

# **Teradata Vantage™ - Advanced SQL Engine Release Definition**

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Release 17.10

July 2021

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# Introduction

Teradata Vantage™ is our flagship analytic platform offering, which evolved from our industry-leading Teradata® Database. Until references in content are updated to reflect this change, the term Teradata Database is synonymous with Teradata Vantage.

Advanced SQL Engine is a core capability of Teradata Vantage, based on our best-in-class Teradata Database. Advanced SQL refers to the ability to run advanced analytic functions beyond that of standard SQL.

## Understand This Release

This document applies to Advanced SQL Engine Release 17.10.

Before you install or upgrade to this release, review the following:

- [Software and Hardware Requirements](#)
- *Teradata Vantage™ - Advanced SQL Engine Release Summary*, B035-1098, available at <https://docs.teradata.com/>

## Additional Information

Link	Description
<a href="https://docs.teradata.com/">https://docs.teradata.com/</a>	Search Teradata Documentation, customize content to your needs, and download PDFs. Customers: Log in to access Orange Books.
<a href="https://support.teradata.com">https://support.teradata.com</a>	One-stop source for Teradata community support, software downloads, and product information. Log in for customer access to: <ul style="list-style-type: none"> <li>• Community support</li> <li>• Software updates</li> <li>• Knowledge articles</li> </ul>
<a href="https://www.teradata.com/University/Overview">https://www.teradata.com/University/Overview</a>	Teradata education network
<a href="https://support.teradata.com/community">https://support.teradata.com/community</a>	Link to Teradata community (also available from the customer portal)

# Software and Hardware Requirements

## Supported Software and Hardware

Supported	Description
Operating Systems	<ul style="list-style-type: none"> <li>• SLES 12 SP3</li> <li>• SLES 11 SP3: On-premises platforms only</li> </ul> <p>See Knowledge Article KB0042117, available at <a href="https://support.teradata.com">https://support.teradata.com</a>. You must log in before you can search for it.</p>
Software and Hardware Platforms	<p>See Knowledge Article KB0027406, available at <a href="https://support.teradata.com">https://support.teradata.com</a>. You must log in before you can search for it.</p>
Cloud Platforms	<ul style="list-style-type: none"> <li>• Public Cloud: AWS, Azure, and Google Cloud</li> <li>• Private Cloud: SQL Engine on VMware</li> </ul>
External Object Store	<ul style="list-style-type: none"> <li>• Amazon S3, Microsoft Blob, and Google Cloud storage</li> </ul>
Teradata Vantage™	<p>Teradata Vantage includes analytic functions and engines, preferred tools and languages, and support for multiple data types:</p> <ul style="list-style-type: none"> <li>• Analytic engines including SQL, machine learning, and graph engines</li> <li>• Languages including SQL, R, and Python</li> <li>• Workbenches and tools including Teradata Studio™, Teradata® AppCenter, Jupyter, and RStudio</li> <li>• Data support including relational, spatial, temporal, XML, JSON, Avro, and time-series formats</li> </ul>
Compilers	<p>Installation of a C++ compiler is required on at least one database node configured with a PE vproc. C++ compilers are included with each Vantage release as part of the operating system.</p>
Free Disk Space	<p>For information on the amount of free disk space required on each SQL Engine node to upgrade to this release, contact your support representative or see <a href="https://support.teradata.com">https://support.teradata.com</a>. You must log in before you can search for it.</p>
Additional Disk Space for Trace Files	<p>The Write Ahead Logging (WAL) feature requires 5 MB per AMP of disk space for File System trace files. For example, if there are 10 AMPs per node, trace files would require 50 MB per node of additional disk space, located in /var/opt/teradata/tdtemp.</p>
Supported External Disk Arrays	<p>See the <i>Product and Site Preparation Guide</i> for your platform, available at <a href="https://support.teradata.com">https://support.teradata.com</a>. You must log in before you can search for it.</p>
Backup, Archive, and Restore (BAR)	<p>See the DSA Ecosystem Compatibility Matrix KCS000003, available at <a href="https://support.teradata.com">https://support.teradata.com</a>. You must log in before you can search for it.</p>

Supported	Description
Teradata Tools and Utilities (TTU)	For release information, see the document attached to KB0027406, available at <a href="https://support.teradata.com">https://support.teradata.com</a> . You must log in before you can search for it.
UDF	A library of UDFs is available on <a href="https://support.teradata.com">https://support.teradata.com</a> . You must log in before you can search for it.

