

MediCal QAWeb Relay installation instructions

Table of contents

Minimum system requirements	2
Gathering important information	2
Configuring network devices	4
Installing MediCal QAWeb Relay	8
Reinstalling/updating MediCal QAWeb Relay	13
Verifying MediCal QAWeb Relay installation	14

Minimum system requirements

The workstation on which MediCal QAWeb Relay will be installed should meet the following minimum system requirements:

- Pentium 4 CPU @ 3 GHz
- 1 GB of RAM
- 80 GB free local disk space
- Operating systems: Windows XP Professional (32-bit or 64-bit), Windows 7 Professional (32-bit or 64-bit), Windows Server 2003 or Windows Server 2008



No webserver (e.g. IIS, Apache Tomcat, ...) should be running on the workstation on which MediCal QAWeb Relay will be installed.

Gathering important information

In order to ensure a smooth installation process and exclude any undesired interruptions, we recommend you to gather some important information before actually starting the MediCal QAWeb Relay installation. This can be done by completing the following questionnaire:

- 1** What is the DNS name of your MediCal QAWeb Relay host workstation?

.....

- 2** What is the IP address of your MediCal QAWeb Relay host workstation? (---.---.---.--- or DHCP)

.....

- 3** Is your MediCal QAWeb Relay host workstation located in a demilitarized zone (DMZ) or is it in a local area network (LAN)? (DMZ/LAN)

.....

- 4** If there is a proxy server used to access the internet:

- a** What is the brand/type of the proxy server? (e.g. Squid 3.0, Microsoft ISA Server 2004, ...)

.....

- b** What is the DNS name of the proxy server?

.....

- c** Does the proxy server allow HTTPS traffic? (Y/N)

.....



If no HTTPS traffic is allowed then the MediCal QAWeb Relay can't be used in combination with this proxy server.

- d** What is the proxy server's port number for HTTPS traffic?

.....



These installation instructions assume that this port number is 443. If your proxy server uses another port for HTTPS traffic, keep this into account while configuring your network devices in the next chapter.

e What kind of authentication mechanism is used by the proxy server? (more than one can apply)

- OBasic
- ODigest
- ONTLM
- ONegotiate/NTLM
- ONegotiate/Kerberos
- ONo authentication



When you are using an NTLM authentication mechanism, please consult Barco support to obtain more detailed installation instructions.

f Does the proxy server support URL whitelisting? (Y/N)

.....

g Does the proxy server support source IP address whitelisting? (Y/N)

.....

5 Should the MediCal QAWeb Relay service run as a specific domain user account or under the local system account? (Dedicated/Local)

.....



If a proxy server is used in the network and it uses a negotiation authentication mechanism (NTLM/Kerberos) then the user account under which the installed MediCal QAWeb Relay services are running will be used to authenticate against the proxy server. Since negotiation authentication is not possible with a local system account, a specific domain user account with Administrative rights should be chosen. Furthermore, the "Log in as a service" right should be granted to this specific user account. The way this can be done is described later in these installation instructions.

a If a specific domain user account will be used, what is the username and password of this account?

.....

6 If the MediCal QAWeb Relay was already installed in your facility before (meaning that this is a reinstallation or update of MediCal QAWeb Relay):

a What is the existing MediCal QAWeb Relay code?

To retrieve the existing MediCal QAWeb Relay code, first log on to the MediCal QAWeb Server. Then, in the facility overview, click the **Facility information** link for the appropriate facility. The MediCal QAWeb Relay code is available in the designated field of the Relay information section. Please refer to the MediCal QAWeb Server documentation for more information.

.....

b What is the existing MediCal QAWeb Relay GUID?

To retrieve the existing MediCal QAWeb Relay GUID, first log on to the MediCal QAWeb Server. Then, in the facility overview, click the **Facility information** link for the appropriate facility. The MediCal QAWeb Relay GUID is available in the designated field of the Relay information section. Please refer to the MediCal QAWeb Server documentation for more information.

.....

c What is the installation folder of the existing MediCal QAWeb Relay?

