

**GateKeeper v3
(PUD3907 Version 3.0)**
Turnstile Monitoring Software



GATEKEEPER

Installation Guide

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Contents

Preface	4
Document Overview	4
Before You Begin	4
Minimum Host Computer Requirements	4
Minimum Software Prerequisites	4
Required Files	4
Initial Software Configuration.....	5
Enable IIS Roles	5
Install and Configure SQL	8
Install and Configure SQL Server Management Studio.....	13
Configure SQL Login	15
Configure .NET 4.0.....	19
GateKeeper Installation	21
Test for Correct Installation.....	29
From Host Computer	29
From a Networked Device.....	30
Password Reset	31
Set Up Password Reset Email Account.....	31
Set Up Default Admin Email Account	33
Appendix 1 – Web Deploy 3.5+ Additional Configuration.....	36
Appendix 2 – Linking to LaneConfig.....	38
Appendix 3 – ARGUS Gate Setup.....	39
Required Software.....	39
Com Port Setup	39
GateKeeper Setup.....	43
Configure IIS.....	45
Revision History.....	50

Preface

Document Overview

This document instructs qualified personnel how to install and configure Alvarado's GateKeeper software. Qualified personnel include IT personnel and anyone else who has experience working with Windows and SQL. After completing this guide, GateKeeper will be ready for use.

This guide only covers installation and initial configuration. For more information on using the GateKeeper application, refer to the *GateKeeper User Guide*. Contact Alvarado Technical Support for a copy.

Before You Begin

The GateKeeper host machine requires third-party software be installed prior to beginning this installation process. This guide lists the required configuration settings for this software when applicable, but installing and configuring this software beyond what is required to run GateKeeper is beyond the scope of this guide.

NOTE This guide uses screenshots taken on a **Windows 10** computer using **SQL Server 2019 Express** edition. There may be visual differences when installing GateKeeper on other operating systems and SQL versions, but the overall process remains the same.

Minimum Host Computer Requirements

Operating System:	Windows 7 Professional or Windows Server 2008 R2
CPU:	1.4 GHz, 64-bit
RAM:	2 GB
Available Disk Space:	20 GB

IMPORTANT You must have **Administrator** privileges on your computer to complete the installation.

Minimum Software Prerequisites

The software versions indicated below are the minimum versions required for GateKeeper, but GateKeeper will work with higher software versions as well. Ensure all required software is installed on your host computer before you begin the GateKeeper installation process. See below for instructions on configuring these applications specifically for use with GateKeeper.

- .NET Framework 4.0
- Web Deploy 3.0
- IIS Roles 7.0

Required Files

You must have access to these files on your host machine before beginning the installation process.

- SQL Server or SQL Server Express installer (.exe file available from Microsoft)

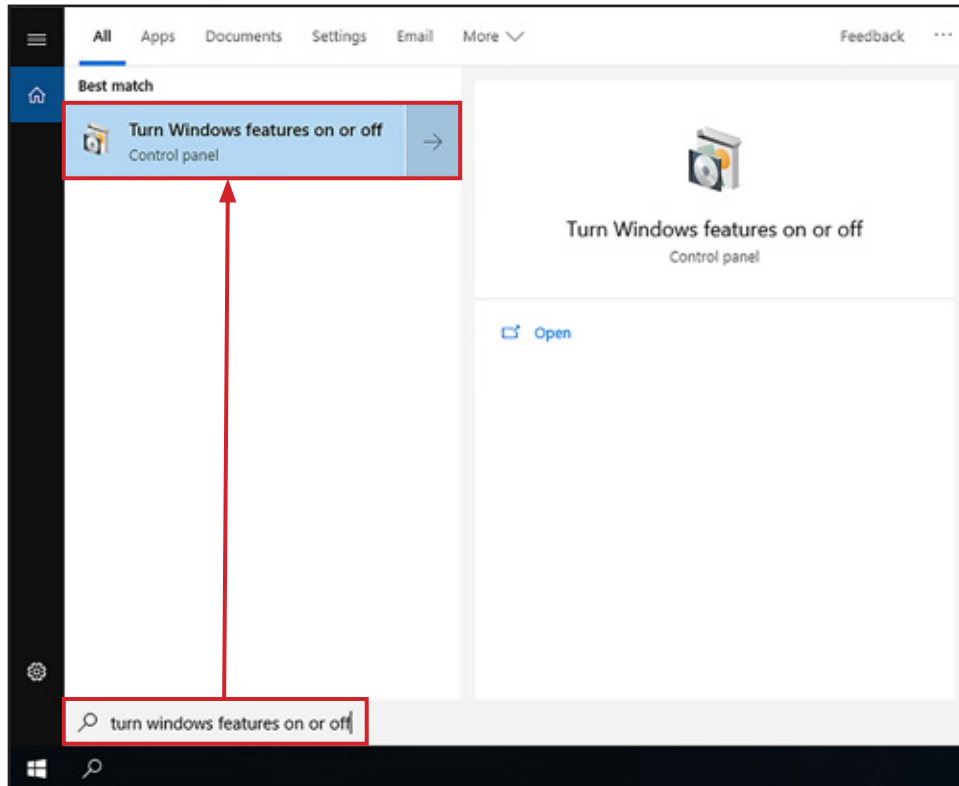
NOTE GateKeeper will work with SQL version 2008 R2 or higher.

- SQL Server Management Studio installer (.exe file available from Microsoft)
- *GateKeeperWeb.zip* file (provided by Alvarado)

Initial Software Configuration

Enable IIS Roles

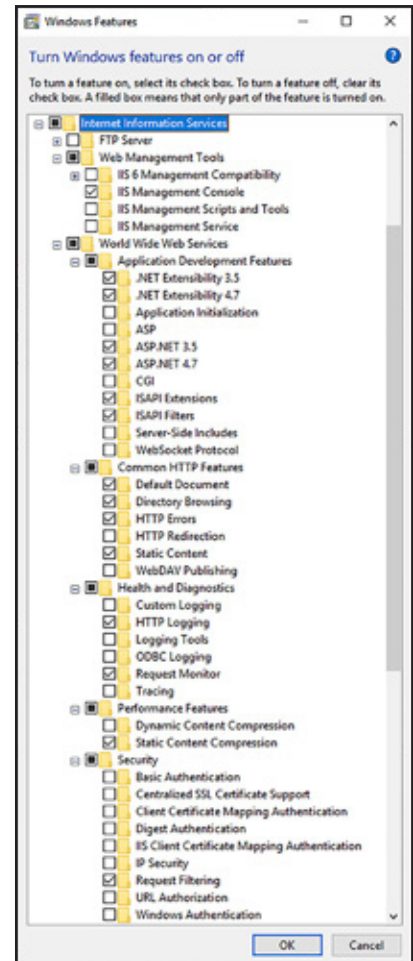
1. Click **Start** and begin typing **Turn Windows features on or off**.
2. Click **Turn Windows features on or off** when it appears. The *Windows Features* box will open and load a list of features. It may take some time for the list to load.



3. Click the **+** next to *Internet Information Services* to expand the folder.
4. Expand the subfolders and check the box for the bolded features shown below.

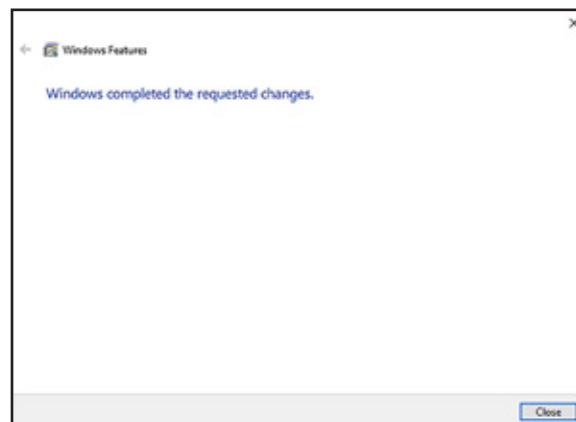
Internet Information Services

- Web Management Tools
 - **IIS Management Console**
- World Wide Web Services
 - Application Development Features
 - **.NET Extensibility***
 - **ASP.Net***
 - **ISAPI Extensions**
 - **ISAPI Filters**
 - Common HTTP Features
 - **Default Document**
 - **Directory Browsing**
 - **Static Content**
 - Health and Diagnostics
 - **HTTP Logging**
 - **Request Monitor**
 - Performance Features
 - **Static Content Compression**
 - Security
 - **Request Filtering**



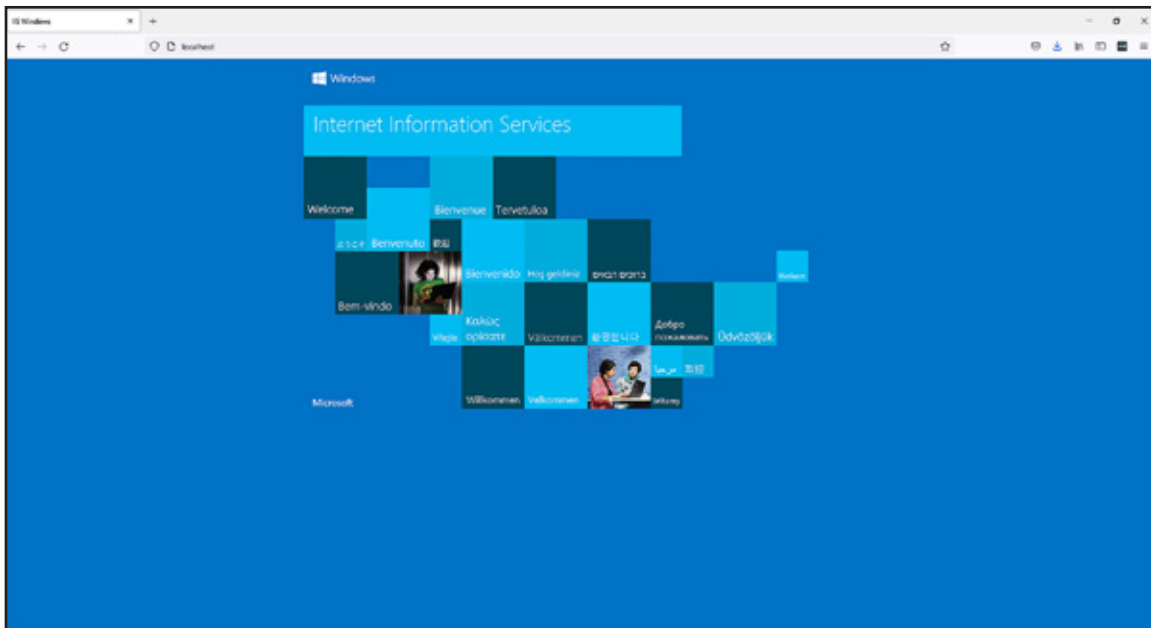
* Check the box for each version of .NET you have installed.

5. Click **OK**. It may take several minutes for the change to apply. The *Windows Features* box will close automatically when the change is applied.



6. Click **Close**.

1. Verify IIS is working properly.
 - a. Open a web browser.
 - b. Type **http://localhost** into the address bar and press **Enter**.
 - c. Verify the browser displays the IIS screen, shown below.

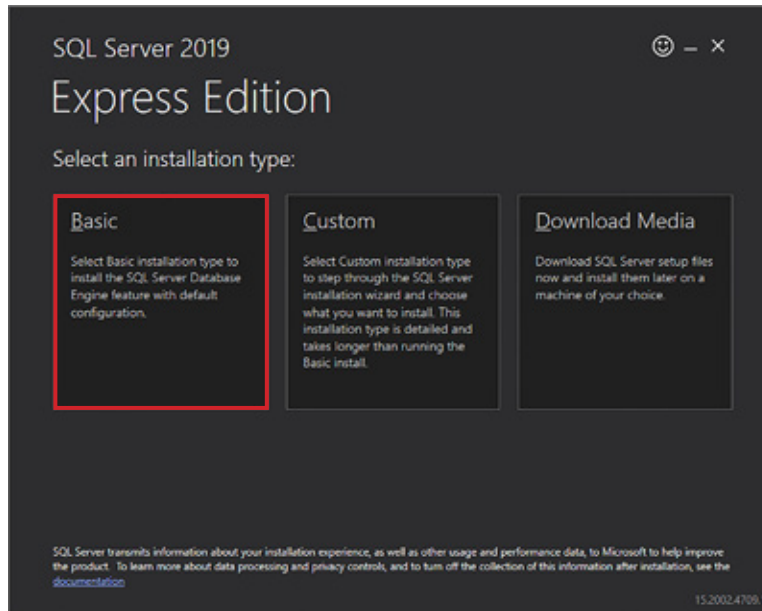


NOTE If you encounter an error instead of the IIS screen, reinstall .NET framework.

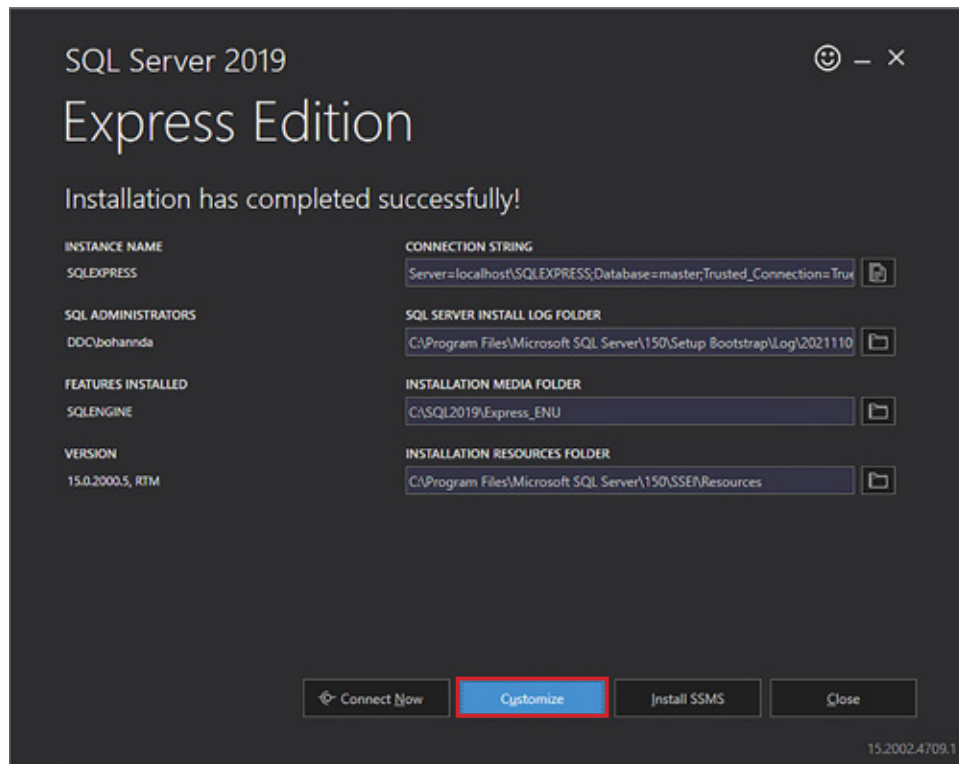
Install and Configure SQL

This section describes how to install a new version of **SQL Server 2019 Express** and configure it for use with GateKeeper. Other versions of SQL (2008 R2, 2012, etc.) may appear different, but the overall process remains the same.

