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TOKEN SERVER V2.1 FOR QDV®

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REQUIRED SOFTWARE

The token server for QDV® is written using Visual Studio 2008 and uses .NET technology.

It can be installed on a server running one of the following OS:

- Windows 2000 Server
- Windows 2003 Server
- Windows 2008 Server

The .NET Framework 2.0, IIS and ASP .NET 2.0 are required.

The directory being on the web site where the server is installed must be accessible by all clients (users of QDV®) with, at least, the following rights :

- Browse
- Read
- Write
- Create
- Delete

If the FAIL-OVER mode is used, the second server should have full access to this directory.

COMPONENTS OF THE SERVER

The token server for QDV® is built around 4 major components:

- A page ASPX named **server.aspx** which provides the interface with users computers
- A page ASPX named **admin.aspx** which enables monitoring of connected users and borrowed tokens
- A program EXE named **QDSettings.exe** used to set up server parameters and to enter the code which contains the server rights
- A Windows service named **QDWebServ.exe** which manages the exchanges between the other components and warrants the integrity of the transactions.

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INSTALLING THE SERVER

Installing all components

To install all components of the token server for QDV®, just launch the file **QDWebLicServer.exe** which can be downloaded at www.quick-devis.net

Caution: To install the token server, it is highly recommended that you have administrator rights first. If you have any doubt, use the "Run as administrator" function when you launch it, accessible with a right click on the program name. As shown here:

Name	Date modified	Type
QDWebLicServer.exe	6/25/2010 12:59 PM	Application
Open	6/25/2010 12:40 PM	Application
Run as administrator	6/24/2010 4:34 PM	Application
Troubleshoot compatibility	6/7/2010 4:19 PM	Application

After installation, your start menu should contain:

Web Token Server for QDV
- Server settings
- Uninstall server
- User's manual

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Search programs and files
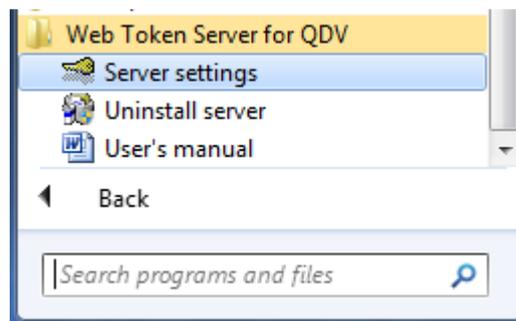
First of all, you must initialise the token server by setting the followings:

The query frequency
The directory of the web site
The code containing your rights

In order to do this, click on **Server settings** in the **Start / Web Token Server for QDV** menu.

Caution: If you're not full administrator of the server, you may get as message like:

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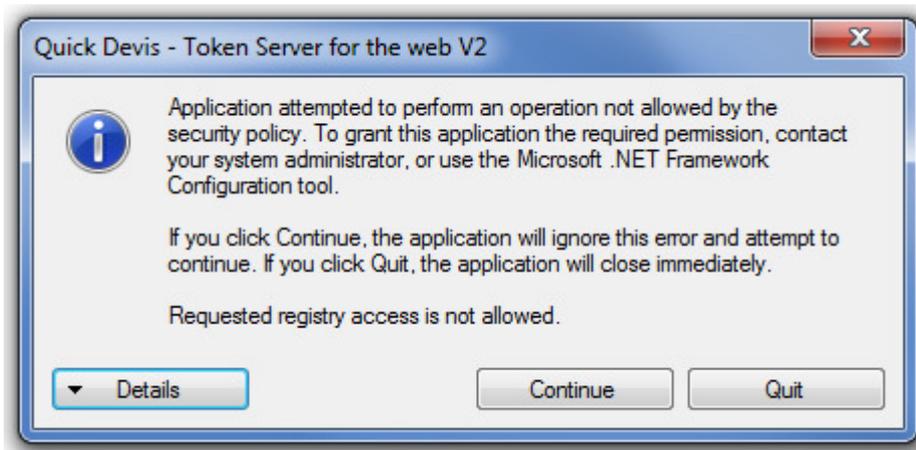
This means that you don't have requested rights to access the registry database of your server. Log as true administrator or launch the program as an administrator doing a right click on the program name:
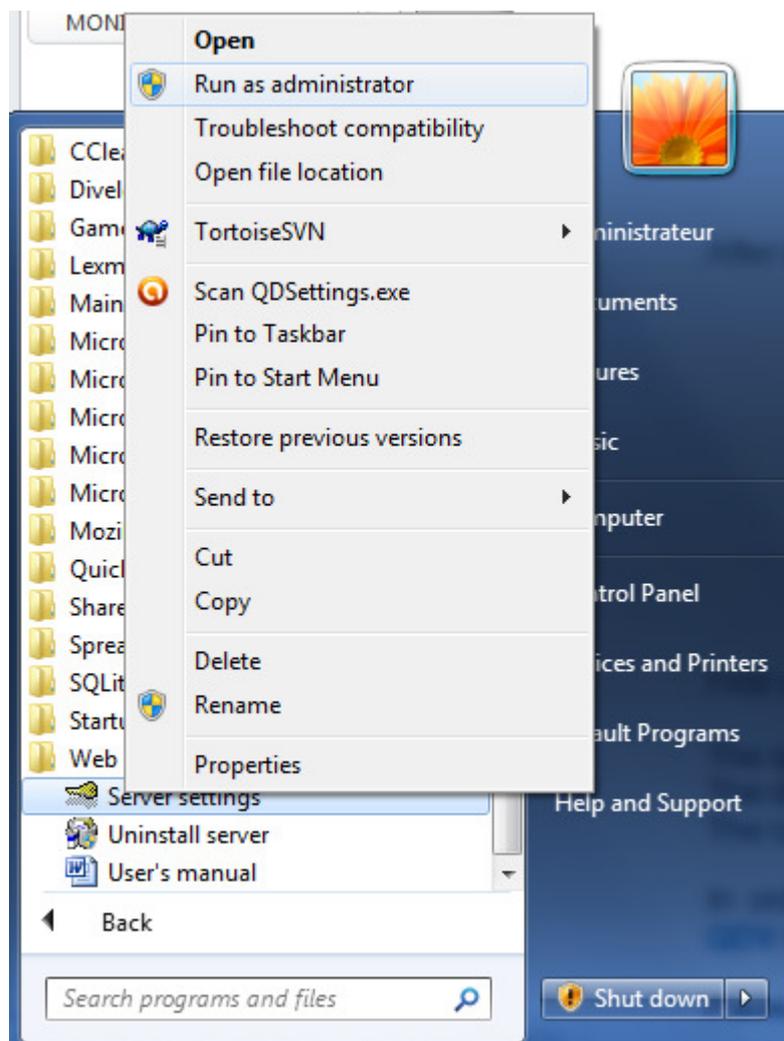
You should obtain the following Window:

Setting server directory

You must set the server directory which is a directory under **IIs**. This is the directory containing the URL visible by the users. The token server will locate ASPX pages in this directory.

Caution: This directory should be the root of the server (**\wwwroot** by default).

To set up this directory, click **Set** button being within the **Web Server Directory** frame and select a directory under **IIs**. The directory appears in the white area.

Setting working directory

This field is not mandatory. In a normal process with a single server you don't have to provide it until you intend to locate operating files in a specific folder.

If you don't provide it, the **Web Server Directory** will be also the **Working Directory** and operating files will be hosted there.

The **Working Directory** is the folder containing working files such as files identifying licenses in use.

If you don't want the application to write anything to your web server directories, you can provide a directory outside **Iis** here. Consider in such a case that the users of ASPX pages may not have proper rights to access this directory. For this reason, you may need to provide user name and password.
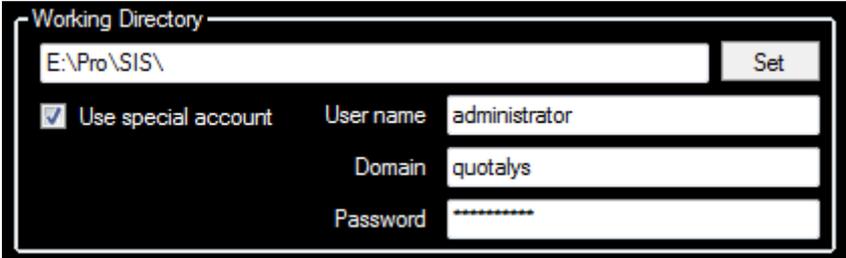
To do that, check the box **Use Special Account** and provide a valid **User Name**, **Domain** and **Password**. Leave **Domain** blank is your computer is not part of a domain. This account should have full rights to the **Working Directory**, to the **Web Server Directory** and to the installation directory (the one hosting the application itself).

Notice: If you do not set any **Working Directory** then **User Name**, **Domain** and **Password** are ignored even if the **Use Special Account** box is checked.

Access frequency

Using the list box named **Query server every**, you can set up the periodicity on which the user computers will attempt to access the server to check their token. Values range from 5 minutes to 15 minutes.

This parameter can be important and you'll adjust it considering the number of token you have and your network traffic. The shorter is this period, the larger is the traffic.

With a web server, clients' computers are not permanently connected to the server and they attempt to access it periodically. When a user launches QDV®, he sends his signature to the server. When he quits the program normally, he sends a new request to the server that frees the token which becomes available for other users.

