ORACLE

Autonomous AI Lakehouse Serverless

All-in-One Datasheet Produced by DB Services Explorer

Overview

Oracle Autonomous AI Lakehouse Serverless (LAK-S) is a fully automated, high-performance, and elastic service. It delivers all of the performance of the market-leading Oracle Database in a fully automated environment that is tuned and optimized for data warehouse workloads.

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

Deployment

Database Type	Single Database
Management Model	Fully Managed PaaS
Supported Cloud Environments (*)	Oracle Cloud Infrastructure, Oracle Database@Azure and Oracle Database@Google Cloud
SKUs for starting configuration	B95701 (ECPU) or B95703 (ECPU BYOL) B95754 (DB storage) B95754 (backup storage)
Oracle AI Database BYOL Support	BYOL Standard Edition (SE) and Enterprise Edition (EE). Mixing BYOL and non-BYOL supported.
DB Versions Supported	Oracle AI 26ai (Long-term release), Oracle 19c (Long-term release)
Hardware Infrastructure	Shared Engineered System

Usage Models

Recommended Workloads	Analytics Blockchain Data Lake Data Science / Machine Learning Data Warehouse / Data Mart Data and IoT Event Streams Graph Vector
Recommended Data Models	Document Store (JSON) Document Store (XML)

ORACLE

	Spatial Text Vector
Certified Oracle Applications	Oracle APEX AI Application Generator

Capacity

Configuration Options	Fully elastic scaling: Scale compute and storage independently to fit your database workload with no downtime: Size the database to the exact compute and storage required Scale the database on demand: Independently scale compute or storage Shut off idle compute to save money Auto scaling: Allows your database to use more CPU and IO resources or to use additional storage automatically when the workload or storage demand requires additional resources: Use compute auto scaling to allow the database to use up to three times more CPU and IO resources, depending on workload requirements. Compute auto scaling is enabled by default when you create an Autonomous Database. Use storage auto scaling to allow the database to expand to use up to three times the reserved base storage, depending on your storage requirements. Storage auto scaling is disabled by default when you create an Autonomous Database.
CPU Range	2 to 16128 ECPUs in increments of 1
Shapes	LAK-S ECPUs: 2 to 512 Max DB TB: 384 LAK-S Available with Service Limit Increase Request ECPUs: 513 to 16128 Max DB TB: 3100
CPU scaling	Online, Auto scale up, Auto scale down
Storage scaling	Online, Auto scale up
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)	Silver, Gold
Automated backups max retention	up to 60 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 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)	Data Transforms (nominal usage charge) 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.) Graph Studio (nominal usage charge) Managed Oracle REST Data Services (ORDS) with ADB-S Oracle APEX AI Application Generator 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) Oracle Machine Learning UI (nominal usage charge)

Security and Compliance

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

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	No
Control DB patch level	No
Control DB release update (RU) level	No
Control DB version	Yes
Control maintenance window	No
Preview and Validate Patches for Zero-Regression SLO	Yes

Additional Information

Open Source DB	No
Delta Sharing / Cloud Links	Delta Sharing Provider / Recipient and Cloud Links
Select AI to Generate SQL from Natural Language Prompts	Yes
Mongo-compatible API	Yes
Supports non-CDB home	No

(*) Capabilities may vary between cloud platforms. Please visit Oracle Multicloud Capabilities for more detailed information.

(**) Check service documentation for feature availability and limitations

Compliance Programs Achieved / Planned for Azure

C5 (Cloud Computing Compliance Controls Catalogue - Germany) - [Supported], CSA STAR Attestation - [Supported], CSA STAR Certification - [Supported], EU Cloud Code of Conduct (EU Cloud CoC), FISC (Center for Financial Industry Information Systems - Japan) - [Supported], GSMA (GSM Association) - [Supported], HDS (Hébergement de Données de Santé – France) - [Supported], HIPAA (Health Insurance Portability and Accountability Act) - [Supported], HITRUST (Health Information Trust Alliance) - [Supported], IRAP (Infosec Registered Assessors Program - Australia) - PROTECTED - [Supported], ISMAP (Information system Security Management and Assessment Program - Japan) -

[Supported], ISO/IEC 20000-1 (Service Management) - [Supported], ISO/IEC 22301 (Business Continuity Management) - [Supported], ISO/IEC 27001 (Information Security Management) - [Supported], ISO/IEC 27017 (Information Security for Cloud Services) - [Supported], ISO/IEC 27018 (Personally Identifiable Information in Public Clouds) - [Supported], ISO/IEC 27701 (Privacy Information Management) - [Supported], ISO/IEC 9001 (Quality Management) - [Supported], MTCS (Multi-Tier Cloud Security - Singapore) - [Supported], PCI DSS (Payment Card Industry Data Security Standard) - [Supported], SOC 1 (System and Organization Controls 1) - [Supported], SOC 2 (System and Organization Controls 2) - [Supported], SOC 3 (System and Organization Controls 3) - [Supported]

