

Building Integration Platform (BIP) Installation Manual

For BIP v1.11

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Important changes are listed in Document Revision History at the end of this document.

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Contents

Overview of Building Integration Platform	1
BIP Components	1
Installation Overview	2
Installation Checklist.....	3
System and Network Requirements.....	4
Enable IIS Service	5
Windows® 8.1 Operating System	5
Windows® 2012 or later operating system	7
Database Installation and Configuration	8
PostgreSQL installation	8
MySQL Server Installation.....	9
MySQL Post-Installation Steps.....	10
Building Integration Platform Service	12
Prerequisites.....	12
Obtain and Install BIP License	13
Installation Steps - Platform Service	14
Uninstalling the Building Integration Platform Service	15
Building Integration Platform - Data Gateway Service	16
Prerequisites - Data Gateway Service	16
Installation Steps - Data Gateway Service	17
Uninstalling the BIP - Data Gateway Service	18
Building Integration Platform - Event Gateway Service	18
Prerequisites - Event Gateway Service	19
Installation Steps - Event Gateway Service	19
Uninstalling the BIP - Event Gateway Service	20
Building Integration Platform - Audit Gateway Service.....	20
Prerequisites - Audit Gateway Service	21
Installation Steps - Audit Gateway Service.....	21
Uninstalling the BIP - Audit Gateway Service	22
Building Integration Platform – Building Automation System Add-On and Connector Services	23
BIP Add-on.....	23
Open Access Connector Service	24
Apache Jena Fuseki Installation.....	25
Building Integration Platform - Semantic Gateway Service	26
Prerequisites.....	26
Installation Steps - Semantic Gateway Service	27
Uninstalling the BIP - Semantic Gateway Service.....	28
Building Integration Platform – Semantic Commission	28
Prerequisites - Semantic Commission	29
Steps for Running GraphDB as Windows® Service.	29
Installation Steps - Semantic Commission	29
Uninstalling the BIP - Semantic Commission.....	30
MyWay Application Service	30
Prerequisites - MyWay Application Service	31
Installation Steps - MyWay	32
Uninstalling the MyWay Application Service.....	33
Troubleshooting.....	33
Document revision history.....	35

Overview of Building Integration Platform

BIP Components

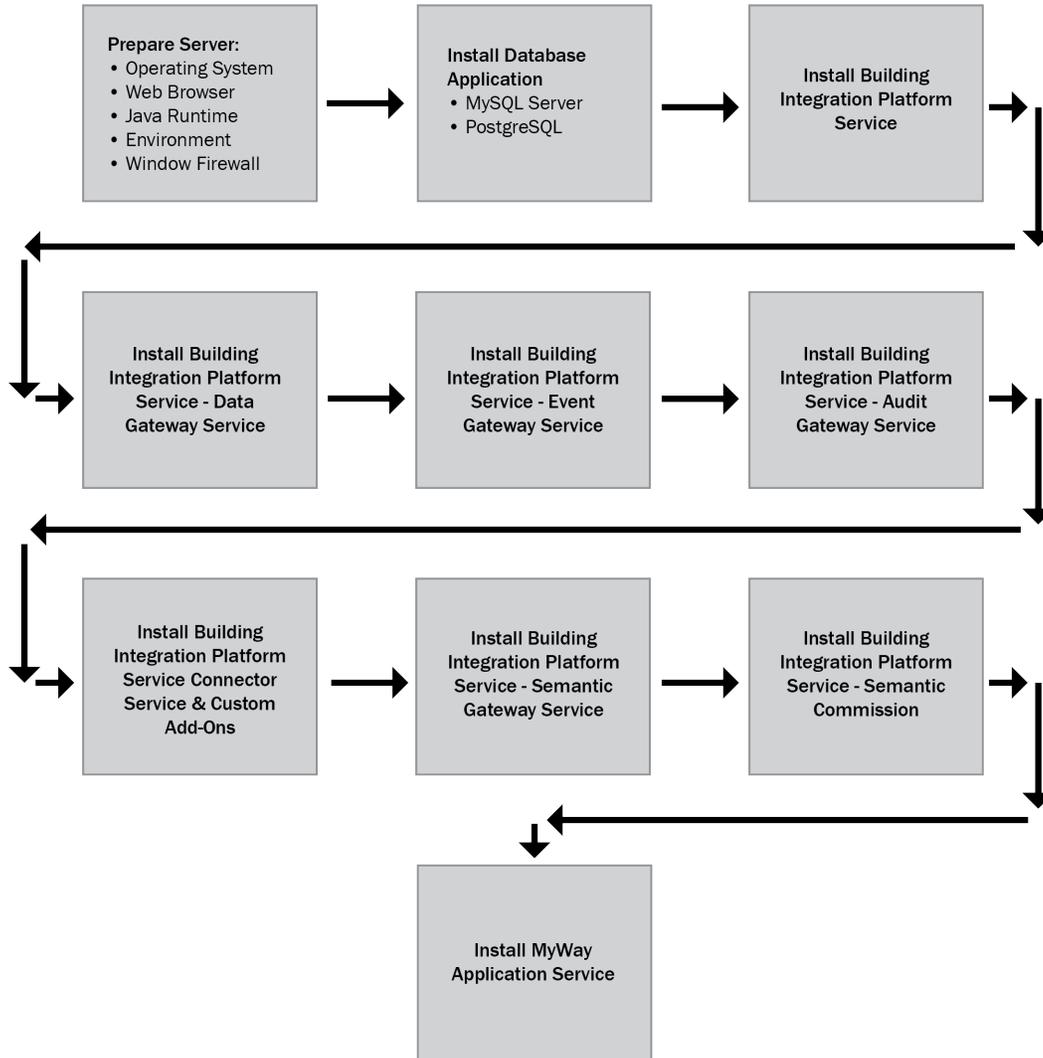
The components required for each integration are marked with an **X** in the table below.

Component Name	Description	MyWay	OnGuard Integration
BIPOAuth Service	An OAuth2 Server used for Authentication, Authorization and Audit Logging.	X	X
BIP Service	This is the BIP core software where the services are hosted. This application is configured to other data access interfaces (like Access Control, HVAC, and Elevator Control) to get the events from the respective data sources.	X	X
BIP Data Gateway	A software gateway application that handles the data requests coming from the BIP	X	X
BIP Event Gateway	A software gateway application that handles the event requests coming from the BIP	X	X
BIP Audit Gateway	A software gateway application which handles the audit requests coming from Audit Service	X	
BIPAdd-on	A building automation system add-on used to exchange events and alarms with the BIP.	X	
BIP Open Access Connector Service	A part of the OnGuard driver that resides on the OnGuard server. This application handles OnGuard related data requests and event subscriptions.	X	X
Apache Jena	A free, open source Java framework for building Semantic Web and Linked Data applications. The framework is composed of different APIs interacting together to process RDF data.	X	
BIP – Semantic Gateway	A software gateway application that handles semantic data requests coming from the BIP	X	
Building Integration Platform - Semantic Commission	A storage system where all semantic information related to targeted data sources is stored The semantic commission is populated with data source semantic data using a data source and event source registration tool. Currently GraphDB 7.0 is being used for the semantic knowledge base.	X	
MyWay Application Service	The MyWay Application service is a web service that is used by the MyWay mobile application to execute its defined functionalities like authentication, user space and comfort setting - temperature.	X	

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Installation Overview

The diagram below provides an overview on the tasks for installing the Building Integration Platform.



NOTE The installation of the Connector Service and BIP add-ons depends on the configuration features during BIP Framework installation. Refer to *Installation Checklist* (page 3) for the software versions needed to prepare the server for BIP installation.

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Installation Checklist

Before installing the BIP application, consult the checklist below for the required software versions.

Steps to Install	Comments	For more information
Verify requirements and prepare the server		
Verify system requirements for BIP	Verify and record the IP address and machine names of the BIP server and the other devices to be accessed.	
Verify Operating System for BIP installation	Windows® Server 2012 R2 with latest Windows® updates.	NOTE This document assumes you are using a Windows® environment.
Install Web Browser	Install the latest versions of Google Chrome.	BIP application is best viewed and supported on Google Chrome.
Set Firewall to OFF	Allow communication to the ports used by Apache Tomcat® 8, ActiveMQ 5.11.1 or higher, MySQL 5.6.24 or higher	Default ports used: ActiveMQ – 61616 MySQL – 3306 Apache Tomcat® – 8443,8444,8445
Copy BIP installation package to the BIP server	Download the BIP installation.zip file from the website and unzip it onto your BIP server. Three folders are provided: <ul style="list-style-type: none"> • 3rd Party Installers • Building Integration Platform • License Info Generator 	
Obtain and install BIP license	Your BIP license must be placed in the Building Integration Platform\key folder before the BIP services can be installed. To obtain your BIP license, you must provide information about the server on which the BIP will be installed.	Refer to "Obtain and Install BIP License" section.
Install the other prerequisite software required for Building Integration Platform installation		
PostgreSQL Installation	V 12.10 or later.	Refer to "PostgreSQL Installation" section
MySQL 5.7.15.0	Community edition is used for PoC release. For production, use the standard or enterprise editions	Refer to "MySQL Installation" Section.
REBOOT the server	Log on as Administrator on the Windows® System	
Installation of Building Integration Platform components		
Install Building Integration Platform Service		Refer to "Building Integration Platform Service" section
Install Building Integration		Refer to "Building Integration Platform

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Platform – Data Gateway Service		– Data Gateway Service" section
Install Building Integration Platform - Event Gateway Service		Refer to "Building Integration Platform – Event Gateway Service" section
Install Building Integration Platform - Audit Gateway Service	Needed for MyWay application only, not for OnGuard Integration.	Refer to "Building Integration Platform – Audit Gateway Service" section
Install BIP add-on	Needed for MyWay application only, not for OnGuard Integration.	Refer to "Building Integration Platform –Add-on" section
Install BIP – Open Access Connector Service		Refer to "Building Integration Platform – Open Access Connector Service" section
Install Building Integration Platform - Semantic Gateway Service	Needed for MyWay application only, not for OnGuard Integration.	Refer to "Building Integration Platform – Semantic Gateway Service" section
Install Building Integration Platform - Semantic Commission	Needed for MyWay application only, not for OnGuard Integration.	Refer to "Building Integration Platform – Semantic Commission" section
Enable IIS	Needed for MyWay application only, not for OnGuard Integration.	Refer "Enable IIS" section below
Install MyWay Application Service	Needed for MyWay application only, not for OnGuard Integration.	Refer "MyWay Application Service" section
Configuring the Post Installation Configuration		
Post Installation Configuration		Refer to "Post Installation Configuration" section

System and Network Requirements

This section describes the various system and network requirements for installing the BIP application.