If QDV® is closed in an abnormal way; the release request will never reach the server which won't free the corresponding token. For this reason, the server checks

periodically that the link to the user is still "alive". If not, it releases the token automatically.

This periodicity for tokens to be released is 4 times the specified period. If you set 15 minutes for example, an application abnormally closed will release its token after a maximum of one hour. If the user tries to launch QDV® after the abnormal termination, he will get automatically the same token without having to wait for the server to release it but other users will have to wait to access this token.

So, basically; if you have a large number of license and want to avoid large traffic, use a higher periodicity. On the opposite, use short periodicity if you want your tokens to be released quickly when applications are abnormally closed.

The rule to calculate the number of connection is: Average number of connected users * frequency (which is the number of periods in one hour). Consider that one access to the server transits almost 700 bytes for each request.

Entering a license code

Ask your dealer to get a license code composed by 28 characters. To obtain such a code, you have to give him your server identifier which is the 12 characters code beginning by the letter F. This code appears in the **Server Id** box.

The server ID is a unique identifier of your computer. It is based on your primary LAN card (MAC address) or on a GUID build from your hardware. The GUID is built only if the MAC address is not accessible or if you explicitly tell the program to do so using the line **IDENTIFIER=** of the **Settings.INI** file being in the installation directory.

Accepted values in this file are:

IDENTIFIER=MAC
IDENTIFIER=GUID
IDENTIFIER=AUTO

The default value is **AUTO**.

Whatever the mode selected, the server identifier is dependent on the hardware meaning that, if you attempt to install the server on another computer, you will have to call your dealer to obtain a new code.

To type the 28 character code given by your dealer, click the **Write new code** button.

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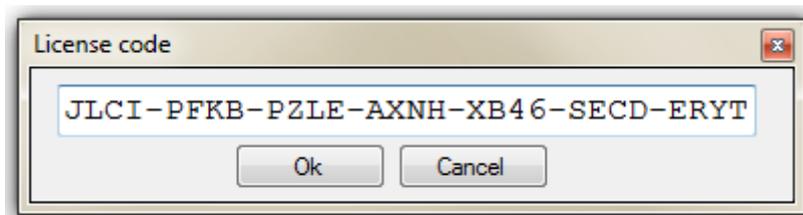
Enter your new code and click **Ok**. If no error message appears, your code is valid and the number of licenses should appear in the **Available tokens** box.

If your code is wrong, a message is displayed. You are allowed to type up to 3 wrong codes after that the server is disabled and you have to call your dealer to unlock it.

Tokens to borrow

You can set a value for the tokens that can be borrowed. Borrowing a token enables running QDV® while disconnected from the server. A borrowed token is no longer accessible by other users. So it can make sense to restrict the number of borrowable tokens. Valid values are:

- 0%

- 25 %
- 50 %
- 75 %
- 100 %

Those values represent a percentage of the total available tokens. 0% means the "borrow tokens" feature won't be accessible.

You can put a limit to the time users can borrow a token. Use the **Max. days to borrow** list box for this purpose. You can set a number of days ranging from 7 to 365.

Your server configuration is now terminated. Click the **Quit** button to close the application. You'll only have to launch this application again if you want to change settings or to enter a new code.

Notice that, if you change the periodicity while users are connected, they might be disconnected after a warning message.

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SETTING UP USERS' COMPUTERS

On every user's computer, you must indicate the server's URL.

Make sure the version of QDV® installed is greater than **6.08.524** to access standard functionalities and greater than **6.12.808** to benefits from the "borrow token" feature.

