suprema

BioStar 2.7.3 INSTALLATION GUIDE

Version 1.00 English

Contents

| Getting Started | 3 |
|--|----|
| System Requirements | 3 |
| BioStar 2 Video Extension | 3 |
| BioStar 2 API Server | 3 |
| Installing BioStar 2 | 4 |
| Login | 9 |
| Changing port of BioStar 2 | 10 |
| Changing with BioStar Setting (HTTPS port) | 10 |
| Changing database of BioStar 2 | 11 |

Getting Started

Before using BioStar 2 to implement an access control system, the BioStar 2 server must be installed on the administrator PC. The BioStar 2 server receives event logs, user information, etc. from connected devices and stores them.

BioStar 2 can be installed easily. Before installation, please check the **System Requirements**. The BioStar 2 installation file can be found on the Suprema's home page(www.supremainc.com).

System Requirements

| lte | m | Small | Medium | Enterprise |
|-----------------------|---------------|--|---|---|
| Environmont | Total Users | 500 | 5,000 | 10,000 |
| Environment | Total Devices | 50 | 100 | 1,000 |
| | OS | Windows 7 Home Basic 64bit SP1 or later Windows 7 Home Basic 32bit SP1 or later | Windows Server 2008 R2 Standard 64bit SP2 or later Windows 7 SP1 Home Premium 64bit SP1 or later | Windows Server 2008 R2 Standard 64bit SP2 or later Windows 7 SP1 Home Premium 64bit SP1 or later |
| System requirement | Database | MariaDB 10.1.10, MS SQL S Server 2016 SP1 | Server 2014 SP2, MS SQL Server 2 | 2014 SP2 Express, MS SQL |
| (Server) | CPU | 2 GHz Dual Core | 4 GHz Quad Core | 4 GHz Quad Core |
| | RAM | 6 GB | 10 GB | 16 GB |
| | HDD | 500 GB | 1 TB | 4 TB |
| | Others | Java 1.8.0_191 | | |
| System | CPU | 1 GHz | 1 GHz | 1 GHz |
| requirement | RAM | 4 GB | 4 GB | 4 GB |
| (Client) | Web Browser | Google Chrome 49 or later | | |

BioStar 2 Video Extension

| ltem | Minimum | Recommended |
|------|-----------------|-----------------|
| CPU | 4 GHz Quad Core | 4 GHz Quad Core |
| RAM | 8 GB | 16 GB |
| HDD | 2 TB | 4 TB |

BioStar 2 API Server

| Item | Minimum | Recommended |
|------|-----------------|-----------------|
| CPU | 4 GHz Quad Core | 4 GHz Quad Core |
| RAM | 8 GB | 16 GB |
| HDD | 1 TB | 2 TB |

NOTE

Oracle Database is no longer supported. For details, please contact the Suprema Technical Support.

[•] For the best performance, use only the 64-bit operating system.

[•] BioStar 2 is optimized for Google Chrome.

[•] To use the Video menu, use MariaDB for the database and 64-bit operating system for the operating system.

If you are using Windows 8.1 or Windows Server 2012 R2, install the KB2919355 update by referring to the following web page. https://support.microsoft.com/en-us/help/2919355/windows-rt-8-1--windows-8-1--and-windows-server-2012-r2-updateapril-2

If you are using MS SQL 2014 Express, install the Service Pack 2 by referring to the following web page. <u>https://www.microsoft.com/en-us/download/details.aspx?id=53168</u>

If MS SQL Server and BioStar 2 are installed on different PCs, you should install the Native Client on a PC with BioStar 2 installed. <u>https://www.microsoft.com/en-us/download/details.aspx?id=50402</u>

Installing BioStar 2

BioStar 2 supports a 32-bit operating system and a 64-bit operating system. Check the system type of your PC where BioStar 2 is to be installed and carry out its installation accordingly.

