

Designing Linearly Scalable Multi-Site MySQL Applications

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A small Verizon logo is located in the top right corner of the red button.

Micro Sites

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E
Product Launch Support Portal

Home Tablet Mystery Shop Sign-up Tablet Shop Form Priority One Jam Session Sign-up Priority One Feedback

Welcome to Priority One: A Product launch support portal

LEARN

PARTICIPATE

EXECUTE

Site Purpose

The main purpose of this site is to allow area and regional support teams to sign up for, and participate in, manager led training sessions in our company owned stores to drive execution for high priority product launches. See Training Schedule tab for details on where and when you can sign up for a training.

Your Role

As an attendee of the training, your role is to participate, not facilitate, answer questions and capture open issues that require clarification, and complete the feedback form the same day to provide us with open questionnaires and training effectiveness data.

Help Us to Become the Best

After class, you must enter feedback regarding open issues/questions and training effectiveness into the Feedback form.

Recent Posts

Site Purpose

Your Role

Help Us to Become the Best

Recent Comments

Paul Ulrich: The Jam went we tested and found out is the...

Tim Benson: The Maple Grove s...

THE QUEST TO BE THE BEST

HOME HOW TO ROCK VENUE LIFEHOUSE RZEZNIK DIARIES RESULTS CONTACT

Wait, what? Two Bands this year?

ANDS TOGETHER FOR
JOHNNY RZEZNIK!

verizon wireless v7tube

Home Videos Audios Dashboard

Latest Videos

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What is Google Ad...

Added: 1 day ago

Tablet Sales Demo...

Added: 1 day ago

Keeping Alabama C...

Added: 1 day ago

MTN HR Knowledge ...

Added: 1 day ago

Browse Videos

Lemonade Stan...

By: kudavid

Added: 38 days ago

Verizon 4G LT...

By: kudavid

Added: 43 days ago

Our Credo

By: cplabre

Added: 83 days ago

XOOM Google M...

By: skybank

Added: 76 days ago

Motorola XOOM...

By: cplabre

Added: 76 days ago

Verizon 4G LT...

By: kudavid

Added: 43 days ago

What is a SIM...

By: demariz

Added: 212 days ago

Latest News

- Feedback
- Request Upload Access

Video Categories

Headquarters	199 Videos
Midwest Area	294 Videos
Northeast Area	105 Videos
South Area	43 Videos
West Area	78 Videos
Workforce Development	396 Videos

Featured Audios

Popular Media

Popular Videos

4G SIM Card Modem Video	43,361 Views
Verizon 4G LTE - Flight...	32,384 Views
Straight Talk from the...	21,497 Views
Lemonade Stand - SMB TV...	21,291 Views
Presidents Cabinet 2011...	19,814 Views

Popular Audios

Right Fit Song Contest...	2,343 Plays
Jim Rome Radio Show...	1,588 Plays
NPS Verbatim audio	1,434 Plays
Jigsaw Contacts in SFA-CM	459 Plays
Top 3 Questions to ask...	419 Plays

Popular Tags

Popular Tags: Information, Security, Compliance, Google, Google Apps, Google Apps for Business, SMB, Tablet, Android RockStar VI - RockStar Diaries ANDE ANDES Assess, troubleshoot troubleshooting Using LTE - OnStar Example Market Messa - RBV Show-i

gets real. No more rallying for registration—just making the customer number one, and maybe

out the new Venue Page, and what your appetite for

Web Portal

News

Shared
Services

Video

Audio

Live
Blogging

Web Casts

Org Chart

Resources

Documents

Email

Schedule

Training

~500,000 Front page loads/day. ~90 queries per front page load

45 MILLION queries per day

For the front page only.

