand-alone).

3. When the installation is complete, please verify that you have the Codemeter Runtime Kit installed and a license container is present. This is the case when a red icon is visible in the taskbar:

4. Proceed to the activation section in order to activate your license.

> 📋 • Make sure that you install every major release from Enterprise Dynamics into a new directory. Minor releases must be installed into an existing major release install directory.
> • If you don't see this icon in your taskbar, please contact us to setup your license container.
> • It is not possible to place the licenses on virtualized hardware.

Network installation

To install the software:

1. As the software is delivered digitally, you find a download link in the license document. Launch the installer when the download is complete.

2. During the installation wizard, you receive a window asking for the type of installation.

   a. On a network client, select option 2: Network client installation. When the installation is complete, please verify that you have the Codemeter Runtime Kit installed. This is the case when a grey icon is visible in the taskbar:

   b. On a network server, select option 3: Network server installation. When the installation is complete, please verify that you have the Codemeter Runtime Kit installed and a license container is present. This is the case when a red icon is visible in the taskbar: . Note that the Enterprise Dynamics software is not installed on the server.

3. If you are setting up a client-server configuration with multiple clients, please read the "installer parameters and installer types" section to support silent installations.

> - Make sure that you install every major release from Enterprise Dynamics on the client into a new directory. Minor releases must be installed into an existing major release install directory.
> - When you re-install the server, make sure that you do not de-install the Codemeter Runtime Kit and license information.
> - If you don't see this icon in your taskbar, please contact us to setup your license system.
> - It is not possible to place the licenses on virtualized hardware. If you require hardware supporting your virtual environment, please contact InControl.

Activation

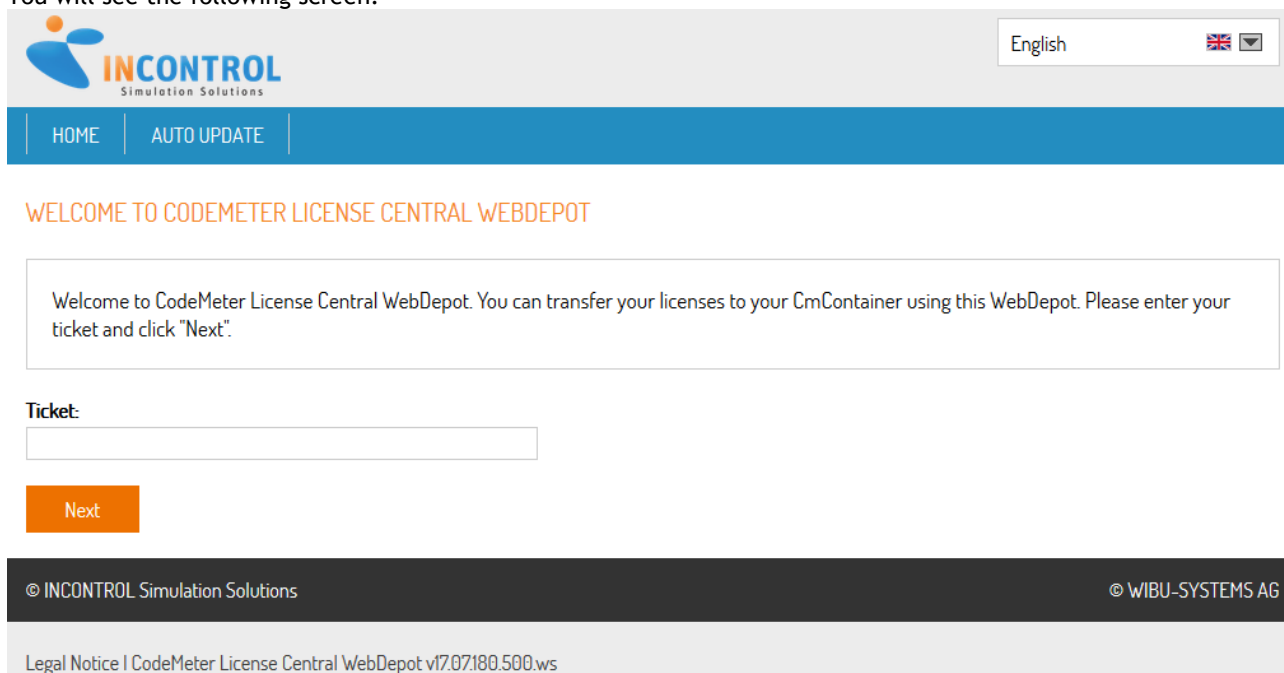**Direct activation using a web browser**

You have installed the software on your computer and the red icon is visible in the taskbar. Your computer has a working internet connection.

1. With your software, you received a ticket to collect your license. At the end of the installation process you can leave the 'License Enterprise Dynamics' checkbox ticked and it will direct you to the URL to activate your license. Alternatively, you can select the option 'Activate License' from the start menu or start screen. It will open your web browser with the following URL: https://lc.codemeter.com/63706/depot/index.php

> The Microsoft Edge browser is not supported. Please use an alternative browser like Internet Explorer.

2. You will see the following screen:

3. Enter your ticket in the 'Ticket' field and press 'Search'. Your ticket has the following format: XXXXX-XXXXX-XXXXX-XXXXX-XXXXX

4. You might receive a security warning to allow access from https://lc.codemeter.com to the application (WIBU-SYSTEMS AG). Allow the add-on to run or choose offline activation. The changes are needed to place the license in your container. You will see the following screen:

MY LICENSES

Name	Activated On	CmContainer	Status
INCONTROL Master License *(License Quantity: 1)*			Available: 1 (1)
Enterprise Dynamics *(License Quantity: 1)*			Available: 1 (1)

Activate Licenses

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5. Pressing 'Activate Licenses' will display the following screen:

AVAILABLE LICENSES

To activate your licenses:

1. Select the licenses you want to activate.
2. Select the locally connected CmContainer to which you want to transfer the licenses.
3. Click "Activate Selected Licenses Now".

☑ Name	Activated On	CmContainer	Status
☑ INCONTROL Master License *(License Quantity: 1)*			Available
☑ Enterprise Dynamics *(License Quantity: 1)*			Available

Select CmContainer

32767-64193 (INCONTROL) ▾ ↻

Activate Selected Licenses Now   Offline license transfer

◀ My Licenses

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⚠ Since Enterprise Dynamics version 10.2, every license requires both an 'InControl Master License' **AND** a seperate product license. Leave both products checked to activate them in the same container.

