

# START, RUN & GROW with Sun Software

APAC Extended Horizons

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## Why and When: Adoption of MySQL

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## MySQL Architecture from a Business Perspective

A translation of what your technical people deal with...

- Application Architecture
- Hardware Selection & Network Infrastructure
- User Interface
- Time to Market - Rapid Development
- Infrastructure Management - Scaling, Monitoring
- Responsiveness - Web Applications
- MySQL Specifics

## MySQL Specifics

- Connection and Thread Management
- Storage Engines
- Replication
- MySQL Cluster
- SQL Extensions & Deviations

## MySQL Connections & Threads

- Single process
- Multi-Threaded
- Thread per Connection
- Very fast sign-on

## MySQL Storage Engines

Different back-ends for different needs

- OLTP
- Warehousing
- Logging
- Archiving
- Remote tables
- Web services
- ...
- Granularity: per table

## MySQL Scale-out: Replication

- Asynchronous
- Uni-directional
- Statement based
- Used for scaling **reads**, not writes

## MySQL Cluster

- In-memory
- Shared nothing
- Access via network

## MySQL Scaling Techniques

- Move tasks outward: "The Network is the Computer"
  - > Logic from database to application server
  - > Tasks from application server to client side
- Aggressive caching strategy
  - > Server tuning: more memory caching, reduce disk I/O
  - > MySQL query cache
  - > Memcached
  - > Reverse proxy servers
  - > Reporting only from slaves, with specialised tuning
- Commodity hardware - more of it
- Disk: more spindles (not SAN)

## Frameworks & Rapid Development

- Hibernate, anyone?
  - > That's fine! But...
- Prepare for MySQL Replication infrastructure
- MySQL Server monitoring and tuning expertise

## Database Portability

- Why: business/strategy
- But any migration is painful
- Do you ever, really, move databases?
  - > Database specific extensions used?
  - > Existing infrastructure not geared for new database
  - > Staff expertise with quirks of both databases

## MySQL Cost Distribution

- Advice during architecture phase
- Skills acquisition
- Time to market (development)
- Deployment assistance
- DBA - only one for many MySQL instances
  - > or remote DBA service
- Monitoring
- Tuning

## Summary & Discussion

## Thank you! Questions?

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