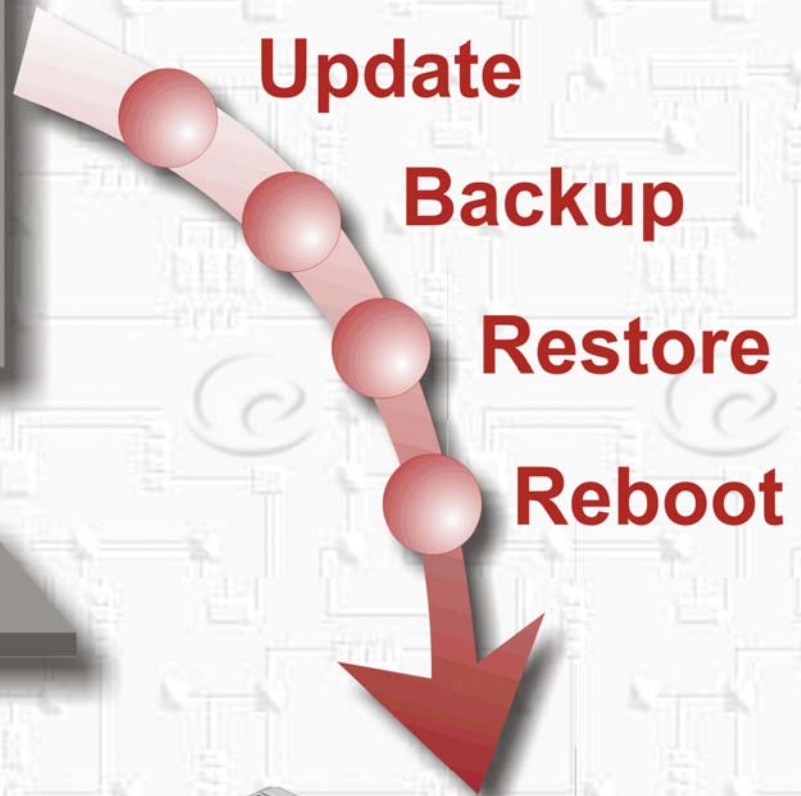




# Quadro Configuration Console



**Manual:**  
**User's Guide**

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## About This User's Guide

This guide gives step-by-step instructions on the setup and operation of the QCC. The guide is divided into the following chapters:

[Introducing the Quadro Configuration Console](#) gives a basic idea of the QCC and lists the operations it can execute.

[Technical Specification](#) gives some technical details on the QCC design.

[Requirements](#) will outline the system and Quadro software requirements.

[Installation](#) explains how to install the QCC.

[QCC' Graphical Interface](#) explains the graphical user interface of the QCC and the operations applicable for each pane.

[Setting up the QCC](#) outlines the steps required to set up the QCC.

[Operations](#) will explain how to execute the basic operations of the QCC.

[Saving the QCC's Configuration](#) lists the settings that can be saved in a qcc file.

[Options](#) will describe the configurable connection settings.

[Technical Terms](#) will explain technical terminology used in this document.

# Introducing the Quadro Configuration Console

The Quadro Configuration Console (QCC) is a tool that allows the administrator to centrally manage a network of Quadros.

## Manage Quadros from a single desktop PC

The following basic functions of the QCC allow easy and convenient management of the Quadro network:

- **Automatic login to Quadro Web management**  
Allows the administrator to automatically log into the web management of Quadros
- **Reboot**  
Allows the administrator to reboot Quadros from the QCC
- **Configuration Backup**  
Allows the configurations of selected Quadros to be backed up and downloaded to the administrator's PC.
- **Configuration Restore**  
Allows a backup configuration file to be uploaded to and restored on Quadros
- **Firmware Update**  
Allows selected firmware to be uploaded to and installed on Quadros
- **Legible Configuration File Upload**  
Allows selected legible configuration files to be sequentially uploaded to Quadros

## View the statuses of all Quadros on the network in a single window

The QCC displays the state of the connection with a Quadro next to an entry associated with the Quadro: *Available* – the QCC is connected to the Quadro and *Unavailable* – the QCC fails to connect to the Quadro. The administrator can easily notice a change in the connection state and take steps to fix the problem if the connection with a Quadro is down.

## Group identical Quadro models together and handle the group as single a unit

The administrator can combine similar Quadro models into a group and handle the group as a single unit. This option provides the possibility of executing an action once over a group, instead of repeating it separately for each Quadro.

## Receive notifications of Quadro status changes and operation results to a single place

The QCC displays the results of the initiated operations and changes in the states of Quadros in a separate pane called the **Log** pane. The notifications are labeled with an icon to display the severity of an event occurred. With this regard, three types of notifications can be received to the QCC: informative, warning and error.

## Technical Specification

The QCC is designed as a Windows SDI (Single Document Interface) application, which can be run on desktop PCs. Only one instance (copy) of the QCC can be run at a time. Trying to start a second copy will restore the instance that is already running.

The QCC uses HTTP/HTTPS protocols to communicate with Quadros and the legible configuration mechanism to change system configuration settings.

## Requirements

### System Requirements

The following system specifications are required for the operation of the QCC:

- Microsoft Windows 2000, or higher.
- Network connection.

### Quadro Software Requirements

The QCC is compatible with the following Quadro devices beginning with the software version listed:

- Quadro2x: SW-3.1.14
- Quadro4x/16x: SW-3.1.23UF
- QuadroE1/T1: SW-3.1.7
- QuadroM-E1/T1: SW-4.1.17
- QuadroFXO: SW-3.1.4
- QuadroISDN: SW-4.1.3
- Quadro6L: SW-3.1.30

**Please note:** The **Upload and restore a backup configuration file** feature is supported for Quadro devices running software 4.1.x.

## Installation

To install the QCC, run the executable file “setup.exe” and follow the instructions of the Setup wizard.

To launch the QCC, run its executable file “QCC.exe” that is by default installed in the C:\Program Files\Epygi Technologies\QCC directory, or double-click on its icon on the desktop, or click on its quick launch icon.

## QCC's Graphical Interface

The working space of the QCC is split into three panes that are separated by division bars (see Figure 1). By dragging these bars, you can define how much of the total space to allocate to each pane.

- The **Files** pane - displays the paths of firmware and legible configuration files to be uploaded.
- The **Quadros** pane – displays the list of Quadros to be managed.
- The **Log** pane – displays the information on operation results, Quadro state changes, etc.

