

# Failover and Seamless Slave Promotion using Global IDs

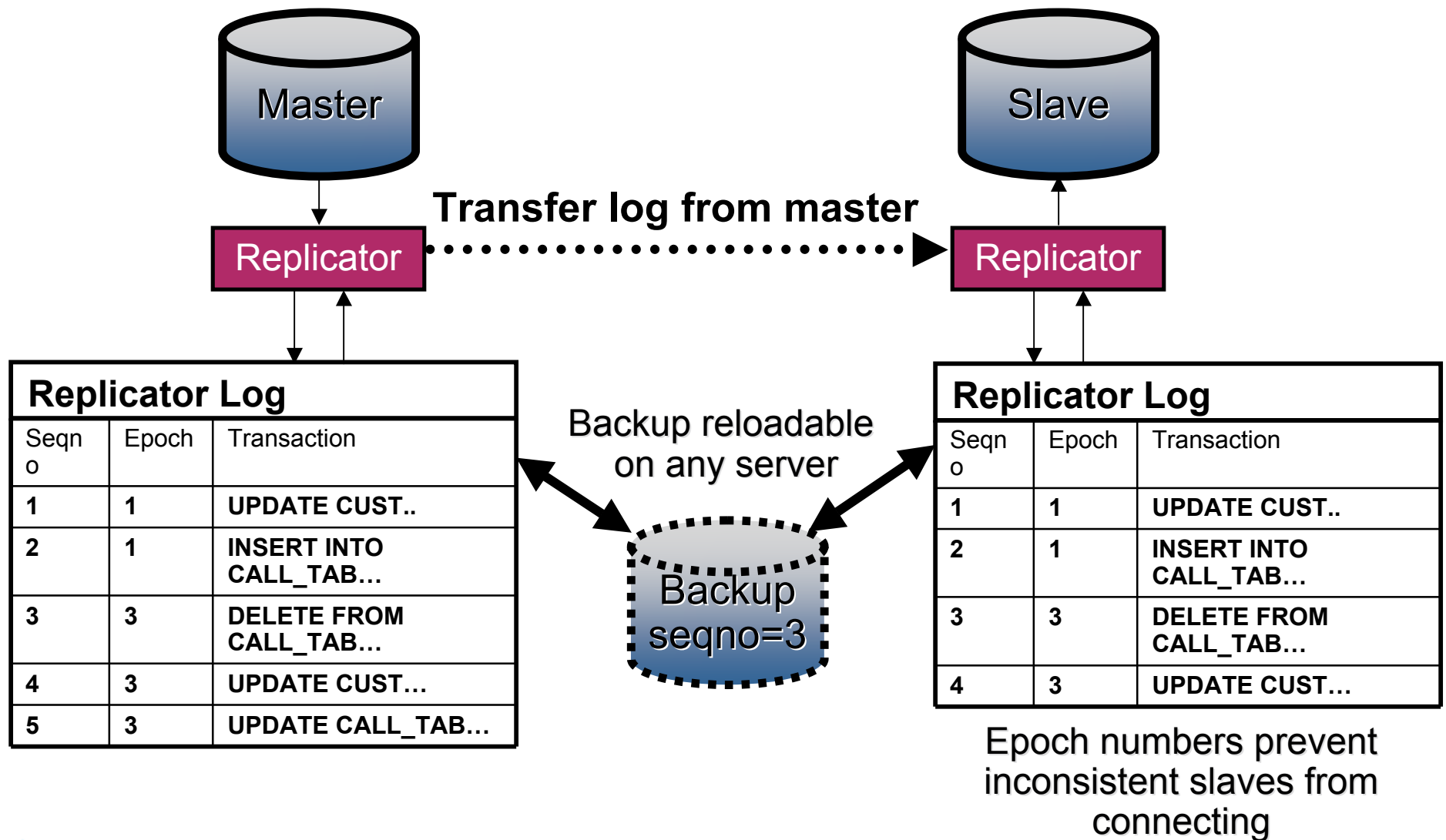


# Getting Started...

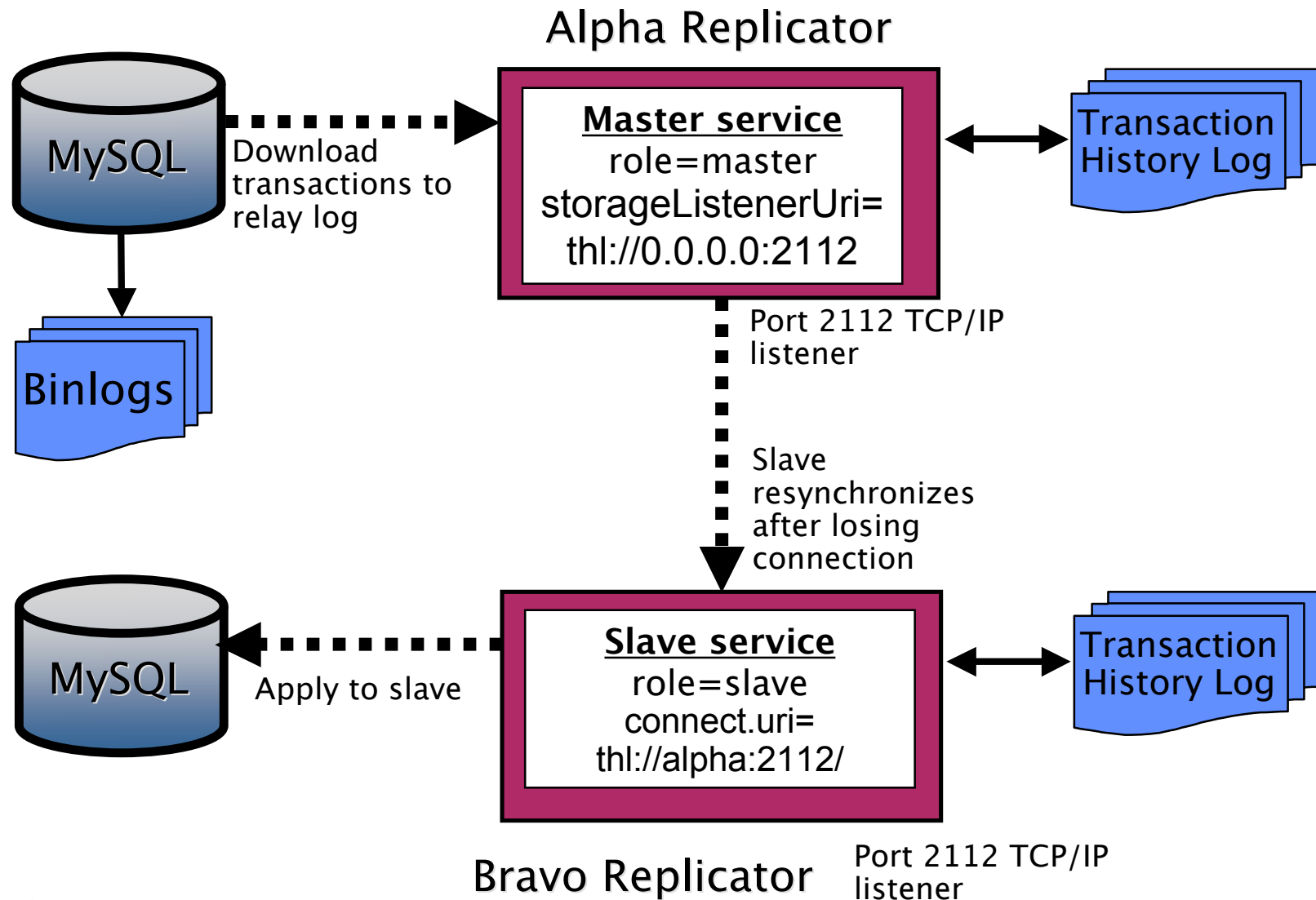
# Let's do a demo!



