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HealthCare Database Consolidation and MAA using Exadata

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Main Objectives

- Business Objective
- Why Oracle Exadata?
- Architecture Diagram
- Network Configuration
- OEM Packs for Exadata using OEM12c
- Oracle Platinum Support
- Future Roadmap
- Q&A

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Business Objective

- Create a future platform for Oracle databases.
- Consolidate multiple Oracle database environments.
- Enable Database Services to provide expected performance, capacity, scalability, and management of the Oracle database environment as per client requirements.
- Establish Database as a Service Model for Private Cloud.
- Implement a High Availability and Disaster Recovery solution within and between both data centers.
- Provide for security and performance isolation of Oracle databases within the Exadata environment

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Why Oracle Exadata?

- Challenges in patching, maintenance and management of database server reduced significantly
- Exadata increased QOS compared to shared network and SAN Storage
  - Benefits of converged infrastructure
- Challenges in capacity increase, expandability, scalability, and performance is reduced drastically
- Exadata helped resolve some of the challenges faced with performance and security Isolation
- Exadata provided environment consolidation for heterogeneous workload (OLTP/OLAP)
- Exadata provided required segregation of environment
- Exadata provided performance benefits
- Exadata consolidated license foot print

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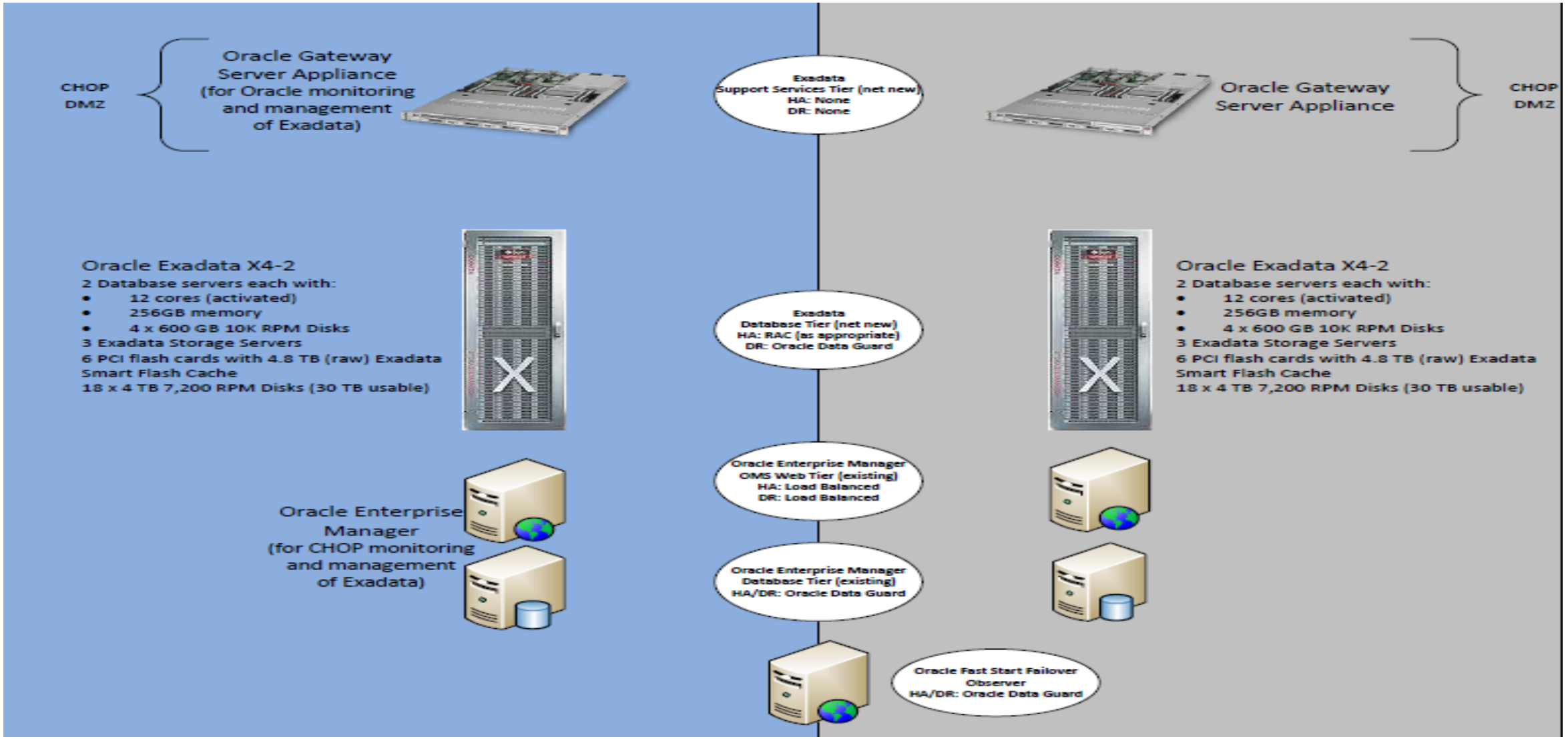
Architecture Diagram



