



# Build Simple and Complex Replication Clusters

Jeff Mace

# Overview

- Introducing Tungsten Replicator
- What do you need?
- Installation
- Next Steps

# Introducing Tungsten Replicator

- Alternative to MySQL replication
- Still requires binary logs
- Crash-safe with ACID storage engines
- Compatible across branches and versions
- Provides heterogenous replication
- 100% GPL v2

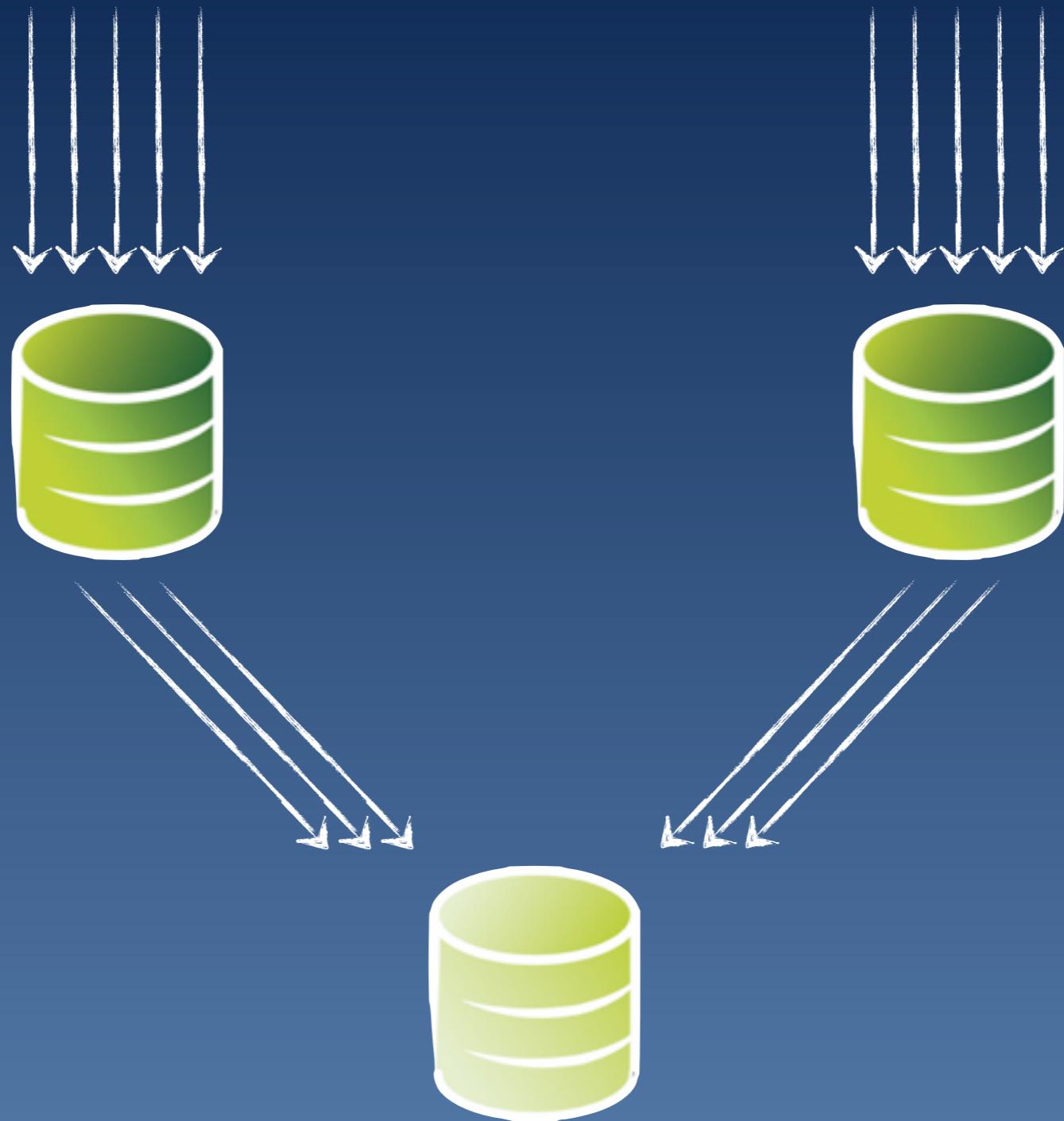
# Break speed limits



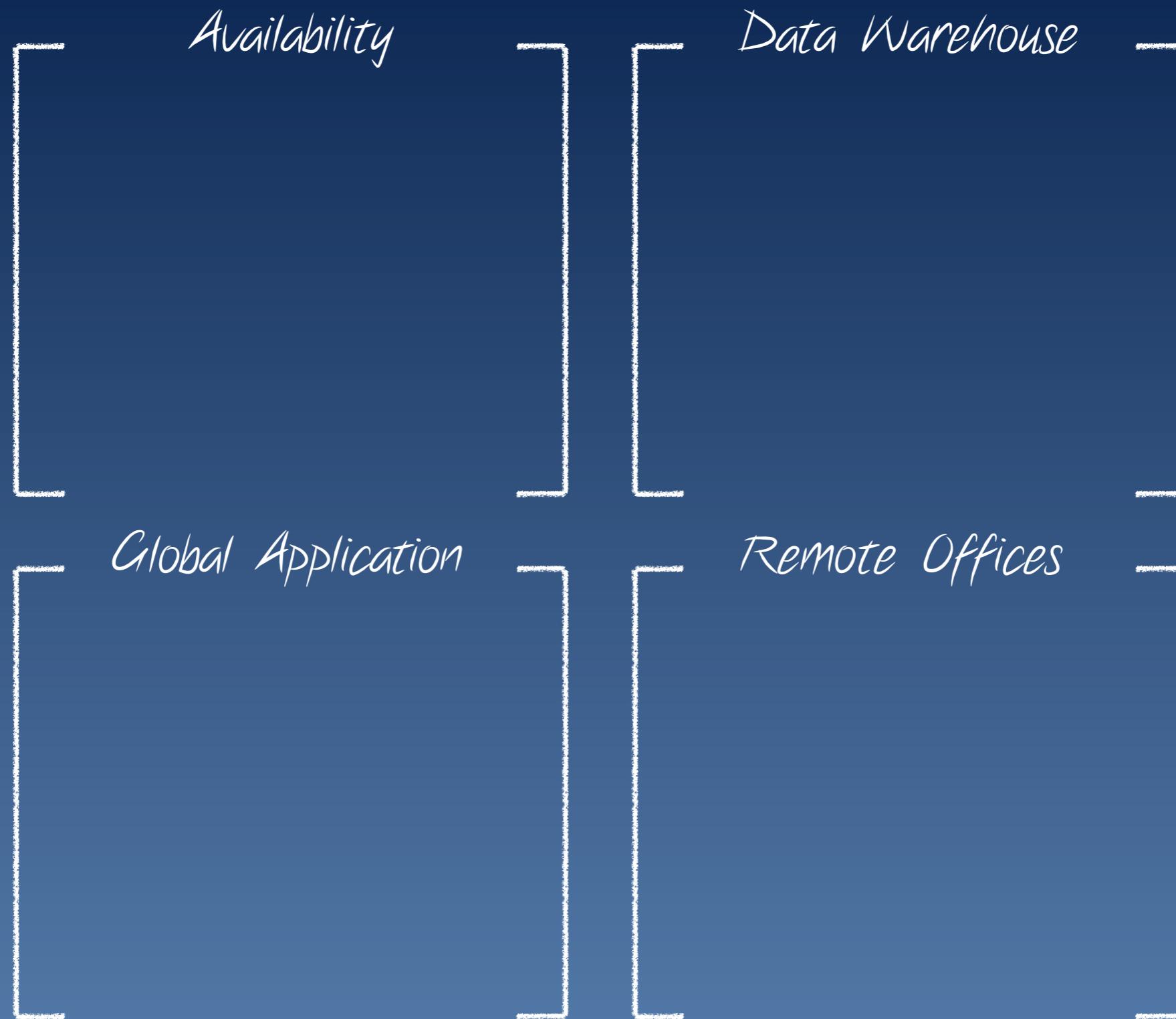
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# Replicate from many masters