NOTE

- Do not install BioStar 2 on a PC where BioStar 1 is installed. This may cause performance problems.
- If BioStar 2.3.0 is installed on top of a BioStar 2.2.1 or 2.2.2 installation, all information stored in the SQLite database is migrated to a new MariaDB database.
- To upgrade BioStar 2.5.0 or less versions of BioStar 2 to the latest version, you must install all versions of BioStar 2.5.0 or less. For example, to upgrade from BioStar 2.3.0 to BioStar 2.7.3, you need to install the all of BioStar 2.5.0 or less version. BioStar 2.5.0 or later can upgrade to the latest version immediately. If you are using Windows 8.1 or Windows Server 2012 R2, install the KB2919355 update by referring to the following web page. https://support.microsoft.com/en-us/help/2919355/windows-rt-8-1--windows-8-1--and-windows-server-2012-r2-update-april-2
- If you are using MS SQL 2014 Express, install the Service Pack 2 by referring to the following web page. https://www.microsoft.com/en-us/download/details.aspx?id=53168
- If MS SQL Server and BioStar 2 are installed on different PCs, you should install the Native Client on a PC with BioStar 2 installed. https://www.microsoft.com/en-us/download/details.aspx?id=50402
- When backing up a database from an older version of BioStar 2, disable all services and procedures. Furthermore, if you do not backup and restore the AC database and the TA database together, you will not be able to use the TA database.
- If you want to back up the database of BioStar 2.7.3, be sure to also back up the enckey in the \Program Files\BioStar 2 (x64)\util folder. Otherwise, the database will be unavailable.

If you use a database configured by the user directly, check the following items before installing BioStar 2.

MariaDB

- Open the my.cnf file and then change some configurations under [mysqld] as shown below. character-set-server=utf8
 - collation-server=utf8_unicode_ci
 max_connections = 600
- Open the my.cnf file and then add some configurations under [mysqld] as shown below.
 log_bin_trust_function_creators = 1 group_concat_max_len = 102400
- Access MariaDB with the root permission and execute the following command.
 - > GRANT SUPER ON . TO user_id@'localhost' IDENTIFIED BY "password";
 - > GRANT SUPER ON . TO user id@'%' IDENTIFIED BY "password";

MS SQL Server

Setting the port

- a) Run SQL Server Configuration Manager and set TCP/IP Protocol for Protocols for SQLEXPRESS to the desired port number.
- b) Restart SQL Server Services to apply the settings.

Creating the user and database

- a) Log in to the sa account using SQL Server Authentication in SQL Server Management Studio.
- b) Right-click on Security and click New Login.
- c) Enter the desired name in the Login Name field and select SQL Server Authentication.
- d) Enter the desired password in the **Password** and **Confirm password** field, and then uncheck the **Enforce password policy**.
- e) Click **OK** to save the settings.
- f) Right-click on Database and click New Database.
- g) Enter the desired name in the Database Name field.
- h) Enter the login name in the **Owner** field. Use the login name set in step c).
- i) In the Database Files section, we recommend that set the Initial Size (MB) to 3000 and set the Autogrowth/Maxsize to By 10 MB, Unlimited.

- 1 Double-click the downloaded setup program. (ex. 'BioStar 2 Setup.x.x.x.xxx.exe')
- 2 Select a language and click **OK**.



3 To continue the installation, select **I accept the agreement** and click **Next**.



4 Enter the password for admin account and click Next.

The password set in this step will be used when you log in to BioStar 2.

| 🔯 Setup - BioStar 2(x64) | | |
|---|--|----------|
| Admin User Enter the password for | admin user. | R |
| Username : | admin | |
| Password : | | |
| Confirm password : | | |
| 1. It must contain betwe | een 8 and 16 characters. | |
| 2. It can contain only Er and certain special ch | nglish letters, numbers from 0 to 9, aracters (e.g. !, \$, #, %). | |
| 3. It must contain at lea | st one alphabet character and at least one nu | umber. |
| Warning -Admin user password n | ust be managed carefully not to be forgotten | L. |
| | < Back Next | > Cancel |

5 Install the database to be used in BioStar 2. You can install a new MariaDB or connect it to the already-installed MariaDB. Installing BioStar 2 for the first time, please select **Express Installation** and click **Next**.

| 😰 Setup - BioStar 2(x64) | |
|--|----------|
| Database installation type Select a database type for BioStar 2. You can either install a new database or connect the existing database. | R |
| Express installation | |
| Use this option for quick installation with the built-in MariaDB server. The installer will automatically install the MariaDB database server and create the database. | |
| Custom installation | |
| Use this option to create database schema on an existing database on a database server (MariaDB / MSSQL) on the local or remote server. Make sure that the database and user account are created and configured before starting the installation. | |
| < Back Next > | Cancel |

6 If Express Installation has been selected from Database Installation Type, enter the database manager's account password and click Next. If Custom Installation has been selected from Database Installation Type, enter the detailed information on the already-configured database and click Next.

