

Tools for Managing MySQL

The MySQL database engine comes with command-line tools to manage the data structures, user security and to add, drop and modify records in the databases. It's worthwhile to learn enough about these tools, since you can be assured they'll be available in every installation, and “one quick change” is much faster in a text-based tool. However, for much of your daily work, you may find that some graphical 3rd party tools make the work easier, more productive and more pleasant.

Moving to MySQL means that you'll need to learn to work with the tools included with MySQL database for maintenance, security, monitoring and data access. It's wise to get familiar with the basic set of command-line tools, as you never know when you may find yourself with a minimal installation to manage or a slow dial-up connection to your server. You will also want to consider some of the very attractive add-on tools that can make the job easier. This chapter starts by covering the basic tools, and then shows some of the other utilities available for downloading.

At a minimum, programmers should be familiar enough with a command-line interface to feel comfortable using it for some work. Some will find that the shell interface is all that's needed. A quick and simple change can be easily implemented that way. However, when learning a new tool, nothing beats the “explorability” of a graphical interface to discover what sorts of features and options are available.

The Tools Supplied with MySQL

In keeping with the Unix tradition, everything that you'll need to do with the MySQL database, you can do from the command line of a shell. Many installations offer no other interface. It has the advantage of speed, ease of use in slow bandwidth situations, and ease of secure remote access. However, command lines tend to be unforgiving: they require either a proficiency that comes with daily use, or lots of trips to “man” or paper manuals or searches of the “HOWTOs” to make effective use of the tool. For less frequent work and for an easy-to-explore interface, the MySQL developers provide both a complete set of command-line utilities and a graphical tool in the MySQL Command Center.

Shell commands

You can use shell commands to create, manage, secure and query your database. **Table 1** lists common shell commands. The most common, `mysql`, is used to initiate an interactive active session with the database, similar to a command window or immediate window interaction in other languages. To start a session, issue the command “`mysql`”. An informational message appears telling you the database connection, reminding you to complete commands with a semi-colon, and presenting a prompt of “`mysql>`” to remind you that you are no longer talking to your shell. An example session is shown in **Listing 1**.

Command-line tools let you do anything you need to the database, let you work faster over slow connections, and are almost always installed even with a minimal installation.

Listing 1: A sample interactive mysql session.

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```
[root@Nereus root]# mysql
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 99 to server version: 3.23.58
```

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

```
mysql> help
```

MySQL commands:

Note that all text commands must be first on line and end with ';'.

```
help      (\h)      Display this help.
?         (\?)      Synonym for 'help'.
clear     (\c)      Clear command.
connect   (\r)      Reconnect to the server. Optional arguments are db and host.
edit      (\e)      Edit command with $EDITOR.
ego       (\G)      Send command to mysql server, display result vertically.
exit      (\q)      Exit mysql. Same as quit.
go        (\g)      Send command to mysql server.
nopager   (\n)      Disable pager, print to stdout.
notee     (\t)      Don't write into outfile.
pager     (\P)      Set PAGER [to_pager]. Print the query results via PAGER.
print     (\p)      Print current command.
quit      (\q)      Quit mysql.
rehash    (\#)      Rebuild completion hash.
source    (\.)      Execute a SQL script file. Takes a file name as an argument.
status    (\s)      Get status information from the server.
tee       (\T)      Set outfile [to_outfile]. Append everything into given outfile.
use       (\u)      Use another database. Takes database name as argument.
```

```
Connection id: 99 (Can be used with mysqladmin kill)
```

```
mysql> use test
```

Reading table information for completion of table and column names

You can turn off this feature to get a quicker startup with -A

Database changed

```
mysql> select last_name, first_name, birth_date from employee order by 3 desc;
```

```
+-----+-----+-----+
| last_name | first_name | birth_date |
+-----+-----+-----+
| Smith     | Tim        | 1973-06-06 |
| Patterson | Caroline   | 1972-09-11 |
| Dodsworth | Anne       | 1966-01-27 |
| Pereira   | Laurent   | 1965-12-09 |
| Leverling | Janet      | 1963-08-30 |
| Suyama    | Michael    | 1963-07-02 |
| Brid      | Justin     | 1962-10-08 |
| Martin    | Xavier     | 1960-11-30 |
| King      | Robert     | 1960-05-29 |
| Hellstern | Albert     | 1960-03-13 |
| Callahan  | Laura      | 1958-01-09 |
| Buchanan  | Steven     | 1955-03-04 |
| Davolio   | Nancy      | 1948-12-08 |
| Fuller    | Andrew     | 1942-02-19 |
| Peacock   | Margaret   | 1937-09-19 |
+-----+-----+-----+
```

