ORACLE

Globally Distributed Autonomous Transaction Processing

All-in-One Datasheet (Beta) Produced by DBExpert

Overview

Globally Distributed Autonomous Database is a fully automated distributed cloud database that is easy to use, develop with, and manage. Its shared-nothing, sharded architecture is built on top of Oracle Autonomous Database, letting transaction processing and analytics applications benefit from hyperscale performance and scalability as well as extreme availability. Organizations can easily meet data residency requirements and the needs of distributed global users.

Visit the DB Expert Services Taxonomy page to get the latest version of this data sheet and see data sheets for all the Oracle Cloud Database services.

Deployment

Database Type	Distributed Database
Management Model	Fully Managed PaaS
Supported Cloud Environments	Oracle Cloud Infrastructure
SKUs for starting configuration	B99593 (ECPU) or B99594 (ECPU BYOL) 2* Database Server - X11M - B110627 3* Storage Server - X11M - B110629 Backup storage -B91628
DB Versions Supported	Oracle 23ai (Long-term release), Oracle 19c (Long-term release)
Hardware Infrastructure	Dedicated Engineered System

Usage Models

Recommended Workloads	Blockchain Data Science / Machine Learning Data and IoT Event Streams Graph Mixed Workload (Transaction + Analytics) Transaction Processing (OLTP) Vector
Recommended Data Models	Document Store (JSON) Document Store (XML) NoSQL Spatial Text

	Vector
Certified Oracle Applications	Oracle APEX

Capacity

Configuration Options	Elastic X11M infrastructure configuration shapes range from 2 database and 3 storage servers, up to a total of 32 database and 64 storage servers to achieve the exact ratio of compute to storage required. Each database server provides 720 ECPUs, and each storage server provides 64 TB of database storage (no local backup). Elastic configuration example 1 is the minimum size elastic configuration with 2 database and 3 storage servers. Elastic configuration example 2 with 8 database and 8 storage servers and elastic configuration example 3 with 2 database and 14 storage servers are example elastic configurations that provide the highest SQL Read IOPS and Bandwidth in a theoretical single rack, respectively.
CPU Range	2 to 16128 ECPUs
Shapes	Exadata Cloud Infrastructure X11M - Elastic Configuration Example 1 ECPUs: 8 to 1520 Max DB TB: 192 Exadata Cloud Infrastructure X11M - Elastic Configuration Example 3 ECPUs: 8 to 1520 Max DB TB: 896 Exadata Cloud Infrastructure X11M - Elastic Configuration with Maximum Storage ECPUs: 8 to 1520 Max DB TB: 4096 Exadata Cloud Infrastructure X11M - Elastic Configuration Example 2 ECPUs: 8 to 6080 Max DB TB: 512 Exadata Cloud Infrastructure X11M - Elastic Configuration with Maximum ECPU ECPUs: 8 to 24320 Max DB TB: 192

CPU scaling	Online, Auto scale up, Auto scale down
Storage scaling	Online
Max IOPs	flash 8k: 2.8M read + 1M write (per storage server)
Max Throughput	100 GB/s
Max Memory	1.35TBx32 = 44 TB

Availability

Nines of availability (may require configuration)	99.995 SLA (with Autonomous Data Guard)
Oracle DB Maximum Availability Architecture medals (for OCI / Cloud@Customer deployments)	Not MAA certified
Automated backups max retention	up to 95 days
Long-term backup retention (up to 10 years)	Yes

Functionality Included

Included Oracle DB Options for license-included service (*)	Advanced Compression Advanced Security Database In-Memory Database Vault Label Security Multitenant Partitioning Real Application Clusters (Oracle RAC) Real Application Testing Spatial and Graph
Included Oracle EM Packs for license-included service (*)	Cloud Management Pack for Oracle Database (functionality provided by service) Data Masking and Subsetting Pack (functionality provided by service) Database Lifecycle Management Pack for Oracle Database (functionality provided by service) Diagnostics Pack Tuning Pack
Free Add-Ons (no extra licensing required)	Eligible target for loading data using Oracle Data Integrator, available on Cloud Marketplace(No license required if ADB is the target. Compute resources are charged.) Managed Oracle REST Data Services (ORDS) for ADB-D Oracle APEX Oracle Analytics Desktop Oracle Cloud Observability and Management

	Service (O&M) Oracle Data Safe Oracle Database Actions Oracle GoldenGate 1) Limited Use Term License Promotion and 2) Oracle GoldenGate Database Migration Term (both available on Oracle Cloud Marketplace)

*Check service documentation for feature availability and limitations

Security and Compliance

Recommended for hosting sensitive data and candidate for compliance with non-audited programs (customer responsibility)	Yes

Compliance Programs Achieved for Oracle Cloud Infrastructure

Abu Dhabi Information Security Standard (ADISS), C5 Attestation, CSA STAR Level 2, CST Class C, Dubai Electronic Security Center (DESC) Certification, ENS High, EU CoC (DOA Level 2), FedRAMP High - JAB ATO, GSMA SAS-SM, HIPAA, Health Data Hosting (HDS) France, IRAP, ISMAP, ISMS, ISO 20000-1, ISO/IEC 27001, ISO/IEC 27017, ISO/IEC 27018, ISO/IEC 27701:2019, ISO/IEC 9001:2015, MTCS, OSPAR, PCI-DSS, SOC 1, UAE IAR, UK Cyber Essentials Plus

Compliance status for the service may vary across regions. The Compliance Documents service in the OCI console lets users view and download compliance documents and determine current program availability in specific regions. Additional information is available in the Elevated Support Portal (Oracle Internal; VPN required).

