



# GARDiS Installation

Install Guide  
SM007 - Issue 12

## Foreword

Copyright © 2021 TDSi. All rights reserved.  
 Time and Data Systems International Ltd operate a policy of continuous improvement and reserves the right to change specifications, colours or prices of any of its products without prior notice.

## Guarantee

For terms of guarantee, please contact your supplier.

## Trademarks

Copyright © 2021 Time and Data Systems International Ltd (TDSi). This document or any software supplied with it may not be used for any purpose other than that for which it is supplied, nor shall any part of it be reproduced without the prior written consent of TDSi.  
 Microsoft and Windows are registered trademarks of Microsoft Corporation.  
 All other brands and product names are trademarks or registered trademarks of their respective owners.

## Cautions and Notes

The following symbols are used in this guide:



**CAUTION!** This indicates an important operating instruction that should be followed to avoid any potential damage to hardware or property, loss of data, or personal injury.



**NOTE.** This indicates important information to help you make the best use of this product.

Issue	Date Issued	Change Summary	Issued By
1	25/10/17	Initial Release	RT
2	05/11/17	Content and Format Changes	RT
3	27/02/18	Content Update of installer and troubleshoot section	RT
4	28/02/18	Removed all Prerequisites	RT
5	08/03/18	Added Prerequisites back into TS Section	RT
6	19/07/18	Added Section 5.3 and 5.4 in TS	RT
7	10/10/18	Added HTTPS TS section along with other updates requested by DS	RT
8	09/11/18	Updated styling from FM's proof read	RT
9	21/03/19	Updated with upgrade section. .Net Framework is updated from 4.6.1 to 4.7.2. SQL Server version is updated from 2014 Express to 2014 SP2 Express.	TBA
10	02/05/19	Revised branding	FM
11	23/09/20	Updated pc requirements	TBA
12	30/07/21	Update GARDiS Requirements to reflect Windows Server 2019 and SQL Server 2019. Removed references to Windows 7, 8.1 and Windows Server 2012	TBA

## Contents

<b>1. Introduction .....</b>	<b>4</b>
<b>2. GARDiS Requirements .....</b>	<b>5</b>
2.1 Minimum Requirements .....	5
2.2 Recommended Requirements .....	5
2.3 Tested Operating Systems: .....	5
2.4 Supported Database Engines .....	5
2.5 Supported Browsers .....	5
<b>3. Installer   6</b>	
<b>4. Firewall Access for Server PC .....</b>	<b>13</b>
5.1 Accessing Inbound and Outbound Port Rules .....	13
5.2 Inbound Rules .....	14
5.3 Outbound Rules .....	17
<b>5. Upgrading GARDiS.....</b>	<b>20</b>
6.1 Uninstall the Previous Version .....	20
6.2 Install the New Version .....	20
<b>6. Troubleshooting.....</b>	<b>20</b>
7.1 Installing on a Domain Controller.....	20
7.2 Error installing .NET 3.5.....	20
7.3 Error installing .NET 4.7.2.....	21
7.4 SQL Installation Failure .....	21
7.5 Troubleshooting – Windows Features .....	22
7.5.1 Windows 10 Prerequisites.....	22
7.6 Log in Button Error.....	35
7.7 Unable to log in .....	36
<b>7. HTTPS       38</b>	
<b>8. VPN and WAN .....</b>	<b>39</b>

# 1. Introduction

This manual will show you the installation steps required, depending on the Windows version you're working on.

This guide contains walkthroughs for Windows 7, 8 and 10, as well as Server 2008, 2012 and 2016.

Before installing GARDiS on your system there are certain prerequisites that need to be enabled first.

**PLEASE NOTE:** Windows 8, 10, Server 2012 and 2016 need Windows updates enabled.

## 2. GARDiS Requirements

 **The computer name must be 15 characters or less.**

### 2.1 Minimum Requirements

Intel i5, 4GB Ram, 4GB free hard drive space, Windows 10 Pro.

### 2.2 Recommended Requirements

Intel i5 or above, 8GB Ram, 10GB free hard drive space.

### 2.3 Tested Operating Systems:

**GARDiS CANNOT BE INSTALLED ON A DOMAIN CONTROLLER**

- **Windows 2019 Server Standard x64 - Fully supported**
- **Windows 2019 Server Datacentre**
- **Windows 2016 Server Standard x64 - Fully supported**
- **Windows 2016 Server Datacentre x64 - Fully supported**
- Windows 2012 Server Standard x64 – Not supported (R2 SP1)
- Windows 2012 Server Datacentre x64 – Not supported (R2 SP1)
- Windows 2008 Server x86/x64 – Not supported (R2 SP1)
- **Windows 10 Pro x86/x64 – Fully supported**
- Windows 8.1 Pro x86/x64 – Not supported
- Windows 7 Professional x86/x64 – Not supported
- Windows 7 Enterprise x86/x64 – Not supported
- Windows 7 Ultimate x86/x64 – Not supported
- Windows 7 without Service Pack 1 installed – Not supported
- Windows 7 Home – Not supported

### 2.4 Supported Database Engines

GARDiS software will be installed with Microsoft SQL 2019 Express.

- SQL 2019 Standard x64
- SQL 2019 Express x64
- SQL 2017 Standard x64
- SQL 2017 Express x64
- SQL 2017 Enterprise x64
- SQL 2016 Express x64
- SQL 2016 Standard x64
- SQL 2016 Enterprise x64
- SQL 2014 Express x86/x64
- SQL 2014 Standard x86/x64
- SQL 2014 Enterprise x86/x64

**PLEASE NOTE:** Windows 7 and 2008 Server – **See section 3.1.**

**PLEASE NOTE:** Domain controllers or child domains are not supported by TDSi

### 2.5 Supported Browsers

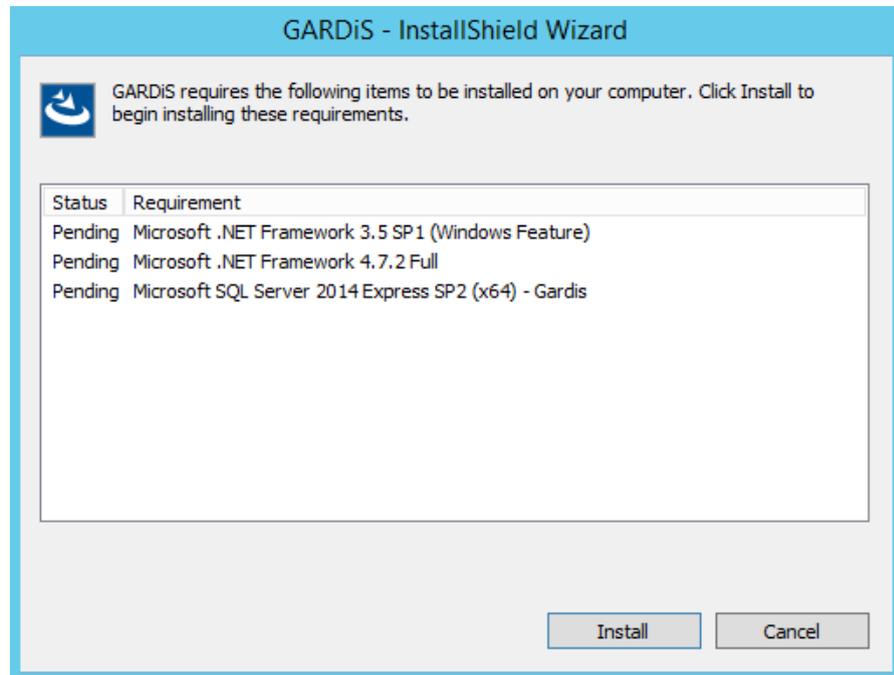
- Google Chrome
- Mozilla Firefox
- Edge
- Microsoft Internet Explorer 11
- Opera

## 3. Installer

Run the **'Setup.exe'** file.

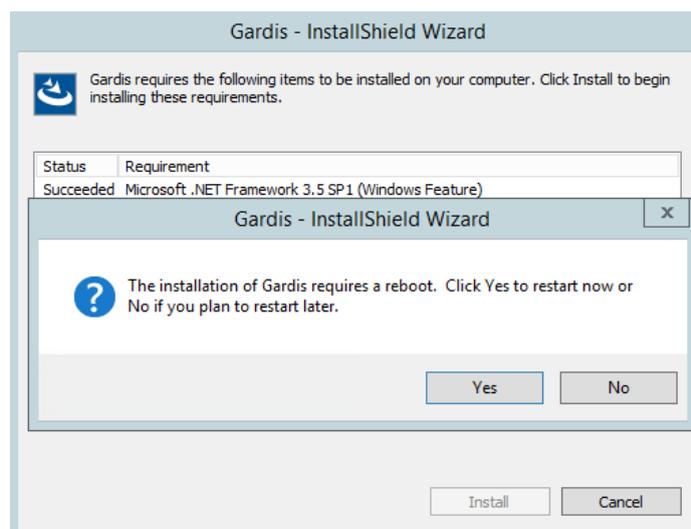
An InstallShield pop-up window may appear, prompting you to install any prerequisites required.

Click **'Install'**.



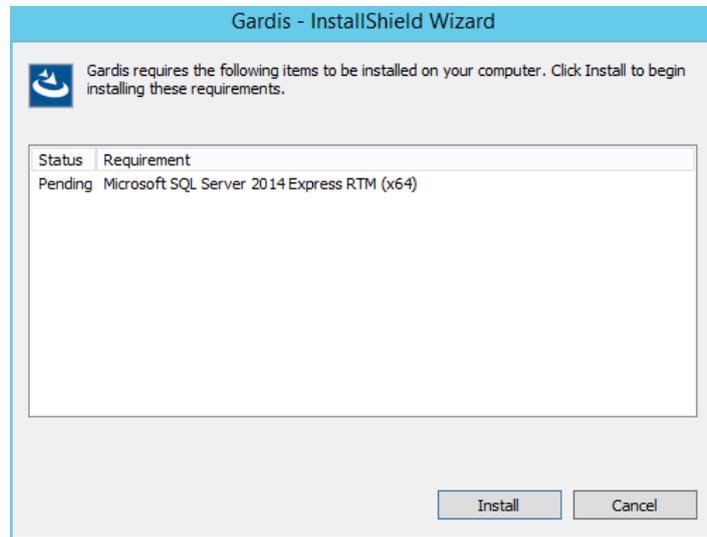
Wait while the required software is installed.

If prompted, click **'Yes'** to restart your computer.

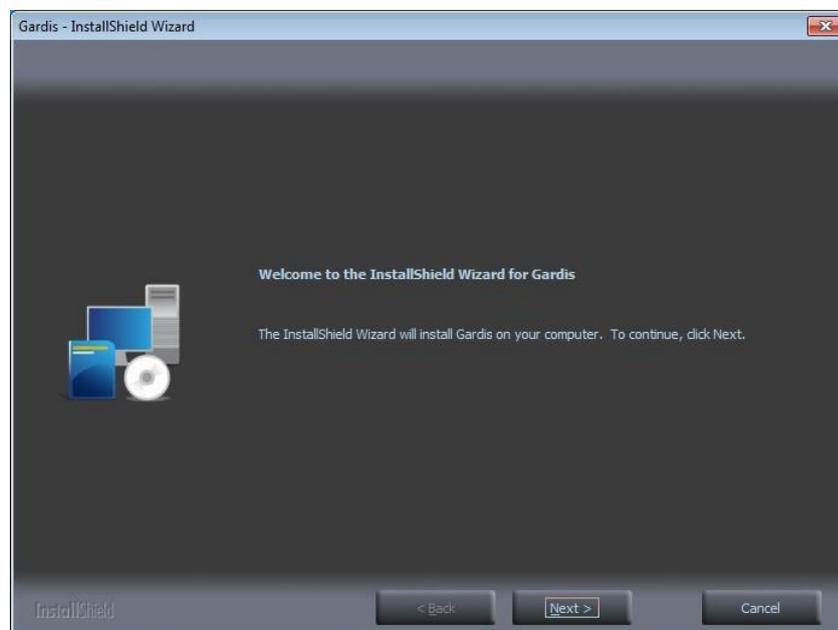


The InstallShield window will automatically reappear once your computer has restarted and you've logged back in.