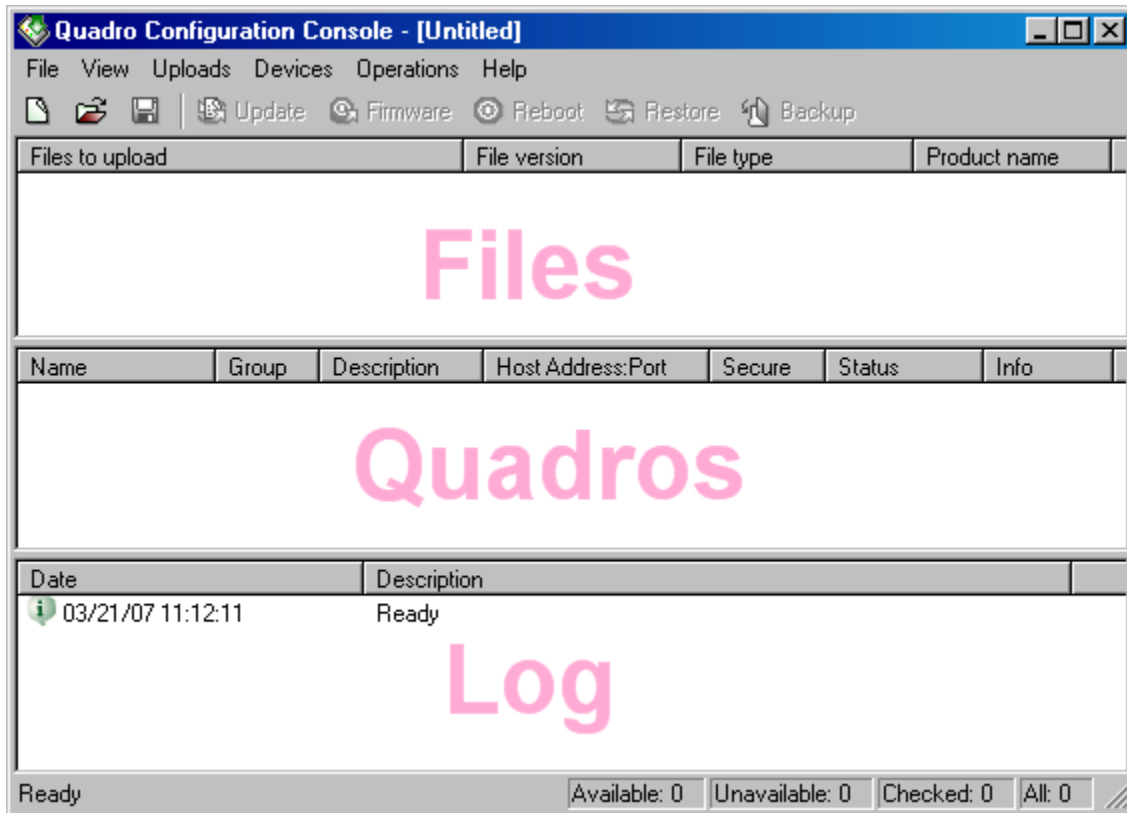


Figure 1 The graphical user interface of the QCC

## The Files Pane

The **Files** pane displays the paths of legible configuration and firmware files specified by the user. The pane allows for the following operations that can be initiated either from the right-click menu within this pane or from the **Uploads** menu. The procedures for executing these operations are detailed below.

- **Add** opens a file chooser to allow a legible configuration file or firmware to be selected. The path of the selected file is then added to the **Files** pane.
- **View/Edit** allows a selected legible configuration file to be opened with a text editor.
- **Remove** removes the path of a selected file from the **Files** pane.
- **Check/Uncheck All** selects all files in the **Files** pane.

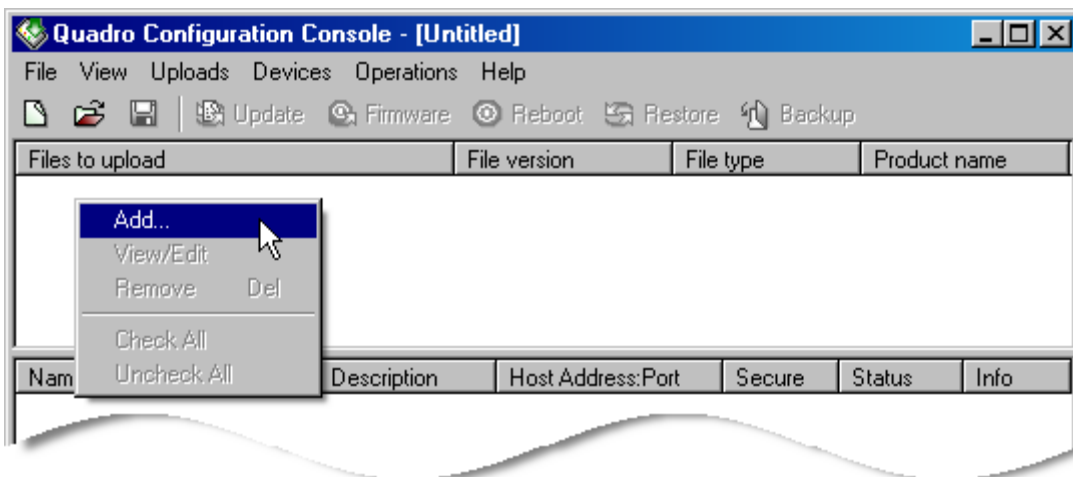


Figure 2 The right-click menu of the Files pane

### Add a File

Right-click anywhere within the **Files** pane and choose **Add** to browse for a required file (see Figure 2).

Select the file and click the **Open** button. The path of the corresponding file will be added to the **Files** pane (see Figure 3).

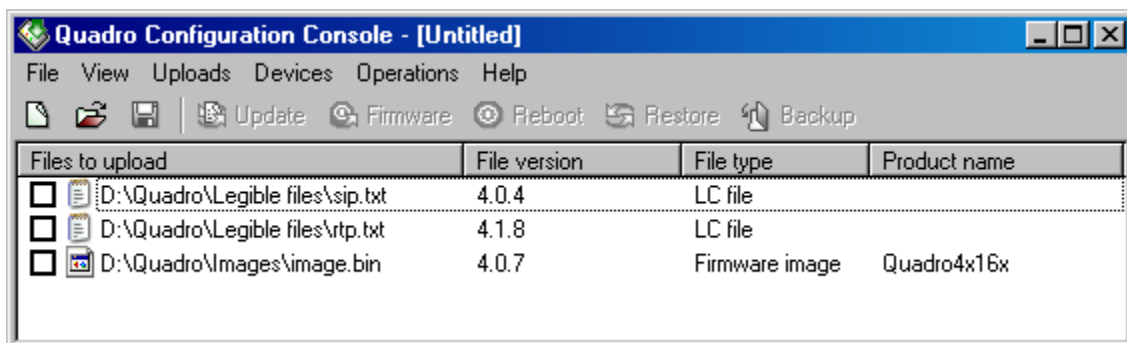


Figure 3 The path of the specified file listed in the Files pane

**Please note:** When adding a legible configuration file or firmware, the QCC checks its validity. For legible configuration files, the validity checking is based on verifying the presence of the configuration version number in the first line of a file. The file must also be an ASCII text file.

