

Revision Note

BioStar 2.6

- Video is supported in MSSQL DB
- `RC_SP, space_rate_to_alert, record_mode` added in SYSTEMSETTING table

BioStar 2.5

- Video is supported in Maria DB

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Added Version	Color
BioStar 2.6	

Cautions

Generic Cautions

A. Isolation Level

If **tx_isolation** in Maria DB's Global/Session variable is **REPEATABLE READ** avoid using INSERT INTO ~, SELECT ~, CREATE TABLE AS ~ SELECT ~

- a. Alternative: Configure and use **tx_isolation** as **READ UNCOMMITTED** or **READ COMMITTED**.
- b. Reference: [Isolation Level](#)

B. Multiple Sessions

Avoid using REPLACE INTO ~ with multiple DB sessions. The REPLACE INTO ~ operation executes two operations of DELETE ~ and INSERT INTO ~ as one operation and when this status is linked with the isolation level mentioned above, a dead-lock may occur.

- a. Alternative: Use INSERT INTO ~ ON DUPLICATE KEY UPDATE ~
- b. Reference 1: [Replace](#)
- c. Reference 2: [INSERT on duplicate key update](#)

C. Self-reference

Self-reference should not be used if possible when executing an update or insert query. If a self-referencing SELECT statement is included in an update or insert query, many locks will be held which may lead to performance decrease. Furthermore, a reference to a table with a foreign key constraint may also provide a similar result as a self-reference.

- a. Example 1: UPDATE T_USR SET NM = (SELECT NM FROM T_USR WHERE USRID = '1111');
- b. Example 2: INSERT INTO T_USR (A, B, C, D) SELECT 'a', 'b', 'c', D FROM T_USR;

D. Transactions

Transactions (batch jobs) should be held shortly as possible unless it is an insert and update execution for a large number of rows.

E. DDL Usage

DDL usage within a transaction will execute an implicit commit which may result in unintended results. (Rollback is not possible)

- a. Reference 1: [SQL statements That Cause an Implicit Commit](#)

BioStar 2 Database Related Cautions

A. Allowed Tables

Usage of any other table not included in the Table Information section of this document is not allowed.

B. Auto Sync Tables

There is two kind of table which Synchronized with BioStar. Or not

- a. COL-SETTING, EVENTSYNC, IPCAMERA, NVR, RCDPTH, RECORDLOG, TR_EVT are not sync data.
- b. Lest data is sync data or not allowed.

Table Information

[CAUTION] : Please do **NOT** manually modify any INTERNAL data in your database.

COL_SETTING : Column Setting for List UI

Column	Data Type	Key	Description
ID	UNSIGNED INT	PK	Unique ID (INTERNAL)
CK	TINYINT		Show / Hide = 1 / 0
KEY	VARCHAR(255)		Message Text or Message Key for UI
MSG_DB	TINYINT		Message Key Mode for Key field – Boolean 1: KEY field is message key 0: KEY field is message text
INDEX	INT		Order on UI List
WIDTH	INT		Column Width
LT_NE	VARCHAR(10)		List Name for Distinguish Target List on UI
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
USER_ID	VARCHAR(255)		User ID of this setting

DEVICE : Devices

Column	Data Type	Key	Description
ID	VARCHAR(255)	PK	Unique Device ID
NAME	VARCHAR(255)		Name
IP_ADDRESS	VARCHAR(50)		IP address
TYPE	VARCHAR(40)		Device Type
STATUS_CODE	VARCHAR(10)		Status Code = AC (active)/IN (inactive)
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
DG_ID	INT		Device Group ID That this device belongs to 1: global 2: Not null
PDV_ID	VARCHAR(255)		Parent Device ID That this device belongs to Not null

DEVICEGROUP : Device Group

Column	Data Type	Key	Description
ID	UNSIGNED INT	PK	Unique Device ID
NAME	VARCHAR(255)		Name
DEPTH	INT		Device Group Tree Depth Level 0: All Devices 1~: depth
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
PDG_ID	UNSIGNED INT		Parent Device Group ID of this group