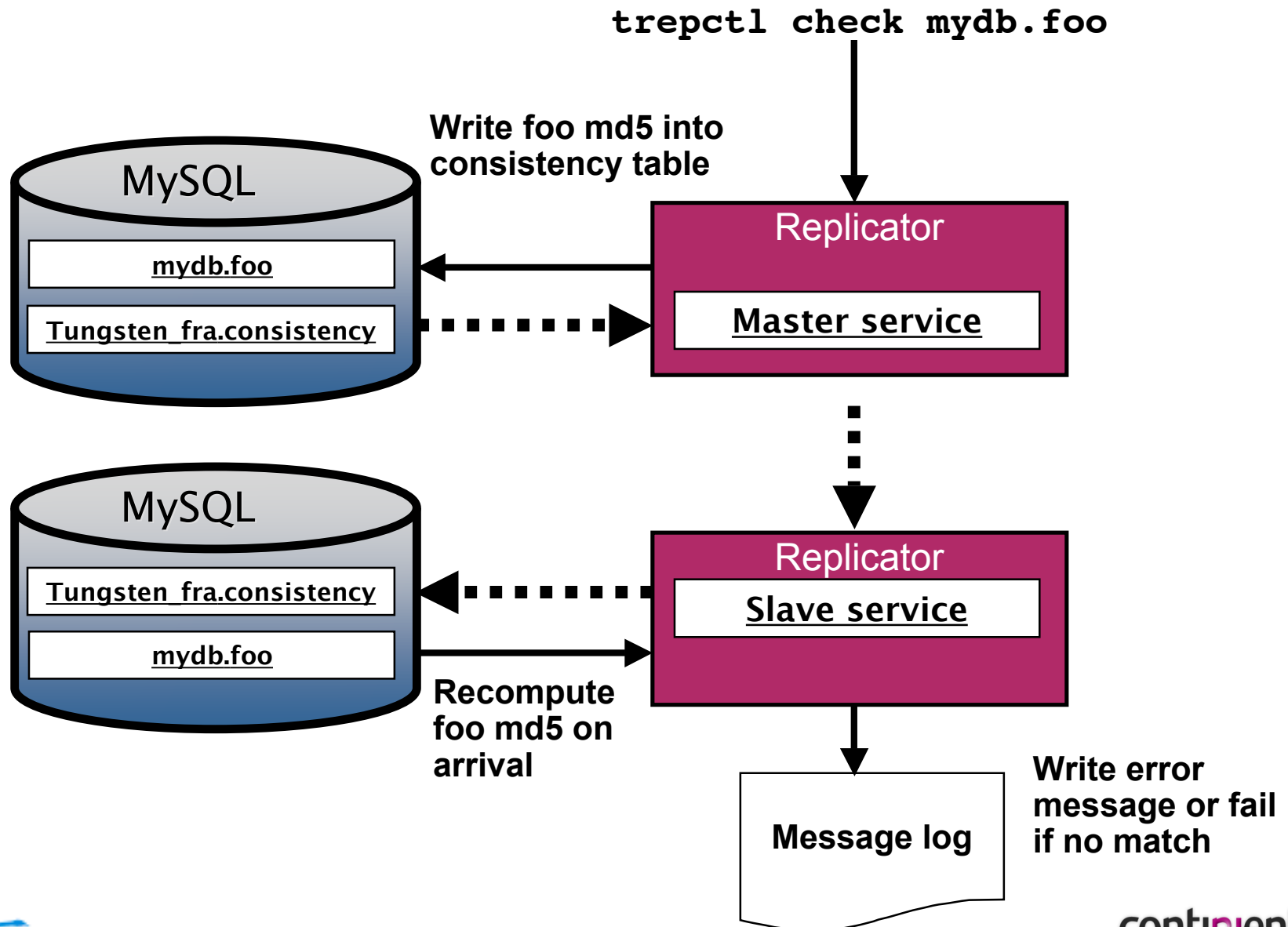
# Global ID and Epoch Number Concepts



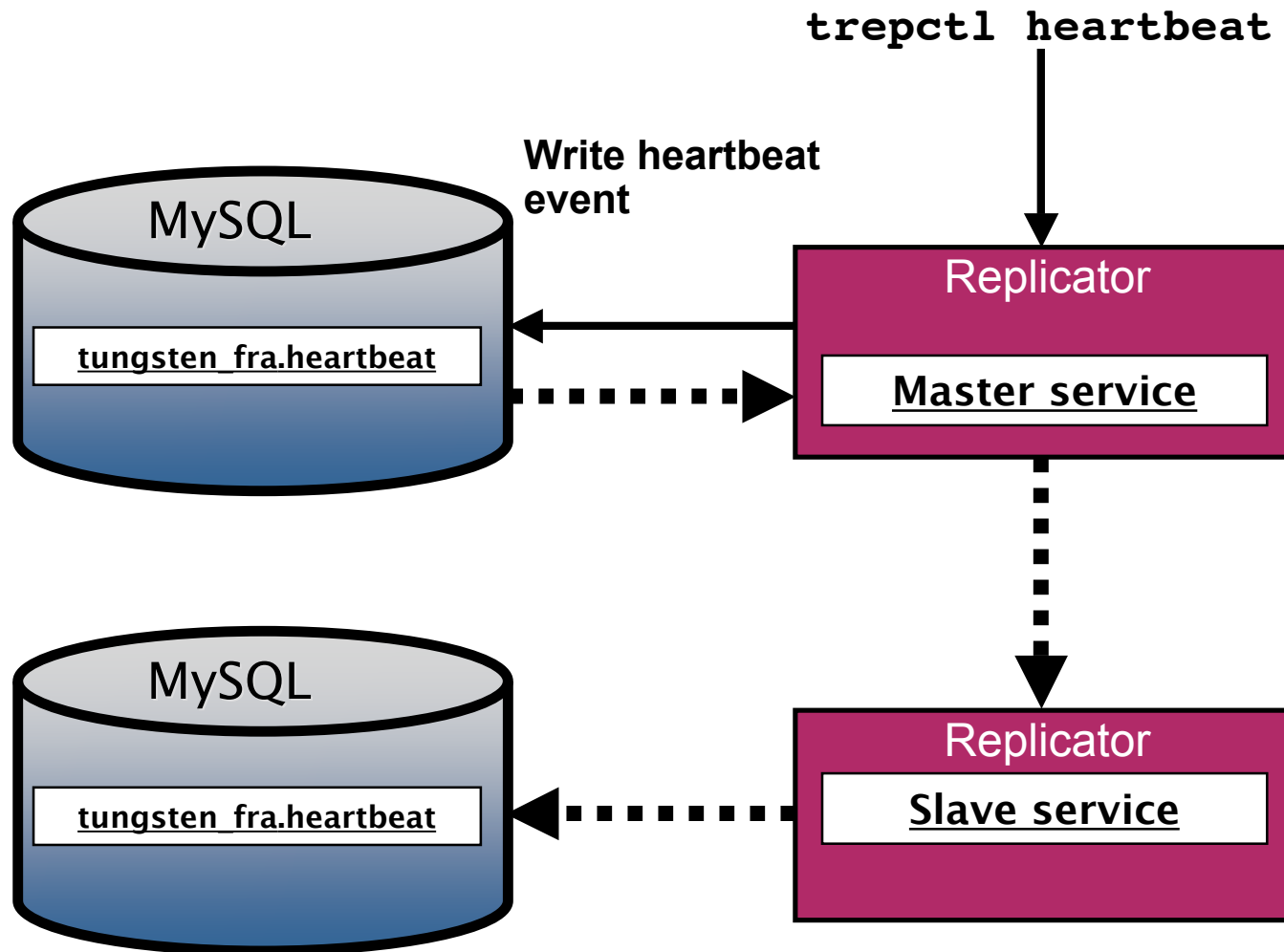
# Master/Slave Architecture



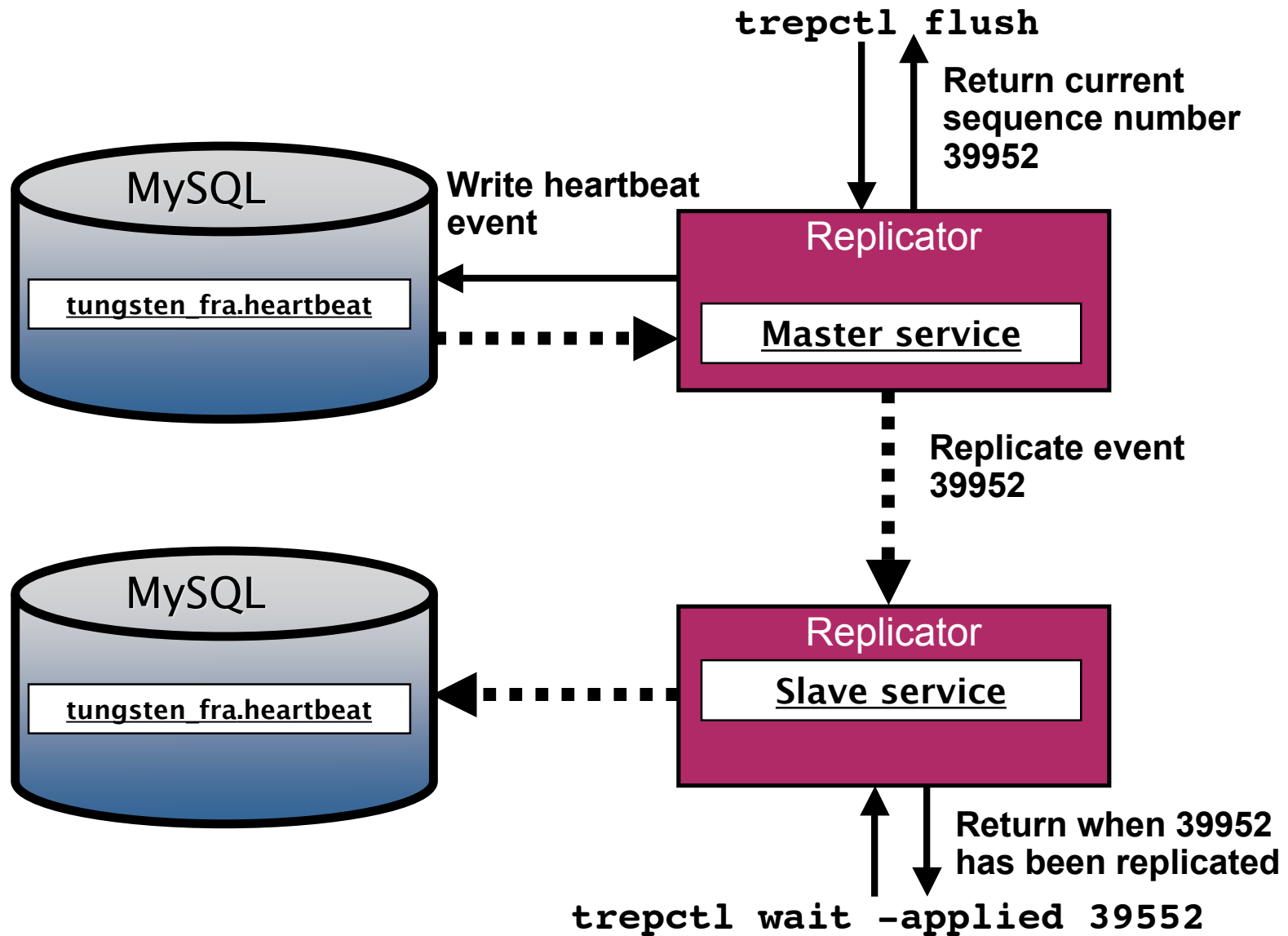
# Consistency Checking



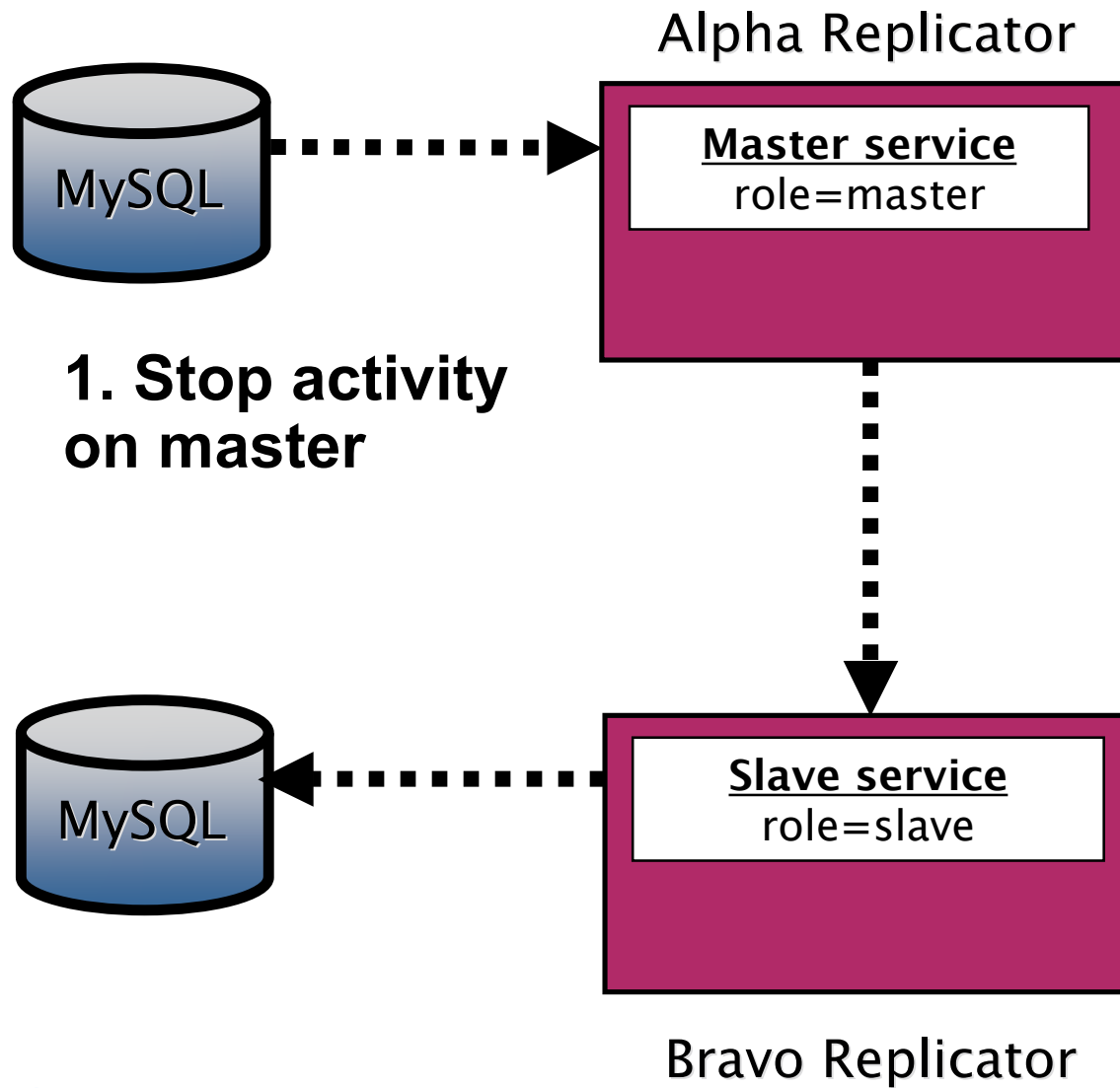
# Heartbeat Command



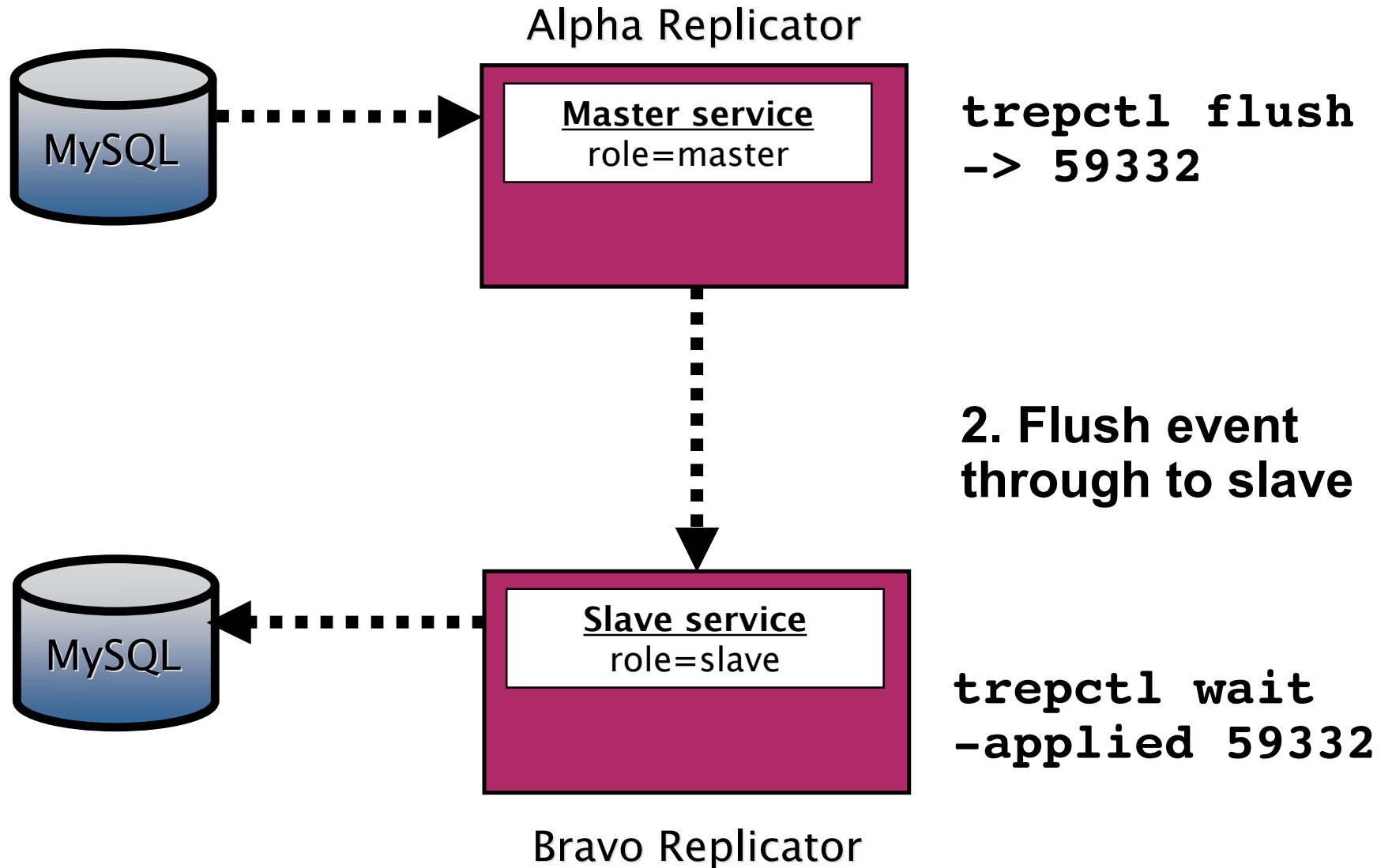
