BioConnect ID Enterprise v4.2

Installation Guide
Revision 1.0

Table of Contents

1. Introduction

BioConnect ID Enterprise 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 ID Enterprise 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.
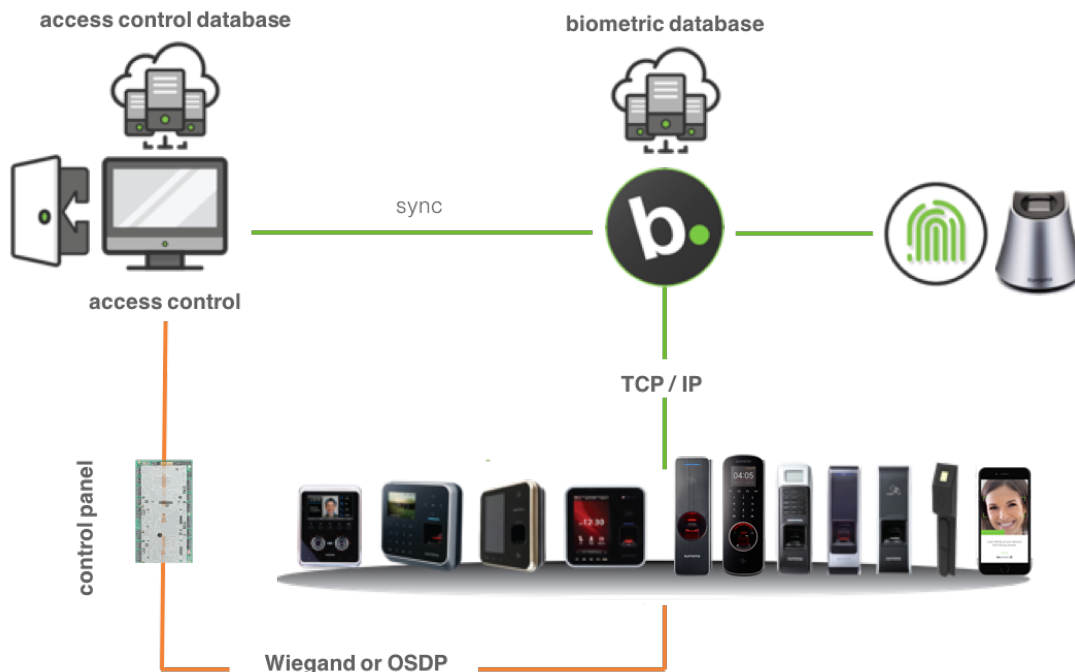
1.1 About this Guide

This guide will walk you through the installation of the BioConnect ID Enterprise 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 ID Enterprise. 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)

Email:

support@bioconnect.com

3. Release Notes

BioConnect ID Enterprise v4.2:

Embedded Enrollment (from supporting partners):

-Trigger BioConnect enrollments directly from your ACM
-Manage existing fingerprint templates directly from your ACM
-Update user and credential details directly from your ACM

BioConnect API (from supporting partners):

-Integrate user and credential information seamlessly into BioConnect
-Trigger remote enrollments and manage biometric templates

Other Updates:

-Improved system startup resiliency
-Expanded client connection feedback
-Enhanced ACM sync protection
-SQL express installation bug resolved

4. Requirements

This chapter specifies the minimum and recommended hardware and software requirements for BioConnect ID Enterprise Server and BioConnect ID Enterprise Client installation. Before you can install BioConnect ID Enterprise, 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 ID Enterprise setup requires that you have administrative privileges.

- All prerequisite software in the BioConnect ID Enterprise installation package must be installed.

- Adobe Reader is not required but highly recommended as you need it to read the BioConnect ID Enterprise documentation.

- Internet Explorer 10 or above must be installed to run C-CURE Deep Embed application

4.1 Hardware and Software Requirements

BioConnect ID Enterprise Server

	Minimum	Recommended
CPU	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
HDD	10 GB	30 GB
RAM	4 GB	8 GB
OS	Windows 7 Windows Server 2008 R2 Windows 8/8.1 Windows 10 Windows Server 2012/R2	Windows Server 2012 R2
Database	SQL Server 2008 R2 Express/Standard or above (SQL Server 2008 R2 Express is included for free with BioConnect ID Enterprise)	
Installed Features	.Net Framework 3.5; 4.0 and above RabbitMQ 3.6.10 Erlang OTP 19 (8.2)	
Firewall: Open Ports Required	TCP/UDP Ports 8000 (Server), 8001 (Gen 1), 51212 (Gen2), 1003 (Digitus)	

BioConnect ID Enterprise Client

	Minimum	Recommended
CPU	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
HDD	10 GB	30 GB
RAM	4GB	8GB
OS	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 CabinetShield installation:

  - Digitus Ethernet Utility
  - Visual Studio 2013 C++ Redistributable Package (x86 or x64)

4.2 PACS Prerequisites

Access Control Partner	Software Version	Requirements
ACT	ACT Manage 1.5.0.1 to 2.3.0.3	ACT API License
AMAG	Symmetry 7	Data Connect
	Symmetry 8	
Avigilon	ACM 5.4 to 5.6	-
	ACM 5.8	XML Connection
Brivo	On Air	Brivo REST API
Gallagher	Command Centre v7.30.0747	-
	Command Centre v7.40769	
Genetec	Security Center 5.3 to 5.6	Genetec SDK 5.5
Honeywell	ProWatch 4.2	Honeywell HSDK
	WinPak PE v4.0 to v4.1	6.6 - 7.2 API
	WinPak PE v4.4	8.3 - 8.5 API
Imron	IS2000 v10.3.65	-
Kantech	Entrapass Corporate Edition v7.0 to 7.11	-
Keyscan	Aurora V1.0.14	SDK "AUR-SDKB"
Lenel	On Guard 6.4 - 7.3	DataConduIT License
Maxxess	eFusion 6.1.3.16193	-
Open Options	dna Fusion 6.4	Flex API v1.23
	dna Fusion 6.5 to 6.6	Flex API v1.24
PACOM	GMS v4.20.20.0	-
Paxton	Net 2 v5.03	OEM SDK
PCSC	Linc-Plus v3.9.68	-
S2	Netbox 4.7 to 4.9	-
RS2	Access It! Universal 4.1 to 5.4	-
Stanley	SecureNET 4.6	Stanley SDK Certificate / OEM Key
Software House	CCURE 9000 2.2 to 2.6	-

5. Installing BioConnect ID Enterprise (Server)

Before you begin ensure you have the following:

- BioConnect ID Enterprise v4.2 Install Package Contents (Documentation, Firmware Files, Utilities and Software)
- BioConnect ID Enterprise 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 ID Enterprise Installer

NOTE:

- If you have previous version BioConnect ID Enterprise (v4.0 etc.) installed on your pc, you need to uninstall it by clicking [Computer] -> [Control Panel] -> [Uninstall a program] -> right click "BioConnect" -> [Uninstall].

- Upgrading from any other previously licensed versions of BioConnect requires a new Activation ID. Please have your existing activation ID available and contact our support team so they can provide you with an updated activation ID (See page 4 for contact details).
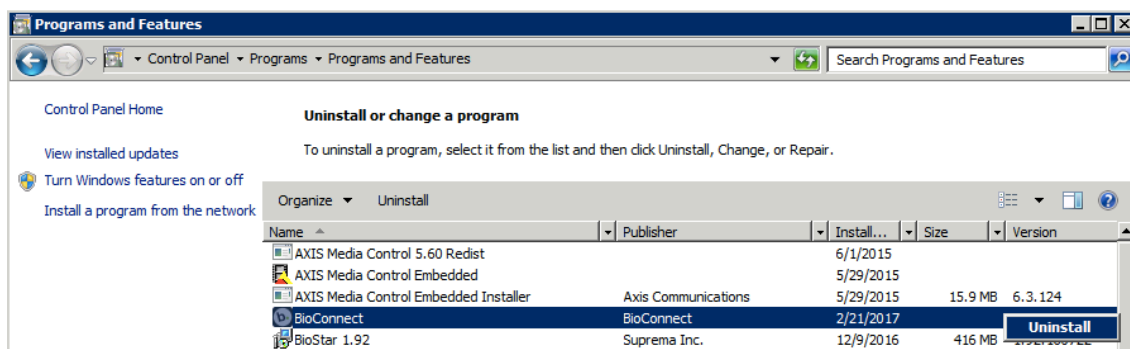
Step 2. Accept the terms and conditions and choose the **Server Installation** type.
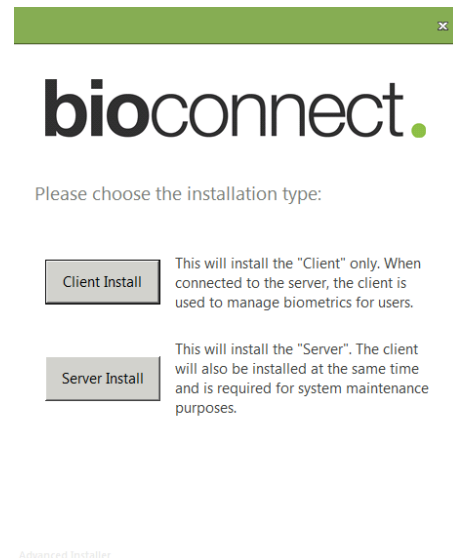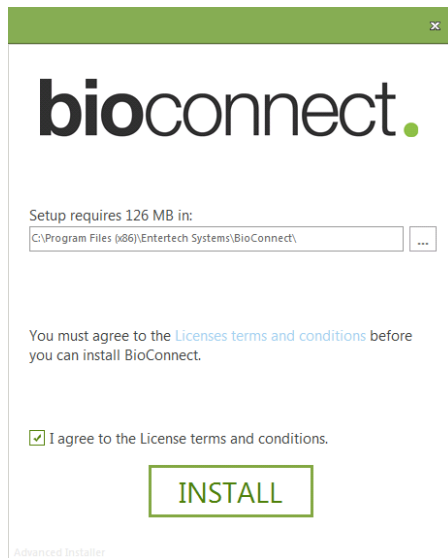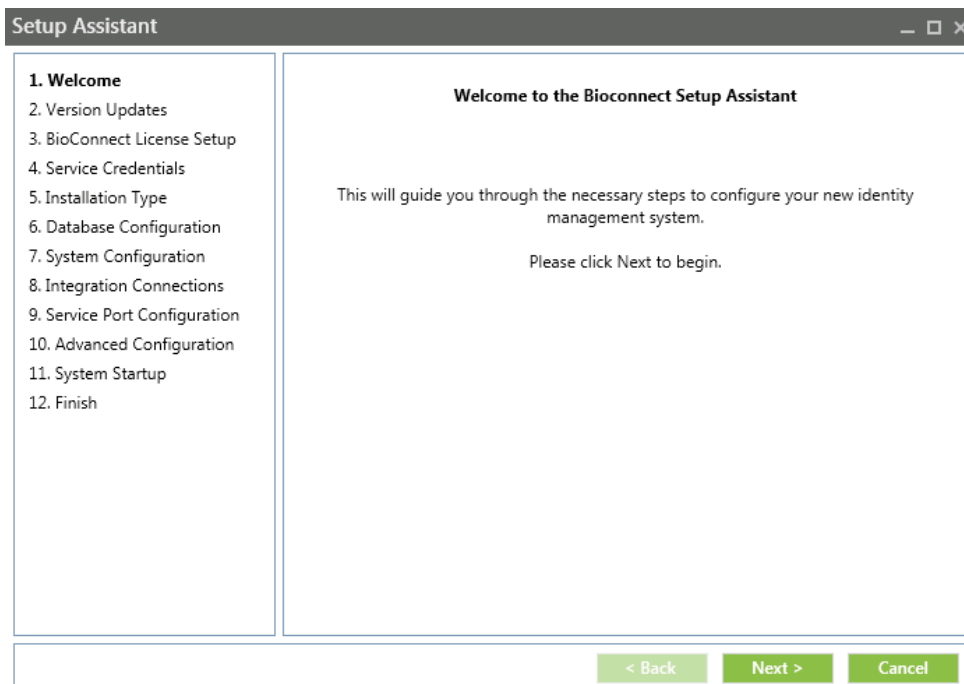
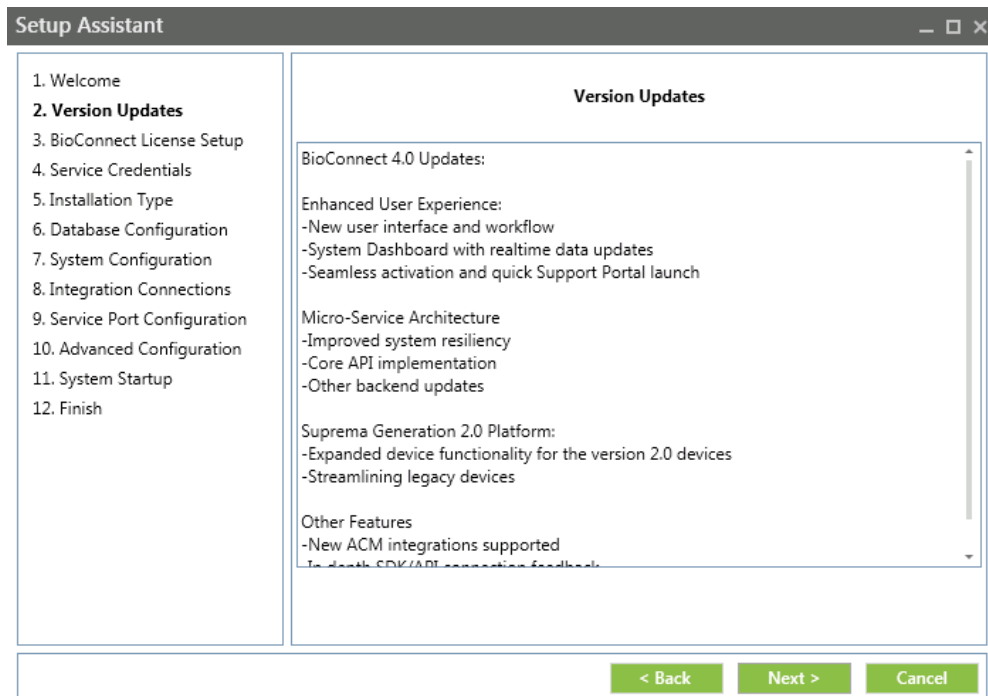**Step 3.** Click [Next] and wait the installation completes.
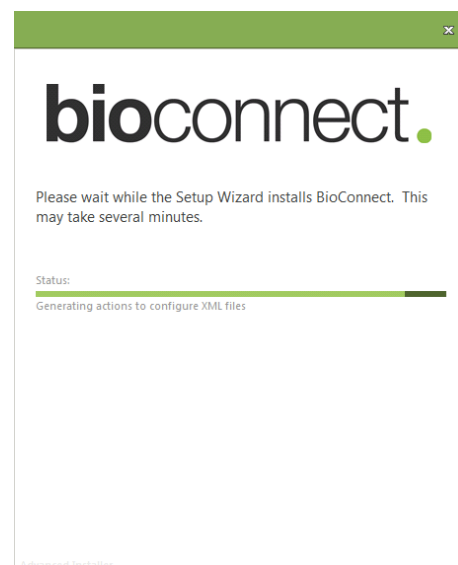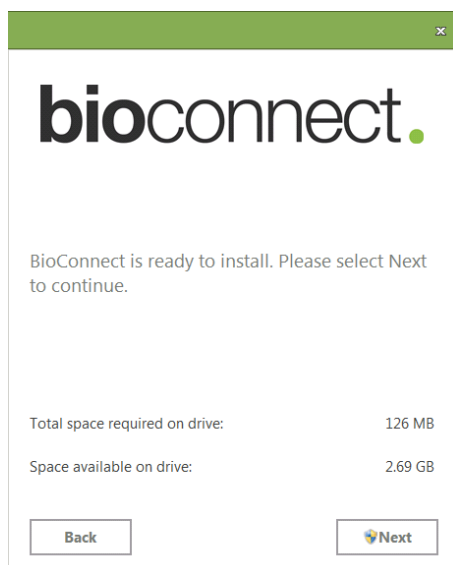
Step 4. Once finished, click [Launch BioConnect].
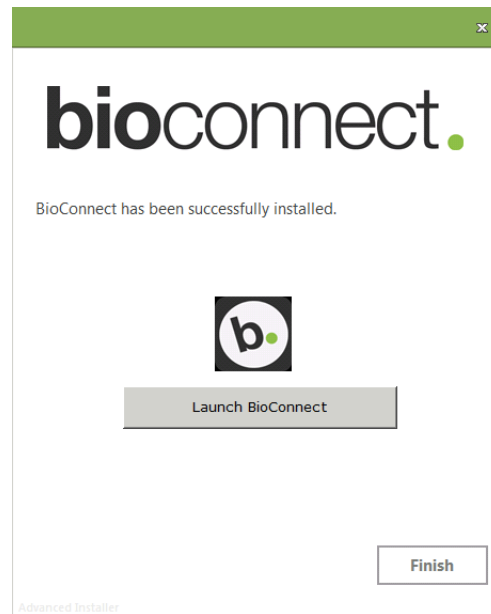
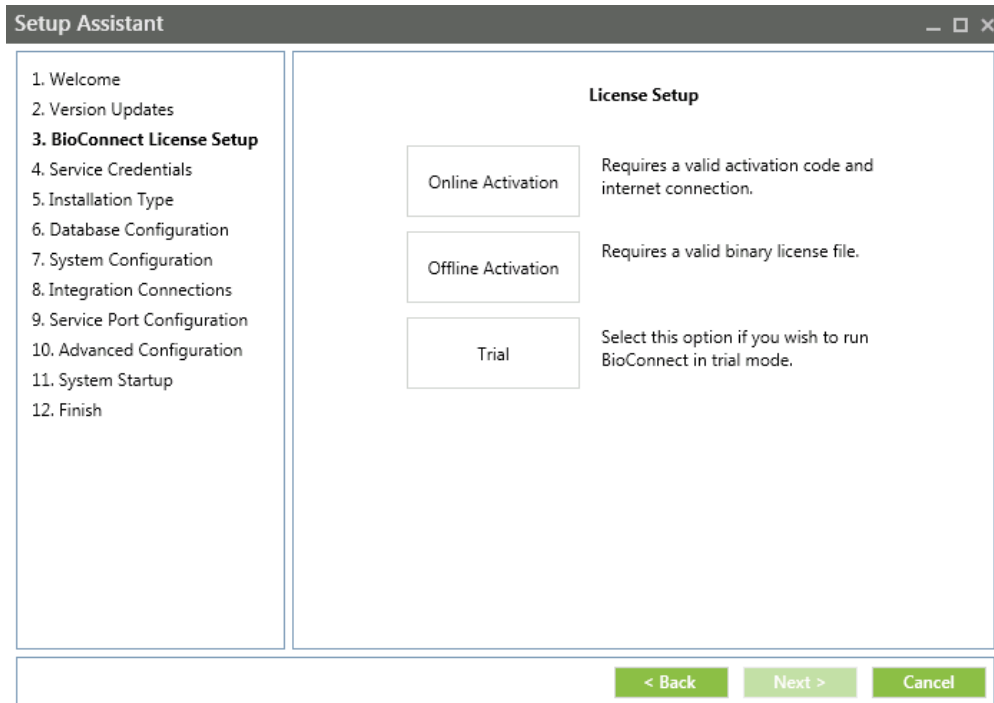**Step 5.** Click [Next] through **Welcome** page and **Version Updates** page.