Ohio, New York, Pennsylvania, and Rhode Island



Pros

1. The Price
2. Quality
3. Ease of Deployment
4. Large amount of talent
5. Tons of resources

Cons

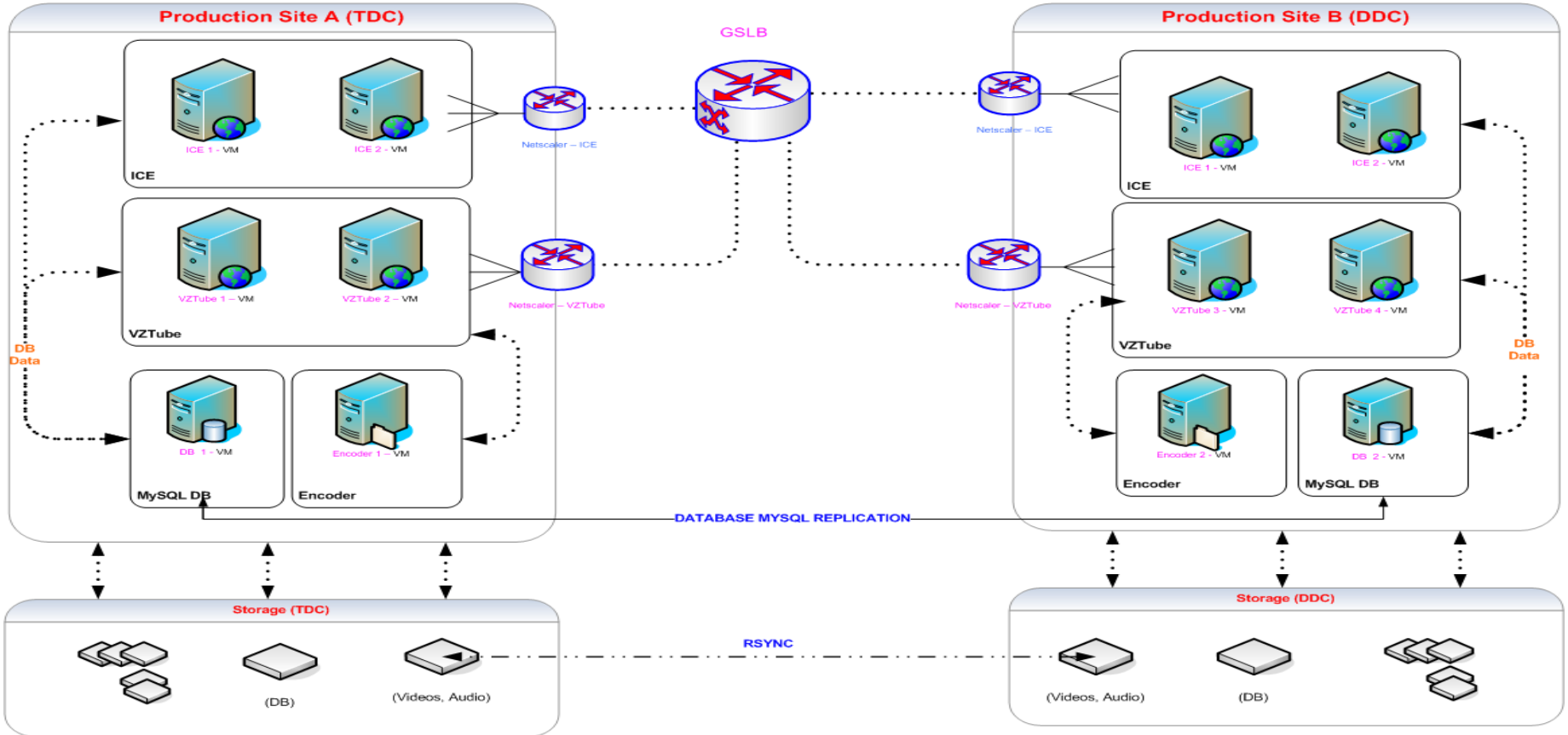
1. No Master/Master database replication
2. Difficult to convince upper management.

- Design a scalable & highly available platform
- Minimize downtime and lower MTTR in catastrophes
- Optimize DB to handle exceptional spikes during user traffic
- Eliminate expensive network calls
- Segregate CPU intensive queries
- Migrate from MyISAM to Innodb
- Upgrade Mysql
- Re design Memcache and deep dive into Drupal code
- Eliminate spikes in the DB

- Key Metrics – High Scalability & High Availability
- Multi Site Standard for all Tier 1 apps – External & Internal
- Multiple Technology platforms Multi Sited base on Business needs
- Oracle, Sun Directory Server, Mysql
- Five 9's SLA
- Ability to do rolling deploys
- Seamless Failovers
- Zero Data Loss
- Ability to grow Vertically within a Data Center and Horizontally (geographically)