# What do you need?



# Bi-Directional

- Availability
- Simple failover
- Simple deployment

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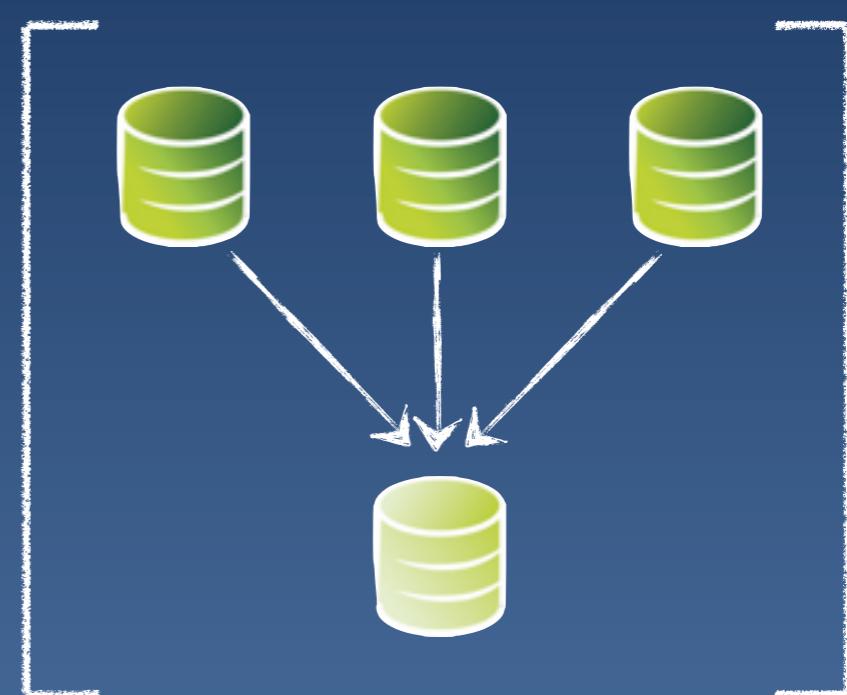


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- Data warehouse + reporting
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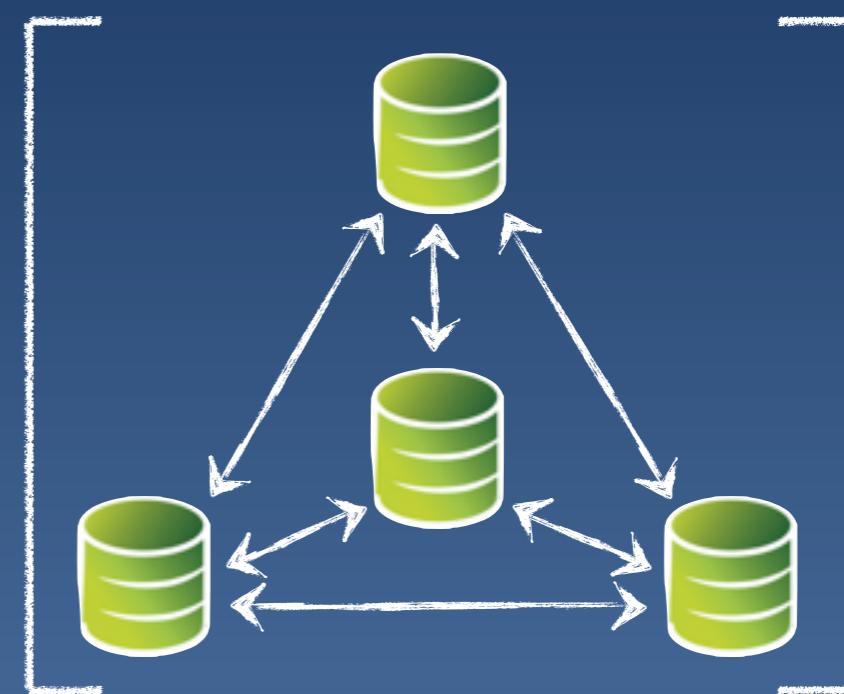


