ODA Business en Technical challenges

Safe Harbor Statement

- Onze discussie bevat onder meer voorspellingen, schattingen of andere informatie die kan worden beschouwd als toekomstgericht. Hoewel deze anticiperende statements een actueel oordeel geven over wat de toekomst brengt, zijn ze onderhevig aan risico's en onzekerheden die ertoe kunnen leiden dat werkelijke resultaten wezenlijk verschillen.
- Wij adviseren u behoedzaam om te gaan met deze anticiperende statements, die onze meningen weerspiegelen op de datum waarop deze presentatie is geplaatst of gepresenteerd.
- U dient er rekening mee te houden dat we op enig moment meningen mogelijk herzien. Nieuwe informatie of toekomstige gebeurtenissen kunnen er toe bijdragen dat we deze anticiperende statements in een ander licht dienen te zien.
- Met de discussie van vandaag, zullen we proberen om een aantal belangrijke factoren te presenteren die betrekking hebben op onze activiteiten, die van invloed kunnen zijn op onze voorspellingen.
- U verbindt zich met dit vertrouwelijke document, informatie geheim te houden en deze informatie niet aan derden te verstrekken anders dan leden van de projectgroep. Na beëindiging van het project bent u gehouden alle genoemde documenten, kopieën en bescheiden of andere zich terzake in uw bezit bevindende informatie op elke informatiedrager geheim te houden dan wel te vernietigen.
- Wij stellen uw organisatie aansprakelijk voor alle eventuele hieruit voortvloeiende schade en vervolg schade als blijkt dat aan bovenstaande voorwaarde niet wordt voldaan.

Introductie Nelson Kuya

Ik ben werkzaam als database administrator en werk sinds 2008 bij Impulse Info Systems. Destijds ben ik begonnen als systeembeheerder en sinds 2012 ben ik database administrator.

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Agenda

- Background Information Impulse Info Systems
- The IT infrastructure before ODA
- Business and Technical challenges
- Proof of Concept and Results
- The IT infrastructure with ODA/ Why ODA?
- ODA Implementation Cycle
- Challenges, Issues and Advice
- Conclusions

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INFO SYSTEMS

We are 90 driven IT professionals specialized in providing IT solutions for mental health care, forensic care, youth care and disabled care.

USER®

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User® is an all-in-one integrated software solution that offers planning, time management, filing and records management, financing and invoicing. It also offers a fully integrated calendar, one-click registration and integrated BI.

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ORACLE®

Our application USER® runs on Oracle software, RDBMS and WebLogic. Currently, we have 35 clients, up to 450 systems and manage more than 20 ODA’s.

The IT infrastructure before ODA

- Linux and Microsoft Operating Systems
- Several VM platforms , VMware and Oracle VM
- Several hardware suppliers , HP, Dell and Custom hardware systems
- Custom RAC , Oracle fail-over and Single database deployments
- Non-consolidation and non-standardization
- Complex maintenance and deployment , due to the fact it requires extensive knowledge of different platforms and hardware suppliers
- System, network and storage administrators dependency

Business and Technical challenges

- High cost on implementation due to multiple hardware vendors and different support points
- High work load needed to meet SLA targets
- Multiple experts needed to implement and support the systems
- Long process of fine-tuning due to the various components and stack layers from different vendors
- Components such as storage and network were managed, monitored and diagnosed separately by different administrators

Proof of Concept

- ODA in-House for deployment testing
- Tested the deployments, bare metal and VM platform
- Built a dedicated test lab environment for our application
- Executed several performance tests
- Performed test on ODA patching
- Risk assessment and the impact of ODA within the business
- The results were within our goals: easy to deploy, standardization and combination of the software and hardware supplier

The IT infrastructure with ODA/ Why ODA?

- Standard implementation
- Central expertise,
- system is managed end-to-end as a whole
- No need for complex tuning process, ODA is a pre-integrated, pre-tested, pre-tuned configuration
- Both hardware and software support in one vendor
- SLA manageability
- Low cost and implementation time, 3 times faster to implement our application
- Consolidation and standardization
- non dependency on system , network and storage administrators.

The IT infrastructure with ODA/ Why ODA?

Simple

Automated deployment
HA databases
Complete applications
Automated patching
Zero Admin Storage
Integrated VM management
Single vendor support

The IT infrastructure with ODA/ Why ODA?