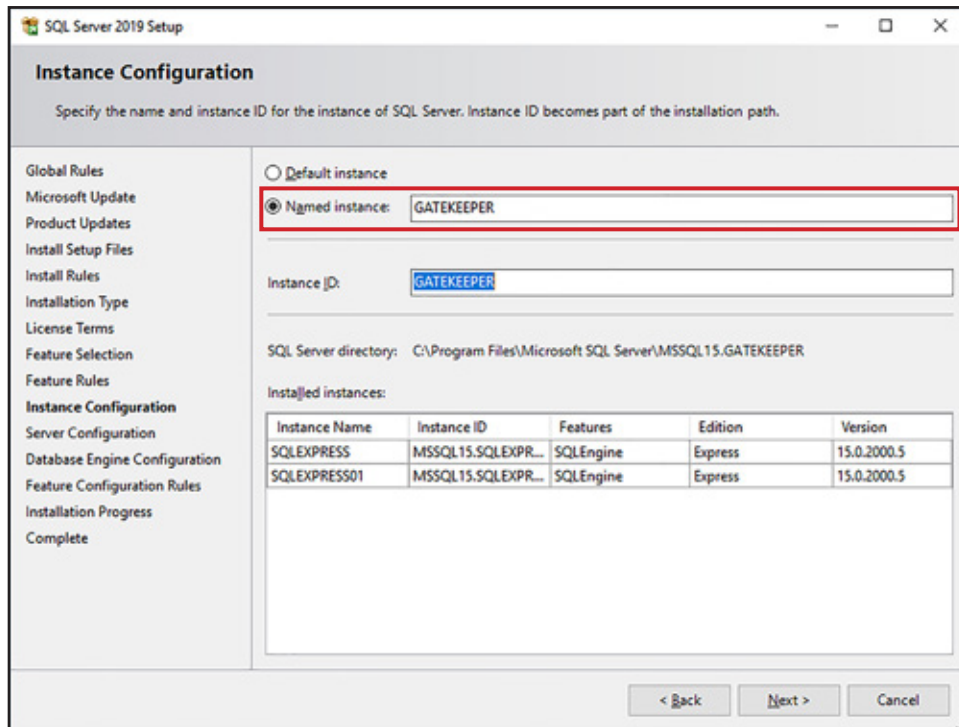
1. Run the SQL installer.
2. Click **Basic**.



3. Click **Accept** to accept the license terms.
4. Leave the *INSTALL LOCATION* set to the default value and click **Install**. Wait for the installation to complete. It may take several minutes to complete the installation.

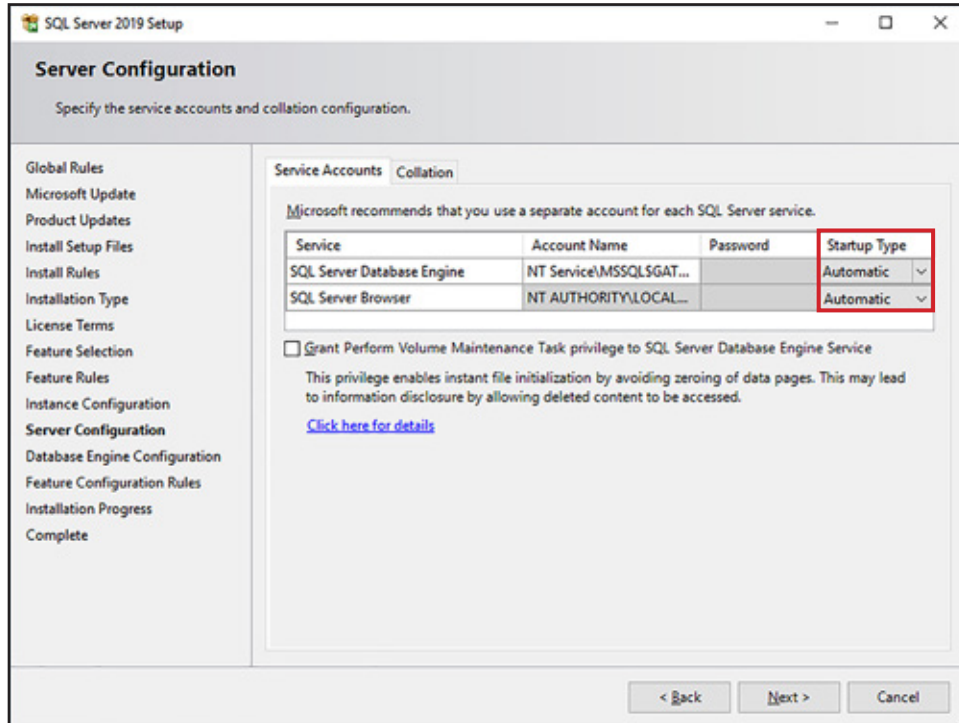
5. Click **Customize**.

- Leave settings set to default and click **Next** until you get to the *Instance Configuration* screen.
- Enter **GATEKEEPER** into the *Named instance* field and press **Tab**. The *Instance ID* field will be automatically filled in.



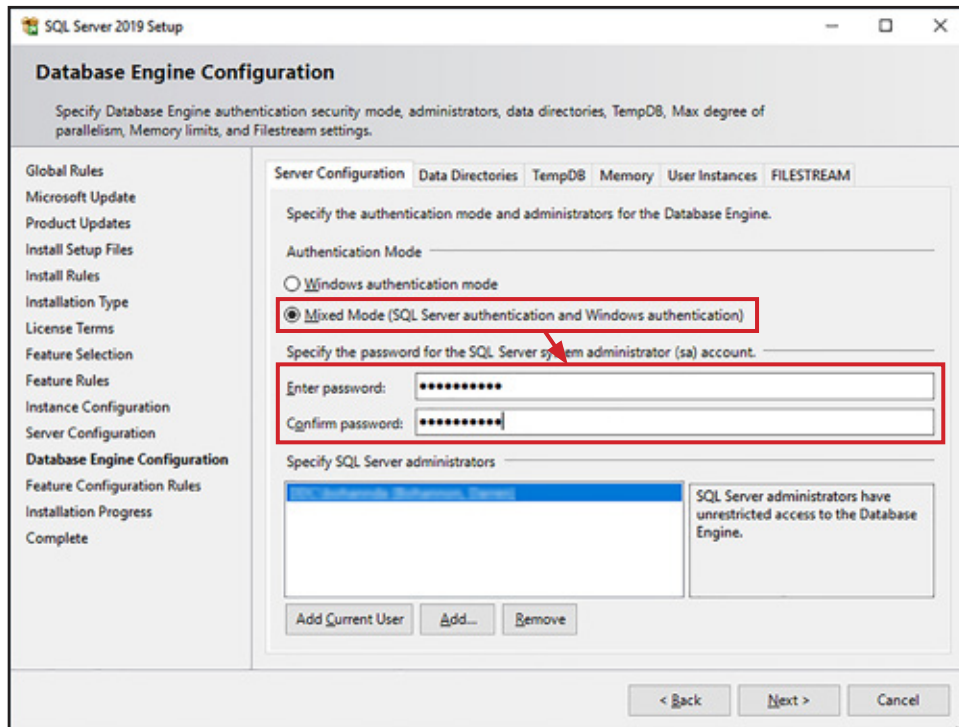
- Click **Next**.

- On the *Server Configuration* screen, ensure both *SQL Server Database Engine* and *SQL Server Browser* have their *Startup Type* set to **Automatic**.



- Click **Next**.

11. On the *Database Engine Configuration* screen:
 - a. Select **Mixed Mode (SQL Server authentication and Windows authentication)**
 - b. Enter a password for the system administrator account according to your local policies into the *Enter password* and *Confirm password* fields.



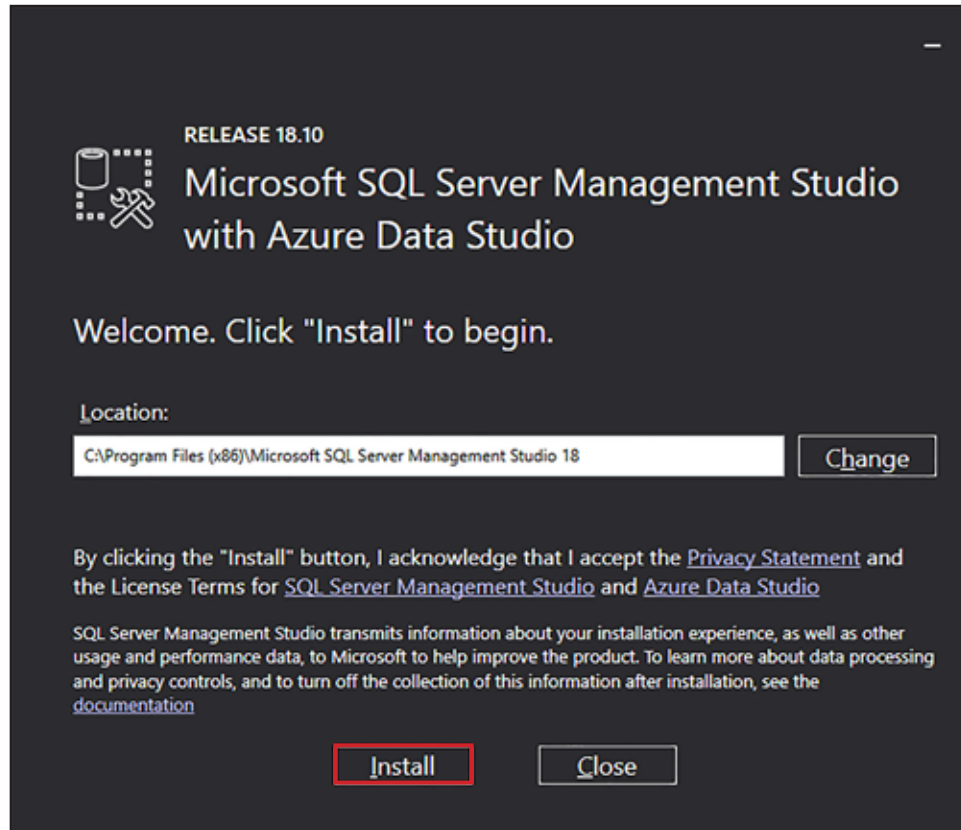
12. Click **Next**.
13. Wait for the installation process to finish successfully and click **Close**.

Install and Configure SQL Server Management Studio

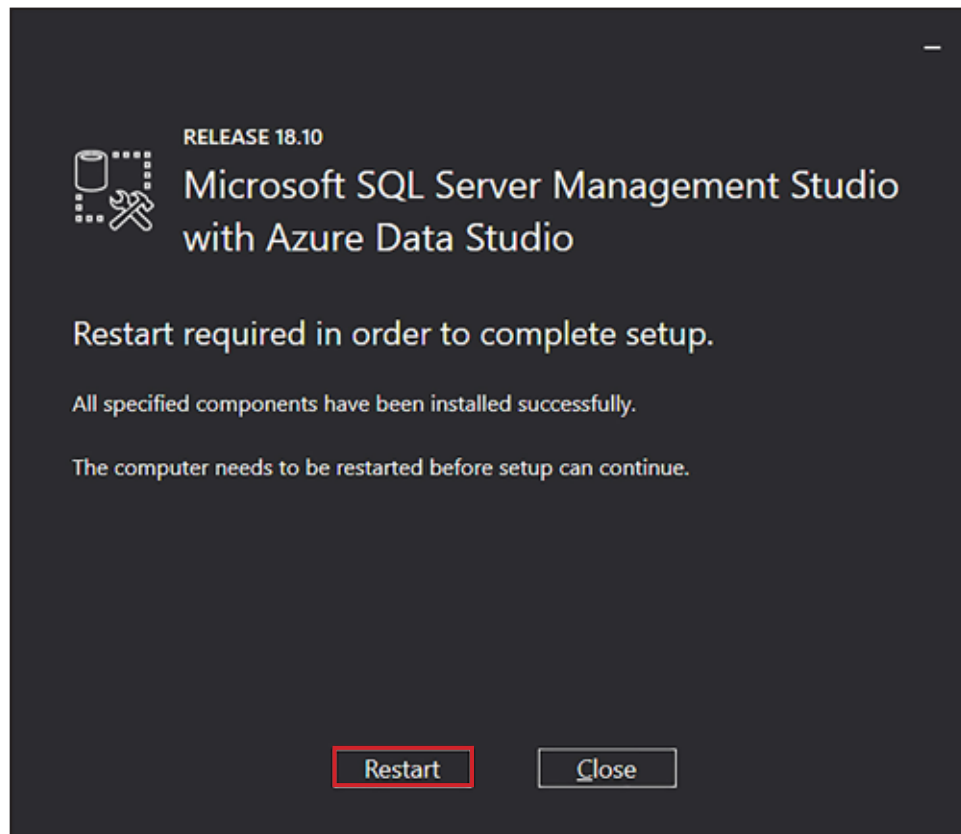
NOTE

You will need to restart your computer to complete the steps in this section. Save your work and close all other programs before installing SQL Server Management Studio.

