

BioConnect v3.6

Software Configuration Guide

Revision 1.3



Table of Contents

1. Support	3
2. Software Configuration	4
2.1 Root Account Login	4
2.2 Configuration Options	4
2.2.1 BioConnect Configuration	5
2.2.2 BioConnect Reporting Configuration	6
2.2.3 Licensing Configuration	7
3. Client Navigation	8
4. User Management	10
4.1 Credentials Tab	10
4.2 Administration Tab	11
4.2.1 Username and Password	11
4.2.2 Active Directory	12
5. Quick Enrollment	14
5.1 Fingerprint Enrollments	
5.2 Encode to Card (Template on a Card)	16
5.3 User Credentials	
5.4 Face Enrollment (FaceStation)	17
6. Device Management	
6.1 Adding a Device	
6.2 Recommended: Adding a Device in DHCP	
6.3 Advanced: Adding a Device using BioStar Config	
6.4 Reader Setting Definitions (Device Management)	
6.4.1 Details Tab	
6.4.2 General Information Tab	
6.4.3 Network Details Tab	
6.4.4 Wiegand Details Tab	
7. Synchronization	27
8. Reporting	28
9. Service Manager	29
9.1 Services	29
9.2 Connections	30
9.3 Service Logs	
9.4 Database Backup	
10. Advanced: BioStar Configuration Software	
11 Additional Assistance	33



1. 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



2. Software Configuration

2.1 Root Account Login

The default "root" level account is (case sensitive):

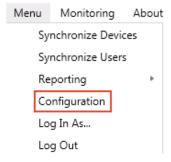
Username: Entertech Password: Bobcat

This account's password can be changed within the configuration window (Menu > Configuration).



2.2 Configuration Options

To open, click [Menu] > [Configuration].

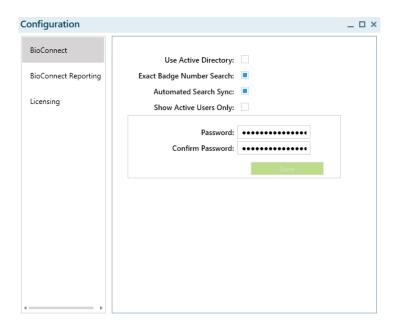


You will see three configuration tabs on the left pane: BioConnect, BioConnect Reporting, Licensing.



2.2.1 BioConnect Configuration

This section of the software is primarily used by the root level Administrator account "Entertech". This allows you to turn on/off Active Directory, set the root account password, check the status of your license or update the existing license.



Use Active Directory

If you enable the Use Active Directory option, all Username and Passwords will no longer be able to login to the software with the exception of the root level administrator account. Only accounts that are registered on the domain and linked to a cardholder within BioConnect will be able to access the software. To add Active Directory accounts, go to the cardholder's profile within User Management (See section 4.2)

Exact Badge Number Search

This option requires that you type the exact credential number of the cardholder you are searching for instead of a portion of the credential number. For example, if you are searching for the card "18273", with this checkbox left unchecked, you will get the record with the card "18273", but you also get "182731323, 123182732, 918273" because all of these cards consist of the 18273 digits. To protect against this, you can choose to only bring results for the exact number you searched for.

Automated Search Sync



This option allows you to enable or disable the automatic database sync that occurs every time you press the [Search] button or open Quick Enrollment or User Management. In large systems, this can improve the speed of the software and will result in the software only synchronizing every 5 minutes, or anytime a manual synchronize is triggered from the software menu.

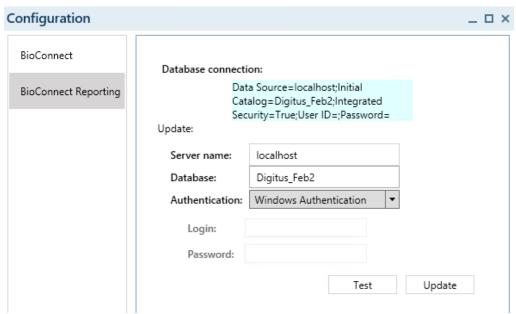
Show Active Users Only

This option allows you to filter the BioConnect user list to display only active users from the ACM. The default setting is to show all users synchronized from the ACM, both active and inactive.

