Teradata UDA Appliance

Harnessing the power of 21st century big data often requires multiple analytic technologies and platforms. Figuring out where and how to efficiently analyze and store this data can be intimidating. The Teradata® UDA Appliance enables all types of organizations to cost-effectively utilize a variety of technologies to explore, analyze, and transform data into actionable insights.

The Teradata Unified Data Architecture™ (UDA) is comprised of three core components: an integrated data warehouse (IDW), an integrated discovery platform, and a data platform. The Teradata IDW is the central platform for delivering strategic and operational analytics to a business by utilizing a single source of centralized, consistent data. Teradata Aster® Analytics is used by business analysts to unlock insights from big data with rapid exploration capabilities and a variety of analytic techniques. And the Hadoop-based data platform is used for capturing, storing, archiving, exploring, and refining all types of data.

Big Data Analytics in a Compact Solution

The Teradata UDA Appliance—the first appliance to combine the IDW, a discovery platform, and a data platform in a single cabinet—is a compact environment for data warehousing, iterative data exploration and advanced analytics, and low-cost data storage. The flexible cabinet enables a mixture of Teradata, Teradata Aster, and Hadoop nodes to meet your workload requirements—all installed into one cabinet to preserve valuable data center floor space.

The appliance is a tightly coupled, fully-integrated hardware and software solution that contains Teradata Database, Teradata Aster Database, and a choice of Hadoop distribution software from Hortonworks or Cloudera to process structured, unstructured, and semi-structured data all running on proven, robust, enterprise-class Teradata hardware.

Key capabilities of the UDA Appliance include:

- A truly hybrid architecture that includes Teradata Aster Database, Teradata Database, and Hadoop for a complete analytics solution in a data center-friendly single cabinet footprint.

- Teradata QueryGrid™ enables business analysts to issue ANSI-standard SQL, open source R, Teradata Aster SQL-GR, and Teradata Aster SQL-MapReduce® commands on Teradata, Teradata Aster, and Hadoop data.

- High-speed 40Gb/s InfiniBand connectivity enables seamless communication with all platforms within the Teradata Unified Data Architecture.

- Enterprise-ready software and hardware management, via Teradata Server Management, Teradata Viewpoint, and Teradata Vital Infrastructure services.

- Compatibility with BI and ETL tools.

Enterprise-Ready Solution

Since the solution is optimized, certified, and fully supported by Teradata, the most trusted name in enterprise data management and analytics, you eliminate the need for specialized software or hardware management skills required to assemble your own big data analytics solution. Existing customers will find the management consoles and capabilities familiar and complementary to your existing database and data warehouse deployments. New customers will appreciate the variety of analytic technologies available at your fingertips in a compact appliance.

A suite of adapters supports out-of-the-box enterprise integration for a complete ecosystem of enterprise data management systems. Certified ODBC and JDBC support for major business intelligence, visualization, and ETL tools; Teradata high-speed data transfer infrastructure; and native Hadoop connectivity are all available to enhance your enterprise solution.

Fast and Reliable Network Interconnect
A dual 40 Gb/s InfiniBand network connects the Aster, Hadoop, and Teradata nodes within a cabinet. This fast, dedicated, and reliable network interconnect can also be used to connect the UDA Appliance to individual Teradata, Teradata Aster, and Hadoop cabinets and enables tight integration with the Teradata Unified Data Architecture.

All the tools and utilities you need to build and maintain your analytic applications are available:

Integration with Teradata Server Management enables proactive monitoring of hardware and software events, such as disk or node failures. Server Management runs on the Virtual Management Server (VMS). The VMS also provides Teradata Vital Infrastructure support for Teradata, Teradata Aster, and Hadoop components.

Teradata Vital Infrastructure is the end-to-end solution for delivering Server Management data to Teradata Customer Service's back-end support infrastructure. It escalates (forwards) the alerts and other types of data so issues can be addressed quickly, thereby minimizing system downtime.

Integration with Teradata Viewpoint offers a common management console for the Teradata Aster Database, Teradata Database, and Hadoop. Teradata Viewpoint offers simpler, faster, and more comprehensive system management and monitoring capabilities by providing a browser-based portal that delivers management intelligence to DBAs and users alike. A standalone Viewpoint server is required to manage two or more systems.

In addition, we offer a full array of support advantages, including Teradata Vital Infrastructure services which provide:

- Industry-certified regional and global Customer Care Centers with experienced service representatives who are available 24x7.
- End-to-end support for the entire solution, from the hardware/OS to the Aster, Hadoop, and Teradata software.
- Secure remote connectivity options to pinpoint problems and react rapidly.

