



Create

Connect

Encode

Produce

CardExchange® Producer SBS Install Guide

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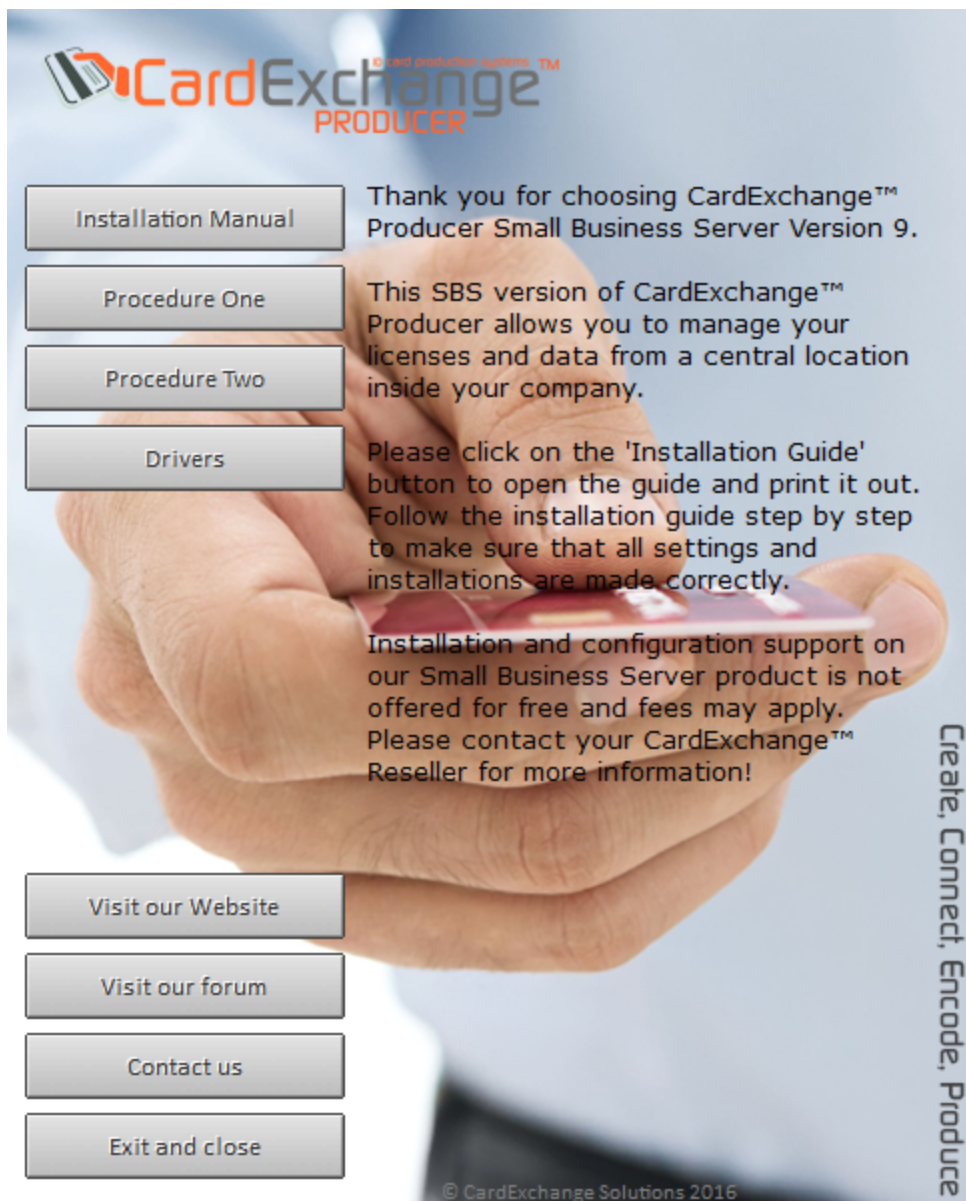
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1 Introduction

Welcome and thank you purchasing our CardExchange™ Producer Small Business Server edition.

You will have received a CD (Or self-extracting installer download link) that contains all the applications and installers that are needed to make this a successful installation. Therefore we created an Auto Play menu that will lead you to all the different installation and configuration processes, step by step. After inserting the CD, the main menu will start as shown below:



If this menu does not start automatically, please browse to the CD content and execute the autorun.exe application.

In this menu you can open this manual, start with the procedures, visit our website, our forum, and contact us.

2 Getting Started

As with any installation, everything starts with a good preparation so please read everything carefully to ensure a successful installation of CardExchange™ Producer Small Business Server.

This manual is created to explain in detail the installation and configuration and it is very important that, before starting, you are a true administrator that has all the rights to do the installation and configurations. Be aware, if you are a local Administrator and you are installing this product on a computer or server that is inside your network domain, this does not guarantee that you have all the privileges and rights to make installations on domain servers.

Although this manual is very detailed, installing a CardExchange™ Producer Small Business Server requires more advanced skills than a standard CardExchange™ Producer desktop installation.

Installing and configuring CardExchange™ Producer Small Business Server products requires the installation of the license manager, activating and installing of the license(s), configuring the data folder location, installing the CardExchange™ Producer client application on the desktop, and the client license retrieval location. Therefore we have split the whole process into two (2) procedures; installation and configuration of the license manager and the installation and configuration of the CardExchange™ Producer client application.

Make sure that you are aware of all the technical specifications that are required for making a successful installation of our CardExchange™ Producer Small Business Server product. If you have any doubt or are unsure if you are meeting the technical requirements, technical knowledge level, etc. please contact your CardExchange™ Producer Reseller as they can offer you services for installation and configuration. You can also contact our support department at support@cardexchangesolutions.com. Be aware that installation and configuration support is not offered as a free service and fees may apply!

Please check the [Requirements](#) section to make sure everything is set to start...

2.1 Requirements

For installing CardExchange™ Producer Small Business Server on your server, the following operating systems are supported:

- Windows XP, Vista, Windows 7, Windows 8, Windows 10

- Windows Server 2003, 2005, 2008 R2, 2012
- Citrix and Terminal Systems
- Virtual Machines

All operating systems are supported as 32 and 64 bit systems and need to run the latest available service packs of Microsoft.

For running CardExchange™ Producer Small Business Server on servers or workstations we advice the following minimum specifications:

- 100 MB free disk space for Workstations, 300 MB running on servers
- Intel Core i3 or comparable
- 2048 MB internal memory
- Internet Explorer 6 or higher
- Microsoft .NET Framework 4.0

Specific Firewall information:

Firewall issues are usually solved by adding the Sentinel RMS License Manager to your the firewall exceptions. The provider of the licensing system SafeNet states that:

"The Sentinel RMS License Manager only uses the UDP port 5093 at Server end by default. And at client end the ports are used dynamically and controlled by Operating System i.e. for communication only UDP port 5093 is used at server end and at client end it is used dynamically on the basis of available port."

2.2 Using License Dongle

If you have chosen to use a USB dongle with your license, it is important that the driver of this dongle is installed first before connecting this dongle to your system and activating the license.

In the main page of the Auto Play Menu you can find the menu option Drivers. When you select this menu item you will enter the driver page. Now click on the USB Dongle button to execute the installer:



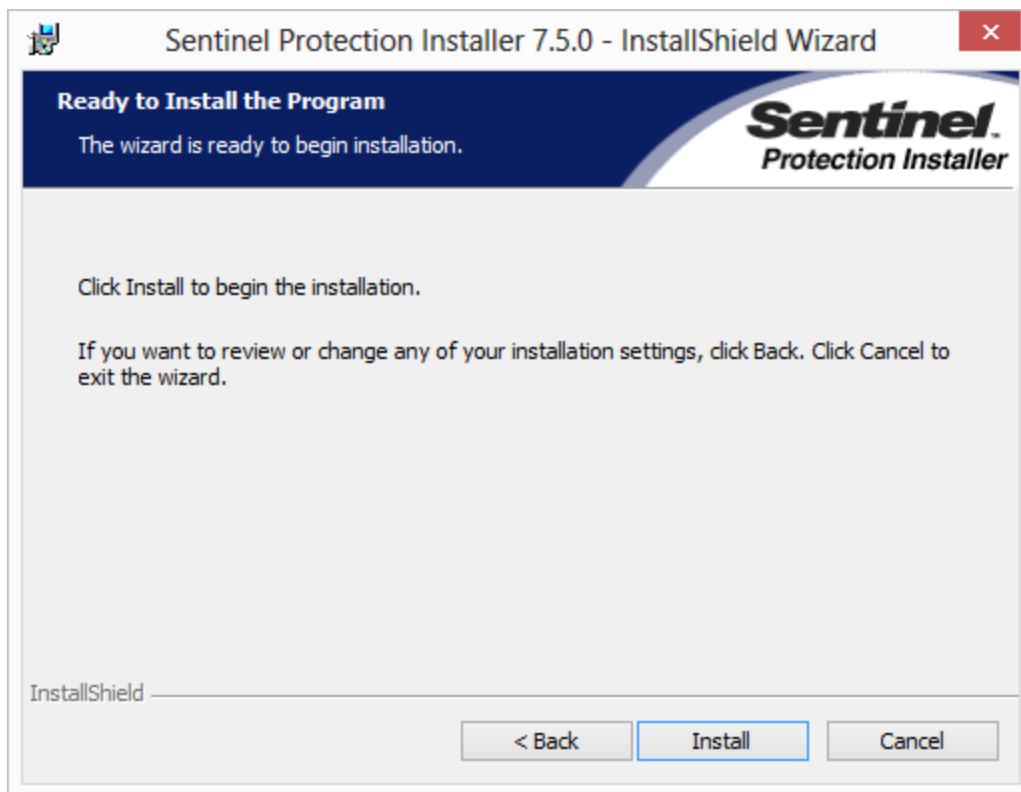
When the installer is started, click on Next to proceed:



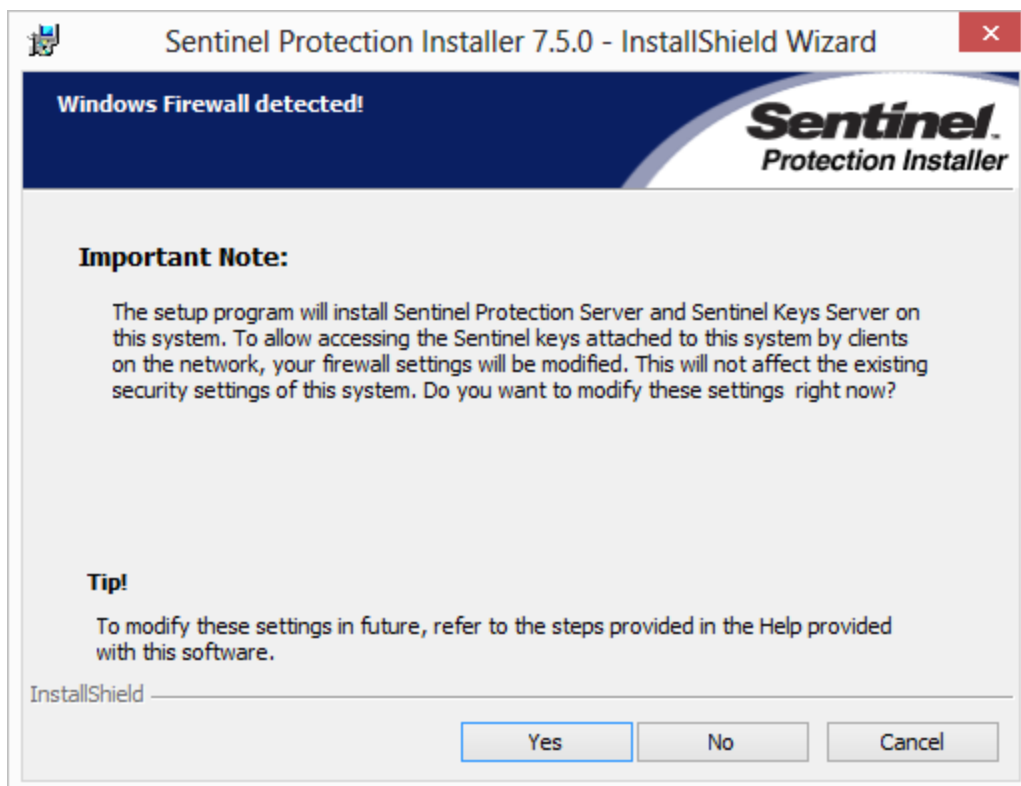
If you agree to the terms of the license agreement, please do select the corresponding option and proceed with Next. If you decline these terms, when selecting the installation will stop and the wizard will be closed after clicking on Finish:



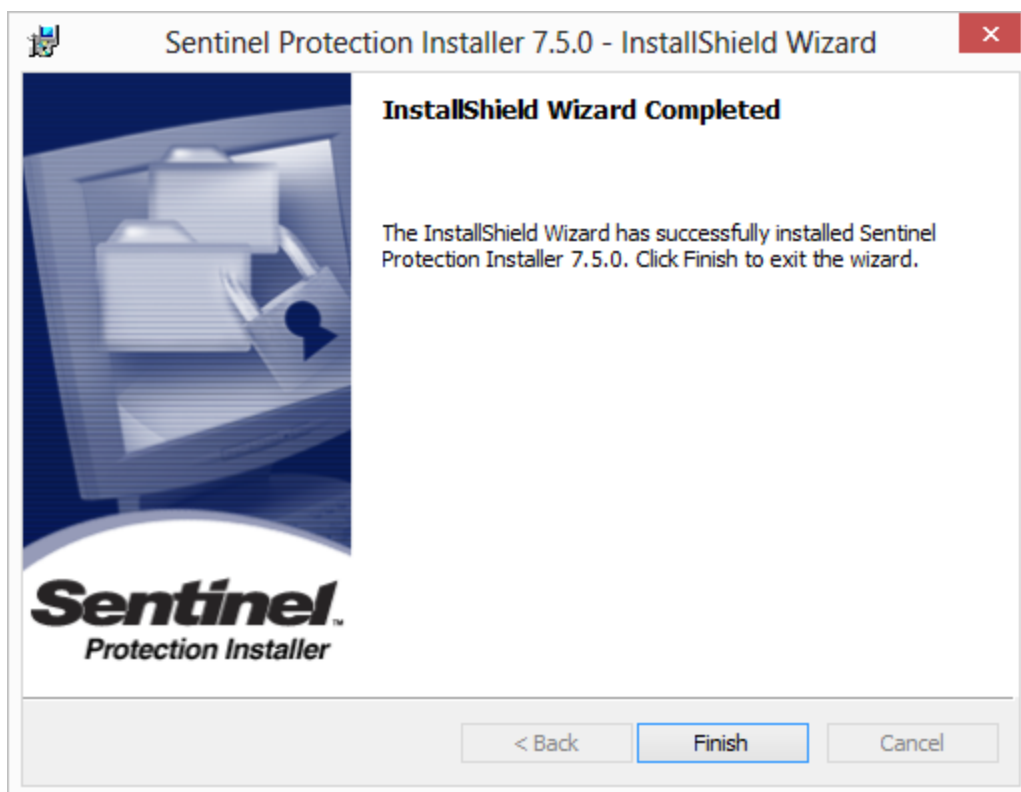
Select Complete as Setup Type and click on Next to Proceed:



Now you are ready to install the dongle driver on your system. Click Install to proceed:



To allow access to the server, the firewall has to be modified to allow this. You can always do this manual later, select No to do so. We advice to let the installer do the modifications to the firewall as that guarantees the correct working of the dongle with the server. Click Yes to proceed:



When the installation is successful you can click on Finish to close the installation wizard. Now you can insert the dongle into a free USB port of your system and it will automatically install the driver.

2.3 Procedure One (License Manager)

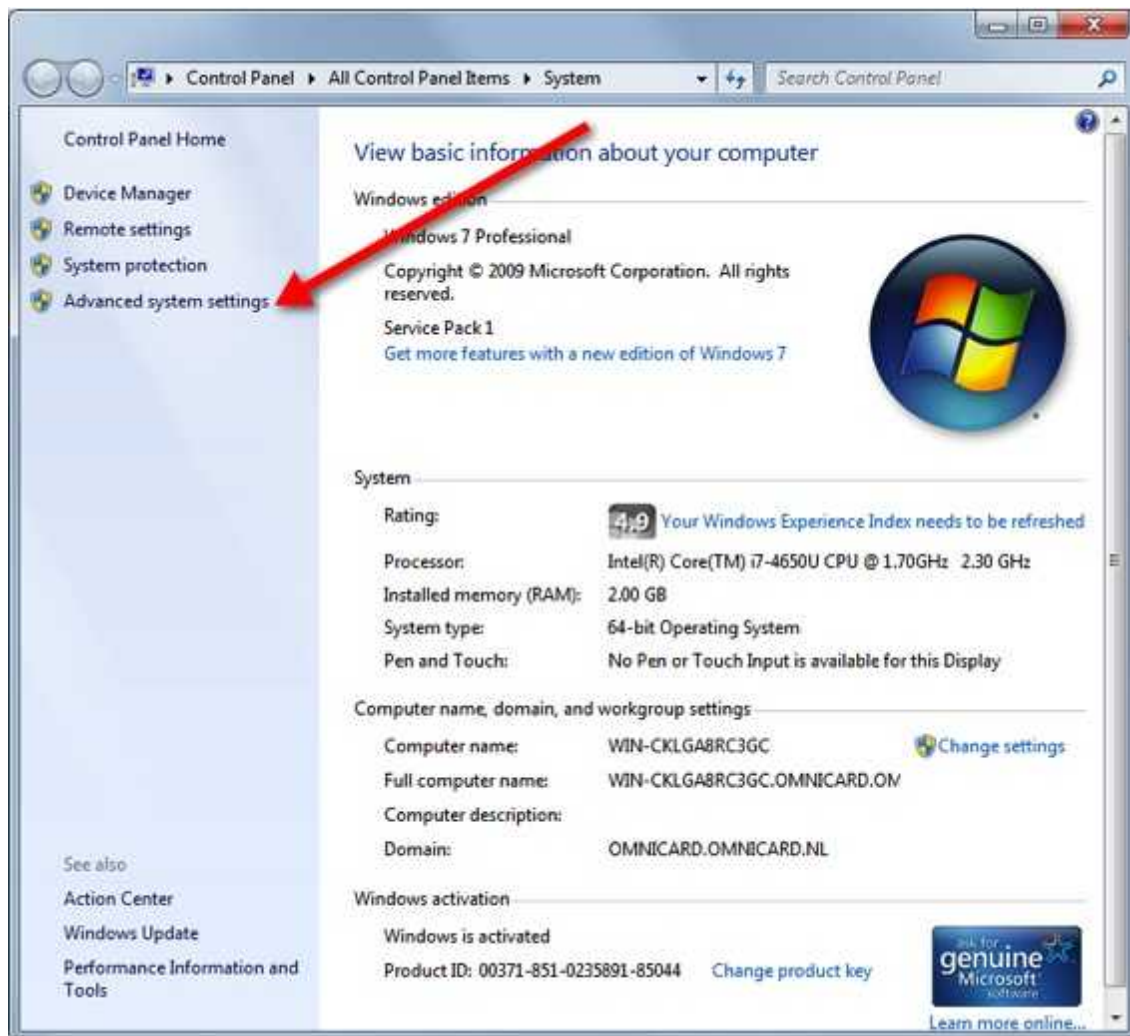
In Procedure One we are going to explain how to install the license manager, activate your license, and configure the license manager. Follow the steps one by one to guarantee a successful installation and configuration. Each step will explain in detail what to do, install or configure:

- [Step 1 - Install License Manager](#)
- [Step 2 - License Manager Tools](#)
- [Step 3 - License File Location](#)
- [Step 4 - Activating SBS License](#)
- [Step 5 - Configuring License Manager](#)

2.3.1 License File Location

The Small Business Server license manager stores its license codes in a plain text file. This file can be located anywhere on the system but the Windows user that manages the license manager service process needs to have read and write access to this location. To make sure this is guaranteed, we need to create a specific Environment Variable to set the location.

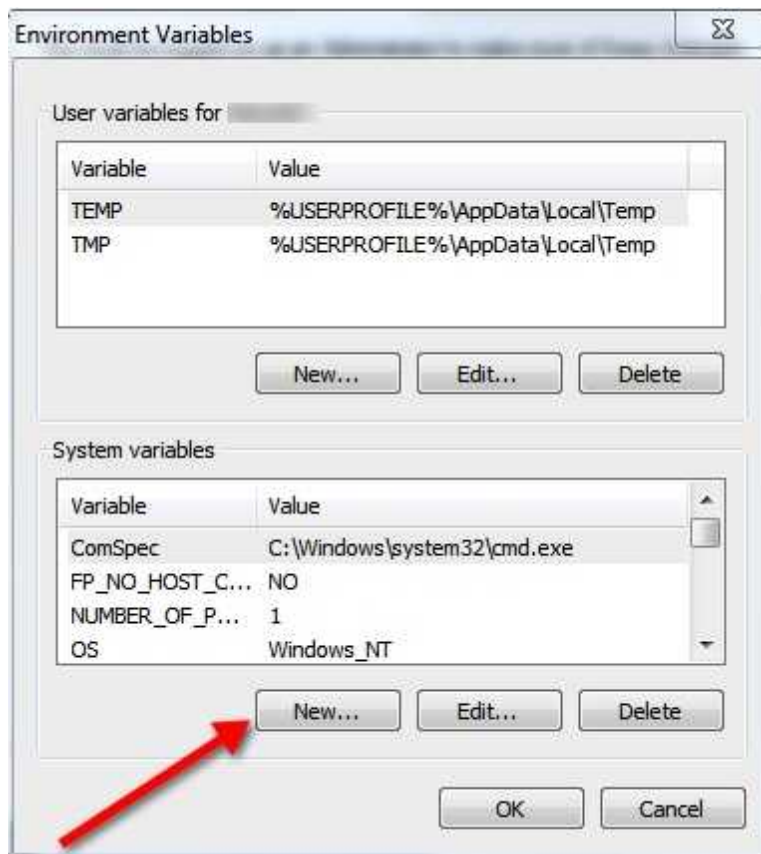
To create this variable right mouse click on My Computer and select Properties. If you are running Windows Vista, 7, or 8, click on Properties and then select Advanced System Settings as shown below:



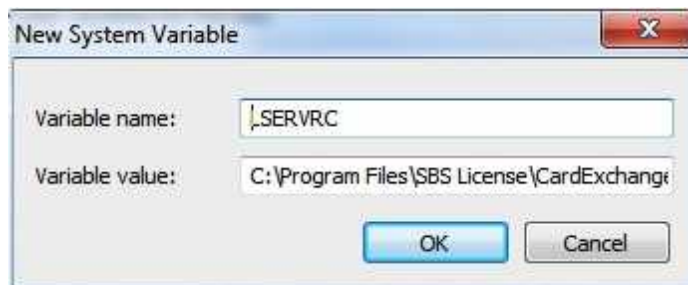
This will open System Properties window with the Advanced tab selected.



Now click on Environment Variables to open the this window:



And click on New to create a new variable:



Enter LSERVRC as the variable name and enter the complete path of where the license file will be located into the value field. Please note that the directory of the path should exist, while the file itself should not exist. The name of the file is arbitrary, for example,

CardExchange.Licenses

Click on OK to store the new created Environment Variable.

