

MySQL Workbench

Big Data Systems

Dr. Rubi Boim

Important note

- Using MySQL Workbench is NOT needed for HW
- But you can use it instead of using CLI

Installing MySQL Workbench

- <https://dev.mysql.com/downloads/workbench/>

TAU's CS MySQL Server

- <https://www.cs.tau.ac.il/system/MySQL>
- **UPDATE**
 - sakila is on ~~mysqlsrv~~ and mysqlsrv1
 - Your own account (if created) is on mysqlsrv1
not needed for the HW

Sakila

- A sample database/schema
- **User:** sakila
Password: sakila
Server: mysqlsrv1.cs.tau.ac.il

Reminder - MySQL CLI (from nova):

```
mysql -h mysqlsrv1.cs.tau.ac.il -u sakila -p
```

Using MySQL Workbench from home

- **VPN is NOT enough**
unlike MySQL CLI
- **You need to create a tunnel (via nova).**
- You can choose either option:
 - A. Use the built in MySQL Workbench “TCP over SSH”
 - B. Manually create a tunnel
Local port 3305 to `mysqlsrv1.cs.tau.ac.i:3306`

Option A - Via “Workbench TCP over SSH”

Manage Server Connections

MySQL Connections
TAU-MySQL-Tunnel
TAU-MySQL

Connection Name: TAU-MySQL

Connection Method: Standard TCP/IP over SSH Method to use to connect to the RDBMS

Parameters SSL Advanced

SSH Hostname: nova.cs.tau.ac.il SSH server hostname, with optional port

SSH Username: boim Name of the SSH user to connect with.

SSH Password: Store in Keychain ... Clear SSH user password to connect to the SSH

SSH Key File: ... Path to SSH private key file.

MySQL Hostname: mysqlsrv1.cs.tau.ac.il MySQL server host relative to the SSH se

MySQL Server Port: 3306 TCP/IP port of the MySQL server.

Username: sakila Name of the user to connect with.

Password: Store in Keychain ... Clear The MySQL user's password. Will be requ later if not set.

Default Schema: The schema to use as default schema. Le to select it later.

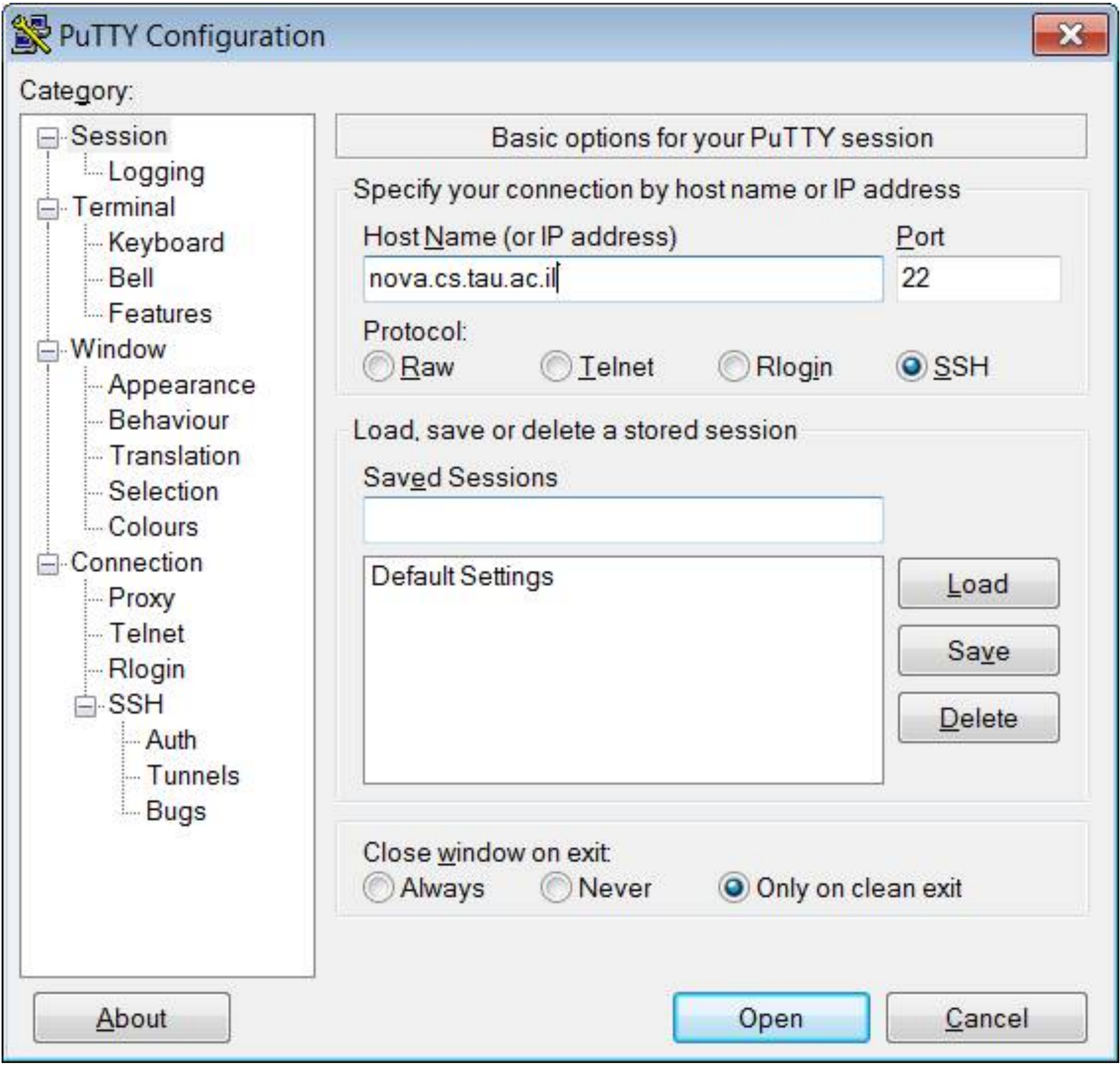
New Delete Duplicate Move Up Move Down Test Connection Close

