MySQL Sandbox 3.0

Installing and testing MySQL servers effortlessly

http://launchpad.net/mysql-sandbox

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MySQL Community

Overview

- Not an official Sun/MySQL product
- GPL
- installs from a tarball in a few seconds
- to install **side servers**, not the main instance
- creates a separated environment
    - data directory
    - port
    - socket
  - groups of related or unrelated servers

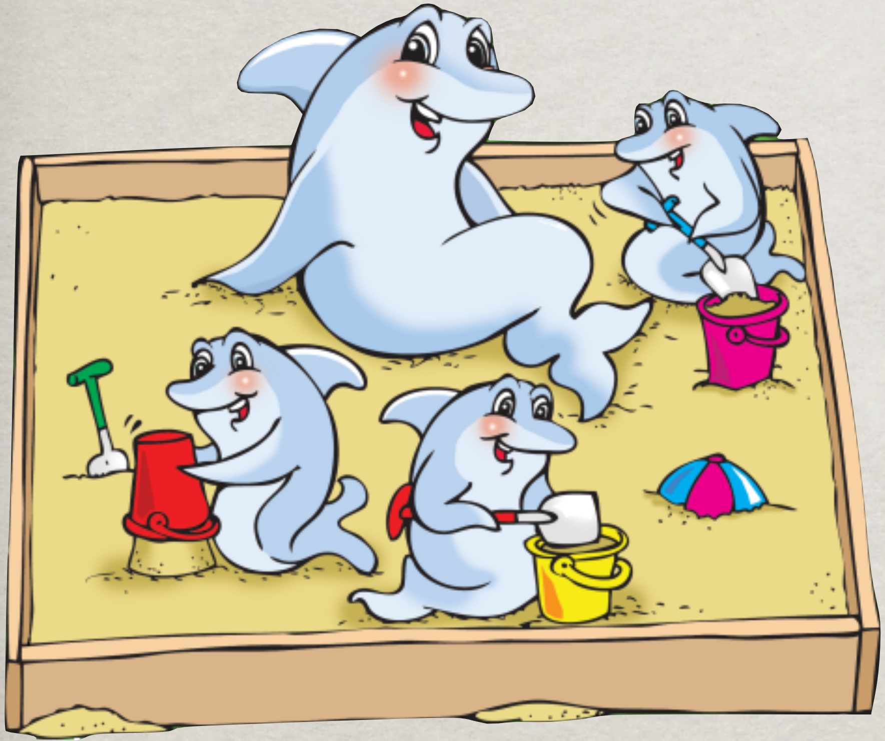
http://launchpad.net/mysql-sandbox/

System requirements

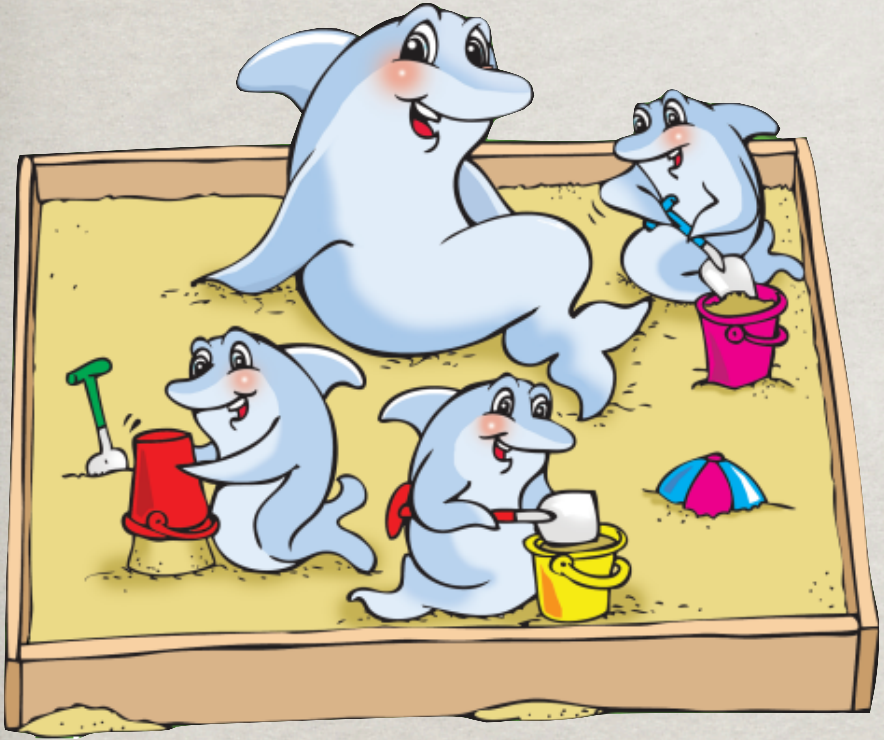
- Unix like operating system
  - Linux
  - Mac OS X
  - Solaris
  - Free BSD
- MySQL binary tarball
- MySQL Sandbox (current version 2.0.99a)
- Perl
- Bash shell

explaining the sandbox is like boxing

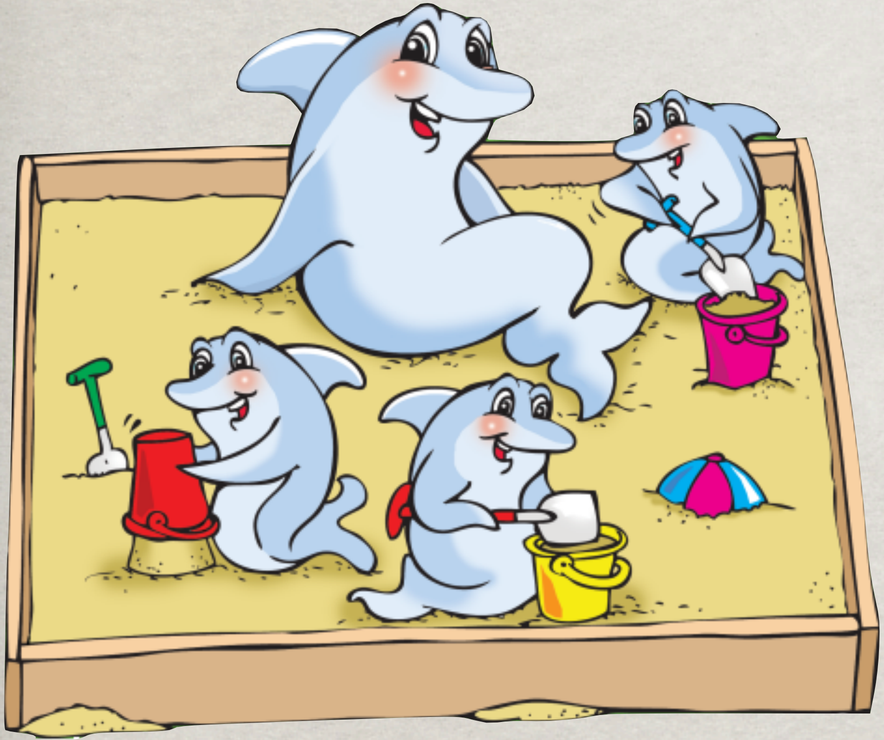
explaining the sandbox is like boxing



explaining the sandbox is like boxing



explaining the sandbox is like boxing



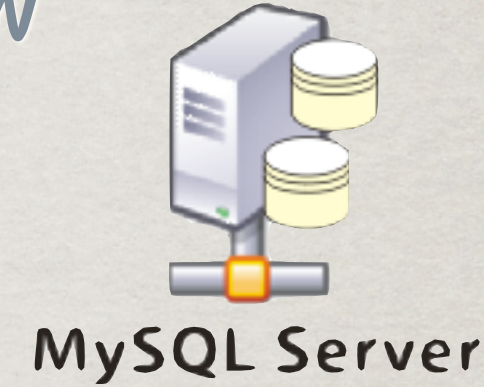
explaining takes longer than delivering

Overview

data directory

port

socket

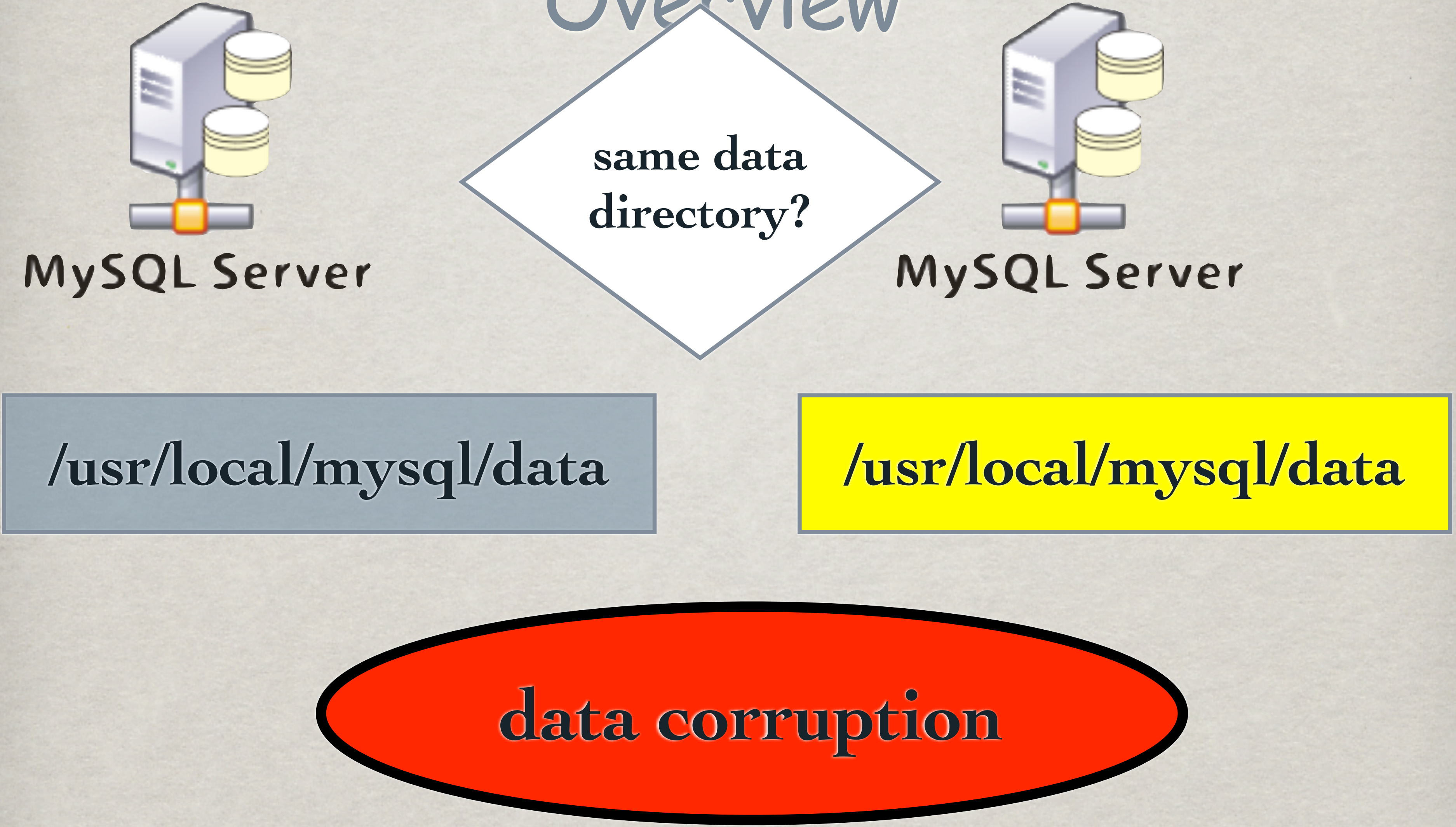


data directory

port

socket

Overview



MySQL Server

same data directory?

