



Lessons from Oracle

Jagdeep Sahni

Sr. Mktg Mgr., NetApp Global Services

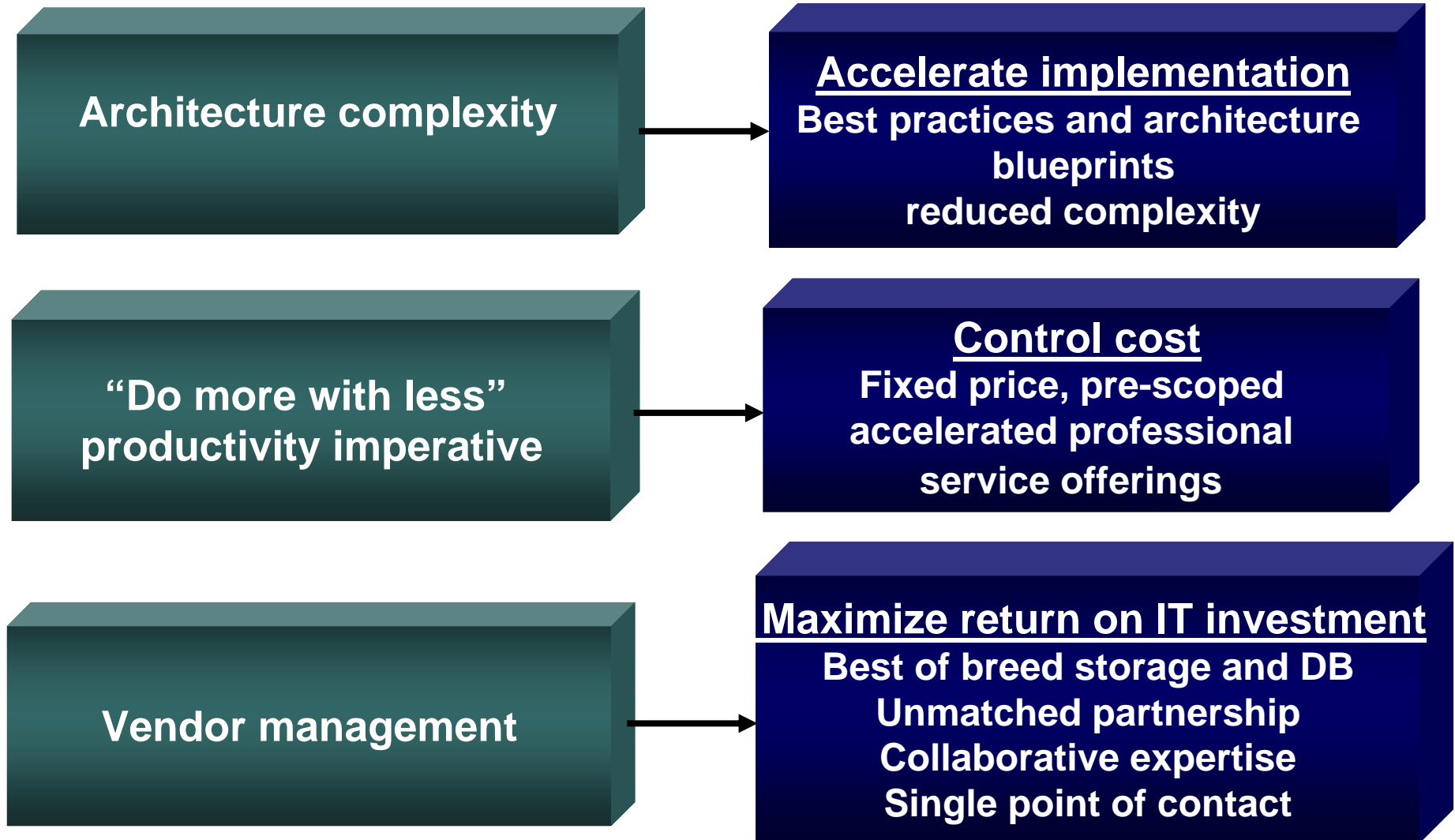
Fred J. Gomez

Specialized Deployment Team, NGS
Field Operations - Americas

Agenda

- ▶ Customer Challenges
- ▶ NetApp Services for Oracle
- ▶ NetApp Best Practices for Oracle
- ▶ Case Studies
- ▶ Further Sources of Information