Network Requirements

You must have a list of all the IP address, machine names of the BIP server, and other targeted data sources, like OnGuard, for your building automation system. Ensure the BIP Server is connected to an IP network with access to the other monitored devices and servers.

System Requirements

BIP has both hardware and software requirements.

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Server Hardware Requirements

- Intel® Core™ i5 or higher class processor, 3 GHz or greater
- Minimum 4 GB RAM
- Minimum 150 GB hard disk space
- Static IP address
- IP network connection with access to all targeted data sources like OnGuard, LMS and building automation system

Server Software Requirements

- Microsoft Windows® Server 2012 R2 or higher
- Adopt Open JDK JRE v11 or later
- MySQL Server 5.7 or later OR PostgreSQL v12.10 or later
- Web Browser (Google Chrome) – this can be from any client machine or on the same machine to use the BIP Application.

NOTE Other software, for example Apache Tomcat® 8 or Apache ActiveMQ, can be installed during BIP Service installation.

Requirements for the targeted data sources

The targeted data sources are OnGuard, LMS and building automation system drivers. Ensure there is network access to the BIP server from the respective machines.

Enable IIS Service

This section guides you through installing and enabling the necessary IIS Features for MyWay Application Service components.

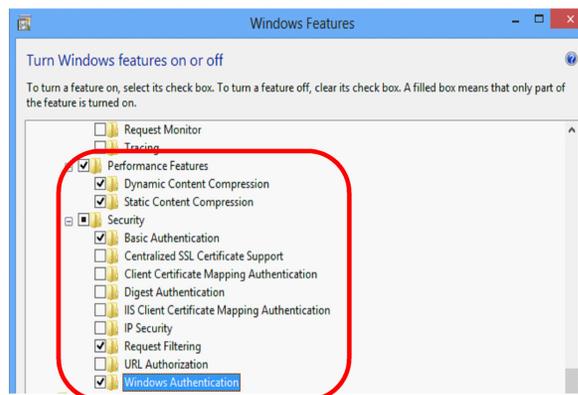
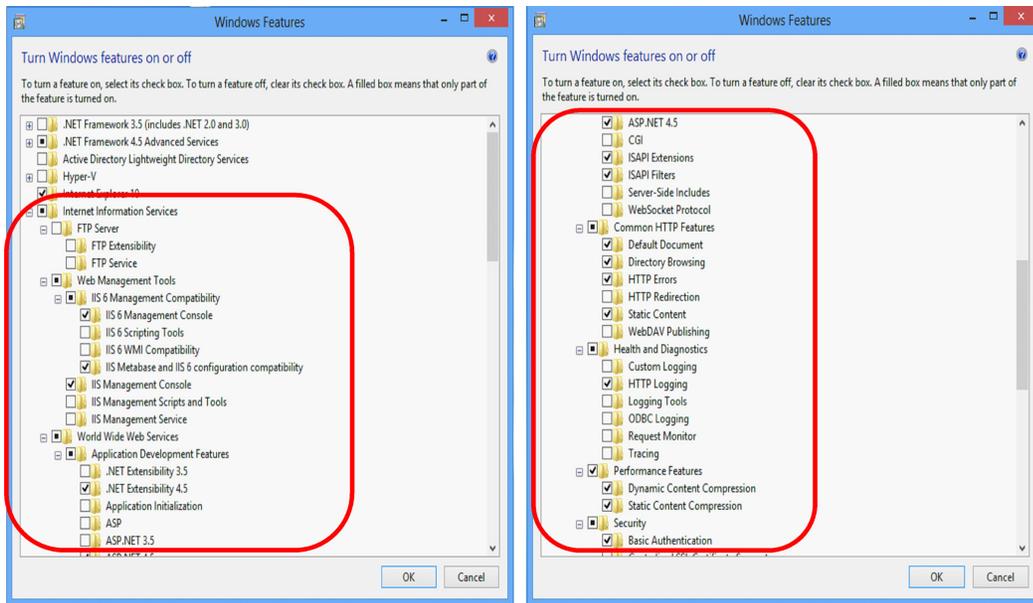
Windows® 8.1 Operating System

- 1 Go to **Control Panel** -> **Programs and Features**.
- 2 Click **Turn Windows features on or off**.
- 3 Select the Internet Information Services (IIS) options below.

Feature Name	Sub Feature List
Web Management Tools -> IIS6 Management Compatibility	IIS 6 Management Console IIS Metabase and IIS 6 Configuration compatibility
Web Management Tools	IIS Management Console
World Wide Web Services -> Application Development Features	.NET Extensibility 4.5 ASP .NET 4.5 ISAPI Extensions ISAPI Filters

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Common HTTP Features	Default Document Directory Browsing HTTP Errors Static Content
Health and Diagnostics	HTTP Logging
Performance Feature	Dynamic Content Compression Static Content Compression
Security	Basic Authentication Request Filtering Windows Authentication



4 Click **Ok**.

5 Once the installation is complete, click **Close**.

NOTE If you are prompted to restart the machine, do so now.

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Windows® 2012 or later operating system

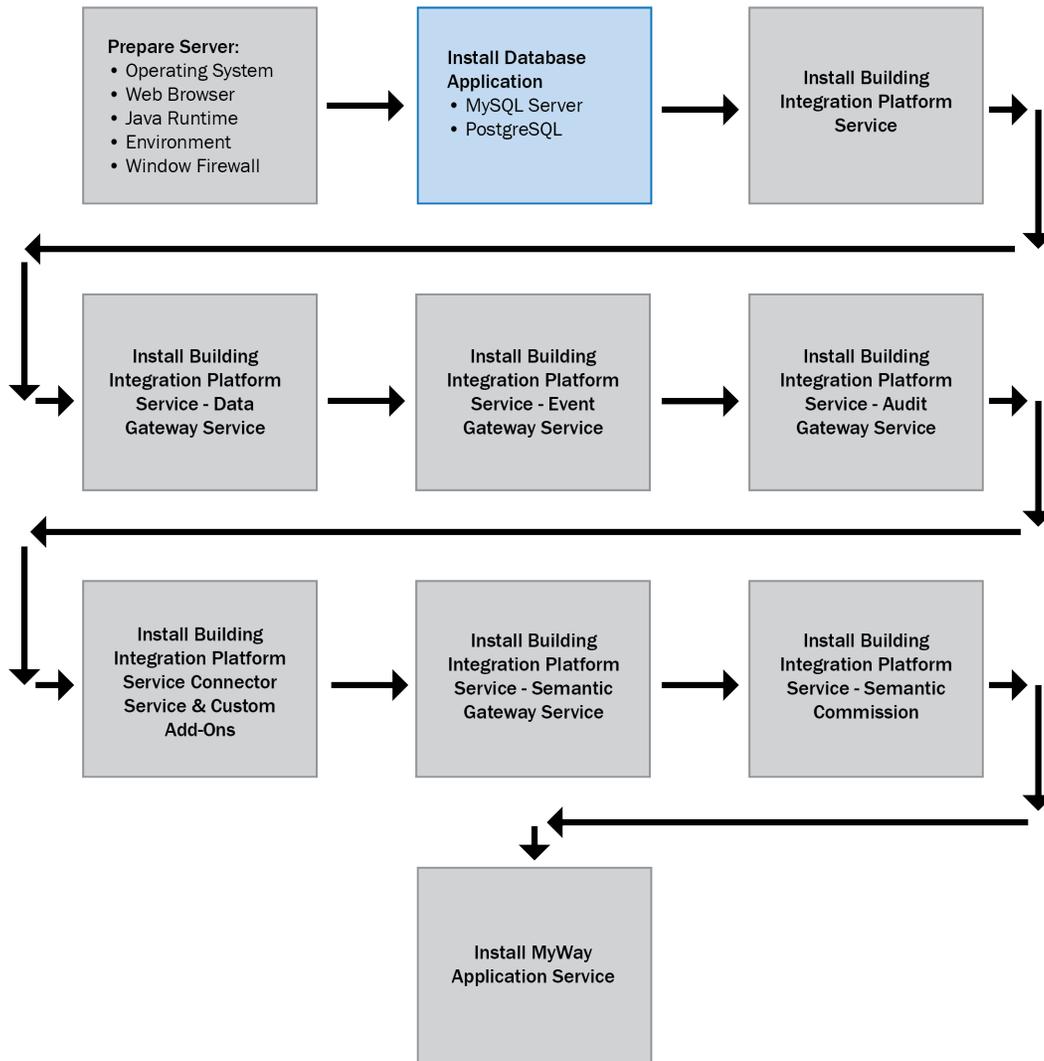
- 1 Go to **Control Panel**- > **Programs** -> **Programs and Features**.
- 2 Click **Turn Windows features on or off** to start the **Add Roles and Features Wizard**.
- 3 In **Installation Type**, select **Role-based or feature-based installation**.
- 4 In **Server Selection**, choose **Select a server from the server pool**.
- 5 In **Server Roles**, select **Web Server (IIS) Feature** and click **Add Feature**.
- 6 Select the Internet Information Services (IIS) options below.

Feature Name	Sub Feature List
Web Server -> Common HTTP Features	Default Document Directory Browsing HTTP Errors Static Content
Web Server -> Health and Diagnostics	HTTP Logging Tracing
Web Server -> Security	Basic Authentication Request Filtering Windows Authentication
Web Server -> Application Development	.NET Extensibility 4.5 ASP .NET 4.5 ISAPI Extensions ISAPI Filters
Management Tools	IIS Management Console
Management Tools -> IIS 6 Management Compatibility	IIS 6 Metabase Compatibility IIS 6 Management Console

- 7 Click **Install** to install the selected IIS options.

NOTE If you are prompted to restart the machine, do so now.

Database Installation and Configuration



PostgreSQL installation

This package is for the Windows® Operating System only.

- 1 Right-click the 3rd Party Installer\PostgreSQL-14.2-1-windows-x64.exe installer and select **Run as administrator**. This starts the **PostgreSQL** installation wizard.

