



Multimaster MySQL

How to build a global, multi-region MySQL cloud backend capable of serving a high volume cloud contact center

By Chris Parker, Director, Professional Services, EMEA & APAC
March 28, 2019



Welcome!

“Continuent, the MySQL Availability Company”



Introduction

Continuent, the MySQL Availability Company, provides solutions for continuous operations enabling business-critical MySQL applications to run on a global scale with zero downtime.

Agenda

This webinar will have three parts, and is expected to last no longer than 30 minutes:

- Customer Use Case: Who, What, How & Why?
- Continuent Benefits
- Q & A

Please note this live webinar is being recorded.



Webinar Goals

We will explore how to deploy Multimaster MySQL with the following design criteria:

- Geographically distributed, low-latency data
- Fast local response times for read & write traffic
- Full ACID compliance - atomic operations, guaranteed consistency, isolation, and durability
- Local rapid-failover, automated high availability



Tungsten MySQL Use Cases



MySQL Availability

Continuous MySQL Availability

MySQL HA and Disaster Recovery

Multimaster MySQL

Multimaster MySQL [A/A]

Geo-Scale MySQL

Geo-Scale MySQL for Global Operations [A/P]

[Broadcast March 14, 2019]

Geo-Scale Multimaster MySQL [A/A]

MySQL Replication

MySQL Cloud Migration

Real-time Replication from MySQL into Analytics

[Broadcast March 21, 2019]

** MySQL is understood in a broad context, including MySQL, MariaDB, Percona Server, RDS MySQL, RDS Aurora and Google Cloud SQL*

WHO: Customer Profile

NewVoiceMedia's cloud-based call centre software frees your people to make every conversation personal. It supports the creation of exceptional customer experiences that help serve better and sell more

NewVoiceMedia's technology is 100% cloud-based & device agnostic for telephony infrastructure



NVM NewVoiceMedia
A Vonage® Company

WHAT: Business Challenge

Regional distribution of data

Deliver up-to-date data to clients as quickly as possible

Fast, site-local read response times

Zero downtime for planned maintenance

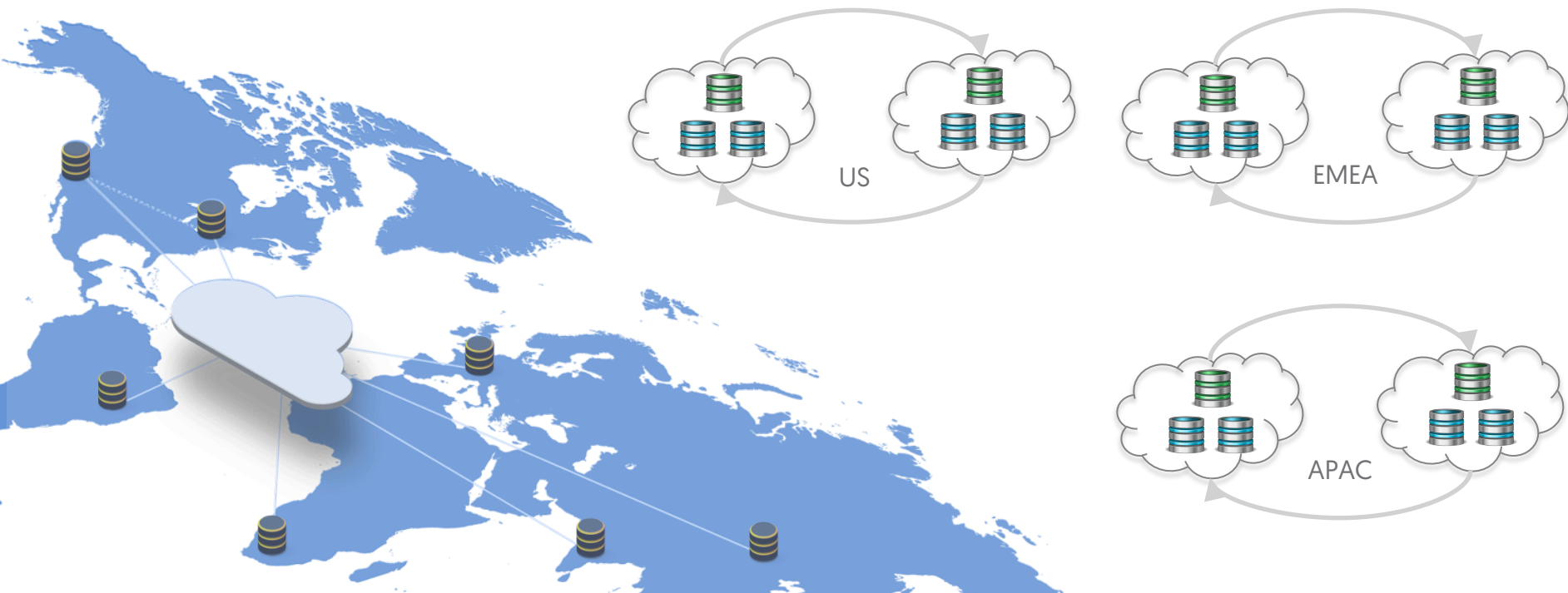
Automatic High Availability within a region



