ADAPTIVE RECOGNITION

OPTICAL CHARACTER RECOGNITION (LICENSE PLATES, INDUSTRIAL CODES, ID DOCUMENTS)

User Manual

License Server

How to enable to share your Adaptive Recognition
licenses over the network

LICENSE SERVER
USER MANUAL

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INTRODUCTION

From CARMEN® ANPR version 7.3.1.24 and CARMEN® OCR version 7.3.1.15, License Server is part of the installer package. This application allows users to share any Adaptive Recognition license over their network.

The server computer, which has the hardware key(s) (HW Key or NNC) with the licenses plugged in, runs the Server Application.

Client computer(s) may join this server by using the Client Application that, upon a successful configuration, will make it possible to do ANPR/OCR processes without any HW Key attached to the client computer(s).

> **🗋 Note**
>
> This solution is provided free for up to one client.
>
> If you would like to connect more than one client to the server, please contact your Sales Manager to check the possibilities.

> **❗Important**
>
> Please note that the above-mentioned applications are console/terminal applications. As such, run them in **Command Prompt** (or any other console application) on Windows or in **Terminal** (or any other console application) on Linux.

SERVER APPLICATION

This application can be found here:

- On Windows: "**C:\Program Files\Adaptive Recognition\Common Utils\LicenseServer\Server**
- On Linux: "**/opt/gx64/LicenseServer/**"

The Server application allows the sharing of your licenses over the network. On Windows, there is a **LicenseServer.cfg** file in the same folder where the application is installed. This file is in the following folder on Linux-based computers: **/etc/gxd/licserver**. This file stores the configuration settings, which the user can modify manually.

This file contains the following properties:

Property and its default value	Description
SRVPORT=8998	This is the server port. The Client will connect through this to the Server. Modification of the property is permitted. Please make sure that the set port is allowed on your firewall.
CHECKPORT=48315	This is for an internal service port. Please **DO NOT MODIFY.**
LOGPATH=.\logs\	The folder where the Server application stores the logs. If it is empty, the log files will be saved into the same folder where the application is installed.
IDLETIMEOUT=600	Indicates the idle timeout in milliseconds. The Client Application sends "keepalive" messages every 40 seconds to make the connection stable. If there is no "keepalive" message, then the Server application breaks the connection to prevent a client from being stuck.
NNCTIMEOUT_MS=2000	This value defines, in milliseconds, when one NNC lock request has to be finished. If the CPU load is high and the number of available licenses is low, it may result in a timeout error, indicated by the "HW Key lock error" message and the loss of the ANPR/AICR/MMR process.
LOCKTIMEOUT=3000	Sets, in milliseconds, the maximum time one license can be locked.
NPROC=6	The number of threads not handling license lock calls.
NPROCLOCK=6	The number of threads handling license lock calls.
SAVEDATA=1	If it is set to "1," then every invalid request's binary data will be saved. Any other value than "1" will not save invalid requests' binary data.

If you properly set all the above properties in this file, please open a Console/Terminal window in the Server application's folder and just start the application.

SERVER APPLICATION AS CONSOLE APPLICATION

ON WINDOWS

Just go to this folder: "**C:\Program Files\Adaptive Recognition\Common Utils\LicenseServer\Server** and run this file: **LicenseServer_x64.exe** in command prompt.

ON LINUX

There is 3 possibilities to start the Server Application on Linux from the Console:
1. Go to this folder: "**/opt/gx64/LicenseServer/**" and this this command: **"./LicenseServer_x86_64"**

> 🗋 **Note**
>
> Please make sure that kernel drivers are running if you are using this option

2. Go to this folder: "**/opt/gx64/LicenseServer/**" and this this command: **"./LicenseServer_start.sh"**

> 🗋 **Note**
>
> If you start the Server application like this, the script will check if the kernel drivers are compiled for the current kernel and running, and if not, it will try to compile and start them to make sure that Server application will be able to run.

3. Hit the following command from any folder: **"LicenseServer"**

> 🗋 **Note**
>
> This will do the same as point #2, but from any folder.

Once the Server application is running, it will write to the console something like this:

```
Checking time functions
t0: 248725978581 -> t1: 248726984480, dt: 1005899
t2: 248725978582 -> t3: 248726984480, dt: 1005898
t4: 1649309382940272 -> t5: 1649309383955655, dt: 1015383
```

Log files:
```
Log files will be saved to .\logs\ directory
[LSLOG] Current logfile: .\logs\/licsrv.20220407_072943_956.log (20220407_072943_956)
[LSLOG]   Clean   logs   in   c:\Program   Files\Adaptive   Recognition\Common
Utils\LicenseServer\Server\logs (licsrv.*.log)
[LSLOG] Current logfile: .\logs\/lscons.20220407_072943_956.log (20220407_072943_956)
[LSLOG]   Clean   logs   in   c:\Program   Files\Adaptive   Recognition\Common
Utils\LicenseServer\Server\logs (lscons.*.log)
[licsrv] Logging started
2022.04.07 7:29:43,956395 [11176] Main started
[lscons] Logging started
```

Searching for licenses:

```
2022.04.07 7:29:43,956507 Finding licenses type: 99900099, min. expiry date: 20220407 ...
2022.04.07 7:29:43,956761 Found license type: 99900099, licID: 111111, expiry date:
20230331
2022.04.07 7:29:43,956840 Query access to share licenses -> Locking(CARMEN Server license)
2022.04.07 7:29:43,958076 Finding licenses to share...
2022.04.07 7:29:43,958163 Found 1 devices
2022.04.07 7:29:43,958238 [01111111] XX licenses
2022.04.07 7:29:43,987310 nk: 21, nkf: 0
2022.04.07 7:29:43,987440 Found 21 license(s) to share.
2022.04.07 7:29:43,987647 Num. of license types shared: 4
        1affffff -> 4
        99902000 -> 1
        30ffffff -> 1
        16ffffff -> 4
```