NOTE If the system does not have VC ++ 2013, it installs automatically and continues with the PostgreSQL install.

- 2 Follow the instructions in the wizard, and ensure you make the following selections when they appear.
 - Uncheck **Stack Builder**; it is not a required feature.
 - Uncheck **Launch Stack Builder at exit**.

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- 3 Once installation is completed, follow the steps below for "accessing PostgreSQL with domain name or remote access".
 - a) Open the PostgreSQL folder.
 - b) Under the data folder, open "pg_hba.conf" in Notepad.
 - c) Update the file as shown below.

```

61 #
62 # This file is read on server startup and when the server receives a
63 # SIGHUP signal.  If you edit the file on a running system, you have to
64 # SIGHUP the server for the changes to take effect, run "pg_ctl reload",
65 # or execute "SELECT pg_reload_conf()".
66 #
67 # Put your actual configuration here
68 # -----
69 #
70 # If you want to allow non-local connections, you need to add more
71 # "host" records.  In that case you will also need to make PostgreSQL
72 # listen on a non-local interface via the listen_addresses
73 # configuration parameter, or via the -i or -h command line switches.
74
75
76
77 # TYPE      DATABASE      USER      ADDRESS      METHOD
78
79 # IPv4 local connections:
80 host      all             all             all             md5
81
82 # IPv6 local connections:
83 host      all             all             ::1/128        md5
84 # Allow replication connections from localhost, by a user with the
85 # replication privilege.
86 host      replication    all             127.0.0.1/32   md5
87 host      replication    all             ::1/128        md5
88

```

MySQL Server Installation

MySQL Server and MySQL Workbench (Optional) features are required to install MySQL Server for the BIP application.

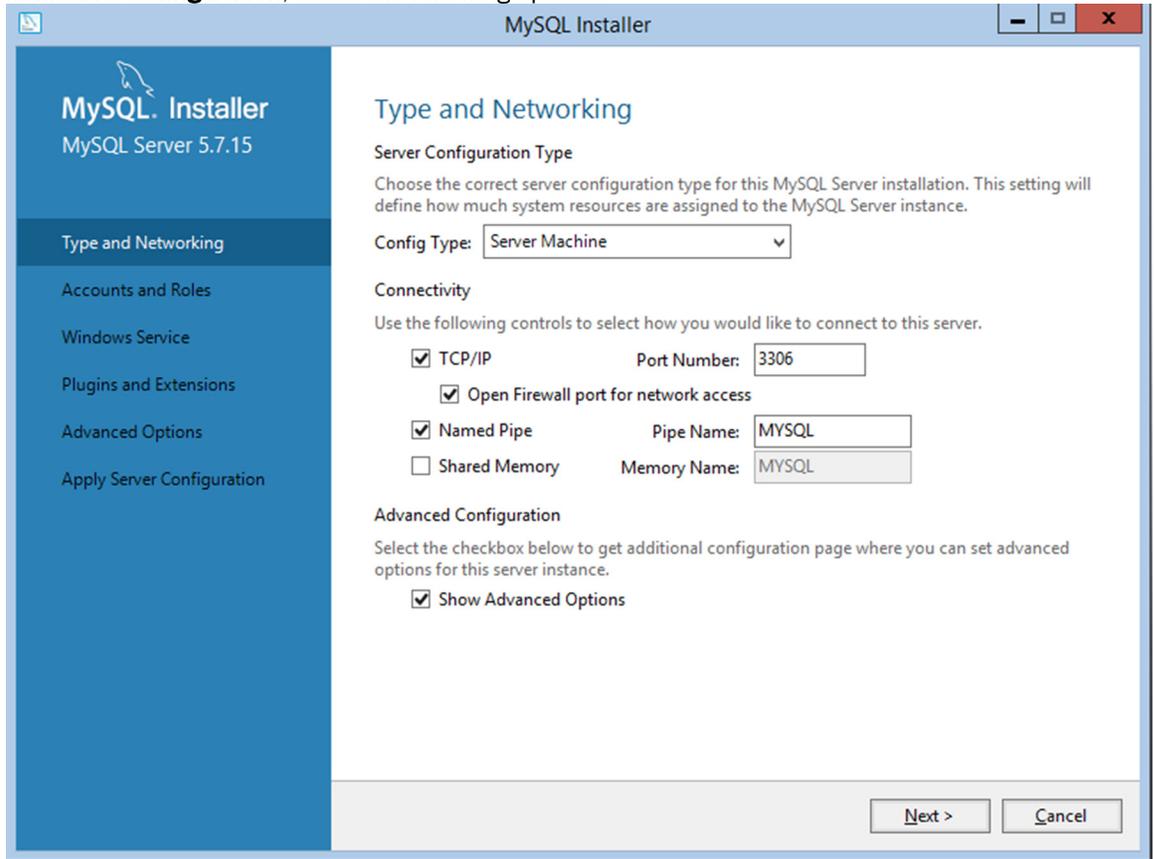
NOTE The information below was obtained from the MySQL Community website.

- 1 Run the 3rd party Installers\MySQL Community Edition v5.7.15.0\mysql-installer-community-5.7.15.0.msi installer (if the local machine does not have MySQL Server already installed). This starts the **MySQL installation wizard**. Follow the instructions in the wizard, and ensure you make the following selections when they appear.
 - o In **Setup Type**, select **Custom**.
 - o In **Products and Features**, select the **MySQL Server**. You can also install **MySQL Workbench** to have visual SQL development and administration.

NOTE To install the **MySQL Workbench** feature, you must install "Microsoft Visual C++ 2013 Redistributable Package" prior to MySQL Server installation. Refer to the Microsoft® website for more information.

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- o In **Product Configuration**, select the following options.



- o In **Account and Roles**, enter the MySQL Root Password in **Root Account Password**.

MySQL Post-Installation Steps

Follow the steps below to download the jar file needed for using MySQL with the Building Integration Platform.

- 1 Go to the MySQL download page (insert link - <https://dev.mysql.com/downloads/connector/j>)
- 2 Select the **Platform Independent** option from the **Select Operating System** drop-down.

- 3 Click **Download** beside the **ZIP Archive** option.

General Availability (GA) Releases Archives

Connector/J 8.0.19

Select Operating System:
Platform Independent

Looking for previous GA versions?

Platform Independent (Architecture Independent), Compressed TAR Archive <small>(mysql-connector-java-8.0.19.tar.gz)</small>	8.0.19	3.7M	Download
Platform Independent (Architecture Independent), ZIP Archive <small>(mysql-connector-java-8.0.19.zip)</small>	8.0.19	4.4M	Download

MDS: 57a7a463e543f408ca1677e3c446648 | Signature

MDS: 3c8b5c38f4073129f3a025e50bce6e25 | Signature

We suggest that you use the MDS checksums and GnuPG signatures to verify the integrity of the packages you download.

- 4 Click **No Thanks, Just Start My Download**

MySQL Community Downloads

Login Now or Sign Up for a free account.

An Oracle Web Account provides you with the following advantages:

- Fast access to MySQL software downloads
- Download technical White Papers and Presentations
- Post messages in the MySQL Discussion Forums
- Report and track bugs in the MySQL bug system

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for an Oracle Web account

MySQL.com is using Oracle SSO for authentication. If you already have an Oracle Web account, click the Login link. Otherwise, you can sign up for a free account by clicking the Sign Up link and following the instructions.

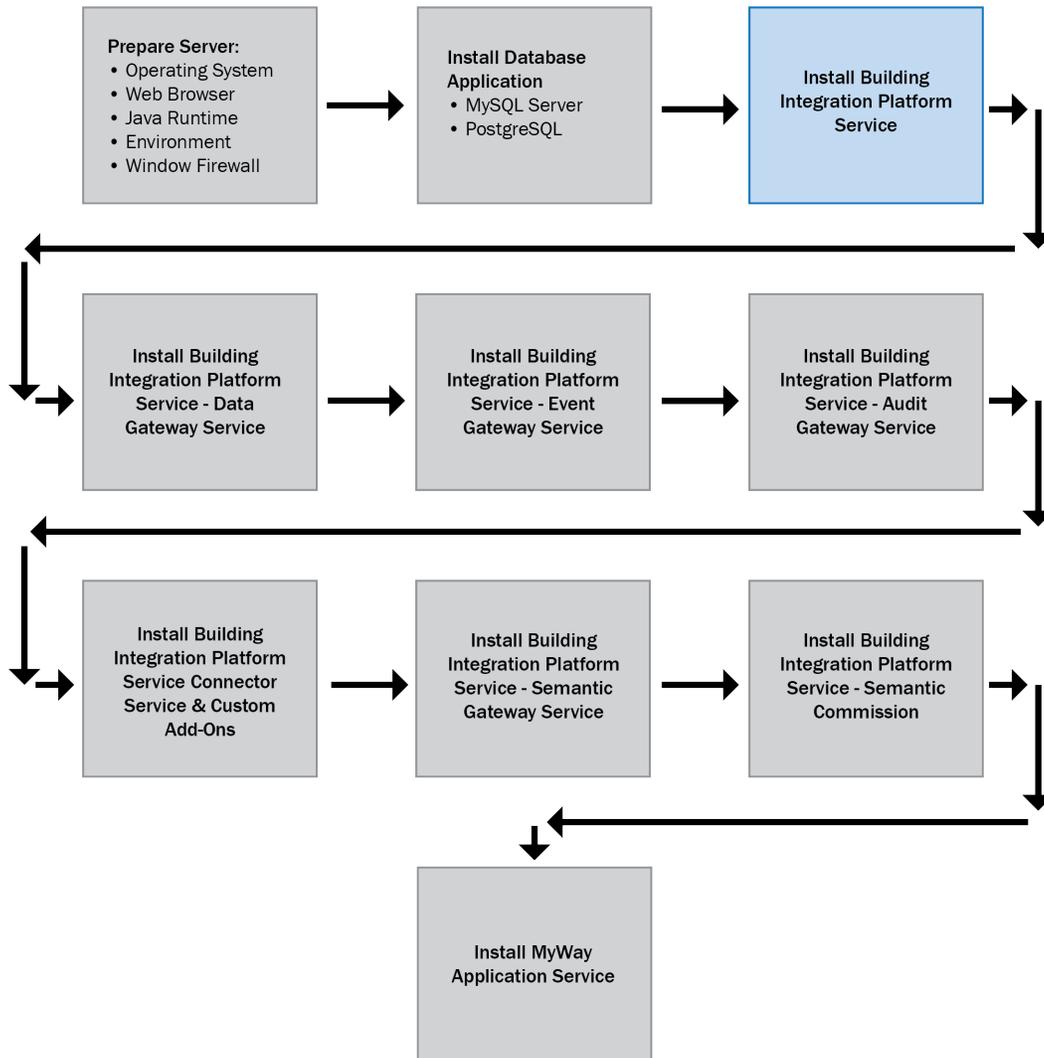
No thanks, just start my download.