MySQL Server

/usr/local/mysql/data

/usr/local/mysql/data

data corruption

Overview

same data port or socket?

3306

/tmp/mysql.sock

3306

/tmp/mysql.sock

does not start

the hard way

1. unpack the tarball
2. ensure that it goes to a separate directory
3. create the database tables
4. create a .cnf file with separate
    - port
    - data directory
    - socket
5. launch mysqld_safe manually
6. launch mysql with options

error prone

Why tar.gz?
Why not .rpm/.deb/.pgk?

- it would work
- but only in their specific environments

The sandbox aims at being standard across operating systems.

It works the same way on Linux, Mac OSX, OpenSolaris, FreeBSD, and probably many more

MySQL Sandbox

MySQL Server

VERSION

$SANDBOX_HOME/msb_VERSION/data

VERSION

/tmp/mysql_VERSION.sock

MySQL Sandbox

MySQL Server

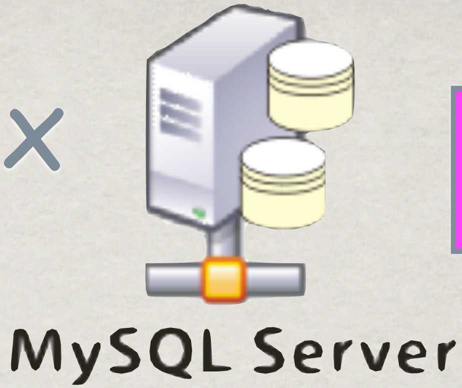
5.1.32

$SANDBOX_HOME/msb_5_1_32/data

5132

/tmp/mysql_5132.sock

MySQL Sandbox



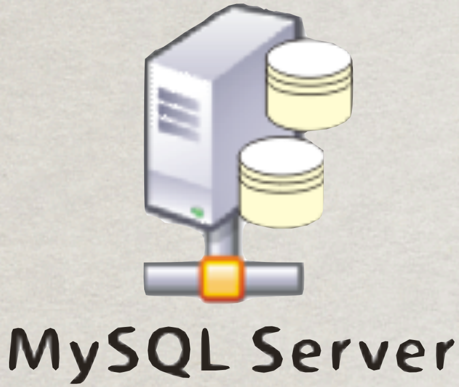
6.0.6

$SANDBOX_HOME/msb_6.0.6/data

6006

/tmp/mysql_6006.sock

MySQL Sandbox



single sandbox commands

```
start
stop
clear
send_kill
```

```
use
```

MySQL Sandbox

MySQL Server

multiple sandbox commands

One sandbox to rule them all

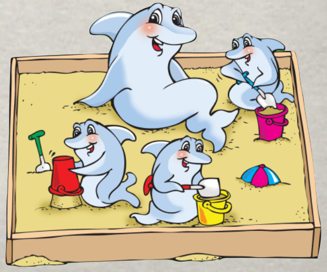
```
m
s1
s2
```

```
n1
n2
n3
```

```
start_all
stop_all
clear_all
send_kill_all
use_all
```

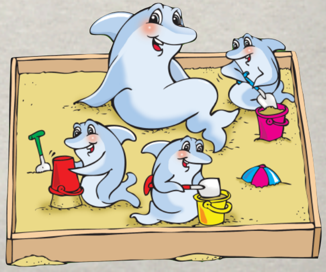
The easy way - installation

```
# as root
$ cpan
cpan> install MySQL::Sandbox
```



Installing the sandbox as unprivileged user

```
# download the sandbox
# http://launchpad.net/mysql-sandbox/
$ tar -xzf MySQL-Sandbox-x.x.x.tar.gz
$ cd MySQL-Sandbox-x.x.x/
$ perl Makefile.PL \
   PREFIX=$HOME/usr/local
$ make
$ make test
$ make install

# change $PERL5LIB and $PATH
```



The easy way - single sandbox

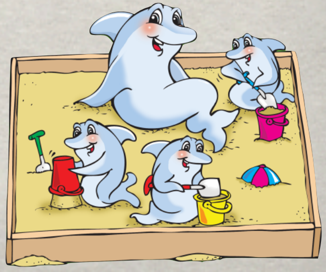
```
$ make_sandbox \
    /path/mysql-OS-5.1.26.tar.gz

# that's it!
```

The easy way - replication

```
$ make_replication_sandbox \
     /path/mysql-OS-5.1.26.tar.gz

# that's it!
```

The easy way - circular replication

```
$ make_replication_sandbox \
    --circular=5 \
    /path/mysql-OS-5.1.26.tar.gz

# that's it!
```

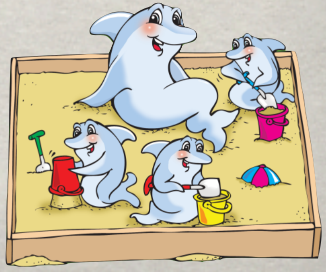


The easy way - multiple servers

```
$ make_multiple_sandbox \
    /path/mysql-OS-5.1.26.tar.gz

# that's it!
```

The even easier way - $SANDBOX_BINARY

```
# default SANDBOX_BINARY=$HOME/opt/mysql
$ export SANDBOX_BINARY=$HOME/mybin
$ ls $SANDBOX_BINARY
  5.0.64 5.0.66 5.0.67 5.1.20
  5.1.23 5.1.24 5.1.25 5.1.26
  5.1.28 5.1.29 6.0.5 6.0.6

$ make_sandbox 5.1.29

# that's it!
```

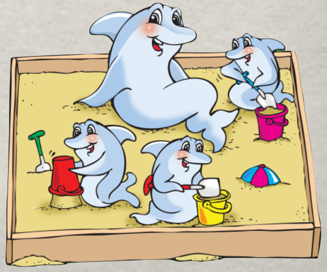


multiple servers - different versions

```
$ make_multiple_custom_sandbox \
    5.0.67 5.1.26 6.0.6


# that's it!
```

fine tuning

```
$ make_sandbox \
    /path/mysql-OS-5.1.26.tar.gz \
    [option] [option] [option]
```



pick your size

```
$ make_sandbox \
    /path/mysql-OS-5.1.26.tar.gz \
    --my_file={small|medium|large|huge}
```

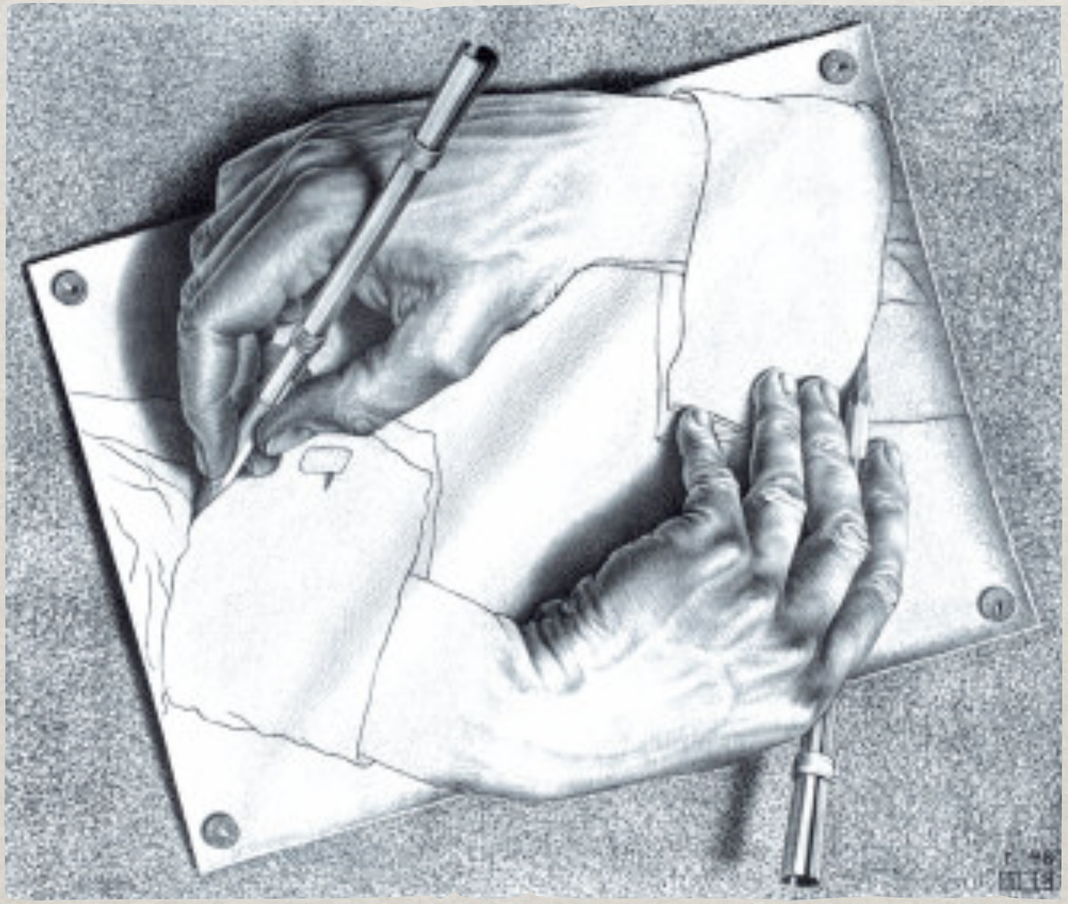
fine tuning easily

```
$ make_sandbox \
     /path/mysql-OS-5.1.26.tar.gz \
     --interactive
```

fine tuning easily

```
Enter the values for each option
* To leave the interactive choice and accept default
  values for the remaining options, enter 'default'
* To go to the previous item, enter 'back'
* To quit the installation without any action, enter
  'quit'
------------------------------------------
home_directory
   The home directory. (default: $HOME/sandboxes
   (/Users/gmax/sandboxes))
Your choice: (current value [/Users/gmax/sandboxes]) _
```

hands on



Using the sandbox

./start

- starts the server
- creates a .pid file in the data directory
- creates a socket file in /tmp
- if a .pid file exists, it exits immediately

