BigDB.com

Agenda

➢ Database Market

➢ Its Broken

➢ BigDB.com Could Fix It

➢ Call to Action

Database Market

- ➢ Huge - $50B minimum

    - ▶ Database software

    - ▶ Database hardware

    - ▶ Database administrators

    - ▶ Policies, procedures, administration

- ➢ Money comes from the middle

    - ▶ All those mid sized CSFB applications

    - ▶ Some packaged applications and some not

    - ▶ Not from eBay/Google or Mom/Pop

Veeva

Its Broken

- ➤ What they want…
  - ▶ Store my data somewhere secure and reliable
  - ▶ Let me query it with speed
  - ▶ Scale with me

- ➤ What they get…
  - ▶ Buy some hardware
  - ▶ Buy some software
  - ▶ Get a database administrator
  - ▶ Figure out scale, backup, security, DR
  - ▶ Tune, stir and repeat

Veeva

BigDB.com

- Cloud based database service

- They get
  - Robust SQL Interface with transaction control
  - Good Utilities (Load, Unload, Database Copy)
  - High performance without tweaking
  - Backup, Restore and DR
  - Scale up

- They don't get
  - Indexes
  - Knobs
  - Bad utilities (Reorg, Runstats, Backup)
  - Amazon SimpleDB

Veeva

Client Bindings

- Over HTTPS with compression

- Multiple flavors

  - JDBC interface for SQL

  - "Find" interface for searchable text columns

  - Put/Get interface for name/value

- SOAP and REST not efficient enough

  - XML parsing/data format provides no value

  - Lack of client processing causes fragmentation

Good Utilities

➤ Utilities are half the value of a database

   ▶ Load

   ▶ Unload

   ▶ Database copy

   ▶ All at high performance levels

➤ Transmit data over FTP

   ▶ That's how it works today

   ▶ Works just fine

Veeva

Good Performance Without Tweaking

➢ This index/optimizer thing is a problem

  ▶ You can never have enough

  ▶ Cardinalities not predictable

  ▶ Execution time not **predictable**

➢ Are there "indexes" in BigDB.com

  ▶ Every column behaves like it is indexed

Veeva

Latency and Location

➢ RDBMS latency today

- ▶ Put your RDBMS in your datacenter
- ▶ Put your application in the same datacenter
- ▶ Latency ~ 1ms

➢ BigDB

- ▶ If BigDB is in Santa Clara
- ▶ Better put your application near Santa Clara!
- ▶ Latency ~ 2ms

➢ Location matters

- ▶ A lot

BigDB.com Brings Innovation

- New capabilities

  ▶ Data available on the internet

  ▶ Secure and easy ways to share it

- New applications

  ▶ Specialized application servers?

  ▶ Distributed multi-company applications?

  ▶ Selling data access?

Veeva

How to Build BigDB.com?

➢ I don't know

- ► 10 thousand cores

- ► 10 million tables

- ► 10 Terabytes/second bandwidth

- ► 10 Petabytes data

➢ People in this audience can figure it out

- ► Or else others will

Veeva