DOOR: Door

Column	Data Type	Key	Description
ID	UNSIGNED INT	PK	Unique Door ID
NAME	VARCHAR(255)		Name
STATUS_CODE	VARCHAR(10)		Status Code = AC (active)/IN (inactive)
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
DG_ID	UNSIGNED INT		Door Group ID of this Door
ENTRY_DEVICE_ID	VARCHAR(255)		Entry Device ID on this Door
EXIT_DEVICE_ID	VARCHAR(255)		Exit Device ID on this Door
RELAY_DEVICE_ID	VARCHAR(255)		Relay Device ID on this Door
SENSOR_DEVICE_ID	VARCHAR(255)		Sensor Device ID on this Door
BUTTON_DEVICE_ID	VARCHAR(255)		Button Device ID on this Door

DOORGROUP : Door Group

Column	Data Type	Key	Description
ID	UNSIGNED INT	PK	Unique Door ID
NAME	VARCHAR(255)		Name
DEPTH	INT		Door Group Tree Depth Level
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
PDG_ID	UNSIGNED INT		Parent Door Group ID of this group

EVENTLOG : Event Log

Column	Data Type	Key	Description
ID	UNSIGNED BIGINT(20)	PK	Unique ID
DV_DT	DATETIME		Date/time from Device
DV_ID	VARCHAR(255)		Device ID
DR_ID	INT		Door ID
CH_ID	INT		NVR Channel ID
BS_EVT_CD	INT		BioStar Event Code
BS_EVT_ID	INT		BioStar Event ID
BS_EVT_DT	DATETIME		BioStar Event Date/Time
USER_ID	VARCHAR(255)		User ID
BS_EVT_M	VARCHAR(10)		Month of BioStar Event
BS_EVT_LI	INT		Index of BioStar Event
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time

EVENTSYNC : Event Type

Column	Data Type	Key	Description
ID	INT(11)	PK	Unique Event Sync ID
ST_DT	DATETIME		Event Sync Start Time
END_DT	DATETIME		Event Sync End Time
EMPTY_RUN_COUNT	INT(11)		Count for Search request result empty
LAST_QUERY_END_DT	DATETIME		Date/time of last search request
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
DV_ID	VARCHAR(255)		Device id of this event sync

EVENTTYPE : Event Type

Column	Data Type	Key	Description
CODE	INT(11) UNSIGNED	PK	Unique ID
NAME	VARCHAR(50)		name
DESCRIPTION	VARCHAR(255)		Description
STATUS_CODE	VARCHAR(10)		Status Code = AC (active)/IN (inactive)
ALERTABLE	TINYINT(1)		Is set alert mode as boolean
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time

HOLIDAY : Holiday Schedule

Column	Data Type	Key	Description
ID	INT(11) UNSIGNED	PK	Unique ID
NAME	VARCHAR(50)		Name
DSCR	TEXT		Description
BIOSTAR_ID	INT(11)		Holiday ID from BioStar
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time

HOLIDAYDATE : Holiday Schedule Date Information

Column	Data Type	Key	Description
ID	INT(11) UNSIGNED	PK	Unique ID
REPETITION_TYPE	VARCHAR(30)		Repetition type of holiday
DATE	VARCHAR(30)		Holiday Date
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
HOLIDAY_ID	INT(11) UNSIGNED		Holiday Schedule ID

TSHOLIDAYTIMESEGMENT : Time Segments of Holiday Schedule Date Information

Column	Data Type	Key	Description
START_TIME	INT(11)		Start Time of time segment
END_TIME	INT(11)		End Time of time segment
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
TSID	INT(11) UNSIGNED		Time Schedule ID of this

IPCAMERA : IP Camera

Column	Data Type	Key	Description
ID	INT(11) UNSIGNED	PK	Unique ID
NAME	VARCHAR(255)		Name
CHANNEL	INT(4) UNSIGNED		NVR Channel ID of this
IP_ADDRESS	VARCHAR(50)		IP Address
LOG_TYPE	VARCHAR(10)		Video/Snapshot
VIDEO_LOG_FROM_SEC	INT(4) UNSIGNED		Recording video start-time from Event occurs
VIDEO_LOG_TO_SEC	INT(4) UNSIGNED		Recording video end-time from Event occurs
IMAGE_LOG_SEC	INT(11)		Record at this(seconds) from Event occurs
OFF_COVER_HOUR	INT(11)		TDB
STREAM_PROFILE	INT(11)		TDB
STREAM_PROFILE_NM	VARCHAR(255)		TDB
STATUS_CODE	VARCHAR(10)		Status Code = AC (active)/IN (inactive)
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
NVR_ID	INT(11) UNSIGNED		NVR ID of NVR of This
DR_ID	INT(11) UNSIGNED		Door ID of Door That this belongs to

