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Autonomous AI Lakehouse on Dedicated Infrastructure Cloud@Customer

All-in-One Datasheet Produced by DB Services Explorer

Overview

Oracle Autonomous AI Lakehouse on Dedicated Infrastructure Cloud@Customer (LAK-C@C) 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, hosted on a dedicated Exadata - compute, storage, network and database service for a single tenant. Dedicated deployment provides for the highest levels of security isolation and governance. The customer has customizable operational policies for Autonomous Operations: workload placement, workload optimization, update scheduling, availability level, over-provisioning and peak usage.
Oracle Autonomous AI Lakehouse on Dedicated Infrastructure Cloud@Customer (LAK-ExaC@C) brings all the power and capabilities of Oracle Autonomous AI Database to your data center.

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, Database Consolidation Pool
Management Model	Fully Managed PaaS
Supported Cloud Environments	Cloud@Customer
SKUs for starting configuration	B95708 (ECPU) or B95710 (ECPU BYOL) Rack - X11M - B110635 (comes with 2 DB servers, 0 storage servers (of which at least three must be added)) 3* Storage Server - X11M - B110647 Backup storage -B91628
Oracle AI Database BYOL Support	BYOL Standard Edition (SE) and Enterprise Edition (EE)
DB Versions Supported	Oracle AI 26ai (Long-term release), Oracle 19c (Long-term release)
Hardware Infrastructure	Dedicated Engineered System

Usage Models

Recommended Workloads	Analytics

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	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) Spatial Text Vector
Certified Oracle Applications	Oracle APEX AI Application Generator Oracle Fusion Middleware - Data Access Only 14.1.2.0.0

Capacity

Configuration Options	Flexible shapes start with 2 database and 3 storage servers, and can be expanded up to 16 total servers in a single rack and up to 32 database and 64 storage servers across multiple racks to meet a variety of processing and storage requirements. Each database server provides 720 ECPUs, and each storage server provides 64 TB of database storage (no local backup). Elastic configuration example 2 and elastic configuration example 3 are examples of typical elastic configurations that provide the highest Flash Read IOPS and Flash Bandwidth in a single rack, respectively.
CPU Range	2 to 21504 ECPUs
Shapes	Exadata Cloud@Customer X11M - Elastic Configuration Example 1 ECPUs: 16 to 1520 Max DB TB: 192 Exadata Cloud@Customer X11M - Elastic Configuration Example 3 ECPUs: 16 to 1520 Max DB TB: 896 Exadata Cloud@Customer X11M - Elastic Configuration with Maximum Storage ECPUs: 16 to 1520 Max DB TB: 4096 Exadata Cloud@Customer X11M - Elastic Configuration Example 2

	ECPUs: 16 to 6080 Max DB TB: 512 Exadata Cloud@Customer X11M - Elastic Configuration with Maximum ECPU ECPUs: 16 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 SLO (with Autonomous Data Guard)
Oracle DB Maximum Availability Architecture medals (for OCI / Cloud@Customer deployments)	Silver, Gold, Platinum
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 (*)	Active Data Guard 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 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)

*Check service documentation for feature availability and limitations

Locations

Oracle Cloud Infrastructure

Customer Data Center

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	Yes

Additional Information

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

Reference Links

General

Multicloud Interconnect
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

ADB FAQ
ADB-D: Feature Parity Between Oracle Cloud and Exadata Cloud@Customer Deployments
Autonomous AI Database on Dedicated Exadata Infrastructure X11M Datasheet
Certify Applications for Compatibility Between Autonomous AI Database Serverless and Dedicated
Cost Estimator
LAK-ExaC@C Customer References
Oracle Autonomous AI Database Tools and Applications—Certifications, Compatibility, and Compliance
Oracle Database Cloud Migration
What's new in Autonomous AI Database - Dedicated
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.