

MAA Best Practices at Bank of America

Oracle Open World
9/21/2010

Vinod Haval
Vice President
Global Database
Product Manager

Bank of America 

Who Doesn't know BofA

- **Largest bank holding company in the USA and second largest by market capitalization.**
- **Serves Clients in more than 150 countries**
- **Relationship with 99% of the US Fortune 500 companies**
- **Relationship with 83% of the Fortune Global 500 companies**
- **World's largest Wealth Manager and major player in the Investment Banking Industry.**
- **FDIC Member and component of both S&P 500 Index and Dow Jones Industrial Average.**

About Me..



- **Wonderful 13 years in IT Industry primarily as Oracle DBA**
- **Working for Bank of America as VP of Product Management**
- **Responsible for Database Product Management (Oracle)**
- **Frequent Speaker at various conferences (OOW, IOUG and so on)**
- **Represents BofA on various Oracle CABs**
- **Board of Director on IOUG Exadata SIG**
- **Member of IOUG Support Council**

Oracle Footprint

- **1000's of Oracle Databases**
- **Oracle Database Enterprise Edition, Enterprise Manager Grid Control, E-Business Suite, Oracle CRM, Hyperion, Fusion Middleware**
- **Oracle Database 11g Release 2**
 - **The bank's core RDBMS version as of July 1**
 - **11gR2 upgrade ramping now, 10% of databases upgraded**

Oracle MAA Fully Deployed

- Oracle RAC
- ASM
- Data Guard
- GoldenGate
- Streams
- Flashback Database
- Recovery Manager
- Fast Recovery Area
- Grid Control

Seven Application Tiers

- **Tiers 0 and 1**
 - Full MAA configuration
- **Tiers 2 through 6**
 - Single instance MAA configurations (non-RAC)
- **Business continuity implemented for all tiers**
 - Data Guard is implemented on 99% of all production databases
 - GoldenGate is used for multi-master configurations
 - e.g. one critical in-house application with 3-way replication between continents

Oracle Database 11g Release 2 Plans

- **RAC One Node**
 - Consolidate multiple single-instance databases on a single cluster
 - Utility computing that reduces cost and enhances service level
 - Exadata Database Machine is proving to be the ideal platform
 - Four Database Machines already in-house
- **Active Data Guard**
 - Increase return on investment in DR systems
- **GoldenGate**
 - For Tier 0 and 1 applications suited to multi-master deployment
- **Oracle Advanced Compression**
 - Storage savings

Conclusion

- **It would be difficult for the Bank of America to meet its availability and data protection requirements without the Oracle Maximum Availability Architecture.**