When everything is setup correctly, you will see a unique identifier in the CmContainer dropdown selection. If you update an existing license, you will see the unique container ID holding t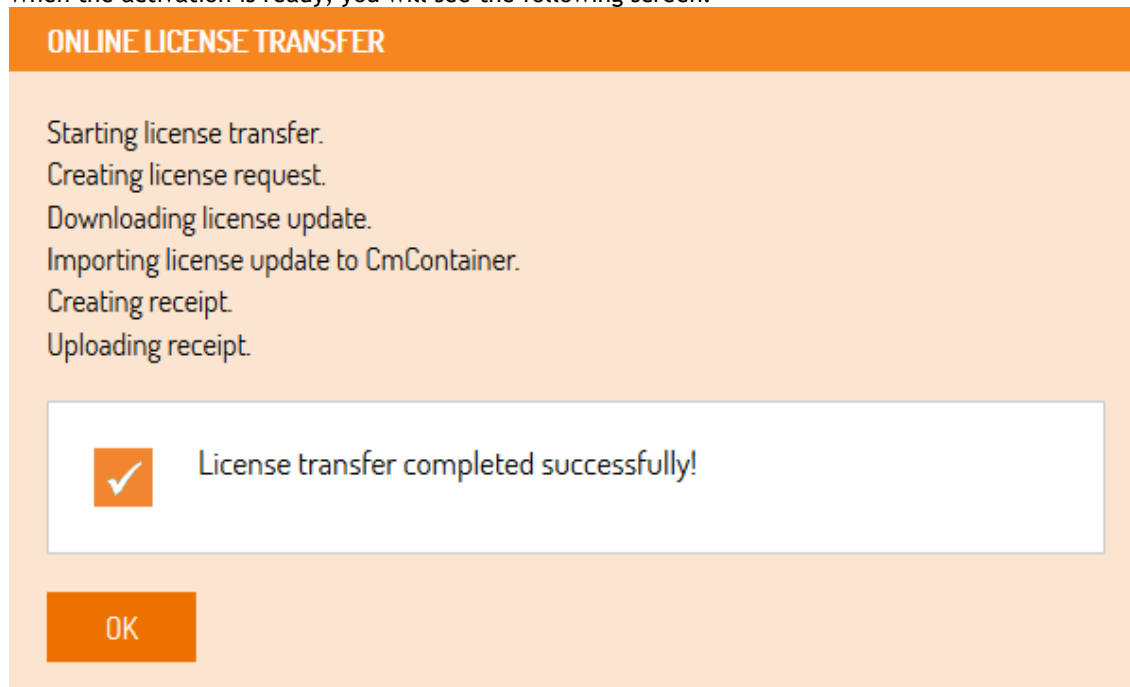he license. Press 'Activate Selected Licenses Now' and the licenses will be placed on your computer. The following progress is shown in your browser:

ONLINE LICENSE TRANSFER

! **Please wait!** The selected licenses are transferred. **This process may take several minutes to complete.** Please do not remove the CmContainer during this process and do not reload this page.

Starting license transfer.
Creating license request.
Downloading license update.
Importing license update to CmContainer.
Creating receipt.
Uploading receipt.

6. When the activation is ready, you will see the following screen:

ONLINE LICENSE TRANSFER

Starting license transfer.
Creating license request.
Downloading license update.
Importing license update to CmContainer.
Creating receipt.
Uploading receipt.

✓ License transfer completed successfully!

OK

7. When the process was successful, you will see the Codemeter icon display green:

Offline activation

Activations via the upload/dowload

You have installed the software on your computer and the red icon is visible in the taskbar. Your computer does not have a working internet connection but you have another internet connected computer available.

