

## Using Events to Enforce Data Consistency

(**Programming tip:** drop event if it exists, before and after testing each event, in order to release server resources.)

Using the "test" database on \*your\* MySQL DBMS:

**\*\*\*First: drop \*ALL\* existing tables!\*\*\*** Then, place the following code into a file (events\_using.sql) and pull it into the "test" database:

-- Create inventory table:

```
drop table if exists inventory;
create table inventory
(
    invent_id int (4) not null auto_increment,
    item_desc varchar(30),
    notes varchar(100),
    primary key (invent_id)
);
```

-- Create log table:

```
drop table if exists log;
create table log
(
    user varchar(30),
    comment varchar(50),
    mod_time timestamp
);
```

-- Create trigger:

```
drop trigger if exists trg_inventory_mod;
```

-- temporarily redefine delimiter

```
delimiter //
create trigger trg_inventory_mod
    AFTER INSERT on inventory
    FOR EACH ROW
    BEGIN
        INSERT into log (user, comment, mod_time)
        values (current_user(), "record added", now());
    END //
delimiter ;
```

-- Add new inventory records:

```
insert into inventory(invent_id, item_desc, notes)
values
    (null, "broom", "first item stocked"),
    (null, "vacuum", "second item stocked"),
    (null, "jacuzzi", "third item stocked"),
    (null, "lounge chair", "fourth item stocked"),
    (null, "umbrella", "fifth item stocked");
```

```
drop trigger if exists trg_inventory_mod;
```

```
select * from log;
```

**-- check if event scheduler on**

```
SHOW VARIABLES LIKE 'event_scheduler';
```

**-- turn on event scheduler (using "set" applies only until server restarted)**

**-- must change configuration file to make change permanent (use "set" instead)**

```
SET GLOBAL event_scheduler = ON;
```

**List All Events in MySQL:**

```
SELECT * FROM INFORMATION_SCHEMA.EVENTS\G
```

**-- list all events in specific database**

```
SHOW EVENTS IN test;
```

**SHOW CREATE PROCEDURE Syntax:**

```
SHOW CREATE Event event_name;
```

### Reports:

**Note:** All currency values should be formatted with \$ sign, including 2 decimal places.  
All zip codes and phone numbers should include hyphens.

1. Create a one-time event that executes three seconds from the current date/time (name it **one\_time\_delete\_log\_rows**). The event should delete records from the log table more than one second old (limit 3 records).
2. Same as above, though, have the event call a stored procedure that does the same thing.
3. Create a recurring event that executes every five seconds. It should begin at the current date/time, and repeat long enough to delete the remaining two records (name it **repeated\_delete\_log\_rows**).
4. Show the event-scheduler's current state.
5. Show both events' create statements.