Option B - Tunnel (Mac)

- Connect via VPN
- Then, terminal is all you need:
`ssh -L 3305:mysqlsrv1.cs.tau.ac.il:3306 <user>@nova.cs.tau.ac.il`

Option B - Tunnel (Windows)

- Connect via VPN
- Then, create a tunnel via putty and connect



PuTTY Configuration

Category:

- Session
 - Logging
- Terminal
 - Keyboard
 - Bell
 - Features
- Window
 - Appearance
 - Behaviour
 - Translation
 - Selection
 - Colours
- Connection
 - Proxy
 - Telnet
 - Rlogin
- SSH
 - Auth
 - Tunnels
 - Bugs

Basic options for your PuTTY session

Specify your connection by host name or IP address

Host Name (or IP address)	Port
nova.cs.tau.ac.il	22

Protocol:

Raw Telnet Rlogin SSH

Load, save or delete a stored session

Saved Sessions

Default Settings

Load Save Delete

Close window on exit:

Always Never Only on clean exit

About Open Cancel

PuTTY Configuration

Category:

- Session
 - Logging
- Terminal
 - Keyboard
 - Bell
 - Features
- Window
 - Appearance
 - Behaviour
 - Translation
 - Selection
 - Colours
- Connection
 - Proxy
 - Telnet
 - Rlogin
- SSH
 - Auth
 - Tunnels
 - Bugs

Options controlling SSH tunnelling

X11 forwarding

Enable X11 forwarding

X display location

Remote X11 authentication protocol

MIT-Magic-Cookie-1 XDM-Authorization-1

Port forwarding

Local ports accept connections from other hosts

Remote ports do the same (SSH v2 only)

Forwarded ports:

Add new forwarded port:

Source port

Destination

Local Remote Dynamic

mysqlsrv1.cs.tau.ac.il

PuTTY Configuration

Category:

- Session
 - Logging
- Terminal
 - Keyboard
 - Bell
 - Features
- Window
 - Appearance
 - Behaviour
 - Translation
 - Selection
 - Colours
- Connection
 - Proxy
 - Telnet
 - Rlogin
- SSH
 - Auth
 - Tunnels
 - Bugs

Options controlling SSH tunnelling

X11 forwarding

Enable X11 forwarding

X display location

Remote X11 authentication protocol

MIT-Magic-Cookie-1 XDM-Authorization-1

Port forwarding

Local ports accept connections from other hosts

Remote ports do the same (SSH v2 only)

Forwarded ports:

L3305	mysqlsrv.cs.tau.ac.il:3306
-------	----------------------------

Add new forwarded port:

Source port

Destination

Local Remote Dynamic

mysqlsrv1.cs.tau.ac.il

PuTTY Configuration [Close]

Category:

- Session
 - Logging
- Terminal
 - Keyboard
 - Bell
 - Features
- Window
 - Appearance
 - Behaviour
 - Translation
 - Selection
 - Colours
- Connection
 - Proxy
 - Telnet
 - Rlogin
- SSH
 - Auth
 - Tunnels
 - Bugs

Basic options for your PuTTY session

Specify your connection by host name or IP address

Host Name (or IP address)	Port
nova.cs.tau.ac.il	22

Protocol:
 Raw Telnet Rlogin SSH

Load, save or delete a stored session

Saved Sessions

TAU - MySQL Tunneling	[Load] [Save] [Delete]
Default Settings TAU - MySQL Tunneling	

Close window on exit:
 Always Never Only on clean exit

[About] [Open] [Cancel]

nova.cs.tau.ac.il - PuTTY

login as: boim

Using keyboard-interactive authentication.