2.3.2 Install License Manager

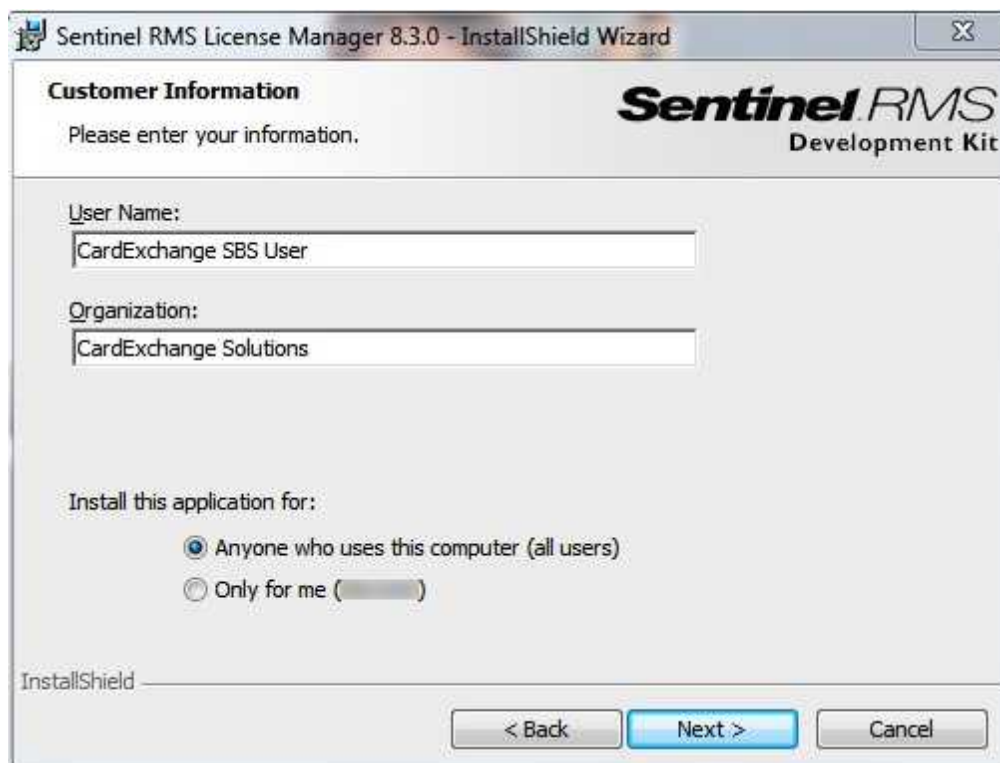
We need to install the license manager on the system, to do so click on the Install License Manager button to start the installation:



When the installation is started, click Next to proceed:



If you agree to the terms of this agreement, select accordingly and proceed by clicking Next:



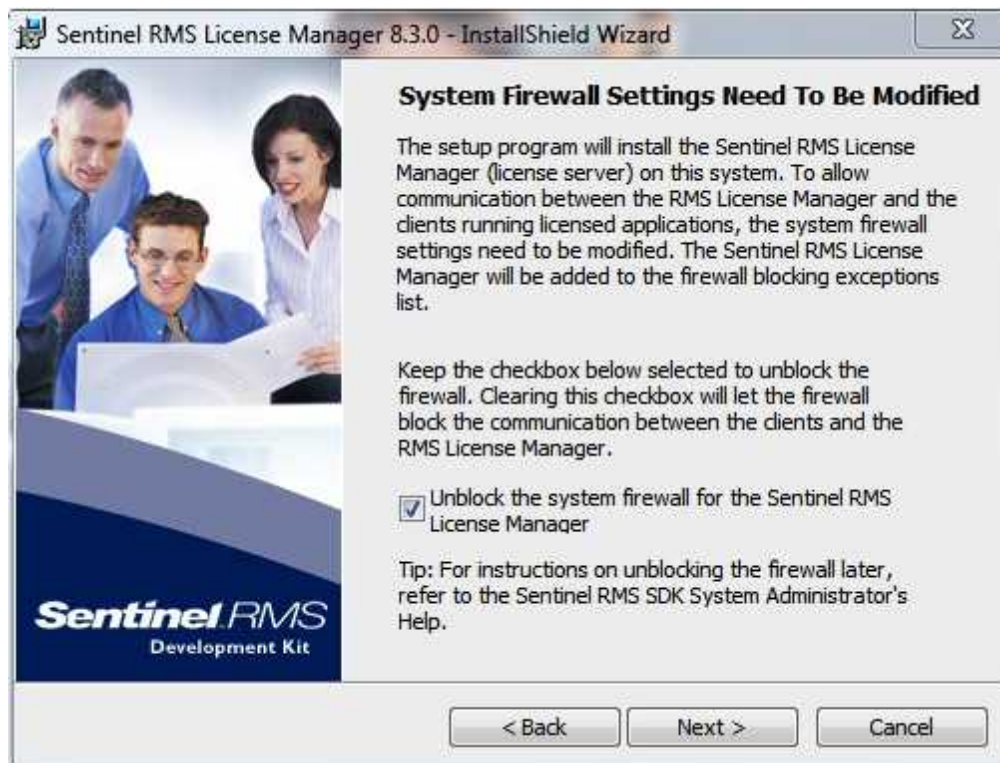
Enter the user and company information. We advice to install this application so that anyone can use it:



If applicable, change the destination folder of the application by clicking the Change button. However, we do advice to install it into the default installation folder:



Choose Complete installation and proceed with Next:



License assignment by the license manager goes via UDP protocol over your network. It is

important that all the clients can freely communicate with the license manager therefore the license manager needs to address some ports for it's communications. These ports are described and explained in the Requirements section of this manual. When installing, per default the installer can make the firewall modifications for your, as we advice to have the installer do so. If you want to do this manually, please uncheck the check box before proceeding:

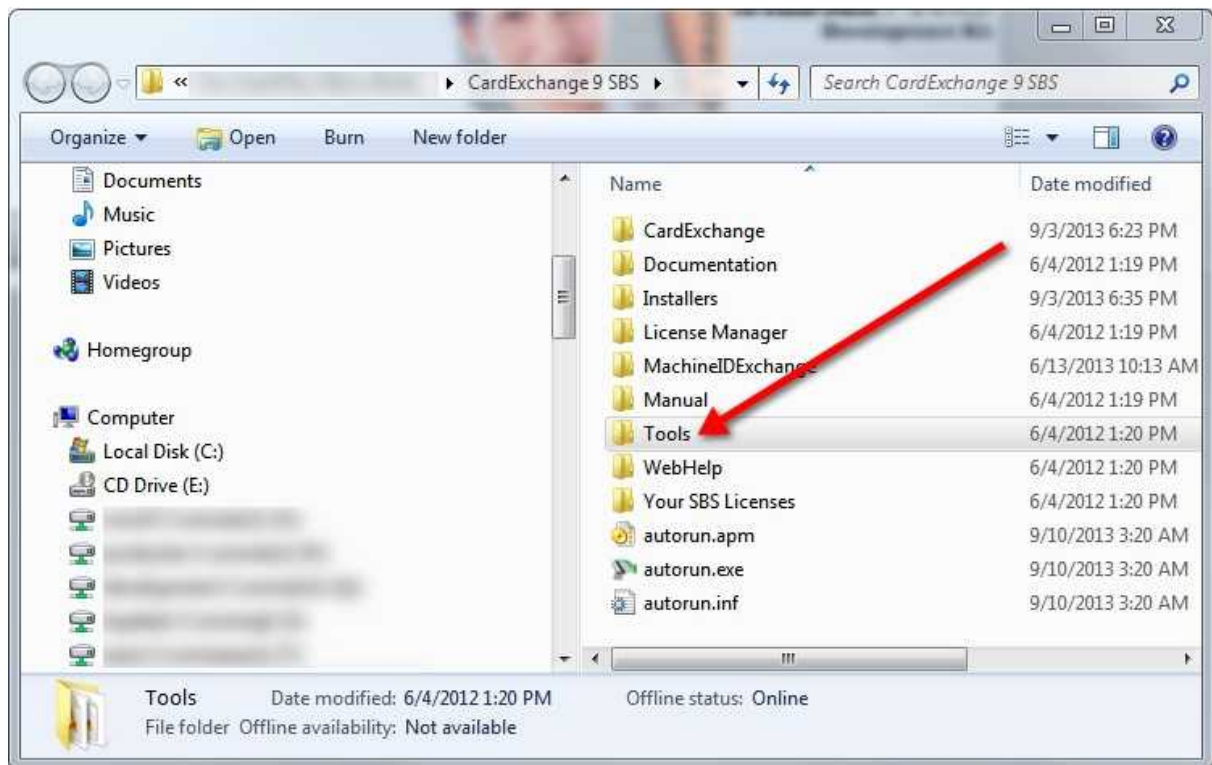


Now you are ready to install the license manager on your system and you can click Install to start the installation. Click on Finish when the installation is done to close the installer.

2.3.3 License Manager Tools

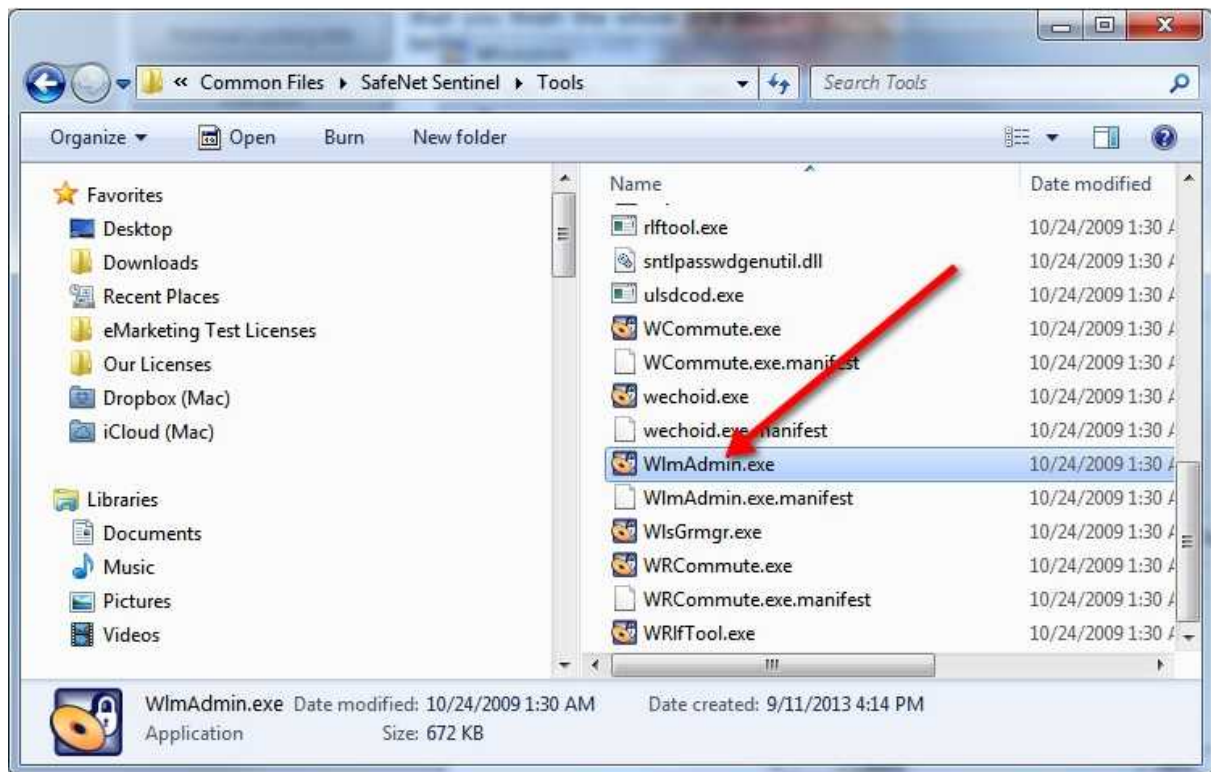
The license manager we just installed is running as a service on your system and has no interface of it's own. As we need to be able to install the licenses and manager the license manager, we need to use additional tools to configure the license manager. These so called tools can be simply copied to a location on the server or workstation the license manager is running on.

To do so just simple click on the Browse CD button and make a copy of the tools folder on the CD.

