## Backup and Restore MySQL/MariaDB Databases

As you use XAMPP, you might find that you need to backup or restore a MySQL or MariaDB database. There are two easy ways to do this with XAMPP: using the browser-based phpMyAdmin tool or using MySQL/MariaDB's command-line tools. This guide describes both options.

This guide assumes that you already have a PHP application that uses a MySQL/MariaDB database deployed on XAMPP. The example application used in this guide is WordPress, although the steps outlined below will work for any application.

TIP

Remember that you can install WordPress quickly using the Bitnami WordPress module for XAMPP.

## Using phpMyAdmin

XAMPP includes phpMyAdmin, an open-source, browser-based tool for managing MySQL/MariaDB database servers. To backup a MySQL/MariaDB database using phpMyAdmin, follow these steps:

- 1. Browse to http://localhost/phpMyAdmin or http://127.0.0.1/phpMyAdmin. If required, log in using your database access credentials. On a fresh XAMPP installation without any changes, you can log in as *root* with a blank password.
- 2. Select the database to be backed up from the list in the left navigation pane. In this case, we're backing up the WordPress database, which is named *bitnami\_wordpress*.

php <mark>MyAdmin</mark>	← 📑 Server: 127.0.0.1 > 🗊 I	Database: bitnami_wordpress				
<u>↑</u> • • • • • • • • • • • • • • • • • • •	🖌 Structure 🛛 📋 SQL	🔍 Search 🗐 Query 🔜 Export				
Recent Favorites	Table 🔺	Action				
+ bitnami_wordpress	wp_commentmeta	🚖 🗐 Browse 📝 Structure 👒 Search 👫				
💽 🗐 mysql	□ wp_comments	🚖 🔲 Browse 📝 Structure 🤹 Search 👫				
🖶 performance_schema 🖶 phpmyadmin	□ wp_links	🚖 🗐 Browse 📝 Structure 👒 Search 👫				
₽-0 test	wp_options	🚖 🔲 Browse 🥻 Structure 🤏 Search 👫				
	wp_postmeta	🚖 🗐 Browse 🥻 Structure 🍕 Search 👫				
	□ wp_posts	🚖 🔲 Browse 🥻 Structure 👒 Search 👫				
	□ wp_terms	🚖 🗐 Browse 📝 Structure 🤏 Search 👫				
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	<pre>wp_term_taxonomy</pre>	🚖 🗐 Browse 📝 Structure 🤏 Search 👫				
	wp_usermeta	🚖 🔲 Browse 🥻 Structure 🧃 Search 👫				
	wp_users	🚖 📰 Browse 🙀 Structure 👒 Search 👫				
	11 tables	Sum				

- 3. Select the "Export" command in the top navigation bar.
- 4. On the resulting page, select "Quick" as the export method and "SQL" as the output format. Click "Go" to proceed.

🗕 🗊 Server: 127.0.0.1 » 🗊 Database: bitnami_wordpress						
M Structure	📄 SQL	🔍 Search	🗐 Query	🔜 Export	🛃 Import	▼ More
Exportir	ng table	es from '	'bitnam	i_wordpr	ess" da	tabase
Export Methe	od:					
⊙ Qu	ick - display	only the minimal	options			
O Cu	stom - displa	y all possible op	tions			
Format:		•				
Go						

phpMyAdmin will export the database to a text file as a series of SQL statements. Once done, the browser will prompt you to download it to the desktop. This text file is your backup, so store it safely!

Opening bitnami_wordpress.sql	×
You have chosen to open:	
🗐 bitnami_wordpress.sql	
which is: sql File	
from: http://localhost	
What should Firefox do with this file?	ן ר
C Open with Browse	
C Save File	
Do this <u>a</u> utomatically for files like this from now on.	
OK Cancel	

At a later point, you may wish to restore the database. To restore the data to a fresh MySQL/MariaDB database using phpMyAdmin, follow these steps:

- 1. Browse to http://localhost/phpMyAdmin or http://127.0.0.1/phpMyAdmin. If required, log in using your database access credentials.
- 2. Select the "New" command in the left navigation pane.



3. On the resulting page, enter a name for the new database (in this case, myblog). Select the collation

"utf8\_general\_ci". Click "Create" to create the database.



Once the database has been created, it will appear in the left navigation pane.

php <b>MyAdmin</b>	🗕 📑 Server: 125	7.0.0.1				
<u>^</u>	Databases	📄 SQ	L 🚯 Status	🔳 Users	🔲 Export	📑 Import
Recent Favorites						
	<b>D</b>					
information_schema	Database	es				
e mysqi	🔒 Create dat	abase 😡				
💼 🗐 performance_schema	Database na	me	Collation		• Cre	ate
💼 💷 phpmyadmin						
⊕ test	Avote: Enabling the database statistics here might cause heavy traffic between the well server.					
	Database 4	. (	Collation			
	information_s	chema	utf8_general_	ci 📧 Check	Privileges	

- 4. Select the new database from the left navigation pane. In the resulting page, select the "Import" command in the top navigation bar.
- 5. Click the "Browse...\_" button and select the backup file created earlier. Click "Go" to proceed.

🔶 💷 Server: 127.0.0.1 » 🗊 Database: myblog
📝 Structure 📑 SQL 🔍 Search 🗊 Query 🔂 Export 🔜 Import 🔻 More
Importing into the database "myblog"
File to Import:
File may be compressed (gzip, bzip2, zip) or uncompressed. A compressed file's na <mark>ve must cert in . <b>formatj.(compression)</b>. Example: <b>.sql.zip</b></mark>
Browse your computer Browse No ile selected. (Max: 2,048KiB)
Character set of the file: un-a
Partial Import:
I Allow the interruption of an import in case the script detects it is close to the PHP timeout limit. (This might be a good way to import large files, however it can break transactions.)
Skip this number of queries (for SQL) or lines (for other formats), starting from the first one:
Format:
SOL
Format-Specific Options:
SQL compatibility mode: NONE
Do not use auto_increment for zero values
Go

phpMyAdmin will import the data from the backup file. Once complete, you will see a screen indicating the status of the import.