Customer Challenges *Drive Service Solutions*



NetApp Services for Oracle



Pre Deployment

- Assessment services
- Architecture services
- Capacity planning

Deployment

- Oracle on NetApp Accelerator
- Disaster recovery
- High availability

Post Deployment

- Performance tuning
- Data migration
- Custom services

Delivering value together for our customers while helping them lower cost and reduce complexity

NetApp Services for Oracle

Reducing Complexity and Delivering Success

Accelerator Services

Fixed-cost & scope
Lowering risk

Custom Services

Wide range of capabilities
Delivering expertise

Portfolio of Services

- ✓ High availability
- ✓ Disaster recovery
- ✓ Capacity/performance tuning
- ✓ NAS/SAN



How to Quote

Always engage PS early in sales cycle for discovery and pre-sales support

- ▶ **NAS/SAN Accelerator - PS-ORCL-A-7USORCL-ACCEL-DB-ON-NetApp \$28,500**
- ▶ **Real Application Clusters Implementation - PS-ORCL-HA-10US ORCL-HA-9iRAC-ACCEL-ON-NetApp - \$35,000**
- ▶ **Disaster Recovery Implementation - PS-ORCL-DR-7INTLORCL-Dsas-Rcov-ACCEL-ON-NetApp \$31,500**
- ▶ **Custom Consulting – Assessment, Tuning, Migration etc. – Contact your local PS Manger for scoping**

NetApp Best Practices for Oracle

These best practices were developed through the interaction of technical personnel from NetApp, Oracle, and joint customer sites, and cover:

1. NetApp system configuration
2. Operating-specific recommendations
3. Database layout
4. Network recommendations
5. And much more...

Case Study

OC Tanner: Salt Lake City, Utah

Customer situation

- ▶ Two terabyte SAP database migrated from IBM Shark storage system to NetApp Filer

NetApp-Oracle solution

- ▶ Two-Week Data Migration Accelerator
- ▶ NFS Protocol
- ▶ Target Filer:
 - 2 x F820 – 4 DS-14 shelves each
 - Multipath fiber channel I/O
 - 4 x GbE NIC (1 single vif of 2 cards)
 - Data ONTAP 6.2R2

Customer benefits

- ▶ Reduced backup time from 14 hours to less than one minute!
- ▶ Migration completed in less than two weeks
- ▶ Knowledge transfer about Oracle and NetApp products

Case Study

Universal Tax Services: Rome, Georgia

Customer situation

- ▶ 9i RAC upgrade to 10g RAC
- ▶ Moved from SAN to NAS

NetApp-Oracle solution

- ▶ Two-Week 9iRAC Accelerator
- ▶ Hewlett Packard Servers
- ▶ Microsoft Operating System to LINUX OS
- ▶ Proof of Concept with iSCSI and Fiber Channel
- ▶ Chose NAS for simplicity after all options were tested

Customer benefits

- ▶ 9i RAC upgrade to 10g RAC
- ▶ Moved from SAN to NAS
- ▶ Increased confidence level that project would be completed on time

Case Study

U of Texas Medical Center: Galveston, Texas

Customer situation

- ▶ PeopleSoft migration from SunFire 4900 Server Disk Storage to NetApp Filer

NetApp-Oracle solution

- ▶ Five-Day Data Migration Accelerator
- ▶ One F960 configured
 - 56 72GB disk drives 4 TB raw space
 - Data ONTAP 6.1.2R3
 - Memory Size: 6 MB
 - 2 Gigabit Ethernet interfaces
- ▶ NFS Protocol
- ▶ SnapShot / SnapRestore for Backup and Recovery

Customer benefits

- ▶ Accelerated all back up and restore processes
- ▶ Acquired more disk space to accommodate future growth

Case Study

PPM Energy: Portland, Oregon

Customer situation

- ▶ New 9i RAC installation

NetApp-Oracle solution

- ▶ Two-Week 9i RAC Accelerator
- ▶ FAS940C Filer
- ▶ Four databases to support production and on development database
- ▶ RAC was chosen for high availability and scalability
- ▶ Two-node cluster
- ▶ Dell server
- ▶ NFS protocol

Customer benefits

- ▶ Faster deployment due to Rack Accelerator engagement -- up and running within two weeks
- ▶ Comment from DBA about snapshots “WOW!”

