

# BioConnect v3.6

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## Installation Guide

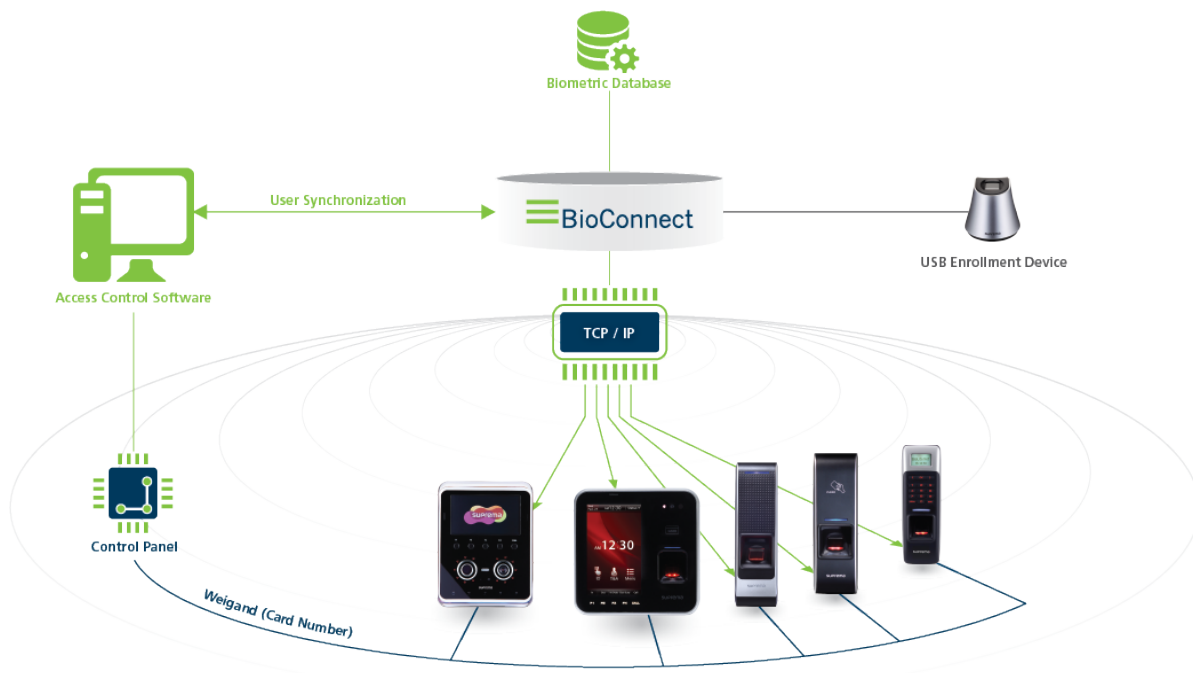
Revision 1.5

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## 1. Introduction

BioConnect uses an advanced plugin architecture to connect directly into your access control software. This provides seamless synchronization of all data such as new cardholders, changes or deletions. All biometric readers connect directly to the BioConnect software over TCP/IP for quick access to the dynamic user/template database. Communication with the control panel is a standard Wiegand card number using a card format of your choice. Within the access control software, the reader is configured as a standard Wiegand interface reader. This architecture provides a simple, flexible, and scalable biometric solution that allows you to use a variety of biometric types and readers within a single system.



### 1.1 About this Guide

This guide will walk you through the installation of the BioConnect software and connecting it to your Access Control software.

## 2. Support

Telephone support is available Monday - Friday from 8:30 AM to 8:30 PM Eastern to assist with installing, configuring and troubleshooting the BioConnect software. The technical support team is well versed to assist integrators both during the planning or post sales stages.

The goal of the BioConnect team is to make the software as easy as possible to install and configure. If an unexpected problem occurs or if you would like some guidance, please don't hesitate to reach out using one of the contact methods listed below:

### Support Website:

<http://www.bioconnect.com/support/>

### Telephone:



Toll-Free 1-855-ENTERID (368-3743)



Free Phone +44 (0) 8003 688 123  
Main Phone +44 (0) 2037 439 123

### Email:

[support@bioconnect.com](mailto:support@bioconnect.com)

### **3. Release Notes**

#### **BioConnect v3.6:**

##### Service Manager

- Ability to manage system service status
- View the status of all current connections (database and ACM)
- Ability to view real-time event logs
- One-click backups of the BioConnect database

##### System Startup Checklist

- Checklist of all processes required for BioConnect to function are displayed on startup
- Detects and reports any issues preventing startup, such as:
  - administrator permissions errors
  - inaccurate connection details
  - licensing issues

##### Enhanced BioStation 2 Functionality

- Includes server matching to grant enrolled users instant access
- Adjust authentication modes from BioConnect
- Perform firmware upgrades from BioConnect
- Improved synchronization times with device for offline access

##### Expanded Authentication Mode Options

- Authentication modes now include PIN options, adjusted from BioConnect
- 3-Factor authentication (Card + Finger + PIN) for supporting devices

##### Create New Database

- Create a new BioConnect database straight from the Setup Assistant

## 4. Requirements

This chapter specifies the minimum and recommended hardware and software requirements for BioConnect Server and BioConnect Client installation. Before you can install BioConnect Software, ensure that you have met all the hardware and software requirements, PACS requirement and database configurations requirement.

### NOTE:

- If using Windows 7 (might need to run in compatibility mode- see [Appendix C](#) for more information), Windows 8, Windows 8.1 or Windows 10, the BioConnect setup requires that you have administrative privileges.
- All prerequisite software in the BioConnect installation package must be installed.
- Adobe Reader is not required but highly recommended as you need it to read the BioConnect documentation.

### 4.1 Hardware and Software Requirements

BioConnect Server		
	Minimum	Recommended
<b>CPU</b>	x64-capable dual core processor with speeds of 2.4 GHz or more	x64-capable quad core processor with speeds of 2.7 GHz or more
<b>HDD</b>	10 GB	30 GB
<b>RAM</b>	4 GB	8 GB
<b>OS</b>	Windows 7 Windows Server 2008 R2 Windows 8/8.1 Windows 10 Windows Server 2012/R2	Windows Server 2012 R2
<b>Database</b>	SQL Server 2008 R2 Express/Standard or above (SQL Server 2008 R2 Express is included for free with BioConnect)	
<b>Installed Features</b>	.Net Framework 3.5; 4.0 and above	
<b>Firewall: Open Ports Required</b>	TCP/UDP Ports 8000 (Server), 8001 (Gen 1), 51212 (Gen2), 1003 (Digitus)	

### BioConnect Client

	Minimum	Recommended
<b>CPU</b>	x64 or x86 dual core processor with speeds of 2.4 GHz or more	x64-capable quad core processor with speeds of 2.3 GHz or more
<b>HDD</b>	10 GB	30 GB
<b>RAM</b>	4GB	8GB
<b>OS</b>	Windows 7 Windows Server 2008 R2 Windows 8/8.1 Windows 10 Windows Server 2012/R2	Windows 8.1

### NOTE:

- Larger deployments of 50 or more readers/server should contact BioConnect for a custom server requirements evaluation.
- Following prerequisite software must be installed for BioConnect DualLock installation:
  - Digitus Ethernet Utility
  - Visual Studio 2013 C++ Redistributable Package (x86 or x64)

## 4.2 PACS Prerequisites

Access Control Partner	Software Version	Requirements
<b>ACT</b>	ACT Manage1.10.0.2	ACT API License
<b>AMAG</b>	Symmetry 7	Data Connect
	Symmetry 8	
<b>Avigilon</b>	ACM 5.4	-
	ACM 5.6	
<b>Axis</b>	Embedded Controller V1.40	-
<b>Brivo</b>	On Air	Data Sync API
	On Site (Apparato)	
<b>Gallagher</b>	Command Centre v7.30.0747	-
	Command Centre v7.40769	
<b>Genetec</b>	Security Center 5.5	Genetec SDK 5.5
<b>Honeywell</b>	ProWatch 4.2	Honeywell HSDK
	WinPak PE v4.0	6.6 - 7.2 API
	WinPak PE v4.1	
<b>Imron</b>	IS2000 v10.3.65	-
<b>Kantech</b>	Entrapass Corporate Edition v7.0	-
<b>Keyscan</b>	Aurora V1.0.14.2 or above	SDK AUR-SDKB
<b>Lenel</b>	On Guard 6.4	DataConduIT License
	On Guard 6.5	
	On Guard 6.6	
	On Guard 7.0	
	On Guard 7.1	
	On Guard 7.2	
<b>Open Options</b>	dna Fusion 6.4	Flex API v1.23
<b>PACOM</b>	GMS v4.20.20.0	-
<b>Paxton</b>	Net 2 v5.3	OEM SDK
<b>PCSC</b>	Linc-Plus v3.9.68	-
<b>S2</b>	Netbox 4.7	-
<b>RS2</b>	Access It! Universal 4.1	-
	Access It! Universal 5.1	-
<b>Stanley</b>	SecureNET 4.6	Stanley SDK Certificate / OEM Key
<b>Software House</b>	CCURE 9000 2.2	-
	CCURE 9000 2.3	
	CCURE 9000 2.4	
	CCURE 9000 2.5	



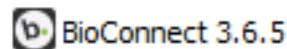
## 5. Installing BioConnect (Server)

Before you begin ensure you have the following:

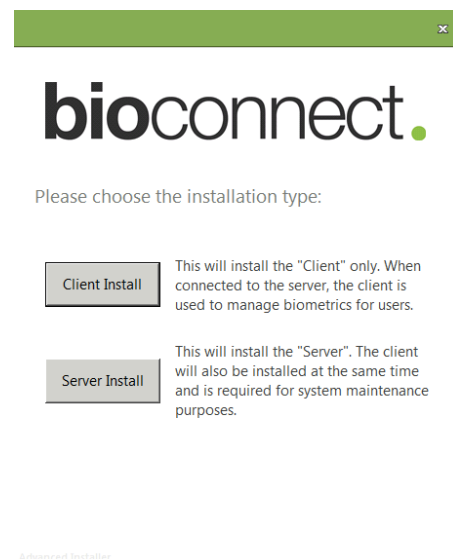
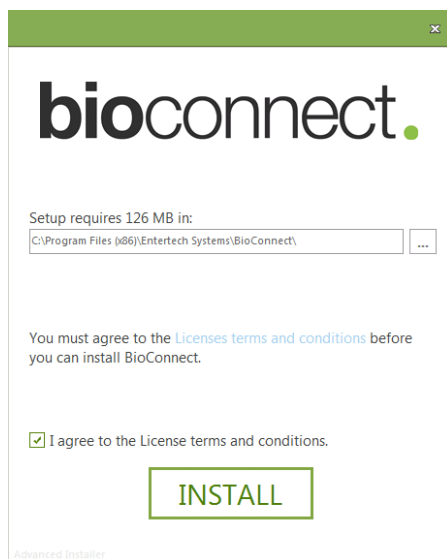
- BioConnect v3.6 Install Package Contents (Documentation, Firmware Files, Utilities and Software)
- BioConnect License Activation Code (Provided by BioConnect upon purchase) - If you are installing a trial for the first time, this is not necessary
- Administrative access to the server you will be installing the software on.

### 5.1 Express Install

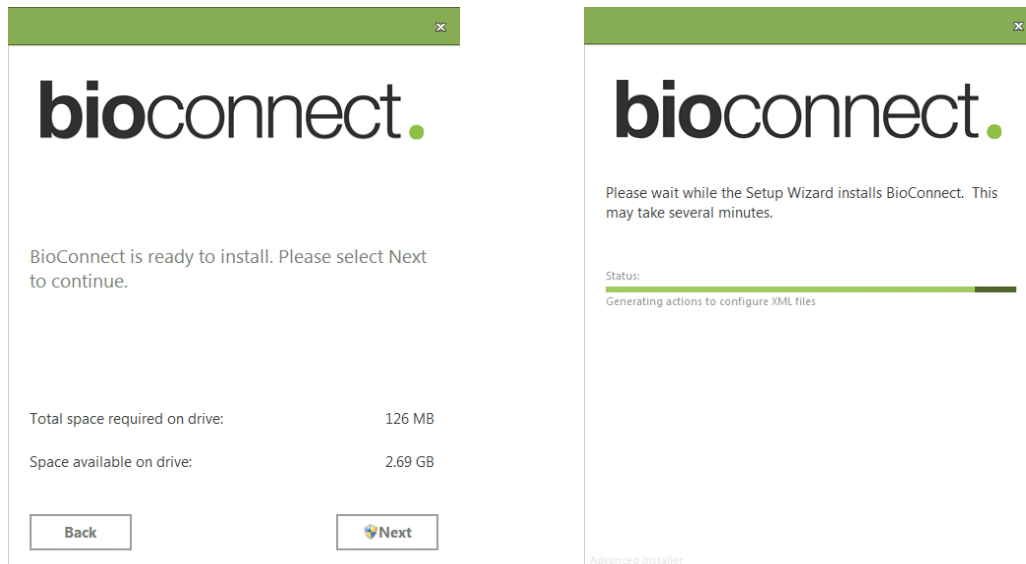
**Step 1.** Launch the BioConnect Installer- double click the label below in 'BioConnect (Integration Software)' folder:



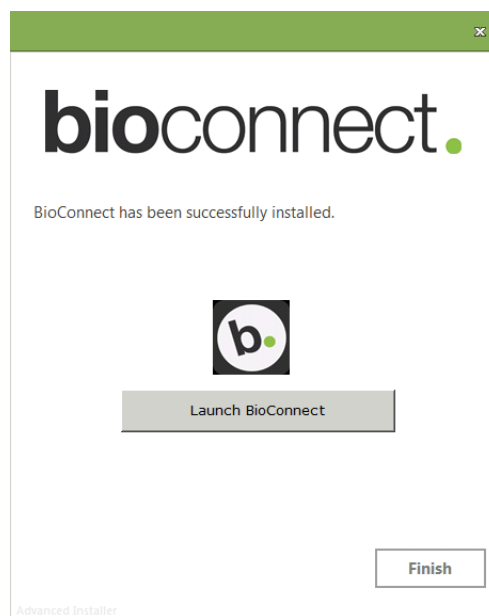
**Step 2.** Accept the terms and conditions and choose the **Server Installation** type.