For firmware files, the validity checking criterion constitutes the file format that must match the format used for Quadro firmware files. If a selected file does not meet the respective criterion, the QCC will prevent adding the file and display an error message.

Each file in the **Files** pane is displayed with the following information:

- **Files to upload** - indicates the path of an added file,
- **File version** - indicates the software version that the file represents,
- **File type** – indicates whether the path points to a legible configuration (*LCC file*) or firmware file (*Firmware image*),
- **Product name** - indicates the Quadro models for which the firmware file is valid.

## View/Edit a File

**Please note:** Viewing or editing is possible only for legible configuration files.

Double-click on the appropriate entry in the **Files** pane or right-click on the entry and choose **View/Edit**. This opens the file with the system's default text editor (Notepad, Word Pad, etc.).

## Remove a File

Right-click on the appropriate entry in the **Files** pane and choose **Remove** or press the **Del** keyboard button.

Click the **OK** button when asked for confirmation. Note that this does not delete the file from its location, but only removes its path from the **Files** pane.

## Check/Uncheck All

Right-click anywhere in the **Files** pane and choose **Check/Uncheck All** to select all files in the **Files** pane. Selecting all files is useful if a number of legible configuration files are to be sequentially uploaded (see [Legible Configuration File Upload](#)).

## The Quadros Pane

The **Quadros** pane displays the list of Quadros to be managed. The pane allows for the following operations that can be initiated either from the right-click menu within this pane or from the **Quadros** menu. The procedures for executing these operations are detailed below.

- **Add** opens a dialog box where a Quadro can be specified for further management with the QCC.
- **Edit** opens a dialog box to allow the settings of a selected Quadro to be modified.
- **Delete** removes selected Quadros from the **Quadros** pane.
- **Manage** opens a browser and accesses the web management of a selected Quadro with the administrator's privileges.
- **Check/Uncheck Group** select/unselects all Quadros within the same group as a highlighted Quadro.
- **Check/Uncheck All** select/unselects all Quadros in the **Quadros** pane.

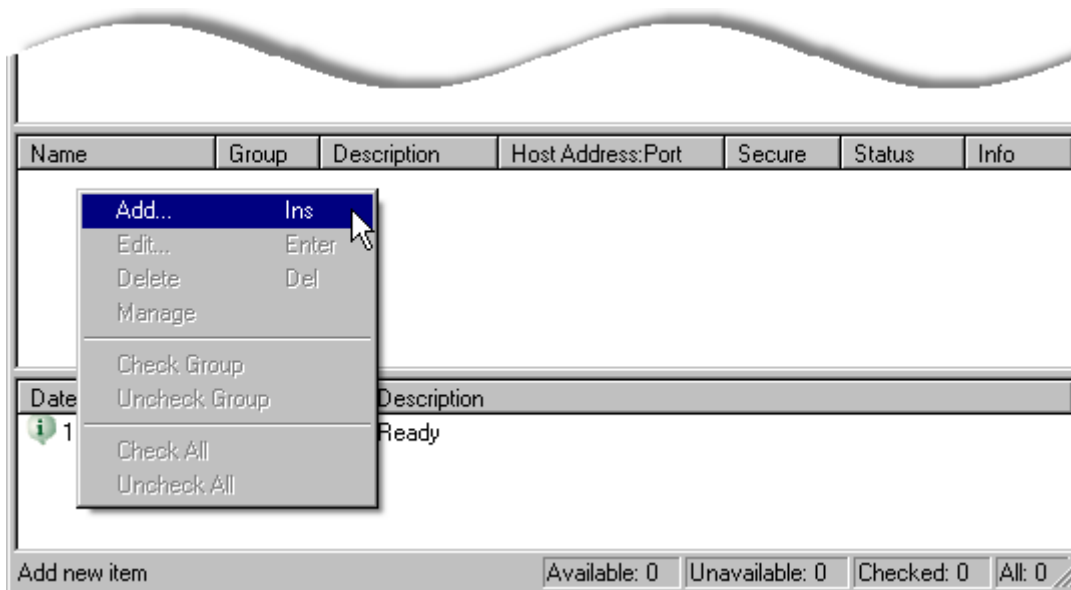


Figure 4 The right-click menu of the Devices pane

## Add a Quadro

Right-click anywhere within the **Quadros** pane and choose **Add** or press the **Ins** keyboard button (see Figure 4). In the **Add** dialog box, specify the following settings

- **Name** – any text to identify the Quadro. For example, a hostname-related name.  
**Please note:** A name must be unique with the existing names.
- **Group** (optional) - The QCC allows forming groups of identical Quadro models and operating with each group as with a single unit. For example, you may group all Quadro16x's on the network into one group named Q16x's. Further, when updating the firmware or configuration of all Quadro16x's, you may execute the operation on the Q16x's group, instead of executing it separately for each Quadro. Note that it will still be possible to refer to a single device in a group.

To add a Quadro to an existing group, select the group name from the **Group** combo box; otherwise, enter a name for the new group in the **Group** text field. Next time you add a Quadro the specified name will be available in the **Group** combo box.

- **Description** - some descriptive information to describe the Quadro.

- **Host Address** - the IP address or FQDN of the Quadro.
- **Port** - the web-server-port of the Quadro. By default, this is set to 80. Changing this default value is not usually required with the exception of the following two cases:
  1. The Quadro's administrator has changed the default web server port of the Quadro (this is done from a hidden cgi page). In this case, the **Port** setting of the QCC should match the custom value for the port set on the Quadro.
  2. The QCC accesses the Quadro over a NAT that has a port translation rule enabled to reach the Quadro's web management. The following description is an example of such a rule: "forward all incoming HTTP traffic addressed to port 8080 to port 80 of a specified Quadro." In this case, the **Port** setting of the QCC should match the forwarded port (8080) on the NAT.
- **Use secure connection** - indicates whether the HTTP or HTTPS (HTTP Secure) should be used to connect to the Quadro. To set up a secure connection with the Quadro, select this checkbox and specify the appropriate port in the **Secure port** text box (by default 443). For an HTTP connection, leave the checkbox clear.
- **Username and Password** - the username and password required for the administrator login to the device (by default, *admin* and *19* respectively).

