Overview

HPE Alletra dHCI

HPE Alletra dHCI is an intelligent platform with the flexibility of converged and the simplicity of HCI. It disaggregates compute and storage and integrates hyperconverged control to give enterprises simple infrastructure management on a flexible architecture. Built with the world's most secure server, HPE ProLiant, and the self-managing flash storage of HPE Nimble Storage, this platform provides the flexibility to scale compute and storage independently for unpredictable growth and the data resiliency and performance needed for business-critical apps.

Powered by HPE InfoSight, this platform is intelligently simple, absolutely resilient, and efficiently scalable.

Intelligently simple with native, full-stack intelligence from storage to VMs and policy-based automation for virtualized environments. Features include a fast, self-service experience include hyperconverged control with simple setup and auto-discovery for the entire cluster via VMware vCenter. All data services integrated with VMware vSphere and VMware Virtual Volumes for a native VM experience. Also included are what-if simulations that eliminate guesswork when consolidating new applications, as well as app-aware recommendations for self-optimizing performance and resources.

Absolutely resilient and ready for demanding apps on a platform designed for 99.9999% availability (HPE Nimble Storage) and sub-ms of low-latency at consistent, high performance. Features include data-centric visibility that extends across the infrastructure and across every VM. Performance bottlenecks are diagnosed with root cause from storage to VMs identified easily. Advanced data services, like QoS and synchronous replication, ensure applications stay on and are always fast.

Efficiently scalable to eliminate overprovisioning and lower TCO compared to competitive platforms. Features include the ability to independently scale compute and storage non-disruptively with industry-leading data efficiency guaranteed.

With HPE Alletra dHCI, enterprises can run faster with rack-to-apps in less than 15 minutes, end the fire-fighting with predictive analytics delivering 99.9999% data availability by HPE Nimble Storage, and optimize everything with higher productivity and maximum resource efficiency.

HPE Alletra dHCI

Overview

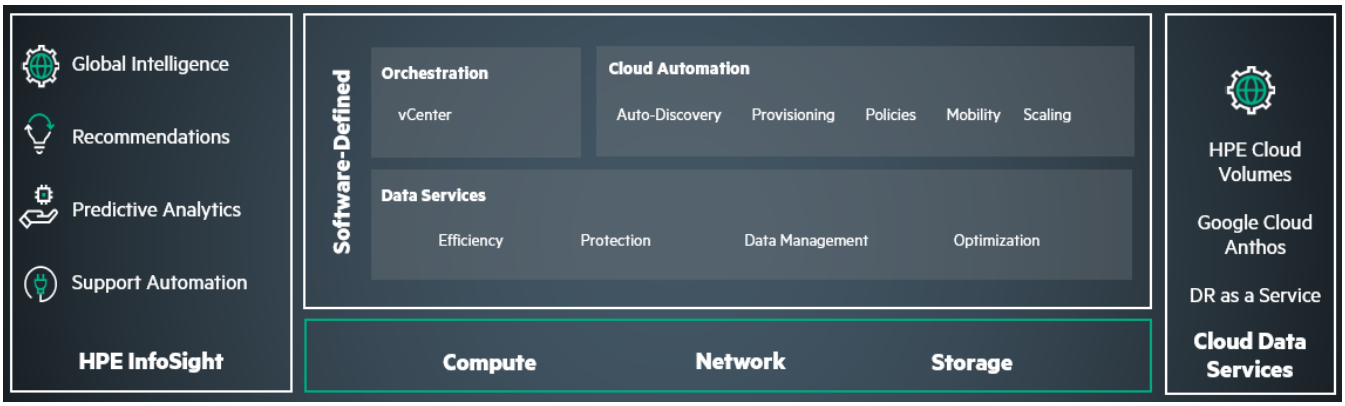
At a Glance

Hyperconverged infrastructure has revolutionized IT, delivering an experience that radically simplifies how infrastructure is managed, deployed, and scaled. It's an architecture ideal for workloads with predictable growth as compute and storage scale together.

HPE Alletra dHCI extends the hyperconverged experience to workloads with unpredictable growth, allowing independent scaling of compute and storage. This gives enterprises the flexibility of converged and the simplicity of HCI – accelerating time-to-market on an architecture built for the unpredictable.