- 5 Unzip the downloaded .zip file and save the .jar file (mysql-connector-java.XXX.jar) to a local folder of your choice. During the installation process, you will be asked to identify the folder where you saved the file.

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Building Integration Platform Service

This section describes installing the Building Integration Platform Framework components.



This installs BIP services on Apache Tomcat® 8 web server along with the database deployment in MySQL Server. The installer uses Apache ActiveMQ as Message Bus to process the BIP data, event and semantic requests.

Prerequisites

- Supported OS
 - Windows® Server 2012
 - Windows® Server 2012 R2
 - Windows® Server 2016
- Log on to the Windows® system as an Administrator, or as a user with Administrator-level privileges.
- If the machine has Windows® firewall enabled, ensure the ports below are allowed in the firewall settings (if installing with default settings).

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NOTE Ensure the ports used by this application are not already in use by another application.

Application	Default Port	Installed By
Apache Tomcat® 8	8444 (https)	Installed by OAuth Service.
Apache ActiveMQ	61616	Installed by OAuth Service.
MySQL Server	3306	Install manually.
PostgreSQL Server	5432	Install manually.

- If you select SAML authentication type, then ensure the **IDPMetaData** folder with the IDPMetaData.xml file is present in the installation folder.
- If you are using a MySQL database, follow the instructions in the **MySQL Post-Installation Steps** section.

NOTE Ensure the ports used by the application are not in use.

Obtain and Install BIP License

To obtain your BIP license, you must provide information about the server where the BIP will be installed. Prior to installation, follow the steps below to obtain your BIP license:

- Retrieve BIP server information
 - Place the **system-info.bat** script file, located in the License Info Generator folder of the installation package, into a location of your choice on the BIP server.
 - Open a command line prompt.
 - Navigate to the folder where the script file was placed.
 - Type **system-info.bat** on the command line.
 - A file called **BIPSystemInfo.txt** will be created in the current folder.
- Email license information to the Customer Success team
 - Create an email with the subject line "BIP License".
 - Attach the **BIPSystemInfo.txt** file to the email.
 - Include the following information in the email.
 - Name
 - Organization name
 - Email address
 - Phone number
 - Street address
 - Customer name
 - Customer BAS serial number
 - Send email to Contact.customersuccess@carrier.com
- Receive and install the BIP license
 - While waiting to receive your license, you may perform the steps found in the **Enable IIS Service** and **Database Installation and Configuration** sections of this document.
 - You will receive a response within 5 business days from the Customer Success team. A file called license.lic will be attached to this email.
 - Place the license.lic file into the **Building Integration Platform\key** folder.
- Now you may proceed with the installation of the **Building Integration Platform Service**.

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Installation Steps - Platform Service

- 1 Place your BIP license in the Building Integration Platform\key folder. See the **Obtain and Install BIP License** section above.
- 2 Right-click Building Integration Platform\ "Building Integration Platform Service.exe" and select **Run as administrator** to start the **Building Integration Platform-Service Installation wizard**.
NOTE You must have administrative permissions to the machine.
- 3 Follow the instructions in the wizard, and ensure you make the following selections when they appear.
 - o In the **Destination Folder** dialog, accept the default path.

ActiveMQ Configuration: Use existing ActiveMQ Server is selected, ensure the ActiveMQ service is running.

Server Name/IP

Enter the server name or IP where ActiveMQ server (window service) is installed.

Port

Enter the configured ActiveMQ port number. Port 61617 is the default.

- o **Database selection dialog**
Select the database used for the Building Integration Platform Service and then click **Next**.
 - **For MySQL:**
MySQL Server Configuration dialog
This dialog is used to capture the MySQL server name, port and login credentials used to connect and execute the MySQL database creation script. Credentials entered must have "All Host" access.
The same credentials may be used by the application to connect to the database or you may select the **Create New Database User** check box to create a new user for that purpose.
Dependent Jar Configuration
Click **Browse** to select the **Jar File Folder** where the MySQL connector jar file was placed. Select the **Jar File Name** from the drop down. See the **MySQL Post-Installation Steps** section for more information about the jar file.

OR

- **For PostgreSQL**
PostgreSQL Server Configuration
This dialog is used to capture the PostgreSQL Server name, port and login credentials used to connect and execute PostgreSQL database creation scripts. Credentials entered must have administrator privileges.
The same credentials may be used by the application to connect to the database or you may select the **Create New Database User** check box to create a new user for that purpose.

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- **OAuth server configuration dialog**
This dialog captures the Building Integration Platform-OAuth Service configuration details.
 - Server Name/IP:**
Enter the server name or IP where Building Integration Platform-OAuth Service is installed.
 - Port:**
Enter the configured Building Integration Platform-OAuth Service port number. The default port is 8444.

- **Database Backup Information dialog**
 - Network Database Path:**
Enter the network path of the folder where the database backup will be stored, e.g., \\HostName\Folder Name. Your local system user account must have Read/Write permission for the chosen network path.
 - Frequency of the backup to be taken:**
Enter the time of day and day(s) of the week when the backups will occur.

- **Signed Certificate Configuration**
If the tomcat server needs to be configured with a signed certificate:
 1. Select the **Do you want to configure signed certificate...?** check box
 2. Click Browse to select the **Certificate File Folder**
 3. Select the **Certificate File Name** from the drop down
 4. Enter the **Certificate Key**
 5. Enter the certificate's host name in the **Certificate Common Name** field

If you are not configuring a signed certificate, enter the IP address or host name of the machine on which you are installing the service in the **Certificate Common Name** field.

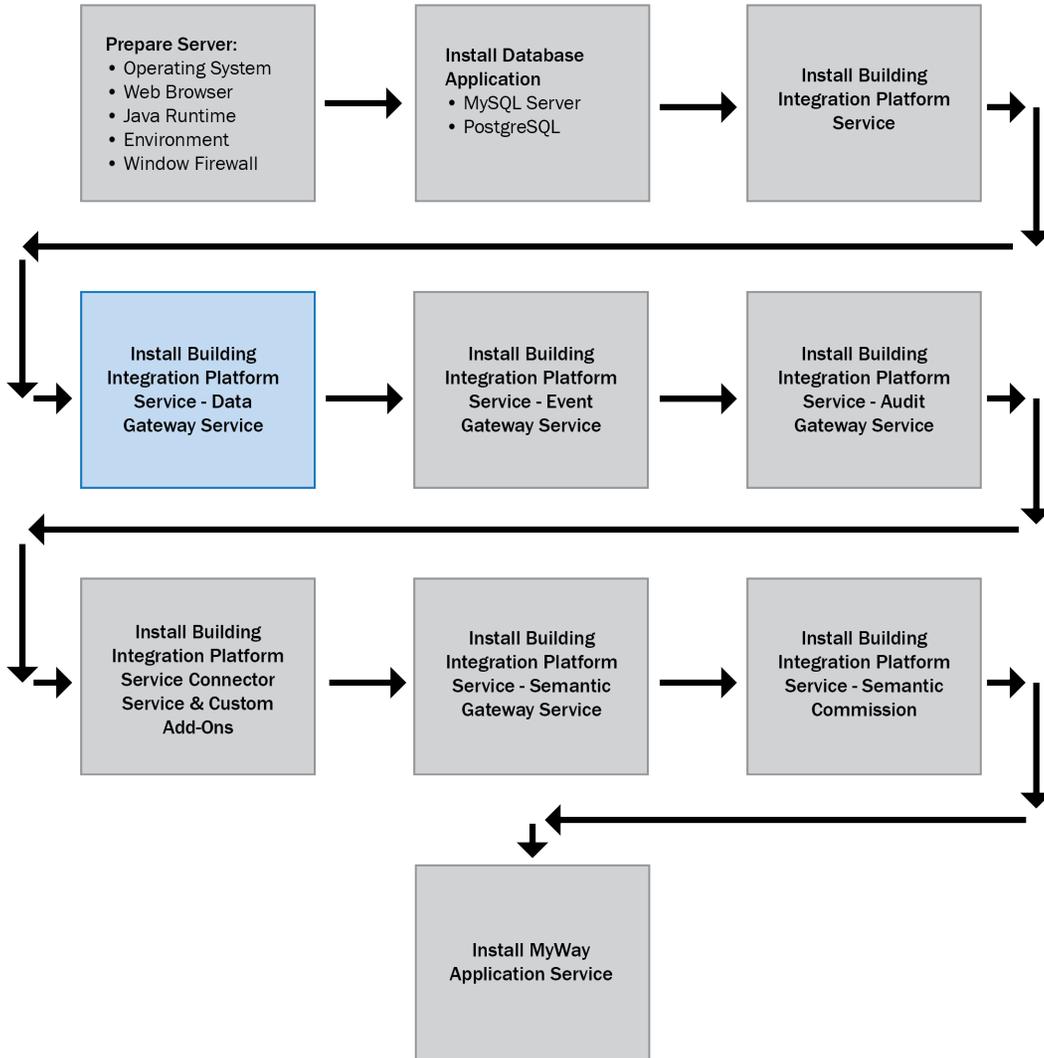
Uninstalling the Building Integration Platform Service

- 1 Close all files related to the application.
- 2 Go to **Control Panel > Add/Remove Programs**.
- 3 Select **Building Integration Platform Service**.
- 4 Click **Uninstall**.
- 5 Reboot the system if required.

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Building Integration Platform - Data Gateway Service

This section describes deploying the Building Integration Platform - Data Gateway Service, which manages the data requests for different data sources from the BIP platform service.



