Teradata Load and Unload Utilities

The Power to Succeed

Today's data warehouses demand fast, reliable tools that help you acquire and manage data. You also need the flexibility

to load large volumes of data from any source at any time to meet your business demands. And that's just the beginning. Challenges come from everywhere: more data sources, growing data volumes, dynamically changing business requirements, and user demands for fresher data.

All of these factors make loading data into your warehouse a significant challenge. That's why Teradata Corporation offers a powerful, comprehensive suite of data load and unload utilities for managing your changing data load requirements. Teradata® Load and Unload Utilities are fully parallel to provide optimal performance for getting data in and out of your Teradata Database. In addition, our utilities allow you to import and export data to and from virtually any data source on any platform. Teradata is the only database that provides seamless integration with the mainframe because Teradata utilities uniquely use multiple concurrent access channels and balance the workload across multiple Teradata Database nodes.

Make the first step in creating your data warehouse the right one. Choose a tool suite that provides:

- **Quick access to data for more timely decision making.**
- **Solutions for the entire spectrum of load requirements from batch to near real time.**
- **Unmatched scalability for large volume loads.**
- **Fail-proof loads with checkpoint restart capabilities.**
- **Proven technology from the data warehouse technology leader.**
- **Integration with industry-leading ETL and ELT tools.**

Built-in Benefits

The advantages of Teradata Load and Unload Utilities include:

Checkpoint restart – Enables you to automatically resume load jobs from the last checkpoint if the job aborts.

Direct loading – Teradata tools load data directly from the source. There's no need for time-consuming file splitting, intermediate files, or manual data conversions.

Automatic allocation – The Teradata Database automatically allocates data across nodes. No manual intervention is required.

Scalability – Teradata tools are completely scalable and can use many sessions to achieve peak throughput.

Seamless data movement – Teradata tools run on a variety of client platforms for efficient data integration.

Data access – Provides access to a variety of sources from industry-standard interfaces to real-time message queues. Teradata Load and Unload Utilities support relational and non-relational databases, flat files, named pipes, ODBC data sources, OLE DB providers, WebSphere MQ, and special access module routines that allow you to code your own data preprocessing routines.

Flexibility – Teradata tools provide the flexibility to load data in batch mode or continuously throughout the day.

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Powerful Solutions

Teradata Load and Unload Utilities have been specifically designed to move large volumes of data into a Teradata Database – faster and more efficiently than any other solution. Our load and unload solutions include:

Teradata Parallel Transporter

Teradata Parallel Transporter, our parallel multi-function load environment, simplifies building and maintaining your warehouse by providing flexible, scalable access to your data sources from a single interface using a single SQL-like scripting language or an open API. It provides a completely parallel environment that is faster, easier to use, and much more extensible than other tools available on the market. Dozens of files can be loaded using a single script, making development and maintenance easier. What's more, Teradata Parallel Transporter efficiently utilizes your system resources by allowing you to easily distribute the workload across CPUs, eliminating bottlenecks in your data load process.

We've provided a foundation – the Teradata Parallel Transporter Infrastructure – that lets you develop parallel load applications to maintain your warehouse (see Figure 1). Each user simply creates a job – a string of Teradata Parallel Transporter commands – that allows them to perform operations, such as heterogeneous data access, data integrity checks, data merging, and data loads in batch or near real time.

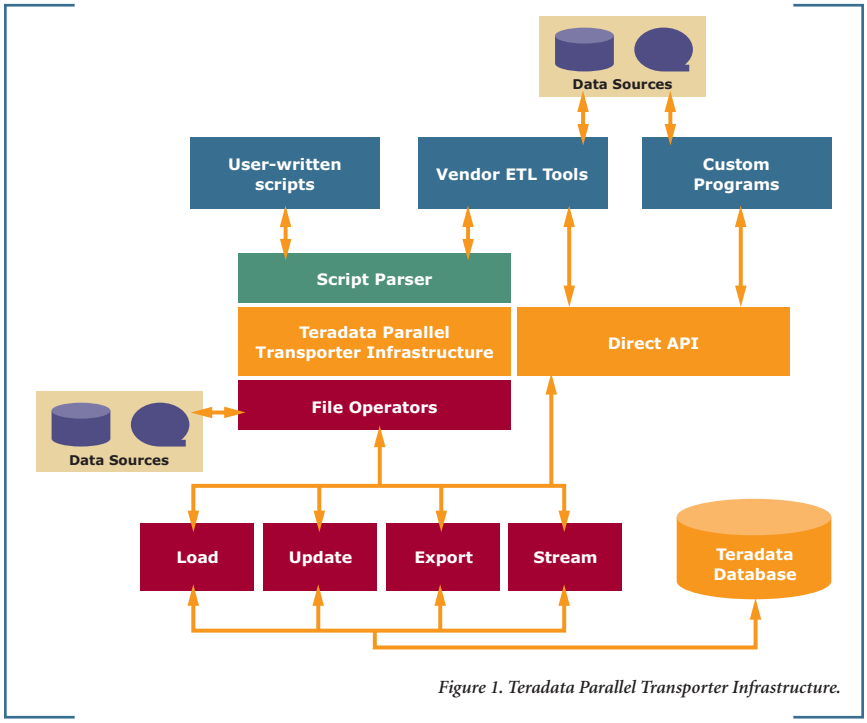

Figure 1. Teradata Parallel Transporter Infrastructure.

Teradata Parallel Transporter provides a set of open APIs that enables integration of third-party tools or custom applications, enabling you to leverage your investment in transformation tools and parallelism of the Teradata Parallel Transporter infrastructure.