1. On the computer where you installed Enterprise Dynamics, open CodeMeter Control Center. If several CmContainer are connected to the computer, select the InControl CmContainer.
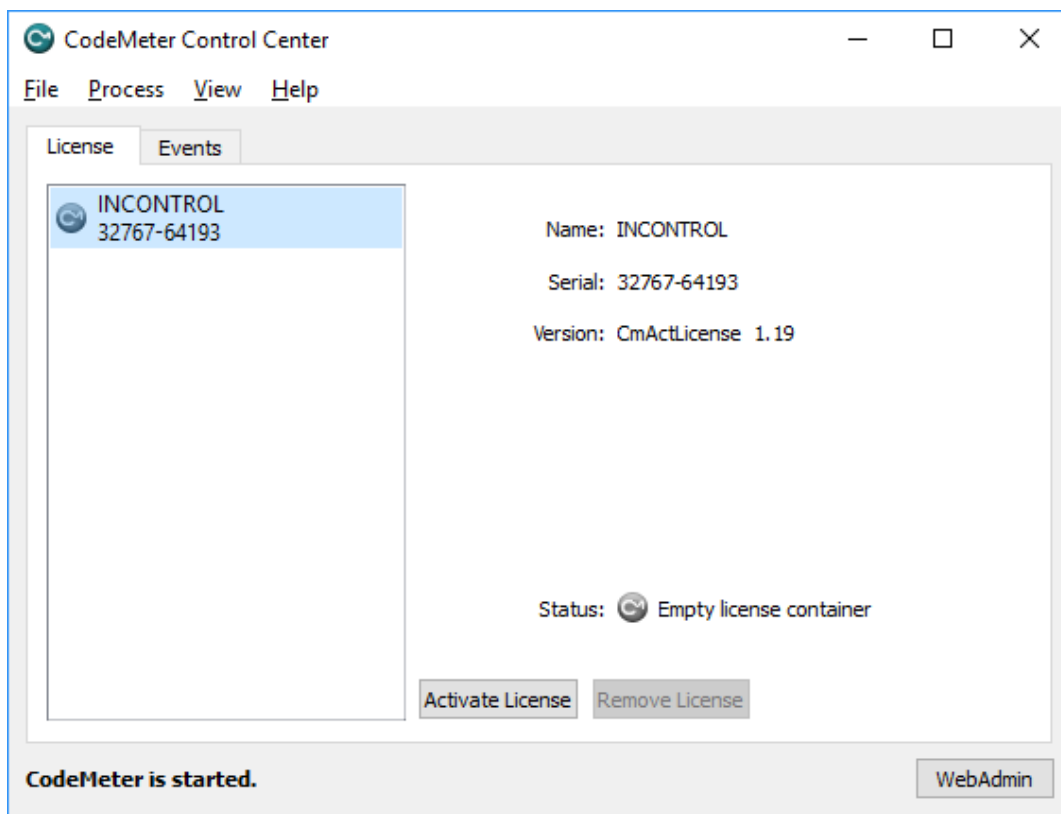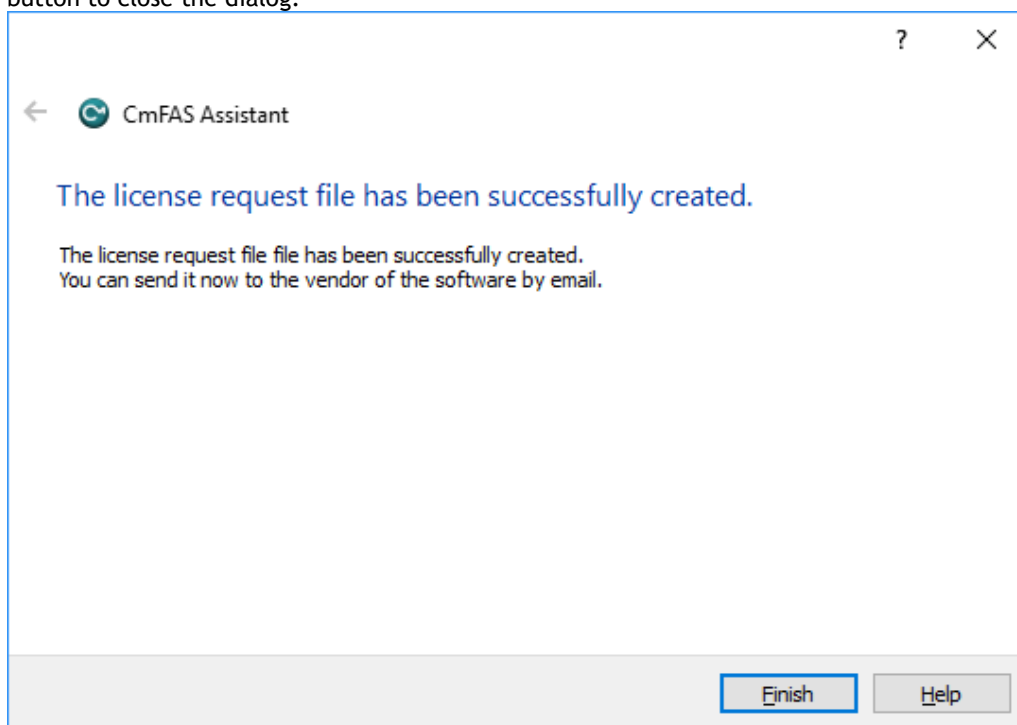
2. Click on the activate license button.
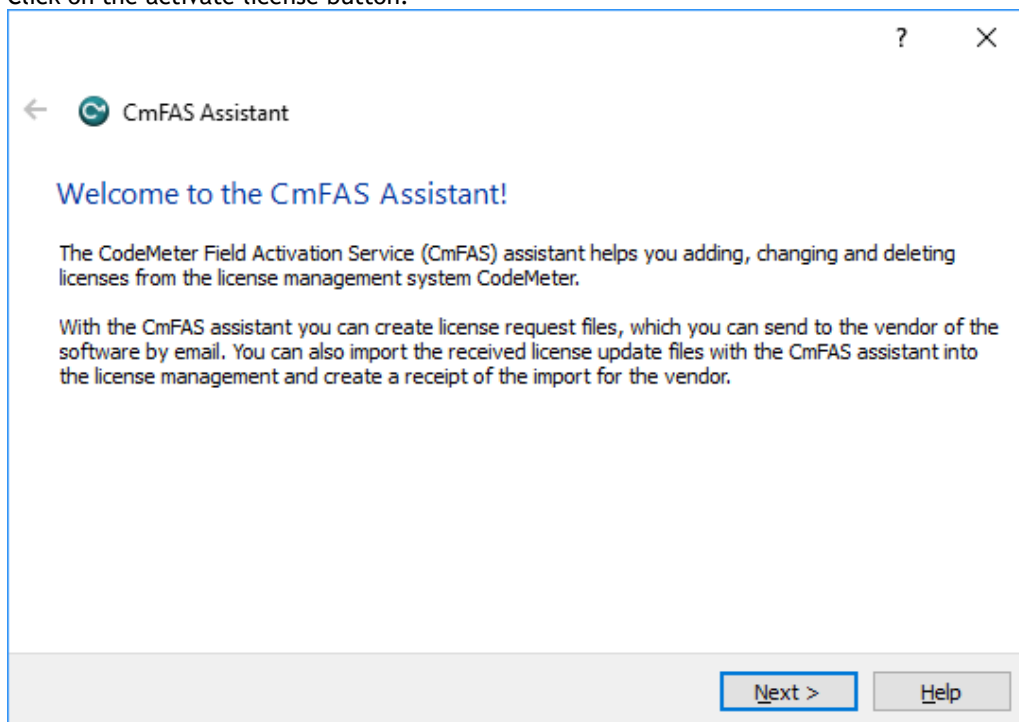
3. The CodeMeter Field Activation (CmFAS) Assistant opens with a welcome dialog.
4. The starting dialog prompts you to proceed. There you select 'creating a license request'. After your selection click the "Next" button.
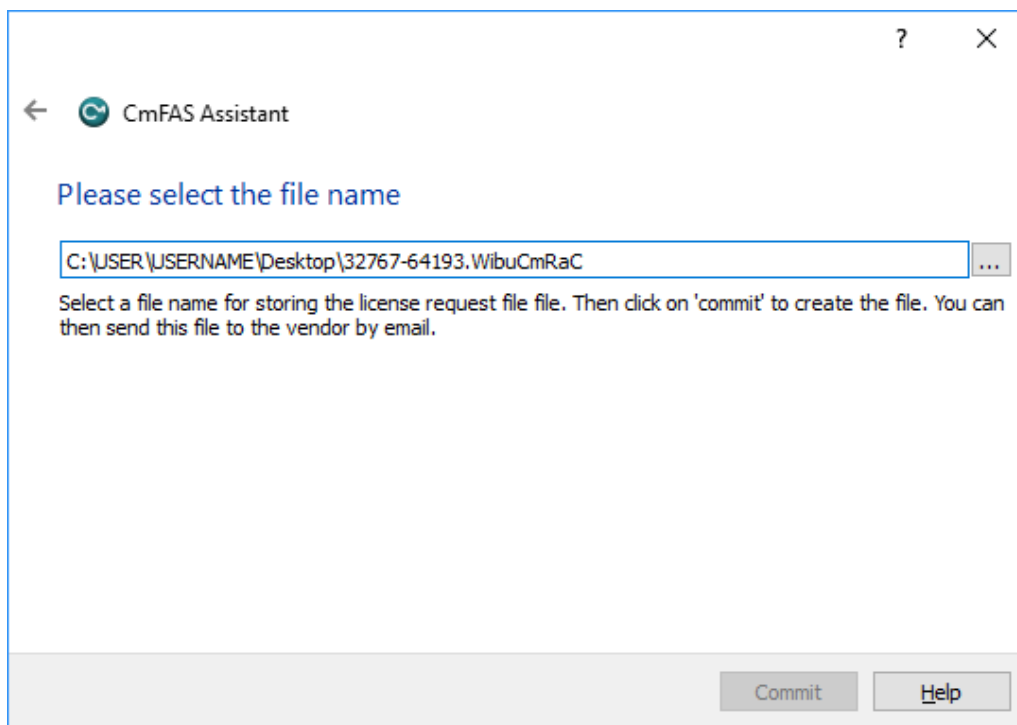
5. A filename and save location is presented. Select the location for the file and press 'commit'.

