

**Altair® Monarch® v2020.0**  
**MONARCH SERVER**  
**INSTALLATION GUIDE**

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# MONARCH SERVER SYSTEM — SERVER INSTALLATION

This chapter describes how to install *Monarch Server* system components on your servers.

## SOFTWARE REQUIREMENTS

### Server software:

- Operating systems:
  - Windows Server 2016
  - Windows Server 2019
- IIS 10.0
- .NET framework 4.7.2 32/64-bit
- Microsoft Access Database Engine 2010 64-bit

**NOTE** You can download Microsoft Access Database Engine 2010 64-bit from <http://www.microsoft.com/en-us/download/details.aspx?id=13255>.

- Microsoft SQL Server 2016/2017/2019
- SQL 2017 Local DB 64-bit

**NOTE** You can download SQL 2017 Local DB 64-bit from <https://download.microsoft.com/download/E/F/2/EF23C21D-7860-4F05-88CE-39AA114B014B/SqlLocalDB.msi>.

If SQL Server is not installed on the Common Components server, then a basic installation of SQLClient and SQLCMD is required.

### Client software:

- One of the following browsers:
  - Internet Explorer 11
  - Mozilla Firefox v78.x+
  - Google Chrome v84.x+
  - Microsoft Edge (Chromium Engine) v85.x +

**NOTE**

Compatibility of future browsers may require Monarch Server patches as a result of changes by browser vendors that compromise historic functionalities and behaviors.

## HARDWARE REQUIREMENTS

**Processors:**

- ❑ **Recommended:** Multi-core or multi-processor Intel Xeon 2 GHz w/ 2 MB cache (or better)

**Memory:**

- ❑ **Recommended:** 16 GB RAM or greater

**Network Adapter:**

- ❑ **Recommended:** Ethernet 100 Mbps or higher (Gigabit recommended)

**Hard drive:**

- ❑ **Recommended:** 100 GB or more (depending on processing requirements, report sizes, number of active concurrent users, mining types). Disk performance has a significant influence on application scalability and viewing response.

**NOTE**

- ❑ Additional disk space may be required if leveraging Monarch Classic-based processes. The requirement depends on the number of concurrent processes and the data volumes being processed by each and subsequent configurations of the SDK Database. Altair Support can assist with identifying the space considerations in such instances.
- ❑ Monarch Server is a distributed application. Typically, better functionality is obtained by deploying 1+ servers as opposed to increasing the resource of a single server. Altair Support can assist with advising on options to address aspects such as performance, failover, and high availability.

**Monitor:**

- ❑ **Recommended:** Screen resolution of 1920 × 1080 (or 1366 × 768 for wide screens)

# RECOMMENDED SOFTWARE VERSIONS

The following software versions are recommended for the Monarch Server System.

SOFTWARE	VERSION
<b>Metadata database:</b> MS SQL Server	2019
<b>Application server:</b> <ul style="list-style-type: none"><li>• Operating System</li><li>• IIS</li><li>• .NET Framework</li></ul>	<ul style="list-style-type: none"><li>• Windows Server 2019</li><li>• 10.0</li><li>• 4.7.2</li></ul>
<b>For end users:</b> Browser	Google Chrome v83.x+

## BEFORE YOU BEGIN

Before you begin the installation process, you should plan the setup of your Monarch Server System in a manner suited for your tasks.

### Distributable and Non-distributable Components

Monarch Server System is a *distributable* system. This means that different *components* of the system can be installed on different machines within a network. There are two types of components: distributable and non-distributable.

Each of the non-distributable components can be installed only once per Monarch Server system.

Distributable components can be installed several times on different computers to form a desired configuration of the Monarch Server system that is tailored to your requirements.

The system consists of five main components:

- Configuration Service
- Agent Service
- Services
- Web Applications (Admin, Client, and RMSClient)
- Repository

The **Configuration Service** is a non-distributable component. Install only one instance of the **Configuration Service** per sold copy.

The **Agent Service** is a distributable component. It should be installed on every server used for MS installation. All instances of **Agent Service** use one **Configuration Service**.

The **Agent Service** launches the following services:

- Datawatch.Config.ConfigServer.exe
- Datawatch.ModulesManagement.Agent.exe
- Datawatch.RemoteServices.AdminServicesHost.exe

- ❑ Datawatch.RemoteServices.ClientServicesHost.exe
- ❑ Datawatch.RemoteServices.FilingDispatcherServiceHost.exe
- ❑ Datawatch.RemoteServices.MaintenanceDispatcherServiceHost.exe
- ❑ Datawatch.RemoteServices.NotificationsDispatcherServiceHost.exe
- ❑ Datawatch.RemoteServices.VolumeServicesHost.exe
- ❑ Datawatch.RemoteServices.DataPumpDispatcherServiceHost
- ❑ Datawatch.RemoteServices.DataPumpServicesHost
- ❑ Datawatch.RemoteServices.DataPumpStorageServicesHost
- ❑ Datawatch.ModulesManagement.Agent.exe
- ❑ Datawatch.RemoteServices.RMSClientServicesHost.exe
- ❑ Datawatch.RemoteServices.RMSContentServiceHost.exe

These services can run on different servers.

The **Web Applications** is a distributable component. It can be installed several times on different computers according to the number of instances.

The **Repository** is a distributable component. It can be installed on different computers. In most cases, only one instance of **Repository** should be installed.

## Database Server Preparation

When the Database Service component is chosen during the installation, the setup will create the Monarch Server database on the database server. You will need to have a special database user that will be used by the Monarch Server setup for database creation and under which Monarch Server will further connect to the database.

### SQL Server

There are two levels of security that may be set for the Monarch Server database user in SQL Server. They differ in partitioning maintenance task support.

In a Monarch Server database, servicing Content Server functionality, all report-related data are partitioned by date ranges, and each partition can be managed separately — backed up, removed, joined with another partition, etc. For Monarch Server to perform these operations automatically, partition maintenance tasks were designed.

For these tasks to function properly, the Monarch Server database user will require more rights. This requirement may be considered insecure in some environments, particularly when the database server is used for several databases and not only for Monarch Server. In this case, these rights may be assigned temporarily as the partitioning maintenance task is performed. Another option is to perform partitioning maintenance operations manually.

For setup to create the Monarch Server database — and support the partitioning maintenance task functionality — you will need the **Database Creators** server role to be assigned to the user.

**NOTE** This role will allow the user to destroy any database in the system (without reading data). Thus, it is recommended to assign this role only during the time of installation and during partitioning maintenance task operations.

To create the user, login to the database server under System Administrator (sa) user, and execute the following commands:

```
exec sp_addlogin 'ES_LOGIN', 'ES_PASSWORD'  
exec sp_adduser 'ES_LOGIN', 'ES_USER'  
exec sp_addrolemember 'db_ddladmin', 'ES_USER'  
exec sp_addrolemember 'db_datareader', 'ES_USER'  
exec sp_addrolemember 'db_datawriter', 'ES_USER'  
exec sp_addsrvrolemember 'ES_LOGIN', 'dbcreator'
```

If you decide to disable the **Database Creator** role after the Monarch Server database is created (i.e., after installation is complete), you will need to issue the following command under System Administrator:

```
exec sp_dropsrvrolemember 'ES_LOGIN', 'dbcreator'
```

**NOTE**

The db\_owner role may be removed, and the db\_executor role may be added. If the db\_executor role does not exist, it may be created as follows:

```
CREATE ROLE db_executor  
GRANT EXECUTE TO db_executor  
EXEC sp_addrolemember 'db_executor', 'ES_USER'
```

## Installer Preparation

Depending on a computer's local security policies and configuration, the execution of downloaded files might be blocked. In particular, when downloading a file through a Windows OS to an NTFS partition, the Windows OS considers this file as an attachment by default. As a result, the opening, unpacking, or execution of the file is "blocked," resulting in errors. To avoid the installer file of Monarch Server from being blocked, the following steps are recommended.

### To unblock the installer file after download

1. Find the ZIP file of the Monarch Server installer.
2. Right-click on the ZIP file and select **Properties** in the context menu.
3. Navigate to the **Security** section of the **General** tab in the **Properties** window. Find the **Unblock** check box beside the text "This file came from another computer and might be blocked to help protect this computer."
4. Select the **Unblock** check box to activate it.
5. Click **OK** to apply the change.

# MONARCH SERVER INSTALLATION

You need to start **NetTcpPortSharing** in Windows Services if the application uses TCP (by default).

1. Click **Start**, point to **Administrative tools**, and double-click **Services**.
2. Right-click on **NetTcpPortSharing**, and select **Properties**.
3. In the **Startup type** drop-down list, select **Automatic**, and click **OK**.

Next time you start Windows, the service will be started automatically.

It is recommended that you stop Internet Server Services before you begin the installation.

You must be logged on as a local administrator on the machine where you are going to install the Monarch Server system, or the UAC should be turned off during the installation process.

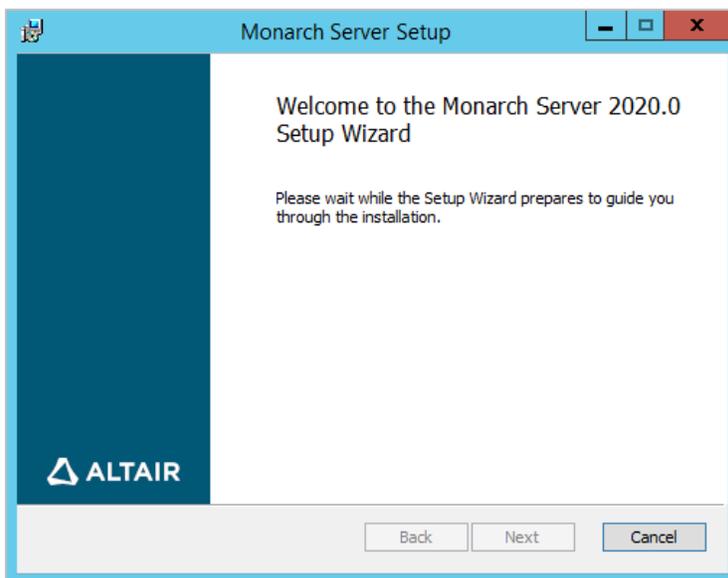
**NOTE** If some system files are to be replaced during the installation, you will see a message informing of a Windows restart requirement at the end of the installation.

Open the directory with the installation files, and check whether it contains the license file labeled as “ds.lic.” If not, copy this file from the original Monarch Server installation media to the directory from which you are going to install Monarch Server.

**NOTE** If the configuration machine name in the license file is not the same as the machine name of installation, the warning message is displayed: “Config machine name in license does not match current machine name. Config service will not start properly.” You can proceed with the installation.

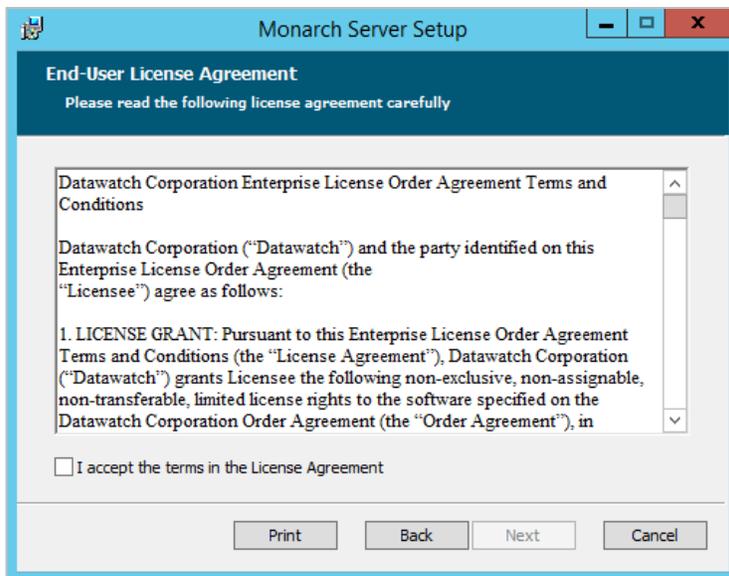
## Single Server Installation

1. In the directory with the installation files, double-click **MonarchServerv2020x64.msi** in case of 64-bit Windows to launch the Monarch Server Setup Wizard.