Using the sandbox

./stop

- stops the server
- if no .pid file exists, it exits immediately

Using the sandbox

./send_kill

- stops the server, using

  ```
  kill -TERM pid#
  ```

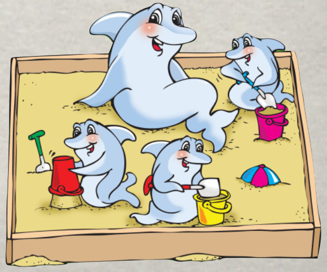
- if the server is unresponsive, uses

  ```
  kill -KILL pid#
  ```

Using the sandbox

./clear

- stops the server (by calling the stop script)
- removes all files in the data directory
- empties the test database



Using the sandbox

./use

- starts the mysql client
- uses the credentials in the my_sandbox.cnf
- default username and password:
  - msandbox/msandbox
- root password:
  - msandbox

Using the sandbox

./my {sqldump|sqlbinlog|sqladmin}

- starts a mysql command line tool
- uses the credentials in the my_sandbox.cnf

- it's a shortcut to call the tool from the right version with the proper options

using mysql clients

```
$ ./my sqlbinlog \
   ./data/mysql-bin.000001 |less

$ ./my sqldump dbname > dumpname

$ ./my sqladmin extended-status
# no username or password needed!
```

Using the replication sandbox

```
./start_all
```

- starts the master and all the slaves

```
./stop_all
```

- stops all the slaves and then the master

```
./send_kill_all
```

- kills all the slaves and then the master

```
./clear_all
```

- clears all the slaves and then the master

```
./use_all "command"
```

- executes "command" for all nodes

Using the replication sandbox

```
./m
```

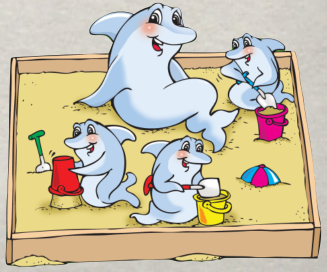
- uses the master

```
./s1
```

- uses the first slave

```
./s2 [s3, s4 ... ]
```

- uses the Nth slave



Using the multi-nodes sandbox

`./start_all`

- starts all the nodes

`./stop_all`

- stops all the nodes

`./send_kill_all`

- kills all the nodes

`./clear_all`

- clears all the nodes

`./use_all "command"`

- executes "command" for all nodes

Using the multi-node sandbox

```
./n1
```

- uses the first node

```
./n2 [n3, n4 ... ]
```

- uses the Nth node

Using the $SANDBOX_HOME directory

the master sandbox that rules them all

```
./start_all
```

- starts all the sandboxes

```
./stop_all
```

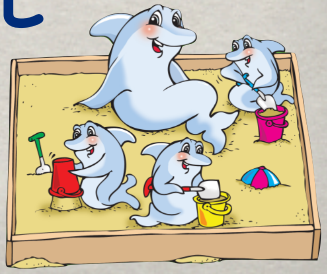
- stops all the sandboxes

```
./clear_all
```

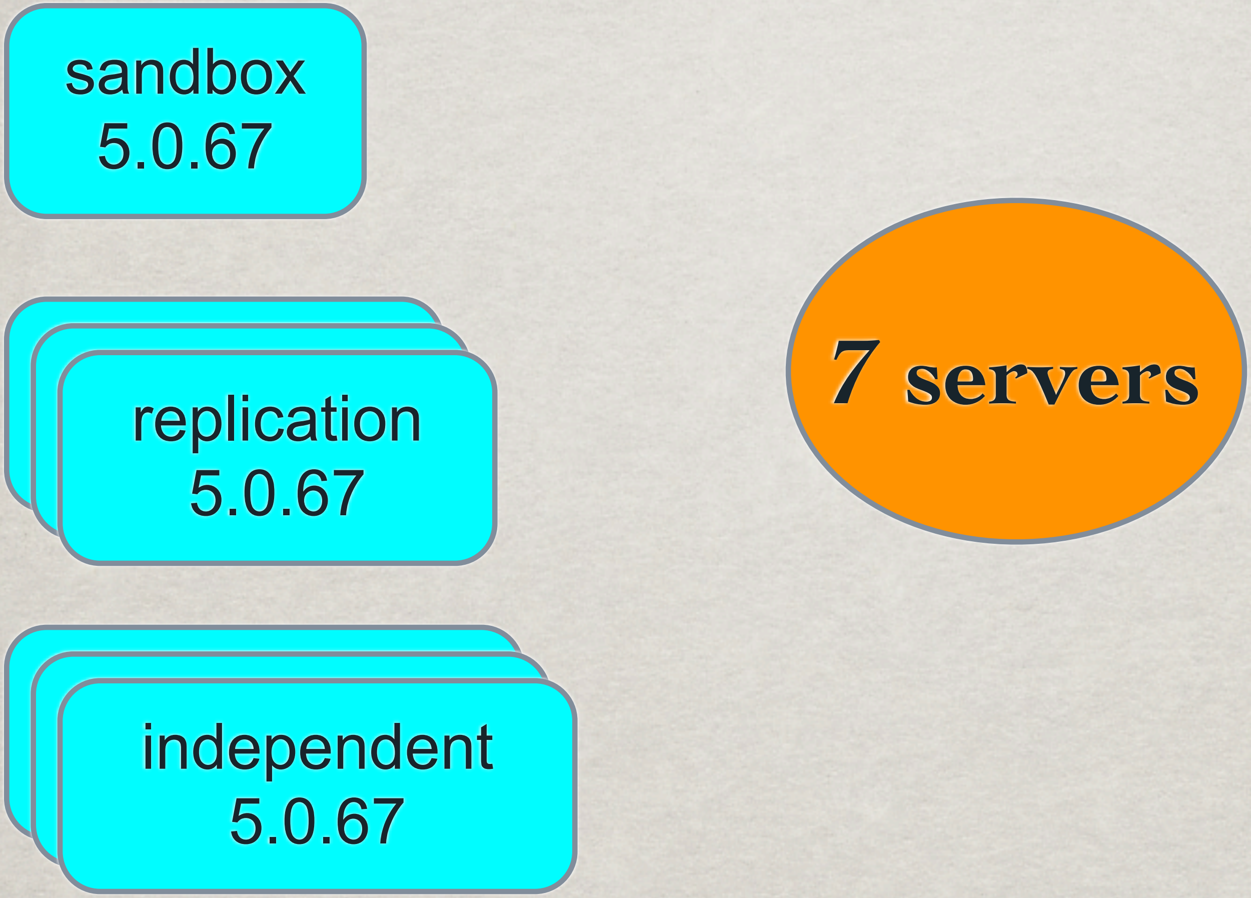
- clear all the sandboxes

```
./use_all  "SQL statement"
```

