



*Manual*

***CHROMELEON<sup>®</sup> License Server***

***Version:6.80***

Now sold under the  
Thermo Scientific brand

**Thermo**  
SCIENTIFIC

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Dok.: CmLicServ\_E\_V680SR10

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# 1 How to Use this Manual

The layout of this manual is designed to provide quick reference to the sections of interest to the user. However, we recommend that you review the manual thoroughly before beginning operation of the license server in order to obtain full understanding.

At various points throughout the manual, messages of particular importance are indicated by certain symbols:



**Note:** Indicates general information intended to optimize the performance.



**Tip:** Indicates that failure to take note of the accompanying information may produce wrong results.

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## **2 Overview**

In installations with numerous computers, it is a fatiguing task to equip all clients with the corresponding hardware and enter the respective license codes. That is why the Chromeleon license server was developed.

Running the license server requires a key code that is available in the ini-file included in the shipment. Together with the serial number that is filed in the hardware (dongle, hard-protect) the key code allows accessing the licensed software features.

## 3 Description

### 3.1 Installing the License Server

The license server can be installed on any network PC fulfilling the following conditions:

- Windows 2000, Windows XP, Windows Vista (32-bit/64-bit), Windows 7 (32-bit/64-bit), Windows Server 2003 or Windows Server 2008 R2 Operating System
- LAN connection via TCP/IP or IPX/SPX
- The license server must not be installed on systems that are configured as Primary Domain Controller (PDC). Due to the security settings implemented on these systems, the license server installation is blocked.



**Tips:**

Make sure that the person performing the installation has full **local administrator privileges**. Otherwise, the installation will fail or be incomplete. After reboot, the administrator running the setup must login again so that the installation process can be completed correctly.

If a firewall is active on the PC (for example under Windows XP Service Pack 2), the CmLicSrv.exe program must be included in the exceptions list. For Windows XP, for example, click **Start > Control Panel > Windows Firewall**. On the Exceptions tab page, click Add Program and then click Browse to select the file. Under **Windows Server 2008**, you must also add the rule "COM + Network". To do so, select the respective check box on the **Exception** tab page.

#### 3.1.1 New Installation

1. Insert the distribution CD that is shipped with the product into the CD drive of your computer. The installation screen opens automatically if CD Autostart is active on your PC (otherwise, you may go to the **Autorun** folder on the CD and start **autorun.exe** from there).
2. To install the license server, select **License Server Setup**. The installation wizard guides you through the installation process. Clicking **Next** takes you to the second wizard page.
3. Specify the destination folder for the installation. If Chromeleon is already installed on your PC, the corresponding message appears. We recommend installing the license server into a folder different from the Chromeleon installation folder. The default folder is **C:\CmLicSrv**. To use a different folder, navigate to the desired destination using the **Browse...** button. Clicking **Next** takes you to the next Wizard page.

If the CmLicSrv directory does not yet exist on your PC, a message appears. Click **Yes** to confirm the prompt whether to create the folder (Should Setup create it for you?).

4. Before starting the installation, a confirmation page is displayed indicating the selected installation path. Click **Next** to confirm the installation path and to proceed to the next wizard page. (Clicking **Back** returns you to the previous page where you can edit the installation options; clicking **Cancel** aborts the installation.)
5. As no license server has been installed on your PC, a license file (= **CmLicSrv.ini**) is requested. (The license server needs a license file ("CmLicSrv.ini") to start. Do you want to install this file now?). Click **Yes** to install the file. Clicking **Next** takes you to the next page.
6. The ini-file for your license is available on the disk that is shipped with the product. In the File Selection box, specify the path accordingly and click **Open** to confirm your selection.
7. To complete the installation of the license server, you have to restart your computer. Select the desired option (**Yes, I want to restart my computer now** or **No, I will restart my computer later**), and then click **Finish** to complete the license server installation.
8. When you have restarted your computer, the **Setup Finish** wizard page appears. Use this page to determine whether the license server monitor is started immediately (**Start License Server**

**Monitor now?**) and/or whether the license server icon is added to the system tray (**Add License Server Monitor to the taskbar?**). Select the desired option(s), and then click **Finish**.

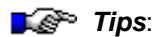
9. The **CmLicSrv.ini** file needs to be adapted to the local requirements (if a new ini-file has been installed). In the [Servers] section, replace the computer names PC\_XX by the names actually used on your network to assign serial number/key code pairs to the Chromeleon servers:

```
[License Server]
Serial Number = 4711
Key Code = 112233-445566
Pal Location = 5

[Servers]
ALPHA :1/111111-111111
BRAVO :2/222222-222222
CHARLIE :3/333333-333333
DELTA :4/444444-444444
ECHO :5/555555-555555
FOXTROTT:6/666666-666666

[Clients]
Max Clients = 10

[Checksum]
Checksum = 0x00005E77
```



**Tips:**


The information about the number of full licenses can be obtained from the key codes of the separate server PCs. These licenses can only be used on the indicated PC (e.g., ALPHA, BRAVO, ...). In addition, floating licenses are available for any PC on the network. For information about the number of floating licenses, see Max Clients underneath [Clients]. In the above example, 10 floating licenses are available.