Why Teradata?

Teradata helps companies get more value from data than any other company. Our big data analytic solutions, integrated marketing applications, and team of experts can help your company gain a sustainable competitive advantage with data.

For More Information

Find out how the Teradata UDA Appliance can make your entry into enterprise analytics fast, efficient, and cost effective while you improve your decision-making capabilities and grow a stronger, more productive business. Contact your local Teradata representative, or visit **Teradata.com**.

TERADATA

UDA Appliance Description

Integrated Cabinet

- SUSE® Linux Enterprise Sever (SLES) 11 64-bit Operating System
- Teradata Aster nodes running Teradata Aster Database 6.0 or higher
  - Dual Intel® Twelve-Core Xeon® processors @ 2.5GHz per node (Queen/Worker)
  - Dual Intel Eight-Core Xeon processors @ 2.6GHz per node (Backup/Loader)
- Hadoop nodes running Hortonworks HDP 2.3 or Cloudera Enterprise 5.4
  - Dual Intel Twelve-Core Xeon processors @ 2.5GHz per node (Master/Edge/Balanced Data/ Performance Data Nodes)
  - Dual Intel Eight-Core Xeon processors @ 2.6GHz per node (Capacity Data node)
- Teradata Data Warehouse Appliance 2800 running Teradata

Database 14.10 or higher (four nodes maximum)
  - Dual Intel Fourteen-Core Xeon processors @ 2.6GHz
- Teradata Data Mart Appliance 680 (one node maximum)
  - Dual Intel Fourteen-Core Xeon processors @ 2.6GHz
- High throughput Teradata BYNET® v5 on a dual 40Gb/s InfiniBand interconnect for performance and redundancy
- Optional 10GB switch for connecting nodes to customer LAN
- Optional Servers for Teradata Aster AppCenter, Teradata Unity, Teradata Data Mover, Viewpoint, and third- party applications

User Data Capacity – uncompressed

(3x compression assumed typical)
  - Aster Worker Nodes with 1.2TB drives: 7.3TB
  - Aster Backup Nodes with 4TB drives: 36TB

  - Balanced data nodes and Capacity data nodes for Hadoop with 4TB drives: 16TB
  - Performance data nodes for Hadoop with 1.2TB drives: 9.6TB
  - Teradata nodes with 300/600/ 900/1200GB drives: 3.8/7.5/ 11.4/15.2(RAID1)-26.7(RAID6)TB
- Teradata software developed and/ or optimized for monitoring and communication for all technologies including:
  - System Management Infrastructure, Teradata Administration, Teradata Vital Infrastructure, and Teradata Viewpoint 14.10 or higher
  - Teradata QueryGrid allows data access in Teradata Database, Teradata Aster Database, and Hadoop through a standard SQL interface

Specifications

Cabinet

- Height: 80.5 in. (204.5 cm)
- Width: 24 in. (61 cm)
- Depth: 49 in. (124.5 cm) 47 in. (119.4 cm) w/o the front and rear doors
- Weight: 2,228 lbs. (1011 kg) fully loaded with crate
- Installed Weight: 1,828 lbs. (830 kg) fully loaded w/o crate

Operating

- Operating Temperature: Allowable: 59°F to 90°F (15°C to 32°C);
  - Recommended: 64.8°F to 80.6°F (18°C to 27°C)
- Relative Humidity: Allowable: 20% to 80% (non-condensing)
  - Recommended: Low end moisture: 5.5C DP (41.9°F), High end

moisture: 60% RH and 15C DP (59°F DP)
- Electrical
  - Worldwide: 200 – 240V (Phase to Phase or Single Phase)
    - 30A/32A, 4-cord
  - North America: 200 - 240V, 3~+PE
    - 30A, 3-p delta, 4-cord
    - 60A, 3-p delta, 2-cord
  - International: 220 - 240 / 381 - 415, 3~ +N +PE
    - 30A/32A, 3 phase wye, 2-cord, (including North America with EU style power)
- All plugs are IEC 60309 CEE17
- Frequency: 50Hz / 60Hz
- Maximum Power: 15,600 Watts

- Dual AC: Standard
- Compliant with U.S. and International Safety and Emissions Standards

Support Services
Maintenance and Support

- Integrated hardware and software maintenance and support
- Secure remote connectivity
- Fast response times
- Flexible coverage hours
- Robust diagnostic capabilities with Teradata Vital Infrastructure
- Easy access to software updates via Teradata @ Your Service
- Proactive system monitoring
- Implementation Services
- System Installation