```
15 rows in set (0.00 sec)
```

```
mysql> quit;
```

Bye

Table 1: Common commands available from the shell prompt.

Command	Significance
mysql	Interactive commands to create and drop databases, tables, query and modify data.
mysqld	Command to start, stop and restart daemon
isamchk	Checks and repairs validity of tables
mysqlaccess	Report and modify user and host rights to a database.
mysqladmin	Administrative interface to add/drop databases, check status, flush caches, troubleshoot processes or shut down.
mysqldump	Dumps a SQL script to text file useful for creating or backing up a database.
mysqlshow	Display databases, tables and column structural information.
perror	Return a text explanation of a numeric error code.

Command-line tools provide all of the facilities necessary to install, configure, and maintain a MySQL database application. As the ad says “Who could ask for anything more?” I could. I'm fumble-fingered and lousy at remembering commands I'm not using on a daily basis. And for those those just starting up with the tool, wouldn't you like a few clues about what sort of commands are available? Enter the graphical interface tools of the MySQL Control Center and some other third-party products.

MySQL Control Center

The MySQL Control Center (MySQLcc) is a separate download from the MySQL data engine, but it's written and supported by same group who wrote the engine. MySQLcc has an interface similar to the “Enterprise Manager” tool supplied with Microsoft SQL Server or Oracle's database tools.

With the Control Center, you can view multiple databases and drill down into the table and field level. Check out the menus and the context-sensitive (right-mouse-click) menus at each level to see the tools available to you. **Figure 1** shows the main window, with server Neresus accessed, the database test opened, and the employee table selected, showing the structure of the table in the right pane. **Figure 2** shows the query window where interactive SQL commands can be executed, and the results examined. The columns window lets you control which fields are displayed, and the grid of data showing the results of the query can be sorted by clicking on the column headers.

MySQL Control Center

Version: 0.9.4, April 2004

License: GPL / commercial

Platforms: Windows, *Nix, OS X
promised in the future

Features: Like commercial “Enterprise Managers,” complete tool for creating, modifying and maintaining databases.

<http://www.mysql.com/products/mysqlcc/>

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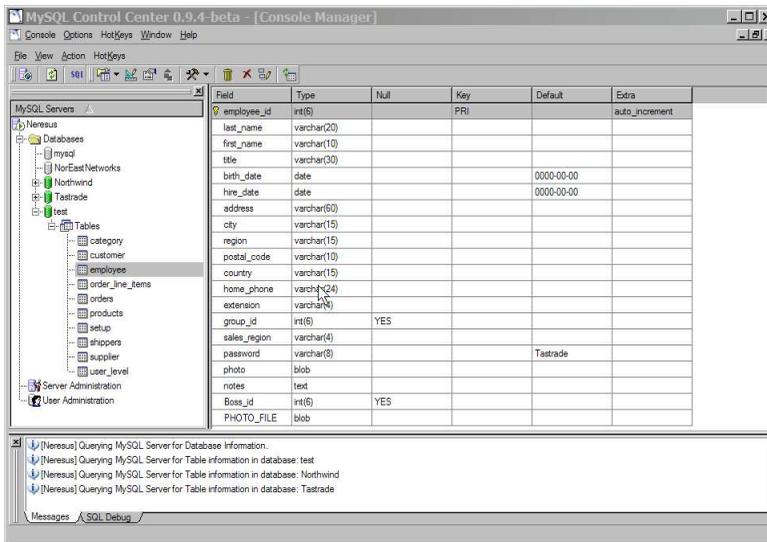


Figure 1: The MySQL Control Center lets you explore and maintain MySQL databases.

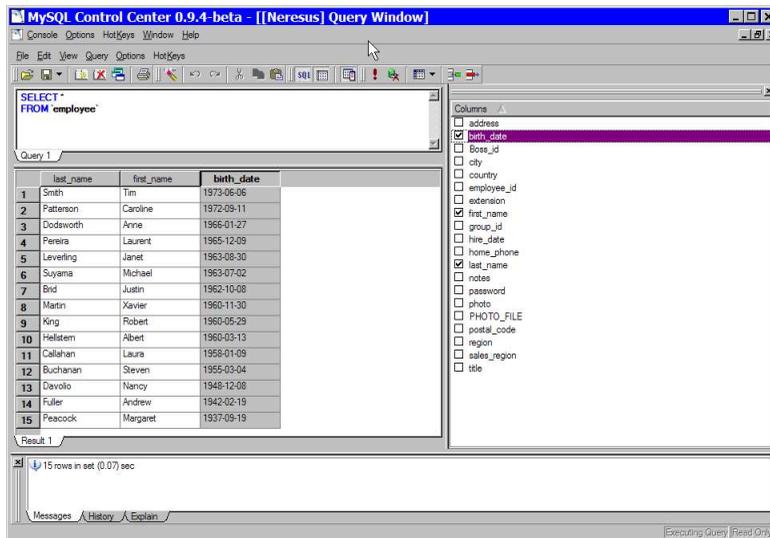


Figure 2: The MySQL Control Center's Query window lets you create and execute queries, and then manipulate the result set by filtering and sorting the displayed fields.

MySQL Administrator

At the time of this writing, the MySQL Administrator was a promising product, but at version 1.0.1 alpha, it was not yet ready for deployment in a production environment. Check out the

links and screen snapshots at <http://www.mysql.com> to see what the future holds. This promises to be a powerful product for database administrators.

Third Party Tools for MySQL

Third-party tools for MySQL include those available under free licenses as well as commercial products. While it's often desirable to use free software, not everything may yet be available or in production quality, so commercial software can provide a valuable alternative.

