



The Sherwin-Williams Company

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Who We Are

- Largest Producer of Paint & Coatings in US, among Top 3 worldwide
- Founded in 1866, Cleveland, OH
- 2016 is 150th Anniversary
- 2012 - \$9.5 billion in sales
- Business in 120+ Countries
- 34,000+ employees
- 4,000+ Company Owned Stores
- 90+ Manufacturing Facilities Globally



Leading Sherwin-Williams Brands



PRATT & LAMBERT
PAINTS





SW EBS Footprint

Three Regional EBS Application Environments

US/Canada (R12.1.3)

HR, Benefits (Global Employees Management Systems)
Financials (AP, GL, FA) ; Property Management; EAM

Latin America (R12.1.3)

Financials (AP, AR, GL, FA) ; Property Management; EAM
Supply Chain & Manufacturing (OM, OPM, WMS, ASCP); Demantra

Asia Pacific (R12.1.3)

Financials (AP, AR, GL, FA)
Supply Chain & Manufacturing (OM, OPM, WMS, ASCP)



SW Adoption of Engineered Systems

Where we started

Challenges (US/Canada EBS Env.)-

- Complexity of using Veritas Clusterware with Solaris
- Concurrent Tier on DB Servers
- Long cloning time (24 hours) & backup time (12 hours)
- Poor performance of several business processes
- Apps Upgrade to R12 very slow on old hardware



SW Adoption of Engineered Systems

Where we started

Objective – Replace Hardware along with Apps Upgrade from 11i to R12

- POV of Exadata at OSC with SW actual EBS data & configuration
- Evaluated Sun M5000, Dell R910 & Exadata X2-2 in Q4 2010 for our US/Canada EBS Environment

Key Decision Points

- Speed to market
 - Performance
 - Stability and Manageability with Engineered Architecture
 - Single vendor for support
- Acquired Two Exadata machines (X2-2 ¼ & X2-2 ½) in May 2011



Benefits

- Faster delivery to meet business needs
 - Fully configured clustered hardware in 2 weeks
- Direct performance benefit in R12 upgrade cycle; Upgrade time reduced from ~ 200 hours (old H/W) to 65 hours (including Database platform migration to Exadata)
- Managed the Application upgrade to R12 in 36 hours, by handling Database Platform migration ahead of schedule



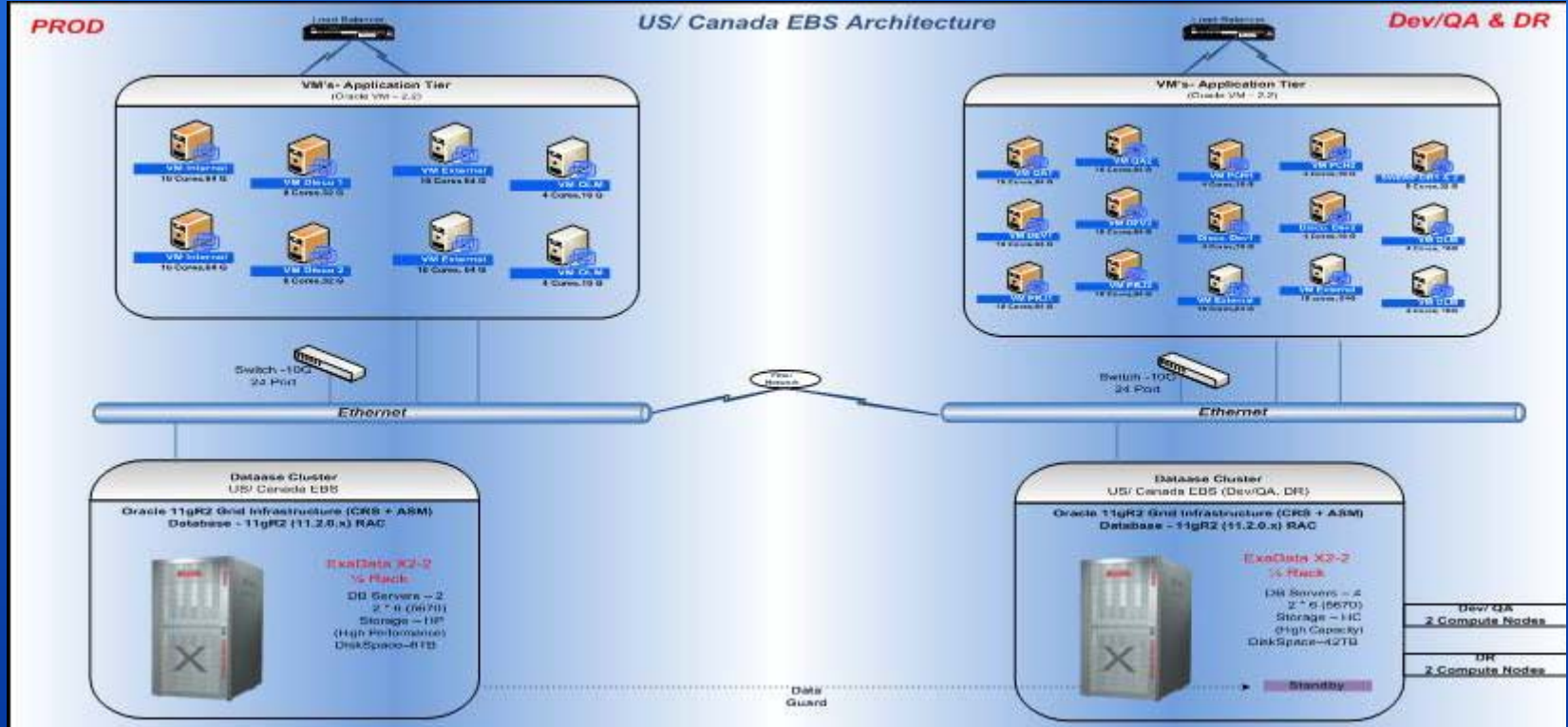
Benefits (continued)

