Lower Cost, Increase Reliability and Performance to Extract More Value from Your Data With Oracle Autonomous Data Warehouse

Today’s leading-edge organizations differentiate themselves through analytics to further their competitive advantage by extracting value from all their data sources. Other companies are looking to become data-driven through the modernization of their data management deployments. These strategies do include challenges, such as the management of large growing volumes of data. Today’s digital world is already creating data at an explosive rate, and the next wave is on the horizon, driven by the emergence of IoT data sources. The physical data warehouses of the past were great for collecting data from across the enterprise for analysis, but the storage and compute resources needed to support them are not able to keep pace with the explosive growth. In addition, the manual cumbersome task of patch, update, upgrade poses risks to data due to human errors. To reduce risks, costs, complexity, and time to value, many organizations are taking their data warehouses to the cloud. Whether hosted locally in a private cloud, outsourced to a public cloud service, or a mixture of the two, the cloud offers simpler management, higher scalability and availability with ensured performance, and new ways to cut the costs associated with data storage and processing.

Why are Customers Moving their Data Warehouse to the Cloud

- Simplified Deployment & Migration
- Always-On Reliability
- Big Data Enablement
- Reduce Cost and Risk
- Accelerate Analytics & Data Insight Extraction
Data Warehouse In The Cloud: Common Customer Use Cases

The velocity and volume of incoming data is placing crushing demands on traditional data marts, enterprise data warehouses, and analytic systems. Can a traditional data warehouse cloud solution help customers meet these demands? Many customers are proving the value of data warehouses in the cloud through “sandbox” environments, line-of-business data marts, and database backups. More advanced monetization use cases include high-performance data management projects, data warehouses coupled with cloud computing analytics, and big data cloud implementation. Oracle’s revolutionary Autonomous Data Warehouse is the industry’s first solution for delivering business insights with unmatched reliability. This fully autonomous database cloud service is self-tuning and pre-configured for automated patch and upgrades, and avoids manual error-prone human management processing.

Common Customer Use Cases Enabled by Complete Oracle Cloud Platform

- On-Premise Data Warehouse or Data Marts
- Consolidation of Disparate Data Sources
- Integration of New Data Sources
- High Performance Analytics
- Publish Big Data to the Data Warehouse
- 3rd Party BI and Analytics Apps
- New Monetization Opportunities
Introducing Oracle Autonomous Data Warehouse

Oracle Autonomous Data Warehouse uses applied machine learning to self-tune and automatically optimizes performance while the database is running. It is built on the next generation Oracle Autonomous Database technology using artificial intelligence to deliver unprecedented reliability, performance and highly elastic data management to enable data warehouse deployment in seconds.

Why Oracle Autonomous Data Warehouse

**Easy**
- Fully autonomous database capable of self-patching, self-tuning, upgrading itself while the system is running, eliminating manual human error prone processing.
- Optimized and pre-configured to allow for creation of data warehouse cloud service in a matter of minutes.
- Immediately run analytics on your data, or build low code apps, without the need for investment in data center infrastructure or additional IT staffing.

**High Performance**
- Based on the next generation cloud database platform using artificial intelligence including machine learning to deliver adaptive caching and indexing all powered by the Oracle Exadata engineered infrastructure.
- Machine learning automatically optimizes indexing and caching helps to reduce CPU consumption to deliver more value to customers than AWS Redshift.

**High Elasticity**
- Oracle customers have fine-grained control of pre-configured compute and storage resources allowing for independent scale-up and down to avoid overpaying for expensive, unused, fixed blocks of cloud resources.

**Always-on Reliability**
- Built-in machine learning technology eliminates manual configuration errors to ensure reliability. In addition, unlimited concurrent access combined with advanced clustering technology enable businesses to grow data stores without any downtime.
One Autonomous Database — Two Deployment Options

You can deploy Oracle Autonomous Database in two different ways, depending on the level of isolation you require from other cloud tenants.