There are many packages available but I'll show two in a little more detail, to demonstrate the range of tools available and the features they contain.

Webmin

WebMin is not a MySQL specific tool, but rather a utility that provides web-based administration of a Linux machine. Available from <http://www.webmin.com> (not .org), the application runs on your MySQL server and manages its own web server on port 10000. Logging into the application lets you administer many aspects of the machine, from users to firewall to email to MySQL.

Webmin offers the advantage of a graphical user interface. It can be secured by several means, explained on the Webmin web site, to use SSL or tie into the machines user login mechanism for security. The big advantage of a tool like Webmin is that it is universally available from any machine with a web browser.

Webmin

Version: 1.140-1, April 2004

License: BSD-like

Platforms: Windows (with Cygwin), *Nix, OS X

Features: Secure and easy-to-use administrative tool for a server. Plugins for tools: Apache, MySQL, PostgreSQL, Qmail, many others.

<http://www.webmin.com/>

Webmin walk-through

Selecting the MySQL option from the main WebMin page presents a web page like that in **Figure 3**. If no databases are displayed, check that the button at the bottom on the screen is labeled “Stop” and not “Start.” If it's “Start,” you'll need to start the database before you can work on it.

Select a database or create a new one. Creating a new database will bring up the dialog shown in **Figure 4**. This simple dialog lets you name the new database and optionally create the initial table in the database. Following this, you're returned to the screen in **Figure 3** to select the database to work on. Selecting a database with no tables allows you to create one, as shown in **Figure 5**, or to pick from the existing tables, as shown in **Figure 6**.

Drilling further into the interface, selecting a table will show you the table structure, as in **Figure 7**. Clicking on an individual fieldname will bring up the dialog of **Figure 8**, with options to rename the field, change the type or enable or disable other features. Way back in **Figure 6**, there's also an option for “Execute SQL.” Pressing that button brings up the interface in **Figure 9**, where you enter and execute SQL statements. (Curiously, the bottom of that page also lets you import tab-delimited data files. This could probably be put somewhere more obvious, say, an Import button off the front page, perhaps.) If you enter a SQL statement into the edit box and choose Execute and results are returned, Webmin will generate a page similar to **Figure 10**, displaying the SQL statement and the results in tabular format.

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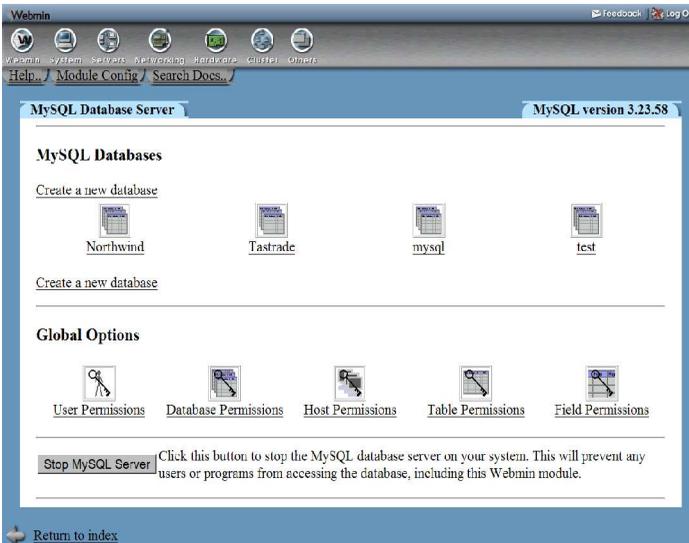


Figure 3: Selecting the MySQL tool in Webmin presents you with the databases you can administer. The “Stop” button will be a “Start” button if MySQL is not running.

Webmin presents a reasonable web interface for MySQL. While day-to-day operations will it could get to be somewhat tiresome, with the constant loading and refreshing of pages, the universal accessibility of the product certainly makes it one to considering adding to your toolbox.

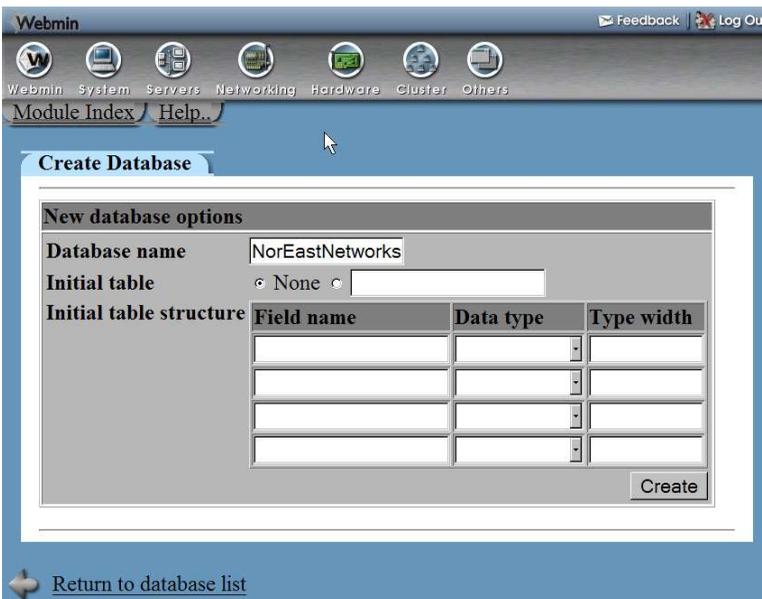


