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Autonomous Database Serverless in an Elastic Pool

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

Overview

Autonomous Elastic Pool is a configuration option for the ADW-S and ATP-S services, allowing you to create a collection of ABD instances, potentially hundreds or even thousands of them. The pool is a logical entity where you can consolidate your Autonomous Database instances in terms of their compute allocation. You can think of it as a "family plan" for your Autonomous databases. Instead of paying individually for each one of them, they are grouped into a logical pool in which you are charged for the compute usage of the entire pool.

Visit the DB Expert Services Taxonomy 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	Database Consolidation Pool
Management Model	Fully Managed PaaS
Supported Cloud Environments	Oracle Cloud Infrastructure, Oracle Database@Azure and Oracle Database@Google Cloud
SKUs for starting configuration	B95702 (ATP ECPU) or B95704 (ATP ECPU BYOL) and / or B95701 (ADW ECPU) or B95703 (ADW ECPU BYOL) B95706 (ATP storage) B95754 (ADW storage) B95754 (backup storage)
DB Versions Supported	Oracle 23ai (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 Mixed Workload (Transaction + Analytics) Transaction Processing (OLTP) Vector

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Recommended Data Models	Document Store (JSON) Document Store (XML) NoSQL Spatial Text Vector
Certified Oracle Applications	FLEXCUBE 14.7 JD Edwards EnterpriseOne Tools 9.2.6 and later Oracle APEX Oracle Fusion Middleware 14.1.2.0.0 Oracle Primavera P6 EPPM Version 23 PeopleSoft PeopleTools 8.62 and later RGBU-Xstore 18.0.1 and later Siebel Enterprise Server 25.2 and later

Capacity

Configuration Options	When you create an elastic pool you select a pool size from a predefined set of pool sizes. Pool size determines how much you pay for compute as well as how many ECPUs you can provision in a given pool. There are several terms to use when you work with elastic pools: Pool Leader: Is the Autonomous Database instance that creates an elastic pool. Pool Member: Is an Autonomous Database instance that is added to an elastic pool. Pool Size: Is a value that you set when you create an elastic pool. The pool size must be one of the available elastic pool shapes. Pool Capacity: The pool capacity is the maximum number of ECPUs that an elastic pool can use, and is four times (x4) the pool size. Pool Shape: A pool shape is one of the valid pool sizes that you select when you create an elastic pool. The pool shape must be one of: 128, 256, 512, 1024, 2048, or 4096 ECPUs.

CPU Range	128 to 16384 ECPUs
Shapes	ADB-S Elastic Pool 128 ECPUs: 128 to 512 Max TB per Database: 3100 ADB-S Elastic Pool 256 ECPUs: 256 to 1024 Max TB per Database: 3100 ADB-S Elastic Pool 512 ECPUs: 512 to 2048 Max TB per Database: 3100 ADB-S Elastic Pool 1024 ECPUs: 1024 to 4096 Max TB per Database: 3100 ADB-S Elastic Pool 2048 ECPUs: 2048 to 8192 Max TB per Database: 3100 ADB-S Elastic Pool 4096 ECPUs: 4096 to 16384 Max TB per Database: 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 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)

*Check service documentation for feature availability and limitations

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 - DBX, 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), Marseille - MRS, Milan - LIN, Newport - CWL, Paris - CDG, Riyadh - RUH, Stockholm - ARN, 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), 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, Japan East, Southeast Asia

EMEA: France Central, Germany West Central, Italy North, UK South, UK West

LAD: Brazil South

North America: Canada Central, Central US, East US, East US 2, West US

Google Cloud

APAC: asia-northeast1

EMEA: europe-west2, europe-west3

North America: us-east4

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	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

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

ADB-S Elastic Pool across workload types Customer References
Certify Applications for Compatibility Between Autonomous Database Serverless and Dedicated
Cost Estimator
How to Achieve up to 87% Compute Cost Savings with Elastic Resource Pools on Autonomous Database
Oracle Autonomous Database Tools and Applications—Certifications, Compatibility, and Compliance
Oracle Database Cloud Migration
Use and Manage Elastic Resource Pools on Autonomous Database

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.