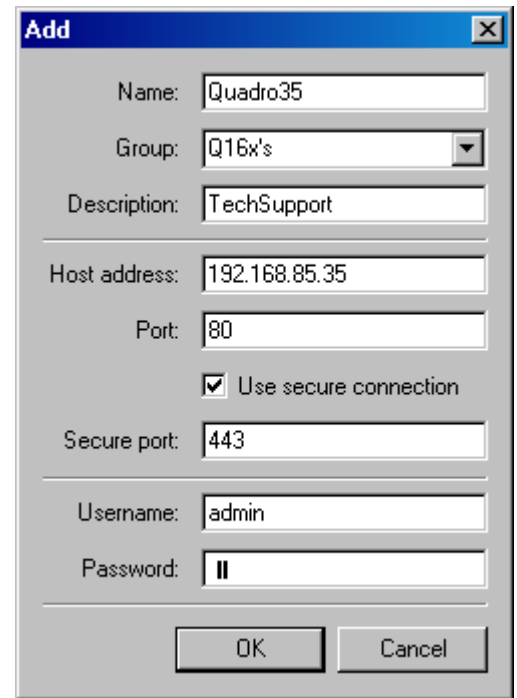


Figure 5 Devices- Add a device dialog box





Name	Group	Description	Host Address:Port	Secure	Status	Info
<input type="checkbox"/>  Quadro35	Q16x's	TechSupport	192.168.85.35:443	Yes	Available	Software version: 3.1.27 - Release

Figure 6 The specified Quadro is listed in the Quadros pane

After all the settings have been specified, click **OK**. The corresponding entry will be added to the **Quadros** pane (see Figure 6). With the exception of the **Username** and **Password**, which are not displayed for the security purposes, each Quadro in the pane is displayed with the settings specified when adding it. The icon next to the Quadro name and the **Status** column display the state of the connection with that Quadro (see the table below). If the connection with the Quadro is successful (the status column shows *Available*), then the **Info** column will display the software version the Quadro is running.

Icon	Status	Comments
	Unknown	The QCC is trying to connect to the Quadro.
	Available	The connection with the Quadro has been established. The Quadro is available for further operations.
	Unavailable	The connection with the Quadro could not be established: the Quadro may be down or behind a NAT. This may also be the result of entering the wrong values for connection or login parameters.

## Edit the Settings of a Quadro

To change the settings of a managed Quadro, double-click on the appropriate entry in the **Quadros** pane or right-click on it and choose **Edit**. You may also edit the settings of a Quadro by clicking on the corresponding entry and pressing the **Enter** keyboard button. This opens the **Edit** dialog box with the specified settings.

Change any settings you find necessary and click **OK**.

## Delete a Quadro

Right-click on the entry to be removed and choose **Delete**.

The QCC will display a prompt notifying that the backup folders created for selected Quadros will also be removed. See [Configuration Backup](#). Click **Yes** to proceed with deleting. To relocate the folders prior to deleting the Quadros, click **No**.

You may also delete a Quadro by clicking on the corresponding entry in the **Quadros** pane and pressing the **Del** keyboard button.

## Manage a Quadro

Right-click on any device in the **Quadros** pane and select **Manage**. This connects to the Quadro's web management and logs automatically into it. The connection is established using the system's default web browser. Depending on the browser's settings, the web management page of a Quadro will be displayed either in a new window or in an already open browser's window.

The operation can also be launched by holding down the **Ctrl** key and double clicking on the appropriate entry.

## Check/Uncheck a Group

To select all the Quadros in a group, click on the appropriate entry within the group and choose **Check Group**. This is useful if further operations must be executed over a group of devices. For the operations available for a group, see the chapter [Operations](#) below.




To cancel the selection, click on the appropriate entry within the group and choose **Uncheck Group**.

## Check/Uncheck All

To select all the devices, right-click anywhere in the **Quadros** pane and choose **Check/Uncheck All**.

## The Log pane

The **Log** pane is for informative purposes only. It gives information on the application's activities, changes in the state of devices and operation results (referred as events). Each entry in the pane starts with an icon (see the table below) that shows the severity of an event and the date and time when it occurred:

Icon	Event type	Comments	Examples
	Informative	Notifies of changes in the state of a Quadro, events, the progress of initiated operations, etc.	<i>Status changed to available</i>
	Warning	Notifies that a Quadro is running with the software incompatible with the QCC.	<i>Not supported</i>
	Error	Notifies of operation failures, errors occurred while trying to connect to a Quadro, etc.	<i>Upload failed</i>

If an event relates to a specific Quadro, the **Description** column of the corresponding log entry will start with the name of that Quadro (see Figure 7). The log entries that display the information on an operation result will additionally contain the operation name.

**Please note:** The listed events are only QCC specific. They indicate the progress of operations initiated by the QCC.

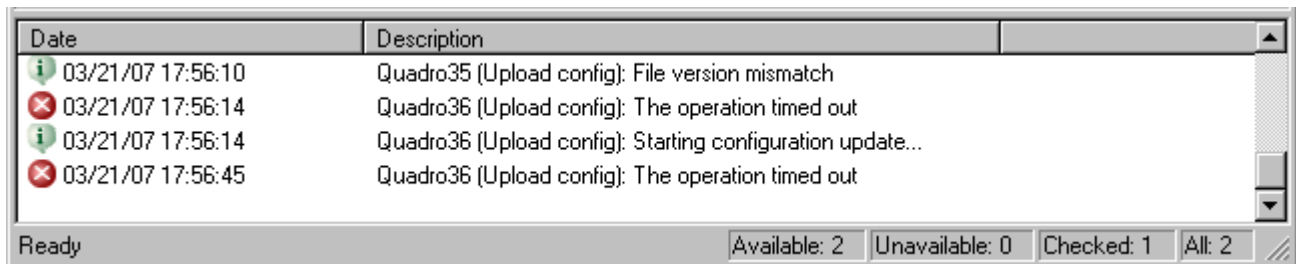


Figure 7 Logs pane

The **Log** pane allows for the following operations that can be initiated from the right-click menu within this pane (see Figure 8). The procedures for executing these operations are detailed below.

- **Copy** copies selected log entries into the system clipboard.
- **Select All** selects all log entries available in the **Log** pane.
- **Clear** removes all log entries from the **Log** pane.