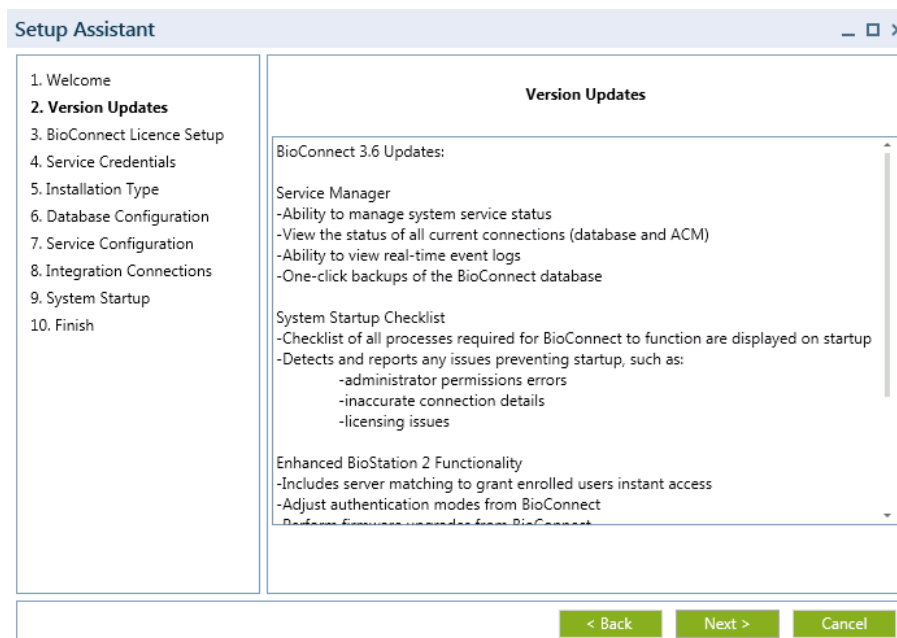
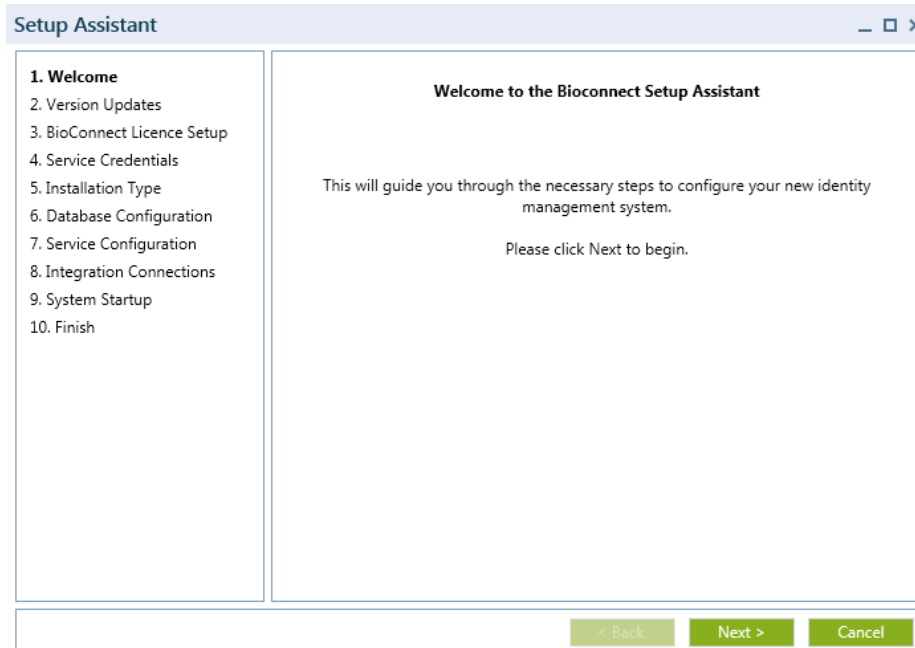
**Step 3.** Click [Next] and wait the installation completes.



**Step 4.** Once finished, click [Launch BioConnect].



**Step 5.** Click [Next] through **Welcome** page and **Version Updates** page.



## Step 6. BioConnect License Setup

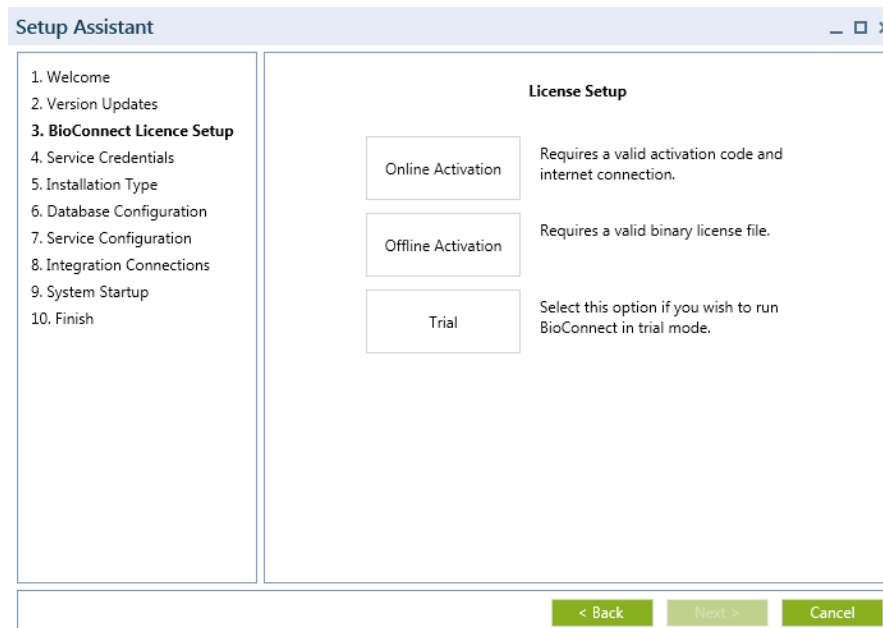
To license the software, you will need the following:

- License Activation Code (Included after purchase when we provide you with the software download and license information)

- An internet connection

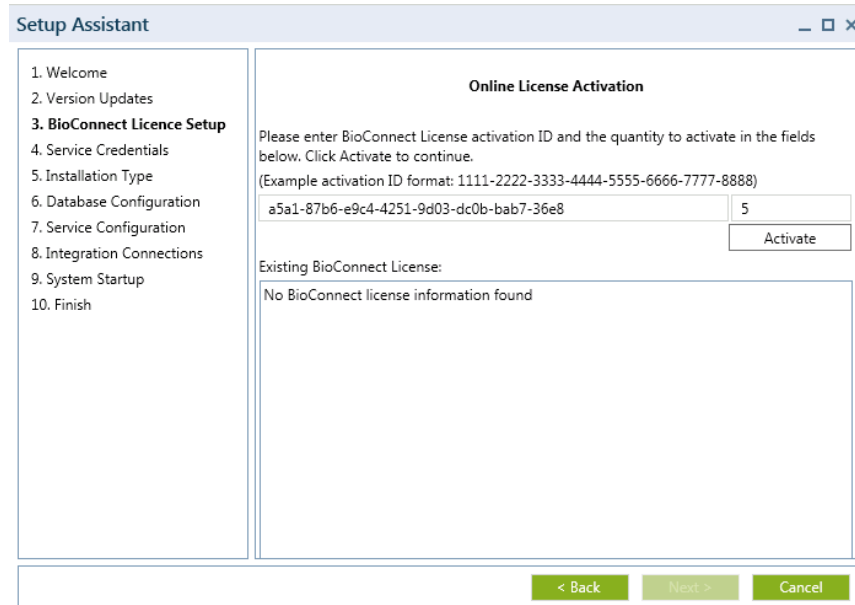
The software license restricts the number of devices that can be connected to the software as well as other custom features.

Once you have the License Activation Code from us, select one of the three options below (Online Activation/Offline Activation/Trial) to create / activate a license:



### **Online:**

Enter the Activation Code and the number of devices included with your license and click [Activate] to complete the licensing process. If successful, your license details will be displayed on screen.



**Setup Assistant**

- 1. Welcome
- 2. Version Updates
- 3. BioConnect Licence Setup**
- 4. Service Credentials
- 5. Installation Type
- 6. Database Configuration
- 7. Service Configuration
- 8. Integration Connections
- 9. System Startup
- 10. Finish

### Online License Activation

Please enter BioConnect License activation ID and the quantity to activate in the fields below. Click Activate to continue.  
(Example activation ID format: 1111-2222-3333-4444-5555-6666-7777-8888)

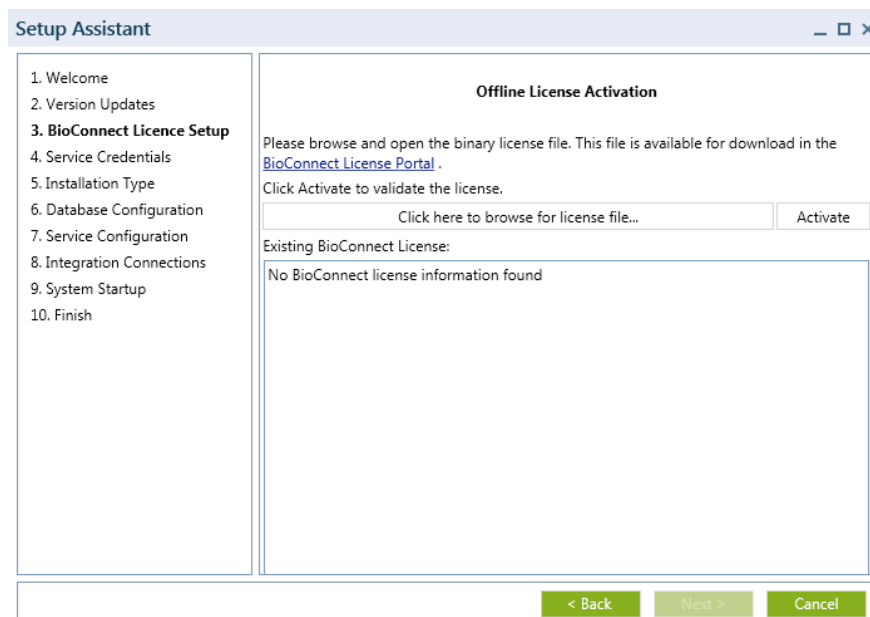
Existing BioConnect License:

No BioConnect license information found

## Offline:

Before installing BioConnect, contact BioConnect at "[support@bioconnect.com](mailto:support@bioconnect.com)" to acquire off-line activation license file.

Copy the license file and save it onto the BioConnect server machine. Click the [Browse] button to locate the saved license file and [Activate] to validate it. If successful, the details will be displayed on screen.



**Setup Assistant**

- 1. Welcome
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### Offline License Activation

Please browse and open the binary license file. This file is available for download in the [BioConnect License Portal](#).  
Click Activate to validate the license.

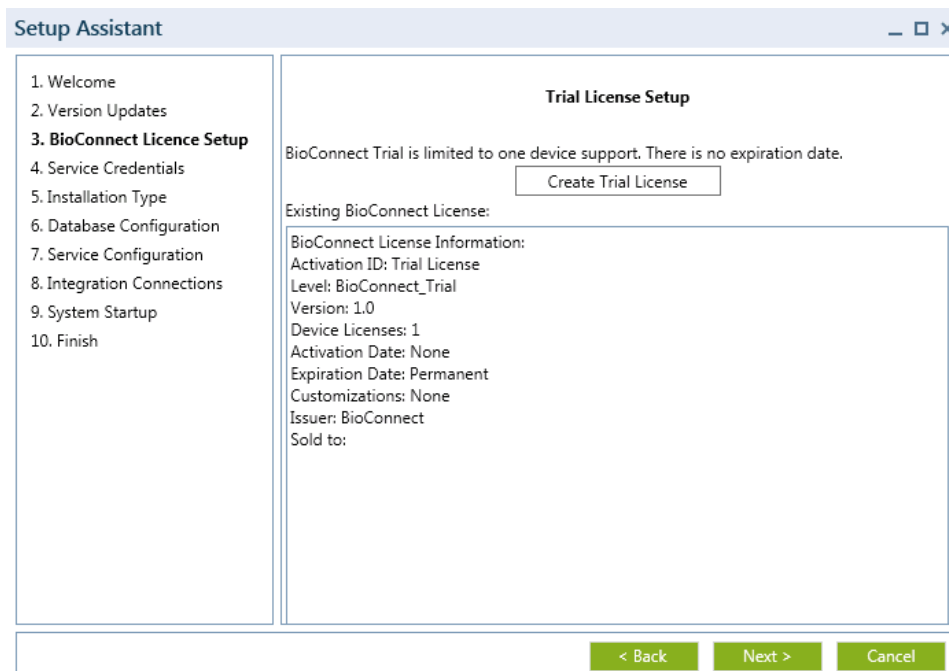
Existing BioConnect License:

No BioConnect license information found

## **Trial:**

Every BioConnect software install includes a trial, which includes a maximum device limit of 1 device/reader.

Click [Create Trial License] to begin your trial. Once you reach the **Integration Connections** page of Setup Assistant, you'll be asked to select the Access Control platform being used with your BioConnect system.



----- End of Step 6: BioConnect License Setup -----

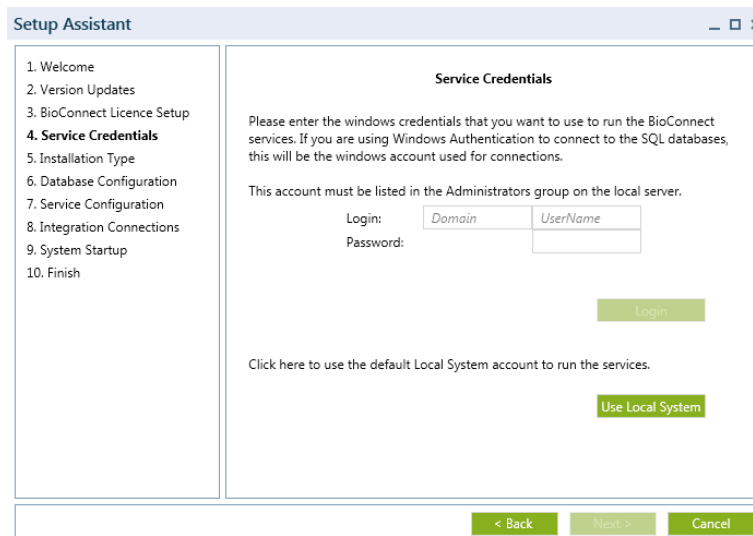
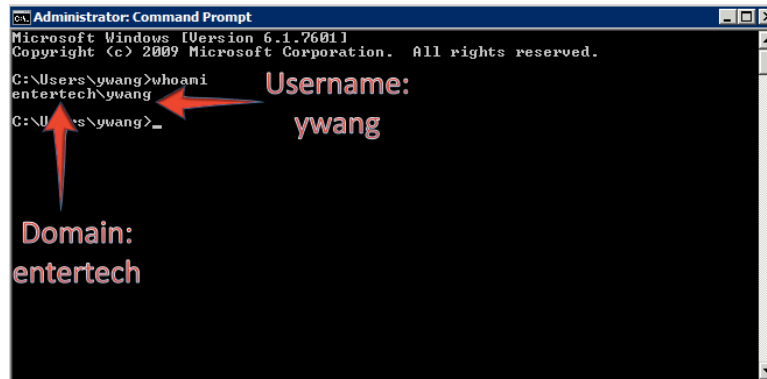
## **Step 7. Service Credentials**

Enter the windows account credentials that you want to use to run the BioConnect services. This account **must** be a local administrator on the server on which it is being installed.

**NOTE:** If you want to confirm what your current windows account is, open Command Prompt and type **whoami** to have it display your current login details:

1. Open Command Prompt
2. Type **whoami**

The domain is either the prefix that everyone in your organization uses to login to windows (Entertech\ywang) or is the local PC name if the account is simply a local windows account.

