



Enterprise Installation

Monnit Corporation

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Prerequisites

Web Server

- Install / Enable IIS 7
 - Server OS (ex: server 2008) – Look inside Server Manager, Add Roll Web Server (IIS)
 - When Adding the This Role Make sure to add ASP.NET
 - Desktop OS (ex: Windows 7) - Look for “turn windows features on or off” under “Program and features” under “control panel” and then open “Internet information services”. Check “web management tools” and “WWW services”. Under www services check all under “Application dev features”. See below. When you hit OK it will start to reconfigure the PC and must reboot. You may also get an error message saying, “Not all changes were made”. If this occurs, the changes will be applied after rebooting.
- Install ASP.NET MVC4 from the Web Platform Installer. Download from here: <http://www.asp.net/mvc/mvc4>
- Install an instance of Microsoft .Net framework 4.5. Download from here: <http://www.microsoft.com/en-us/download/details.aspx?id=30653>

Note: Follow these steps **in order** to ensure the smoothest installation possible.

SQL Server

- Install an instance of SQL Server (2005 or later)
 - For small implementations (single or few networks) Express is sufficient: <http://www.microsoft.com/en-us/download/details.aspx?id=29062>
 - Download and install Service Packs as needed
- During installation make sure that you use mixed authentication mode
- Create login credentials that can be used by the application to access the database
 - SQL Express default server is (the computer name)\SQLEXPRESS
 - During setup you must select either SQL Authentication or Mixed Mode Authentication (Windows Authentication and SQL Authentication)
 - You can use the default administrative account “sa” or create a secondary user and assign permissions to that user.
 - Make sure you use a strong password (i.e. at least 8 characters, letters, numbers, and special characters.)
 - You can use SQL Server Management Studio to check and manage user permissions.

Note: *SQL Server Management Studio 2012 requires Microsoft .net 3.5 service pack 1, in Server 2008 you need to go to server manager --> Features --> click add Feature and add .net 3.5.1.*

If you are unfamiliar with managing SQL Server you may need to contract the aid of a database administrator to assist with the setup and configuration of the database and application.

Installation

Activation Key

An activation key is needed to complete the installation. You can purchase an activation key through the Monnit web store (www.monnit.com) or by contacting your sales representative. During the installation the activation is done online automatically. This does require temporary internet access for the computer where the installation is being done.

After you receive your activation key keep it in a safe location! The key will only allow for activation of a single computer. However, if you ever need to re-install the software you can use the same key on the same computer.

Download

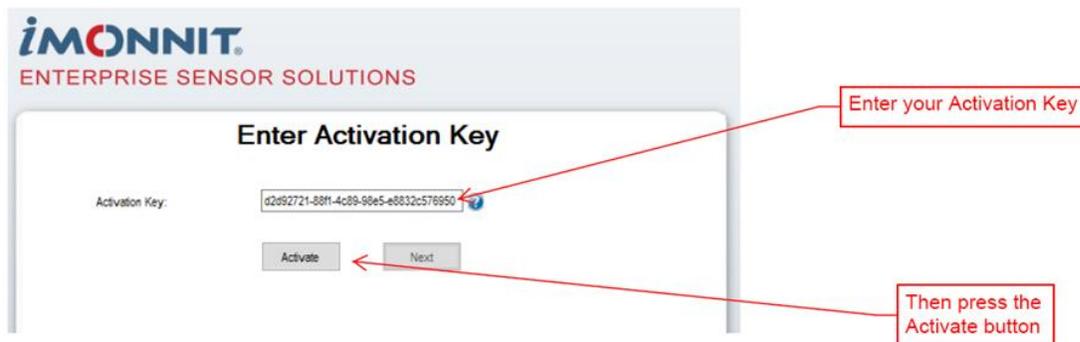
Start by downloading iMonnit Enterprise installation files, available for download here:

<http://www.monnit.com/support/downloads>

Run the installer by double-clicking it. The installer will add the needed files to your hard drive. Multiple applications will be installed to enable the iMonnit Enterprise system to run properly. There is a step by step configuration wizard which will guide you through configuring each of the applications.

When the installer is finished you will have a new icon on your desktop to launch the configuration wizard.

Configuration Wizard



Activation

This is where you will enter your Activation Key for authentication. If your server is not connected to the Internet, you will need to use the manual activation process. Shown in the “Manual Offline Activation” under the troubleshooting section.