Setup Assistant   — □ ×

1. Welcome
2. Version Updates
3. BioConnect License Setup
4. Service Credentials
5. Installation Type
6. Database Configuration
7. System Configuration
8. Integration Connections
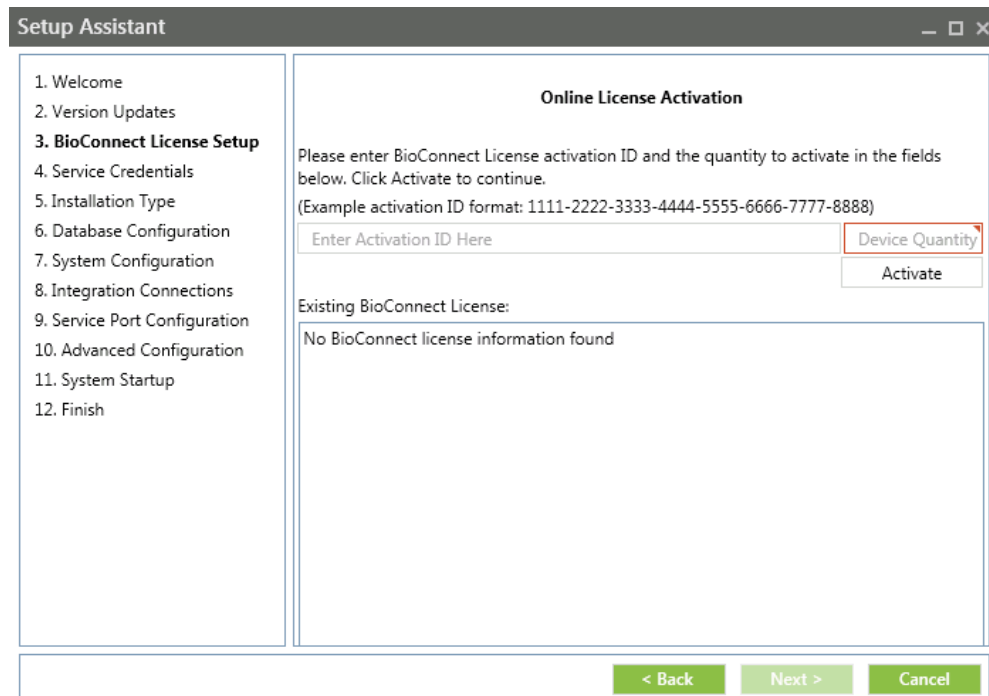9. Service Port Configuration
10. Advanced Configuration
11. System Startup
12. Finish

Version Updates

BioConnect 4.0 Updates:

Enhanced User Experience:
-New user interface and workflow
-System Dashboard with realtime data updates
-Seamless activation and quick Support Portal launch

Micro-Service Architecture
-Improved system resiliency
-Core API implementation
-Other backend updates

Suprema Generation 2.0 Platform:
-Expanded device functionality for the version 2.0 devices
-Streamlining legacy devices

Other Features
-New ACM integrations supported
-In depth SDK/API connection feedback

                                    < Back   Next >   Cancel

Step 6. BioConnect License Setup

To license the software, you will need the following:

- License Activation Code (acquired by contacting BioConnect tech support team, see page 4 for contact details).

- 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:

Setup Assistant   _ □ ×

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

License Setup

Online Activation	Requires a valid activation code and internet connection.
Offline Activation	Requires a valid binary license file.
Trial	Select this option if you wish to run BioConnect in trial mode.

< Back   Next >   Cancel

<u>Online</u>:

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 License Setup**
4. Service Credentials
5. Installation Type
6. Database Configuration
7. System Configuration
8. Integration Connections
9. Service Port Configuration
10. Advanced Configuration
11. System Startup
12. 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)

Enter Activation ID Here   Device Quantity

Activate

Existing BioConnect License:
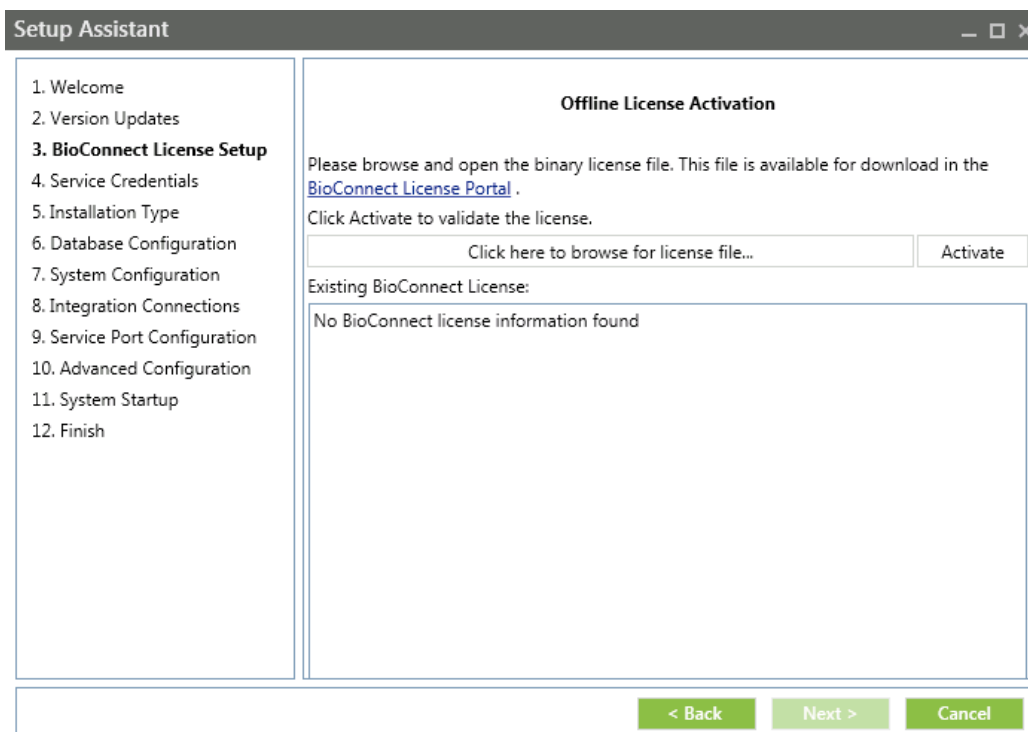
No BioConnect license information found

< Back   Next >   Cancel

Offline:

Before installing BioConnect ID Enterprise, contact BioConnect at "support@bioconnect.com" to acquire off-line activation license file.

Copy the license file and save it onto the BioConnect ID Enterprise 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.

Trial:

Every BioConnect ID Enterprise 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.

Setup Assistant

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

Trial License Setup

BioConnect Trial is limited to one device support. There is no expiration date.

Create Trial License

Existing BioConnect License:

BioConnect License Information:
Activation ID: Trial License
Level: BioConnect_Trial
Version: 1.0
ACM plugin:
Device Licenses: 1
Activation Date: None
Expiration Date: Permanent
Customizations:
Issuer: BioConnect
Sold to:

< Back   Next >   Cancel

----------------------------- 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 ID Enterprise 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.
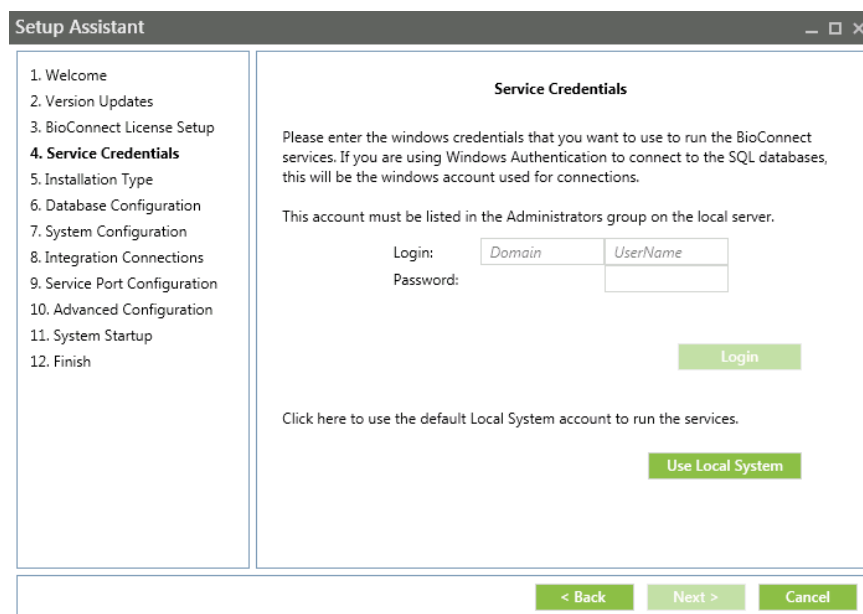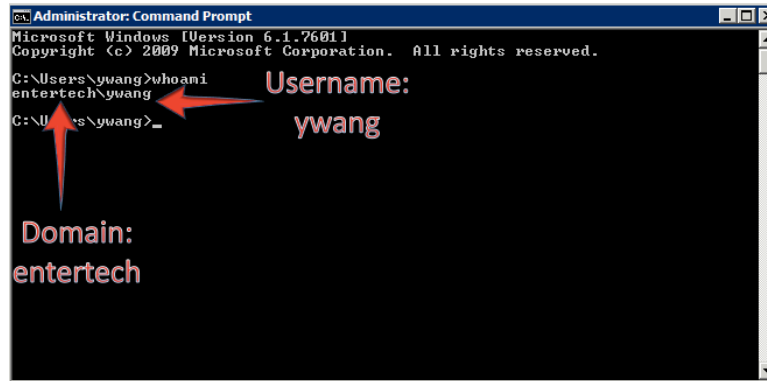
Step 8. Installation Type

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 ID Enterprise database automatically. (Recommended)

Once finished, go to Step 9 (page 18).