1. Run the *SQL Server Management Studio* installer.
2. Leave the *Location* set to default and click **Install**.

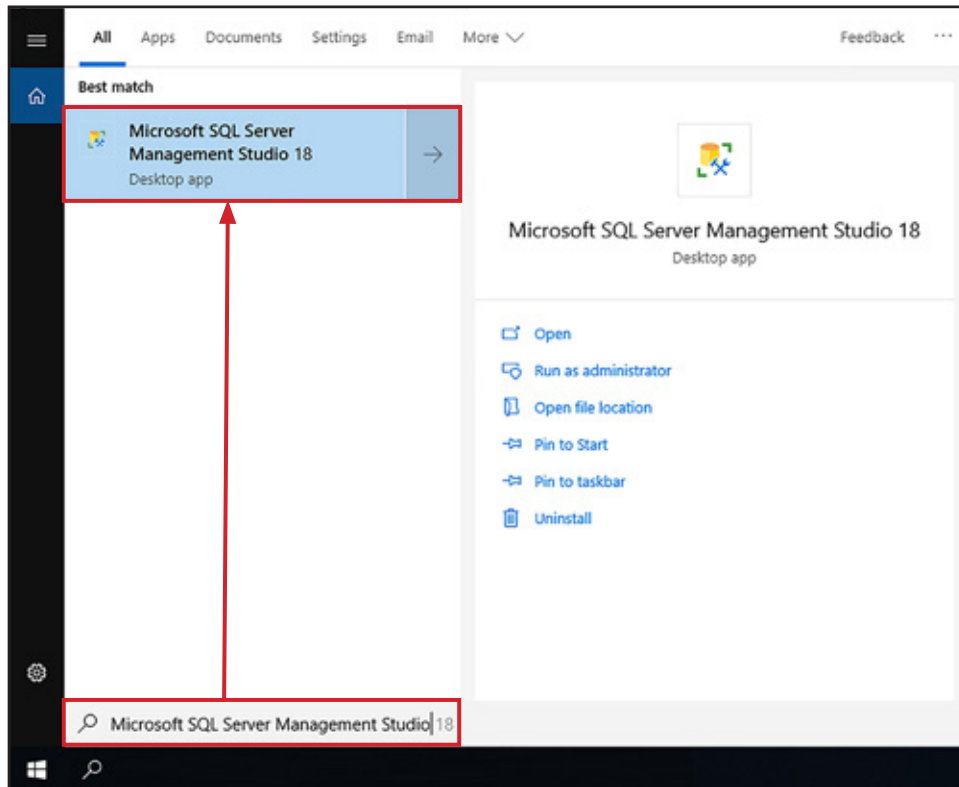


3. Click **Restart** to restart your computer and complete the installation process.

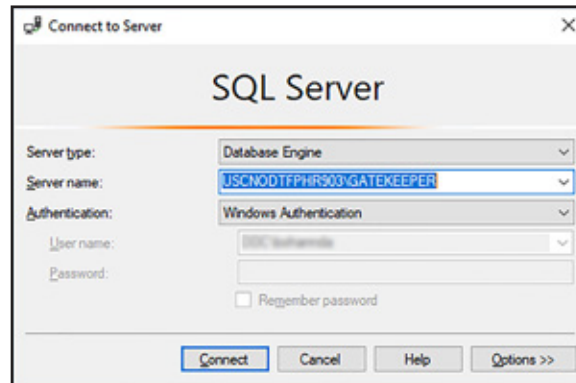


Configure SQL Login

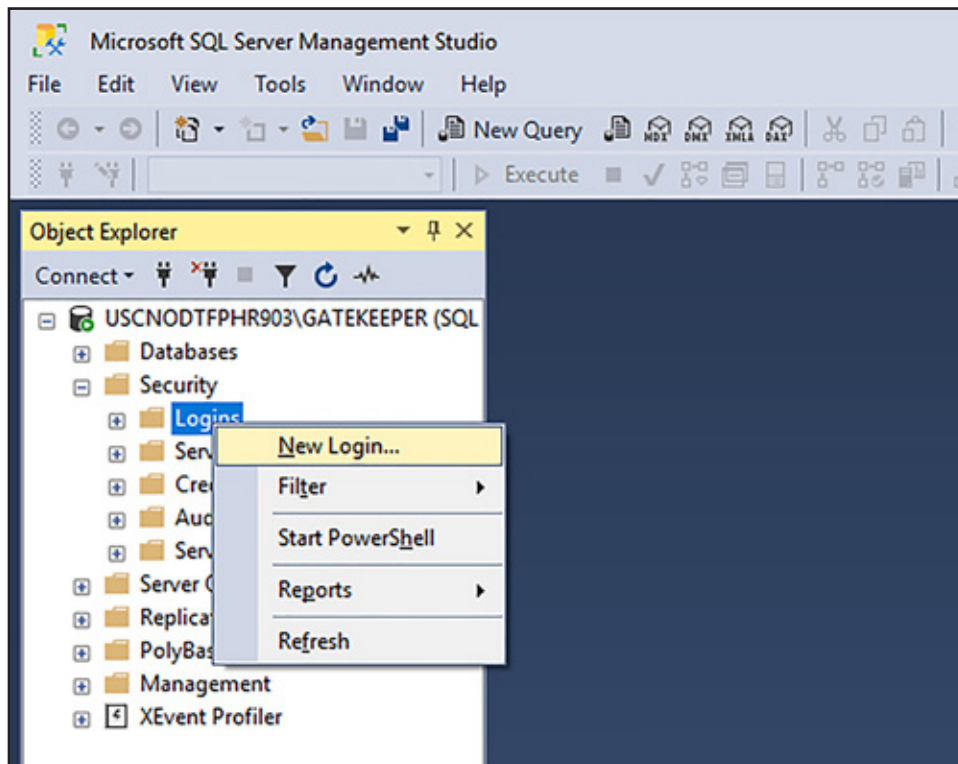
1. When your computer restarts, click **Start** and begin typing **Microsoft SQL Server Management Studio**.
2. Click **Microsoft SQL Server Management Studio** when it appears. Your version may be different than the one shown in the image below.



3. Enter the appropriate information into the *Connect to a Server* box and click **Connect**.
 - a. The *Server name* field should automatically display the GateKeeper instance you created. If you have more than one SQL server instance, enter the **Host Machine Name\GATEKEEPER** into this field. In the example below, the host machine name is USCNOTFPHR903.
 - b. Set Authentication to **Windows Authentication** to use the login credentials for the Windows user currently logged in. The current Windows user must be an approved server administrator to use this login method. See step 0 on page 12.
 - c. Set *Authentication* to **SQL Server Authentication** to use the system administrator password you set up in step 0 on page 12.



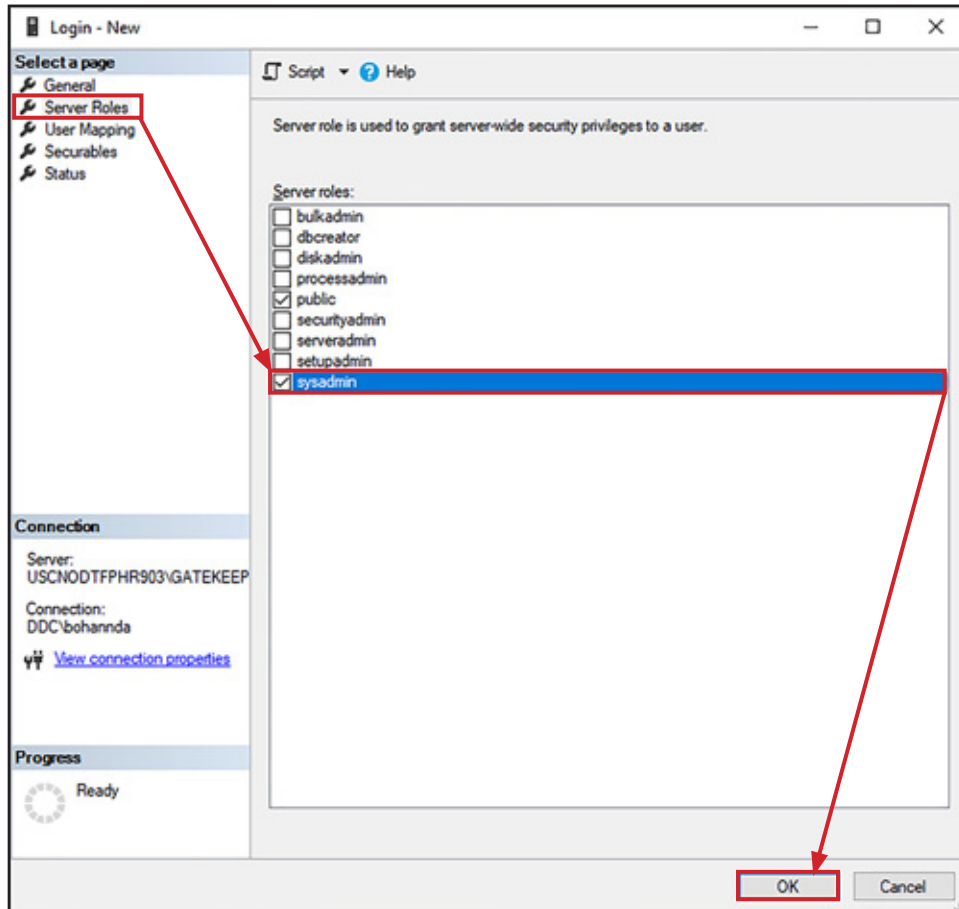
4. Click the **+** to expand the **Security** folder.
5. Right-click the **Logins** folder and click **New Login...**



6. Enter **gatekeeper** into the *Login name* field.
7. Select **SQL Server authentication**.
8. Create a password according to your local policies and enter it into the *Password* and *Confirm password* fields.
9. Uncheck the **Enforce password policy** box.

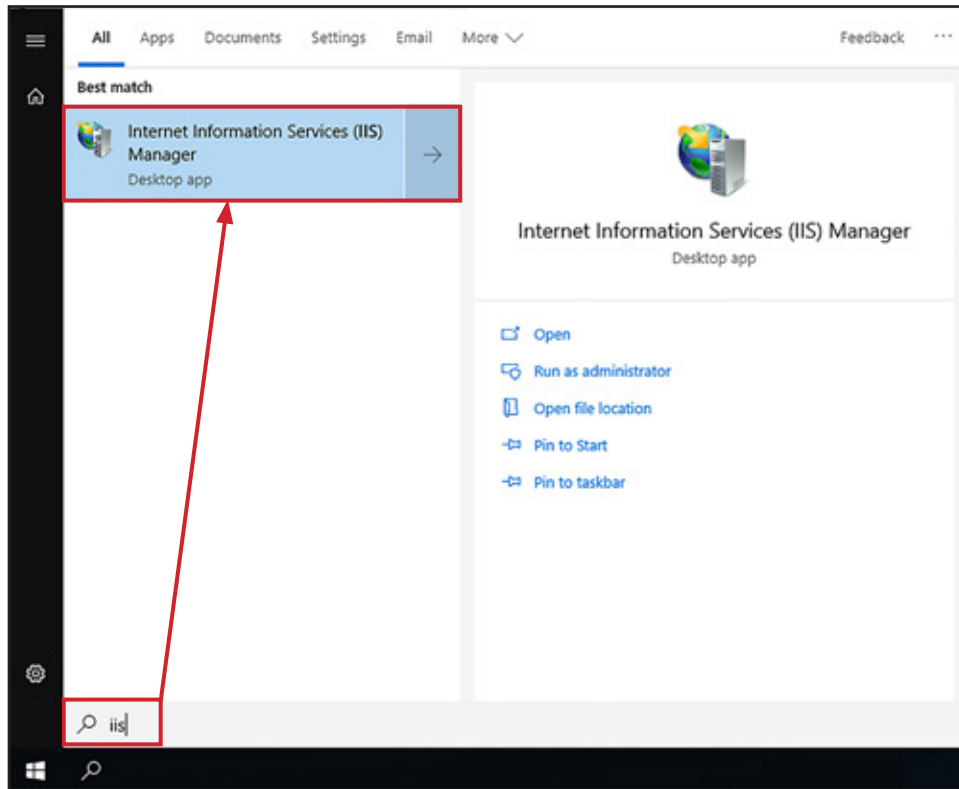
The screenshot shows the 'Login - New' dialog box in SQL Server Enterprise Manager. The dialog is titled 'Login - New' and has a 'Script' dropdown and a 'Help' icon. The 'Login name' field contains 'gatekeeper'. The 'Authentication' section has 'SQL Server authentication' selected with a radio button. The 'Password' and 'Confirm password' fields are filled with '*****'. The 'Enforce password policy' checkbox is unchecked. Other options include 'Windows authentication', 'Mapped to certificate', 'Mapped to asymmetric key', and 'Map to Credential'. The 'Mapped Credentials' table is empty. The 'Default database' is 'master' and the 'Default language' is '<default>'. The 'Connection' section shows 'Server: USCNODTFPHR903\GATEKEEP' and 'Connection: DDC\bohanna'. The 'Progress' section shows 'Ready'.

10. Click **Server Roles** in the *Select a page* section.
11. Check the **sysadmin** box.
12. Click **OK**.

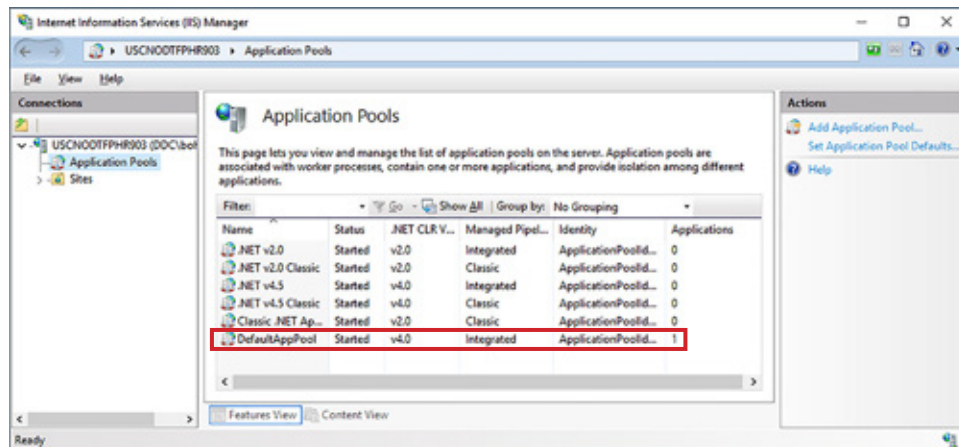


Configure .NET 4.0

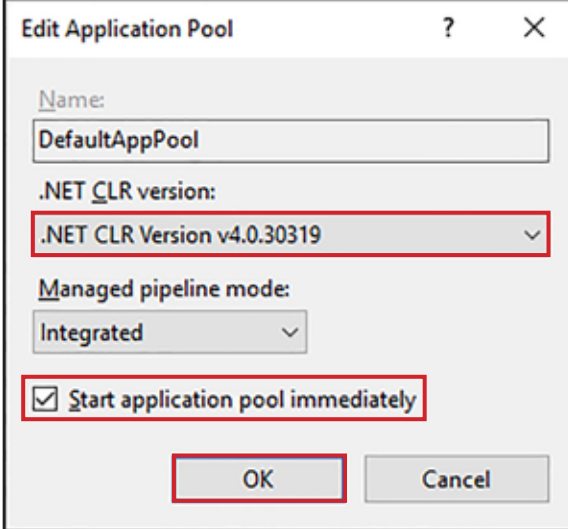
1. Click **Start** and type **IIS** into the search bar.
2. Click **Internet Information Services (IIS) Manager**.



3. Double-click the host computer's name to expand the list and select **Application Pools**.
4. Double-click **DefaultAppPool**.