Highly Available

Hardware

- Two dual-socket Oracle Linux servers
- Redundant private interconnect
- Redundant public networks
- Double-mirroring or triple-mirroring storage redundancy
- Redundant hot-swappable power, cooling, and fans

Software

- Oracle Database 12c & 11g R2 Enterprise Edition
  - Real Application Clusters
  - RAC One Node
  - Single Instance
- Oracle Grid Infrastructure
  - Automatic Storage Management
  - Oracle Clusterware
- Oracle Linux and Oracle VM
- Oracle Appliance Manager

ODA Implementation Cycle

- IT architecture analysis – evaluation of the custome architecture and needs regarding USER®
- Type of implementation – Bare metal
- Deployment – Oracle Appliance Manager
- Migration – RMAN as a tool to migrate de database to ASM
- Optimization – Tuning of USER® in combination with ODA deployment
- Maintenance

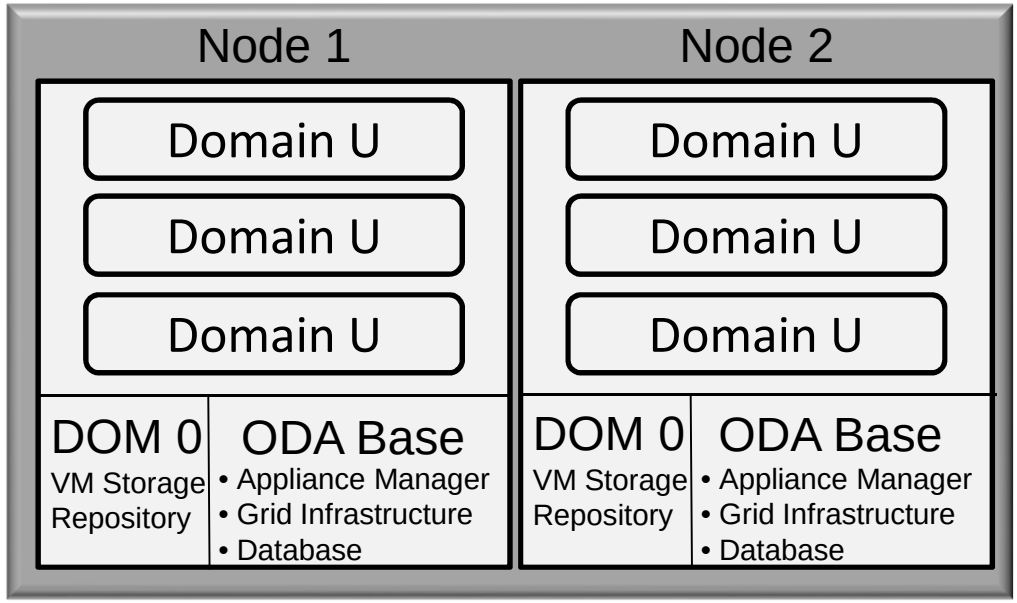
ODA Implementation Type

- Bare Metal

- Physical, traditional Real Application Clusters deployment database-only mode.

- Virtualized Platform

- Database / Middleware / VM in 1 stack Non-production Sites



ODA Virtualized Platform and Oracle VM

- XEN based
- Oracle VM Cluster 3.2.8 version
- Usage of templates for easy and quick deployment
- Currently used for Development, Research and Testing purposes

Maintenance and support

- Intern monitor software to maintain ODA's, we maintain and manage all the ODA's that we deploy
- ASR, most of ODA located on remote location, when there is a faulty hardware a SR is automatically started on Oracle support for further assistance

Patching

Patching through OAKCLI, user-friendly command line interface. The patch bundle includes OS, GRID and RDBMBS software all in one:

/opt/oracle/oak/bin/oakcli update -patch “version” --infra
/opt/oracle/oak/bin/oakcli update -patch “version” --gi
/opt/oracle/oak/bin/oakcli update -patch “version” --database

New with ODA X5-2

- The X5-2 offers more storage, memory, cores and also Extra SSD on shared storage that can be used for database flash cache.
- 40Gb/s InfiniBand for interconnect, that offers high rate connectivity between servers nodes.
- Possibility of testing new features in 12c Multitenant architecture, for example database in-memory, that is not possible on the old version

Issues and Challenges

- Long downtime through patching , on most cases data guard is used to ensure the downtime is as short as possible.
- One off patching availability when bugs are encountered , ODA patches are only available quarterly.
- High risk of losing data during faulty patching, - we always make sure that there is a backup of the environment, even if data has never been lost to date
- No Clustering scalability
- Local patching to reduce downtime , solution was offered with the deployment of the new ODA software 12.1.2.6.0

Conclusion

Since we started using ODA in 2012, we have experienced an improvement in the performance of our software. With ODA it is easy to meet our SLA targets. We are happy with the easy and quick hardware. With our IT infrastructure , we are keen to provide high quality and fast deployment of our software on physical or virtual platforms. We actively achieve this with ODA and we expect to do so in the future.

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