MySQL Sandbox

Multiple independent servers in one host

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http://sf.net/projects/mysql-sandbox/

MySQL Conference & Expo

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Agenda

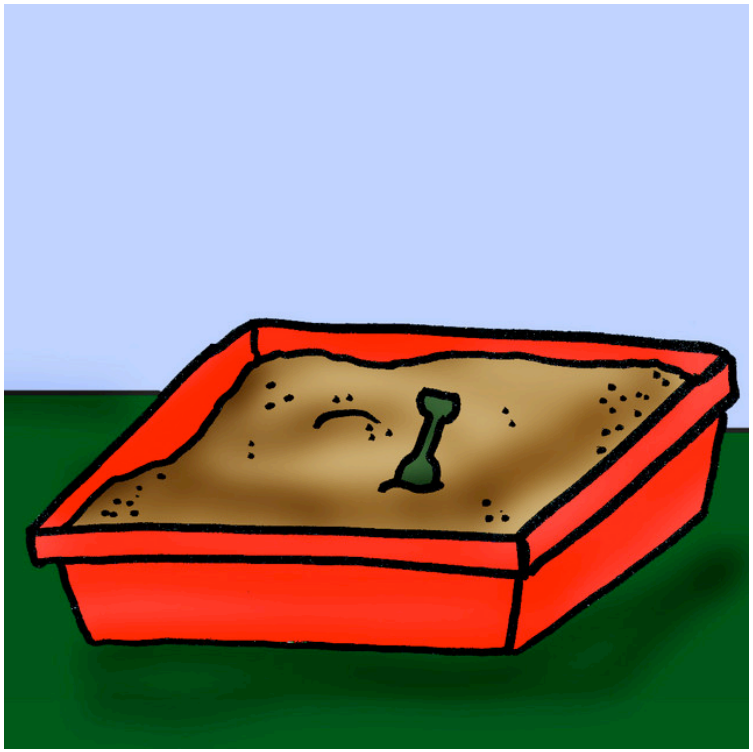
- Overview
- The hard way
- The easy way - one server in < 10 seconds
- Replication in 15 seconds
- Multiple independent servers in < 15 seconds
- Demo time
- Questions

Overview

- Not an official 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://sf.net/projects/mysql-sandbox/

explaining the sandbox is like boxing



explaining takes longer than delivering

Overview

MySQL Server

data directory

port

socket

MySQL Server

data directory

port

socket

Overview

MySQL Server

same
data directory?

MySQL Server

/usr/local/mysql/data

/usr/local/mysql/data

data corruption

Overview

MySQL Server

3306

/tmp/mysql.sock

same
data port or
socket?

MySQL Server

3306

/tmp/mysql.sock

does not start

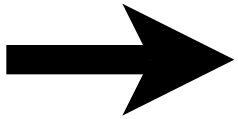
the hard way

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

MySQL Sandbox

MySQL Server

VERSION



$HOME/VER/data

VER

/tmp/mysql_VER.sock

MySQL Sandbox

MySQL Server

5.1.24

$HOME/5_1_24/data

5124

/tmp/mysql_5124.sock

MySQL Sandbox

MySQL Server

6.0.5

$HOME/6_0_5/data

6005

/tmp/mysql_6005.sock

MySQL Sandbox

single sandbox commands

```
start
stop
clear
```

```
use
```

MySQL Sandbox

multiple sandbox commands

```
start_all
stop_all
clear_all
```

```
m
s1
s2
```

```
n1
n2
n3
```

The easy way - installation

```
# download the sandbox
# http://sf.net/projects/mysql-sandbox/

$ ./express_install.pl \
    /path/mysql-OS-5.1.23.tar.gz

# that's it!
```

The easy way - replication

```
$ ./set_replication.pl \
    /path/mysql-OS-5.1.23.tar.gz

# that's it!
```

