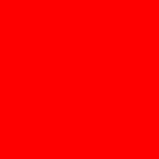


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## **Making MySQL Administration a Breeze** **A look into a MySQL DBA's toolchest**

Lenz Grimmer  
MySQL Community Relations Manager



The preceding is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions.

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# Overview

- Tools for Linux/Unix only
- Toolkits (script collections) and individual tools with a MySQL focus
- Not covering generic base OS tools like `vmstat`, `iostat` or `top`
- Open Source Software

# Maatkit

- <http://maatkit.org/>
- Perl script collection
- >25 tools
- All tools are standalone
- Minimal dependencies
- Docs embedded in the tools
- Exhaustive test suite

# Openark kit

- <http://code.openark.org/forge/openark-kit/>
- Python script collection
- 10 tools
- BSD License
- Written by Shlomi Noach

# Kontrollkit

- <http://kontrollsoft.com/software-kontrollkit>
- A collection of 13 scripts for making your daily MySQL DBA responsibilities easier
- Perl, Python, Shell
- Formerly known as Monolith Toolkit
- Maintained by Matt Reid (Kontrollbase)

# Hack MySQL Kit (hmk)

- <http://hackmysql.com/>
- 4 tools (C, Perl)
  - **mysqlreport** - Make easy-to-read MySQL status reports.
  - **mysqlsla** - Simple, lightweight MySQL log parsing.
  - **mysqlidxchk** - Checks tables for unused indexes.
  - **mysqlsniffer** - MySQL protocol sniffer.
- GPL
- Written by Daniel Nichter (Maatkit)

# User account administration

# Securich

- <http://www.securich.com/>
- Written by Darren Cassar (aka “MySQL Preacher”)
- Implemented as Stored Routines
- Roles & user groups
- Cloning of user accounts
- Flexible privilege assignment
- Improved password handling
- Fast blocking of user accounts

## **oak-block-account**

- Block or release connections for specific accounts
- Without changing privileges
- Optionally kill any existing connections

```
$ oak-block-account -u root \  
-ask-pass --account-user=<someuser>
```

# Monitoring

## mytop

- <http://jeremy.zawodny.com/mysql/mytop/>
- A `top` clone for MySQL
- Written in Perl
- Console based
- Monitoring of threads and overall performance

# innotop

- <http://code.google.com/p/innotop/>
- MySQL/InnoDB transaction/status monitor, inspired by **mytop**
- Perl
- Monitoring of
  - Replication status
  - Queries
  - InnoDB Transactions, Locks...

# mycheckpoint

- <http://code.openark.org/forge/mycheckpoint>
- Python
- Monitoring utility with a strong emphasis on user accessibility to monitored data
- SQL oriented: charts, reports and advanced metrics are generated on the fly with views.

# Backup

## `mk-parallel-dump/restore`

- Multi-threaded SQL dumps
- One subdirectory per DB
- Dump Compression
- Backups can be split up into chunks
- Saves binlog position
- Supports regular Expressions

# mydumper

- <https://launchpad.net/mydumper>
- Developed in C (glib, pcre)
- Parallel **Data** Dumps
- Easy to parse output
- Regular expressions
- Consistency
  - Snapshot across all threads
  - Stores Master/Slave binlog positions

# xtrabackup

- <https://launchpad.net/percona-xtrabackup>
- Online backup for InnoDB / MyISAM
- 2010-04-12: Version 1.2 (incl. Windows)
- In `my.cnf`:  
    **[xtrabackup]**  
    **target\_dir = /home/backups**
- Backup command:  
    **\$ xtrabackup -backup**

## mylvmbakup

- <http://www.lenzg.net/mylvmbakup/>
- Perl Script
- Fast creation of MySQL backups using LVM-Snapshots (Linux)
- Supports tar, rsync or rsnap to back up the data (rdiff soon)
- Archive names with timestamps

# Auditing/Security

# `oak-security-audit`

- Regular, automatic checking of
  - Non-local root-accounts
  - Anonymous user accounts
  - Accounts without a hostname
  - Accounts using empty or identical passwords
  - Non-root accounts with full privileges

```
$ oak-security-audit \  
-u root --ask-pass
```

# Performance tuning

# MySQL Tuning Primer

- <https://launchpad.net/mysql-tuning-primer>
- Shell script by Matthew Montgomery
- Takes information from "SHOW STATUS LIKE..." and "SHOW VARIABLES LIKE..."
- Attempts to produce sane recommendations for tuning server variables
- Inspired by Gert Dewit's MySQL AR

# mysqltuner

- <https://launchpad.net/mysqltuner>
- Perl
- Examines the database environment
- Provides performance tuning data and recommendations.
- Inspired by the MySQL Tuning Primer

```
$ mysqltuner.pl -recommend \  
  --config tuner-default.cnf
```

# mysqlreport

- Part of the HackMySQL toolkit
- Well-documented Perl script
- Reports important MySQL status values
- Transforms SHOW STATUS values into an easy-to-read report
- A better alternative to manually interpreting SHOW STATUS output
- Must-read: “The Guide To Understanding mysqlreport”

## mext

- <http://code.google.com/p/aspersa/>
- Shell script
- BSD license
- Runs `mysqladmin extended-status` and formats it nicely
- Can also read from saved files
- Supports incremental, differential and relative output

# Replication

# Monitoring replication

- **mk-heartbeat**
  - Uses separate heartbeat table
  - Frequently updates a time stamp on the master and measures replication delay
  - Master and slave clocks must be in sync
- **mk-table-checksum**
  - Performs an online replication consistency check
  - Checksums MySQL tables on one or many servers

# Monitoring replication (Cont.)

- **oak-get-slave-lag**
  - Reads master status and iterates through SHOW SLAVE STATUS
  - Triggers an error if threshold is reached
- **oak-show-replication-status**
  - Shows how far behind replicating slaves are on a given master

# Replication maintenance

- **oak-purge-master-logs**
  - Purges master logs while considering the replicating slaves
- **mk-slave-find**
  - Connects to a MySQL replication master and finds its slaves
  - Prints a tree-like view of the replication hierarchy
- **mk-slave-move**
  - Move a MySQL slave around in the replication hierarchy



**Q & A**

**Questions, Comments?**



# Thank you!

Lenz Grimmer <[lenz@sun.com](mailto:lenz@sun.com)>  
<http://lenzg.net/> | Twitter: [@lenzgr](https://twitter.com/lenzgr)