



SQL Beginner to Guru

MySQL Edition

Connecting to MySQL Overview



Types of Connections

- Local Connection
 - You're connecting to MySQL from the command line on the machine running MySQL
 - Protocol depends on your Operating System
- Remote / Client Connection
 - You're using some type of client software on the same machine running MySQL
 - OR - Connecting to the MySQL Server from a different machine over the network





Client Protocols

- TCP/IP - Most common
- SOCKET - Unix/OSX/Linux Only
- PIPE - Windows Only
- MEMORY - Windows Only





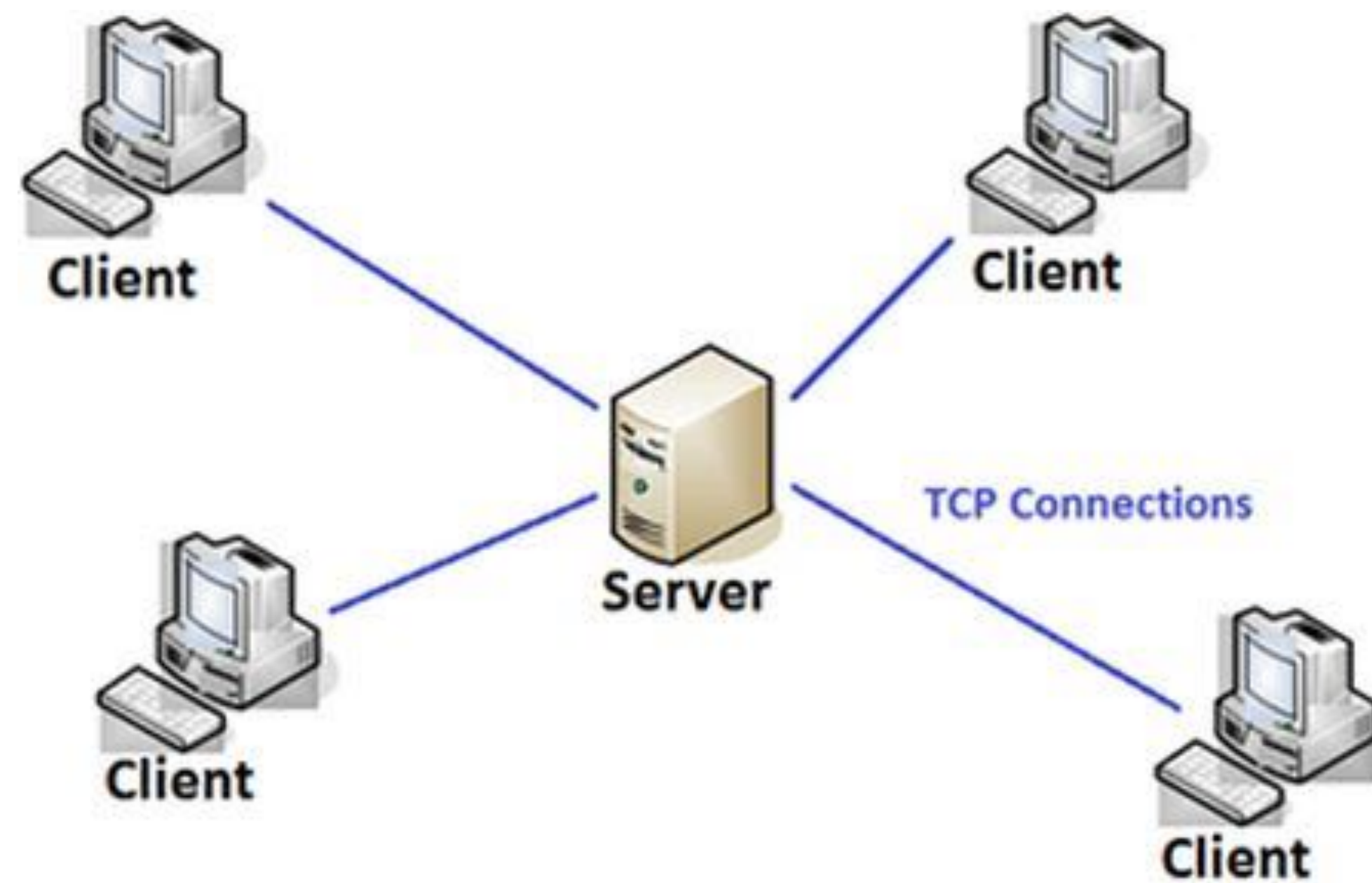
TCP / IP

- TCP / IP - Transmission Control Protocol / Internet Protocol
- DNS - Domain Name Service - Associates an IP address with a human readable name
 - [google.com](https://www.google.com) = IP Address: 216.58.218.110
- “localhost” is the computer you are on. IP Address: 127.0.0.1
- A “port” is a logical connection endpoint of an IP Address.
- Ports range from 0 to 65535
- MySQL by default will connect on port 3306





MySQL Server - Server address 127.10.10.4; Clients Connecting on port 3306





Connecting to MySQL in this Course

- 'localhost' port 3306
- 127.0.0.1 port 3306
 - The host name 'localhost' will resolve to the IP Address 127.0.0.1





MySQL Command Line / MySQL Workbench

- From the operating system command line, we can use the program “mysql” to connect to the MySQL database.
- This is a client program for the command line which gives you a shell to interact with the database.
- MySQL Workbench is a graphical user interface for working with the MySQL database.
- The majority of the course work will be done with MySQL Workbench.