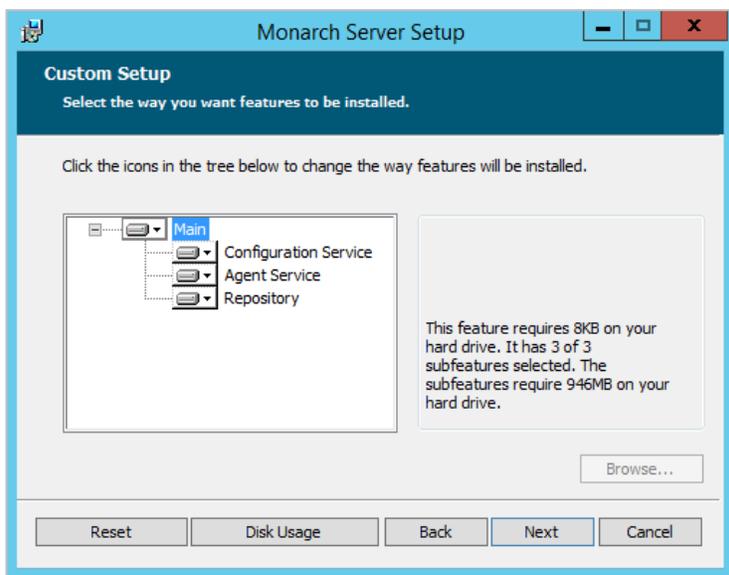
Click **Next**.

2. The End-User License Agreement dialog box appears.



If you agree to the license terms, select the check box below the text, and click **Next**.

3. The **Custom Setup** dialog box appears.

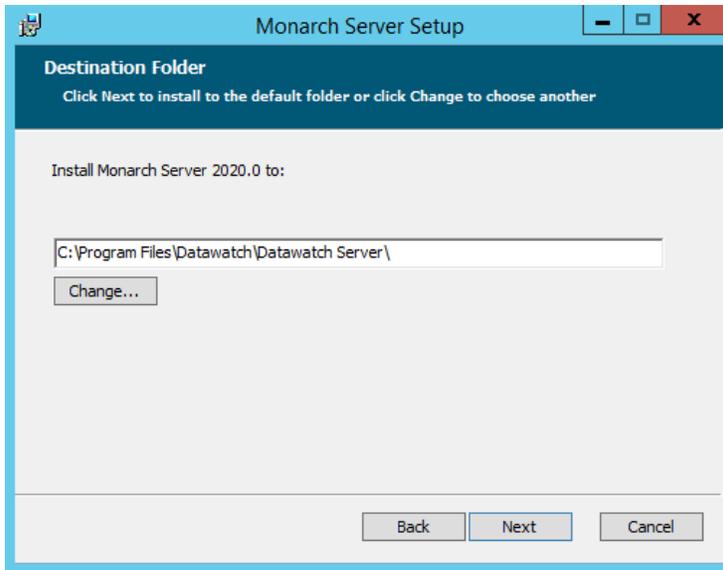


You can select the following components to be installed:

- **Configuration Service** manages the system configuration and tracks license agreements. It can serve more than one instance. In most cases, only one instance of Configuration Service should be installed.
- **Agent Service** manages services (modules) on a particular server. It should be installed on every server used for MS installation.
- **Repository** is a folder containing module packages. A package is a 7-Zip archive containing all assemblies required by a module. In most cases, only one instance of Repository should be installed.

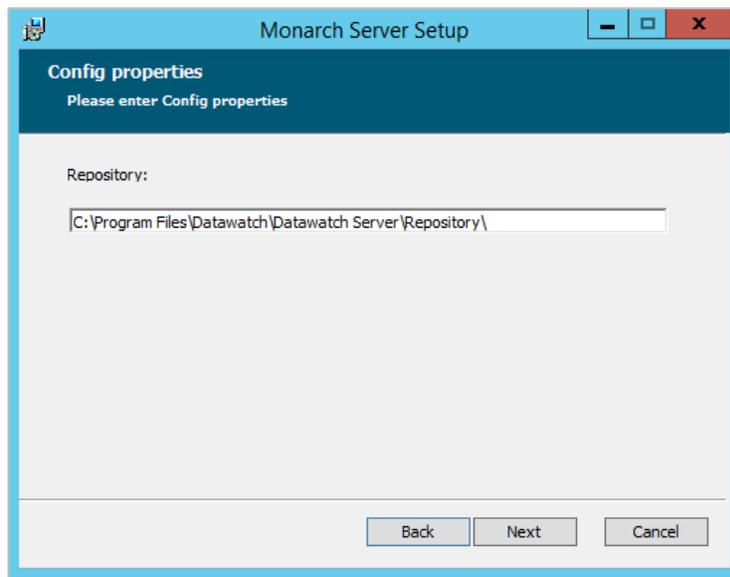
Click **Next**.

4. The **Destination Folder** dialog box appears.



Click **Next** to install Monarch Server in the default folder, or click **Change** to select another folder.

5. The **Config properties** dialog box appears.

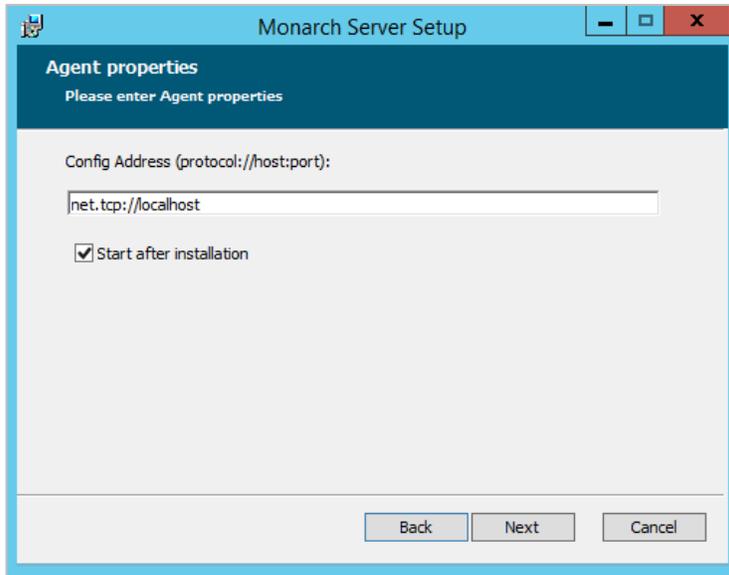


Set the following properties:

- In the **Repository** field, specify the path to the folder where the **Repository** will be located.

Click **Next**.

6. The **Agent properties** dialog box appears.

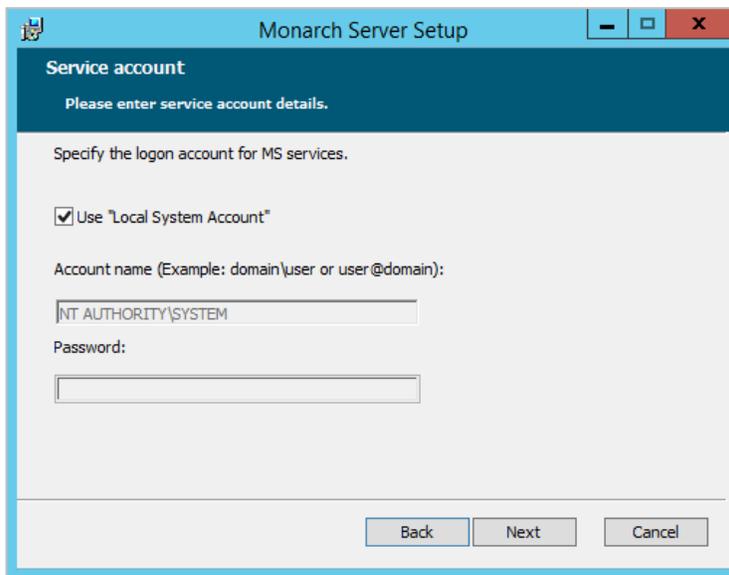


Set the following properties:

- In the **Config Address** field, specify the address where the **Configuration Service** will run; 'localhost' should be replaced with the FQDN of your server (e.g., net.tcp//myserver.domain).
- Select the **Start after installation** check box if you want the **Agent Service** to start immediately after the installation.

Click **Next**.

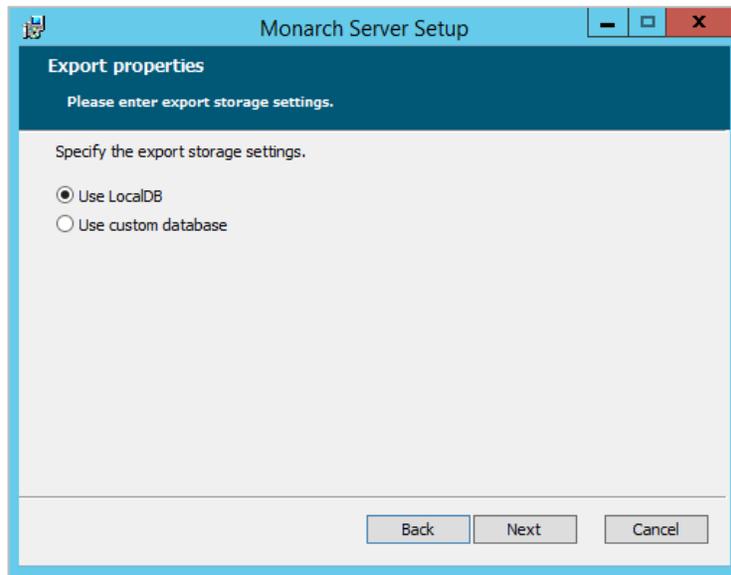
7. The **Service account** dialog box appears.



Select the **Use "Local System Account"** check box if you want to use a local system account. Otherwise, clear the check box and specify a custom user in the **Account name** box.

**NOTE** In case of a [distributed installation](#), if you specify a custom user in the **Account name** field, **NTLM** authentication is applied.

8. The **Export Properties** dialog box appears.



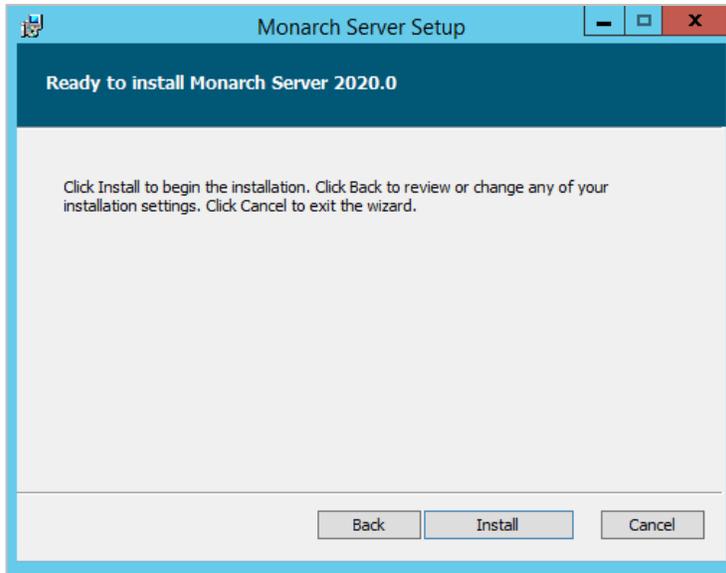
Specify the export storage settings:

- Select the **Use local DB** option if you want to use a local database as an export storage.
- Select the **Use custom database** option if you want to use a custom database as an export storage, and then specify its parameters:
  - ◆ Server name
  - ◆ Authentication credentials: user name and SQL password. If you want to use Windows authentication, select the corresponding check box.

**NOTE** Using a custom database means Monarch Server will need to be able to create/destroy work databases dynamically. Contact Altair Support for further information and guidance if required.

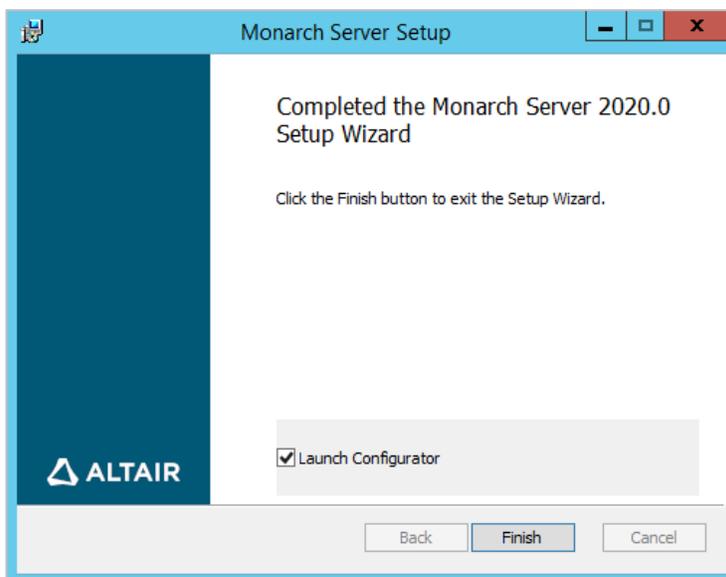
Click **Next**.

9. The following dialog box appears.



Click **Install** to begin the installation.

10. After the installation is complete, the following dialog box appears.



Select the **Launch Configurator** check box to run the **Configurator** immediately. Click **Finish** to exit the Setup Wizard.