Figure 4: Selecting the “Create Database” button on the main screen presents a simple dialog for naming a new database and (optionally) creating the initial table.

New table options

Table name:

Copy fields from table:

Type:

Field name	Data type	Type width	Primary key?	Autoincrement?
cField1	char	20	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
iTestTablePK	int		<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
dDate	date		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
tDateTime	datetime		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes

Figure 5: Creating a new table involves selecting the table type, naming the fields, and specifying a few of the field characteristics.

Edit Database test

Database Tables

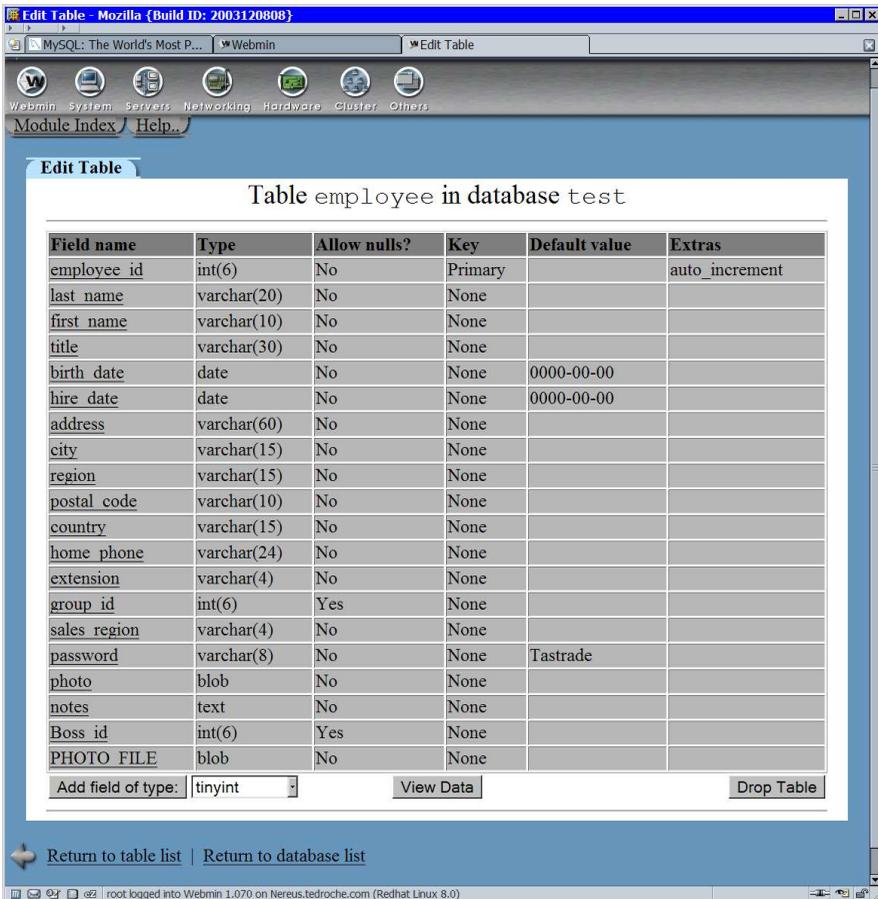
Create a new table Fields: 4

<input type="button" value="Maintain"/> category	<input type="button" value="Maintain"/> customer	<input type="button" value="Maintain"/> employee	<input type="button" value="Maintain"/> order_line_items	<input type="button" value="Maintain"/> orders
<input type="button" value="Maintain"/> products	<input type="button" value="Maintain"/> setup	<input type="button" value="Maintain"/> shippers	<input type="button" value="Maintain"/> supplier	<input type="button" value="Maintain"/> user_level

Create a new table Fields: 4

Figure 6: The Table dialog lets you create a new table, drop the database, backup the database, execute SQL against any table, or pick a table to maintain.

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The screenshot shows the MySQL Webmin interface. The browser window title is "Edit Table - Mozilla {Build ID: 2003120808}". The address bar shows "MySQL: The World's Most P...". The page title is "Edit Table". The main content area is titled "Edit Table" and "Table employee in database test". Below this is a table showing the field structure of the 'employee' table.

Field name	Type	Allow nulls?	Key	Default value	Extras
employee_id	int(6)	No	Primary		auto_increment
last_name	varchar(20)	No	None		
first_name	varchar(10)	No	None		
title	varchar(30)	No	None		
birth_date	date	No	None	0000-00-00	
hire_date	date	No	None	0000-00-00	
address	varchar(60)	No	None		
city	varchar(15)	No	None		
region	varchar(15)	No	None		
postal_code	varchar(10)	No	None		
country	varchar(15)	No	None		
home_phone	varchar(24)	No	None		
extension	varchar(4)	No	None		
group_id	int(6)	Yes	None		
sales region	varchar(4)	No	None		
password	varchar(8)	No	None	Tastrade	
photo	blob	No	None		
notes	text	No	None		
Boss_id	int(6)	Yes	None		
PHOTO FILE	blob	No	None		

At the bottom of the table, there is a form: "Add field of type: tinyint" with a dropdown menu, a "View Data" button, and a "Drop Table" button. Below the table, there are two links: "Return to table list" and "Return to database list". The status bar at the bottom shows "root logged into Webmin 1.070 on Nereus.tedroche.com (Redhat Linux 8.0)".

Figure 7: Choosing a table lets you view the field structure of the table. Clicking on a field name will let you change its characteristics.

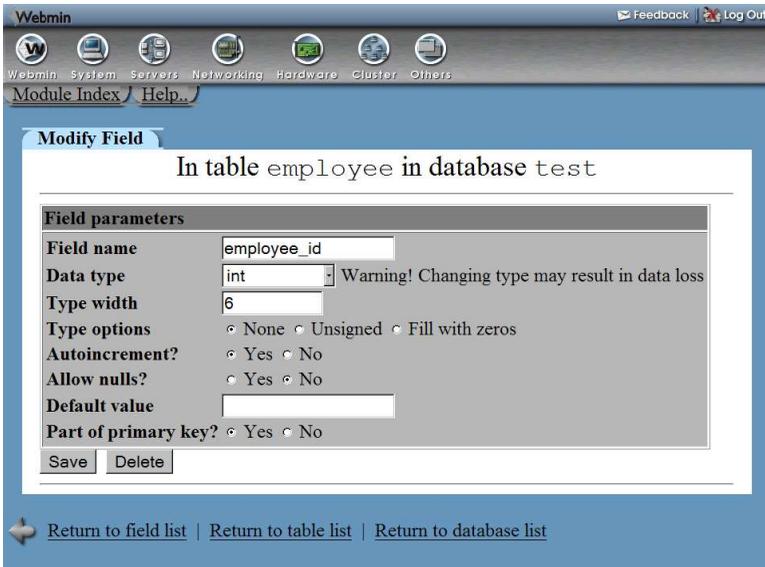


Figure 8: Choosing a field name in the previous dialog lets you modify the characteristics of the field.

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Webmin System Servers Networking Hardware Cluster Others
Module Index Help..

Execute SQL

Enter SQL command to execute on database test ..