# Flush and Wait Commands



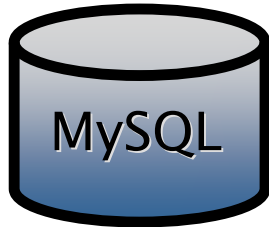
# Planned Failover



# Planned Failover



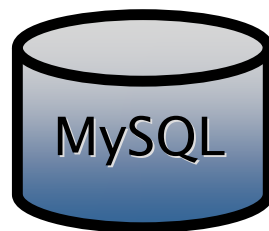
# Planned Failover



Alpha Replicator

Master service  
role=master

**trepctl offline**



Slave service  
role=slave

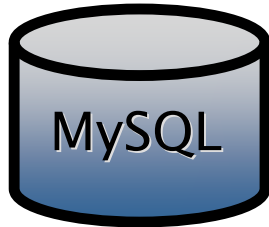
**trepctl offline**

**3. Put master  
and slave offline**

Bravo Replicator



# Planned Failover

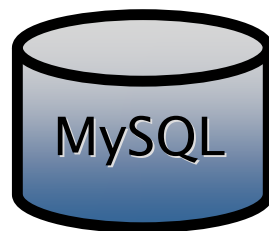


Alpha Replicator

Slave service  
role=slave

```
trepctl setrole  
-role slave -uri  
th1://bravo
```

**4. Reconfigure  
master and slave**



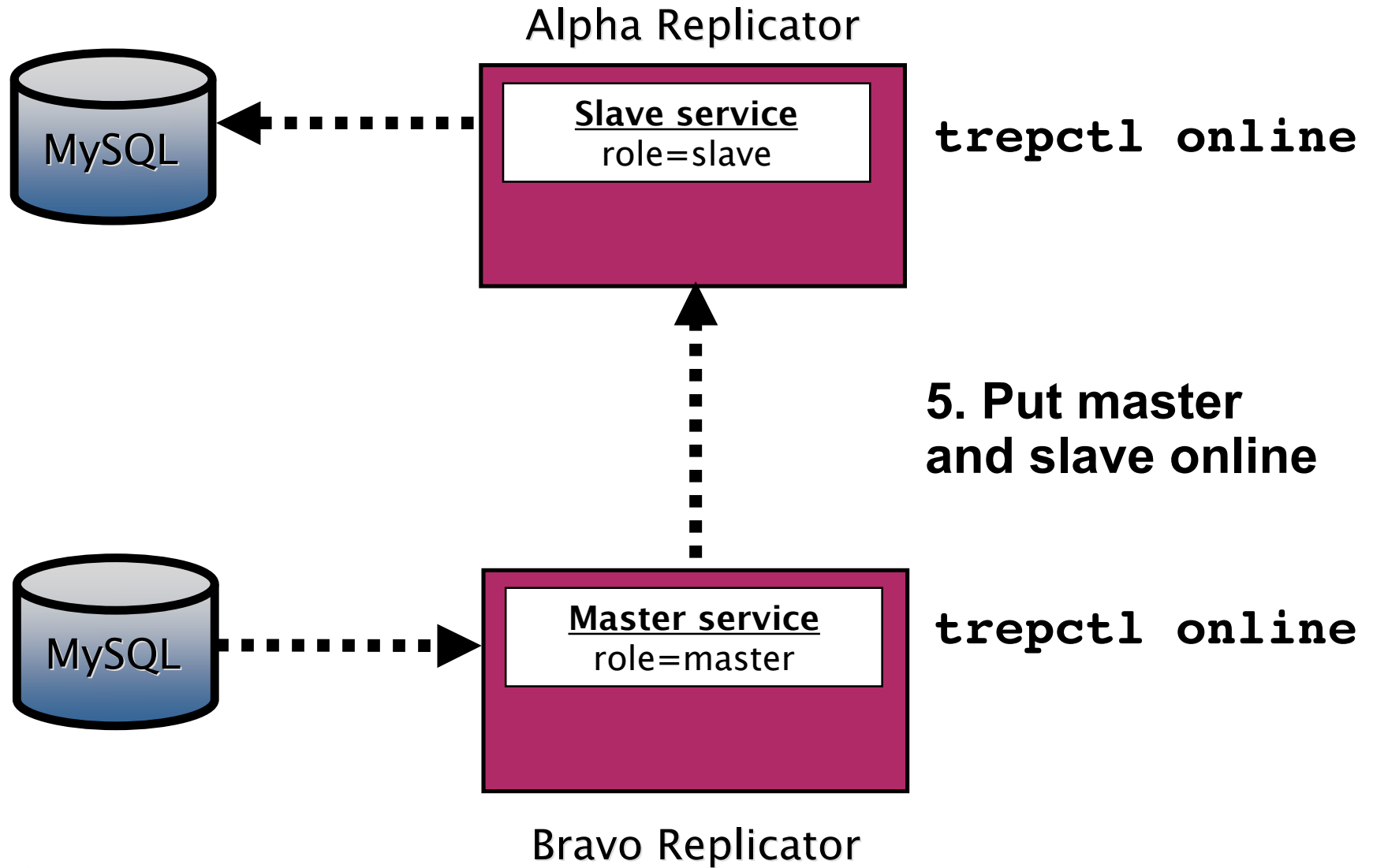
Master service  
role=master

```
trepctl setrole  
-role master
```