Hyperconverged control collapses storage and compute silos and all data services can be managed exclusively in VMware vCenter.
Resilient design center for 99.9999% availability (with HPE Nimble Storage) with no single point of failure and advanced data integrity to tolerate three simultaneous dive failures.
Low-latency performance as low as 200 microseconds data response with automatic QoS to ensure fast performance for every app.

Industry-leading data efficiency with advanced data reduction and a modern OS providing up to 21x data reduction.



dHCI Automation Software features

What's new?

- Support for HPE Alletra 5000 including Alletra 5010H for customers desiring more affordable, lower capacity storage
- Support for VMware ESXi 8.0 Software
- Support for the AMD-based HPE ProLiant DL325 Gen11, HPE ProLiant DL365 Gen11 and HPE ProLiant DL385 Gen11 server models.
- Support for the Intel-based HPE ProLiant DL360 Gen11, HPE ProLiant DL380 Gen11 server models.
- HPE Alletra dHCI now supports Rack integration of specific configurations via pre-configured Build-to-Order SKUs.
- HPE Alletra dHCI has simplified lifecycle management with one-click, unified software upgrades for server firmware, hypervisor and storage software.
- Customers with existing HPE ProLiant servers can extend the asset life by converting servers into solutions with HPE Alletra dHCI , gaining automated, unified management for VMs on-prem and across various cloud environment(s).

Standard Features

HPE Alletra dHCI setup software

Deploying the dHCI solution can be accomplished by going through the following simple steps with the help of the dHCI setup software:

- Physical infrastructure layout
- Completion of the configuration Worksheet
- Network configuration
- Initialize and configure the HPE Nimble storage
- Deploy a new vCenter (or) Use existing vCenter
- Add HPE ProLiant to the HPE Alletra dHCI stack
- Create VMFS and/or VVOL datastores

vCenter plugin

After the deployment completes successfully, you can perform different task from the vCenter plugin for HPE Alletra dHCI.

This section highlights the task you can perform using the dHCI vCenter plugin.

Adding a new server to dHCI can be accomplished by the following quick steps:

- Rack the server and perform the cabling
- Review section Ethernet Switch Configuration
- Configure the switch and assign the correct VLAN
- Assign IP address to ESXi management interface
- Add server in vSphere cluster using vCenter plugin

In the background, dHCI software automates tasks such as the configuration of vSwitch, iSCSI software initiator and VMDK binding during deployment saving additional cycles for administrators.

The HPE Alletra dHCI plugin can also be utilized to create and grow VMFS and/or VVOL based datastores that are mapped to volumes on the array configured as part of dHCI deployment. Additional operations such as clones or snapshots on the datastores can also be performed directly from the HPE Alletra dHCI plugin on to vCenter.

For additional information related to managing VMFS/VVOL based datastores on HPE Alletra dHCI, please refer to the VMware integration guide available at infosight.hpe.com.

HPE Alletra dHCI is natively integrated with HPE InfoSight

The industry's most advanced AI for infrastructure. Through cloud-based machine learning, HPE InfoSight predicts and prevents problems from storage to VMs and takes the guesswork out of managing infrastructure. In the HPE InfoSight web portal for HPE Alletra dHCI, VM admins are provided complete, VM-centric visibility and full-stack analytics into their VM environment.

These analytics diagnose performance bottlenecks and root cause issues in the storage, the host, and even the network with recommendations that eliminate noisy-neighbor VMs, repurpose unused VMs, and self-optimize performance and resources.