HOW: The Solution Architecture

Geo-distributed Composite Tungsten clusters
[three pairs of active/active MySQL clusters] in USA, EMEA and APAC

- Three (3) nodes per cluster
- Running on AWS EC2 instances in VPC's



WHY: Significant Benefits

Regional Geo-scale, Availability, Disaster Recovery

Low-latency, regionally geo-distributed data access providing fast response times for read traffic and local, rapid-failover and automated high availability.

Maintain client connectivity for planned and unplanned maintenance activities

Simple administration, system visibility and stability also help create high return on investment.

Sub-Second Replication across regions



Solutions



About Continuent

Continuent, the MySQL Availability Company, provides solutions for continuous operations enabling business-critical MySQL applications to run on a global scale with zero downtime.

Continuent provides geo-distributed MySQL high availability on-premises, in hybrid-cloud, and in multi-cloud environments.

Continuent customers are leading SaaS, e-commerce, financial services, gaming and telco companies who rely on MySQL and Continuent to cost-effectively safeguard billions of dollars annual revenue.

Continuent's database experts offer the industry's best 24/7 MySQL support services to ensure continuous client operations.



Proven Team

The core **Continuent Team** has been building data service solutions since 2004.

In 2014 VMware acquired 'old' Continuent, the best-of-breed DBaaS company, to offer their own DBaaS for vCloud Air.

'New', independent Continuent was spun off from VMware in 2016 after VMware changed its cloud strategy.

In 2019 Continuent is ready to launch an all-new Tungsten Cloud, extending and expanding the functionality of Continuent Clustering in to the Cloud



Proven Solutions

Our solutions handle billions of transactions per day and support businesses with billions of dollars in combined revenue:



Continuent Tungsten Solutions



Tungsten Clustering

Tungsten Clustering allows enterprises running business-critical MySQL database applications to cost-effectively achieve continuous operations with commercial-grade high availability (HA), geographically redundant disaster recovery (DR) and global scaling.

Tungsten Replicator

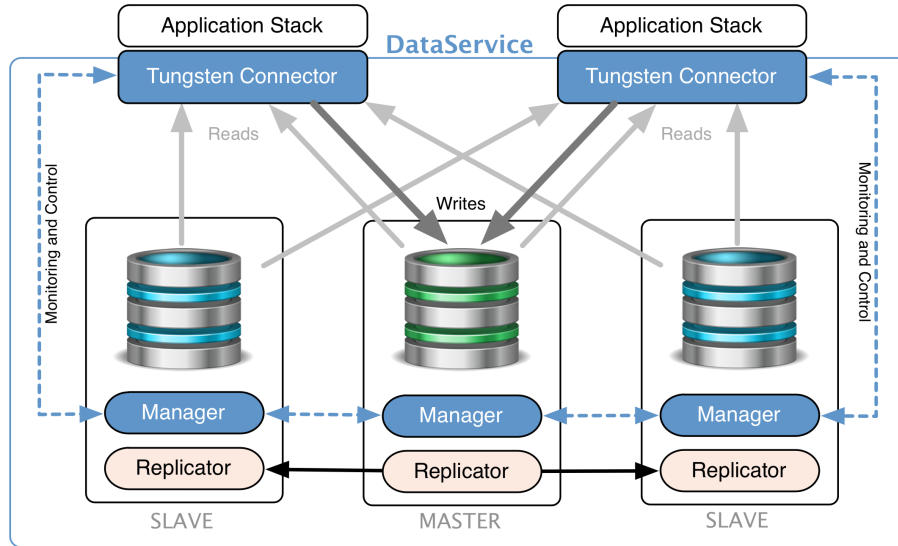
Tungsten Replicator supports real-time data replication from MySQL into AWS RedShift, Cassandra, ClickHouse, Elasticsearch, HDFS, Kafka and Vertica to derive insight from analytics for better business decisions and increase revenue.