6. Finally, a dialog displays which confirms the successful creation of the license request file. Click the "Finish" button to close the dialog.

7. Take this file with you to the internet connected pc.

8. Open your web browser and enter the following URL: https://lc.codemeter.com/63706/depot/index.php

9. On the webpage that opens, you enter the ticket you received with your software. On the screen that appears you will see your software products.

10. Select 'Offline Activation'

11. Browse and select the container file created in step #6 and mark all products you want to use.

12. Press 'Upload Request And Continue Now' and save the generated file. Transport this file to the computer containing the Enterprise Dynamics installation.
13. Open CodeMeter Control Center and select the InControl CmContainer.
14. Click on the "Activate License" button.
15. This time select the 'Import license update' option and press next.
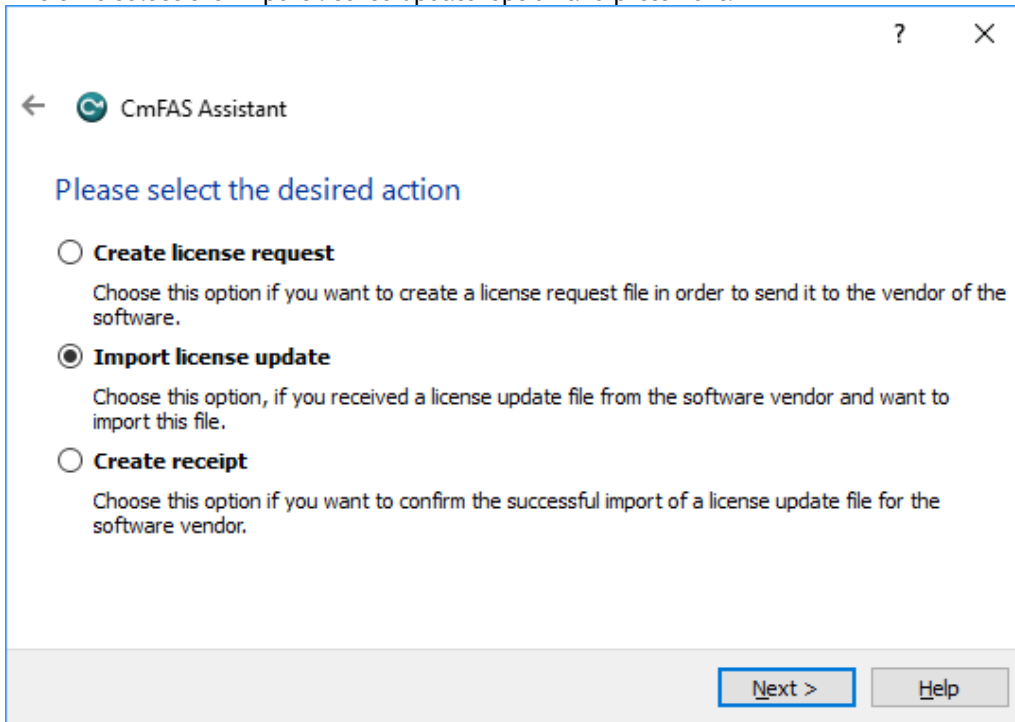
16. Browse to the file created on the internet connected machine and press commit.
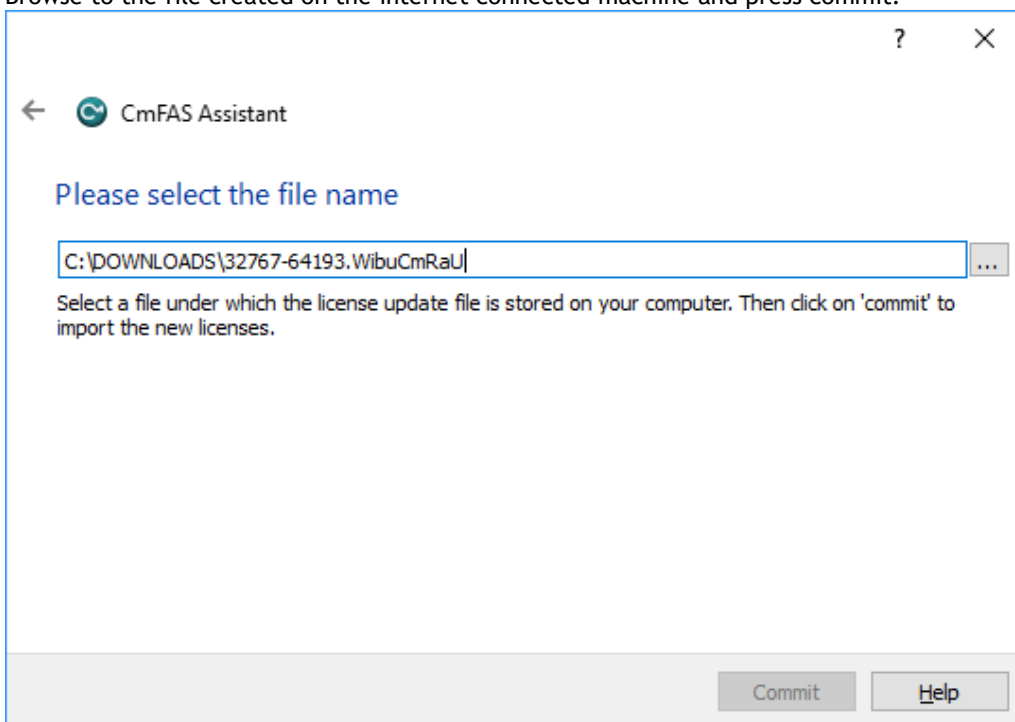
17. A message will display that the license update was successful.
18. The software is now licensed. Please repeat the last steps and create and upload a receipt.

Other activations

If the methods mentioned above fail, please contact the InControl Support hot line (+31 30 6703798 (world) or 0800 180 20 66 (Germany)) to have an alternative activation method.

When the process was successful, you will see the Codemeter icon display green:

We welcome your remarks, suggestions and ideas for improvement of the Enterprise Dynamics software. Please send them to us directly or ask your local agent to transfer them to us.