Prerequisites - Data Gateway Service

- Supported OS
 - Windows® Server 2012
 - Windows® Server 2012 R2
 - Windows® Server 2016

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Installation Steps - Data Gateway Service

- 1 Right-click Building Integration Platform\Building Integration Platform-Data Gateway Service.exe and select **Run as administrator** to start the **Building Integration Platform-Data Gateway Service installation wizard**.

NOTE You must have administrative permissions to the machine.

- 2 Follow the instructions in the wizard, and ensure you make the following selections when they appear.

- In the **Destination Folder** dialog, accept the default path.
- **Building Integration Platform and OAuth Server Configuration**

Platform Server Configuration

Server Name/IP

Enter the server name or IP where the BIP Service is deployed.

Port

Enter the configured Apache Tomcat® port number. Port 8443 is the default.

OAuth Server Configuration

Server Name/IP

Enter the server name or IP where BIP OAuth Service is deployed.

Port

Enter the configured Apache Tomcat® port number. Port 8444 is the default.

- **ActiveMQ Configuration**

This dialog is used to capture the ActiveMQ server configuration details to update the Data Gateway Service. This ActiveMQ queue server is monitored to process requests.

Server Name/IP

Enter the server name or IP where ActiveMQ server (Windows® service) is installed.

Port

Enter the configured ActiveMQ port number. The default is port 61617 with SSL Protocol.

- **Gateway Configuration**

Select the number of Gateway service instances needed and provide the name for each instance to be created.

NOTE The number of services listed matches the number of instances selected. Each service is created with the prefix of BIP_ and the instance name mentioned during the installation.

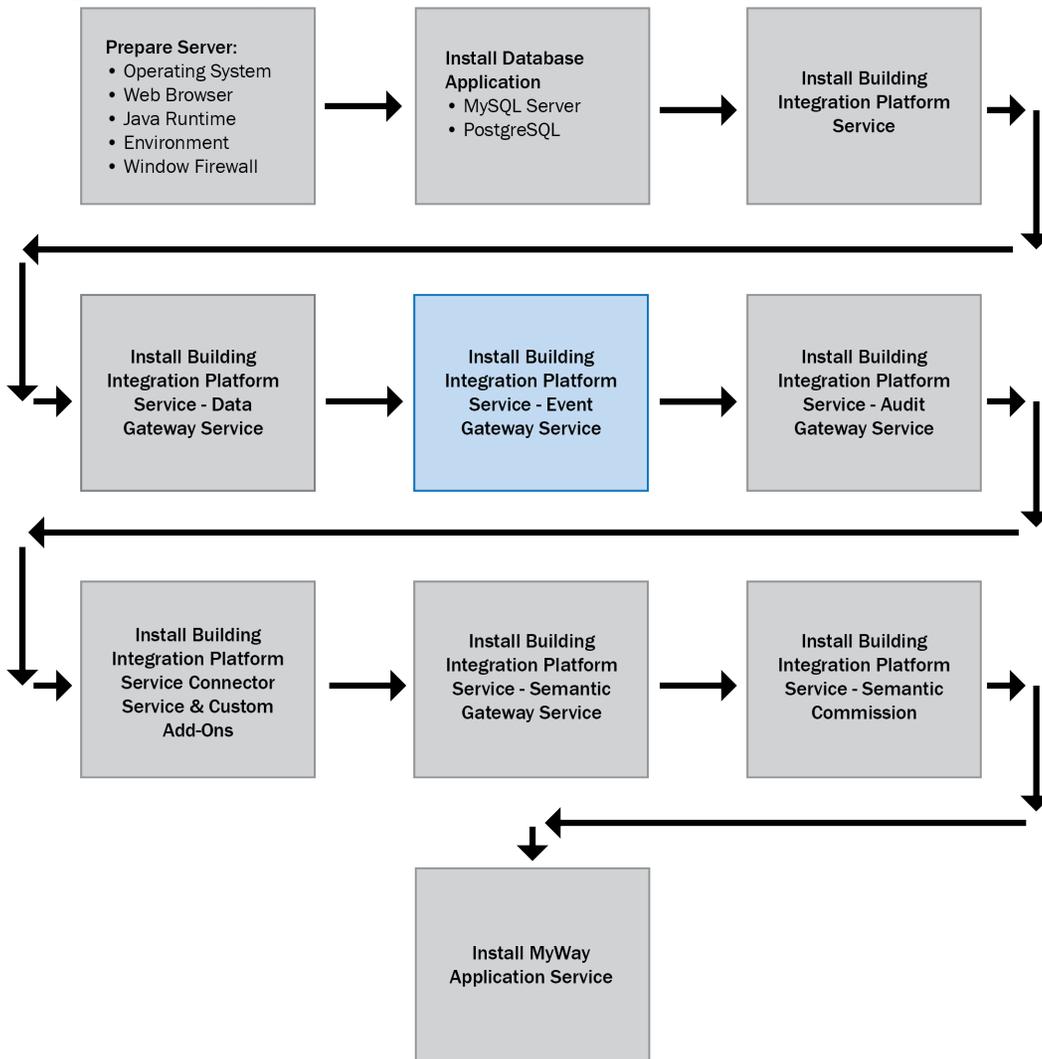
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Uninstalling the BIP - Data Gateway Service

- 1 Close all files related to the application.
- 2 Go to **Control Panel** -> **Add/Remove Programs**.
- 3 Select **Building Integration Platform Data Gateway Service**.
- 4 Click **Uninstall**.
- 5 Reboot the system if required.

Building Integration Platform - Event Gateway Service

This section describes deploying the Building Integration Platform - Event Gateway Service, which manages the event requests for different data sources from BIP service.



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Prerequisites - Event Gateway Service

- Supported OS
 - Windows® Server 2012
 - Windows® Server 2012 R2
 - Windows® Server 2016
- Port number 8855 must be enabled.

Installation Steps - Event Gateway Service

- 1 Right-click Building Integration Platform\Building Integration Platform-Event Gateway Service.exe and select **Run as administrator** to start the **Building Integration Platform-Event Gateway Service Installation wizard**.

NOTE You must have administrative permissions to the machine.

- 2 Follow the instructions in the wizard, and ensure you make the following selections when they appear.

- In the **Destination Folder** dialog, accept the default path.

- **Data Integration Server Configuration Dialog**

BIP server configuration

Server Name/IP

Enter the server name or IP where BIP Service is deployed.

Port

Enter the configured Apache Tomcat® port number. Port 8443 is the default.

BIP OAuth server configuration

Server Name/IP

Enter the server name or IP where BIP OAuth service is deployed.

Port

Enter the configured Apache Tomcat® port number. Port 8444 is the default.

- **ActiveMQ Configuration**

This dialog captures the ActiveMQ server configuration details to update the Event Gateway Service. This ActiveMQ queue server is monitored to process requests.

Server Name/IP

Enter the server name or IP where ActiveMQ server (window service) is installed.

Port

Enter the configured ActiveMQ port number, Port 61617 is the default.

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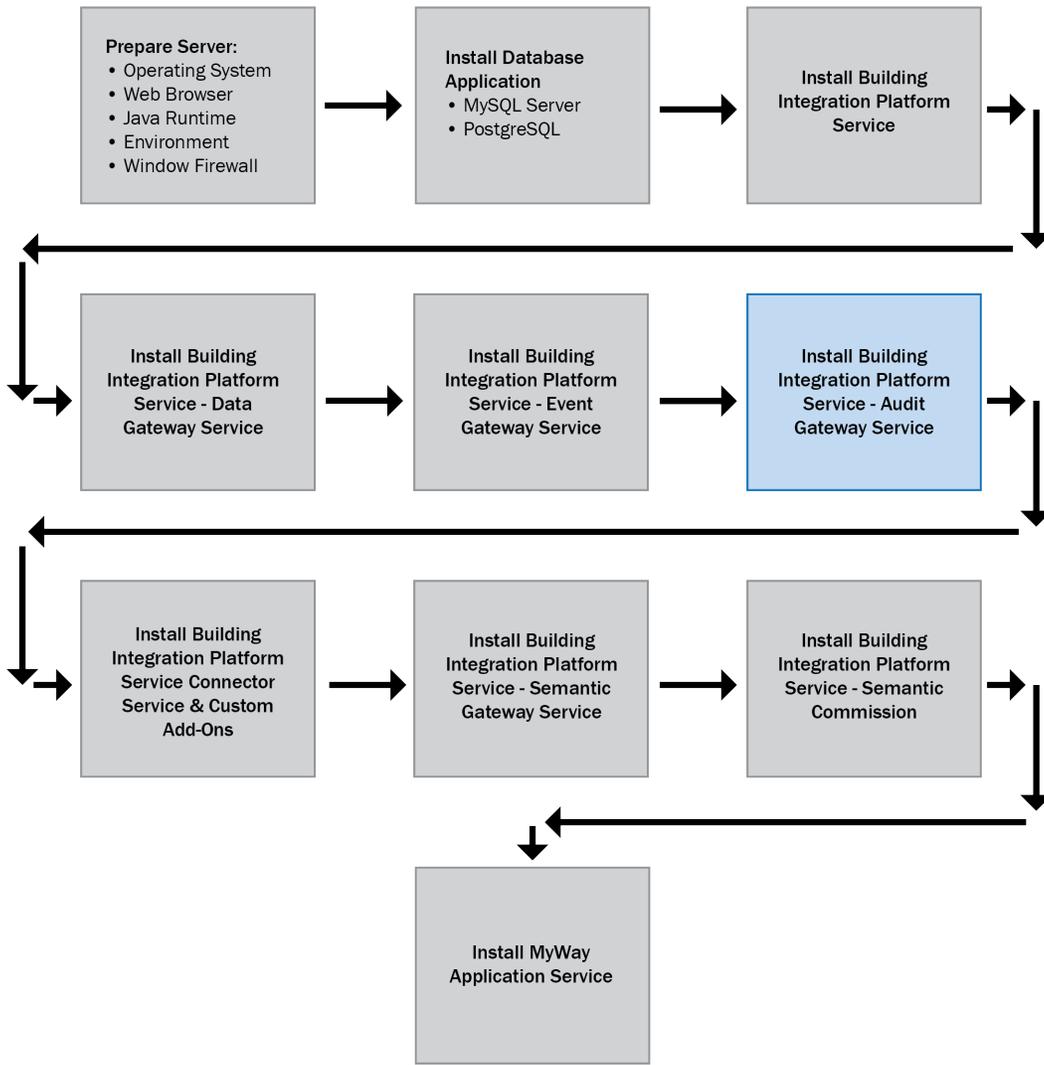
Uninstalling the BIP - Event Gateway Service

- 1 Close all files related to the application.
- 2 Go to **Control Panel > Add/Remove Programs**.
- 3 Select **Building Integration Platform Event Gateway Service**.
- 4 Click **Uninstall**.
- 5 Reboot the system if required.