Standard Features

- For more information about HPE Nimble Storage: **https://www.hpe.com/us/en/storage/nimble.html**
- For more information about HPE Alletra 6000 Storage: **https://www.hpe.com/psnow/doc/a50002567enw?jumpid=in_lit-psnow-red**
- For more information about HPE Alletra 5000 Storage: **https://www.hpe.com/psnow/doc/a50004287enw.html?jumpid=in_pdp-psnow-qs**
- For more information about HPE InfoSight: **https://www.hpe.com/us/en/solutions/infosight.html**
- For more information about HPE ProLiant DL360: **https://h20195.www2.hpe.com/v2/getpdf.aspx/a00008159enus.pdf?v**
- For more information about HPE ProLiant DL380: **https://h20195.www2.hpe.com/v2/getpdf.aspx/a00008180ENUS.pdf**
- For more information about HPE ProLiant DL325: **https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00073548enw**
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- For more information about HPE ProLiant DL560: **https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00008181enw**
- For more information about HPE M-Series switches: **https://buy.hpe.com/us/en/storage/storage-networking/m-series-switches/c/421513**
- For more information about HPE Aruba switches: **https://www.arubanetworks.com/products/networking/switches/**
- For more information about HPE Flex Fabric switches: **https://h50146.www5.hpe.com/products/networking/datasheet/HPE_5710_Switch_Series.pdf**

For additional information, please refer to the HPE Alletra dHCI deployment guide.

Service and Support

HPE Pointnext - Service and Support

Get the most from your HPE Products. Get the expertise you need at every step of your IT journey with **HPE Pointnext Services**. We help you lower your risks and overall costs using automation and methodologies that have been tested and refined by HPE experts through thousands of deployments globally. HPE Pointnext **Advisory Services**, focus on your business outcomes and goals, partnering with you to design your transformation and build a roadmap tuned to your unique challenges. Our **Professional** and **Operational Services** can be leveraged to speed up time-to-production, boost performance and accelerate your business. HPE Pointnext specializes in flawless and on-time implementation, on-budget execution, and creative configurations that get the most out of software and hardware alike.

Consume IT on your terms

HPE GreenLake brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

Managed services to run your IT operations

HPE GreenLake Management Services provides services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.

Recommended Services

HPE Pointnext Tech Care.

HPE Pointnext Tech Care is the new operational service experience for HPE products. Tech Care goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Pointnext Tech Care has been reimagined from the ground up to support a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Pointnext **https://www.hpe.com/services/techcare**

HPE Pointnext Complete Care

HPE Pointnext Complete Care is a modular, edge-to-cloud IT environment service that provides a holistic approach to optimizing your entire IT environment and achieving agreed upon IT outcomes and business goals through a personalized and customer-centric experience. All delivered by an assigned team of HPE Pointnext Services experts. HPE Pointnext Complete Care provides:

- A complete coverage approach -- edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

https://www.hpe.com/services/completecare

Service and Support

HPE Alletra dHCI Startup Services

Provide a choice of installation options to meet your business needs and budget.

There are four delivery services to choose from:

HPE Alletra dHCI Installation and Startup Service – HA124A1#5WX

This is a standardized installation offering that focuses on getting your HPE Alletra dHCI Greenfield solution from delivery to being ready for application use and data migration. This optional deployment service provides HPE onsite and remote assistance from racking and installation of the hardware to the deployment of the dHCI software, to configuring the datastores. The service includes the installation of a single array (including up to six shelves), along with up to two (2) HPE ProLiant servers and two (2) top-of-rack network switches. It also enables the networking, SAN, management, and data functions. This service may not be used to deploy a dHCI Brownfield order. This service can be extended to include the deployment of additional server components beyond the core configuration listed above.

HPE Alletra dHCI Expansion Deployment Service – HA124A1#V0T

This service deploys your HPE Alletra dHCI solution with a customized approach allowing you to pick and choose which new components you want deployed into your existing environment of switches or servers. The service provides for both the installation of new hardware and the configuration and deployment of the dHCI solution into your pre-existing environment. The basic installation may include a single array (including up to six shelves), along with two HPE ProLiant servers and two top-of-rack network switches. This service can be further extended beyond the basic deployment and configuration to encompass additional new servers, the software and operating system reloading of pre-existing servers, or the configuration or reconfiguration of pre-existing network switches through additional services as listed in the ordering information section.

HPE Alletra dHCI Hardware Installation Service – HP7E2A1

This service provides the hardware racking, inter-connect cabling, and power testing for a single array (including up to six (6) shelves), along with up to two (2) HPE ProLiant servers and two (2) top-of-rack network switch components in your HPE Alletra dHCI solution (Greenfield and Brownfield configurations). This service does not include any software configuration, but interconnect cabling to the other dHCI components will be completed. This service should be quoted for customers who want assistance with the heavy lifting and hardware racking but prefer to perform the software configuration work on their own. This service can be extended to include the hardware installation of additional servers.

