



# INSTALLATION GUIDE

BioStar 2.4.0

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English

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## 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](http://www.supremainc.com)).

## System Requirements

Item		Small	Medium	Enterprise
Environment	Total Users	500	5,000	10,000
	Total Devices	50	100	1,000
	PC	Desktop or other applications	Desktop	Desktop or Server Appliance
System requirement (Server)	OS	Windows 7 64bit Windows 8 64bit Windows 10 64bit	Windows Server 2008 or later Windows 7 64bit Windows 8 64bit Windows 10 64bit	Windows Server 2008 or later Windows 7 64bit Windows 8 64bit Windows 10 64bit
	Database	MariaDB 10.1.10 or later, Oracle Database 11g , Oracle Database 11g Express, Oracle Database 12c		
	CPU	2 GHz Dual Core	2 GHz Dual Core	3 GHz Quad Core
	RAM	3 GB	4 GB	8 GB
	HDD	100 GB	100 GB	100 GB
System requirement (Client)	CPU	1 GHz	1 GHz	1 GHz
	RAM	1 GB	1 GB	1 GB
	Web Browser	Google Chrome 49 or later(recommended), Internet Explorer 11 (Windows 7, 8), Edge (Windows 10)		

### Note

- BioStar 2 is optimized for Google Chrome.
- If you use BioStar 2 Cloud, cannot connect to BioStar 2 through Internet Explorer or Edge.
- Use Oracle Database on 64bit system only.

## 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 Maria Database.
- If you want to install BioStar 2.4.0 on top of a BioStar 2.2.1 or 2.2.2, install BioStar 2.3.0 first and then install BioStar 2.4.0.

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";
```

### Oracle Database

- Use Oracle Database on 64bit system only.
- It is recommended to create a new tablespace on the database you intend to use by executing the following command. When a new tablespace is configured, it can be used while minimizing the effects on other database being operated, and backup and restoration can be carried out freely. In addition, an independent tablespace is provided so that it is convenient to optimize the performance.

```
CREATE TABLESPACE BIOSTAR2_AC
DATAFILE 'D:\App\Oracle12c\oradata\BIOSTAR2\DATAFILE\BIOSTAR2_AC_00.DBF'
SIZE 500M
AUTOEXTEND ON NEXT 10M MAXSIZE UNLIMITED
LOGGING
PERMANENT
EXTENT MANAGEMENT LOCAL AUTOALLOCATE
BLOCKSIZE 8K
SEGMENT SPACE MANAGEMENT MANUAL
FLASHBACK ON
/

CREATE USER BIOSTAR2_AC_USER IDENTIFIED BY "BIOSTAR2_AC_PW"
/

ALTER USER BIOSTAR2_AC_USER DEFAULT TABLESPACE BIOSTAR2_AC_USER
/

ALTER USER BIOSTAR2_AC_USER TEMPORARY TABLESPACE TEMP
/

ALTER USER biostar2_ac_user QUOTA UNLIMITED ON BIOSTAR2
/

GRANT RESOURCE, CONNECT, DBA TO BIOSTAR2_AC_USER
/

GRANT CREATE DATABASE LINK,
CREATE PUBLIC SYNONYM,
CREATE SYNONYM,
CREATE TYPE,
CREATE MATERIALIZED VIEW,
CREATE ROLE,
CREATE TABLE, CREATE ANY TABLE, ALTER ANY TABLE, DROP ANY TABLE,
CREATE ANY INDEX, ALTER ANY INDEX, DROP ANY INDEX,
CREATE SESSION, ALTER SESSION, RESTRICTED SESSION,
CREATE TABLESPACE, UNLIMITED TABLESPACE,
CREATE VIEW,
```

```
CREATE PROCEDURE,  
CREATE SEQUENCE,  
CREATE TRIGGER TO BIOSTAR2_AC_USER  
/
```

- Access Oracle Database with the root permission and execute the following command. It is recommended to set the Max processes as 250 or higher, and 500 if the database is used together with another system.

```
> ALTER SYSTEM SET processes=500 scope=spfile;
```

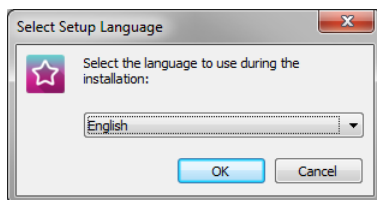
Execute the command and restart the database.