5. Ensure the *.NET Framework version* is set to **.NET Framework v4.0.30319** (or higher) and ensure the **Start application pool immediately** box is checked.



The screenshot shows a dialog box titled "Edit Application Pool" with a question mark and a close button in the top right corner. The dialog contains the following fields and controls:

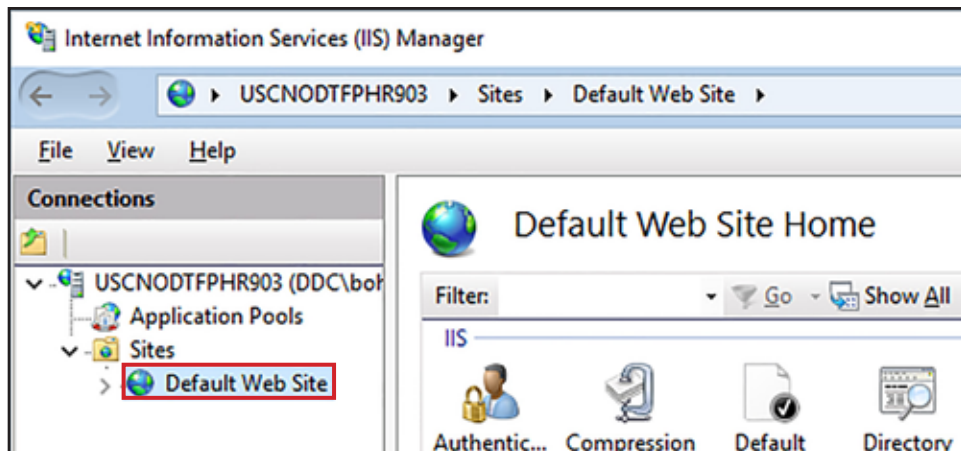
- Name:** A text box containing "DefaultAppPool".
- .NET CLR version:** A dropdown menu showing ".NET CLR Version v4.0.30319".
- Managed pipeline mode:** A dropdown menu showing "Integrated".
- Start application pool immediately:** A checked checkbox.
- Buttons:** "OK" and "Cancel" buttons at the bottom.

Red boxes highlight the ".NET CLR version" dropdown, the "Start application pool immediately" checkbox, and the "OK" button.

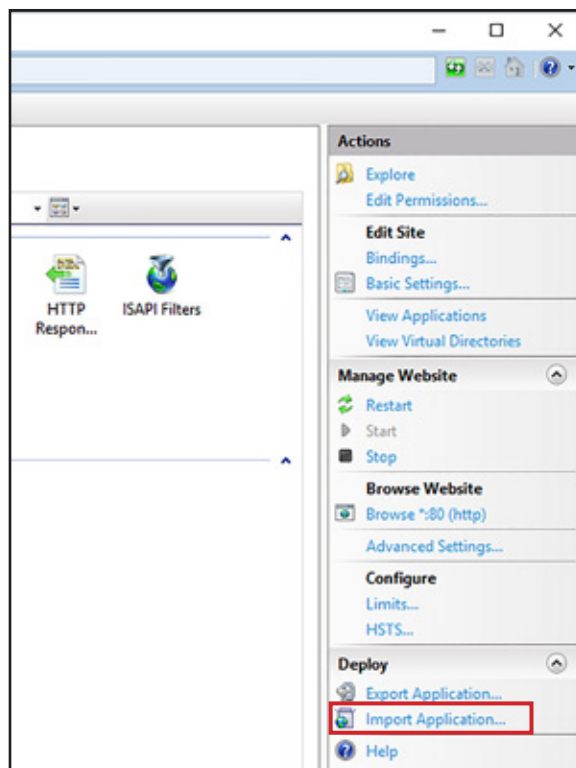
6. Click **OK**.

GateKeeper Installation

1. In the *IIS Manager*, double-click the **Sites** to expand the list and select **Default Web Site**.



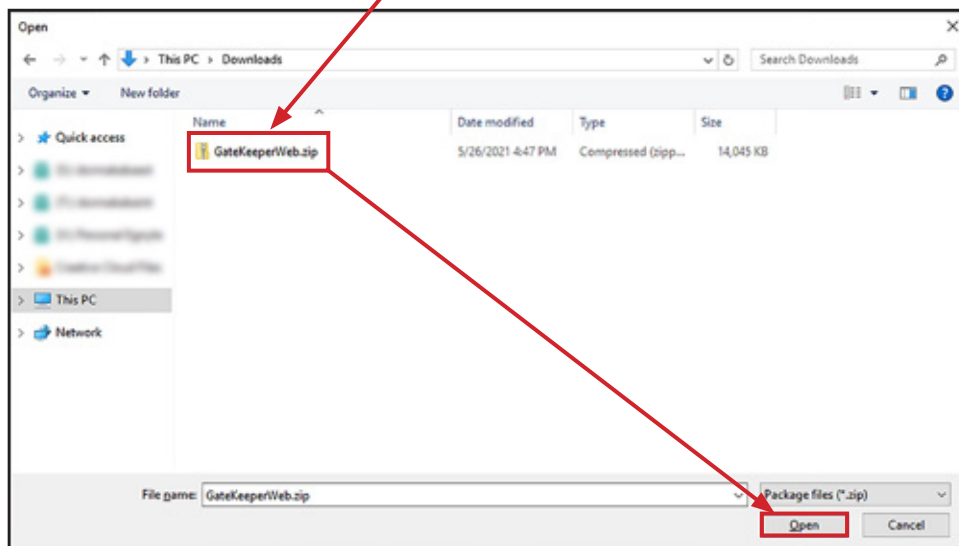
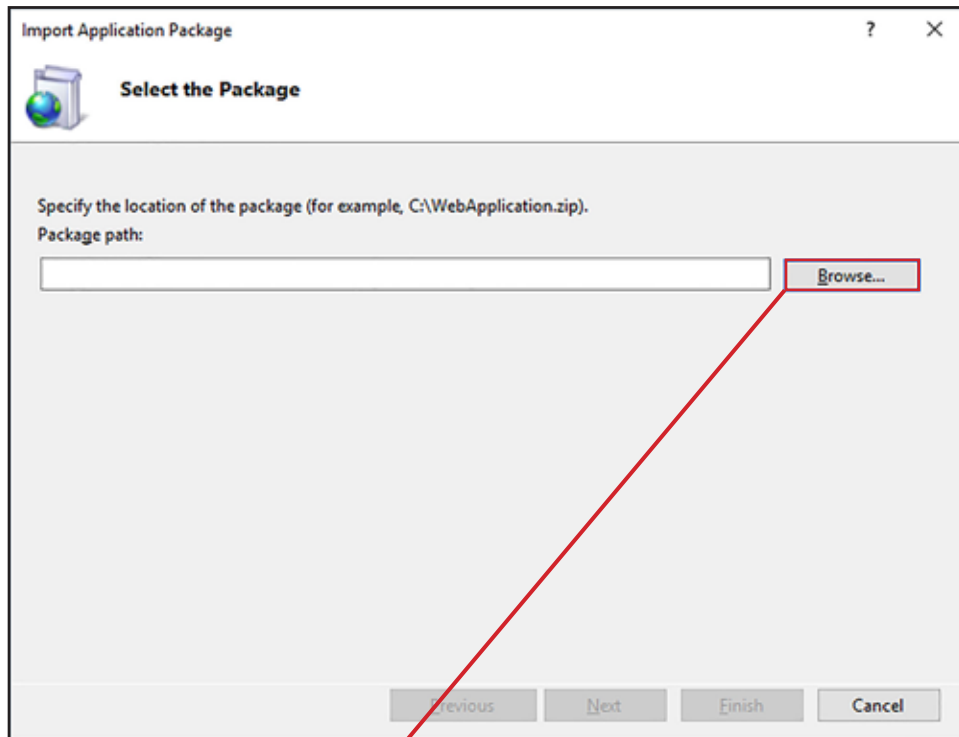
2. Click **Import Application** in the *Actions* pane.



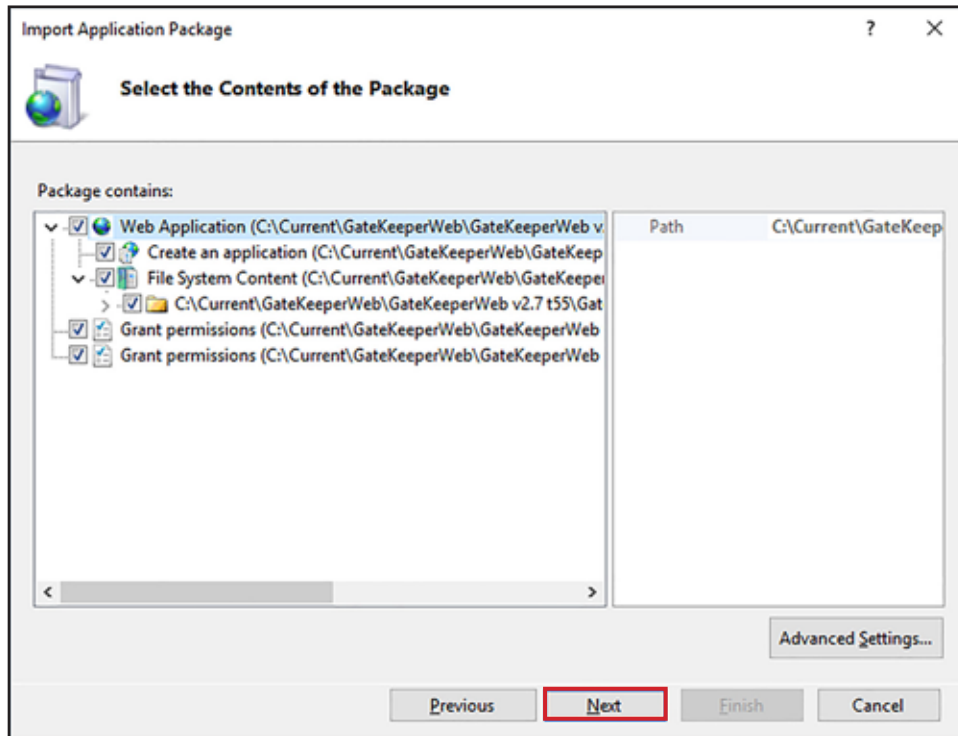
NOTE

If the Deploy section does not appear, and you are using Web Deploy 3.5 or above, see **Appendix 1** on page 36.

3. Click **Browse**, select the **GateKeeperWeb.zip** file, click **Open**, and click **Next**.



4. Accept the default selections on the *Select the Contents of the Package* screen and click **Next**.



5. Replace the “XXX” values in the *TurnstileConnection* and *UserConnection* fields with the values indicated below and click **Next**.
 - a. Change all instances of **Data Source=XXX** to the *Server name* you entered in step 11 on page 12.
 - b. Change all instances of **User Id=XXX** to the *Login name* you created in step 6 on page 17.
 - c. Change all instances of Password=XXX to the *Password* you created in step 8 on page 17.

Import Application Package

Enter Application Package Information

Enter information that is required to install this package:

Application Path
Full site path where you want to install your application (for example, Default Web Site/Application).
Default Web Site/ GateKeeper

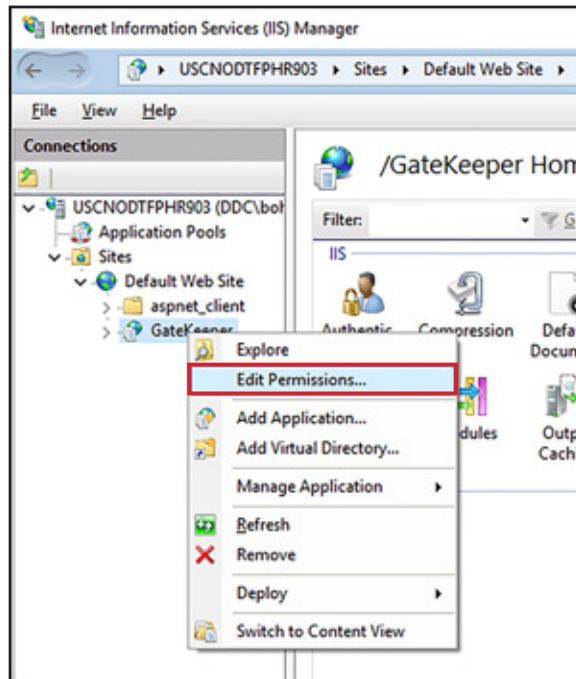
Connection String
UserConnection Connection String used in web.config by the application to access the database.
Data Source=XXX;Initial Catalog=GateKeeperUser;Integrated Security=False;User Id=XXX;Password=XXX;Multi

Connection String
TurnstileConnection Connection String used in web.config by the application to access the database.
Data Source=XXX;Initial Catalog=GateKeeperTurnstile;Integrated Security=False;User Id=XXX;Password=XXX;

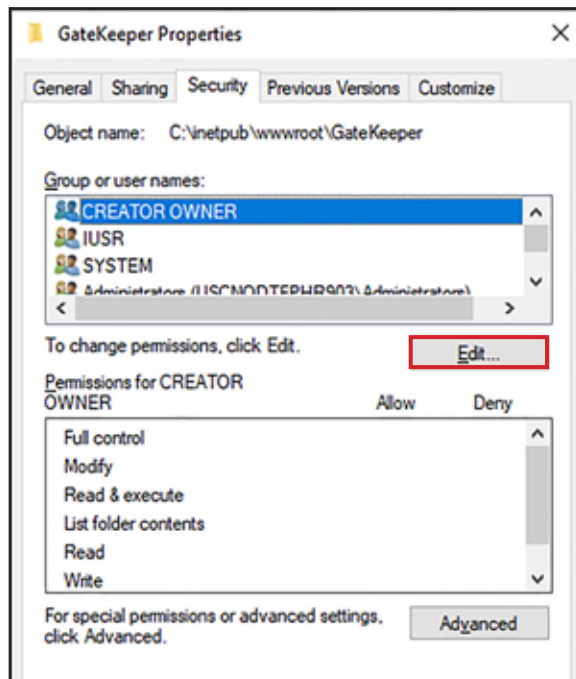
Previous **Next** Finish Cancel

6. Verify the installation completes successfully and click **Finish**.

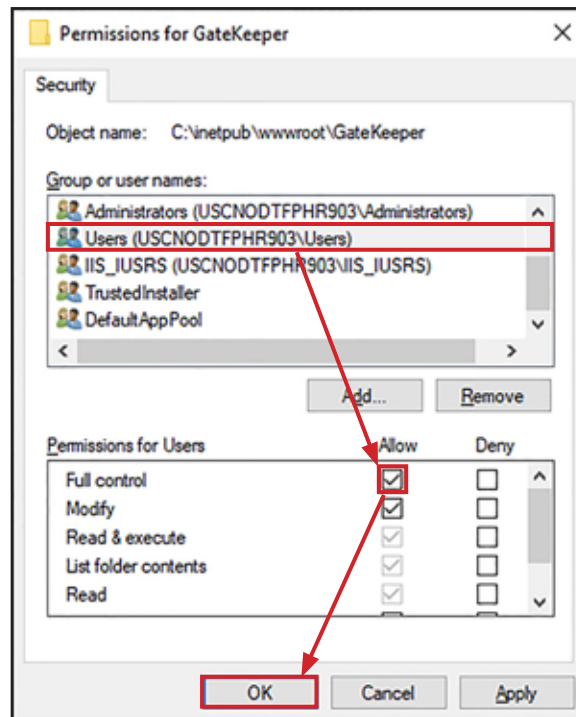
7. Double-click **Default Web Site** to expand the list and select **GateKeeper**.
8. Right-click **GateKeeper** and select **Edit Permissions**.