- passes a SQL statement to all servers in all sandboxes



a crowded host



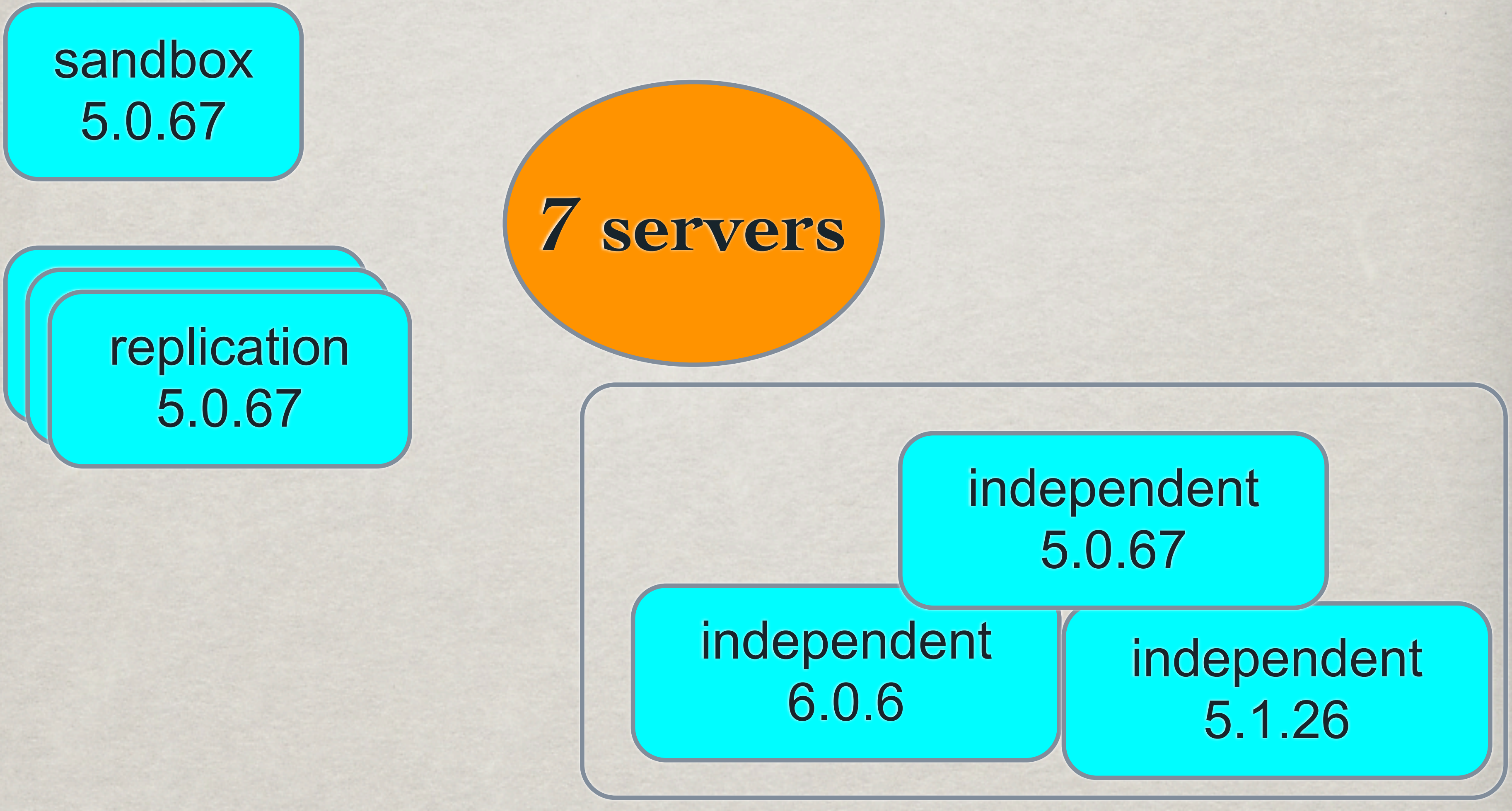
sandbox
5.0.67

replication
5.0.67

independent
5.0.67

7 servers

a differently crowded host



sandbox
5.0.67

replication
5.0.67

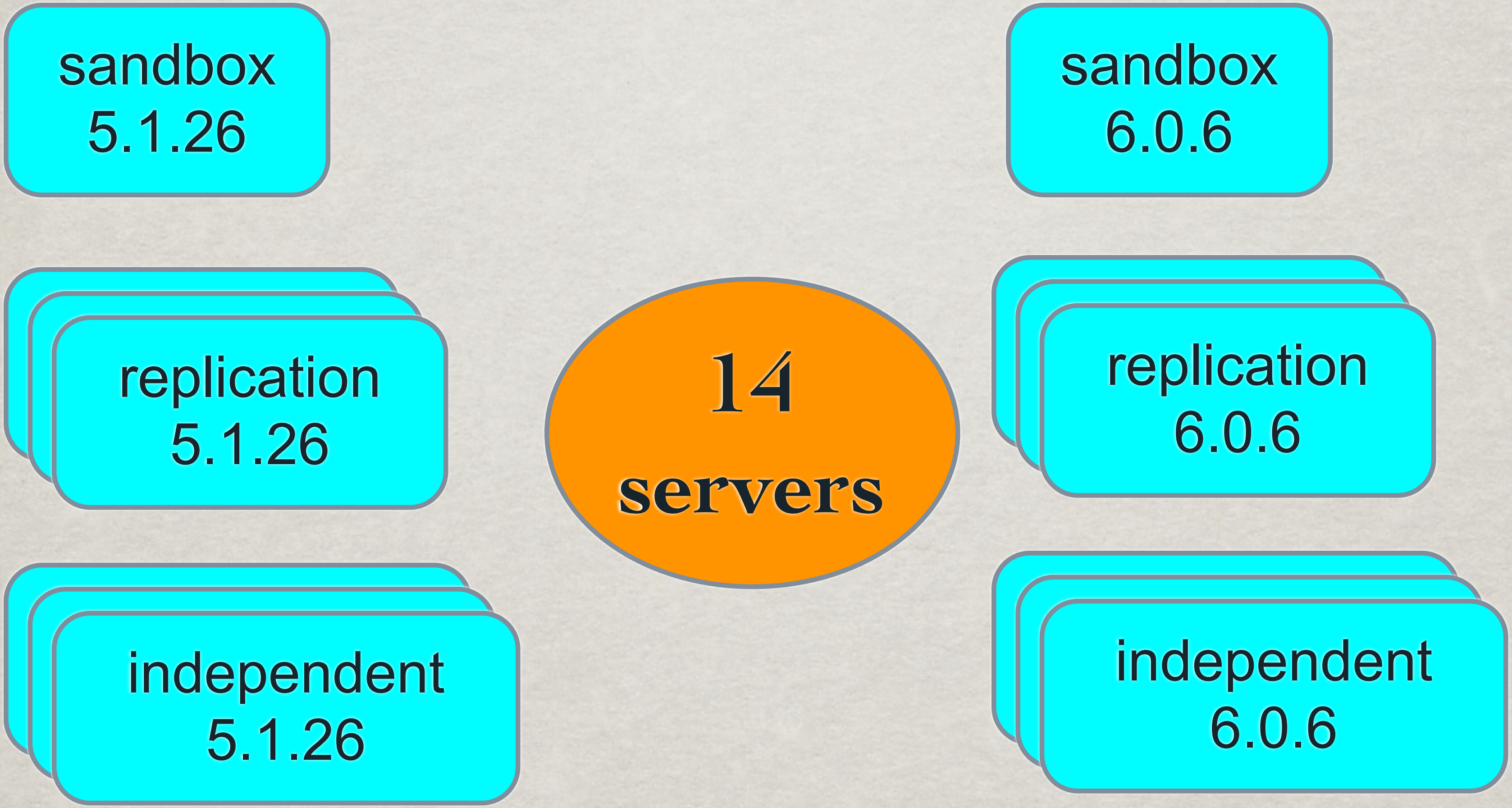
7 servers

independent
5.0.67

independent
6.0.6

independent
5.1.26

a more crowded host



sandbox
5.1.26

sandbox
6.0.6

replication
5.1.26

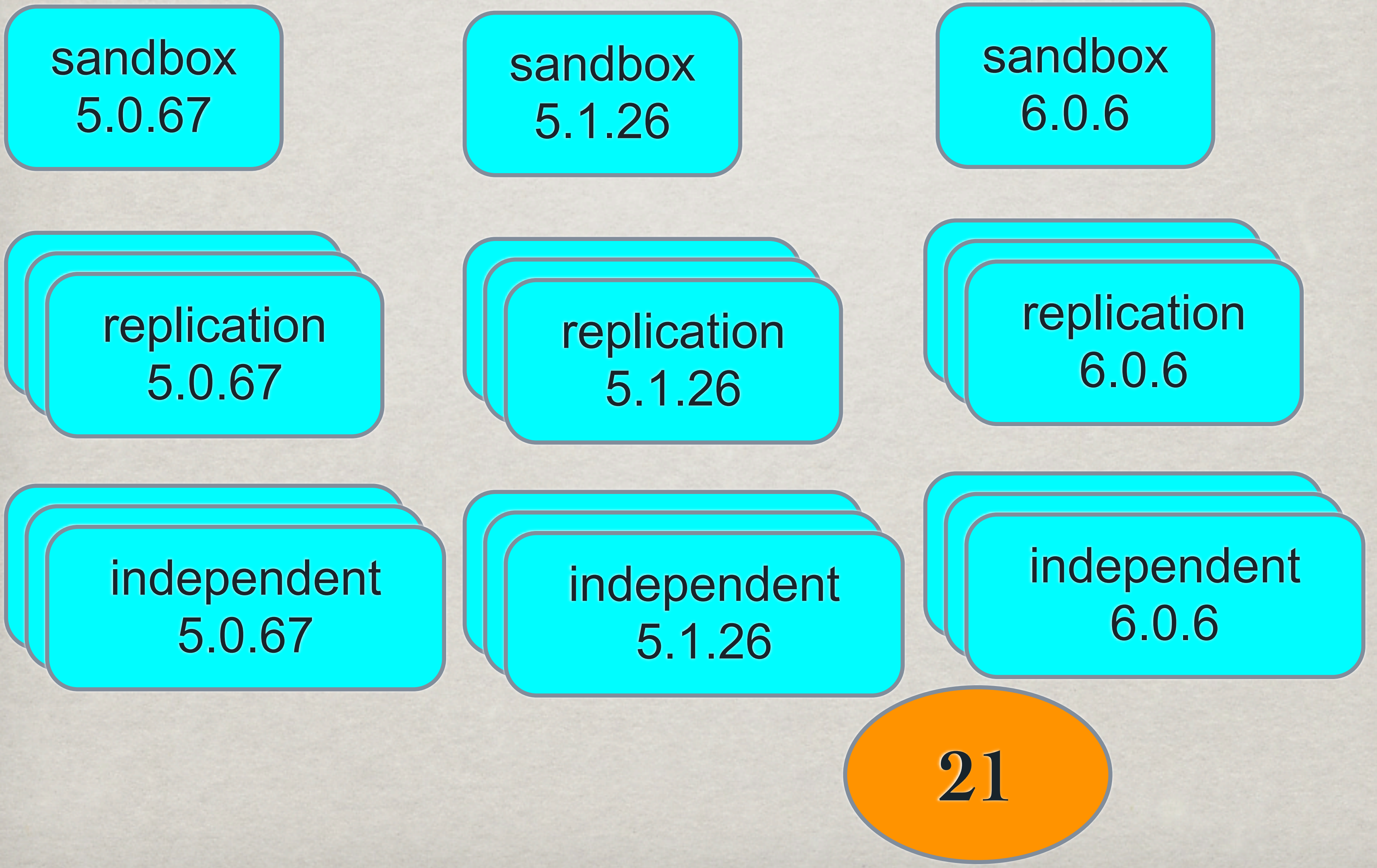
14
servers

replication
6.0.6

independent
5.1.26

independent
6.0.6

an even more crowded host



sandbox 5.0.67

sandbox 5.1.26

sandbox 6.0.6

replication 5.0.67

replication 5.1.26

replication 6.0.6

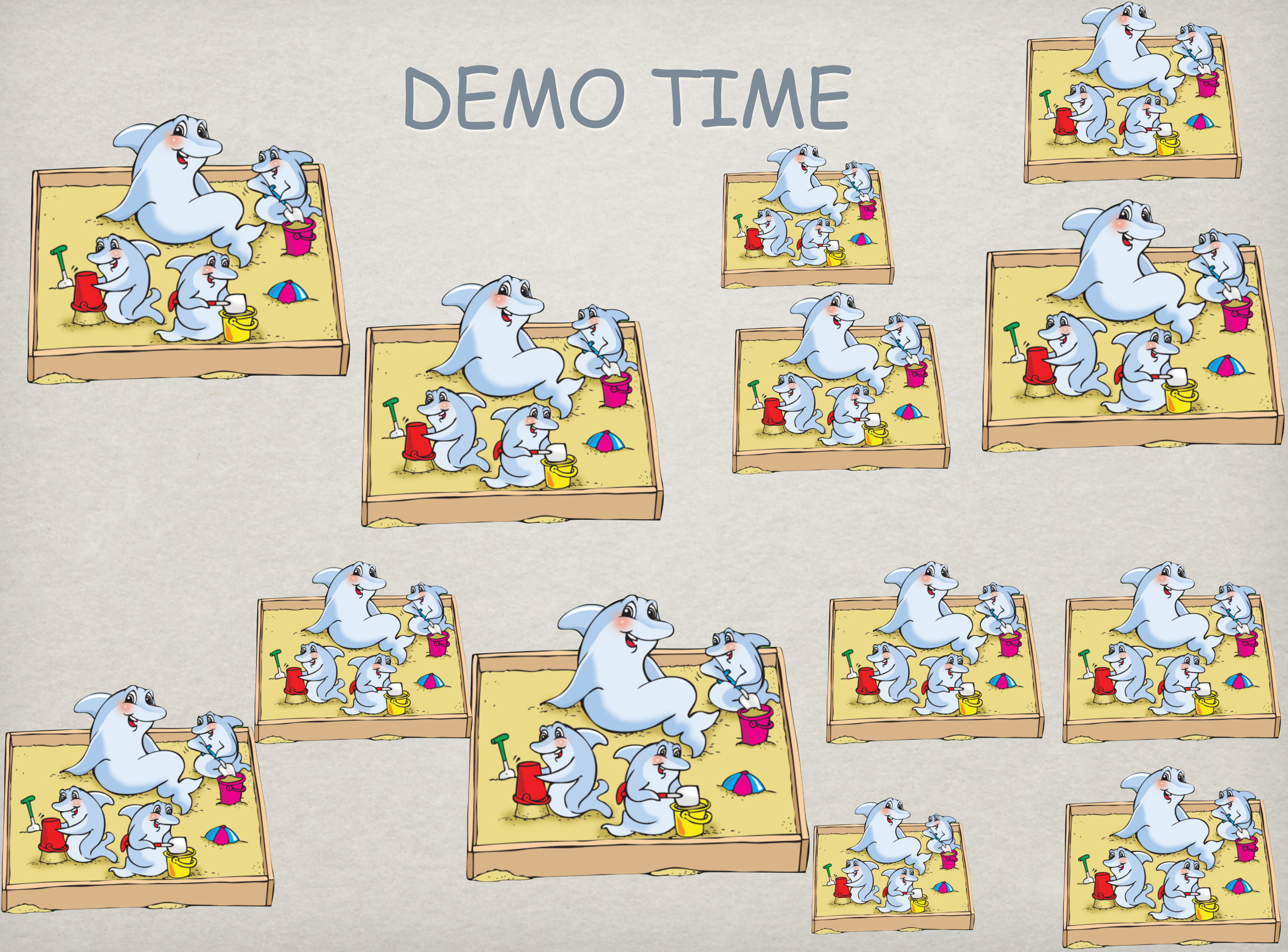
independent 5.0.67

independent 5.1.26

independent 6.0.6

21

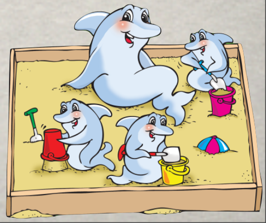
DEMO TIME



Installing a single one

```
$ make_sandbox 5.1.29
```

```
Executing ./low_level_make_sandbox --basedir=/Users/gmax/opt/mysql/5.1.29 \
          --sandbox_directory=msb_5_1_29 \
          --install_version=5.1 \
          --sandbox_port=5129 \
          --no_ver_after_name \
          --my_clause=log-error=msandbox.err
    The MySQL Sandbox,  version 2.0.12 16-Oct-2008
    (C) 2006,2007,2008 Giuseppe Maxia, Sun Microsystems, Database Group
installing with the following parameters:
upper_directory                = /Users/gmax/sandboxes
sandbox_directory              = msb_5_1_29
sandbox_port                   = 5129
datadir_from                   = script
install_version                = 5.1
basedir                        = /Users/gmax/opt/mysql/5.1.29
operating_system_user          = gmax
db_user                        = msandbox
db_password                    = msandbox
my_clause                      = log-error=msandbox.err
prompt_prefix                  = mysql
prompt_body                    =  [\h] {\u} (\d) > '
do you agree? ([Y],n)
loading grants
.. sandbox server started
----------------------------------------
Your sandbox server was installed in /Users/gmax/sandboxes/msb_5_1_29
```



Using a single one

```
$ cd $HOME/sandboxes/msb_5_1_29
$ ./use
```

```
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 3
Server version: 5.1.29-rc MySQL Community Server (GPL)

Type 'help;' or '\h' for help. Type '\c' to clear the
buffer.

mysql [localhost] {msandbox} ((none)) >
```

Installing a replication sandbox

```
$ make_replication_sandbox 5.1.29
installing and starting master
installing slave 1
installing slave 2
starting slave 1
.. sandbox server started
starting slave 2
.. sandbox server started
initializing slave 1
initializing slave 2
replication directory installed on
  /Users/gmax/sandboxes/rsandbox_5_1_29
```

using a replication sandbox

```
$ cd $HOME/sandboxes/rsandbox_5_1_29
# m = master
```

```
$ ./m test
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.1.29-rc-log MySQL Community Server (GPL)

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

master [localhost] {msandbox} (test) > create table t1 (i
int);
Query OK, 0 rows affected (0.08 sec)
```

using a replication sandbox

