

How to Access phpMyAdmin from Your VMware Cloud[®] Service Evaluation

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About Cloud Computing

Cloud computing is an approach to computing that pools or aggregates IT infrastructure resources. Using Infrastructure-as-a-Service (IaaS), through cloud computing, gives you a more efficient, flexible and cost-effective infrastructure. Clouds typically include a set of virtual machines (“VM”s). A virtual machine is an isolated software container that can run its own operating systems and applications as if it were a physical computer, and contains its own virtual (i.e., software-based) CPU, RAM, hard disk and network interface card (NIC). Users can start and stop Virtual Machines or use compute cycles, as needed. Clouds can be on-site (commonly referred to as ‘Private Clouds’), with a Service Provider (‘Public Cloud’), or a combination of the two (‘Hybrid Cloud’).

What is vCloud?

VMware vCloud is a software suite that empowers enterprises to transform their existing vSphere™ infrastructure into a consumable, self-managed, web-based service. It provides a window for end-user provisioning and deployment of servers, and enables enterprises to isolate departments IT deployments to provide unique quality of service requirements to each business unit. Organizations can maintain one or many shared catalogues, so business units can quickly and easily deploy custom servers on-the-fly without the need for further IT intervention. The VMware vCloud suite is built on top of vSphere, the industry standard in virtualization technology, and carries with it the enterprise-grade quality and features that you would expect from VMware.

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Overview

phpMyAdmin is a user friendly management tool for MySQL. This powerful tool allows you to create, drop and modify databases and tables. In addition, to the capability to add, edit and delete fields, phpMyAdmin can also execute SQL statements, manage keys on fields, manage privileges and export data in a wide range of formats through a web-based interface.

This document describes how to access your phpMyAdmin installation. No additional database manipulation is necessary to get up and running with a pre-packaged vApp provided through the “VMware Cloud Evaluation”. However, if you need to directly manage the MySQL database(s), phpMyAdmin is the tool to use.

How to Access phpMyAdmin from Your VMware Cloud Evaluation

By default, phpMyAdmin restricts access to all except from 127.0.0.1. In order to access it, you can create an SSH tunnel to Apache, sending your requests to your webserver from 127.0.0.1. In the VMware Cloud Evaluation, the BitNami Application templates do not have SSH enabled by default, nor is a firewall rule created.

To create a new firewall rule in the VMware Cloud Evaluation, go to 'View My Virtual Networks' within the 'My Cloud' tab, and click 'Create Rule'.

Add port 22 (TCP) as the Destination port to allow SSH traffic through to the VM (as pictured).

The screenshot displays the VMware Cloud Evaluation interface. At the top, there are navigation tabs: Summary, My Cloud, Administration, Billing Info, and Help Desk. Below these are sub-tabs: ADD A NEW SERVER, View my Public Cloud, View in vCloud Director, View my Virtual Networks, View Logs, and RELOAD. The main content area is titled 'Manage your IP Addresses' and shows a table of IP addresses:

Machine & vApp	Internal IP	External IPs
vCC-Node in vCC-vApp	192.168.0.100	[edit] [edit] Add external IP
CF-WWW in CF_WWW	192.168.0.101	[edit] [edit] Add external IP
Nomad in CF-Nomad	192.168.0.102	Add external IP

Below this is the 'Configure your Firewall' section, which includes a 'RESET FIREWALL' button and a table of firewall rules:

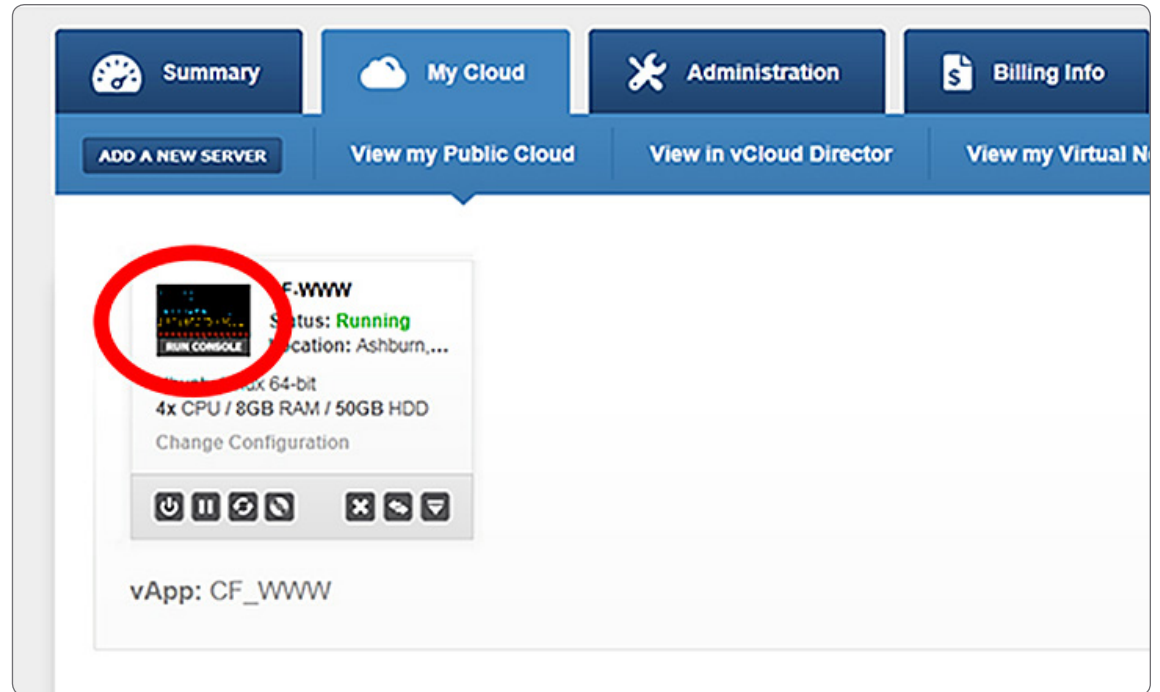
On	Description	Dir	Policy	Source IP	Port	Destination IP	Port	Protocol
<input checked="" type="checkbox"/>	Ping	In	Allow	*	*	192.168.0.101	*	ICMP
<input checked="" type="checkbox"/>	FTP	In	Allow	*	*	192.168.0.101	21	TCP+UDP
<input checked="" type="checkbox"/>	ssh	In	Allow	*	*	192.168.0.101	22	TCP
<input checked="" type="checkbox"/>	Website HTTP	In	Allow	*	*	192.168.0.101	80	TCP+UDP
<input checked="" type="checkbox"/>	Website HTTPS	In	Allow	*	*	192.168.0.101	443	TCP+UDP

At the bottom of the firewall configuration, it says 'Public Cloud Firewall - Enabled'. There are two buttons: 'Save Settings' and 'Create new rule', with the latter circled in red.

How to Access phpMyAdmin from Your VMware Cloud Evaluation

Once the rule is created, you will need to log into the VM using the Remote Console to enable SSH.

Using Internet Explorer, navigate to the 'My Cloud' tab of your VMware Cloud Evaluation console.



How to Access phpMyAdmin from Your VMware Cloud Evaluation

Click the thumbnail labeled 'Run Console'

Login using the following:

User: bitnami

Pass: bitnami

Upon first login you will be prompted to change the default user (bitnami) password.

