

Oracle 11g Active Data Guard

High Availability, Disaster Recovery & Resource Offloading

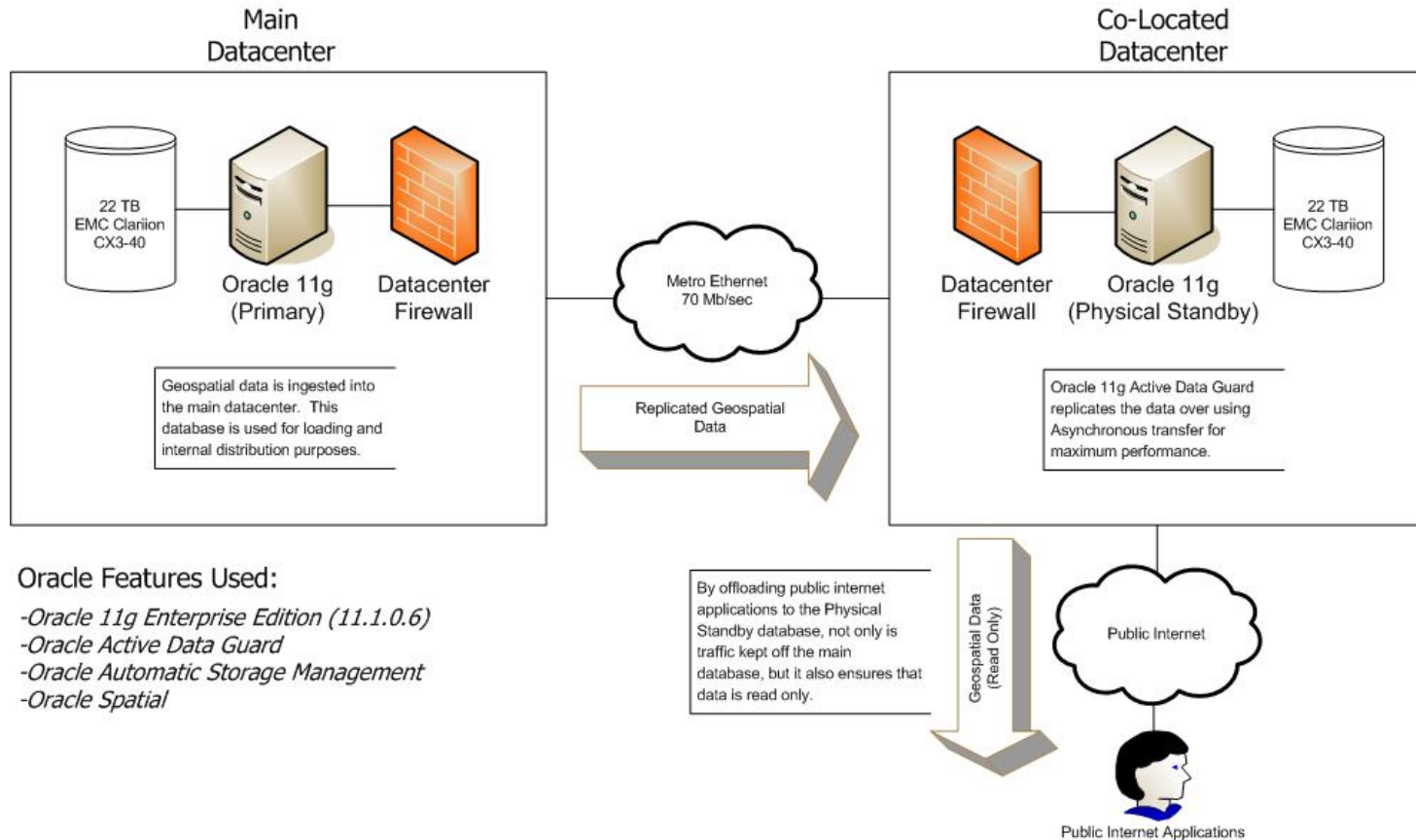
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Who is Intermap Technologies Inc.?

- Intermap is a digital mapping company that is proactively remapping entire countries across the world and building uniform high-resolution 3D digital national data sets which we call NEXTMap®.
- Intermap uses proprietary airborne Interferometric Synthetic Aperture Radar (IFSAR) to collect raw elevation data.
- Intermap produces elevation data models and geometric images of unprecedented accuracy from the IFSAR data.
- These NEXTMap® data sets are used in various commercial and government spatial applications within a many industries:
 - Automotive Safety & Fuel Efficiency
 - Insurance Flood Modeling
 - Global Positioning Systems (GPS)
 - Environmental Planning
 - Wind Power Planning
 - Wireless Communication Planning
 - Other 3D Visualization Applications

Using Oracle 11g & Active Data Guard

Intermap Technologies Inc. High Level Architecture



Oracle Features Used:

- Oracle 11g Enterprise Edition (11.1.0.6)
- Oracle Active Data Guard
- Oracle Automatic Storage Management
- Oracle Spatial

Business Requirements

The Need	The Solution
Disaster recovery site in order to maintain business continuity.	Oracle Active Data Guard (Fast-Start Failover)
Secure data hosting platform for public internet applications.	Oracle Active Data Guard (Read Only Physical Standby)
24x7 availability for customers to retrieve and use Intermap data.	Oracle Active Data Guard (Stays up while applying redo)
Easy storage management to maintain a large database (10 TB and growing).	Oracle Automatic Storage Management (Seamless storage integration for using various storage vendors)
Manage and maintain spatial datasets within Oracle.	Oracle Spatial

Lessons Learned

- Configuring LUN sizes larger than 2 TB for use in disk groups is not supported by ASMLib in Oracle 11g (11.1.0.6). This has been fixed in 11.1.0.7.
 - See <https://metalink.oracle.com/metalink/plsql/showdoc?db=Bug&id=6453944>
- Some Oracle GeoRaster procedures do not work on a Standby Database as they do on a Primary Database. Specifically SDO_GEOR.mosaic. Oracle provided Intermap Technologies Inc., with a fix to bypass the using of temporary tables on the Physical Standby when assembling tiles of GeoRaster images and instead assembling the tiled GeoRasters into allocated RAM.

The Oracle Experience

Oracle Active Data Guard –

Prior to Oracle 11g Active Data Guard there was no out-of-the-box solution to meet the business requirements of a co-located geospatial database that was an exact replica of our main production geospatial database and maintain 24x7 availability.

*Active Data Guard was by far the **easiest** component to set up. Since production implementation Intermap Technologies Inc. has experienced **no** problems and has maintained 100% uptime.*