



# MySQL Database Service with HeatWave

All-in-One Datasheet Produced by DBExpert

## Overview

MySQL Database Service is the only MySQL cloud service with an integrated, high performance, in-memory query accelerator—HeatWave. It is the only service that enables customers to run OLTP and OLAP workloads directly from their MySQL database. MySQL Database Service with HeatWave is:

5400x Faster than Amazon RDS  
 1400x Faster than Amazon Aurora  
 6.5x Faster than Amazon Redshift  
 7x Faster than Amazon Snowflake

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                   | Single Database                                                        |
| Management Model                | Fully Managed PaaS                                                     |
| Supported Cloud Environments    | Oracle Cloud Infrastructure                                            |
| SKUs for starting configuration | B92023 node per hour<br>B96625 (DB storage)<br>B92483 (backup storage) |
| DB Versions Supported           | MySQL 8.4.x, MySQL 8.0.x                                               |
| Hardware Infrastructure         | Dedicated General Purpose                                              |

## Usage Models

|                         |                                                                                                                                                                                |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recommended Workloads   | Analytics<br>Data Lake<br>Data Science / Machine Learning<br>Data Warehouse / Data Mart<br>Mixed Workload (Transaction + Analytics)<br>Transaction Processing (OLTP)<br>Vector |
| Recommended Data Models | Document Store (JSON)<br>NoSQL<br>Spatial<br>Text<br>Vector                                                                                                                    |

|                               |             |
|-------------------------------|-------------|
| Certified Oracle Applications | Oracle APEX |
|-------------------------------|-------------|

## Capacity

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Configuration Options</b> | <p>A shape is a template that determines the number of CPUs, amount of memory, and other resources that are allocated to a DB system, a HeatWave cluster node, or a read replica.</p> <p>Both the DB system and the HeatWave cluster have their own shape. Read replicas can have the same or different shape as compared to the DB system.</p> <p>Each shape for the DB system or read replica is associated with a list of default configurations. The configuration contains a collection of variables that define the operations of the MySQL instance. There are two default configurations for most of the shapes:</p> <p>Standalone: Optimized for standalone DB systems and read replicas.</p> <p>HA: Optimized for highly available DB systems.</p> |
| <b>CPU Range</b>             | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Shapes</b>                | <p>HeatWave.32GB (One to 16 HeatWave nodes with either one MySQL base node or a 3-node MySQL HA Cluster)</p> <p>ECPU: 1 to 16</p> <p>Max DB TB: 128</p> <p>HeatWave.512GB (One to 64 HeatWave nodes with either one MySQL base node or a 3-node MySQL HA Cluster)</p> <p>ECPU: 16 to 1024</p> <p>Max DB TB: 128</p>                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>CPU scaling</b>           | Online                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Storage scaling</b>       | Online, Auto scale up                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

|                       |                                                                                                                                  |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Max IOPs</b>       | The Higher Performance Block Volume provides a linear performance scale of 75 IOPS/GB up to a maximum of 50,000 IOPS per volume. |
| <b>Max Throughput</b> | Throughput scales at the rate 600 KB/s/GB up to a maximum of 680 MB/s per volume.                                                |
| <b>Max Memory</b>     | 512 GB (HeatWave node), 1024 GB (DB System and Read Replica)                                                                     |

## Availability

|                                                                                                  |                                                                                                                     |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>Nines of availability (may require configuration)</b>                                         | 99.99 SLA with 3-node MySQL HA Cluster in more than one AD. 99.95 SLA if one AD. SLO of 99.9 with Standalone MySQL. |
| <b>Oracle DB Maximum Availability Architecture medals (for OCI / Cloud@Customer deployments)</b> | Not MAA certified                                                                                                   |
| <b>Automated backups max retention</b>                                                           | up to 35 days                                                                                                       |
| <b>Long-term backup retention (up to 10 years)</b>                                               | Yes                                                                                                                 |

## Functionality Included

|                                                                    |                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Included Oracle DB Options for license-included service (*)</b> | N/A                                                                                                                                                                                                                                                    |
| <b>Included Oracle EM Packs for license-included service (*)</b>   | N/A                                                                                                                                                                                                                                                    |
| <b>Free Add-Ons (no extra licensing required)</b>                  | Eligible target for loading data using Oracle Data Integrator, available on Cloud Marketplace<br>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

**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), 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

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

## Additional Information

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

## Reference Links

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### General

[Oracle PaaS and IaaS Universal Credits Service Descriptions](#)

[Service Level Objectives](#)

[Oracle Cloud Infrastructure Compliance](#)

[BYOL FAQ](#)

[OCI Locations and Status](#)

### Service Specific

[MySQL Database Service](#)

[MySQL HeatWave Customer References](#)

[MySQL Overview](#)