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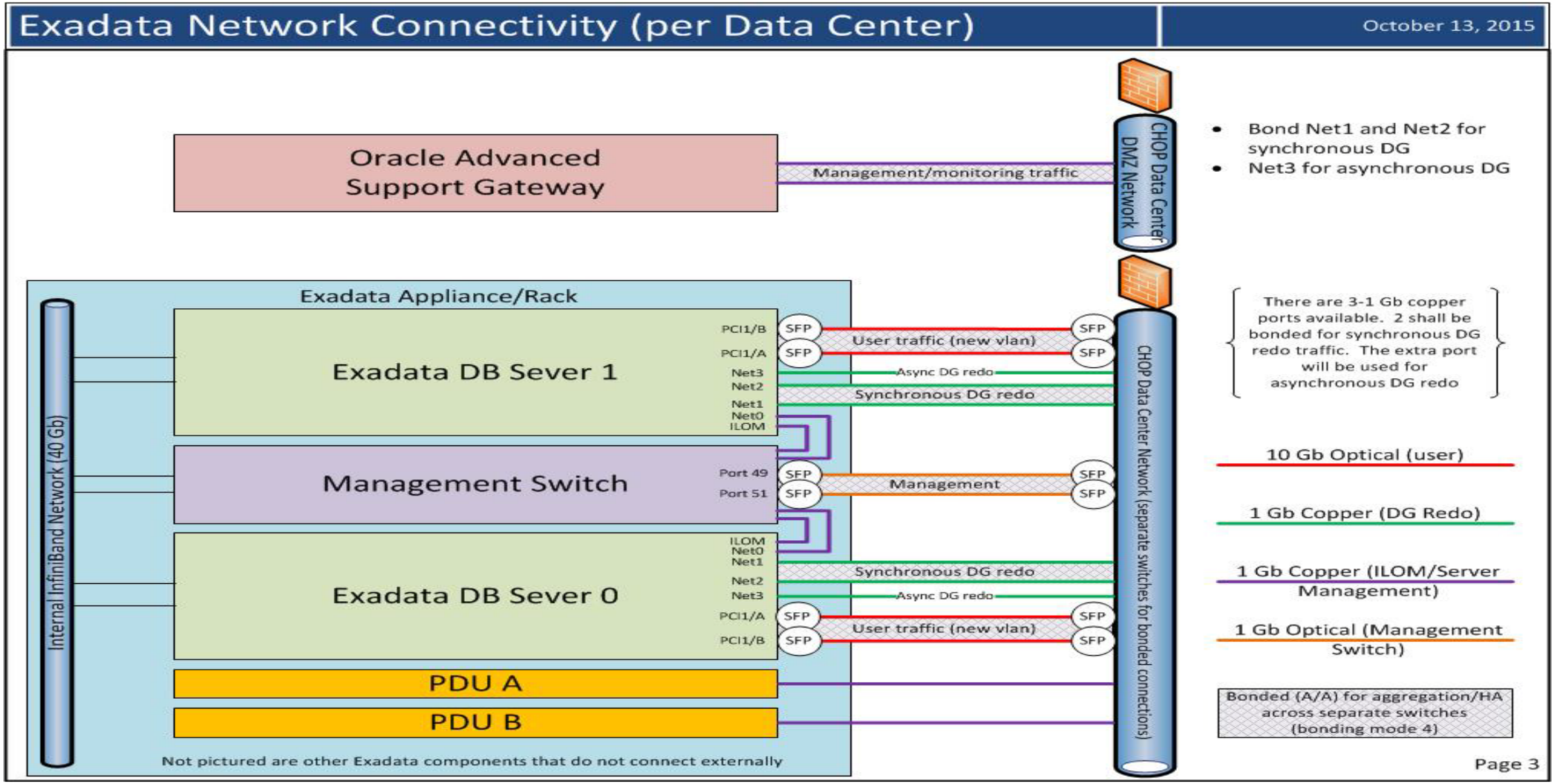
Network Configuration