- Geographically located websites on East Coast & West Coast
- Bi Directional master-master replication of both sites
- Zero Data Loss
- Odd & Even offsets
- Conflict resolution – Limit updates to one site
- Segregation of cpu Intensive reporting queries – No user impact
- Seamless failovers – Single VIP for both sites
- Automated promotion of read only DB to write
- Automated failover of application servers
- Redundant app servers

ICE Architecture



- Achieved five 9's SLA goal
- Mysql upgrade to all environments
- Migration from MyISAM to Innodb
- Table row growth trending and alarming
- 24X7 Replication Monitoring and alarming
- Implementation of new MaatKit utilities – Innotop, Mk-kill, mk-query-digest etc
- Paging for critical alert
- Implementation of Xtrabackup

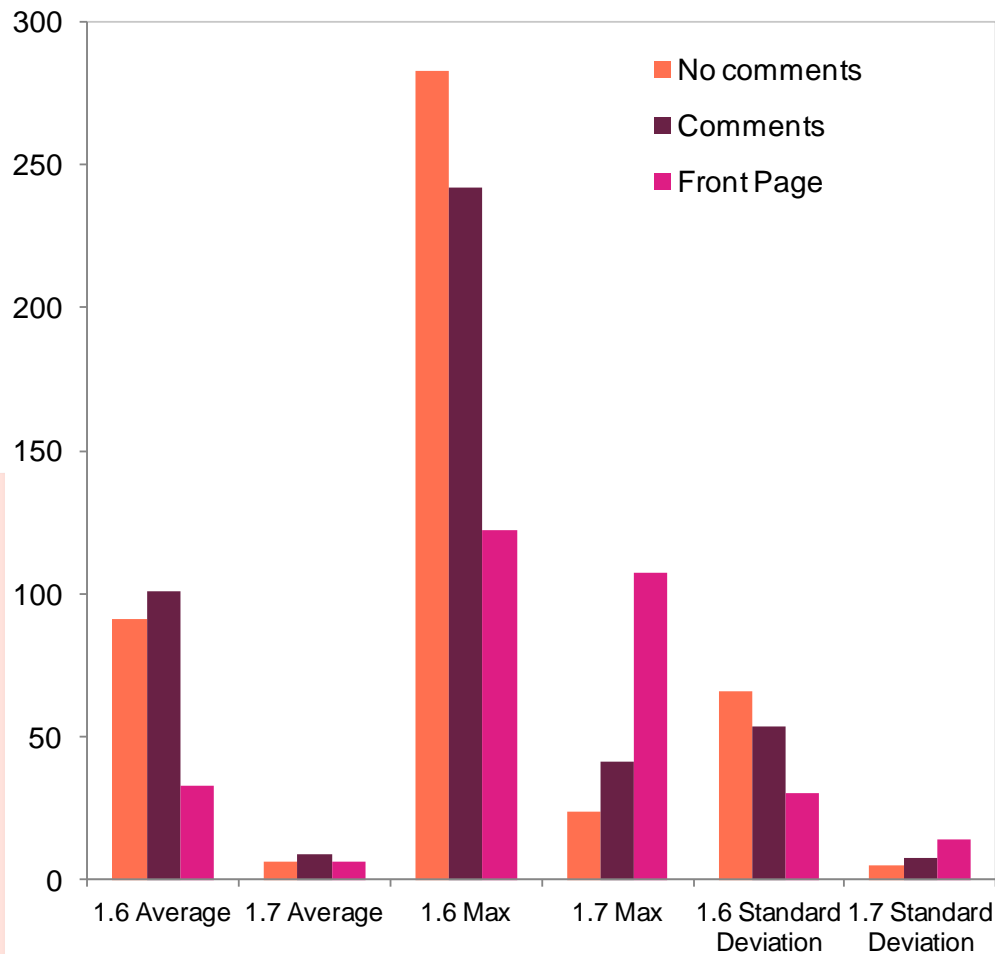
Overview: Performance & Business Benefits

Performance Benefits

- No spikes observed post MSA implementation and performance fixes
- Major performance improvements in most called queries
- 1489% improvement in user calls to the DB
- Front page response improvement even after adding additional functionalities
- Ability to perform read-write transactions on both data centers

Business Milestones

- Achieved five 9's SLA
- Website performed exceptionally well during iPhone launch
- Live webcasts and blogging during iPhone launch
- Live webcast during Iphone announcement to the press
- Live webcast from CES





Thank You

