

DB Consolidation and RAC

Accountable
INTEGRITY
Independent
Quality
Partner
Trusted
Reliable
enterpriseIT
Flexible
VALUE
K.I.S.S. Innovator
Leader
Deliver
Business Aligned

Agenda

- ✓ Definitions – Server verses Database consolidation
- ✓ Why consolidate?
- ✓ Consolidation challenges
- ✓ What DB Features and DB Options assist consolidation
- ✓ A practical phased approach
- ✓ GRID Environment
- ✓ RAC and Consolidation
- ✓ Q&A

Consolidation Definitions

- ✓ Traditional – Server consolidation
 - ✓ Multiple databases running on a single host
 - ✓ Individual memory allocations, oracle software, disk
- ✓ Database consolidation
 - ✓ Multiple applications running inside fewer DB's
 - ✓ Shared everything





Why Consolidate?

- ✓ Reduce cost – space, power, cooling, administration (less env's to manage)
- ✓ Improved utilisation – less CPUs
- ✓ No dedicated database servers to an application
- ✓ Standardisation
- ✓ Rapid deployment / fast provisioning



Consolidation Challenges?

- ✓ Potential for increase in complexity, depending on apps and size.
- ✓ App vendor support / Many apps now generic so little features used.
- ✓ App recommended init parameters
- ✓ Business understanding / acceptance of process change and any risks.
- ✓ Security model critical – no public synonyms, no schema access for apps
- ✓ Backup and recovery – ability for PIT tablespace recovery

DB Features and Options

- ✓ Common management tools – GRID Control, diag and tuning
- ✓ ASM – no arguments
- ✓ Edition Based Redefinition (EBR) – note table restrictions
- ✓ Oracle Total Recall
- ✓ Real Application Testing (RAT)
- ✓ Advanced Compression
- ✓ Don't forget partitioning





A practical phased approach

- ✓ Gain business agreement to consolidate - critical
- ✓ If required standardisation 1st step – OS and versions (TCO reduction)
- ✓ Check schemas for common object names
- ✓ Don't target 100% consolidation target
- ✓ Start with non-critical environments
- ✓ Complex applications may well be best left as own database
- ✓ Deploy GRID Control – Diag and tuning minimum



GRID Environment

- ✓ Each application has:
 - ✓ Own schema(s)
 - ✓ Tablespaces
 - ✓ Temp space
 - ✓ Service (KISS)
- ✓ Consume resources via
 - ✓ Profile limit
 - ✓ Resource Plan

RAC and Consolidation

- ✓ If HA required, then a must.
- ✓ Standard Edition – Why not RAC!?
- ✓ Scalability
- ✓ Target GRID Infrastructure with 11gR2 – DB's 10gR2, 11gR1, 11gR2
- ✓ GRID control and packs – improved management and visibility
- ✓ Consistent and Uniform Deployment – Design once, deploy many
- ✓ TCO - Reduction in hardware – increased utilisation through resource pooling
- ✓ Rolling patches



RAC and Consolidation

- ✓ All storage available to all databases / instances
- ✓ Potential hardware maintenance savings
- ✓ Load balancing
- ✓ ASM Clustered File System (ACFS)
- ✓ Move away from specific database parameters – auto management

Q & A

Thanks for your time!