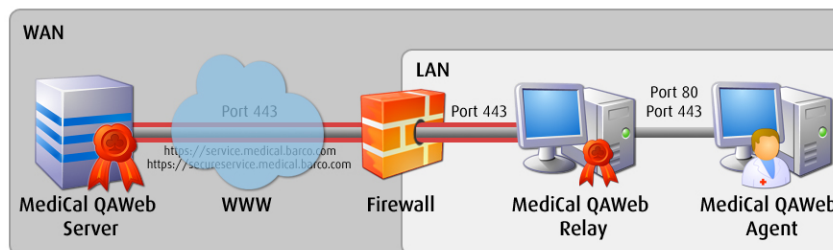
.....

Configuring network devices

In many facilities, the different Medical QAWeb components are not located in only one local area network but are spread across various locations and network zones. These different areas are mostly protected from each other by means of dedicated network protection devices (e.g. firewalls). Therefore, not only the MediCal QAWeb components should be configured but all additional network devices as well.

This section describes some commonly used MediCal QAWeb network setups and how all devices should be configured to obtain a properly working MediCal QAWeb network. Derive your own facility's network setup from the given examples and follow the corresponding instructions before starting the installation of MediCal QAWeb Relay.

Setup 1: MediCal QAWeb Relay located in a LAN and connected to the WAN via a firewall, MediCal QAWeb Agent(s) located in a LAN and directly connected to MediCal QAWeb Relay.



This network setup requires the following actions:

- 1 Open ports 80 and 443 on all MediCal QAWeb Agents for outbound traffic to the MediCal QAWeb Relay host workstation.
- 2 Open ports 80 and 443 on the MediCal QAWeb Relay host workstation for inbound traffic from the Medical QAWeb Agent(s).
- 3 Open port 443 on the MediCal QAWeb Relay host workstation for outbound traffic to the MediCal QAWeb Server.
- 4 The LAN/WAN firewall should allow inbound traffic from the MediCal QAWeb Relay on port 443. Outbound traffic on port 443 is also required for communication with the MediCal QAWeb Server.

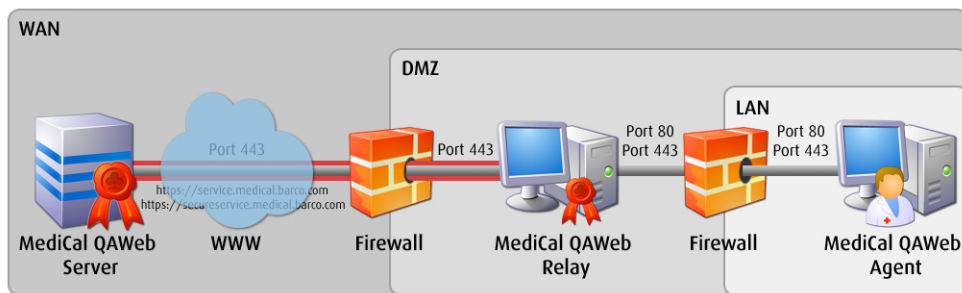
Communication is done via the following HTTPS URLs which will have to be allowed in the web browser of your MediCal QAWeb Relay host workstation:

- <https://service.medical.barco.com> (IP address: 137.117.187.172)
- <https://seureservice.medical.barco.com> (IP address: 137.117.177.94)



Connecting to the MediCal QAWeb Server with the IP addresses is not recommended. This method may cause connection problems when the IP addresses would change in future updates of the MediCal QAWeb Server. We advise you to use the URLs instead as these are dynamic and adapt themselves to the latest IP addresses for the MediCal QAWeb Server.

Setup 2: MediCal QAWeb Relay located in a DMZ and connected to the WAN via a firewall, MediCal QAWeb Agent(s) located in a LAN and connected to MediCal QAWeb Relay via a firewall



This network setup requires the following actions:

- 1 Open ports 80 and 443 on all MediCal QAWeb Agents for outbound traffic to the MediCal QAWeb Relay host workstation.
- 2 The LAN/DMZ firewall should allow inbound traffic from the MediCal QAWeb Agent on ports 80 and 443. Outbound traffic on ports 80 and 443 is also required for communication with the MediCal QAWeb Relay.



