

# Vertica Enterprise Edition

Micro Focus® Vertica is designed for use in data warehouses and other big data workloads where speed, scalability, simplicity, and openness are crucial to the success of analytics. With Vertica Enterprise Edition software, you get high-performance data analytics for all of your data to make better business decisions in real time. Packed with powerful features for harnessing the value from all your data, Vertica Enterprise Edition manages massive amounts of data quickly and reliably, giving you real-time insight for advanced, Big Data analytics.

## Product Highlights

As part of the Vertica Analytics Platform, you can perform queries 50 to 1,000 times faster than with traditional databases, at a fraction of the cost and using a fraction of the hardware. Unlike traditional RDBMS databases, which are not designed for analytics and today's complex analytics workloads, the Vertica Analytics Platform is built from the ground up to deliver breakneck performance on Exabyte volumes at nearly infinite scale.

## Key Features and Benefits

### Columnar Storage and Execution

By eliminating costly disk I/O associated with traditional row-oriented SQL databases, you can perform queries 50 to 1,000 times faster.<sup>1</sup> And you can store 10x–30x more data per server than traditional databases with patented columnar compression.<sup>2</sup>

### “Scale-Out” Massively Parallel Processing (MPP)

Scale your solution as much as you need by adding an unlimited number of industry-standard servers and storage to your analytics environment.

### Extensible In-Database Analytics Framework

Achieve open access to in-database processing through a robust development framework for procedural, user-defined analytics. In addition to using built-in SQL analytic and aggregate functions, you can define your own custom functions by using a software developers' kit (SDK). The SDK features secure sandboxing, and resulting functions run in parallel for fast performance.

### In-Database Analytics Library

Vertica provides a number of machine learning functions for performing in-database analysis. Out-of-the-box, in-database analytics include event-series pattern matching, event-series joins, clustering, linear regression, geospatial support, advanced time series, and more. You also get open source analytics libraries, including thousands of packages from CRAN (Comprehensive R Archive Network).

### Native Support for Hadoop, Kafka, and More

Vertica Enterprise Edition includes application programming interfaces (APIs) for user-defined aggregates, analytics, and multi-phase transform functions. These dynamically integrate with Apache Hadoop, Apache Kafka, and MapReduce, so that you can analyze large sets of structured, semi-structured, and unstructured data in real time.

## Quick View

- **Real-time big data analytics.** Gain insights into your data in real time. Consume, analyze, and make informed decisions at the speed of business.
- **Fast time to value.** Monetize your data in a matter of minutes, not weeks or months. Prevent data blind spots from increasing your risk and uncertainty around regulatory compliance.
- **Agile deployment.** Get maximum flexibility—deploy Vertica Enterprise Edition on industry-standard hardware, virtual machines, or in the cloud.

<sup>1</sup> TechValidate reference: [techvalidate.com/product-research/hp-vertica/charts/B9F-BA0-073](https://techvalidate.com/product-research/hp-vertica/charts/B9F-BA0-073)

<sup>2</sup> A Vertica internal study

### Automatic High Availability

Run non-stop with data replication, failover, and recovery. Vertica Enterprise Edition is optimized for performance and is transparent to your integration and operations teams.

### Optimized System and Performance Management

Management Console displays tuning recommendations from the Workload Analyzer tool, addressing a wide range of system concerns, including empty administrator passwords, high CPU usage, and recommendations for better data management.

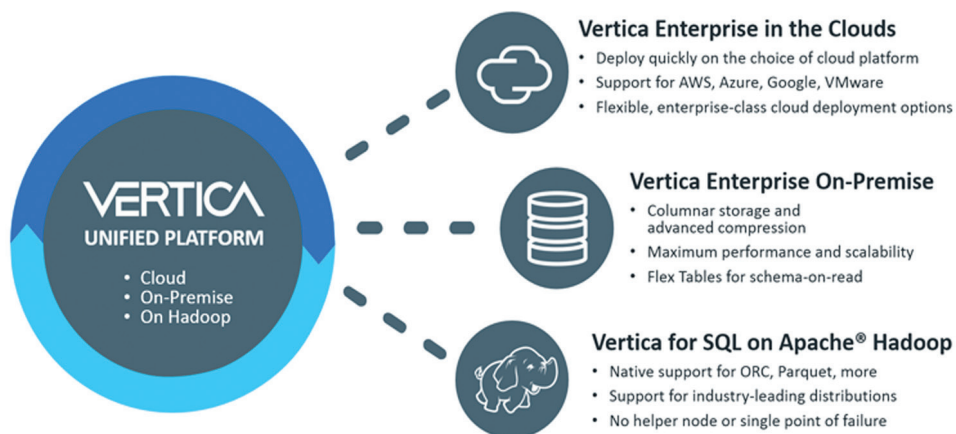
### Broad Deployment and Consumption Models—All Based on the Same Vertica Core