Now you can access the following options via the **Start** menu, under **All Programs, Monarch Server, Monarch Server 64-bit**:

- Run **Agent Service** in console mode
- Run Configuration Service in console mode
- Run Configurator
- Uninstall

## Creating Instances

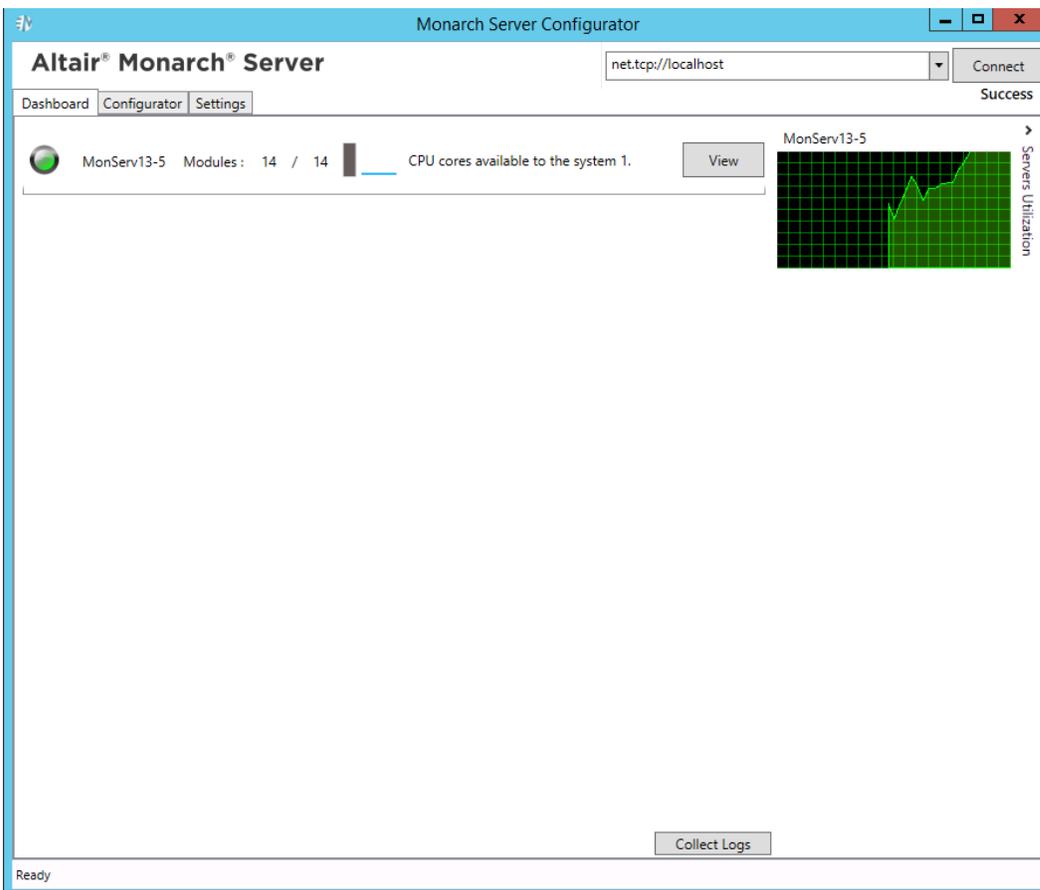
You can create instances using the **Configurator** tool.

The **Configurator** will launch immediately after installation if you select the corresponding check box.

**NOTE** You can run it manually by selecting the **Run Configurator** option on the **Start** menu.

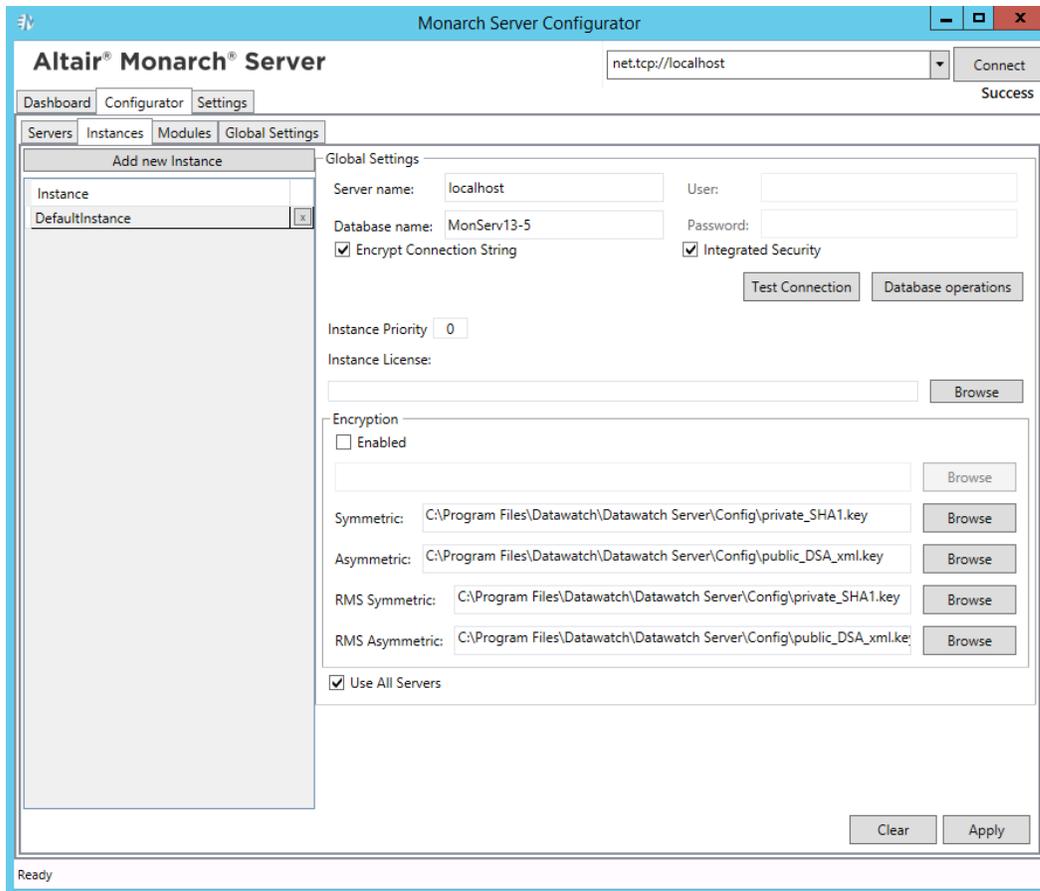
### To create an instance

1. From the drop-down list in the top right corner in the **Monarch Server Configurator** window, select the domain server name and port where the **Configuration Service** runs, and click **Connect**.



**NOTE** The default service URI can be net.tcp://localhost. However, the **Configuration Service** can be launched on any computer. In this case, the URI should contain the domain server name.

2. Select the **Configurator** tab, and click the **Instances** tab.



- Under **Global Settings**, specify the connection string parameters: server name, database name, user, and password. Click **Test Connection**. You will be prompted to update the database.

**NOTE** Select the **Integrated Security** check box if you want to access SQL Server via Windows Authentication. This option is based on the context of the user running the Configurator application and NOT the Config Service.

If there is no database with the specified name, a message will appear asking if you want to create a new database.

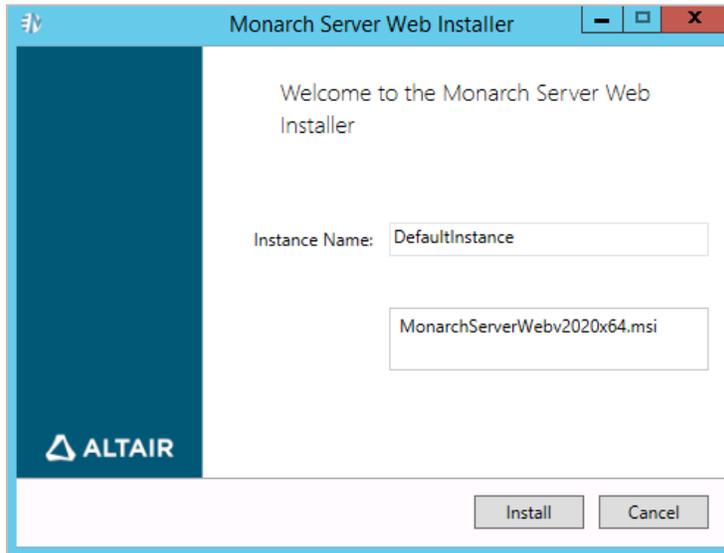
- Under **Instance License**, specify the path to the license file.
- Click **Apply**.
- If you want to create several instances, each using its own database, click the **Add new Instance** button, type the new instance name, and specify the parameters described in Step 2.

**NOTE** For additional information about setting instance parameters, refer to *Monarch Server Configurator Guide*.

## Installation of Web Applications

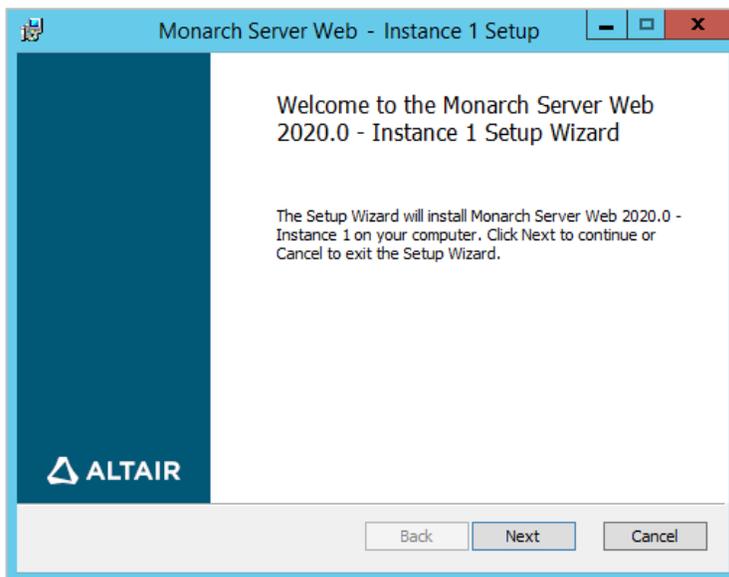
You need to install the **Admin** and **Client** applications for each instance.

1. Go to the directory with the installation files, and double-click **Web.Installer.exe**.
2. In the **Monarch Server Web Installer** dialog box, type the instance name (or leave the field empty if you plan to install only one instance), and click **Install**.

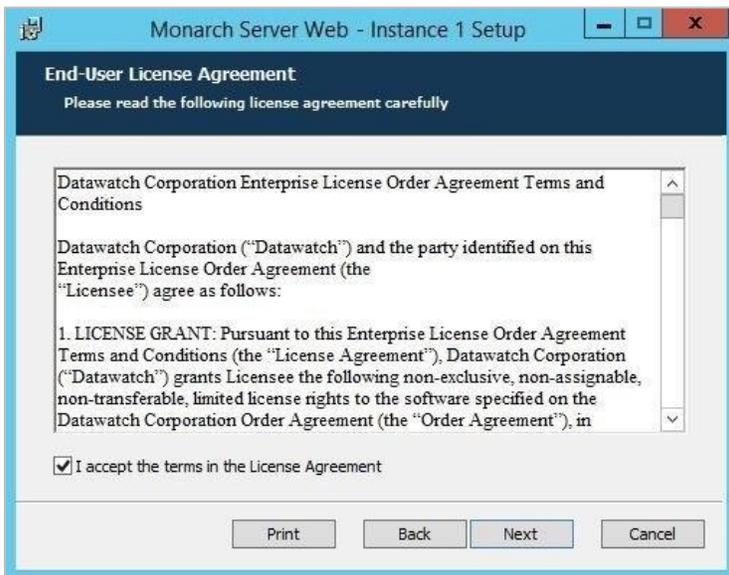


**NOTE** If you install only one instance, double-click **MonarchServerWebv2020x86.msi** (or **MonarchServerWebv2020x64.msi** in case of 64-bit Windows) to launch the Monarch Server Web Setup Wizard.