If application filtering is done on the LAN/DMZ firewall, make sure that "QAWebAgent.exe" and "qawebpms.exe" are not blocked on this firewall so these have access to the MediCal QAWeb Relay.

- 3 Open ports 80 and 443 on the MediCal QAWeb Relay host workstation for inbound traffic from the Medical QAWeb Agent(s).
- 4 Open port 443 on the MediCal QAWeb Relay host workstation for outbound traffic to the MediCal QAWeb Server.
- 5 The DMZ/WAN firewall should allow inbound traffic from the MediCal QAWeb Relay on port 443. Outbound traffic on port 443 is also required for communication with the MediCal QAWeb Server.

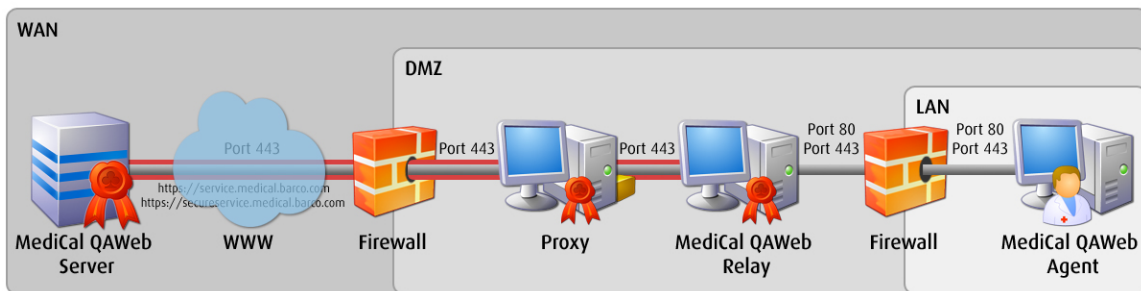
Communication is done via the following HTTPS URLs which will have to be allowed in the web browser of your MediCal QAWeb Relay host workstation:

- <https://service.medical.barco.com> (IP address: 137.117.187.172)
- <https://secureservice.medical.barco.com> (IP address: 137.117.177.94)



Connecting to the MediCal QAWeb Server with the IP addresses is not recommended. This method may cause connection problems when the IP addresses would change in future updates of the MediCal QAWeb Server. We advise you to use the URLs instead as these are dynamic and adapt themselves to the latest IP addresses for the MediCal QAWeb Server.

Setup 3: MediCal QAWeb Relay located in a DMZ and connected to the WAN via a proxy server, located in a DMZ, MediCal QAWeb Agent(s) located in a LAN and connected to MediCal QAWeb Relay via a firewall.



This network setup requires the following actions:

- 1 Open ports 80 and 443 on all MediCal QAWeb Agents for outbound traffic to the MediCal QAWeb Relay host workstation.
- 2 The LAN/DMZ firewall should allow inbound traffic from the MediCal QAWeb Agent on ports 80 and 443. Outbound traffic on ports 80 and 443 is also required for communication with the MediCal QAWeb Relay.

! If application filtering is done on the LAN/DMZ firewall, make sure that "QAWebAgent.exe" and "qawebpms.exe" are not blocked on this firewall so these have access to the MediCal QAWeb Relay.

- 3 Open ports 80 and 443 on the MediCal QAWeb Relay host workstation for inbound traffic from the Medical QAWeb Agent(s).
- 4 Open port 443 on the MediCal QAWeb Relay host workstation for outbound traffic to the proxy server and the MediCal QAWeb Server.
- 5 The proxy server should allow inbound traffic from the MediCal QAWeb Relay on port 443. Outbound traffic on port 443 is also required for communication with the MediCal QAWeb Server.

! If you are using URL whitelisting on the proxy server, make sure that the HTTPS URLs to connect to the MediCal QAWeb Server are added to the URL whitelist.

! If you are using source IP whitelisting on the proxy server, make sure that the IP address of the MediCal QAWeb Relay host workstation is added to the IP whitelist.