Custom Setup: This will allow you to choose where the BioConnect ID Enterprise 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.)
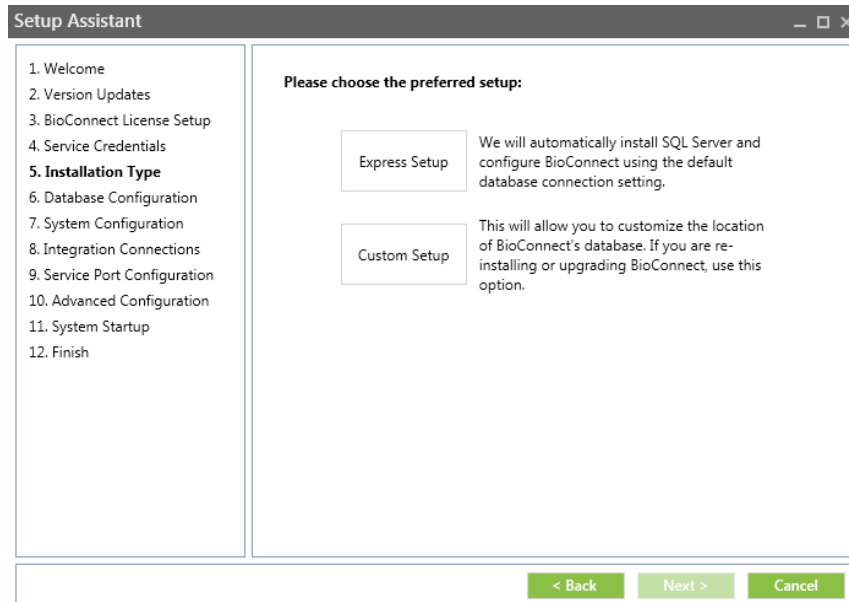
Step 9. System Configuration

Use Default Settings: select this checkbox to activate default settings as shown below. Click [Next] if you have not altered the default settings.
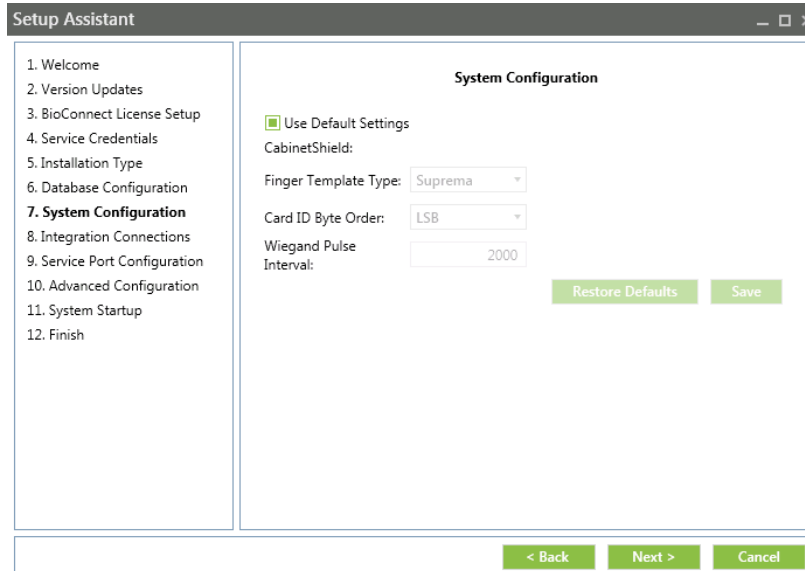
Finger Template Type	Suprema
Card ID Byte Order	LSB
Wiegand Pulse Interval	2000

Following configuration settings can be altered when you uncheck the [Use Default Settings] box:

- **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.

- **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).

- **Wiegand Pulse Interval:** type Wiegand Pulse Interval value. (Default value is 2000.)

Click [Save] to confirm the above settings and then click [Next] to continue with Integration Connections.
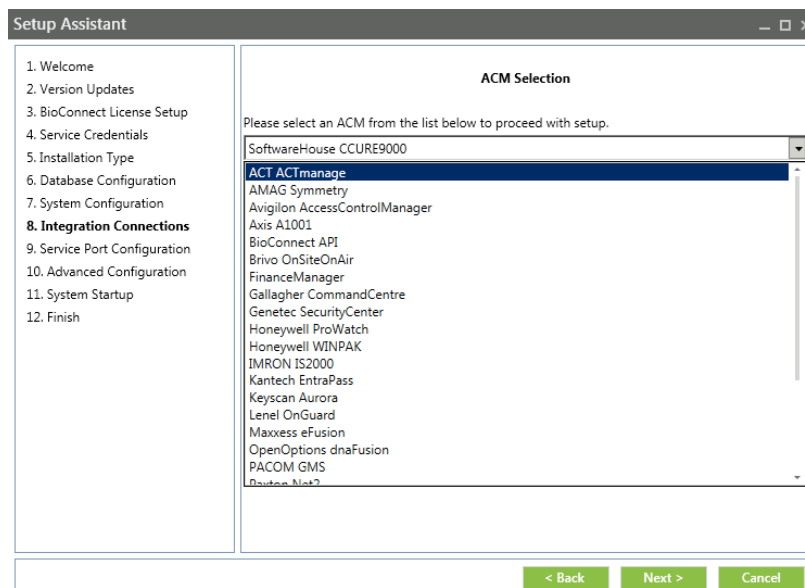
Step 10. Integration Connections

Click Drop-down menu to select your ACM platform and click [Next] to continue with the ACM Connection Configurations.
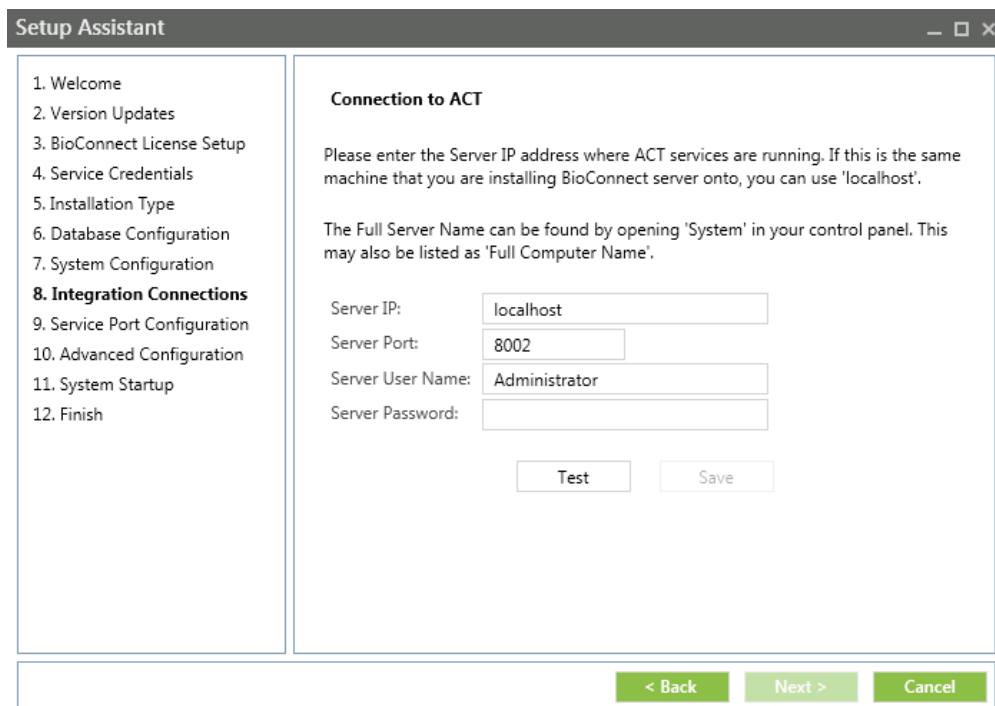
NOTE: Please scroll down in this document (page 20-35) to find the ACM Integration information for your selected ACM.

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 with Step 11- Service Port Configuration.

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. (Refer to Appendix E for Symmetry Configuration Details)

Click [Next] when you are ready to continue with Step 11- Service Port Configuration.

Option 1- Avigilon (Basic Integration): 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 ID Enterprise to login for synchronization.

Option 2- Avigilon (XML Integration): XML integration requires the following Collaborations to be activated by Avigilon License:

- ✓ Events – Generic XML
- ✓ Identity CSV Export
- ✓ Identity CSV One-Time Long Format
- ✓ Identity CSV One-Time Short Format
- ✓ Identity CSV recurring
- ✓ Rest API
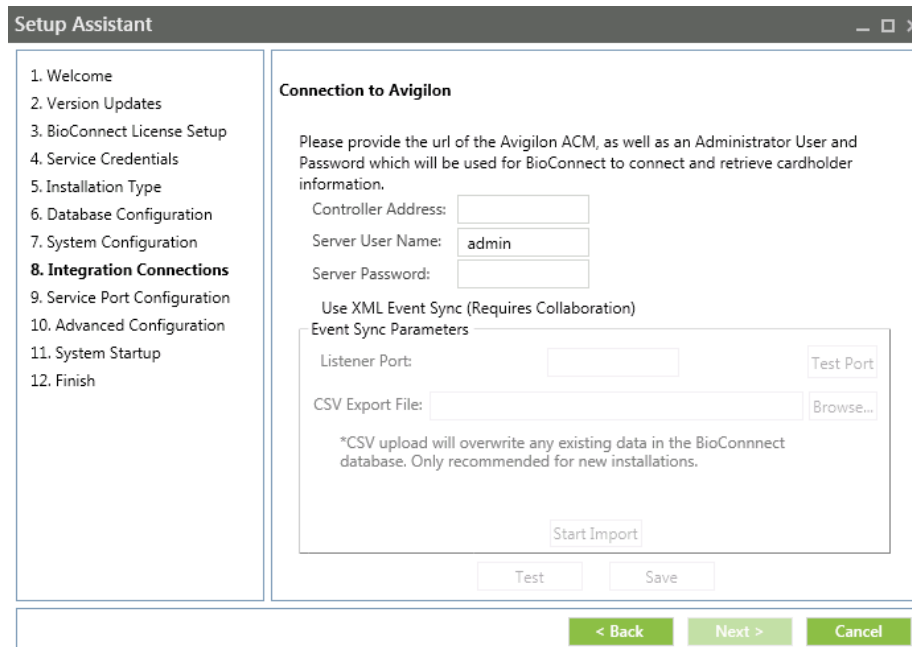
Generate Export CSV of all users to be brought into BioConnect. Ensure that that the following settings are configured on the Avigilon XML Port configuration and designated port is open and available on both systems:

- ✓ "Installed" is checked-off
- ✓ Schedule is set to "24 hours Active"
- ✓ "Send Acknowledgements", "Send Clears" and "Send Notes" are all checked off.

✓ "User Audit" is the only value in the field on the right-hand column.

NOTE: Do not make any changes to users in the Avigilon system while the CSV upload is in progress.

Click [Save] and then click [Next] when you are ready to continue with Step 11- Service Port Configuration.

Brivo: Once SQL Server finishes installing and creates the database, you will have to connect the software to Brivo ACS. REST API sync requires REST API to be activated within your Brivo onAir software. Once confirmed that REST API has been activated, follow the same instructions as stated above.

Please provide the following information: Brivo OnAir [Username] and Brivo OnAir [Password]. You will also be required to provide [Client ID] and [Client Secret]. These can be found by navigating within Brivo to the top right corner dropdown and selecting [Edit Account Settings]. Then navigate to the [Application Management] tab. Click the [Application Detail] icon for the BioConnect application. Here you will find the Client ID and Client Secret.
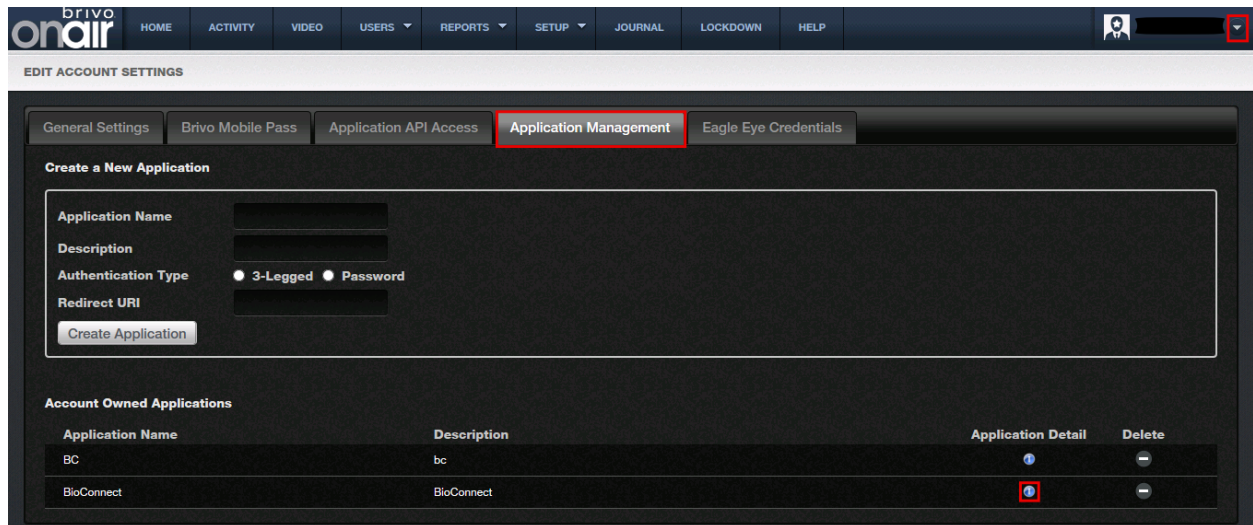
NOTE: When copying and pasting these data strings, a space is included before the first number or letter. Be sure to delete this space after pasting into BioConnect.

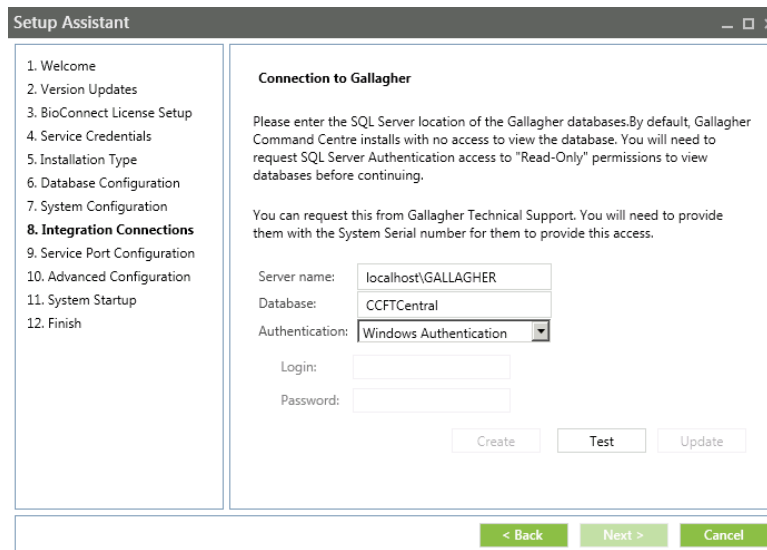Click [Save] and then click [Next] to continue with Step 11- Service Port Configuration.