Click **'Install'** to continue.

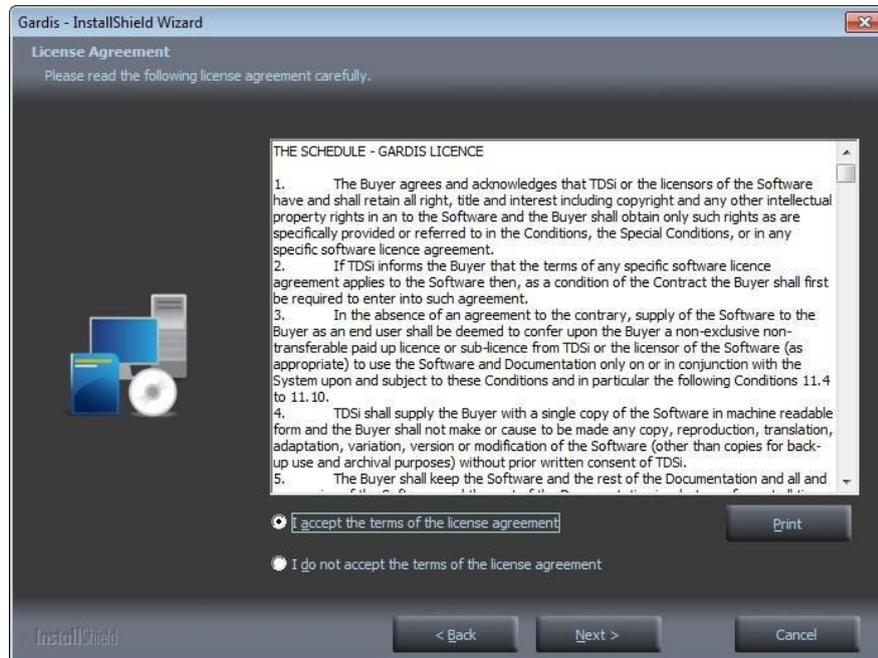


The installer window will now appear. Click **'Next'**.



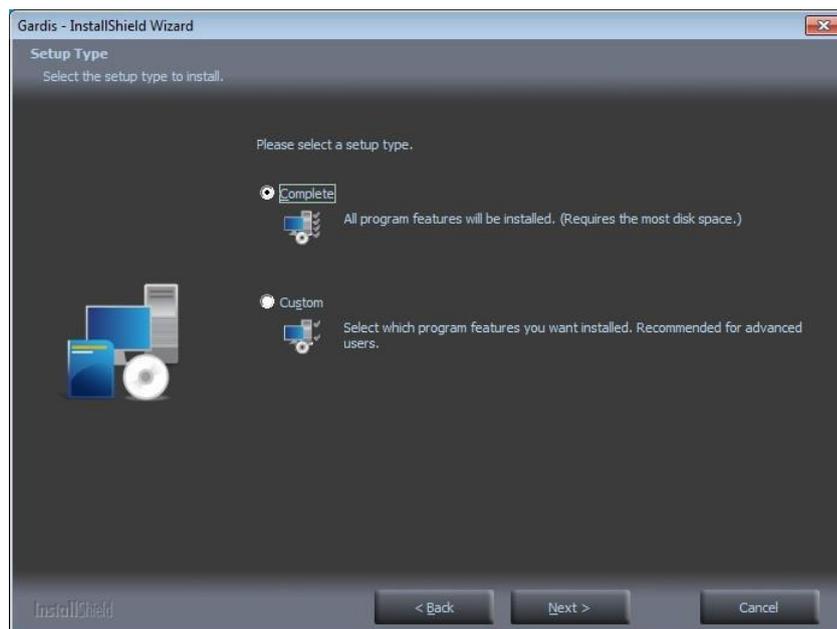
Read the User License Agreement then click **'I accept'**.

To continue, click **'Next'**.

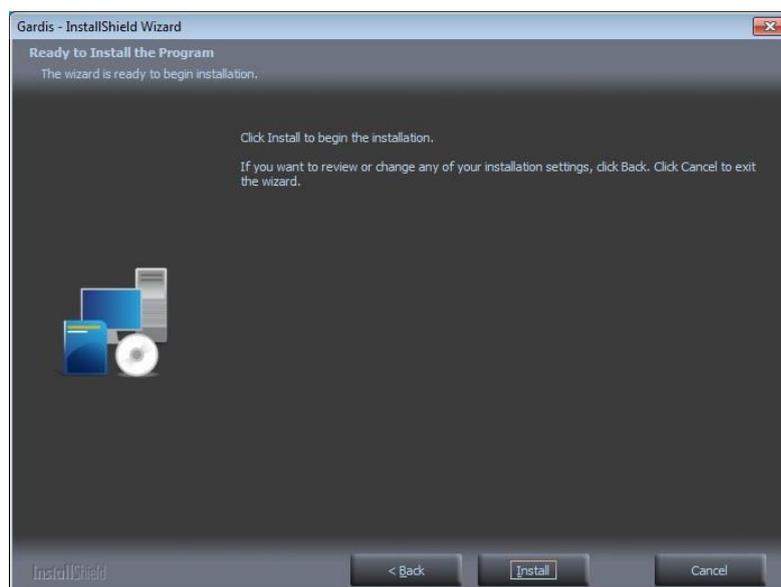


Click the required setup type. It's recommended that you select **'Complete'**, but to customise your install, click **'Custom'**.

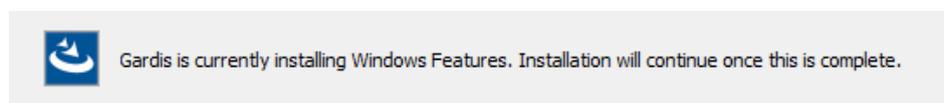
To continue, click **'Next'**.



Click **'Install'**.



Wait while Windows features are installed.

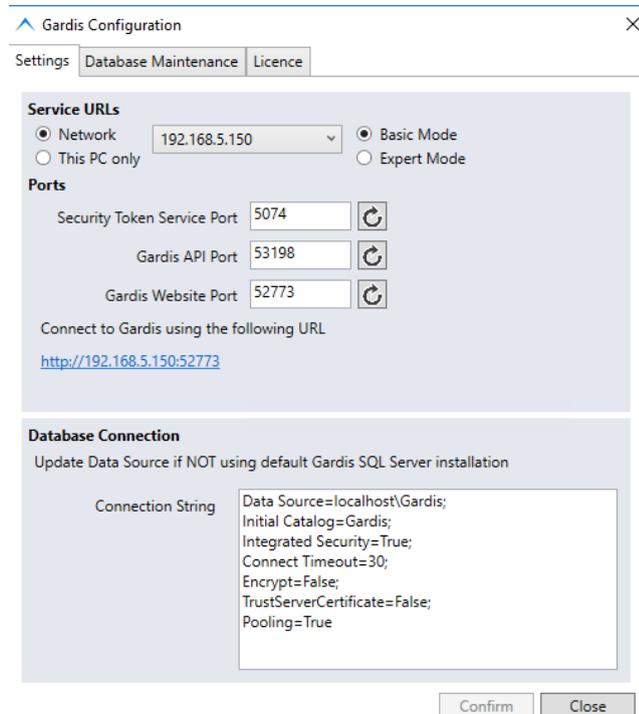


You will now see the configuration application appear. Enter the IP address of the PC so you can access the system remotely. Once complete, click **'Update'** then **'Finish'**.

If you wish to use/access GARDiS on your PC only, leave the settings as they are and click **'Finish'** in the bottom right corner.

**NOTE:** If you're accessing GARDiS from a remote PC, you may need to allow these port numbers in Windows firewall settings as a rule. See **Section 4** for information on how to set up firewall rules.

- **Service URLs:** 'Uniform Resource Locator' or the address where GARDiS can connect to.
- **Radio buttons: 'Network'** for connecting from other machines to the GARDiS PC >> drop down box to choose IP address from those listed on the PC, it may have two or more network cards, you will need to select which one will be listened to.
- **'This PC only'** will display the URL that will only work on the PC itself.
- These radio buttons do NOT change the operation of the GARDiS service, it's only to indicate to the installer what the desired URL will be following installation.



If you do not have one of the internet browsers listed in section 2.5, you will see this message.



To complete the install, click **'Yes, I want to restart my computer now'** then click **'Finish'**.



Navigate to the address you previously set in the configuration application.

E.g. 192.168.5.17:52773

Click **'Log In'** on the landing screen, then you will now be able to log into GARDiS using your username and password.

**Username:** GARDiS  
**Password:** TDSi\$1234

**NOTE:** The username and password is case sensitive.



## Login

Username

Password

Login

You will now see the screen below, prompting you to change your password.

Fill in the required fields, then click '**Submit**'. You will then be redirected to the landing page once more and asked to re-enter your log in details.

**You are required to change your password**

Current Password

New Password

Confirm password

Minimum length 8 and include 1 uppercase, 1 lowercase, 1 numeric and 1 special character

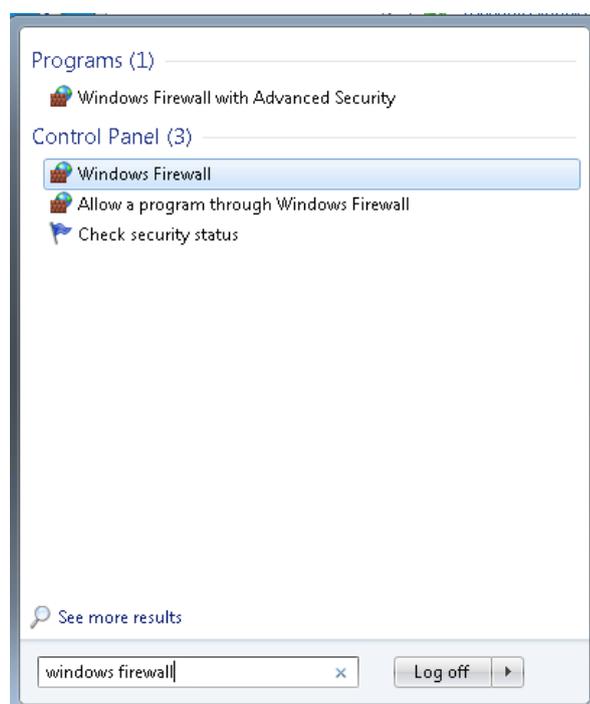
**Submit**

## 4. Firewall Access for Server PC

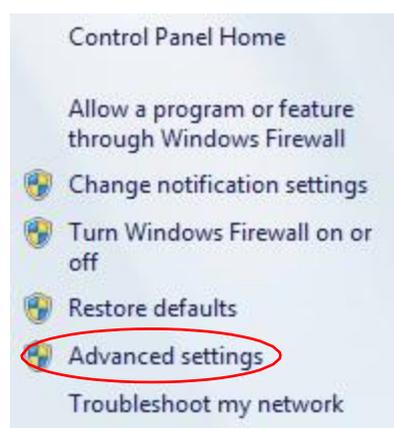
### 5.1 Accessing Inbound and Outbound Port Rules

To access GARDiS on a browser from a remote PC you need to allow the GARDiS ports through the firewall on the Server PC.