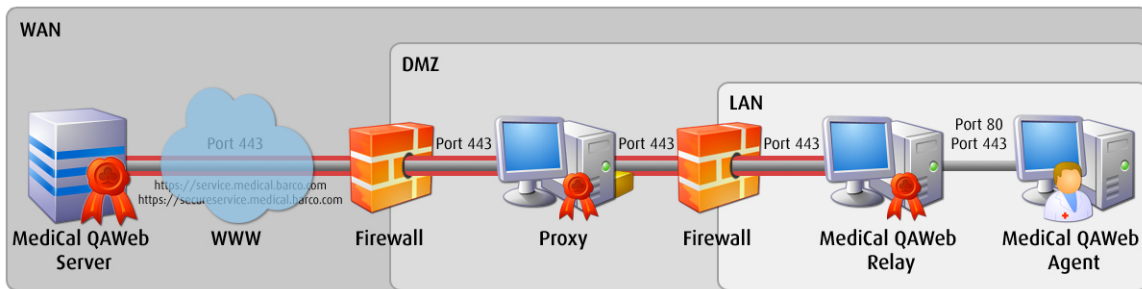
- 6 The DMZ/WAN firewall should allow inbound traffic from the proxy server on port 443. Outbound traffic on port 443 is also required for communication with the MediCal QAWeb Server.

Communication is done via the following HTTPS URLs which will have to be allowed in the web browser of your MediCal QAWeb Relay host workstation:

- <https://service.medical.barco.com> (IP address: 137.117.187.172)
- <https://secureservice.medical.barco.com> (IP address: 137.117.177.94)

! Connecting to the MediCal QAWeb Server with the IP addresses is not recommended. This method may cause connection problems when the IP addresses would change in future updates of the MediCal QAWeb Server. We advise you to use the URLs instead as these are dynamic and adapt themselves to the latest IP addresses for the MediCal QAWeb Server.

Setup 4: MediCal QAWeb Relay located in a LAN and connected to the WAN via a proxy, located in a DMZ, MediCal QAWeb Agent(s) located in a LAN and directly connected to MediCal QAWeb Relay.



- 1 Open ports 80 and 443 on all MediCal QAWeb Agents for outbound traffic to the MediCal QAWeb Relay host workstation.
- 2 Open ports 80 and 443 on the MediCal QAWeb Relay host workstation for inbound traffic from the Medical QAWeb Agent(s).
- 3 Open port 443 on the MediCal QAWeb Relay host workstation for outbound traffic to the proxy server and the MediCal QAWeb Server.
- 4 The LAN/DMZ firewall should allow inbound traffic from the MediCal QAWeb Relay on port 443. Outbound traffic on port 443 is also required for communication with the proxy server and the MediCal QAWeb Server.

Communication is done via the following HTTPS URLs which will have to be allowed in the web browser of your MediCal QAWeb Relay host workstation:

- <https://service.medical.barco.com> (IP address: 137.117.187.172)
- <https://secureservice.medical.barco.com> (IP address: 137.117.177.94)

⚠ Connecting to the MediCal QAWeb Server with the IP addresses is not recommended. This method may cause connection problems when the IP addresses would change in future updates of the MediCal QAWeb Server. We advise you to use the URLs instead as these are dynamic and adapt themselves to the latest IP addresses for the MediCal QAWeb Server.

- 5 The proxy server should allow inbound traffic from the MediCal QAWeb Relay on port 443. Outbound traffic on port 443 is also required for communication with the MediCal QAWeb Server.

⚠ If you are using URL whitelisting on the proxy server, make sure that the HTTPS URLs to connect to the MediCal QAWeb Server are added to the URL whitelist.

⚠ If you are using source IP whitelisting on the proxy server, make sure that the IP address of the MediCal QAWeb Relay host workstation is added to the IP whitelist.

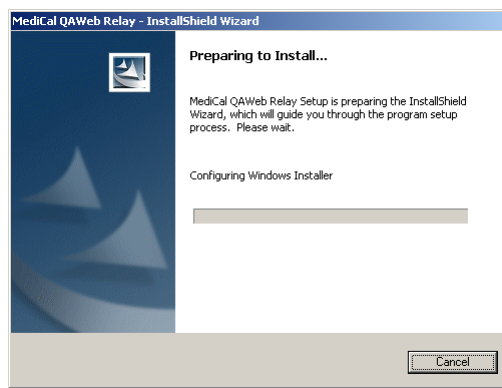
- 6 The DMZ/WAN firewall should allow inbound traffic from the proxy server on port 443. Outbound traffic on port 443 is also required for communication with the MediCal QAWeb Server.