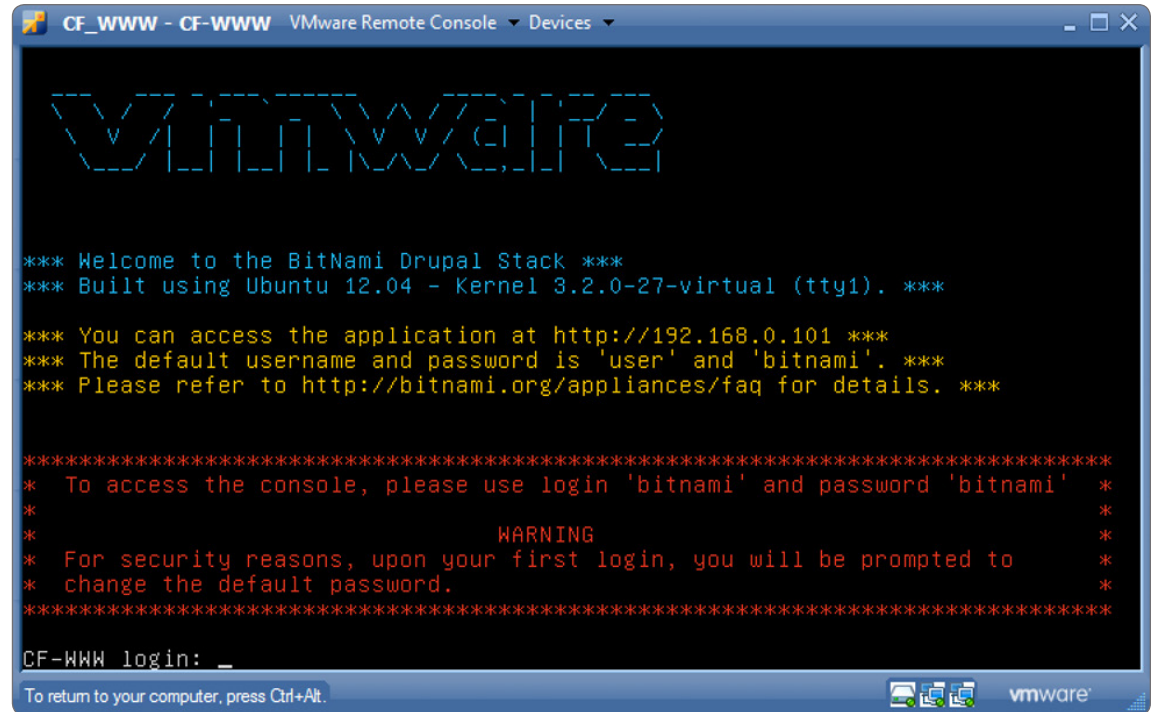
Once logged in, type the following to start ssh:

```
$ sudo /etc/init.d/ssh start
```

You will be prompted for your password. Enter it and press 'return'. A notification should show that ssh was started.

Type 'exit' to log out and then quit the remote console.

Once SSH is started in the VM you can connect a tunnel to it for securely accessing phpMyAdmin.

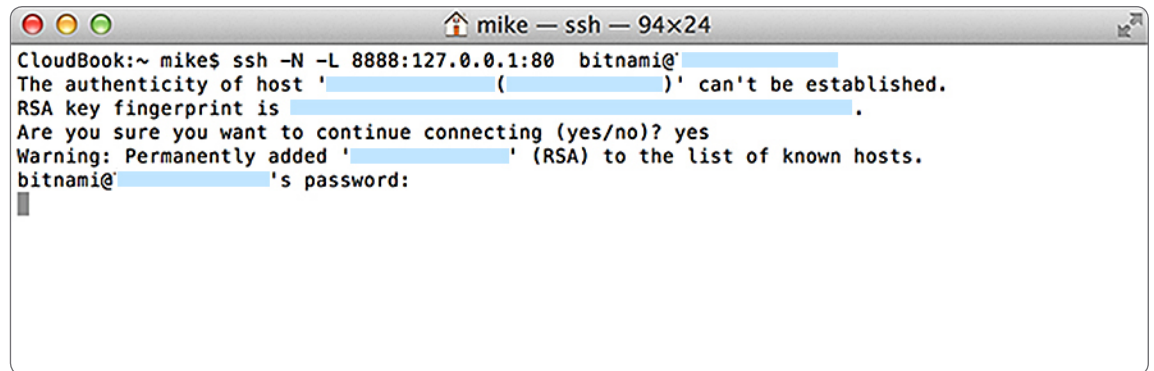


Creating a Secure Tunnel to Your VM to Access phpMyAdmin

Follow these steps to create the tunnel from a Linux or BSD (Mac) machine:

1. Create the tunnel:

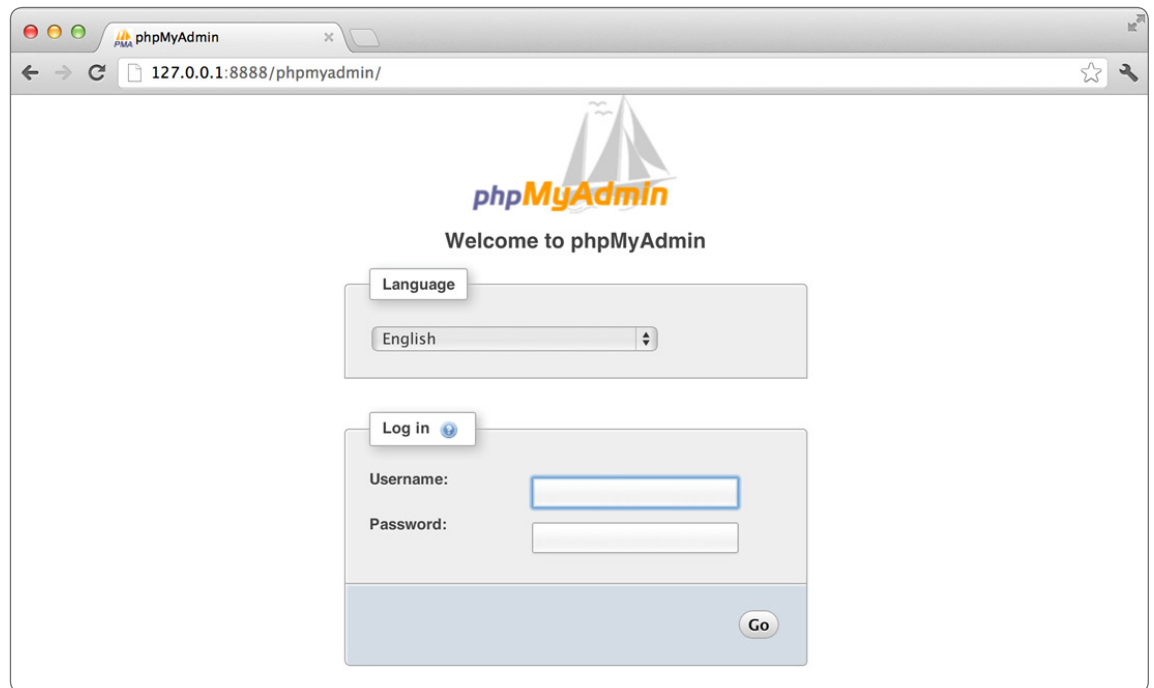
```
$ ssh -N -L 8888:127.0.0.1:80 bitnami@your_ip
```



```
mike — ssh — 94x24
CloudBook:~ mike$ ssh -N -L 8888:127.0.0.1:80 bitnami@
The authenticity of host ' ( )' can't be established.
RSA key fingerprint is .
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added ' (RSA)' to the list of known hosts.
bitnami@'s password:
█
```

2. While the tunnel is active you can connect to the web application at <http://127.0.0.1:8888/phpmyadmin> in your browser.

To close the tunnel, use Ctrl+c at the console to escape the current command.



The default user is 'root', and password is 'bitnami'

How to Access phpMyAdmin from a Remote Location

If you wish to access phpMyAdmin from somewhere beyond the Virtual Machine it resides upon, or the ssh connection mentioned above, you will need to configure the VM's Operating System to allow connections from the outside world to phpMyAdmin.

You can enable connections from remote systems by editing the "installdir/apps/phpmyadmin/conf/phpmyadmin.conf" file.