Enter Activation Key

Activation Key:

Unable to verify key against online database. Contact support at www.smartsensys.com

Manual Token:

Manual Key:

You will need this Manual Token to retrieve the Manual Key

Continue Steps below to get Manual Key

Manual Offline Activation

Follow these steps to complete your activation if the computer you are installing on cannot be given temporary access to the internet for automatic activation.

After entering your Activation Key, if the configuration software is not able to communicate to the internet, it will display the required form values for you to use to complete activation manually.

Using a web browser on an internet connected device navigate to:

www.monnit.com/order/productActivation. Enter the Manual Token into the form and press OK. Enter the Manual Key that is generated into the enterprise configuration tool to complete manual activation.

Monnit Portal info@monnit.com +1 801 561 5555

MONNIT. Home Products Services

Product Activation

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This will generate the Manual Key you will need to complete Activation



Create Gateway Service

This is the server application that Monnit enabled gateways communicate with. When you click create you will see a command window come up and disappear. When this finishes you can then click next to continue.



Website Configuration

The website is the user portal you will use to view and configure Monnit sensors. This website will run in Microsoft Internet Information Services (IIS). IIS should have already been enabled as a prerequisite to installation.

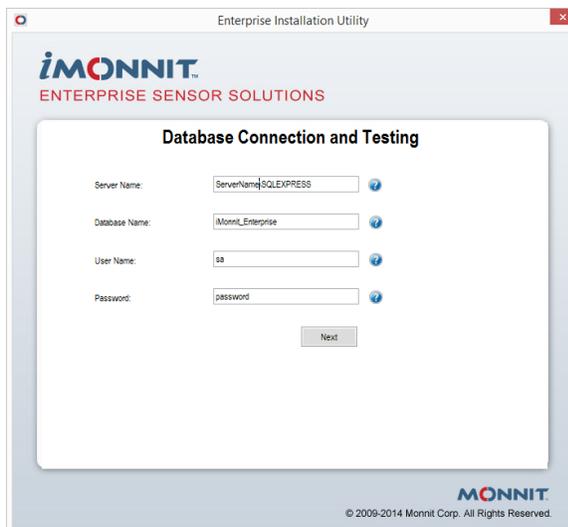
Enter the information for IIS to be able to create your personal website experience. This step creates the website folder, application bindings, and the hosting site.

Physical Path - This field is where you will be storing the website folder. This field also configures IIS to where the folder is located.

IP Address – This field is the first of three binding fields. By default this field is set to use all unassigned IP addresses, which means all requests to that server will land at that site. If you are using the same server for multiple websites you may need to configure different IP Addresses.

Port – This field is the second of three binding fields. By default this field is set to use port 80, which means all requests to port 80 on the server’s IP address will bring up the site.

Host Name – This field is the last of the three binding fields. By default this field is set to be blank. If left blank, IIS will route all traffic to the configured IP Address and port to this website. Optionally, you can configure the host name so that only requests with this host are routed to the iMonnit Enterprise web application. This option allows IIS to host multiple sites on a single IP Address.



Database Configuration

Enter the information to communicate with your SQL Server Instance. Before leaving this step you will have tested communication with the database to ensure credentials are properly configured.

Database Server and instance name – This field is the server where your database is located. If you are using an instance name (default with SQL Server Express) the instance name will be included here also. Server can be either a DNS Resolvable host or an IP Address of the computer. Example:
“COMPUTERNAME/SQLSERVEREXPRESS”

Database Name – This will be the name of the database. If you are upgrading and have an existing database make sure this name matches. If you are installing for the first time, the name entered here will be the name of the database that is created.

User Name – User authenticated to the database server for selected database.

Password – Password for user to gain access to database.

The screenshot shows a window titled "Enterprise Installation Utility" with the iMONNIT logo and "ENTERPRISE SENSOR SOLUTIONS" text. The main content area is titled "SMTP Mail Server Setup" and contains the following fields:

- SMTP Host: smtp.hostname.com
- Port: 25
- User: username@hostname.com
- Password: 100534034
- Use SSL: True (dropdown menu)
- From Email Address: username@hostname.com
- From Name: Company or Persons name
- Return Path: username@hostname.com

At the bottom of the form are "Back" and "Test Email" buttons. A small red text note states: "You must Test the Smtip and have a successful Email sent before you can continue with the Installation." The footer includes the MONNIT logo and copyright information: "© 2009-2014 Monnit Corp. All Rights Reserved."

SMTP Configuration

This step creates a connection to your SMTP server, so that the application can send notifications. This information can point to an email server, a SMTP forwarder, or a transactional email service.

SMTP Host - This field is the address of your SMTP server i.e. www.smtphost.com.