In the start menu, search for '**Windows Firewall**' and click on it.

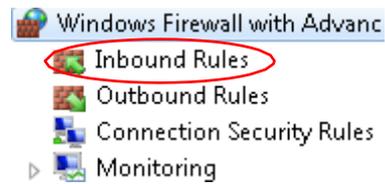


Look to the left hand panel and click '**Advanced settings**'.

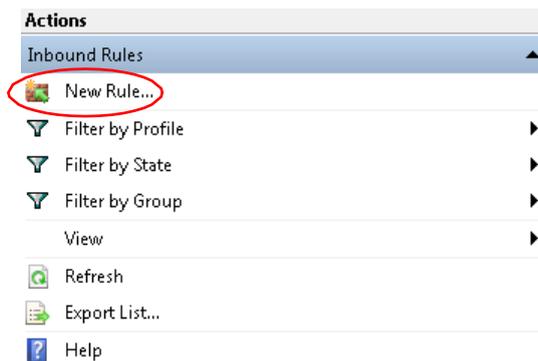


## 5.2 Inbound Rules

In the left hand menu click **'Inbound Rules'**.



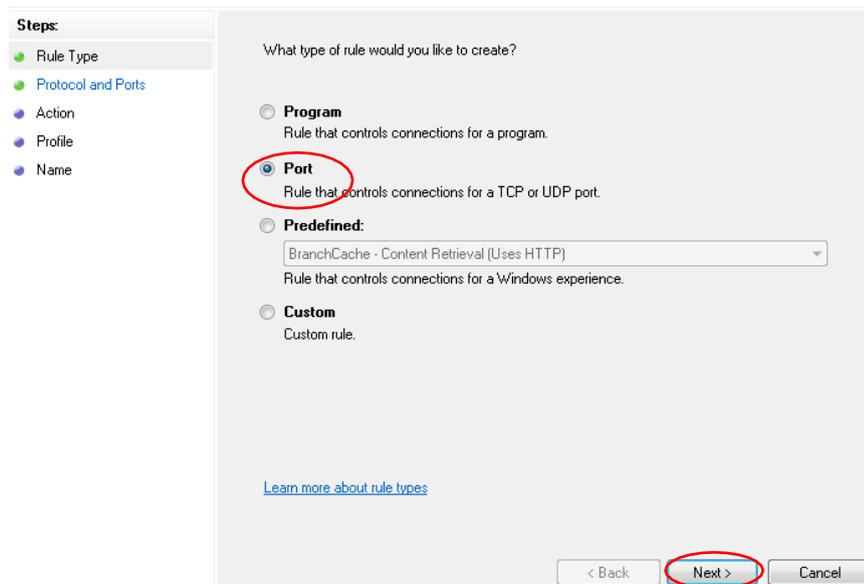
In the right hand menu click **'New Rule...'**



Make sure **'Port'** is selected, then click **'Next'**.

### Rule Type

Select the type of firewall rule to create.



Make sure TCP is selected, then click the **'Specific Local Ports'** box and enter:

- 5074
- 52773
- 53198

**NOTE:** Each port number must be followed by a comma.

Then click **'Next'**.

#### Protocol and Ports

Specify the protocols and ports to which this rule applies.

**Steps:**

- Rule Type
- Protocol and Ports
- Action
- Profile
- Name

Does this rule apply to TCP or UDP?

TCP  
 UDP

Does this rule apply to all local ports or specific local ports?

All local ports  
 Specific local ports:   
Example: 80, 443, 5000-5010

[Learn more about protocol and ports](#)

< Back   Next >   Cancel

Make sure you've selected **'Allow the Connection'** then click **'Next'**.

#### Action

Specify the action to be taken when a connection matches the conditions specified in the rule.

**Steps:**

- Rule Type
- Protocol and Ports
- Action
- Profile
- Name

What action should be taken when a connection matches the specified conditions?

Allow the connection  
This includes connections that are protected with IPsec as well as those are not.

Allow the connection if it is secure  
This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node.

Block the connection

[Learn more about actions](#)

< Back   Next >   Cancel

By default Domain, Private and Public are ticked. Change as required then click **'Next'**.

**Profile**

Specify the profiles for which this rule applies.

**Steps:**

- Rule Type
- Protocol and Ports
- Action
- Profile
- Name

When does this rule apply?

**Domain**  
Applies when a computer is connected to its corporate domain.

**Private**  
Applies when a computer is connected to a private network location.

**Public**  
Applies when a computer is connected to a public network location.

[Learn more about profiles](#)

< Back   Next >   Cancel

Give the new rule a name and enter a description if required, then click **'Finish'**.

**Name**

Specify the name and description of this rule.

**Steps:**

- Rule Type
- Protocol and Ports
- Action
- Profile
- Name

Name:  
GARDIS Ports

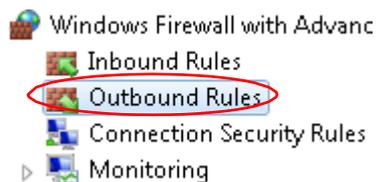
Description (optional):

< Back   Finish   Cancel

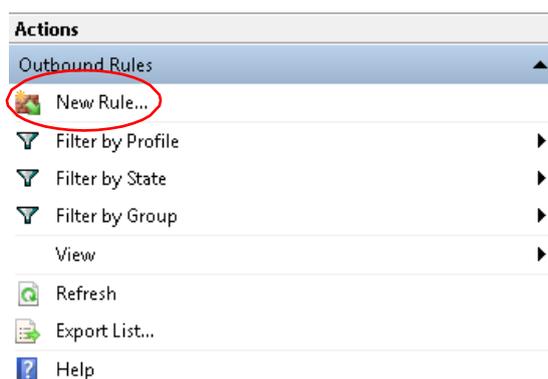
## 5.3 Outbound Rules

One of the port numbers also needs to be entered into an **Outbound Rule**.

Windows Firewall Advanced Settings should still be open, click '**Outbound Rules**' in the left menu.



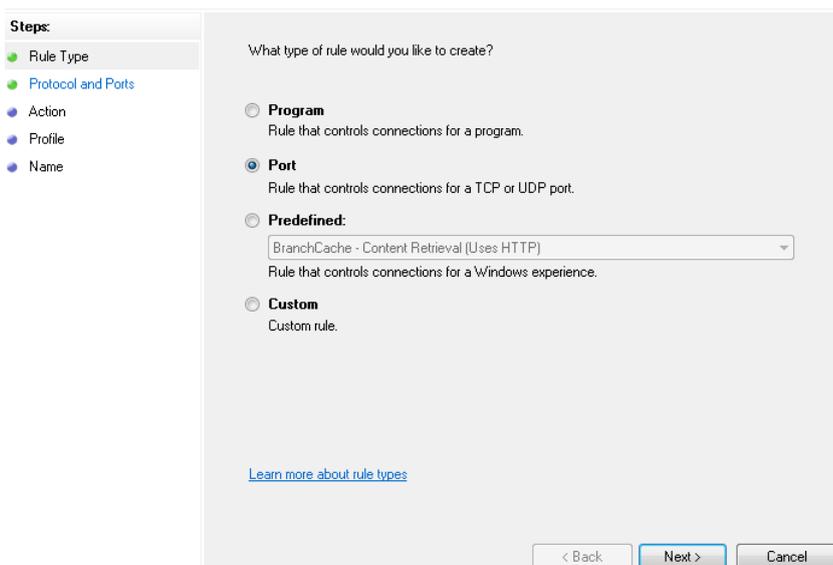
Click '**New Rule...**' in the right hand menu.



Select '**Port**' then click '**Next**'.

### Rule Type

Select the type of firewall rule to create.



Make sure **'TCP'** is selected, then enter **'5074'** in the specific remote ports box. Then click **'Next'**.

#### Protocol and Ports

Specify the protocols and ports to which this rule applies.

The screenshot shows a configuration window with a sidebar on the left and a main content area on the right. The sidebar, titled 'Steps:', contains five items: 'Rule Type', 'Protocol and Ports', 'Action', 'Profile', and 'Name'. 'Protocol and Ports' is highlighted with a green dot. The main content area has the following text and controls:

Does this rule apply to TCP or UDP?

TCP  
 UDP

Does this rule apply to all remote ports or specific remote ports?

All remote ports  
 Specific remote ports:   
Example: 80, 443, 5000-5010

[Learn more about protocol and ports](#)

< Back   Next >   Cancel

Make sure **'Allow the Connection'** is selected, then click **'Next'**.

#### Action

Specify the action to be taken when a connection matches the conditions specified in the rule.

The screenshot shows a configuration window with a sidebar on the left and a main content area on the right. The sidebar, titled 'Steps:', contains five items: 'Rule Type', 'Protocol and Ports', 'Action', 'Profile', and 'Name'. 'Action' is highlighted with a green dot. The main content area has the following text and controls:

What action should be taken when a connection matches the specified conditions?

**Allow the connection**  
This includes connections that are protected with IPsec as well as those are not.

**Allow the connection if it is secure**  
This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node.

**Block the connection**

[Learn more about actions](#)

< Back   Next >   Cancel

By default Domain, Private and Public are ticked. Change as required then click **'Next'**.

**Profile**

Specify the profiles for which this rule applies.

Name the rule as required then click **'Finish'**.

**Name**

Specify the name and description of this rule.

## 5. Upgrading GARDiS

### 6.1 Uninstall the Previous Version

Go to Control Panel -> Programs and Features. Right click on GARDiS from the list of programs and select "Uninstall".  
The software will be removed and the configuration settings will remain.

### 6.2 Install the New Version

Install the new version by following the steps in section 4 (Installer) from this manual.

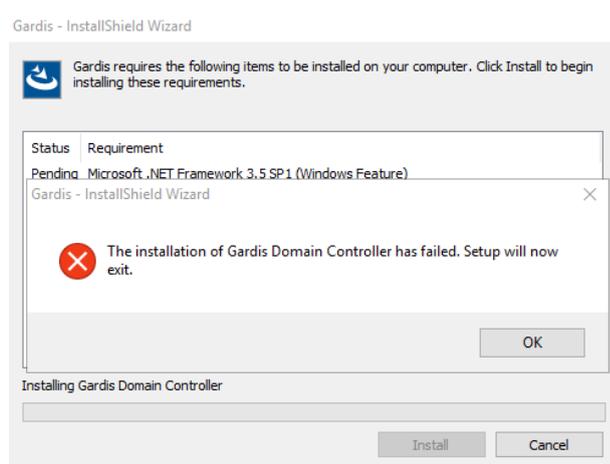
During the Configuration step, the previous settings will be displayed. Confirm and close.

The installer may ask to reboot the computer. This is recommended for successful software installation.

## 6. Troubleshooting

### 7.1 Installing on a Domain Controller

GARDiS cannot be installed on a domain controller. If you attempt to install on a domain controller you will see this error message.