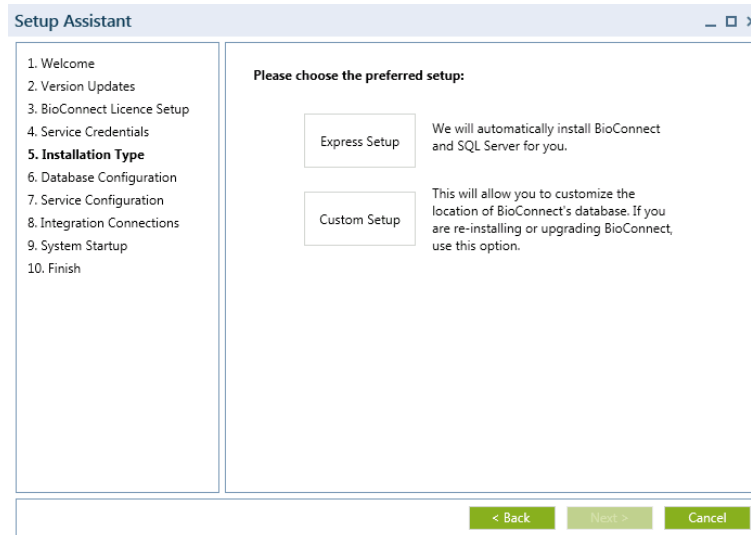


## Step 8. Installation Type

Click [Next] and for this example we'll choose [Express Setup].

**Express Setup:** This will install a BioConnect SQL Server 2008 R2 instance and create the BioConnect database automatically. (Recommended)

**Custom Setup:** This will allow you to choose where the BioConnect database is. If the database does not already exist, you will have to create it manually using SQL Management Studio. (See [Appendix B](#) for more information.)



## Step 9. Service Configuration

**1. Use Default Settings:** select this checkbox to activate default settings as shown below.

<b>Finger Template Type</b>	Suprema
<b>Card ID Byte Order</b>	LSB
<b>Suprema gen1 Service Port</b>	8001
<b>Suprema gen2 Service Port</b>	51212
<b>Digitus DuoLock</b>	Not Applicable

**2. Finger Template Type:** click the drop-down menu to select the template type (Suprema/ISO 198794-2/Ansi 378) you want to use for fingerprint enrollment.

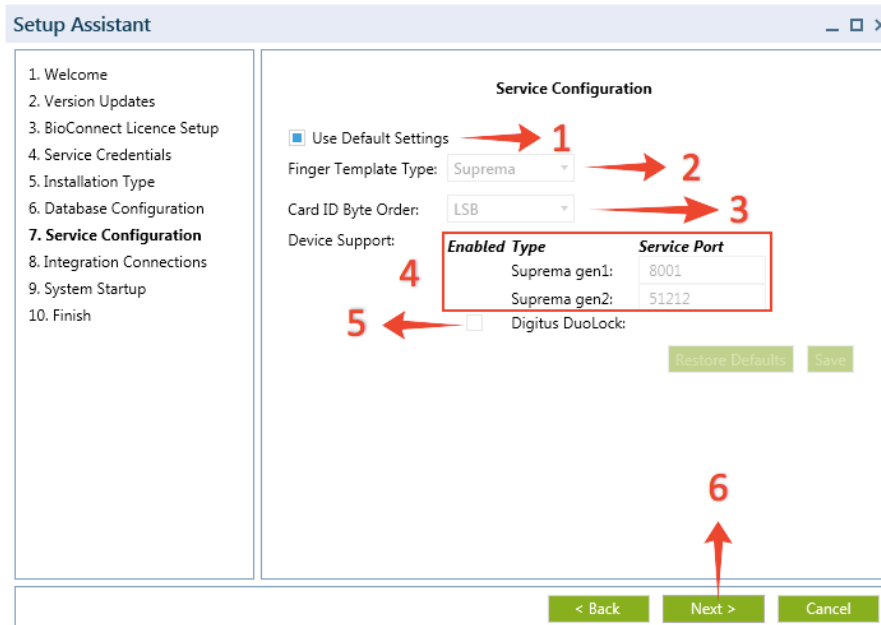
**3. Card ID Byte Order:** click the drop-down menu to select the Card ID Byte Order: LSB (Least Significant Bit) or MSB (Most Significant Bit).

**4. Device Service Support:** type the port number in the text field for BioConnect Server to listen. (Be sure that these ports are not blocked by your fire wall).



**5. Digitus DuoLock:** select this checkbox to enable Digitus DuoLock support.  
(System will lock Template Type to ISO 19794\_2 and CardID Byte Order to LSB once this checkbox is selected.)

**6.** Click [Next] to continue with Integration Connections.



**Setup Assistant**

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- 5. Installation Type
- 6. Database Configuration
- 7. Service Configuration**
- 8. Integration Connections
- 9. System Startup
- 10. Finish

**Service Configuration**

☒ Use Default Settings

Finger Template Type:

Card ID Byte Order:

Device Support:

Enabled Type	Service Port
Suprema gen1:	8001
Suprema gen2:	51212

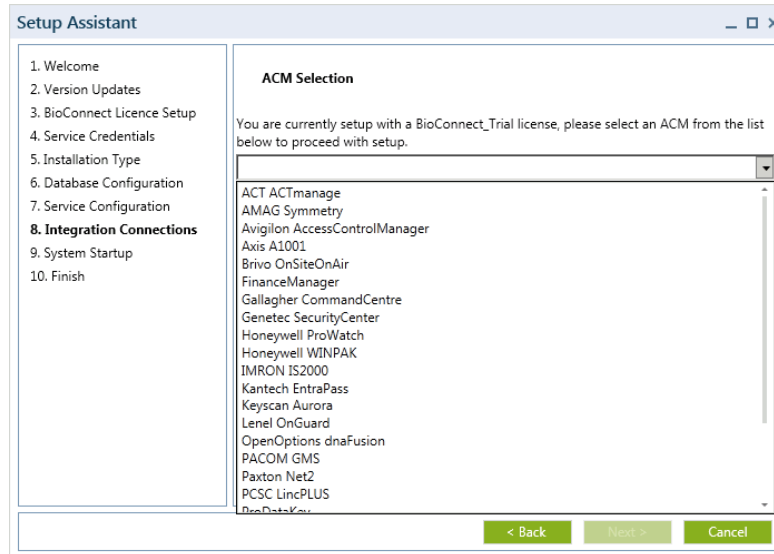
☐ Digitus DuoLock:

Restore Defaults Save

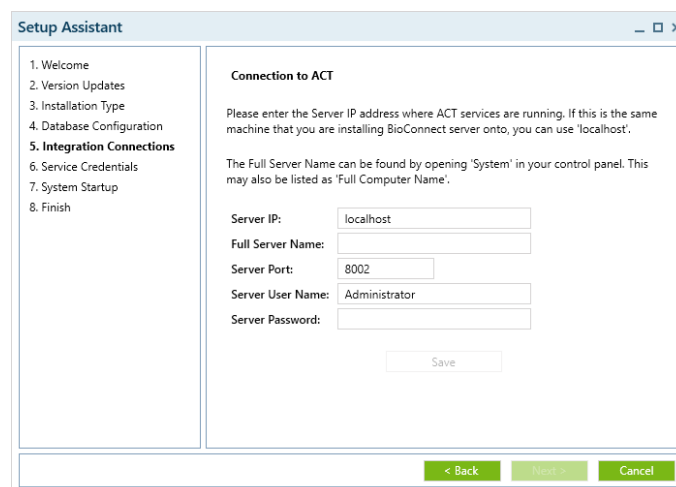
< Back Next > Cancel

## Step 10. Integration Connections

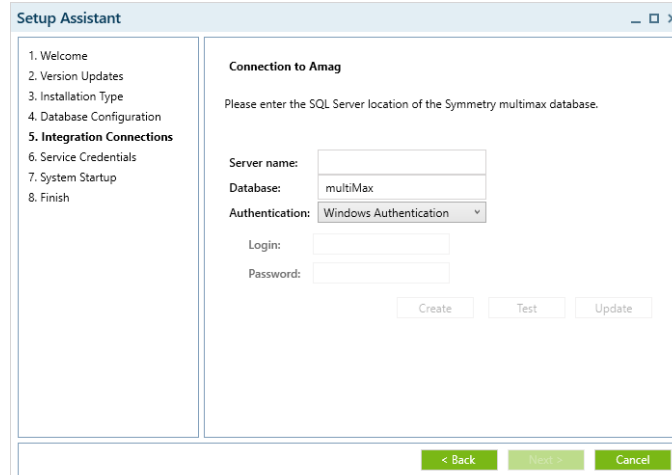
Click Drop-down menu to select your ACM platform and click [Next] to continue with the ACM Connection Configurations.



**ACT:** Once SQL Server finishes installing and creates the database, you will have to connect the software to ACT. This is completed by entering the Server IP address and full server name of the machine running ACT. You must also enter the password for the Administrator account to ACTmanage. Click [Save] and then click [Next] when you are ready to continue.



**AMAG:** Once SQL Server finishes installing and creates the database, you will have to connect the software to Symmetry. This is completed by entering the SQL Server login details to access the Symmetry 'multimax' database. Click [Test] to confirm the connection, and [Update] to save the configuration.



**Setup Assistant**

1. Welcome  
2. Version Updates  
3. Installation Type  
4. Database Configuration  
**5. Integration Connections**  
6. Service Credentials  
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8. Finish

**Connection to Amag**

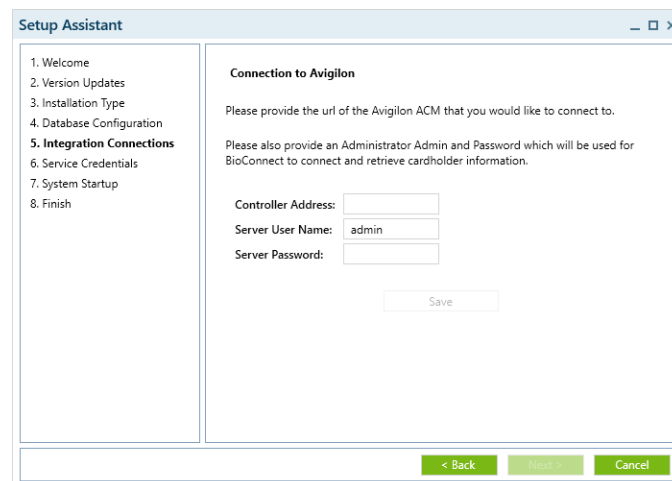
Please enter the SQL Server location of the Symmetry multimax database.

Server name:   
 Database: multiMax  
 Authentication: Windows Authentication  
 Login:   
 Password:

Create Test Update

< Back Next > Cancel

**Avigilon:** Once SQL Server finishes installing and creates the database, you will have to provide the IP address for the Avigilon Access Control Manager Appliance/VM. Also enter the password for the Admin account which will be used by BioConnect to login for synchronization.



**Setup Assistant**

1. Welcome  
2. Version Updates  
3. Installation Type  
4. Database Configuration  
**5. Integration Connections**  
6. Service Credentials  
7. System Startup  
8. Finish

**Connection to Avigilon**

Please provide the url of the Avigilon ACM that you would like to connect to.

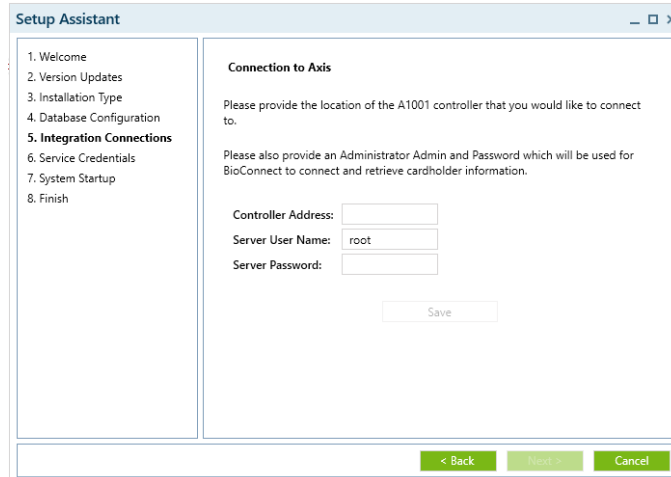
Please also provide an Administrator Admin and Password which will be used for BioConnect to connect and retrieve cardholder information.

Controller Address:   
 Server User Name: admin  
 Server Password:

Save

< Back Next > Cancel

**Axis:** Once SQL Server finishes installing and creates the database, you will have to connect the software to the Axis 1001 controller. This is completed by entering the IP address and root level administrator password. Click [Save] and [Next] once you have entered in these details.



**Setup Assistant**

- Welcome
- Version Updates
- Installation Type
- Database Configuration
- Integration Connections**
- Service Credentials
- System Startup
- Finish

**Connection to Axis**

Please provide the location of the A1001 controller that you would like to connect to.

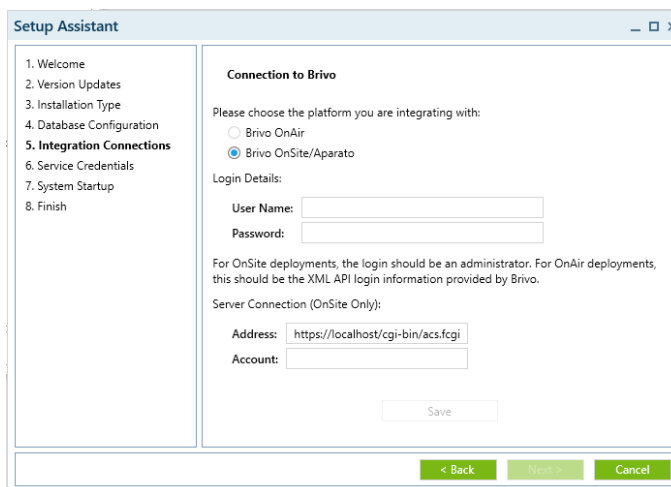
Please also provide an Administrator Admin and Password which will be used for BioConnect to connect and retrieve cardholder information.

Controller Address:

Server User Name:

Server Password:

**Brivo:** Once SQL Server finishes installing and creates the database, you will have to connect the software to Brivo ACS. This is completed by entering the Server Address, Login details and Account information (Account is required for ACS Onsite Only). Click [Save] and [Next] once you are ready to continue.



**Setup Assistant**

- Welcome
- Version Updates
- Installation Type
- Database Configuration
- Integration Connections**
- Service Credentials
- System Startup
- Finish

**Connection to Brivo**

Please choose the platform you are integrating with:

☐ Brivo OnAir

☒ Brivo OnSite/Aparato

Login Details:

User Name:

Password:

For OnSite deployments, the login should be an administrator. For OnAir deployments, this should be the XML API login information provided by Brivo.