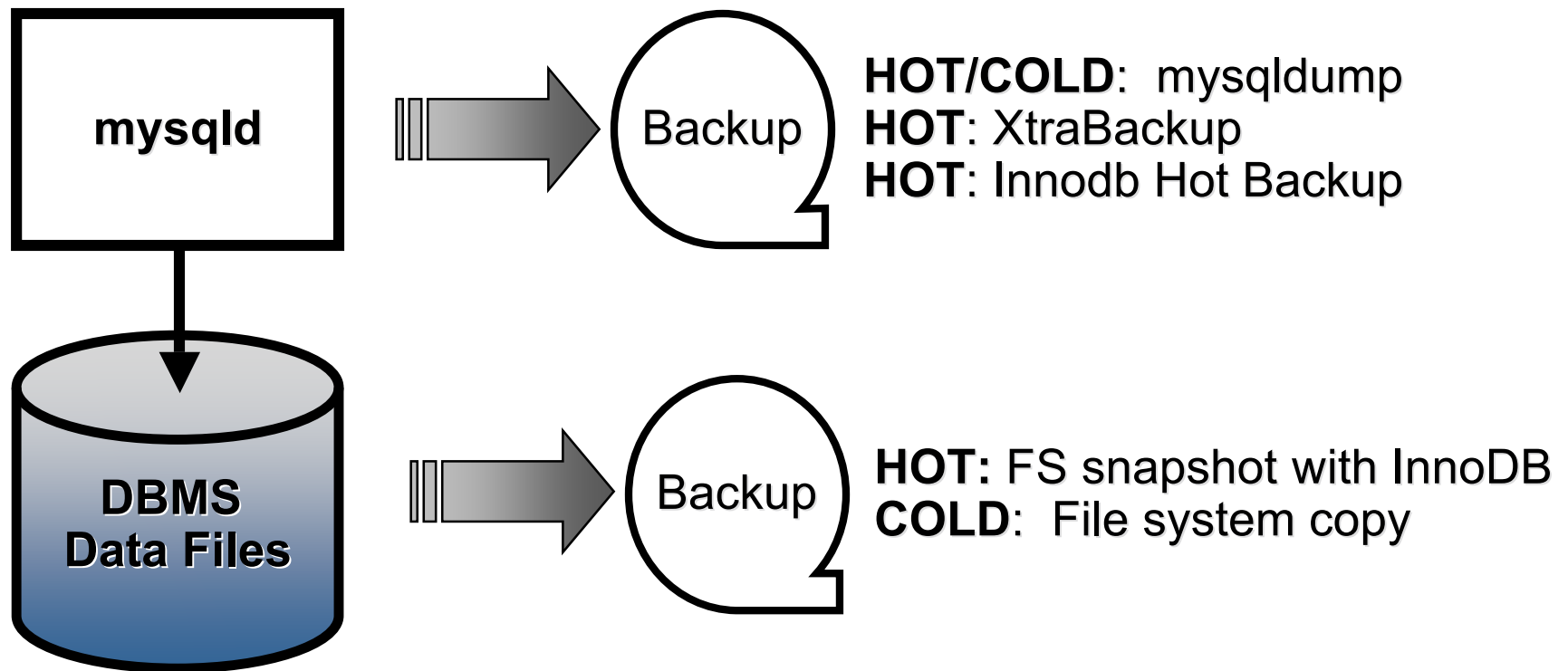
Bravo Replicator



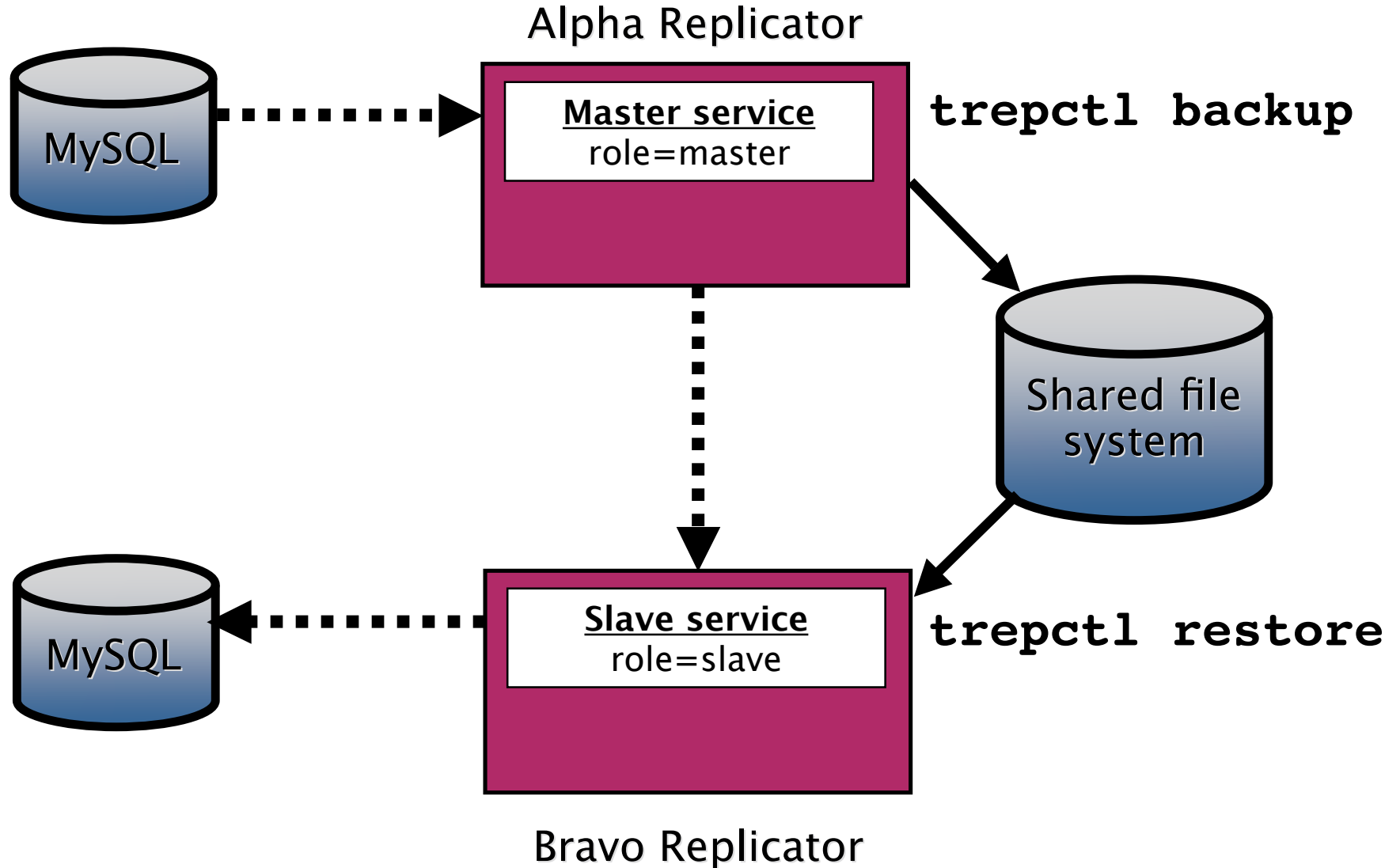
# Planned Failover



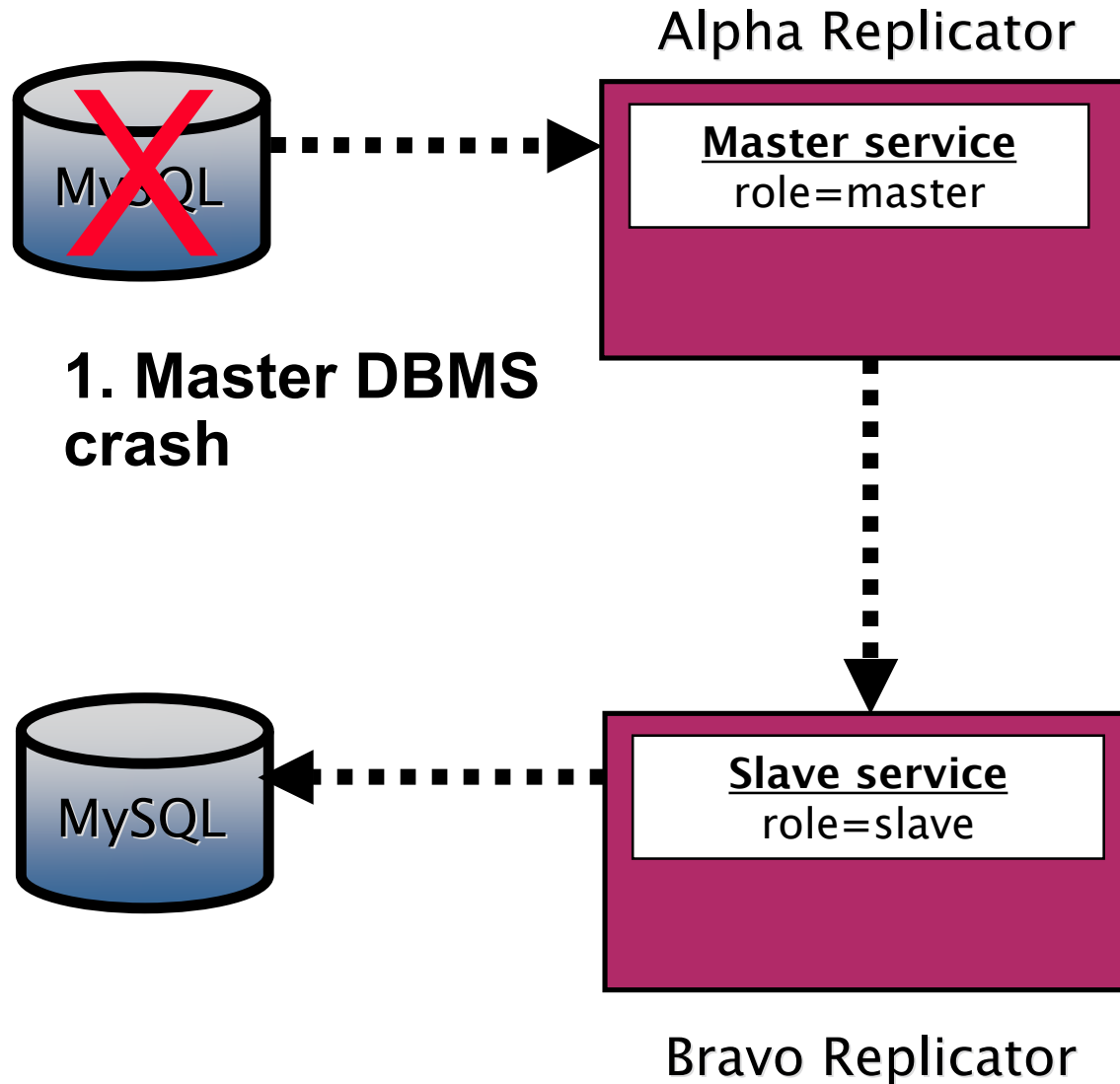
# MySQL Backup Options



# Backup and Restore on Idle System



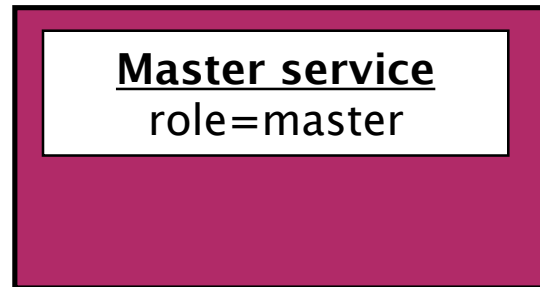
# Unplanned Failover and Recovery



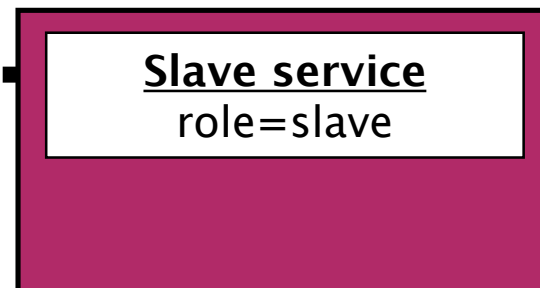
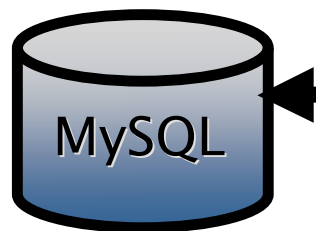
# Unplanned Failover and Recovery



Alpha Replicator



**2a. Master ->  
OFFLINE:ERROR**



**2b. Slave ->  
SYNCHRONIZING**