3. The **Setup Wizard** dialog box appears. To proceed, click **Next**.

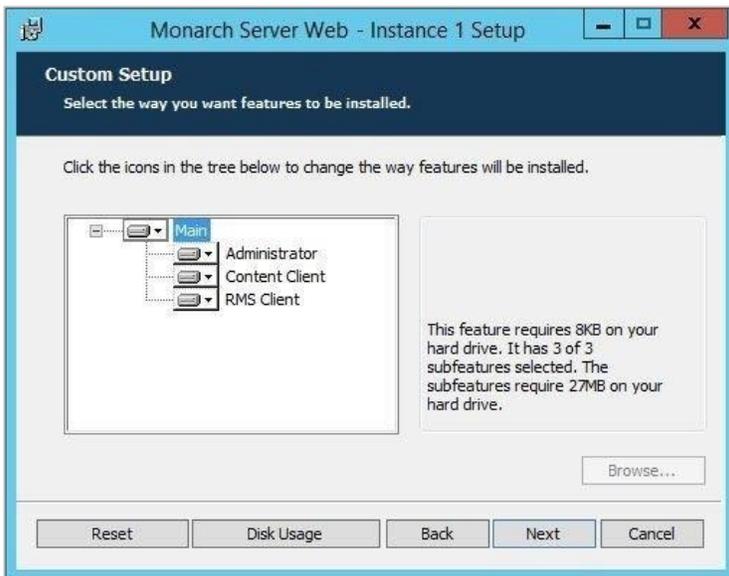


4. The End-User License Agreement dialog box appears.



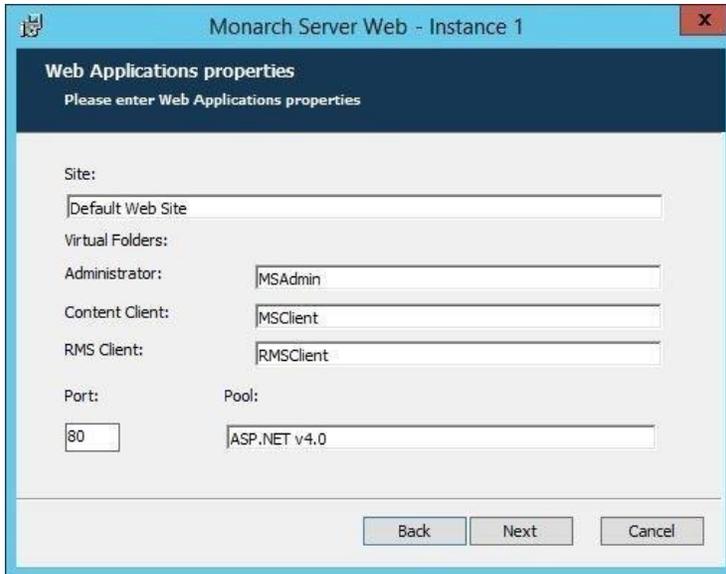
If you agree to the license terms, select the check box, and click **Next**.

5. The **Custom Setup** dialog box appears.



Select the components to be installed. For single server installation, install all the components. Click **Next**.

6. The Web Applications properties dialog box appears.



In the **Site** field, specify the site name where the Web applications will be installed.

**NOTE** Select this site name from those listed in the Internet Information Services (IIS).

Under **Virtual Folders**, specify the names of the virtual folders for **Administrator**, **Client**, and **RMS Client**.

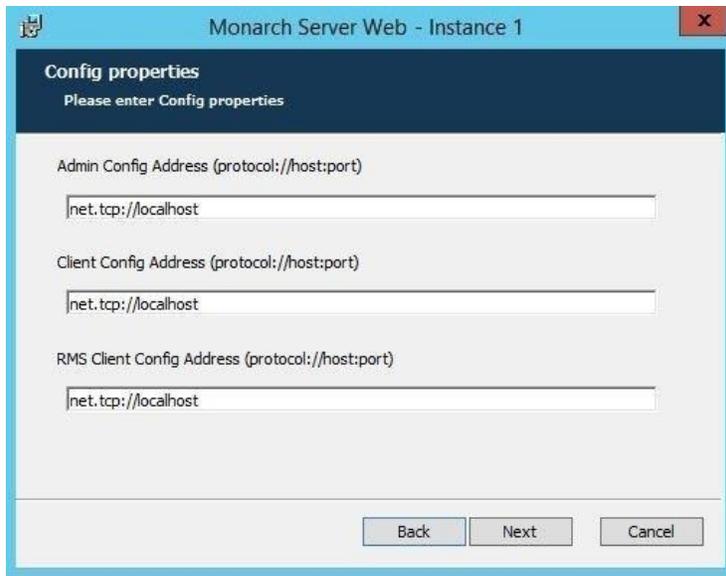
**NOTE** The installer creates virtual folder names using the template **DsAdmin%instance\_name%** and maps them to the corresponding folder at C:\inetpub\wwwroot.

In the **Port** field, specify the port where the IIS runs.

In the **Pool** field, specify the name of the application pool to be used by the Web applications.

Click **Next**.

7. The **Config properties** dialog box appears.



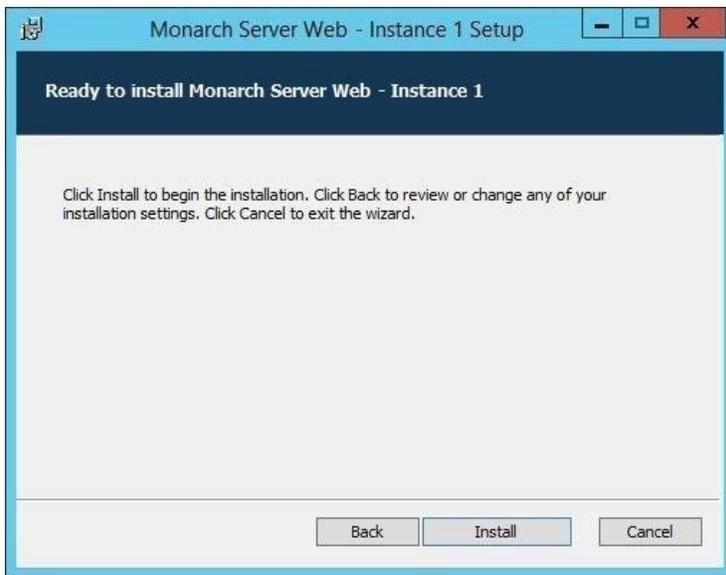
In the **Admin Config Address** field, specify the address where the Configuration Service runs for the Admin application.

In the **Client Config Address** field, specify the address where the Configuration Service runs for the Client application.

In the **RMS Client Config Address** field, specify the address where the Configuration Service runs for the RMS Client application.

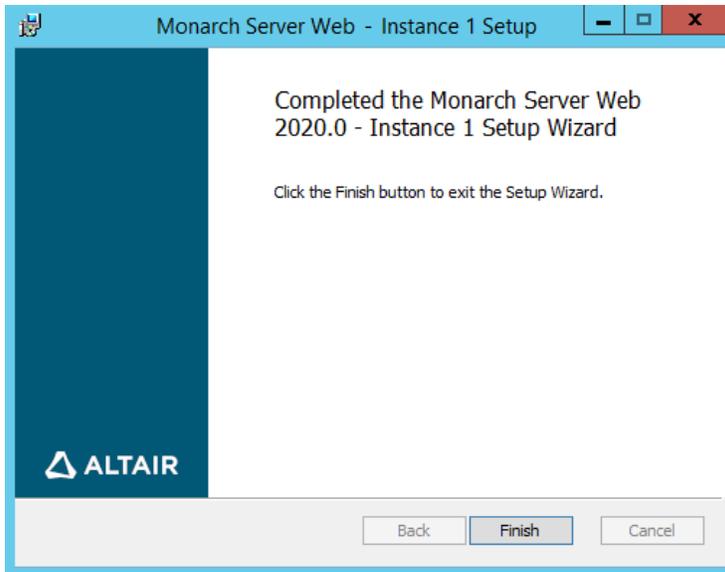
Click **Next**.

8. The following dialog box appears.



Click **Install** to begin the installation of the chosen applications.

9. After the installation is complete, the following dialog box appears.

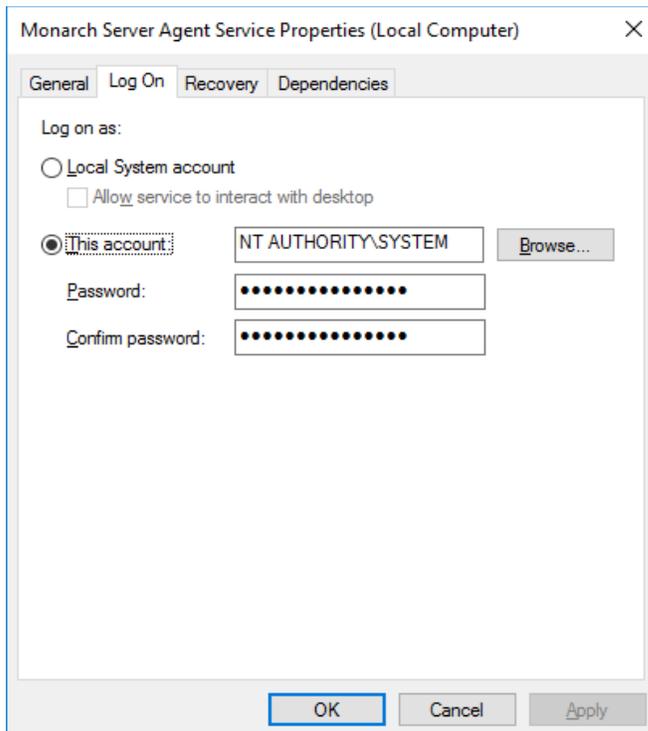


Click **Finish** to exit the Setup Wizard.

## Changing the Account

To change the account

1. Click Start, select Control Panel, and point to Administrative Tools.
2. Double-click **Services**.
3. Double-click Monarch Server Agent Service.
4. Select the **Log On** tab and specify account properties.



5. Click **OK** to save the changes and start the service.

## Distributed Installation

All installation steps for single server installation are valid for distributed installation with the following remarks:

- In Step 7, in the **Service account** dialog box, you specify the logon account for MS services. If you specify a custom user in the **Account name** field, **NTLM** authentication is applied.

The following table provides details on the interaction of services in case of distributed installation.

Client \ Server	Local User	Local System	Domain User	Domain Machine
Local User	NTLM	NTLM	NTLM	NTLM
Local System	Anonymous NTLM	Anonymous NTLM	Anonymous NTLM	Anonymous NTLM
Domain User	NTLM	NTLM	Kerberos	Kerberos
Domain Machine	NTLM	NTLM	Kerberos	Kerberos

- You may install **Client**, **Admin**, and **RMS Client** applications together or separately on any server allowed by your license.
  - Install **Agent** on each server.
  - Configure the list of services that should run on each server.

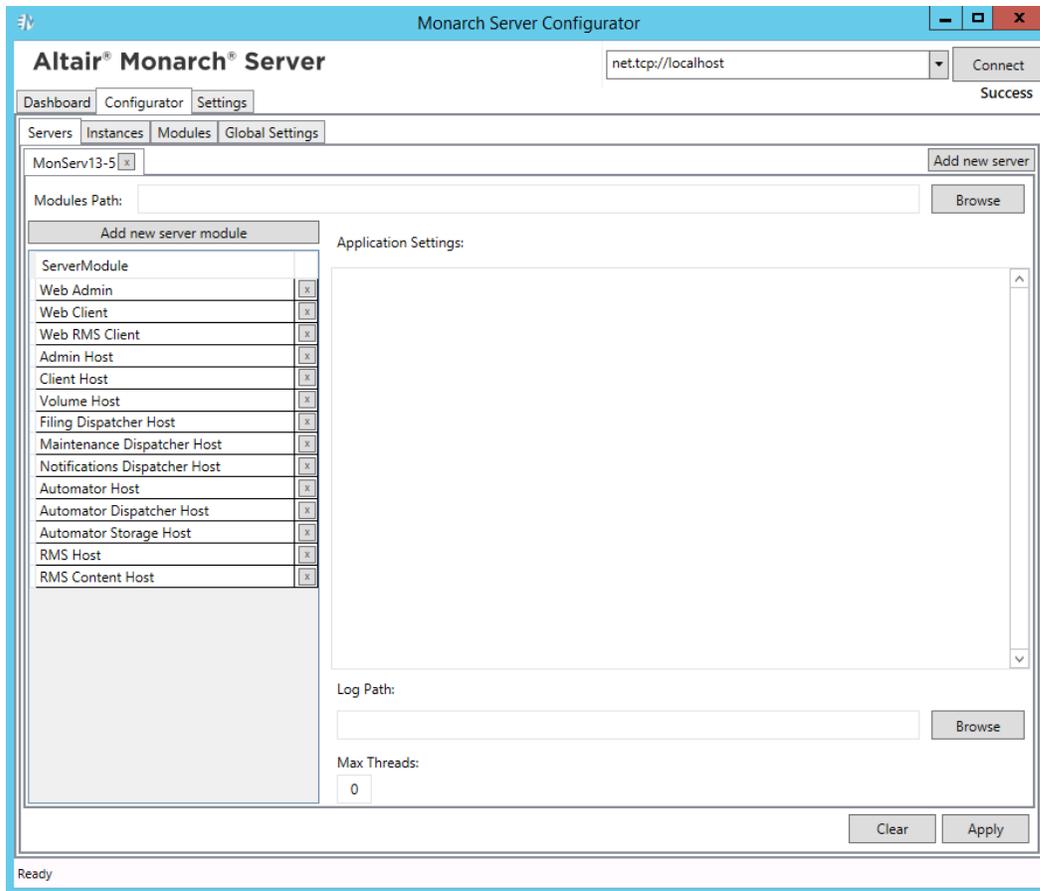
### **NOTE** LOAD BALANCING

Every server tries to execute a task locally (with the tasks sorted according to execution time). It then checks the count of threads in the thread pool.

