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**Q-Pulse Web Service APIs  
Installation Manual**

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## Installation Requirements

Before installation, please ensure the system meets the following minimum specification:

### Software Requirements

- Operating System: Windows 2003 Server or better.
- .NET 3.5 SP 1 framework (must be installed manually)
- IIS Version 6 or greater (this must be installed manually on Win 2003 and 2008)
- ASP.NET (this must be installed manually on Win 2003 Server, on Win2008 the ASP.NET Server Role AND it's required services must be installed)
- Internet Explorer 6 or later; IE8 is recommended

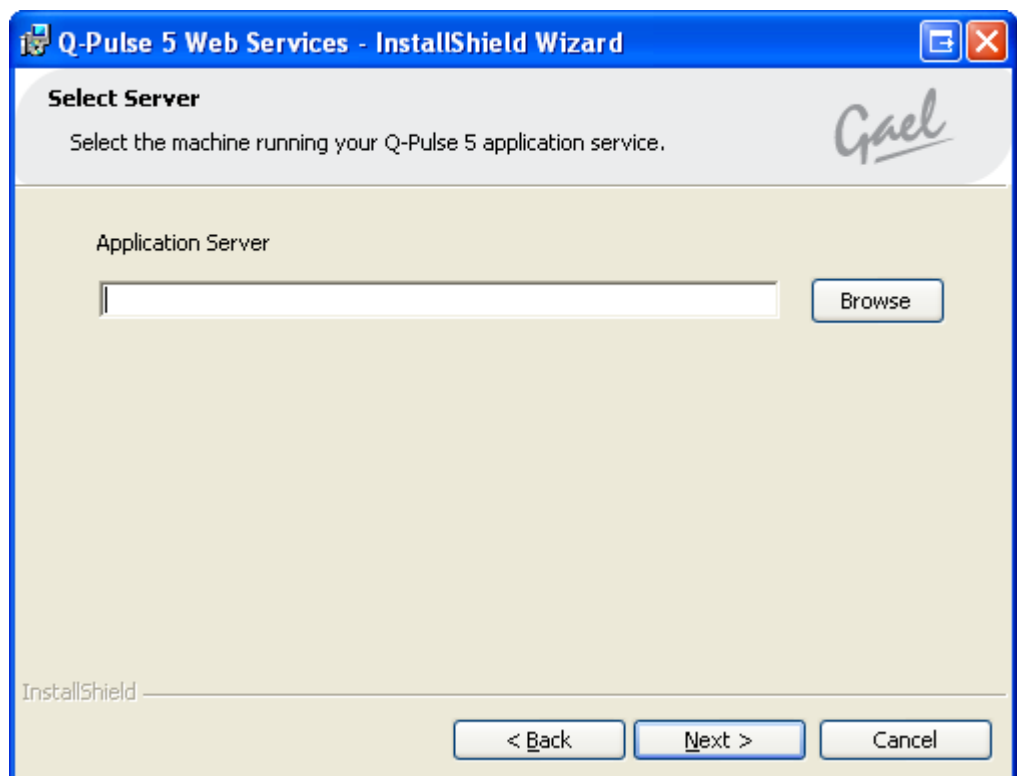
### Hardware Requirements

Although no specific specification is given here, the exact hardware chosen should reflect the typical user load the server is expected to encounter and the bandwidth required to service requests. We recommend:

- Server capable of running Windows 2003 Server or better
- Disk space: Q-Pulse 5 Web Service APIs = 15MB; .NET 3.5 with SP1 = 220MB