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

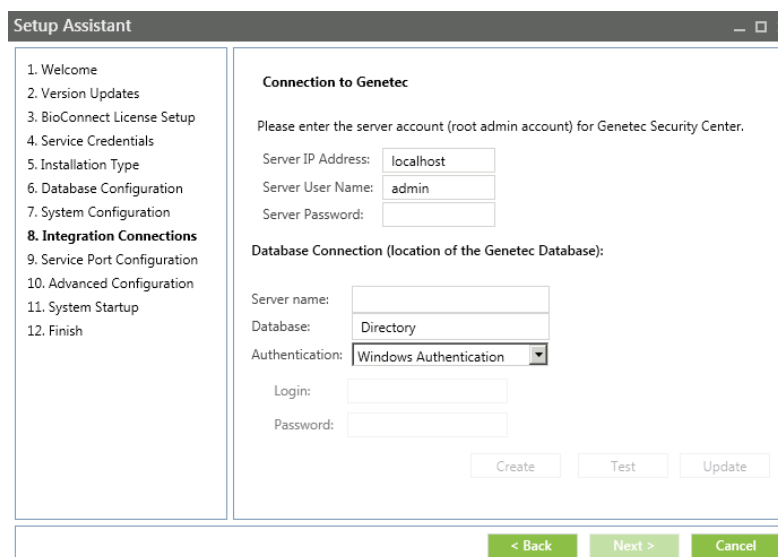Authentication for "Read Only" rights to the Gallagher database.)

Once finished, click [Next] to continue with Step 11- Service Port Configuration.

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. Click [Test] to confirm the connection, and [Update] to save the configuration.

Once finished, click [Next] to continue with Step 11- Service Port Configuration.
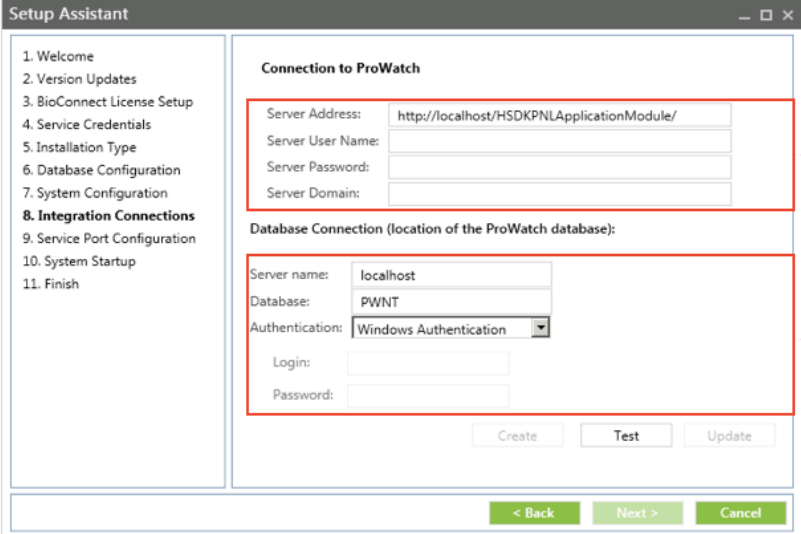
Honeywell ProWatch: Once SQL Server finishes installing and creates the database, you will have to connect the software to ProWatch. This is completed by either entering the SQL server login details to access ProWatch database (recommended) or by entering the server address of the Honeywell HSDK.

Option 1 (Recommended)- SQL Integration: You will need to provide the SQL instance name and database name of the ProWatch Database. The below example is the default database values for ProWatch database. Click [Test] to confirm the connection, and [Update] to save the configuration.

NOTE: Please fill in random letters/characters (For example, ".") in HSDK Integration fields before clicking [Test]. These letters/characters will not be used to establish database connection, but simply a placeholder to continue the process.

Option 2 (Alternative)- HSDK Integration: The default value is provided for you if you are installing BioConnect ID Enterprise 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 [Test] to confirm the connection, and [Update] to save the configuration.

Once finished, click [Next] to continue with Step 11- Service Port Configuration.

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.

Once finished, click [Next] to continue with Step 11- Service Port Configuration.
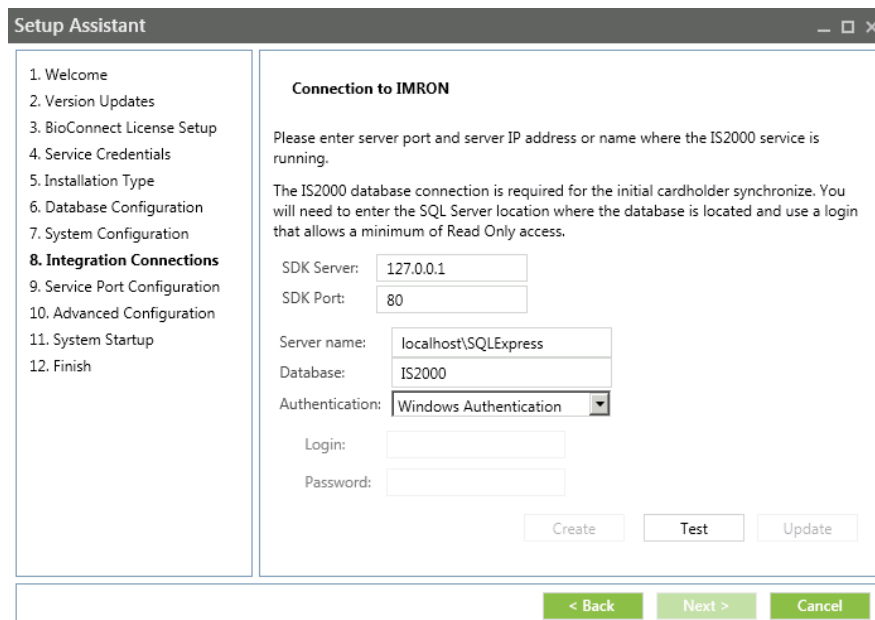
IMRON: Once SQL Server finishes installing and creates the database, you will have to provide the Server Address of the IS2000 server. The default SDK port is 80. Also enter the location/login details of the IS2000 SQL database for synchronization. Click [Test] to confirm the connection, and [Update] to save the configuration.

Once finished, click [Next] to continue with Step 11- Service Port Configuration.

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 ID Enterprise. You will then need to provide the username and password for an Entrapass Operator. Click [Save] to complete the configuration.

Once finished, click [Next] to continue with Step 11- Service Port Configuration.

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 ID Enterprise on the same server as Aurora, the default will be 'localhost' and 'AURORA'. Next, enter the root level KEYSCAN username and password, the synchronization will not work if you use another administrator. Click [Test] to confirm the connection, and [Update] to save the configuration.

Once finished, click [Next] to continue with Step 11- Service Port Configuration.

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.

Once finished, click [Next] to continue with Step 11- Service Port Configuration.
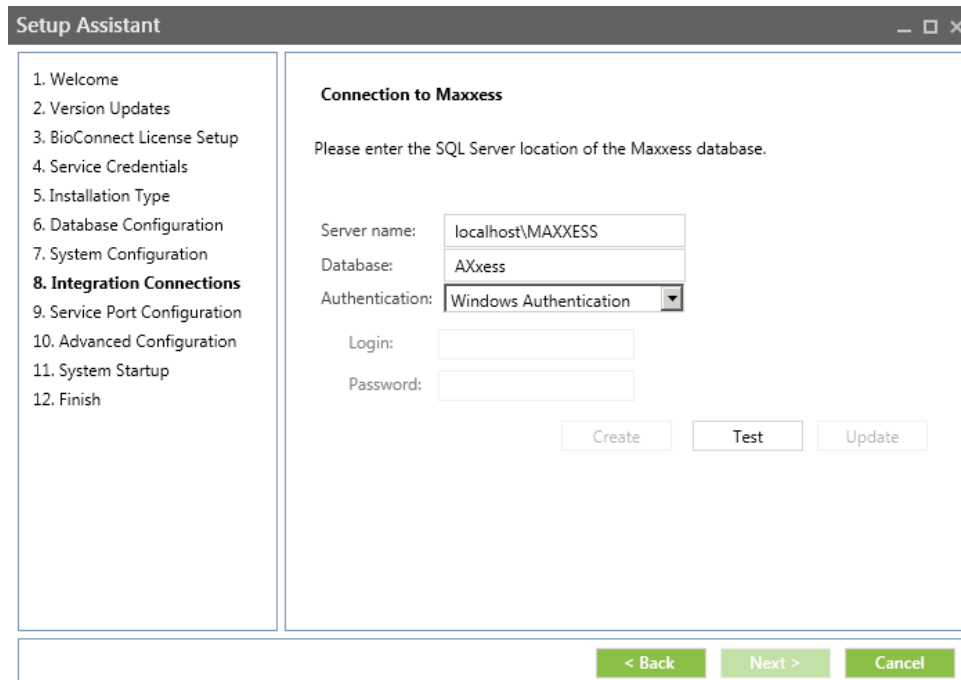
Maxxess: Once SQL Server finishes installing and creates the database, you will have to provide the Server Address of the Maxxess eFusion database. Enter the Server Name and instance (if applicable), and the desired login credentials. Click [Test] to confirm the connection, and [Update] to save the configuration.

Once finished, click [Next] to continue with Step 11- Service Port Configuration.

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* ID Enterprise *is being installed on the same machine as the DNAFusion server, please leave the default Server Address as is.*

Once finished, click [Next] to continue with Step 11- Service Port Configuration.

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 ID Enterprise. Click [Test] to confirm the connection, and [Update] to save the configuration.

Once finished, click [Next] to continue with Step 11- Service Port Configuration.

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 ID Enterprise to use for connection to the Net2 system.

Once finished, click [Save] and then click [Next] to continue with Step 11- Service Port Configuration.

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. Click [Test] to confirm the connection, and [Update] to save the configuration.

Once finished, click [Next] to continue with Step 11- Service Port Configuration.
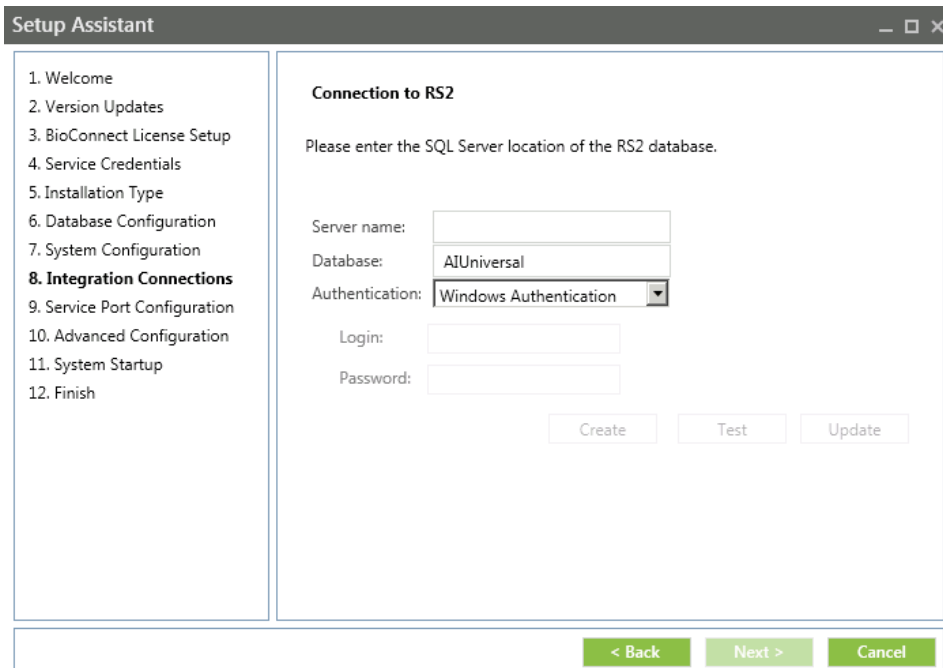
RS2: Once SQL Server finishes installing and creates the database, you will have to connect the software to AccessIt!. This is completed by entering the SQL Server login details to access the AccessIt! database. Click [Test] to confirm the connection, and [Update] to save the configuration.

Once finished, click [Next] to continue with Step 11- Service Port 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.

NOTE: User must enter "http://" before the URL of the S2 software.

Once finished, click [Save] and then click [Next] to continue with Step 11- Service Port Configuration.
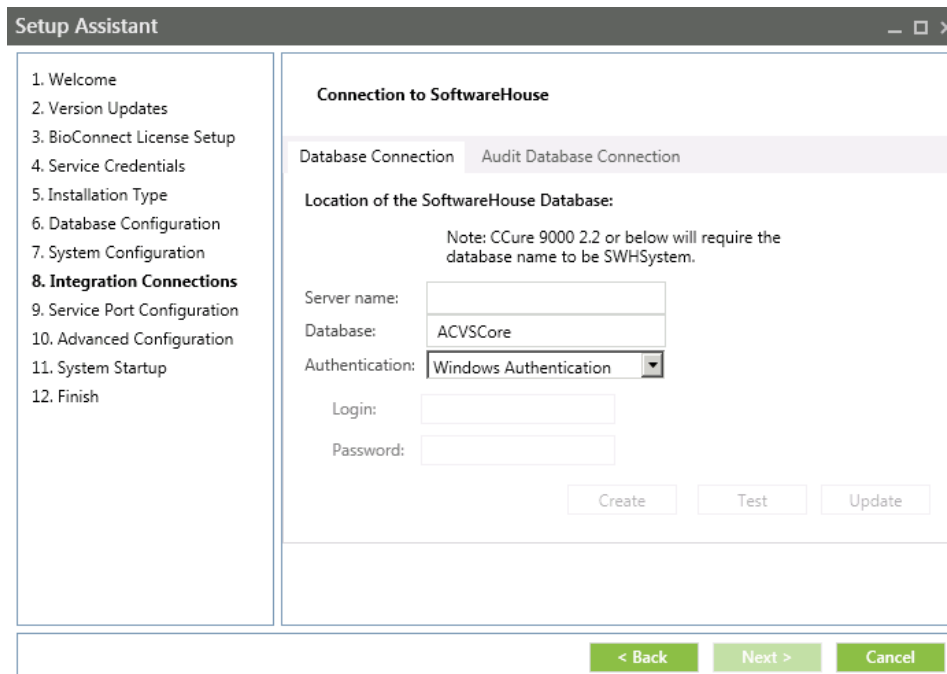
Software House: Once SQL Server finishes installing and creates the database, you will have to connect the software to CCURE. You do this by entering the SQL Server login details to access the CCURE database. If you are using CCURE 9000 v2.2 or below, the database name will be SWHSystem. With v2.3 or 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.