If you have a hard-protect installed (that is, if the entry in the INI file reads: Pal Location = 1), specify an I/O address. Enter the line "Pal Address = 0x030F". Depending on the jumper settings on the hard-protect, other available options are: 0x031F, 0x032F, and 0x033F. If the "Pal Address =" line is missing in the INI file, 0x030F is the default.


Do **not** modify any other settings!

If the license server is not yet running, start the license server via the License Server Monitor. For information about how to configure the client and server PCs (that is, about how to establish the license reference), see sections 3.2 and 3.3, respectively.

## 3.1.2 Upgrading the License Server

 **Tip:** Before starting an upgrade make sure that the license server and the server monitor are disabled. Verify that neither the server monitor icon nor any minimized program button is displayed on the Windows taskbar!

### 3.1.2.1 Upgrading a License Server Version 6.20 or earlier

 **Tip:** When you upgrade your Chromeleon installation that includes a license server, observe the following order: First, install the Chromeleon 6.80 SR10 license server! An old license server (6.40 or earlier) cannot provide Chromeleon clients and servers with version 6.50 or higher with a license! However, Chromeleon clients and servers 6.40 or earlier can receive their licenses from a Chromeleon 6.50 and higher license server.


**Therefore, upgrade the license server before upgrading any computers receiving their licenses from the license server.**

If a license server version 6.20 or earlier is already installed on your PC, this installation will not be recognized as such during setup.

1. Therefore, install the license server as described in 3.1.1 selecting the installation directory of the old installation. A message appears indicating that an old license file for the Chromeleon server has been detected and in which folder. .

The old key codes are invalid for a Chromeleon 6.50 and higher license servers. Thus, when you update the license server to version 6.50 or higher, you always need a **new CmLicSrv.ini** file.

2. Select the **Install a new license file** option. Clicking **Next** takes you to the **Please select the license file ("CmLicSrv.ini")** dialog box. Navigate to the new license file, and then click **Open**.

 **Note:** If you do not yet have a new CmLicSrv file, you may still use the old file. The old key codes are accepted for a transition period of 30 days. The transition period starts with the upgrade of the Chromeleon server or client.

3. The new **CmLicSrv.ini** file needs to be adapted to the local requirements. For an example for a CmLicSrv.ini file after an upgrade, refer to page 7.

### 3.1.2.2 Upgrading a License Server Version 6.30 or 6.40



**Tip:**

When you upgrade your Chromeleon installation that includes a license server, observe the following order: First, install the Chromeleon 6.80 SR10 license server! An old license server (6.40 or earlier) cannot provide Chromeleon 6.50 or higher clients and servers with a license! However, Chromeleon clients and servers 6.40 or earlier can receive their licenses from a Chromeleon 6.50 or higher license server.

**Therefore, upgrade the license server before upgrading any computers receiving their licenses from the license server.**

1. Insert the distribution CD that is shipped with the product into the CD drive of your computer. The installation screens opens automatically if CD Autostart is active on your PC (otherwise, you may go to the **Autorun** folder on the CD and start **autorun.exe** from there).
2. To install the license server, select **License Server Setup**. The installation wizard guides you through the installation process. Clicking **Next** takes you to the second wizard page.
3. A message informs you that the license server is already installed on your computer. Select **Upgrade / Repair License Server** and click **Next**.
4. A message on the next wizard page informs you that an old license file has been detected and in which folder.

The old key codes are invalid for a Chromeleon license server 6.50. Thus, when you update the license server, you always need a **new CmLicSrv.ini** file.

5. Select the **Install a new license file** option. Clicking **Next** takes you to the **Please select the license file ("CmLicSrv.ini")** dialog box. Navigate to the new license file, and then click **Open**.



**Note:**

If you do not yet have a new CmLicSrv file, you may still use the old file. The old key codes are accepted for a transition period of 30 days. The transition period starts with the upgrade of the Chromeleon server or client.

6. The new **CmLicSrv.ini** file needs to be adapted to the local requirements. In the [Servers] section, replace the computer names PC\_XX by the names actually used on your network to assign serial number/key code pairs to the Chromeleon servers.