Port - This field is the port that your SMTP server uses.

User - This field is the admin email account that will be used to send notifications i.e. username@hostname.com.

Password - This field is for the password to the email account which will be used to send notifications.

Use SSL - This field determines if your SMTP server uses SSL or not.

From Email Address - This field is the email address that will be sending out the notifications. This field can be different from the User field.

From Name - This field is used as the name of the company or the name of the person sending the notification.

Return Path - This field is typically the same as the user to negate spam issues with other SMTP servers.



Automated Email and Gateway Configuration

This step determines the type of Notifications which will be sent, what port the Gateway Service should be using, and if any inbound packets from all gateways or a specific gateway should be logged in the database.

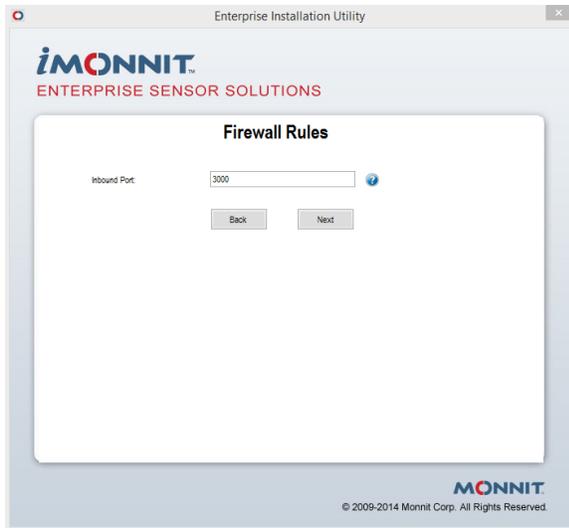
Send Inactivity Notifications - This field allows for inactivity notifications to be sent.

Send Subscription Notifications - This field allows for subscription notifications to be sent.

Send Maintenance Notifications - This field allows for maintenance notifications to be sent.

Address To Listen On - This field tells the gateway service which port to listen on for gateways to send information. Default is Any: 3000.

Inbound Packet Retention- This field determines if any gateway messages are stored in the database for troubleshooting.



Firewall Rule Configuration

This step creates an inbound firewall rule in Windows Firewall for both TCP and UDP. If you have additional firewalls you will need to also create rules for traffic coming from the gateways to the server.

Inbound Port - This field needs to be the same port used for "Address to Listen On".



Wireless Gateway Server Test

This step tests if gateways will be able to speak to the database using the gateway service. Because this is run from the same computer as the service is running, it will bypass any firewalls.

Host Address - This field, by default, uses the specific servers NIC Card's IP Address if the test is successful the installation is complete.

System Setup

First Login

Navigate in your browser to the web application you created in IIS. The credentials that are set when you first install the database are:

Administrative Account

Username: Admin

Password: password

*The Administrative account will be used for adding Accounts/Subaccount, adding Users, handling permissions, and making changes at the Account level. You will not want to add your Networks, Sensors, and Gateways to this Account.

Enterprise User Account

Username: EnterpriseUser

Password: password

*The EnterpriseUser account is where you will want to add your Networks, Sensors, and Gateways. It is recommended you change the Account Name to something more appropriate to your company. You can rename this account by visiting the Account Settings and clicking the Edit Account Information button. To change the name of the user, you will need to edit the user name.

After logging in the first time, the system will prompt you to agree to the End User License Agreement (EULA), on your second login, it will prompt you to change the password.

Accounts Management

See included Administration Guide pdf for information on managing multiple accounts.

Adding Gateways and Sensors

Enterprise has the ability for the server to download the required metadata of the sensors and gateways from a central online repository, using the Sensor and Gateway IDs and Codes. This is only available if the server hosting the web application has access to the Internet. Adding gateways and sensors to the database is done in the same manner as moving them between networks after they are in the database. From the "Manage" screen choose "Add Gateway/Add Sensor" and you will be prompted for the Gateway ID/Sensor ID and Code. These values are found on the ID labels affixed to the Monnit Gateways and Sensors.