We look forward to hear from you or to meet you at one of our user conferences.

Creating a command line shortcut and passing parameters

It is possible to pass extra command line parameters with Enterprise Dynamics. This improves working with network system environment variables that are common in Windows. Also developers might benefit from these commandline parameters.

A command line shortcut should be build up the following way:

Parameter	P0
Explanation	The full path to the executable and the executable (.exe) itself
Required	Yes
Directory Rights	Read
Comments	Note that you can change the name of the executable but the default Enterprise Dynamics application launcher will not work.
Examples	"C:\Program Files (x86)\Enterprise Dynamics\10.0\.exe" "%ProgramFiles%\Enterprise Dynamics\10.0\.exe" "%PROGS%\Enterprise Dynamics\10.0\.exe"

Parameter	P1
Explanation	The full path to the Enterprise Dynamics application launcher (.app)
Required	No
Directory Rights	Read
Comments	When no parameters are passed, the default file with the same name (without extension) as the executable is launched. (e.g. EDDev.app, MyApp.app, etc.)
Examples	"C:\Program Files (x86)\Enterprise Dynamics\10.0\.app" "%ProgramFiles%\Enterprise Dynamics\10.0\.app" "%PROGS%\Enterprise Dynamics\10.0\.app"

Parameter	P2
Explanation	The full path to a work directory.
Required	No
Directory Rights	Read / Write by user
Comments	The application uses this directory to store temporary files and by default stores and opens files here. This parameter **requires closing with a fore slash.**
Examples	"C:\MY DOCUMENTS\Enterprise Dynamics\10.0\" "%ProgramFiles%\Enterprise Dynamics\10.0\" "Y:\EDWork\" "%HOMESHARE%\"

Installer parameters and installer types

It is possible to pass extra command line parameters to the Enterprise Dynamics installer. The available parameters can also be viewed using the -? parameter. The following windows is then displayed:
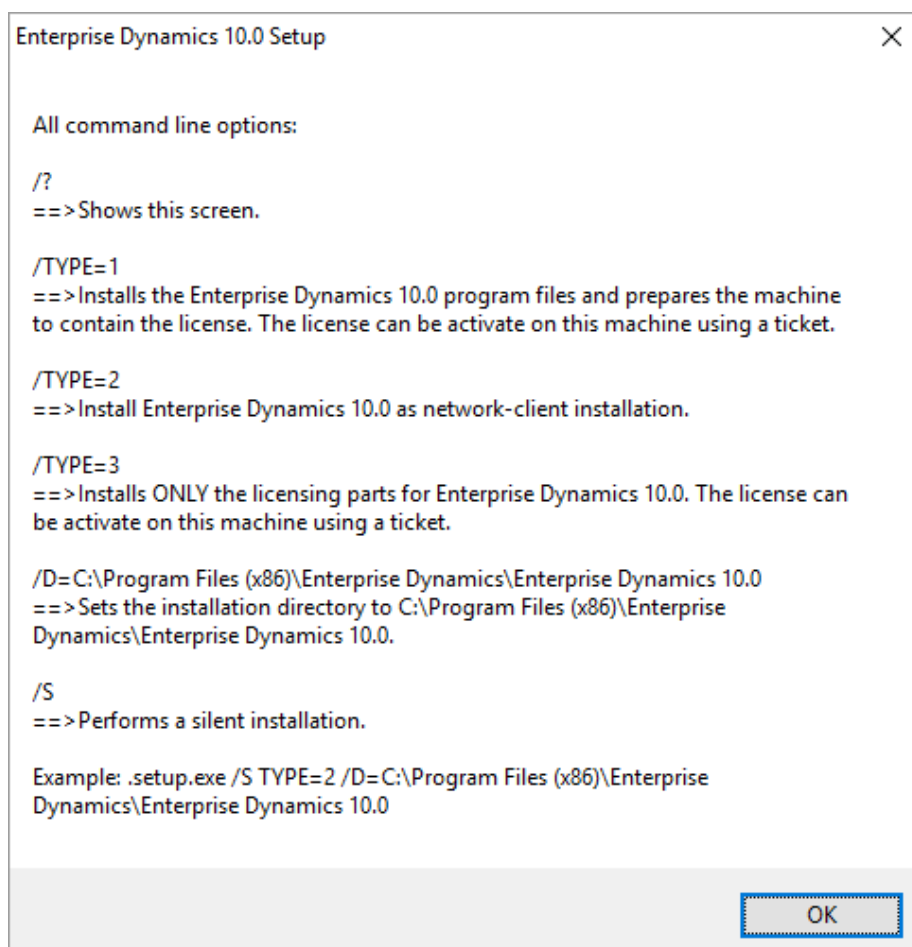
The following parameters are explained:

Parameter	Explanation
-?	Shows the available parameters windows
TYPE=1	Sets the installation to installation type **1: Stand-alone installation** This options should be selected when the machine will hold the license and the Enterprise Dynamics software. This option makes only sense when performing a silent installation (parameter /S).
TYPE=2	Sets the installation to installation type **2: Network Client installation** This options should be selected when the machine will hold the Enterprise Dynamics software alone. The license is or will be active on a different machine. This option makes only sense when performing a silent installation (parameter /S).
TYPE=3	Sets the installation to installation type **3: Network Server installation** This options should be selected when the machine will hold the Enterprise Dynamics license alone. The license will be active on this machine.
/D	Sets the installation directory.
/S	Performs a silent installation. When no other parameters are passed, the default settings are used.

License Selector Tool

The license selector tool is used to store your default license selection in case more licenses are available.

When only a single license is available in your network (and local machine), the license selector tool has no purpose. Only when you have multiple licenses of a single product or different licenses available in the same network, it makes sense using this tool. Also, when your license server changes, you can use this tool to provide the new license location.

> 📑 When you start Enterprise Dynamics for the first time AND multiple types of licenses are available, the license selector will automatically pop-up forcing you to make a choice. Once a selection is saved, you will not be asked again until you launch the application, or the stored selection is unavailable (or deleted).

> 📑 When your Enterprise Dynamics license is moved (e.g. to a new container or a new license server, you will receive a license error. In case of license errors, you best run the License Selector again to see what licenses are available. If no licenses are listed, please contact InControl Support.