HPE dHCI Server Add-on Installation and Startup Service – HA124A1#V08

This service provides the deployment of additional servers into your existing dHCI environment including hardware installation to server and software configuration and datastore access. This service should not be quoted for new Greenfield or Brownfield dHCI quotes. This service is for server add-on only. This service cannot be extended.

HPE Installation Comm Svrs Hourly Service - HB983A1

This service is intended as an add-on service to the dHCI deployment service. This allows deployment services to expand beyond the base two (2) servers included in the HA124A1#5WX or HA124A1#V0T deployment services. A quantity of one (1) HB983A1 service should be added to the quote for each server over two (2) in the order to install the additional services.

HPE Storage Servers Install Hourly Service - H29BSA

This service is intended as an add-on service to the dHCI deployment service. This allows for the re-imaging of customer pre-existing servers expand beyond the base two (2) servers included in the HA124A1#5WX or HA124A1#V0T deployment services. A quantity of one (1) H29BSA service should be added to the quote for each server over two (2) in the order where server re-imaging on customer site is required.

Service and Support

Additional Services Available

HPE Tier 1 Storage Array Upgrade service – HA124A1#5MS

On-site installation of upgrades kits or for an existing HPE Alletra 6000 or HPE Nimble Storage array deployed within your dHCI configuration. This service is for in-family upgrades only and cannot be quoted to upgrade an existing array to the next generation of storage. This service can be used to upgrade components within an existing Greenfield or Brownfield dHCI storage configuration.

HPE Tier 1 Storage Array Cross Family Offline Upgrade service – HA124A1#V0R

Provides the on-site hardware upgrade and disk migration from your exiting array to the next generation array chassis. This service is completed with the array powered off during a downtime window.

HPE Tier 1 Storage Array Peer Persistence Setup Service - HA124A1#V0S

Provides remote implementation of the Peer Persistence software functionality available in the HPE Alletra 6000/Nimble Storage operating system (OS). This service provides analysis, implementation, and testing services necessary for you to deploy the Peer Persistence features between a pair of dHCI configurations.

Deployment Service Ordering Information

The following dHCI deployment services may be ordered including the extension services as listed below.

HA124A1#5WX—HPE Alletra dHCI Base Deployment Service (Greenfield orders only)

Add-on service:

- Additional servers beyond the basic configuration of two (2) HPE ProLiant servers, can be in added to the installation by ordering the following service product number once for each server over the basic configuration: HB983A1—HPE Installation CommServer Hourly Service

HA124A1#V0T—HPE Alletra dHCI Expansion Deployment Service (Brownfield orders only)

Add-on services:

- Additional net new servers beyond the basic configuration of two (2) HPE ProLiant servers, can be in added to the installation by ordering the following service product number once for each server over the basic configuration: HB983A1—HPE Installation CommServer Hourly Service
- Pre-existing Customer servers requiring reimaging and reloading of supported software beyond the basic configuration of two (2) HPE ProLiant servers can be added to the installation by ordering the following service product number once for each additional server to be reconfigured - H29BSA1—HPE Storage Servers Install Hourly Service
- HPE Remote network configuration services as needed for the deployment design as determine by the Customer and the deployment team for network services beyond the installation design:
  - H2S79A1—HPE Remote Network Configuration and Integration Hour (business hours)
  - H2S80A1—HPE Remote Network Configuration and Integration Hour (after hours)
  - H2S83A1—HPE Onsite Network Configuration and Integration—1 day (business hours)
  - H2S81A1—HPE Onsite Network Configuration and Integration—2 days (business hours)
  - H2S84A1—HPE Onsite Network Configuration and Integration—1 day (after hours)
  - H2S82A1—HPE Onsite Network Configuration and Integration—2 days (after hours)

HA124A1#V08—HPE Alletra dHCI Server Add-On Installation and Startup Service

HP7E2A1—HPE Alletra dHCI Hardware Installation Service

Notes: The HA124A1#5WR HPE Alletra dHCI Base Deployment Service is only available for complete, new base (Greenfield) configuration orders and cannot be used for expansion (Brownfield) deployments using pre-existing hardware in a Customer environment. Correspondingly, the expansion deployment service, HA124A1#V0T—HPE Alletra dHCI Expansion Deployment Service must be ordered for dHCI deployment using pre-existing hardware in the Customer environment.