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- Connect multiple sites
- Replicate between each server
- Allows individual failure
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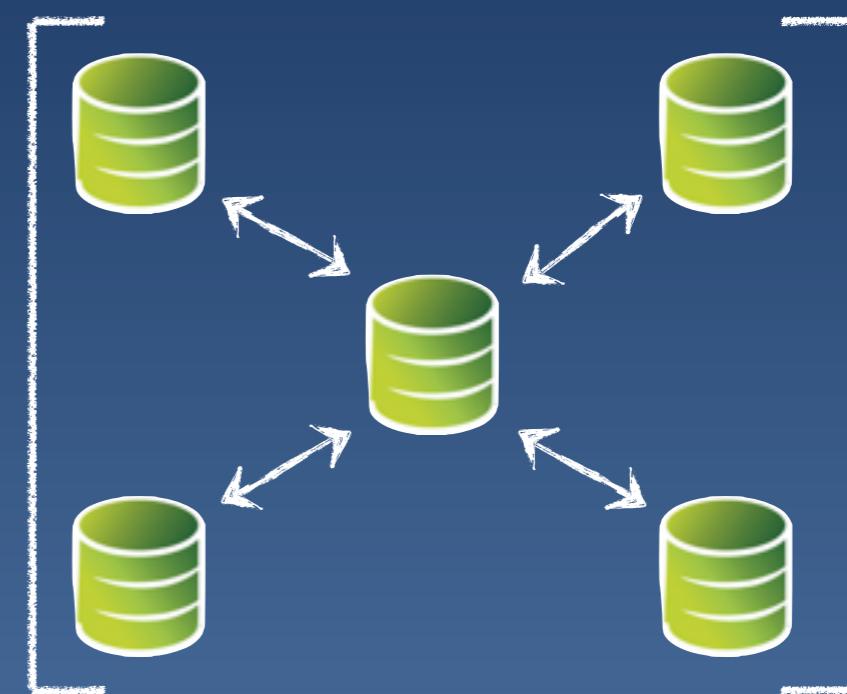