Installing MediCal QAWeb Relay

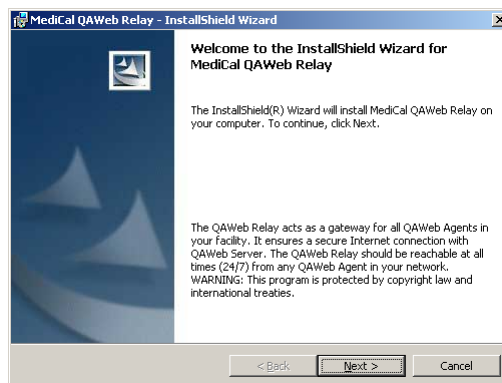
! Follow this procedure if this is your first installation of MediCal QAWeb Relay (meaning that there was never installed a MediCal QAWeb Relay in your facility before). If a MediCal QAWeb Relay was already registered in your facility before (meaning that this is a reinstallation or update of MediCal QAWeb Relay), follow the instructions in the dedicated chapter (see “Reinstalling/updating MediCal QAWeb Relay” on page 13).

! If not already done so, register your facility to MediCal QAWeb. Please refer to the MediCal QAWeb Server documentation for more information.
After having signed up to MediCal QAWeb, you should have received an e-mail with a MediCal QAWeb Relay code and a link to the zipped installation folder. Download this zip file and extract the installation files to an appropriate folder on your hard disk. Also write down the MediCal QAWeb Relay code. You will need it in this installation procedure.

- 1 Open the installation folder on the hard disk and open the **setup.exe** file.
The InstallShield Wizard window opens.

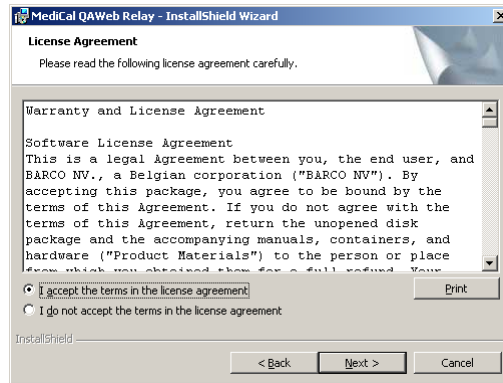


- 2 When the Welcome window appears, click **Next**.



3 The License Agreement window opens.

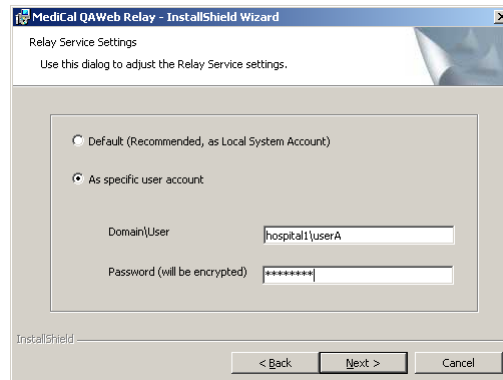
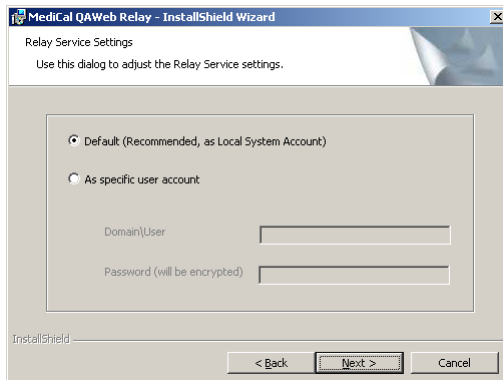
After reading this agreement, select **I accept the terms in the license agreement** and click **Next**. Some necessary files will be copied to your local drive. This may take approximately 30 seconds.



4 In the Relay Service Settings window, select the user account under which you would like to run the installed services related to MediCal QAWeb Relay, then click **Next**.