License Selector
The license selector is an application that is available in the same directory as your simulation engine (e.g. the installation directory of your application). The name of the application is LicenseSelector.exe. When you execute the application, the application will list all non-free licenses for that product family. It will list licenses that are available locally, over the LAN and, when configured, over the WAN. Next to this, it will list the product code, product name, container ID and location (Server Name).
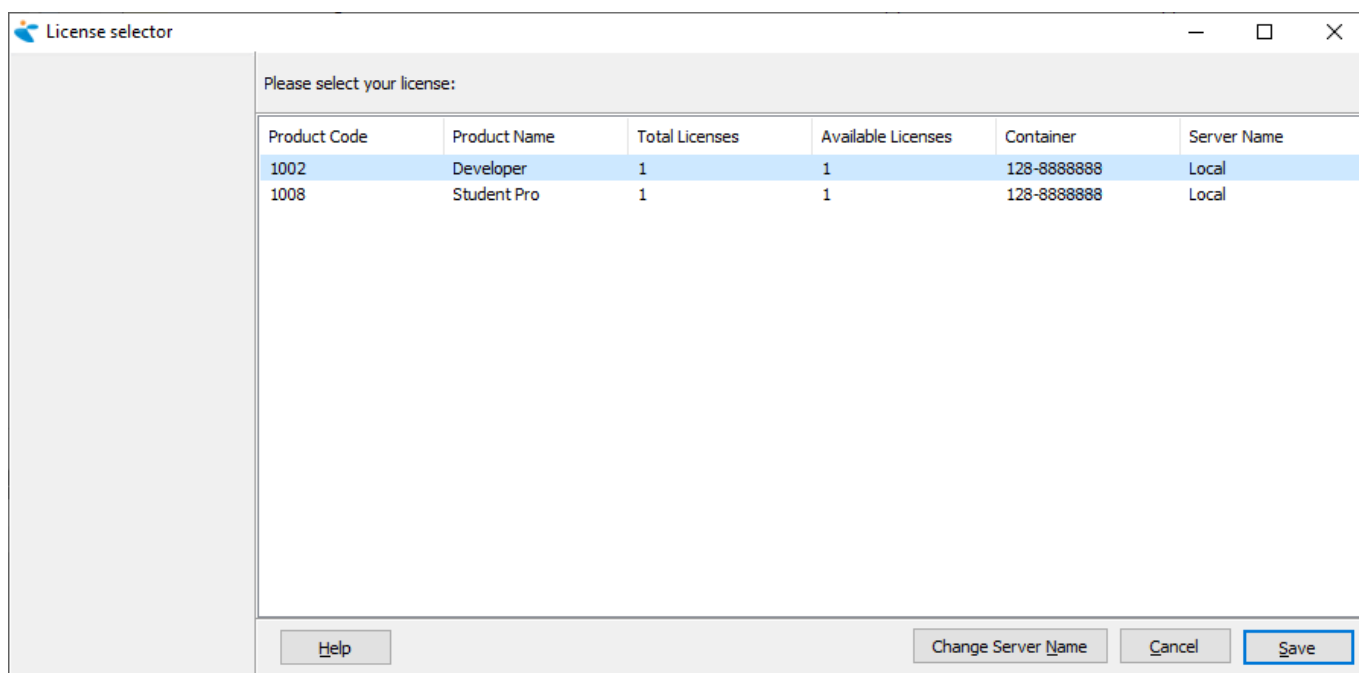
Using the License Selector, you can select one of the listed licenses and press save. Your selection will be stored in an xml file named LicenseSettings.xml on your local machine in your application local appdata directory (CSIDL_LOCAL_APPDATA). A typical path is C:\Documents and Settings*username*\Local Settings\Application Data or C:\Users*username*\AppData\Local.

The subdirectory is: \InControl Simulation Solutions*ProductFamily**version*\

When you execute the same License Selector again, you can alter your license without the need of having different installations on your machine. This makes switching between licenses very easy in case you need to supply your solution to a third party that will use a different license type.

> ⚠️ Only change the Server Name when you make use of a license server. By default, the Server Name uses the IP address but for migration purposes, you can change this to a DNS name.

Network Configuration

This document describes the network configuration procedure for Enterprise Dynamics.
We assume you have setup a client-server configuration and:

- have activated the license on the server (Codemeter Runtime with Container and activated the license using a ticket)
- have installed the software application on the client (Codemeter Runtime with Application files)

Your configuration will look like this:
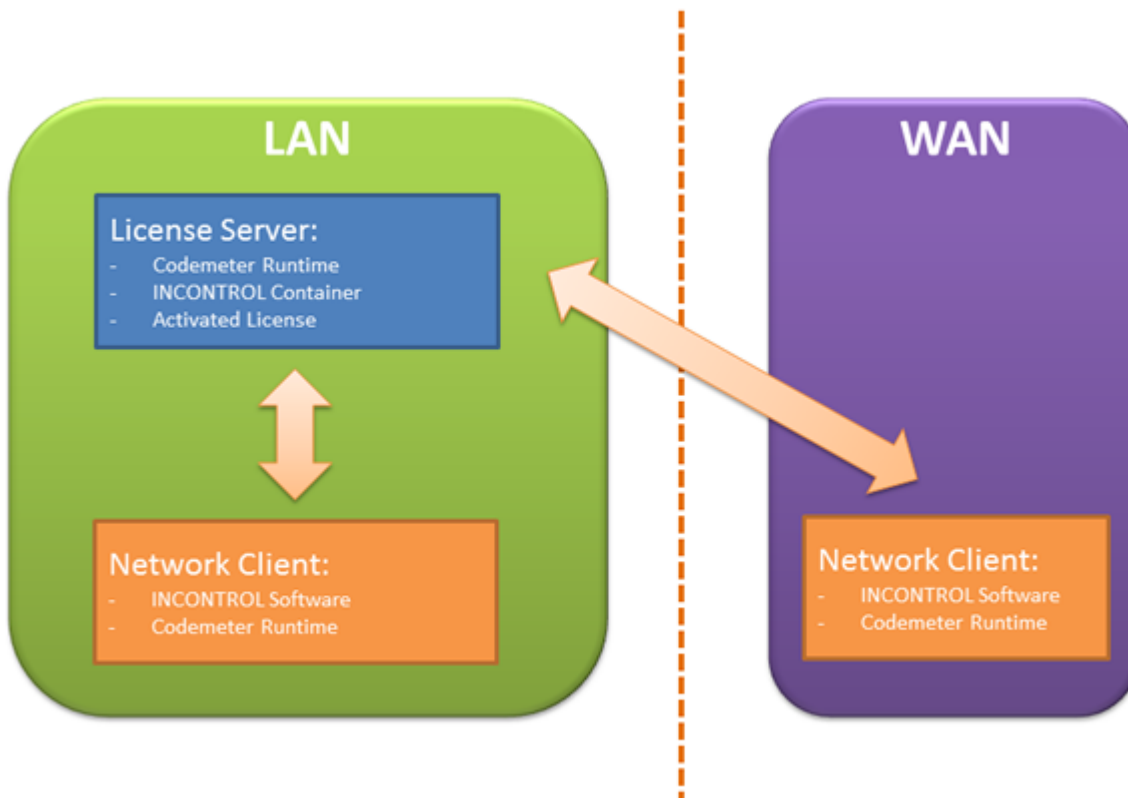
Once you have **activated the license** on your server, you must configure the server and client to enable communication between the two in order to exchange the license information.