When you have updated your license server to a version higher version, the file looks as follows (for the example below, upgrade from 6.40 to 6.50):

```
[License Server]
Serial Number = 666
Key Code = XXXXXX-XXXXXX
Key Code 640 = YYYYYY-YYYYYY
Pal Location = 5

[Servers]
ALPHA :1/AAAAAA-AAAAAA
BRAVO :2/BBBBBB-BBBBBB

[Servers 640]
1/CCCCCC-CCCCCC
2/DDDDDD-DDDDDD

[Clients]
Max Clients = 5

[Checksum]
Checksum = 0x12345678
```

The **Key Code 640** and **[Servers 640]** sections are only part of the file after upgrading. They allow you to continue operation of Chromeleon 6.40 clients and servers for the moment and to upgrade them one after the other. The license server recognizes whether the license is inquired by a Chromeleon 6.40 or a Chromeleon 6.50 client (or server). Thus, the computer automatically receives the new key code if the update is performed.

 **Tips:**

The information about the number of full licenses is included in the key codes of the separate server PCs. These licenses can only be used on the indicated PC (e.g., ALPHA, BRAVO, ...). In addition, floating licenses are available for any PC on the network. For information about the number of floating licenses, see Max Clients under [Clients]. In the above example, 5 floating licenses are available.

If you have a hard-protect installed (that is, if the entry in the INI file reads: Pal Location = 1), specify an I/O address. Enter the line "Pal Address = 0x030F". Depending on the jumper settings on the hard-protect, other available options are: 0x031F, 0x032F, and 0x033F. If the "Pal Address =" line is missing in the INI file, 0x030F is the default.

Do **not** modify any other settings!

7. To complete the installation of the license server, you have to restart your computer. Select the desired option (**Yes, I want to restart my computer now** or **No, I will restart my computer later**), and then click **Finish** to complete the license server installation.
8. When you have restarted your computer, the **Setup Finish** wizard page appears. Use this page to determine whether the license server monitor is started immediately (**Start License Server Monitor now?**) and/or whether the license server icon is added to the system tray (**Add License Server Monitor to the taskbar?**). Select the desired option(s), and then click **Finish**.
9. If the license server is not yet running, start the license server via the License Server Monitor. For information about how to configure the client and server PCs (that is, about how to establish the license reference), see sections 3.2 and 3.3, respectively.

### 3.1.2.3 Upgrading a License Server from Version 6.50

1. Insert the distribution CD that is shipped with the product into the CD drive of your computer. The installation screen opens automatically if CD Autostart is active on your PC (otherwise, you may go to the **Autorun** folder on the CD and start **autorun.exe** from there).
2. To install the license server, select **License Server Setup**. The installation wizard guides you through the installation process. Clicking **Next** takes you to the second wizard page.
3. A message informs you that the license server is already installed on your computer. Select **Upgrade / Repair License Server** and click **Next**.
4. The license server is updated and the next wizard page is opened. Select **Reuse existing license file** and click **Next**.
5. To complete the installation of the license server, you have to restart your computer. Select the desired option (**Yes, I want to restart my computer now** or **No, I will restart my computer later**), and then click **Finish** to complete the license server installation.
6. When you have restarted your computer, the **Setup Finish** wizard page appears. Use this page to determine whether the license server monitor is started immediately (**Start License Server Monitor now?**) and/or whether the license server icon is added to the system tray (**Add License Server Monitor to the taskbar?**). Select the desired option(s), and then click **Finish**.
7. If the license server is not yet running, start the license server via the License Server Monitor. For information about how to configure the client and server PCs (that is, about how to establish the license reference), see sections 3.2 and 3.3, respectively.

### 3.1.3 Uninstalling the License Server

The license server can be uninstalled using the Windows Control Panel.

1. Open the Windows **Start** menu and navigate to the **Control Panel**.
2. Open the list of installed programs.
3. From the list of currently installed programs, select the license server and follow the on-screen instructions to uninstall the program.



#### **Notes:**

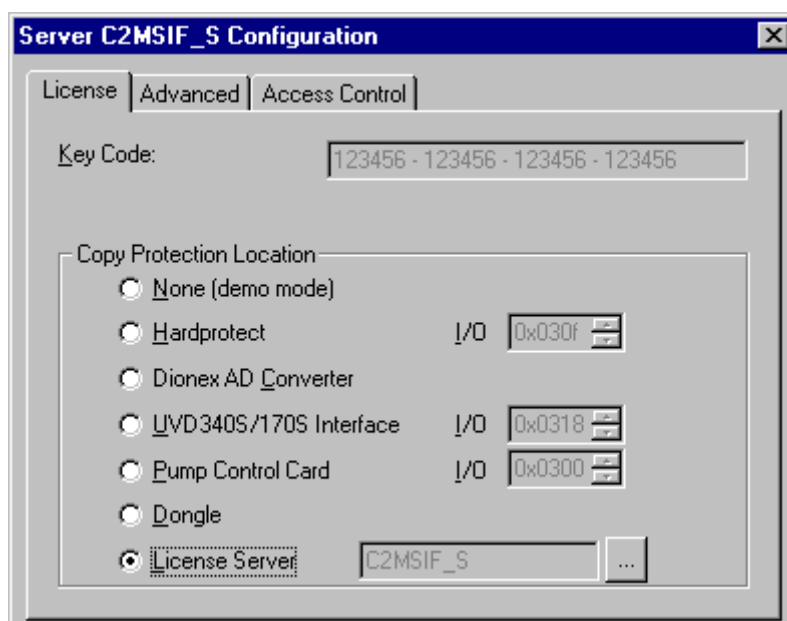
Uninstalling the license server can also be performed via the License Server Setup of the distribution CD. To uninstall the license server (from version 6.30 on) but not Chromeleon, you have to run the setup for Chromeleon once again and vice versa.