2.2.2 BioConnect Reporting Configuration

The 'Reporting' section of BioConnect allows you to take the system's event data, sort it, and export customized reports based on your specifications.

Before using the reporting section itself, you'll need to enter connection details for the database which is storing your event logs. This is generally the same database used to install / setup BioConnect, so use those connection settings if you're unsure. By default, the Reporting connection setting will match your existing BioConnect database. See below:

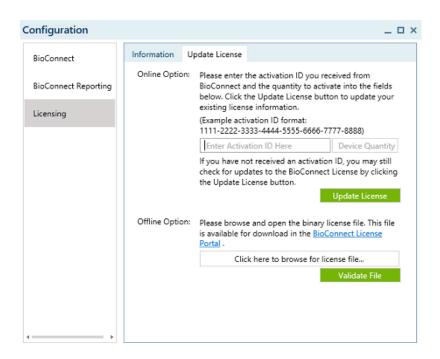


The [Test] button will confirm whether your settings established a proper connection to the database. Once you've tested the connection, click [Update] to save those settings.



2.2.3 Licensing Configuration

After setting up your initial trial or license, you can always update an existing license by going to **Menu -> Configuration -> Licensing** from the BioConnect core application.





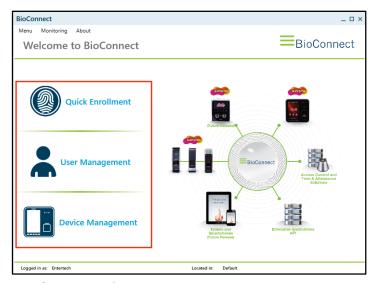
3. Client Navigation

This is the BioConnect home screen. Here you have 3 options to choose from:

Quick Enrollment: This is where you conduct all biometric enrollments or Template on a Card encoding. (See section 5 for more information.)

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

control software. (See section 4 for more information.)



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. (See section 6 for more information.)

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

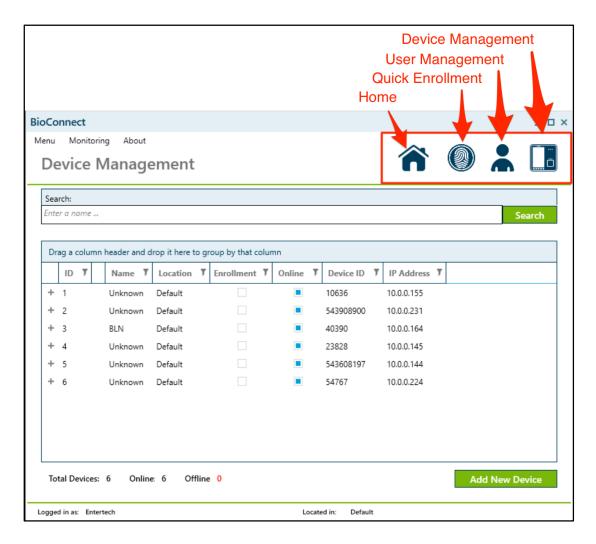
Monitoring: This feature allows you to view system events including reader status messages, or BioConnect user account login/activity data.

About: This will show you the

software version of your client and server, technical support contact information and the software expiry date.





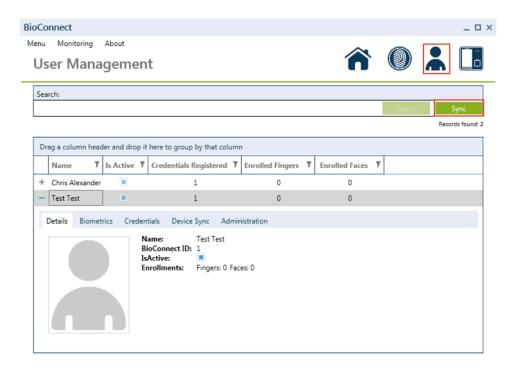


There are shortcuts available in each section to assist you with navigating throughout the software.



4. User Management

The User Management section of the software allows you to view all of the users who have been synchronized from your access control software. You can sort/filter the users to see details such as who has been enrolled. Click [Sync] at any time to re-sync the data in the list.