Replace:

```
"Allow from 127.0.0.1"
```

With:

```
"Allow from all":
```

```
Alias /phpmyadmin "/installdir/apps/  
phpmyadmin/htdocs"
```

```
<Directory "/installdir/apps/phpmyadmin/  
htdocs">
```

```
AuthType Basic
```

```
AuthName phpMyAdmin
```

```
AuthUserFile "/installdir/apache2/users"
```

```
Require valid-user
```

```
Order allow,deny
```

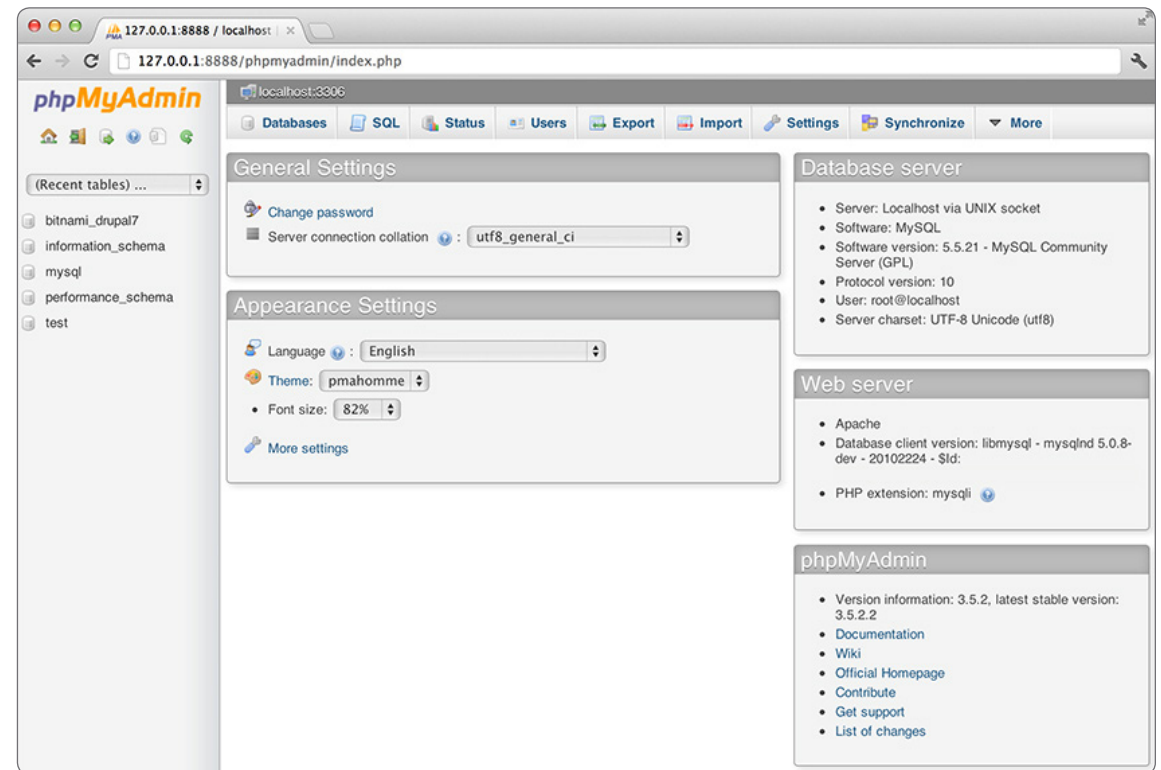
```
Allow from all
```

```
Satisfy all
```

```
ErrorDocument 403 "For security reasons,  
this URL is only accessible using localhost  
(127.0.0.1) as the hostname"
```

```
</Directory>
```

Once you navigate to the interface in your local or remote browser, you should see a login similar to the screenshot shown below.



Increasing the Security of phpMyAdmin's Login Pages

If you would like, you can add an additional layer of security by enabling Apache's built-in authentication to access phpMyAdmin.