Server Connection (OnSite Only):

Address:

Account:

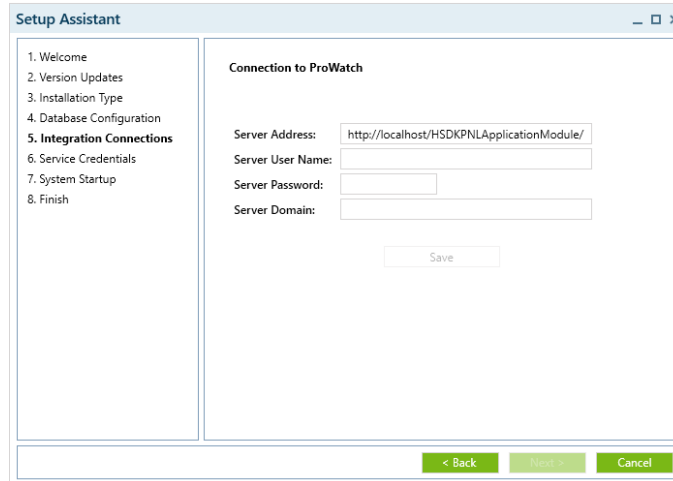
**Gallagher:** Once SQL Server finishes installing and creates the database, you will have to connect the software to Gallagher. This is completed by entering the SQL Server login details to access the Gallagher database. Click [Test] to confirm the connection, and [Update] to save the configuration. (**NOTE:** You will need to request SQL Server Authentication for "Read Only" rights to the Gallagher database.)

The screenshot shows the 'Setup Assistant' window with the 'Integration Connections' step selected in the left sidebar. The main pane is titled 'Connection to Gallagher'. It contains instructions about SQL Server access and a form with the following fields: 'Server name' (localhost\GALLAGHER), 'Database' (CCFTCentral), 'Authentication' (Windows Authentication), 'Login', and 'Password'. There are 'Create', 'Test', and 'Update' buttons, and a navigation bar at the bottom with '< Back', 'Next >', and 'Cancel' buttons.

**Genetec:** Once SQL Server finishes installing and creates the database, you will have to connect the software to Genetec. This is completed by entering the Server IP Address or name where Genetec is installed. You will need to login using the root level Security Center administrator, and provide the SDK Certificate file. If you don't have the certificate file, Genetec Technical Support can provide this to you. Once finished, click [Save] and [Next] to continue.

The screenshot shows the 'Setup Assistant' window with the 'Integration Connections' step selected in the left sidebar. The main pane is titled 'Connection to Genetec'. It contains instructions about the Server IP and the root admin account. The form has fields for 'Server Address' (localhost), 'Server User Name' (admin), and 'Server Password'. There is a 'Save' button and a navigation bar at the bottom with '< Back', 'Next >', and 'Cancel' buttons.

**Honeywell ProWatch:** Once SQL Server finishes installing and creates the database, you will have to connect the software to ProWatch. This is completed by entering the server address of the Honeywell HSDK. The default value is provided for you if you are installing BioConnect on the same server where the HSDK is installed. You will also have to provide the Windows Account credentials of a user who has full permissions within ProWatch. Click [Save] and [Next] when you are ready to continue.

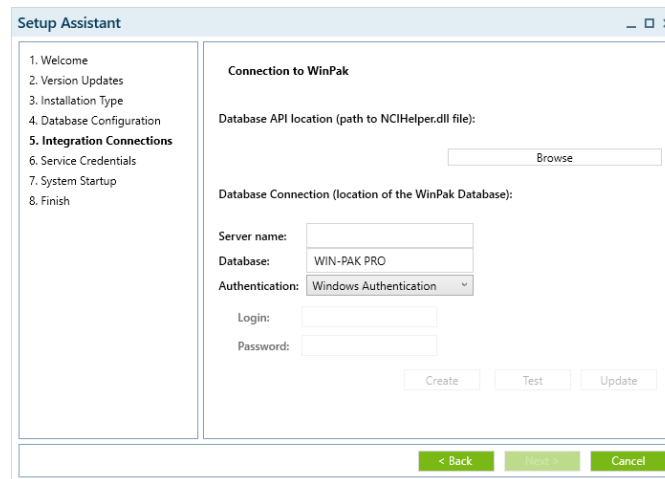


The screenshot shows the 'Setup Assistant' window with the 'Integration Connections' step selected in the left sidebar. The main pane is titled 'Connection to ProWatch' and contains the following fields:

- Server Address:
- Server User Name:
- Server Password:
- Server Domain:

Below these fields is a 'Save' button. At the bottom of the window are three buttons: '< Back', 'Next >', and 'Cancel'.

**Honeywell WinPak:** Once SQL Server finishes installing and creates the database, you will have to connect the software to WinPak. This is completed by entering the SQL Server login details to access the WinPak database. Click [Test] to confirm the connection, and [update] to save the configuration.

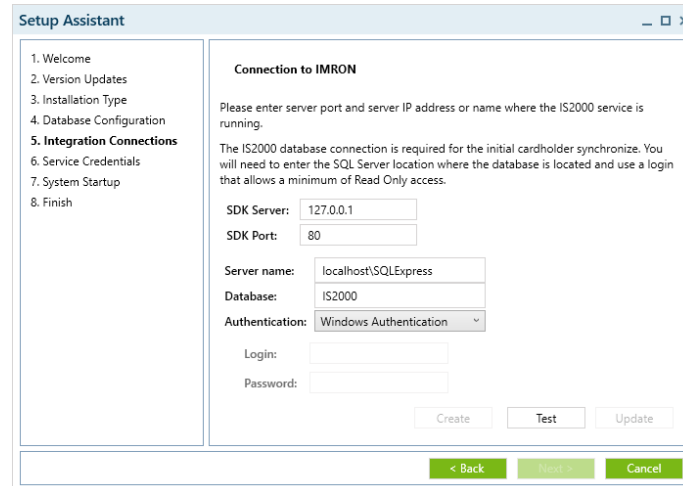


The screenshot shows the 'Setup Assistant' window with the 'Integration Connections' step selected in the left sidebar. The main pane is titled 'Connection to WinPak' and contains the following fields:

- Database API location (path to NCHelper.dll file):
- Database Connection (location of the WinPak Database):
  - Server name:
  - Database:
  - Authentication:
  - Login:
  - Password:

Below these fields are three buttons: 'Create', 'Test', and 'Update'. At the bottom of the window are three buttons: '< Back', 'Next >', and 'Cancel'.

**IMRON:** Once SQL Server finishes installing and creates the database, you will have to provide the Server Address of the IS2000 server. The default SDK port is 80. Also enter the location/login details of the IS2000 SQL database for synchronization.



**Setup Assistant**

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- 6. Service Credentials
- 7. System Startup
- 8. Finish

**Connection to IMRON**

Please enter server port and server IP address or name where the IS2000 service is running.

The IS2000 database connection is required for the initial cardholder synchronize. You will need to enter the SQL Server location where the database is located and use a login that allows a minimum of Read Only access.

SDK Server:

SDK Port:

Server name:

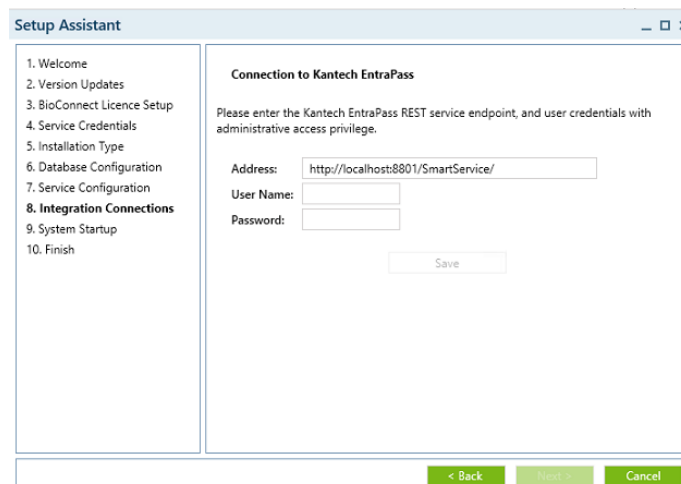
Database:

Authentication:

Login:

Password:

**Kantech:** Once SQL Server finishes installing and creates the database, you will have to connect the software to Entrapass. You will need to provide the URL address of the Entrapass SmartService location. The below URL example is the default address for an Entrapass server installed on the same machine as BioConnect. You will then need to provide the username and password for an Entrapass Operator. Click [Save] to complete the configuration.



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- 7. Service Configuration
- 8. Integration Connections**
- 9. System Startup
- 10. Finish

**Connection to Kantech EntraPass**

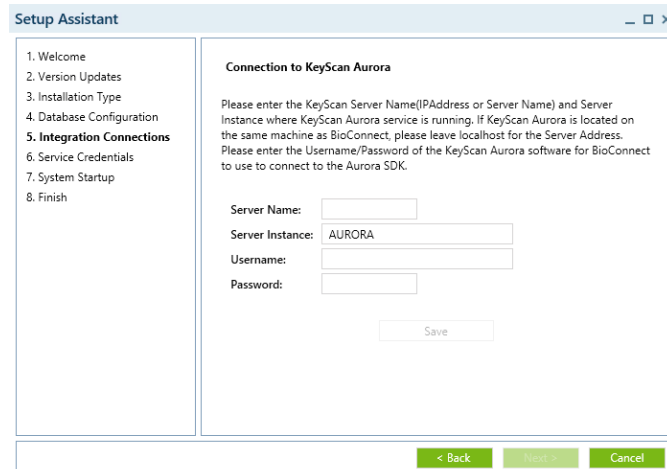
Please enter the Kantech EntraPass REST service endpoint, and user credentials with administrative access privilege.

Address:

User Name:

Password:

**Keyscan:** Once SQL Server finishes installing and creates the database, you will have to connect the software to Aurora. You'll need to enter the server details for where Keyscan Aurora is installed. If you're installing BioConnect on the same server as Aurora, the default will be 'localhost' and 'AURORA'. Next, enter your login credential for Keyscan Aurora. Click [Test] to confirm the connection, and [Update] to save the configuration.



**Setup Assistant**

- Welcome
- Version Updates
- Installation Type
- Database Configuration
- Integration Connections**
- Service Credentials
- System Startup
- Finish

### Connection to KeyScan Aurora

Please enter the KeyScan Server Name(IPAddress or Server Name) and Server Instance where KeyScan Aurora service is running. If KeyScan Aurora is located on the same machine as BioConnect, please leave localhost for the Server Address. Please enter the Username/Password of the KeyScan Aurora software for BioConnect to use to connect to the Aurora SDK.

Server Name:

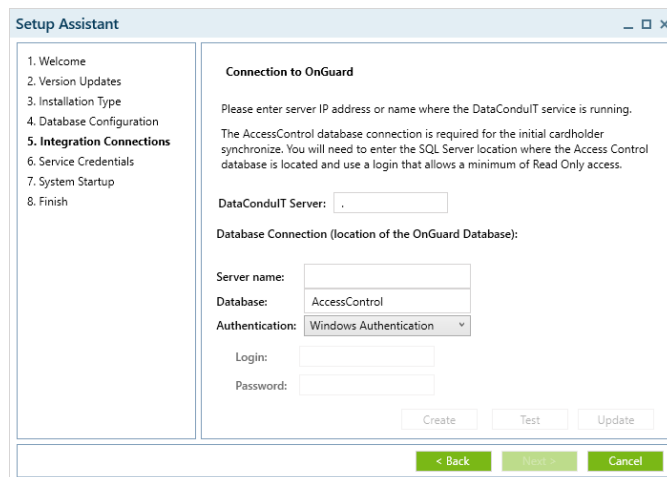
Server Instance:

Username:

Password:

< Back   Next >   Cancel

**Lenel:** Once SQL Server finishes installing and creates the database, you will have to connect the software to OnGuard. This is completed by entering the location of the DataConduIT server (Use "." if it is on the local machine), as well as the SQL Server connection for "Read-Only" or higher permissions to view the AccessControl database. Click [Test] to confirm the connection, and [Update] to save the configuration.



**Setup Assistant**

- Welcome
- Version Updates
- Installation Type
- Database Configuration
- Integration Connections**
- Service Credentials
- System Startup
- Finish

### Connection to OnGuard

Please enter server IP address or name where the DataConduIT service is running.

The AccessControl database connection is required for the initial cardholder synchronize. You will need to enter the SQL Server location where the Access Control database is located and use a login that allows a minimum of Read Only access.

DataConduIT Server:

Database Connection (location of the OnGuard Database):

Server name:

Database:

Authentication:

Login:

Password:

< Back   Next >   Cancel

**Open Options:** Once SQL Server finishes installing and creates the database, you will have to connect the software to dnaFusion. This is completed by entering the Server address or name where dnaFusion is installed, and entering the Flex API Key. Click [Save] and [Next] when you are ready to continue. *If BioConnect is being installed on the same machine as the DNAFusion server, please leave the default Server Address as is.*

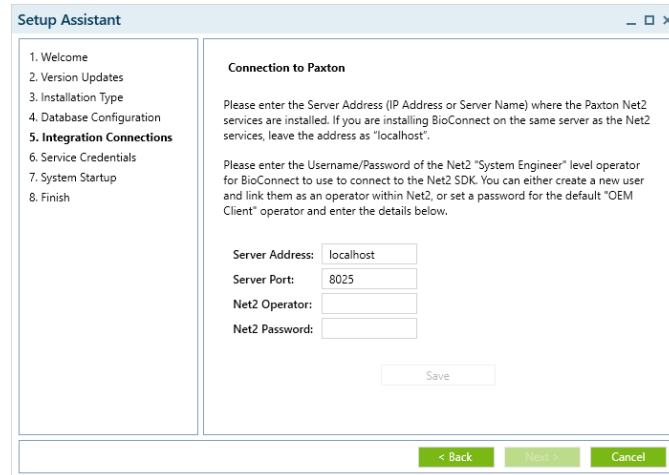


The screenshot shows the 'Setup Assistant' window with the 'Connection to OpenOptions' step selected in the left sidebar. The main area contains instructions to enter the Server Address and Flex API Key. The 'Server Address' field is pre-filled with 'http://localhost/'. The 'Flex API Key' field is empty. A 'Save' button is located below the 'Flex API Key' field. At the bottom of the window are three buttons: '< Back', 'Next >', and 'Cancel'.

**PACOM:** Once SQL Server finishes installing and creates the database, you will have to connect the software to GMS. First, you will need to provide the GMS credentials of a user who has full permissions within GMS. Second, you will need to provide the SQL instance name and database name of the GMS database. The below example is the default database values for a GMS server installed on the same machine as BioConnect. Click [Test] to confirm the connection, and [Update] to save the configuration.

The screenshot shows the 'Setup Assistant' window with the 'Connection to PACOM' step selected in the left sidebar. The main area contains instructions to enter a GMS Operator username and password, and details of the GMS SQL database. The 'Operator Username' and 'Operator Password' fields are empty. The 'Database Connection (location of the PACOM GMS database):' section includes 'Server name' (localhost), 'Database' (GMS32DBASE), 'Authentication' (Windows Authentication), 'Login', and 'Password' fields. 'Create', 'Test', and 'Update' buttons are located below the 'Login' and 'Password' fields. At the bottom of the window are three buttons: '< Back', 'Next >', and 'Cancel'.