Building Integration Platform - Audit Gateway Service

NOTE This service is needed for the MyWay application only, not for the OnGuard Integration.

This section describes how to deploy the Building Integration Platform - Audit Gateway Service, which takes care of audit requests coming from Audit Service, and handles the request through respective driver modules.



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Prerequisites - Audit Gateway Service

- Supported OS
 - Windows® Server 2012
 - Windows® Server 2012 R2
 - Windows® Server 2016

If using MySQL as the database, follow the instructions in the **MySQL Post-Installation Steps** section.

Installation Steps - Audit Gateway Service

- 1 Right-click Building Integration Platform\Building Integration Platform-Audit Gateway Service.exe and select **Run as administrator** to start the **Building Integration Platform-Audit Gateway Service** installation wizard.

NOTE You must have administrative permissions to the machine.

- 2 Follow the instructions in the wizard, and ensure you make the following selections when they appear.

- In the **Destination Folder** dialog, accept the default path.

- **ActiveMQ Configuration Dialog**

This dialog captures the ActiveMQ server configuration details to update the Event Gateway Service. This ActiveMQ queue server is monitored to process requests.

Server Name/IP

Enter the server name or IP where ActiveMQ server (window service) is installed.

Port

Enter the configured ActiveMQ port number, Port 61616 is the default.

- **Database Selection Dialog**

Select the database used for the Audit Gateway Service, then click **Next**.

- **For MySQL:**

MySQL Server Configuration dialog

This dialog is used to capture the MySQL server name, port and login credentials used to connect and execute the MySQL database creation script. Credentials entered must have "All Host" access.

The same credentials may be used by the application to connect to the database or you may select the **Create New Database User** check box to create a new user for that purpose.

Dependent Jar Configuration

Click **Browse** to select the **Jar File Folder** where the MySQL connector jar file was placed. Select the **Jar File Name** from the drop down. See the **MySQL Post-Installation Steps** section for more information about the jar file.

OR

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- **For PostgreSQL**

- **PostgreSQL Server Configuration**

- This dialog is used to capture the PostgreSQL Server name, port and login credentials used to connect and execute PostgreSQL database creation scripts. Credentials entered must have administrator privileges.

- The same credentials may be used by the application to connect to the database or you may select the **Create New Database User** check box to create a new user for that purpose.

- **Database Backup Information dialog**

- **Network Database Path:**

- Enter the network path of the folder where the database backup will be stored, e.g., \\HostName\Folder Name. Your local system user account must have Read/Write permission for the chosen network path.

- **Frequency of the backup to be taken:**

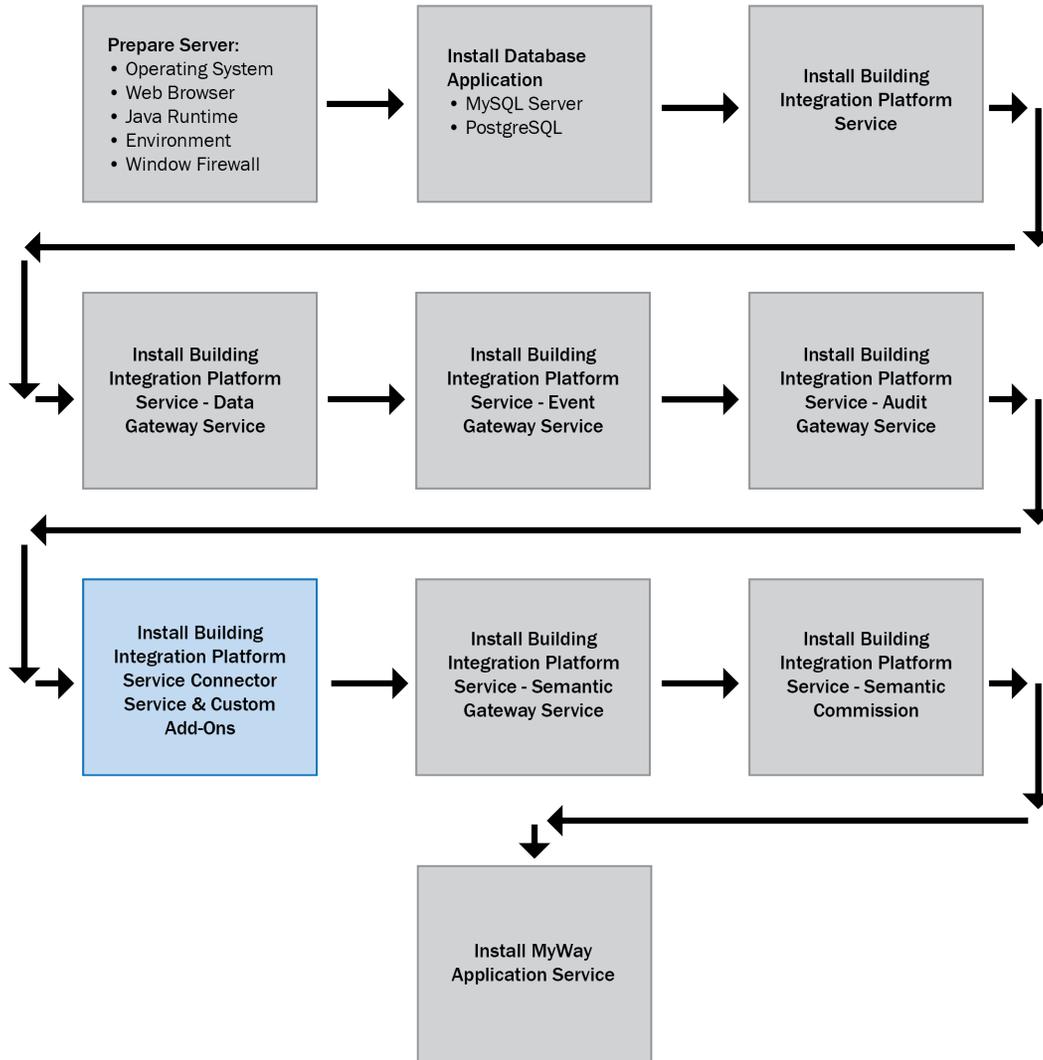
- Enter the time of day and day(s) of the week when the backups will occur.

Uninstalling the BIP - Audit Gateway Service

- 1 Close all files related to the application.
- 2 Go to **Control Panel** -> **Add/Remove Programs**.
- 3 Select **Building Integration Platform Audit Gateway Service**.
- 4 Click **Uninstall**.
- 5 Reboot the system if required.

Building Integration Platform – Building Automation System Add-On and Connector Services

This section describes installing the required driver services on the data source applications, like OnGuard, or your building automation system.



BIP Add-on

NOTE This add-on is needed for the MyWay application only, not for the OnGuard Integration.

This section describes installing and configure the BIP add-on, which is used to publish the building automation system events to the BIP Service.

Pre-requisites

The BIP add-on is deployed on the building automation system server. Ensure the building automation system application is installed and configured properly.

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Installation Settings

- 1 Install the add-on in your building automation system, as described in the add-on instructions.
- 2 Complete the add-on's configuration page as described below.

Field	Action
Event Gateway Service IP/Host	Enter the Event Gateway Service IP/Host.
Event Gateway Port	Enter the Event Gateway Service Port.
Event Gateway SSL Enable?	Select based on whether Enable Https was selected when installing the Event Gateway.
Event Gateway OAuth Enable?	Select based on whether Enable OAuth was selected when installing the Event Gateway.
OAuth Service IP/Host	Enter the BIP OAuth Service IP /Host.
OAuth Service Port	Enter the BIP OAuth Service port.
Allow Occupancy Override	Select Yes to allow users to override building automation system schedules.
Occupancy Priority Array	Enter the priority level in the Priority Array allocated for the BIP integration.

- 3 Click **Submit**.
- 4 Go back to the add-ons page and **Disable** and re-**Enable** the BIP add-on.

Open Access Connector Service

This section describes installation and configuration of the BIP Open Access Connector Service, which publishes the OnGuard events to the BIP Service.

NOTE Use OnGuard system version 7.4 or later.

Pre-requisites

- .NET framework 4.8 is installed automatically if it is not present.
- Login to the machine with valid admin privileges.

Installation Steps

NOTE Open Access Connector Service can be accessed from local system only, and cannot be accessed remotely.

- 1 Right-click Building Integration Platform\Building Integration Platform-OpenAccess Connector Service installer.exe and select **Run as administrator** to start the **Building Integration Platform-OpenAccess Connector Service Installation wizard**.

NOTE You must have administrative permissions to the machine.

- 2 Follow the instructions in the wizard, and ensure you make the following selections when they appear.

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- **Building Integration Platform Event Gateway Configuration dialog**
This screen captures the BIP Event Gateway Configuration (where BIP Event Gateway is installed).

BIP Event Gateway Server Name/IP:
Enter the BIP Event Gateway installed machine name or IP.

Port:
Enter the BIP Event Gateway Port of the Event Gateway Server.
 - **BIP OAuth Service and Open Access Application ID Information**
Enabling remote access is unsecure. We recommend installing Open Access Connector on the same machine that the BIP Gateways are installed.
- 3** After installation, ensure the "BIP Open Access Connector Service" window service is installed and running.

Apache Jena Fuseki Installation

NOTE This is needed for the MyWay application only and not for the OnGuard Integration.

- 1** Right-click 3rd Party Installers\ApacheJenaFusekiSetup.exe and select **Run as administrator** to start the **Apache Jena Fuseki installation wizard**.

NOTE You must have administrative permissions to the machine.