Password:

Last login: Sun Mar 6 13:46:16 2011 from lap-milo6.cs.tau.ac.il

nova 1% █

Setup New Connection

Connection Name: Type a name for the connection

Connection Method: Method to use to connect to the RDBMS

Parameters | SSL | Advanced

Hostname: Port: Name or IP address of the server host - and TCP/IP port.

Username: Name of the user to connect with.

Password: The user's password. Will be requested later if it's not set.

Default Schema: The schema to use as default schema. Leave blank to select it later.

Local host (3305) → will use the tunnel

We got it connected, what now?

MySQL Workbench

TAU mysqlserv (via tunnel) - Warning - not supported

Administration Schemas actor

SCHEMAS

Filter objects

- sakila
 - Tables
 - actor
 - address
 - category
 - city
 - country
 - customer
 - film
 - film_actor
 - film_category
 - film_text
 - inventory
 - language
 - payment
 - rental
 - staff
 - store
 - Views
 - Stored Procedures
 - Functions

Limit to 1000 rows

```
1 • SELECT * FROM sakila.actor;
```

100% 28:1

Result Grid Filter Rows: Search Edit: Export/Import:

actor_id	first_name	last_name	last_update
3	ED	CHASE	2006-02-15 04:34:33
4	JENNIFER	DAVIS	2006-02-15 04:34:33
5	JOHNNY	LOLLOBRIGIDA	2006-02-15 04:34:33
6	BETTE	NICHOLSON	2006-02-15 04:34:33
7	GRACE	MOSTEL	2006-02-15 04:34:33
8	MATTHEW	JOHANSSON	2006-02-15 04:34:33
9	JOE	SWANK	2006-02-15 04:34:33
10	CHRISTIAN	GABLE	2006-02-15 04:34:33
11	ZERO	CAGE	2006-02-15 04:34:33
12	KARL	BERRY	2006-02-15 04:34:33
13	UMA	WOOD	2006-02-15 04:34:33
14	VIVIEN	BERGEN	2006-02-15 04:34:33
15	CUBA	OLIVIER	2006-02-15 04:34:33

actor 1 Apply Revert

Action Output

	Time	Action	Response	Duration / Fetch Time
✓ 1	11:23:20	SELECT * FROM sakila.actor LIM...	200 row(s) returned	0.0048 sec / 0.0000...
✓ 2	11:23:29	SELECT * FROM sakila.actor LIM...	200 row(s) returned	0.0046 sec / 0.0000...
✓ 3	11:23:36	SELECT * FROM sakila.actor LIM...	200 row(s) returned	0.0043 sec / 0.00002...

Query Completed

MySQL Workbench

TAU mysqlserv (via tunnel) - Warning - not supported

Administration Schemas actor sakila.actor

SCHEMAS

Filter objects

- sakila
 - Tables
 - actor
 - address
 - category
 - city
 - country
 - customer
 - film
 - film_actor
 - film_category
 - film_text
 - inventory
 - language
 - payment
 - rental
 - staff
 - store
 - Views
 - Stored Procedures
 - Functions

Info Columns Indexes Triggers Foreign keys Partitions Grants DDL

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges
actor_id	smallint(5) unsig...		NO			select
first_name	varchar(45)		NO	utf8	utf8_general_ci	select
last_name	varchar(45)		NO	utf8	utf8_general_ci	select
last_update	timestamp	CURRENT_TIME...	NO			select

Count: 4 Refresh

Action Output

	Time	Action	Response	Duration / Fetch Time
✓ 1	11:23:20	SELECT * FROM sakila.actor LIM...	200 row(s) returned	0.0048 sec / 0.0000...
✓ 2	11:23:29	SELECT * FROM sakila.actor LIM...	200 row(s) returned	0.0046 sec / 0.0000...
✓ 3	11:23:36	SELECT * FROM sakila.actor LIM...	200 row(s) returned	0.0043 sec / 0.00002...

Query Completed

Using the ER tools

- Option 1: download it

<https://downloads.mysql.com/docs/sakila-db.zip>

Open `sakila.mwb` with MySQL Workbench

- Option 2: reverse engineer `sakila` at TAU

MySQLWorkbench File Edit View Query Database Server Tools Scripting Help

TAU mysqlserv (via tunnel) - Warning - not supported

Administration Schemas Query 4

SCHEMAS

Filter objects

- sakila
 - Tables
 - actor
 - address
 - category
 - city
 - country
 - customer
 - film
 - film_actor
 - film_category
 - film_text
 - inventory
 - language
 - payment
 - rental
 - staff
 - store
 - Views
 - Stored Procedures
 - Functions

1

100% 1:1

Action Output

	Time	Action	Response	Duration / Fetch Time
✓ 1	11:23:20	SELECT * FROM sakila.actor LIM...	200 row(s) returned	0.0048 sec / 0.0000...
✓ 2	11:23:29	SELECT * FROM sakila.actor LIM...	200 row(s) returned	0.0046 sec / 0.0000...
✓ 3	11:23:36	SELECT * FROM sakila.actor LIM...	200 row(s) returned	0.0043 sec / 0.00002...