# Star

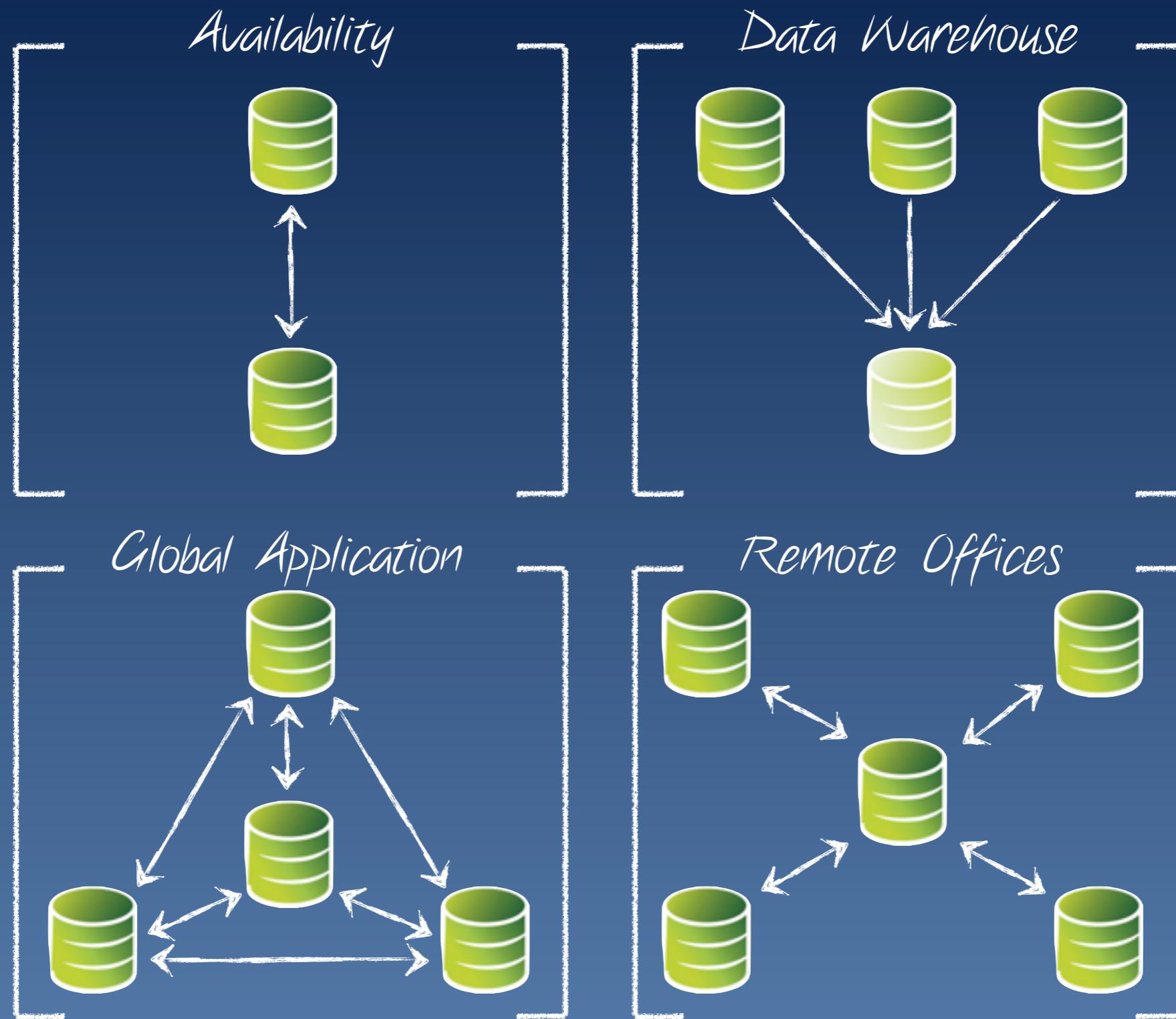
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- Not MySQL 5.5
- Optional hub for disaster recovery

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- Not MySQL 5.5
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# One tool, many solutions



# Installing Tungsten

- tungsten-installer + configure-service
- Written in Ruby
- Simple installation using SSH between database servers
- Validates prior to installation

# Installing simple master - slave

```
tools/tungsten-installer --master-slave \  
--cluster-hosts=db1.nyc.example.com,db2.nyc.example.com \  
--master-host=db1.nyc.example.com \  
--home-directory=/opt/continuent \  
--datasource-user=tungsten \  
--datasource-password=secret \  
--start-and-report \  
--service-name=nyc
```