- Key business processes performance increased significantly
 - Depreciation of 1M+ assets
 - Before: 20-24 hours execution time serially
 - After: 4-5 hours execution time in parallel
- Direct benefit to the business with significant improvements in the month-end processes
- Reduced backup and clones dramatically
 - Before: ~12 hours to perform backup and restore of 1 TB DB
 - After: <60 minutes to perform backup and restore of 2 TB DB
 - EBS Cloning time reduced to 6 hours from 24 hours



Architecture

Highly Available based on MAA Guidelines





SW Second Exadata Implementation

Objective – Add capacity to Latin America EBS environment for EBS implementation in Argentina and Brazil. And add capacity for OBIEE environment.

Additional Benefits –

- Comprehensive Patching – Single application testing cycle
- Significant performance improvements in Demantra & ASCP planning jobs
 - Demantra weekend forecasting process time reduced to < 6 hours from 33 hours
- Performance improvement in various manufacturing & shipping processes
- ASR - Created SR automatically & SW being notified for HW replacement
- Reallocate resources to higher value-add activities



Performance Improvements for OBIEE –

- ETL - Avg. 2X - 4X improvements
- Reporting - Avg. 4X - 10X improvements

Consolidation Platform for Stores Custom Application

- Acquired Two Exadata machines (X2-2 ½ rack) in May 2012
- Database consolidated for key stores POS & AR applications
- Other Database consolidation is underway