The easy way - multiple servers

```
$ ./set_many.pl \
    /path/mysql-OS-5.1.23.tar.gz

# that's it!
```

fine tuning

```
$ ./express_install.pl \
    /path/mysql-OS-5.1.23.tar.gz \
    [option] [option] [option]
```

pick your size

```
$ ./express_install.pl \
    /path/mysql-OS-5.1.23.tar.gz \
    --my_file={small|medium|large|huge}
```

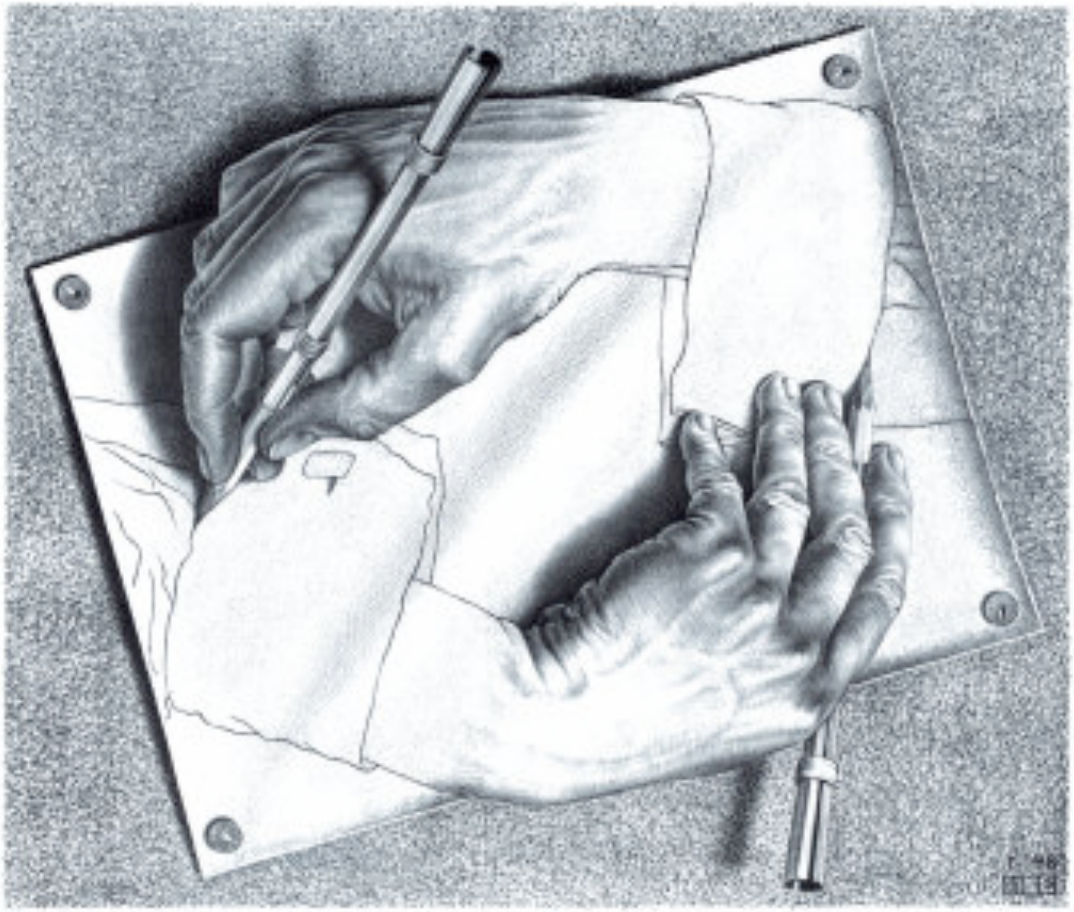
fine tuning easily

```
$ ./express_install.pl \
    /path/mysql-OS-5.1.23.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 (/Users/gmax))
Your choice: (current value [/Users/gmax]) _
```