Manual setting

Launch the **Licenses Manager** module from the **Start / Quick Devis V6** menu. You should get the following window.
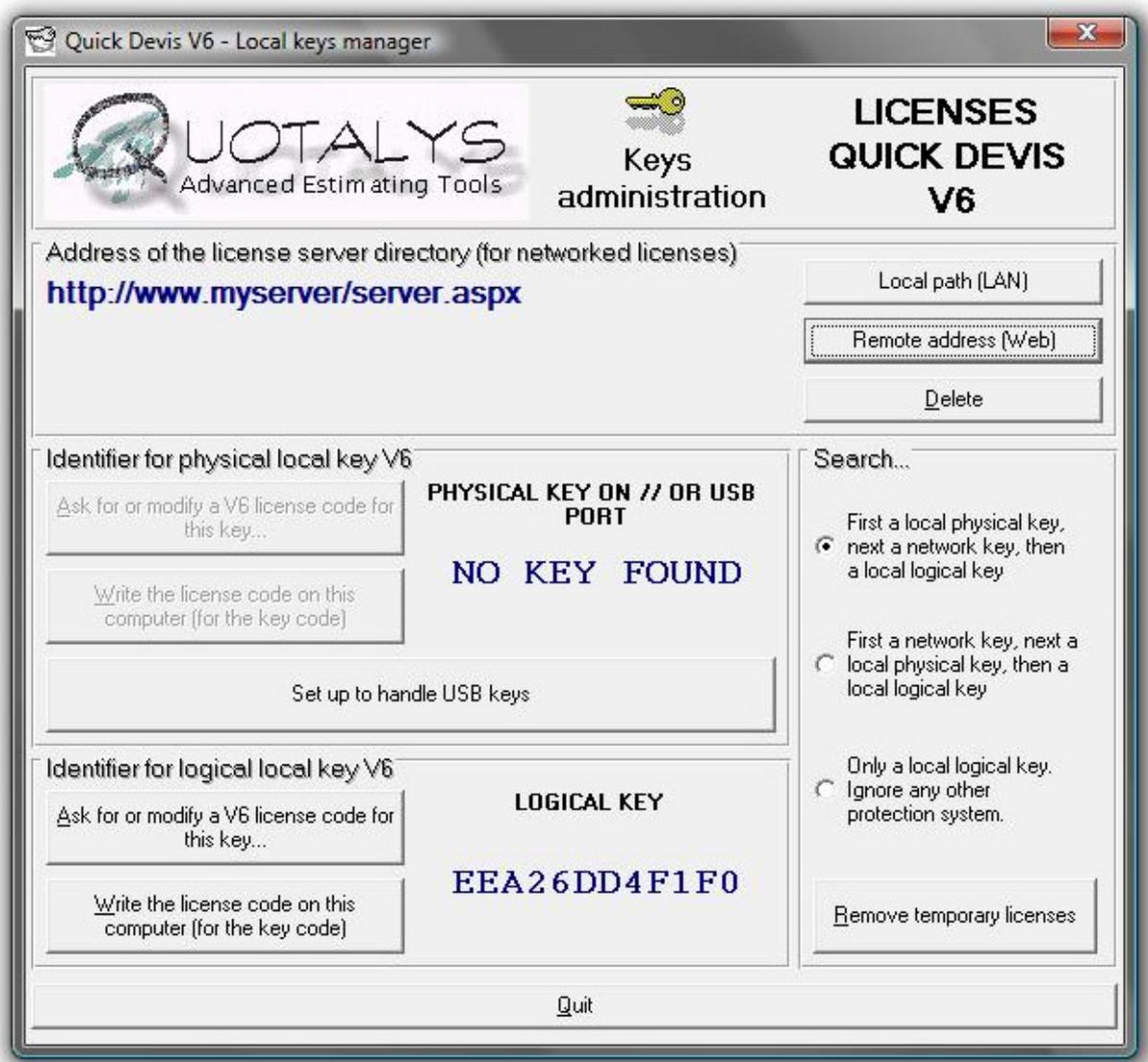
Click **Remote address (Web)** button and type the full web path to your server. Example: http://www.myserver.com/server.aspx
Then, click the **Ok** button.

If the **Remove Temporary Licenses** button is activated, click it to remove those licenses because they are taken into account prior to web licenses.

You can set the way the program will access the licenses using options being in the **Search…** section

You can now quit the application and launch QDV or one of its modules to make sure the server works fine. If not, you will get an error message explaining why the server cannot return a token.

If you need to check your network connection and rights, you can directly enter a test URL in a browser. Below is a test URL:

http://myserver.com/server.aspx?guid=CHECKCHECKCHECKCHECKCHEC&frees=NO&name=check

This URL should return a text that looks like.

CODE:188017712Z2609~TOTALLIC:0002~FREQ:05~REMAINING:0001~INUSE:0001~LIC:FAE8C48CA6C0~CODE28:PCORLMCBP7FCAEFH64KICE4DPC1B~MESSAGE:OK