If you browse the contents of the database, you should now see your original data.

← 📑 Server: 127.0.0.1	l » 📄 Data	base:	myblog o 🔜 Tal	ale: wp_posts			~
Browse 🖌 S	tructure		SQL 🔍 Se	arch 👫 Insert	🖶 Export 📑	Import 🔻 Ma	re
Showing rows 0 -	2 (3 total, (	Query	took 0.0000 sec	conds.)			
SELECT * FROM 'up	_posts`						
			🗆 Profil	ing [Inline] [Edit] [	Explain SQL ] [ Create	PHP Code ] [ Re	fresh]
Number of rows:	25 💌	Fi	lter rows: Sear	ch this table			
Sort by key: None			•				
+ Options ←T→	~	ID	post author	post date	post date gmt	post content	post title
🗖 🥜 Edit 👫 Copy	Delete	1	1	2014-11-10 10:25:06	2014-11-10 10:25:06	Welcome to WordPress. This is your first post. Edi	Hello world
🔲 🥜 Edit 👫 Copy	😑 Delete	2	1	2014-11-10 10:25:06	2014-11-10 10:25:06	This is an example page. It's different from a blo	Sample Page
🔲 🥜 Edit 📑 Copy	😂 Delete	З	1	2014-11-14 06:33:38	0000-00-00 00:00:00		Auto Draft

You should now update your application's configuration and point it to your newly-created database. For example, with the Bitnami WordPress module, you will need to edit the *wp-config.php* file in the *apps\wordpress\htdocs\* subdirectory of your XAMPP installation directory. Within this file, you will need to update the *DB\_NAME* constant to use the new database name.



NOTE

By default, PHP (and therefore phpMyAdmin) is configured to only accept uploads up to 2 MB in size. If your database is larger than this, you need to modify the PHP configuration file to accept a larger upload size. To do this, edit the *php.ini* file in the *php\* subdirectory of your XAMPP installation directory and increase the values of the *post\_max\_size* and *upload\_max\_filesize* variables. Save your changes and restart Apache for the changes to take effect.

## **Using Command-Line Tools**

MySQL and MariaDB include two command-line tools that you can use to quickly backup and restore databases. The *mysqldump* tool is used to export the contents of a database to a text file, while the *mysql* client can be used to import data from a text file into a MySQL/MariaDB database.

To backup a MySQL/MariaDB database from the command line, follow these steps:

- 1. Launch a new Windows command shell using the "Shell" button in the XAMPP control panel.
- 2. Use the command below to export the contents of the selected database. In this example, we're backing up the WordPress database, which is named *bitnami\_wordpress*, to a file named *bitnami\_wordpress.sql*. This text file is your backup, so store it safely!

mysqldumpuser=rootpassword="" bitn	nami_wordpress > bitnami_wordpress.sc
Administrator: XAMPP for Windows # mysgldumpusersrootpassworde"" bitnami_wordpress > b woranies. Join a pittofface.com	_□× ⊃ bitnami_wordpress.sql
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At a later point, you may wish to restore the database. To restore the data to a fresh MySQL/MariaDB database from the command line, follow these steps:

- 1. Launch a new Windows command shell using the "Shell" button in the XAMPP control panel.
- 2. Use the *mysql* client to create a new, empty database to hold your data. In this example, the new database is named *myblog*.

mysql --user=root --password="" -e "CREATE DATABASE myblog"

Remember to use the correct database access credentials in the command. On a fresh XAMPP installation

without any changes, you can usually log in as root with a blank password.

3. Use the *mysql* client to import the contents of the backup file into the new database.

mysql --user=root --password="" --database=myblog < bitnami\_wordpress.sql

The command-line client will now import the data from the backup file.



If you browse the contents of the database, you should now see your original data.



You should now update your application's configuration and point it to your newly-created database. For example, with the Bitnami WordPress module, you will need to edit the *wp-config.php* file in the *apps\wordpress\htdocs\* subdirectory of your XAMPP installation directory. Within this file, you will need to update the *DB\_NAME* constant to use the new database name.

📕 wp-config.php - Notepad	_ 🗆 🗙
File Edit Format View Help	
<pre>K?php /** * The base configurations of the WordPress. * * This file has the following configurations: MySQL settings, Table Prefix, * Eccret Keys, WordPress Language, and ABSPATH. You can find more informationby visiting {@link http://codex.wordpress.org/Editing_wp-config.php</pre>	<u> </u>
Editing * wp-config.php} Codex page. You can get the MySQL settings from your host. * This file is used by the wp-config.php creation script during the * installation. You don't have to use the web site, you can just copy file * to "wp-config.php" and fill in the values. * @package WordPress */	
// ** MySQL settings - You can get this 'nfo from your web host ** // /** The name of the database for WordPress */ define('DB_NAME', 'bitnami_wordpress');	
/** MySQL database username */ define('DB_USER', 'bn_wordpress');	
/** MySQL database password */ define('DB_PASSWORD', '6dc4075f8c');	
/** MySQL hostname */ define('DB_HOST', 'localhost:3306');	
/** Database Charset to use in creating database tables. */ define('DB_CHARSET', 'utf8');	
/** The Database Collate type. Don't change this if in doubt. */ define('DB_COLLATE', '');	
/**#@+ * Authentication Unique Keys and Salts.	-