```
# s1 is slave1

$ ./s1 test
slave1 [localhost] {msandbox} (test) > show tables;
+----------------+
| Tables_in_test |
+----------------+
| t1             |
+----------------+
```

using a replication sandbox

```
# checking the slaves

$ ./check_slaves
slave # 1
             Slave_IO_Running: Yes
            Slave_SQL_Running: Yes
slave # 2
             Slave_IO_Running: Yes
            Slave_SQL_Running: Yes
```

using a replication sandbox

```
# sending commands to all nodes

$ ./use all "SELECT @@server_id"
# master
@@server_id
1
# server: 1:
@@server_id
101
# server: 2:
@@server_id
102
```

Example: breaking replication

```
# leveraging command line scripts
$ ./m  -e 'create table test.t2 (i int primary key)'
$ ./s1 -e 'insert into test.t2 values (1)'
$ ./m  -e 'insert into test.t2 values (1)'
$ ./check_slaves
slave # 1
             Slave_IO_Running: Yes
            Slave_SQL_Running: No
slave # 2
             Slave_IO_Running: Yes
            Slave_SQL_Running: Yes

$ ./s1 -e 'show slave status\G' |grep Last_Error
Last_Error: Error 'Duplicate entry '1' for key 'PRIMARY''
 on query. Default database: ''. Query: '
```

Installing circular replication

```
$ make_replication_sandbox --circular=4 5.1.34
installing node 1
installing node 2
installing node 3
installing node 4
# server: 1:
# server: 2:
# server: 3:
# server: 4:
Circular replication activated
group directory installed on
  /Users/gmax/sandboxes/rcsandbox_5_1_34
```

using circular replication

```
$ cd $HOME/sandboxes/rcsandbox_5_1_34
$ ./n1 -e 'create table test.t1 (i int)'
$ ./n3 -e 'insert into test.t1 values (3)'
$ ./use_all 'select * from test.t1'
# server: 1:
i
3
# server: 2:
i
3
# server: 3:
i
3
# server: 4:
i
3
```

Easy testing conditions (1)

```
$ cd $HOME/sandboxes/msb_5_1_35
$ ./use -e 'show variables like
"key_buffer_size"'
+-----------------+---------+
| Variable_name   | Value   |
+-----------------+---------+
| key_buffer_size | 8384512 |
+-----------------+---------+


# we need to increase this one
```

Easy testing conditions (2)

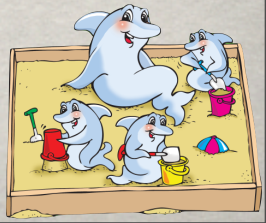
```
$ ./restart --key_buffer=20M

$ ./use -e 'show variables like
"key_buffer_size"'
+-----------------+-----------+
| Variable_name   | Value     |
+-----------------+-----------+
| key_buffer_size | 209715200 |
+-----------------+-----------+

# as easy as saying it!
```

Testing same version in different conditions

```
$ make_multiple_sandbox 5.1.34 \
  --group_directory=unpartitioned \
  --base_port=5500 --check_base_port

$ make_multiple_sandbox 5.1.34 \
  --group_directory=partitioned \
  --how_many_nodes=4 \
  --base_port=6500 --check_base_port
```

Testing same version in different conditions

```
$SANDBOX_HOME/unpartitioned
|
+-- node1   MyISAM
|
+-- node2   InnoDB
|
+-- node3   Archive
```



Testing same version in different conditions

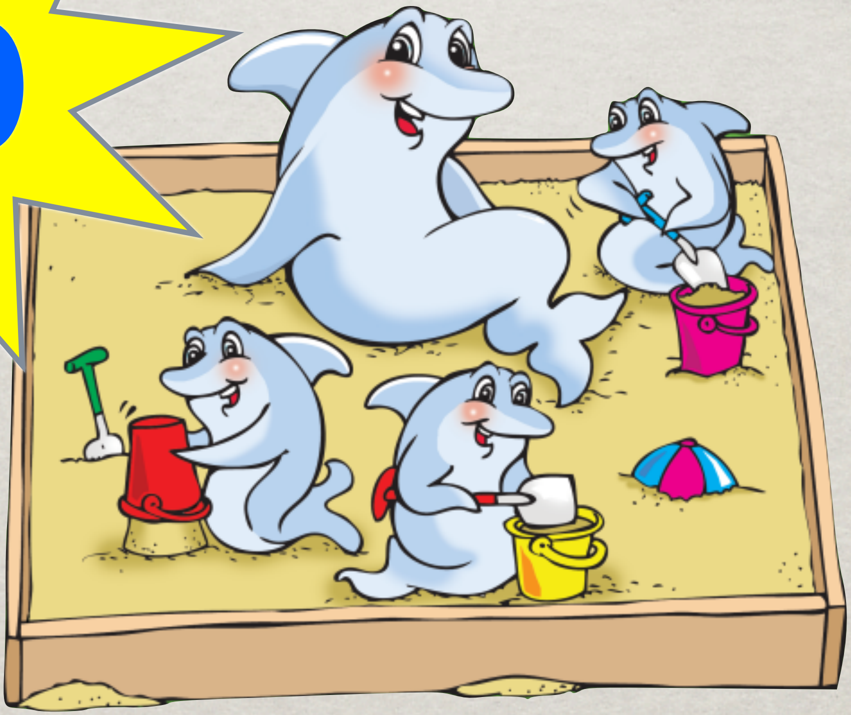
```
$SANDBOX_HOME/partitioned
|
+-- node1   MyISAM by month
|
+-- node2   InnoDB by month
|
+-- node3   InnoDB file per table by month
|
+-- node4   Archive by month
```