After deinstallation of the license server, problems when connecting to the CmUser database may occur in rare cases. Should a corresponding error message be displayed upon starting the Chromeleon Client program, reinstall the CmUser program. Then start the CmSecure program and turn the User Mode on and off again.

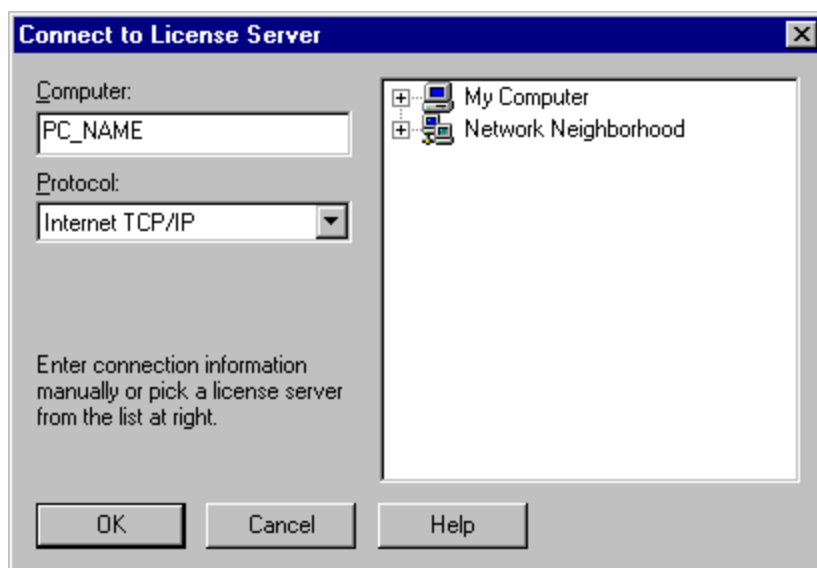
### 3.2 Configuring a PC with a Chromeleon Server

Establish the license reference for a Chromeleon server PC in the **Server Configuration** program.


1. Start the local Chromeleon server via the Server Monitor program. For the moment, the server runs in evaluation mode, as no license is available. Then, start the Server Configuration program (**Start > Programs > Chromeleon > Server Configuration**).
2. When the connection to the Chromeleon server is successful, assign the server properties. Right-click the server name and then select **Properties** on the context menu. The following dialog appears:



3. On the **License** tab page, select **License Server**; the **Key Code** field is now disabled, as it is no longer required. Click the '...' button (**Browse**) to the right of the **License Server** option to open the next dialog. Select the computer on which the License Server runs:



4. Enter the name of the License Server PC or select a PC from the network list in the right window section. In addition, select a network protocol from the protocol list by means of which the local PC can connect to the License Server PC.

 **Tip:** If "Server not found" is displayed in the list on the right, a firewall may be active on the PC and CmLicSrv.exe is not included in the exceptions list (see page 3).

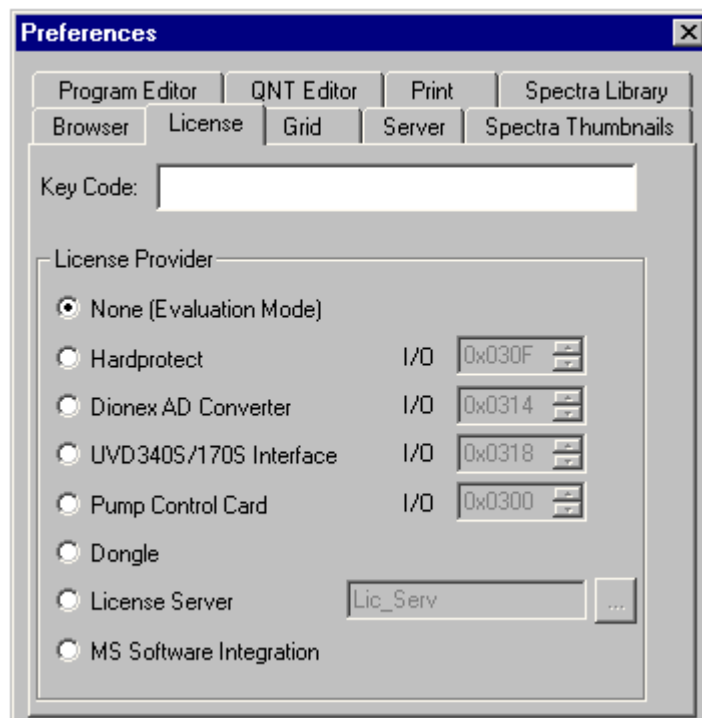
Click **OK** to close both dialogs. This action reconfigures the local Chromeleon client. In future, the license will refer to the selected Chromeleon License Server if the connection can be established via the settings made.