- If the thread count in the thread pool is the same across all servers, CPU utilization is >95% (check the Configuration Dashboard for the specific server for a given parameter or logs similar to "Server server\_name utilization is percentage% processor time").
- If the thread pool lacks free threads (see logs similar to "Server server\_name pump thread pool used used\_number of pool\_count (percentage%)"), the task being executed is forwarded to another server with low utilization.

### To configure the list of services

1. Select the Run Configurator option from the Start menu.  
The **Configurator** will be launched.



2. From the drop-down list in the top right corner in the **Monarch Server Configurator** window, select the domain server name and port where the **Configuration Service** runs, and click **Connect**.
3. Under the **Configurator** tab, select **Servers**, and configure the list of services that should run on each server.

**NOTE** If you use the **Active Directory** security provider:

- Launch the Admin Host using an account that has the permission to receive the Active Directory (AD) users list.
- Launch the Client Host using an account that has access to the AD.

# SERVER POST-INSTALLATION ACTIONS

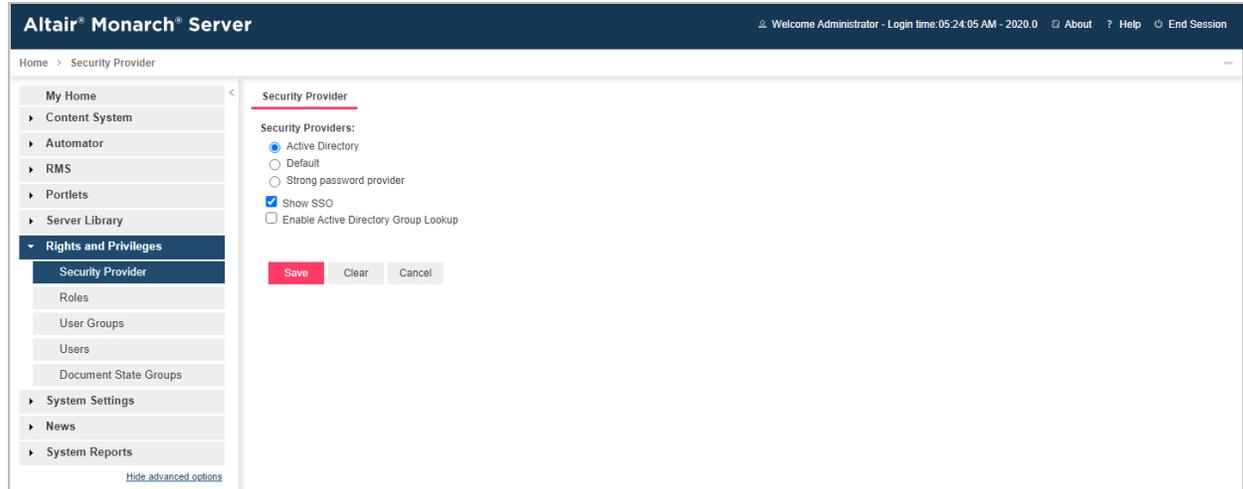
## CONFIGURING SSO

To use SSO

1. Open Administrator.

**NOTE** In Monarch Server that is upgraded from previous versions (e.g., v13.2), the virtual folders could still be labeled as “DSAdmin” (or “DSClient”). In this case, use “DSAdmin” (or “DSClient”) instead of “MSAdmin” (or “MSClient”) to open the Admin (or Client) page.

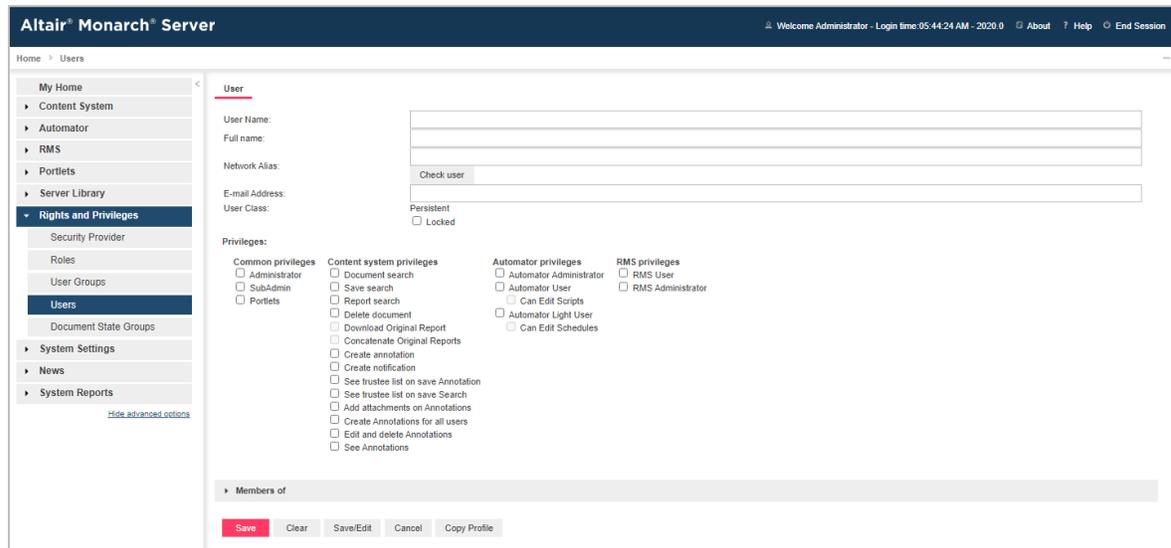
2. Under the Navigation Tree, click **Show Advanced Options**.
3. Click on Rights and Privileges, and then choose Security Provider.
4. Under Security Providers, select **Active Directory**, and then select **Show SSO**.



**NOTE** Mapping/aliasing of at least one administrator user is required. If there are no users mapped (MS and AD users are the same), the MS application is inaccessible without direct database modification of the Configuration table to the default state.

To add an administrator user account, choose **Users** under Rights and Privileges in the Navigation Tree. In the *User* window, click on “+” to add a new user.

In the *User* window, provide the necessary details. To check if the user account you are creating already exists, click on **Check User**. Do not forget to click **Save**.



5. Modify the file **web.config** of the Administrator and Client applications (the paths are *C:\inetpub\wwwroot\MSAdmin* and *C:\inetpub\wwwroot\MSClient*, respectively).

**NOTE** This step is crucial. One simple mistake can result in serious application issues. To avoid potential problems, make a backup of the **web.config** file before making any changes.

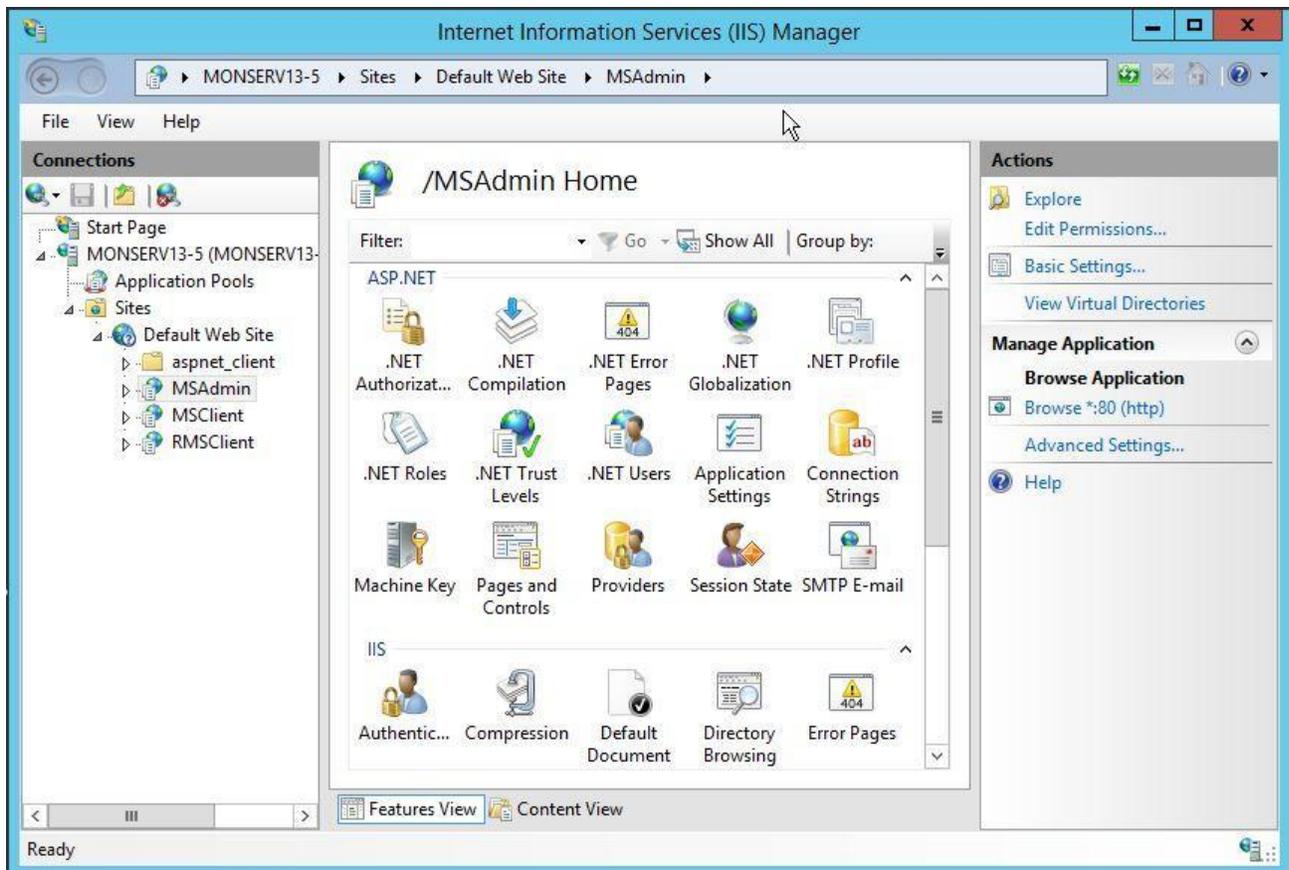
- a. Disable the following code:

```
<authentication mode="Forms">
  <forms loginUrl="~/Login/LoginRedirect" defaultUrl="~/Login/LoginIndex"
    cookieless="UseCookies" timeout="15" name=".ASPXFORMSAUTH"
    slidingExpiration="true"/>
</authentication>
```

- b. Enable the following code:

```
<authentication mode= "Windows" />
<authorization>
  <deny users="?" />
</authorization>
```

6. Make sure that **Windows, ASP.NET Impersonation** authentication on IIS for the Administrator and Client applications is disabled.
  - a. Go to Start > All apps > Windows Administrative Tools > Internet Information Services (IIS) Manager.

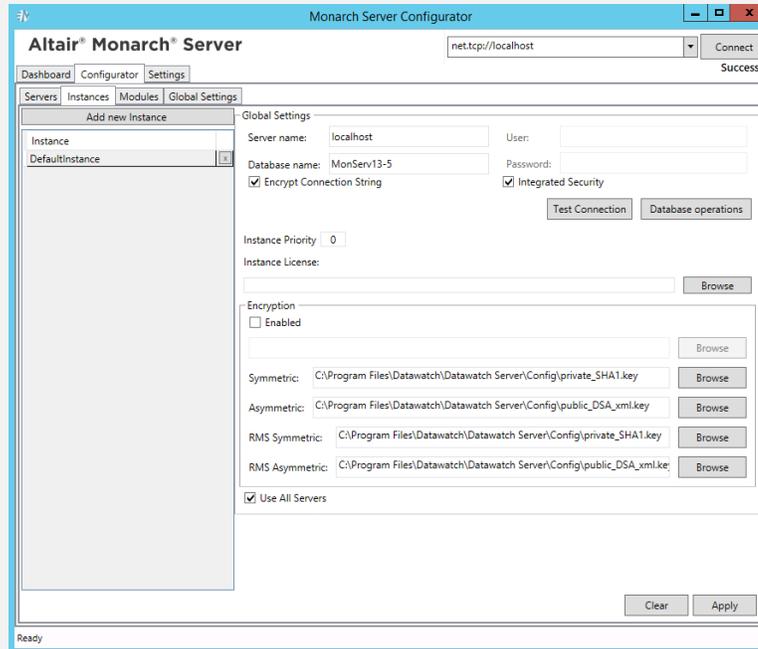


- c. Go to MSAdmin > Authentication, and disable ASP.NET Impersonation status.
  - d. Go to MSClient > Authentication, and disable ASP.NET Impersonation status.
7. Restart the Monarch Server Config and Monarch Server Agent Services, IIS.
  8. On the login page of the Administrator and Client applications, click the **SSO** button.

