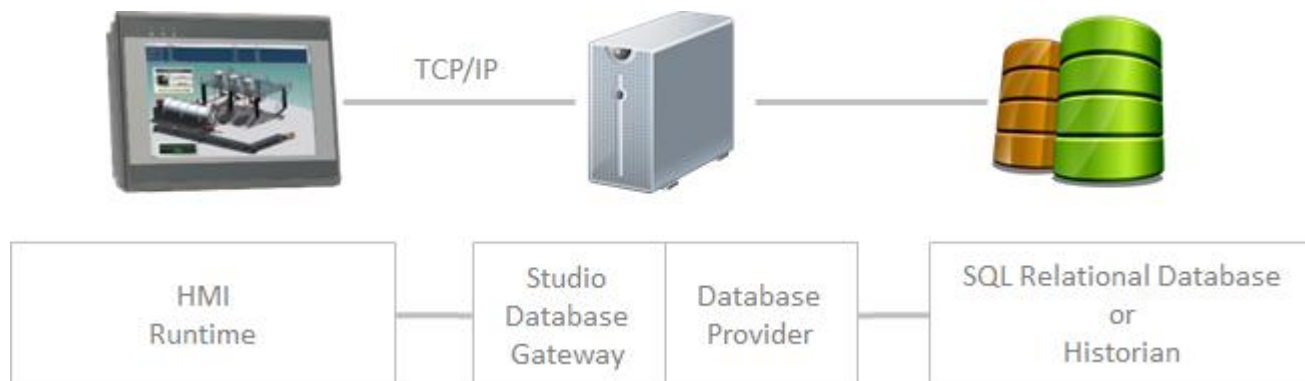


Running StADOSvr.exe as a Service on Machines without InduSoft Web Studio

Introduction

The **Studio Database Gateway** is an application that provides a communication link between applications designed with **InduSoft Web Studio** and **SQL Relational Databases** (or **Historians**).

The **Studio Database Gateway** is an application that exchanges data with the **InduSoft Web Studio** applications via **TCP/IP**. Therefore, it can run either on the same station where the **InduSoft Web Studio Runtime** is running, or on a remote station. This architecture is especially useful to provide access to remote **SQL Relational Databases** or **Historians** to **InduSoft Web Studio** applications running on operating systems that does not support the providers for such databases, such as **Windows Embedded Standard** and **Windows Embedded Compact** (formerly known as **Windows CE**), as illustrated in the following figure:



This document provides information required to run the **Studio Database Gateway** as a service on a remote station (where the InduSoft Web Studio runtime is not installed).

Initial Considerations

During this process, some system registry keys will be changed. Therefore, make sure that you have full local machine administrator privileges before starting. It is also strongly recommended that a backup of the current registry is made before starting the procedures listed within this Tech Note.

Warning! Running the **Studio Database Gateway** as a service on a remote computer can be set up to operate with the same privileges as the **Local User**, or by following the instructions in this Tech Note, it will run as a **Windows System User**. It is not possible at this time, to run it as a service using a **Windows System Account** *and also use Data Protection*. This is because when activating **Data Protection**, the **local user** must be logged on to enter the **Data Protection** password. That same **local user** must be logged on in order for the encryption system to work on that machine, which can represent a possible security issue. Therefore, it is required that these security limitations are understood and mitigated using acceptable security protection techniques approved by your IT Security staff.

More information about enabling and using **Data Protection** is available in the **Help Manual** (Technical Reference Guide) in the section: **Configuring additional project settings >> Options Tab >> Enable Data Protection to encrypt sensitive information**.

Copy Files to the Remote Computer

In order to run the **Studio Database Gateway** on a remote computer, you must copy the gateway executable and supporting files to the remote computer. Copy the files called **StADOSvr.exe**, **StADOSvr.ini**, and **StudioDataProtection.dll** (if present) from the **\Bin** folder of the **InduSoft Web Studio** installation folder on your development computer (e.g., **C:\Program Files (x86)\InduSoft Web Studio v7.1\Bin** or **C:\Program Files\InduSoft Web Studio v7.1\Bin**) to the remote computer.

NOTE: If you are using the **Wonderware Historian** connection (introduced in **InduSoft Web Studio v7.1 SP3**), then you must also copy the file called **aaClientManaged.dll** to the remote computer.