5. On the **File** menu, select **Save Installation** to save the installation.

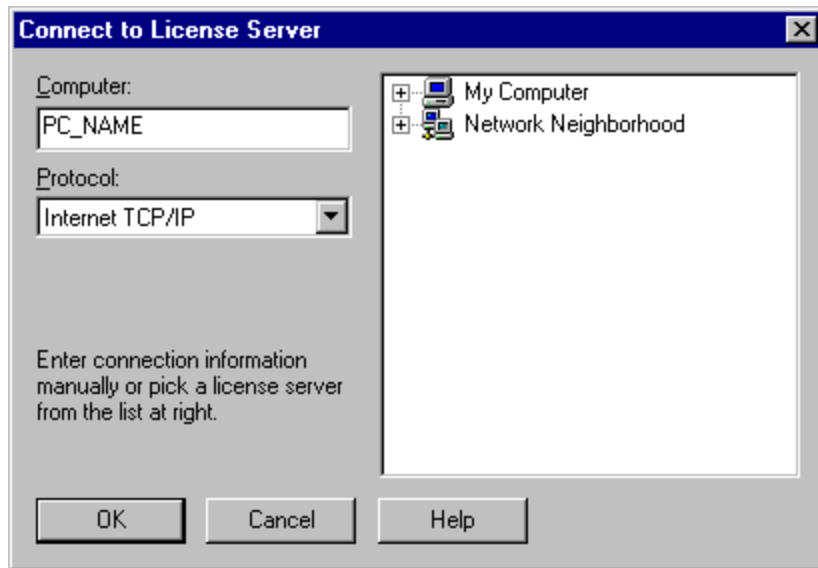
### 3.3 Configuring a PC with a Pure Chromeleon Client

Establish the license reference for a PC on which **no** Chromeleon server is installed directly in the Chromeleon client.


1. Start Chromeleon and open the following dialog by selecting the **Preferences** command on the **File** menu.



2. On the **License** tab page, select **License Server**; the **Key Code** field is now disabled, as it is no longer required. Click the '...' button (**Browse**) to the right of the **License Server** option to open the next dialog. Select the computer on which the License Server runs:



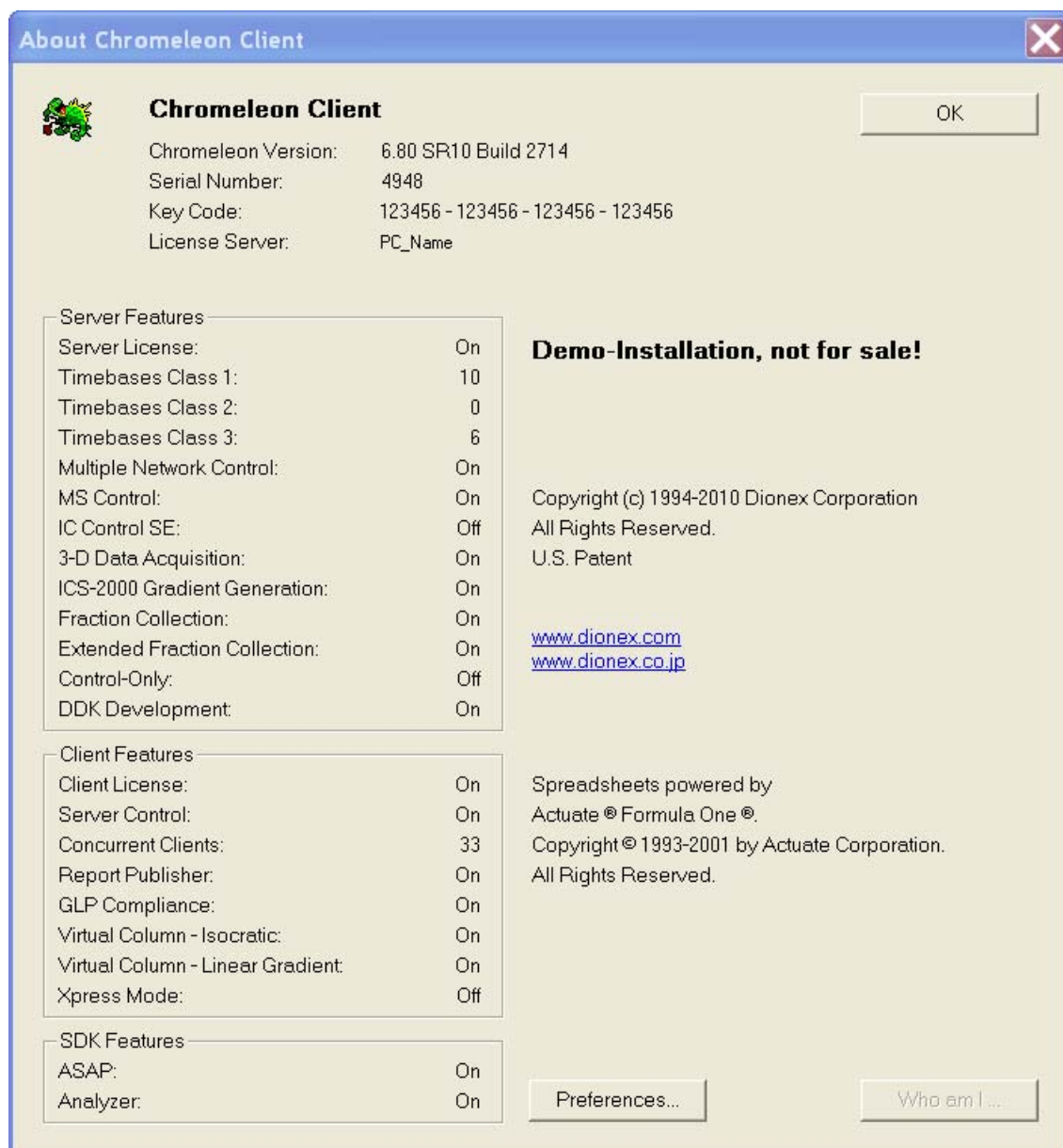
3. Enter the name of the Chromeleon server PC or select one from the network list in the right window section. In addition, select a network protocol from the protocol list by means of which the local PC can connect to the License Server PC.