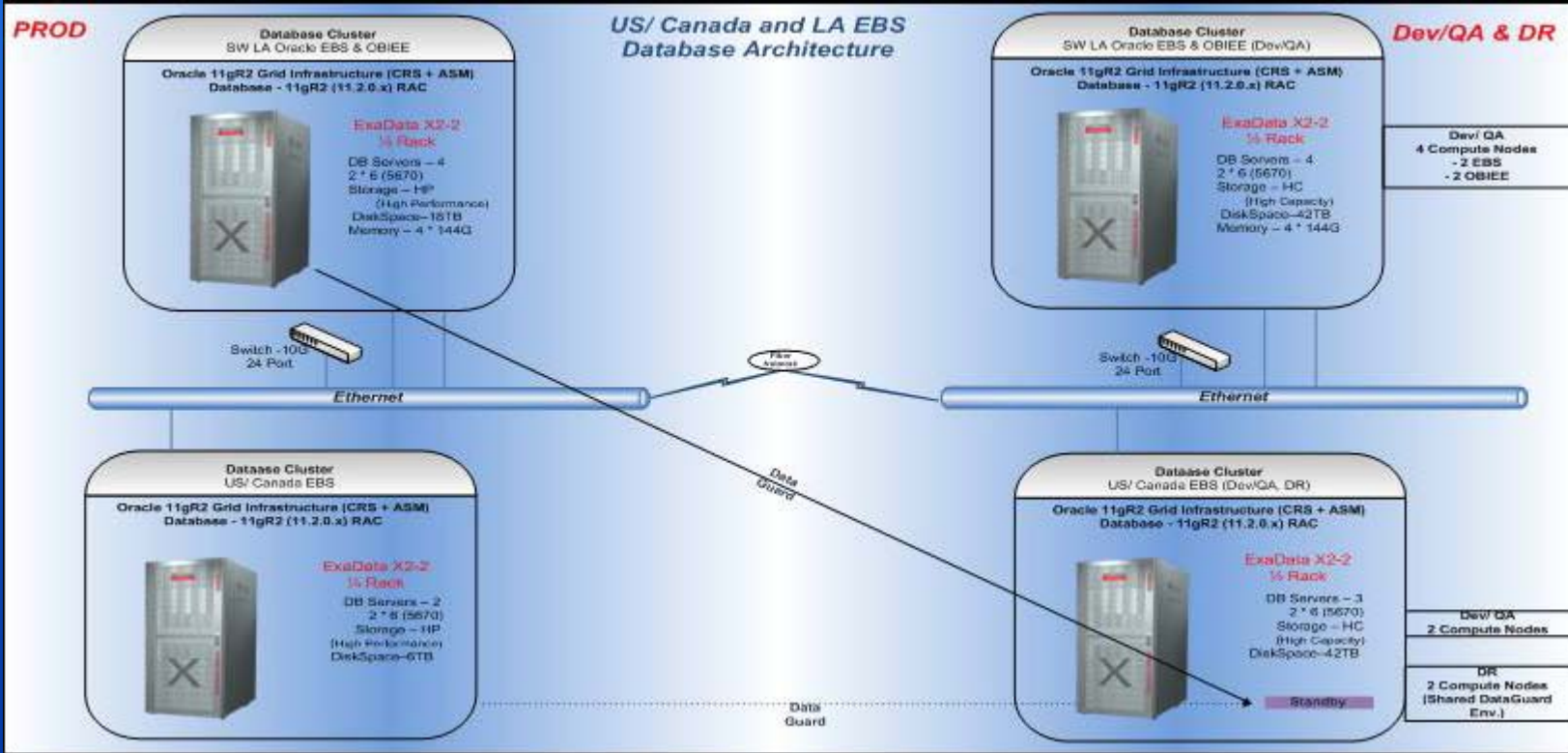
Current Exadata Footprint

- One X2-2 ¼ Rack (HP – High Performance HDD)
- Two X2-2 ½ Rack (HP)
- Three X2-2 ½ Rack (HC – High Capacity HDD)



Architecture

Shared DR





Lessons Learned

- Need to develop strategy for managing Exadata between DBA, Unix, Network & Storage team. Who has root?
- 1/4 rack, too much space lost for fault tolerance
- Do not use Exadata Admin subnet for AppsTier, SW specific
- Leverage 10G interface for cloning / backup (if possible)
- Understand implications of multiple Networks on host, this was new to SW
- EM Cloud Control 12c for monitoring
- Periodically run and review Exachk



Platinum Services

- Joined early adopter program – June 2012
- Platinum Services and ACS resources performed implementation
- Immediate access to Platinum Services and Oracle Support resources to resolve issues
- **Benefit** to SW – Saved time (\$\$) and reduced risk
- Lessons Learned -
 - Plan Early
 - Demand on Oracle resources is high
 - Schedule is a challenge
 - Manage the vendor
 - Review Upgrade Plans
 - Monitor Access to Systems
 - Identify ways to minimize impact/downtime
 - Minor Issues encountered unique to SW Network



Our Vision - Next Steps

- **Exadata** - Primary DB platform for applications requiring highest availability and performance (both OLTP and Decision Support)
- ZFS Backup Appliance – Implementation is underway for DB disk backups; replacing NetApp. Using 10G N/W, move to IB in future
- Exalogic – POV completed; very encouraging results for ERP, ASCP & Demantra processes
- Strategy is to move to complete Engineered Platform for ERP
- Planning, Demantra, OBIEE and critical Java/WebLogic Applications
- Provision and Migrate AsiaPac EBS to Exadata / Exalogic platform
- Using Exadata with 12c multitenant(pluggable) for non-EBS Databases