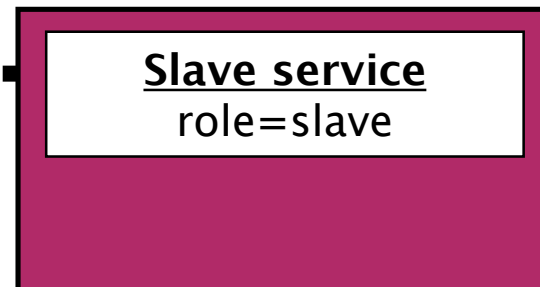
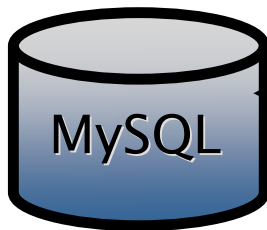
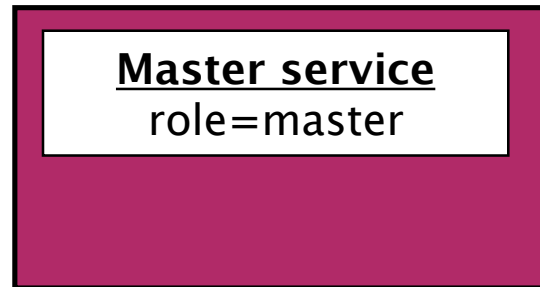
Bravo Replicator



# Unplanned Failover and Recovery



Alpha Replicator



Bravo Replicator

**3. Put slave  
offline**  
**trepctl offline**



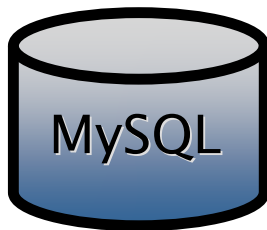
# Unplanned Failover and Recovery



Alpha Replicator

Master service  
role=master

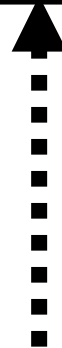
```
trepctl setrole  
-role slave -uri  
th1://beta
```



