Additional License Authorizations

For Vertica software products
### Products and suites covered

<table>
<thead>
<tr>
<th>Products</th>
<th>E-LTU or E-Media available*</th>
<th>Perpetual License Non-production use category**</th>
<th>Subscription or Term License Non-production use category (if available)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertica Community Edition</td>
<td>No</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Vertica Express Edition</td>
<td>Yes</td>
<td>Class 4</td>
<td>Class 4</td>
</tr>
<tr>
<td>Vertica External Data Add-On</td>
<td>Yes</td>
<td>Class 4</td>
<td>Class 4</td>
</tr>
<tr>
<td>Vertica for SQL on Hadoop</td>
<td>Yes</td>
<td>Class 3</td>
<td>Class 4</td>
</tr>
<tr>
<td>Vertica Premium Edition</td>
<td>Yes</td>
<td>Class 4</td>
<td>Class 4</td>
</tr>
<tr>
<td>Vertica + Voltage Add-On</td>
<td>Yes</td>
<td>Class 4</td>
<td>Class 4</td>
</tr>
</tbody>
</table>

* Any product sold as E-LTU or E-Media shall be delivered electronically regardless of any contrary designation in a purchase order.
** Non-production use rights, if any, can be found at [software.microfocus.com/legal/software-licensing](http://software.microfocus.com/legal/software-licensing).

### Definitions

Capitalized terms not otherwise defined in this ALA document are defined in the governing agreement.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Software</td>
<td>Means Voltage SecureData Client Simple API software running on Windows and Linux (SUSE and RedHat).</td>
</tr>
<tr>
<td>Cluster</td>
<td>Means a group of cooperating Vertica Nodes.</td>
</tr>
<tr>
<td>Core</td>
<td>Means a part of a CPU that executes a single stream of compiled instruction code.</td>
</tr>
<tr>
<td>CPU</td>
<td>Means a system in a single integrated circuit package with one or more discrete processing Cores.</td>
</tr>
<tr>
<td>Developed Code</td>
<td>Means the software and scripts developed and/or deployed by Licensee using Voltage SecureData products.</td>
</tr>
<tr>
<td>E-LTU and E-Media</td>
<td>Means products which are electronically delivered only, and as such any reference to FOB Destination or delivery methods that are stated on your purchase order other than electronic shall be null and void with respect to these E-LTU or E-Media products.</td>
</tr>
<tr>
<td>External Data Size</td>
<td>Means the size of the data accessed at the source (e.g. HDFS) with the URL path defined by a Vertica external table in Parquet or ORC format.</td>
</tr>
<tr>
<td>GB</td>
<td>Means gigabytes which designates the amount of physical capacity that can be managed.</td>
</tr>
<tr>
<td>HDFS</td>
<td>Means Hadoop distributed file system.</td>
</tr>
<tr>
<td>Instance</td>
<td>Means each implementation of the application installed on a Server.</td>
</tr>
<tr>
<td>LTU</td>
<td>Means License To Use.</td>
</tr>
<tr>
<td>MP</td>
<td>Means monthly payment for the term LTU and Term Support. When MP is indicated in the product description customer is required to submit a purchase order inclusive of both for the term of the license.</td>
</tr>
<tr>
<td>Named User or Nmd User</td>
<td>Means a specific individual authorized by you to access the software regardless of whether they are actively using the software.</td>
</tr>
<tr>
<td>Node</td>
<td>Means a Server that acts as a single computer system, whether physical or virtual.</td>
</tr>
<tr>
<td>ORC File</td>
<td>Means Optimized Row Columnar file format.</td>
</tr>
<tr>
<td>Parquet File</td>
<td>Means Columnar data format.</td>
</tr>
</tbody>
</table>
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| Raw Data Size or Vertica Raw Data Size    | Means the size of the uncompressed data stored in a Vertica database as if such uncompressed data had been exported from the database in text format. All logical database entities (tables) and all derived and aggregate tables are included in the Raw Data Size measurement. All data stored in external tables in the ORC or Parquet format is included in the Raw Data Size. Data stored in Flex Tables (as defined in documentation on Vertica.com) will be counted as one tenth the capacity stored in a regular table (e.g. 1TB loaded into Flex Tables will count as 100GBs towards the license capacity). The following is excluded from the Raw Data Size measurement:  
  • Multiple projections (underlying physical copies) of data from a logical database entity (table); i.e. data appearing in multiple projections of the same table is only counted once  
  • Data stored in temporary tables  
  • Data stored in flattened tables used for de-normalization purposes  
  • Deleted data that remains in the database  
  • Data stored in the Write Optimized Store (WOS) as defined in documentation  
  • Data stored in system tables such as monitoring tables, data collector tables, query repository tables, Database Designer work tables, etc.  
  • Views  
  • Copies or adaptations for back-up or archival purposes or when copying or adaptation is an essential step in the authorized use of the Vertica software |
| Read Optimized Store Format or ROS Format | Means the internal columnar format in which the Vertica system stores data for query purposes.                                                                                                                                                                                                                                                                                                                                                                                                  |
| Server or SVR                             | Means any designated computer system in which an Instance or Instances of the software is installed.                                                                                                                                                                                                                                                                                                                                                                                          |
| SaaS Fee                                  | See definition for Subscription.                                                                                                                                                                                                                                                                                                                                                                                                  |
| Subscription                              | Means a Term License that is priced with both Term LTU Fees and Term Support Fees bundled together as a single line item.                                                                                                                                                                                                                                                                                                                                                                   |
| TB                                        | Means terabytes which designates the amount of physical capacity that can be managed.                                                                                                                                                                                                                                                                                                                                                                                                       |
| Term License to Use or Term LTU           | Means a software license to use (LTU) which indicates in its license description that the license is valid for a fixed period of time such as One Month (1M), One Year (1Y) etc. Term LTUs are not perpetual licenses, therefore upon expiration of the Term License, no software license asset survives as a standalone element.                                                                                                                                                                                                                                                 |
| Term Support                              | Means a fixed period support offering that is only valid during the time period of the associated Term LTU. Term Support is not renewable upon expiration of the Term License as a standalone element.                                                                                                                                                                                                                                                 |
| Unlimited or Unl                          | Means without restrictions in terms of number of systems, devices or media, depending on the context.                                                                                                                                                                                                                                                                                                                                                                                   |
| User                                      | Means a user whose use is restricted to the type of software that is being licensed.                                                                                                                                                                                                                                                                                                                                                                                                       |