Standalone Load Utilities

Teradata FastLoad – Initial Table Load

This highly reliable, parallel load utility is designed to move large volumes of data – collected from data sources on channel and network-attached clients – into empty tables in the Teradata Database. You can execute Teradata FastLoad from any client platform, mainframe, or load server to move data seamlessly into the Teradata Database.

And because data allocation, conversion, movement, and loading are automatic and performed in parallel, FastLoad offers higher performance levels than a standard application program written to load data to an empty database.

Teradata FastExport – Data Export

Our data extract tool, Teradata FastExport, is the reverse of the FastLoad utility. This high-speed utility quickly exports large data sets from Teradata tables or views to a client system for processing, generating large reports, or for loading data into a smaller database. Like all Teradata load utilities, FastExport can export data to both channel- or network-attached client systems. FastExport also provides session control and data handling specifications for the data transfer operations.

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Teradata MultiLoad – Data Maintenance
A time-tested, highly reliable, parallel load utility, Teradata MultiLoad is used to create and maintain Teradata Databases. MultiLoad optimizes operations that rapidly acquire, process, and apply data to tables in a Teradata Database. For data maintenance, MultiLoad updates, inserts, upserts, and deletes large volumes of data into empty or populated tables. MultiLoad works at the data block level, providing a faster alternative to insert/select operations that touch a significant portion of the target table. A single MultiLoad job can maintain up to five Teradata tables by extracting large volumes of data, locking the destination tables, then loading data rapidly using block level updates. Like FastLoad, MultiLoad runs on a variety of client platforms, operates in a fail-safe mode, and is fully recoverable.

Teradata TPump – Continuous Data Loading
Teradata TPump is a highly parallel utility designed to continuously move data from data sources into Teradata tables without locking the affected table. TPump provides near-real-time data into your data warehouse, allowing you to maintain fresh, accurate data for up-to-the-moment decision making. You can use TPump to insert, update, upsert, and delete data in the Teradata Database, particularly for environments where batch windows are shrinking and warehouse maintenance overlaps normal working hours. And because TPump uses row hash locks, users can run queries even while it's updating the Teradata Warehouse.

BTEQ – SQL Query Capability
BTEQ, available as part of the Teradata Utility Pack, is a general-purpose, command-based tool that enables you to communicate with one or more Teradata Databases. BTEQ provides an interactive or batch interface that allows you to submit SQL statements, import and export data, and generate reports. BTEQ provides report-formatting options where queried data are formatted and returned to the screen, file, or printer. Scripts are sent from the client to the Teradata Database where the actual process occurs. You can also use BTEQ to import and export data between your client and database tables. BTEQ's streamed package format design ensures fast processing and effective resource utilization.

Access Modules
Access modules are adapters that allow all Teradata Load and Unload Utilities to interface with a variety of sources through standards-based interfaces. These standards- based modules let you read from a given source just as if you were reading from a flat file. Our access modules include Named Pipes, OLE DB, JMS queues, and WebSphere MQ.

Teradata Replication Services – Real-time Data Synchronization
Teradata Replication Services ensure that the data in your transactional data stores and your Teradata Database are synchronized. Teradata Replication Services replicate data from multiple relational and non-relational data sources into Teradata Databases. Changes to data within a data source are propagated to specified targets within seconds. It also ensures that the data in your backup or dual active databases are up-to-date. If any part of your system is unavailable, Teradata Replication Services will remember where you left off and catch up once the resource becomes available again.

ETL Solutions
Teradata works with industry-leading companies that specialize in data integration and movement to provide you with complete Extract, Transform, and Load (ETL) capabilities. By combining the strengths of Teradata's Load and Unload technology with our partners' proven ability to extract information from many sources, you get an even more effective ETL solution. This combined ETL solution includes an easy-to-use graphical user interface and the ability to automatically generate ETL scripts leveraging parallel load and unload utilities from Teradata.

Why Choose Teradata?

Teradata brings you the power to proactively manage your business and drive growth. Our solutions help provide analysis to expedite fast, accurate, and consistent decision making across your entire enterprise. And, we can help you take the first step toward that single view of data for every user in your organization.

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Utility	**Features**	**Supported Platforms**
Teradata Parallel Transporter	> Single infrastructure for all loading needs using single scripting language > Integrated API to interface with ETL tools and custom programs > Completely parallel > Combines functionality of Teradata FastLoad, MultiLoad, FastExport, and TPump	> UNIX SVR4 MP-RAS™ > IBM z/OS (MVS) > Microsoft® Windows® > Sun Solaris SPARC > HP-UX > IBM AIX > RedHat Linux > SUSE Linux Enterprise Server from Novell
Teradata FastLoad	> High-performance initial table load	
Teradata FastExport	> High-performance data unload in client format	
Teradata MultiLoad	> High-performance maintenance operations applies updates to multiple tables in single pass > Best for over 1-2% of rows changed	
Teradata TPump	> Fast, scalable continuous data loads > Row hash lock enables concurrent queries > Dynamic throttling feature > Best for small data volumes	
BTEQ	> Report formatting > Ad hoc query tool > Database administration > Best for small data volumes	
Teradata Replication Services – GoldenGate™ Replication Products	> Real-time data synchronization > Teradata Database can be selected as a source or a target > Best for real-time change data capture	

Plus, Teradata brings you a built-in foundation of industry knowledge, consulting expertise, global customer support services, and world-leading hardware technology – a combination of strengths unmatched in the industry.

Meet Your Data Movement Needs

Teradata Load and Unload Utilities offer a unique blend of performance, operational efficiency, and flexibility. Together, they provide the power to effectively integrate data for the information and insight you need to make faster, better decisions. To find out more about Teradata Load and Unload Utilities, contact your Teradata representative or visit Teradata.com.

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