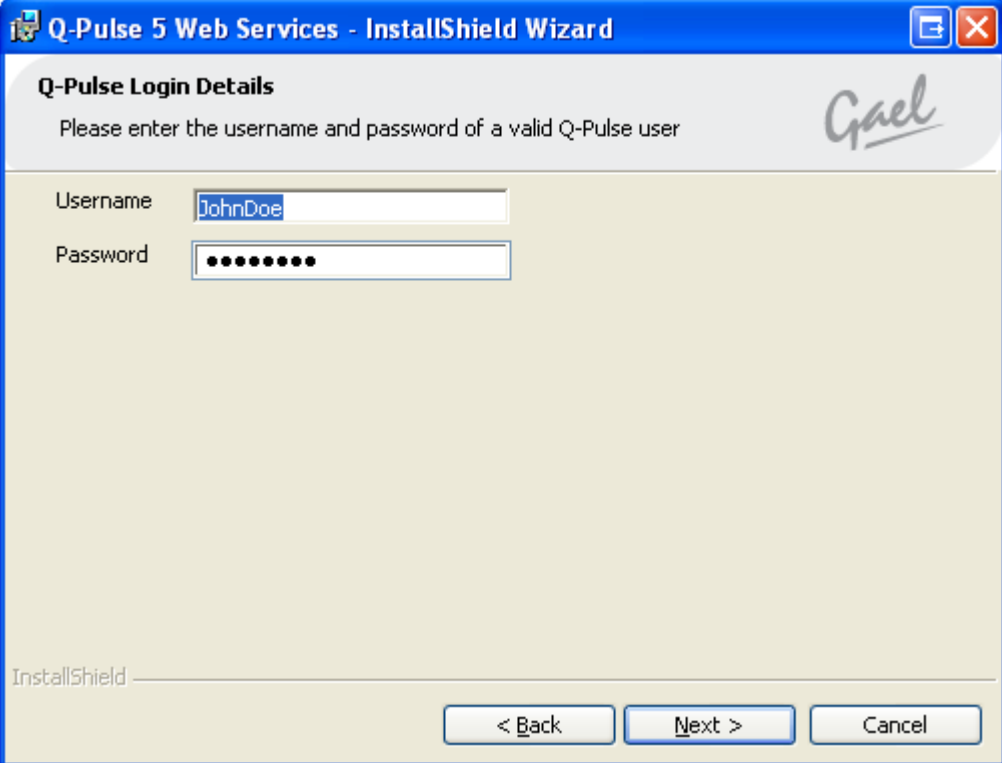
## Installation Procedure

1. Install IIS on the server if required
2. Install .NET 3.5 Service Pack 1
3. Run the installation program on the desired system.
4. Specify the Q-Pulse Application server. If a Q-Pulse Application service is running on the local machine then specify 'localhost'; otherwise enter the server name or browse for a server running a Q-Pulse Application service



5. Specify a dedicated Q-Pulse user account for anonymous authentication.

**NB** Any Q-Pulse session authenticated with the same credentials will be terminated .



The image shows a Windows-style dialog box titled "Q-Pulse 5 Web Services - InstallShield Wizard". The dialog has a blue title bar with standard window controls. Below the title bar, the text "Q-Pulse Login Details" is displayed in bold, followed by the instruction "Please enter the username and password of a valid Q-Pulse user". In the top right corner of the dialog, there is a stylized signature that reads "Gael". The main area of the dialog contains two input fields: "Username" with the text "JohnDoe" entered, and "Password" with ten black dots representing a masked password. At the bottom of the dialog, there are three buttons: "< Back", "Next >", and "Cancel". The "InstallShield" logo is visible in the bottom left corner of the dialog area.

6. Specify the desired install location
7. To verify if the Q-Pulse Web Service APIs have been successfully installed go to the following address using your browser:

<http://<Server Name>/QPulse5WebServices/Services/core.svc>

## Installing to IIS7 64 Bit (Windows Server 2008 x64)

On IIS7 64 bit systems IIS7 must be able to run 32-bit and 64-bit processes simultaneously. Please check 32 bit applications are enabled:

1. Open IIS manager
2. Navigate to Application Pools
3. Right-Click over 'QPulseAppPool' and select 'Advanced settings'
4. In the General section ensure 'Enable 32 bit applications' is true

## Installing to IIS6 64 bit (Windows Server 2003 x64)

The 32 bit version of ASP.NET 2.0 must be installed. To do this:

1. Open a command prompt (Click Start, click Run, type cmd)
2. Enter this command to enable 32-bit mode:  
`cscript %SYSTEMDRIVE%\inetpub\adminscripts\adsutil.vbs SET W3SVC/AppPools/Enable32bitAppOnWin64 1`
3. Enter this command to install the version of ASP.NET 2.0 (32-bit) and to install the script maps at the IIS root and under:  
`%SYSTEMROOT%\Microsoft.NET\Framework\v2.0.50727\aspnet_regiis.exe -i`
4. Make sure that the status of ASP.NET version **2.0.50727** (32-bit) is set to Allowed in the Web service extension list in Internet Information Services Manager.

**Important:** The .NET version number shown in the command line above must match the version installed.

**N.B.** This needs to be performed before the Q-Pulse Web Service API installation.

## Configuration for Attachment Retrieval

To be able to launch files the user must pass through a number of security layers. These layers will differ depending on how/where the files are actually stored and the authentication under which the Q-Pulse Web Service API is running.

### Q-Pulse Security

To successfully request and view a file, the Q-Pulse user must have the privilege to do so assigned in the Q-Pulse Windows client – Administration module. All users will pass through this security layer. If a user attempts to navigate directly to a document when not logged in (eg via a saved URL) they will be forced to log in first.

### Attachment Storage

Attachments may be embedded within the Q-Pulse database or may be stored on file. If the attachment is embedded no further security layers will apply; if instead it is stored on disk then the user must pass through network security.

