

Brochure

# HP AppSystem for Vertica

Optimized HP Converged Infrastructure  
building blocks for advanced analytics



# Blazingly-fast Big Data analytics at massive scale and low TCO

Business innovators are gaining critical insight from Big Data analytics—the science of extracting meaning from the tsunami of information being captured by business applications and digital socialization.

Every day, unimaginable amounts of Big Data are created from a variety of sources ranging from traditional business transactions to social media posts and cell phone signals to digital photos and videos. New opportunities and predictive insights can be revealed by applying advanced analytics technologies, particularly where traditional structured data can be combined with unstructured data. The business case is clear, but how to get there is not as clear.

Information Optimization solutions from HP maximize return on information by accelerating time to value. With solutions that enable customers to extract value from 100% of their information, HP is uniquely positioned to build an end-to-end analytics platform to analyze unstructured, semi-structured, and structured data at enterprise scale. The HP AppSystem for Vertica is one component of this portfolio. It is designed as a modular building block for flexibility and expansion.

## HP Vertica advantage

With the explosion of Big Data, many companies now have hundreds of terabytes of data to store and analyze. Traditional database technology simply cannot keep the pace. Performing ad-hoc queries on such large data volumes does not come naturally for existing database management systems (DBMS). Desperate for better performance, many IT departments spend millions of dollars every year on stop-gap measures or replacing their DBMS with expensive and proprietary data warehouse appliances.

Designed from the ground up for this new world, the HP Vertica Analytics Platform delivers revolutionary performance without proprietary infrastructure or intensive database administrator (DBA) overhead, even when managing terabytes of data. HP Vertica Analytics Platform automates time-consuming DBA tasks such as physical database design, tuning, indexing, recovery, and fault tolerance.

Several HP Vertica Analytics Platform innovations contribute to the blazingly-fast Big Data analytics at massive scale and low TCO that is the HP Vertica advantage:

- Column-store architecture
- Industry-leading compression
- Vertica database designer
- Concurrent loading and querying
- Shared nothing scale-out design

## HP AppSystem for Vertica advantage

New analytics deployments can be complex, taking up to 18 months to implement and optimize. The complexity of maintaining and integrating these environments often results in missed deadlines, incomplete projects, increased costs, and lost opportunities. In fact, only 32 percent<sup>1</sup> of application deployments are rated as 'successful' by organizations.

Built on the HP Converged Infrastructure, the new HP AppSystem for Vertica is a pre-integrated technology stack that includes a specifically-optimized hardware configuration, factory pre-loaded OS, the HP Vertica Analytics Platform environment, and tailored HP Solution Support and Consulting Services.

This highly-optimized solution ensures system performance and reduces implementation time from months to a matter of hours. HP AppSystem for Vertica is built on industry-standard components which deliver flexibility and agility, while many competitive offerings are proprietary, creating additional silos within an enterprise that increase complexity, cost, and risk.

### Customer benefits

- Accelerate time to deployment for immediate business value with factory-integrated hardware, OS, and HP Vertica Enterprise Edition 6.1 software for risk-free start-up
- Realize optimal performance and eliminate design trial and error with a tested and proven system based on HP ProLiant Gen8 technologies
- Reduce storage footprint with HP Vertica Analytics Platform aggressive compression and caching
- Maximize utilization with modular HP AppSystem building blocks that align investment with utilization
- Gain near real-time insight and value from your data with advanced analytics and simultaneous loading and querying
- Realize lower TCO with industry-standard components and modular scale-out architecture

### Features

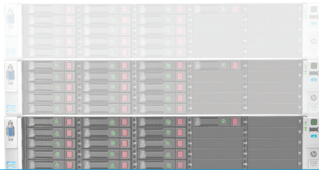



- HP ProLiant DL380p series Gen8 for optimal disk-to-core ratio
- Red Hat® Enterprise Linux® for better cost efficiencies
- Factory-integrated hardware OS and HP Vertica Enterprise Edition 6.1 software for ready-to-run capability
- HP Support and Consulting Services for always-on system availability

## Modular design for controlled investment

The HP AppSystem for Vertica provides two building block options—a base configuration module and a large configuration module. Both are built on the HP ProLiant DL380p Gen8 server with the latest in performance and manageability from HP. They are offered as modular building blocks versus a fixed, predefined data center silo. With this approach, customers can work with HP to define the ideal starting point for their Big Data journey and expand in small increments as performance and capacity requirements grow.

<sup>1</sup> CHAOS Summary 2009, Jim Johnson, Standish Group, April 2009



	Base configuration	Large configuration	
Expand with additional 4TB nodes (or additional drives balanced across base nodes)			Expand with additional 10TB nodes
<b>Minimum configuration for HA</b>			
Minimum three-node cluster provides approximately 12TB of data storage			Minimum three-node cluster provides approximately 30TB of data storage

The minimum recommended configuration for availability and performance is always a three-node cluster of servers. With the base configuration HP AppSystem module, a three-node cluster provides approximately 12TBs of RAID protected physical capacity, which can scale-out with additional 4TBs modules (servers with storage) or scale-up by filling the available nine drive bays in each module. This physical capacity is independent of the HP Vertica Analytics Platform licensed capacity which is purchased separately to ensure maximum return on investment.

The large configuration HP AppSystem module comes fully populated with 900 GB drives to provide approximately 30TBs of RAID protected physical capacity. The individual modules then allow expansion in roughly 10TB increments. Very large systems of many hundreds of terabytes are supported with this architecture.

Keeping with the objective of maximum flexibility, the infrastructure for adding these HP AppSystem modules to your existing data center is sold separately or may be provided from existing data center resources. The HP ProLiant DL380 Gen 8 server is a standard, rack-mount server adaptable to most rack and power systems, or HP can provide a custom solution. The same flexibility is available for the network infrastructure. Both HP AppSystem modules include four 10 Gb ports for redundant LAN and cluster interconnects. Switch capacity and cabling options are available from HP or can be provided from an existing data center Ethernet backbone.


## Start now

Extracting valuable insight from Big Data can be very complex. HP is ready to help.

**Learn more at**  
[hp.com/go/appsystems/vertica](http://hp.com/go/appsystems/vertica)

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