

MySQL®

by:
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- Became Systems Administrator in 2002 for Rapid Grid
- Became Sr Systems Administrator in 2003 for Touch Support
- Began Working for cPanel in 2004 in PA
- Moved with cPanel to Houston in 2005

Main Topics

- How cPanel Install and Distributes MySQL
- How to tell what version of MySQL cPanel® currently supports
- MySQL naming conventions in cPanel
- How does cPanel access the MySQL information
- Basic Troubleshooting

How cPanel Distributes and Installs MySQL on Linux

- MySQL is installed by using the /scripts/mysqlup script.
 - The program connects to the cPanel update servers to verify the latest RPM available and download it.
 - cPanel rebuilds all of the mySQL RPM's from the src.rpm that MySQL distributes.
 - This is due to the # of issues that have risen in the past from using the mySQL RPM's

How cPanel Distributes and Installs MySQL on FreeBSD

- /scripts/mysqlup
 - While this script is also used on FreeBSD, it uses the packages or ports on FreeBSD to install MySQL.

What Version of MySQL does cPanel currently install?

- cPanel downloads a version file from its httpupdate servers.
 - <http://httpupdate.cpanel.net/mysqlinstall/version>
 - This file has a very specific layout that it uses to determine what version to download and install on your server.
 - TREE:version:subversion::individualRPMnames
 - TREE = Your cPanel Release Tree
 - version = MySQL version
 - subversion = MySQL subversion
 - individualRPMnames = The individual RPM names that cPanel will download and install

MySQL Version File Example

The following is a small cutout of the versions file. Please note that it is not complete and should not be referenced as complete.

```
CURRENT,RELEASE,STABLE,DNSONLY:mysql50:5.0.18:0.glibc23::  
    shared,shared-compat,devel,embedded,client,bench,server,shared  
CURRENT,RELEASE,STABLE,DNSONLY:mysql50-64:5.0.18:0.glibc23::  
    shared,shared-compat,devel,embedded,client,bench,server,shared  
EDGE,BETA:mysql50:5.0.21:0.glibc23::  
    shared,devel,client,bench,server,shared  
EDGE,BETA:mysql50-64:5.0.21:0.glibc23::  
    shared,devel,client,bench,server,shared
```

Choosing the Version of MySQL that is Right for You

- Current Versions Available
 - 4.0
 - 4.1
 - 5.0
 - 5.1 (not available in cPanel)

Choosing the Version of MySQL that is Right for You

- MySQL version 4.0
 - Considered depreciated and not recommended for new server installations

Choosing the Version of MySQL that is Right for You

- MySQL version 4.1
 - Still widely used and updates are readily available from MySQL. Scripts work well with this release and it is not currently necessary to update on a current running server

Choosing the Version of MySQL that is Right for You

- MySQL version 5
 - Latest GA release. Recommended for all new servers.
 - Have been issues with upgrading and then downgrading back to 4.1
 - Downgrading is not available in cPanel

Choosing the Version of MySQL that is Right for You

- MySQL version 5.1
 - Currently in beta
 - Not recommended for use with cPanel
 - Not available for install through cPanel



Manually Upgrading MySQL

While this is possible it is
NOT RECOMMENDED



Manually Upgrading MySQL: How it is Actually Done

- Install via RPM or source as needed by your OS
- Touch mysqlupdisable file
 - Touch /etc/mysqlupdisable
 - Makes cPanel ignore the mysql upgrade

The cPanel Naming Conventions and how they Work with MySQL

- cPanel only allows users to have 8 characters.
 - Allows MySQL databases and users to be prefixed with the username to allow for easy administration

How cPanel and MySQL Interact

- cPanel uses a setuid wrapper to interact with the MySQL database for security reasons.
 - /usr/local/cpanel/bin/mysqlwrap
 - This is a symlink to /usr/local/cpanel/bin/cpwrap

Possible Errors with cpwrap

- CP-Wrap Critical Error (signal %d from wrapped program)! This may indicate a corrupt admin binary in /usr/local/cpanel/bin/
 - This can be fixed by running /scripts/upcp –force

Possible Errors with cpwrap

- pwnam: error getting uid for user: %s
 - This happens when your passwd or shadow files are damaged

Possible Errors with cpwrap

- grnam: error getting gid for gid: %d
 - This happens when your group files are damaged
- grnam: error getting gid for group: %s
 - This happens when your group files are damaged

Possible Errors with cpwrap (cont.)

- There was an error setting uids. Please have the admin check permissions on:
 - The permissions should be 4755

Basic MySQL Troubleshooting

- Log Files
 - All MySQL logfiles are located at:
 - Linux: `/var/lib/mysql/`hostname`.err`
 - FreeBSD: `/var/db/mysql/`hostname`.err`

Scripts Included with cPanel to Help Troubleshoot MySQL

- /scripts/fixmysql
 - Verifies that the Bundle::DBD::mysql perl module is installed
 - If the privilege tables have not been updated and MySQL 4.x is installed it runs the update scripts
 - /usr/bin/mysql_fix_privilege_tables

MySQL and Perl Scripts

- When MySQL and perl are not playing nicely together it is almost always caused by the `Bundle::DBD::mysql` being out of date or linked with an old `mysql` library
 - `/scripts/realperlinstaller -force Bundle::DBD::mysql`
 - This forces a reinstall of the perl module

MySQL and PHP scripts

- When mySQL and PHP are not playing nice a PHP (easyapache) reinstall will generally fix it.



Additional MySQL Troubleshooting

- /scripts/mysqlconnectioncheck
 - reset /root/.my.cnf
- /scripts/securemysql
 - If users can see all MySQL databases
- MySQL not starting
 - old setting in /etc/my.cnf
 - check error log for details

Questions ? Discussion ?

Ask away!