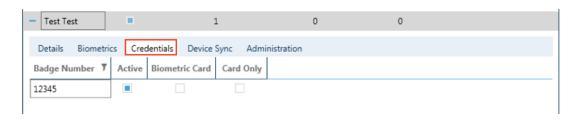
4.1 Credentials Tab

All badges are listed under the Credentials tab of the user profile.

- 1. Active Checkbox: The cardholder must have an active credential within the access control software to appear "active" within BioConnect. If there are no active credentials, the user will appear inactive within BioConnect. Please see below for some definitions of the various options:
- 2. Biometric Card Checkbox: This option allows you to choose which card is sent to the access control panel in the event of a Biometric-Only identification. If no card is selected, the system will assume the first card listed. This is only necessary when a cardholder has multiple credentials.



3. Card Only Checkbox: This checkbox allows the selected card to be accepted by the reader without a biometric verification. If the reader is configured for Card + Finger, this will allow the card to gain access immediately without a biometric verification. This is a useful feature for people who are not going to be enrolled, or people who have not enrolled yet but still need access.



4.2 Administration Tab

The Administration tab allows you to give access to the BioConnect software. This can be done using a Username and Password, or by using Active Directory. Cardholders are linked to Usernames or Windows Credentials to gain access to the BioConnect software to conduct enrollments.

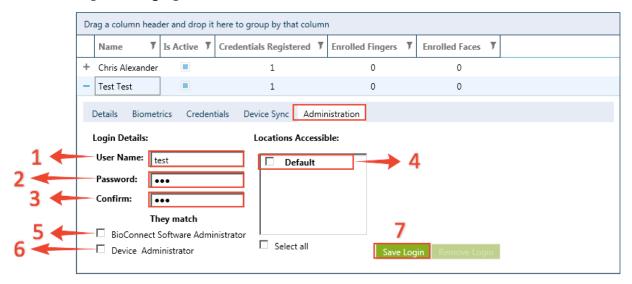
4.2.1 Username and Password

To provide access using Username and Password, Active Directory must be turned off. This can be turned off within the Configuration section of the software.

- 1. Enter the username into the text field that you would like to provide access to. In the example below, the username is 'test'.
- 2. Enter a value into the password field (For example, "123").
- 3. Retype the password in the text field to confirm it.
- 4. Choose a location(s) that the person will be working from. This will allow them to see the enrollment readers that are at that specific location.
- 5. Decide if the user is going to be an Administrator or Standard User. Admins can access the entire software including device management, as well as providing other cardholders access to the software. Standard Users can only login to the software to conduct enrollments.
- 6. Decide if the user is a Device Administrator. Device Admins are able to login to the on-screen menus of devices that have LCDs. This level of access should be restricted to network administrators.



7. Click [Save Login]

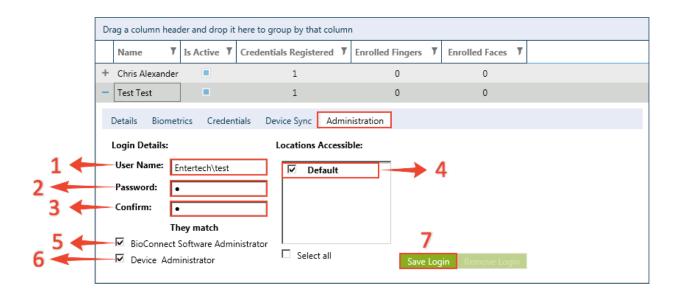


4.2.2 Active Directory

To provide access using Active Directory, the option must be enabled within the Configuration section of the software. Once this is enabled, the only user who can access the software using a Username and Password is the root level administrator "Entertech".

- 1. Enter the "DOMAIN\username" into the username field that you would like to provide access to. In the example below, the domain is 'Entertech' and the Windows Account username is 'test'.
- 2. Enter a value into the password field (For example, "1"). This will not be able to be used for access to the software, it is simply a placeholder. You do not need to use the person's actual Active Directory password.
- 3. Retype the password in the text field to confirm it.
- 4. Choose a location(s) that the person will be working from. This will allow them to see the enrollment readers that are at that specific location.
- 5. Decide if the user is going to be an Administrator or Standard User. Admins can access the entire software including device management, as well as providing other cardholders access to the software. Standard Users can only login to the software to conduct enrollments.
- 6. Decide if the user is a Device Administrator. Device Admins are able to login to the on-screen menus of devices that have LCDs. This level of access should be restricted to network administrators.
- 7. Click [Save Login]

bioconnect.