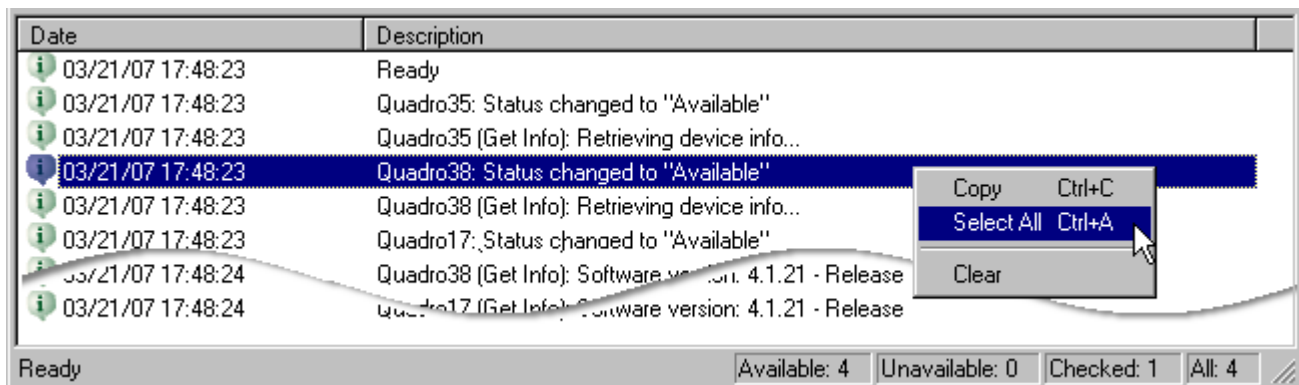


Figure 8 The right-click menu of the Logs pane

## Copy

1. Select the logs to be copied. Log entries can be selected either by holding down the Ctrl or Shift button and clicking the entries or by clicking somewhere in the pane and moving the mouse over the entries (Figure 9).
2. Right-click on the selection and choose **Copy**.
3. The selected log entries will be copied into the system clipboard.

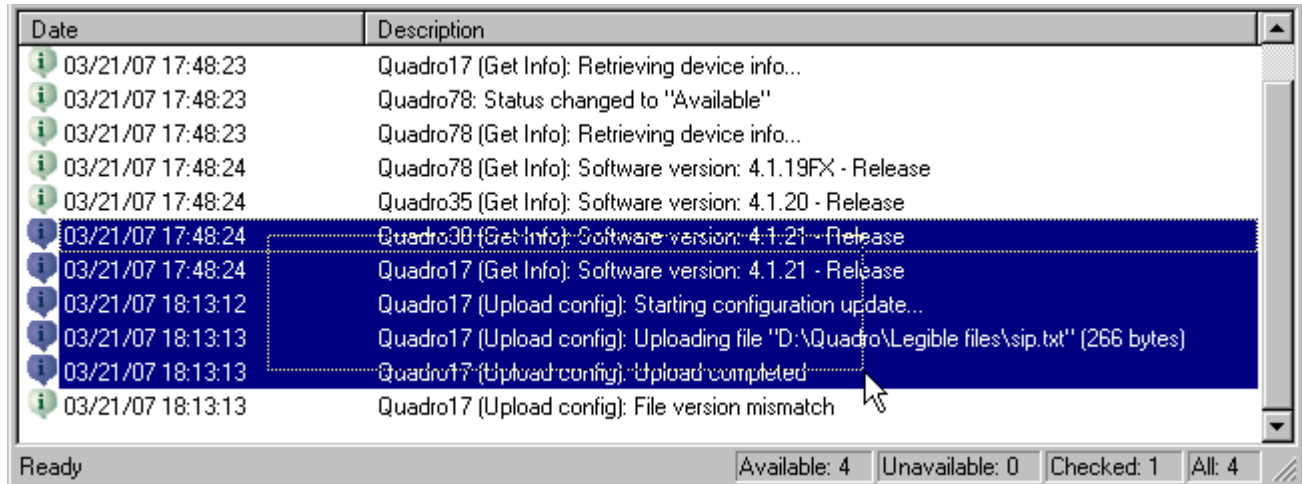


Figure 9 Selecting several log entries

## Select All

Right-click anywhere in the **Log** pane and click **Select All** to select all log entries in the pane.

## Clear

Right-click anywhere in the **Log** pane and click **Clear** to remove all log entries from the pane.

## Setting up the QCC

To set up the QCC, first add the Quadros on the network into the Quadros pane of QCC (see [Add a Quadro](#)), then specify the paths of the required firmware and legible configuration files into the Files pane (see [Add a file](#)).

# Operations

The following operations can be executed with the QCC:

- [Reboot](#) - allows the administrator to initiate a reboot on selected Quadros from the QCC.
- [Configuration backup](#) - allows the configuration of selected Quadros to be backed up and downloaded to the administrator's PC.
- [Configuration restore](#) - allows a backup configuration file to be uploaded to and restored on selected Quadros.
- [Firmware update](#) - allows a selected firmware file to be uploaded to and installed on selected Quadros.
- [Legible configuration file upload](#) - allows selected legible configuration files to be uploaded to selected Quadros.

**Please note:** The operations listed above will work only for the devices with an *Available* status (see [Add a Quadro](#)).


## Reboot a Quadro

1. In the **Quadros** pane, select Quadros to be rebooted. To select a Quadro, select the checkbox assigned to it. Please also see [Check/Uncheck a Group](#).
2. Click on the **Reboot** toolbar icon or choose **Reboot** from the **Operations** menu. Once the Quadro reboots, its status will change to *Available* in the **Status** column.

## Configuration Backup

The following instructions describe how to back up the Quadro configuration:

1. In the **Quadros** pane, select the devices whose configuration is to be backed up.
2. Click on the **Backup** toolbar icon or choose **Backup** from the **Operations** menu (see Figure 10).

By default, the QCC stores downloaded backup files in the **Backup** folder created in the QCC's installation directory (the default path is C:\Program Files\Epygi Technologies\QCC). Backup files for each Quadro are stored in a separate subfolder of the **Backup** root folder. Each subfolder is created with the same name as the respective Quadro. To choose another root folder, select Operations→Options and click the  button (see Figure 14). Once chosen, the QCC will further create backup subfolders in the specified location. When removing a Quadro from the Quadros pane (see [Delete a Quadro](#)), the QCC will ask confirmation for also deleting the associated backup subfolder.