To do this, open the file:

```
/opt/bitnami/apps/phpmyadmin/conf/phpmyadmin.conf
```

Uncomment the following 4 lines by removing the # symbol: You can edit the phpmyadmin.conf file with 'nano' at the command line (either from the Remote Console or from ssh if you enabled it):

```
$ sudo nano /opt/bitnami/apps/phpmyadmin/conf/phpmyadmin.conf
```

Here are the lines to uncomment:

```
# AuthType Basic
# AuthName phpMyAdmin
# AuthUserFile "install_directory/apache2/users"
# Require valid-user
```

Now, when accessing phpMyAdmin you will have to log in twice: First, with the username **administrator** and second, with the username **root** (note this is the MySQL 'root' user, not the system 'root' user). The password will be "bitnami". If you would like to change this password, you just have to follow the next set of instructions.



How to Change the Default Passwords

By default the database is not accessible from outside of the Virtual Appliance but it is still strongly recommended that you change the default password.

You can modify the mysql password using the following command at the shell prompt:

```
$ /opt/bitnami/mysql/bin/mysqladmin -p -u root  
password <your_new_password>
```

The default password for MySQL root user is “bitnami”. Please change it to a more secure password.



How to Reset the MySQL Root Password

To reset the MySQL root user password, create a file in the folder:

```
/home/bitnami/mysql-init
```

with the content shown below (replace mynewpassword with the one you wish to use):

```
UPDATE mysql.user SET Password=PASSWORD('mynewpassword') WHERE User='root';  
FLUSH PRIVILEGES;
```

Stop the MySQL server:

```
$ sudo /opt/bitnami/ctlscript.sh stop mysql
```

Start MySQL with the following command:

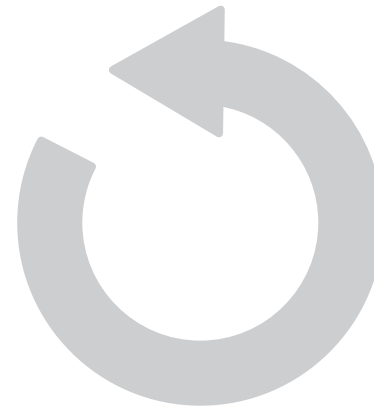
```
$ sudo /opt/bitnami/mysql/bin/mysqld_safe  
--defaults-file=/opt/bitnami/mysql/my.cnf  
--port=3306 --socket=/opt/bitnami/mysql/tmp/  
mysql.sock --old-passwords --datadir=/opt/  
bitnami/mysql/data --log-error=/opt/bitnami/  
mysql/data/mysqld.log --pid-file=/opt/bitnami/  
mysql/data/`hostname`.pid --init-file=/home/  
bitnami/mysql-init 2> /dev/null &
```

Then restart the MySQL service:

```
$ sudo /opt/bitnami/ctlscript.sh restart mysql
```

Lastly, remove the init script (so that it doesn't reset the password every time MySQL is restarted!)

```
$ rm /home/bitnami/mysql-init
```