You can put these files anywhere on the remote computer, ***but all of them must be in the same folder.***

TIP: **InduSoft Best Practices** recommends creating a folder in the **\Program Files** folder called, "**\InduSoft Studio Database Gateway**"

Examples: **C:\Program Files (x86)\InduSoft Studio Database Gateway** or **C:\Program Files\InduSoft Studio Database Gateway**.

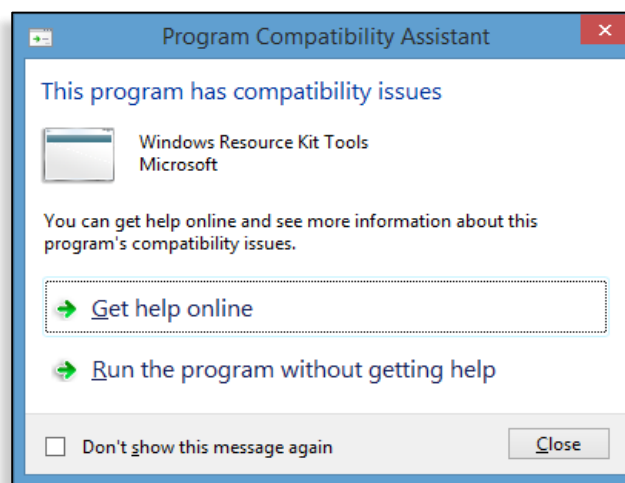
Initial Configuration

You are now ready to configure the **Studio Database Gateway** to run as a **Windows Service**. These instructions use a program called **SRVANY.EXE** from the **Windows Resource Kit Tools** and the **Windows Service Control** program called **SC.EXE**. These instructions are for **Windows 7 and higher** and for **Windows Server 2008 R2 and higher**. If you have questions about configuring the **Studio Database Gateway** to run as a **Windows Service** on other versions of Windows operating systems, then please contact technical support from your software vendor.

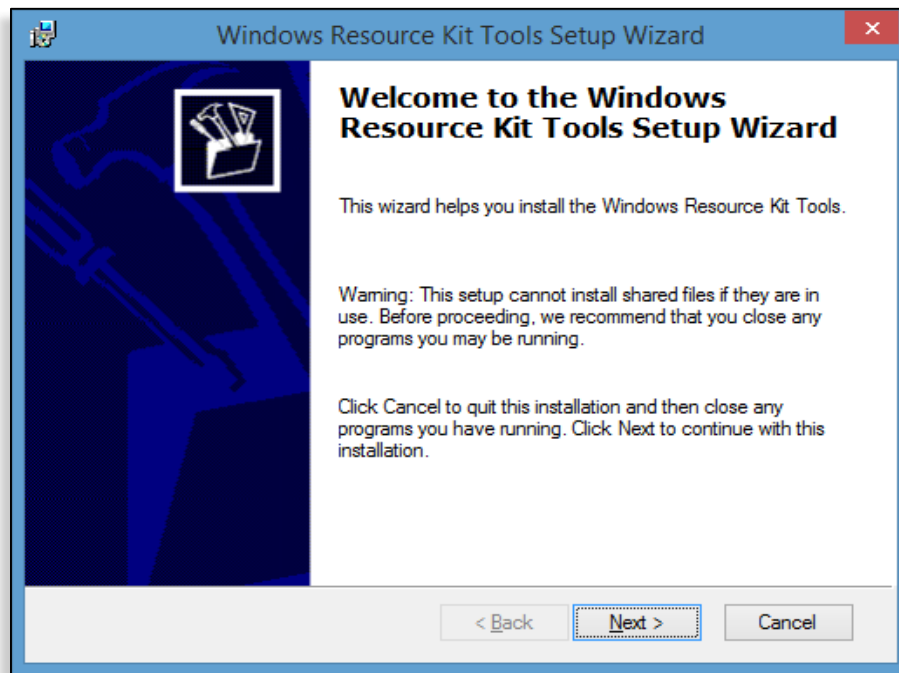
NOTE: The **Studio Database Gateway** requires **.NET Framework 4.0**. Please ensure that it is installed prior to starting the gateway.