```
> shutdown immediate  
> startup
```

- Set the same standard time zone for all PCs where BioStar 2 and Oracle Database are installed.
- Your system requires at least 3 GB or memory.

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

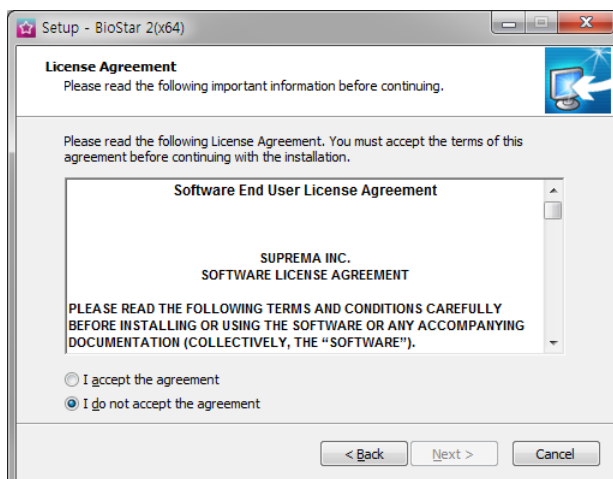
**2** Select a language and click **OK**.



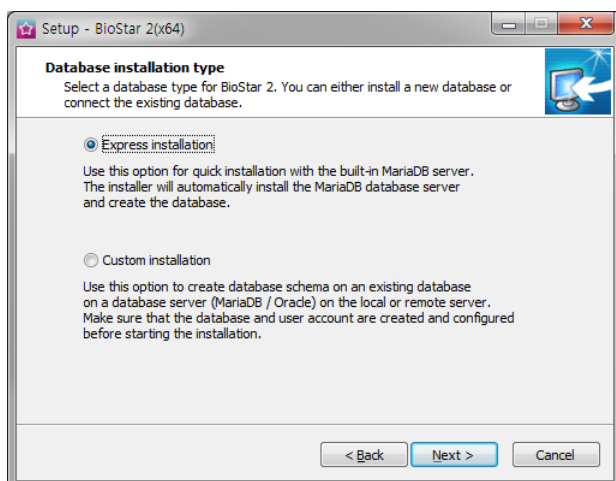
**3** Click **Next** to start installation.



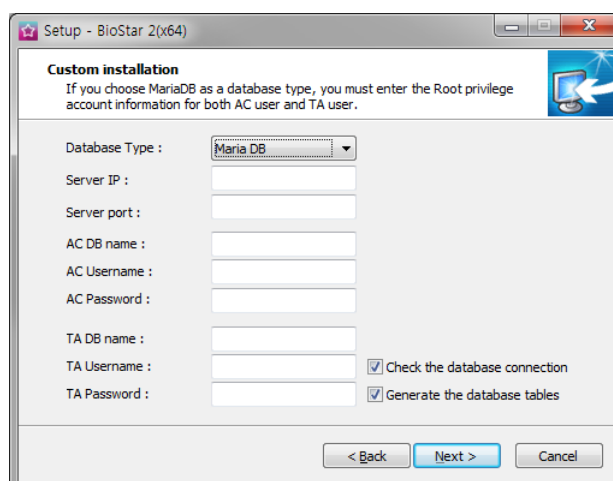
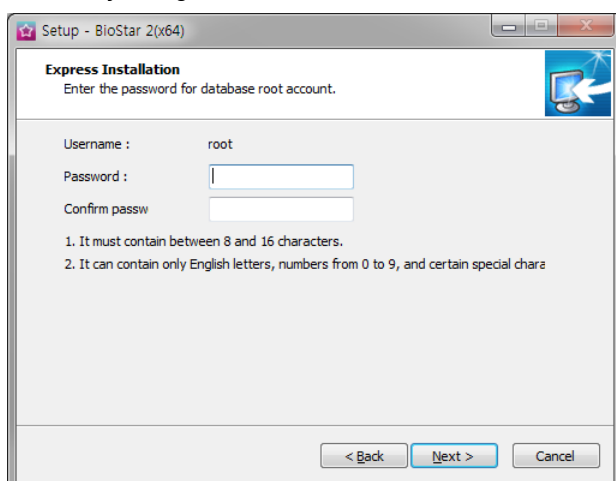
**4** To continue the installation, select **I accept the agreement** and click **Next**.



- 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**.



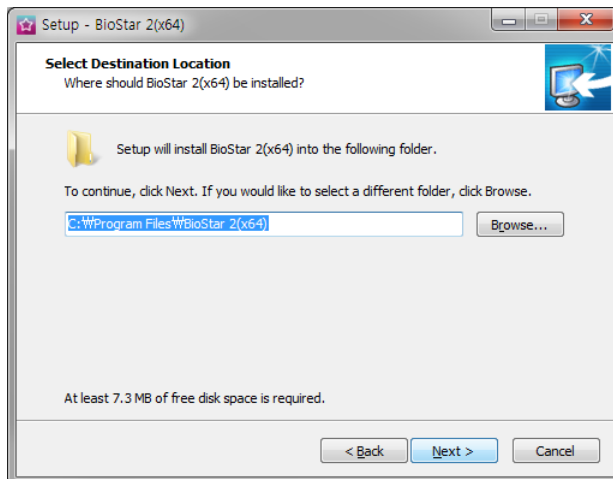
- 6** If **Express Installation** has been selected from **Database Installation Type**, enter the database manager's account password and click **Next**. If **Custom Installation** has been selected from **Database Installation Type**, enter the detailed information on the already-configured database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