If a proxy server is used in the network and it uses a negotiation authentication mechanism (NTLM/Kerberos) then the user account under which the installed MediCal QAWeb Relay services are running will be used to authenticate against the proxy server. Since negotiation authentication is not possible with a local system account, a specific domain user account with Administrative rights should be selected here. Furthermore, the "Log in as a service" right should be granted to this specific user account. In Windows, this can be done via Start > Control Panel > Administrative Tools > Local Security Policy > Security Settings > Local Policies > User Rights Assignment. Then right click the "Log in as a service" policy and select Properties. Now you can add the specific user account to this policy.

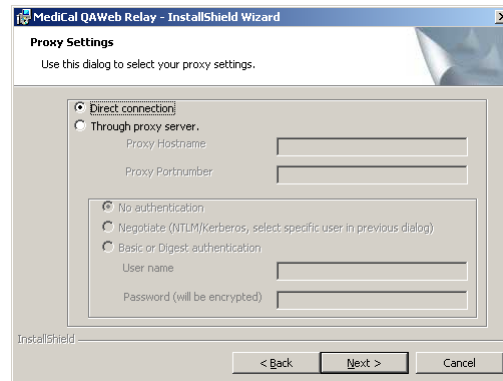


After checking the user account and connection to the MediCal QAWebServer, the Proxy Settings window appears.

- 5 This window allows you to select the desired connection method from the MediCal QAWeb Relay with the MediCal QAWebServer.

The **Direct connection** option will be selected by default if a direct connection could be made to the MediCal QAWeb Server in the previous check. If not, the **Through proxy server** option will be selected.

- a If no proxy server is used in your network setup, select the **Direct connection** option and click **Next**. The connection to the MediCal QAWeb Server will be tested and, if OK, the Customer Information window will appear.



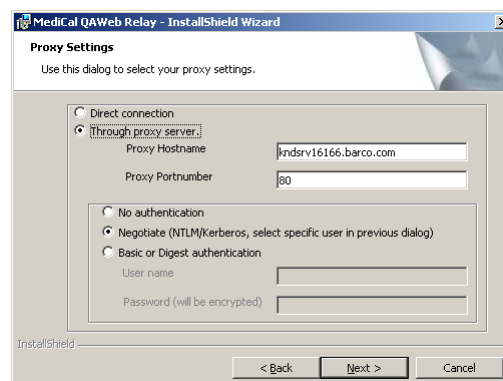
- b If you want to use a proxy server to connect to the MediCal QAWeb Server, select the **Through proxy server** option.

Fill out the appropriate **Proxy Hostname** and the **Proxy Portnumber**. Then select the authentication method used by the proxy server.

! Make sure to use the FQDN (Fully Qualified Domain Name) in the **Proxy Hostname** field.

! As mentioned in the previous step, keep in mind that when you select the Negotiate (NTLM/Kerberos) option, a specific domain user account should have been selected in the previous window.

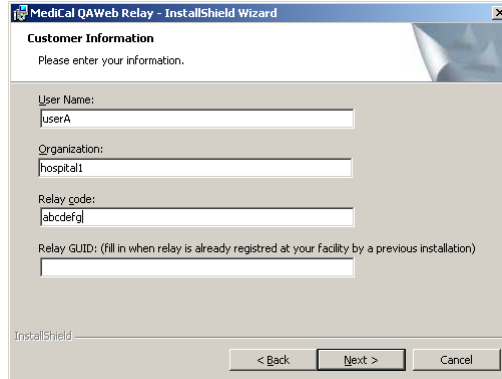
Click **Next** to test the connection to the MediCal QAWeb Server. If OK, the Customer Information window will appear.



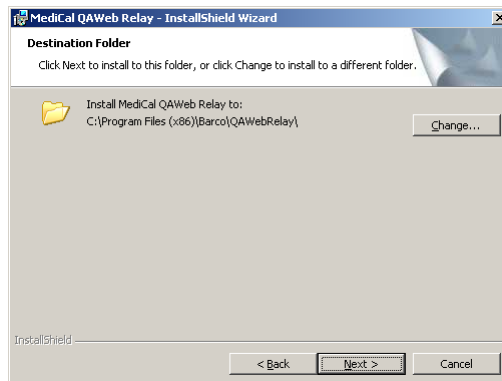
- 6 In the Customer Information window, choose your **User Name** and **Organization**.