Install the Windows Resource Kit Tools

Download and install the [Windows Resource Kit Tools](http://www.microsoft.com/en-us/download/details.aspx?id=17657) (<http://www.microsoft.com/en-us/download/details.aspx?id=17657>). When you launch the installer, you **may** get a popup that looks like the following picture:



If so, then click the link called, "**Run the program without getting help**". The installer should launch and you should see something similar to this:

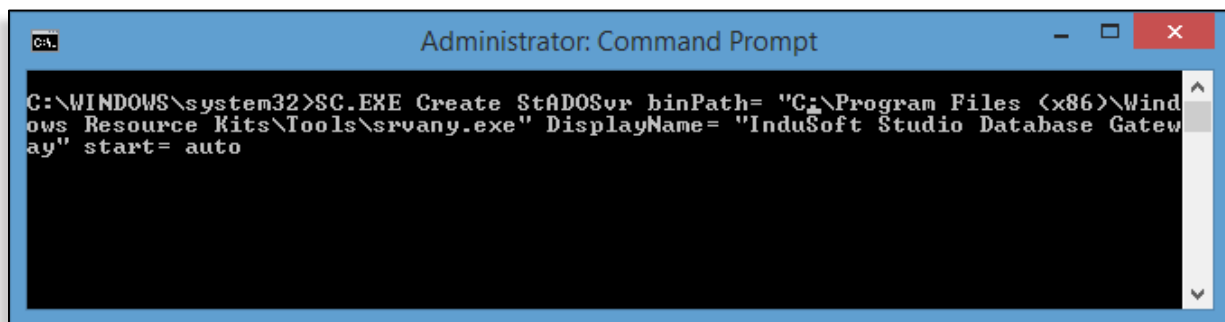


Click the button labeled "Next" and follow the installation prompts to complete the installation. This will install the **Windows Resource Kit Tools** in your **\Program Files** folder (e.g., **C:\Program Files (x86)\Windows Resource Kits\Tools** or **C:\Program Files\Windows Resource Kits\Tools**). The remainder of these instructions presume that Windows Resource Kit Tools are installed in **C:\Program Files (x86)\Windows Resource Kits\Tools**. (Please make the appropriate changes if they were installed in a different folder on your computer).

The next section will create a **Windows Service** using the **Windows Resource Kit Tool** called **SRVANY.EXE** to launch the Studio Database Gateway.

Create the Windows Service

Open a **Windows Command Prompt** with elevated permissions. Do this by **right-clicking** on the **Command Prompt** application in the **Windows Start** menu (or **CMD.EXE**) and selecting "**Run as Administrator**". Once the **Command Prompt** window opens, run the **SC.EXE** command exactly as shown below:



As shown here, the command line is one single string that will wrap in the Command Prompt, depending on the width of your **Command Prompt** window. Also, note that the spaces following binPath=, DisplayName=, and start= are required. For your convenience, you can copy/paste the command to your Command Prompt window and run it.

Highlight the entire text shown below (in the box) and copy. Click once on the **Command Prompt** window in order to give it focus. Paste using **only** the right-click "**Paste**", then execute (press enter) the following **single** command line:

```
SC.EXE Create StADOSvr binPath= "C:\Program Files (x86)\Windows Resource  
Kits\Tools\srwany.exe" DisplayName= "InduSoft Studio Database Gateway"  
start= auto
```

NOTE: Remember to change the path if the Windows Resource Kit Tools are installed in a different location on your computer.

This command line creates a **Windows Service** called **StADOSvr** that launches **SRVANY.EXE**.

