13.1.33 TRUNCATE TABLE Syntax

```
TRUNCATE [TABLE] tbl_name
```

`TRUNCATE TABLE` empties a table completely. It requires the `DROP` privilege.

Logically, `TRUNCATE TABLE` is similar to a `DELETE` statement that deletes all rows, or a sequence of `DROP TABLE` and `CREATE TABLE` statements. To achieve high performance, it bypasses the DML method of deleting data. Thus, it cannot be rolled back, it does not cause `ON DELETE` triggers to fire, and it cannot be performed for `InnoDB` tables with parent-child foreign key relationships.

Although `TRUNCATE TABLE` is similar to `DELETE`, it is classified as a DDL statement rather than a DML statement. It differs from `DELETE` in the following ways in MySQL 5.6:

- Truncate operations drop and re-create the table, which is much faster than deleting rows one by one, particularly for large tables.
- Truncate operations cause an implicit commit, and so cannot be rolled back.
- Truncation operations cannot be performed if the session holds an active table lock.
- `TRUNCATE TABLE` fails for an `InnoDB` table or `NDB` table if there are any `FOREIGN KEY` constraints from other tables that reference the table. Foreign key constraints between columns of the same table are permitted.
- Truncation operations do not return a meaningful value for the number of deleted rows. The usual result is “0 rows affected,” which should be interpreted as “no information.”
- As long as the table format file *`tbl_name`*`.frm` is valid, the table can be re-created as an empty table with `TRUNCATE TABLE`, even if the data or index files have become corrupted.
- Any `AUTO_INCREMENT` value is reset to its start value. This is true even for `MyISAM` and `InnoDB`, which normally do not reuse sequence values.

- When used with partitioned tables, TRUNCATE TABLE preserves the partitioning; that is, the data and index files are dropped and re-created, while the partition definitions (.par) file is unaffected.

- The TRUNCATE TABLE statement does not invoke ON DELETE triggers.

TRUNCATE TABLE for a table closes all handlers for the table that were opened with HANDLER OPEN.

TRUNCATE TABLE is treated for purposes of binary logging and replication as DROP TABLE followed by CREATE TABLE—that is, as DDL rather than DML. This is due to the fact that, when using InnoDB and other transactional storage engines where the transaction isolation level does not permit statement-based logging (READ COMMITTED or READ UNCOMMITTED), the statement was not logged and replicated when using STATEMENT or MIXED logging mode. (Bug #36763) However, it is still applied on replication slaves using InnoDB in the manner described previously.

On a system with a large InnoDB buffer pool and innodb_adaptive_hash_index enabled, TRUNCATE TABLE operations may cause a temporary drop in system performance due to an LRU scan that occurs when removing an InnoDB table's adaptive hash index entries. The problem was addressed for DROP TABLE in MySQL 5.5.23 (Bug #13704145, Bug #64284) but remains a known issue for TRUNCATE TABLE (Bug #68184).

TRUNCATE TABLE can be used with Performance Schema summary tables, but the effect is to reset the summary columns to 0 or NULL, not to remove rows. See Section 22.9.9, “Performance Schema Summary Tables”.