

OneDB 2.0 Datasheet



▶ Introduction

Across every industry, companies are rethinking value chains and reimagining business processes to meet consumer demands and remain competitive. As a result, to change and adapt via digital transformation is becoming increasingly important for future success.

HCL OneDB is a cloud native enterprise database that can accelerate digital transformation within your organization. OneDB offers the versatility, reliability, and ease-of-use needed to address today's data management and application development challenges.

Cloud native technologies – containers, service meshes, microservices, immutable infrastructure, and declarative APIs – empower organizations to build and run scalable applications in modern, dynamic environments such as public, private, and hybrid clouds, enabling loosely coupled systems that are resilient, manageable, and observable. Combined with robust automation, the software allows engineers to make high-impact changes frequently and predictably.

Cloud native application development projects require a cloud native database. HCL OneDB delivers high availability and scalability to achieve the performance users expect, seamlessly and silently supporting the application layer in the background.

An always accessible, bullet-proof foundation at the core of your cloud native solution reduces operational risk, minimizes performance limitations, increases data security, and better positions you to succeed in staying ahead of rapidly evolving data demands. Does your company have a sound strategy to manage 21st century data proliferation and support cloud native app development in today's evolving digital landscape?

Product Overview

Cloud Native Advantage:

The HCL OneDB enterprise-grade cloud native database launches new capabilities that make deploying, scaling, and managing a cloud native database easy within a Kubernetes environment. Because of its new cloud native capabilities and transactional processing speed, reliability, and flexibility, HCL OneDB is rapidly being adopted within HCL Software's portfolio as the best choice to ensure a quick and effortless cloud native deployment.

Reliability:

HCL OneDB's cloud native scalability and high availability (HA) provides the performance and resiliency enterprises demand. 'High Availability' (HA) ensures the uptime required for enterprise, mission-critical applications to ensure business continuity. To support complex native scale-out capabilities, OneDB leverages our Kubernetes operator and orchestration to add and remove OneDB instances based on workload and configuration.

Versatility:

HCL OneDB runs any cloud - private, public, or hybrid - with no vendor lock-in. Its capability translates equally well for on prem, edge-to-cloud, and even embedded/IoT solutions. OneDB's multi-model database encompasses multiple disparate data models within a single, streamlined backend. I.e., Structured, unstructured (i.e., document) timeseries (i.e., sensor), geo-spatial, and user-defined custom data models, including key value, can all reside harmoniously within the OneDB platform, and more importantly, are persisted in their native format. It enables you to easily combine different database model types into one integrated database engine. Companies no longer need to buy, configure, and maintain multiple databases for multiple data store models because of the robust convergence of capabilities offered by OneDB. This helps significantly reduce the total cost of ownership (TCO) and architectural/operational complexity that binds unwitting hostages via polyglot persistence.

Transactional speed:

Speed and performance are consistently top considerations when choosing a database to power mission critical applications. HCL OneDB rapidly delivers the throughput (TPS/TPM), response time, and cost per transaction modern applications require.

Ease of Use & Administration:

Included in the OneDB platform is an advanced database management layer (OneDB Explore) which allows you to configure an engine that requires little to no maintenance or DBA resources. It provides a modern command console complete with a customizable dashboard to help novice DBAs, Developers, or DevOps team members to efficiently visualize, monitor, and manage all server instances simultaneously. This performance management module helps track key performance indicators (KPI's) and related data points over time. In addition, it incorporates tools such as a task scheduler and a customizable alerting system, which are all accessible and compatible via desktop, laptop, or mobile devices.