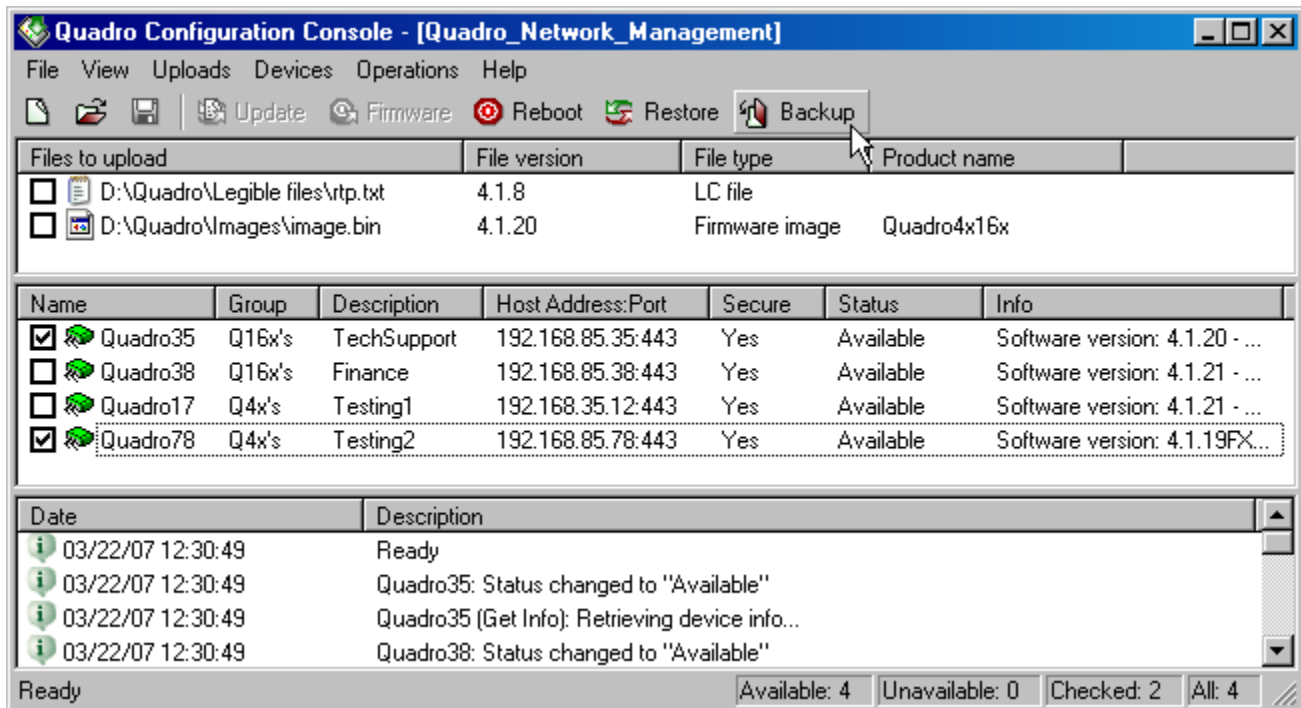


Figure 10 Backing up *Quadro35's* and *Quadro78's* configuration

## Configuration Restore

The following instructions describe how to upload and restore backup configuration on a Quadro:

1. In the **Quadros** pane, select the Quadro whose configuration is to be restored.
2. Click on the **Restore** toolbar icon or choose **Restore** from the **Operations** menu. This will open a file chooser window to allow you to select the desired back-up file (see Figure 11). The current folder for the file chooser will be set to the backup folder of the Quadro that is first on the list of the selected Quadros. If this folder does not exist, the QCC will open the backup root folder. See [Configuration Backup](#).
3. Select a backup file and click **Open**.

**Please note:** Restoring the configuration and voice data requires switching Memory Allocation to the state that was selected when the Quadro configuration and voice data were backed up. For more information, please refer to Manual II: Administrator's Guide for the corresponding Quadro model and release.

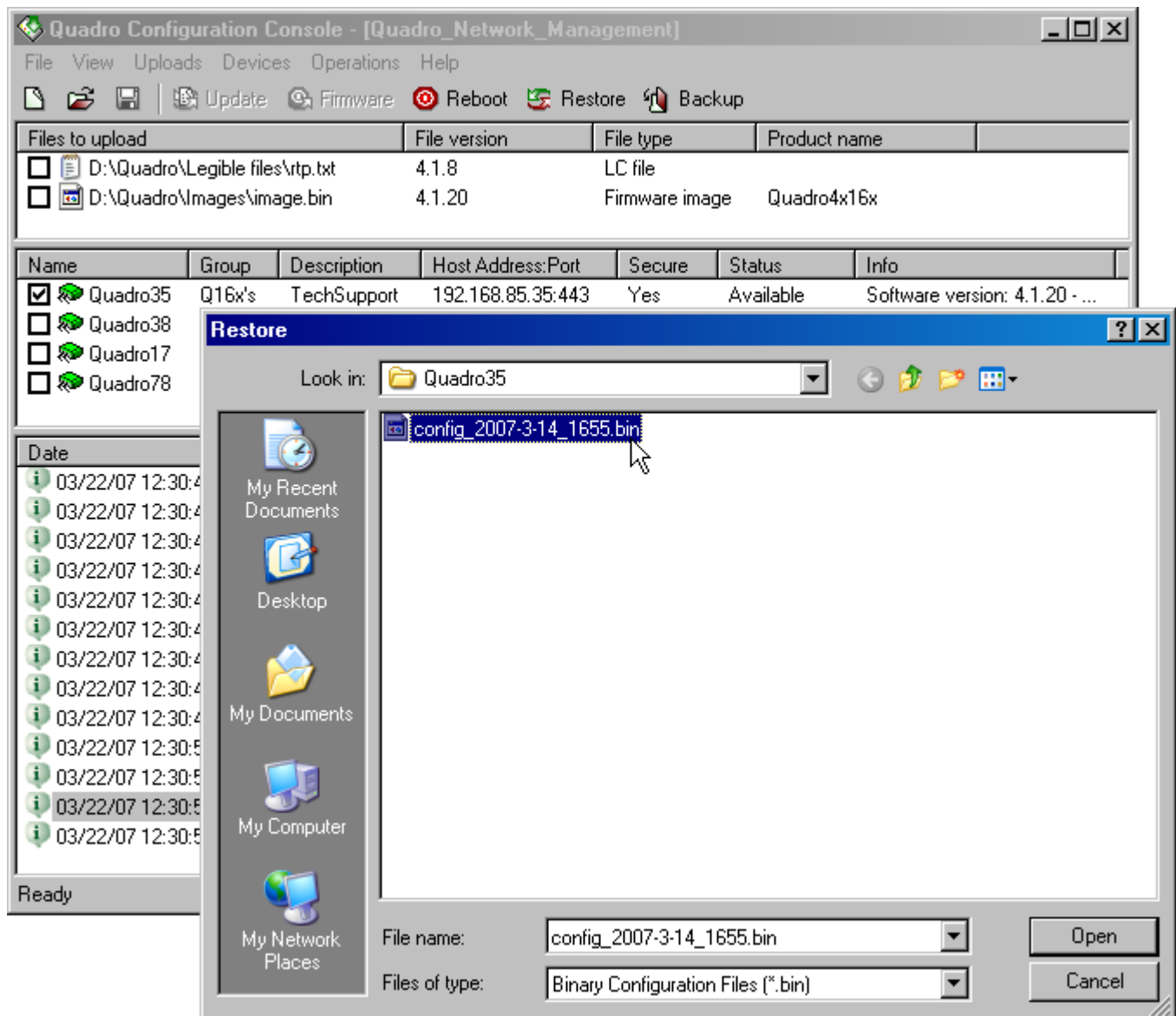


Figure 11 Uploading a back-up configuration file to a Quadro35

## Firmware Update

The following instructions describe how to update the firmware of a Quadro:

1. In the **Quadros** pane, select Quadros whose firmware is to be updated.
2. In the **Files** pane, select the appropriate firmware file (see Figure 12). Note that only one firmware file can be uploaded per operation. Trying to simultaneously upload several firmware files will display a warning about an illegal operation.
3. Click on the **Firmware** toolbar icon or choose **Firmware** from the **Operations** menu.