## SQL Engine Maintenance and Support

For Advanced SQL Engine maintenance and support information, contact your sales or support team.

## Node Memory Recommendations

For best performance, Teradata recommends that each node has at least the minimum recommended RAM.

When upgrading to Release 17.xx, several factors can cause some systems, especially large ones, to require additional memory. Follow the general guidelines; however, because memory requirements are workload-dependent, the actual memory requirements for your system may differ.

### General Guidelines

- Teradata recommends a minimum of 4 GB memory per vproc to achieve the most value and performance from SQL Engine 17.xx. The absolute minimum requirement is 2 GB memory per vproc, including AMP, PE, TVS, and GTW.
- Some SQL Engine features require 512 GB per node; for example, Teradata In-Memory Optimizations.
- Additional memory consumed is based on the size of system, AMPs per node, AWT, and feature use.

#### Note:

The maximum amount of memory allowed per node may be increased between database releases. Always double-check what the maximum memory amount is for your platform.

This release can run on a system with the recommended minimum RAM, but depending on the system configuration and the SQL Engine features you use, performance may not be optimal. You should also factor in the following to determine the optimal memory configuration:

- Workload
- Memory-consuming features
- Performance requirements
- Cost of memory

### Memory Consuming Features

- 1 MB Data Block
- 1 MB Perm and Response Rows

- 1 MB Phase 2
- 1 MB Response Buffer
- 1 MB Spool Row
- 128K Parser Tree Segments
- 3D Geospatial
- Algorithmic Compression and Block Level Compression
- Array INSERT
- Auto Stats Enhancements
- AVRO DATASET
- BSON and UBSON
- Columnar Primary AMP/Primary Index
- Cylinder Read
- Data Stream Architecture
- DBQL – Show Parameters
- Expanded Table Header
- Extended Object Naming
- External Stored Procedures
- Geospatial Data Type
- Geospatial Indexing
- Global and Persistent Data (GLOP)
- In-Memory Enhancements
- In-Memory Optimizations
- Increased Join/Subquery Limits
- Incremental Planning and Execution
- Java Stored Procedures
- Join Index, Hash-Join, Stored Procedures, and 128K Data Blocks
- JSON Data Type
- Large Cylinder with Cylinder Read
- Larger than 1 MB Plan Cache
- LOBs and UDFs
- More Than 20 AMPs/Vprocs per Node (All Releases)
- More than 80 AWTs per AMP
- Multiple Count Distinct Performance
- Native Object Store
- Online Archive Memory Enhancements
- Parameterized Query Logging
- Partial Online Reconfiguration
- PPI and Multivalue Compression

- Queryable Column Information on Views
- QueryGrid: Teradata Database-to-Hadoop
- Script Table Operators
- Scripting and Language Support
- SLES 11
- SLES 12
- SQL Interface for Ferret SHOWBLOCKS
- Table Functions
- Temporal DBS Support
- Teradata Columnar
- Teradata Intelligent Memory
- Teradata Virtual Storage
- Teradata XML
- Tunable UDF Memory Limit
- XML DBQL Logging
- XSLT\_SHRED\_BATCH

## Reserved Words

Teradata Vantage reserved words cannot be used as identifiers to name host variables, correlations, local variables in stored procedures, objects (such as databases, tables, columns, or stored procedures), or parameters (such as macro or stored procedure parameters).

For new reserved words for this release, see “Teradata Vantage Restricted Words” in *Teradata Vantage™ - Advanced SQL Engine Release Summary*, B035-1098, available at <https://docs.teradata.com/>.