Knowing that this is your first installation of MediCal QAWeb Relay (there was never installed a MediCal QAWeb Relay in your facility before), fill out the MediCal QAWeb Relay **code** which you wrote down earlier in this section (see page 8).

You can skip the **Relay GUID** field and click **Next** to validate the MediCal QAWeb Relay code and proceed to the Destination Folder window.



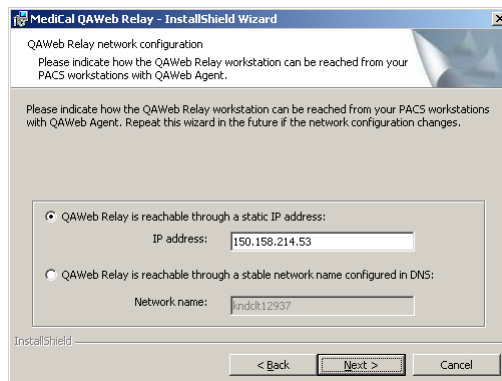
- 7 Click the **Change...** button to select an installation location different from the default folder, then click **Next** to proceed to the MediCal QAWeb Relay network configuration window.



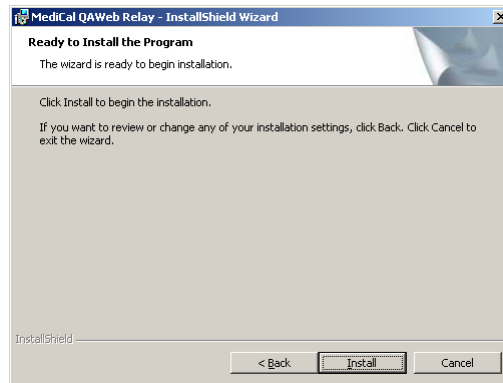
- 8 Select how the MediCal QAWeb Agent(s) can make contact with the MediCal QAWeb Relay host workstation.


When the MediCal QAWeb Relay host workstation is installed in the network with a static IP address, select the **IP address** option and enter the MediCal QAWeb Relay host workstation's IP address. When the IP address is not static, select the option **Network name** and enter the exact DNS name of the network in which the MediCal QAWeb Relay host workstation is installed. The latter is recommended.


Click **Next** to proceed.



- 9 If all previously selected installation settings were correctly chosen, click **Install** to start the MediCal QAWeb Relay installation.





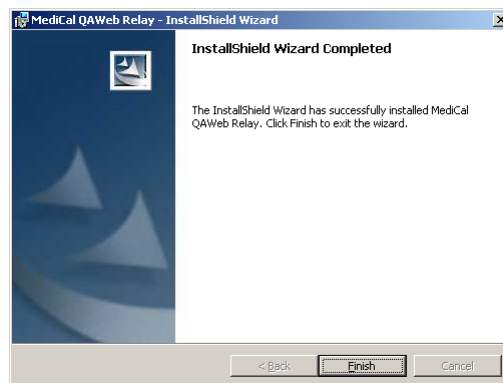


If during installation the Can't start the Relay Service! window appears then there might be something wrong with the rights of the user account as specified in action 4 of this section (see page 9) which caused the inability to start the MediCal QAWeb Relay services. This can still be solved at this stage of the installation (a complete reinstallation is not required).

Therefore, make sure that the specified user account has Administrative rights and that the "Login as service" rights are granted to the account. Please refer to the sidenote of action 4 in this section for more information (see page 9).

Click **OK** to close the Can't start the Relay Service! window.

- 10 When the installation is finished, click **Finish** to conclude the installation.



- 11 Reboot the MediCal QAWeb Relay host workstation.