5. Quick Enrollment

5.1 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]

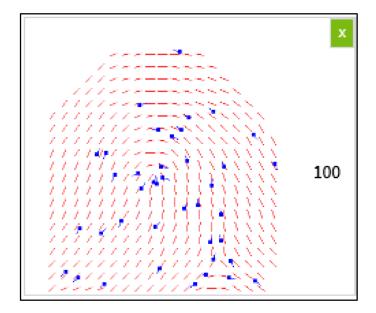
The enrollment process will ask you to place your finger 3 times. Ensure that you lift your finger up off of the scanner between each scan. Doing this allows for more unique data points to be captured and creates a higher quality enrollment.

NOTE: If you do not see the device in the list that you are looking for, please see section 6.4 to enable the device as an enrollment reader.

The [Sync] button performs a check on the Access Control database for any changes to cardholder information.



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.

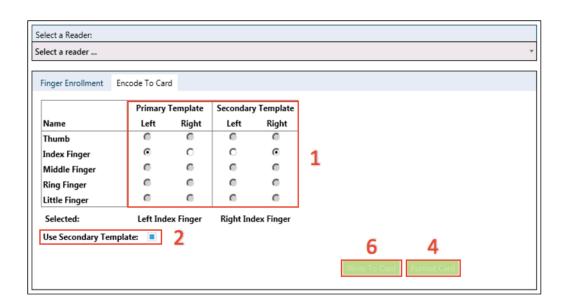


5.2 Encode to Card (Template on a Card)

When working with Mifare or iClass smartcards, you have the option of encoding two templates onto the card itself for verification. This allows you to carry your templates with you to the reader instead of having the reader use the Server as it's matching database. This is common in locations where networking is difficult.

To encode templates onto the card:

- 1. Choose a template for your primary and secondary template.
- 2. If you prefer to only write one template, you can uncheck "Use SecondaryTemplate".
- 3. Choose a reader that is smart card compatible (iClass or Mifare) as your enrollment device.
- 4. Click [Format Card].
- 5. Hold the Smart Card up against the front of the reader until you hear a "success" chime.
- 6. Click [Write Card].
- 7. Hold the card up against the front of the reader until you hear a "success" chime.



Once this completes, the template is now located on the internal memory of the card. You will need to configure the readers to accept Template on a Card using the BioStar



Configuration Software. For more details on this software, see the <u>section 10</u> in this quide for BioStar Configuration Software.

5.3 User Credentials

For details on User Credentials - Please see section 4.0

5.4 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 reenroll 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].

Last Updated: December 2016 | Page 18 of 33



6. Device Management

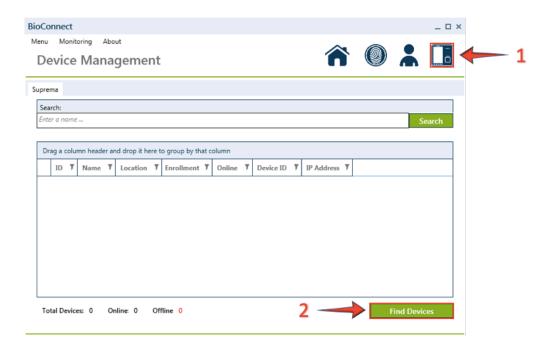
6.1 Adding a Device

The easiest way to configure and network Suprema readers is to connect them into a router. All Suprema readers come in DHCP mode out of the box. To network them, simply connect them into a network that supports DHCP. If you connect the device directly to a standalone "dumb" switch or directly to your PC, you won't acquire an address. You can reset the devices back to a default IP address of 192.168.0.1 - To do this, please see the User Manual for the specific device type, included with the BioConnect Install Package.