Once finished, click [Next] to continue with Step 11- Service Port 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 ID Enterprise 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. Click [Test] to confirm each connection, and [Update] to save the configuration.

Once finished, click [Next] to continue with Step 11- Service Port Configuration.

----------------------------End of Step 10: Integration Connections---------------------------

Step 11. Service Port Configuration

Verify the default port values (preloaded by Setup Assistant). Click [Save] to confirm and then click [Next] to continue with Step 12- Advanced Configuration.

Step 12. Advanced Configuration

Verify the default advanced configuration values (preloaded by Setup Assistant) and enter Server IP value (**NOTE:** RabbitMQ loop back IP 127.0.0.1 can be used for Server IP when no remote client connection is required). Click [Test] to complete data synchronization and then click [Next] to continue with Step 13- System Startup.

NOTE:

RabbitMQ hosts communication between BC services and between the client and server. It is a pre-requisite application needed to run BioConnect 4.2. The SetupAssistant can only configure RabbitMQ version 3.6.10 found on the local machine. On this page you can configure the IP, Port and Access Credentials for the Rabbit MQ Service. BioConnect highly suggests using the default settings if possible.

BioConnect requires a valid RabbitMQ virtual host, and a username/password with full config/write/read rights to the vhost. Default values are listed as follows:

File Directory	C:\Program Files\RabbitMQ Server
Host	Port: 5672
VirtualHost	BCHost
UserName/Password	BioConnect

Step 13. 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.
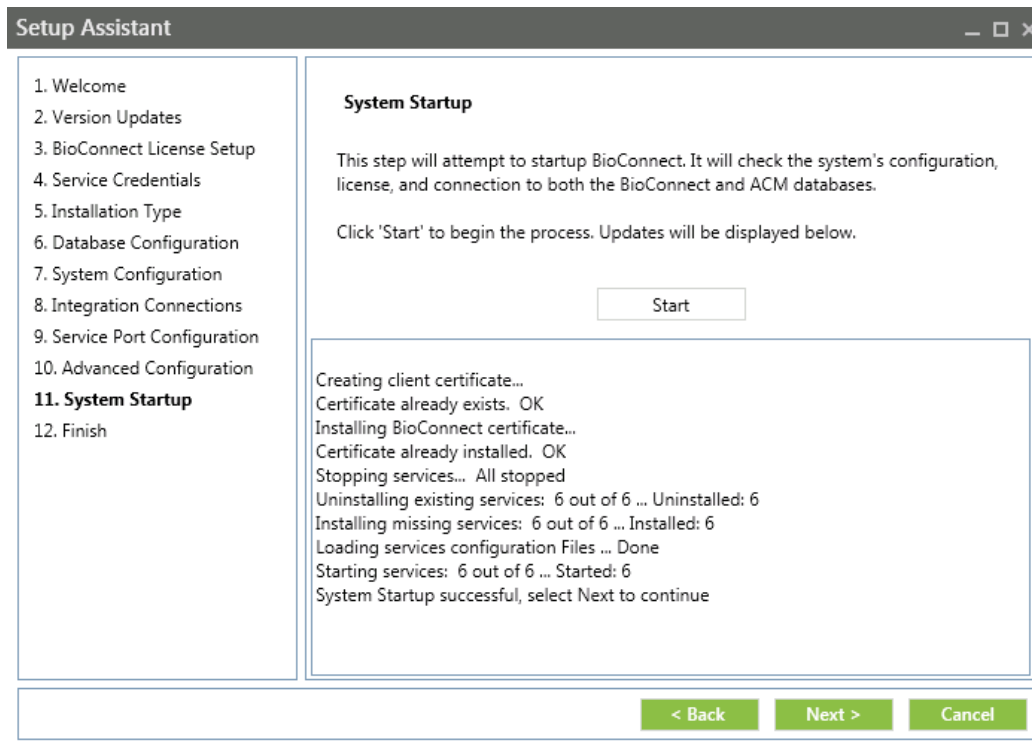
Step 14. Finish

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

Setup Assistant _ □ ×

1. Welcome
2. Version Updates
3. BioConnect License Setup
4. Service Credentials
5. Installation Type
6. Database Configuration
7. System Configuration
8. Integration Connections
9. Service Port Configuration
10. Advanced Configuration
11. System Startup
12. Finish

Finish

The BioConnect Setup Assistant has completed! Clicking Finish will close this window and start BioConnect client application

< Back   Finish   Cancel
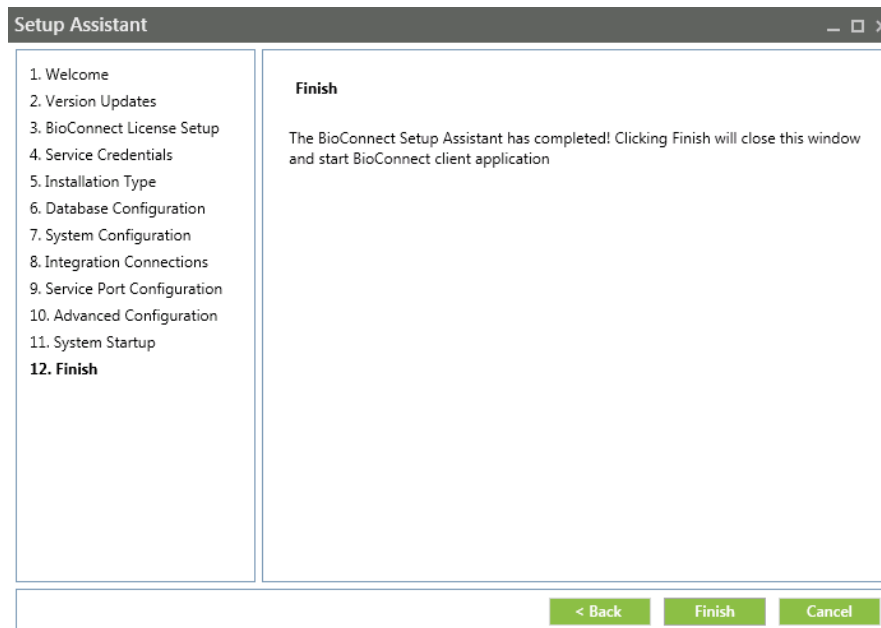
NOTE: The default "root" level account for the client is (case sensitive):

Username: Entertech
Password: Bobcat

enterprise

User Name:
Entertech

Password:
••••••

Login

Need help? Contact support
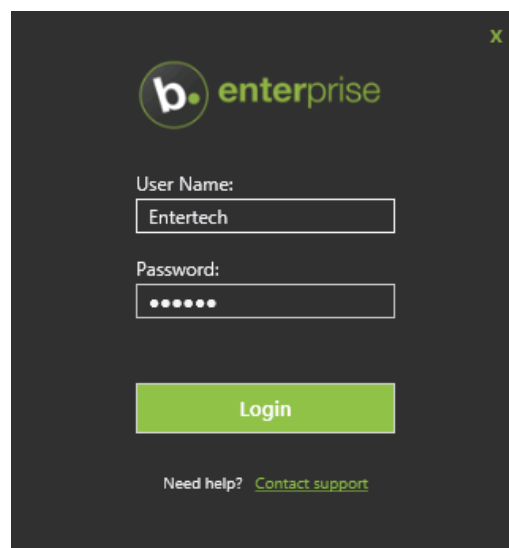
6. Installing BioConnect ID Enterprise (Client)

1. Accept the terms and conditions and choose [Client Install].
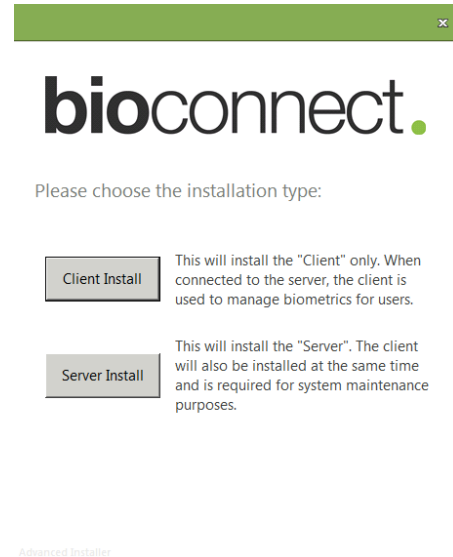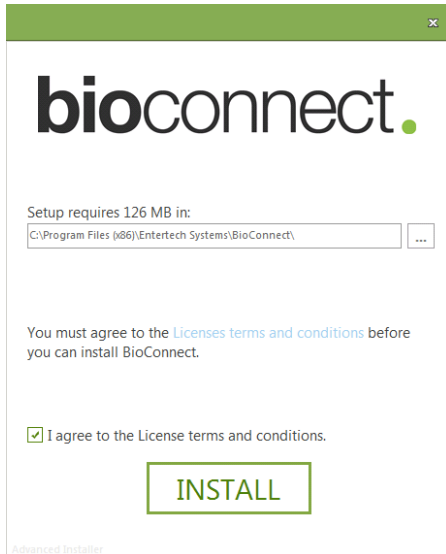
2. Once the setup completes, click [Finish]. The Setup Assistant will only open if the client is installed on the server (localhost).

3. Click [Next] through the **Welcome** page and **Version Updates** page.

Setup Assistant _ □ ×

1. Welcome
2. Version Updates
3. Connection Configuration
4. Finish

Version Updates

BioConnect 4.0 Updates:

Enhanced User Experience:
-New user interface and workflow
-System Dashboard with realtime data updates
-Seamless activation and quick Support Portal launch

Micro-Service Architecture
-Improved system resiliency
-Core API implementation
-Other backend updates

Suprema Generation 2.0 Platform:
-Expanded device functionality for the version 2.0 devices
-Streamlining legacy devices

Other Features
-New ACM integrations supported
-In-depth SDK/API connection feedback

< Back   Next >   Cancel

4. Verify the default Connection Configuration values (preloaded by Setup Assistant). Click [Save] to test and save the settings. If you have customized the Rabbit MQ settings in the main server, those same settings need to be used for the client installation. (For more information about RabbitMQ, refer to Server Install- Step 12. Advanced Configuration)

Setup Assistant _ □ ×

1. Welcome
2. Version Updates
3. Connection Configuration
4. Finish

Server Connection Configuration

Below are the configurations that are required to run the BioConnect Client. Click 'Save' to test and save the settings.

BioConnect Server: 127.0.0.1   8139

RabbitMQ Configuration:

Server IP: [   ] *   Port: 5672

Access Control: ☑ Use Defaults
BioConnect will create and use RabbitMQ virtual host, username and password with preset values

Virtual Host: BCHost
Username: BioConnect   Password: •••••••••

Save

< Back   Next >   Cancel

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

7. Quick Enrollment
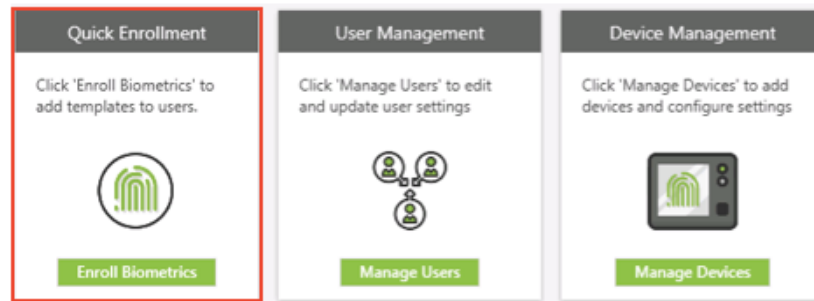
7.1 Fingerprint Enrollments

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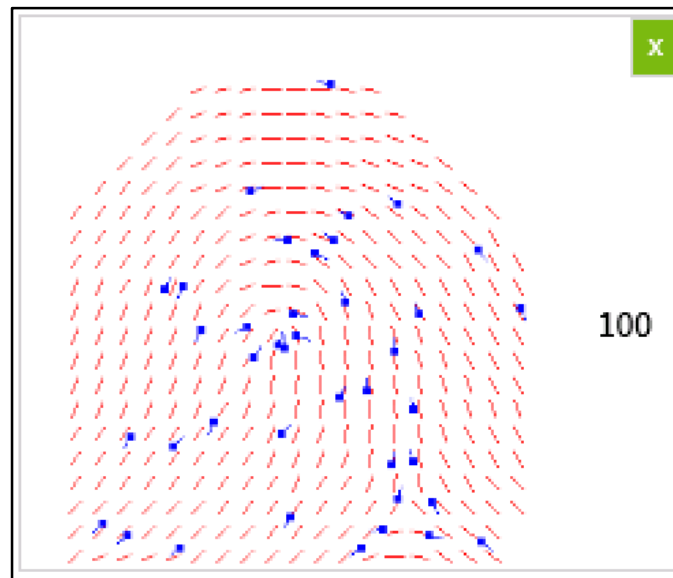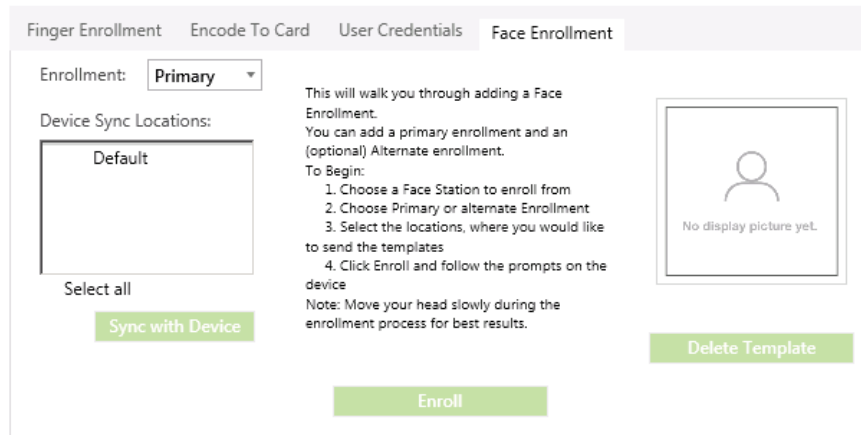
In the above example, you can see that the **middle** of the finger is placed in the middle of the scanner. You can clearly see the ridges of the fingerprint and the quality score is at 100% (Quality scores are only available when enrolling from the BioMini USB scanner).