 **Tip:** If "Server not found" is displayed in the list on the right, a firewall may be active on the PC and CmLicSrv.exe is not included in the exceptions list (see page 3).

Click OK to close both dialogs. This action reconfigures the local Chromeleon client. In future, the license will refer to the selected Chromeleon License Server if the connection can be established via the settings made.

### 3.4 Checking the License Information

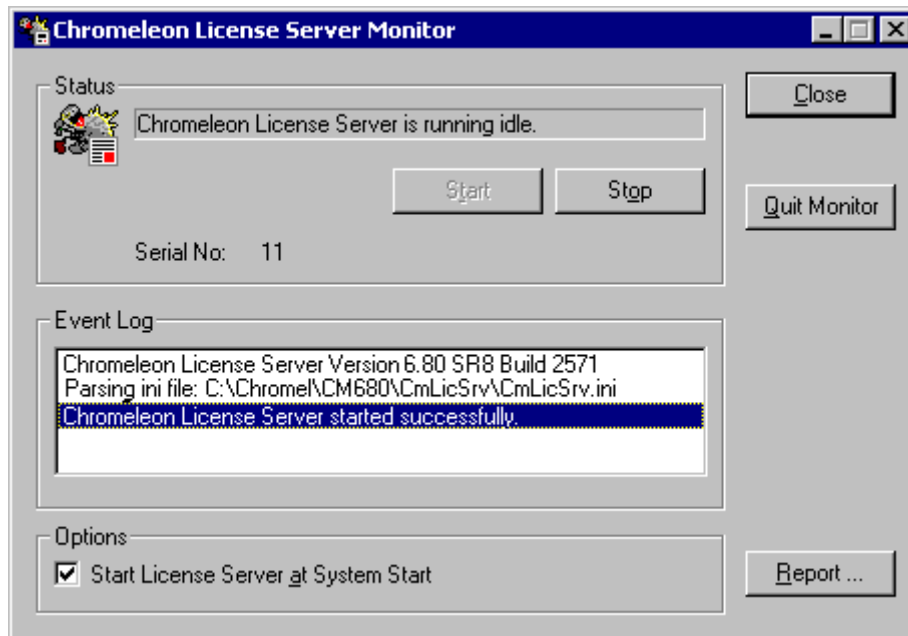
To check whether the connection to the License Server was established successfully and which licenses are available, open **Help > About Chromeleon** (the example refers to a Chromeleon server license):



### 3.5 License Server Report

The Chromeleon License Server Monitor allows you to output a report describing the status of the Chromeleon License Server.