To configure network licensing you need to open the Codemeter Control Center. This can be done by pressing the icon in the taskbar or from your application launcher (start menu). Here you will find a button to launch the WebAdmin interface for the local machine.
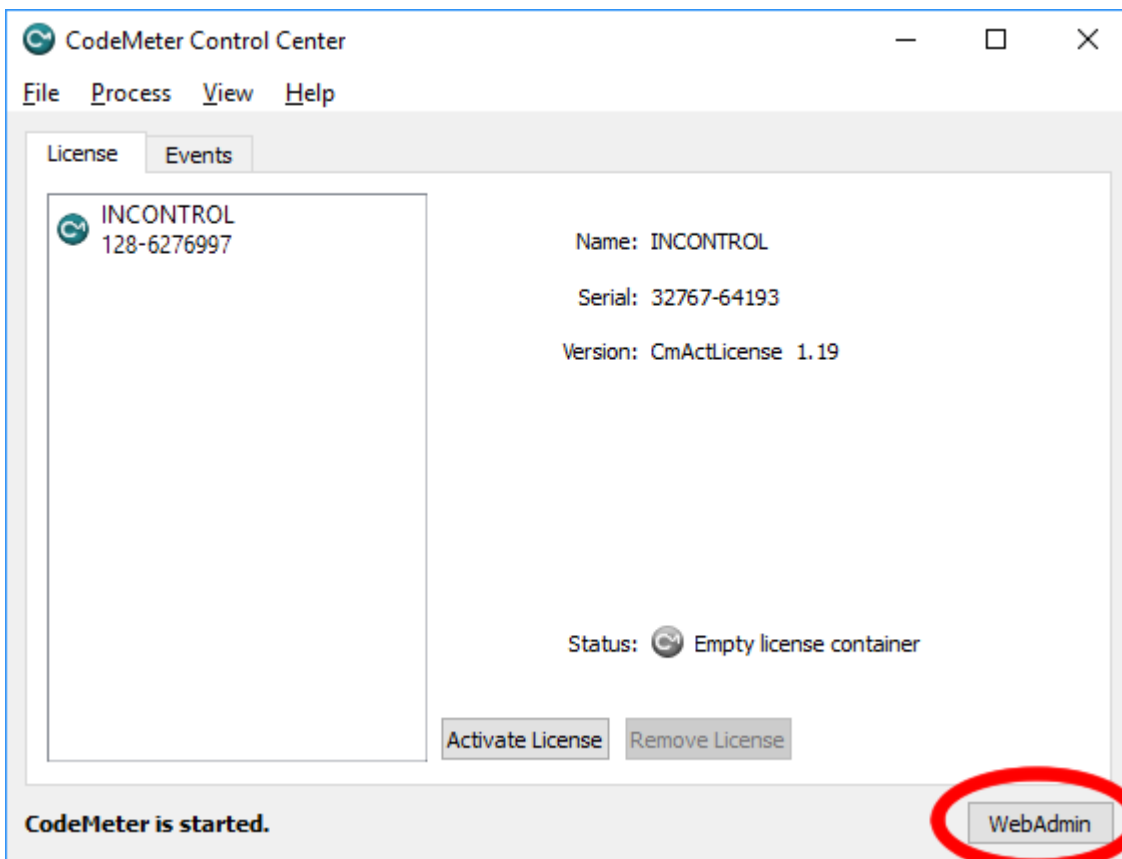
Setting up the License Server

Under Configuration | Server, you can enable the "Network Server" and/or enable the "CmWAN Server". Pressing apply will update the services. Here, you can also setup access control to the licenses and configure remote administration for WebAdmin.
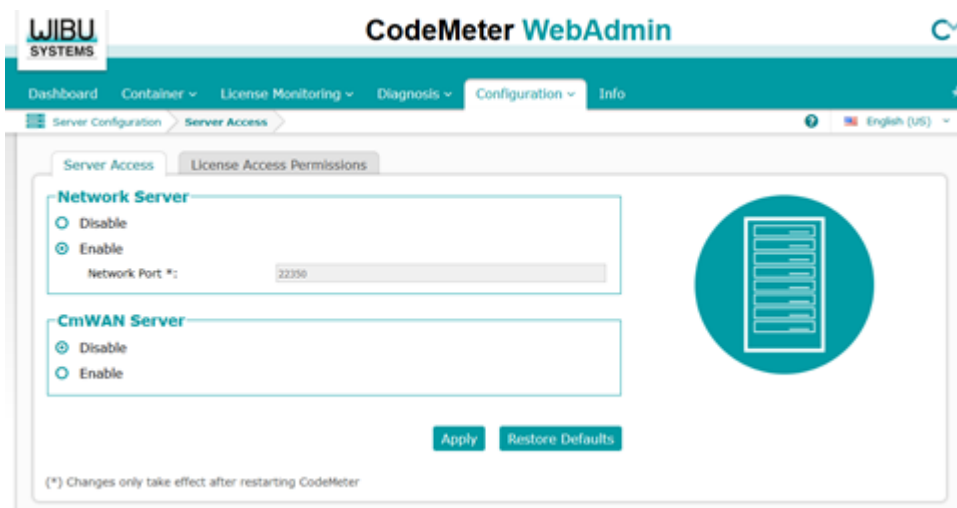
Setting up the Network Client

Under Configuration | Basic, you can enter the server name or IP address where the licenses are stored. When nothing is entered, a broadcast will be done. Entering a license server is required when clients are in a different (sub)net then the server.
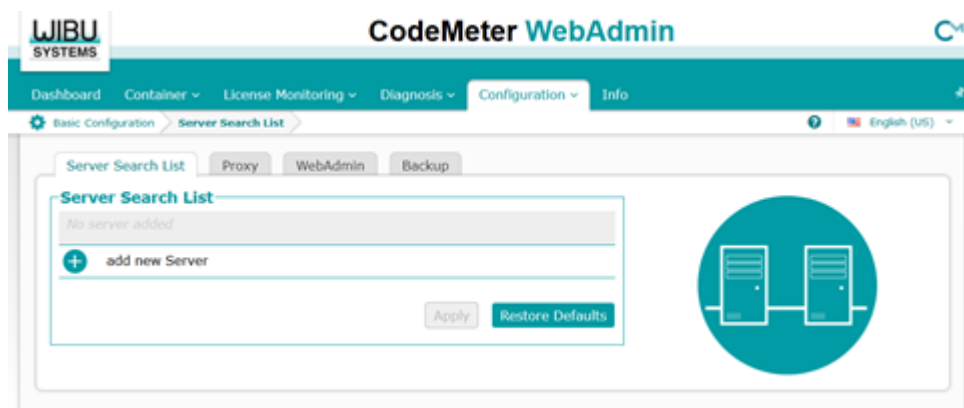
The WebAdmin interface has integrated local help.

