

Hyperconvergence for Oracle

Oracle Database and Real Application Clusters



Independent scaling



Always-on storage efficiency



Predictable performance



Application and database
availability

Designed for databases

Oracle Databases and Real Application Clusters (RAC) are the core of many enterprise applications, including online transaction processing (OLTP), data warehousing, business intelligence, report generation, and online analytical processing (OLAP). As the amount and types of data increase, you need flexible and scalable systems with predictable performance to address database sprawl. By deploying Cisco HyperFlex™ systems with all-flash nodes, you can run your Oracle Database and RAC deployments on an agile platform that delivers insight in less time and at less cost.

Enterprise application-ready solution

We have the right solution for your Oracle databases and the applications that use them. The platform consists of Cisco HyperFlex systems with all-flash nodes, Oracle Database 12c or Oracle RAC, an integrated network fabric, powerful data optimization, and unified management. Faster to deploy, simpler to manage, and easier to scale than first-generation products, Cisco HyperFlex systems enable you to bring the full power of hyperconvergence to power enterprise databases and applications.

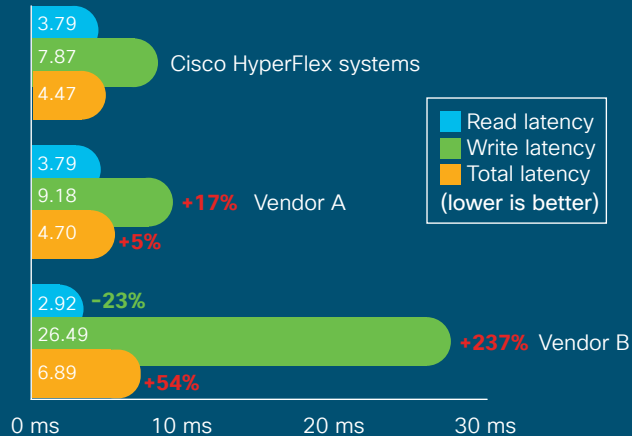
Cisco HyperFlex systems with Oracle Database and RAC

- Closely match the needs of databases and applications
- Reduce storage footprint
- Optimize storage costs
- Deliver predictable database performance
- Keep enterprise applications and databases available

Performance matters

Oracle workload performance comparison executed by ESG and reported in [Mission-Critical Workload Performance Testing of Different Hyperconverged Approaches on the Cisco Unified Computing System™ Platform \(Cisco UCS®\)](#).

Cisco HyperFlex systems	421,811	Aggregate I/O operations per second (IOPS) (higher is better)
Vendor A	251,303	
Vendor B	238,538	



Easy to deploy and manage

Cisco HyperFlex nodes are shipped with software installed so your cluster can be up and running in an hour or less. Cisco Intersight™ management can help you deploy, manage, and monitor your cluster regardless of where it is installed. Full-stack upgrades help you keep your cluster up to date with firmware, hypervisor, and data platform software updated synchronously. Integrated Cisco® Technical Assistance Center (TAC) connectivity allows us to detect any failures and automatically initiate repair tickets.

Scalable

Independent resource scaling helps you closely match the resource needs of your Oracle environments. You can start small and scale to support hundreds or thousands of users and petabytes of data. The entire cluster's disk drives are combined into a single distributed, object-based data store. As you add nodes to the cluster to expand capacity, data is automatically rebalanced across shared resources, providing performance consistency and lower I/O operations per second (IOPS) than other hyperconverged solutions (see sidebar). Using thin provisioning, you can size your data store larger than the cluster and expand the solution as databases grow.

Efficient data storage infrastructure

You can reduce your data footprint and optimize storage infrastructure costs. Deduplication and compression are built in to make efficient use of

storage capacity. And unlike solutions from other vendors, you don't have to disable these features to deliver the high performance that databases and enterprise applications demand.

Proven and predictable performance

All-flash configurations and high network throughput support consistent performance even to large databases. The distributed architecture allows every virtual machine access to high IOPS and to use the capacity of the entire cluster, regardless of the physical location of the virtual machine. This capability is important for virtual machines running Oracle Database or RAC because they frequently need higher performance to handle bursts of application or user activity.

High data availability

Your enterprise applications and databases need to run all the time. The innovative configuration of Cisco HyperFlex systems supports database mirroring and is resilient to failure. For example, systems configured with five nodes or more can keep running even if all drives fail on two nodes. In addition, built-in snapshots are available and are integrated with backup solutions to support disaster-recovery operations.

Next steps

Read the [Cisco HyperFlex All-Flash Systems for Oracle Database Deployments](#) white paper and the [Cisco HyperFlex All-Flash Systems for Oracle Real Application Clusters Reference Architecture](#).