Slave service  
role=slave

**4. Reconfigure  
master and slave**

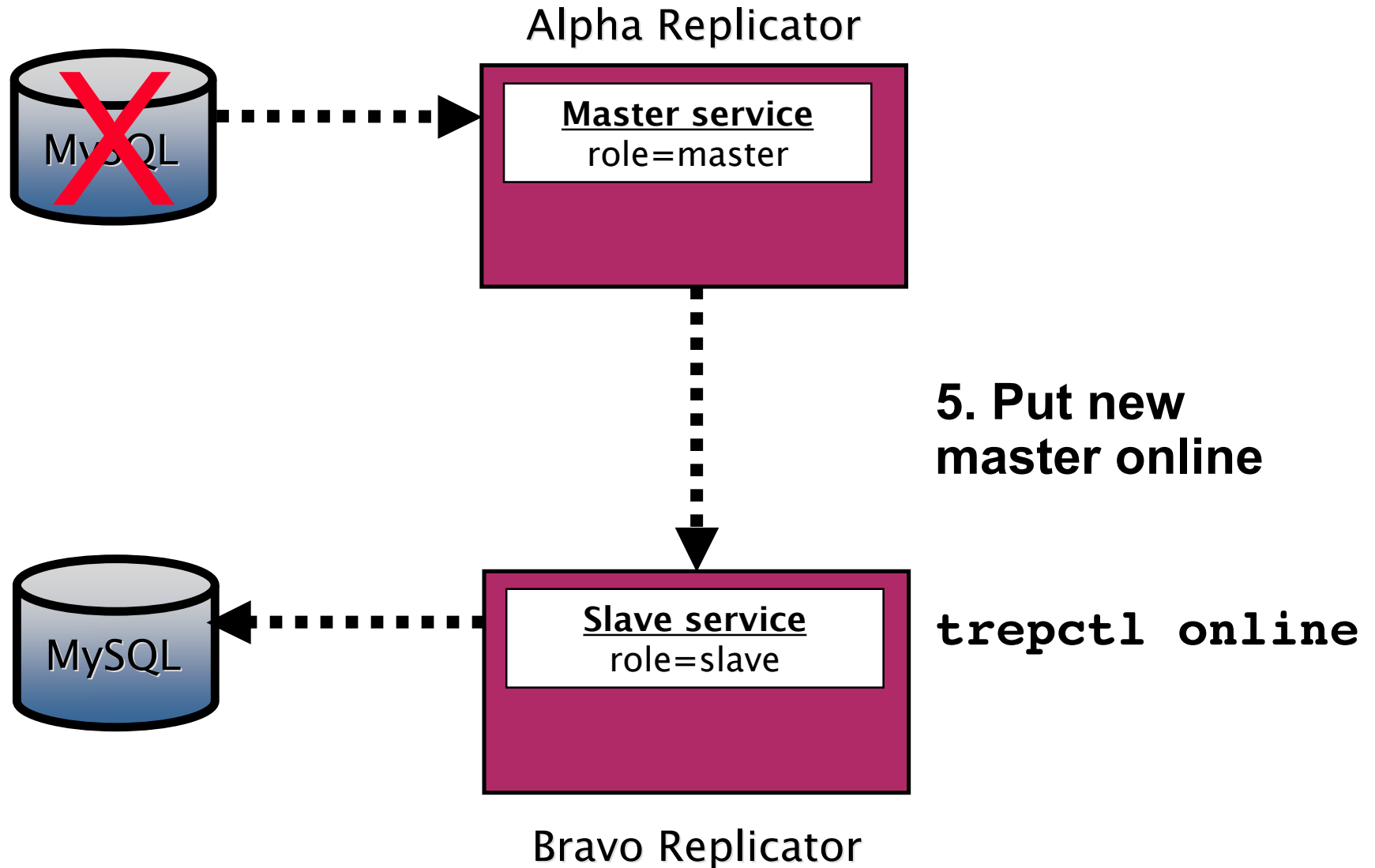
```
trepctl setrole  
-role master
```



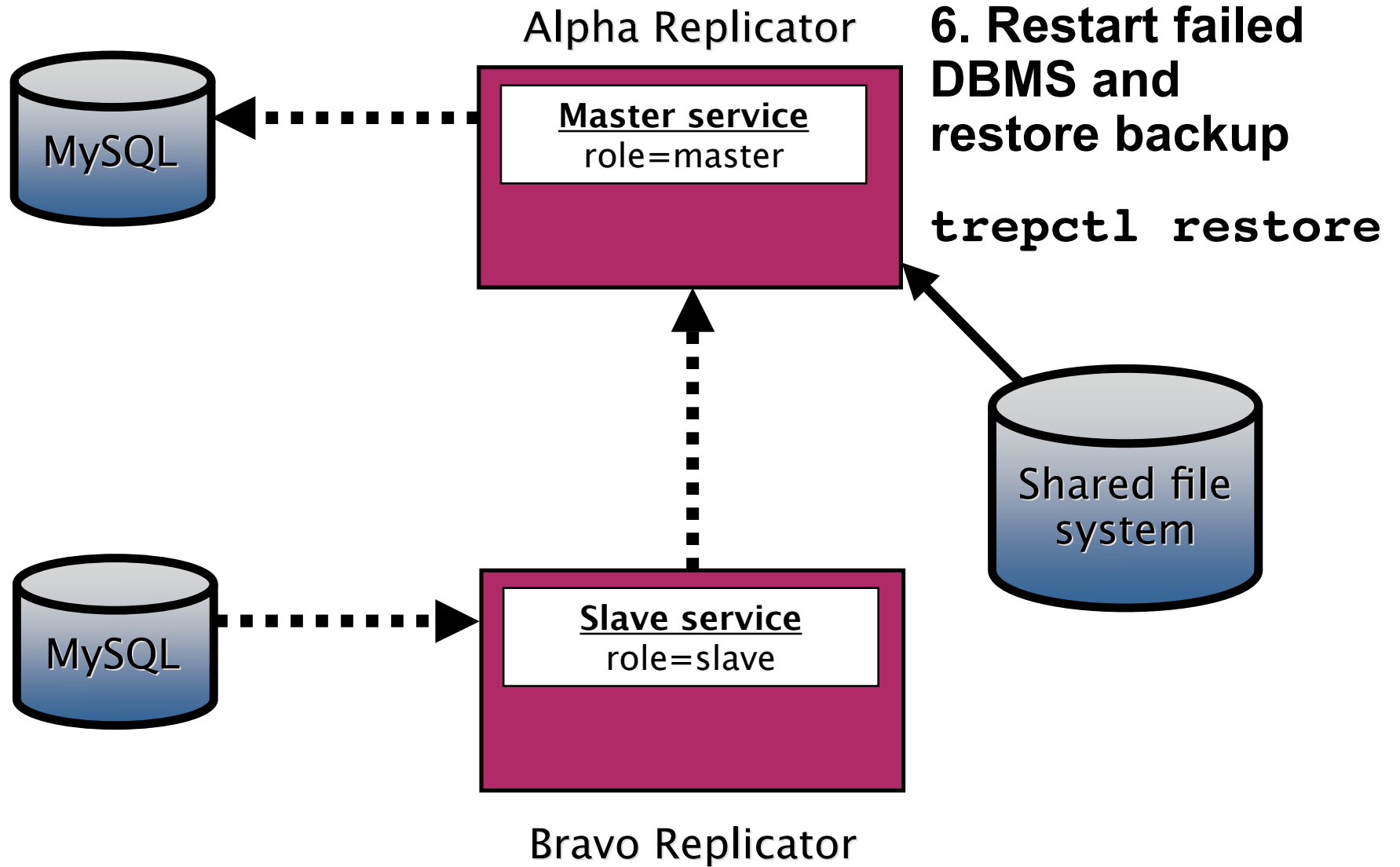
Bravo Replicator



# Unplanned Failover and Recovery



# Unplanned Failover and Recovery



# Failover with attached DR site

- / Cross site failover scenarios can be enabled using virtual IP addresses (VIPs)
- / Examples of usage:

```
ifconfig eth0:0 192.168.128.130 up
```