6.2 Recommended: Adding a Device in DHCP

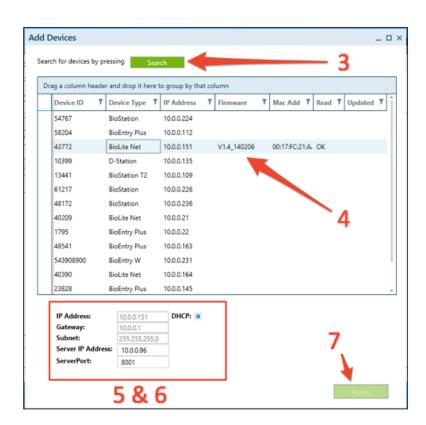
NOTE: Your device must be on the same network as your BioConnect Client software. This means, the client should be installed on a local PC or laptop, acquiring an IP address in the same range/subnet as the readers and connected back to the BioConnect server.

- 1. Go to **Device Management**.
- 2. Click [Find Devices]





- 3. Click the [Search] button to find readers on the network
- 4. Choose your reader If the "Read" column says OK, the software connected to the device successfully. If it says "FAIL", this means that the connection was not successful. The device may already be connected to a server or at an unreachable IP address.
- 5. Choose to either use DHCP, or statically set the IP Address, Subnet and Gateway.
- 6. Enter the IP Address of the server that you want the device to connect to with a Server Port of 8001 (Generation 1 Device) or 51212 (Generation 2 Device).
- 7. Click [Apply]
- 8. The device will automatically show up within the Device Management window within about 30 seconds. If the device does not show up, ensure that you have no firewalls blocking TCP Port 8001/51212.

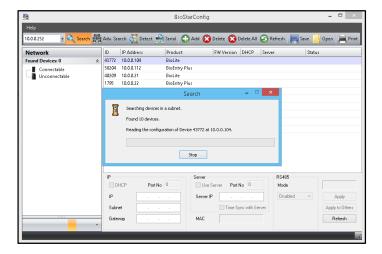




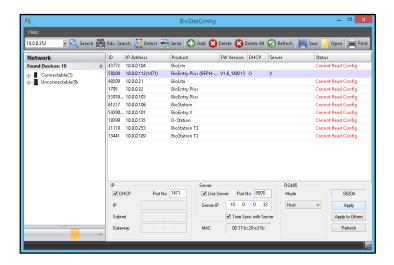
6.3 Advanced: Adding a Device using BioStar Config

BioStar Config is an IP Network utility included with BioConnect that can help search for hard to detect devices. You can find the executable file on the Server at C:\Program Files(x86)\Entertech Systems\BioConnect\BioConnect Service\Utilities\BioStarConfig.exe. This file can be copied onto a laptop for convenience.

- 1. Open BioStar Config
- 2. Click the [Search] button



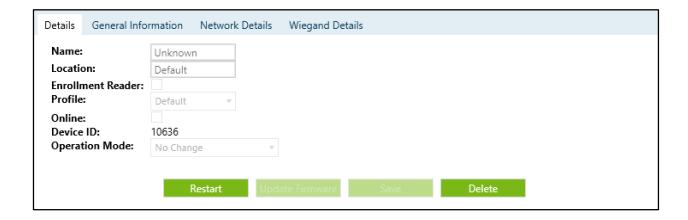
3. If your reader appears, click on the device and enter the desired network/server details at the bottom and click [Apply].





4. If you cannot find your device using the standard search, click [Advanced Search]. You may have to install a third party network search tool called WinPcap. This is also included in the same directory as BioStar Config on the server.

6.4 Reader Setting Definitions (Device Management)



6.4.1 Details Tab

Name: The name you would like to give the reader. It is recommended to keep this consistent with the name you give the reader within the access control software.

Location: This is the location/region of the reader. This location is used throughout the software primarily to limit which enrollment readers are available for use by the people performing enrollments. For example, you may not want people in New York having to filter through enrollment devices across the country to find the one nearest to them. You can limit which locations a user has access to in the User Management section of the software.

Enrollment Reader: This option allows you to designate the reader as a possible enrollment reader. Readers with this enabled can still operate as a production reader, but will be available within the Device list during the enrollment process.

Profile: This feature is for custom applications only. If a reader preset has been incorporated into the software license for your organization, you can use this feature to push down the specific configuration to the reader.