**Paxton:** Once SQL Server finishes installing and creates the database, you will have to connect the software to Net2. This is completed by entering the Server IP address or name of the PC where the Paxton Net2 server is installed. The Server Port should be 8025. This is the default port for communicating with the Net2 SDK. Enter a Net2 Operator (System Engineer Level) account that you want BioConnect to use for connection to the Net2 system.



**Setup Assistant**

- Welcome
- Version Updates
- Installation Type
- Database Configuration
- Integration Connections**
- Service Credentials
- System Startup
- Finish

**Connection to Paxton**

Please enter the Server Address (IP Address or Server Name) where the Paxton Net2 services are installed. If you are installing BioConnect on the same server as the Net2 services, leave the address as "localhost".

Please enter the Username/Password of the Net2 "System Engineer" level operator for BioConnect to use to connect to the Net2 SDK. You can either create a new user and link them as an operator within Net2, or set a password for the default "OEM Client" operator and enter the details below.

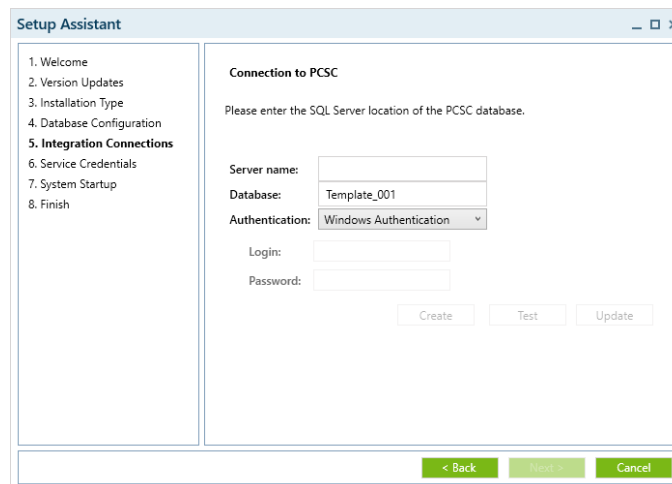
Server Address:

Server Port:

Net2 Operator:

Net2 Password:

**PCSC:** Once SQL Server finishes installing and creates the database, you will have to provide the Server Address of the PCSC LiNC-PLUS database. Enter the Server Name and instance (if applicable), and the desired login credentials.



**Setup Assistant**

- Welcome
- Version Updates
- Installation Type
- Database Configuration
- Integration Connections**
- Service Credentials
- System Startup
- Finish

**Connection to PCSC**

Please enter the SQL Server location of the PCSC database.

Server name:

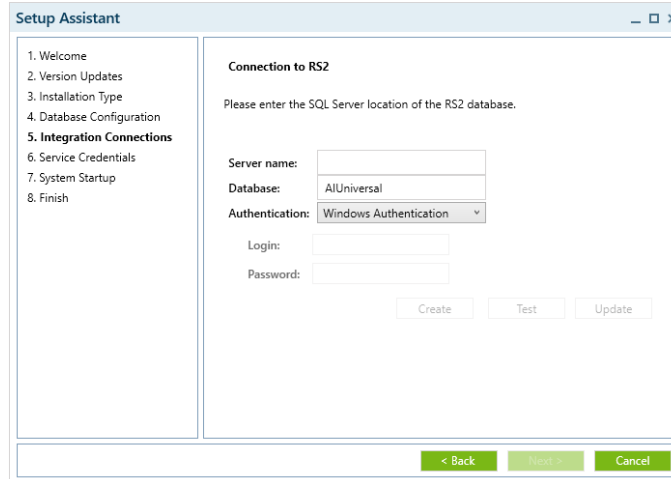
Database:

Authentication:

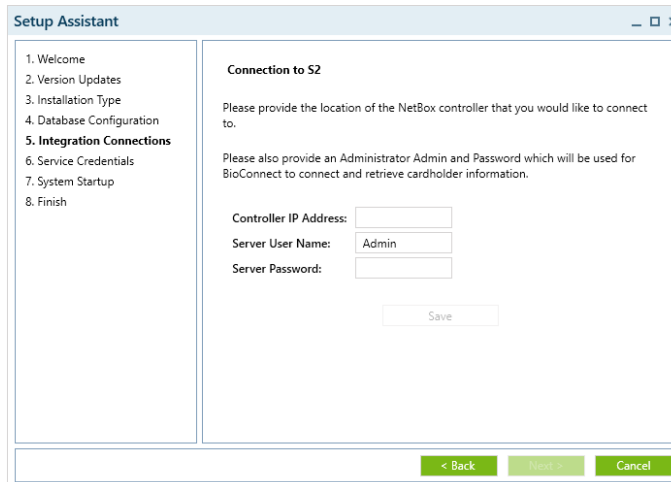
Login:

Password:

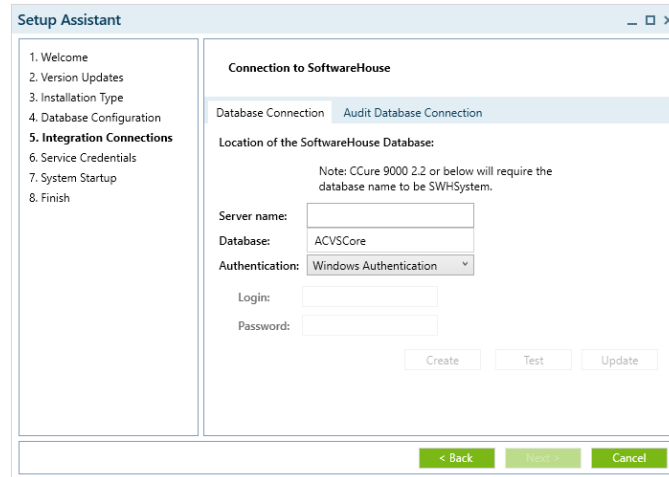
**RS2:** Once SQL Server finishes installing and creates the database, you will have to connect the software to AccessIt!. This is completed by entering the SQL Server login details to access the AccessIt! database. Click [Test] to confirm the connection, and [Update] to save the configuration.



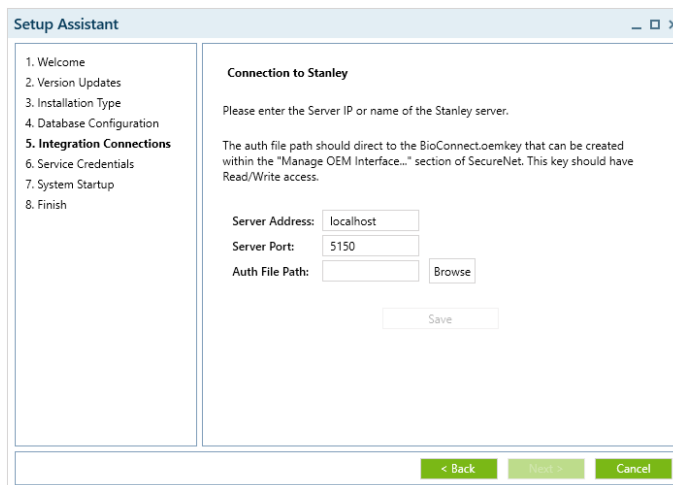
**S2:** Once SQL Server finishes installing and creates the database, you will have to provide the IP address of the NetBox Controller. Enter the password for the Admin login for the NetBox which will be used to connect for synchronization.



**Software House:** Once SQL Server finishes installing and creates the database, you will have to connect the software to CCURE. You do this by entering the SQL Server login details to access the CCURE database. If you are using CCURE 9000 v2.2 or below, the database name will be SWHSystem. With v2.3 or above, the database will be ACVSCORE. Ensure to also link the Audit database on the second tab. Click [Test] to confirm each connection, and [Update] to save the configuration.



**Stanley:** Once SQL Server finishes installing and creates the database, you will have to provide the Server Address of the SecureNET server. If BioConnect is on the same machine, you can leave this as "localhost". The default port for communication with the SecureNET software is 5150. You must also link the BioConnect.oemkey OEM interface Key that you created prior to installation.

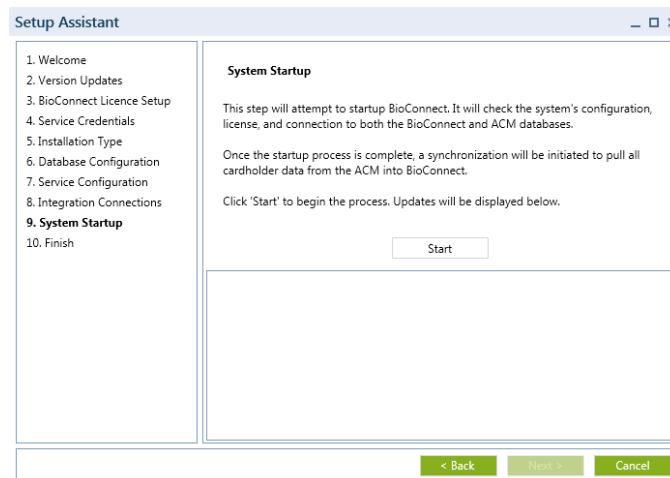


-----End of Step 10: Integration Conections-----

## Step 11. System Startup

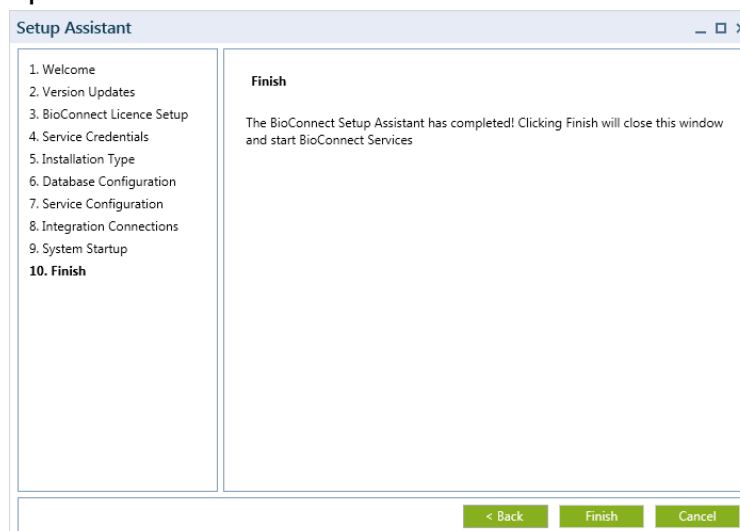
Click [Start] to automatically start the services and complete the first synchronize of all data from your access control software. If this is an upgrade or reinstall and the database already has cardholder records, still continue with the synchronize - You will not lose any templates or data.

If any problems arise while the system attempts to startup, the diagnostic checklist below the [Start] button will alert you to the source of the issue.



## Step 12. Finish

Click [Next] and then [Finish] to complete the Setup Assistant. The BioConnect client will automatically open.

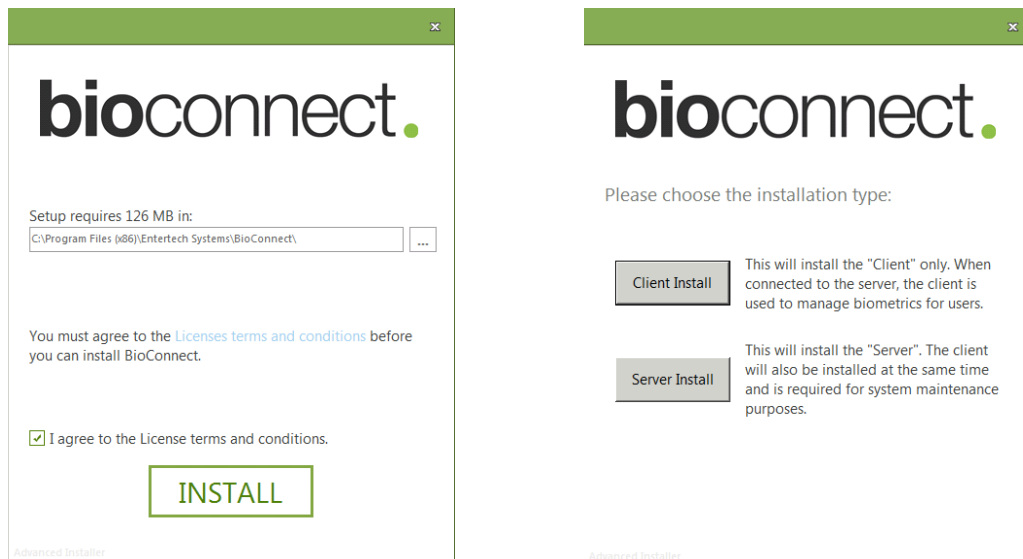


**NOTE:** The default “root” level account for the client is (case sensitive):

Username: Entertech  
Password: Bobcat

## 6. Installing BioConnect (Client)

1. Accept the terms and conditions and choose [Client Install].



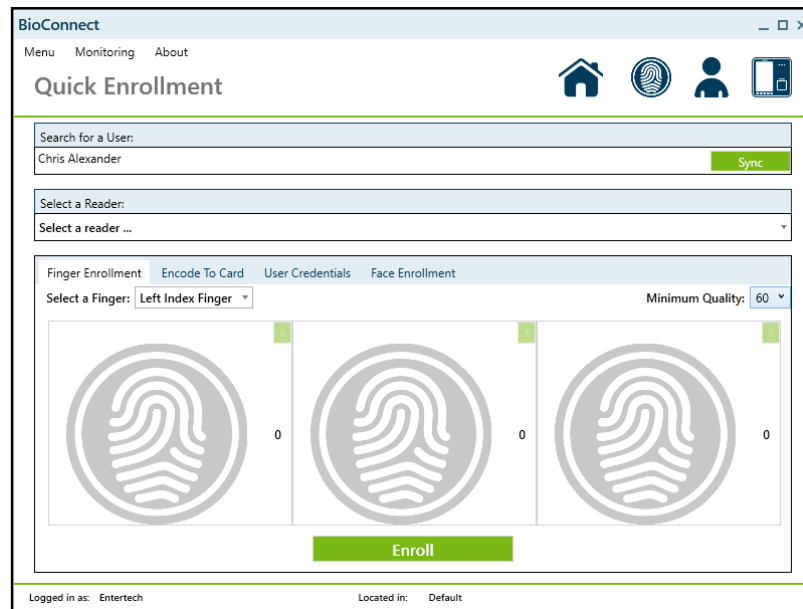
2. Once the setup completes, click [Finish]. The Setup Assistant will only open if the client is installed on the server (localhost).

3. Click through the Setup Assistant until you reach the server Settings page. Enter the IP Address of the Server. This will be used for the clients to connect into the BioConnect services. Select which ACM platform you're integrating with from the dropdown menu list. The port typically used for the BioConnect client is TCP:8000. This port will have to be open on the Server's firewall for communication to occur.

4. If you are using a BioMini USB Fingerprint enrollment capturing device, please install the Suprema Fingerprint Scanner Driver included with the BioConnect software package before connecting the device to the PC.