Running tests

```
cd $SANDBOX_HOME/unpartitioned

./stop_all
RESULTS=unpartitioned_results.txt
date > $RESULTS
for SB in 1 2 3
do
  ./node$SB/start
  time ./n$SB < test.sql >> $RESULTS
  ./node$DB/stop
done
# more on tests later on. Stay tuned
```

Latest news

3.0



MySQL Sandbox 3.0

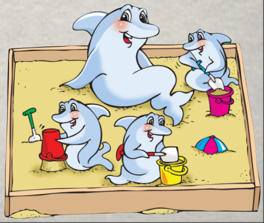
- Released as Perl package - now on CPAN
- Added the sbtool
- Port detection
- Install from a source directory
- Allow the test suite to load and execute a customized test
- Improved documentation

Port detection

```
$ make_sandbox 5.1.33 --check_port
# port 5133 under msb_5_1_33

$ make_sandbox 5.1.33 --check_port
# port 5134 under msb_5_1_33_a

$ make_sandbox 5.1.33 --check_port
# port 5135 under msb_5_1_33_b
# ... and so on
```

Install from source directory

```
# compile mysql

$ ./configure && make

# install a sandbox

$ make_sandbox_from_source $PWD single
```



sbtool - the sandbox helper

- Server clone
- Server move
- Change port
- Sandbox deletion
- List ports
- Find a port range
- Multi-level replication
- Convert a sandbox from temporary to permanent

Cloning a sandbox

```
# install two sandboxes
$ make_sandbox 5.1.33
$ make_sandbox 5.1.34

# Load and process data into msb_5_1_33
# ...
# ...
# Clone data into the second sandbox
sbtool -o copy \
   -s $HOME/sandboxes/msb_5_1_33 \
   -d $HOME/sandboxes/msb_5_1_34
```

Moving a sandbox

```
# install a sandbox
$ make_sandbox 5.1.33

# move it
sbtool -o move \
   -s $HOME/sandboxes/msb_5_1_33 \
   -d /some/path/a_fancy_name
```

Powerful new testing (1)

```
# write a test script 'check_single_server.sb'

shell:
command  = make_sandbox 5.1.30 --no_confirm
expected = sandbox server started
msg      = sandbox creation

sql:
path     = $SANDBOX_HOME/msb_5_1_30
query    = select version()
expected = 5.1.30
msg      = checking version
```

Powerful new testing (2)

```
# write a test script 'check_single_server.sb'
# (continues)

shell:
command  = $SANDBOX_HOME/msb_5_1_30/stop
expected = OK
msg      = stopped
```

Powerful new testing (3)

```
# Run the test



$ test_sandbox --tests=user \
  --user_test=t/check_single_server.sb
** currently there are (0) mysqld processes
and (0) mysqld_safe processes
ok 1 - sandbox creation
ok 2 - checking version
ok 3 - stopped
*** Executed 3 tests. Passed 3 (100.00%).
Failed 0 ( 0.00%)
```

Powerful new testing (4)

```
# Run the test is simple TAP mode

$ export TAP_MODE=1
$ test_sandbox --tests=user \
  --user_test=t/check_single_server.sb
ok 1 - sandbox creation
ok 2 - checking version
ok 3 - stopped

# for more info on the TAP format:
$ perldoc Test::Harness::TAP
```

Powerful new testing (5)

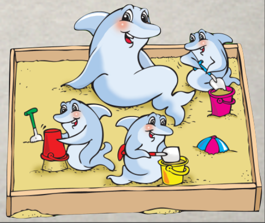
```
# Run the test inside a test suite

prove -v t/06_test_user_defined.t
t/06_test_user_defined....
1..3
ok 1 - sandbox creation
ok 2 - checking version
ok 3 - stopped
ok
All tests successful.
Files=1, Tests=3,  8 wallclock secs ( 0.50
cusr +  0.56 csys =  1.06 CPU)
```

Create a replication tree

```
# 1 create a multiple sandbox

$ make_multiple_sandbox \
  --how_many_nodes=12 5.0.77

# set the roles

$  sbtool -o tree \
  --tree_dir=~/sandboxes/multi_msb_5_0_77 \
   --master_node=1 \
   --mid_nodes='2 3 4' \
   --leaf_nodes='5 6|7 8 9|10 11 12'
```

Using a replication tree (1)

```
$ cd ~/sandboxes/multi_msb_5_0_77

$ ./n1 -e 'show slave hosts'
+-----------+-------+-------+-------------------+-----------+
| Server_id | Host  | Port  | Rpl_recovery_rank | Master_id |
+-----------+-------+-------+-------------------+-----------+
|       102 | node2 | 19778 |                 0 |       101 |
|       104 | node4 | 19778 |                 0 |       101 |
|       103 | node3 | 19778 |                 0 |       101 |
+-----------+-------+-------+-------------------+-----------+
```



Using a replication tree (2)

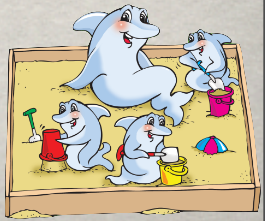
```
$ ./n2 -e 'show slave hosts'

+-----------+-------+-------+-------------------+-----------+
| Server_id | Host  | Port  | Rpl_recovery_rank | Master_id |
+-----------+-------+-------+-------------------+-----------+
|       105 | node5 | 19779 |                 0 |       102 |
|       106 | node6 | 19779 |                 0 |       102 |
+-----------+-------+-------+-------------------+-----------+
```

Using a replication tree (3)

```
$ ./n1 -e 'create table test.t1 (i int)'
$./n1 -e 'insert into test.t1
       values (@@server_id)'
```

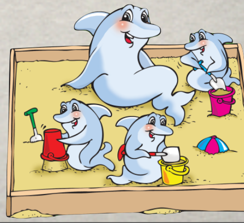
Using a replication tree (4)

```
$ ./use_all "select * from test.t1"
# server: 1:
i
101
# server: 2:
i
102
# server: 3:
i
103
# server: 4:
i
104
# server: 5:
i
105
```



checking ports

```
$ sbtool -o ports
 5078  0
 5130  0
 5131  0
 5132  0
 5133  1
 5135  0
 5333  0
 5400  0

$ sbtool -o ports --only_used
 5133  1
```

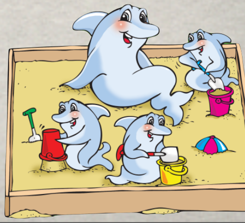


checking ranges

```
$ sbtool -o range --min_range=5130
 5136 -  5146
```

Preserving a sandbox

```
$ sbtool  -o preserve \
   -s $HOME/sandboxes/msb_5_1_33/
sandbox at <$HOME/sandboxes/msb_5_1_33/> is
now permanent

$ $HOME/sandboxes/msb_5_1_33/clear
This sandbox is permanent.
The 'clear' command has been disabled.
The contents of the old 'clear' command are in
the 'no_clear' file
```



un-preserving a sandbox

```
$ sbtool  -o unpreserve \
   -s $HOME/sandboxes/msb_5_1_33/
sandbox at <$HOME/sandboxes/msb_5_1_33/> is
now NOT PERMANENT

$ $HOME/sandboxes/msb_5_1_33/clear

# no error
```

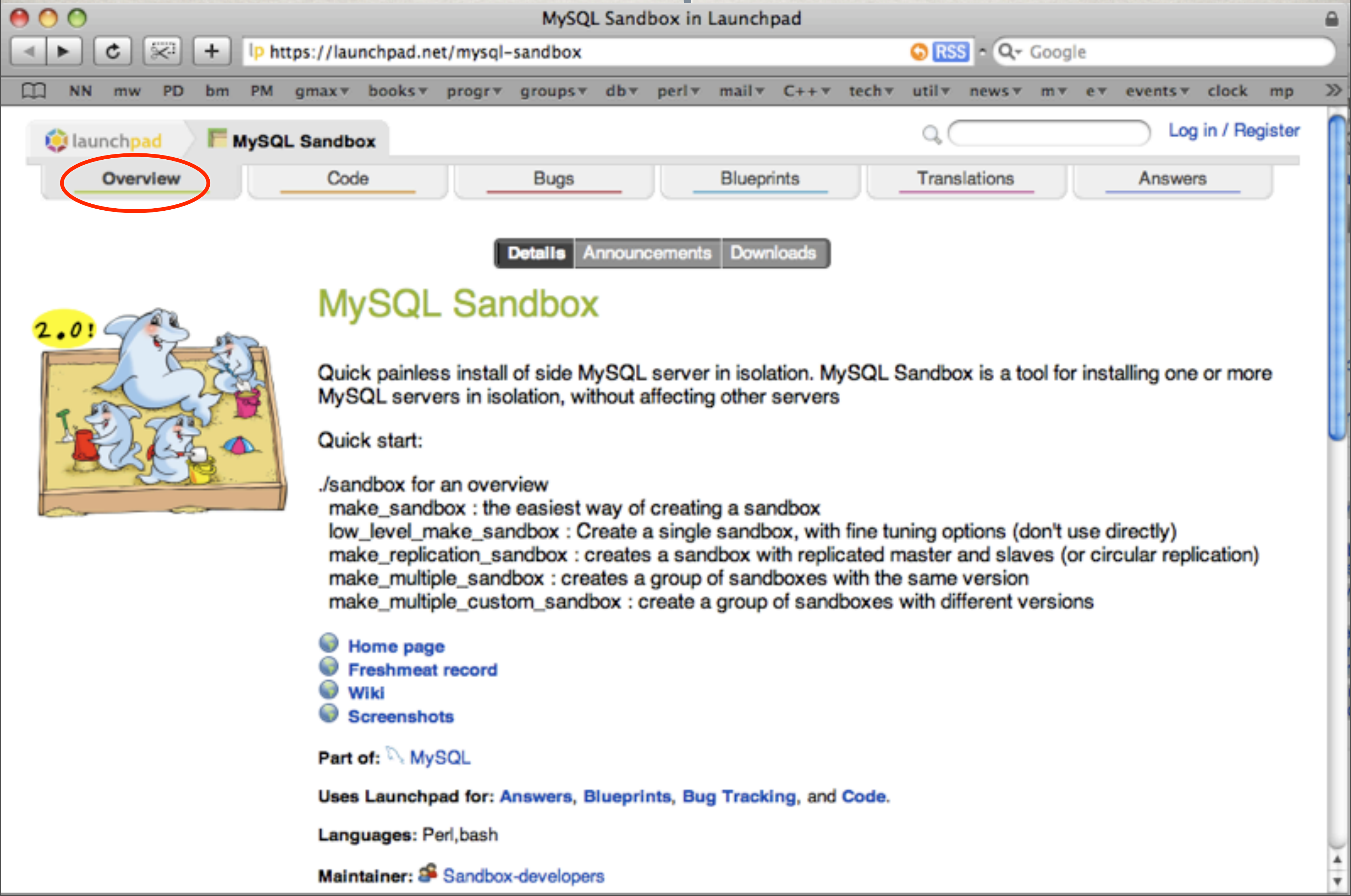
deleting a sandbox

```
$ sbtool -o delete \
   -s $HOME/sandboxes/msb_5_1_35
sandbox at <$HOME/sandboxes/msb_5_1_35> has
been removed
```

Roadmap

- Install on remote servers (in design)
- create a failover script in replication to promote a slave to master (in design)
- GUI
- flexible topology read-and-install

Participate!