Compliance Programs Achieved / Planned for Azure

None to date. Visit the Multicloud Updates page (link below) to check on potential roadmap items.

Compliance Programs Achieved / Planned for Google Cloud

None to date. Visit the Multicloud Updates page (link below) to check on potential roadmap items.

Compliance Programs Achieved / Planned for AWS

None to date. Visit the Multicloud Updates page (link below) to check on potential roadmap items.

Locations

Oracle Cloud Infrastructure

APAC: Chuncheon - YNY, Hyderabad - HYD, Melbourne - MEL (G), Mumbai - BOM (G), Osaka - KIX, Seoul - ICN (A), Singapore - SIN (A, G), Singapore West - XSP, Sydney - SYD (G), Tokyo - NRT (A, G)

EMEA: Abu Dhabi - AUH, Amsterdam - AMS (A), Dubai - DBX, Frankfurt - FRA (A, G), Jeddah - JED, Jerusalem - MTZ, Johannesburg - JNB (A), London - LHR (A, G), Madrid - MAD (G), Marseille - MRS, Milan - LIN, Newport - CWL, Paris - CDG, Riyadh - RUH, Stockholm - ARN, Zurich - ZRH (G)

LAD: Monterrey - MTY, Queretaro - QRO, Santiago - SCL, Sao Paulo - GRU (G), Vinhedo - VCP (A)

North America: Ashburn - IAD (A, G), Chicago - ORD, Montreal - YUL (G), Phoenix - PHX (A), San Jose - SJC (A), Toronto - YYZ (A)

* New services and hardware generations are rolled out across regions, check your region for current status. (A) = Interconnect to Microsoft Azure available. (G) = Interconnect to Google Cloud available

Azure

None to date. Visit the Multicloud Updates page (link below) to check on potential roadmap items.

Google Cloud

None to date. Visit the Multicloud Updates page (link below) to check on potential roadmap items.

AWS

None to date. Visit the Multicloud Updates page (link below) to check on potential roadmap items.

Multicloud Updates

Operational Controls

Allows installing additional software/agents on the host	No
Allows installing OS packages	No
Allows kernel changes	No
Allows OS runtime changes	No
Allows sysdba access	No
Oracle operator access control	Yes
Control DB patch level	Yes
Control DB release update (RU) level	Yes
Control DB version	Yes
Control maintenance window	Yes
Preview and Validate Patches for Zero-Regression SLO	No

Additional Information

Open Source DB	No
Delta Sharing / Cloud Links	Delta Sharing Recipient

Select AI to Generate SQL from Natural Language Prompts	No
Mongo-compatible API	Yes
Supports non-CDB home	No

Reference Links

General

Oracle PaaS and IaaS Universal Credits Service Descriptions
Service Level Objectives
Oracle DB Maximum Availability Architecture medals
Oracle Cloud Infrastructure Compliance
Oracle Database Releases
BYOL FAQ
OCI Locations and Status
Oracle Database Multicloud Regions, Capabilities, Compliance, High Availability and Migration

Service Specific

Achieve data residency, availability, and scale with Oracle Globally Distributed Autonomous Database
Data Management Services Feature Level Roadmaps
Globally Distributed ATP-D Customer References
Globally Distributed Autonomous Database
Globally Distributed Autonomous Database (Globally Distributed ADB) Sales Resources

The Responsibility Model for Oracle Autonomous Database

Task	Who	Details
Provisioning Autonomous Database resources	Oracle	Oracle is responsible for provisioning resources. You the customer are responsible for initiating provisioning requests that specify configuration characteristics of the resource being provisioned.
Backing up databases	Oracle	Oracle is responsible for backing up databases on a daily basis and for retaining database backups for 60 days.
Recovering a database	Oracle	Oracle is responsible for recovering databases. You the customer are responsible for initiating a recovery request that specifies which existing backup to recover to.
Patching and upgrading	Oracle	Oracle is responsible for patching and upgrading all Autonomous Database resources.
Scaling	Oracle	Oracle is responsible for scaling Autonomous Databases. You the customer are responsible for initiating scaling requests.
Monitoring service health	Oracle	Oracle is responsible for monitoring the health of Autonomous Database resources and for ensuring their availability as per published guidelines.
Monitoring application health and performance	Customer	You the customer are responsible for monitoring the health and performance of your applications at all levels. This responsibility includes monitoring the performance of the database queries and updates your applications perform.
Application security	Customer	You the customer are responsible for the security of your applications at all levels. This responsibility includes Cloud user access to Autonomous Database resources, network access to these resources, and access to database data. Oracle ensures that data stored in Autonomous Databases is encrypted and ensures that connections to Autonomous Databases require TLS 1.2 encryption and wallet-based authentication.
Auditing	Oracle	Oracle is responsible for logging REST API calls made to Autonomous Database resources and for making these logs available to you the customer for auditing purposes. Oracle is responsible for ensuring that Autonomous Databases are provisioned with Oracle Database auditing features enabled. You the customer are responsible for using these features to audit database usage.
Alerts and Notifications	Oracle	Oracle is responsible for providing an alert and notification feature for service events. You the customer are responsible for monitoring any database alerts that may be of interest.