Tungsten Cloud (release date tbd)

Tungsten Cloud is a portal offering managed data service solutions using select Tungsten Clustering and Tungsten Replicator topologies and solutions.

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Tungsten Clustering



Continuous MySQL Operations

Zero Downtime MySQL

Multimaster MySQL

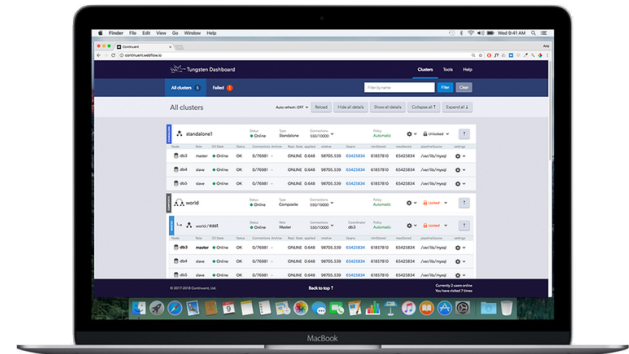
Geo-Scale MySQL

Hybrid-Cloud and Multi-Cloud MySQL

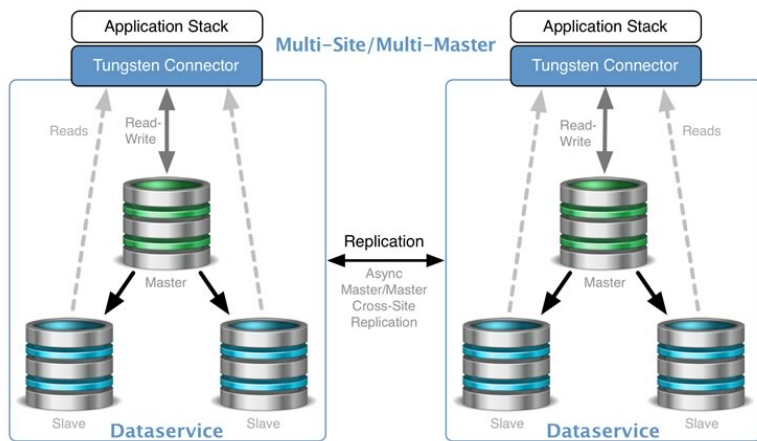
Intelligent MySQL Proxy

Most Advanced MySQL Replication

Full MySQL Support, No Application Changes



Tungsten Multi-Site/Multi-Master Clustering



Active/Active Cluster

Active/Active

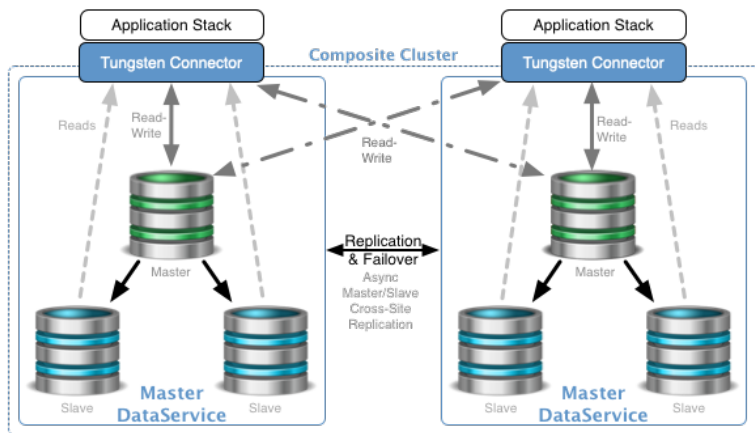
Scale to multiple Cloud Regions or datacenters

Platform-agnostic means you can span vendors and create hybrid topologies using any combination of cloud, VM and/or bare-metal servers

Move the write primary from node to node within each cluster with a single command.

For low bandwidth WAN links, this topology is the most resilient due to the loosely coupled nature and lower traffic requirements

Tungsten Composite Multimaster Clustering



Active/Active Composite Cluster

Active/Active

Scale to multiple Cloud Regions or datacenters

Platform-agnostic means you can span vendors and create hybrid topologies using any combination of cloud, VM and/or bare-metal servers

Control all clusters from any node

Move the write primary from node to node within each cluster with a single command.