```
select * from category
```

Execute

Select SQL commands file to execute on database test ..

From local file ...

From uploaded file Browse... Execute

Select a text data file to import into MySQL database test ..

This file must contain one database record per line, with the fields separated by tabs.

From local file ...

From uploaded file Browse... Execute

Table to import data into From filename

Delete data in table first? Yes No

Ignore duplicate rows? Yes No

Execute

Figure 9: Choosing to execute SQL against the database brings up this dual-purpose dialog: SQL statements can be executed in the top portion, and tab-delimited text files imported in the bottom portion.

Execute SQL - Mozilla (Build ID: 2003120808)

MySQL: The World's Most P... | WAdmin | Execute SQL

Module: Index

Execute SQL

Output from SQL command: select * from category ..

category_id	category_name	description	picture
1	Beverages	Soft drinks, coffees, teas, beer, and ale	
2	Condiments	Sweet and savory sauces, relishes, spreads, and seasonings	
3	Confections	Desserts, candies, sweetbreads	
4	Dairy Products	Cheeses	
5	Grains/Cereals	Breads, crackers, pasta, and cereal	
6	Meat/Poultry	Prepared meats	
7	Produce	Dried fruit and bean curd	
8	Seafood	Seaweed and fish	

Return to execute SQL form | Return to table list | Return to database list

Return to execute SQL form | Return to table list | Return to database list

Return to execute SQL form | Return to table list | Return to database list

Figure 10: The results returned from the query displayed at the top of the form.

xCase

xCase is a commercial tool, one of the few covered in this paper. I use it as an example because of its great utility and many features. I have been unable to find a tool of similar functionality in the Open Source / Free Software world. xCase is a tool for Computer-Aided Software Engineering (hence the CASE part of the name) that can read and write various database structures. From the xCase web site, the list of supported databases is impressive: SQL Server, Oracle, Sybase, SQL Anywhere, Informix, DB2, Interbase, Firebird, FoxPro, VFP, MySQL and Jet (VB and Access). xCase lets you:

- read in the structure from one database,
- save and print the model or diagrams (a very effective communication tool!),
- two-way synchronize the model with a live database,
- convert the target database from one type to another,
- generate scripts for the creation and modifications of databases,
- perform the actual transfer of data from source to target database,

xCase

Version: 7.4, April 2004

Price: \$399 (Fox) to \$799 (Professional) in several different packages

License: commercial, 1 per user

Features: two-way design interaction & scripting, color printing, data migration, target data server switching, much more

<http://www.xcase.com>

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- and more.

Like the GUI tools mentioned above, xCase is good at providing the “discoverability” within a data model, offering you choices and options you might not have been aware of, and can then show you the script equivalent of the commands you perform.

phpMyAdmin

phpMyAdmin is another web-based tool, like WebMin above, but specifically designed for the management of MySQL only. If you are already hosting a PHP application for MySQL, this add-on can give you full remote administrative abilities without the overhead or exposure of the WebMin application described above.

A typical installation of phpMyAdmin involves downloading and decompressing the files from the web site onto your web site, modifying the configuration files for your site, establishing security for the application, and running the application. Installation instructions are also on the phpMyAdmin site, under documentation.

If you plan to make your phpMyAdmin interface available over the Internet (versus exposing it only internally via an intranet), you'll need to be aware that the application could provide a security hole leading directly to your corporate data. Some caution in configuring and securing the program is in order.