How to Create a Database Backup

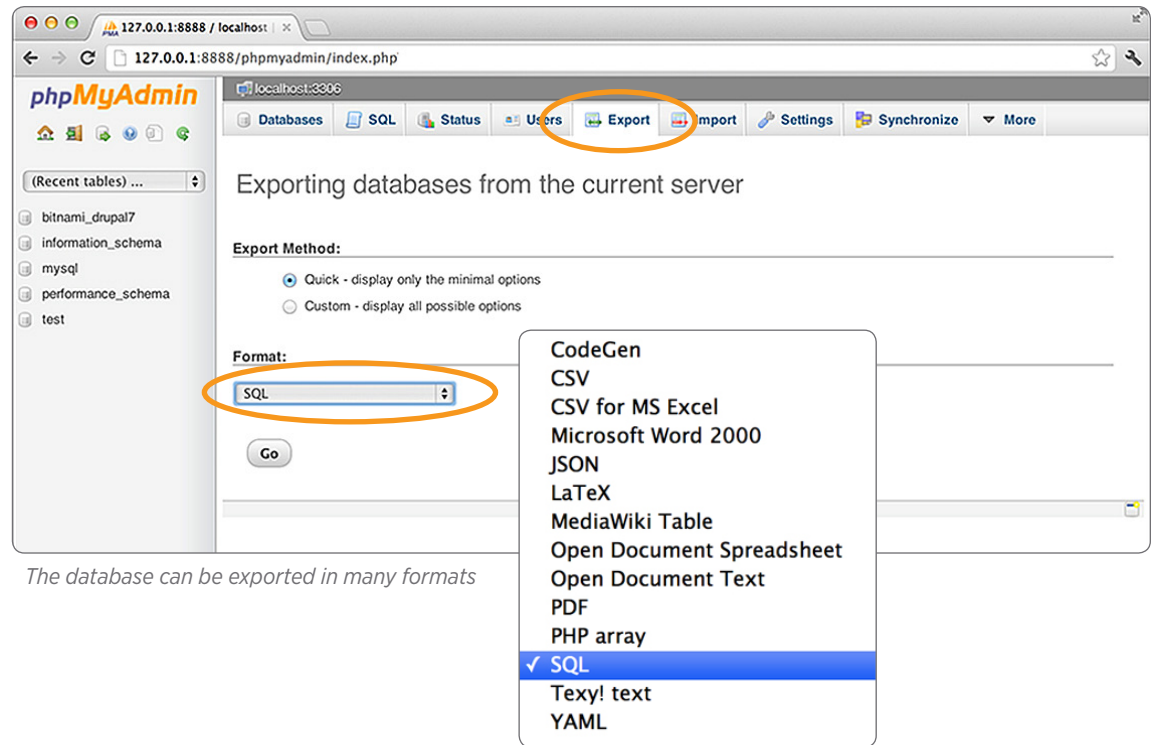
The phpMyAdmin interface has an 'Export' feature which can be used to quickly backup the database.

From the phpMyAdmin Interface, choose the 'Export' button from the toolbar.

Another way to backup only the database data is to create a dump file using the "mysqldump" tool.

```
$ /opt/bitnami/mysql/bin/mysqldump -u root -p database_name > backup.sql
```

This operation could take some time depending on the data size.