Connectors aware of all sites and all writeable masters

Connectors can write to another site in the event of total loss of local cluster nodes

Tungsten Replicator



Tungsten Replicator, the core underlying technology for Continuent Tungsten, supports data replication from MySQL sources to AWS RedShift, Cassandra, ClickHouse, Elasticsearch, HDFS, Kafka and Vertica.

The same, proven replication mechanism supports data replication from clustered MySQL databases to high-performance NoSQL and data analytics engines

Derive insight from big data for better business decisions

Create new revenue opportunities with already existing data

Key Benefits



Tungsten Key Benefits



Continuous MySQL Operations

- MySQL High Availability and Disaster Recovery solution, which provides redundancy within and across data centers
- Immediate failover for maximum availability and data protection of business-critical MySQL applications
- Reduce MySQL recovery time from hours or days to mere seconds
- Dashboard provides graphical view and management of all globally distributed MySQL clusters

Zero Downtime MySQL

- Site-level and cross-site failover ensures application availability
- Upgrade hardware, software and data without taking applications offline
- MySQL compatibility means seamless migration of your data and applications

Tungsten Key Benefits



Multimaster MySQL

- Multiple geographically-distributed write masters can provide higher availability due to lack of failover between sites
- Lower-latency response times for reads for co-located application servers

Geo-Scale MySQL

- Load-balance MySQL read operations across multiple slaves, locally and globally
- Geo-distributed MySQL clusters bring data close to your application users for faster response times
- Easily add more MySQL clusters as needed for unlimited scaling, both locally or across the globe

Hybrid-Cloud and Multi-Cloud MySQL

- Deploy in the cloud, VM and bare metal environments
- Mix-and-match on-premises, private and public clouds (incl. Amazon AWS, Google Cloud and Microsoft Azure)
- Easy, seamless migration from cloud to cloud to avoid vendor lock-in in any specific cloud provider
- Withstand node, data center, zone or region failures or outages

Tungsten Key Benefits



Intelligent MySQL Proxy

- Provides intelligent traffic routing to a valid MySQL master, locally and globally
- Scale read queries via query inspection and other methods
- Application and active users do not disconnect during MySQL master failover events

Most Advanced MySQL Replication

- Filter and transform your data in-flight
- No more ETL, get real-time data feeds into your analytics
- Replicate directly into popular analytic repositories: AWS RedShift, Cassandra, ClickHouse, Elasticsearch, HDFS, Kafka and Vertica
- Unlimited real-time transactional data transfer to eliminate escalating replication cost of ETL-based alternatives

Tungsten Key Benefits



Cost Savings

- Use the free open-source MySQL for your business-critical needs
- Optimize costs by selecting the most cost-effective cloud environment(s) at any given time
- Eliminate downtime risks and associated cost, also during maintenance [zero downtime maintenance operations]
- Reduce DBA time spent on admin and recovery operations, lowering your costs while increasing reliability.

Full MySQL Support, No Application Changes

- Deploy and Configure MySQL clusters in minutes
- Not 'MySQL-compatible' solution. Use any of your off-the-shelf MySQL, MariaDB and Percona Server versions
- Support for all modern MySQL [5.x through 8.x] and MariaDB [5.x and 10.x] versions and features
- SSL support for all in-flight traffic
- Native MySQL support means easy and complete migration of your data and applications

Tungsten Key Benefits

Last, but not least...

Industry-Best 24/7 MySQL Customer Service

- Highly Qualified 24/7 support. All support team member have 15 or more years of MySQL DBA and Site Reliability Experience
- 24/7 support comes with 1-hour SLA, with response times for urgent requests averaging less than 5 minutes
- MySQL uptime measured in months or years



Recap



With Continuent, you get...

Revenue protection

Revenue upside

Real-time data

Lower TCO

Stellar 24/7 customer support



Next Steps



Sign up for a private demo for your team, setup a POC, email us at sales@continuent.com

Learn more at your own pace

- Training and webinar library at www.continuent.com/videos/
- White papers at www.continuent.com/white-papers/
- Read the documentation at <http://docs.continuent.com/>



For more info...



Eero Teerikorpi

Founder, CEO

eero.teerikorpi@continuent.com

+1 [408] 431-3305

Eric M. Stone

COO

eric.stone@continuent.com

Robert Noyes

VP Sales

robert.noyes@continuent.com

+1 [650] 575-0958

Matthew Lang

Director, Professional Services Americas

matthew.lang@continuent.com

Chris Parker

Director, Professional Services EMEA & APAC

chris.parker@continuent.com