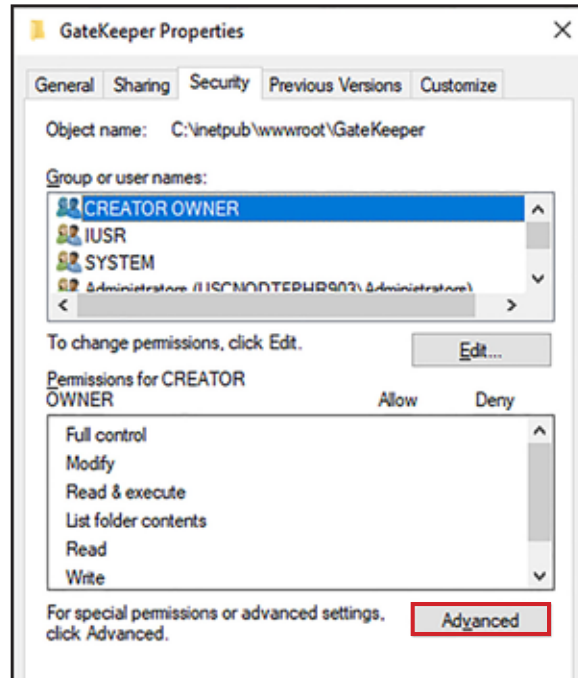
9. Click the **Security** tab and click the **Edit** button.



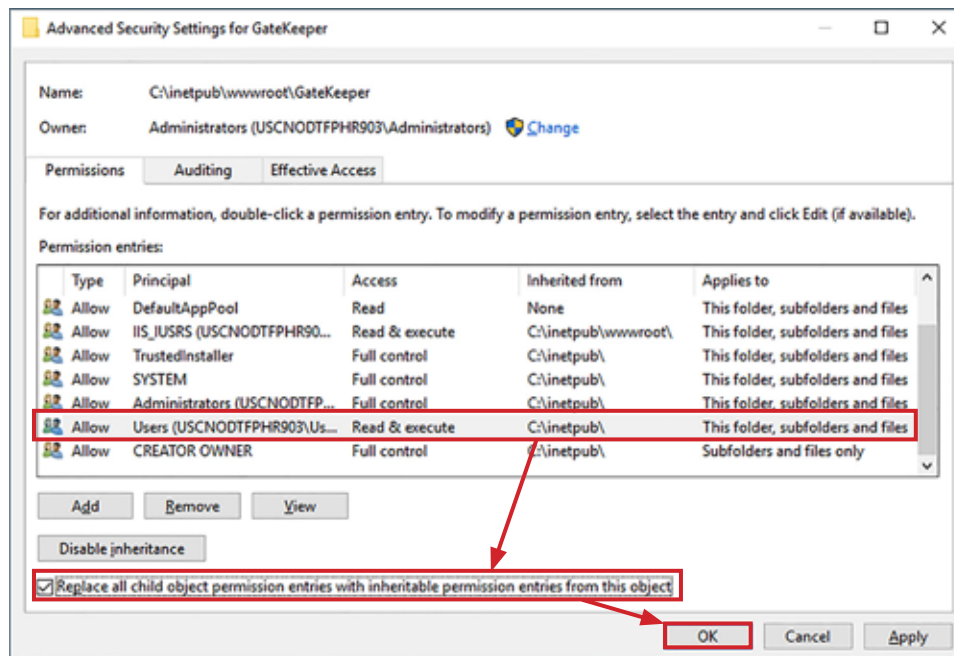
10. Select the **Users ([Host Name]Users)** item from the *Group or user names* list and check the **Allow** box for *Full Control*. In the image below, the Host Name is USCNOTDFPHR903.
11. Click **OK**.



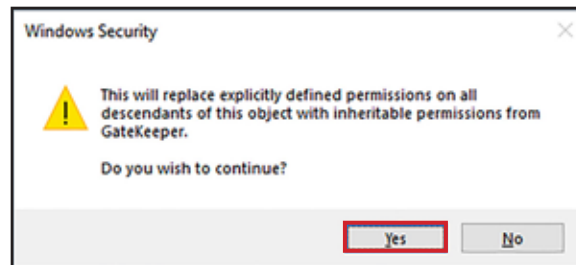
12. Click **Advanced**.



13. Select the **Users ([Host Name]Users)** item from the *Permission entries* list. In the image below, the Host Name is USCNODTFPHR903.
14. Check the **Replace all child object permission entries with inheritable permission entries from this object**.
15. Click **OK**.



16. Click **Yes** when prompted to continue.

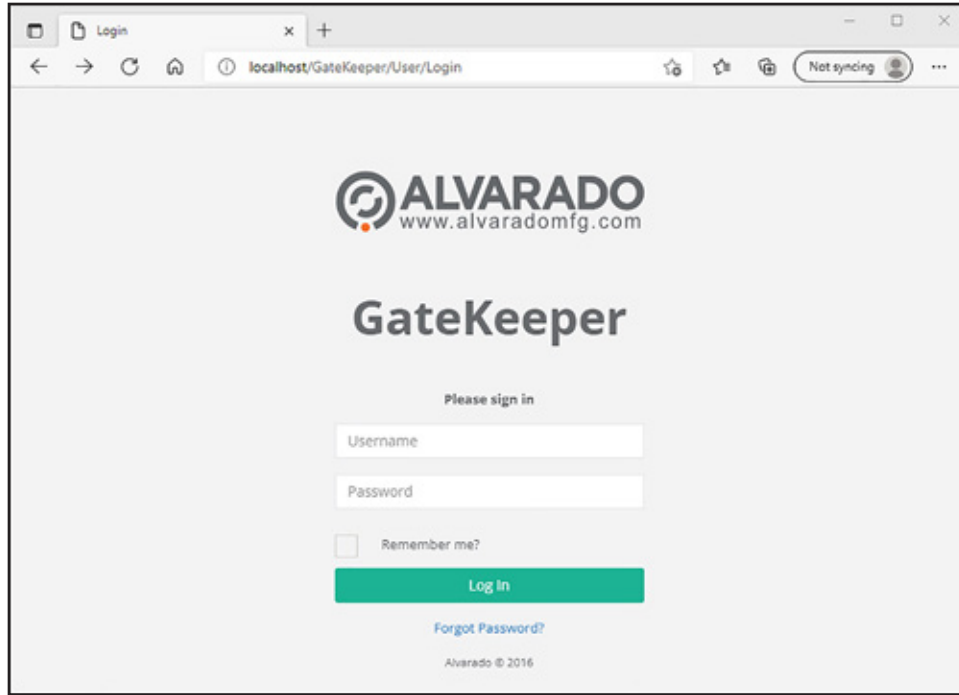


17. Click **OK**.
18. Close the *Internet Information Services (IIS) Manager*.

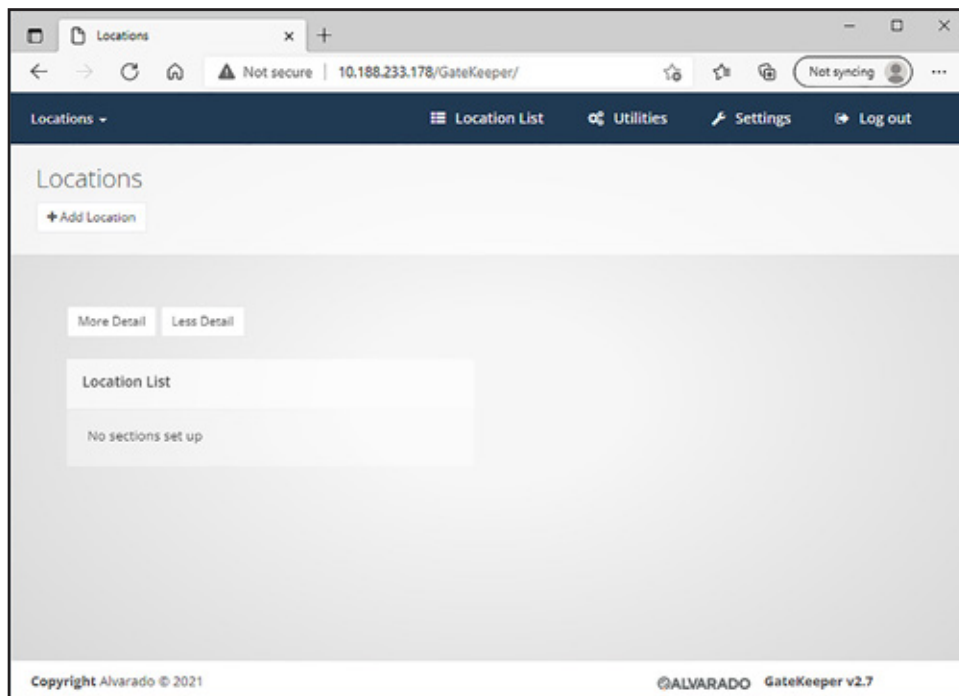
Test for Correct Installation

From Host Computer

1. Open a **web browser**.
2. Type **localhost/gatekeeper** into the address bar and press **Enter** to go to the GateKeeper *Login* screen.

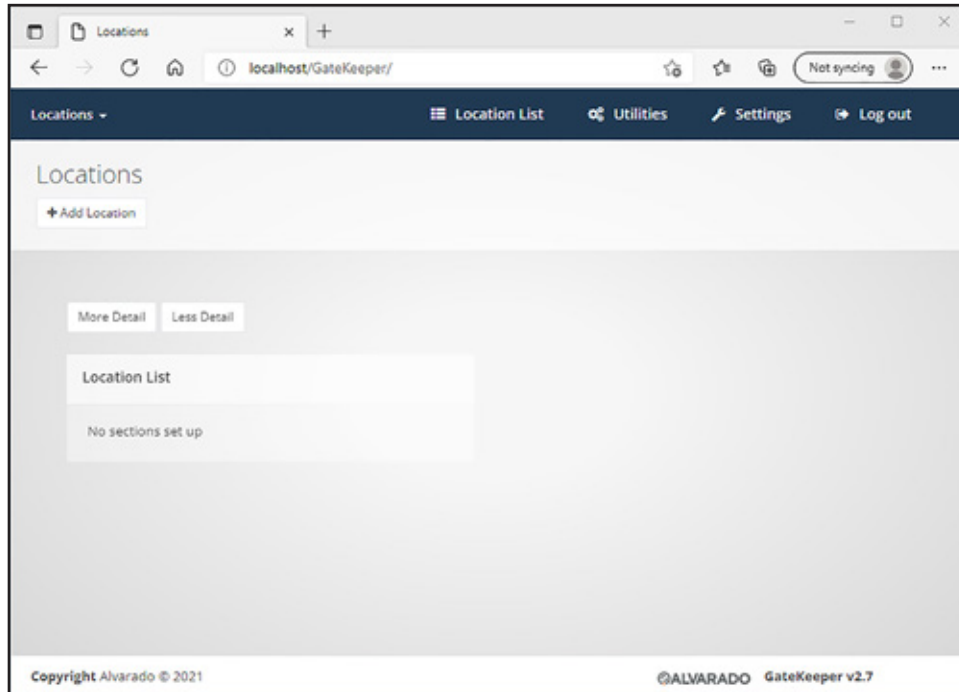


3. Type **admin** for the *Username* and **Admin@123** for the *Password* and click **Log In**. Verify the screen looks like the one shown below.



From a Networked Device

1. Open a **web browser**.
2. Type **<IP Address>/gatekeeper** into the address bar and press **Enter** to go to the GateKeeper *Login* screen. Replace **<IP Address>** with your host computer's IP address.
3. Type **admin** for the *Username* and **Admin@123** for the *Password* and click **Log In**. Verify the screen looks like the one shown below. The IP address of the host computer in the image below is 10.188.233.178.



Password Reset

Follow the steps in this section to set up the password-reset system. To use this system, you must have either an **email account set up on an email server** or a free **Outlook.com email account**.

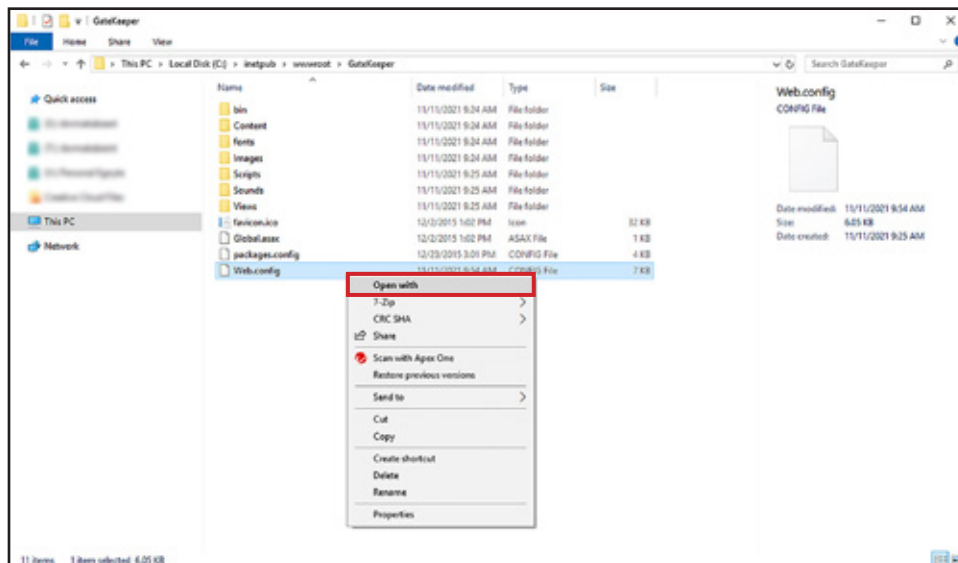
To use the GateKeeper password reset feature, you will first need to input the account information for the email address that will generate password reset instructions. Two types of email accounts may be used: 1) an email account setup on the facility's mail server, or 2) a free Outlook.com email account.