NVR : NVR

Column	Data Type	Key	Description
ID	INT(11) UNSIGNED	PK	Unique ID
MAKE	VARCHAR(255)		NVR Make
NAME	VARCHAR(255)		Name
IP_ADDRESS	VARCHAR(50)		IP Address
PORT	INT(10) UNSIGNED		IP Port
LOGIN_USER_ID	VARCHAR(255)		Login ID for NVR
LOGIN_PASSWORD	VARCHAR(255)		Password for NVR
LOG_TYPE	VARCHAR(10)		Default Record type for Child IP Cameras, values Video/Snapshot
VIDEO_LOG_FROM_SEC	INT(4) UNSIGNED		Default Video Record Start time from Event time
VIDEO_LOG_TO_SEC	INT(4) UNSIGNED		Default Video Record End time from Event time
IMAGE_LOG_SEC	INT(4)		Default Snapshot time from Event time
STATUS_CODE	VARCHAR(10)		Status Code = AC (active)/IN (inactive)
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time

RCDPTH : Record Path

Column	Data Type	Key	Description
ID	BIGINT(20) UNSIGNED	PK	Unique ID
PATH	VARCHAR(255)		Path String of storage
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time

RECORDLOG : Record Log

Column	Data Type	Key	Description
ID	BIGINT(20) UNSIGNED	PK	Unique ID
NVR_ID	INT(11) UNSIGNED		NVR ID of this Record
CHANNEL_NO	TINYINT(4) UNSIGNED		NVR Channel ID of this Record
REQ_ID	BIGINT(20) UNSIGNED		Request ID which indicate Event log (eventlog table ID)
EVT_CD	INT(11) UNSIGNED		Event code (eventtype table CODE)
DL	CHAR(1)		Storage Drive Letter (if set zero, deleted file)
REC_FILE	VARCHAR(255)		Record file name
REC_FILE_SIZE	BIGINT(11)		Record file size
REC_FILE_DT	DATETIME		Record file date/time
TMB_FILE	VARCHAR(255)		Thumbnail file name
TMB_FILE_SIZE	BIGINT(11) UNSIGNED		Thumbnail file size
TMB_FILE_DT	DATETIME		Created date/time
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
PATH_ID	BIGINT(20)		RECPTH ID of this

ROLECODE : Role Code for one User

Column	Data Type	Key	Description
ID	INT(11) UNSIGNED	PK	Unique ID
CODE	VARCHAR(50)		Role Code
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
USER_ID	VARCHAR(255)		User ID which has this role

SECUREDATA : Secure Data

Column	Data Type	Key	Description
ID	INT(11) UNSIGNED	PK	Unique ID
HOST_PRIVATE_KEY	TEXT		
HOST_CERTIFICATION	TEXT		
RSA_PRIVATE_KEY	TEXT		
RSA_PUBLIC_KEY	TEXT		
BIOSTAR2_PUBLIC_KEY	TEXT		
DEFAULT_ADMIN_ACCOUNT	TEXT		
SESSION_SECRET	VARCHAR(255)		
SYSTEM_SALT	VARCHAR(255)		
ENCRYPTION_KEY	VARCHAR(255)		
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time