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

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 the replication sandbox

start_all

- starts the master and all the slaves

stop_all

- stops all the slaves and then the master

clear_all

- clears all the slaves and then the master

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

clear_all

- clears all the nodes

Using the multi-node sandbox

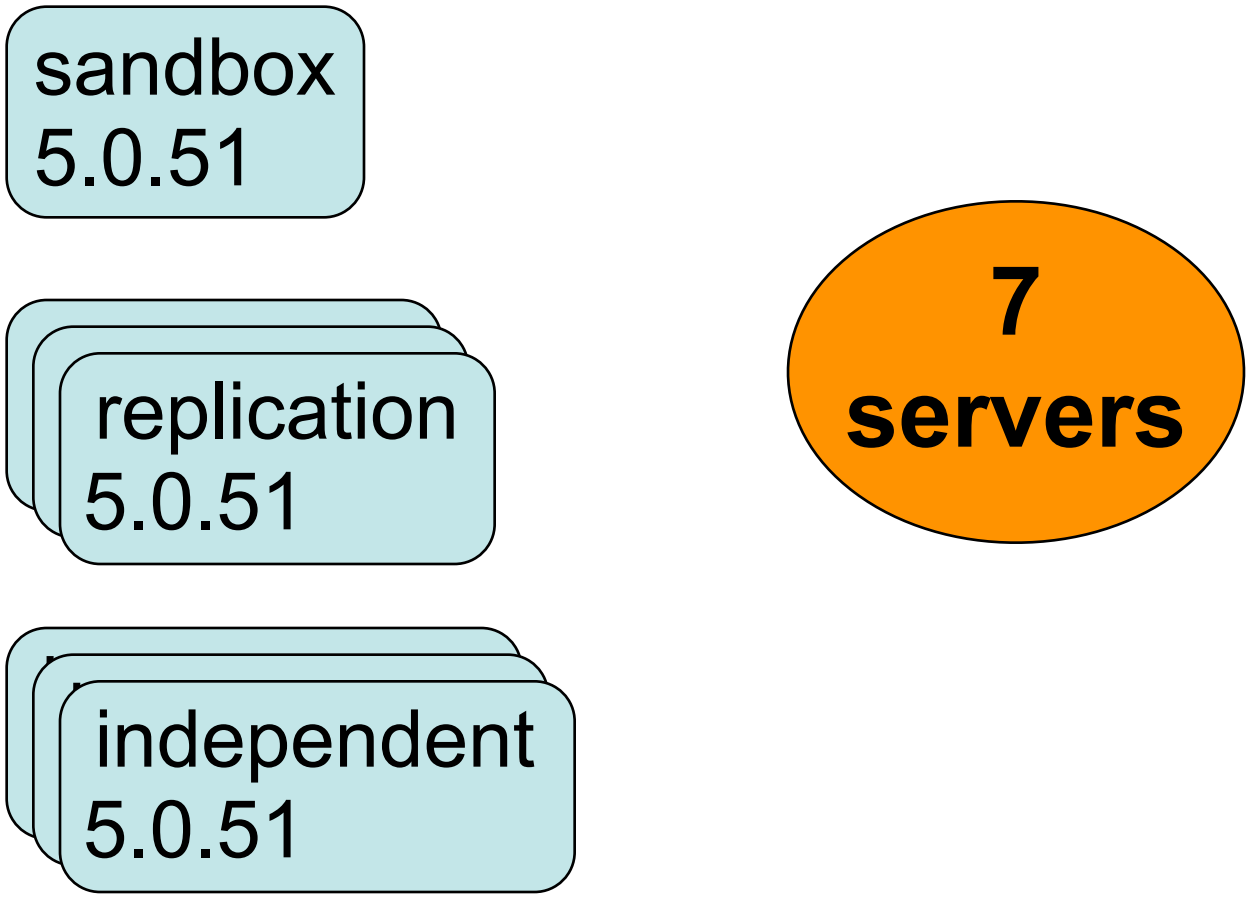
n1

- uses the first node

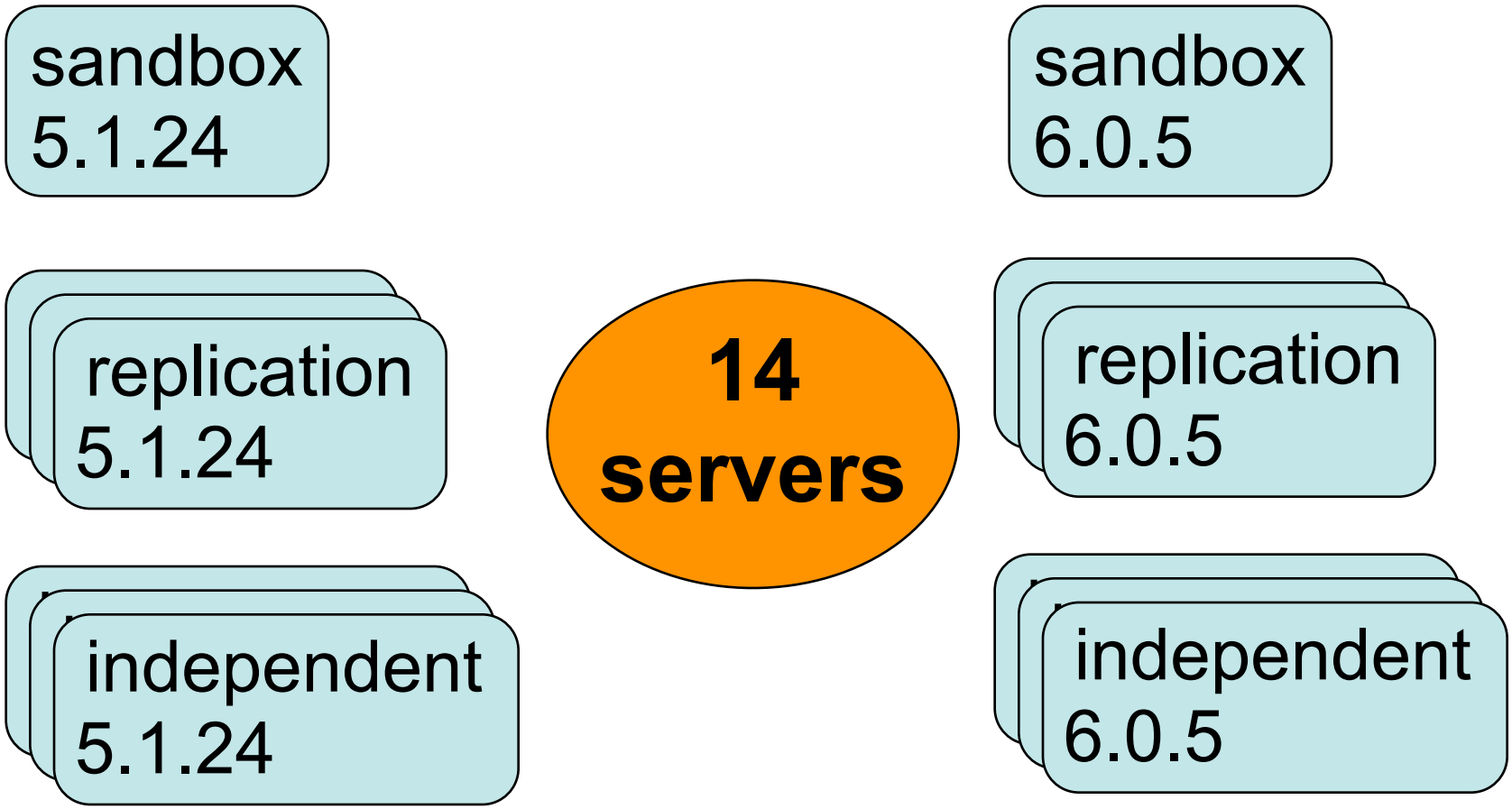
n2 [n3, n4 ...]