## 7. Quick Enrollment

### 7.1 Fingerprint Enrollments

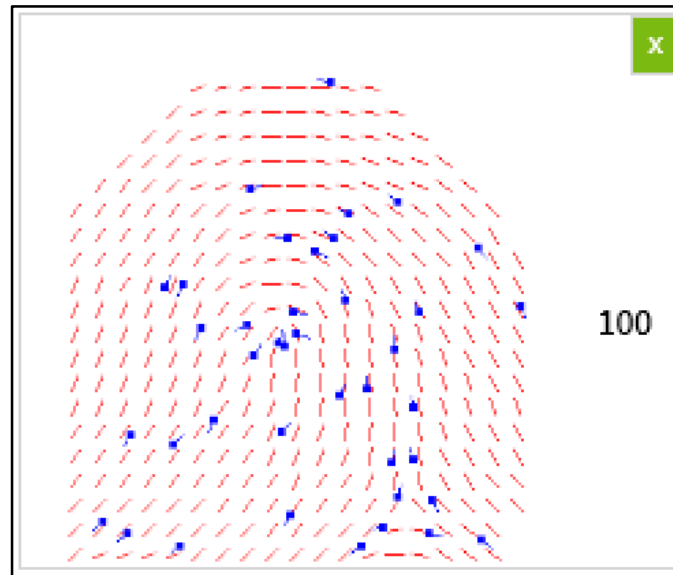


The Quick Enrollment section of the software is where all biometrics are captured. To enroll a fingerprint:

1. Search for the user you would like to enroll.
2. Choose which reader you would like to enroll from (For BioMini USB scanner enrollments, you will see the device listed within this list when it is connected to your PC).
3. Choose which finger you would like to enroll.
4. Click [Enroll]

The enrollment process will ask you to place your finger 3 times. Ensure that you lift your finger up off the scanner between each scan. Doing this allows for more unique data points to be captured and creates a higher quality enrollment.

It is critical for the success of the system that good enrollments are captured. Below is an example of a good enrollment:



In the above example, you can see that the **middle** of the finger is placed in the middle of the scanner. You can clearly see the ridges of the fingerprint and the quality score is at 100% (Quality scores are only available when enrolling from the BioMini USB scanner).

**WARNING:** Placing your fingers too low on the scanner, or not placing the finger flat create poor enrollments. These will lead to low success rates and could also increase the possibility of a False Accept (Having a fingerprint show up as another cardholder). Although this is extremely unlikely, having a high volume of poor fingerprints (Fingertips) in the software can lead to issues as fingertips do not have as much unique data as the middle of the finger. **Always ensure that you are capturing the best fingerprints possible during the enrollment phase.** These enrollments are going to be the basis for all fingerprint matching going forward.

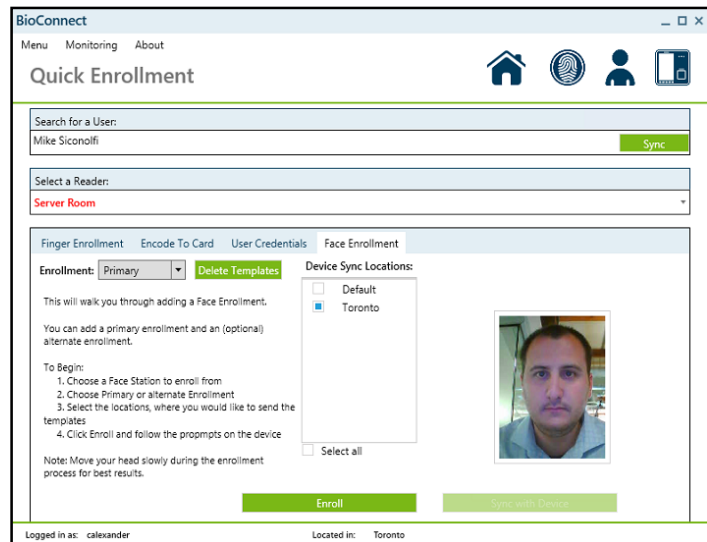
For more information about fingerprint enrollment, see [Appendix A- Fingerprint Enrollment Guide](#)



## 7.2 Face Enrollment (FaceStation)

To enroll a Face, you must have a FaceStation device added to BioConnect with the “Enrollment” option applied within the device settings.

Face templates are sent to devices in groups. You can choose which location groups to send the templates to – This will send the templates to all of the devices listed under that specific location group.



The maximum number of face templates that should be sent to a device for 1:N matching (Matching with only your face/biometric only) is 1,000. To use more than 1,000 faces in a given location group, a 1:1 verification should be used (Either typing the BioConnect ID into the device before verifying your face, or by presenting a card to the device before verification).

You can enroll two face templates per user (Not required). If a user occasionally wears glasses, it is best to enroll them both with and without glasses.

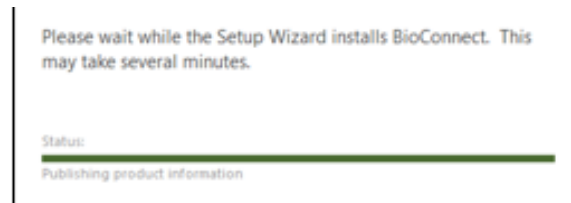
**Delete Templates:** Clicking [Delete Templates] will remove all of the user’s templates from the system and devices. Once the templates are deleted, the user will have to re-enroll before using the system again.

**Sync with Device:** Using the Sync with Devices function will re-send the templates to the appropriate location device groups. If you want to change the device sync locations after the enrollment process has been completed, make the location changes and click [Sync with Device].

To continue with software configuration, please see the BioConnect Software Configuration Guide included within the BioConnect software package.

## 8. Installation Troubleshooting

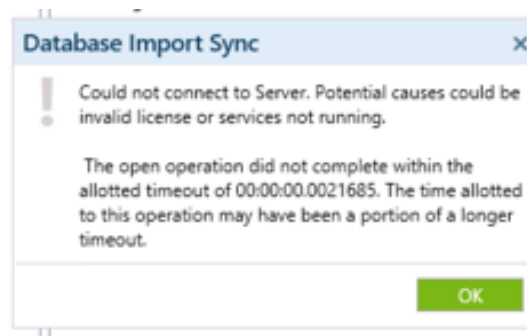
### 8.1 Installation stalled at “Publishing product information”



#### **Solution:**

The software is performing a number of steps in the background during this stage of the installation process. Depending on the machine it is installing on, it is not uncommon for the software to stay on this stage for several minutes. Please be patient and the software installation will be complete.

### 8.2 Services failed to start



#### **Solution:**

If you receive an error during installation that the BioConnect services are not running, the best troubleshooting step is to open the BioConnect log file and scroll all the way to the bottom:

BioConnect Log File Location (Open in Notepad):

C:\Windows\Temp\BioConnect.txt

On the next page you will find a few possible errors and how to resolve them.

## Log Event: "Cannot find the X.509 Certificate using the following search criteria..."

If an older version of BioConnect was previously installed (BioConnect v2.0 or v2.5), you may have to delete the BioConnect certificate file. Previously this certificate was generated manually, and now the software automatically handles this as part of the installation. Follow the steps below to resolve:

1. Uninstall BioConnect
2. Click [Start] and type **cmd** into the Windows Search
3. Type **certmgr.msc** into the cmd prompt window and hit [enter]
4. Double click the "Trusted People" folder
5. Right click and delete any certificates labeled "BioConnect" or "BCClient"
6. Reinstall BioConnect - The new certificate will be automatically generated

## Log Event: "License System: This system is now expired"

BioConnect installs in a free 30-day trial mode on a new PC. Once this trial is expired, the services will not start, so you will want to ensure that you have acquired a license before the end of this period. If the software has already expired, you will need to contact BioConnect at "[support@bioconnect.com](mailto:support@bioconnect.com)" to acquire a new license.

To manually stop the BioConnect services:

1. Open Task Manager and click the [Processes] tab
2. Choose the "Entertech.BiometricService.exe" process and click [End Task]

To manually start the BioConnect services:

1. Open C:\Program Files(x86)\Entertech Systems\BioConnect\BioConnect Service\
2. Right click on the "startservices.bat" file and click [Run as Administrator]
3. All 6 services will be automatically triggered to start

## 9. Additional Assistance

If you encounter issues during the BioConnect installation that were not covered here, please don't hesitate to reach out to us or visit our support website.

Telephone support is available **Monday - Friday from 8:30 AM to 8:30 PM Eastern** to assist with installing, configuring and troubleshooting the BioConnect software. The technical support team is well versed to assist integrators both during the planning or post sales stages.

### Support Website:

<http://www.bioconnect.com/support/>

### Telephone:



Toll-Free 1-855-ENTERID (368-3743)



Free Phone +44 (0) 8003 688 123

Main Phone +44 (0) 2037 439 123

### Email:

[support@bioconnect.com](mailto:support@bioconnect.com)

## Appendix A- Fingerprint Enrollment Guide

### Step 1: Choose Ideal Fingers to Enroll

- For correct positioning of finger on the sensor, it is recommended to use index or middle fingers.
- Avoid using the Pinky Finger, as it is typically too small for good verification (as shown in Figure 1).



Figure 1

### Step 2: Prepare the Finger for Enrollment

- When enrolling your fingerprint, it is important that your finger be clean. It is also recommended that the finger you choose be relatively undamaged and without scars.



### Step 3: Correct Positioning of Finger on the Sensor

- **Place on the Center:** Position center of fingerprint (core) to the center of the sensor (as shown in Figure 2).



Fingerprint Core  
Figure 2

- **Maximum Contact Area:** Place your finger to completely cover the sensor with maximum contact surface (Figure 3 shows some examples of correct and wrong positioning of finger).
- **Hold Your Finger Still:** Once you place finger on the sensor, hold your finger still until enrollment process completes.

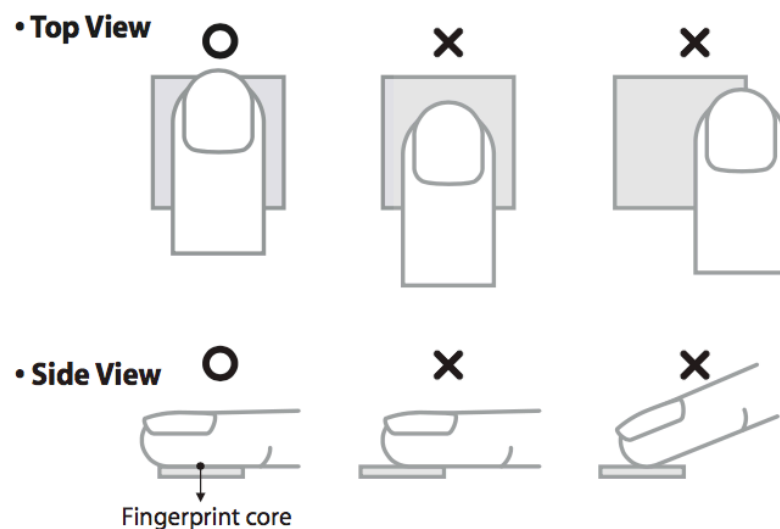


Figure 3

## Good Finger Enrollment

- In Figure 4, you can see that the finger core is placed in the middle of the scanner. The ridges of the fingerprint clearly identified and the quality score is at 100% (Quality scores are only available when enrolling from the BioMini USB scanner).

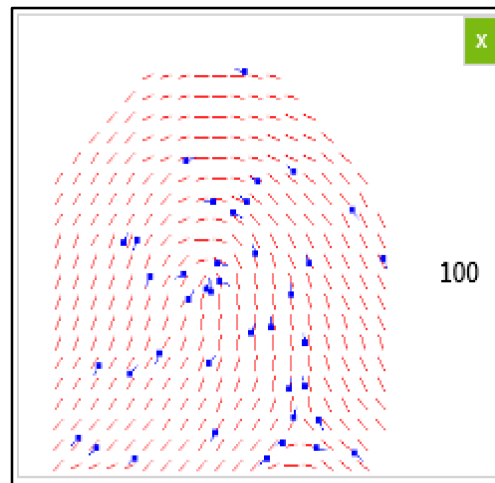


Figure 4

## Poor Finger Enrollment

- Placing your fingers too low on the scanner, or not placing the finger flat create poor enrollments. Examples below shown in Figure 5 will lead to low success rates and could also increase the possibility of a False Accept (Having a fingerprint show up as another cardholder).

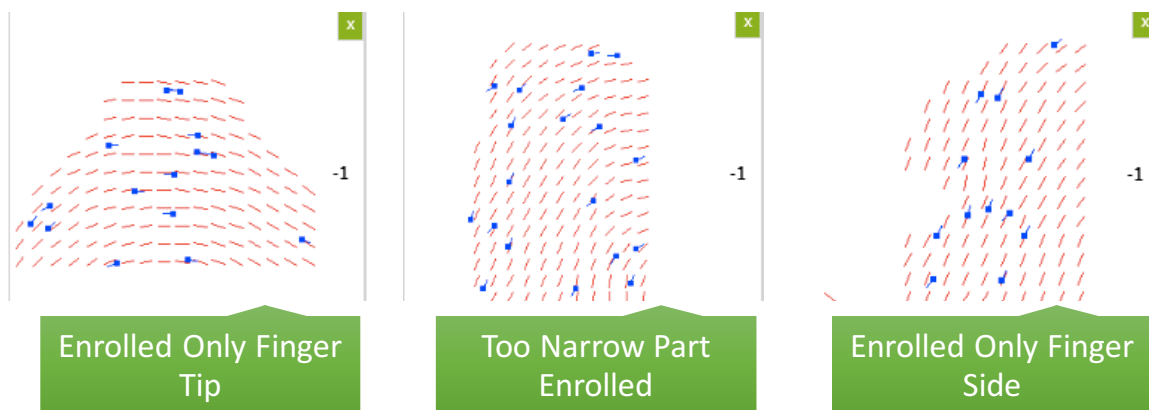
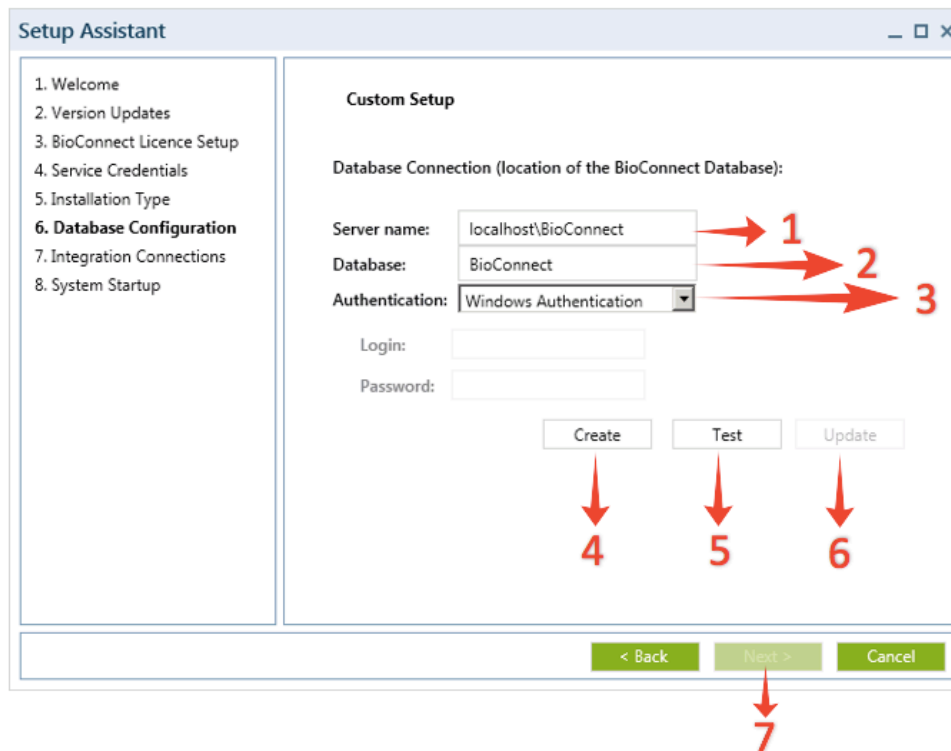


Figure 5

## Appendix B- Custom Install (Server)

1. In **Server name** field, you will need to provide the SQL instance name. The below example is the default database values for a SQL server installed on the same machine as BioConnect.
2. In **Database** field, you can create a name for BioConnect Database. In this example, we name it 'BioConnect'.
3. Select "Windows Authentication" in **Authentication** field.
4. Click [Create] to create a new BioConnect Database.
5. Click [Test] to verify the **Server name** and **Database** are configured correctly.
6. Click [Update] to save the above configurations.
7. Click [Next] to continue with PACS configuration.