# Software and Hardware Restrictions

## Obsolete and Unsupported Tools, Utilities, Options, Record Types, and Other Software

Item	Final Release that Contains Feature	Replacement Feature (If Applicable)	Additional Information
Amazon Web Services	TD 16.20		
DBS Check tool (dbschk)	TTU 15.0 TD 15.10	Mailbox Check (mboxchk) tool	
dbscsp	TD 12.00		The dbscsp tool, used only on MP-RAS systems, is no longer supported. The executable /usr/ntos/bin/dbgcsp now links to fdclsp instead of dbscsp.
DULTAPE	TD 16.00	DUL	
ExecR table operator			Unavailable by default to users of Teradata Vantage delivered as-a-service, such as on AWS and Azure. Contact your Teradata account representative to have it enabled.
gdviewer	Before TD 12.00		
gtwcontrol -b option			This utility is still supported. Removed -b option. Deprecated logons are no longer allowed.
HP-UX Itanium and IBM Mainframe z/Linux (RedHat and SUSE)	TTU 16.10		
ITEQ, HUT CNS	TD 15.00		
Kanji1 character set			
Meta Data Services (MDS)	TD 15.00		
OLE DB Provider for Teradata	TTU 15.0 TD 15.10	Microsoft's OLE DB Provider for ODBC with Teradata ODBC Driver	

Item	Final Release that Contains Feature	Replacement Feature (If Applicable)	Additional Information
PMON	TD 13.10		
Priority Scheduler	TD 12.00		Priority Scheduler functions must be controlled through Teradata Viewpoint, Workload Designer portlet.
rcvmanager F7 help			
Replication Services	TD 14.10		<p>Teradata Replication Services (Teradata-to Teradata-replication) was discontinued for new sales as of August 2011. Aligned with that discontinuation, no further enhancements have been made since the TRS 13.10 release. TRS 13.10 has been certified with Teradata DB 14.00 and 14.10 versions but with no new feature support and for existing customers only. Teradata Unity is the replacement for TRS.</p> <p><b>Note:</b> Replication from third-party solutions to Teradata is still supported by Oracle GoldenGate.</p>
rssmon	TD 13.00		The Resource Sampling System Monitor (rssmon) utility ran on only MP-RAS systems. It is obsolete now that Teradata Database is no longer supported on MP-RAS.
SCRIPT table operator			Unavailable by default to users of Teradata Vantage delivered as-a-service, such as on AWS and Azure. Contact your Teradata account representative to have it enabled.
SLES 10	TD 15.10	Later versions of SLES, depending on your release.	
SQL Assistant	TTU 16.20 TD 16.00	Teradata Studio and Teradata Studio Express	
tdsbind	TD 18.00	tdgssauth	

Item	Final Release that Contains Feature	Replacement Feature (If Applicable)	Additional Information
tdgsspkggrm	TD 15.10		
tdgssversion	TD 16.00		
tdssearch	TD 13.00	ldapsearch	ldapsearch is included with Teradata Database 13.10 and later.
Teradata Administrator	TTU 15.10 TD 15.10	Teradata Studio	
Teradata Archive/ Recovery Utility (ARC)	TTU 16.20	Teradata Data Stream Architecture (DSA) or Teradata Data Stream Utility (DSU)	
Teradata Administration Workstation (TD AWS)	TTU 16.20		
Teradata Dynamic Workload Manager	TD 13.00	TASM, controlled by Teradata Viewpoint	
Teradata IDE-Plugin for Eclipse	TTU 16.00		
Teradata Index Wizard	TTU 16.20		
Teradata Workload Analyzer (TWA)	TTU 16.20		
Teradata Manager	TD 13.00	Teradata Viewpoint	
Teradata Method 1 (TD1), NTLM, NTLMC, and KRB5C	TD 16.00		
Teradata Monitor	TD 13.10	Command-line utilities, such as Database Window	
Teradata Preprocessor2	TTU 16.20	ODBC	
Teradata Preprocessor2 (PP2) for C and COBOL Network Platforms: <ul style="list-style-type: none"> <li>Windows</li> <li>Linux</li> <li>Unix</li> </ul>			
Teradata Query Director	TD 13.10	Teradata Unity	