MySQL Sandbox in Launchpad
https://launchpad.net/mysql-sandbox
RSS
Google
NN mw PD bm PM gmax books progr groups db perl mail C++ tech util news m e events clock mp
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MySQL Sandbox
Log in / Register
Overview
Code
Bugs
Blueprints
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Details
Announcements
Downloads
2.0!

MySQL Sandbox

Quick painless install of side MySQL server in isolation. MySQL Sandbox is a tool for installing one or more MySQL servers in isolation, without affecting other servers

Quick start:

./sandbox for an overview
  make_sandbox : the easiest way of creating a sandbox
  low_level_make_sandbox : Create a single sandbox, with fine tuning options (don't use directly)
  make_replication_sandbox : creates a sandbox with replicated master and slaves (or circular replication)
  make_multiple_sandbox : creates a group of sandboxes with the same version
  make_multiple_custom_sandbox : create a group of sandboxes with different versions

- Home page
- Freshmeat record
- Wiki
- Screenshots

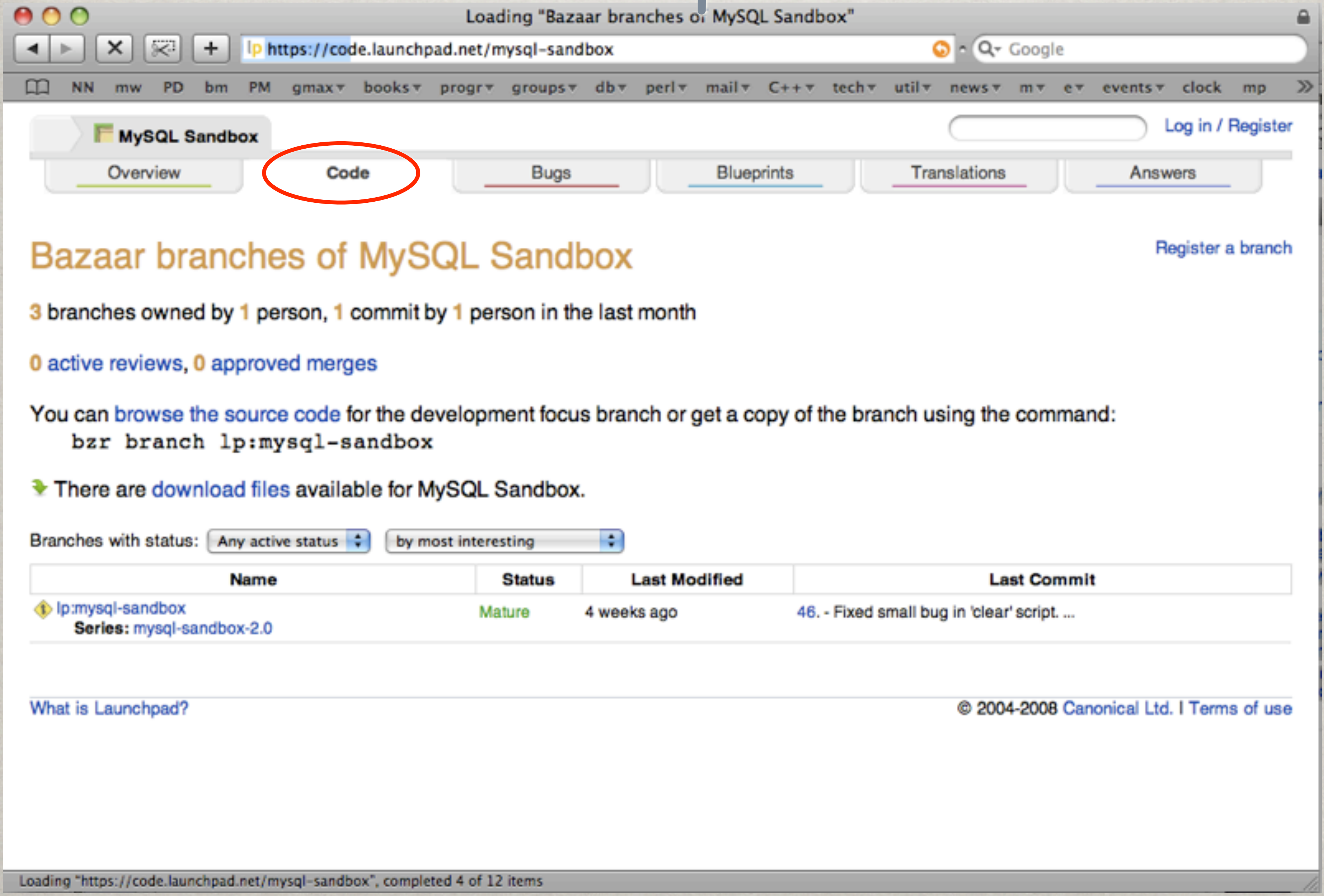
Part of: MySQL

Uses Launchpad for: Answers, Blueprints, Bug Tracking, and Code.

Languages: Perl,bash

Maintainer: Sandbox-developers

Participate!



Loading "Bazaar branches of MySQL Sandbox"
https://code.launchpad.net/mysql-sandbox
Google
NN mw PD bm PM gmax books progr groups db perl mail C++ tech util news m e events clock mp
MySQL Sandbox
Log in / Register
Overview
Code
Bugs
Blueprints
Translations
Answers

Bazaar branches of MySQL Sandbox

Register a branch

3 branches owned by 1 person, 1 commit by 1 person in the last month

0 active reviews, 0 approved merges

You can browse the source code for the development focus branch or get a copy of the branch using the command:

```
bzr branch lp:mysql-sandbox
```

There are download files available for MySQL Sandbox.

Branches with status: Any active status — by most interesting

Name	Status	Last Modified	Last Commit
lp:mysql-sandbox **Series:** mysql-sandbox-2.0	Mature	4 weeks ago	46. - Fixed small bug in 'clear' script. ...

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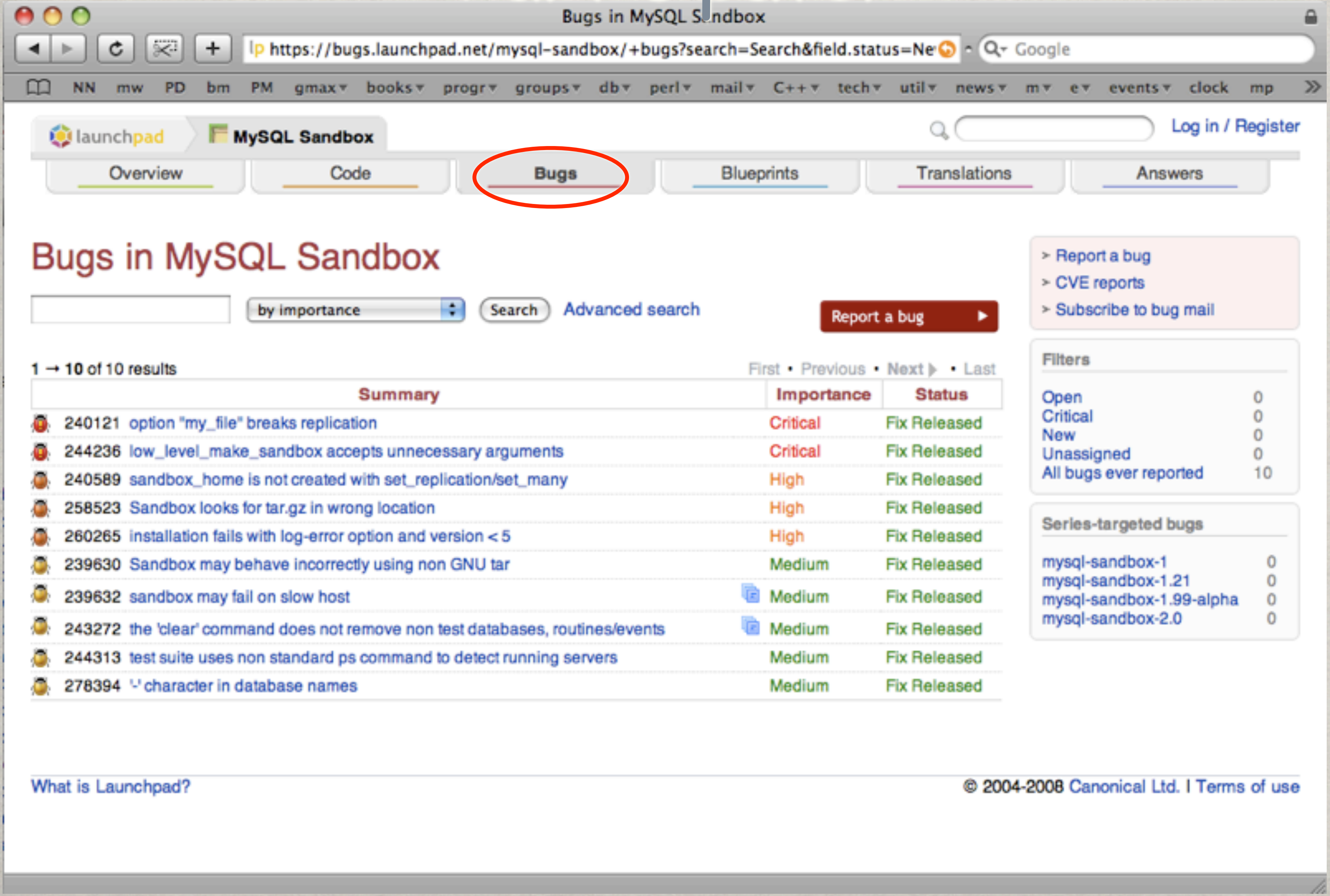
Loading "https://code.launchpad.net/mysql-sandbox", completed 4 of 12 items

Participate!