SYSTEMSETTING : System Setting

Column	Data Type	Key	Description
ID	INT(11) UNSIGNED	PK	Unique ID
BIOSTAR_SERVER_URL	VARCHAR(255)		
PASSWORD_STRENGTH_LEVEL	VARCHAR(255)		
EXT_SYSTEM_ID	VARCHAR(255)		
EXT_SYSTEM_SESSION_ID	VARCHAR(255)		
EXT_SYS_BIOSTAR_SESSION_ID	VARCHAR(255)		
EXT_SYS_SESSION_UDT_DATETIME	DATETIME		
MAX_BK_DATE_DAYS_FOR_EVT_SYNC	INT(11)		
SEARCH_LIMIT_FOR_USER_SYNC	INT(11)		
LAST_UDT_VER_FOR_USER_SYNC	INT(11)		
IS_COMPLETE_USER_SYNC	TINYINT(1)		
IS_COMPLETE_EVENT_SYNC	TINYINT(1)		
RC_SP	FLOAT		Reserved Space for record
space_rate_to_alert	SMALLINT(5)		Unused
record_mode	SMALLINT(5)		Recording Mode 1: Circular Queue Mode 2: Stop on Record Space is full
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
PATH_ID	BIGINT(20) UNSIGNED		Current record path ID

TIMESCHEDULE : Time Schedule

Column	Data Type	Key	Description
NAME	VARCHAR(255)		name
TYPE	VARCHAR(255)		Repetition type string
BIOSTAR_ID	INT(11)	PK	Schedule ID from BioStar
NUM_OF_DAYS	INT(11)		Duration day
DSCR	TEXT		Description
START_DATE	DATETIME		Start date of this schedule
CREATEDAT	DATETIME		Created date/time

UPDATEDAT	DATETIME		Updated date/time
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TIMESCHEDULETIMESEGMENT : Time Segments of Time Schedule

Column	Data Type	Key	Description
DAY_INDEX	INT(11)		Date Index of One Week
START_TIME	INT(11)		Start time
END_TIME	INT(11)		End time
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
TSID	INT(11)		Time Schedule ID

TR_EVT : Trigger Event to Record Video/Snapshot Data

Column	Data Type	Key	Description
ID	BIGINT(20) UNSIGNED	PK	Unique ID
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
EVT_TYP_CD	INT(11) UNSIGNED		Event Type Code what trigger recording
TSC_ID	INT(11)		Time Schedule ID
IP_CAM_ID	INT(11) UNSIGNED		Target IP Camera ID

USER : User

Column	Data Type	Key	Description
USER_ID	VARCHAR(255)	PK	Unique ID
NAME	VARCHAR(255)		Name
BIRTH_DATE	DATETIME		NOT Used
ST_DT	DATETIME		Start date/time
EXP_DT	DATETIME		Expire date/time
GENDER_CODE	VARCHAR(255)		NOT Used
LOGIN_ID	VARCHAR(255)		Login ID
PASSWORD	VARCHAR(255)		
PASSWORD_EXIST	TINYINT(1)		
MOBILE_PHONE	VARCHAR(255)		
EMAIL	VARCHAR(255)		NOT Used
PHOTO_EXIST	TINYINT(1)		NOT Used
PHOTO	VARCHAR(255)		NOT Used
PHOTO_DOWNLOADED	TINYINT(1)		NOT Used
STATUS_CODE	VARCHAR(10)		Status Code = AC (active)/IN (inactive)
LAST_UPDATE_VERSION	INT(11)		Figure out update or not
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
UG_ID	BIGINT(20) UNSIGNED		Parent User Group ID

USERGROUP : User Group

Column	Data Type	Key	Description
ID	BIGINT(20) UNSIGNED	PK	Unique ID
NAME	VARCHAR(255)		Name
DEPTH	INT(11)		User Group Tree depth Level
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time
PUG_ID	BIGINT(20) UNSIGNED		Parent User Group ID

USERSESSION : User Session

Column	Data Type	Key	Description
ID	BIGINT(20)	PK	Unique ID
USER_ID	VARCHAR(255)		User ID
USER_NAME	VARCHAR(255)		Name
SESSION_ID	VARCHAR(255)		Session ID
BIOSTAR_SESSION_ID	VARCHAR(255)		Biostar Session ID
LOGOUT_DATE_TIME	DATETIME		Logout date/time
LANGUAGE	VARCHAR(255)		Language setting
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time

VESESSION : Video Extension Session

Column	Data Type	Key	Description
SID	VARCHAR(255)	PK	Unique ID
DATA	TEXT		Data
EXPIRES	DATETIME		Expire date/time
CREATEDAT	DATETIME		Created date/time
UPDATEDAT	DATETIME		Updated date/time