Before updating the firmware on any of the selected Quadros, the QCC will prompt to back up its configuration. Press **Yes** to back up the configuration before proceeding with the firmware update (see [Configuration Backup](#)), or click **No** to start the update immediately. Clicking **Yes to All** at any point will back up the configurations of the remaining Quadros without asking for confirmation. Clicking **No to All** at any point will cancel the configuration backup of the remaining Quadros.

If a higher firmware version is running on a selected Quadro, the QCC will display a warning about the configuration loss that will result from downgrading the firmware. Click **Yes** to proceed with the firmware update or **No** to cancel.

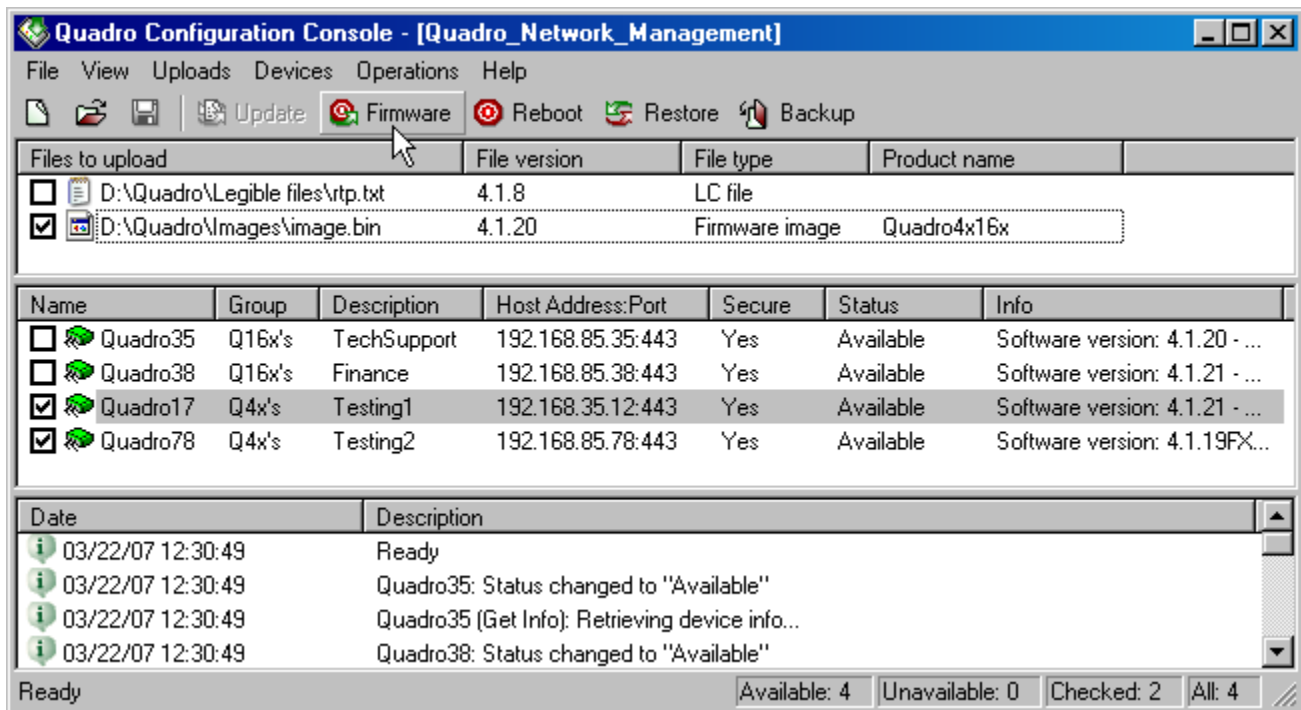


Figure 12 Updating the firmware of Q16x's and Q4x's

## Legible Configuration File Upload

The following instructions describe how to upload a legible configuration file to Quadros:

1. In the **Quadros** pane, select Quadros whose configuration is to be modified.
2. In the **Files** pane, select the legible configuration file(s) to upload. If multiple files have been selected, the QCC will upload those files sequentially in the order they are listed in the pane (see Figure 13).
3. Click on the **Update** toolbar icon or choose **Update** from the **Operations** menu. Note that uploading legible configuration files does not cause a Quadro to reboot.

The upload of several legible configuration files to several Quadros takes place in the following order:

1. The QCC uploads a file that is first on the **Files** list to all selected Quadros simultaneously.  
 Each Quadro that receives the file parses it to verify the validity. If the uploaded legible configuration file is valid, the Quadro will apply the settings specified in the LCF. Otherwise, it will send the description of an error occurred to the QCC that will print it into the **Log** pane. Note that this will not stop an overall upload procedure.
2. After the QCC receives a notification of the legible configuration update result from any Quadro (successful or failed), it sends out the next file on the list to that Quadro.