Item	Final Release that Contains Feature	Replacement Feature (If Applicable)	Additional Information
Teradata Query Scheduler (TQS)	TD 16.00		
Teradata Statistics Wizard (TSWIZ)	TTU 14.10 TD 15.00	Teradata Viewpoint Statistics Manager	
Teradata Visual Explain (VEComp)	TTU 16.20 TD 16.00	Visual Explain App in	
Transparency Series/ Application Programming Interface (TS/ API) (mainframe)	TTU 15.0 TD 15.10	SQL query tool, such as Teradata Studio	
Windows Vista	TTU 16.10		

## Unity Does Not Support TDNEGO

Teradata recommends disabling TDNEGO on Unity servers. For more information, see "Disabling TDNEGO," in the *Teradata Vantage™ - Advanced SQL Engine Security Administration*, B035-1100, available at <https://docs.teradata.com/>.

## 1 MB Perm and Response Rows

This feature is not supported on Small Cylinder systems, such as systems using a maximum cylinder size of 3872 sectors or approximately 1.9 MB.

## Compatibility Views

Compatibility views convert the native variable-length Unicode object names to 30 bytes of either Latin or Kanji1. This can cause either loss of information by truncation or inability to convert object names longer than 30 characters into Latin or Kanji1. Characters that cannot be converted are replaced by the substitution character, which is 0x1A for both Latin and Kanji1.

When object names are returned to the user, they are converted to the session character set. If the characters in the object name cannot be converted to the session character set or exceed the export width for the character data, the conversion can produce loss of information. Teradata recommends using Unicode views. For more information, see *Teradata Vantage™ - Data Dictionary*, B035-1092, available at <https://docs.teradata.com/>.

## Security-Related Restrictions

### Custom-Authentication Mechanisms

A custom-authentication mechanism is a user-authentication mechanism that is above and beyond the mechanisms that are provided with SQL Engine:

1. Teradata Method 2
2. KRB5 (Kerberos authentication)
3. LDAP
4. SPNEGO (used for Kerberos authentication for logons from Windows .NET clients)
5. TDNEGO

If additional information is required, customers should contact their Teradata representative. Teradata representatives requiring help should contact Teradata Corporate Export Compliance, Law Department.

#### Related Information:

[Unity Does Not Support TDNEGO](#)

## Analytic Functions

Unicode is not supported for the nPath<sup>®</sup> and Attribution functions on SQL Engine.

## C++ and Java UDFs, UDMs, UDTs, or External Stored Procedures

If you are using Vantage delivered as-a-service (Vantage running on AWS or Azure), you cannot create your own C++ and Java UDFs, UDMs, UDTs, or External Stored Procedures.

# Changes in System Behavior

## Default Feature Status

In previous releases, some features were enabled by default and others were manually enabled, depending on whether the Vantage system had a fresh installation (sysinit) or an upgrade.

Default enabling may cause changes in system behavior compared with previous releases. Even after enabling, some features may require additional configuration.

Teradata Vantage 1.1 and later features do not require a sysinit to be enabled. Features in earlier releases that required a sysinit still require a sysinit.

Feature Use Log (FUL) is automatically enabled with Default Logging for all license tiers, for both sysinit and upgrade. The syntax to enable or disable FUL is still supported, but will be a no-op because FUL is now always logged whenever default logging is enabled.

Feature	License Tiers	Upgrade Sysinit	Effects and Comments
OVERRIDE ON ERROR	Not Applicable	<b>Upgrade:</b> Enabled <b>Sysinit:</b> Enabled	OVERRIDE ON ERROR has become the default when creating tables. If a user names an invalid map when creating a table, the system uses the default map for the user, role, or profile instead. If there is no default map for the user, role, or profile, the system default map is used.
Always Fallback	Not Applicable	<b>Upgrade:</b> Disabled <b>Sysinit:</b> Enabled	Fallback behavior and defaults have become platform-specific. Newer platforms always use fallback, even if you specify NO FALLBACK. Older platforms that upgrade to this release still allow the NO FALLBACK option, and the default is NO FALLBACK for CREATE TABLE, ALTER TABLE, CREATE JOIN INDEX, CREATE HASH INDEX, CREATE DATABASE, MODIFY DATABASE, CREATE USER, and MODIFY USER requests.
In-Memory Optimization	<b>Developer:</b> Not Applicable <b>Base:</b> Not Applicable <b>Advanced:</b> Not offered <b>Enterprise:</b> Included	<b>Upgrade:</b> Disabled <b>Sysinit:</b> Disabled	In-Memory Optimization is enabled when the appropriate license and memory are purchased. To enable, contact Teradata Support Center.
Temporal	<b>Developer:</b> Included <b>Base:</b> Included	<b>Upgrade:</b> Disabled	To enable, contact Teradata Support Center.