- Enable security by requiring web-server authenticated logins for your database administrators.
- Disable the 'root' and 'guest' user ids or provide them with passwords/
- Consider creating a user id solely for access to the phpMyAdmin tool to minimize the damage that could be done to the machine if that id was compromised.
- If you'll be supporting multiple databases with different administrators, grant the DBAs just the rights they will need to their databases and limited rights to the mysql database.

A Visual Tour of phpMyAdmin

Figure 11 shows the phpMyAdmin interface: a frame on the left contains links to the phpMyAdmin web site, a dropdown list of the databases available, and a list of the tables in the currently selected database. The link at the bottom of the frame, labeled “Query window” displays a pop-up window with query capabilities similar to that available on the “SQL” tab. The right-hand frame shows one of the tabbed dialogs listed across the top of the page. Note that these dialogs are different, depending on whether you select a database or a table in the left pane. If you select a database, the dialogs operate across the entire database and show you options for tables; if you select a single table, the dialogs focus on that table and the fields within that table. The following pages illustrate the different pages that are available within phpMyAdmin, and describes what they can do. The tabbed pages include:

- Structure, **Figure 13**, to alter the structure of tables, fields and indexes.
- Browse, **Figure 15**, to view and edit data in the tables.
- SQL, **Figure 16**, to execute commands against the data.

phpMyAdmin

Version: 2.5.6, May 2004

License: GNU General Public License (GPL)

Features: Complete control of a MySQL database: security, database and table creation, browsing and editing data, ad-hoc querying as well as form-driven queries.

<http://www.phpmyadmin.net>

- Search, **Figure 17**, to locate records matching search criteria.
- Insert, **Figure 14**, to add data.
- Export, **Figure 18**, to copy data into different formations.
- Operations, show in **Figure 11**, to perform various maintenance operations on the data.
- Empty to remove all data items from the table. A confirmation dialog (**Figure 19**) confirms.
- Drop to drop the table or database from MySQL completely. A confirmation dialog (**Figure 20**) confirms you really want to completely remove the table from the database.

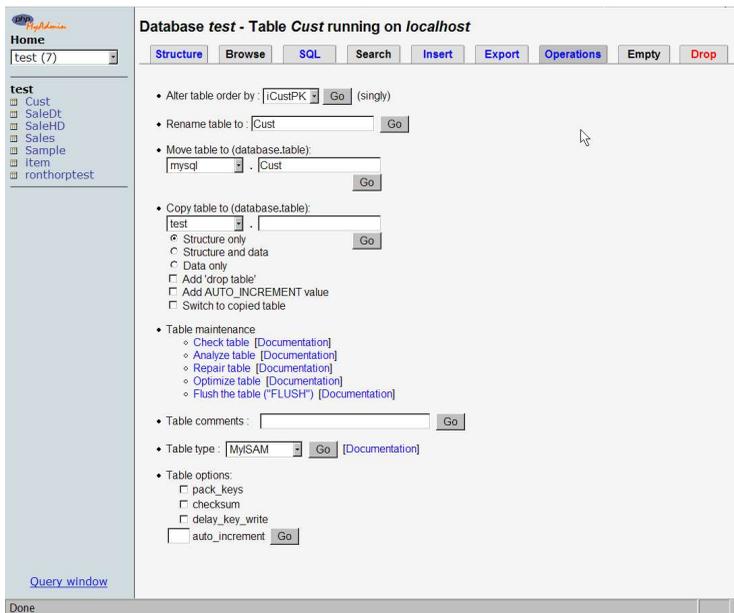


Figure 11: The main phpMyAdmin browser interface has a frame on the left to select databases and tables, and a frame on the right with tabs to perform various function.

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Database test - Table Cust running on localhost

Field	Type <small>[Documentation]</small>	Length/Values*	Attributes	Null	Default**	Extra	Primary	Index	Unique	---	Fulltext
cCustname	CHAR	4		not null			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
mShipaddr	TEXT			not null			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
yMaxCredit	DECIMAL	12, 4		not null	10000.0000		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
cMainphone	CHAR	20		not null			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
lActive	TINYINT		UNSIGNED	not null	1		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>

Save

* If field type is "enum" or "set", please enter the values using this format: 'a','b','c'.

If you ever need to put a backslash ("\") or a single quote (") amongst those values, backslashes it (for example '\\xyz' or 'a\\b').

** For default values, please enter just a single value, without backslash escaping or quotes, using this format: a

[\[Documentation\]](#)

Figure 12: Selecting the “Add Field” option on the table structure page (see Figure 13) gives you a dialog to add fields and specify their type and characteristics.

Database test - Table Cust running on localhost

Table Cust has been altered.