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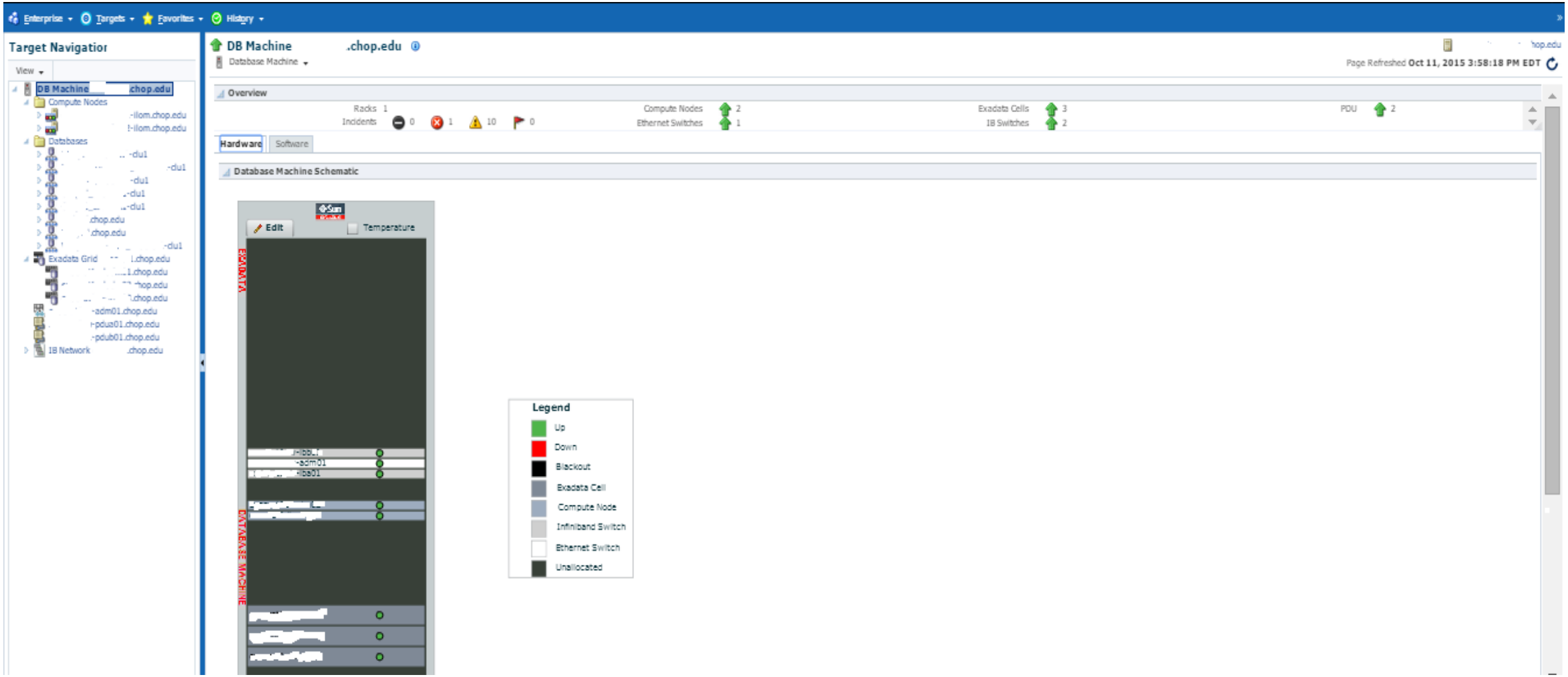
EMCC Packs for Exadata