Online: This box will become active when the device is online.

Device ID: The device's serial number.

Operation Mode: The authentication mode of the reader. Possible presets are Card + Finger/Finger Only, Card + Finger, or Card Only. Below are some descriptions:

Card + Finger/Finger Only:

This mode will allow either Card + Finger OR Fingerprint Only to gain access to the reader. You can also enable "Card Only" within cardholders User Profiles within the User Management section of the software to achieve a Card OR Finger authentication mode using this option.

Card + Finger:

This option requires Card + Finger for authentication.

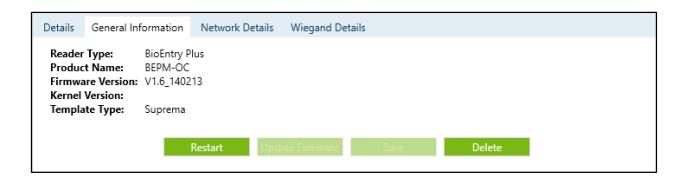
Card Only

This option will only allow cards to be used at the doors, no fingerprints.

Various operations modes which support PINs, such as 3-factor authentication (Card + Finger + PIN), are also included for supporting devices.

NOTE: If your preferred authentication mode is not listed, you will use the BioStar configuration software to configure these custom settings in the reader. Please see Section 10 of this guide on the <u>BioStar Configuration Software</u> for more details.

6.4.2 General Information Tab





Reader Type: This is the product version.

Product Name: The product code for the reader.

BEPM-OC	BioEntry Plus Mifare
BEPH-OC	BioEntry Plus Prox
BEPI-OC	BioEntry Plus iClass
BEWM-OC	BioEntry W Mifare
BEWH-OC	BioEntry W Prox
BEWI-OC	BioEntry W iClass SE
BST2M-OC	BioStation T2 Mifare
BLNM-OC	BioLite Net Mifare
BSM-OC	BioStation Mifare
BSH-OC	BioStation Prox

Firmware/Kernel Version: The current firmware/kernel installed on the reader. Note that firmware updates can be installed through the software, but Kernel updates **must** be upgraded at the reader itself using the onboard USB port.

6.4.3 Network Details Tab

The IP Address, Subnet and Gateway of the reader. Having DHCP enabled will cause the reader to look to the network for an IP address assignment. With it disabled, you can assign it your own address.

Server IP Address: The IP address of the server which you would like to have the device connect into. This should be the server where the BioConnect services are installed. The server **must** have a static IP address.

Server Port: The default port for the BioConnect server to listen on is either 8001 (Generation 1 Device) or 51212 (Generation 2 Device). Be sure that this is not blocked by your firewall.





6.4.4 Wiegand Details Tab

Facility Code: This is the facility code that will be sent to the panel (along with the matching card number) when a fingerprint is authenticated. (BioConnect reader can identify the Facility Code automatically, thus permanent Facility Code can be used in case of 'Biometric Only'.)

Card Format: The card format you want to use on the reader. Suprema readers are limited to 1 card format per reader. For your convenience, some of the most popular card formats are included within BioConnect:

- Standard 26 bit Wiegand
- 35 bit Corporate 1000
- 37 bit H10304

NOTE: You can set custom formats as well. Suprema readers are compatible with up to 64 bit cards, with a maximum of 32 ID bits. This can be customized by using the BioStar Configuration Software (Refer to <u>section 10</u> for more information.)

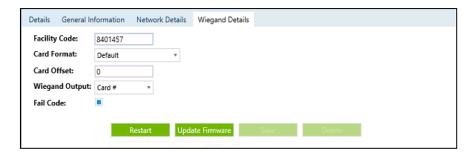
Card Offset: The card offset is used by some Access Control systems when they have duplicate card numbers across different card formats within their system. This feature adjusts for the card offset set within the access control software. If you are not using an offset, leave this value as 0.

Wiegand Output: This option allows you to send the User ID field instead of the card number to the panel after a successfull card or finger authentication at the reader. It is recommended that unless in rare cases, you should leave this option set to "Card ID".



Fail Code: The fail code will send the largest possible number within your card format when a failure occurs at the reader. For example, with 26 bit wiegand the largest number would be 65535. Failures include rejected fingerprint or card reads.