Available on-premises, in the Cloud, or on Hadoop, Vertica offers proven Big Data analytics that can deliver unmatched speed and scale. Depending on the situation, if you need extra capacity and have no time to stand up on-premises hardware, deploying Vertica in the Cloud is an attractive option. For organizations that prefer to apply a sophisticated SQL query engine to their growing data lakes, Vertica for SQL on Apache Hadoop is another popular Vertica consumption model.

### Out-of-the-Box Productivity

Vertica Enterprise Edition was designed to get your users up and running quickly, requiring fewer resources than traditional solutions. With real-time loading and querying, automated database design, and familiar interfaces, your users are productive immediately.

Operating on industry-standard hardware and with an optimized architecture, Vertica Enterprise Edition can deliver significant savings while providing you with industry-leading analytics capabilities and performance.



### Vertica Enterprise Edition Offerings

The Vertica Enterprise Edition has two options. The Express edition consists of the base functionality and the Premium edition has additional advanced capabilities as shown below.

Enterprise Capabilities	Express (Price per TB)	Premium (Price per TB)
MPP Architecture for high scalability	✓	✓
High Availability provides tolerance for node failures	✓	✓
Role-Based Security	✓	✓
User Defined Extension (UDx) for filtering, parsing, scalar functions, aggregates, transforms and more	✓	✓
Standard SQL (ANSI 99)	✓	✓
Flex Tables—Load semi structured data (JSON, Avro, etc.) into a table for querying with pre-built parsers	✓	✓
Workload Analyzer, DB Designer, Management Console for ease of management and optimal query performance	✓	✓
Elastic Cluster for seamlessly adding or removing nodes in a cluster	✓	✓
Advanced SQL Analytics (Time Series, SQL Windowing, Gap Filling, more)* and Text Search		✓
Routeable Query (Key Value) Interface to achieve high throughput for low latency and high-concurrency queries		✓
Fault Groups provides high availability and reduces risk of correlated failures		✓
Advanced Analytics with Sentiment, Geospatial, R Extensions, and In-database Machine learning		✓
Advanced Relational OLAP functions (Rollup Aggregate, Grouping Sets Aggregate, Cube Aggregate, and Pivot)		✓
Live Aggregate & Pre-Join Projections to optimize query performance for frequently used queries containing aggregates		✓

## New Technology, Not Retrofitted Solutions

Designed and developed in the 21st century, Vertica Enterprise Edition powers some of the largest organizations and most innovative business models around the world.

### Real-Time Big Data Analytics

Gain insights into your data in real time. Consume, analyze, and make informed decisions at the speed of business.

### Fast Time to Value

Monetize your data in a matter of minutes, not weeks or months. Prevent data blind spots from increasing your risk and uncertainty around regulatory compliance.

### Agile Deployment

Get maximum flexibility—deploy Vertica Enterprise Edition on industry-standard hardware, virtual machines, or in the cloud.

You can get all of these benefits with a leading data analytics solution that scales without compromising performance.

## Try Vertica Today

Get started today and download Vertica Community Edition, a free version of Vertica Enterprise Edition. Store up to 1 TB of data and deploy Vertica on a three node cluster. Sign up for Vertica Community Edition at: [www.vertica.com/try](http://www.vertica.com/try)

<sup>3</sup> While other file systems have been successfully deployed by some customers, Vertica cannot guarantee performance or stability of the product on these file systems. In certain support situations, you may need to migrate from these untested file systems to help you troubleshoot or fix an issue. Vertica Community Edition does not support Linux Logical Volume Manager.