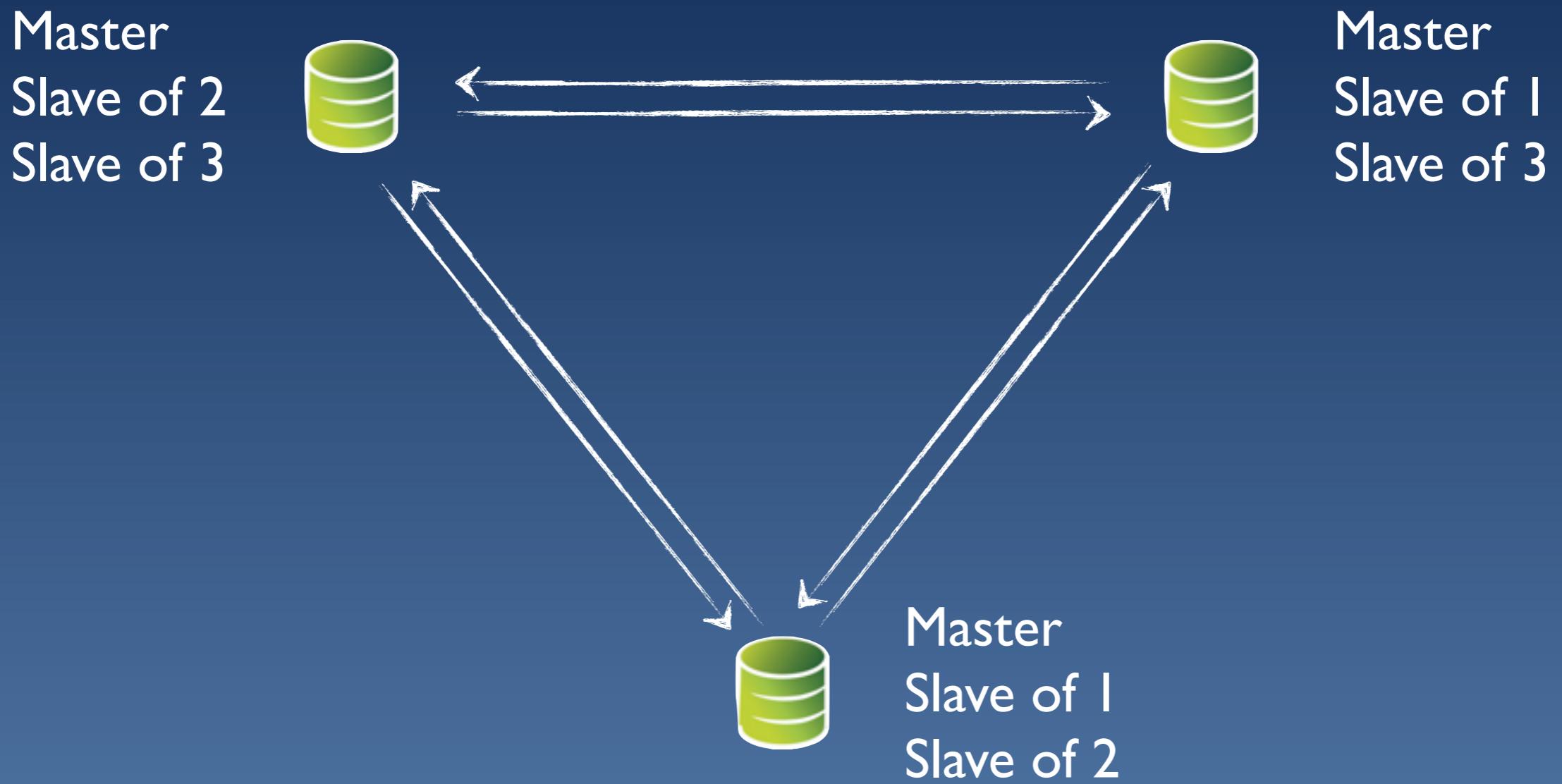
# Installing multi-master

```
tools/tungsten-installer --master-slave \  
--cluster-hosts=db1.nyc.example.com \  
--master-host=db1.nyc.example.com \  
--home-directory=/opt/continuent \  
--datasource-user=tungsten \  
--datasource-password=secret \  
--start-and-report \  
--service-name=nyc_db1
```

# Installing multi-master (2)

```
tools/configure-service \
--host=db2.nyc.example.com \
--release-directory=/opt/continuent \
--role=slave \
--datasource=db2_nyc_example_com \
--master-thl-host=db1.nyc.example.com \
--local-service-name=nyc_db2 \
--service-type=remote \
--svc-start-and-report \
nyc_db1
```

# Demo



# That's great! How do I get started?

```
# mysql-sandbox & tungsten-sandbox  
# Written by Giuseppe Maxia
```

```
$ tungsten-sandbox-2.0.4 -m 5.1.54 \  
-i /opt/continuent/downloads/tungsten-replicator-2.0.5 \  
-n 3 --topology=all-masters
```

```
# Follow the wiki cookbook at  
# http://code.google.com/p/tungsten-replicator/
```

# From Replication to Managing Data

- Tungsten Replicator moves data
- It does not ensure databases are:
  - Protected from failures
  - Easy to administer
  - Fully utilized
- To manage data you need cluster management



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