Feature	License Tiers	Upgrade Sysinit	Effects and Comments
	<b>Advanced:</b> Included <b>Enterprise:</b> Included	<b>Sysinit:</b> Disabled	<b>Note:</b> After Temporal is enabled, it cannot be disabled.
Teradata Secure Zones	<b>Developer:</b> Included <b>Base:</b> Included <b>Advanced:</b> Included <b>Enterprise:</b> Included	<b>Upgrade:</b> Disabled <b>Sysinit:</b> Disabled	
Teradata Database MAPS Architecture (MAPS)	<b>Developer:</b> Not Applicable <b>Base:</b> Included <b>Advanced:</b> Included <b>Enterprise:</b> Included	<b>Upgrade:</b> Disabled <b>Sysinit:</b> Enabled	This feature is: <ul style="list-style-type: none"> <li>• Enabled for new installations</li> <li>• Disabled by default on upgraded systems</li> </ul> To enable, contact Teradata Support Center. After this feature is enabled backdown is not supported.  <b>Note:</b> When MAPS is enabled, you must use DSA for archive/recovery operations. For more information about DSA, see <i>Teradata® DSA User Guide</i> , B035-3150.
Adaptive Optimization	<b>Developer:</b> Includes IPE <b>Base:</b> Includes IPE <b>Advanced:</b> Includes IPE <b>Upgrade:</b> Includes IPE <b>Enterprise:</b> Includes Enhanced IPE	<b>Upgrade:</b> Enabled for Enterprise <b>Sysinit:</b> Enabled for Enterprise	Enhanced IPE provides: <ul style="list-style-type: none"> <li>• Noncorrelated subqueries with small results sets</li> <li>• Single-row query blocks</li> <li>• Derived table or view produces zero rows or a single row</li> <li>• Spooled subqueries with smaller result sets</li> <li>• Advanced rewrites based on results feedback</li> </ul>
Block loads between Row Level Security (RLS) tables and non-RLS tables	<b>Developer:</b> Included <b>Base:</b> Included <b>Advanced:</b> Included <b>Enterprise:</b> Included	<b>Upgrade:</b> Disabled <b>Sysinit:</b> Disabled	To enable, contact Teradata Support Center.
IN-list Rewrite Developer	<b>Developer:</b> Included <b>Base:</b> Included <b>Advanced:</b> Included <b>Enterprise:</b> Included	<b>Upgrade:</b> Enabled <b>Sysinit:</b> Enabled	To disable this feature, use DBS Control fields. For more information, see <i>Teradata Vantage™ - Database Utilities</i> , B035-1102
TASM I/O Usage Event	<b>Developer:</b> Not Applicable <b>Base:</b> Not Applicable	<b>Upgrade:</b> Disabled <b>Sysinit:</b> Disabled	To enable, contact Teradata Support Center. The appropriate license must be purchased first.