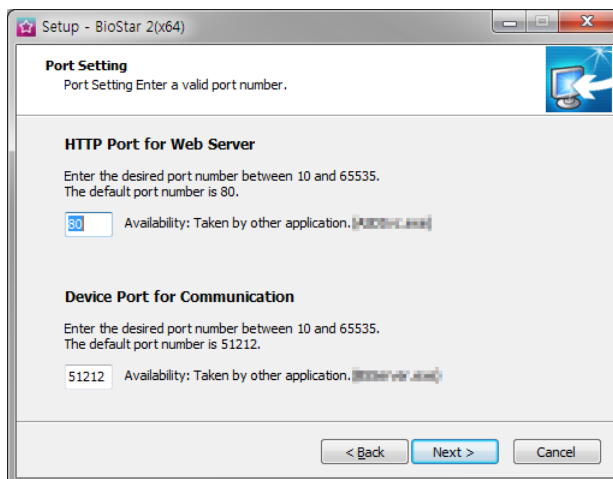
#### Note

- BioStar 2.4.0 supports the following databases.
  - MariaDB 10.1.10 or later
  - Oracle Database 11g
  - Oracle Database 11g Express
  - Oracle Database 12c

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



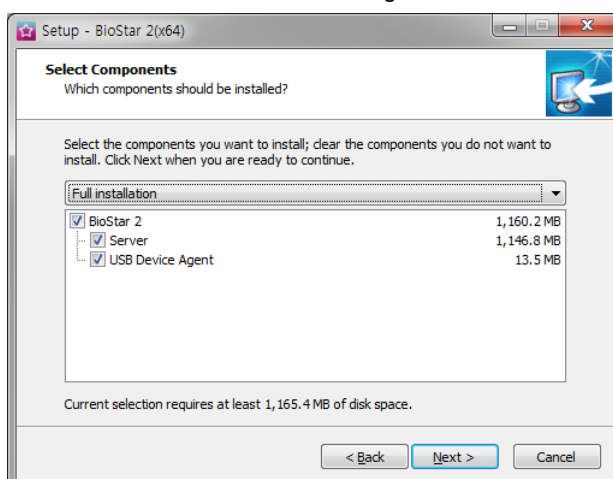
- 8 Enter the port number and click **Next**.



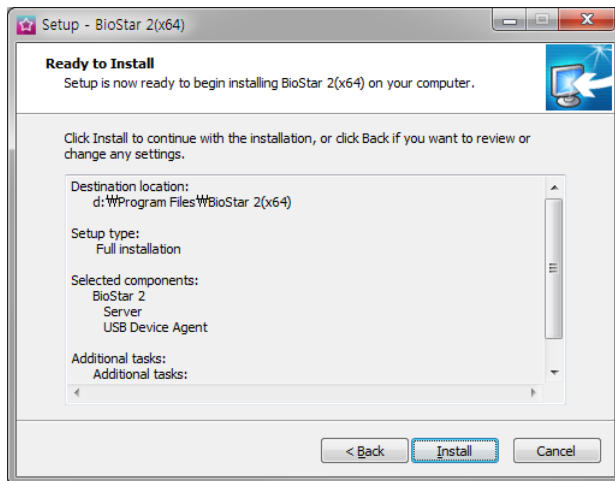
#### Note

- 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 you uninstall BioStar 1.

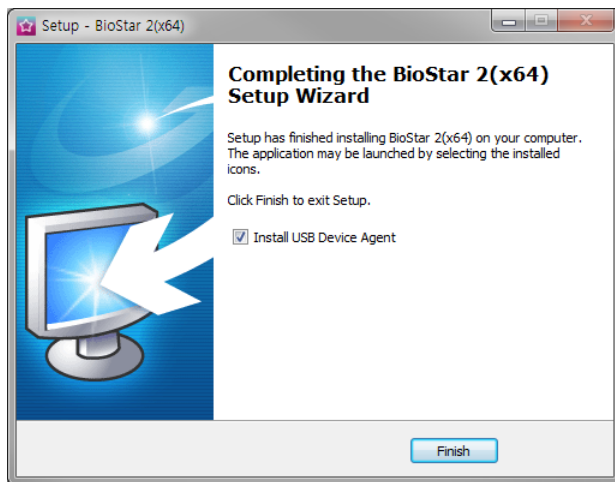
- 9 Select a component of BioStar 2 and click **Next**. If you select **USB Device Agent**, a USB-Agent and a driver for using BioMini and DUALi DE-620 will be installed together.



**10** If ready to install, click **Install**.



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



**Note**

- The USB Device Agent Certificate provided can be applied to a local network only.
- When another program uses port 80, 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