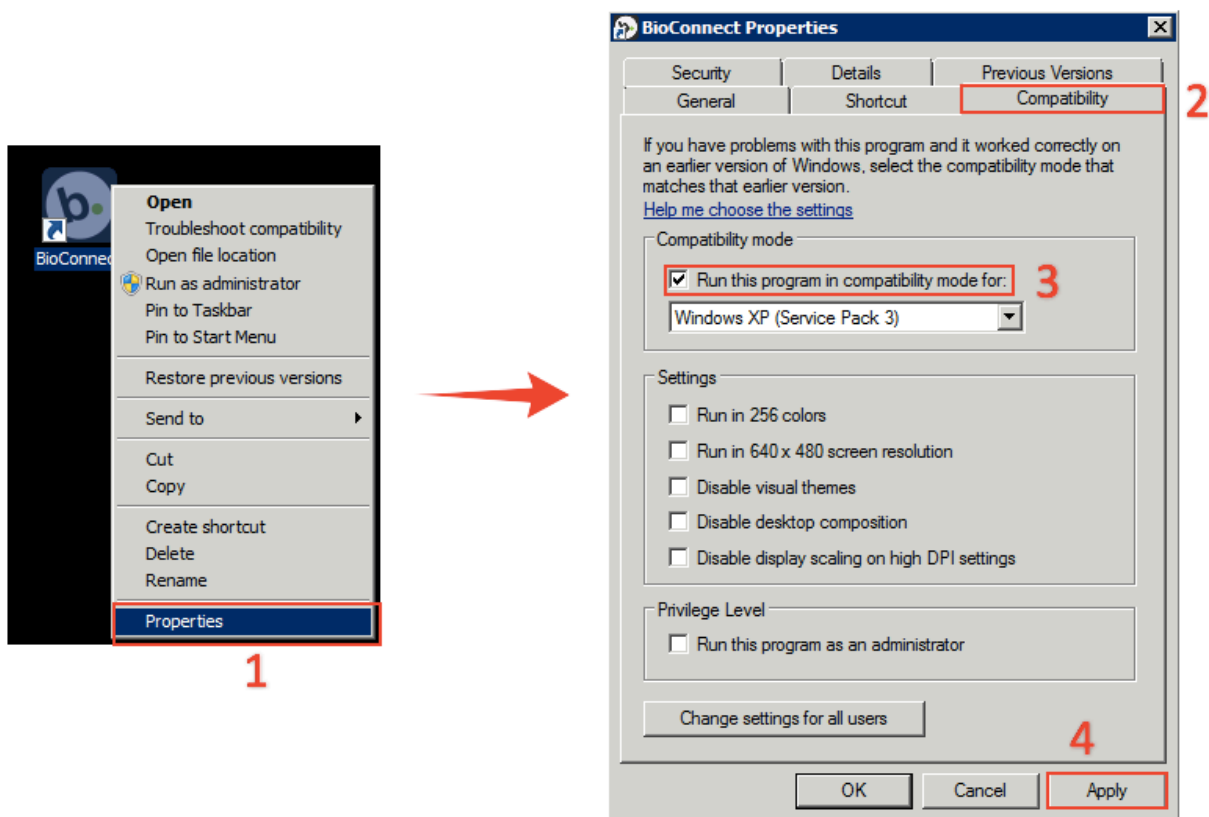




## Appendix C- Windows 7 Compatibility Mode

To make sure BioConnect Service function properly, installer may need to run in compatibility mode. To perform compatibility mode setting, complete following steps:

1. Right click [BioConnect] program label and select [Properties]
2. Select [Compatibility] Tab
3. Select checkbox "Run this program in compatibility mode for"
4. Click [Apply] to save the above configurations



## Appendix D- BioConnect Enterprise Installation

Before you begin ensure you have the following:

- BioConnect v3.6 Install Package Contents (Documentation, Firmware Files, Utilities and Software)
- BioConnect **Enterprise Level** License Activation Code (Provided by BioConnect upon purchase)
- Administrative access to the server you will be installing the software on

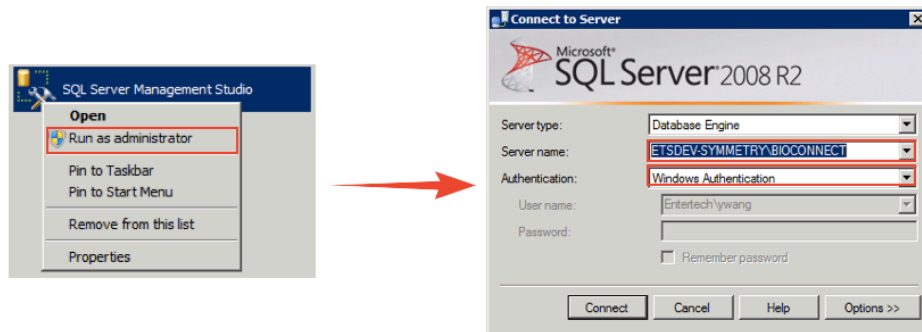
Refer to [section 5](#) for BioConnect Master Server and BioConnect Slave Server installation steps using BioConnect Setup Assistant.

### NOTE:

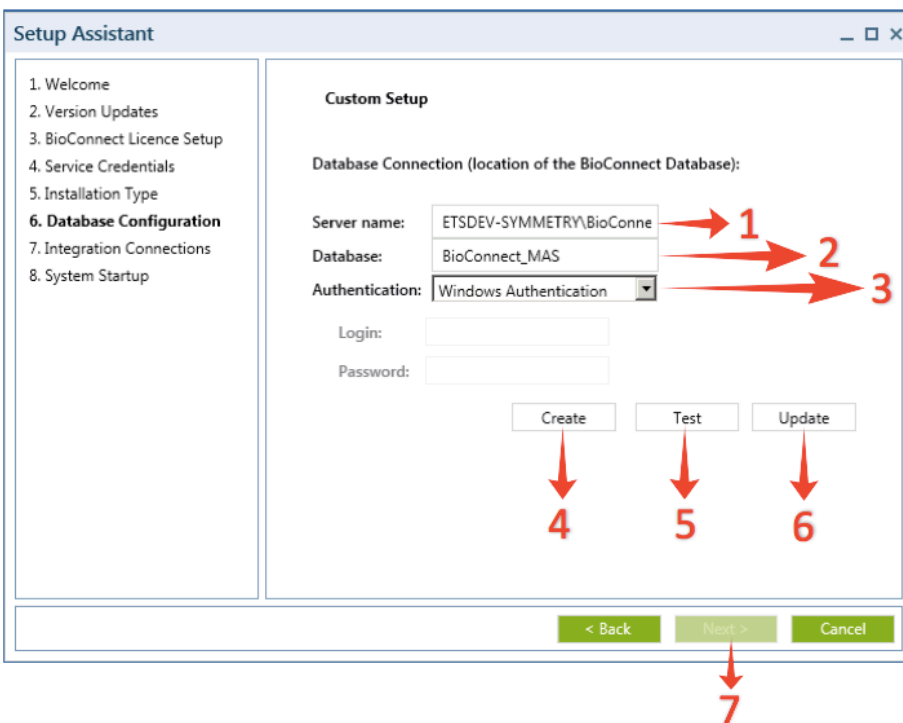
- One BioConnect Enterprise Level License will be needed to set up each BioConnect Master Server (BC MAS) / BioConnect Slave Server (BC SAS).
- Trial License currently does not support BioConnect Enterprise installation.
- At Step 8- **"Installation Type"**, select [Custom Setup]. See "Database Configuration" below for details.
- For BioConnect Slave Server (SAS) installation, stop at Step 10- **"Integration Connections"** and exit Setup Assistant.  
(The SAS installation will not actually connect to any PACS. It will synchronize all user data from the MAS.)

### Database Configuration

1. In **Server name** field, you will need to provide the SQL instance name. In this example, the SQL instance name is ETSDEV-SYMMETRY\BioConnect. (To find out SQL instance name, log into SQL Server Management Studio as Administrator and the dialogue window below will show up. Server name here "ETSDEV-SYMMETRY\BioConnect" is the SQL instance name.)



2. In **Database** field, you can create a name for BioConnect Master Server/Slave Server. In this example, we name it "BioConnect\_MAS".
3. According to the above SQL configuration window, here we can keep **Authentication** field as default- **Windows Authentication**.
4. Click [Create] to create a new BioConnect master server/ slave server in the database.
5. Click [Test] to verify the **Server name** and **Database** are configured correctly.
6. Click [Update] to confirm the above configurations.
7. Click [Next] to continue with Service Configuration.



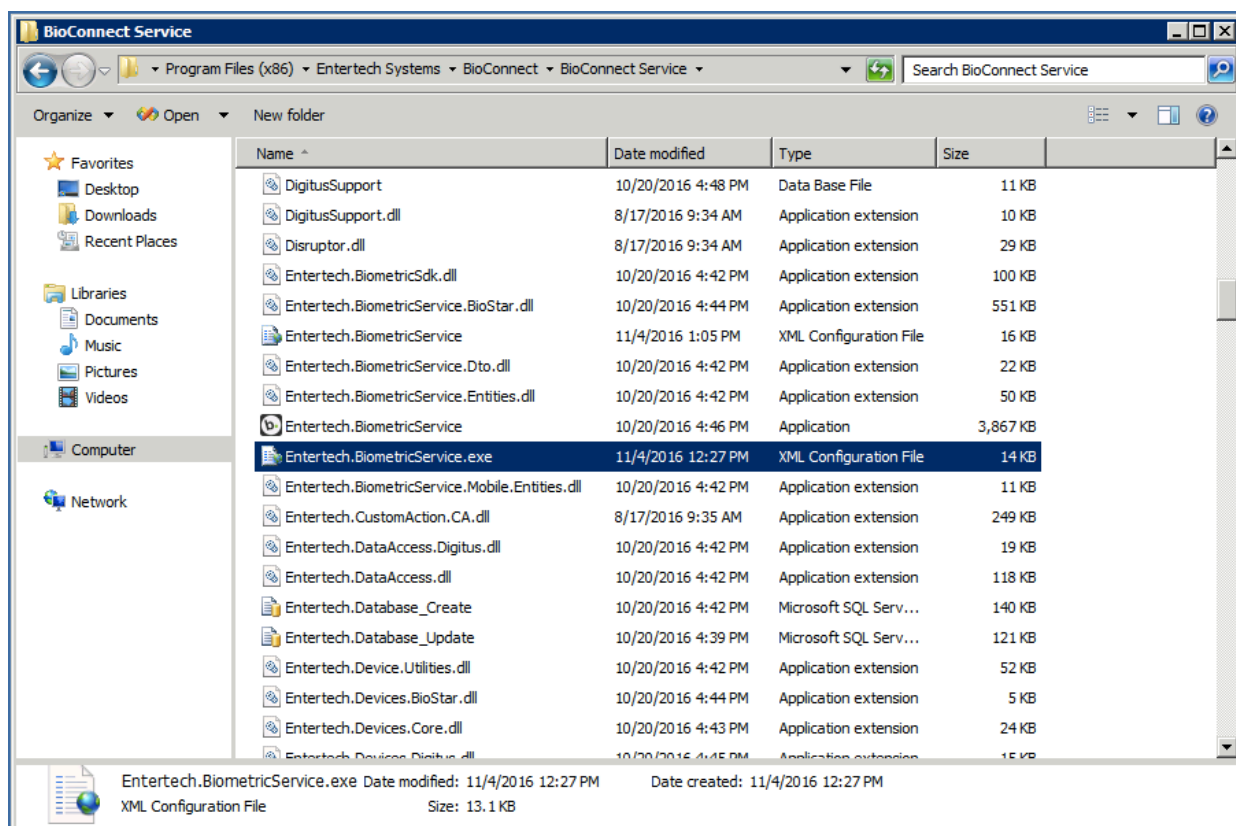
## Editing Configuration File- BioConnect MAS

After completing Bioconnect MAS/SAS Server installation with BioConnect Setup Assistant, follow instructions below to edit BioConnect MAS configuration file and complete BioConnect MAS setup.