If the service does not work, go to **Control Panel / Administrative Tools / Services** and look for **QDWebServ**. Edit the service and enter the login / passwords of and administrator. Then, restart the service.
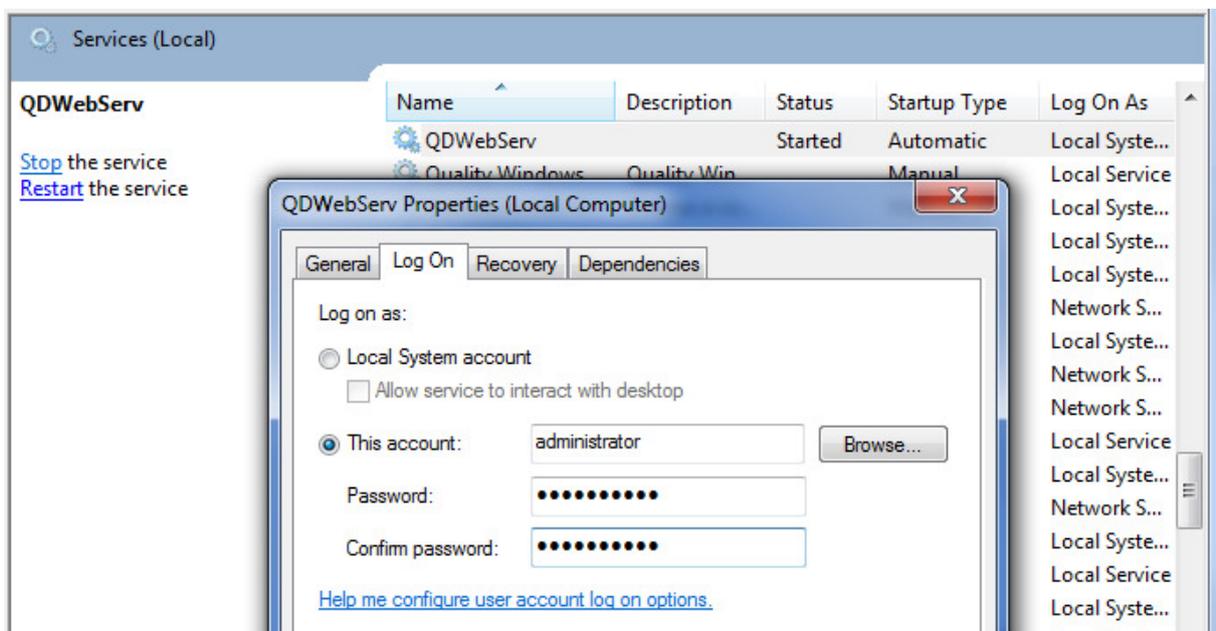
The directory hosting the server under IIs must allow all potential users to Create, Write, Read and Browse. Please check those rights.

Automatic setting

Because it can be difficult to set up a large number of computers to indicate the server address, QDV® enables such a specification using a registry key or a file located in the **\Windows\System32** directory. You can implement this address using

The registry key **HKEY_CURRENT_USER/QuickDevis/** of each user contains the license parameters.
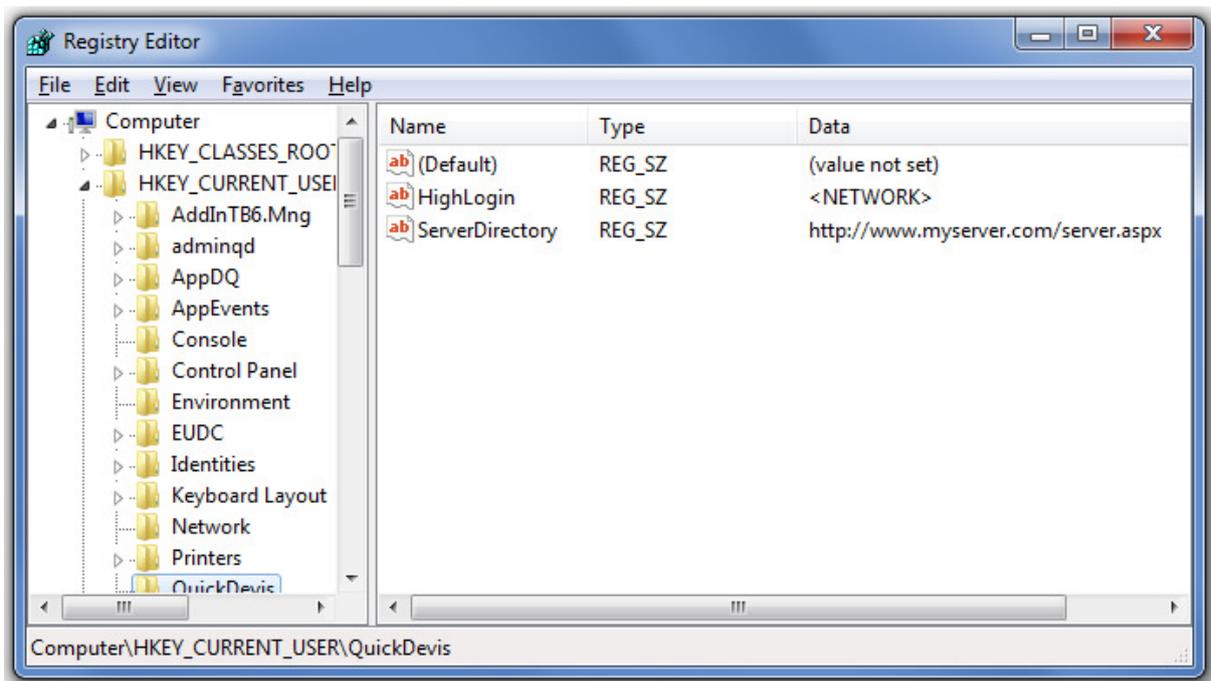
The **ServerDirectory** key lets you specify the address of the remote server.

