



*Easy RAC - Deployment through  
Automation*

Delivered by:  
Matthew Zito, Chief Scientist

156 5th Avenue  
Penthouse  
New York, NY 10010  
P: 646.452.4100  
[www.gridapp.com](http://www.gridapp.com)



[response@gridapp.com](mailto:response@gridapp.com)

# GridApp Welcomes You

- Thank you for attending
- Our presentation will last approximately 30 minutes
  - Topic: Easy RAC - Deployment through Automation
  - Speaker: Matthew Zito, GridApp Chief Scientist
- Stay tuned for the companion white paper
- [response@gridapp.com](mailto:response@gridapp.com)

# About Matthew Zito

- Chief Scientist, GridApp Systems
- Formerly of EMC and Register.com
- Expert in using centralized management and automation to run large production applications

# Today's Agenda

- RAC Fundamentals
- RAC Challenges
- Why RAC now?
- 11g RAC new features
- Building the next generation database infrastructure with GridApp
- Key customer examples
- Q&A

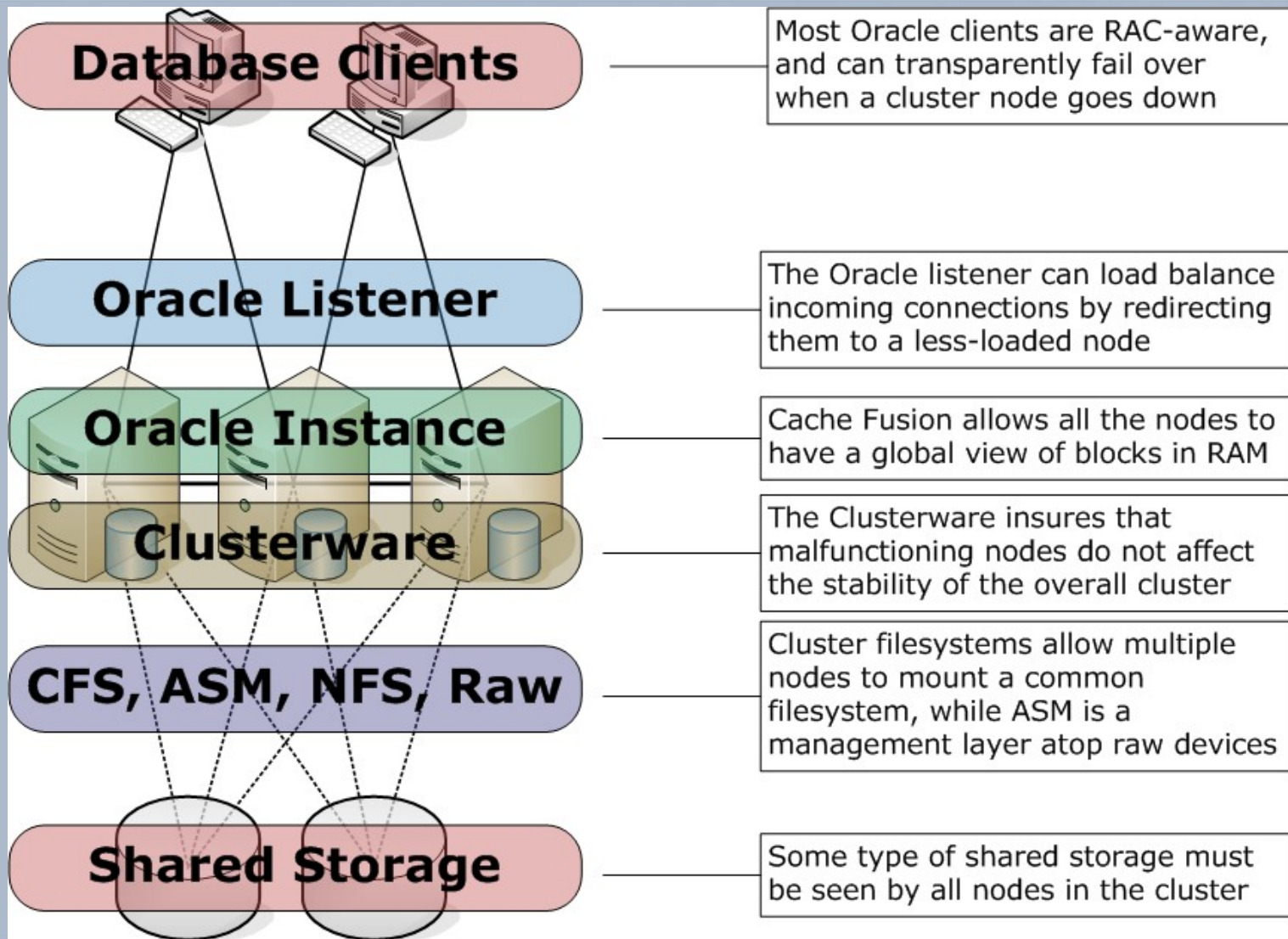
# RAC Fundamentals - Clustering

- Shared-nothing – Each cluster node has no common resource with any other node
- Shared-everything – Each cluster node shares a universal pool of common resources
- Shared-something – Each cluster node shares some resources, but not others
- Active-Passive – Only one cluster node at a time is providing any given service

# Oracle RAC

- Oracle RAC is a “shared-something” cluster
- RAC nodes share:
  - Application state awareness (Cache Fusion)
  - A single set of on-disk data (ASM, OCFS, etc.)
- RAC provides
  - Enhanced reliability
  - Enhanced scalability
  - Reduced processing cost

# What RAC Looks Like



# RAC Objections & Challenges

- RAC is too complicated
  - Adds moving parts
  - Applications can behave differently under RAC
- RAC is too expensive
  - Licenses cost extra
  - Requires EE for all but small deployments
- RAC requires additional training and education
  - Fewer DBAs know RAC
  - Requires DBAs to learn storage, networking

# Why RAC now?

- Reduce Cost
  - Buy only what you need today
  - Scale incrementally & online
  - Upgrade incrementally
- Improve uptime
  - Online/rolling patching
  - No SPOF
  - Rolling maintenance