Delete Button: The [delete] button within the Device Configuration tabs allows you to remove a device that is no longer online or used within your system.





7. Synchronization

BioConnect is designed to make synchronization simple requiring no interaction from the user. There are three types of synchronizations that occur:

Automatic Sync:

The automatic synchronize occurs automatically every 5 minutes in the background. It is also triggered whenever you open the User Management section of the client, or do a search. This means that you do not have to wait 5 minutes for the data to synchronize if you need it immediately.

Manual User Sync:

The manual user synchronize feature can be activated at any time within the BioConnect client by clicking [Menu] > [Synchronize Users]. During normal use, this feature will not be required. Choose a date that you would like to synchronize from (The date will pull all changes that have occurred since that date). This is a helpful feature if a cardholder does not appear to have the most up to date information.

Manual Device Sync:

The manual device synchronize can be activated at any time within the BioConnect client by clicking [Menu] > [Synchronize Devices]. During normal use, this feature will not be required. Purpose of this synchronization is to push the user info and templates to the internal memory of the reader.

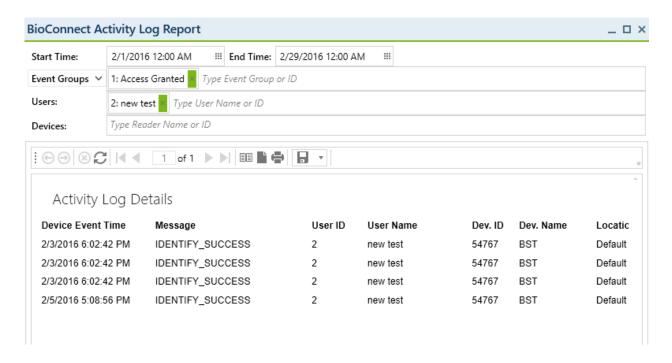
NOTE: The software also does a full re-synchronize each night. This helps by providing redundancy to ensure that all data was properly updated within the BioConnect software.



8. Reporting

The 'Reporting' section of BioConnect allows you to take the system's event data, sort it, and export customized reports based on your specifications. Reporting can be accessed by selecting [Menu] -> [Reporting] -> [Activity Log Report].

Reporting allows you to filter your event data by several categories, including date, event type, user and device. The event listing will be updated in real-time as you adjust your search parameters. See below:



These customized reports can be printed or exported to a separate document by using the icons directly above your report results. Simply hover over the icon to see its description. See below:



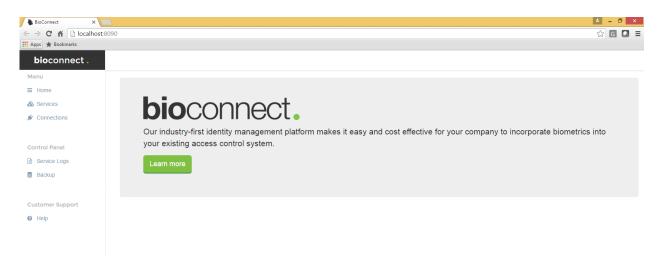


9. Service Manager

The Service Manager can be used to manage and monitor the overall status of, and perform diagnostic checks on, your BioConnect system.

The Service Manager is run in parallel to the BioConnect server itself, only requiring two prerequisite services to be running – BioConnect Logging Server Host and BioConnect Service Manager Host. If these aren't already running, they can be manually started from your Windows Services screen.

To open the Service Manager, search for 'BioConnect – Service Manager' in your Start menu, or enter 'localhost:8090' into a supported web browser (such as Google Chrome) on your BioConnect server machine.



9.1 Services

On the Services page, the core services hosting your BioConnect server can be managed.