1. Browse to the following folder:

C:\Program Files (x86)\Entertech Systems\BioConnect\BioConnect Service\Entertech.BiometricService.exe

2. Open **Entertech.BiometricService.exe** for editing



3. Search for the following line:

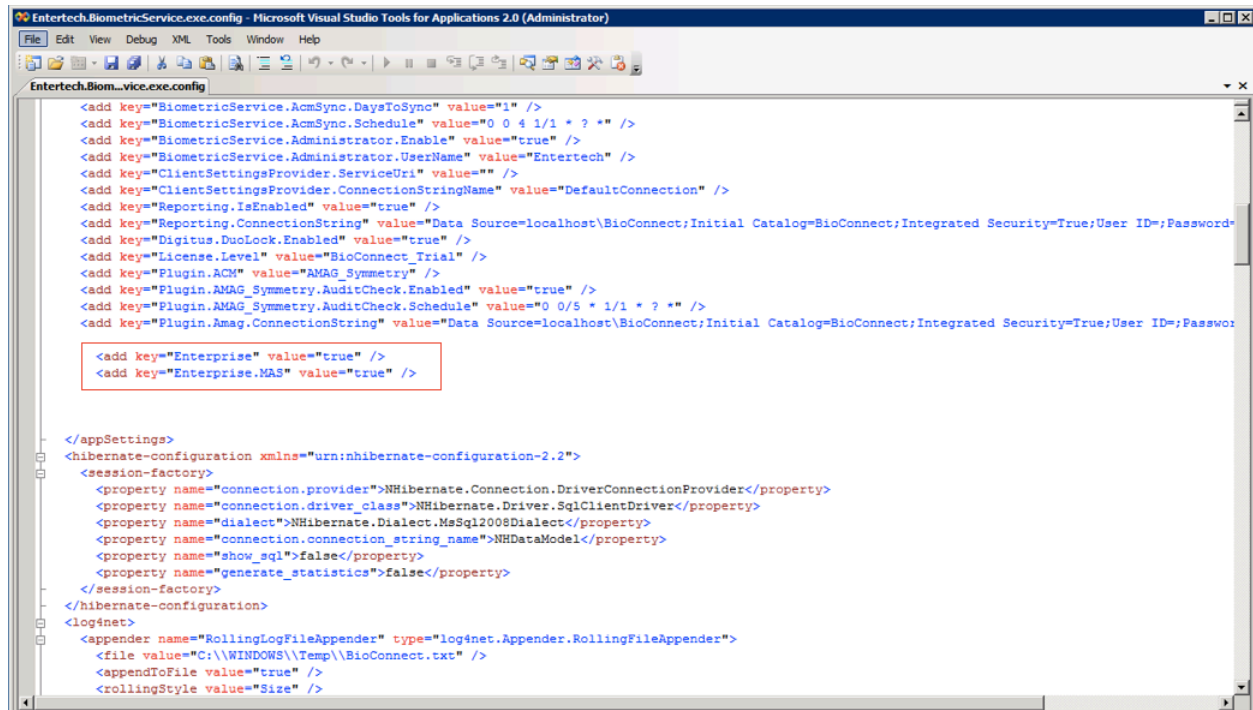
```
</appSettings>
```

```
<hibernate-configuration xmlns="urn:nhibernate-configuration-2.2">
```

4. Add the following immediately above </appSettings>:

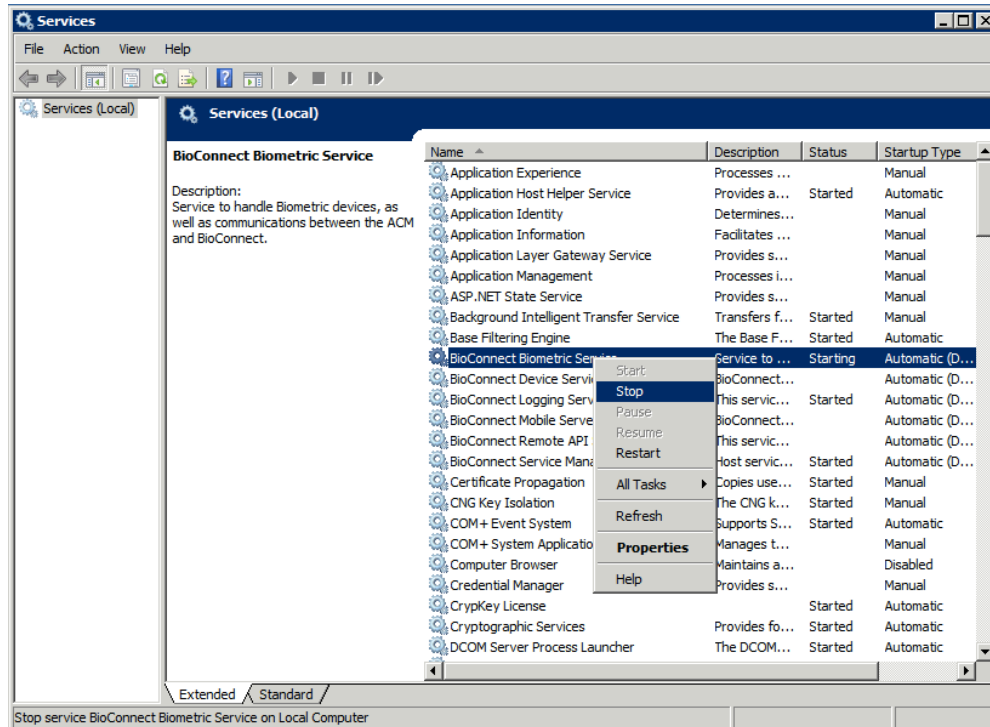
```
<add key="Enterprise" value="true" />
```

<add key="Enterprise.MAS" value="true" />

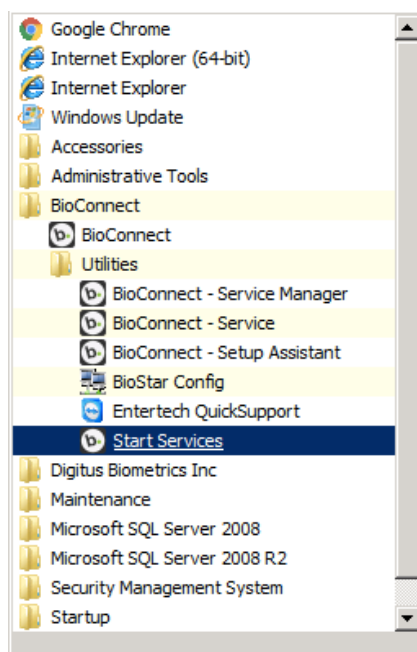


5. Save and Exit from Configuration File

6. Stop services by right clicking **BioConnect Biometric Service** and then click [Stop]



7. Restart the BioConnect services by clicking [StartServices] under 'BioConnect Utilities' Folder



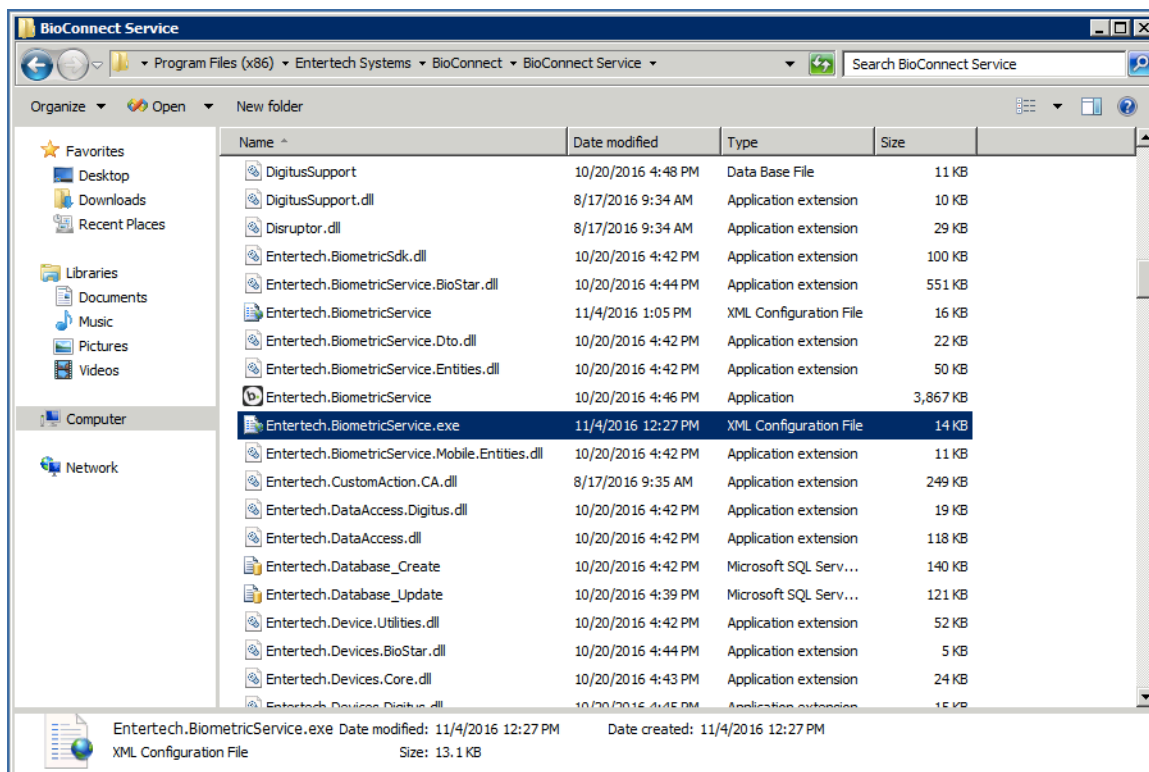
## Editing Configuration File- BioConnect SAS

After completing Bioconnect MAS/SAS Server installation with BioConnect Setup Assistant, follow instructions below to edit BioConnect SAS configuration file and complete BioConnect SAS setup.

1. Browse to the following folder:

C:\Program Files (x86)\Entertech Systems\BioConnect\BioConnect Service\Entertech.BiometricService.exe

2. Open **Entertech.BiometricService.exe** for editing



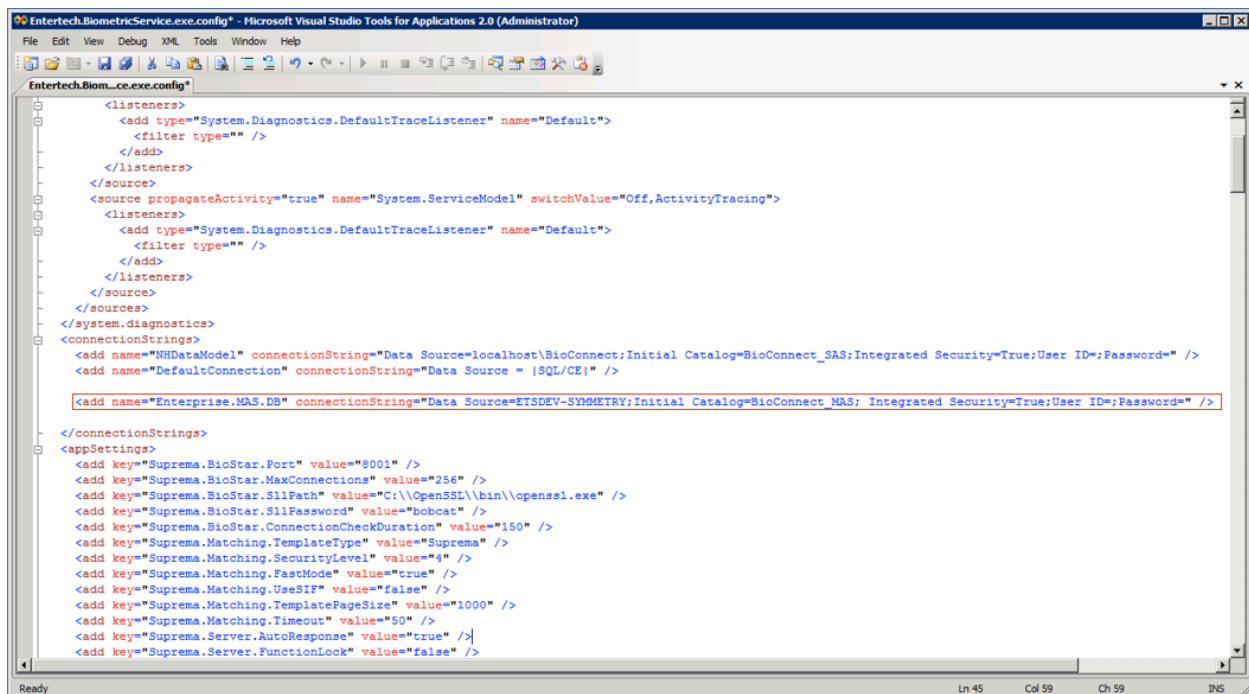
3. Search for the following line:

<add name="DefaultConnection" connectionString="Data Source = |SQL/CE|"/>

4. Add the following immediately following <add name="DefaultConnection" connectionString="Data Source = |SQL/CE|"/>:

```
<add name="Enterprise.MAS.DB" connectionString="Data
Source=ServerName\Instance;Initial Catalog=ServerName; Integrated
Security=SSPI;" />
```

**NOTE:** **ServerName\Instance** (Data Source) is an example location, customer will need to provide the SQL location of the BioConnect MAS database. **ServerName** (Initial Catalog) is also an example name, customer will provide the BC MAS database name.



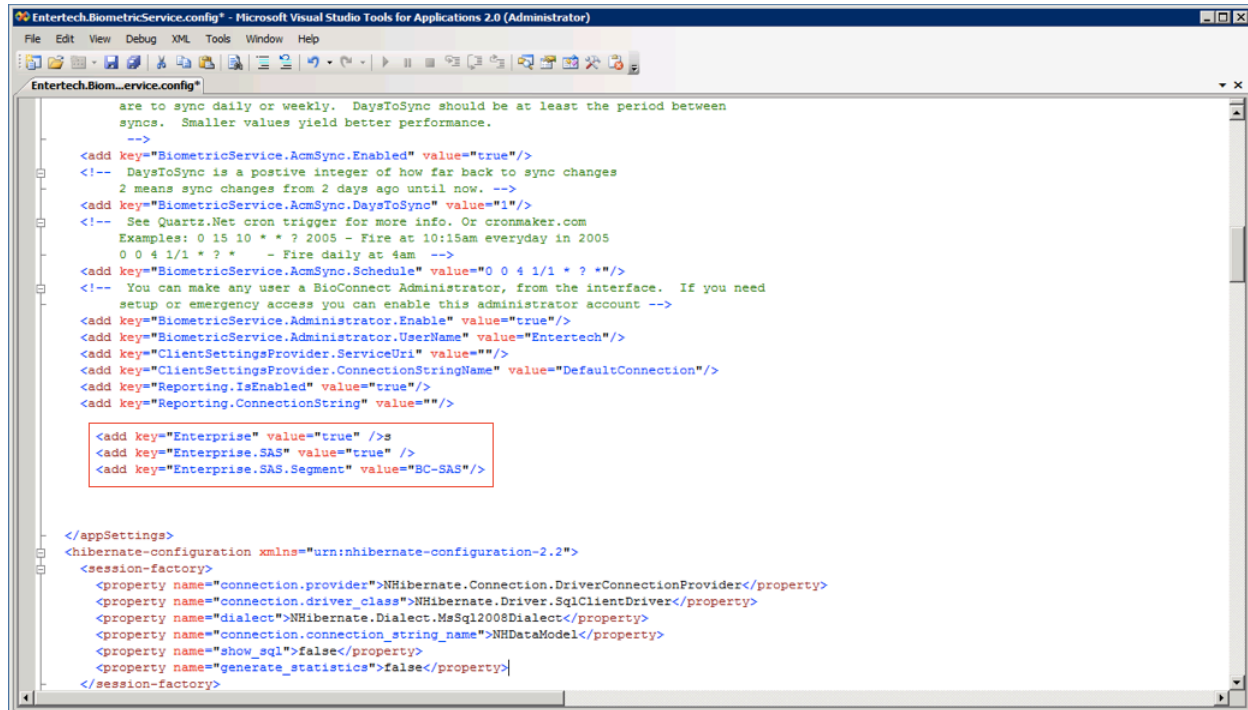
5. Search for the following line:

```
</appSettings>
<hibernate-configuration xmlns="urn:nhibernate-configuration-2.2">
```

6. Add the following immediately above </appSettings>:

```
<add key="Enterprise" value="true" />
<add key="Enterprise.SAS" value="true" />
<add key="Enterprise.SAS.Segment" value="BC-SAS"/>
```





## 7. Save and Exit from Configuration File

## 8. Start the BioConnect services by clicking [StartServices] under BioConnect Utilities Folder