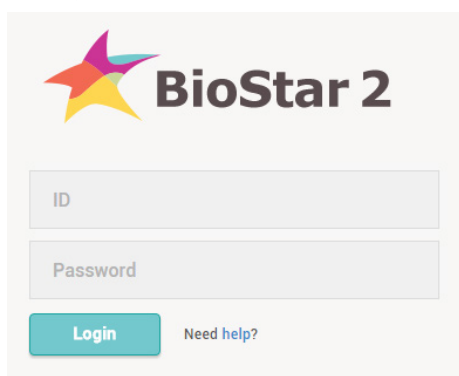
BioStar 2 is a web-based system which can be accessed from anywhere as long as you remember your login ID and password.

- 1 Run your web browser.
  - We recommend that you use Google Chrome 49 or later, or Internet Explorer 11 or later.
- 2 Run BioStar 2.
  - If running from the PC installed with BioStar 2, enter 'localhost' or '127.0.0.1' in the address input field of the web browser.
  - If BioStar 2 is installed on another PC, enter the BioStar 2 server IP address in the address input field of the web browser.
  - If using an HTTP server, enter 'http://ip address'. Or, if using an HTTPS server, enter 'https://ip address'.

## Note

- BioStar 2 uses port 80. If another program is using port 80 you wouldn't be able to launch BioStar 2. When another program uses port 80, BioStar-Setting program will be launched automatically and then you can change the port number. For more information, see [Changing port of BioStar 2](#).

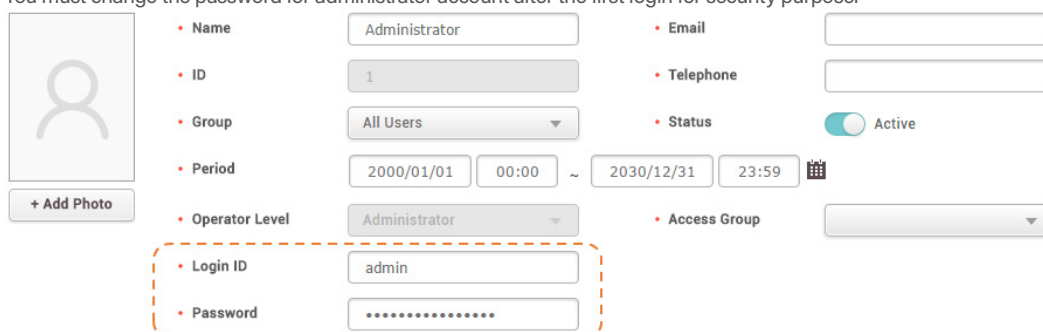
