

7 considerations when migrating Oracle Databases to the cloud

There's never been a better time to move to the cloud

With significant improvements with cloud security, IT efficiency and advancements in cloud solutions, CIOs now have a real option to drive their business forward through cloud based initiatives. This in turn will improve business processes, drive down costs and open up the potential to increase company profits.

Historically an Oracle database migration would take up to six weeks to complete, with new technologies it can now be achieved within less than a day.

Once you have decided that cloud is the way forward for your Oracle systems there are many considerations you have to take into account.

1. Transform

When migrating to the cloud it is a perfect opportunity to accurately evaluate your system. Rather than 'lift and shift' your existing environment, you should invest in a thorough solution design and architecture process. Taking the time to evaluate what the database is used for and the business requirements allowing you to design and build your new fit for purpose system. This allows you to get the speed and performance required from your Oracle database(s).

2. Understand cloud licensing

When migrating your Oracle database to the cloud make sure you understand the licensing of your chosen cloud provider, whether it is in a public, private or hybrid environment.

The key questions you need to be asking are:

- Do you have to purchase new cloud licences or are you able to bring your own?
- Is the cloud platform certified for Oracle database? Currently the only public services that are certified are Microsoft Azure, Amazon Web Services and Oracle Cloud.
- Are the licensing models the same?

Did you know Microsoft Azure allows you to bring your existing licences across also they currently have 12 months Free of Charge licence for Oracle 12c, Weblogic and Java (information correct at date of publishing May 2015)

3. Security

Cloud security is a fundamental concern if looking at a public cloud solution to store your data in and raises implications with data protection and legalisations.

When migrating your Oracle databases to the cloud you have to consider the following:

- Data type and sensitivity
 - What is the legislation around this type of data?
 - Where is it allowed to be stored?
- Company Policy and EU Policies
- Location of data centres
- Data centre security levels and certifications

Did you know that Microsoft Azure is PCI DSS compliant (Payment Card Industry Data Security Standards) meaning if you store customer credit card details, Azure meets government data security legislations for you to be able to do so?

4. Sizing

Most providers have a restricted choice of hardware specification. So when choosing a provider, investigate options available and the cost implications of increasing resource demand - scalability is paramount to future proof your environment.

To get the memory required you may have to choose a build with more cores than desired. This is a delicate balancing act as it can have a serious impact on the licensing of your estate and it's important to look at performance enhancing options which can be done through a solution design and architecture service.

5. Understand the providers SLA

Cloud providers will have their own Service Level Agreements (SLAs); you need to research them to ensure they meet your business objectives and current SLAs. Cloud providers will also have their own terms and conditions applied, meaning your Oracle database will have to adhere to these to be eligible for the stated SLAs.

Did you know Microsoft Azure guarantees 99.95% availability? This means that the service can be down for up to 4 hours in a year. How much lost revenue does this equal to?

6. Performance

Performance of your cloud solution is paramount to the productivity of your business. Problems can arise when moving information between the database, the application and the end user - significantly diminishing productivity.

From a technical aspect you need to consider the following:

- Disk I/O
- Are solid state disks supported?
- How to lay out disks

- Do you need to get disks specifically set or can you compromise your recoverability and your transaction consistency?
- How to get mirroring established within the cloud and within the oracle software?

7. Disaster Recovery

It is possible to take advantage of cloud based backup and disaster recovery (DR) solutions whether it is through Amazon, Azure, Oracle or any other cloud platform provider. When looking at a cloud DR solutions you need to consider the efficiency of the backup and recovery, the security of your data, issues within your data legislations, geographical locations of the data centres and the speed at which your data can be recovered.

From a technical aspect you need to consider the following:

- Do the same models still work?
 - Oracle RAC,
 - Oracle Data Guard,
 - Golden Gate
- What about the models in the public cloud?
 - Geo replication
 - Geo redundancy