Software specific license terms
Software products with software specific license terms are described below. Software products covered by this ALA document (as listed above) and not covered in this section do not have software specific license terms.

Vertica Community Edition
Vertica Community Edition license terms are the same as the Vertica Enterprise Edition license terms listed below with the following exceptions: a) Raw Data Size is limited to one (1) TB, b) External Data Size is limited to three (3) TB, c) to be used on no more than three (3) Servers or other resources that act as a single system whether physical or virtual and d) cannot be connected to multiple editions of Vertica Community Edition. Vertica Community Edition must be installed on a separate Node from Hadoop when performing queries of the Hadoop native formatted data.
**Vertica Express Edition**

Vertica Express Edition terms are the same as the Vertica Premium Edition license terms listed below.

The following features and functionality (as defined in the documentation) are not included with licenses of Vertica Express Edition:

1. Advanced SQL Functions
   A. Analytical Functions
   B. Patterns Matching Functions
   C. Time Series Functions
2. ROLAP SQL Functions
   A. ROLLUP Aggregate
   B. GROUPING SETS Aggregate
   C. CUBE Aggregate
   D. Pivot
3. R Integration via Vertica pre-built UDX
4. Python Integration via Vertica pre-built UDX
5. Workload Analyzer
6. KV Interface
7. Fault Groups
8. Live Aggregate Projections
9. Text Search
10. FIPS 140-2 Support
11. Flattened Tables
12. Parquet Export
13. Predictive Analytics Functions
   A. Normalization, outlier detection, sampling, imbalanced data processing and missing value imputation functions
   B. Linear regression, logistic regression, k-means, naive bayes, random forests, singular value decomposition, support vector machines, generalized boost models, neural networks, page rank, k nearest neighbors
   C. Confusion matrix, receiver operator characteristic (ROC), error rate, lift table, mean squared error, r squared, wald statistics

**Vertica External Data Add-On**

Vertica External Data Add-On for data not stored in the Vertica database, is licensed per TB measured in External Data Size on an unlimited number of central processing units or CPUs and for an unlimited number of Users. The external data formats permitted are ORC & Parquet. External data in non-optimized formats, such as CSV, are not counted towards the per TB license. The Vertica External Data Add-On is only available for Vertica version 8.1.1 or higher.