The **HighLogin** key may contain 3 different values:

- <LOCAL> priority is given to a local token, then a remote token
- <NETWORK> priority is given to a remote token, then a local token
- <LOGICAL> only a logical token is searched. Other tokens are ignored

You can also use a file deployed on users' computers. This file is a text file named **QDServAddress.INI** and located in the directory **\Windows\System32**. Its first row contains the address of the server page.
For example: **http://monserveur/server.aspx**

This file has the highest priority meaning that it overwrites registry keys and the manual settings.

Only the remote address can be stored in this file. The **HighLogin** parameter cannot be stored in the file because the user may have to change it if he wants to use punctually another kind of token.

BORROWING TOKENS

If the version of QDV® is greater than **6.12.808**, the "borrow token" feature is implemented. To enable this function, you must use a value greater than 0% in the "Max. token to borrow" list box of the settings program.

When a user borrows a token for a period of time, the token is automatically restituted after this period of time. After that, it's impossible to launch QDV® on the computer until the user connects to the network again.

The user can decide to restitute his token at any time, before the period expires.

To borrow a token, launch the **Borrow Token** module from the **Start / Quick Devis V6** menu. The following window appears:

To borrow a token, click **Borrow one token**. The application displays the following window:

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Borrowing of tokens is based on whole days and using Universal Time (UTC) because the users may be in different locations around the world and, thus, use different local times.

When borrowing a token, the program displays both UTC and Local Time.

Select the number of whole days and check the **LOCAL TIME** mention to make sure it is in accordance with your needs. Then click **Borrow now**. After a few seconds, the server closes the window, meaning that the token has been borrowed and the application displays the token being on the computer.
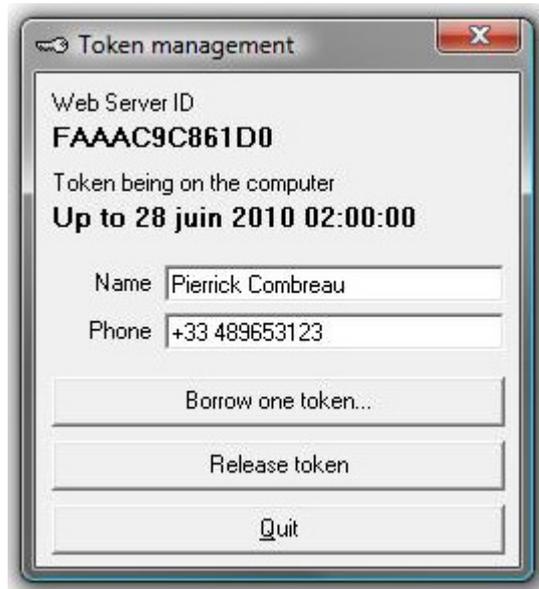
If the token cannot be borrowed, the server will display a clear message indicating the reason.

Once you token has been borrowed, you can disconnect from the server and use QDV®. Even if you are connected, the local token will be taken into account prior to the server ones. This is true in all cases and does not depend from the **HighLogin** key.

RELEASING TOKENS

Tokens are automatically released when they expires. This is done simultaneously by the server and by the local computer. If you are online when your local token expires, QDV® will attempt to log on the server without prompting.

If you want to release your token before it expires, launch the **Borrow Token** module from the **Start** / **Quick Devis V6** menu and click **Release Token**.

INSTALLATION USING TWO SERVERS

Important notice: This section is intended to people having a sufficient knowledge in IT because information about granting rights on services or directories is not developed. Furthermore, the changes needed to the registry database may crash the computer if wrong keys are pasted.

You may want to install the token server for QDV® on two servers running simultaneously using the fail-over mode or being replicated dynamically (Clustering)

Such a solution grants a better availability of the service.

In order to do that, proceed as follows:

1. Install the server normally on the first computer
2. Stop the service **QDWebServ.exe**
3. Edit the **Settings.INI** file being in the application directory (usually **\Program Files\QDLicenseServer**).
4. Change the line **FAILOVERMODE=NO** into **FAILOVERMODE=YES**
5. Save the file
6. Restart the service **QDWebServ.exe**