- 3 Log in with the administrator account. The default IP/password is 'admin/admin'. After the first login, reset the password for security purpose.



The image shows the BioStar 2 login interface. It features a logo with a colorful star and the text 'BioStar 2'. Below the logo are two input fields: 'ID' and 'Password'. A blue 'Login' button is positioned below the 'Password' field, and a link labeled 'Need help?' is to its right.

## Note

- You must change the password for administrator account after the first login for security purpose.



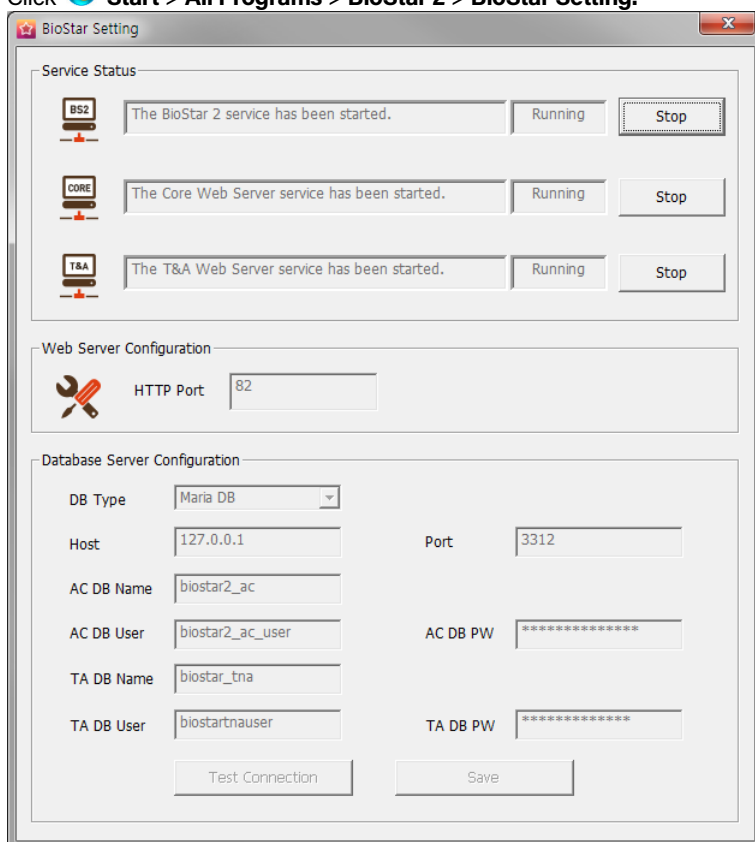
The image shows the BioStar 2 user management page. On the left is a profile card with a placeholder for a photo and a '+ Add Photo' button. To the right is a form for user details. The 'Login ID' and 'Password' fields are highlighted with a dashed orange border. The 'Password' field contains a series of dots, indicating it is masked.

• Name	Administrator	• Email	
• ID	1	• Telephone	
• Group	All Users	• Status	Active
• Period	2000/01/01 00:00 ~ 2030/12/31 23:59	• Access Group	