### Network Authentication

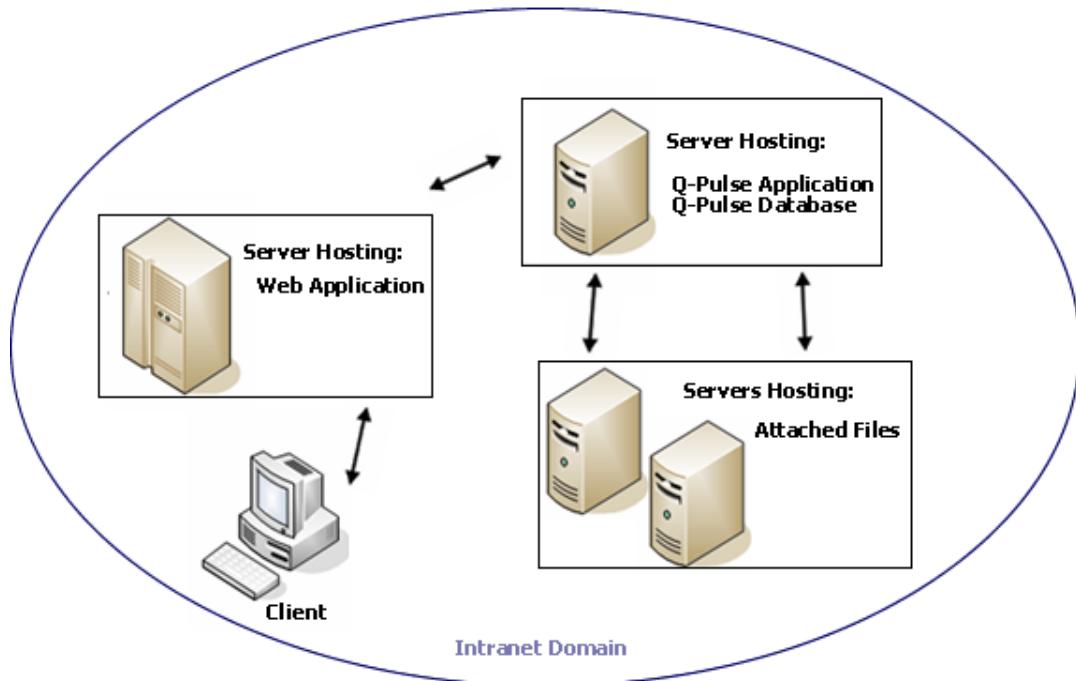
Authentication is checked as follows:

1. If the Anonymous user under which the Web Application operates has access to the file, then access will be granted
2. If this authentication fails, then the application will attempt to authenticate under the current Windows user account of the operating user
3. If this too fails, then the file request will be denied

Network security configuration will be affected by the type of access users require. If users need to connect outside of the intranet domain then the account used for anonymous access may have to be altered; see overleaf.

### Attachment Access and Authentication within the Domain/Intranet

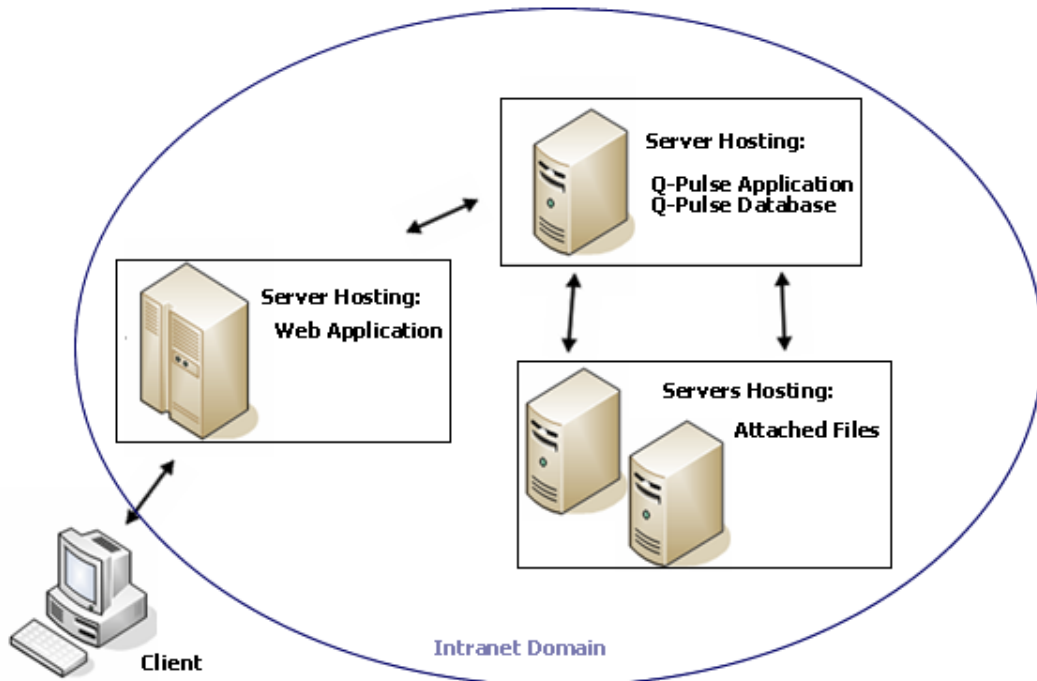
As long as all transactions are within the intranet, no additional configuration will be required:



In the example above the Web Service APIs can connect to the Q-Pulse server using the default anonymous (IUSR) account; however, though this (local) account will not have access to the files stored on other servers, access may still be granted to these files by authenticating using user credentials.

### Attachment Access and Authentication outside the Domain/Intranet

If access is required from outside of the domain/intranet, further configuration will be required:



In this example, though the Web Service APIs can connect to the Q-Pulse server using the anonymous (IUSR) account, file access will fail as in this case neither the anonymous account or the Windows account can authenticate across the domain. In this case a domain account must be used for anonymous access.

To achieve this:

#### For IIS6

1. Create a domain user account and give that account access to the required servers and files ('Account should not expire' and 'User cannot change password' options should be set)
2. Open the IIS Admin console
3. Open the properties of the Q-Pulse Web Service API web site
4. Select the Directory Security tab
5. Press the 'Edit' button for 'Anonymous Access and Authentication Control'
6. Change the user account used for anonymous access to the account previously created and insert the password required
7. Re-start the Q-Pulse Web Service API web site

### For IIS7

1. Create a domain user account and give that account access to those servers and files that Q-Pulse must access ('Account should not expire' and 'User cannot change password' options should be set)
2. Open the IIS Admin console
3. Open Advanced Setting on application pool Q-Pulse Web service API is using
4. Expand Process Model if needed
5. Select Identity field and click "... " button
6. Select "Custom account" radio button
7. Click "Set" button
8. Enter authentication details for user created in step 1
9. Click "OK" on open windows

## Providing Access for 'Q-Pulse Docs'

If you intend to purchase the Q-Pulse iPad application 'Q-Pulse Docs', the following URL will be required by the application once the Q-Pulse Web Service APIs have been installed:

<http://<Server Name>/QPulse5WebServices/Services>

## Uninstalling the Software

To remove Q-Pulse Web Service APIs from your system, navigate to 'Add or Remove Programs' or 'Programs and Features' and remove the 'Q-Pulse 5 Web Services' entry. Alternatively re-running the installation program provides a 'Remove' option allowing the software to be uninstalled.

**NB** This will not remove third party software that may have been installed as part of the installation process e.g. .NET 3.5.

## Troubleshooting

### Installation Errors

#### Install interrupts and install wizard rolls back making no changes to the system

Default App Pool has not been enabled for 32 bit applications.

### Errors Connecting to the Server

#### No connection could be made because the target machine actively refused it

Domain security problem whilst using a remote server. Possible causes:

- Account used for anonymous access does not have access to the Q-Pulse Application and/or Database server
- Firewall is blocking access

### Unhandled Exception

Configuration problem. Possible causes:

- IIS is set to use ASP.NET 1.1:
  - Open the IIS settings window (Start > Control Panel > Admin Tools > Internet Information Services).
  - Right-click > Properties on the QPulse5Web data portal and navigate to the ASP.NET tab. Change the ASP.NET version to 2.0.

#### No page loaded when checking Q-Pulse Web Service APIs using a browser

Occurs if using a browser to determine if the Q-Pulse Web Service API is running.  
Possible causes:

- IIS service not started
- Q-Pulse Application service not started
- Firewall is blocking access
- Server machine not online
- Q-Pulse Application service is using a non-standard port

### Attachments

#### Unable to access attachments

- Account used for anonymous access is a local user when a domain user is required



## Contacting Us

**Gael Ltd**, Orion House, S.E. Technology Park, East Kilbride, Scotland. G75 0RD

**W** <http://www.gaelquality.com/>

**T** +44 1355 593400 | **F** +44 1355 579191 | **E** [info@gaelquality.com](mailto:info@gaelquality.com)

**Support** [support@gaelquality.com](mailto:support@gaelquality.com) | **Training** [training@gaelquality.com](mailto:training@gaelquality.com)

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**Gael Ltd.**

Orion House,  
S. E. Technology Park,  
East Kilbride,  
Scotland. G75 0RD

**t:** +44 1355 593400

**f:** +44 1355 579191

**e:** [info@gaelquality.com](mailto:info@gaelquality.com)

**w:** [www.gaelquality.com](http://www.gaelquality.com)

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