

TS0119 – BioStar – Things to know when integrating with BioStar through DB Link program development.

APPLIES TO: BioStar 1.x

Outline

This document is to introduce some useful methods that we recommend how to register users, how to get logs, and other important information you should be aware of when you develop a DB Link program to integrate with BioStar.

How to Register Users

When registering users in DB Link program, we recommend one of the following methods.

Method 1 : By adding records in the tables directly.

In the each of following table **TB_USER**, **TB_USER_EX**, **TB_USER_CUSTOMINFO**, you will need to insert a new record respectably.

- 1) In the table **TB_USER**, insert a record with user information, and extract **nUserIdn**(Auto-increment attribute).
- 2) In the table **TB_USER_EX**, insert it as **nUserIdn**.
- 3) In the table **TB_USER_CUSTOMINFO**, insert it as **nUserIdn**.

Method 2 : By using **sp_InsertUserBasicInfo** procedure.

sp_InsertUserBasicInfo is a stored procedure and it automatically inserts necessary records in those three tables, **TB_USER**, **TB_USER_EX**, **TB_USER_CUSTOMINFO**, when you call this procedure.

Using this method, you don't have to manually insert records as introduced in the above Method 1 as it does the tasks for you.

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How to Get Logs

When getting log data in DB Link program, we recommend following method.

Method : By polling **TB_EVENT_LOG** table regularly.

- 1) When you first poll, **Select** the table and store the **MAX** value of **nEventLogIdn**(Auto-increment attribute) from obtained logs.
- 2) Next time when you poll, repeat calling **SELECT** with the condition of (**nEventLogIdn > stored value**).
- 3) It is recommended to have the poll cycle be modifiable through Settings.

Other Settings

Other settings are usually temporary; it is recommended to configure them in BioStar directly, excluding them from synchronization.

Other Important Information

Before integrating DB Link program with BioStar, please read the followings carefully to avoid any possible malfunctioning/loss of data.

- 1) Please do not manually **INSERT/DELETE** all the fields that are used in BioStar.
- 2) Please do not manually **UPDATE/DELETE** all the records that are used in BioStar.
- 3) Please do not manually **INSERT/UPDATE/DELETE** records in the table **TB_EVENT_LOG**.
- 4) Please do not **INSERT/UPDATE** excessively. It can possibly cause Table Lock.
- 5) Please do not use **DB Trigger**. It may cause log deletion of **TB_EVENT_LOG** table, decrease of Database speed, lower performance of BioStar, and other serious problems.

Log Table Reference

TB_EVENT_LOG

Idn	Name	Type	Size	Key	Index	Default	Description
1	nEventLogIdn	Integer	4				Log Index
2	nDateTime	Integer	4	PK	O		Event Time in UTC ex) 33435
3	nReaderIdn	Integer	4		O		Reader Index - nReaderIdn of TB_READER
4	nEventIdn	Integer	4		O		nEventIdn of TB_EVENT_DATA
5	nUserID	Integer	4		O		User ID - sUserID of TB_USER
6	nIsLog	SmallInt	2				It is Log or Real Time Data
7	nTNAEvent	SmallInt	2				T&A Event
8	nIsUseTA	SmallInt	2				Check if used for T&A result
9	nType	SmallInt	2				Log type: Normal(0), Image log(1), Avi log(2)

BioStar saves all the logs in **TB_EVENT_LOG** table. Please see below for type of events:

- 1) The connection status to the BioStar
- 2) User Verification / Identification success or failure
- 3) Controlling relay
- 4) Etc

All events are distinguished by nEventIdn value. The event definition which can be applied to the nEventIdn is defined in the TB_EVENT_DATA. The TB_EVENT_DATA is installed in the BioStar DB automatically when you install BioStar.

TB_EVENT_LOG_BK

Idn	Name	Type	Size	Key	Index	Default	Description
1	nEventLogIdn	Integer	4				Log Index
2	nDateTime	Integer	4	PK	O		Event Time in UTC ex) 33435
3	nReaderIdn	Integer	4		O		Reader Index - nReaderIdn of TB_READER

4	nEventIdn	Integer	4		O		nEventIdn of TB_EVENT_DATA
5	nUserID	Integer	4		O		User ID - sUserID of TB_USER
6	nIsLog	SmallInt	2				It is Log or Real Time Data
7	nTNAEvent	SmallInt	2				T&A Event
8	nIsUseTA	SmallInt	2				Check if used for T&A result
9	nType	SmallInt	2				Log type: Normal(0), Image log(1), Avi log(2)

[Note] This table is only created for BioStar V1.7 or higher.

All logs saved in the **TB_EVENT_LOG** table are transferred to **TB_EVENT_LOG_BK** table after *a certain period of time*. This means that TB_EVENT_LOG only has logs of *a certain period of time* and all other previous logs are saved in the TB_EVENT_LOG_BK.

nDateTime

The number of seconds that have elapsed since January 1, 1970, 00:00:00. (Unix Time)

How to query in MSSQL is as follows:

Select dateadd(s,ndatetime,'1970-01-01 00:00:00') from TB_EVENT_LOG

How to query in ORACLE is as follows:

*SELECT TO_CHAR(TO_DATE('19700101000000', 'yyyymmddhh24miss') + 1/(24*60*60) * nDateTime, 'yyy-mm-dd hh24:mi:ss') "sLogTime" FROM TB_EVENT_LOG;*

nTNAEvent

The fixed TNA event value is saved. 255 is the default value in case there is no event. The rest of the value under 255 will be transferred which is set in the Device T&A tab.

#define BS_TNA_F1	0
#define BS_TNA_F2	1
#define BS_TNA_F3	2
#define BS_TNA_F4	3
#define BS_TNA_1	4
#define BS_TNA_2	5

#define BS_TNA_3	6
#define BS_TNA_4	7
#define BS_TNA_5	8
#define BS_TNA_6	9
#define BS_TNA_7	10
#define BS_TNA_8	11
#define BS_TNA_9	12
#define BS_TNA_CALL	13
#define BS_TNA_0	14
#define BS_TNA_ESC	15
#define BS_TNA_MAX_TNA_FUNCTION KEY	16

nIsLog

This shows the type of record which is inserted from BioStar to the TB_EVENT_LOG (inserted by upload, inserted in realtime, inserted by editing). If you use external program, you can ignore this value.

nIsUseTA

If BioStar uses the record as T&A data, this field is set to 1. If you use external program, you can ignore this field.

nType

This shows the existence of the image log of the event log. (0: no image log, 1: there is an image log, 2: there is an AVI log) only the camera embedded device supports this image log function. If you don't use image log, you can ignore this field.