Feature	License Tiers	Upgrade Sysinit	Effects and Comments
	<b>Advanced:</b> Not Applicable <b>Enterprise:</b> Included		
Intelligent Memory (TIM)	<b>Developer:</b> Not Applicable <b>Base:</b> Not Applicable <b>Advanced:</b> Included <b>Enterprise:</b> Included	<b>Upgrade:</b> Disabled <b>Sysinit:</b> Disabled	TIM is enabled when the appropriate license and memory are purchased. To enable, contact Teradata Support Center.
TVS (Hybrid Storage)	<b>Developer:</b> Not Applicable <b>Base:</b> Not Applicable <b>Advanced:</b> Not Applicable <b>Enterprise:</b> Included	<b>Upgrade:</b> Enabled <b>Sysinit:</b> Enabled	TVS (Hybrid Storage) is enabled by default when using the hybrid storage system.
Concurrent Query Limit	<b>Developer:</b> 2 <b>Base:</b> 15e <b>Advanced:</b> None <b>Enterprise:</b> None	<b>Upgrade:</b> Enabled <b>Sysinit:</b> Enabled	Appropriate license must be purchased first.
Function Mapping	<b>Developer:</b> Included <b>Base:</b> Included <b>Advanced:</b> Included <b>Enterprise:</b> Included	<b>Upgrade:</b> Enabled <b>Sysinit:</b> Enabled	Function mapping simplifies executing functions on foreign servers.
Teradata Analytic Functions	<b>Developer:</b> Included <b>Base:</b> Included <b>Advanced:</b> Included <b>Enterprise:</b> Included	<b>Upgrade:</b> Enabled <b>Sysinit:</b> Enabled	Some scoring and predictive analytical functions are executed natively on Advanced SQL Engine. For details see <i>Teradata Vantage™ - Advanced SQL Engine Analytic Functions</i> , B035-1206.
Default DBQL Algorithm	Not Applicable	<b>Upgrade:</b> Enabled <b>Sysinit:</b> Enabled	Changed from Alg 1 to Alg 3.
Native Object Store (NOS)	Not Applicable	<b>Upgrade:</b> Enabled <b>Sysinit:</b> Enabled	WRITE_NOS is also enabled when NOS is enabled. It is only enabled on SLES 12 SP3 and if certain prerequisites are met. If not enabled by default, contact Teradata Support Center.



## CREATE/REPLACE TRIGGER WHEN Clause

The CREATE TRIGGER and REPLACE TRIGGER statements have an optional WHEN clause that specifies a search condition. As of Release 17.10, you must qualify column names in the search condition with OLD or NEW unless they are in a subquery.

## DIGEST-MD5 Authentication Protocol

The DIGEST-MD5 authentication protocol used by LDAP is deprecated. Teradata recommends you stop using DIGEST-MD5 and use simple binding with TLS protection instead.

## LDAP Service Password Change No Longer Requires System Restart

The new LdapServicePasswordFile property lets you change the LDAP service password without restarting the system. If you use this new property, the system ignores the LdapServicePassword and LdapServicePasswordProtected properties and reads passwords only from the password file. In the password file, you must encrypt passwords using the tdspasswd command-line utility.

## Native Object Store

For Release 17.10 and later, Native Object Store (NOS) is enabled by default if the following prerequisites are met:

- Teradata system is running SLES 12 SP3 or greater.
- NOS Connector base libraries are installed.
- Certain DBSControl flags for 1 MB related features are enabled.

Contact your Teradata Customer Support representative if you suspect these fields are not set appropriately.

## Native Object Store SQL Updates

Some SQL syntax has been simplified for NOS:

- CREATE AUTHORIZATION INVOKER/DEFINER

Existing syntax:

```
CREATE AUTHORIZATION auth-obj
AS DEFINER TRUSTED
USER 'user-logon'
PASSWORD 'user-password' ;

CREATE FOREIGN TABLE tablename
, EXTERNAL SECURITY DEFINER TRUSTED auth-obj;
```

Simplified syntax:

```
CREATE AUTHORIZATION auth-obj-new
USER 'user-logon'
PASSWORD 'user-password';

CREATE FOREIGN TABLE tablename
, EXTERNAL SECURITY auth-obj-new;
```

- ACCESS\_ID and ACCESS\_KEY Syntax

In previous releases, READ\_NOS used an authorization object in a function mapping in the READ\_NOS statement. The syntax is simplified now, so you can include the authorization in the READ\_NOS statement without using a function mapping.

You also no longer need to include "READ\_NOS" in the SELECT.

```
CREATE AUTHORIZATION auth-obj-new
USER 'user-logon'
PASSWORD 'user-password';

SELECT TOP n * FROM (
    LOCATION='YOUR-STORAGE-ACCOUNT'
    AUTHORIZATION=auth-obj-new
) AS D;

OR

SELECT TOP n * FROM (
    LOCATION='YOUR-STORAGE-ACCOUNT'
    AUTHORIZATION='{ "ACCESS_ID": "access_id", "ACCESS_KEY": "access_key" }'
) AS D;
```

**Note:**

Continue to use INVOKER/DEFINER in a function mapping.