You must have the following email account information to set up the password reset feature:

- Host name of your email server
- Email address
- Password for the email address

Set Up Password Reset Email Account

1. Open **Windows Explorer** and go to the **C:\inetpub\wwwroot\GateKeeper** folder.
2. Right click the **Web.config** file and click **Open With**.



3. Select **Notepad**.

NOTE You can edit the **Web.config** file with any application capable of editing XML files.

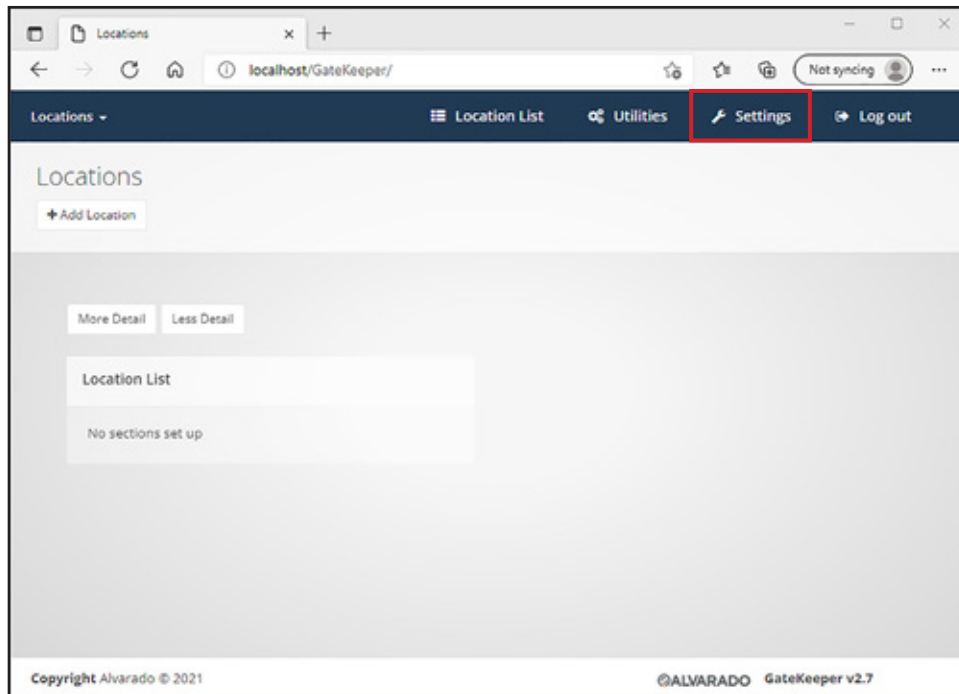
4. Find the following text strings in the file. Change “XXX” in the text strings to the indicated values. Include the quotation marks.

```
<add key="EmailHost" value="XXX" />  
<add key="EmailUsername" value="XXX" />  
<add key="EmailPassword" value="XXX" />
```

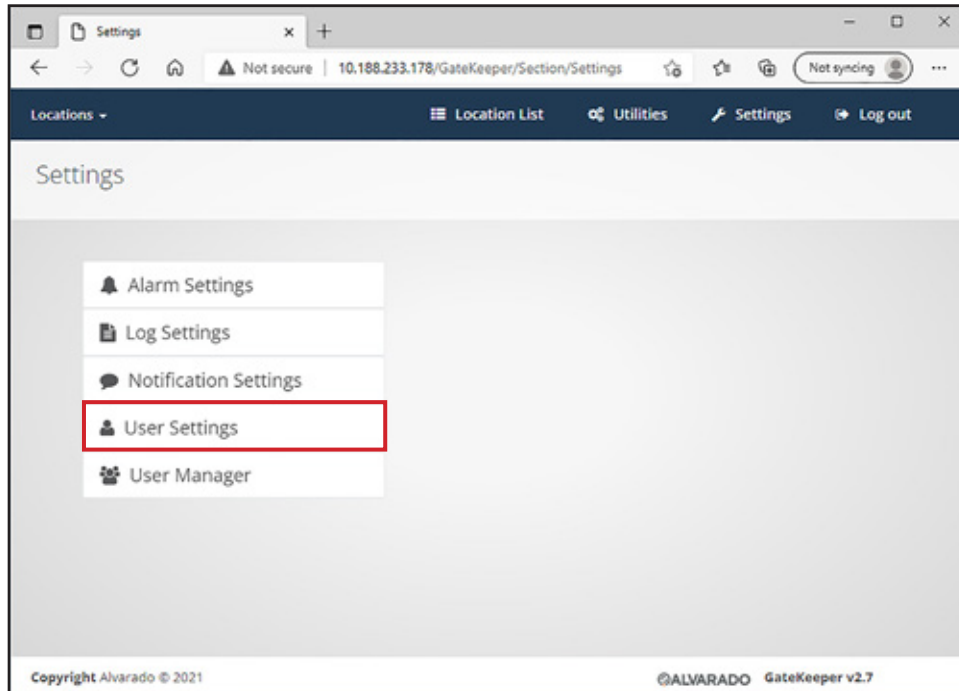
- “*EmailHost*” should be set to your email host server’s name.
 - “*EmailUserName*” should be set to the email address of the account that will send the reset password message.
 - “*EmailPassword*” should be set to the password of the email address defined above.
5. **Save** the file and **close** it.

Set Up Default Admin Email Account

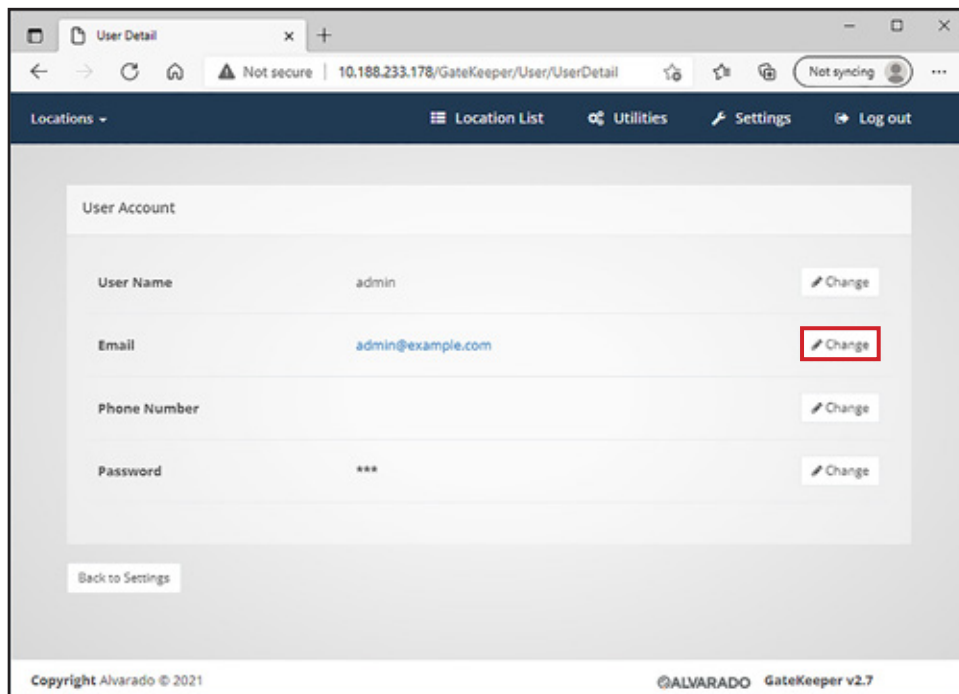
1. Follow the steps in the [Test for Correct Installation](#) section to log into GateKeeper.
2. Click **Settings**.



3. Click **User Settings**.



4. Click the **Change** button for *Email*.



5. Enter the email address that will receive password reset information and click **Save Changes**.

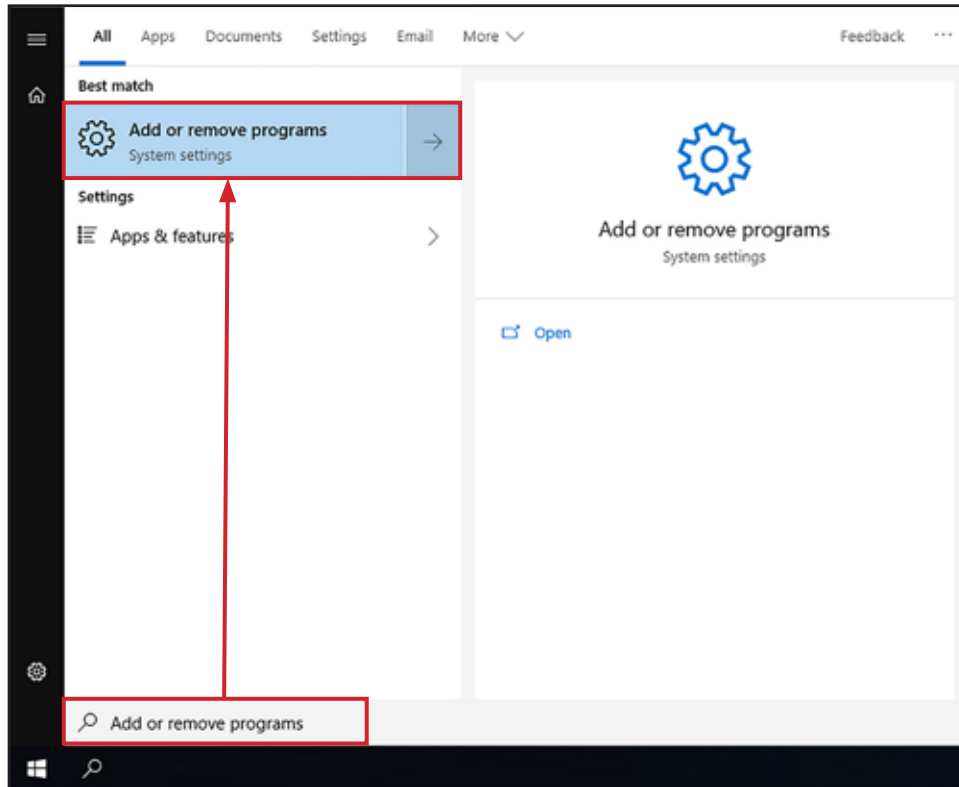
The screenshot shows a web browser window with the following details:

- Browser tab: Edit User Email
- Address bar: 10.188.233.178/GateKeeper/User/EditUserEmail
- Page title: Edit User Email
- Navigation menu: Locations, Location List, Utilities, Settings, Log out
- Form content:
 - Label: Email
 - Input field: admin@example.com
 - Buttons: Save Changes (highlighted), Cancel
- Footer: Copyright Alvarado © 2021, ©ALVARADO GateKeeper v2.7

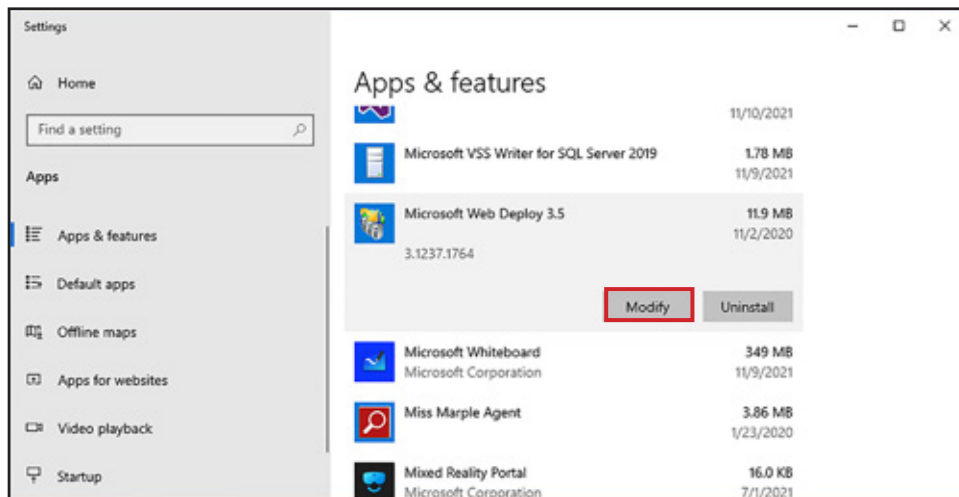
Appendix 1 – Web Deploy 3.5+ Additional Configuration

If you installed Web Deploy 3.5 or higher, you need to follow these additional steps at least before you do the steps in the [GateKeeper Installation](#) section on page 21. This section uses Web Deploy 3.5 for instructions and illustrative purposes.

1. Click **Start** and begin typing **Add or remove programs**.
2. Click **Add or remove programs** when it appears.

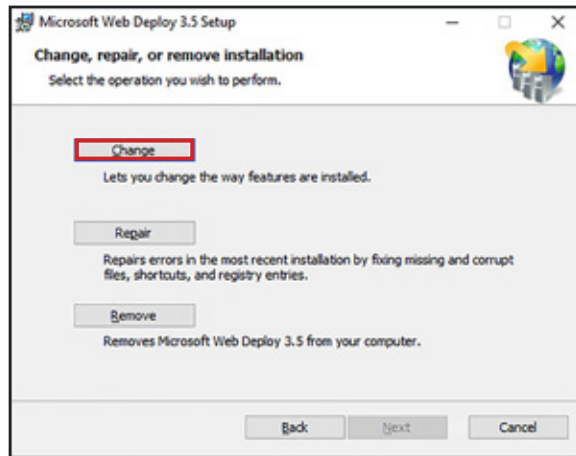


3. Click **Microsoft Web Deploy 3.5** in the list and click **Modify**.

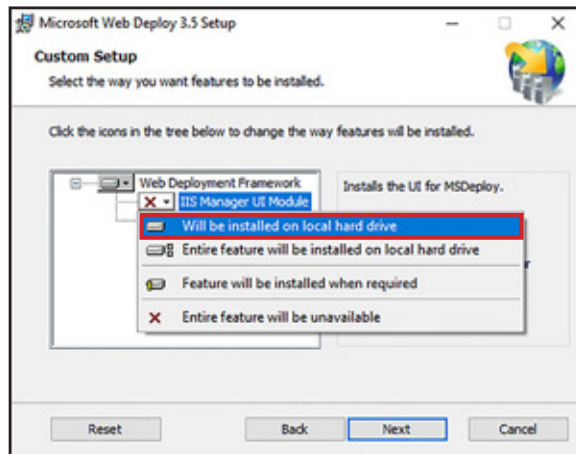


4. Click **Next**.

5. Click **Change**.



6. Change *IIS Manager UI Module* to **Will be installed on local hard drive** and click **Next**.

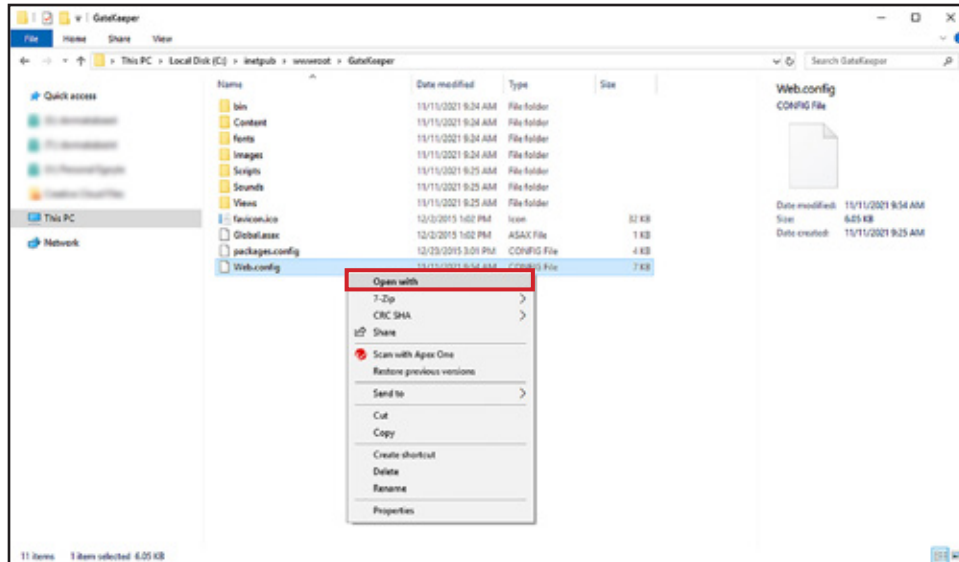


7. Click **Change**.
8. Click **Finish** when the process is complete.

Appendix 2 – Linking to LaneConfig

Follow the instructions below to link your LaneConfig application to GateKeeper.