**Serverless**

**Simplicity and Elasticity**

Serverless deployments are characterized by simplicity and elasticity, with Exadata and Oracle Real Application Clusters providing exceptional performance, online scaling, rolling updates, and fast failover.

**Dedicated**

**Customizable Private Cloud in a Public Cloud**

This unique architecture delivers the highest degree of workload isolation, helping protect each database from both external threats and malicious internal users. The level of security and performance isolation can be easily tailored to the needs of each database.

Key Features — An Affordable, Feature-Rich and Fully Managed Service in the Cloud

- **Autonomous**
  - The world’s first self-driving database cloud is designed to perform all routine database maintenance tasks such as patch, update, backup, without human intervention, all while the database is running.

- **Oracle SQL**
  - DWCS is compatible with all business analytics tools that support Oracle Database.

- **High-performance queries and concurrent workloads**
  - Optimized query performance with preconfigured resource profiles for different types of users.

- **Cloud-based data loading**
  - Fast, scalable data-loading from Oracle Object Store, AWS S3, or on-premises.

- **Instant Elasticity**
  - Preconfigured compute and storage shapes can independently scale up and down, without any downtime.

- **Built-in Web-based SWL tool**
  - Apache Zeppelin based notebooks ready to run from your browser.

- **Database migration utility**
  - Dedicated cloud-ready migration tools for easy migration from Amazon AWS Redshift, SQL Server and other databases.

- **Enterprise Grade Security**
  - Self-upgrades of security patches. Data is encrypted by default in the cloud, as well as in transit and at rest.
Oracle Provides True Enterprise Data Warehouse Solutions in the Cloud

A handful of vendors now offer data warehouse cloud services, but these solutions are archaic, complex to use, lack enterprise scale and flexibility in deployment choice. Only Oracle offers the next generation Autonomous Data Warehouse. Based on applied machine learning, the next generation of the Oracle Database is completely autonomous, eliminating human error and delivering unprecedented performance, high security and reliability in the cloud. Oracle Autonomous Data Warehouse is designed to deliver industry-leading database technology with unmatched flexibility, enterprise scale and simplicity. The goal is to ensure that businesses get more value quickly from their data, and manage their data more effectively.

Oracle Cloud is open, allowing customers to utilize the service in a true hybrid cloud model, as well as supporting the utilization of 3rd party applications, tools or even open-sourced Hadoop solutions. Oracle’s data warehouse cloud solution combines a fully integrated cloud, the industry’s best database, a comprehensive cloud platform and the power of choice to provide a path to the cloud that’s right for you.

Customer Benefits

Complete Solution for Analytics
A single platform that empowers your entire organization to ask any question of any data type. With Oracle Autonomous Data Warehouse, you can load and analyze data in the cloud in a few clicks, allowing you to quickly extract data insights and make critical decisions in real time.

Easy Migration
Oracle makes it easy to migrate your data warehouse or data marts to Autonomous Data Warehouse. Oracle SQL Developer easily migrates data into the cloud in just a few clicks. Cloud-ready migration workbench tools support all major database providers, including Redshift.

Reduce Cost and Risk
Customers moving from Amazon’s Redshift to Oracle’s autonomous database can expect to cut their costs in half, while benefiting from a higher database availability.

Preserve Existing Investment
On-premises Oracle data management workloads are 100% compatible with Oracle Cloud ensuring customers can leverage existing investments and skills. With AWS Redshift, customers must completely rework their code and realign their applications.
Oracle is the market leader for data warehousing solutions*. Oracle Autonomous Data Warehouse makes available a highly scalable solution to customers with the ease, simplicity, high-performance and security, value that only Oracle can deliver. With Oracle, customers have deployment choice, and can preserve their existing investment while enabling new monetary opportunities for their most valuable asset – their data.

Call to Action:

- Learn more about Oracle Autonomous Database
- Explore Oracle Autonomous Data Warehouse

* Gartner Magic Quadrant for Data Management Solutions for Analytics