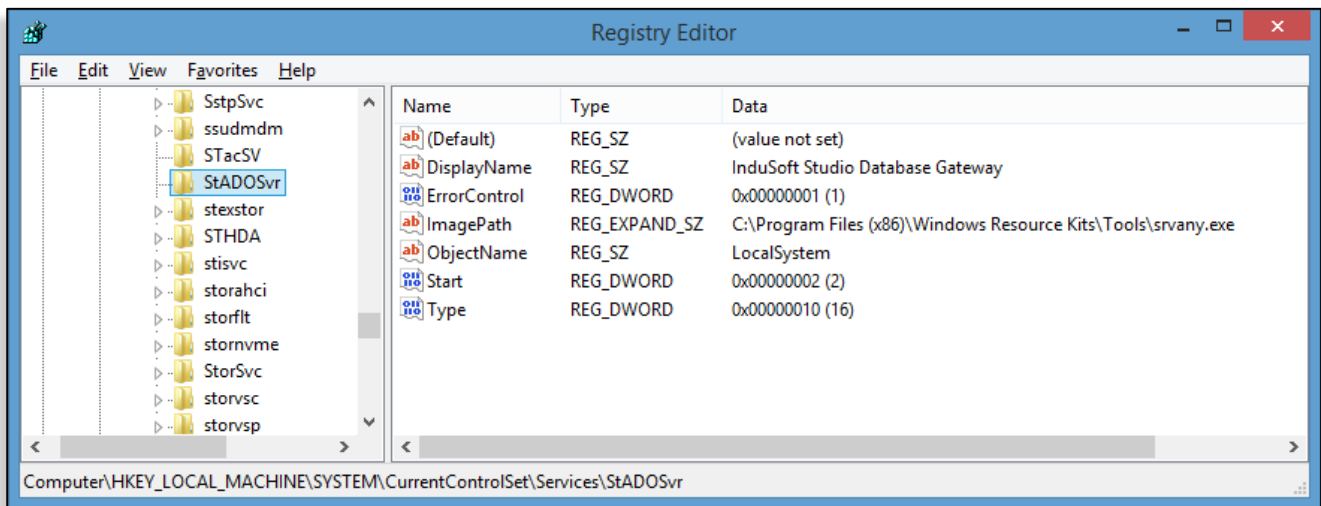
Next, we need to configure the service to launch the **Studio Database Gateway**. This step requires that you edit the **Windows Registry**. You should back up the registry before you edit it.

WARNING! (Reprinted from Microsoft) Using **Registry Editor** incorrectly can cause serious problems that may require you to reinstall your operating system. **Microsoft** cannot guarantee that problems resulting from the incorrect use of **Registry Editor** can be solved. Use **Registry Editor** at your own risk.

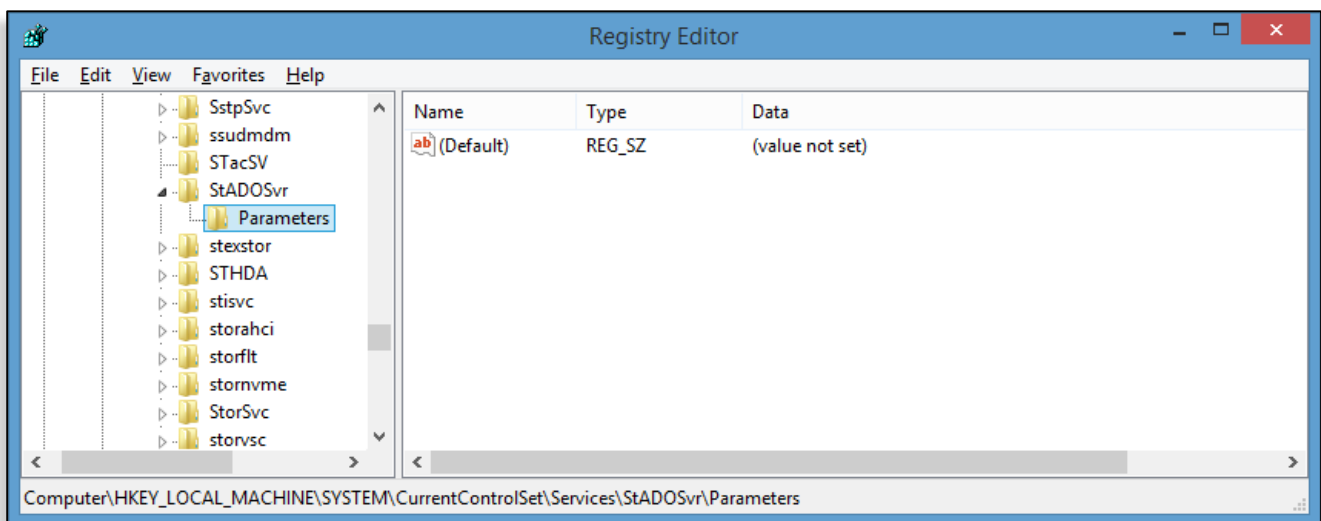
Launch the **Registry Editor** (**regedit.exe**) and locate the following key:

- HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\StADOSvr

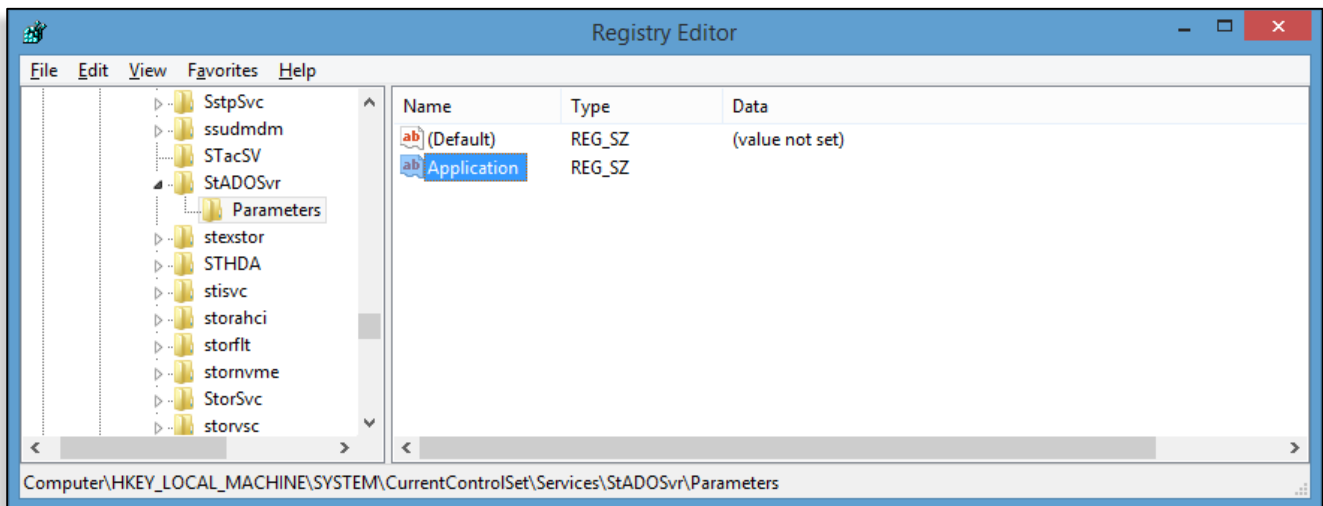
If you select the key called **StADOSvr**, then you should see something similar to the following:



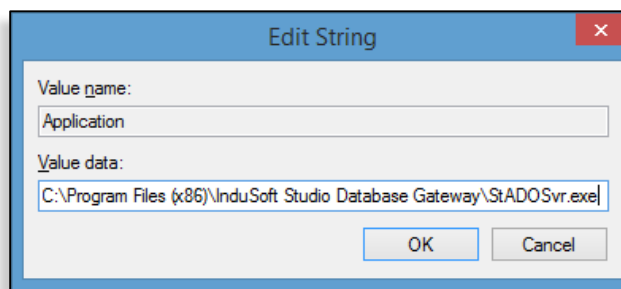
Right-click the key called **StADOSvr**, click **New >> Key**, and create a key called **Parameters**. You should see something similar to this:



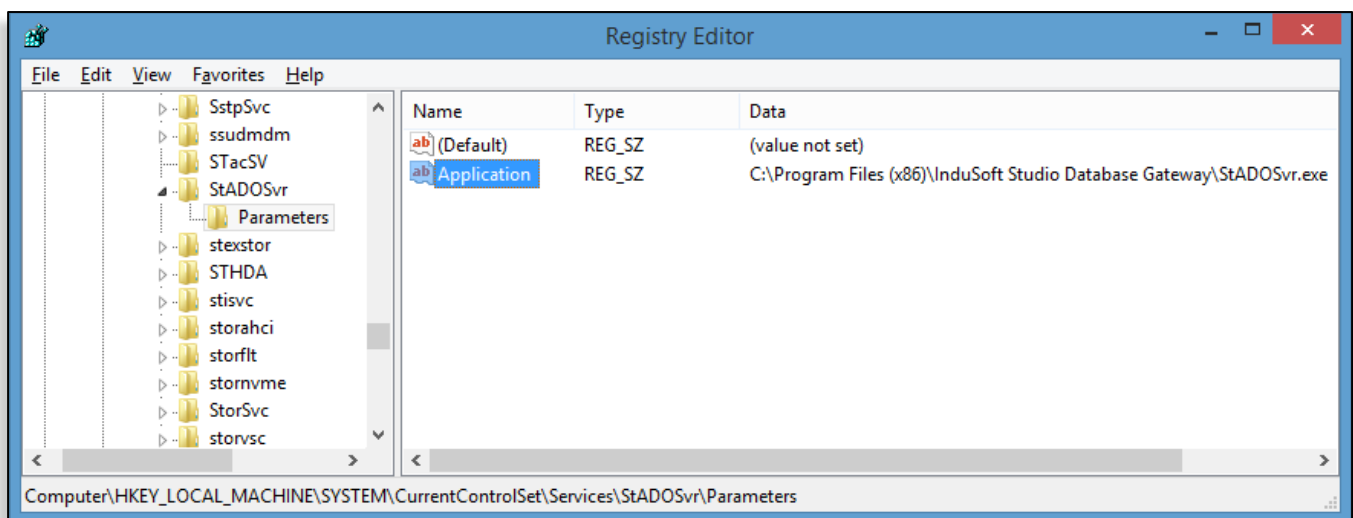
Right-click the new key called **Parameters**, click **New >> String Value**, and create a new string value called **Application**. You should see something similar to this:



Right-click the new string value called **Application** and change the field called **Value data** to be the full path name of the Studio Database Gateway as shown below:



If you installed the **Studio Database Gateway** files in a different location, then change the path as required. Click OK and you should see something similar to the following:

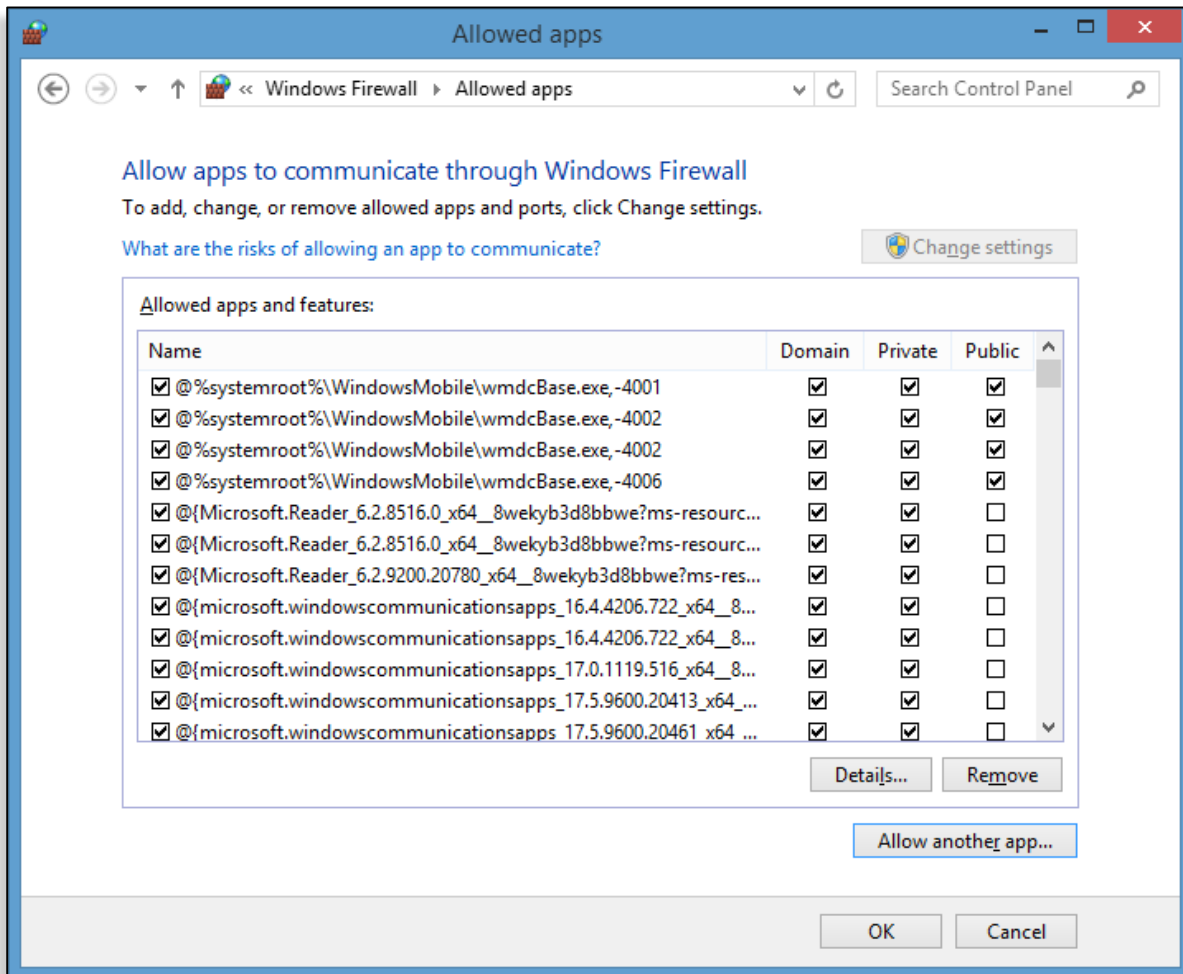


Close the **Registry Editor**.

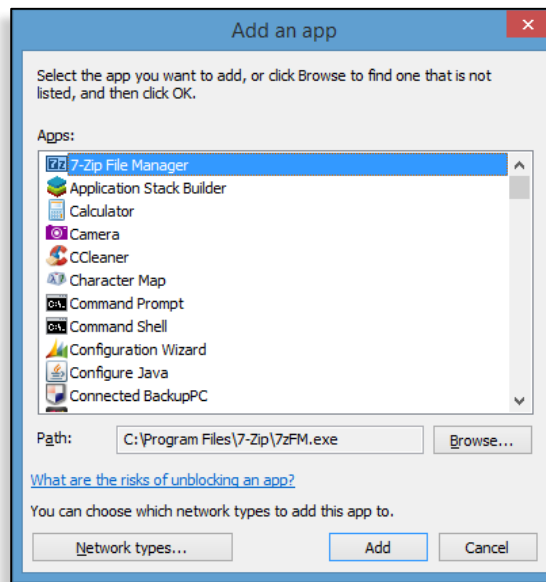