All Installation and upgrade services are optional for all HPE Alletra 6000 and HPE Nimble Storage products.

Service and Support

Parts and Materials

Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

Configuration Information

How to order HPE Alletra dHCI

Your HPE account rep (or) channel partner can help guide you through the solution pre-requisites. The HPE Nimble Storage dHCI sizer on HPE InfoSight can be utilized towards sizing recommended configurations with details on server count, server configuration, HPE Nimble AF/HF storage platform and storage capacity by determining the workload characteristics.

In the case of server configurations, note that the HPE ProLiant DL servers selected as part of dHCI would come with a pre-loaded VMware ESXi image in HPE factory.

For additional information please refer to the HPE Nimble Storage dHCI ordering guide.

What's Included?

- **dHCI automation software:** HPE Alletra dHCI software stack
  - dHCI setup software
  - VMware vCenter plugin (HPE Alletra dHCI requires vCenter Server Standard)
  - HPE InfoSight for dHCI
- **Storage:** One (1) HPE Nimble Storage (or) HPE Alletra 6000 (or) HPE Alletra 5000 storage array
  - HPE InfoSight is included with the storage array
- **Servers:** From the following supported list of servers (existing (or) new):
  - DL360, DL380, DL325, DL365, DL385, DL560, DL580 (more details on generations listed under "What's new')
  - Server count per dHCI configuration: 2 – 32 HPE ProLiant servers
  - HPE InfoSight is included with HPE ProLiant servers
- **Ethernet switches:** The choice of HPE M-Series, HPE Aruba 8320, Aruba 8325, Aruba 6300M (or) HPE FlexFabric 5710, 5945 switches, (or) Cisco Nexus 3k and 5k (Purchase of Cisco switches is not available through dHCI ordering on HPE web pages)
  - Switch count per dHCI configuration: (2) Top of the Rack switches
- **Hypervisor:** VMware vSphere 6.7, VMware vSphere 7.0

Notes:

- For Greenfield configurations, the purchased solution consists of the storage array, minimum 2 servers, top of rack switches, and mandatory cabling to complete the solution.
- For Brownfield configurations, the storage array is the only mandatory component. Customers can use existing compatible servers and switches with the array or order either component new from HPE.
- HPE Alletra dHCI solution only support iSCSI-based connectivity and does not support Fibre Channel (FC) in this release
- More details on ordering in the "Ordering" section below

Summary of Changes

Date	Version History	Action	Description of Change
05-Jun-2023	Version 13	Changed	Overview section was updated. What's New Section updated to include ProLiant Gen11 Server Support
01-May-2023	Version 12	Changed	Overview and Configuration Information sections were updated
03-Oct-2022	Version 11	Changed	Overview, Standard Features and Configuration Information sections were updated.
06-Jun-2022	Version 10	Changed	Overview section was updated.
06-Dec-2021	Version 9	Changed	Service and Support, and Configuration Information sections were updated.
15-Sep-2021	Version 8	Changed	Service and Support, and Configuration Information sections were updated.
02-Aug-2021	Version 7	Changed	New HPE ProLiant compute support
04-May-2021	Version 6	Changed	Overview, Standard Features, Service and Support, and Configuration Information sections were updated.
01-Mar-2021	Version 5	Changed	Overview and Standard Features sections were updated.
14-Dec-2020	Version 4	Changed	Service and Support and Configuration Information sections were updated.
02-Nov-2020	Version 3	Changed	Overview and Configuration Information sections were updated.
06-Jul-2020	Version 2	Changed	Overview, Standard Features and Configuration Information sections were updated.
05-Aug-2019	Version 1	New	New QuickSpecs

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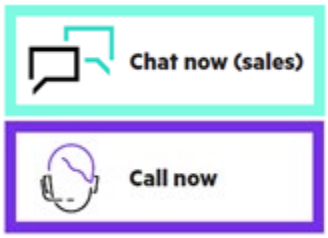
Contact our presales specialists.



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Hewlett Packard Enterprise

For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less.

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