Restart the **Server Settings** application from the start menu. You're prompted for a code because such installation on two servers requires an authorization for each server.
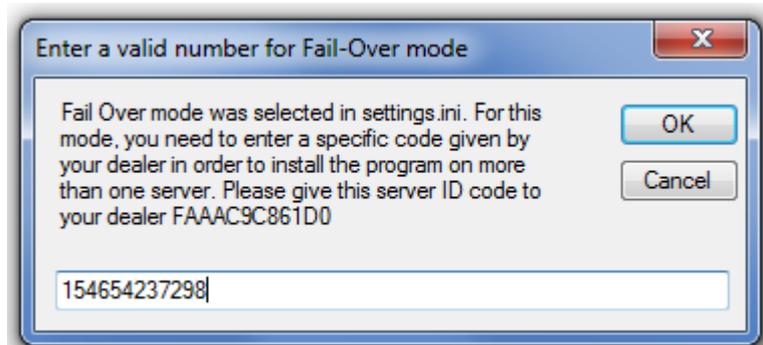
Call your dealer and give him the 12 character code being in the window. He will return a several digits code to be typed. When done, press **Ok** and restart the application. The text **FAILOVER MODE ACTIVATED** should appear.

Important notice: In order to enhance reliability, it is advised that the working directory is hosted on a secured resource different from the two servers. For a maximum security, create a working directory on an external resource and give it specific rights (create a user for this).
This user should have full rights to the **Working Directory**, to the **Web Server Directory** and to the installation directory (the one hosting the application itself).

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Proceed in the same way on the second server:

1. Install the server normally on the second computer
2. Stop the service **QDWebServ.exe**
3. Edit the **Settings.INI** file being in the application directory (usually **\Program Files\QDLicenseServer**).
4. Change the line **FAILOVERMODE=NO** into **FAILOVERMODE=YES**
5. Save the file
6. Save registry keys:

Before you restart the service, you must first, copy the registry keys of the first computer to the second computer.

On order to do so, go to the first server and type **Regedit** in the "Run program" box of the Start menu.
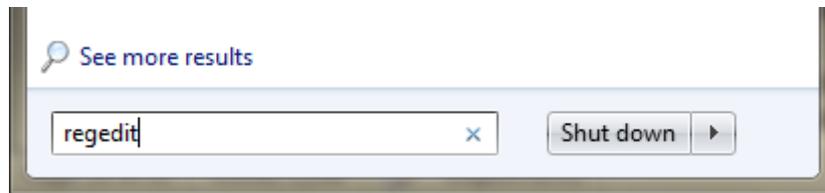
This displays the registry database.
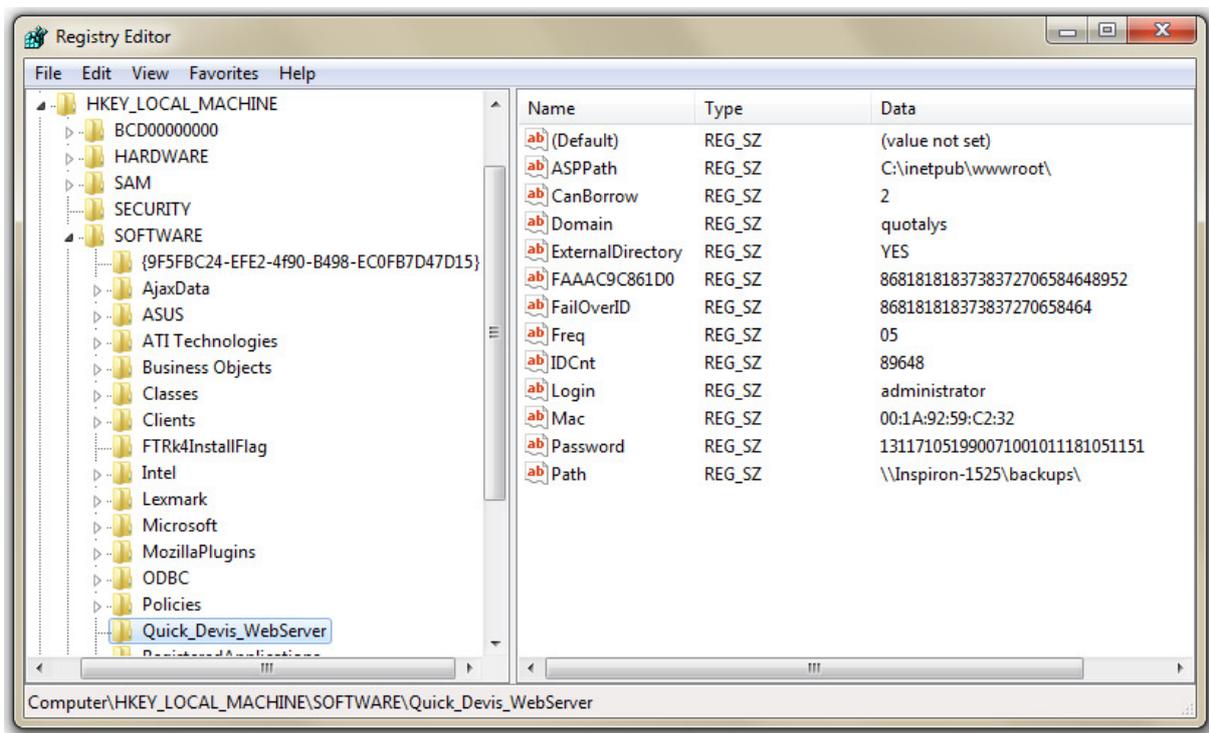
Then go to **HKEY_LOCAL_MACHINE/SOFTWARE/Quick_Devis_WebServer**.
Using **File / Export** menu, save this key to a .reg file. Then close the registry window.