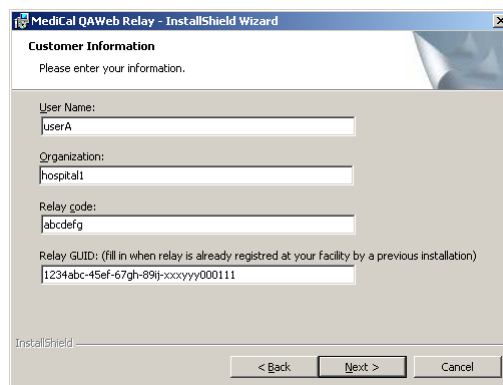
Reinstalling/updating MediCal QAWeb Relay

! Follow this procedure if a MediCal QAWeb Relay was already registered in your facility before (meaning that this is a reinstallation or update of MediCal QAWeb Relay). If this is your first installation of MediCal QAWeb Relay (meaning that there was never installed a MediCal QAWeb Relay in your facility before), follow the instructions in the dedicated chapter (see “Installing MediCal QAWeb Relay” on page 8).

- 1 Follow actions 1 to 5 in the “Installing MediCal QAWeb Relay” section (see page 8).
- 2 In the Customer Information window, your **User Name**, **Organization**, **Relay code** and **Relay GUID** should already be pre-filled with the existing values of the previous MediCal QAWeb Relay installation (which is required to complete this installation).

! If the existing values are not pre-filled or are incorrect, please refer to question 6 of the “Gathering important information” section on page 3 for more information on how to retrieve them.

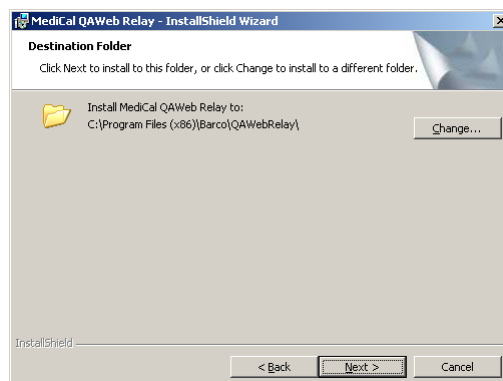
Click **Next** to validate the values and proceed to the Destination Folder window.



- 3 The pre-defined folder in the Destination Folder window should be the same installation location used for the previous installation of MediCal QAWeb Relay (which is required to complete this installation).

! Please refer to question 6 of the “Gathering important information” section on page 3 if the pre-defined folder does not correspond to the folder used for the previous MediCal QAWeb Relay installation. Click the **Change...** button to select the correct installation location.

Click **Next** to confirm the destination folder and proceed to the MediCal QAWeb Relay network configuration window.



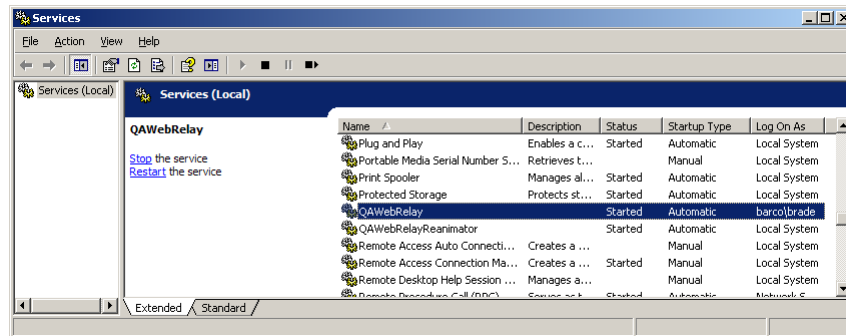
- 4 Follow actions 8 to 11 in the “Installing MediCal QAWeb Relay” section (see page 11).

Verifying MediCal QAWeb Relay installation

After installation, the “QAWebRelay” and “QAWebRelayReanimator” services should be running on the MediCal QAWeb Relay host workstation. You can check this by clicking Start > Control Panel > Administrative Tools > Services and then search for these services. Their status should be “Started”.



“QAWebRelay” should be running under the local system account or the domain user account, depending on the selection made in action 4 of this section (see page 9). “QAWebRelayReanimator” should be running under the local system account. This service automatically restarts the “QAWebRelay” service in case it would crash.



Furthermore, the MediCal QAWeb Relay should be accessible from any MediCal QAWeb Agent workstation in the facility over HTTP. To check this, open a web browser on a MediCal QAWeb Agent workstation and browse to <http://<relayname>> (where <relayname> is the MediCal QAWeb Relay’s default DNS name or IP address).