```

SQL-query: [Edit] [Create PHP Code]
ALTER TABLE `Cust` ADD `cCustname` CHAR(4) NOT NULL,
ADD `mShipaddr` TEXT NOT NULL,
ADD `yMaxCredit` DECIMAL(12,4) DEFAULT '10000.0000' NOT NULL,
ADD `cMainphone` CHAR(20) NOT NULL,
ADD `lActive` TINYINT UNSIGNED DEFAULT '1' NOT NULL,

ALTER TABLE `Cust` ADD FULLTEXT (
  mShipaddr
);
    
```

Structure Browse SQL Search Insert Export Operations Empty Drop

Field	Type	Attributes	Null	Default	Extra	Action
<input type="checkbox"/> iCustPK	int(8)		No	0		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> cCustname	varchar(4)		No			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> mShipaddr	text		No			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> yMaxCredit	decimal(12,4)		No	10000.0000		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> cMainphone	varchar(20)		No			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> lActive	tinyint(3)	UNSIGNED	No	1		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Check All / Uncheck All With selected:

Indexes: [\[Documentation\]](#)

Keyname	Type	Cardinality	Action	Field	Type	Usage	Statements	Value
PRIMARY	PRIMARY	0	<input type="checkbox"/>	iCustPK	Data	0 Bytes	Format	dynamic
mShipaddr	FULLTEXT	None	<input type="checkbox"/>	mShipaddr	Index	1,024 Bytes	Rows	0
					Total	1,024 Bytes	Creation	Aug 19, 2004 at 03:07 PM
							Last update	Aug 19, 2004 at 03:07 PM

Create an index on 1 columns

- Print view
- Add new field: 1 [At End of Table]
- Propose table structure [\[Documentation\]](#)

Figure 13: The “Structure” tab shows you the fields and index in a table and allows you to modify, add or drop fields and indexes. The grey box at the top of the page shows the results of the structure changes made in Figure 12.

Database test - Table Cust running on localhost

Structure Browse SQL Search **Insert** Export Operat

Field	Type	Function	Null	Value
iCustPK	int(8)			
cCustname	varchar(4)			Fred
mShipaddr	text			48 Wellington Street Avon, MA 11111-9999
yMaxCredit	decimal(12,4)			10000.0000
cMainphone	varchar(20)			(617) 555-1212 x 999
lActive	tinyint(3) unsigned			1

Insert as a new row -- And --

Go back to previous page
 Or
 Insert another new row

Go Reset

Figure 14: The Insert Tab prompts you for values for a new record.

Database test - Table Cust running on localhost

Structure Browse SQL Search **Insert** Export Operations Empty Drop

Showing rows 0 - 0 (1 total, Query took 0.0019 sec)

SQL-query: [Edit] [Explain SQL] [Create PHP Code]
 SELECT *
 FROM `Cust` LIMIT 0, 30

Show: [30] row(s) starting from record # [0]
 in [horizontal] mode and repeat headers after [100] cells

	iCustPK	cCustname	mShipaddr	yMaxCredit	cMainphone	lActive
<input type="checkbox"/>	1	Fred	48 Wellington Street Avon, MA 11111-9999	10000.0000	(617) 555-1212 x 999	1

With selected:

Show: [30] row(s) starting from record # [0]
 in [horizontal] mode and repeat headers after [100] cells

[Insert new row](#)
[Print view](#)
[Print view \(with full texts\)](#)
[Export](#)

Figure 15: The Browse Tab displays existing records and lets you edit or delete them.

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Database test - Table Cust running on localhost

Structure Browse **SQL** Search Insert Export Operations Empty Drop

Run SQL query/queries on database test [\[Documentation\]](#)