Compliance Programs Achieved / Planned for Google Cloud

C5 (Cloud Computing Compliance Controls Catalogue - Germany) - [Supported], CSA STAR Attestation - [Supported], CSA STAR Certification - [Supported], EU Cloud Code of Conduct (EU Cloud CoC) - [Supported], FISC (Center for Financial Industry Information Systems - Japan), GSMA (GSM Association), HDS (Hébergement de Données de Santé – France) - [Supported], HIPAA (Health Insurance Portability and Accountability Act) - [Supported], HITRUST (Health Information Trust Alliance) - [Supported], IRAP (Infosec Registered Assessors Program - Australia) - PROTECTED, ISMAP (Information system Security Management and Assessment Program - Japan), ISO/IEC 20000-1 (Service Management) - [Supported], ISO/IEC 22301 (Business Continuity Management) - [Supported], ISO/IEC 27001 (Information Security Management) - [Supported], ISO/IEC 27017 (Information Security for Cloud Services) - [Supported], ISO/IEC 27018 (Personally Identifiable Information in Public Clouds) - [Supported], ISO/IEC 27701 (Privacy Information Management) - [Supported], ISO/IEC 9001 (Quality Management) - [Supported], MTCS (Multi-Tier Cloud Security - Singapore), PCI DSS (Payment Card Industry Data Security Standard) - [Supported], SOC 1 (System and Organization Controls 1) - [Supported], SOC 2 (System and Organization Controls 2) - [Supported], SOC 3 (System and Organization Controls 3) - [Supported]

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: AU Gov Southeast - WGA, 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 - DXB, EU Sovereign Central - STR, EU Sovereign South - VLL, Frankfurt - FRA (A, G), Jeddah - JED, Jerusalem - MTZ, Johannesburg - JNB (A), Jovanovac - BEG, London - LHR (A, G), Madrid - MAD (G), Madrid 3 - ORF, Marseille - MRS, Milan - LIN,

Newport - CWL, Paris - CDG, Riyadh - RUH, Stockholm - ARN, Turin - NRQ, UK Gov South - LTN, UK Gov West - BRS, Zurich - ZRH (G)

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

North America: Ashburn - IAD (A, G), Chicago - ORD, Montreal - YUL (G), Phoenix - PHX (A, G), San Jose - SJC (A), Toronto - YYZ (A, G), US DoD East - RIC, US DoD North - PIA, US DoD West - TUS, US Gov East - LFI, US Gov West - LUF

* 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

APAC: Australia East (New South Wales) (Live), Central India (Pune) (Live), Japan East (Tokyo, Saitama) (Live), Japan West (Osaka) (Live), Southeast Asia (Singapore) (Live)

EMEA: France Central (Paris) (Live), Germany North (Berlin) (Live), Germany West Central (Frankfurt) (Live), Italy North (Milan) (Live), North Europe (Ireland) (Live), Sweden Central (Gävle) (Live), UAE North (Dubai) (Live), UK South (London) (Live), UK West (Cardiff) (Live)

LAD: Brazil South (Sao Paulo State) (Live)

North America: Canada Central (Toronto) (Live), Canada East (Quebec) (Live), Central US (Iowa) (Live), East US (Virginia) (Live), East US 2 (Virginia) (Live), South Central US (Texas) (Live), West US (California) (Live), West US 2 (Washington) (Live), West US 3 (Phoenix) (Live)

Google Cloud

APAC: Delhi (asia-south2) (Live), Melbourne (australia-southeast2) (Live), Mumbai (asia-south1) (Live), Osaka, Japan (asia-northeast2) (Live), Sydney (australia-southeast1) (Live), Tokyo (asia-northeast1) (Live)

EMEA: Frankfurt (europe-west3) (Live), London (europe-west2) (Live), Milan (europe-west8) (Live)

LAD: Osasco, São Paulo, Brazil (southamerica-east1) (Live)

North America: Council Bluffs, Iowa (us-central1) (Live), Montréal, Québec (northamerica-northeast1) (Live), N. Virginia (us-east4) (Live), Salt Lake City (us-west3) (Live), Toronto, Ontario (northamerica-northeast2) (Live)

AWS

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

Multicloud Updates

Reference Links

General

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

Service Specific

ADB FAQ
Autonomous AI Lakehouse on oracle.com
Azure documentation: Overview - Oracle Database@Azure
Certify Applications for Compatibility Between Autonomous AI Database Serverless and Dedicated
Cost Estimator
LAK Serverless Customer References
Oracle Autonomous AI Database Tools and Applications—Certifications, Compatibility, and Compliance
Oracle Database Cloud Migration
Oracle Database@Azure
Oracle Database@Azure Credits Service Descriptions
Oracle Database@Google Cloud Credits Service Descriptions
Oracle Database@Google Cloud documentation
Reference Architectures and Solution Playbooks for ADW
Regions, capabilities, interoperability and compliance posture for Oracle Database@ACE services
What's new in Autonomous AI Lakehouse Serverless
Why Oracle Autonomous AI Lakehouse over Snowflake

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.