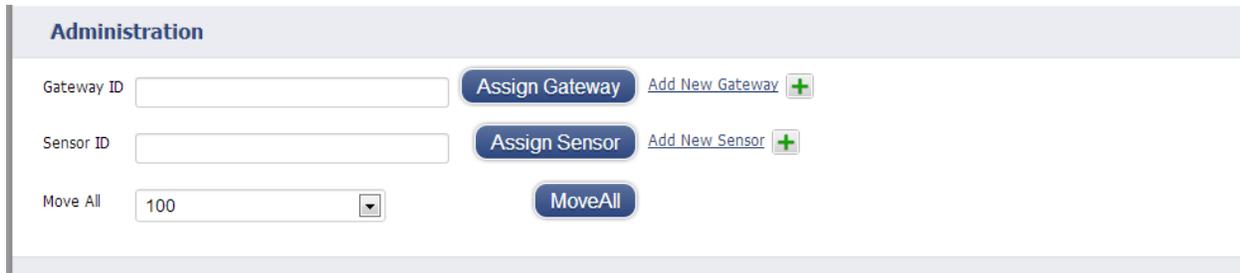
As server administrator there is an area available only to you, which provides a method of adding gateways and sensors to the database manually. This process should only be done if the server is unable to download the information from the central online database. Go to the account and network where you would like to add the device. Under Network Details in the "Administration" area you will

find the links to manually add gateways and sensors. This area also allows you to quickly move gateways and sensors between your different account/networks.

If it is necessary to manually add the devices into the database you can look up the correct metadata from the iMonnit online portal. Using a web browser navigate to:

<https://www.imonnit.com/lookup>. Enter the sensor or gateway id and check-code into the form and the required metadata will be retrieved.

Use this information to complete the form “Add new Sensor” to populate the database for your users. Once the sensor has been entered into the database users will be able to move them between accounts using the device id and code found on the device labels.



The screenshot shows the Administration interface with the following elements:

- Administration** (Section Header)
- Gateway ID** (Text input field)
- Assign Gateway** (Blue button)
- Add New Gateway** (Link with green plus icon)
- Sensor ID** (Text input field)
- Assign Sensor** (Blue button)
- Add New Sensor** (Link with green plus icon)
- Move All** (Text input field with value 100 and dropdown arrow)
- MoveAll** (Blue button)

To add a new gateway into the database

- Select “Add New Gateway”.
- Enter the gateway ID from the sticker on the gateway
- Name the gateway
- Choose the correct gateway type
- Select the correct radio band (Management use only)
- Enter the correct APN Firmware Version (Management use only)
- Enter the correct Gateway Firmware Version (Management use only)
- MAC Address is (not required) can be entered if you look it up on your network.
- Press “Create”

To add a sensor.

- Click “Add New Sensor”
- Select the correct Sensor Profile (It is critical to operation that this information is entered correctly)
- Enter the sensor ID from the bottom of the sensor
- Name the sensor
- Choose the correct type of sensor
 - Commercial
 - Commercial (AA)
 - Industrial
 - Wi-Fi
- Enter the firmware version
- Select the power source
 - Commercial (CR2032)

- Commercial (AA)
- Line Power
- Voltage
- Industrial (Tadiran)
- Industrial Solar (Ind Rech)
- Custom (AAA)
- Custom (CR123)
- Wi-Fi (AA)

Other manual configuration options

To extend the session time out, add this in the website configuration file.

```
<sessionState timeout="60" />
```

(The number "60" is the number of minutes of inactivity before the user is logged out)

Troubleshooting

404 error in website

If you are getting a 404 error when opening the application in your browser, it may be that the .Net framework isn't registered in IIS.

To register or re-register the .Net framework with IIS, open a command prompt as administrator and run the following commands:

```
cd \
cd Windows\Microsoft .NET\Framework\v4.xxx.xxx
aspnet_regiis -i
```

Replace the xxx with the exact version of the framework installed on your server.

Server Error in '/' Application

If while trying to log in to your new version of enterprise you come across an error on your page that says Server Error in '/' Application. Could not load type 'System.ServiceModel.Activation.HttpModule'

Make sure the application pool in IIS 7 is set to Framework 4.X with integrated pipeline mode

If Problem persists re-register the .net framework with IIS

To register or re-register the .Net framework with IIS, open a command prompt as administrator and run the following commands:

```
cd \
cd Windows\Microsoft .NET\Framework\v4.xxx.xxx
aspnet_regiis /iru
```

Replacing the xxx with the exact version of the framework installed on your server.

IIS Configuration Errors

If you are getting an error of "This access control list is not in canonical form and therefore cannot be modified." You most likely do not have permissions to write to the folder you have chosen to save your website files to. There are two fixes for this issue.

The first, using File Explorer Navigate to the folder you chose for website installation. Right click on the folder, click properties, click the security tab and add your user to the permissions list. This will reorder the Security list and fix the issue

The Second, choose a different location to store the website folder and files. That you know you have access to.