## Technical Specifications

<b>Supported operating systems</b>	64-bit operating systems on x86, x64 architecture: <ul style="list-style-type: none"><li>■ Red Hat Enterprise Linux 6.6, 6.7, 6.8, 6.9, 7.0, 7.3</li><li>■ SUSE Linux Enterprise Server 11.0 SP3*, 12 SP2</li><li>■ Oracle Enterprise Linux 6.7, 6.8, 7.3 (Red Hat compatible kernel only)</li><li>■ Debian Linux 7.6, 7.7, 8.5</li><li>■ CentOS 6.6, 6.7, 6.8, 6.9, 7.0, 7.3</li></ul>		
<b>Supported file systems</b>	Extensively tested on all supported Linux platforms running ext3 or ext4 file systems. <sup>3</sup>		
<b>ODBC drivers (32-bit and 64-bit drivers provided)</b>	<b>Operating System</b>	<b>Processor</b>	<b>Driver Manager</b>
	Microsoft Windows <ul style="list-style-type: none"><li>■ Windows 7, 8 and 10 all variants</li><li>■ Microsoft Windows Server 2012, 2012 R2, 2016</li></ul>	x86, x64	Microsoft ODBC MDAC 2.8 iODBC 3.52.6 or later unixODBC 2.3.0 or later DataDirect 5.3 and 6.1 or later
	Red Hat Enterprise Linux 6.6–6.9, 7.0, 7.3	x86, x64	
	SUSE Linux Enterprise 11.0 SP3*, 12 SP2	x86, x64	
	Oracle Enterprise Linux 6.7, 6.8, 7.3 (Red Hat compatible kernel only)	x86, x64	
	Ubuntu 14.04 LTS	x86, x64	
	CentOS 6.6–6.9, 7.0, 7.3	x86, x64	
	Solaris 10	x86, x64, SPARC	
	AIX 7.1	PowerPC	
	HPUX 11i V3	IA64	
<b>JDBC drivers (JDBC 4.0 compliant)</b>	Mac OS X 10.10, 10.11, 10.12	x86, x64	Mac OS X Driver Manager (iODBC)
	Supported on all operating environment platforms		
<b>ADO.NET driver</b>	<b>Operating System</b>	<b>Processor</b>	<b>.NET Requirements</b>
	Microsoft Windows <ul style="list-style-type: none"><li>■ Windows Server 2012, 2012 R2, 2016</li><li>■ Windows 7, 8 and 10 all variants</li></ul>	x86, x64	Microsoft .NET—Framework 3.5 SP1 or later
<b>vsq client</b>	Supported on all Vertica Enterprise Edition ODBC driver platforms		
<b>Perl</b>	<b>Perl Version</b>	<b>Perl Driver Modules</b>	<b>ODBC requirements</b>
	5.8 5.10	DBI driver version 1.609 DBD: ODBC version 1.22	See ODBC drivers.

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## Technical Specifications continued

	Python Version	Python Driver Modules	ODBC Requirements
ODBC drivers (32-bit and 64-bit drivers provided)	2.4.6	pyodbc 2.1.6	See ODBC drivers.
	2.7.3	pyodbc 3.0.6	
	3.3.4	pyodbc 3.0.7	
R Version			
R	3.0.0 or higher		
	Plug-In Version	Operating System	PowerCenter Version
Plug-in for Informatics PowerCenter	7.x	Microsoft Windows	9.x
		<ul style="list-style-type: none"><li>Windows Server 2012, 2012 R2, 2016</li><li>Windows 7, 8 and 10 all variants</li></ul>	
Other Connectors	<ul style="list-style-type: none"><li>Connectors for Hadoop MapReduce, HDFS, HCatalog and Pig</li><li>Connectors for Informatica and Microsoft BI Suite (available from Vertica)</li><li>Connectors for popular data integration tools including IBM, Pentaho, Syncsort and Talend from vendor</li></ul>		
Hadoop Distributions	Cloudera (CDH) 5.7, 5.8, 5.11 HortonWorks Data Platform (HDP) 2.4, 2.5, 2.6 MapR 5.1, 5.2		



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