• Operator Level	Administrator		
• Login ID	admin		
• Password	.....		

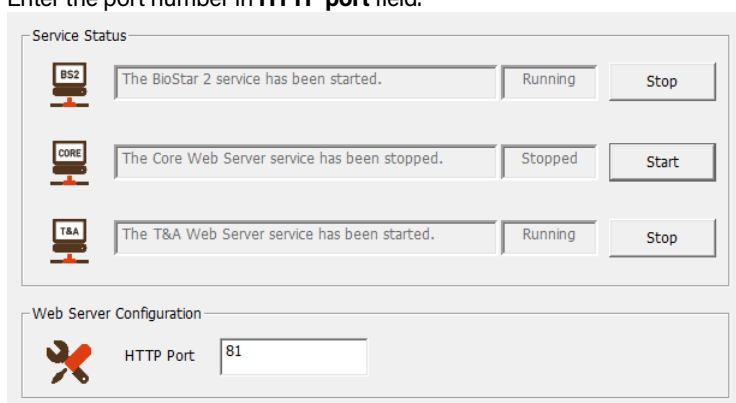
## Changing port of BioStar 2

You can change the port used by BioStar 2. If port 80 is used by a program, run 'Biostar Setting' to change the HTTP port.

- 1 Click  **Start > All Programs > BioStar 2 > BioStar Setting.**



- 2 Click **Stop** button of Core Web Server.
- 3 Enter the port number in **HTTP port** field.

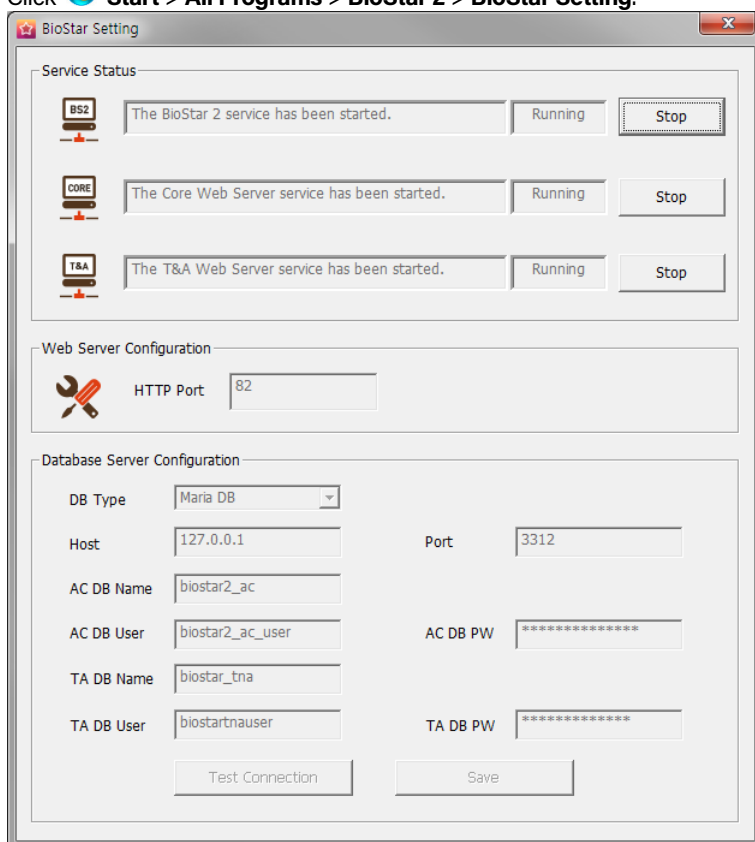


- 4 Click **Start** button of Core Web Server.
- 5 Run BioStar 2. If using port 81, enter 'localhost:81' or '127.0.0.1:81'.

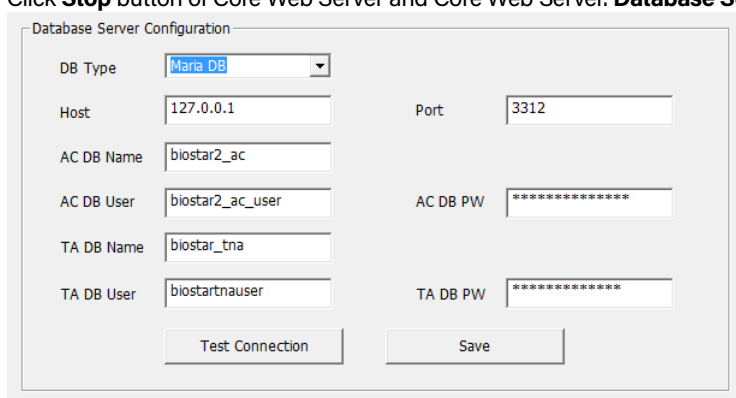
## Changing database of BioStar 2

You can change the database of BioStar 2.

- 1 Click  **Start > All Programs > BioStar 2 > BioStar Setting.**



- 2 Click **Stop** button of Core Web Server and Core Web Server. **Database Server Configuration** will be enabled.



- 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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