Oracle Exadata Management Packs on EMCC 12c



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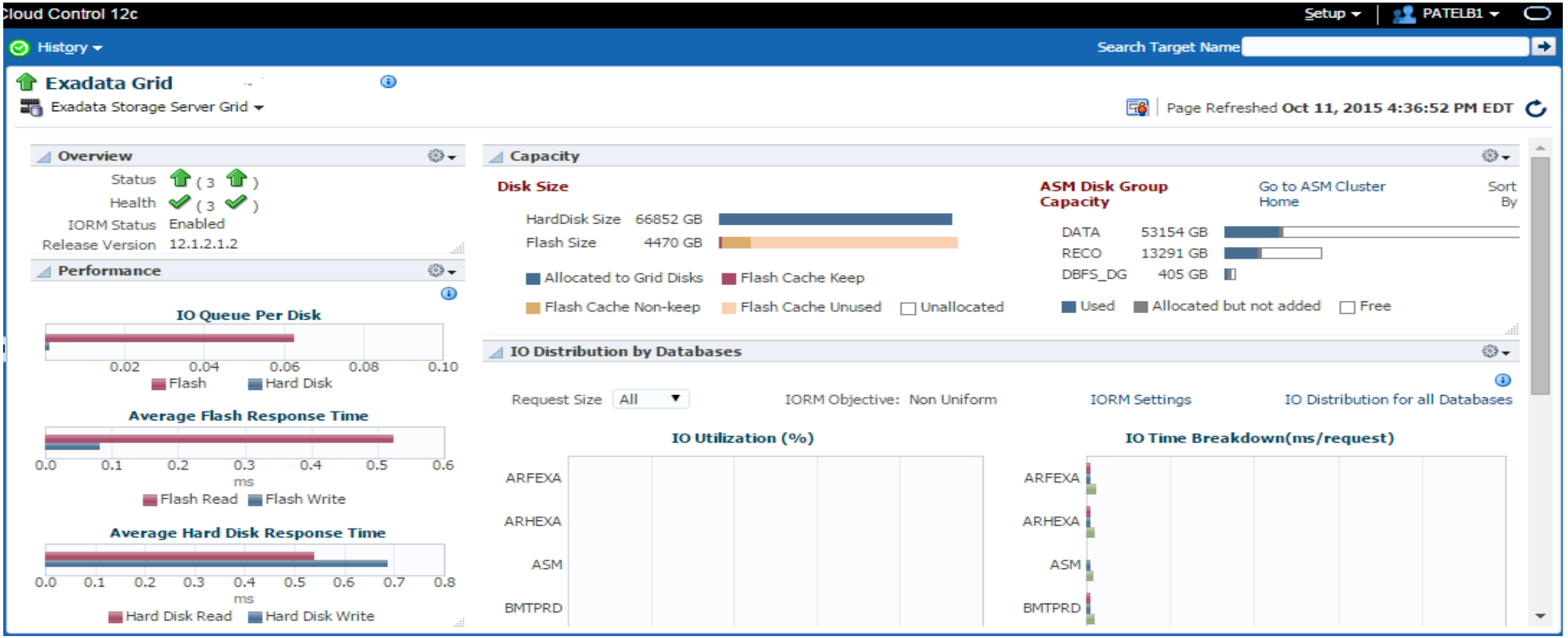
EMCC Packs for Exadata

Oracle Exadata Management Packs on EMCC 12c



Oracle Platinum Support

Oracle Platinum Support (OASG Monitoring and Patching)

- CHOP uses Oracle Platinum Support for OASG Monitoring and Patching.
- Worked with Oracle Platinum Services to build patching schedule that best suites our needs.
- Currently we do 2 Non-Rolling and 2 Rolling Patches in a year.
- Challenges :
  - Finding a common window for non-rolling patches.
  - Work with Platinum Support to coordinate and closely monitor the event.
  - Lessons learned during patching and work with Platinum Support to optimize the process.

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Database Consolidation

Current Status

- Database Consolidation Status
  - 7 Application currently running on Exadata Consolidated Platform. (Oracle Identity Management, Blood Marrow Transplant, VRealize, LIMS, Veterinary EMR, CAR Databases).
  - Plan to migrate 5 additional application by 12/31/2015 (Lawson, Kronos, Archibus, Theradoc, Investigational Drug system)
  - Plan to migrate Clarity and BI Stack
  - Database Sizes
  - Various sizes ranging from 1 TB to 250 Gb.
- Maintenance and Patching
  - We have successfully patched 2 times along with 1 upgrade from Linux 5.5 to 6.1
  - Able to perform patching on a scheduled basis every quarter.
- Performance Improvement is around 50% faster across the board.
- Business processes operational efficiency increased.
- TCO decreased significantly due to 0.5 core factor for Intel x86 as to RISC based AIX.

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Future Road Map

- Provision Exadata to host Non-Production environment.
- Challenge
  - Not having equivalent testing environment is slowing down the production migration to Exadata.
  - Exadata running on x86 chip and our legacy AIX is on Power7 RISC chip set, caused additional challenges for database cloning in lower environments.
- Upgrade databases to 12c from 11.2.0.4.
- Implement Oracle Multitenant option for true DBaaS.
- Implement Fast Sync to speed up Data Guard synchronous replication across data centers
- Expanding Exadata storage or Capacity on Demand

Q&A

Presenter :

Bhavesh Patel

Database Services Manager,

The Children's Hospital of Philadelphia

CHOP IS-Database Services,

patelb1@email.chop.edu

Contributor:

Sukumar Patel, Chief Architect.

David A Kerr, Solution Architect.

Shan Subramaniyam, DBA.

Deepa Telagam, DBA.