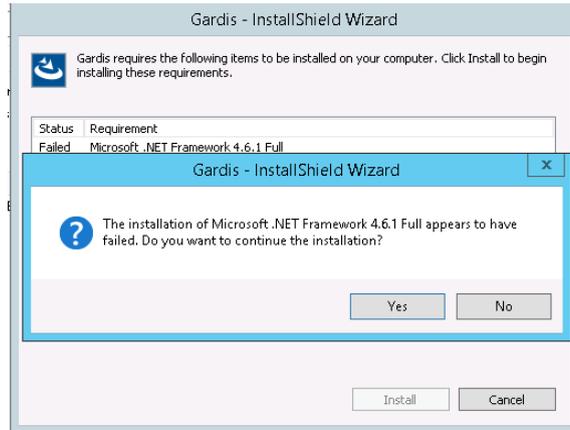


### 7.2 Error installing .NET 3.5

If you encounter an error while installing .NET 3.5 during the installation, go to the following web address

<https://support.microsoft.com/en-gb/help/2734782/net-framework-3-5-installation-error-0x800f0906-0x800f081f-0x800f0907>

Find your Windows version and error code, then follow the instructions on Microsoft's website.



### 7.3 Error installing .NET 4.7.2

If you encounter an error as shown below while installing .NET 4.7.2 you will need to install windows updates.

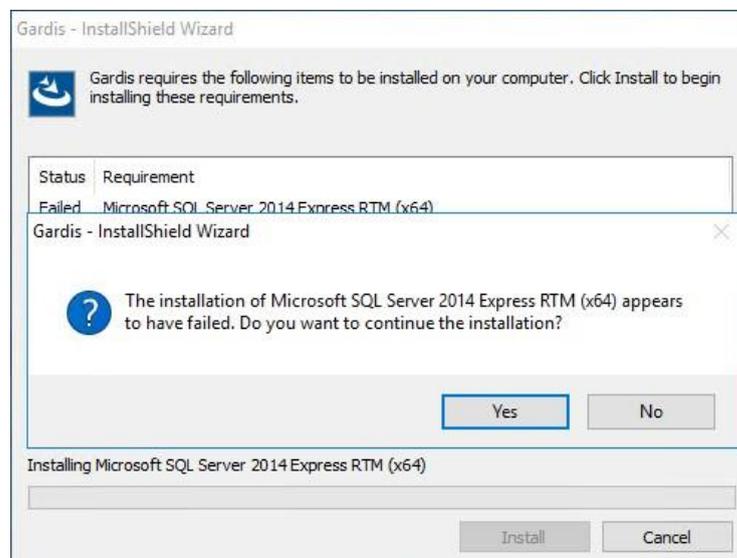
### 7.4 SQL Installation Failure

If you encounter errors while installing SQL during the installation of GARDiS, open the '**Summary.txt**' log file located here:

C:\Program Files\Microsoft SQL Server\120\Setup Bootstrap\Log\

Or, depending on what operating system you're using:

C:\Program Files (x86)\Microsoft SQL Server\120\Setup Bootstrap\Log\



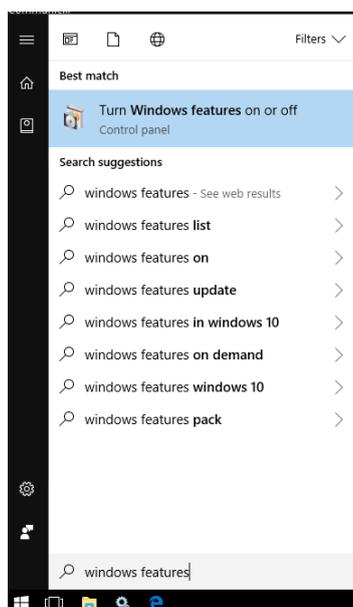
## 7.5 Troubleshooting – Windows Features

If you experience any issues while installing or running GARDiS, it may be because Windows was unable to automatically enable some of the Windows features. The following steps will show you how to enable all the required features depending on the version of Windows you are using. Make sure you check these Windows features.

### 7.5.1 Windows 10 Prerequisites

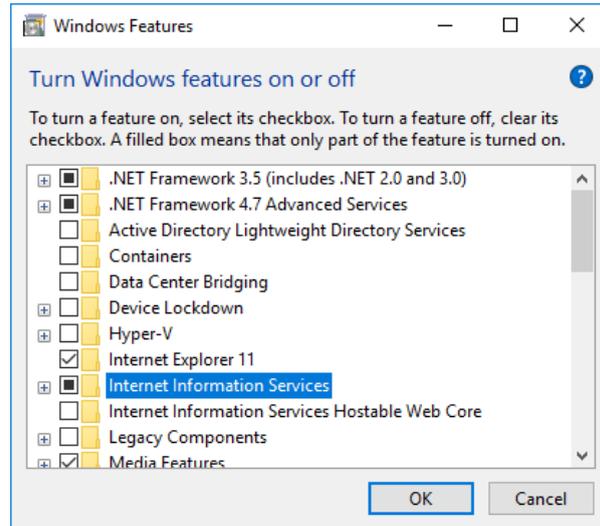
Windows features are accessible by clicking '**Start**' and performing a search through the control panel.

**Click** 'Turn Windows features on or off'.

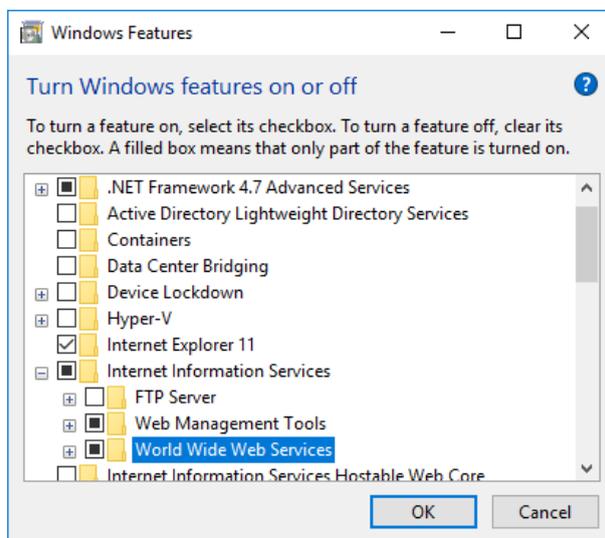


Make sure '**.NET Framework 3.5**' and '**4.7**' are enabled at the top of the list.

Make sure '**Internet Information Services**' are enabled, then click the  icon to expand and reveal more options.

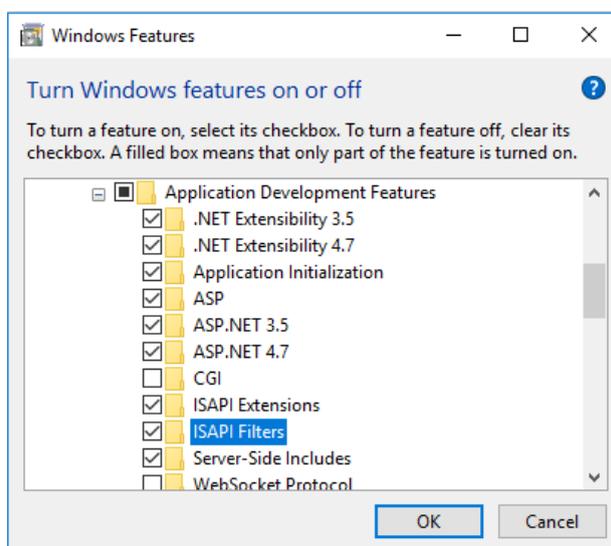


Click the  icon next to World Wide Web Services to expand and show more options.



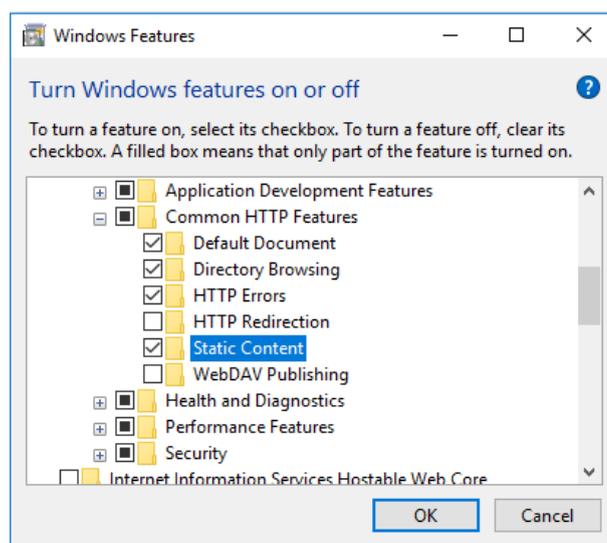
Click the  icon next to Application Development Features to expand then make sure the following settings are enabled:

- .NET Extensibility 4.7
- ASP
- ASP .NET 4.7
- ISAPI Extensions
- ISAPI Filters



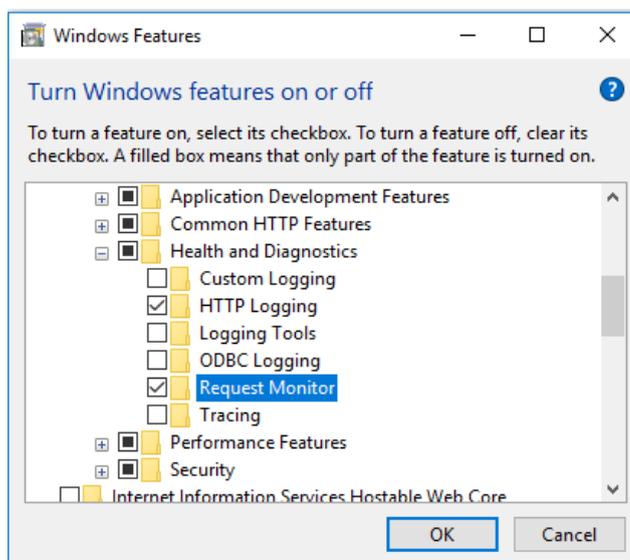
Scroll down to Common HTTP Features and click the  icon to reveal more options. Then make sure the following settings are enabled:

- Default Document
- Directory Browsing
- HTTP Errors
- Static Content



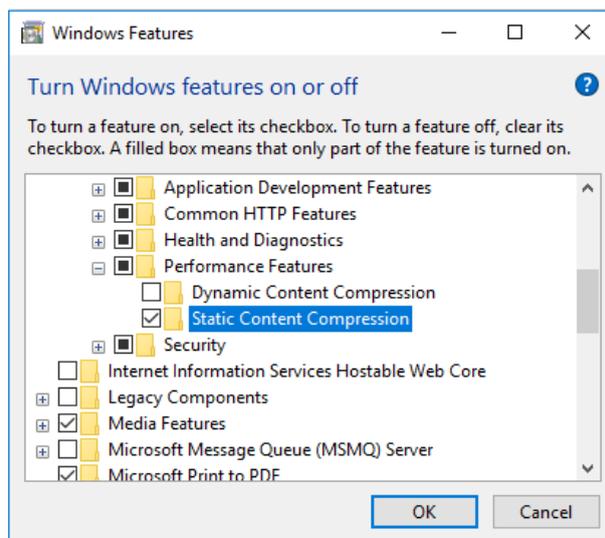
Click the  icon next to Health and Diagnostics to reveal more settings then make sure the following settings are enabled:

- HTTP Logging
- Request Monitor



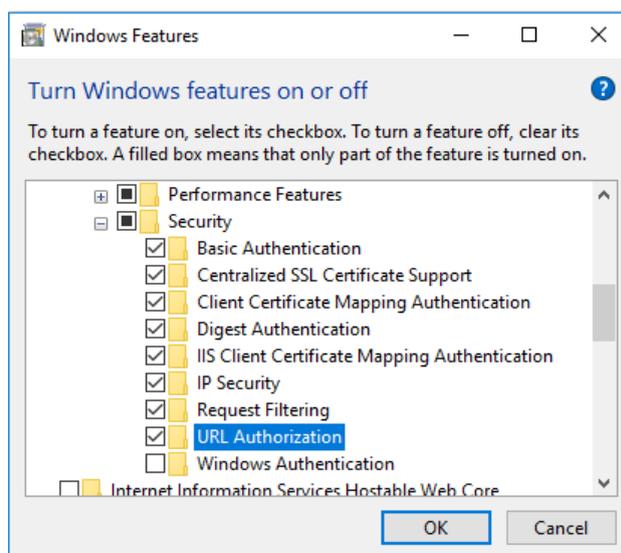
Click the  icon next to Performance Features then make sure the following settings are enabled:

- Static Content Compression

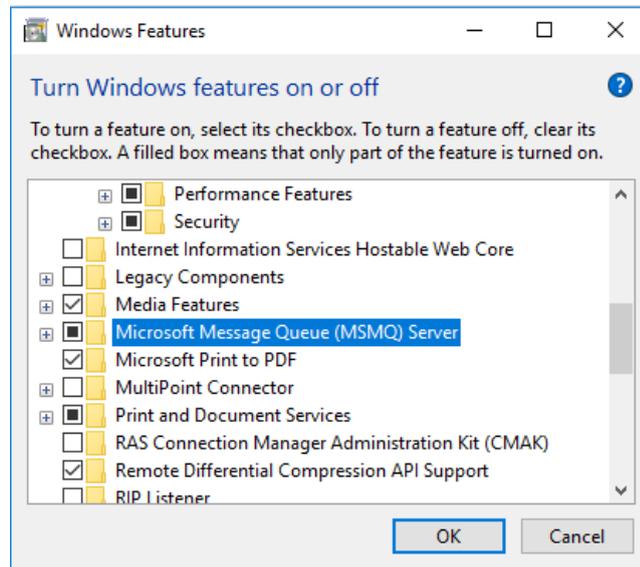


Click the  icon next to Security and make sure the following settings are enabled:

- Basic Authentication
- Client Certificate Mapping Authentication
- IIS Client Certificate Mapping Authentication
- IP Security
- Request Filtering
- URL Authorization



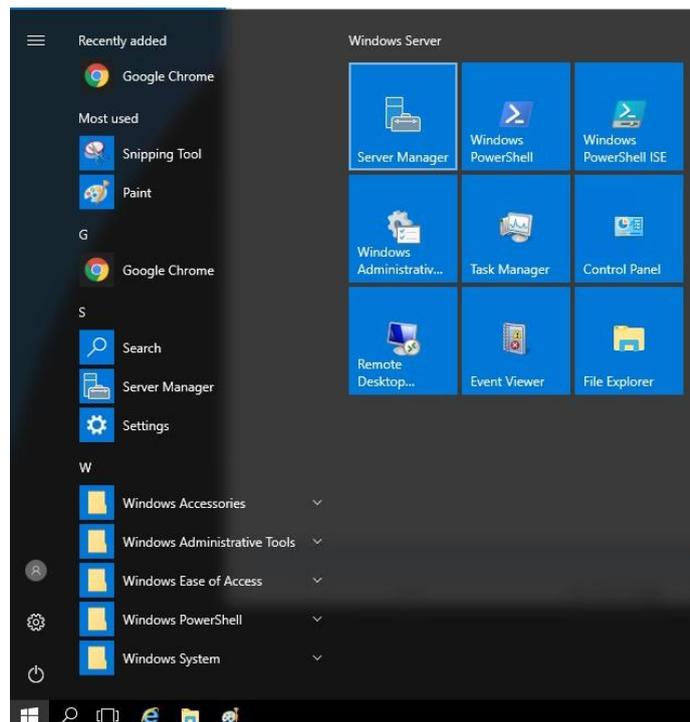
Last of all, scroll down to Microsoft Message Queue (MSMQ) Server and make sure that it is enabled.



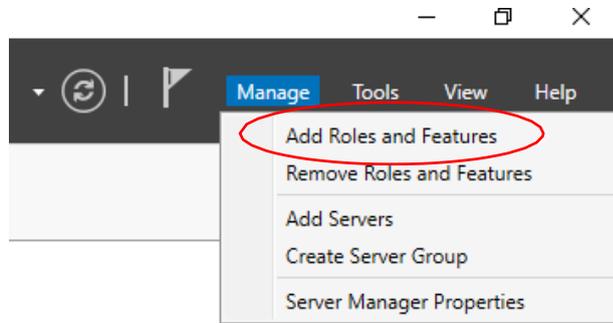
Once complete, click 'OK'.

## 7.5.2 Windows Server 2016 Windows Features

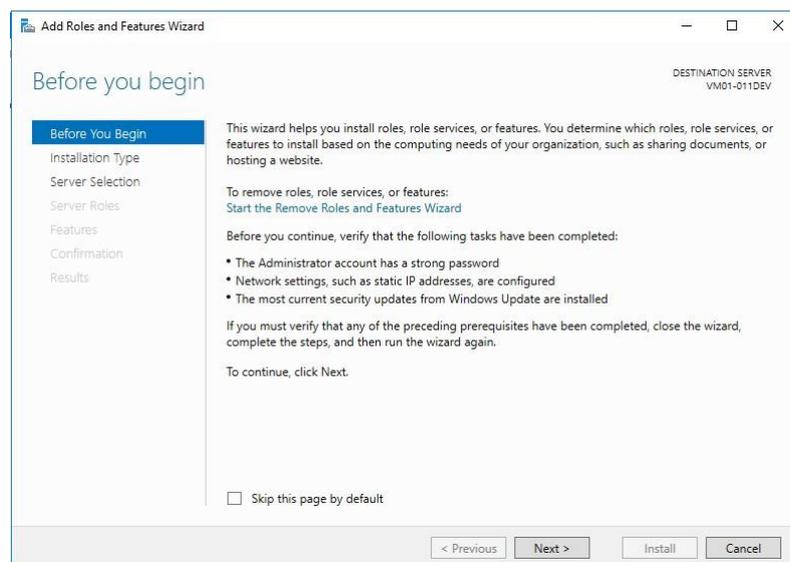
Windows features can be configured on Windows Server 2016 by clicking the 'Start' icon then clicking 'Server Manager'.



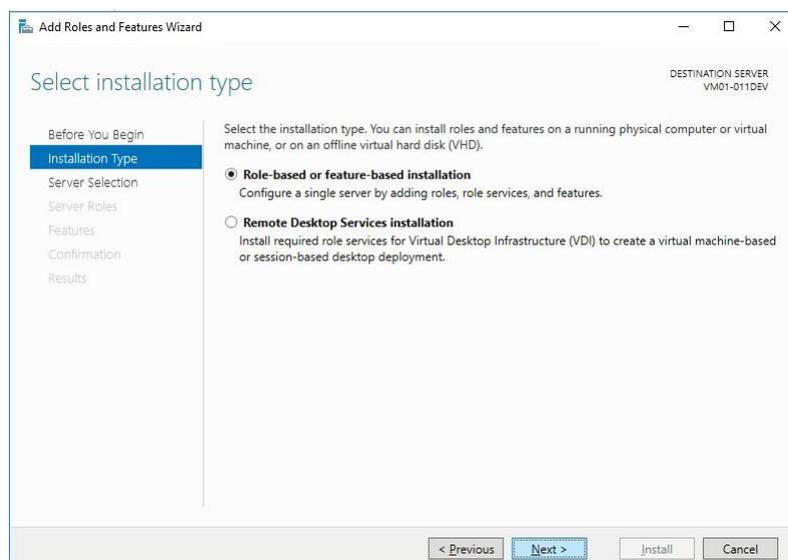
In the top right corner, click **'Manage'** then click **'Add Roles and Features'**.



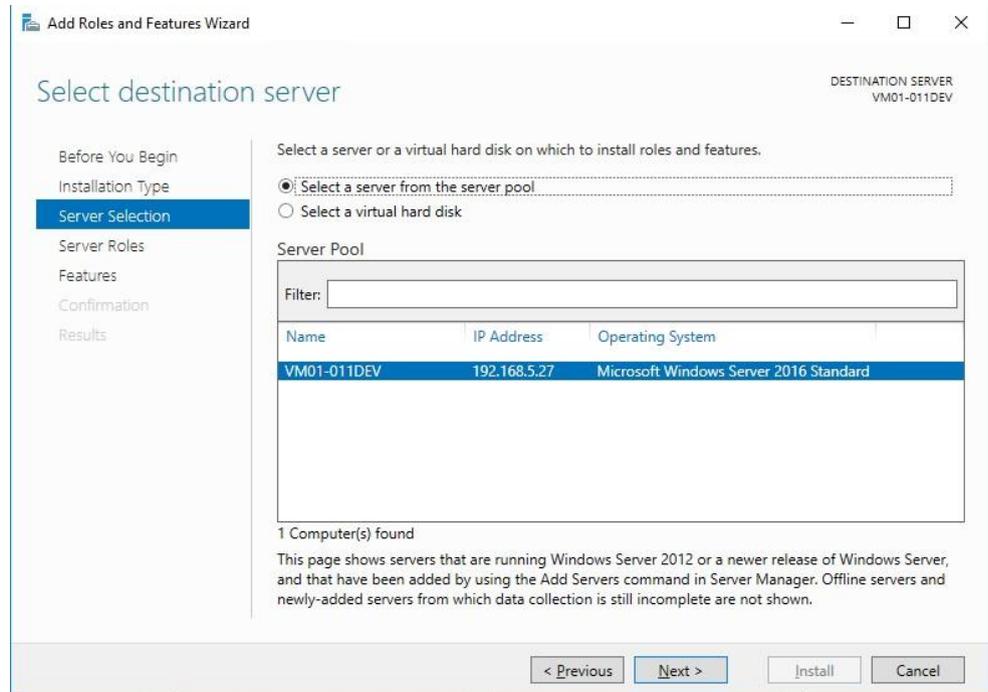
Click **'Next'**.