```
SELECT * FROM 'Cust' WHERE Cut.mShipaddr LIKE '%Avon%'
```

Fields:
iCustPK
cCustname
mShipaddr
yMaxCredit

Insert

Show this query here again

Or Location of the textfile :
 (Max: 2,048KB)

Compression: Autodetect None "gzipped" "bzipped"

Figure 16: The SQL Tab lets you perform many operations against the table – inserts, updates, deletes or complex queries – using the SQL language.

Database test - Table Cust running on localhost

Structure Browse **SQL** **Search** Insert Export Operations Empty Drop

Select fields (at least one):

- iCustPK
- cCustname
- mShipaddr
- yMaxCredit
- cMainphone
- lActive

• Number of rows per page:

• Add search conditions (body of the "where" clause):
 [\[Documentation\]](#)

Or Do a "query by example" (wildcard: "%")

Field	Type	Function	Value
iCustPK	int(8)	=	<input type="text"/>
cCustname	varchar(4)	LIKE	<input type="text"/>
mShipaddr	text	LIKE	Avon
yMaxCredit	decimal(12,4)	=	<input type="text"/>
cMainphone	varchar(20)	LIKE	<input type="text"/>
lActive	tinyint(3)	=	<input type="text"/>

• Display order:
 Ascending Descending

Figure 17: The Search Tab lets you search using a "Query By Example" interface.

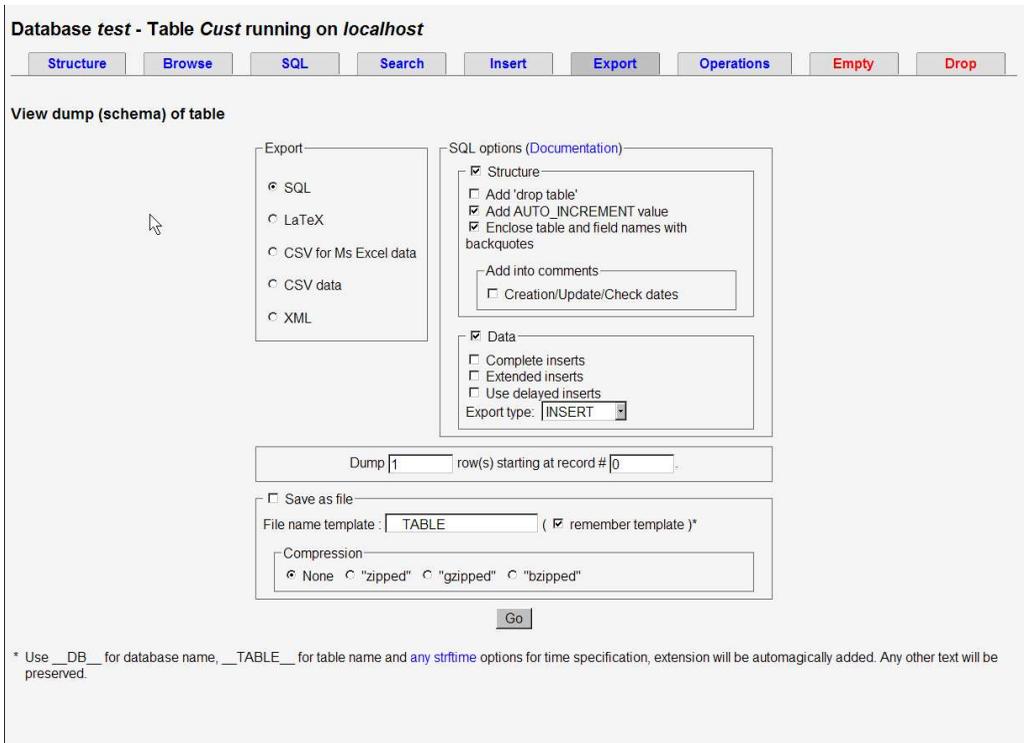


Figure 18: Export Tab

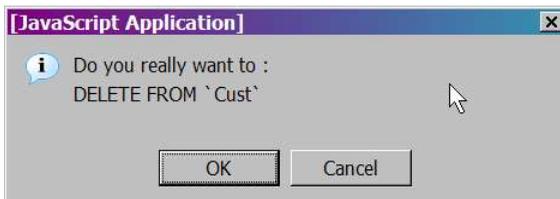


Figure 19: Clicking on the Empty Tab will bring up a confirmation dialog.

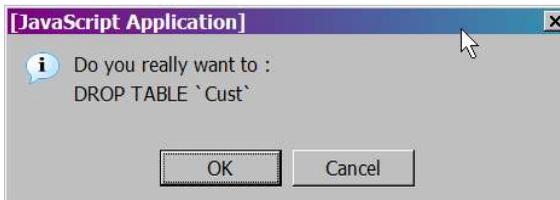


Figure 20: Clicking on the DROP Tab also brings up a confirmation dialog.

Which Tool Should You Use?

The choice of tools involves several factors. First, if there's only one available, for political or logistical reasons, most of the tools in this chapter will provide you with the functionality you'll need. If you are looking for a general purpose maintenance tool for the entire machine, network and many other applications, WebMin has that support. If you need to design and maintain database structures and port them to other database target, xCase is the way to go. If you need a graphical user interface, either mySQLcc or phpMyAdmin will provide that functionality. MySQLcc requires a direct port 3306 connection, but phpMyAdmin requires the installation of PHP on the machine and careful security settings.

Conclusion

MySQL ships with a set of command-line tools that can provide all of the functionality you need to set up, configure and maintain a MySQL database. However, there are advantages to graphical tools in providing the “discoverability” of finding functionality you were unaware of. Command-line tools require precise adherence to the proper parameters and command sequences, and can be difficult to learn and challenging to use infrequently. The MySQL Control Center provides a rich environment for maintaining a MySQL installation. The Webmin interface provides an easy-to-use remote interface that does not require installation on the remote machine. The xCase tool is aimed at specialists in data modeling. The phpMyAdmin tool is ideal if you already plan to use PHP on the machine and need remote and secure access for database maintenance.

For More Information

For Mac OS X users, you might want to check out YourSQL at <http://www.mludi.net/YourSQL/> as a replacement for the MySQL Control Center. I haven't tried the tool myself, but it is recommended on the MySQL web site.

phpMyAdmin can be downloaded from, and is supported at, http://www.phpmyadmin.net/home_page/

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