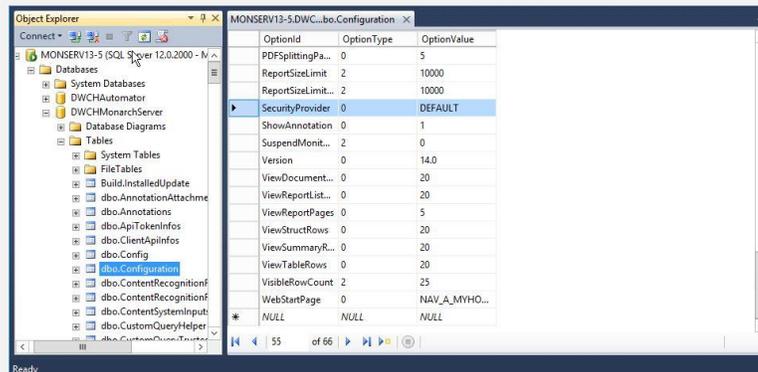
**NOTE**

If you fail to define at least one administrator user and cannot login to the Administrator page, edit the Configuration table, and set the OptionValue of SecurityProvider to DEFAULT. The steps are as follows:

- a. Open Microsoft SQL Server Management Studio.
- b. In the **Object Explorer** panel, click **Databases**, and choose the database you are using. (You may check the database name using the Monarch Server Configurator. Under Configurator, click the Instances tab. The Database Name is shown in the Global Settings window. Refer to the image below.)



- c. Under **Tables**, right-click on **dbo.configuration**, and then choose **Edit Top 200 Rows**.
- d. Look for the OptionId **"SecurityProvider,"** and then change its OptionValue to DEFAULT (case sensitive).



# SETTING USER SESSION TIMEOUT

The server provides two parameters that allow setting up a timeout period, after which user sessions within the application expire and need to be renewed. These parameters are stored in the file **web.config**, the path to which is:

*C:\inetpub\wwwroot\MSAdmin(MSClient or RMSCClient)*

One parameter is located in the Session State mode **In Proc**; this parameter checks when the last request was sent. Session timeout period is the amount of time from the last request.

In the Monarch Server applications, the parameter used by the system is the one with the smaller value.

**NOTE** The following parameter is valid only for MSAdmin and MSClient.

The other parameter is located in the authentication mode **Forms**; this parameter checks the time of the last request from the user when half of the time defined in the parameter passes (for example, if the specified time is 10 minutes, the check will be performed after 5 minutes).

# SETTING ADMINISTRATOR PASSWORD AND E-MAIL ADDRESS

Before you use the Monarch Server system, you should set the password and e-mail address for the administrator account.

1. Open a browser and type the MSAdmin address in the **Address** bar (for example, <http://localhost/MSAdmin>).
2. Log in using the default administrator account (the login name is “admin,” the password is “password”).
3. On the Navigation Tree, double-click **Rights and Privileges**, and select **Users**.
4. Click **admin**.
5. Type a password in the **Password** and **Confirm Password** boxes, and then click **Save**.
6. Click **Save** on the User page to save the changes.
7. On the Navigation Tree, double-click **System Settings**, and select the **Application Settings** tab on top of the page.
8. Enter a valid e-mail address in the **Administrator E-mail Address** field.
9. Click **Save**.

# CLIENT INSTALLATION

No special client installation is required. The user needs the following:

- One of the following browsers:
  - Internet Explorer 7+
  - Microsoft Edge v83.x
  - Mozilla Firefox v78.x
  - Google Chrome v83.x

## SOFTWARE REQUIREMENTS

Monarch Server was tested with the following client browsers and operating systems:

SOFTWARE	VERSION
<b>Operating System:</b> Windows	Windows 7 Enterprise 32-bit Windows 8.1 Enterprise 64-bit Windows 10 Windows Server 2016, 2019
<b>Browsers:</b> <ul style="list-style-type: none"><li><input type="checkbox"/> Internet Explorer</li><li><input type="checkbox"/> Google Chrome</li><li><input type="checkbox"/> Mozilla Firefox</li><li><input type="checkbox"/> Microsoft Edge</li></ul>	7, 8, 9, 10, 11 v83.x v78.x v83.x

# INSTALLATION MAINTENANCE

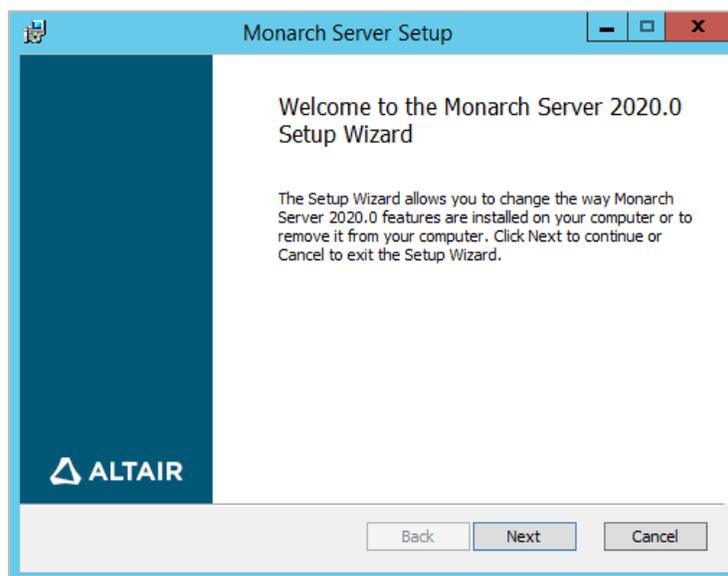
This section describes how to add/remove Monarch Server components on a computer and how to repair a damaged installation.

**NOTE** You must shut down Monarch Server application and the Web application engine before you attempt to do any of the tasks below.

## ADDING OR REMOVING COMPONENTS

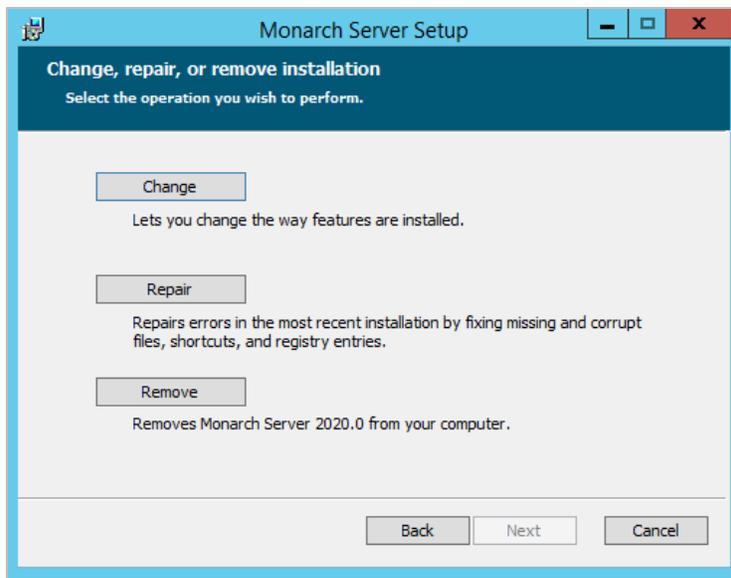
**NOTE** Adding/removing components via **Add/Remove Programs** will not work in the multi-instance mode. In this case, perform this operation manually.

1. Run the **MonarchServerv2020x86.msi** file from your installation media (**MonarchServerv2020x64.msi** in case of 64-bit Windows), or use **Add/Remove Programs** in the system's **Control Panel**. The Monarch Server Setup Wizard is launched.



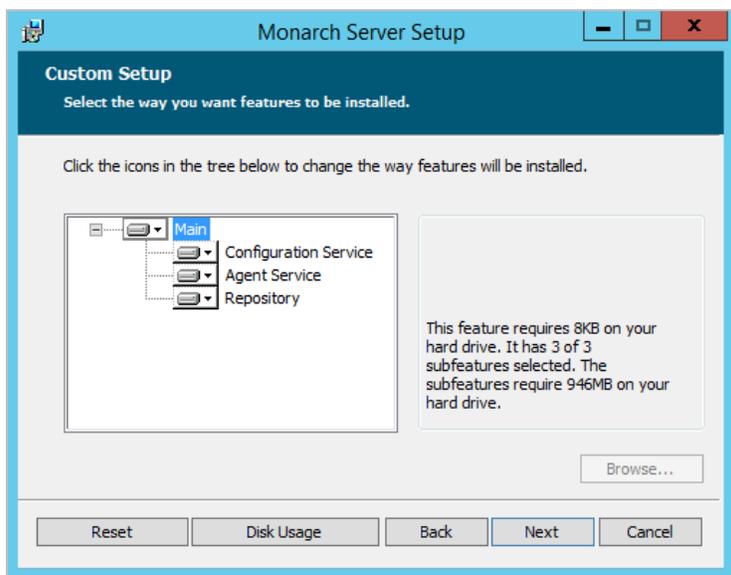
Click **Next**.

2. A dialog box appears with the following options.



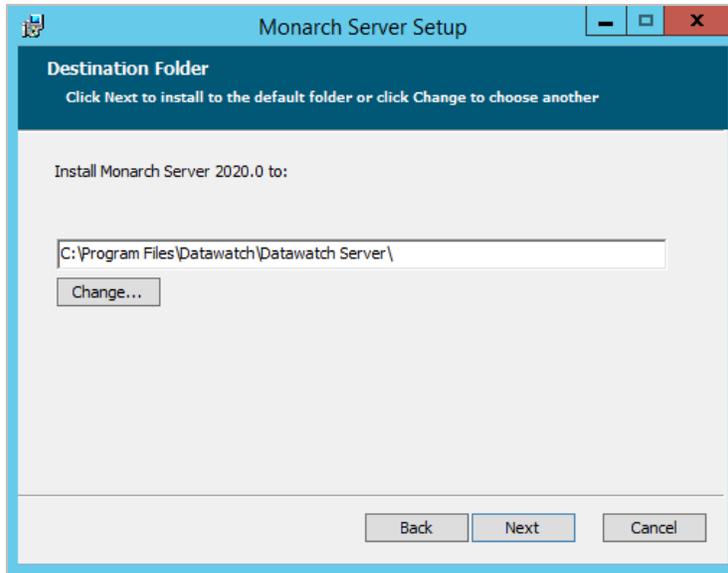
Click the **Change** button.

3. The **Custom Setup** dialog box appears.



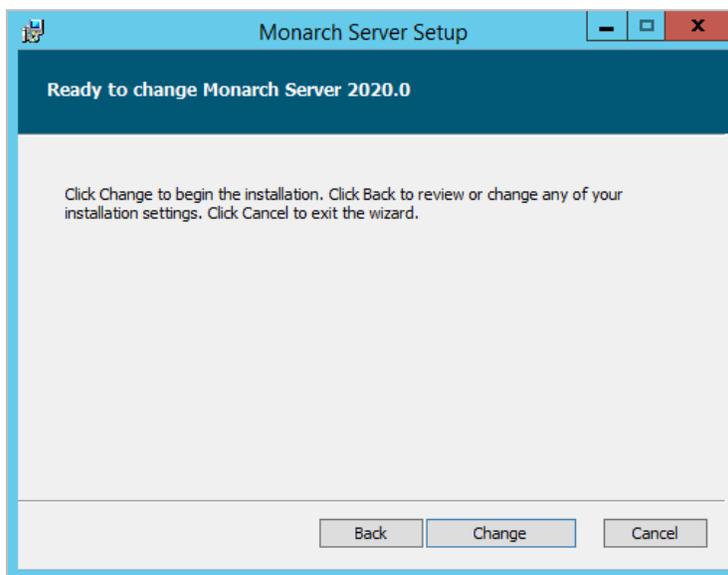
Select the components you want to install, or deselect the components you want to remove. Click **Next**.

4. The **Destination Folder** dialog box appears.



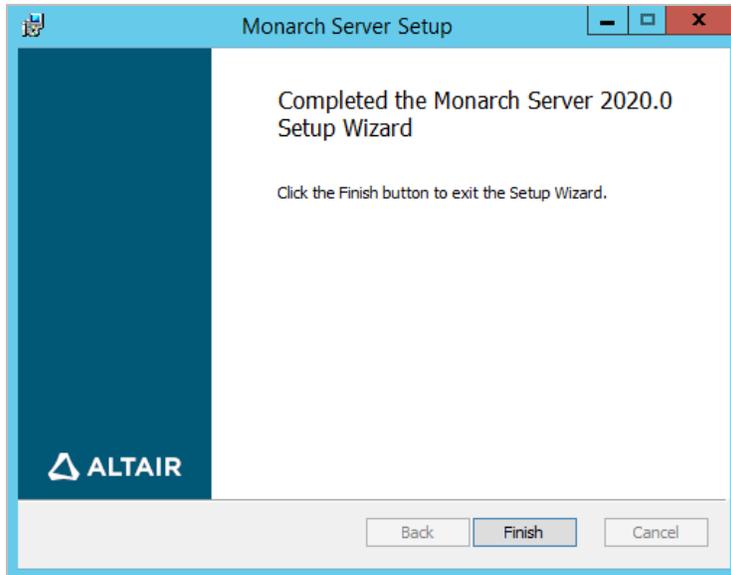
Click **Next** to install Monarch Server to the default folder, or click **Change** to select another folder.