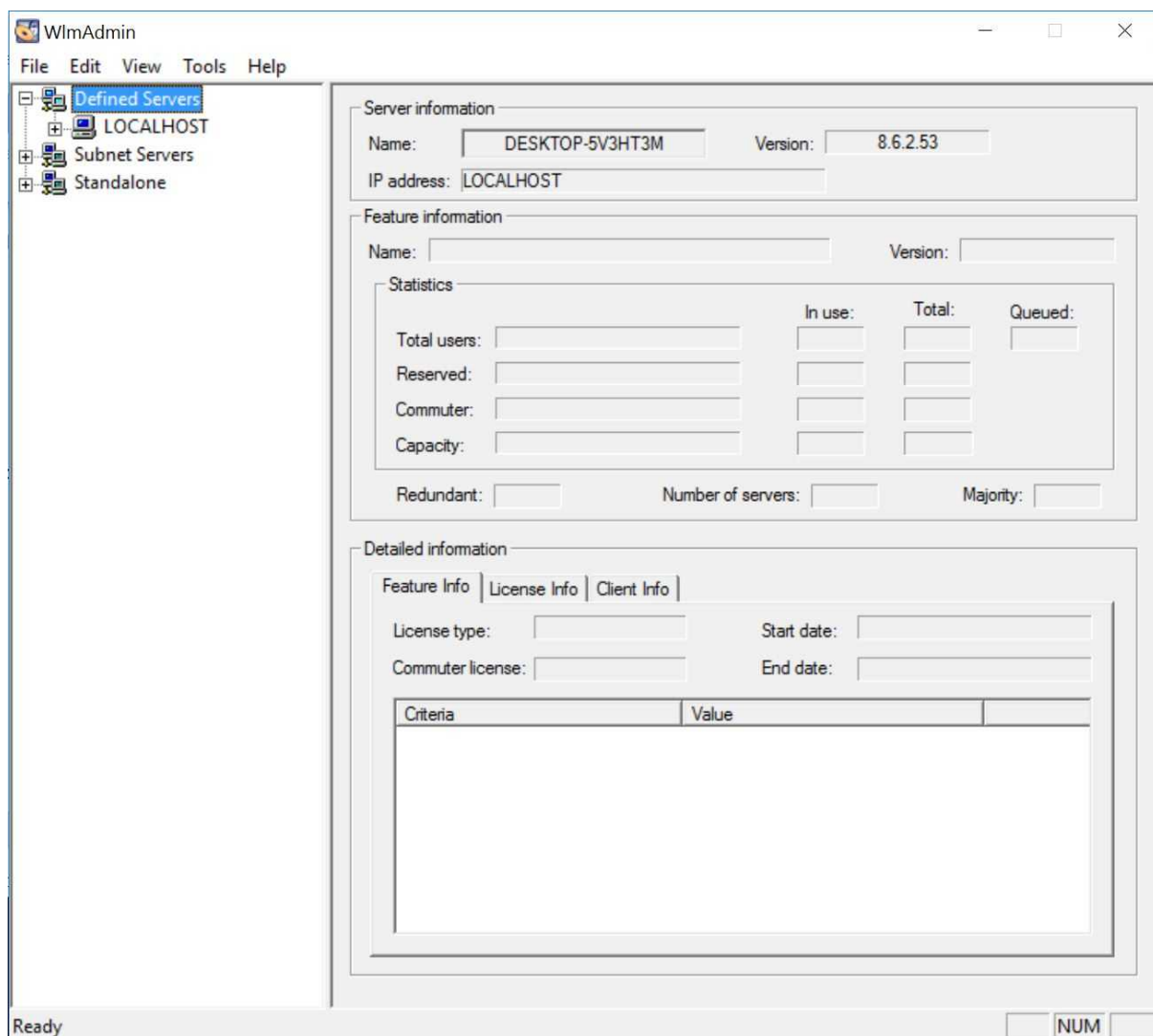


And copy this folder to a location on your server or workstation, for example to the folder C:\Program Files (x86)\Common Files\SafeNet Sentinel\Tools

Now browse the Tools folder and create a shortcut for the WlmAdmin.exe application as shown below, to any location that is convenient for you.



When you execute the WlmAdmin.exe application, an interface for the license manager will start.



This interface will inform you about the status of all your licenses, servers, and is needed to install your Small Business Server licenses as explained in later steps of this help file.

2.3.4 Activating SBS License

Just like with the standard CardExchange™ Producer license, the license manager needs to be activated to the Machine ID of the server or computer too. The only difference is that the Small Business Server License cannot be activated with a CardExchange™ Producer client, but has to be done online via our website.

For activating the license we need to have the serial number, activation code, and the machine ID. The serial number and activation code are printed on the DVD box or you may have received them digital via email. The machine ID needs to be retrieved with a simple

application that is available on this CD. It is important that you run this application on the server or computer that is going to contain the license manager.

Now click on the Retrieve Machine ID button to start the MachineIDExchange application:



If you are using an external license dongle, the machine ID will start with 80. For using an external license dongle, please install the dongle driver first. For instructions, please see the [Using License Dongle](#) section of this manual.

If you have retrieved the Machine ID and write it down. Now open the activation page on our website by clicking on the url below or copy and paste it into your browser:

<https://cardexchangesolutions.com/id-card-software-support/license-activation>

Now enter all the information like serial number, activation code, and the machine ID into the fields like shown below:

Activate a license

Serial number:	<input type="text" value="38384"/>
Activation code:	<input type="text" value="01156-A7581-74234-0FC86-A3616-F51FD-47F9"/>
Machine ID:	<input type="text" value="10-454CC"/> x

When pressing the Activate button, the license will be activated by the License Server. This process can take up to 45 seconds. Please do not close this page during the activation of the license. When the activation succeeds, you will be prompted to download the file containing the activated license.

Activate

And click on Activate to start the activation process of the license. Activating a SBS license

can take up to 60 seconds. do not close the web page during the activation!

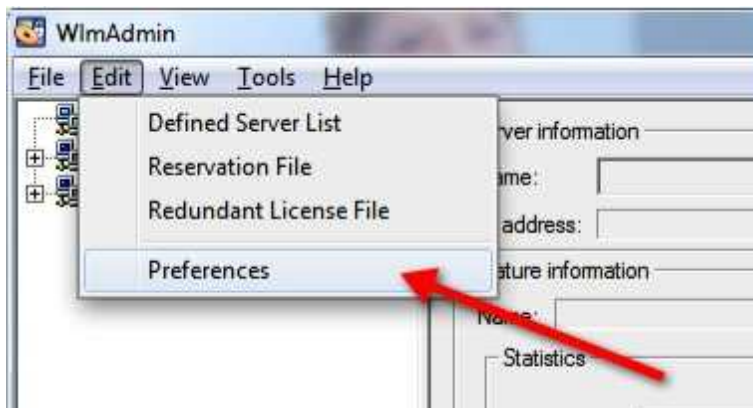
When the license has been activated you will be prompted to download the activated license file with the extension *.LIC. This file needs to be saved to a location that can be accessed by the computer that is running the license manager

Version: 9 Serial number: 38384 Activation code: 01156-A7581-74234-0FC86-A3616-F51FD-47F9

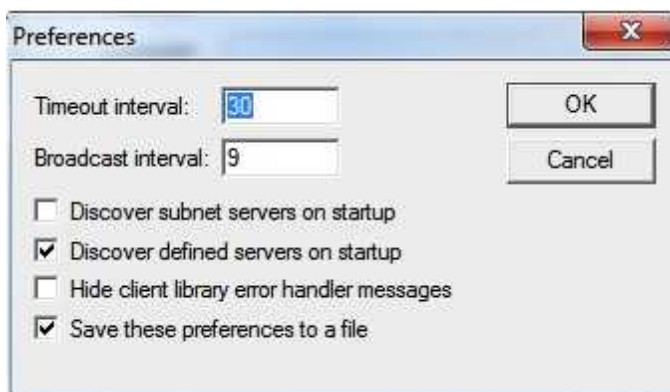
2.3.5 Configuring License Manager

When the license has been activated, you can now configure the License Manager. To do so you have to start the WlmAdmin.exe application as explained in the [License Manager Tools](#) section of this manual.

When the application is started we first need to set the Preferences of the license manager. To do so, select Preferences from the Edit menu as shown below:

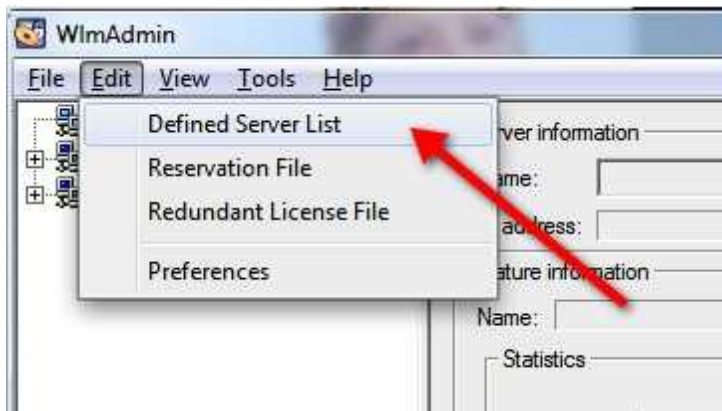


This will open the Preferences window:

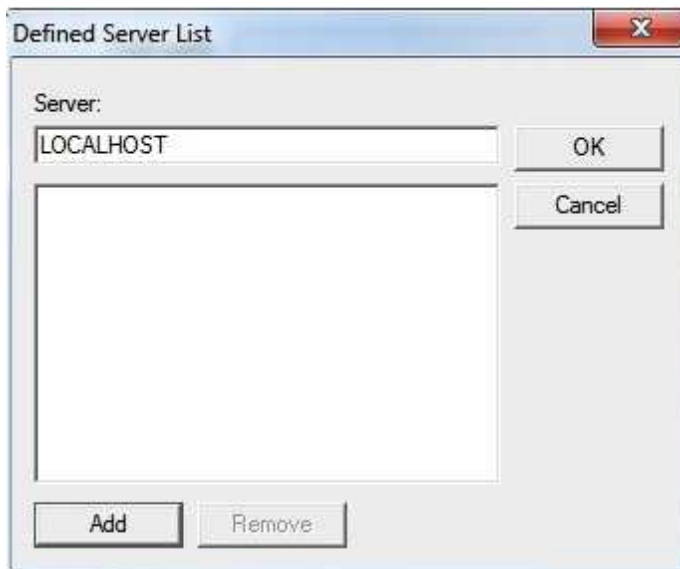


Make sure that you set all the options as shown in the screenshot; Check "Discover defined servers on startup" and "Save these preferences to a file". Click on OK to set the preferences and close the Preferences window.

Now we need to define the server that is going to hold the licenses. To do so, select Defined Server List from the Edit menu as shown below:



This will open the Defined Server List window:

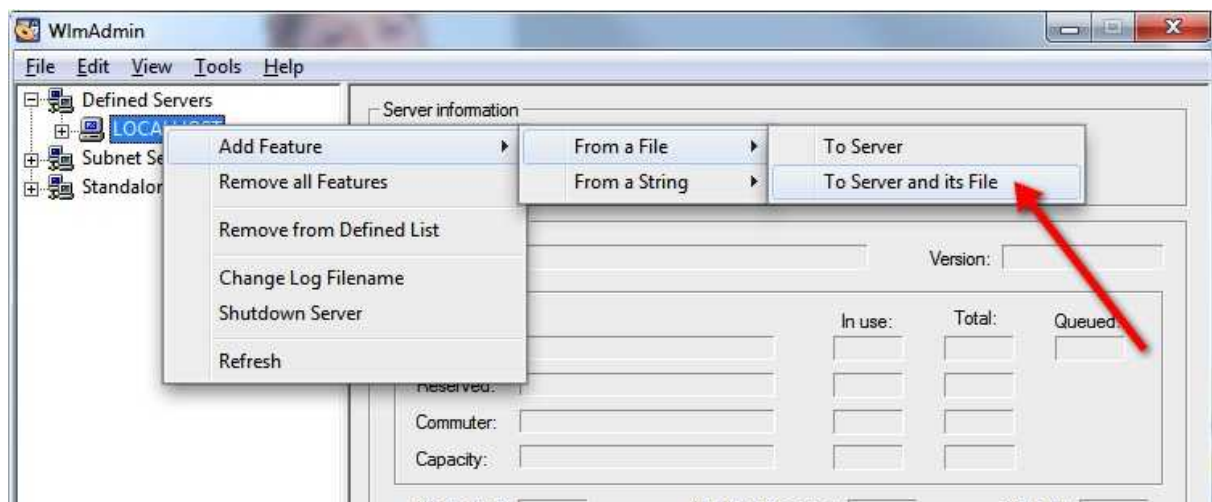


Now enter "LOCALHOST" and click on Add to add the server name and OK to close the Defined Server List window. You will be asked to add the server to the defined list:

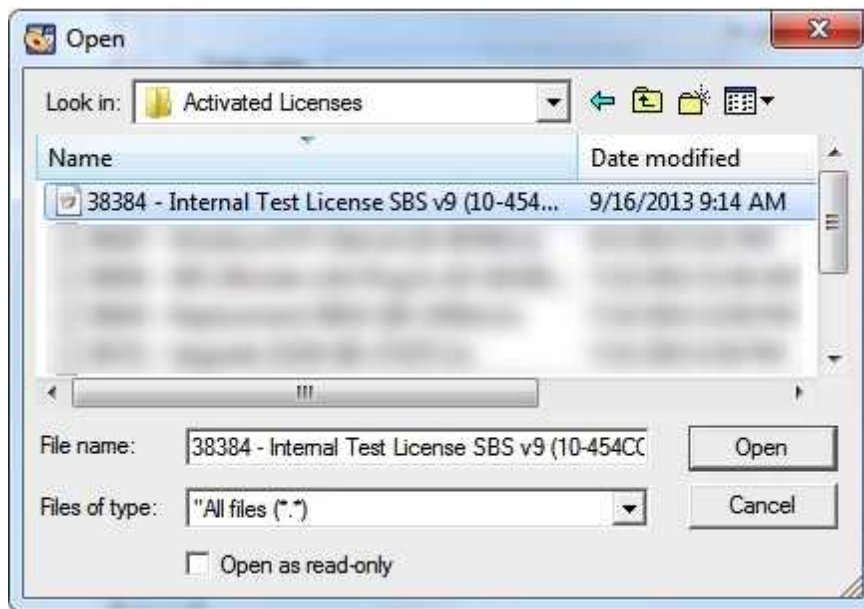


Click Yes to confirm.

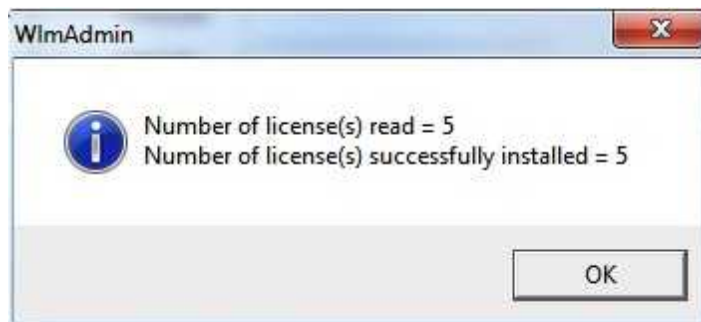
Now we need to add the license file to the license manager. To do so, right click on the LOCALHOST node in the Defined Servers tree and select **Add Feature -> From File -> To Server and its File** as shown below:



Browse to the location of the downloaded license file with the extension LIC, as shown below:

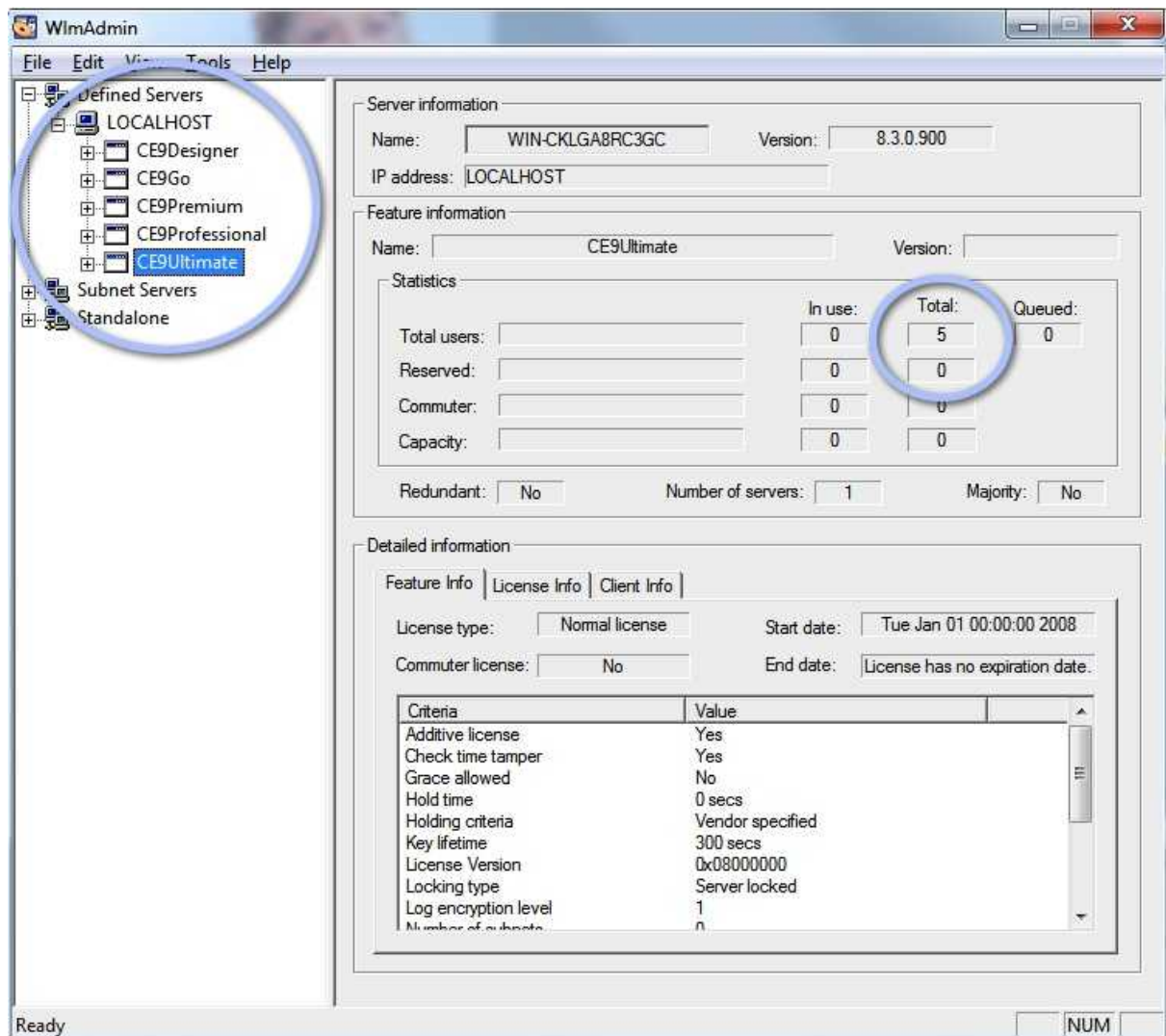


And click on Open. The licenses will now be installed and if the installation succeeds, the window below will be shown:



This message box indicates the amount of licenses that it was able to read from the license file and the amount of licenses that was successfully installed. Of course this number is depending on the amount client licenses purchased. Click on OK to confirm the installation.

The LOCALHOST node should now have one sub node for each license code as shown below:



By selecting the license, you can see in the license manager GUI how many licenses are available and how many licenses are in use.

Don't forget, the License Manager is a Windows service and this GUI does not have to be started to have the system working. After you are done with the configuration, you can close this window.

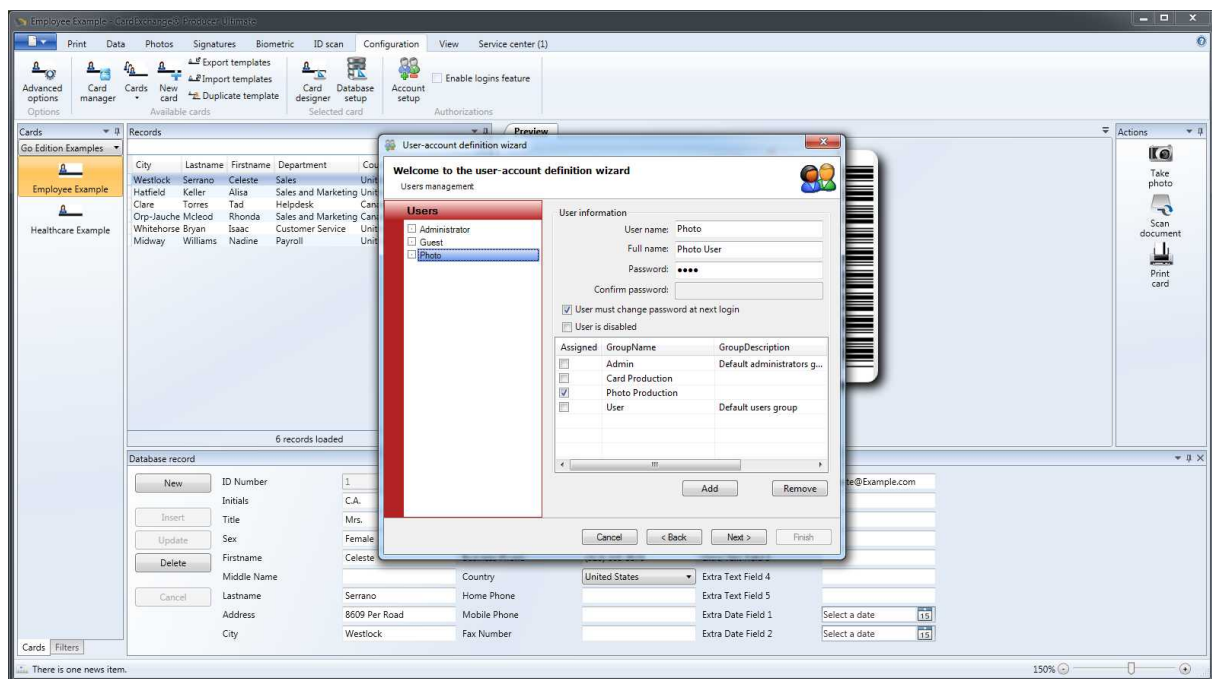
This concludes the installation and configuration of the License Manager and Procedure One. Now we start installing the CardExchange™ Producer clients on the Desktop computers or on the server. This process is explained in Procedure Two!

2.4 Procedure Two (Client)

In Procedure Two we are going to install the CardExchange™ Producer client(s), configure the license, and configuring the shared Data folder:

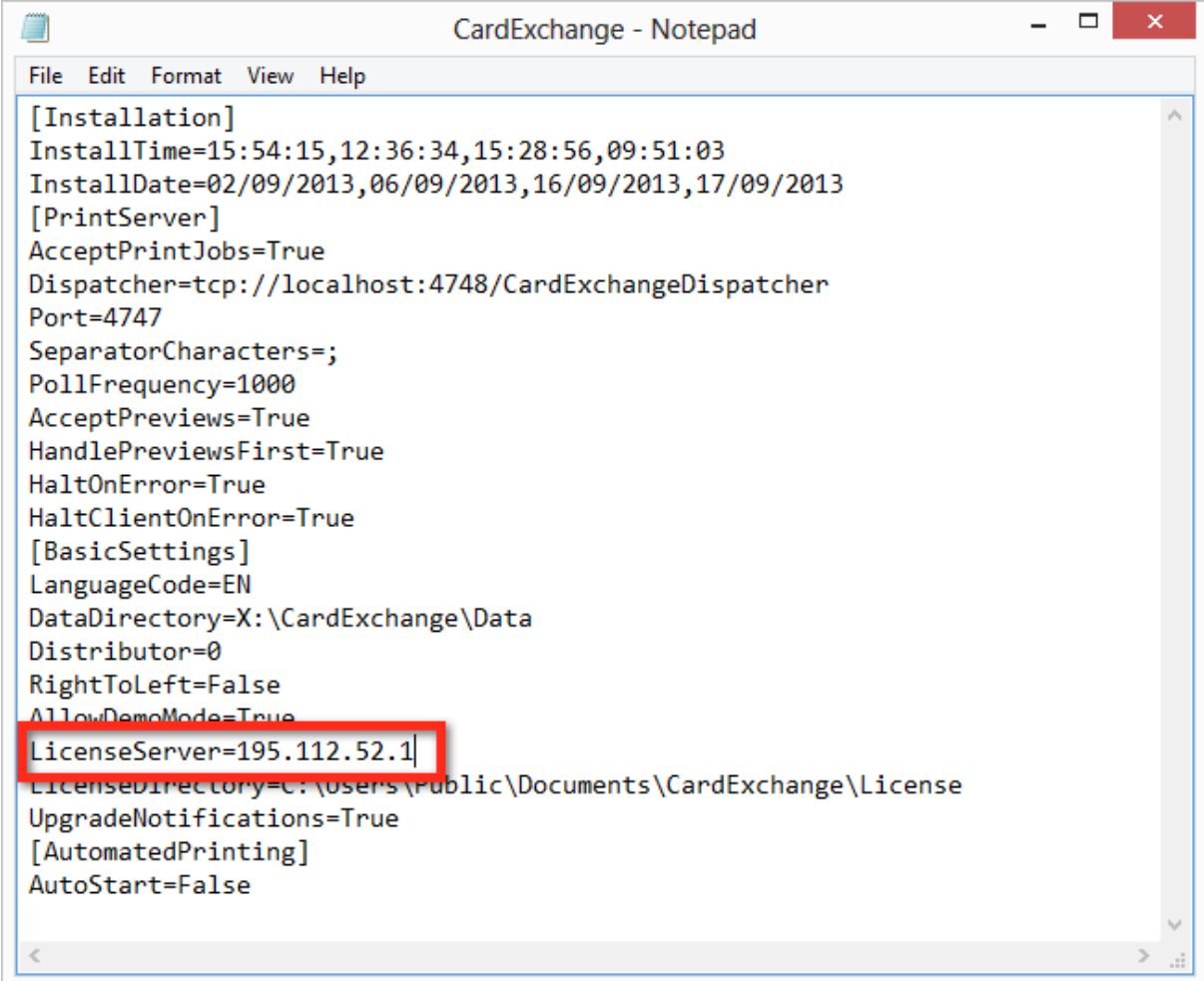
- [Step 1 - Install CardExchange™ Producer Client](#)
- [Step 2 - Configure Client License](#)
- [Step 3 - Configure Shared Data Folder](#)

2.4.1 Install Producer Client



We first need to install the CardExchange™ Producer Client on the computers which are going to be used for producing ID cards. This process is explained in the Quick Install Manual and is available online by [CLICKING HERE!](#)

2.4.2 Configure Client License



```
[Installation]
InstallTime=15:54:15,12:36:34,15:28:56,09:51:03
InstallDate=02/09/2013,06/09/2013,16/09/2013,17/09/2013
[PrintServer]
AcceptPrintJobs=True
Dispatcher=tcp://localhost:4748/CardExchangeDispatcher
Port=4747
SeparatorCharacters=;
PollFrequency=1000
AcceptPreviews=True
HandlePreviewsFirst=True
HaltOnError=True
HaltClientOnError=True
[BasicSettings]
LanguageCode=EN
DataDirectory=X:\CardExchange\Data
Distributor=0
RightToLeft=False
AllowDemoMode=True
LicenseServer=195.112.52.1
LicenseDirectory=C:\Users\Public\Documents\CardExchange\License
UpgradeNotifications=True
[AutomatedPrinting]
AutoStart=False
```

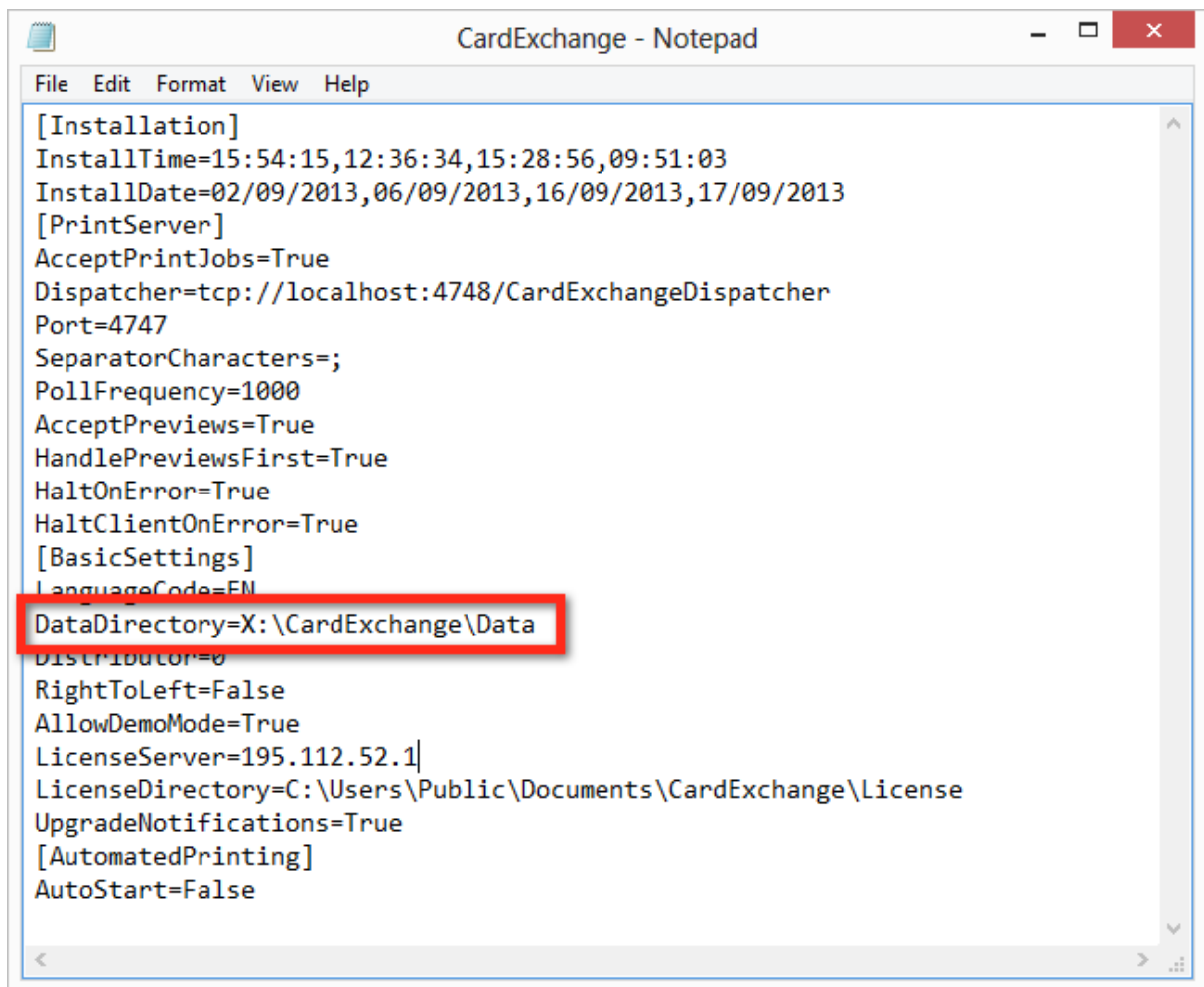
After you have installed the client on your system(s), each client needs to be configured to get access to the license server. The location of the license manager is set in the CardExchange™ Producer Configuration file. This CardExchange.ini file is located in the Program Files folder on your system. You can open and edit this file using Notepad.

The location of the license server is set in the section [**BasicSettings**] as named entry **LicenseServer**. by default this entry is set to "no-net" and CardExchange™ Producer will use the LicenseDirectory during the start up. Now replace the "no-net" with the name or the IP address of the server or computer that is running the license server, see the example in the above screenshot.

Now save the configuration file and start CardExchange™ Producer. When CardExchange™ Producer is starting, it will request a license from the license manager. If available it will start directly, if all licenses are in use it will inform the user that all licenses are in use. As soon as another client is closed, the license will become available again.

2.4.3 Configure Shared Data Folder

Unlike the regular CardExchange™ Producer editions, the Small Business Server allows multiple CardExchange™ Producer installations to share the same data folder, which in that case will be located on a network drive. Therefore all clients need to point to the same Data folder location. This location of the Data folder needs to be adapted in the configuration file of CardExchange™ Producer. Just like when configuring the Client License, browse to the Program Files folder and open the CardExchange.ini file with Notepad:

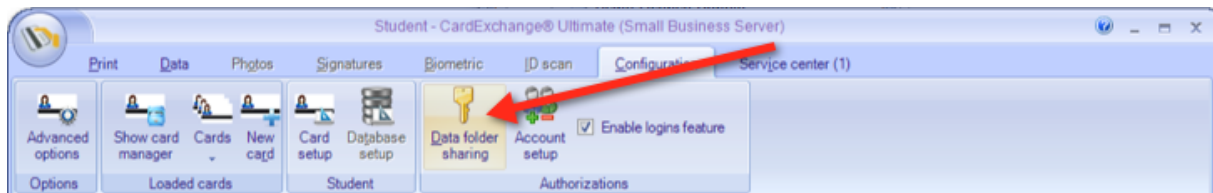


The location of the Data folder is also available under the **[BasicSettings]**. Change the location to the location of the central Data folder, like shown in the above screenshot, and save and close the configuration file.

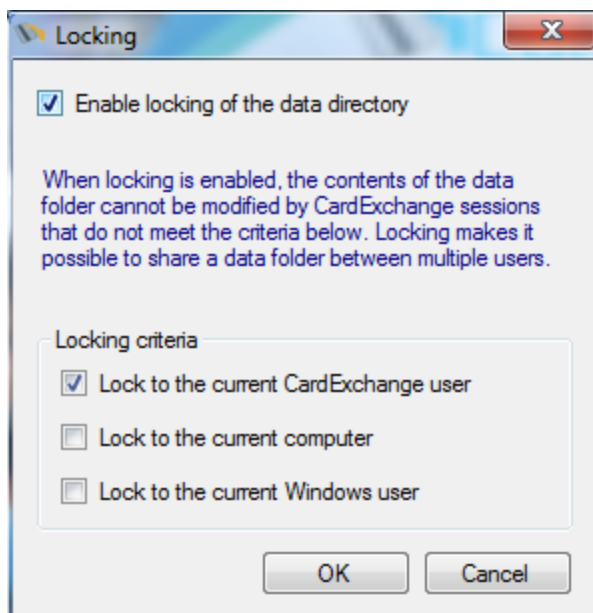
When the data folder is shared between multiple sessions, CardExchange™ Producer makes sure that only one session gets write access to the data folder. All other sessions will run in

read-only mode, which means that any changes to the configuration are not stored and that the Configuration tab in the main window will be hidden altogether.

By default, CardExchange™ Producer grants write access to the first session that starts up and denies it to any subsequent session. This behavior can be changed by clicking Data folder sharing in the Configuration tab.



Click on the Data folder Sharing button to open the Locking window:



When the Locking window is shown, you can select Enable locking of the data directory. When selected, you are offered a choice of three criteria's;

- Lock to the current CardExchange™ Producer user - If you have setup user authorizations, you can use the actual logged in user to lock the data folder to. This is a good choice as it gives you the option to access and configure the data folder from any client location by simply logging in as that user. How to configure and setup user authorizations is explained in the online CardExchange™ Producer Help File and can be accessed by [CLICKING HERE!](#)
- Lock to the current computer - This choice will allow only the selected computer to make changes independent to which user is logged in.
- Lock to the current Windows user - This option is basically the same as the first

option. It can be more hassle as you will have to log off in Windows and log in with your account again.

You can also make a combination of the available locking criteria for example, the data folder can only be edit by the logged user and only on one specific computer.

2.5 CardExchange Network Printing

The CardExchange network printing solution is another “Industry First” from CardExchange™ Solutions and can be implemented with CardExchange™ Producer Professional & Ultimate SBS licenses for the production of secure credentials. This product provides for the following possibilities:

- Send your print commands from a client work station over the network to one or more remote computers, where the card will be printed.
- Share a single printer between two or more clients
- Distribute print jobs automatically over the available printers

Network Printing Components

- CardExchange™ Producer Client
- CardExchange™ Producer SBS Dispatcher
- CardExchange™ Producer SBS Print Server

The **CardExchange™ Producer Client** is very much like an ordinary CardExchange™ Producer installation, with the only exception that, apart from Windows printers installed on the system, you can also select a remote print server or dispatcher as the standard printer for a card layout.