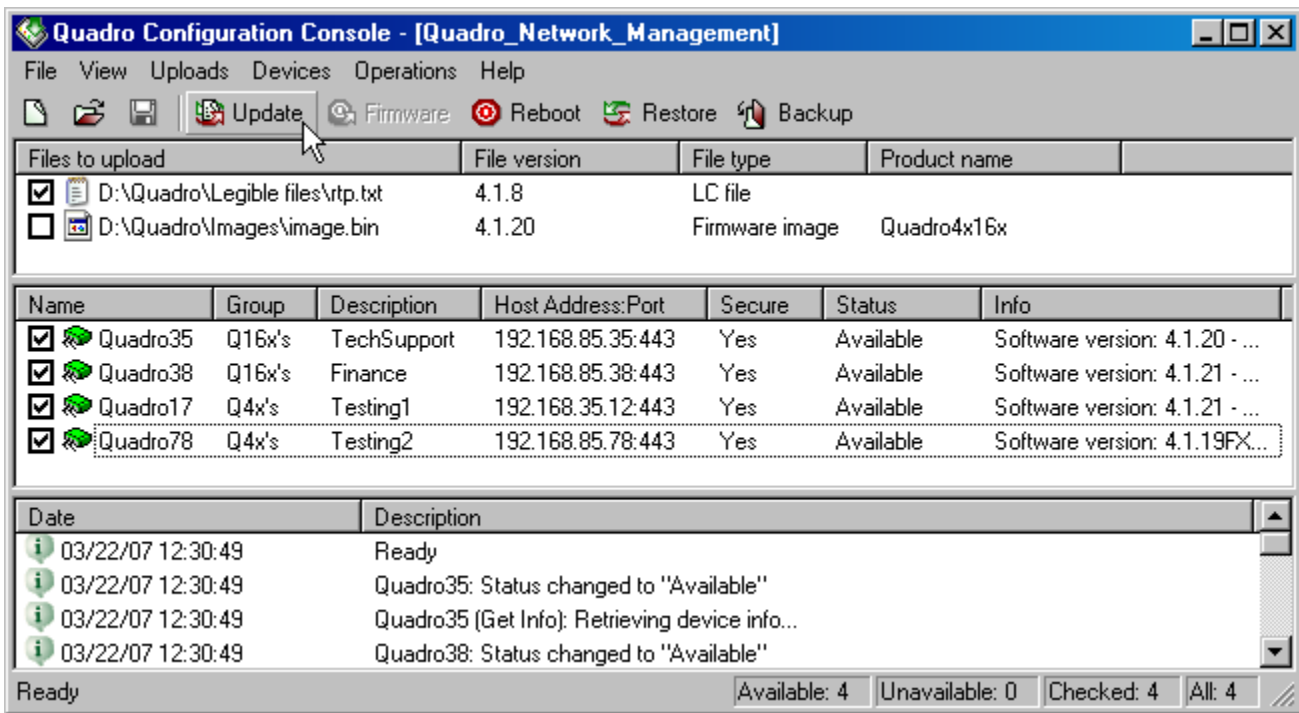


Figure 13 Uploading legible configuration file to a Q16x's group

## Saving the QCC's Configuration

Once all Quadros on the network are specified into the QCC (see [Add a Quadro](#)), you can save this list to a file with a qcc extension.

To do this, choose **Save** or **Save as** from the **Files** menu and specify a name for the file.

Note that the list of files will not be saved with a file. It is saved automatically with the QCC's main application and will be displayed automatically whenever you open a saved qcc file or create a new one. See [Remove a file](#) for instructions on how to remove a file from the **Files** pane.

## Options

The **Options** dialog box (Operations→Options) allows changing the connection settings, specifying the **Device status check period** parameter, and choosing the root backup folder (see Figure 14).

- **HTTP Request timeout** – time after which the QCC will change the status of a Quadro to *Unavailable* if no response has been received from it when executing a certain operation.

When establishing a secure connection with a Quadro, the QCC may display different errors related to the security certificate of the Quadro's web server as described below:

- **Unknown certificate authority** – the certificate authority is not recognized as trusted by the system.
- **Invalid certificate date** – the certificate date has expired or the time and date set on the computer are incorrect.
- **Invalid certificate name** – the IP address does not resolve to the domain name that the certificate belongs to.

To configure the QCC to ignore those warnings, select the appropriate checkboxes on the **Options** dialog box and click the **OK** button.

- **Device status check period** - is the period of time after which the QCC will retry to establish a connection with the Quados that have the *Unavailable* status.

The **Backup files folder** text box indicates the location of the root backup folder where Quadro backup files are stored. If not specified, the QCC will create the root folder in the installation directory of the QCC (by default C:\Program Files\Epygi Technologies\QCC). To change the root folder, click the ... button and choose the needed folder or create a new one.

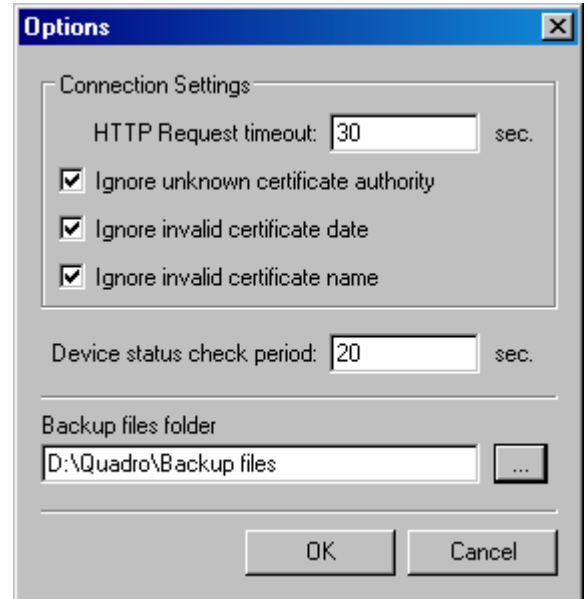


Figure 14 The Options dialog box

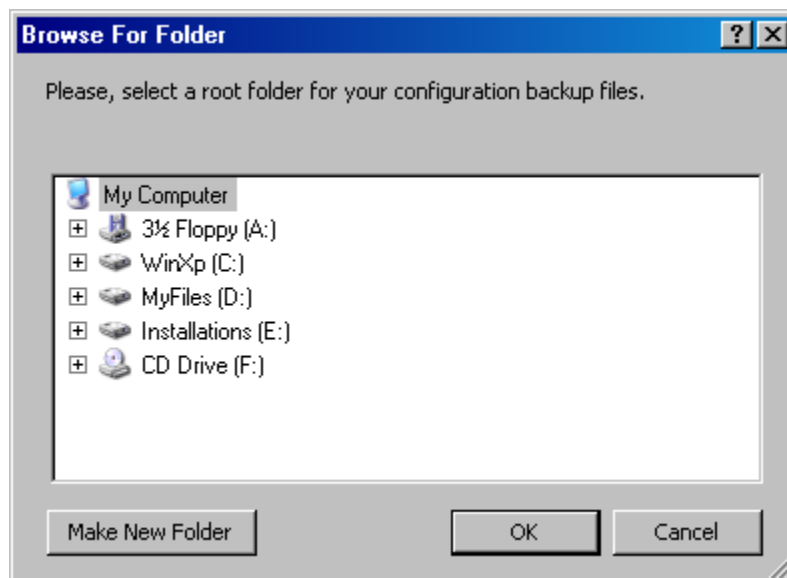


Figure 15 The Browse for Folder dialog box

## Technical Terms

**Legible configuration file** - a clear text file containing Quadro configuration parameters. These parameters can be edited and uploaded to the Quadro to make the change to the system. For more information on legible configuration files, please see the *Introduction to Legible Configuration document* available at Epygi's Support Web portal ([www.epygi.com](http://www.epygi.com)).