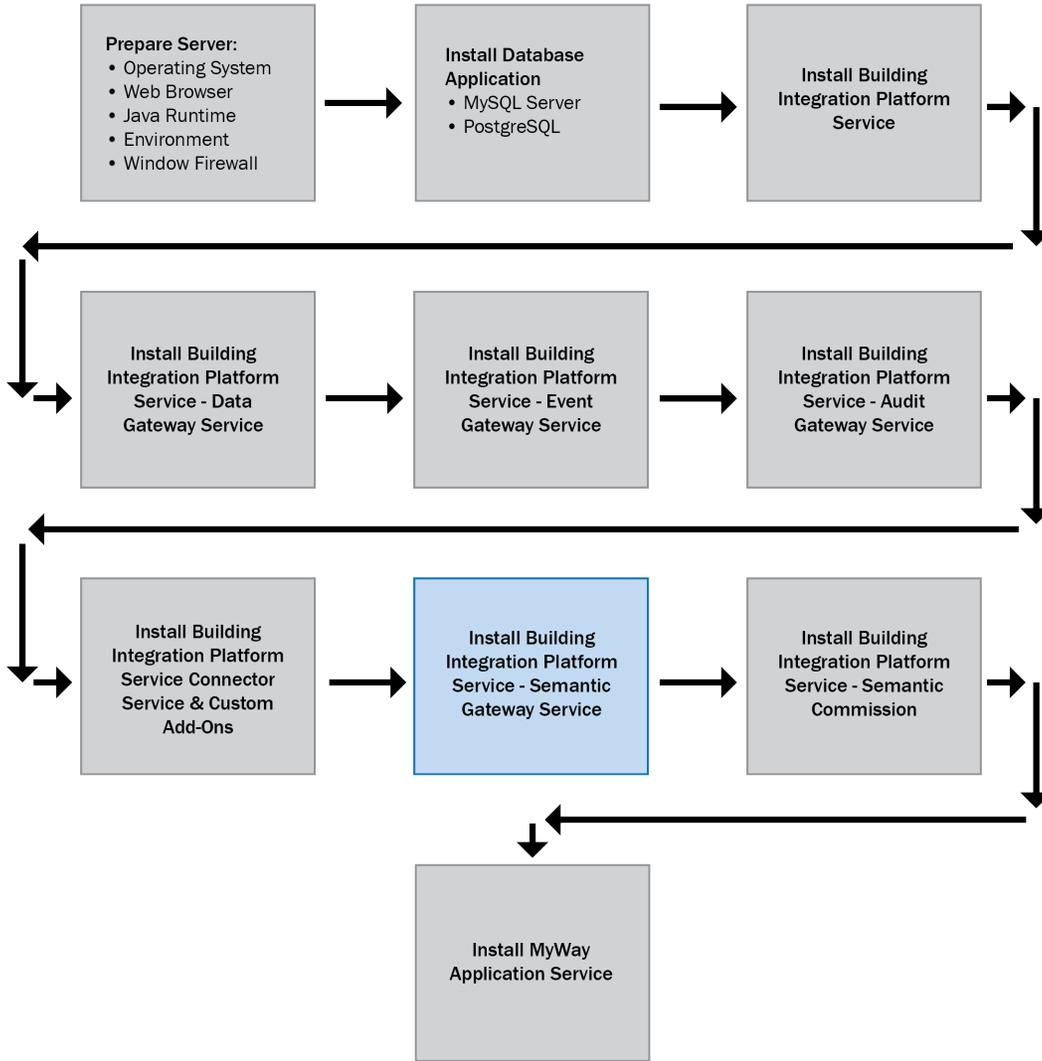
- 2** Follow the instructions in the wizard.

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Building Integration Platform - Semantic Gateway Service

NOTE This service is needed for the MyWay application only and not for the OnGuard Integration.

This section describes deploying the Building Integration Platform – Semantic Gateway Service, that manages semantic data requests.



Prerequisites

Supported OS

- Windows® Server 2012
- Windows® Server 2012 R2

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Installation Steps - Semantic Gateway Service

NOTE This service is needed for the MyWay application only and not for the OnGuard Integration.

- 1 Right-click Building Integration Platform\Building Integration Platform-Semantic Gateway Service.exe and select **Run as administrator** to start the **Building Integration Platform-Semantic Gateway Service installation wizard**.

NOTE You must have administrative permissions to the machine.

- 2 Follow the instructions in the wizard, and ensure you make the following selections when they appear.

- o In the **Destination Folder** dialog, accept the default path.

- o **Building Integration Platform Service Configuration**

Platform Server Configuration

Server Name/IP

Enter the server name or IP where the BIP Service is deployed.

Port

Enter the configured Apache Tomcat® port number. Port 8443 is the default.

BIP OAuth Service Configuration

Server Name/IP

Enter the server name or IP where BIP OAuth Service is deployed.

Port

Enter the configured Apache Tomcat® port number. Port 8444 is the default.

- o **ActiveMQ Configuration**

This dialog captures the ActiveMQ server configuration details to update the Data Gateway Service. This ActiveMQ queue server is monitored to process requests.

Server Name/IP

Enter the server name or IP where ActiveMQ server (Windows® service) is installed.

Port

Enter the configured ActiveMQ port number. The default is port 61617.

- o **Knowledge Base selection Dialog**

Select the Knowledge Base used for the Semantic Gateway Service.

- o **GraphDB Server Configuration Dialog**

Enter the server, port, and user credentials configured during the installation of GraphDB

- o **Apache Jena Fuseki Configuration Dialog**

Enter the server, port, and user credentials configured during the installation of Apache Jena Fuseki.

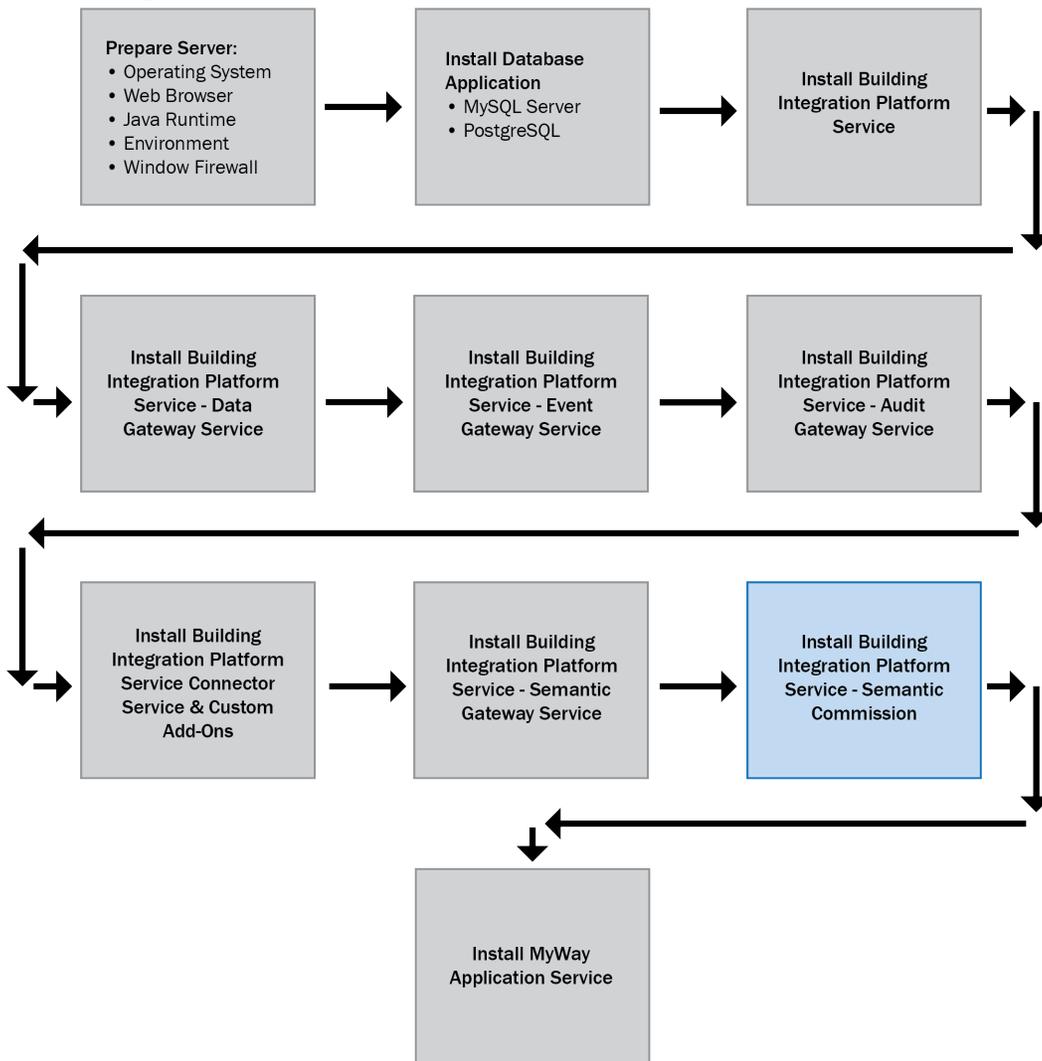
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Uninstalling the BIP - Semantic Gateway Service

- 1 Close all files related to the application.
- 2 Go to **Control Panel > Add/Remove Programs**.
- 3 Select **Building Integration Platform Semantic Gateway Service**.
- 4 Click **Uninstall**.
- 5 Reboot the system if required.

Building Integration Platform – Semantic Commission

NOTE This service is needed for the MyWay application only and not for the OnGuard Integration. This section describes deploying the Building Integration Platform – Semantic Commission service, which manages semantic data requests.



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Prerequisites - Semantic Commission

Supported OS

- Windows® Server 2012
- Windows® Server 2012 R2

Before installing Semantic Commission, all the end systems must be configured in the BIP Commissioning Application's System Configuration page.

NOTE To configure the end systems, log in to the BIP Commissioning Application, go to the **Help** page, and click the **User Manual** for information on how to use the **System Configuration** page.

Steps for Running GraphDB as Windows® Service.

Follow the steps below to configure GraphDB as a knowledge base:

- 1 Download the latest release of NSSM - <http://nssm.cc/download>.
- 2 Unzip the file.
- 3 Open a command prompt (right-click **cmd - run as administrator**).
- 4 Go to the nssm's folder (for example, C:\Users\onto\Downloads\nssm-2.24\nssm-2.24\win64).
- 5 Run `nssm install <your_desired_service_name>`. This opens a GUI, where you can point to the "graphdb.cmd" file .