Added new scratch query editor

Connect to Database... ⌘U

Manage Connections...

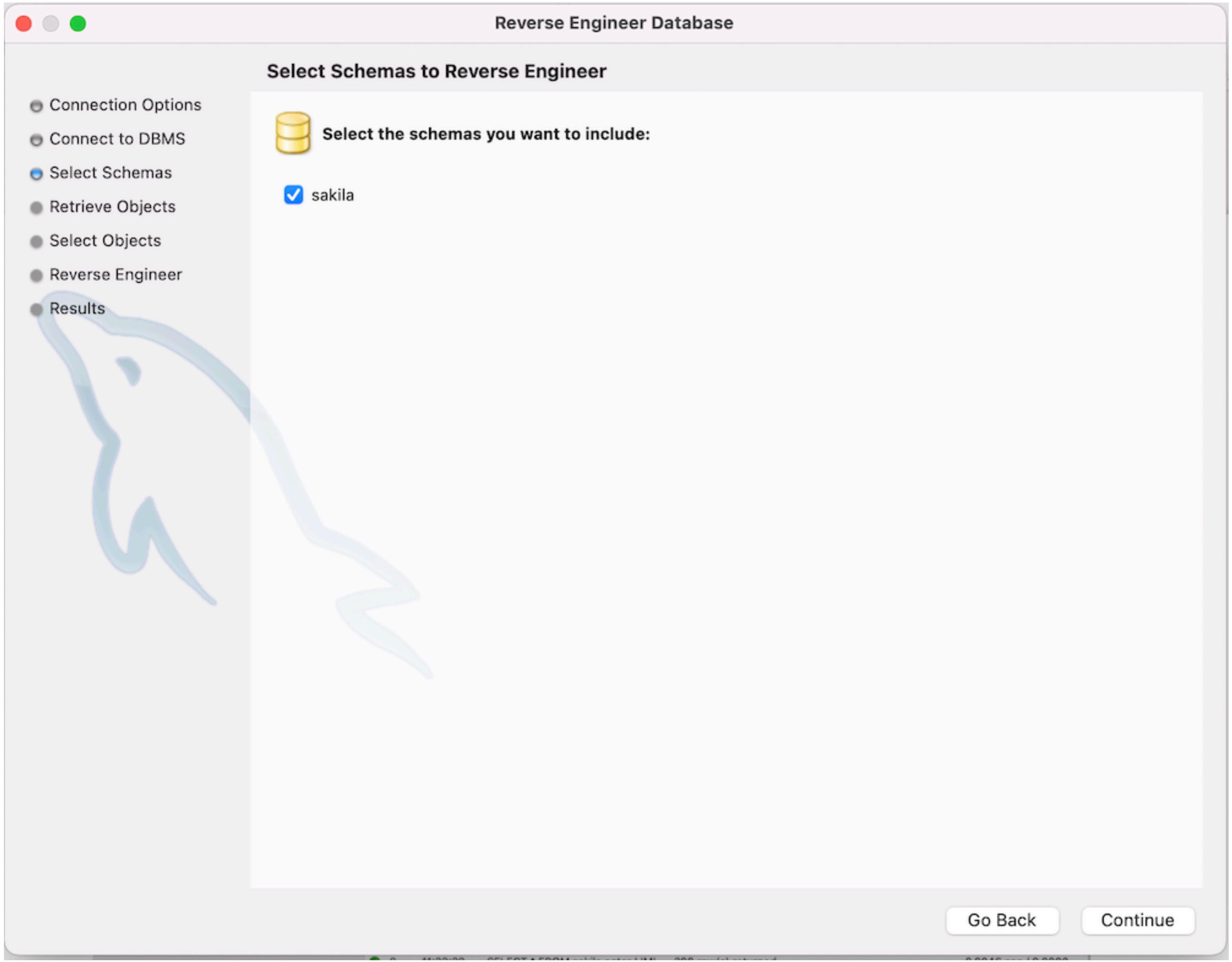
Reverse Engineer... ⌘R

Schema Transfer Wizard...

Migration Wizard...

Edit Type Mappings for Generic Migration...

Search Table Data...



Select Schemas to Reverse Engineer

- Connection Options
- Connect to DBMS
- Select Schemas
- Retrieve Objects
- Select Objects
- Reverse Engineer
- Results



Select the schemas you want to include:

sakila

Go Back

Continue