Bugs in MySQL Sandbox
https://bugs.launchpad.net/mysql-sandbox/+bugs?search=Search&field.status=Ne
Google
NN mw PD bm PM gmax books progr groups db perl mail C++ tech util news m e events clock mp
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Bugs in MySQL Sandbox

by importance
Search
Advanced search
Report a bug

1 → 10 of 10 results

First • Previous • Next • Last

	Summary	Importance	Status
240121	option "my_file" breaks replication	Critical	Fix Released
244236	low_level_make_sandbox accepts unnecessary arguments	Critical	Fix Released
240589	sandbox_home is not created with set_replication/set_many	High	Fix Released
258523	Sandbox looks for tar.gz in wrong location	High	Fix Released
260265	installation fails with log-error option and version < 5	High	Fix Released
239630	Sandbox may behave incorrectly using non GNU tar	Medium	Fix Released
239632	sandbox may fail on slow host	Medium	Fix Released
243272	the 'clear' command does not remove non test databases, routines/events	Medium	Fix Released
244313	test suite uses non standard ps command to detect running servers	Medium	Fix Released
278394	'-' character in database names	Medium	Fix Released

- Report a bug
- CVE reports
- Subscribe to bug mail

Filters

Open	0
Critical	0
New	0
Unassigned	0
All bugs ever reported	10

Series-targeted bugs

mysql-sandbox-1	0
mysql-sandbox-1.21	0
mysql-sandbox-1.99-alpha	0
mysql-sandbox-2.0	0

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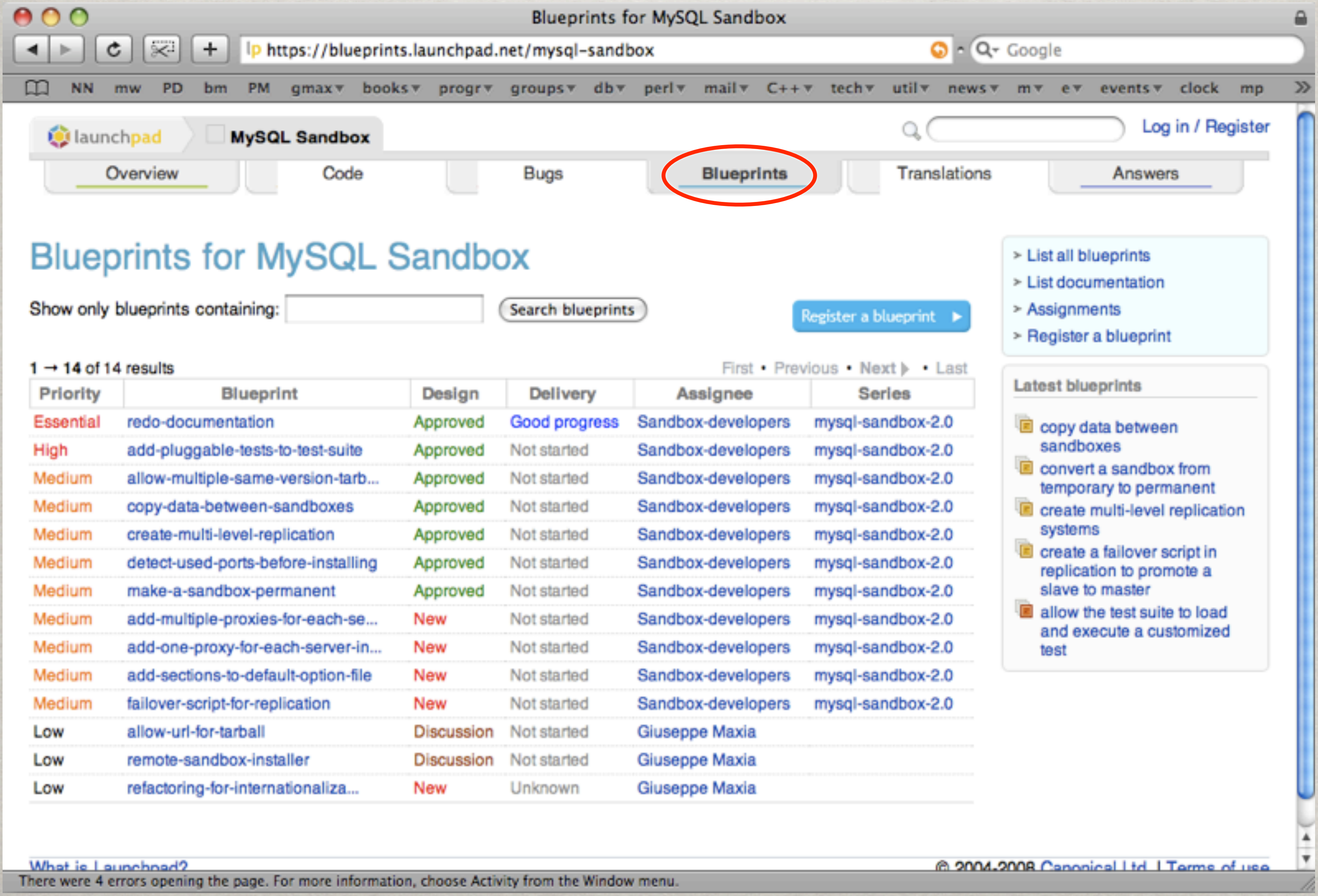
Blueprints for MySQL Sandbox
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Blueprints for MySQL Sandbox

Show only blueprints containing: Search blueprints

Register a blueprint ▸

1 → 14 of 14 results

First • Previous • Next ▸ • Last

Priority	Blueprint	Design	Delivery	Assignee	Series
Essential	redo-documentation	Approved	Good progress	Sandbox-developers	mysql-sandbox-2.0
High	add-pluggable-tests-to-test-suite	Approved	Not started	Sandbox-developers	mysql-sandbox-2.0
Medium	allow-multiple-same-version-tarb...	Approved	Not started	Sandbox-developers	mysql-sandbox-2.0
Medium	copy-data-between-sandboxes	Approved	Not started	Sandbox-developers	mysql-sandbox-2.0
Medium	create-multi-level-replication	Approved	Not started	Sandbox-developers	mysql-sandbox-2.0
Medium	detect-used-ports-before-installing	Approved	Not started	Sandbox-developers	mysql-sandbox-2.0
Medium	make-a-sandbox-permanent	Approved	Not started	Sandbox-developers	mysql-sandbox-2.0
Medium	add-multiple-proxies-for-each-se...	New	Not started	Sandbox-developers	mysql-sandbox-2.0
Medium	add-one-proxy-for-each-server-in...	New	Not started	Sandbox-developers	mysql-sandbox-2.0
Medium	add-sections-to-default-option-file	New	Not started	Sandbox-developers	mysql-sandbox-2.0
Medium	failover-script-for-replication	New	Not started	Sandbox-developers	mysql-sandbox-2.0
Low	allow-url-for-tarball	Discussion	Not started	Giuseppe Maxia	
Low	remote-sandbox-installer	Discussion	Not started	Giuseppe Maxia	
Low	refactoring-for-internationaliza...	New	Unknown	Giuseppe Maxia	

- List all blueprints
- List documentation
- Assignments
- Register a blueprint

Latest blueprints

- copy data between sandboxes
- convert a sandbox from temporary to permanent
- create multi-level replication systems
- create a failover script in replication to promote a slave to master
- allow the test suite to load and execute a customized test

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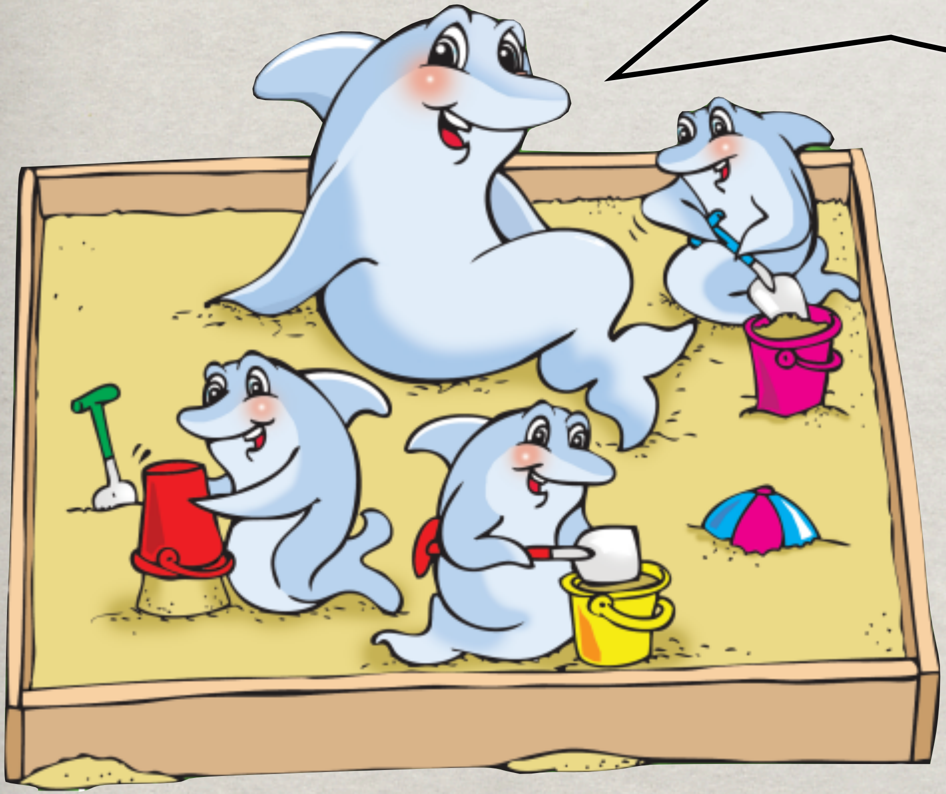
THANKS



Let's talk!