Starting the License Server:

```
2022.04.07 7:29:43,988242 Starting License Server (v7.3.1.27 - License Server (rev:
d5944ac)) ...
2022.04.07 7:29:43,988353 Server running mode: Standalone
2022.04.07 7:29:43,988485 Server port: 8998
2022.04.07 7:29:43,988796 Health check port: 48315
2022.04.07 7:29:43,989069 Server status port: 8980
2022.04.07 7:29:43,989284 Max. clients: 20
2022.04.07 7:29:43,989442 idle time out: 600 sec
2022.04.07 7:29:43,989526 Lock time out: 3000 msec
2022.04.07 7:29:43,989681 Set NNC time out -> 2000 msec
2022.04.07 7:29:43,989875 NNC time out: 2 sec
2022.04.07 7:29:43,991339 Num of process / lock threads: 6 / 6
[LSLOG] Current logfile: .\logs\/portcheck.20220407_072943_987.log (20220407_072943_987)
2022.04.07 7:29:43,992648 Wait for end of initialization
[LSLOG] Clean logs in c:\Program Files\Adaptive Recognition\Common
Utils\LicenseServer\Server\logs (portcheck.*.log)
2022.04.07 7:29:43,993429 Threads initialization is SUCCESS. Init time: 0 msec
[portcheck] Logging started
```

Details about possible connections:

```
2022.04.07 7:29:43,994417 Server has created. IP: 0.0.0.0:8998 Max. client num.: 20
        192.168.6.175
        192.168.74.1
        192.168.109.1
Waiting for a connection (ESC to exit)...
2022.04.07 7:29:43,994799 [LICSRV]: Wait for event: -1
```

> 📝 Note
>
> If you would like to exit from the Server application, please press 'Esc' key on your keyboard.

SERVER APPLICATION AS A SERVICE

There is a possibility to use License Server as a service on Windows and Linux.

ON WINDOWS

Create and start the service with the following command: LicenseServer_x64.exe -inst

Once the service is created and started, it will be visible in Task Manager on the Services tab as 'licserver.' If you open Services from this tab, you will be able to stop and start the License Server service from here as well.

If you would like to stop and remove the License Server service, hit the following command: LicenseServer_x64.exe -uninst

If you hit the above command, the License Server service will no longer be visible in Windows Services.

ON LINUX

It is possible to use License Server as a service on Linux if 'systemd' is available on the system.

- Enable: systemctl enable licserverd.service
- Start: systemctl start licserverd.service
- Get the current status about the service: systemctl status licserverd.service
- Stop: systemctl stop licserverd.service
- Disable: systemctl disable licserverd.service

> **!Important**
>
> CARMEN® has to be installed on the computer where the Server application is running.

SERVER APPLICATION FOR MORE THAN ONE CLIENT

This solution is available for free for one client only. To use it for more clients, a License Server license is necessary. This license allows the application to share any Adaptive Recognition licenses for more clients simultaneously.

If your **License Server license expires**, the application will **STOP working.** After you restart, only one client will be able to connect to the Server application.

If you run the License Server application as a service, license expiration will do the following:

- **On Windows**: the service is stopped. If you restart it, it will share the licenses for one client only.
- **On Linux**: the service restarts automatically as a service for one client only.

> **Note**
>
> If you would like to connect more than one client to the server, please contact your Sales Manager to check the possibilities.

CLIENT APPLICATION

Once the Server application is running—either as a Console application or as a service—the Client application's configuration has to be done as follows.

This application can be found in the following folder:

- On Windows: "C:\Program Files\Adaptive Recognition\Common Utils\LicenseServer\Client\
- On Linux: "/opt/gx64/LicenseServer/Client/"

- Set the Server address where the licenses should search for:
  - o Only IP address:
    Windows: ConfigLSClient_x64.exe SET 192.168.0.1
    Linux: ./ConfigLSClient_x86_64.out SET 192.168.0.1
  - o IP address with port (in cases when, for example, the Server application port was changed from the default 8998 to 7683)
    Windows: ConfigLSClient_x64.exe SET 192.168.0.1:7683
    Linux: ./ConfigLSClient_x86_64.out SET 192.168.0.1:7683

- Enable License Server on the client computer:
  Windows: ConfigLSClient_x64.exe ENABLE
  Linux: ./ConfigLSClient_x86_64.out ENABLE

> 🗋 Note
>
> If License Server is enabled, licenses will always be searched for over the network, even if a HW Key with licenses is plugged into the client computer.

- Get the status of the License Server on the client computer:
  Windows: ConfigLSClient_x64.exe STATUS
  Linux: ./ConfigLSClient_x86_64.out STATUS

- Set the client timeout from the default 10000 to, for example, 20000:
  Windows: ConfigLSClient_x64.exe TIMEOUT 20000
  Linux: ./ConfigLSClient_x86_64.out TIMEOUT 20000

- Disable License Server on the client computer:
  Windows: ConfigLSClient_x64.exe DISABLE
  Linux: ./ConfigLSClient_x86_64.out DISABLE

> ❗Important
>
> CARMEN® has to be installed on the computer where the Client application is configured.

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