You should now be able to start the **InduSoft Studio Database Gateway service** like you would any other **Windows Service**. The Service is also configured to automatically start whenever the computer starts. The final step is to configure the **Windows Firewall** to allow remote access to the gateway.

Configuring the Windows Firewall

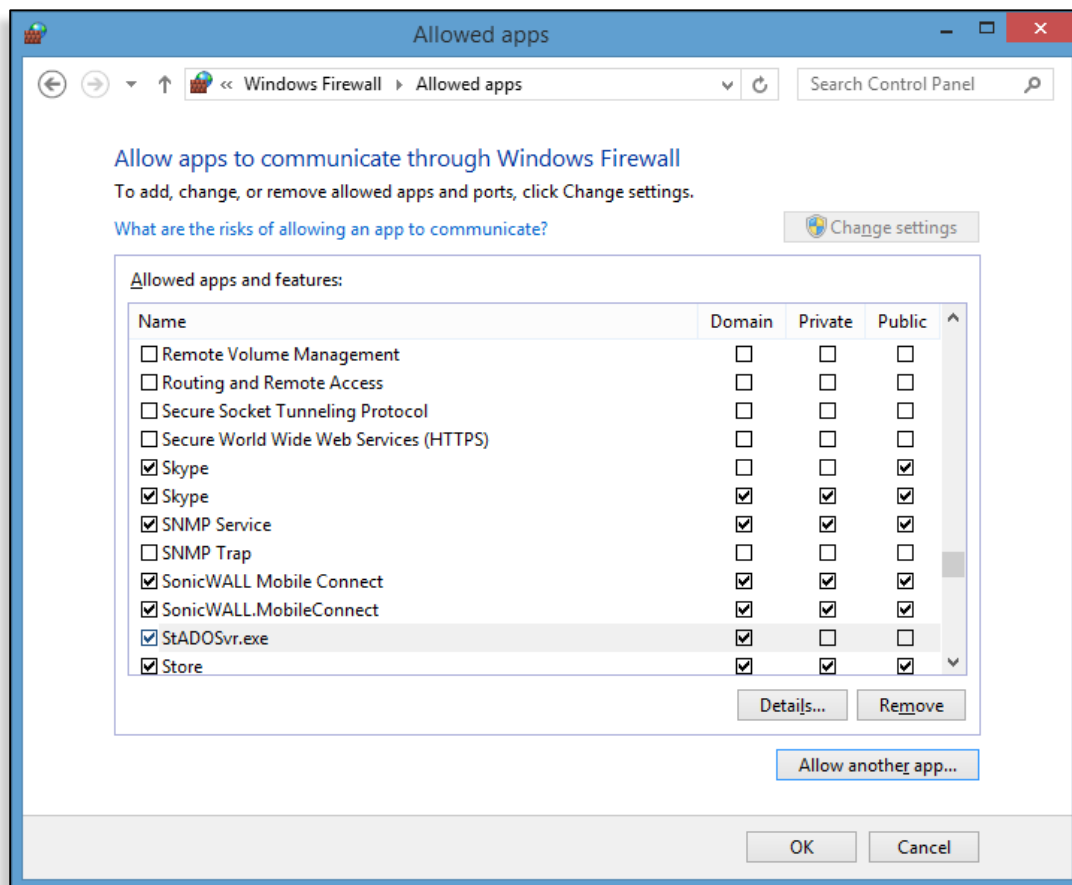
Open the **Windows Firewall** from the **Windows Control Panel** and click the link called "**Allow an app or feature through the Windows Firewall**". You should see something similar to the following:



Click the button labeled "**Allow another app...**". If the button is not selectable, then you may need to click the button called "**Change Settings**" to enable the ability to allow an application through the firewall. You should see something similar to the following:



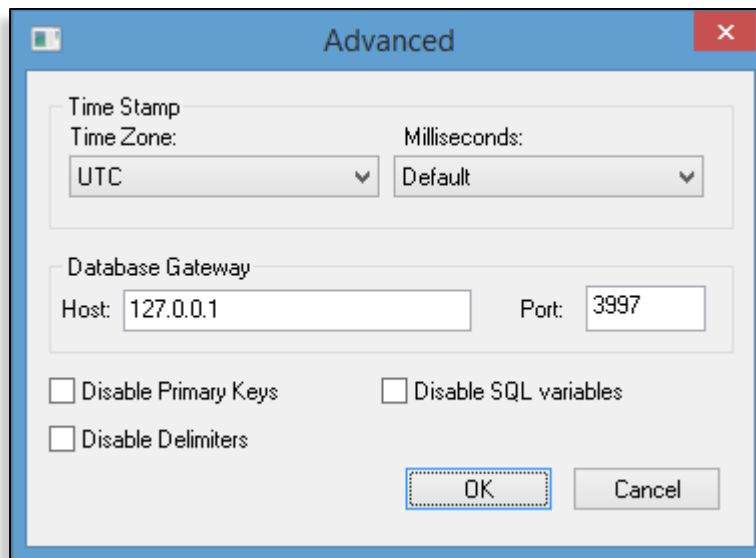
Click the button labeled "**Browse**", browse for the file called **StADOSvr.exe** and click the button labeled "**Add**". You should see something similar to the following:



Select the checkboxes that apply to the networks for which you want to grant access. Click OK and you are finished.

Configuring a Database Connection to use the Remote Studio Database Gateway

When you create a database connection in **InduSoft Web Studio**, one of the advanced settings that you need to configure is the **Database Gateway Host** and **Port**.



(Advanced Database Settings in InduSoft Web Studio v7.1 SP3)

The **Database Gateway Host** parameter specifies the IP Address (or computer name) used by the **InduSoft Web Studio Runtime** to connect with the **Studio Database Gateway**. Using the default value (127.0.0.1) or **localhost**, the **InduSoft Web Studio Runtime** will automatically launch and stop the **Studio Database Gateway** *locally* (on the same computer where the **InduSoft Web Studio Runtime** is running).

If you are using running the **Studio Database Gateway** *remotely* (in another station), you need to enter either the **hostname** or **IP address** of that remote station in the **Host** field. Moreover, you will need to make sure that the **Studio Database Gateway** *is running* (optionally as a service, as described in this **Tech Note**) on the remote station, since **InduSoft Web Studio Runtime** will not be able to automatically launch it from a remote station.

Map of Revision

Revision	Author	Date	Comments	Approval
A	Ricardo Marroni	Dec 21, 2011	Document Creation	
B	Átila Nogueira	Oct 2, 2014	Document Update	
C	Richard Clark	Apr 1, 2015	Update formatting, spelling and grammar corrections, content.	
D	Larry Combs, Fabio Terezinho, Richard Clark	April 24, 2015	Complete rewrite for current versions of IWS and security considerations	Consensus