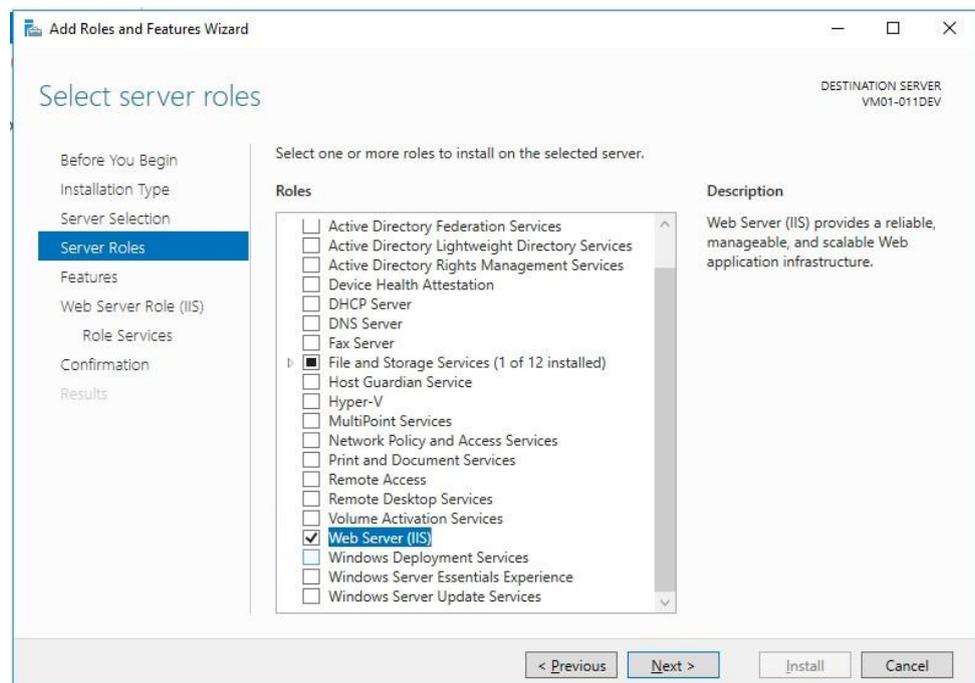
Select the required option then click **'Next'**.



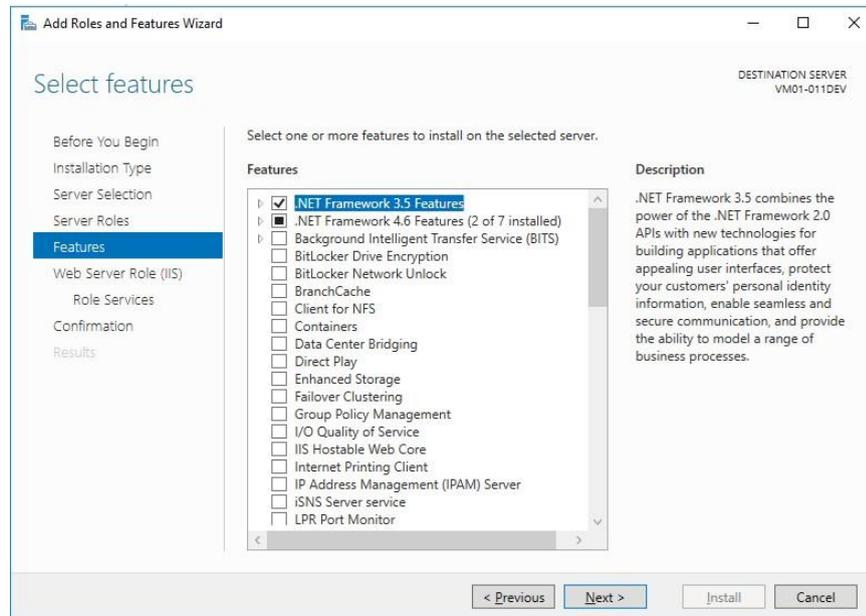
Click the required server then click **'Next'**.



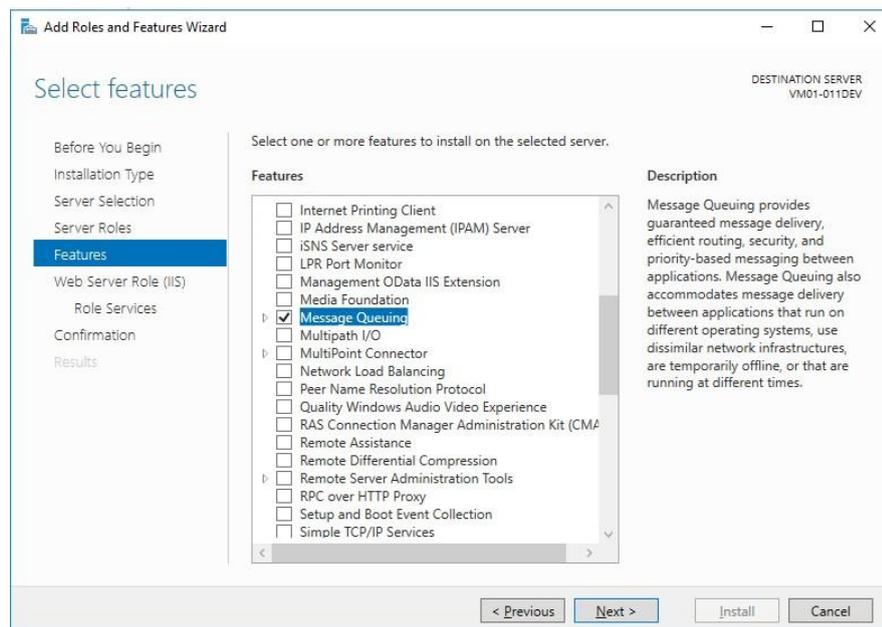
Scroll down the list to **'Web Server (IIS)'** then click to enable it. Then click **'Next'**.



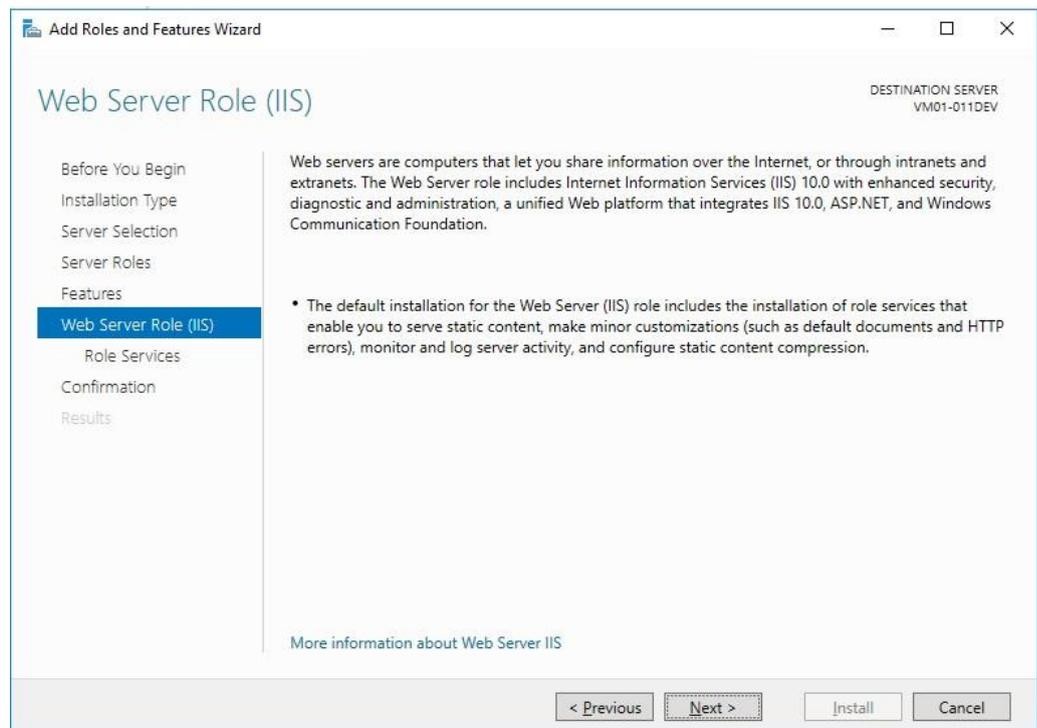
At the top of the list, make sure **'.NET Framework 3.5 Features'** and **'.NET Framework 4.6 Features'** are enabled.



Scroll down the list and click **'Message Queuing'** to enable it, then click **'Next'**.

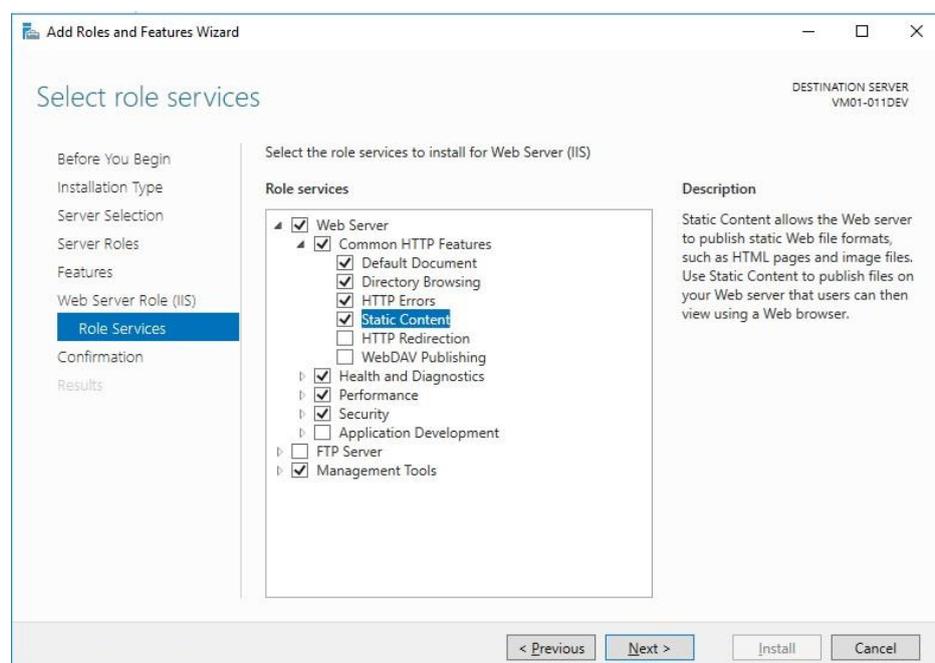


Click **'Next'**.



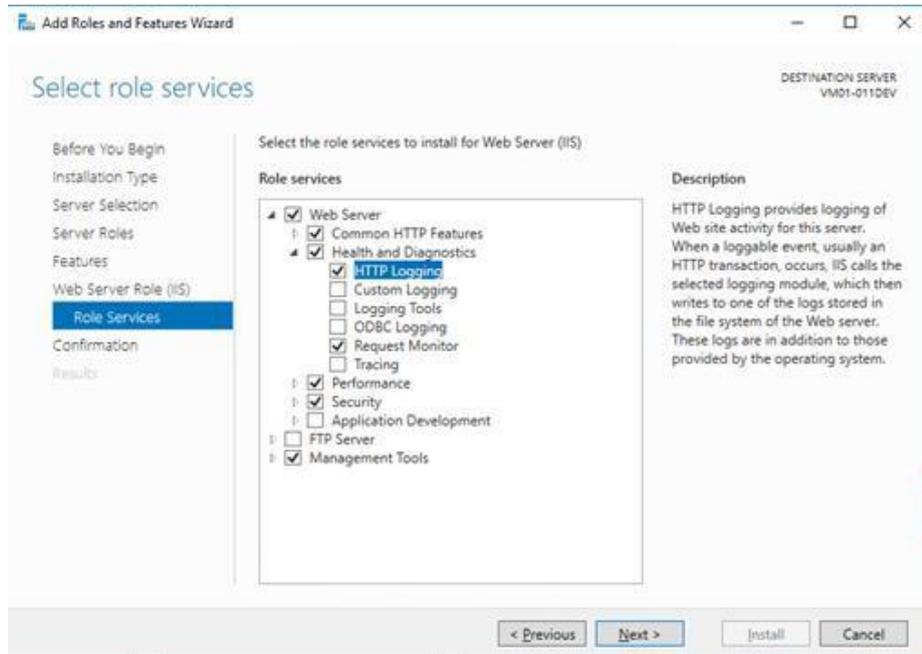
Click the  icon next to Common HTTP Features to expand and reveal more settings. Then make sure the following settings are enabled:

- Default Document
- Directory Browsing
- HTTP Errors
- Static Content



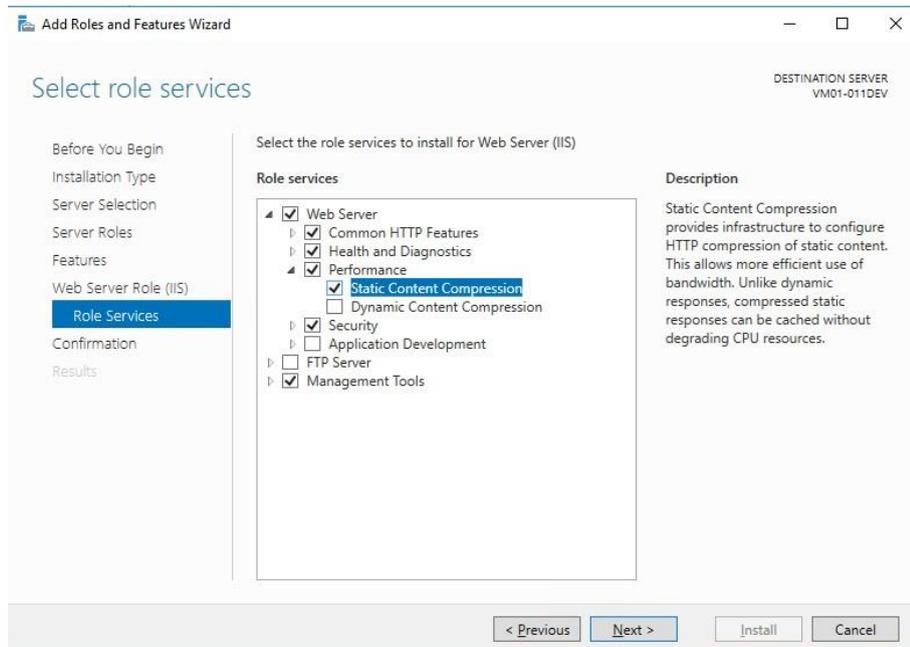
Click the  icon next to Health and Diagnostics to expand and reveal more options.  
Then make sure the following settings are enabled.

- HTTP Logging
- Request Monitor



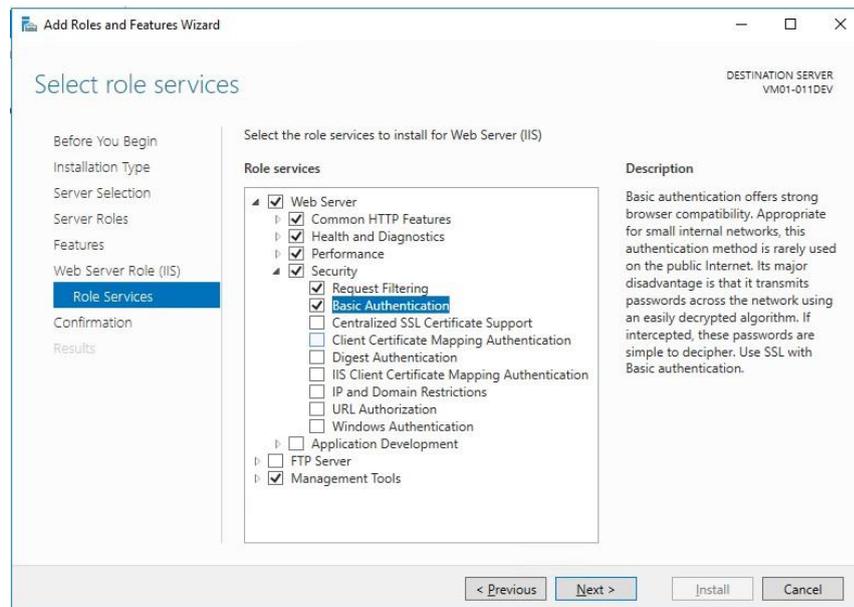
Click the  icon next to Performance to expand and reveal more options. Then make sure the following settings are enabled:

- Static Content Compression



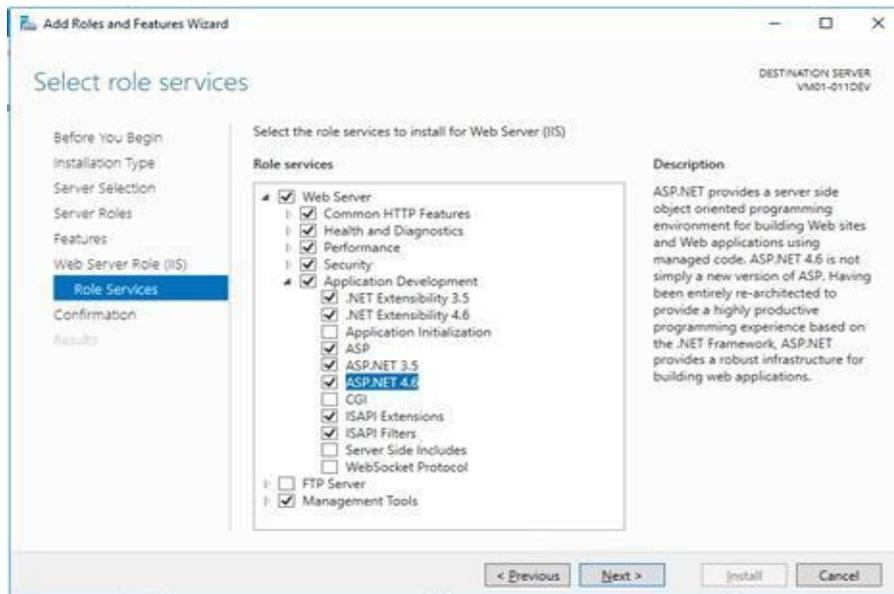
Click the ▶ icon next to Security to expand and reveal more options. Then make sure the following settings are enabled:

- Request Filtering
- Basic Authentication

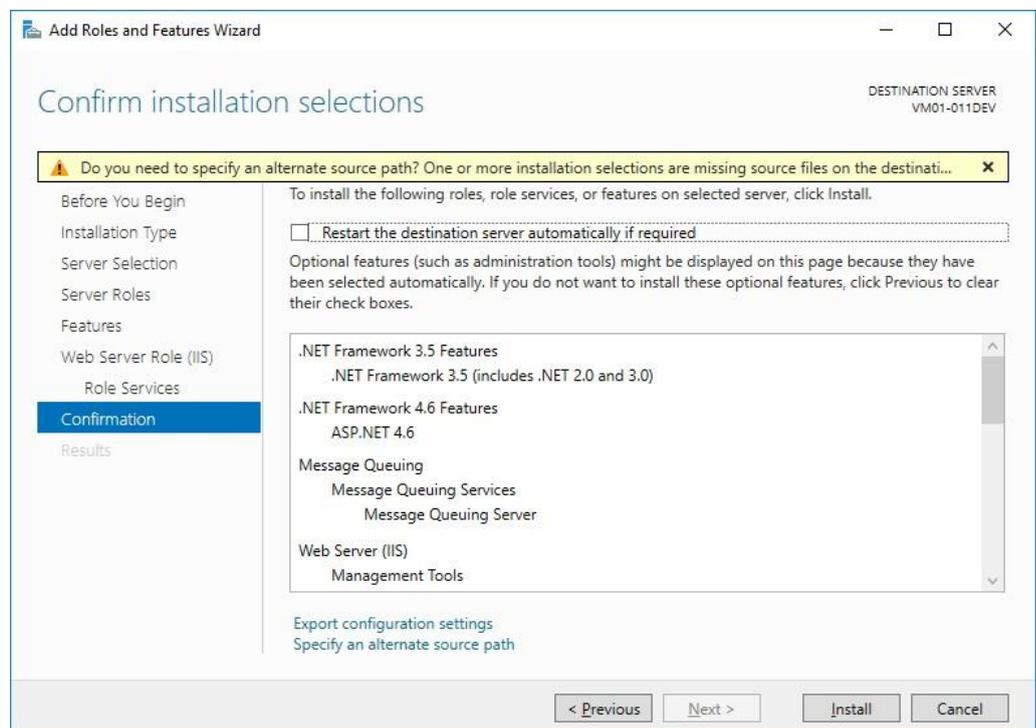


Click the ▶ icon next to Application Development to expand and reveal more options. Then make sure the following settings are enabled:

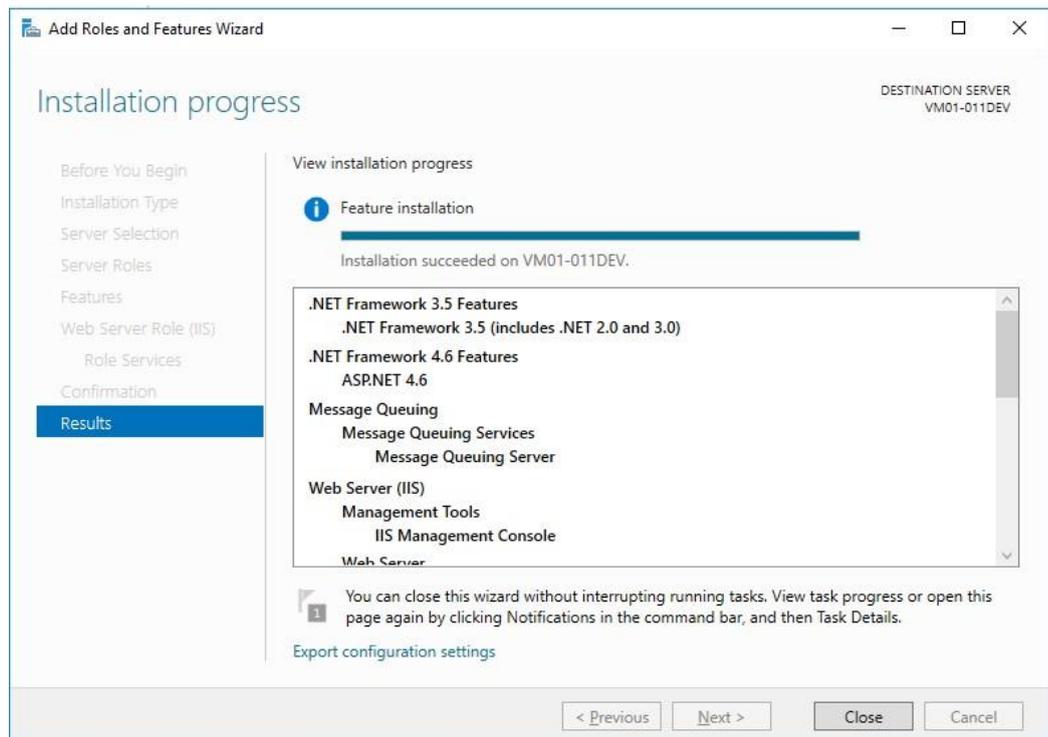
- .NET Extensibility 3.5
- .NET Extensibility 4.6
- ASPI
- ASP.NET 3.5
- ASP .NET 4.6
- ISAPI Extensions
- ISAPI Filters



Click 'Install'.