See *Teradata Vantage™ - SQL Operators and User-Defined Functions*, B035-1210 and *Teradata Vantage™ - Native Object Store Getting Started Guide*, B035-1214 , available at <https://docs.teradata.com/>.

## NOSREAD\_SCHEMA RETURNTYPE for JSON, CSV, and Parquet

If you need information about the schema of your CSV, JSON, and Parquet data, you can use the NOSREAD\_SCHEMA return type in your READ\_NOS statement and the schema is detected automatically. The syntax is RETURNTYPE('NOSREAD\_SCHEMA').

For Parquet data you can also continue to use the return type NOSREAD\_PARQUET\_SCHEMA if you are using the FULLSCAN option, as FULLSCAN is not available in NOSREAD\_SCHEMA.

See *Teradata Vantage™ - SQL Operators and User-Defined Functions*, B035-1210, available at <https://docs.teradata.com/>.

## TPA Reset No Longer Required for Some TDGSS Configuration Changes

Prior to Release 17.10, when the TDGSS configuration changed, a TPA reset was required for the new values in the TDGSSCONFIG GDO to take effect. In Release 17.10 and later, the following can be modified without a tpareset:

- Any attribute or property whose name begins with "Ldap" for KRB5 and LDAP
- MechanismEnabled property for KRB5, LDAP, JWT, and PROXY
- AuthorizationSupported property for KRB5 and LDAP
- LDAP Service ID and password with no impact to user LDAP logons
- The following properties in the PROXY mechanism:
  - CertificateFile
  - PrivateKeyFile
  - PrivateKeyPassword
  - PrivateKeypasswordProtected
  - CACertFile
  - CACertDir
  - SigningHashAlgorithm
- Any JWT mechanism property whose name begins with "JWT"
- All canonicalizations including the lightweight authorization structures

Changes to the following still requires a tpareset:

- Changes to any mechanism property not mentioned above require a tpareset
- QoP configuration
- Local or global policy configuration, including service name changes
- TDNEGO and SPNEGO

For more information, see *Teradata Vantage™ - Advanced SQL Engine Security Administration*, B035-1100, available at <https://docs.teradata.com/>.

# System Performance

## Run Vantage with Other Applications

Although applications, including Teradata applications, may execute concurrently with Vantage on approved system platforms, it might negatively impact the database throughput and response time performance and availability.

Teradata strongly recommends that you do not run applications concurrently that are large consumers of system resources, such as other databases, without understanding the performance and availability impact to both the applications and Vantage.

By default, the memory allocation algorithms are based on Vantage using 100% of the memory on a node. If other applications use a significant amount of node memory, you may need to add memory and you should adjust the option controlling this percentage. For these reasons, avoid running non-Teradata applications on nodes running Vantage, if possible, as shown in the following table:

Software Type	Runs on Nodes that Run on Vantage?	Considerations
Non-Teradata applications	No	Run on nodes that do not run Vantage, so that: <ul style="list-style-type: none"> <li>• Expected throughput, expected response time, and parallel efficiency are not impacted.</li> <li>• Detrimental impact on the system is reduced.</li> <li>• Problems can be more easily isolated.</li> <li>• Fixes needed by one application can be made without having to apply them to nodes that do not need those fixes, or for which those fixes are detrimental.</li> </ul>
Teradata applications and Teradata client software	Yes	Run on nodes that run Vantage if the software: <ul style="list-style-type: none"> <li>• Puts a very small load on a system.</li> <li>• Evenly distributes the workload across the nodes.</li> <li>• Is used periodically for system maintenance.</li> <li>• Has an impact that is well-understood and acceptable.</li> </ul>

### Note:

Even if applications are run on separate non-TPA nodes, they may still share the BYNET and thereby potentially interfere with Vantage.

# Limitations

## Teradata Unity

For Vantage SQL and Teradata Unity compatibility and other considerations, see the *Teradata® Viewpoint Compatibility Matrix*, B035-2528, available at <https://docs.teradata.com/>.

**Related Information:**

[Unity Does Not Support TDNEGO](#)