Case Study

Consol Energy: Pittsburgh, Pennsylvania

Customer situation

- ▶ Data migration from EMC to NetApp Filer
- ▶ SAN protocol

NetApp-Oracle solution

- ▶ Two-Week Basic Accelerator
- ▶ Hewlett Packard AIX Operating System
- ▶ Single instance database to support a 1TB SAP database
- ▶ Target Filer:
 - 2 x F820 – 4 DS-14 shelves each
 - Multipath fiberchannel I/O
 - 4 x GbE NIC (1 single vif of 2 cards)
- ▶ Data ONTAP 6.2R2

Customer benefits

- ▶ Enabled easier maintenance of storage facilities
- ▶ Provided greater growth capabilities
- ▶ Delivered high availability

Case Study

Edmunds.com: Santa Monica, California

Customer situation

- ▶ Multiple 9i and 10g RAC databases to support new mission-critical application

NetApp-Oracle solution

- ▶ Two-Week Basic Accelerator
- ▶ SnapShot and SnapRestore Backup Solution

Customer benefits

- ▶ SnapShot and SnapRestore are now essential to support their backup and recovery strategies
- ▶ Dramatically decreased time for backups

Oracle Corporation: Austin Data Center

Data Center Stats:

- Oracle is the largest NetApp installation on earth!
 - 2.5 Petabytes (2,500 Terabytes) of disk storage
 - More than 9,500 operational servers
- 355 new servers on average added every month
- Largest Dell/Linux installation on earth
- Hundreds of mission-critical applications are hosted on the premises

Contact Information

NetApp:

- Jagdeep Sahni, Sr. Marketing Manager, NGS
Jagdeep.sahni@netapp.com
408-822-3229

Oracle:

- Fred J. Gomez, Specialized Deployment Team,
NGS Field Operations, Americas
fred.gomez@oracle.com
206-954-8049

More Information

▶ Internal website – NetApp Services for Oracle

- http://cs-web.netapp.com/service_mktg/consultingedge/database/index.html

1 TEAM KICKOFF FY06



NetApp Services for Oracle

NAS / SAN Accelerator Service

- ▶ **Planning and Analysis**
 - Determine and recommend architecture for optimization
 - Analyze specific needs such as filer configuration, back up schedules, Number of db instances and data migration requirements
- ▶ **Installation and Configuration**
 - Configure NetApp filer for transition of the db instance
 - Install Oracle software on the NetApp filer, if required
 - Clone the database instance on the Netapp filer and create mirroring scripts for database
- ▶ **Documentation and Transition**
 - Joint testing and review of solution with IT staff to ensure success
 - Mentoring and capture of best practices
 - Deliver full engagement summary
- ▶ **Fixed price and scope**
 - 7 and 10 day options

NetApp Services for Oracle

Disaster Recovery Accelerator Service

- ▶ **Analysis and Diagnosis of IT environment**
 - Review and document filer configuration, backup schedule, number/type/size of Oracle instances and network and storage layout architectures
 - Review and assess disaster recovery requirements
- ▶ **Installation and Configuration**
 - Configure NetApp filer for transition of the database instance
 - Install Oracle software on the NetApp filer
 - Configure and implement the Oracle standby database (DataGuard solution) with the NetApp SnapMirror solution
 - Perform a cold backup of the primary database
- ▶ **Documentation and Transitioning to NetApp Global Support**
 - Provide best practices and recommendations for database or application
 - Develop documentation of findings and create an engagement summary
- ▶ **Fixed price and scope**
 - 7 and 10 day options

NetApp Services for Oracle

High Availability Accelerator Service

▶ **Analysis and Diagnosis of IT environment**

- Analyze specific - filer configuration, backup schedule, number/type/size of Oracle instances
- Review and assess Oracle on NetApp high availability solution architecture
- Identify and optimized design to ensure scalability and availability of Oracle RAC

▶ **Installation and Configuration**

- Configure NetApp filer for transition of the database instance
- Install Oracle software (DBand RAC) on the NetApp filer
- Backup the primary database in preparation for RAC
- Provide a database backup and recovery strategy and develop scripts using NetApp Snampshot and SnapResotre functionality

▶ **Documentation and Transitioning to NetApp Global Support**

- Generate documentation and best practices and engagement summary
- Mentor and transition over to client

▶ **Fixed Price and Scope**

- 7 and 10 day options

NetApp Services for Oracle

Performance Tuning – Custom Service

- ▶ Analysis and Diagnosis of IT environment
 - Database application code, schema and structure
 - Database tuning such as index creation, table reorganization, data partitioning
- ▶ Recommendations and Implementations
 - NFS client side tuning on OS recommendations
 - Filer disk layout and configuration recommendations
 - Oracle instance parameters, database schema structure, I/O and memory tuning
- ▶ Capture and share finding
 - Develop best practice documentation and engagement summary
 - Mentoring and knowledge transfer