The database can be exported in many formats

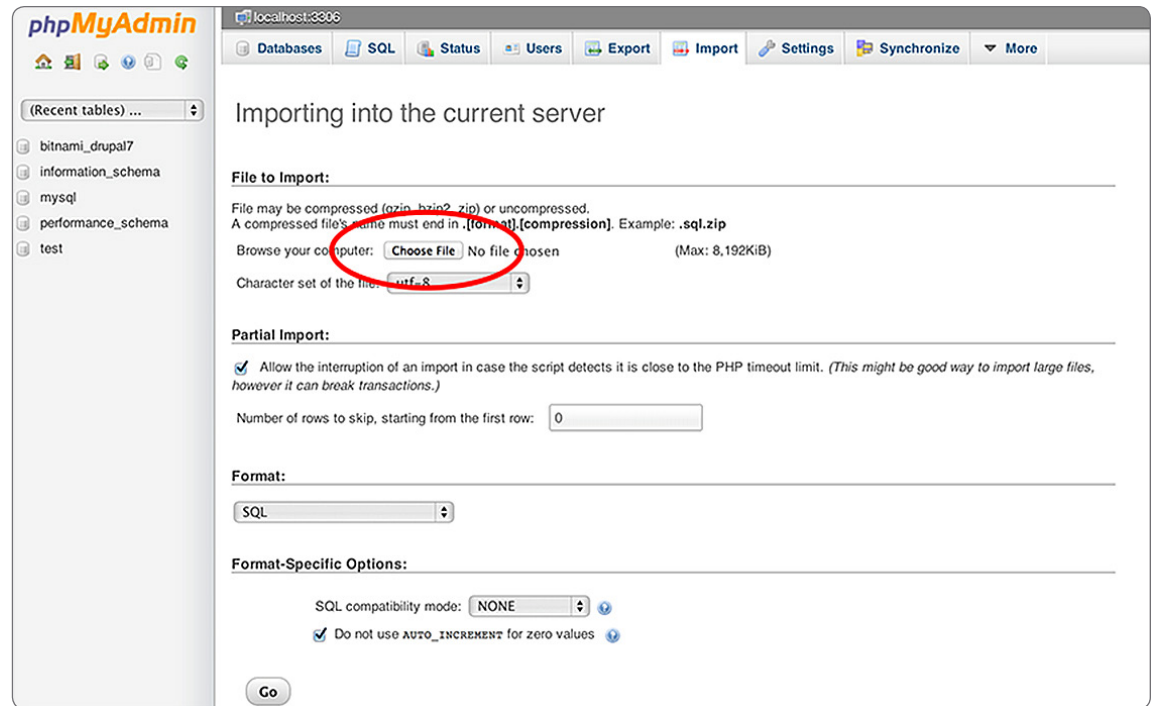
How to Restore a Database Backup

From the phpMyAdmin interface you can 'Import' a previously exported database.

Simply select the 'Import' button from the toolbar.

Click 'Choose file' and select your backup file.

Click 'Go'.



How to Change the Data Directory for MySQL

The data directory for MySQL is in `/opt/bitnami/mysql/data` folder by default. You can modify the location of this folder modifying the following files:

File:

```
/opt/bitnami/mysql/my.cnf
```

Locate and modify the line:

```
datadir=/opt/bitnami/mysql/data
```

File:

```
/opt/bitnami/mysql/scripts/ctl.sh
```

Locate and modify the line:

```
--datadir=/installdir/mysql/data
```

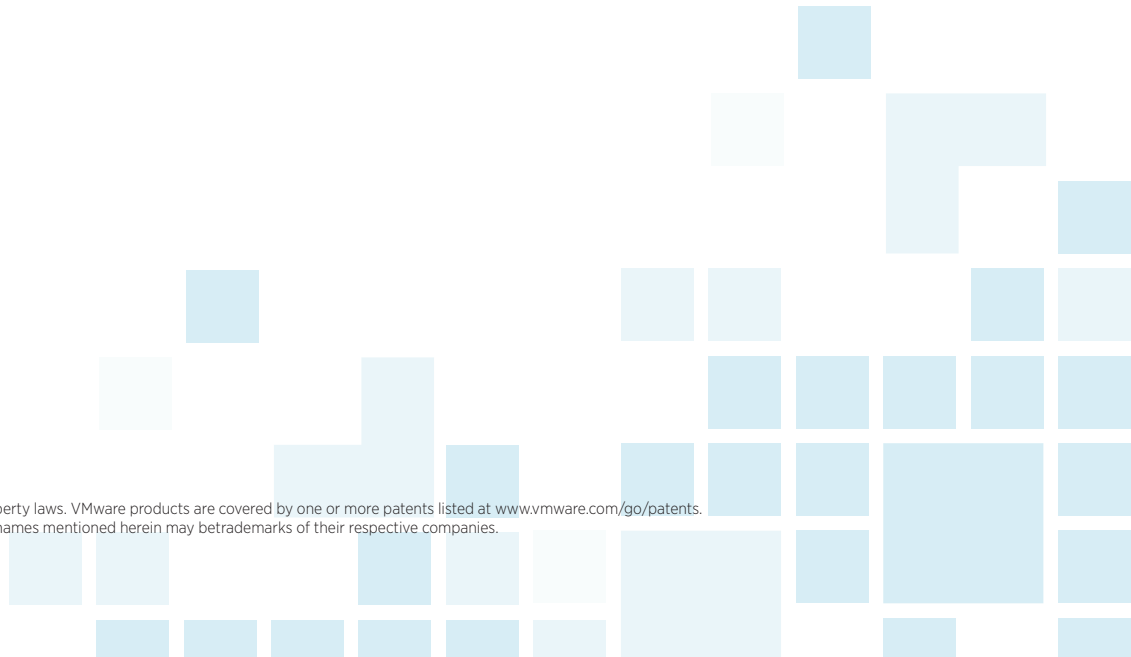
Then move the “data” folder to the new location and restart the database.



How to Debug Errors

The main MySQL log file is created at
`/opt/bitnami/mysql/data/mysql.log` file.





vmware®

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