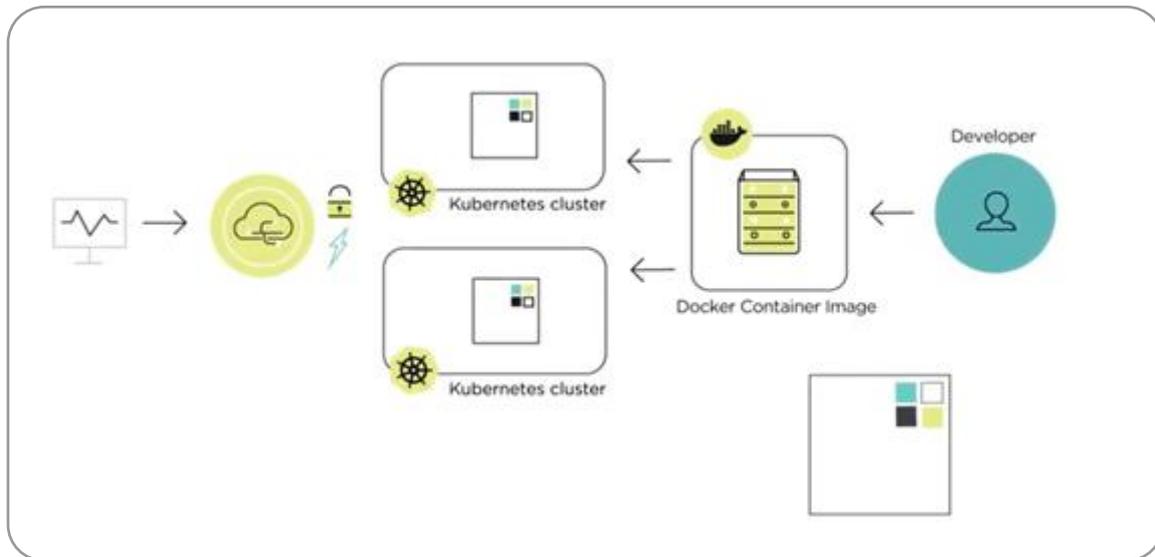
Easy Deployment:

HCL OneDB can be deployed as Docker containers with Kubernetes orchestration in just minutes. As a result, developers and agile teams can begin development in a matter of minutes as opposed to days or weeks, which yields significant benefits such as reduced time to value, reduced operational costs, and reduced output hours of valuable developer time.

Cloud Native Experience with HCL SoFy:

Wouldn't it be great to have a catalog of ready-to-use, enterprise-grade software components with a tool to easily deploy them to a cloud native environment? HCL SoFy allows you to discover cloud native enterprise products and APIs, along with building your custom solutions by using products like HCL OneDB.

HCL SoFy is the foundational cloud native experience platform that allows clients to deploy OneDB on their cloud of choice and scale to enterprise needs. Customers can experience OneDB and other HCL Software products by browsing through the catalog of products, modules, and demo packs, then deploying them in a matter of minutes on the SoFy sandbox or a local environment. Try out new features and functions to find what best matches your business needs.



To learn more about deploying HCL OneDB on SoFy, visit our [SOFY website](#).

Summary

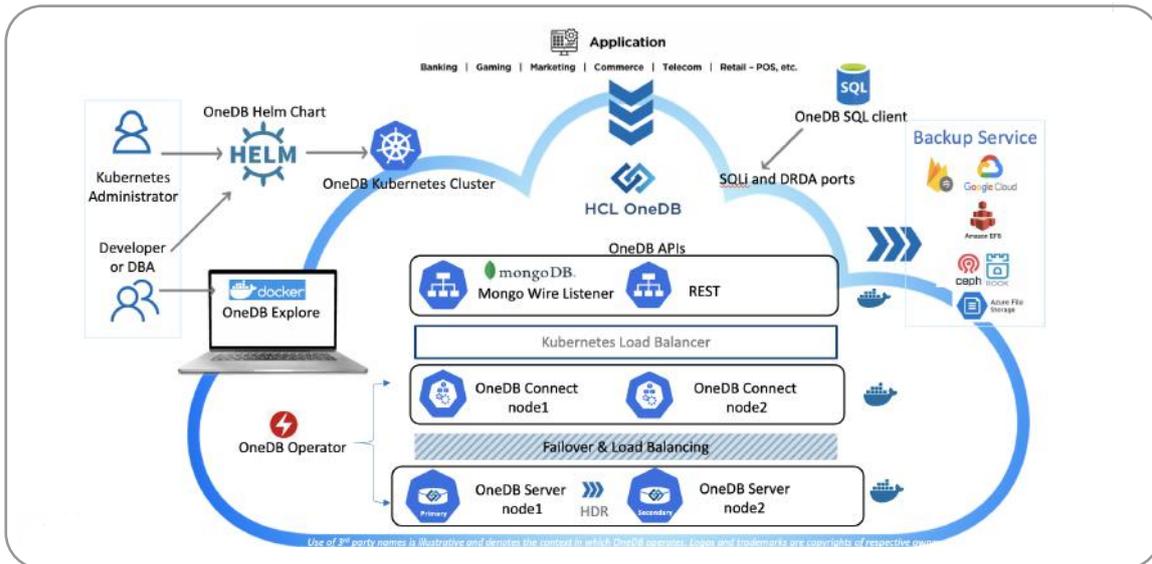
Whether you are ready to build brand new cloud-native apps, rehost applications with "lift & shift," re-platform applications to take better advantage of the destination platform, or refactor to microservices one step at a time, HCL OneDB has you covered with its cloud-native high availability, scalability, and ease of use.