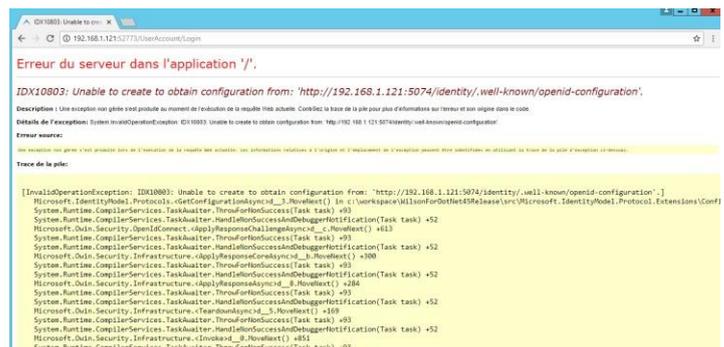
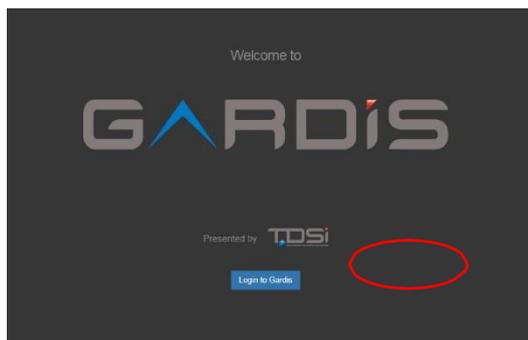


Wait for Windows to install the features, then once complete click 'Close'.



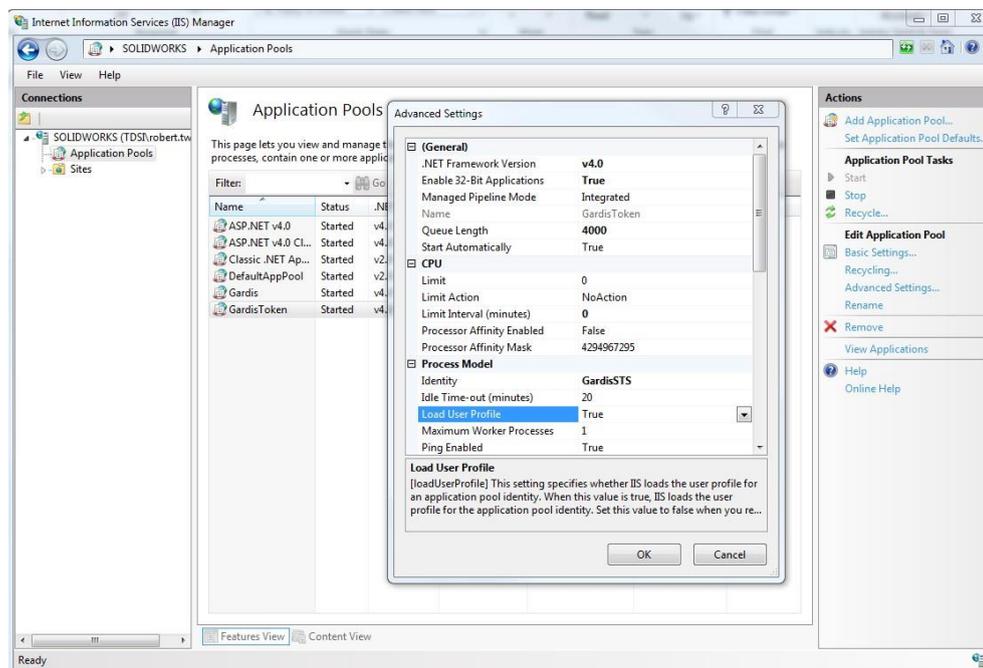
## 7.6 Log in Button Error

**Symptom:** Can navigate to the login page, but when you click the 'Login' button, the following screen appears with IDX10803 error.

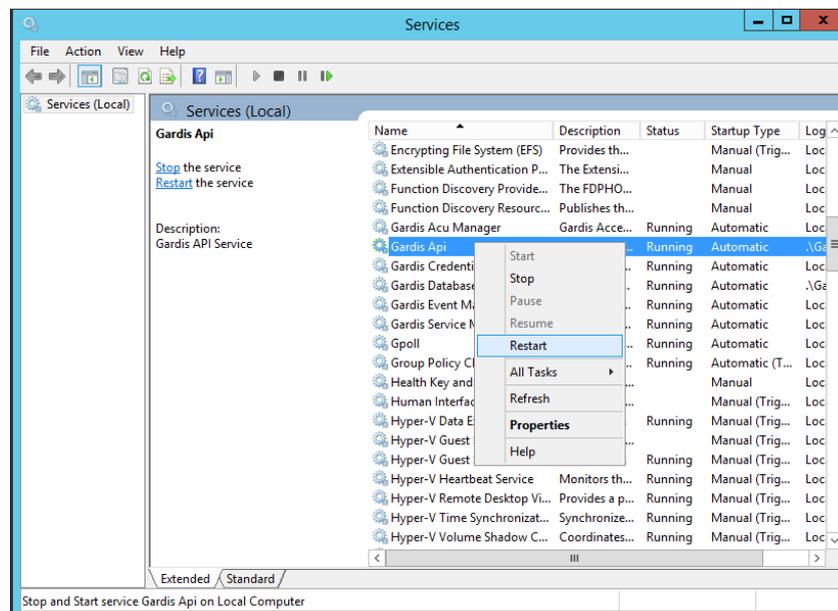


**Resolution:** Change the 'Load User Profile' setting in IIS to 'True'.

- Open 'Internet Information Services (IIS) Manager'.
- Find your computer in the connections menu on the left and click the 'Expand' arrow.
- Click 'Application Pools'.
- Left click 'GardisToken' then click 'Advanced Settings' in the right hand menu.
- Locate 'Load User Profile'.
- If it says false, click on it and change it to 'True'.



Once complete, open **'Services'** and find **'Gardis API'**. Right click it, then click **'Restart'**.

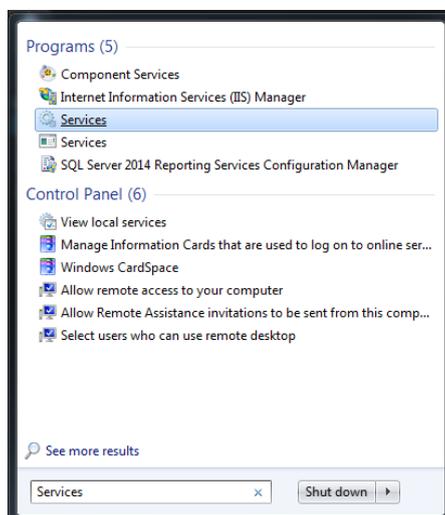


## 7.7 Unable to log in

The most likely cause of this issue is that the GARDiS services aren't running.

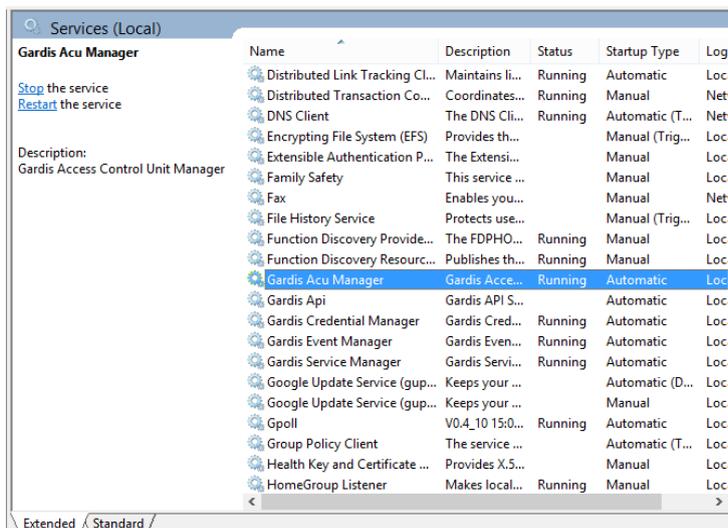
Once you've restarted your system after the install, GARDiS should start automatically within 3 minutes.

Open **'Services'**.

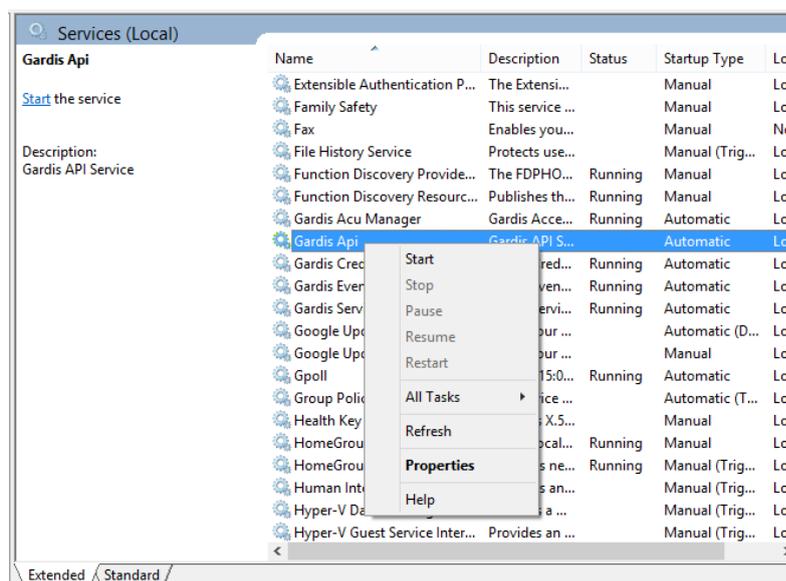


Make sure the following services are running.

- Gardis ACU Manager
- Gardis API
- Gardis Credential Manager
- Gardis Event Manager
- Gardis Service Manager
- SQL (GARDIS)



If the services aren't running, right click on it and click **'Start'**.



Now you're sure the services are running, browse to:

**http://localhost:52773** or the address you've set previously during the installation.

You will now be able to log into GARDiS using your username and password.

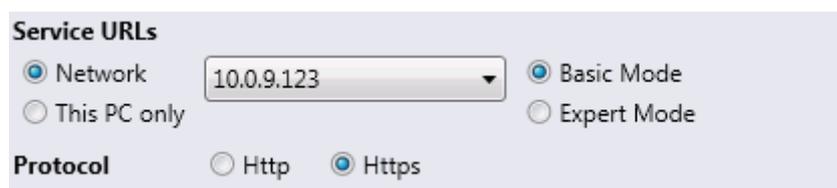
## 7. HTTPS

The default protocol for GARDiS is Http. This is, in most cases, acceptable as all data is being transferred on a local area network. In a medium to large organisation, data protection and securing data will be more active. For this, the protocol needs to be configured to use Https, which encrypts all data between the client (Browser) and the server.

It is recommended to stop all GARDiS services until all tasks are complete.

### 8.1 Enable the https

First run the GARDiS configuration tool and select the Https option.



Change the protocol from 'Http' to 'Https'.

Https has a default port of 443 and if this is the only website running on this PC (recommended), the website port can be set to this value.

**Ports**

Security Token Service Port	<input type="text" value="44310"/>	
Gardis API Port	<input type="text" value="44311"/>	
Gardis Website Port	<input type="text" value="443"/>	

Connect to Gardis using the following URL

The '**Security Token Service**' and '**API**' can then be changed to any value and as an idea using a 443xx gives an indication they are also on a https. Finally click the '**Confirm**' button to save these settings.

If an error occurs at this point in updating the IIS settings, this can be ignored as changes are required to be set in the IIS.

## 8. VPN and WAN

GARDiS will not work internally as the VPN network cannot be accessed on the same WAN.