MANAGEMENT

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

INSTANCE

- Startup / Shutdown
- Server Logs
- Options File

MySQL ENTERPRISE

- Audit Inspector
- Online Backup
- Backup Recovery

SCHEMAS

Filter objects

country

customer

film

Columns

- film_id
- title
- description
- release_year
- language_id
- original_language_id
- rental_duration
- rental_rate

Object Info

Session

Table: film

Columns:

- film_idsmallint(5) UNSIGNED AUTO_INCREMENT PRIMARY KEY
- titlevarchar(255)
- descriptiontext
- release_yearyear(4)
- language_id
- original_language_id
- rental_duration
- rental_rate

Query 1

```
1 SELECT `actor`.`actor_id`,
2       `actor`.`first_name`,
3       `actor`.`last_name`,
4       `actor`.`last_update`
5 FROM `sakila`.`actor`;

7 SELECT `film`.`film_id`,
8       `film`.`title`,
9       `film`.`description`,
10      `film`.`release_year`,
11      `film`.`language_id`,
12      `film`.`original_language_id`,
13      `film`.`rental_duration`,
14      `film`.`rental_rate`,
15      `film`.`length`,
16      `film`.`replacement_cost`,
17      `film`.`rating`,
18      `film`.`special_features`,
```

100%

31:18

Result Set Filter:

Edit:

Export/Import:

Fetch rows:

film_id	title	description	release_year	language_id	original_language_id	rental_duration	rental_rate	length
1	ACADEMY DINOSAUR	A Epic Drama ...	2006	1	NULL	6	0.99	86
2	ACE GOLDFINGER	A Astounding ...	2006	1	NULL	3	4.99	48
3	ADAPTATION HOLES	A Astounding ...	2006	1	NULL	7	2.99	50
4	AFFAIR PREJUDICE	A Fanciful Doc...	2006	1	NULL	5	2.99	117
5	AFRICAN EGG	A Fast-Paced ...	2006	1	NULL	6	2.99	130
6	AGENT TRUMAN	A Intrepid Pan...	2006	1	NULL	3	2.99	169
7	AIRPLANE SIERRA	A Touching Sa...	2006	1	NULL	6	4.99	62
8	AIRPORT POLLOCK	A Epic Tale of ...	2006	1	NULL	6	4.99	54
9	ALABAMA DEVIL	A Thoughtful ...	2006	1	NULL	3	2.99	114
10	ALADDIN CALISOTO	A Action-Pack...	2006	1	NULL	6	4.99	63

film 2

Apply

Revert

Action Output

	Time	Action	Response	Duration / Fetch Time
✓ 1	23:03:10	SELECT `film`.`film_id`, `film`.`title`, `film`.`description`, ...	999 row(s) returned	0.015 sec / 0.136 sec
✗ 2	23:03:15	SELECT `film`.`film_id`, `film`.`title`, `film`.`description`, ...	Error Code: 1054. Unknown column 'film`length' in '...	0.004 sec
✓ 3	23:03:18	SELECT `film`.`film_id`, `film`.`title`, `film`.`description`, ...	999 row(s) returned	0.001 sec / 0.019 sec

Context Help

Snippets

SELECT

Topic: SELECT

Syntax:

SELECT
[ALL | DISTINCT | DISTINCTROW]
[HIGH_PRIORITY]
[STRAIGHT_JOIN]
[SQL_SMALL_RESULT]
[SQL_BIG_RESULT]
[SQL_BUFFER_RESULT]
[SQL_CACHE | SQL_NO_CACHE]
[SQL_CALC_FOUND_ROWS]
select_expr [, select_expr ...]
[FROM table_references
[WHERE where_condition]
[GROUP BY {col_name | expr | position}
[ASC | DESC], ...]
[WITH ROLLUP]
[HAVING where_condition]
[ORDER BY {col_name | expr | position}
[ASC | DESC], ...]
[LIMIT {[offset,] row_count | row_count OFFSET offset}]
[PROCEDURE procedure_name
(argument_list)
[INTO OUTFILE 'file_name'
[CHARACTER SET charset_name]
export_options
| INTO DUMPFILE 'file_name'
| INTO var_name [, var_name]]
[FOR UPDATE | LOCK IN SHARE MODE]]

SELECT is used to retrieve rows selected from one or more tables, and can include UNION statements and subqueries. See [UNION](#), and [Online help subqueries](#).

The most commonly used clauses of SELECT statements are these:

- Each select_expr indicates a column that you want to retrieve. There must be at least one select_expr.
- table_references indicates the table or tables from which to retrieve rows. Its syntax is described in [JOIN](#).

Query Completed