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 ID Enterprise with the "Enrollment" option applied within the device settings.

| Finger Enrollment | Encode To Card | User Credentials | **Face Enrollment** |

Enrollment: Primary ▾

Device Sync Locations:

Default

Select all

Sync with Device

This will walk you through adding a Face Enrollment.
You can add a primary enrollment and an (optional) Alternate enrollment.
To Begin:
  1. Choose a Face Station to enroll from
  2. Choose Primary or alternate Enrollment
  3. Select the locations, where you would like to send the templates
  4. Click Enroll and follow the prompts on the device
Note: Move your head slowly during the enrollment process for best results.

No display picture yet.

Delete Template

Enroll

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 ID Enterprise Configuration Guide included within the BioConnect ID Enterprise package.

8. Installation Troubleshooting

8.1 Installation stalled at "Publishing product information"

> Please wait while the Setup Wizard installs BioConnect. This may take several minutes.
>
> Status:
>
> Publishing product information
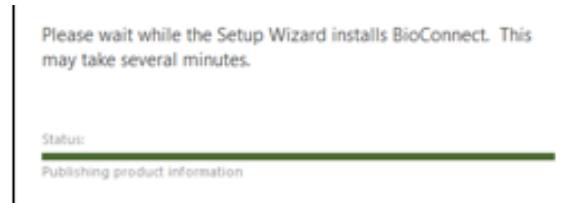
Solution:

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

> **Database Import Sync** ✕
>
> ❗ Could not connect to Server. Potential causes could be invalid license or services not running.
>
> The open operation did not complete within the allotted timeout of 00:00:00.0021685. The time allotted to this operation may have been a portion of a longer timeout.
>
> **OK**
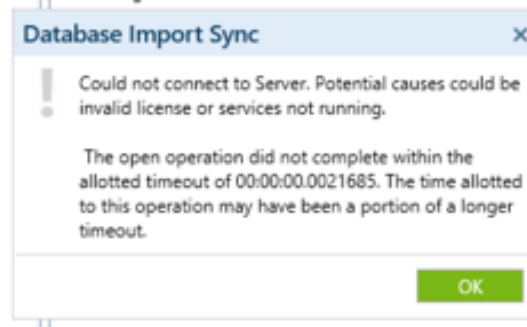
Solution:

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

BioConnect ID Enterprise 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 ID Enterprise was previously installed (BioConnect ID Enterprise v2.0 or v2.5), you may have to delete the BioConnect ID Enterprise 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 ID Enterprise
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 ID Enterprise - The new certificate will be automatically generated

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

BioConnect ID Enterprise 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" to acquire a new license.

To manually stop the BioConnect ID Enterprise 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 ID Enterprise 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

![enterprise logo](b.)

9. Additional Assistance

If you encounter issues during the BioConnect ID Enterprise 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 ID Enterprise. 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)

Email:

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.
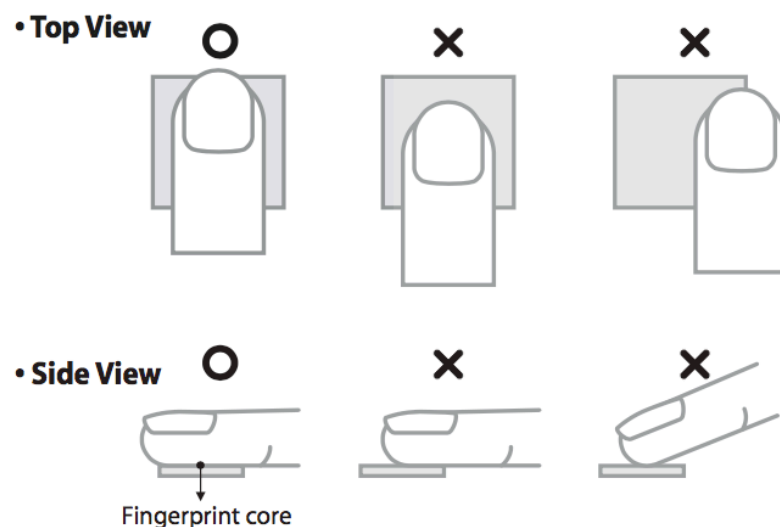
Figure 3

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).
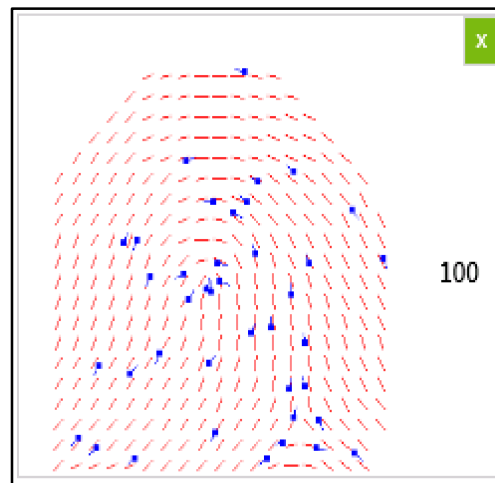
Figure 4

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).

Enrolled Only Finger Tip

Too Narrow Part Enrolled

Enrolled Only Finger Side
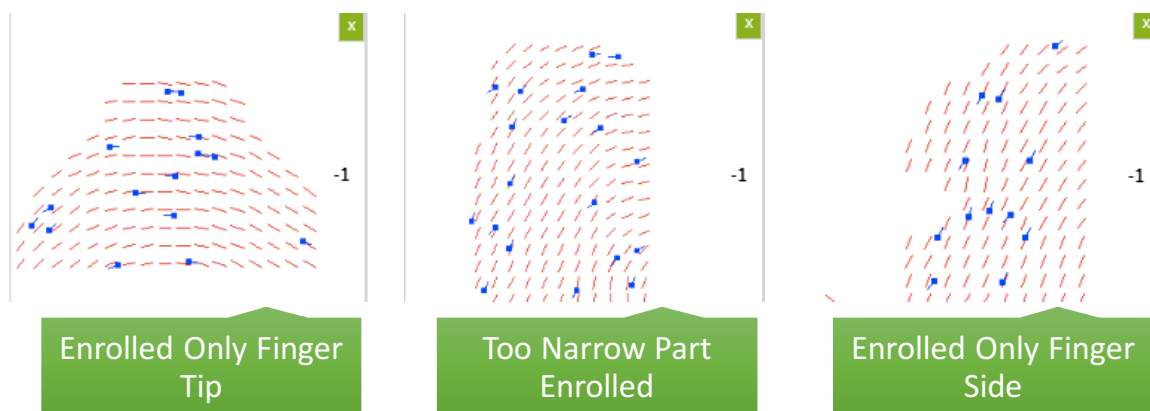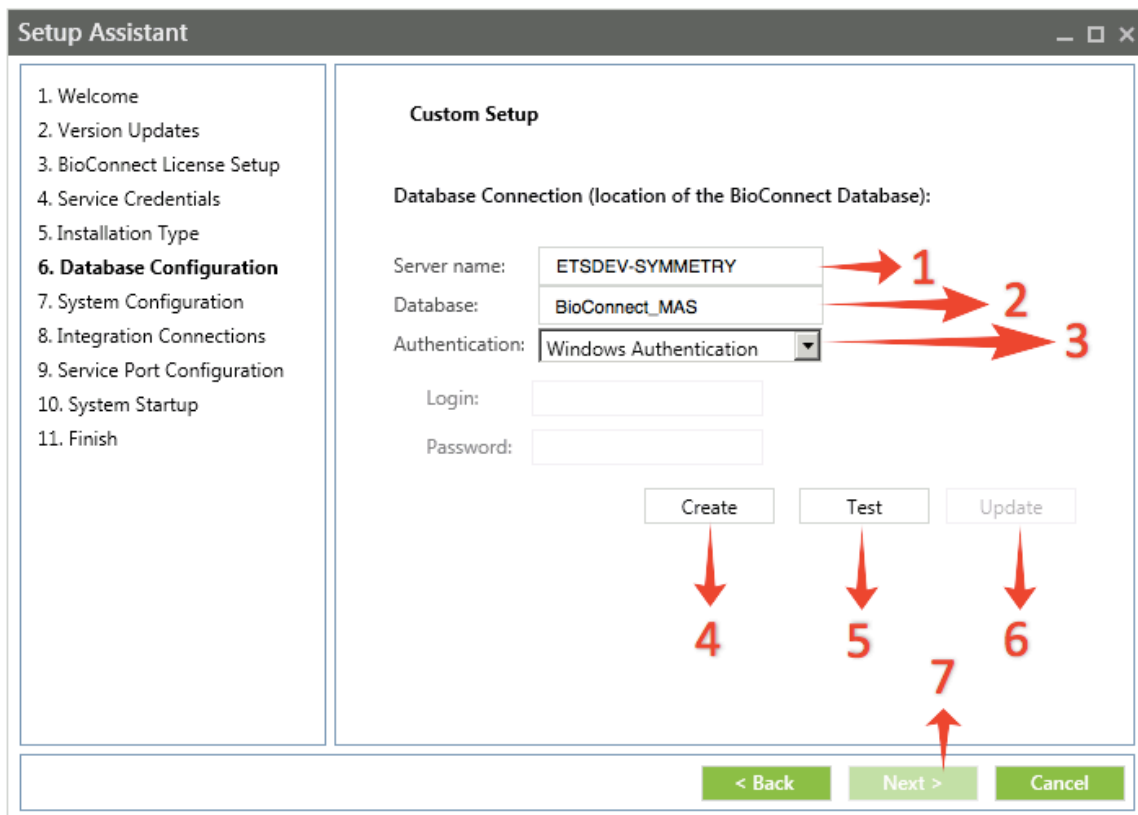
Figure 5

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 ID Enterprise.

2. In **Database** field, you can create a name for BioConnect ID Enterprise Database. In this example, we name it 'BioConnect_MAS'.

3. Select "Windows Authentication" in **Authentication** field.

4. Click [Create] to create a new BioConnect ID Enterprise 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 Step 9 (page 18).

Appendix C- Windows 7 Compatibility Mode

To make sure BioConnect ID Enterprise 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
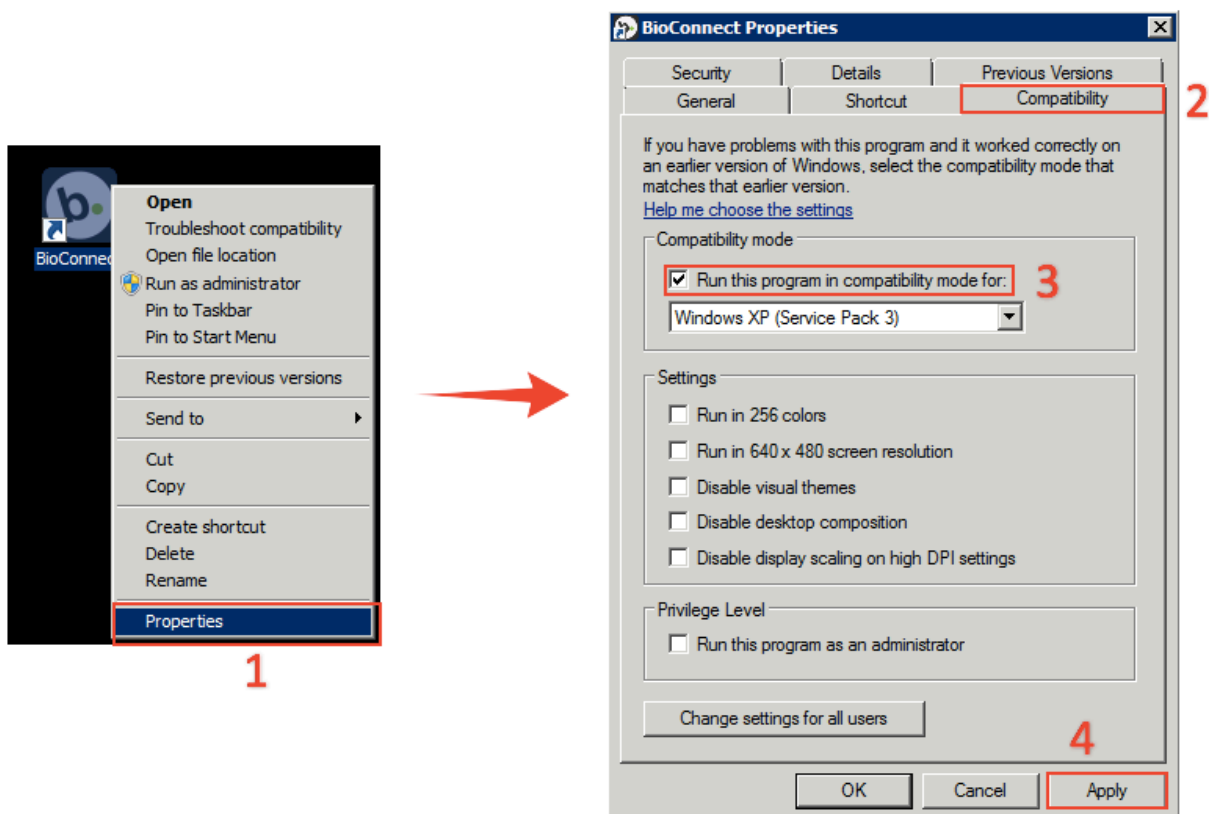
Appendix D- BioConnect ID Enterprise Pro Installation

Before you begin ensure you have the following:

- BioConnect ID Enterprise Pro Install Package Contents (Documentation, Firmware Files, Utilities and Software)
- BioConnect ID Enterprise Pro 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 ID Enterprise Pro 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 ID Enterprise Pro 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. (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" 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.
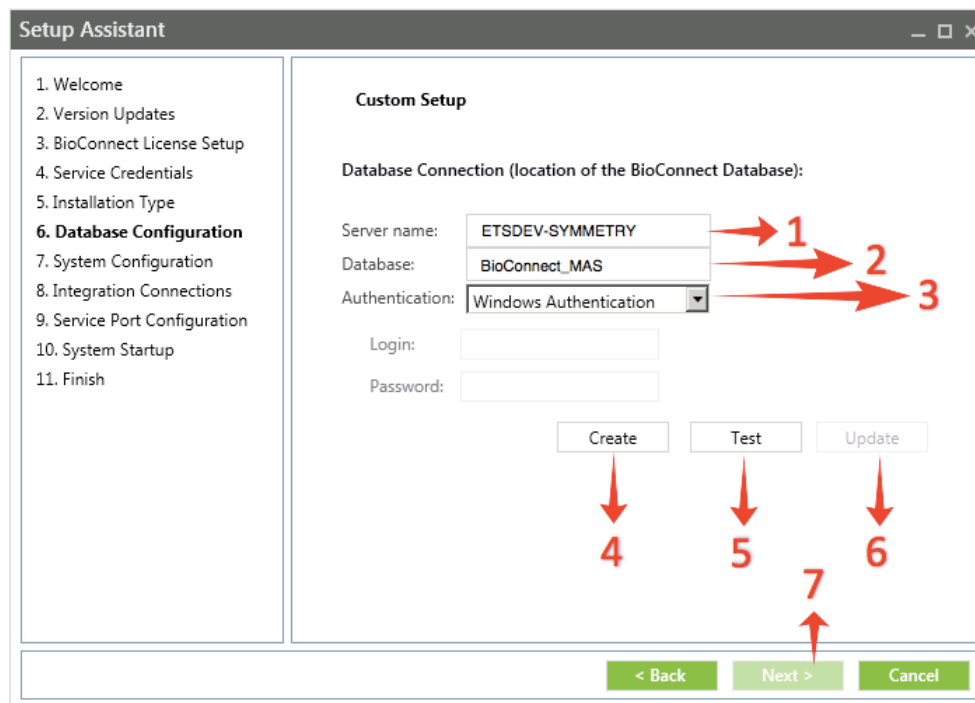
Editing Configuration File- BioConnect MAS

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 ID Enterprise services by clicking [StartServices] under 'BioConnect Utilities' Folder
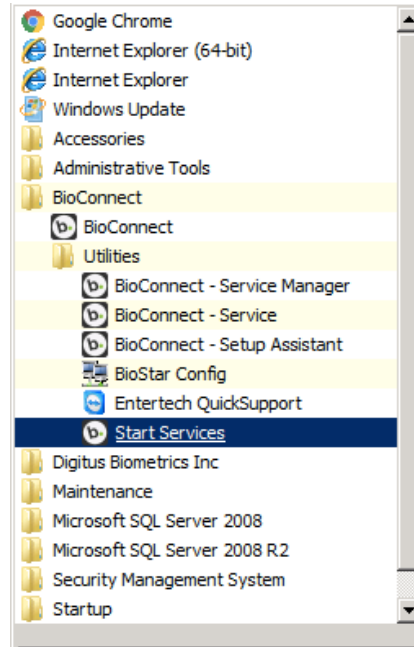
Editing Configuration File- BioConnect SAS

After completing Bioconnect MAS/SAS Server installation with BioConnect ID Enterprise 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
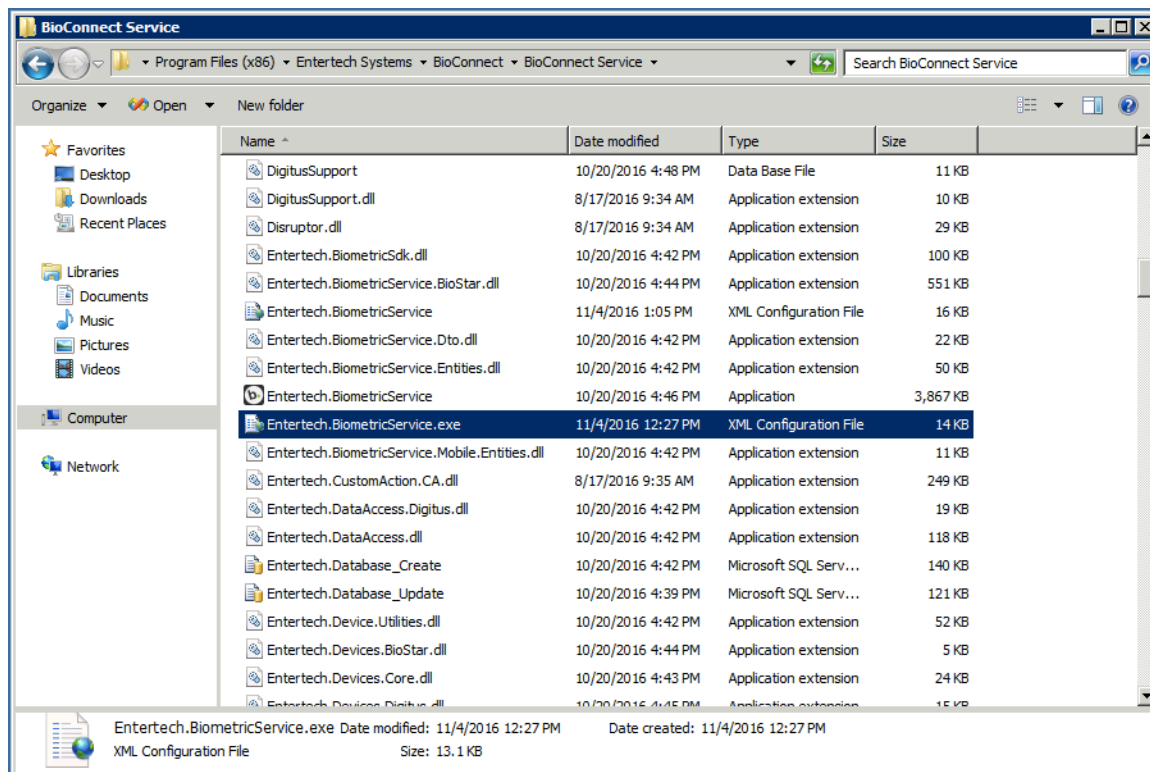
3. Search for the following line:
<add name="DefaultConnection" connectionString="Data Source = |SQL/CE|"/>

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;"/>
```
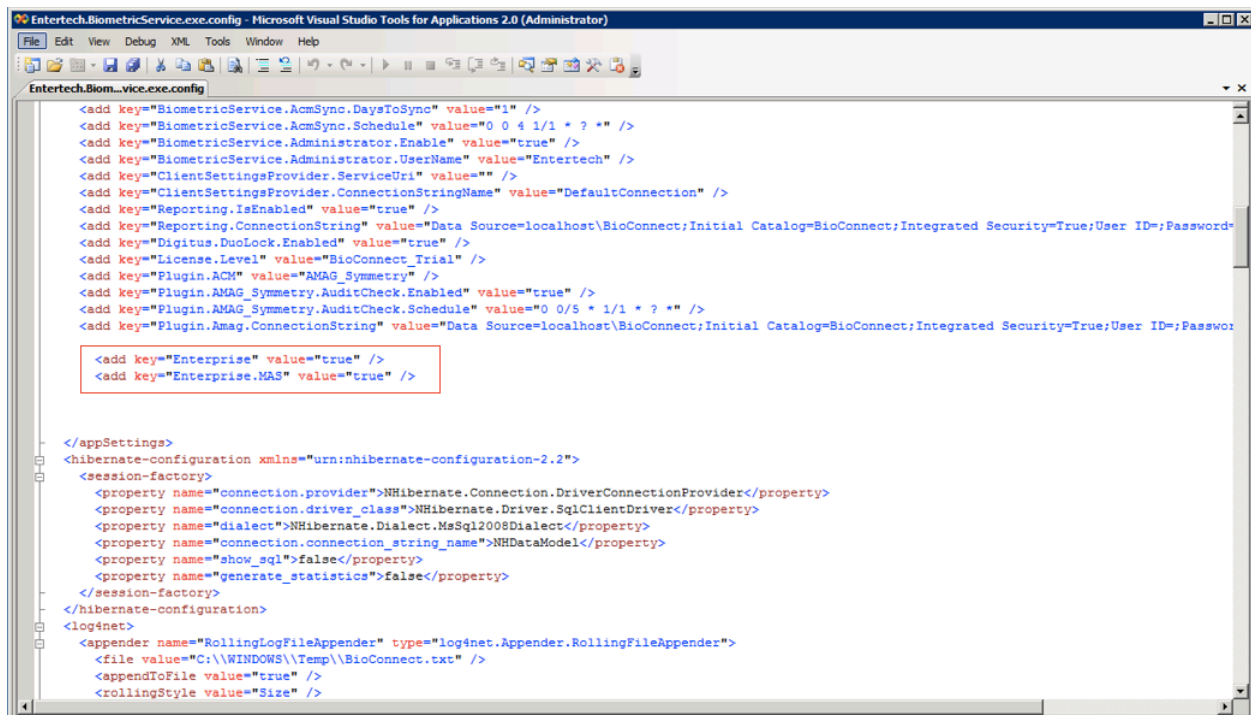
NOTE: ServerName\Instance (Data Source) is an example location, customer will need to provide the SQL location of the BioConnect MAS database. **ServerName** (Initial Catalog) is also an example name, customer will provide the BC MAS database name.
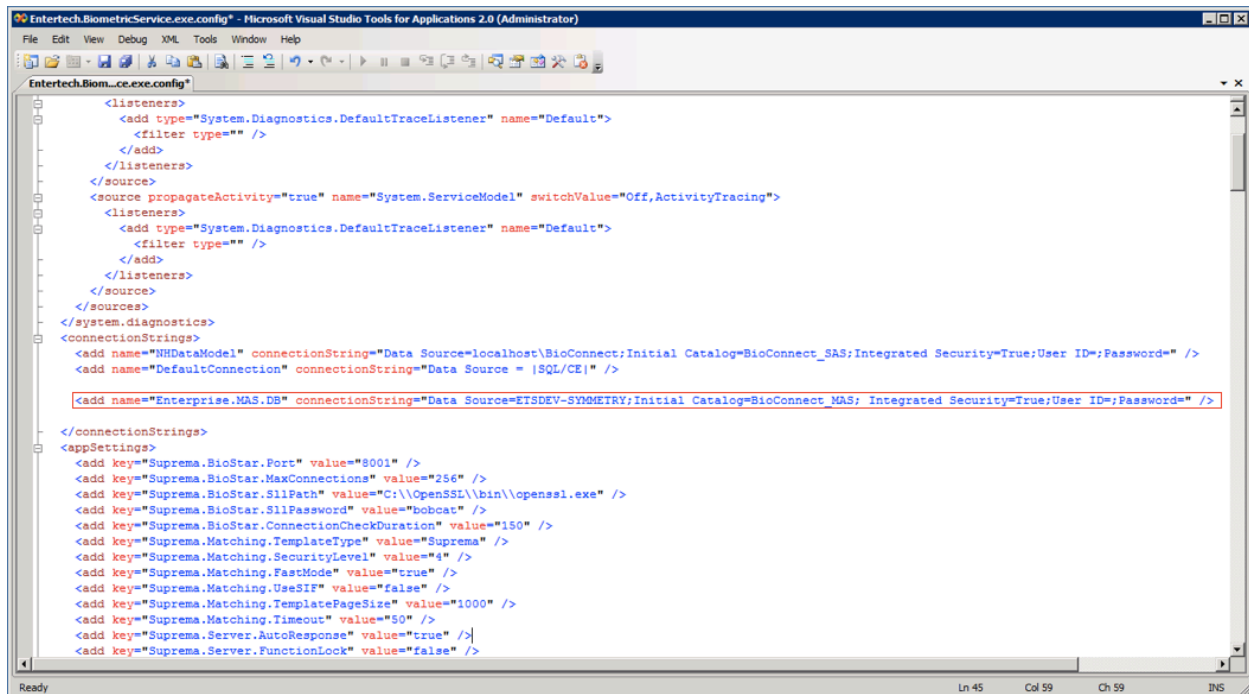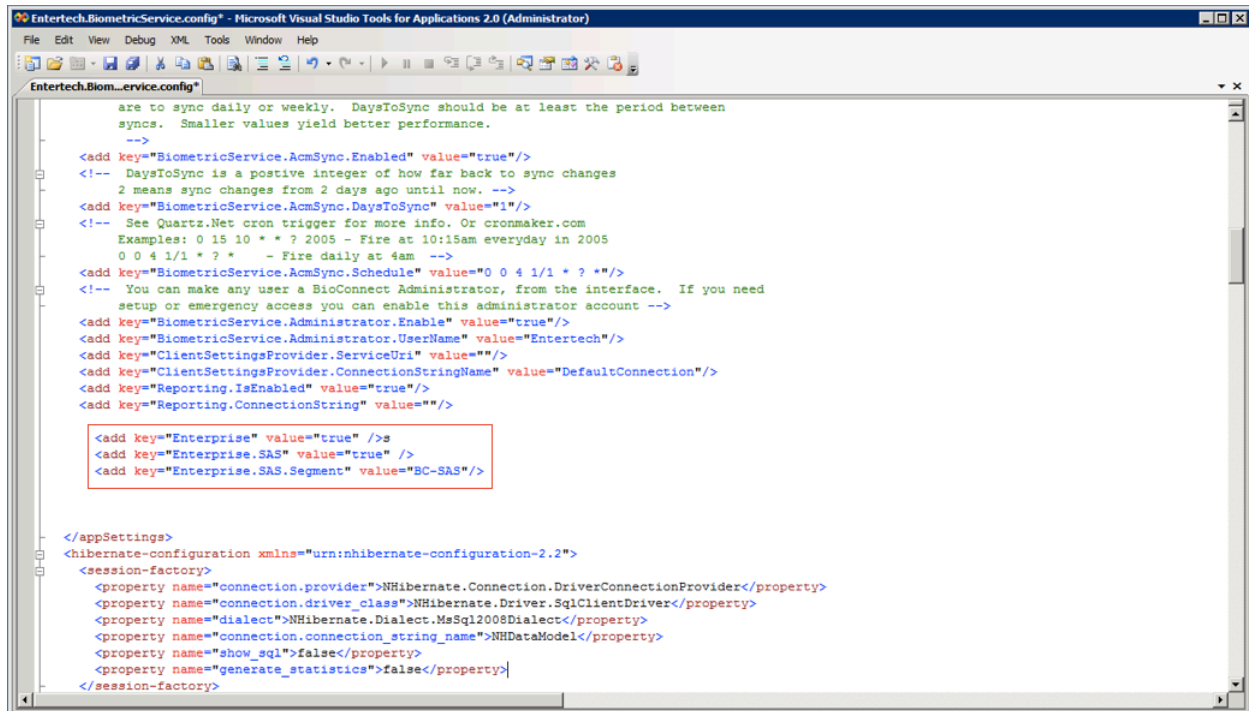
5. Search for the following line:

```
</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"/>
```

```
are to sync daily or weekly.  DaysToSync should be at least the period between
syncs.  Smaller values yield better performance.
    -->
<add key="BiometricService.AcmSync.Enabled" value="true"/>
<!-- DaysToSync is a postive integer of how far back to sync changes
    2 means sync changes from 2 days ago until now. -->
<add key="BiometricService.AcmSync.DaysToSync" value="1"/>
<!--  See Quartz.Net cron trigger for more info. Or cronmaker.com
    Examples: 0 15 10 * * ? 2005 - Fire at 10:15am everyday in 2005
    0 0 4 1/1 * ? *   - Fire daily at 4am  -->
<add key="BiometricService.AcmSync.Schedule" value="0 0 4 1/1 * ? *"/>
<!--  You can make any user a BioConnect Administrator, from the interface.  If you need
    setup or emergency access you can enable this administrator account -->
<add key="BiometricService.Administrator.Enable" value="true"/>
<add key="BiometricService.Administrator.UserName" value="Entertech"/>
<add key="ClientSettingsProvider.ServiceUri" value=""/>
<add key="ClientSettingsProvider.ConnectionStringName" value="DefaultConnection"/>
<add key="Reporting.IsEnabled" value="true"/>
<add key="Reporting.ConnectionString" value=""/>

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


</appSettings>
<hibernate-configuration xmlns="urn:nhibernate-configuration-2.2">
  <session-factory>
    <property name="connection.provider">NHibernate.Connection.DriverConnectionProvider</property>
    <property name="connection.driver_class">NHibernate.Driver.SqlClientDriver</property>
    <property name="dialect">NHibernate.Dialect.MsSql2008Dialect</property>
    <property name="connection.connection_string_name">NHDataModel</property>
    <property name="show_sql">false</property>
    <property name="generate_statistics">false</property>
  </session-factory>
```
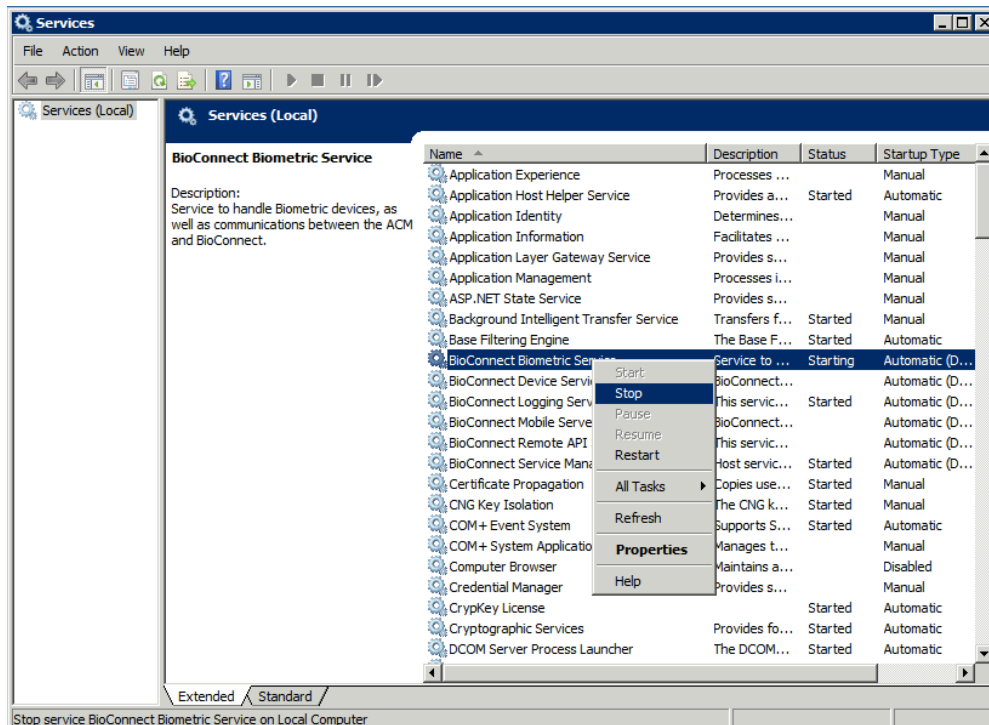
7. Save and Exit from Configuration File

8. Start the BioConnect ID Enterprise services by clicking [StartServices] under BioConnect Utilities Folder
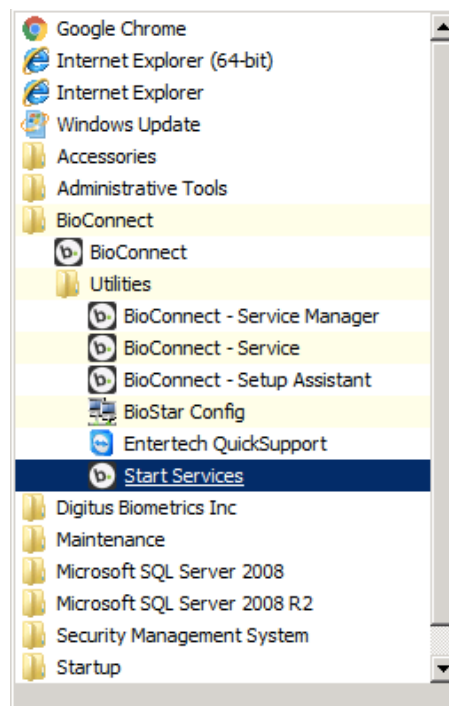
Appendix E- Configuring Symmetry for BioConnect ID Enterprise

1. Login to Symmetry and ensure that you have a DataConnect License installed. For Symmetry Enterprise customers, this license is automatically included with the Enterprise software, so an additional license is not necessary.

2. (Optional) Symmetry has a Biometric Enrollment button which can be linked to BioConnect ID Enterprise. This button will open the BioConnect utility when clicked and with Symmetry version 8 or higher, it will open directly to the cardholder profile that is currently open. To configure this, settings must be added on the Server and Clients you wish to have this feature on - See the following steps to configure.
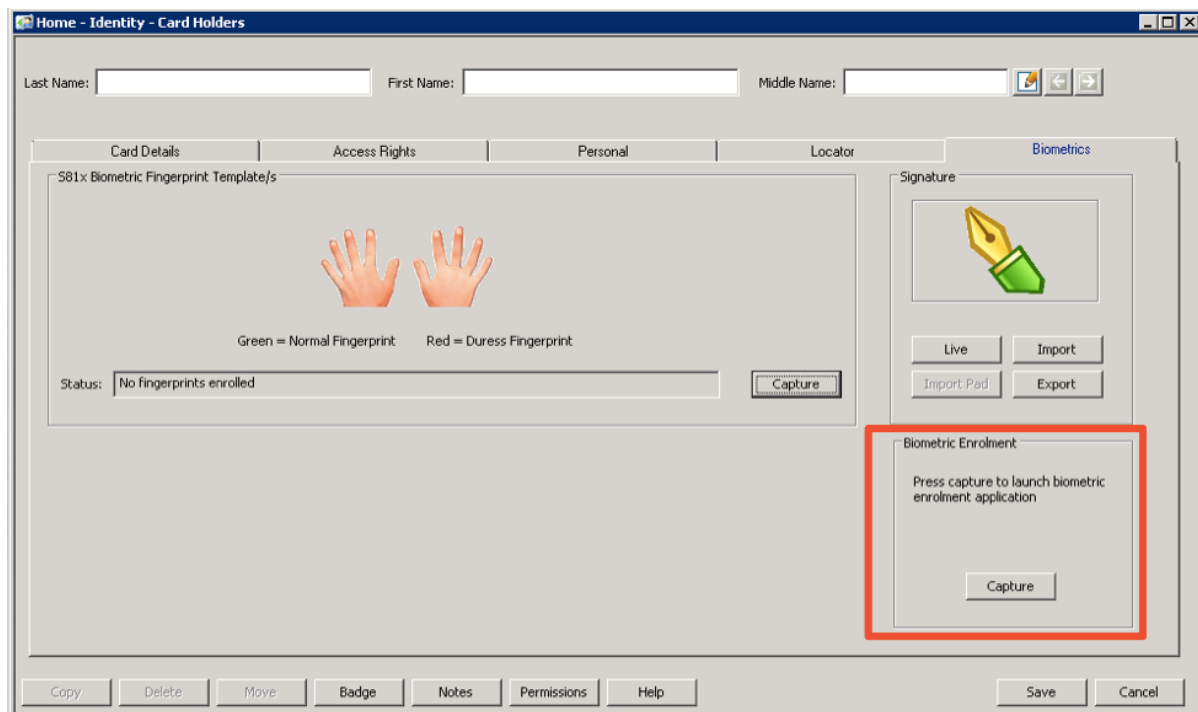
3. To enable the capture button, you must add the following text to the **bottom** of the multimax.ini file. Open the configuration file by clicking the Windows Start button > search for **multimax.ini** and open the file with NotePad.

4. Enter the following text at the bottom of the multimax.ini file:

[BioEnrolment]
CommandLine=CardNumber
BioEnrolmentActive=1
Directory=C:\Program Files (x86)\Entertech Systems\BioConnect\BioConnect Enrollment Utility\
Application=BioConnect.Client.UI.exe
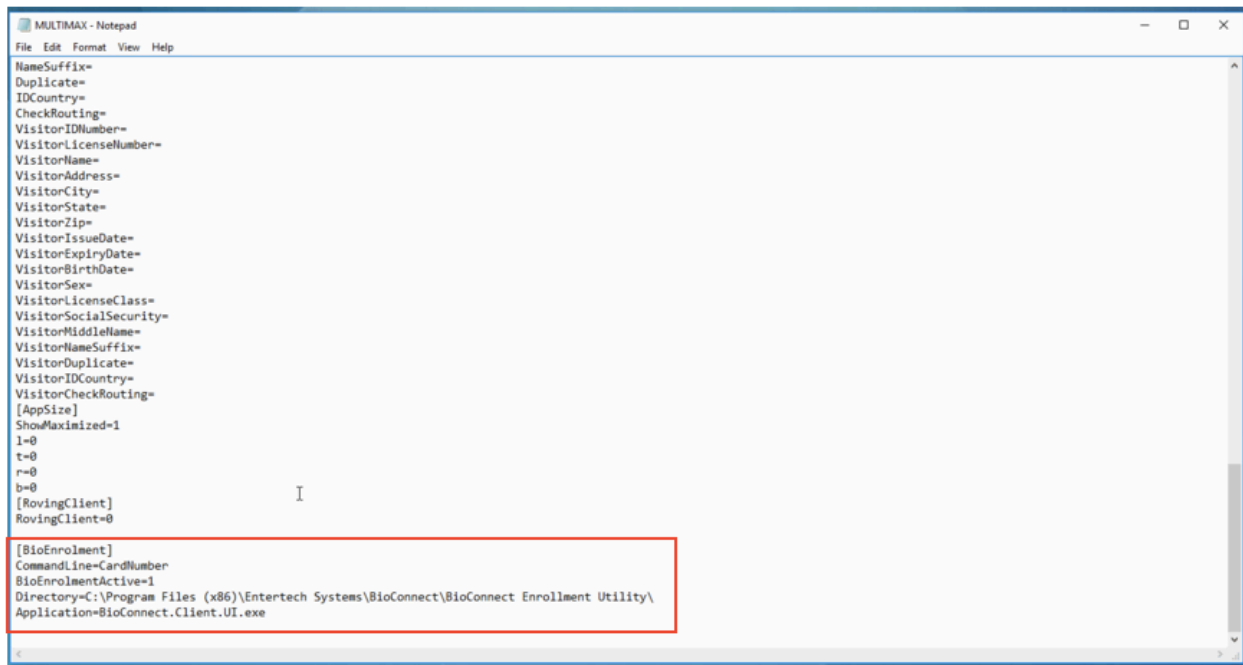
5. Save and close the file.

6. Restart the Symmetry services (SMS Services)
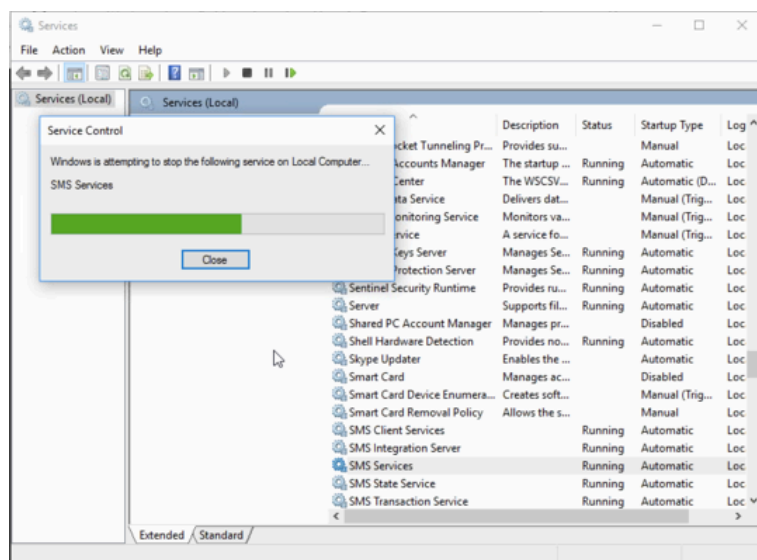
Appendix F- Dashboard Quick Review

Menu: This Menu consists of the Synchronization tools (Synchronize with Devices or Access Control Software), as well as software configuration options.

Navigation Tools: There are shortcuts available in each section to assist you with navigating throughout the software.

Quick Enrollment: This is where you conduct all biometric enrollments or Template on a Card encoding.

Support: This will direct you to BioConnect ID technical support website.

BioConnect

☰ Monitoring   Log Out

Michael
Default

Dashboard
Quick Enrollment
User Management
Device Management

Support
About

System Overview

Users
Active Users
3
Enrolled Users
3
Total Users
3

100%

Readers
Readers Online
2
Enrolled Readers
0
Total Readers
12

16%

Quick Enrollment
Click 'Enroll Biometrics' to add templates to users.

Enroll Biometrics

User Management
Click 'Manage Users' to edit and update user settings

Manage Users

Device Management
Click 'Manage Devices' to add devices and configure settings

Manage Devices

Synchronization | Completed at 6:32:55 PM

Monitoring: This feature allows you to view system events including reader status messages, or BioConnect ID Enterprise user account login/activity data.

System Overview: This feature allows you to view the user and reader onboarding status by showing number of users (by active users, enrolled users, total users), number of readers (by readers online, enrolled readers, total readers) as well as the percentages of active users and readers online.

Device Management: Here you can check the status of the readers or complete tasks such as firmware updates, add new devices, or configure reader settings.

About: This will show you the software version of your client and server, technical support contact information and the software expiry date.

Synchronization Status: Data displayed here will inform you of the current status of the synchronization between your access control software and BioConnect

User Management: Here you can see all of the users that have synchronized over from the access control software.