You'll be able to view the current status of each service and a brief description of its function. Click [Start All] to automatically initiate the startup process for each service, or select an individual service to Start / Stop it. If you're manually starting a service, keep in mind that the BioConnect services need to be started in the following order:

1. Biometric Service, 2. Mobile Server, 3. Device Server, 4. Remote API Service.

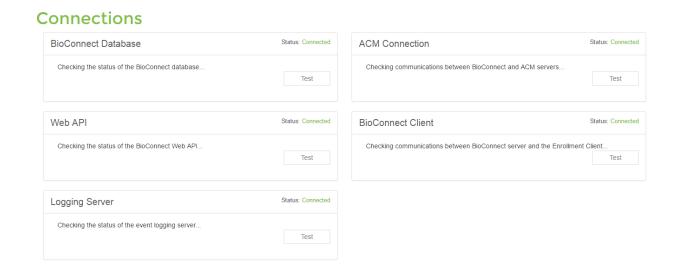


Services Below are the four core services needed to run the BioConnect server. Click 'Start All' to automatically start up all four elements of BioConnect. If you need to start or stop any of these services individually, do so in the following order. Refresh Start All Services Status: Running Status: Running 1. BioConnect Biometric Service 2. BioConnect Mobile Server Service to handle Biometric devices, as well as communications BioConnect service that provides matching to the variety of Stop Stop Status: Running Status: Running 3. BioConnect Device Server 4. BioConnect Remote API Service BioConnect service that is communicating to devices. This service is designed to provide support for the 2.6+ generation Stop Stop of BioConnect.

9.2 Connections

On the Connections page, the current status of several important connections can be viewed. These connections are essential to the proper functioning of your BioConnect system.

If any of the connections are displaying 'Disconnected', the connection is not functioning properly and requires an adjustment. Pay particular attention to the 'BioConnect Database' and 'ACM Connection', which control communication between your system data and ACM user information, respectively. These connection settings can be adjusted from the BioConnect Setup Assistant – see your Installation Guide.



Click [Test] to refresh any individual connection's status.

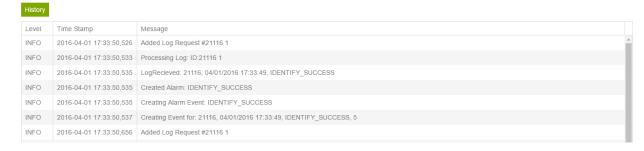


9.3 Service Logs

On the Service Logs page, event data will be displayed in real-time from your BioConnect system. This includes user access events, device network changes and other system wide events.

Real-Time Service Log

This page displays logs coming in from the BioConnect server. Below you'll see logs as they happen in real-time. To view all of the system's recent logs, click the 'History' button.



NOTE: All event data is cleared and refreshed when you leave the Service Logs page.

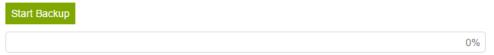
Click [History] to view all recent log events from the BioConnect server.

9.4 Database Backup

On the Backup page, you're able to save a copy of your BioConnect system data, which can be restored later in the event of a system wide failure, server migration, or audit requirement.

Database Backup

Click 'Start Backup' to begin backing up your BioConnect system data. This backup file is saved to the C drive, under the 'BioConnect Backup' folder - it will include user profiles, template data, and many other system settings.



Click [Start Backup] to begin the copying process. Your BioConnect database backup file will be saved into 'BioConnect Backup' folder on the C drive, and will be titled by date of creation.



10. Advanced: BioStar Configuration Software

IMPORTANT NOTE: This section is for Suprema Generation 1.0 devices. If you're using the BioStation 2 (Suprema Generation 2.0), please consult our Support Portal (http://www.bioconnect.com/support/) for resources on using BioStar 2.

The BioStar software by Suprema is required for some reader configuration that is not available within the BioConnect software. Some examples include:

- You are using a card wiegand format that is not included as a preset
- The Authentication Mode that you want to use is not included as a preset (For example: Card + Finger OR PIN)

BioStar is included within every BioConnect Installation Package. This software can be installed on the same server that is running BioConnect, and uses a different server port for communication.

For your reference:

BioConnect Server Port: 8001 BioStar Server Port: 1480

When a device is configured, you point it to a Server IP address and a port. The port that you choose will determine which software it connects into. To switch a reader from BioConnect to BioStar, simply change the Server Port within its network settings in the Device Management section of the software.

The BioStar-specific documentation is also available within the BioConnect Install Package. Please note that although the BioStar software is a fully functional access control software, we are using it primarily for it's reader configuration setting options.

Please see the BioStar manual and Reader-Specific documentation for more details.



11. 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