Installation Steps - Semantic Commission

- 1 Right-click Building Integration Platform\Building Integration Platform-Semantic Commission.exe and select **Run as administrator** to start the **Building Integration Platform-Semantic Commission Installation wizard**.

NOTE You must have administrative permissions to the machine.

- 2 Follow the instructions in the wizard, and ensure you make the following selections when they appear.

- In the **Destination Folder** dialog, accept the default path.
- **BIP Service and OAuth Service configuration dialog**

BIP service configuration

Server Name/IP

Enter the server name or IP where the BIP Service is deployed.

Port

Enter the configured Apache Tomcat® port number. Port 8443 is the default.

BIP OAuth Service Configuration

Server Name/IP

Enter the server name or IP where BIP OAuth Service is deployed.

Port

Enter the configured Apache Tomcat® port number. Port 8444 is the default.

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- **GraphDB Server Configuration Dialog**
Enter the server, port, and user credentials configured during the installation of GraphDB.
- **Apache Jena Fuseki configuration dialog**
Enter the server, port, and user credentials configured during the installation of Apache Jena Fuseki.
- **Database backup information dialog**
 - Network Database Path:**
Enter the network path of the folder where the database backup will be stored, e.g. *Hostname**Folder Name*. Your local system user account must have Read/Write permission for the chosen network path.
 - Frequency of backup to be taken:**
Enter the time of day and day(s) of the week when the backup will occur.

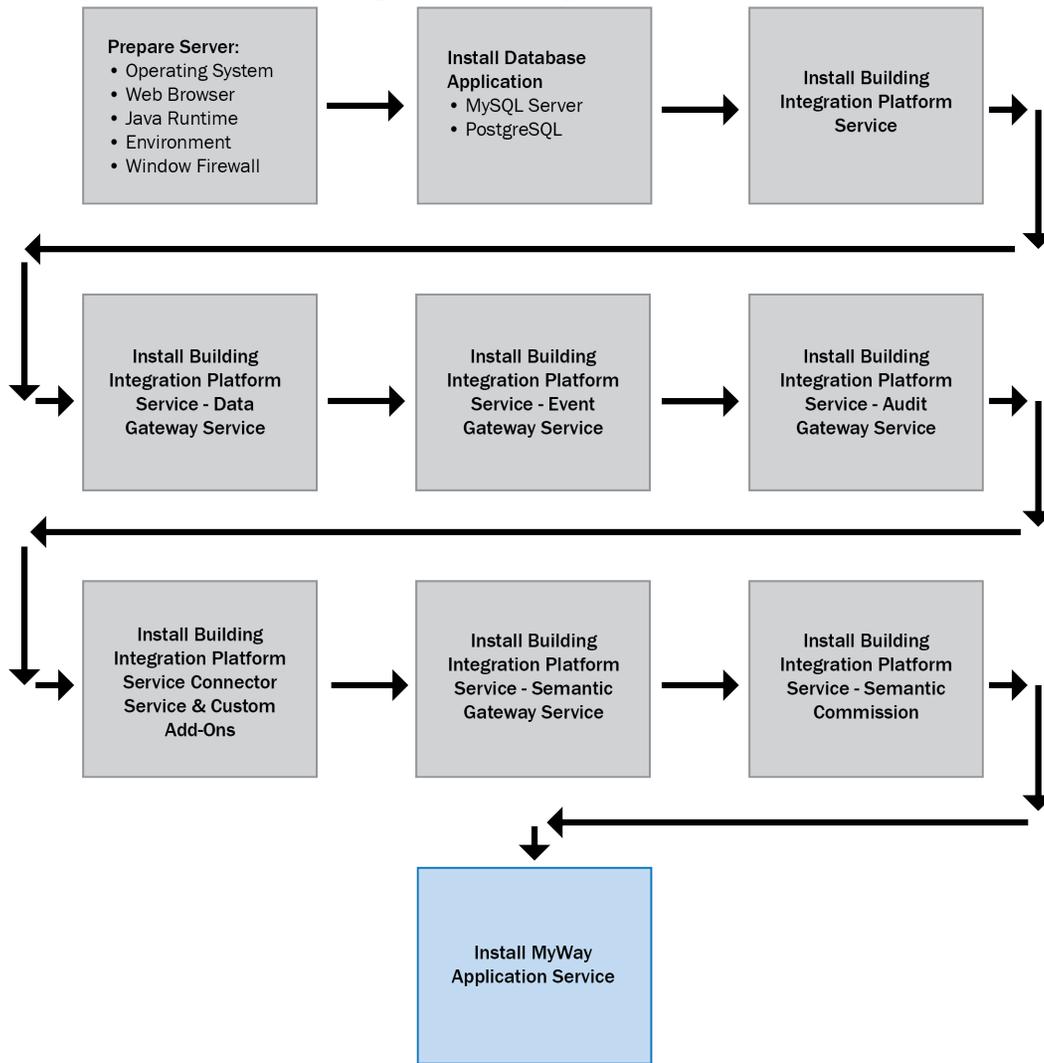
Uninstalling the BIP - Semantic Commission

- 1 Close all files related to the application.
- 2 Go to **Control Panel > Add/Remove Programs**.
- 3 Select **Building Integration Platform Semantic Commission**.
- 4 Click **Uninstall**.
- 5 Reboot the system if required.

MyWay Application Service

NOTE This service is needed for the MyWay application only and not for the OnGuard Integration. This section describes installing the MyWay Application Service components.

This installer hosts the MyWay Application services on an IIS web server. The installer uses IIS for hosting the application and configures SSL Self signed certificate on Port 443.



Prerequisites - MyWay Application Service

- Supported OS
 - Windows Server 2008 R2 SP1 64 Bit
 - Windows 8 64Bit
 - Windows 8.1 64Bit
 - Windows Server 2012
 - Windows Server 2012 R2
- Dot net framework 3.5 SP1
- My SQL v5.7.15.0
- Installation procedures require that you first log on to the Windows system as an Administrator, or as a user with Administrator-level privileges.

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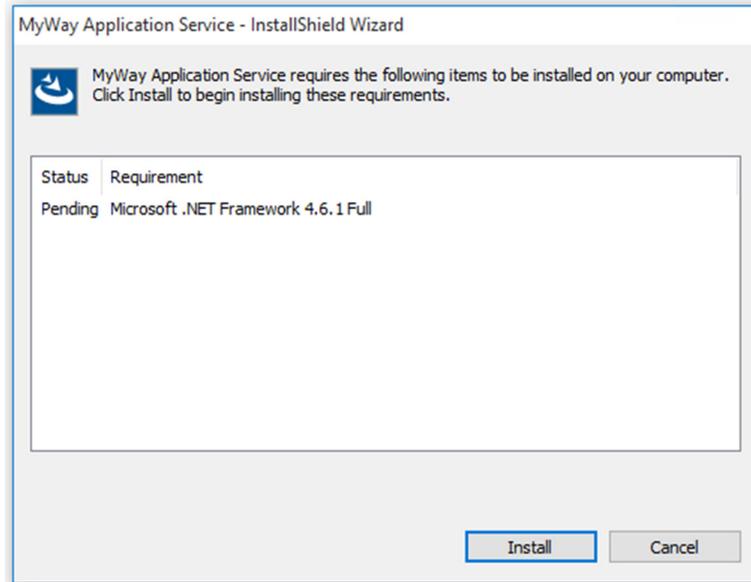
Installation Steps - MyWay

- 1 Right-click Building Integration Platform\MyWay Application Service.exe and select **Run as administrator** to start the **MyWay Application Service Installation wizard**.

NOTE You must have administrative permissions to the machine.

- 2 Follow the instructions in the wizard, and ensure you make the following selections when they appear.

- If the System does not have Dot net 4.6.1 installed, the dialog below appears. Click **Install** and continue the installation.



- In the **Destination Folder** dialog, accept the default path.

- **Platform Service configuration dialog**

Server Name/IP

Enter the server name or IP where the BIP Service is deployed.

Port

Enter the configured Apache Tomcat® port number. Port 8443 is the default.

- **Database selection dialog**

Select the database used for the MyWay Application Service, then click **Next**.

My SQL Server configurations dialog

This dialog is used to capture the MySQL server, port, and login credentials used to connect and execute the MySQL database creation scripts. Credentials entered must have "All host" access.

The same credentials may be used by the application to connect to the database, or, you may select the **Create new database user** checkbox to create a new user for that purpose.

OR

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PostgreSQL Server Configuration

This dialog is used to capture the PostgreSQL server, port, and login credentials used to connect and execute the PostgreSQL database creation scripts. Credentials entered must have administrator privileges.

The same credentials may be used by the application to connect to the database, or, you may may select the **Create new database user** checkbox to create a new user for that purpose.

- **Database Backup Information dialog**

- Network Database Path:**

- Enter the network path of the folder where the database backup will be stored, e.g., \\HostName\Folder_Name. Your local system user account must have Read/Write permission for the chosen network path.

- Frequency of backup to be taken:**

- Enter the time of day and day(s) of the week when the backups will occur.

- **Signed Certificate Configuration**

- If the tomcat server needs to be configured with a signed certificate:

- 1. Select the **Do you want to configure signed certificate..?** check box.
 2. Click **Browse** to select the **Certificate File** folder.
 3. Select the **Certificate File Name** from the dropdown.
 4. Enter the **Certificate Key**.
 5. Enter the certificate's host name in the **Certificate Common Name** field.

- If you are not configuring a signed certificate, enter the IP address or host name of the machine on which you are installing the service in the **Certificate Common Name** field.

Uninstalling the MyWay Application Service

- 1 Close all files related to the application.
- 2 Go to **Control Panel > Add/Remove Programs**.
- 3 Select **MyWay Application Service**.
- 4 Click **Uninstall**.
- 5 Reboot the system if required.

Troubleshooting

Unable to load the BIP service URL

- 1 Ensure the Apache Tomcat® 8 Windows® service is running.
- 2 Ensure BIP_Service folder exists in the “Webapps” folder of the Apache Tomcat® 8 webserver.
- 3 Ensure the library files for the BIP Services exist in “BIP_Service/WEB_INF/lib” path of the Apache Tomcat® webapps folder.
- 4 Verify the port used by Apache Tomcat® server is not in use by any other application.

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Document revision history

Important changes to this document are listed below. Minor changes such as typographical or formatting errors are not listed.

Date	Topic	Change description	Code*
		No updates yet	

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