1. Open **Windows Explorer** and go to the **C:\inetpub\wwwroot\GateKeeper** folder.
2. Right click the **Web.config** file and click **Open With**.



3. Select **Notepad**.

NOTE You can edit the *Web.config* file with any application capable of editing XML files.

4. Find the following text string in the file. Change “XXX” in the text string to the **URL** for your LaneConfig server. For example, “192.168.0.101\LANECONFIG”. Include the quotation marks.

```
<add key="LaneConfigURL" value=""XXX" />
```

NOTE The value you enter into this field cannot include the term “localhost”.

5. **Save** the file and close it.

Appendix 3 – ARGUS Gate Setup

Follow the steps in this section if you are using GateKeeper with dormakaba ARGUS gates.
Follow these steps after you install GateKeeper.

Required Software

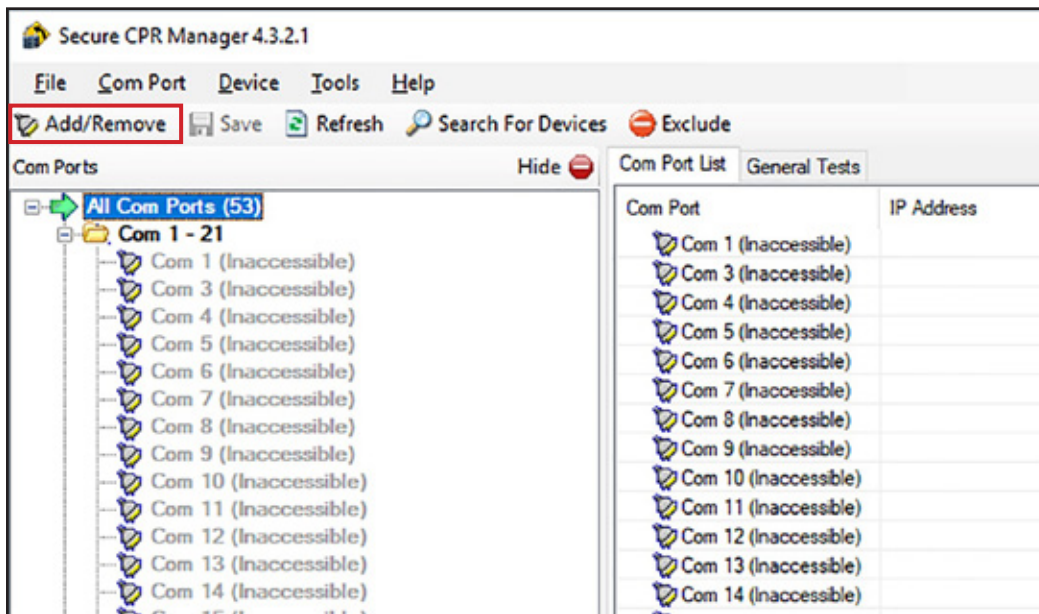
Download and extract the installer for the **Lantronix SCPR** software onto your computer prior to starting the installation process. The latest version of this software can be found on the developer's website:

<https://ltrxdev.atlassian.net/wiki/spaces/LTRXTS/pages/106856722/Latest+version+of+the+Secure+Com+Port+Redirector>

Com Port Setup

IMPORTANT You must have **Administrator** privileges on your computer to complete the installation.

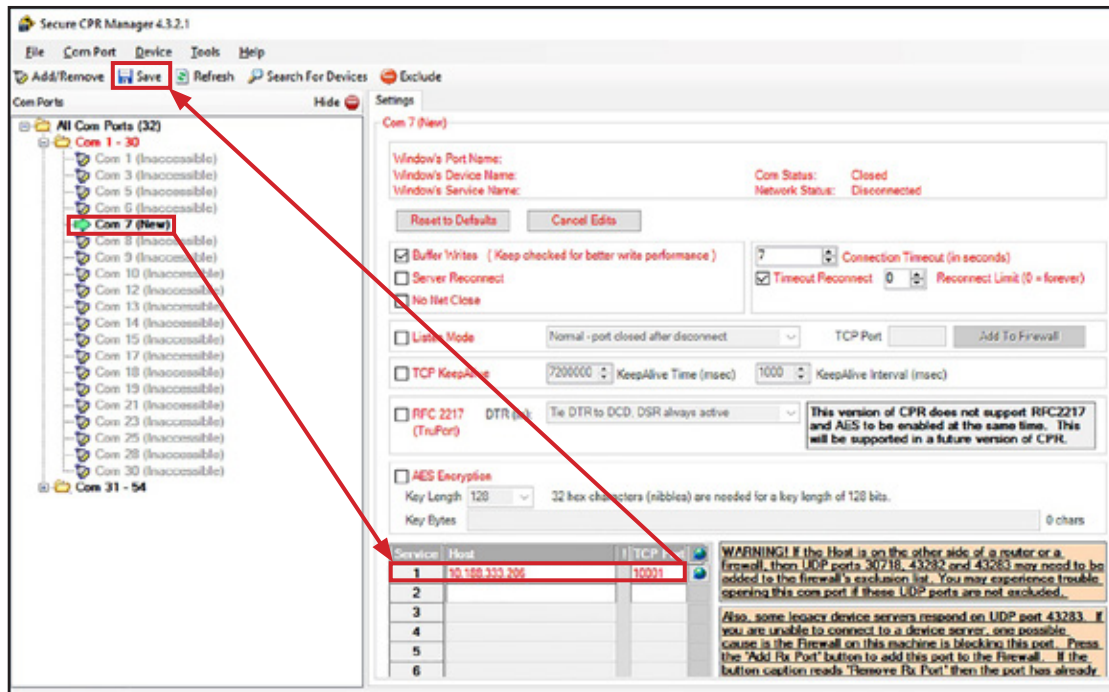
1. Run the **SCPR_x64CD_4.3.2.1.msi** installer. Follow the instructions to install the *Lantronix SCPR* using default settings.
2. Run the **Secure CPR Manager** application.
3. Click **Add/Remove**.



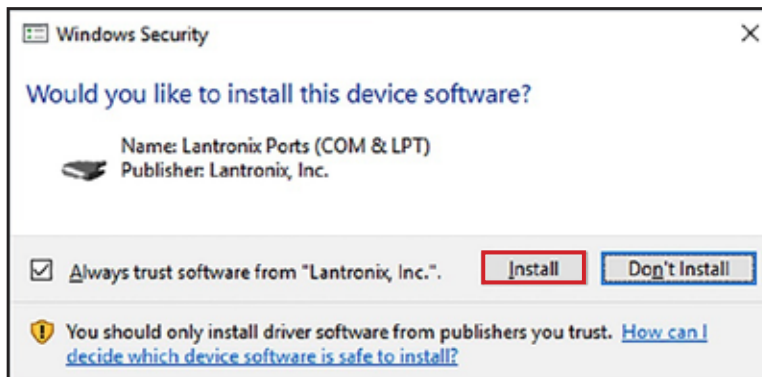
4. Check an available Com port and click **OK**. Com ports that are grayed out are already used and cannot be selected.

NOTE Do not use Com ports 1-4.

5. Click the Com port you just selected in the *All Com Ports* pane on the left.
6. Type the IP address of the dormakaba RS232 LAN module installed in the ARGUS gate into the *Host* field.
7. Type **10001** into the TCP Port field.
8. Click **Save**.



9. Click **Yes** when prompted to save settings.
10. Click **Install**.

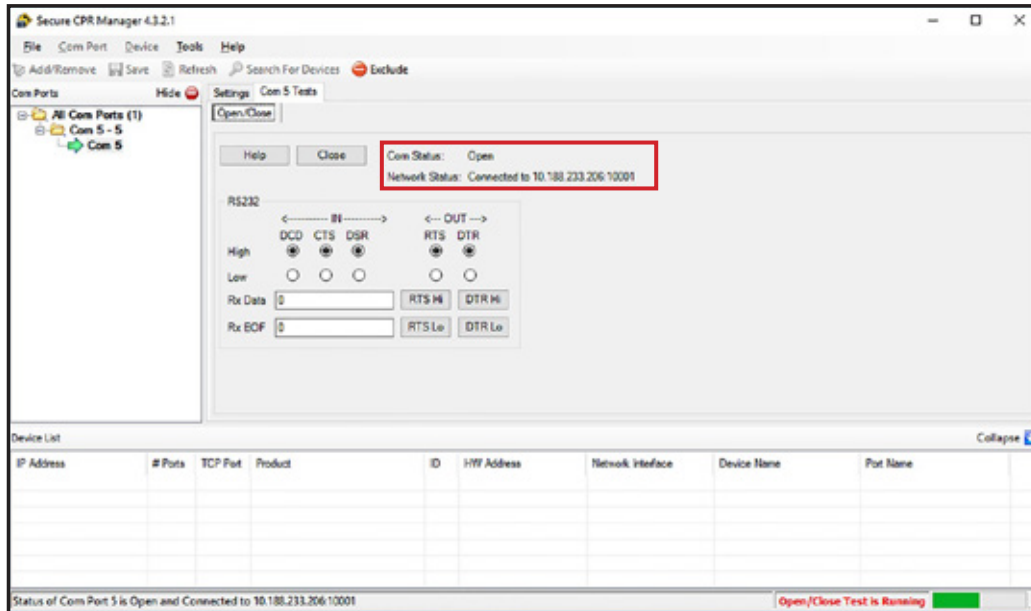


11. Wait for the process to complete, shown in the lower-left corner of the window.

The screenshot displays a software interface with two tables. The top table, titled 'Service', has two columns: 'Service' and 'Host'. The first row contains the value '1' under 'Service' and '10.188.333.206' under 'Host'. The subsequent rows are numbered 2 through 6 but are empty. Below this is a section titled 'Device List' which contains a table with six columns: 'IP Address', '# Ports', 'TCP Port', 'Product', 'ID', and 'HW Address'. This table is currently empty. At the bottom left of the interface, a message 'Settings have been saved' is displayed in a red-bordered box.

NOTE To test the connection, the ARGUS gate must be powered on and connected to your network.

12. Click the **Com # Tests** tab.
13. Click **Open** and verify the Com port connects successfully.



14. Click **Close**.

NOTE

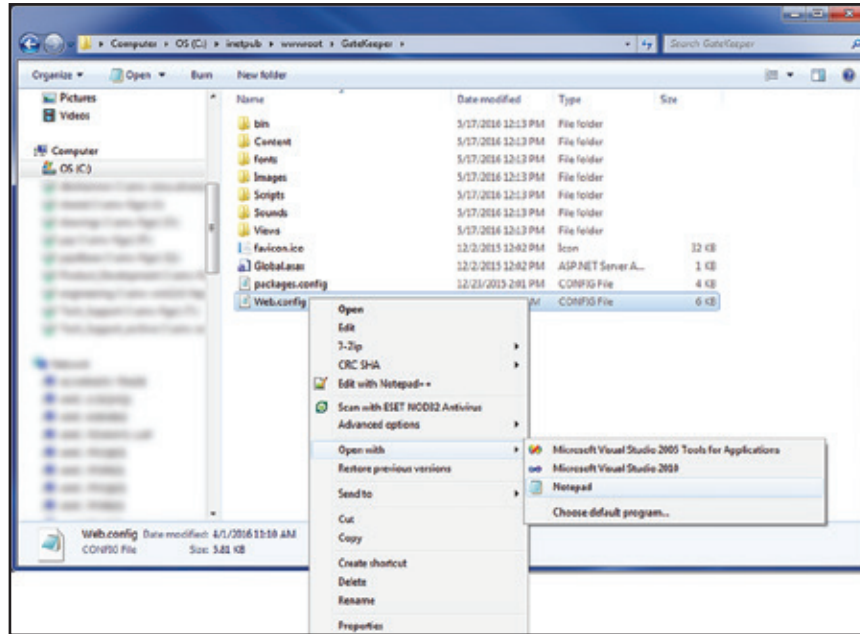
Com ports support only one connection at a time. If you do not close the connection after testing it, GateKeeper will not be able to connect to the ARGUS gate.

15. Repeat steps 3-13 for each ARGUS gate you want to set up.

GateKeeper Setup

NOTE This section assumes you have already installed GateKeeper using the default locations shown in the installation instructions above.

1. Open **Windows Explorer** and go to the **C:\inetpub\wwwroot\GateKeeper** folder.
2. Right click the **Web.config** file, select **Open With**, and click **Notepad**.



NOTE You can edit the *Web.config* file with any application capable of editing XML files.