5. The following dialog box appears.



Click **Change** to change the way features are installed.

6. When the maintenance is complete, the following dialog box appears.



Click **Finish** to exit the Setup Wizard.

## REPAIRING A DAMAGED INSTALLATION

The Repair function of the Setup Wizard repeats the last installation to replace missing or damaged files of the Monarch Server System. Use this option if you accidentally deleted some Monarch Server System files or if the Monarch Server System becomes unworkable due to damaged files.

**NOTE** The Repair function removes all changes you made in property files or registry settings. Therefore, before beginning a repair, backup all property files and registry keys first.

Do not try to work with the system registry if you are unfamiliar with it. Incorrect actions can render your system unusable.

### To repair a damaged installation

1. Run the **MonarchServerv2020x86.msi** file from your installation media (**MonarchServerv2020x64.msi** in case of 64-bit Windows), or use the **Add/Remove Programs** shortcut in the system's **Control Panel**. The Monarch Server Setup Wizard is launched.
2. Click **Next** and select the **Repair** option. Follow the instructions on the screen. When the repair is complete, the corresponding message will appear.
3. Click **Finish** to exit the Setup Wizard.

## REMOVING ALL SYSTEM COMPONENTS

This function removes all Monarch Server components and files installed on the computer.

### To remove all system components

1. Run the **MonarchServerv2020x86.msi** file from your installation media (**MonarchServerv2020x64.msi** in case of 64-bit Windows), or use the **Add/Remove Programs** shortcut in the system's **Control Panel**. The Monarch Server Setup Wizard is launched.
2. Click **Next** and select the **Remove** option. Follow the instructions on the screen. When the operation is complete, the corresponding message will appear.
3. Click **Finish** to exit the Setup Wizard.

# UPGRADING INSTALLATION

If you have the Monarch Server application v13.0/v12.5 installed on your computer, you need to remove the previous version of the application before installing Monarch Server v2020.0.

**NOTE** Before uninstalling the previous version, ensure that you are able to restore the original environment, either wholly (e.g., full server/resource backups) or at minimum; the backups of the Monarch Server database; and all file-based resources dependent on the RMS, Automator, and Content functionalities being utilized.

## To remove the previous version of Monarch Server

1. Run the **MonarchServerv13x86.msi** file from your installation media (**MonarchServerv13x64.msi** in case of 64-bit Windows), or use the **Add/Remove Programs** shortcut in the system's **Control Panel**. The Monarch Server v13.0/v12.5 Setup Wizard is launched.
2. Click **Next** and select the **Remove** option. Follow the instructions on the screen. When the operation is complete, the corresponding message will appear.
3. Click **Finish** to exit the Setup Wizard.

You also need to remove the previous version of Web Installation.

## To remove the previous version of Web Installation

1. Run the **MonarchServerWebv13x86.msi** file from your installation media (**MonarchServerWebv13x64.msi** in case of 64-bit Windows), or use the **Add/Remove Programs** shortcut in the system's **Control Panel**. The Monarch Server Web v13.0/v12.5 Setup Wizard is launched.
2. Click **Next** and select the **Remove** option. Follow the instructions on the screen. When the operation is complete, the corresponding message will appear.
3. Click **Finish** to exit the Setup Wizard.

After performing these steps, you need to run the version installation as specified in the [Single Server Installation](#) section of this guide.

If you have the **distributed** installation of Monarch Server v13.0/v12.5, you need to remove the application and Web Installation from all servers. Then, you need to run the version installation as specified in the [Distributed Installation](#) section of this guide.

**NOTE** Before uninstalling the previous version, you can back up the config.xml file and web.config files to use some settings from these files after the installation of Monarch Server v2020.0.

# UPGRADING USING MULTI-INSTALLER

If you have the Monarch Server application v13.5 (or later) installed on your computer and launch the latest version's installer to upgrade it, it is NOT necessary to remove the previous installation.

### To prepare for the upgrade

1. Close the Configurator.
2. Stop the Application Pool (IIS) used by the MS web applications (MSAdmin, MSCClient, RMSClient) or stop the sites where the web applications are deployed.

### To upgrade to the latest version

1. Run **MonarchServerv2020x64.msi** or **MonarchServerv2020x86.msi**, whichever is applicable to the previous installation. Make sure that the license file is available in the same folder as the installer.
2. Proceed with the installation as usual (Steps [1–3](#), [7](#), and [9–10](#), [Single Server Installation](#) section).
3. In Monarch Server Configurator, click the Configurator tab, and then click the Instances tab.
4. In the **Instances** tab, click the **Database Operations** button to launch the **Database Operations** window.
5. In the **Database Operations** window, click **Update Database**, and then close the window.
6. Click **Apply** in the **Instances** tab to save the changes.
7. Run the Application Pool.
8. In the Services tool, restart Monarch Server Config Service, and start Monarch Server Agent Service to activate the update.

The upgraded version should now be available.

#### NOTE

- Restart the server if requested during the upgrade.
- The initial load of the application may take a few seconds to deploy the update.
- This upgrade supports Monarch Server v13.5 or later.
- In case of distributed installation, **MonarchServerv2020x64.msi** may be used for every machine.
- After the upgrade, web.config reverts to the old state for the multi-installer. Thus, in each web.config, version numbers should be manually changed from 8.0.0.0 (or 9.0.0.0) to 12.0.0.0 for "Newtonsoft.Json" and from 5.1.0.0 (or 5.2.3.0) to 5.2.7.0 for "System.Net.Http.Formatting."
- MonarchServerWebv2020x64.msi** or **MonarchServerWebv2020x86.msi** does not need to be run during the upgrade. Web applications are upgraded automatically. Only **MonarchServerv2020x64.msi** (**MonarchServerv2020x86.msi**) needs to be run.

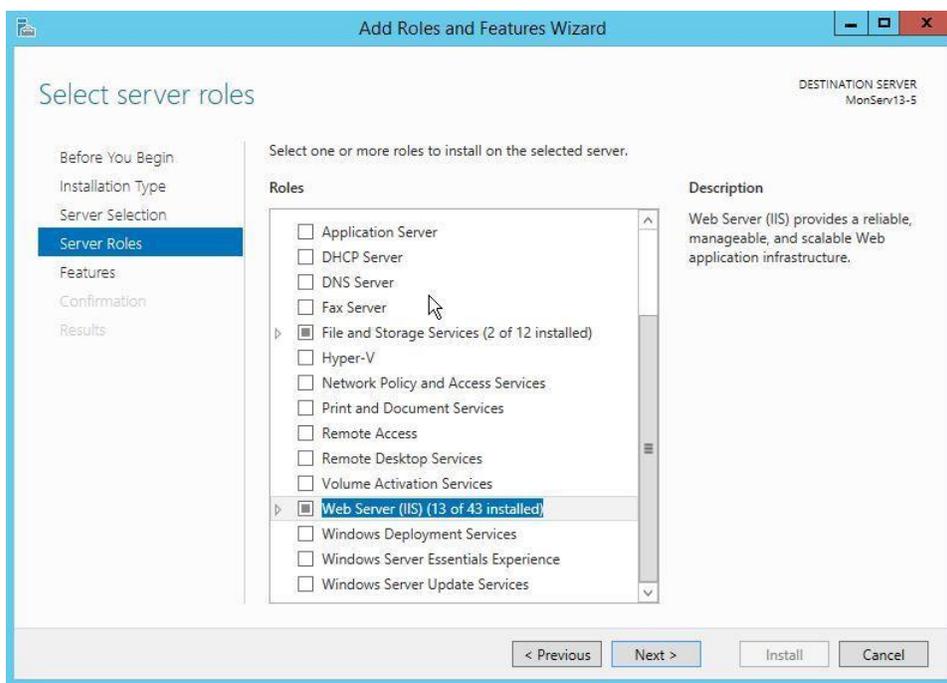
# CONFIGURING SOFTWARE TO WORK WITH MONARCH SERVER

## CONFIGURING WEB SERVICES

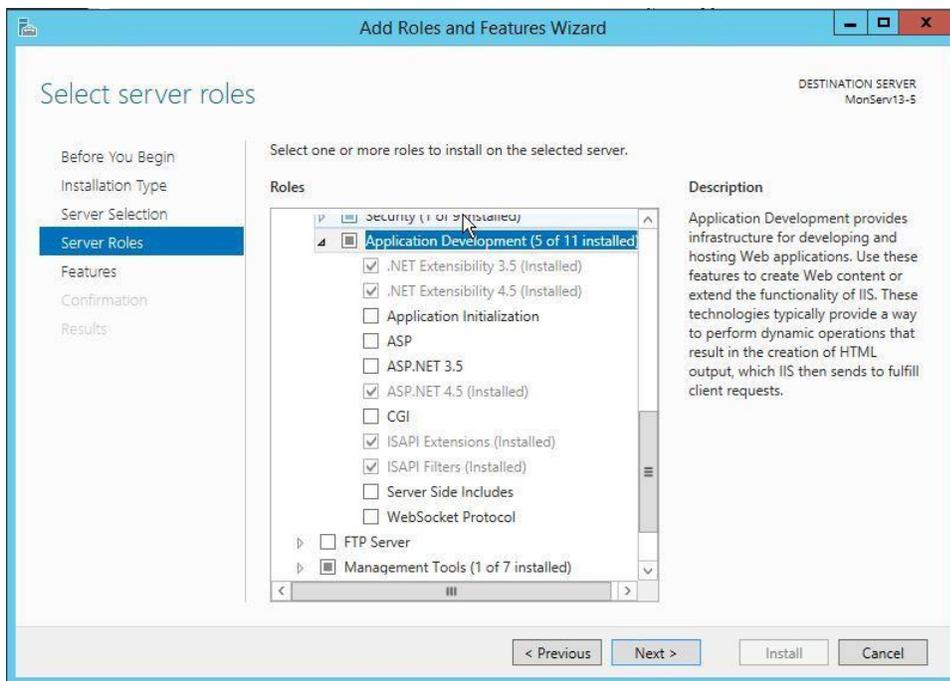
If you install the Web Applications for the first time, you need to configure IIS in the following way.

To install IIS

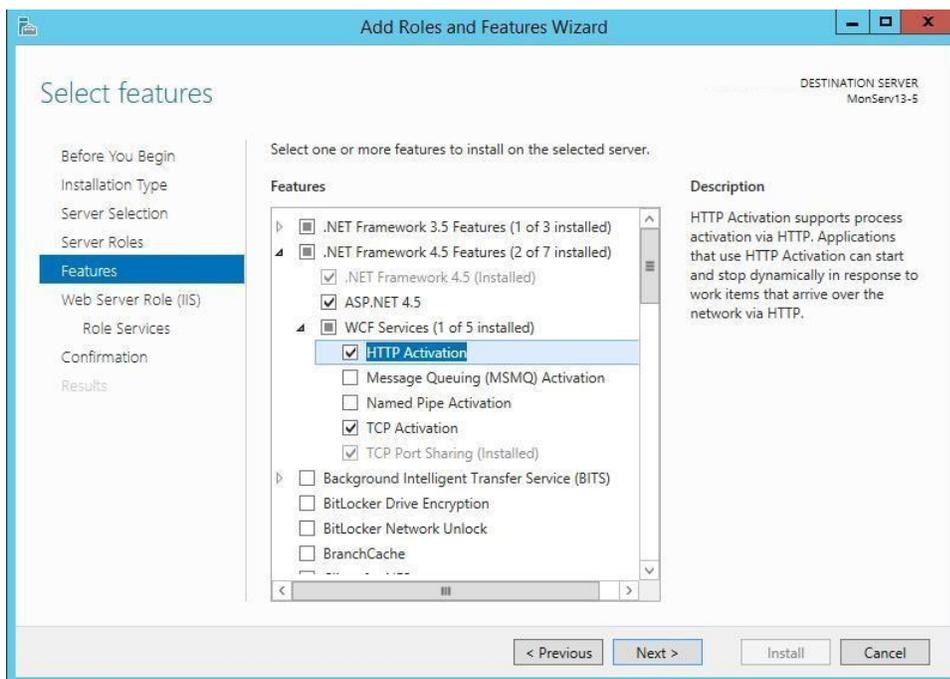
1. Click Start, point to Administrative Tools, and then click Server Manager.
2. Under **Roles**, click **Add Roles**.
3. Select Web Server (IIS) on the Server Roles page.