Automated Client Configuration

Many customers require an automated client setup that installs and configures the client, ready to start the software.

The installer can be executed with parameters to set the installation variables as described in the **installation guide**.

The configuration for your specific settings (e.g. what the name or IP of the license server is) can be done using a configuration file. To create the configuration file, please perfrom the following steps:

1. Open the folder **%programfiles%\CodeMeter\Runtime\bin** or **%programfiles(x86)%\CodeMeter\Runtime\bin** (depending where your Codemeter.exe is located)
2. Create a file named **Codemeter.ini** in this folder
3. Restart the Codemeter Service (net stop Codemeter.exe, net start Codemeter.exe)
4. As a result, the Codemeter.ini file will contain default settings. When you now add a license server in the Codemter WebAdmin and apply this, these changes are included in the Codemter.ini file.
5. You can now distribute the filled, custom Codemeter.ini file to the clients in the Codemeter directory (see 1.) and restart the Codemeter service (see 3.).
6. Should your server hold more types of commercial licenses, then you als need to run the **LicenseSelector.exe tool** (in your installation directory). The generated LicenseSettings.xml can be placed on the client as well.

System Requirements

Operating System

To run Enterprise Dynamics®, you require the Microsoft Windows operating system. Enterprise Dynamics 10 is proven compatible with:

- Microsoft Windows 7
- Microsoft Windows 8
- Microsoft Windows 10
- Microsoft Windows 11

To run Enterprise Dynamics on an Apple Mac, Microsoft Windows needs to be installed on it. This can be achieved using Boot Camp (preferred). We do not support running Enterprise Dynamics on other Operating Systems. Running the software in a virtualized environment is possible but because of video hardware acceleration, we do not encourage this. Licensing the software in a virtualized environment is not possible.

Enterprise Dynamics version 10 and higher are available both as 32-bit and 64-bit versions. You can download the installation type that you prefer and is compatible with your Windows version.

Hardware

The required hardware depends on how the software is used. Users who will only use the standard components in small to medium sized models with a limited number of objects require a different configuration then users who are exploring the limits the software's capabilities (most limitations on this level of usage are caused by hardware limitations).

To give an idea which hardware configuration suits you best, we have listed two configurations, Minimum and Recommended. Most of the descriptions of hardware are very generic due to the fluid nature of computer hardware developments, but we will try to give you some insight.

	Minimum	Recommended
Processor*	Intel 1.5 GHz Dual-Core	Intel 3.0 GHz Hexa-Core
Internal Memory	1 GB	At least 16 GB
Hard Disk space	500 MB of free space	At least 4 GB
Operating system	Windows 7	Windows 10 (latest version)
Video Card**	OpenGL® 4.0	OpenGL® 4.5

Processor

Some modern low power processors, such as Intel's Atom, have lower performance in highly demanding apps like Enterprise Dynamics than mainstream desktop and notebook processors. Consequently, large simulations will take longer to complete on these low power CPUs. An (i-series, Xeon or Ryzen) Hexa-Core processor (or more) has better performance saving simulation time. That is why we recommend an i7 or i9 Hexa-Core or more processor for Enterprise Dynamics.

**Video Card*

To use Enterprise Dynamics to its full extent, it is recommended that you use a laptop or desktop with a major brand (e.g. NVIDIA or AMD) 3D graphics card with at least 1Gb, but preferably 2Gb or more, of (non-shared) RAM (textures and frame buffer). Ask your hardware supplier for a chip set that supports native OpenGL® 4.0 or higher. If your OpenGL version is less than 4.0, then part of the 2D and 3D visualization might be unsupported, also the quality of the 3D lighting and transparency is inferior. Note also that remote desktops only support OpenGL 1.1, so not all visualization will be supported.

> Some computers contain two video cards to decrease the power usage. Usually the default option is to use the integrated (Intel) video card. To change this, go to the driver options (generally right click on desktop -> NVIDIA or AMD control panel) and then, under manage 3D settings create a profile for Enterprise Dynamics which specifies which card to use (the high performance one) or adjust the default video card.

System Requirements License Server

All commercial licenses issued by InControl can be used either stand-alone or can be served over the network. When a network setup is chosen, a dedicated system will hold the license and act as license server. When the software is started, the license is given out on a first-come first-serve basis.

For these network license servers, it is not required to install the full software package. Installing the Codemeter Runtime Kit together with an empty container file and activating the license is sufficient to serve the license over the network. To prepare your license server to hold a license, choose the installation option 'Perform a network-server installation' (option 3) from the setup installer.

As our we supoply Windows software, the provided installer is windows only. When you opt for a different License Server OS, this is also possible but requires manual installation and configuration.

Operating System

The following operating systems currently support an installation of CodeMeter Runtime (version v7.00):

- Windows 32-bit or 64-bit
    - Windows 11
    - Windows 10
    - Windows 8.1
    - Windows 7
    - Windows Server 2019
    - Windows Server 2016
    - Windows Server 2012
    - Windows Server 2008R2
- macOS
    - macOS 10.15
    - macOS 10.14
    - macOS 10.13
    - macOS 10.12
- Linux on Intel 32-bit or 64-bit
    - Kernel 3.x or higher
    - Intel architecture (x86 or x86_64)
    - glibc 2.17 or higher
- Linux on ARMHF 32-bit
    - Kernel 4.9 or higher
    - ARMv6 or newer
    - glibc 2.13 or higher
- Linux on ARMHF 64-bit
    - Kernel 4.15 or higher
    - glibc 2.17 or higher

System Requirements

- Computer and processor: 1 GHz or faster
- Memory: 1 GB RAM
- Hard drive: 200 MB available hard drive space

Communication between protected applications and CodeMeter License Server (runtime) is based on the TCP/IP protocol. The default communication port for the network server is 22350 but can be configured differently in CodeMeter WebAdmin.

Default port for CmWAN server is 22351.

⚠ Our standard container is bound to the computer hardware and therefore cannot be used on a Virtual Machine

In that case, as alternative, InControl can supply the hardware in the form of a hardware key (CmDongle). This can then be used trough, for example an Ethernet-to-USB device.