| 😰 Setup - BioStar 2(x64) | 😰 Setup - BioStar 2(x64) |
|--|---|
| Express Installation Enter the password for database root account. | Custom installation If you choose database type, you must enter the Root privilege account information. |
| Username : root | DB Type : Maria DB 🔹 |
| Password : | Server IP : VE DB name : |
| Confirm password : | Server port : VE Username : |
| 1. It must contain between 8 and 16 characters. | AC DB name : VE Password : |
| It can contain only English letters, numbers from 0 to 9, and certain special characters (e.g. !, \$, #, %). | AC Username : |
| 3. Enter the existing root account password when upgrading the server. | AC Password : |
| Warning -Root account password must be managed carefully not to be forgotten. | TA DB name : |
| -Root account password is also used as the initial AC and TA DB passwords. | TA Username : V Check the database connection |
| and DB backup/recovery. | TA Password : 🕼 Generate the database tables |
| | |
| < <u>Back</u> <u>Next</u> Cancel | <back next=""> Cancel</back> |

NOTE

- BioStar 2.7.3 supports the following databases.
 - MariaDB 10.1.10
 - MS SQL Server 2014 SP2
 - MS SQL Server 2014 SP2 Express
 - MS SQL Server 2016 SP1
- If the database table creation fails when MS SQL Server is set as the Database Type, you can create the table by executing the script in C:\Program Files\BioStar 2 (x64)\dbscript\mssql folder.

7 Click Next after setting a path for BioStar 2 to be installed.



8 Enter the port number and click Next.

| 😭 Setup - BioStar 2(x64) | |
|--|----------|
| Port Setting Port Setting Enter a valid port number. | R |
| HTTPS Port for Web Server | |
| Enter the desired port number between 10 and 65534. The default port number is 443. | |
| Availability: OK | |
| Device Port for Communication | |
| Enter the desired port number between 10 and 65534. The default port number is 51212. | |
| 51212 Availability: OK | |
| | |
| <back next=""></back> | Cancel |

NOTE

- When you install BioStar 2 on a PC where BioStar 1 is installed, the device port (51212) is not available. In this case, we recommend that uninstall BioStar 1.
- 9 Select a component of BioStar 2 and click **Next**. If you select **USB Device Agent**, a USB-Agent and a driver for using BioMini, BioMini Plus 2, and DUALI DE-620 will be installed together.

| 😰 Setup - BioStar 2(x64) | X |
|--|---------------|
| Select Components Which components should be installed? | <u></u> |
| Select the components you want to install; dear the components you de install. Click Next when you are ready to continue. | o not want to |
| Full installation | |
| BioStar 2 | 1,715.7 MB |
| ··· V Server | 1,715.7 MB |
| | |
| Current selection requires at least 1,846.7 MB of disk space. | |
| <back next=""></back> | Cancel |

10 If ready to install, click Install.



11 Select whether to install additional program and click **Finish**. Follow on screen instructions to complete.

| 😰 Setup - BioStar 2(x64) | |
|--------------------------|--|
| | Completing the BioStar 2(x64) Setup Wizard |
| | Setup has finished installing BioStar 2(x64) on your computer. The application may be launched by selecting the installed icons. |
| | Click Finish to exit Setup. |
| | ☑ Install USB Device Agent |
| | |
| Ø | |
| | Finish |

NOTE

- The USB Device Agent Certificate provided can be applied to a local network only.
- When another program uses port 443, BioStar-Setting program will be launched automatically and then you can change the port number. For more information, see Changing port of BioStar 2.
- For more information on Database setting changes, see BioStar 2 Database Change.

Login

BioStar 2 is a web-based system which can be accessed from anywhere as long as you remember your login ID and password.

- 1 Run your web browser.
 - We recommend that you use Google Chrome 49 or later.
- 2 Run BioStar 2.
 - If running from the PC installed with BioStar 2, enter 'https://127.0.0.1' in the address input field of the web browser.
 - If BioStar 2 is installed on another PC, enter 'https://BioStar 2 server IP address' in the address input field of the web browser.
 - Do not use the 'Localhost' to access the BioStar 2.

NOTE

- BioStar 2 uses port 443. If port 443 is used by a program, quit the program and try again. If the program cannot be closed, run 'BioStar Setting' to change the port number. For more information, see Changing port of BioStar 2.
- BioStar 2 uses Java version 1.8.0_191. If BioStar 2 does not run correctly, re-install Java version 1.8.0_191. http://www.oracle.com/technetwork/java/javase/downloads/java-archive-javase8-2177648.html
- **3** Log in with the administrator account. The administrator account ID is 'admin' and when you log in for the first time, **Not secure** warning will be displayed in the address bar.

A Not secure | bttps://127.0.0.1/#/login

- **4** To use HTTPS properly, register the IP address of the PC where BioStar 2 is installed. Click **Download https certification install program**.
- 5 Unzip the downloaded file and run cert-register.exe file. Enrollment Certification window will appears.

