Zmanda Recovery Manager for MySQL

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Zmanda adds a GUI to: mysqldump, Binlogs, and LVM Snapshots

Zmanda the commercial effort behind the open source Amanda Unix tape backup software make a backup product called Zmanda Recovery Manager (ZRM) for MySQL.

Zmanda Recovery Manager (ZRM) 3.0 highlights the following features in their advertisements:

1. Continuous Data Protection for Your MySQL Database
   Deep integration between ZRM, underlying storage and MySQL binary logs enables you to perform highly efficient CDP with almost instantaneous point-in-time recovery

2. Backup Live MySQL Databases Without Impacting Applications
   Perform hot backup of live MySQL by taking advantage of Linux LVM, Microsoft VSS, Solaris ZFS, Symantec VxFS, NetApp SnapManager, and EMC SnapView technologies.

3. Perform One-Click Point-In-Time Recovery
   ZRM provides unified point-in-time recovery for any type of backup method used

How Does Zmanda Recovery Manager (ZRM) Actually Work?

Zmanda Recovery Manager (ZRM) is a perl-based web utility used to manage the open source Amanda application. ZRM uses a variety of methods to extract data from MySQL and they are configurable at backup time. ZRM adds a GUI to all of the Legacy MySQL backup techniques and provides online backup using Online Volume Snapshots (e.g. LVM).

mysqldump & mysqlhotcopy

Zmanda Recovery Manager (ZRM) uses mysqldump and mysqlhotcopymysqlhotcopyas an option.

According to Zmanda: "Backups are done via mysqldump, various snapshots,mysqlhotcopy or MySQL replication."

Zmanda (ZRM) Online MySQL Backup

Zmanda Recovery Manager (ZRM) uses the Volume Snapshot method for providing Online backups of MySQL on Linux and Unix where available.

Zmanda Online Backup Availability

Linux MySQL Online Backups	Requires MySQL Data be Stored on an LVM Logical Volume and have Dedicated LVM Snapshot Storage
Windows MySQL Online Backups	No Not Available
Unix MySQL Online Backups	Requires Veritas File System for Snapshots
Network Attached Storage Online Bakcups	Supports Volume Snapshots using EMC Clarion and NetApp filers

Zmanda Recovery Manager (ZRM) "Continuous Data Protection" for MySQL

Zmanda advertises a continuous data protection offering for MySQL.

Zmanda use of the term "Continuous Data Protection" is very misleading. Zmanda does Not offer Continuous Data Protection ® for MySQL in any way like R1Soft or other CDP software vendors. Zmanda uses the term "Continuous Data Protection" to market it'sMySQL backups software. In the Zmanda press release announcing Zmanda CDP, Zmanda seems to define it's implmentation of CDP as Online Volume Snapshots, then goes on to elaborate about their use of MySQL binary logs for backup and restore.

How Does Zmanda "CDP" for MySQL Work?

We know very clearly Zmanda can do an Online backup of MySQL using Linux LVM, Veritas File System Snapshots, and the snapshot capability of Network Attached STorage devices like NetAPP and EMC. We also know Zmanda can copy MySQL binary logs or provide a GUI for ibbackup (sold separately by Innobase). How this translates to Continuous Data Protection is unclear.

Continuous Data Protections is typically defined as either True CDP where SAN replication is used for 1-second playback and resolution OR a method of computing Deltas between scheduled backups in a near-COntinuous fashion using a device driver to track low level disk (Block Level) changes. Another attribute of Continuous Data Protection is the idea of Virtual Full Backup where each backup appears as a Full Backup even though only deltas are stored.

For more information on Continuous Data Protection see:

- Computing Deltas - near-Continuous (CDP)

- Categories of Backup Software
- Block Based Backup Technology
- Backup Method - Virtual Full Backup
- Wikipedia's Article's on CDP: http://en.wikipedia.org/wiki/Near_Continuous_Backup, http://en.wikipedia.org/wiki/Continuous_Data_Protection

Category	Online IF LVM or other Volume Snapshots Available
Archive Type	Disk or Tape
MySQL Storage Engines Supported	All
Supported O/S	All
Binlog Backup & Restore	Yes
Zero Business Interruption (Online Backups)	Yes IF LVM or other Volume Snapshots Available
Granular (Table Level) Restore	Yes
Easy to Use Graphical User Interface	Yes
Complete Server Protection (Backup All Data or just MySQL?)	Yes with tar or dump
Backup Type	Incremental
Backup Window Length	Long (does not interrupt MySQL IF LVM or ibbackup is used)
Server Disk I/O and Load Impact	Heavy