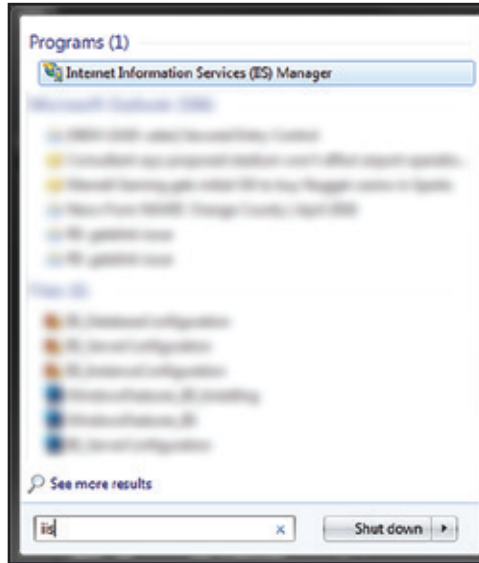
- Find the line that starts with `<add key="CPRFolderPath" value=`. Enter the path to your computer's `Documents\Lantronix\SCPR` folder.
- Save the `Web.config` file and close it.



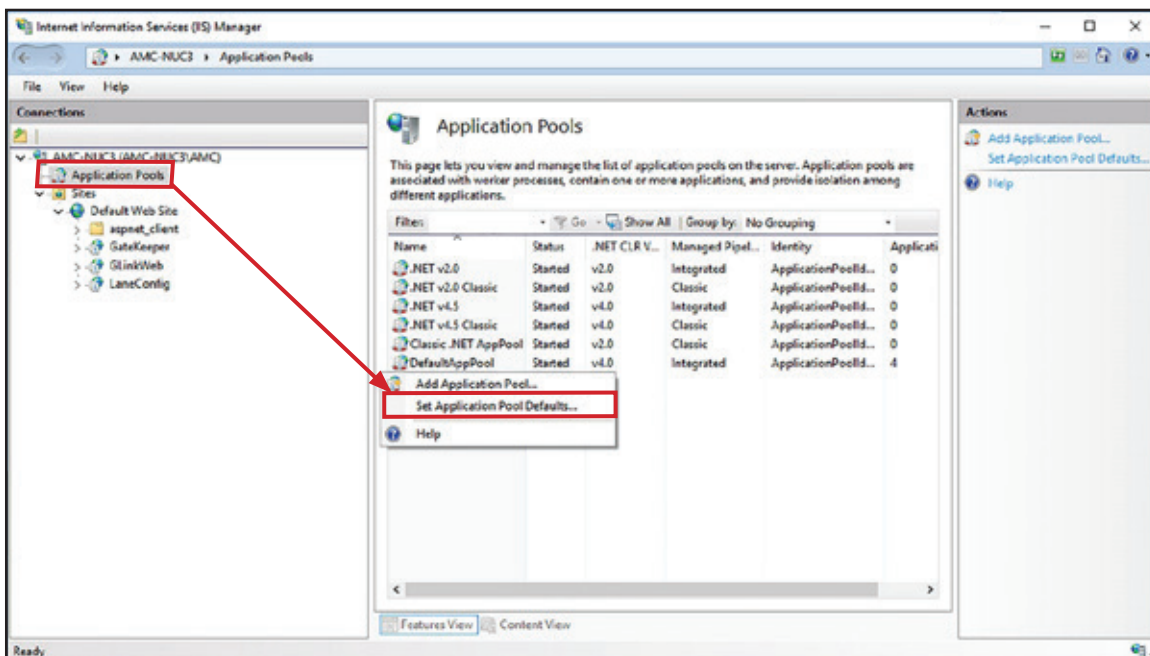
```
Web.config - Notepad
File Edit Format View Help
<?xml version="1.0" encoding="utf-8"?>
<!--
  For more information on how to configure your ASP.NET application, please visit
  http://go.microsoft.com/fwlink/?LinkId=301880
-->
<configuration>
  <configSections>
    <!-- For more information on Entity Framework configuration, visit http://go.microsoft.com/fwlink/
    <section name="entityFramework" type="System.Data.Entity.Internal.ConfigFile.EntityFrameworkSe
  </configSections>
  <connectionStrings>
    <add name="UserConnection" providerName="System.Data.SqlClient" connectionString="Data Source=
Id=sqlexpress;Password=alvarado;MultipleActiveResultSets=True" />
    <add name="TurnstileConnection" providerName="System.Data.SqlClient" connectionString="Data Sc
Id=sqlexpress;Password=alvarado;MultipleActiveResultSets=True" />
  </connectionStrings>
  <appSettings>
    <add key="webpages:Version" value="3.0.0.0" />
    <add key="webpages:Enabled" value="false" />
    <add key="ClientValidationEnabled" value="true" />
    <add key="UnobtrusiveJavaScriptEnabled" value="true" />
    <add key="DemoMode" value="false" />
    <add key="GateKeeperPort" value="8888" />
    <add key="LaneConfigURL" value="XXX" />
    <add key="EmailHost" value="XXX" />
    <add key="EmailUsername" value="XXX" />
    <add key="EmailPassword" value="XXX" />
    <add key="CPRFolderPath" value="C:\Users\AMC\Documents\Lantronix\SCPR" />
  </appSettings>
  <system.web>
    <authentication mode="None" />
```

Configure IIS

1. Click **Start** and type **IIS** into the search bar.
2. Click **Internet Information Services (IIS) Manager**.



3. Double-click the host computer's name to expand the list and select **Application Pools**.
4. Right-click within the center pane and select **Add Application Pool**.



5. Enter **GateKeeperAppPool** for the name and click **OK**.

Add Application Pool

Name:
GateKeeperAppPool

.NET CLR version:
.NET CLR Version v4.0.30319

Managed pipeline mode:
Integrated

Start application pool immediately

OK Cancel

6. Click the App Pool you added and click **Advanced Settings...** in the right pane.

Internet Information Services (IIS) Manager

AMC-NUC3 > Application Pools

Application Pools

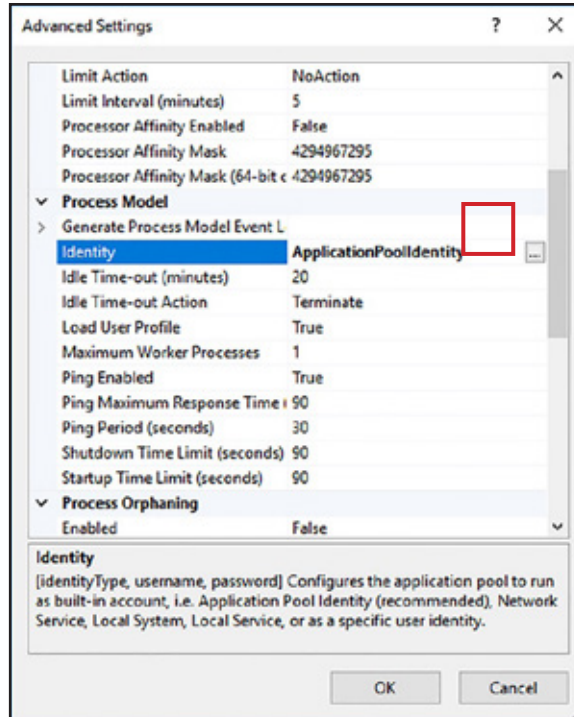
This page lets you view and manage the list of application pools on the server. Application pools are associated with worker processes, contain one or more applications, and provide isolation among different applications.

Name	Status	.NET CLR V...	Managed Pipel...	Identity	Applicati
.NET v2.0	Started	v2.0	Integrated	ApplicationPoolid...	0
.NET v2.0 Classic	Started	v2.0	Classic	ApplicationPoolid...	0
.NET v4.5	Started	v4.0	Integrated	ApplicationPoolid...	0
.NET v4.5 Classic	Started	v4.0	Classic	ApplicationPoolid...	0
Classic .NET AppPool	Started	v2.0	Classic	ApplicationPoolid...	0
DefaultAppPool	Started	v4.0	Integrated	ApplicationPoolid...	4
GateKeeperAppPool	Started	v4.0	Integrated	LocalSystem	1

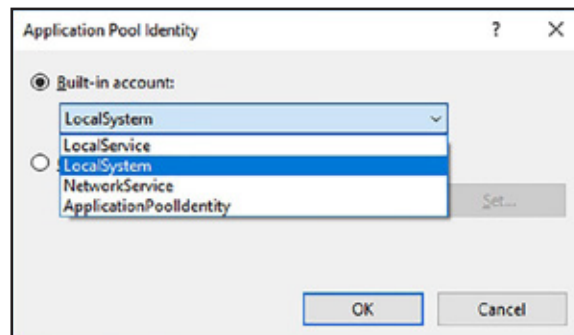
Actions

- Add Application Pool...
- Set Application Pool Defaults...
- Application Pool Tasks**
 - Start
 - Stop
 - Recycle...
- Edit Application Pool**
 - Basic Settings...
 - Recycling...
 - Advanced Settings...**
 - Rename
 - Remove
 - View Applications
 - Help

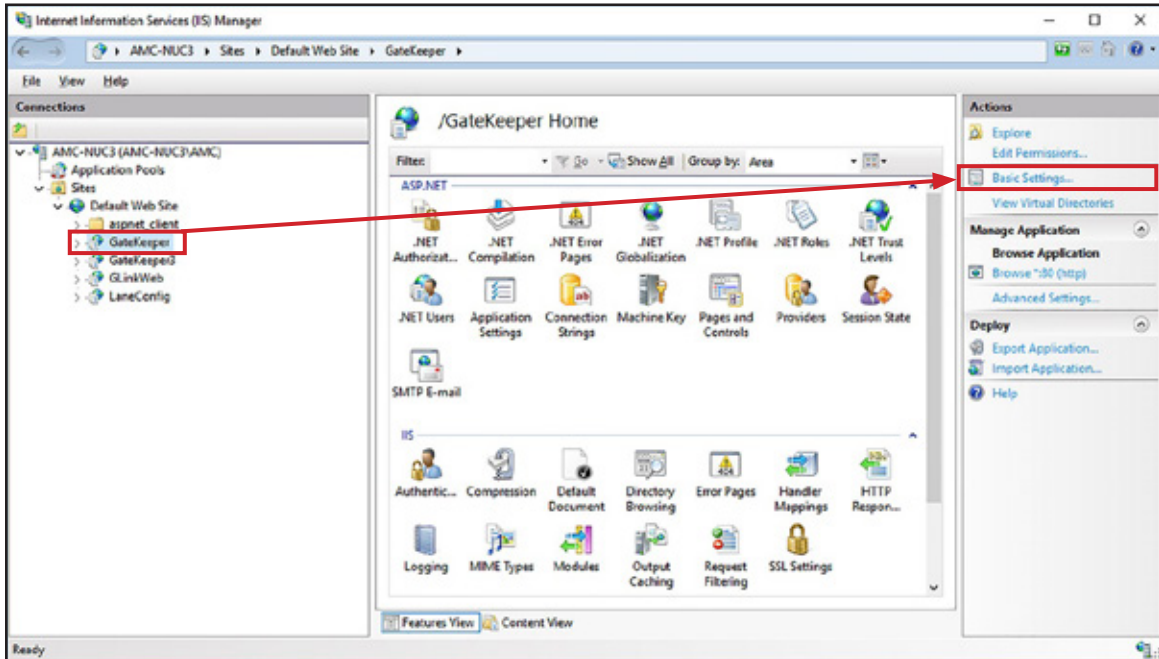
7. Click the [...] button for *Identity*.



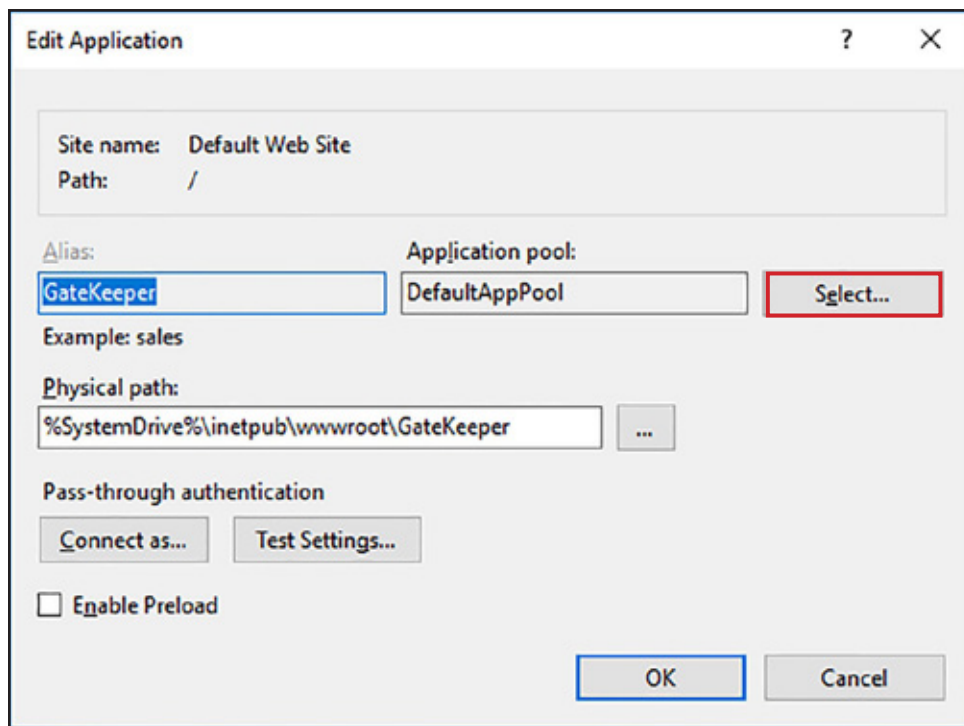
8. Select **Local System** from the *Built-in* account dropdown list and click **OK** until you return to the IIS screen.



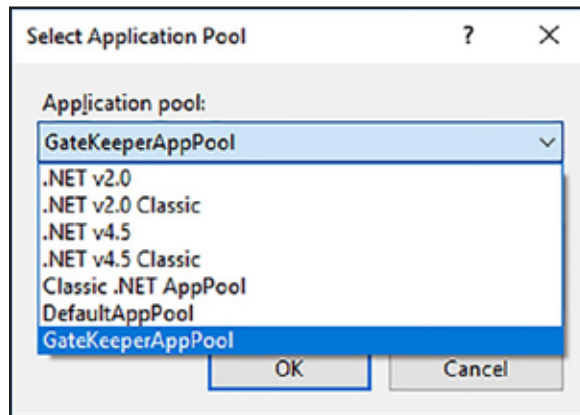
9. Click **GateKeeper** in the left pane to select it and click **Basic Settings...** in the right pane.



10. Click **Select**.



11. Select **GateKeeperAppPool** from the *Application pool* dropdown list and click **OK** until you return to the IIS screen.



Revision History

Revision	Creation Date	Author	Revision History/Description
1.0	7/12/2016	D Bohannon	Original Document
1.1	11/16/2016	D Bohannon	Updated Appendix 2.
2.0	11/2/2021	D Bohannon	Added Appendix 3.
3.0	11/11/2021	D Bohannon	Updated with steps for SQL 2019 and Windows 10.

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