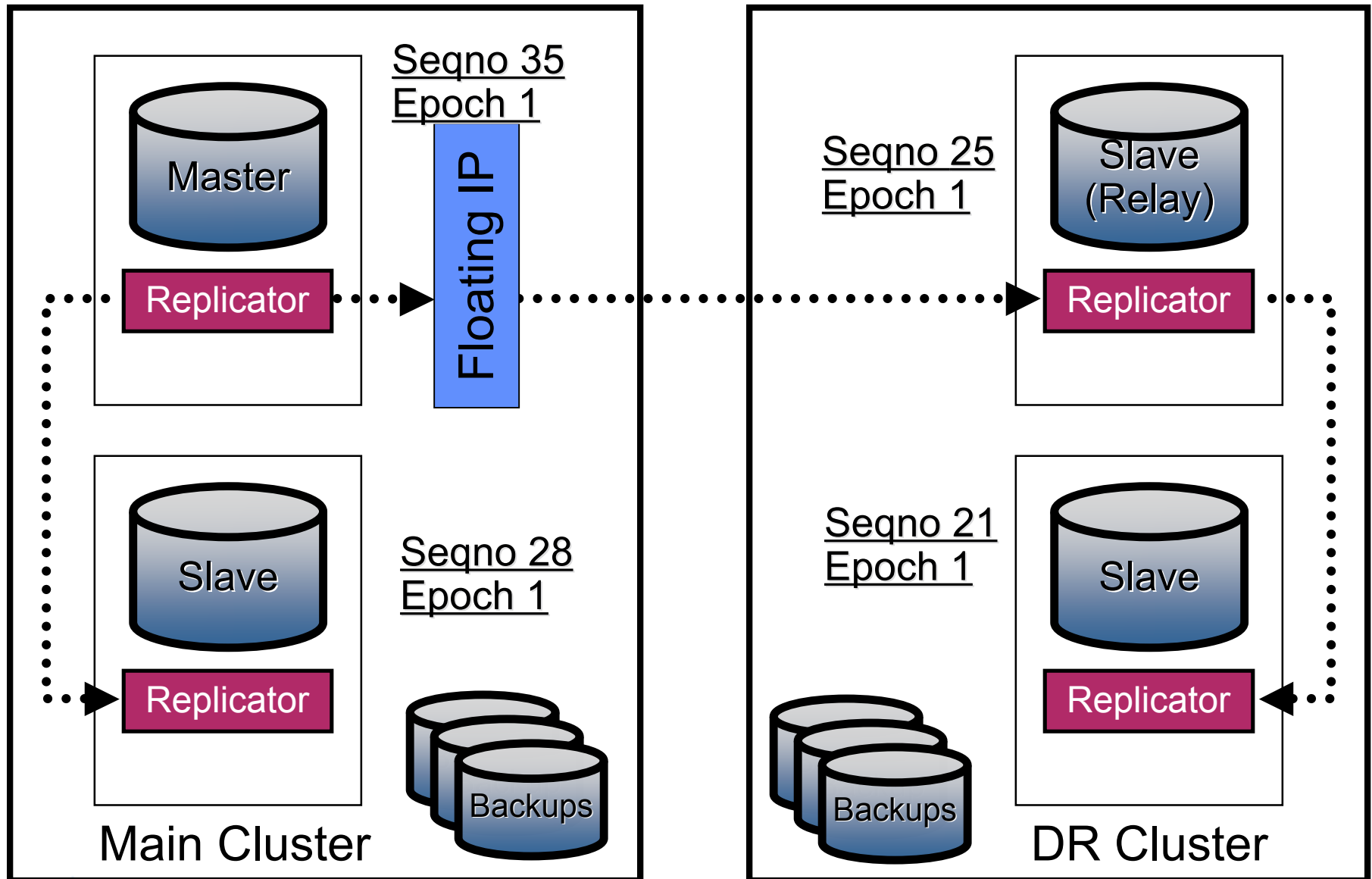
```
ifconfig eth0:0 192.168.128.130 down
```

**Note 1: DNS names are another approach**

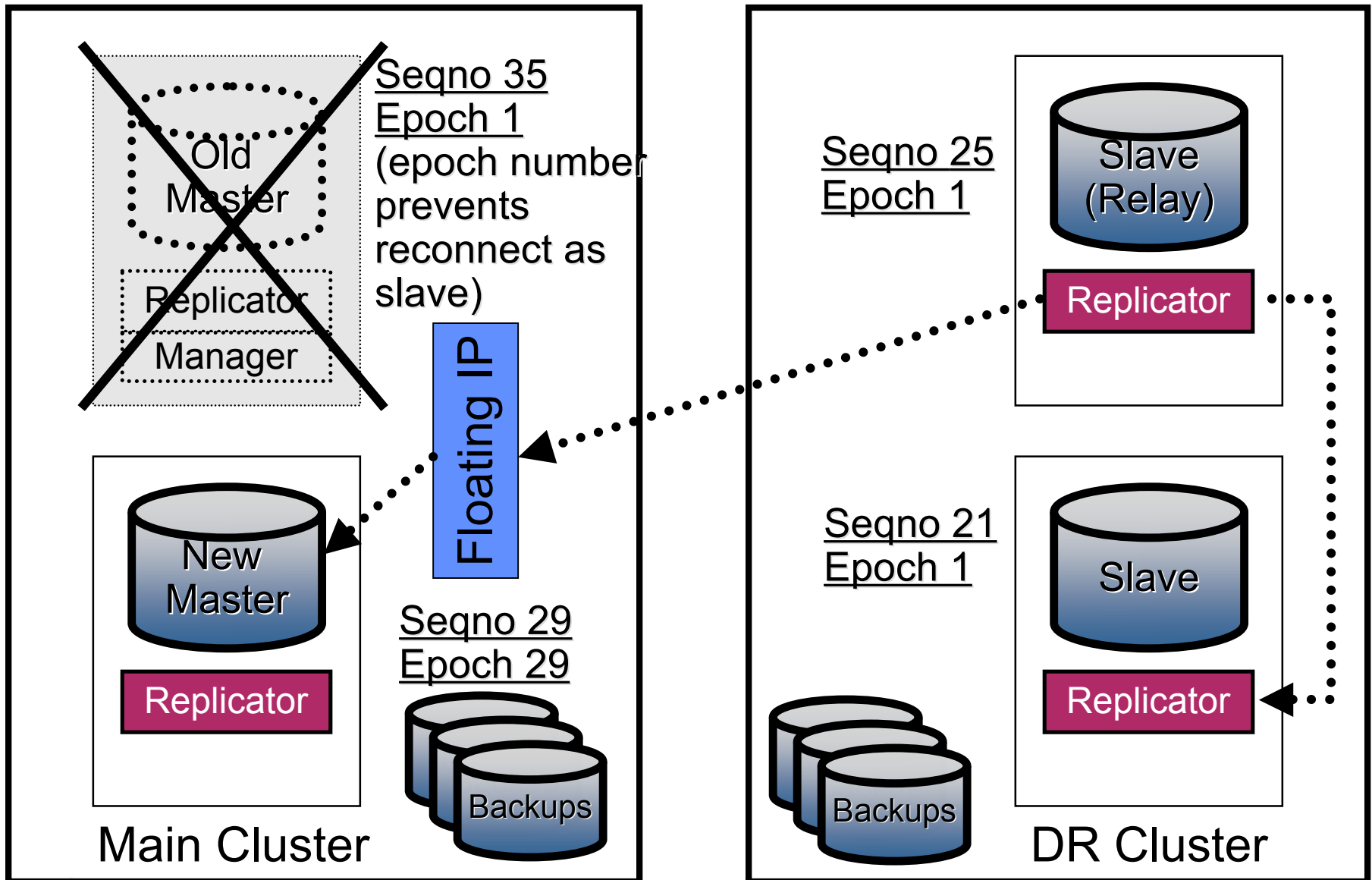
**Note 2: Be sure you understand VIPs if you use them**



# DR Site Enabling with Global IDs



# Reconfiguration After Failover



# Failover / General Roadmap

- / Ability to reset replicator state**
- / Better error logging**
- / JSON administrative interfaces**
- / More efficient consistency checking**
- / Better detection and handling of “lost” transactions**