Product Architecture Overview

The HCL OneDB database is available on Linux x86-64, AIX, and Windows-64 platforms. The complete solution includes these components:

- HCL OneDB Server
- HCL OneDB JDBC - (driver)
- HCL OneDB Client SDK
- HCL OneDB Connect
- HCL OneDB APIs
- HCL OneDB Explore

OneDB Cloud-Native Database Reference Architecture.



Key Capabilities

OneDB is feature-rich and equally able to serve as the foundation for cloud native and cloud solutions, embedded applications, and IoT or edge solutions. Key capabilities include:

Cloud-Native Choice

Deploy and scale on one or many clouds via Docker containers with Kubernetes orchestration, all within minutes. Complete flexibility in cloud infrastructure choice provides freedom from vendor lock-in to any specific cloud provider. Helm charts via HCL SoFy are provided for production deployment of OneDB or any Kubernetes environment (GKS, AKS, EKS, OpenShift).

High Availability & Scalability

Delivers on the performance and resiliency that enterprises demand. In addition, auto-scaling adjusts to seasonal business requirements and optimizes costs.

Kubernetes orchestrated Backup & Restore

Kubernetes operator-enabled backup & restore solution uses Kubernetes managed persistent storage or cloud provider managed storage. Database backups to persistent volume using an NFS operator or cloud provider's native storage, with the last three backups retained.

Data Availability

A comprehensive list of architectures for replication and sharing easily allows scaling and disaster recovery.

ACID Compliant

OneDB is fully ACID compliant, including support for distributed transactions. ACID (atomicity, consistency, isolation, and durability) compliance guarantees data transactions are valid and secure even across distributed database systems.

Data Models

Multi-model analytics drive both OLTP and OLAP workloads across multiple data stores on a single platform. Combine NoSQL (JSON/BSON), SQL, TimeSeries, and Spatial data together in the same database, or in a single query to power your business into the future.

Data Access

Application developers have fast access to their data through REST, JDBC, .NET, or MongoDB APIs and native SQL access via Opensource drivers for OneDB in languages such as Python and NodeJS.

Data Volume

Ingest and store streaming terabytes of sensor data and other information necessary for IoT solutions, allowing for edge analytics and cloud capacity.

Data Security

Industry-standard encryption using OpenSSL is available in all editions so you can ensure that your data is secure at rest and in motion.

Delivering Edge to Cloud Analytics

Small footprint, silent installer, and self-healing capabilities make HCL OneDB ideal for embedding into devices. Seamless analytics populate from the edge to the cloud.

Commitment & Futureproofing:

HCL OneDB is backed by a profitable \$10B company, dedicated to delivering the best solutions in the market. HCL Technologies is committed to R&D and ongoing evolution for the OneDB DBMS solution.

HCL OneDB Professional Services

The HCL OneDB Professional Services team can help implement digital transformation with OneDB as your underlying data platform.

With deep OneDB expertise accessible on-demand, you can rest easy knowing help is always available. Reduce risk and cost as you move to cloud native with help from our Kubernetes and product experts. Migration guidance and services are available; execute a seamless migration from on-prem to cloud through expert assistance. Ongoing database administration and maintenance services are included as part of our premium advisory service packages.

To learn more about HCL OneDB, visit the [HCL OneDB website](#).



About HCL Software

HCL Software is a division of HCL Technologies (HCL) that operates its primary software business. It develops, markets, sells, and supports over 20 product families in the areas of DevOps, Automation, Digital Solutions, Data Management, and Mainframes. HCL Software has offices and labs around the world to serve thousands of customers. Its mission is to drive ultimate customer success with their IT investments through relentless innovation of its products. For more information, please visit www.hcltechsw.com.