- uses the Nth slave

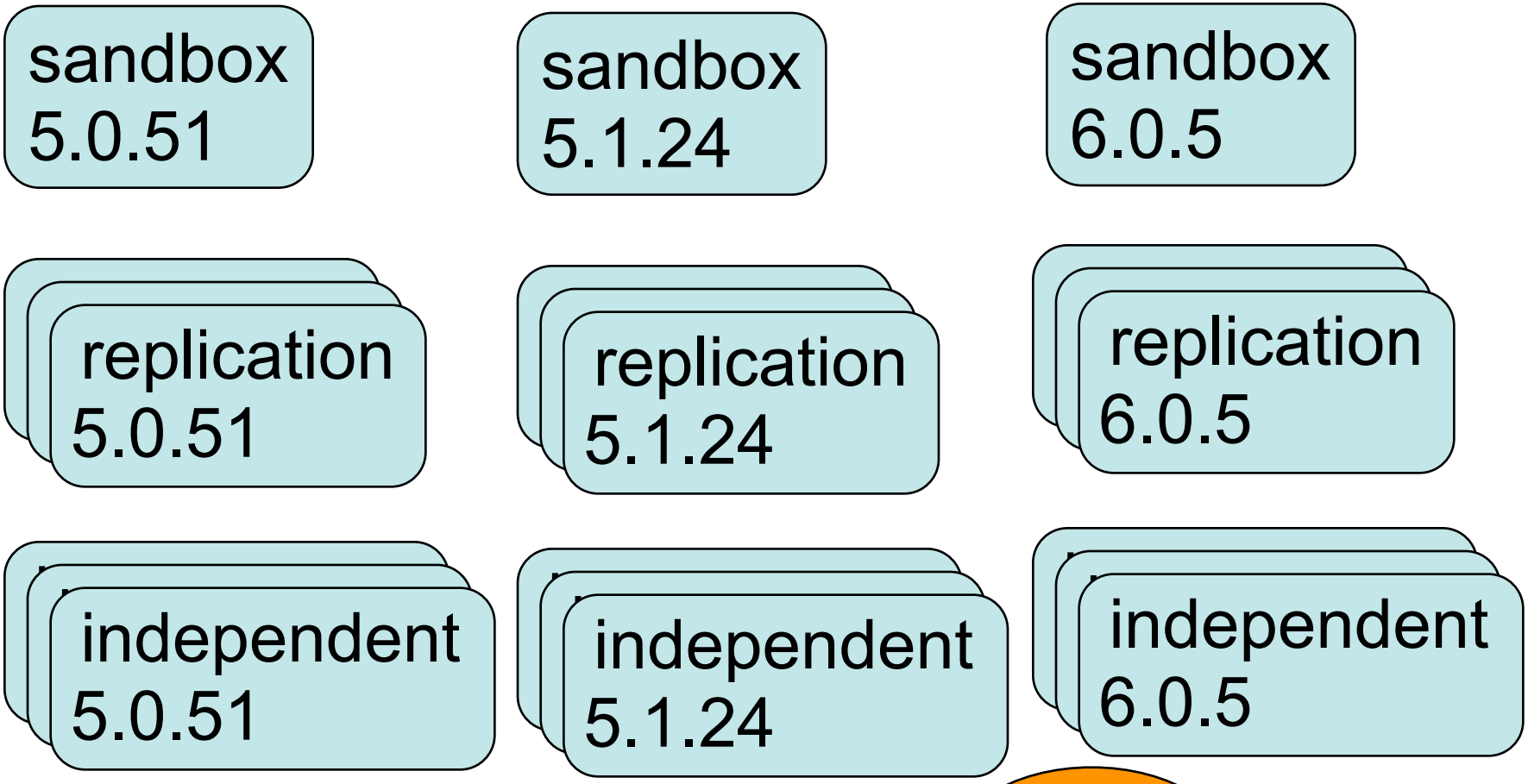
a crowded host



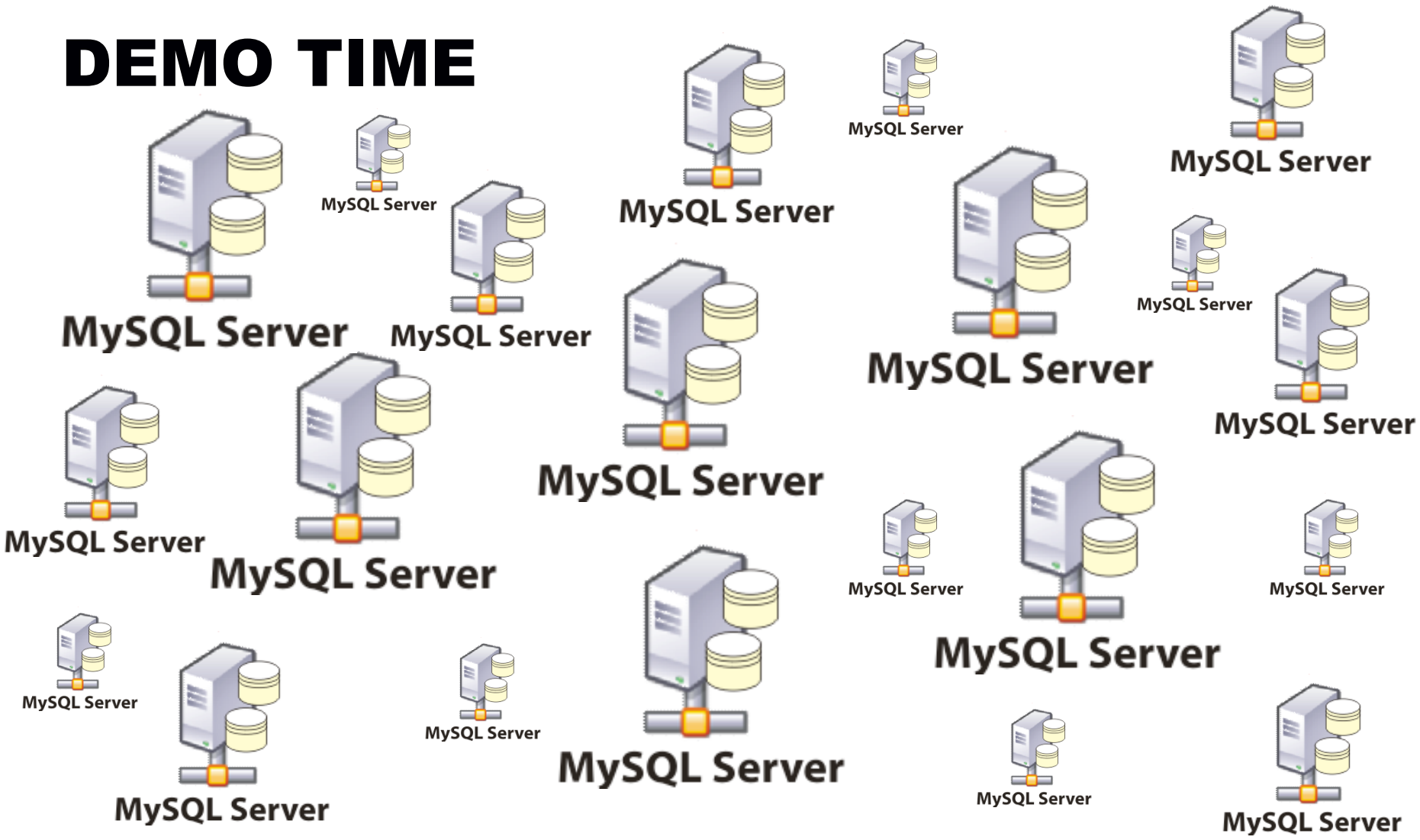
a more crowded host



an even more crowded host



DEMO TIME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THANKS

Let's talk!

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