HPE GreenLake

Solution brief

Accelerate your Oracle RAC deployment

HPE Alletra dHCI is an intelligent platform with the flexibility of a converged infrastructure and the simplicity of an HCI. It disaggregates compute and storage and integrates hyperconverged control to offer enterprises simple infrastructure management on a flexible architecture.

Built with one of the world's most secure servers, HPE ProLiant, and the self-managing flash storage of HPE Nimble Storage or HPE Alletra 6000, this platform provides the flexibility to scale compute and storage independently. It facilitates unpredictable growth and provides the data resiliency and performance needed for business-critical apps.

Combine HPE Alletra disaggregated HCI (dHCI) with Oracle® Real Application Cluster (RAC) for a highly available, resilient, and scalable clustered solution that enables nondisruptive additions of storage or compute to meet the demand.

Oracle RACs

Today's enterprises face unprecedented data growth at an extremely fast pace. Analyzing that data and understanding the latest trends are daunting tasks that present extreme complexities and make heavy demands on computing power. Oracle RAC solves these problems with linear horizontal scalability without application code change. Oracle RAC was designed to run a single Oracle database across multiple servers to help ensure application-level high availability while accessing shared storage. When an Oracle RAC instance has a failover or outage, end-user sessions and applications are not impacted. Oracle RAC customers require high performance and application availability along with strict service-level agreements (SLAs).

With server virtualization becoming the default operating model for enterprise data centers these days, there is a huge demand for hyperconverged infrastructure (HCI). This demand has led to a convergence of traditional three-tier architecture, with server virtualization, software-defined storage, and virtualized networking coming together.

Enterprise Oracle RAC solutions require extensible resources, easier manageability, low latency, high availability, and increased system performance.

Introducing HPE Alletra dHCI

HPE Alletra dHCI delivers the simplicity of hyperconverged architecture without the limitations of a traditional HCI system. Disaggregated HCI (dHCI) takes hyperconverged architecture further by extending the simplicity and ease of use that you expect from HCI to all your apps. HPE Alletra dHCI delivers a hyperconverged experience that includes business-critical speed and resiliency, as well as independent scaling of compute and storage.

Why HPE Alletra dHCI for Oracle RAC?

The very essence of Oracle RAC is to scale out your processes and performance. The addition of VMs can easily be implemented through VMware® technology to scale out database compute. To help align scale-out with an as-a-service model, HPE Alletra dHCI is the right choice because of its ability to independently scale out storage and compute. Also, you can leverage features such as volume collections that work well with the concept of Oracle RAC Automatic Storage Management (ASM) disk groups.

HPE Alletra dHCI is a perfect fit with the trends of consolidating Oracle VMs into single clusters and better use of Oracle core-based licensing. In today's world, data mobility and data protection in a hybrid cloud environment are essential. Customers can take advantage of HPE StoreOnce Virtual Storage Appliance (VSA) for data protection on-premises as well as in the public cloud.

Solution benefits

- **No performance degradation**—Achieve better performance by using flash-optimized storage to handle Oracle RAC that requires high performance, sub-ms of low latency, and quality of service (QoS)
- **Resiliency is no contest**—Achieve

99.9999%

measured data availability

- **Independent scaling**—Add compute or storage on demand
- **Zero tuning**—Data services are tuned out of the box
- **One of the best data efficiencies**—Smaller data footprint
- **Start fast and stay current**—Deploy fast and upgrade easily

[1] HPE Alletra dHCI

[2] "Uptime guarantees that deliver," May 2021

Looking ahead, HPE Alletra dHCI makes managing virtualized environments easier, simplifies deployment and management of virtualized environments, delivers fast application performance, helps ensure that apps are always on, and enables increased resource efficiency. No wonder today's enterprises appreciate HPE Alletra dHCI for its power, simplicity, and efficiency to run critical enterprise workloads such as Oracle RAC in a VMware environment.

More details on the benefits of running Oracle RAC on HPE Alletra dHCI:

- **No performance degradation**—HPE Alletra dHCI delivers consistent sub-ms latency at scale.[1]
- **Resiliency is no contest**—HPE Alletra dHCI provides guaranteed 99.9999% data availability, the kind of reliability that traditional HCI just cannot touch.[2]
- **Independent scaling**—The independent scaling capability of HPE Alletra dHCI enables you to add more compute or storage when required, without hassle—helping eliminate overprovisioning and wasting zero resources. It works seamlessly with Oracle ASM and standard file systems. In traditional HCI, added storage requires added compute. With HPE Alletra dHCI, this is not the case. This flexibility lends itself to Oracle's changing storage needs.
- **Zero tuning**—To optimize data storage with HCI, you must constantly tune your balance between effective capacity and performance—for every VM. It is an endless, time-consuming series of trade-offs. With HPE Alletra dHCI, data services are optimized right out of the box.
- **One of the best data efficiencies**—Store more data in the same capacity (or less) on HPE Alletra dHCI than on any competitive offering.
- **Start fast and stay current**—Stand up full-stack VMware infrastructure at scale quickly, using auto-discovery and policy-driven automation. Then keep your infrastructure up to date with seamless one-click upgrades.

In summary

Deploying Oracle RAC with HPE Alletra dHCI can provide faster deployment time, 6-nines availability, and support resources for faster performance.

Hewlett Packard Enterprise has a long history of deploying Oracle solutions. Its experience, as well as its large customer install base, testifies that HPE has the right infrastructure, expertise, and solution to meet the demands of your Oracle RAC deployment.

This solution can be purchased from HPE. Talk to your HPE sales representative today.

Learn more at

HPE Alletra dHCI

HPE storage for Oracle Databases

Make the right purchase decision. Contact our presales specialists.

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