**Vertica for SQL on Hadoop**

Vertica for SQL on Hadoop is licensed per Node, on an unlimited number of central processing units or CPUs and an unlimited number of Users. Vertica for SQL on Hadoop is for deployment on Hadoop nodes. Includes 1 TB of Vertica ROS formatted data on HDFS.

The following features and functionality (as defined in the documentation) are not included with licenses of Vertica for SQL on Hadoop:

1. User Defined Extensions (Python UDXs, R UDxs, C++ UDxs). UDx libraries shipped with Vertica and Java UDxs are included with Vertica for SQL on Hadoop license
2. Advanced SQL Functions
   A. Analytical Functions
   B. Pattern Matching Functions
   C. Time series Functions
   D. Geospatial Functions
3. ROLAP SQL Functions
   A. ROLLUP Aggregate
   B. GROUPING SETS Aggregate
   C. CUBE Aggregate
   D. Pivot
4. Text Search
5. Live Aggregate Projections
6. Flattened Tables
7. FIPS 140-2 Support
8. Dynamic Workload Management (Secondary Resource Pools – Cascade To Parameter)
9. Vertica Linux (EXT4) File System for storing business data.
10. Backup and Restore utility (vbr.py)
11. Predictive Analytics Functions
   A. Normalization, outlier detection, sampling, imbalanced data processing and missing value imputation functions
   B. Linear regression, logistic regression, k-means, naïve bayes, random forests, singular value decomposition, support vector machines, generalized boost models, neural networks, page rank, k nearest neighbors
   C. Confusion matrix, receiver operator characteristic (ROC), error rate, lift table, mean squared error, r squared, wald statistics

Vertica Premium Edition
Vertica Premium Edition is licensed using one of two metrics: 1) per TB measured in Raw Data Size, on an unlimited number of central processing units or CPUs and for an unlimited number of Users; or 2) per node with an unlimited data size.

If licensed per TB: Licensee is permitted to use an identical data set for no more than three (3) Vertica Clusters. Vertica Premium Edition must be installed on a separate Node from Hadoop when performing queries of the Hadoop native formatted data. The use of HDFS as a storage location is permitted and counts against the licensed capacity.

If licensed per Node: Vertica Premium Edition must be installed on a separate Node from Hadoop when performing queries of the Hadoop native formatted data.

The Vertica Premium Edition includes a limited, revocable (as provided herein), nonexclusive right to use the source code of the Vertica SDK Software (“SDK Software), without right to transfer or sublicense, for the sole purpose of creating libraries and functions for use with the Vertica Premium Edition solely for Licensee’s internal use (“SDK Libraries”). Licensee shall own all SDK Libraries provided, however, that the SDK Libraries are to be used by Licensee for Licensee’s internal purposes in connection with the use and operation of the Vertica Premium Edition, and Licensee is expressly prohibited from transferring, assigning, distributing, licensing or selling the SDK Libraries to any third party. If Licensee uses third party or open source software to develop SDK Libraries using the SDK Software, Licensee is solely responsible for complying with any such third party or open source license requirements.

Vertica + Voltage Add-On
Vertica + Voltage Add-On, is licensed per TB measured in Raw Data Size for data stored in Vertica with a Vertica Premium or Vertica Express license. The Add-on is unlimited to Nodes where the Vertica software is running, and where Voltage SecureData APIs are deployed, and/or where data protected by Voltage SecureData is stored, processed or used. The Vertica + Voltage Add-On is only available for Vertica version 9.1 or higher.

This offering includes:
- 2 Voltage SecureData Production Key Server
- 2 Voltage SecureData Production Web Services Server
- Unlimited Voltage SecureData Enterprise Client Simple API for Windows, SUSE Linux and RedHat Linux operating systems and is limited for storing data to and accessing data from Vertica.
- Unlimited Voltage SecureData File Processor for Windows, SUSE Linux and RedHat Linux operating systems and is limited for storing data to and accessing data from Vertica.
Additional License Authorizations
For Vertica software products

You are authorized to use and copy the Voltage SecureData Enterprise Client Software and Installation Kits Client Software in object code form only solely to create Developed Code and to use and copy Developed Code solely for your internal use with the Voltage SecureData software. No rights to distribute the Developed Code are granted herein. You may make and use the number of copies of Client Software that you deem appropriate unless the number of copies of Client Software is restricted as set forth in the applicable order.

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