The **CardExchange™ Producer SBS Print Dispatcher** is a console-like application. It can receive print commands from the CardExchange™ Producer client and distribute the jobs over one or more print servers. When a print job is received, the dispatcher will check whether there is an idle print server available. If so, the job is sent to that print server. If not so, the dispatcher will put the job in a waiting list and wait until one of the print servers is ready to start a new print job.

The **CardExchange™ Producer SBS Print Server** is also a console-like application that does the actual printing. Typically, there will be one print server for each printer and the print server will run on the work station where the printer has been installed. The print server can receive print commands from the CardExchange™ Producer client or from the dispatcher.

The client, the print server and the dispatcher communicate with each other over the network via .NET Remoting, using the tcp protocol. The communication is completely transparent in the sense that it doesn't matter anymore on which machine a process is running. The client communicates as easy with a dispatcher that runs on the same machine, as with a dispatcher that runs on a remote work station.

2.5.1 Print Server Configuration

The print server has a more extensive initialization file, called "CardExchangePrintServer.ini". Many of the configuration options are identical to the ones found in the file "CardExchange.ini", the most important being the location of the data directory. The following options are specifically related to network printing:

```
[PrintServer] Port=4747  
Dispatcher=tcp://localhost:4748/CardExchangeDispatcher [AutomatedPrinting]  
AutoStart=True
```

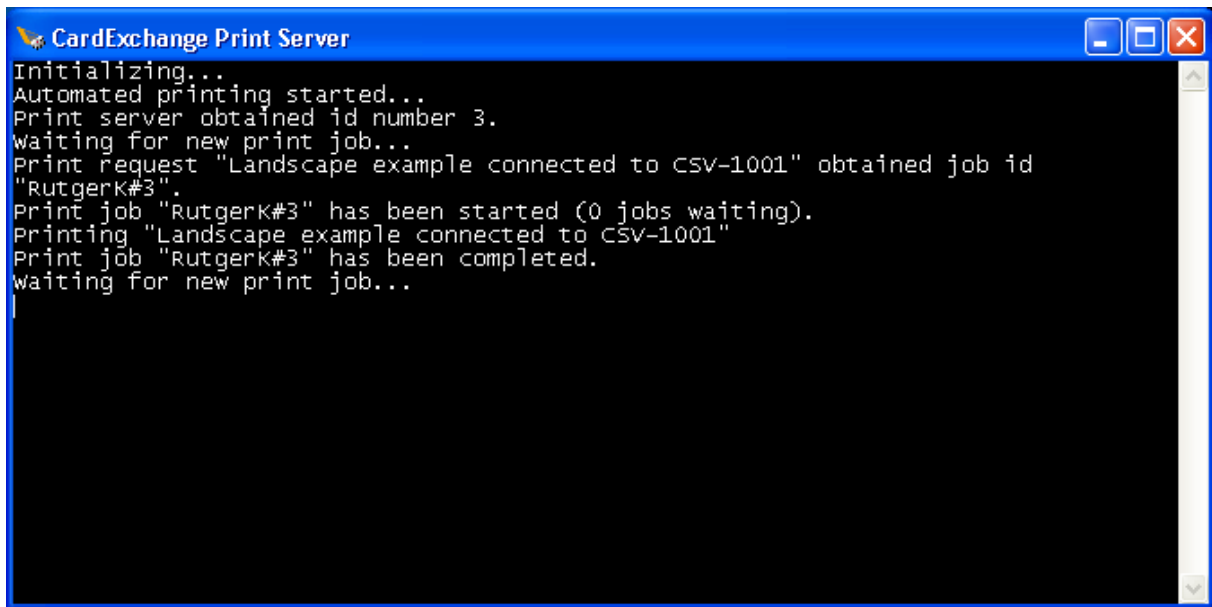
As was the case for the dispatcher, you need to provide a port on which the print server will listen for remote print commands. By default, port 4747 is used. If you are using a dispatcher, you should also indicate the URL of the dispatcher. By default, the print server assumes that the dispatcher is running on the same machine using port 4748. If that is not the case, "localhost" has to be changed into the correct machine name (or IP address) and "4748" into the correct port. The AutoStart option determines whether the print server will start automatically if the print-server application is started. It is set to "True" by default.

When the print server is started, it will try to connect to the dispatcher defined in the initialization file. If the dispatcher is not found, the print server runs without dispatcher. Otherwise, it registers itself with the dispatcher. The dispatcher then knows that it can send print jobs to this print server.

When running, the print server can receive print commands from the dispatcher it is connected to, but it can also receive print commands directly from the client. To send those commands, the client will need to address the print server using its URL. Commands send directly by the client have priority over commands sent by the dispatcher. A print-server URL typically looks like this:

```
tcp://machine_name:4747/CardExchangePrintServer
```

Here, "machine_name" should match the name or IP address of the computer and "4747" should match the port number set in the initialization file. The print server has the following appearance:



```
CardExchange Print Server
Initializing...
Automated printing started...
Print server obtained id number 3.
waiting for new print job...
Print request "Landscape example connected to CSV-1001" obtained job id
"Rutgerk#3".
Print job "Rutgerk#3" has been started (0 jobs waiting).
Printing "Landscape example connected to CSV-1001"
Print job "Rutgerk#3" has been completed.
waiting for new print job...
```

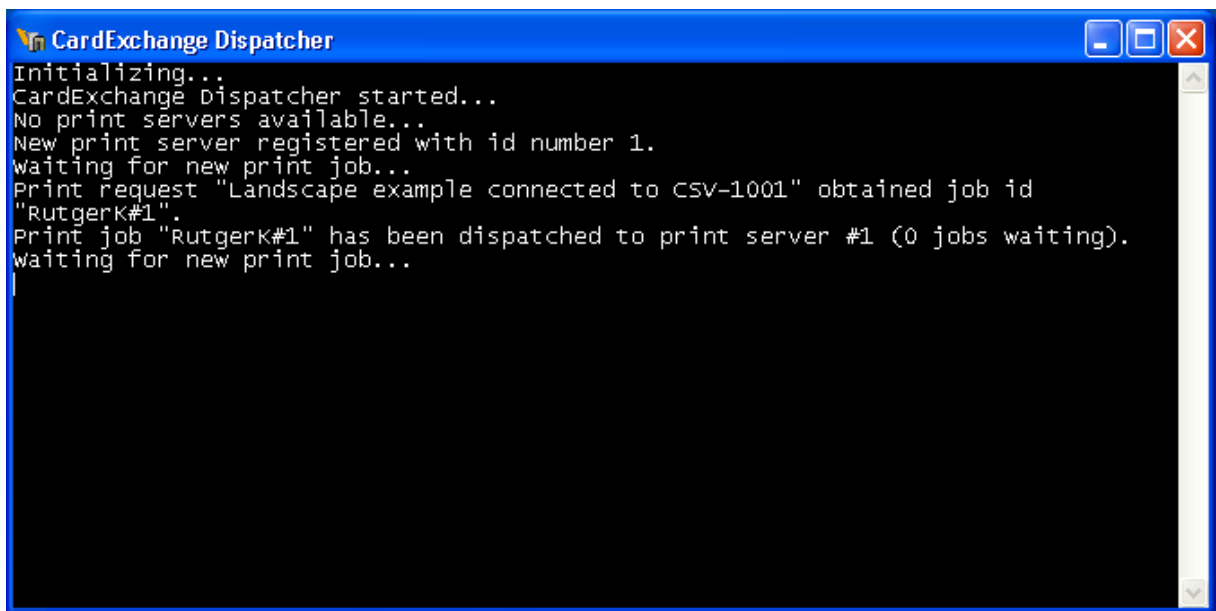
2.5.2 Print Dispatcher Configuration

The Dispatcher is the easiest component to configure. In the CardExchange installation directory, there is a file called "CardExchangeDispatcher.ini" that only contains a single setting: the port on which it runs. By default, the dispatcher uses port 4748. This port may not be used by any other process on that computer.

```
[Dispatcher settings]
Port=4748
```

When the dispatcher runs, it can be addressed by a URL that typically looks like this: `tcp://machine_name:4748/CardExchangeDispatcher`

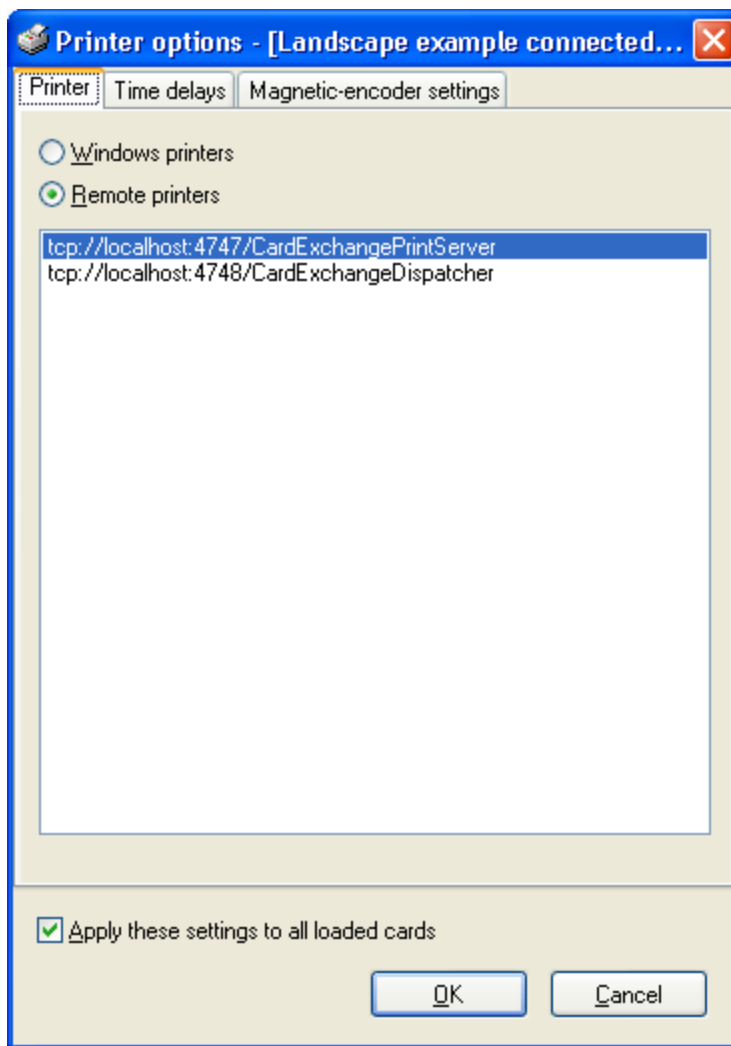
Here, "machine_name" should match the name or IP address of the computer and "4748" should match the port number set in the initialization file. The dispatcher has the following appearance:

A screenshot of a Windows-style application window titled "CardExchange Dispatcher". The window has a blue title bar with standard minimize, maximize, and close buttons. The main area is a black console window with white text. The text shows the application's startup sequence: initialization, starting the dispatcher, checking for print servers, registering a new server with ID 1, waiting for a job, receiving a print request for "Landscape example" connected to CSV-1001, obtaining job ID "RutgerK#1", dispatching the job to print server #1 (0 jobs waiting), and then waiting for the next job.

```
CardExchange Dispatcher
Initializing...
CardExchange Dispatcher started...
No print servers available...
New print server registered with id number 1.
waiting for new print job...
Print request "Landscape example connected to CSV-1001" obtained job id
"RutgerK#1".
Print job "RutgerK#1" has been dispatched to print server #1 (0 jobs waiting).
waiting for new print job...
```

2.5.3 Client Configuration

The client is basically an ordinary CardExchange™ Producer SBS license. The difference is only visible in the printer-options window, where an extra option can be found that enables the user to select a remote printer.