1. Do the same on the second server but use **File / Import** menu instead and select the .reg file you saved from the first server. The second server should now display the same registry sub keys for the key **HKEY_LOCAL_MACHINE/SOFTWARE/Quick_Devis_WebServer**.
2. Restart the service **QDWebServ.exe**
3. Start the **Server Settings** application from the start menu on the second server. Ignore the message:
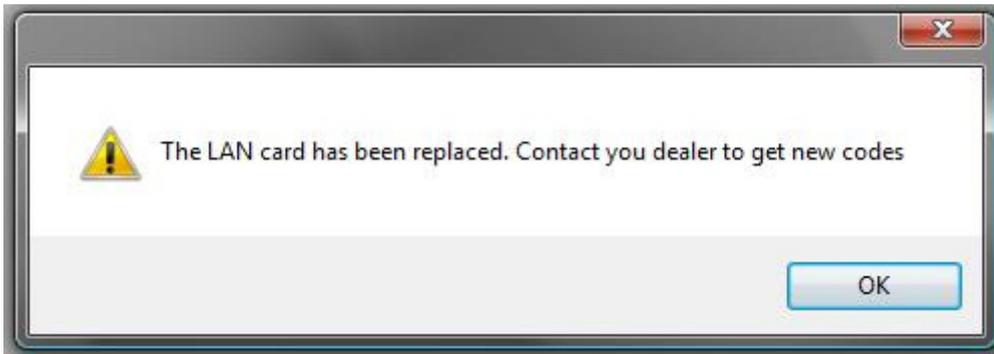
4. You're prompted for a code again that will be delivered by your dealer.
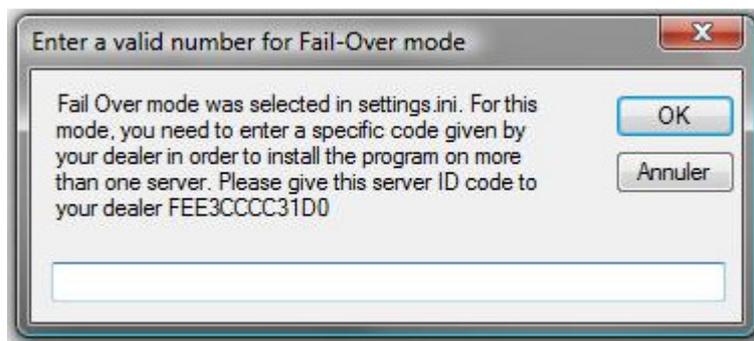
1. You should see exactly the same server ID on both servers. All settings should be identical.

   Select the **Web Server Directory** so that it matches the **IIs** root folder of the second server. If you think you don't have to do that because this folder shown is the desired one, set it again anyway by selecting another directory first, then select correct directory. This process ensures the ASPX files are copied to the selected folder.

2. Enter the code as done with the first server:
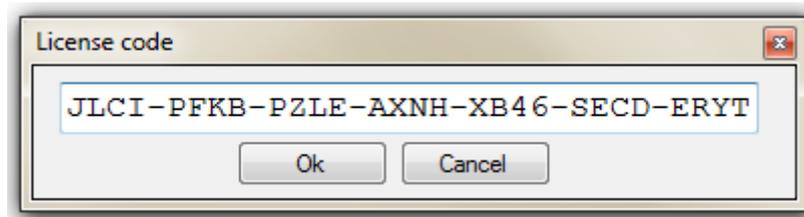
Once both servers are running, the changes you bring to one server on the **Frequency**, **Tokens to borrow**, **Day to borrow** are automatically reported on the other server through the service. The cycle of the service is almost one minute and the changes are taken into account when you quit the **Server Settings** program. So allow at least one minute after you exit the program for the changes to be reflected on the second server.

MONITORING

To see the list of connected users, you just have to reach the **admin.aspx** using a browser and typing an address such as: **http://myserver.com/admin.aspx**

Information about service status, number of available tokens, borrowed tokens… is displayed at the top of the page

TROUBLESHOOTING

If the application seems not to be running properly, you can get information about the service going to the event viewer. The name of the service thread is **PoolingService**.