1. Double-click the License Server Monitor icon on the taskbar. The Server Monitor program is opened:



2. To open the report window, click **Report...** while the Chromeleon License Server is active.

You can then copy the report to the Windows clipboard, print it on the standard printer, or save it in a **CmLicSrv.txt** file. The report looks as follows:

```
License Server Connection Report
Server SERVERNAME - Mon Feb 29 00:00:00:
  Serial number 4711, key code 112233-445566

Server licenses:
Server      Serial No  Key Code           active since
ALPHA      1          111111-111111     Fri Feb 26 11:22:33
BRAVO      2          222222-222222     --- not active ---
CHARLIE    3          333333-333333     --- not active ---
DELTA      4          444444-444444     --- not active ---
ECHO       5          555555-555555     --- not active ---
FOXTROTT  6          666666-666666     Thu Feb 25 01:02:03

Connected Clients:
Client PC   UserID      active since
GOLF       Ruth        Son Feb 28 04:05:06
```

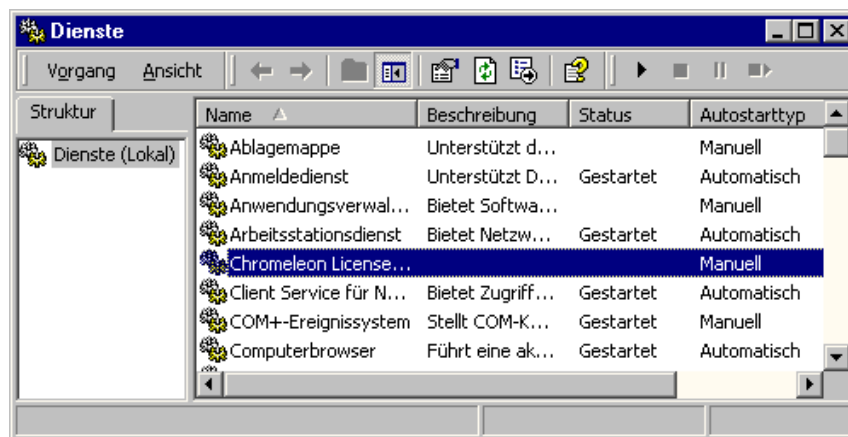
### 3.6 Troubleshooting

- **The Chromeleon License Server does not start**

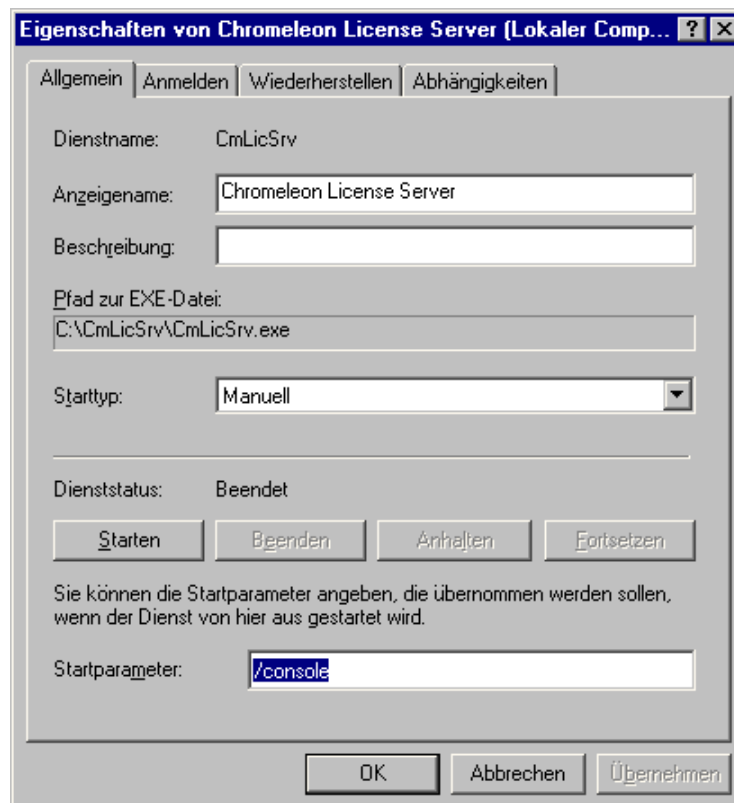
First, check the Event Viewer for your system. The path is: **Start > Settings > Control Panel > Administrative Tools > Event Viewer > Application Log.**

CmLicSrv logs the server start and indicates possible errors. If the information displayed in the Event Viewer is not sufficient, you can enable extended output.

Start the CmLicSrv program via the control panel and not via the License Server Monitor program.



Select **Properties** on the context menu. The **General** tab page is opened.



Enter **/console** in the **Start parameters** field and then click **Start** to start the **Chromeleon License Server** service.

All detected entries of the CmLicSrv.ini license file, possible errors, and all connection attempts of the Chromeleon servers and Chromeleon clients are logged.