The client needs to know which remote printers and dispatchers are available, this is done via the file "RemotePrinters.txt" which should be placed in the CardExchange data folder. Its contents looks typically like this:

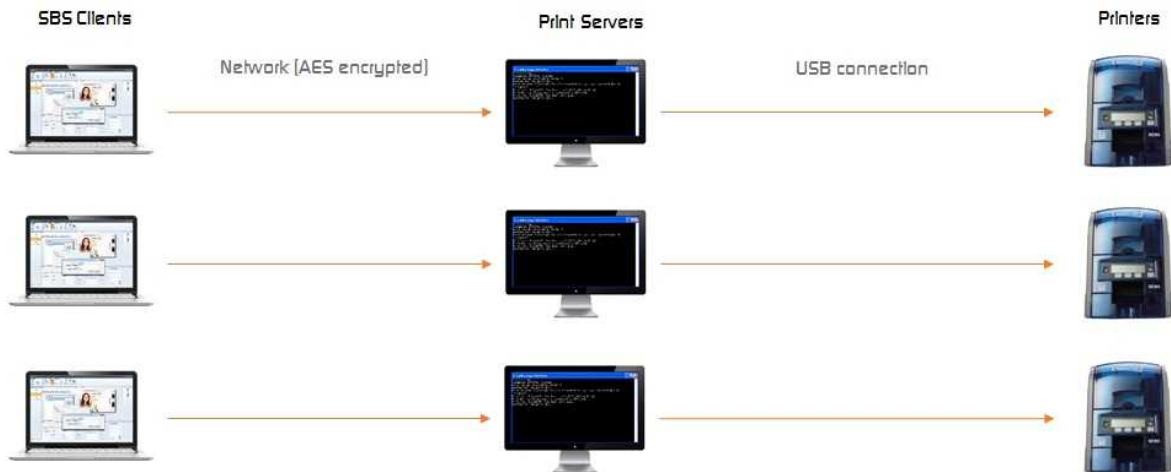
```
tcp://machine1:4748/CardExchangeDispatcher
tcp://machine1:4747/CardExchangePrintServer
tcp://machine2:4748/CardExchangeDispatcher
```

In this example, two dispatchers and one print server are configured to receive print commands from the client. However, there can be any number of dispatchers and print server.

2.5.4 Network Printing Examples

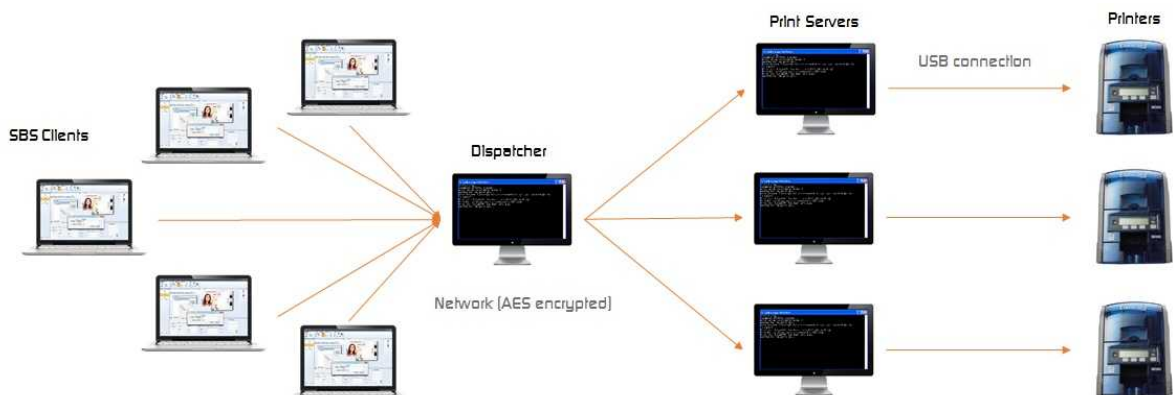
In this example we are printing and encoding contactless smart cards over a network.

- Each SBS Client is printing to a Printer Server via network.
- As soon as the print job is sent to the Server, the client is released to continue working, it does not need to wait for the card to be printed/encoded.
- Data is sent via an AES encrypted protocol so no data is visible on the network.
- The print server is installed on a PC with a printer connected directly via USB.



In this example we have added more SBS Clients and a Dispatcher module.

- Each SBS Client is printing to the Dispatcher via the network.
- As soon as the print job is sent to the Dispatcher the client is released to continue working, it does not need to wait for the card to be printed/encoded.
- Data is sent via an AES encrypted protocol so no data is visible on the network.
- When the Dispatcher receives the print job, it sends it to an available Print Server
- The print server is installed on a PC with a printer connected directly via USB.
- If a printer goes offline due to an error (eg card jam) the Dispatcher will reallocate the job to another Print Server until that printer comes back online.



3 Support



CardExchange™ Producer Solution partners and distributors are your first point of contact if it comes to support for the Small Business Server edition. Please be aware that Small Business Server editions installations and configurations can be complex and therefore additional fees may apply. Please contact your CardExchange™ Producer Small Business Server reseller for more information or contact CardExchange™ Producer Solutions at Support@CardExchangeSolutions.com. More support tools can be found on our website by [CLICKING HERE!](#)

Thank you for using our CardExchange™ Producer Small Business Server! We appreciate your business and trust.

3.1 Troubleshooting

As is the case with all installation procedures, it is also possible that CardExchange™ Producer doesn't obtain a license from the License Manager successfully. This will almost always result in the error message "All licenses are in use. Please try again later." Normally, this message means exactly what it says and you probably need to purchase additional licenses. But if you get the message when there are available licenses, there is probably something else going on.

You should check with the WlmAdmin tool on the server whether there are valid licenses in

the License Manager. If that is not the case, you have to check whether the machine ID has changed (for example because the dongle has been removed or the network card has been changed). Otherwise, the firewall is the most likely cause.

Here are some other suggestions:

- The Sentinel RMS License Manager service is not running on the server.
- The Sentinel RMS License Manager service is running, but no valid license has been loaded.
- The CardExchange.ini file of the client does not point to the correct server name.
- The firewall is blocking the communication, either on the client or on the server.
- The CardExchange™ Producer version you are running does not match the license codes.
- The license file was not created.
- The environment variable did not contain the correct path, did not have sufficient admin rights or did not include the full file name.

When changing configuration settings, it is often needed to restart the License Manager service.

This is done in the Computer Management window via the Services node. The service is called Sentinel RMS License Manager.

3.2 Quick Install Guide

Introduction

This document provides an overview of the installation and configuration procedure of the CardExchange™ Producer Small Business Server License Manager and the configuration of the CardExchange™ Producer client installations that make use of the License Manager. This is an abbreviated version of the previous procedures for experienced installers who just need a reference for the installation procedure. This document is not intended for end users.

Step 1: Set the location of the license file

The License Manager will store its license codes in a plain text file. We will call this the license file. It can be located anywhere on the system. The Windows user that owns the License Manager Service process, which is typically the Local System account, needs read and write access to this location.

The license file location is set by means of an environment variable.

Setting the environment Variable:

- Load Control Panel and select System, then click on the Advanced system settings option.
- Click on the Environment Variables button.
- Click on New in the System variables box.
- Enter LSERVRC as the variable name.
- Enter the complete path to the license file (eg.. C:\CardExchange\License\CardExchange.license) in the variable value box.
The directory of the path should exist, while the file (CardExchange.license) itself should not exist. The name of the file is arbitrary, in this example CardExchange.license is used but it can be, like the path - anything.
- Click OK until all windows are closed.

Step 2: Installation of the License Manager service

The setup for the License Manager is provided on the Installation CD. It installs the License Manager itself and the drivers for the hardware dongle.

- Click on the 'Install License Manager' button. Follow the instructions of the installation wizard. Normally, you don't need to change any of the default settings.

Step 3: Copy the License Manager tools to the server

The License Manager ships with a set of tools that are not installed automatically with the License Manager Service. For using the tools, we recommend that the tools folder on the CardExchange CD is copied to the server, for example to the folder C:\Program Files (x86)\Common Files\SafeNet Sentinel\Tools.

Click on the 'Browse CD' button to open the CD content and copy the information of the Tools folder.

Step 4: Connect the Sentinel hardware dongle (Only supplied if requested)

Connect the hardware dongle to one of the USB ports on the server. The dongle should be recognized and installed automatically.

Step 5: Obtain MachineID and Activate license

The license will be locked to the MachineID of the server, you will need to run the MachineIDExchange utility to retrieve this ID (It is important that if you are using a USB license dongle that you complete step 4 before activating the license).

You can then go to <https://cardexchangesolutions.com/id-card-software-support/license-activation> to activate the license using the serial number and activation code. Once activated it will prompt you to download a .lic file which you need to save to the PC for use

later on.

Step 6: Install the license codes

The license codes can be installed with the Windows License Manager Administrator, which is found in the tools folder that was copied to the server in the previous step.

- Run the program WlmAdmin.exe.
- Select Preferences in the Edit menu.
- Check the options "Discover defined servers at startup" and "Save these preferences to a file".
- Click OK to close the preferences window.
- Select Defined Server List in the Edit menu.
- Type localhost in the Server box and click Add and OK to close the window.
- Right click on the localhost node in the Defined Servers tree and select Add Feature – From a File – To Server and its File.
- Select the downloaded license file from step 5 and click Open. This file has the extension *.lic.
- The license codes are now installed. You need to click OK for each license code.

The localhost node should now have one sub node for each license code. The file you specified in the first step has been created and contains the license codes. The License Manager is now ready for use. Leave the WlmAdmin tool open until we have tested whether the License Manager works correctly.

Step 7: Configure the CardExchange™ Producer client for using the License Manager

For testing purposes, it is practical to have CardExchange™ Producer installed on the same machine where the license manager runs. That excludes any possible network connection errors for the first test. Click on the 'Install CardExchange' button for installing CardExchange™ Producer.

The CardExchange™ Producer initialization file needs to be modified to instruct CardExchange™ Producer to connect to the License Manager.

- Open the CardExchange.ini file in Notepad. Normally, this file can be found in C:\Program Files (x86)\CardExchange Solutions\CardExchange Producer.
- Search for the LicenseServer setting in the BasicSettings group. By default, this option is set to "no-net", which means that no license manager is used.
- Set the correct license server by replacing "no-net" with the name or the IP address of the license server. If CardExchange runs on the same machine as the License Manager, you can type "localhost".
- Close and save the CardExchange.ini file.
- Start CardExchange™ Producer.

Starting CardExchange™ Producer with the License Manager is somewhat slower than using stand-alone licenses, but after a few seconds, the CardExchange™ Producer main window should appear. If so, you can switch back to the WlmAdmin tool, right-click on Defined Servers and select Refresh. If you now drill down from the Defined Servers to localhost and for example the CE9Professional license code, you can see that the license code is in use and you can actually see which users are running CardExchange™ Producer by clicking the sub nodes of CE9Professional.

Trouble shooting

As is the case with all installation procedures, it is also possible that CardExchange™ Producer doesn't obtain a license from the License Manager successfully. This will almost always result in the error message "All licenses are in use. Please try again later." Normally, this message means exactly what it says and you probably need to purchase additional licenses. But if you get the message already in step 7 of this procedure, there is probably something else going on. Here are some suggestions:

- The Sentinel RMS License Manager service is not running on the server.
- The Sentinel RMS License Manager service is running, but no valid license has been loaded.
- The CardExchange.ini file of the client does not point to the correct server name.
- The firewall is blocking the communication, either on the client or on the server.
- The CardExchange™ Producer version you are running does not match the license codes.
- The license file was not created.
- The environment variable did not contain the correct path, did not have sufficient admin rights or did not include the full file name.

When changing configuration settings, it is often needed to restart the License Manager service. This is done in the Computer Management window via the Services node. The service is called Sentinel RMS License Manager.

The Windows License Manager Admin Tool

The tool WlmAdmin is not needed to use the license manager once the license codes have been installed. The License Manager is a Windows service and will start automatically, since it is a Windows service, but the administration tool needs to be started manually. It can be used to monitor the usage of licenses and to check whether the license server is running correctly.