6 Enter the IP address of the PC where BioStar 2 is installed and click Enrollment.

| Enrollment Certificat | ion | |
|-----------------------|------------|--------|
| Server Address : | | |
| | Enrollment | Cancel |

- 7 Check the security warning message and click Yes.
- 8 When you restart the web browser and enter the registered IP address, **Secure** will appear on the address bar of the web browser.

Secure | https://1021001414/#/login

Changing port of BioStar 2

You can change the port used by BioStar 2.

NOTE

• If you use MS SQL as a database, when changes the port in BioStar 2, you must also change the port manually in the database. Otherwise, BioStar 2 may be disconnected from the database and may not work properly.

Changing with BioStar Setting (HTTPS port)

| - | | | | |
|---|---|--|---|------|
| Service Status — | | | | |
| The | Core Web Server service | ce has been started. | Running | Sto |
| BS2 The | BioStar 2 service has b | een started. | Running | Sto |
| T&A The | T&A Web Server service | te has been started. | Running | Sto |
| The | Video Server service ha | as been started. | Running | Sto |
| Database Server | TPS Port 443 Configuration | | | |
| Database Server Com DB Type Host | TPS Port 443 Configuration Maria DB 127.0.0.1 | Port | 3312 | |
| Database Server Obst | TPS Port 443 Configuration Maria DB 127.0.0.1 Database Name | Port Database User | 3312 Database Passv | word |
| Database Server Com DB Type Host AC | TPS Port 443 Configuration Maria DB 127.0.0.1 Database Name biostar2_ac | Port Database User biostar2_ac_user | 3312 Database Passu | word |
| Database Server of DB Type Host AC TA | TPS Port 443 Configuration Maria DB 127.0.0.1 Database Name biostar2_ac biostar_tna | Port S Database User biostar2_ac_user biostartnauser | 3312 Database Passo ********* ******** | word |
| Database Server Com DB Type Host AC TA Video | TPS Port 443 Configuration Maria DB 127.0.0.1 Database Name biostar2_ac biostar_tra biostar_ve | Port Database User biostar2_ac_user biostartnauser biostarveuser | 3312 Database Passu ********* ********* ********* | word |

2 Click Stop button of Core Web Server.

3 Enter the port number in **HTTPS port** field.



- 4 Click Start button of Core Web Server.
- 5 Run BioStar 2. If using port 450, enter 'IP address:450'.

Changing database of BioStar 2

You can change the database of BioStar 2.

1 Click 🚳 Start > All Programs > BioStar 2 > BioStar Setting.

| | ne Core Web Server servi | Running | Sto | |
|--|---|--|--|---|
| BS2 | ne BioStar 2 service has b | BioStar 2 service has been started. | | |
| | ne T&A Web Server servi | T&A Web Server service has been started. | | |
| | ne Video Server service h | /ideo Server service has been started. | | |
| tabase Serve | r Configuration | | | |
| tabase Serve DB Type | r Configuration Maria DB | Port | 3312 | |
| tabase Serve DB Type Host | TTPS Port 443 r Configuration Maria DB 127.0.0.1 Database Name | Port | 3312 Database Passwor | ď |
| tabase Serve DB Type Host AC | TTPS Port 443 r Configuration Maria DB 127.0.0.1 Database Name biostar2_ac | Port Database User biostar2_ac_user | 3312 Database Passwor | ď |
| AC TA | TTPS Port 443 r Configuration Maria DB 127.0.0.1 Database Name biostar2_ac biostar_tna | Port Database User biostar2_ac_user biostartnauser | 3312 Database Passwor | ď |
| Cabase Serve DB Type Host AC TA Video | TTPS Port 443 r Configuration Maria DB 127.0.0.1 Database Name biostar2_ac biostar_tna biostar_ve | Port Database User biostar2_ac_user biostartnauser biostarveuser | 3312 Database Passwor ********** ********** ********** ********** ********** | d |

2 Click Stop button of all BioStar 2 services. Database Server Configuration will be enabled.

| Database Server C | onfiguration | | | |
|-------------------|-----------------|------------------|------|-------------------|
| DB Type | Maria DB | | | |
| Host | 127.0.0.1 | Port | 3312 | |
| | Database Name | Database User | | Database Password |
| AC | biostar2_ac | biostar2_ac_user | | ***** |
| TA | biostar_tna | biostartnauser | | ******* |
| Video | biostar_ve | biostarveuser | | ****** |
| | | | | |
| | Test Connection | | Save | |
| | | | | |

- 3 Edit the necessary fields. If you are not sure about the each information, contact your system administrator.
- 4 Click Test Connection to check if the database has been set properly.
- 5 Click Save to save the settings.



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