4. Select the following services:
  - ASP.NET
  - .NET Extensibility
  - ISAPI Filters



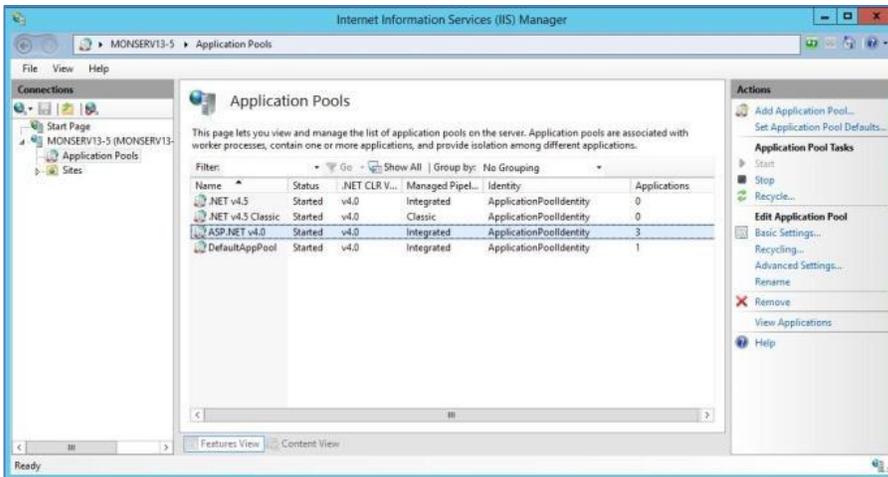
If you use Windows Server 2012, select HTTP Activation of the .NET 4.5 WCF Services.



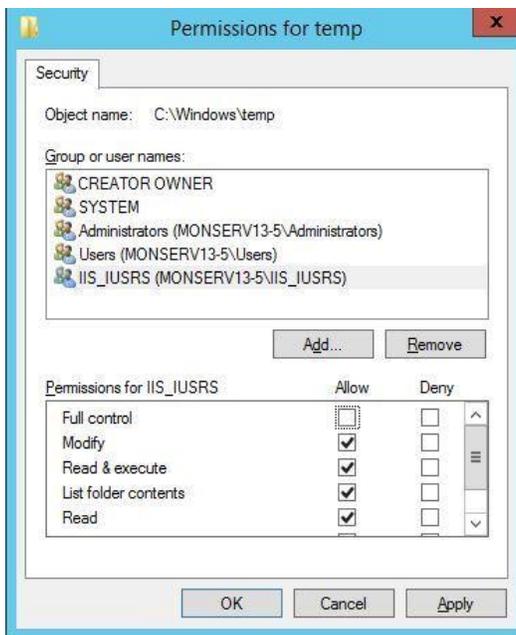
5. Register .NET Framework:

- 32-bit %WINDIR%\Microsoft.Net\Framework\v4.0.30319\aspnet\_regiis.exe -i
- 64-bit %WINDIR%\Microsoft.Net\Framework64\v4.0.30319\aspnet\_regiis.exe -i

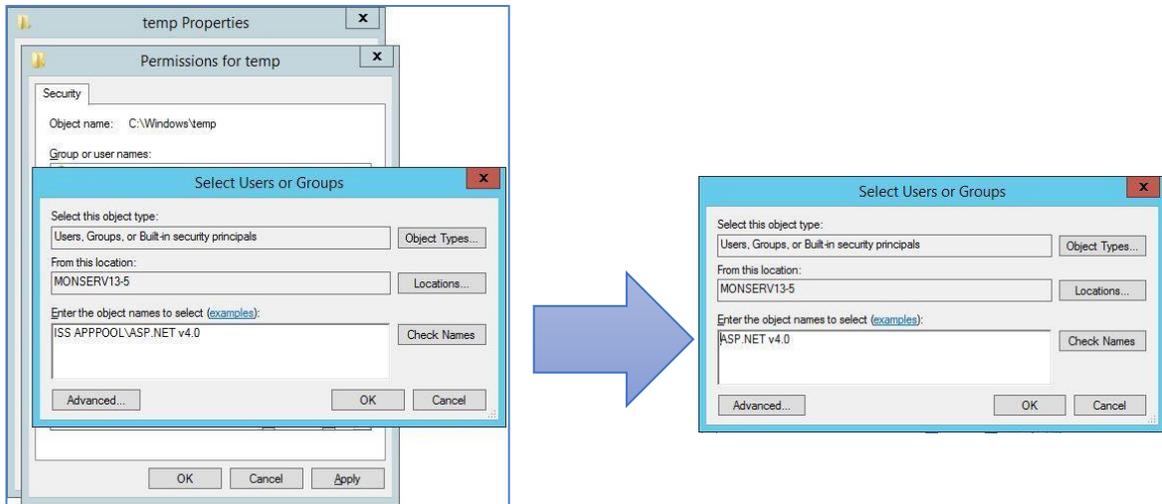
6. In the IIS Manager, look up the **Identity** of the ASP.NET v4.0 application pool.



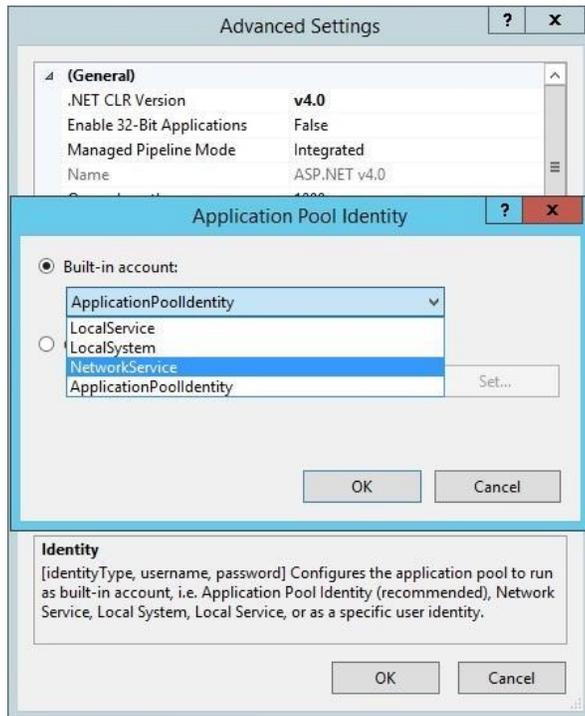
7. Based on the **Identity**, give write permissions to the “%WINDIR%\temp” folder:
  - a. Right-click on the folder name and select **Properties**.
  - b. Select the **Security** tab and click **Edit**.
  - c. Select the **Modify** check box and click **OK**.



- d. Click **Add** in the **Security** dialog box.
- e. Enter the pool identity name and click **Check Names** to look up available application pool identity names. Click **OK**.

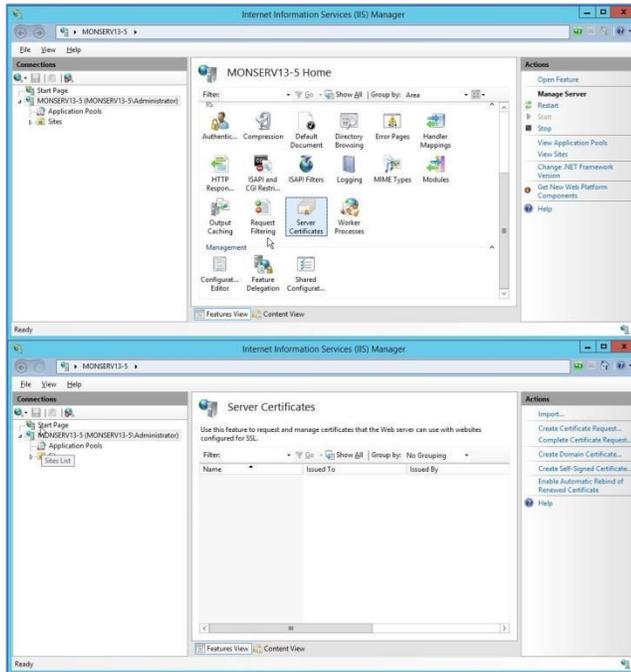


8. You can change the application pool identity if necessary.
  - a. In the **IIS Manager**, click the application pool name.
  - b. In the Actions pane, click **Advanced Settings**.
  - c. Under **Process Model**, select **Identity**, and click the (...) button.
  - d. Select another identity from the list, and click **OK**.

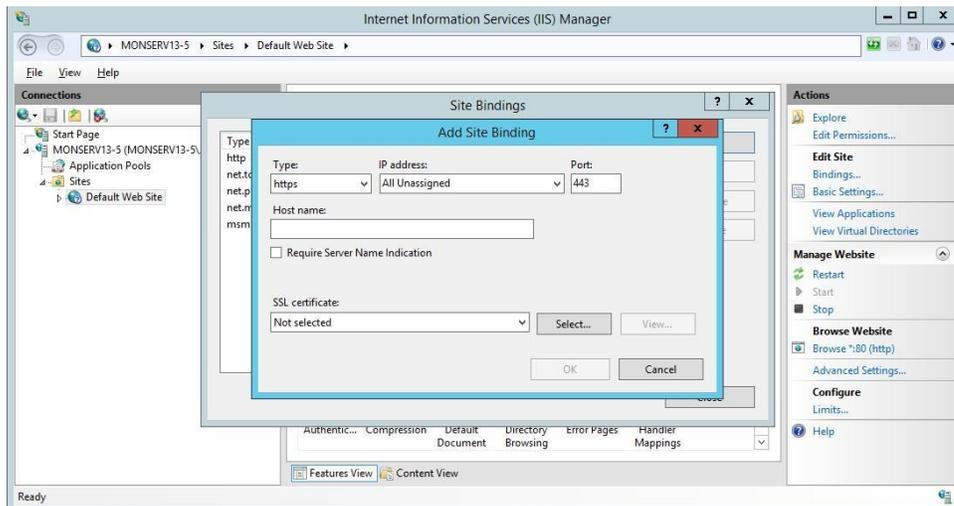


9. To support SSL, you need to set up a certificate or create a self-signed certificate:
  - a. Open the **IIS Manager** and navigate to the level you want to manage.
  - b. In the **Features** view, double-click **Server Certificates**.
  - c. In the Actions pane, click **Create Self-Signed Certificate**.

- d. On the **Create Self-Signed Certificate** page, type a friendly name for the certificate in the **Specify a friendly name for the certificate** box, and then click **OK**.



10. Assign the certificate to a site:
  - a. In the **IIS Manager**, select a site.
  - b. In the **Actions** pane, click **Bindings**.
  - c. Click **Add**.
  - d. Select the **Https** type, select the certificate, and then click **OK**.



# CONFIGURING WEB APPLICATIONS

After installing Monarch Server v2020.0, you can manually edit some of the Clients applications' parameters in the web.config file.

## CLIENT

The default path to the file is C:\inetpub\wwwroot\MSClient\web.config.

The parameters listed below are located in the <appSettings> of the MSClient.

The recording format of each of the parameters is as follows:

```
<add key="parameterName" value="parameterValue" />
```

PARAMETER NAME	DESCRIPTION	DEFAULT VALUE
allowXformPdfView	Enable ES Style PDF View.	true
enableTrainingLink	Enable Lesson link.	true
ClientEndSessionRedirectUrl	URL to be opened on clicking to End Session link.	
usePdfSubgroupHeaders	Enable Subgroup Headers in PDF export from Dynamic View.	true
loginOutOnBrowserCloseEnabled	Enable immediate session termination when the browser or browser tab is closed.	false
loginOutOnBrowserCloseTimeout	Waiting time for the termination of current session after the browser or browser tab is closed.	5000 (ms)

## RMSCLIENT

The default path to the file is C:\inetpub\wwwroot\RMSClient\web.config.

The parameters listed below are located in the <appSettings> of the RMSClient.

The recording format of each of the parameters is as follows:

```
<add key="parameterName" value="parameterValue" />
```

PARAMETER NAME	DESCRIPTION	DEFAULT VALUE
userGroupName	Name of the group whose rights are applied to users when logging in to the RMS Client.	RMSGroup
exportPDFInSameWindowEnabled	Enable export to PDF in the current window.	true
usePdfSubgroupHeaders	Enable Subgroup Headers in PDF export from Dynamic View.	true
loginOutOnBrowserCloseEnabled	Enable immediate session termination when the browser or browser tab is closed.	false

PARAMETER NAME	DESCRIPTION	DEFAULT VALUE
loginOutOnBrowserCloseTimeout	Waiting time for the termination of current session after the browser or browser tab is closed.	5000 (ms)

## ADMIN

The default path to the file is C:\inetpub\wwwroot\MSAdmin\web.config.

The parameters listed below are located in the <appSettings> of the MSAdmin.

The recording format of each of the parameters is as follows:

```
<add key="parameterName" value="parameterValue" />
```

PARAMETER NAME	DESCRIPTION	DEFAULT VALUE
loginOutOnBrowserCloseEnabled	Enable immediate session termination when the browser or browser tab is closed.	false
loginOutOnBrowserCloseTimeout	Waiting time for the termination of current session after the browser or browser tab is closed.	5000 (ms)

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## CONTACT US

### GET IN TOUCH

We'd love to hear from you. Here's how you can [reach us](#).

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