- **The Chromeleon License Server has no licenses ("No Licenses Available")**

1. Check whether the hardware protection module (dongle or hard-protect) has been installed correctly. The serial numbers of the module and in the [License Server] section of CmLicSrv.ini must be identical.
2. Check whether the **Pal Location** entry in the [License Server] section of **CmLicSrv.ini** has been modified. "5" is the correct entry for dongles, while "1" corresponds to hard-protects.

- **The Chromeleon Server starts but receives no license ("Evaluation Mode")**

1. In the Chromeleon **Server Configuration** program, verify that the computer name for the License Server is correct.
2. Check whether the correct RPC protocol is used.
3. Also, check whether the PC on which the License Server is installed can be accessed via the network; for example, for a TCP/IP network, use **ping servername** or open a network share in the Windows Explorer.
4. Check whether a line for the Chromeleon server is provided in the **CmLicSrv.ini** file. Verify that the computer name is spelled correctly in the [Servers] section. The computer name must comply with the NetBIOS computer name (max. 15 characters). The NetBIOS computer name can be found using **Start->Control Panel->System->Computer Name**; on the **Computer name** tab locate and click on **Change**.
5. If a firewall is active on the PC, verify that the CmLicSrv.exe file is included in the exceptions list (see page 3).

- **The Chromeleon Server starts, but, the device drivers report that a device control feature is missing when loading**

The starting sequence for the two server services, the Chromeleon Driver and Chromeleon Server, is wrong. Uninstall the services via the Server Monitor program: **C:\Chromel\Bin>cmReg /deinstall**. Restart the computer and reinstall the services via the Chromeleon Server Monitor program: **C:\Chromel\Bin>cmReg /install**.

- **The Chromeleon Client receives no license ("Evaluation Mode")**

1. Verify in the Chromeleon client that the computer name for the License Server is correct.
2. Check whether the correct RPC protocol is used.
3. Also, check whether the PC on which the License Server is installed can be accessed via the network; for example, for a TCP/IP network, use **ping servername** or open a network share in the Windows Explorer.
4. Check in the Chromeleon License Server Monitor report to see whether the maximum number of licenses for clients has been reached. Restart the License Server, if necessary.
5. If a firewall is active on the PC, verify that the CmLicSrv.exe file is included in the exceptions list (see page 3).

- **Network Failure**

Under normal circumstances, network failure does not cause damage. Both, the Chromeleon server and the Chromeleon client save the license information locally for up to 7 days. The user can usually continue working during this period even if the License Server cannot be accessed. After this period, the Chromeleon server will shut down and the client will run in evaluation mode.

If the connection to the Chromeleon License Server is disrupted during active operation or if the connection is not available when the system is started, these events logged in the daily audit trail. In this case, a dialog box appears on the client indicating the remaining time. In addition, the audit trails logs when the connection to the Chromeleon License Server is available again. The two audit trail messages look as follows:

Warning: Chromeleon server failed to retrieve a license from the License Server CCHROMEL!  
Your local license will expire in 167 hours.

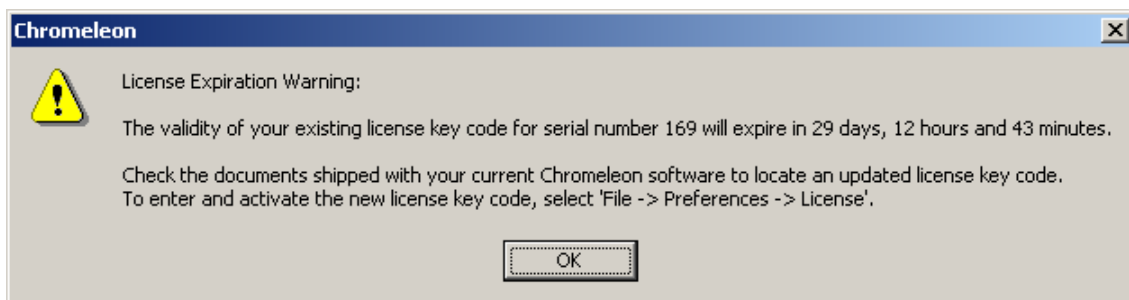
Chromeleon server succeeded to retrieve a license from the License Server CCHROMEL! Your local license has been updated.

- **Could not create "Chromeleon Operators" group - No mapping between account names and security IDs was done**

During the installation of the License Server on a Windows a 2000/XP Backup Domain Controller, the following error message may appear when calling in CmLicReg.exe /install: **Could not create "Chromeleon Operators" group - No mapping between account names and security IDs was done (8b2)**. Remedial action: Create the group via the Windows 2000/XP User Manager before you run **CmLicReg.exe /install**.

- **When you start the License Server, a "License Expiration Warning" appears.**

When you start the License Server, the following warning appears:



This message is displayed during the transition period. It is a reminder that you are still using an old key code ( $\leq$  Chromeleon 6.40) or an old CmLicSrv.ini file.