- Improve performance
  - Moore's law works for you
  - Incremental upgrades

# Oracle 11g RAC New Features

- Optimized Cache Fusion protocols
  - Different protocols for different types of traffic – locks vs. block transfers
  - Improved performance
  - Improved scalability
- Online Upgrades
  - Requires RAC + standby database
  - Automatically fails over to standby at correct moments

# GridApp Systems

- Leader in Oracle RAC management and database automation
- Two products:
  - GridApp D2500 – turnkey database appliance – hardware, Oracle, GridApp Clarity management software
  - GridApp Clarity – easy RAC automation on your hardware
- Headquartered in NYC

# GridApp D2500

- Hardware - IBM BladeCenter - up to 256 cores, 200+ GB of RAM in 7U
- Operating System - Red Hat Enterprise Linux
- Database - Oracle 10gR2 RAC
- Management Software - GridApp Clarity™

The D2500 is an all-in-one solution for your database environment

# GridApp Clarity™

- “Click and deploy” Oracle RAC
  - Average time to deploy RAC manually - 1-2 weeks
  - Average time to deploy RAC with Clarity - **45 minutes**
- Little to no RAC expertise needed
  - Software understands RAC out of the box
  - Allows DBA to focus on application tuning and testing
- Automated patching for Oracle RAC
  - Deploy patches in minutes
  - Centralized patch compliance reporting
- Scale RAC online and in minutes

# Customer Case Study

- High-throughput transaction processing database
- Successfully scales from 4 to 10 nodes on-demand to accommodate load
- Three sites - production, development, disaster recovery

**Cost savings - >\$1m**

# Summary

- Oracle RAC is the next step in database infrastructure
- GridApp's software and appliance are the easiest path to a simple, stable RAC rollout
- Oracle 11g offers new features, but additional complexity for RAC environments

# Schedule a Demo

- Email [sales@gridapp.com](mailto:sales@gridapp.com)
- **SUBJECT LINE = Demo**

# The Companion White Paper: D2500 Turnkey Database Grid

- Email [response@gridapp.com](mailto:response@gridapp.com)
- **SUBJECT LINE** = White Paper

# Q&A

With Matthew Zito, Chief Scientist



Thank You!