

# Aster MapReduce Appliance from Teradata

Data Warehousing > Hardware

## The Simplest Way to Bring Big Data Insight to Business



No matter what you call it – big, raw, multi-structured, or non-relational – data that is at the heart of data science is growing at dramatic rates. And so is the need for companies to combine the art of business with the science of data to find new and better ways to use this valuable information.

The digital age has created a tremendous business opportunity in the massive volumes of multi-structured data that are being generated. This data is not typically

stored and processed in traditional database systems, and yet it provides insight into digital customer behavior, machine-to-machine communications, and entirely new data-driven strategic initiatives, products, and services. To take full advantage of the value of this new data type requires a solution that simplifies and accelerates the development of data science applications – without demanding new skills and administrative resources.

That's exactly the combination of intelligence with simplicity and power that the Aster MapReduce Appliance from Teradata Corporation delivers.

### An Out-of-the Box Solution

The Aster MapReduce Appliance is a powerful, ready to run platform that is pre-configured and optimized specifically for big data analysis. A purpose-built, integrated hardware and software solution for analytics at big data scale, the Aster MapReduce Appliance runs the Aster patented SQL-MapReduce® technology on a time-tested, fully-supported Teradata hardware platform. By minimizing the number of moving parts to deploy, it offers easy, integrated management of an enterprise-ready MapReduce solution with the benefits of optimized performance, continuous availability, and linear scalability. The result? You can bring data science to the business by simply plugging the Aster MapReduce Appliance into your infrastructure.

### Grow Your Insight with Your Business

The Aster MapReduce Appliance lets you begin building big data insight now – and it can grow as your future business needs expand. That's because it offers you a unique blend of power and simplicity that can keep pace with your changing demands. The Aster MapReduce Appliance is an analytic performance-optimized environment for rapid on-the-fly data exploration using data science analytic techniques, such as graph, pattern, and path analysis, to unlock new insights from social network data to Web log data, machine data, and more.

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In addition, the analytic platform extends and enhances the value delivered by your data warehouse. How? By processing new data types and sources that are not typically stored in a data warehouse and by leveraging that data stored to enhance its analysis. Plus, the appliance lets you quickly find the high-value data and deep insights you need for strategic and operational intelligence. And with the integrated, high-speed communication connection, the Teradata Aster Adapter, those insights can be easily integrated into your enterprise data warehouse.

## ***Built for Ease of Start-up***

Delivered ready to plug-in, the Aster MapReduce Appliance is a fully-integrated system that's purpose built for big data analytics on multi-structured data. It features a complete Aster Database, including the patented Aster SQL-MapReduce framework, on a proven Teradata hardware platform with dual six-core Intel® Westmere processors, SUSE® Linux operating system, and enterprise-class storage – all preinstalled into a power-efficient unit. That means you can have the system up and running live in just a few hours for rapid time to value.

## ***Delivers Reliable, Scalable and Powerful Processing***

Massively parallel processing architecture and embedded SQL and MapReduce engines enable end-to-end parallelism of data and analytic processing. It executes loads, queries, exports, backups, recoveries, installs, and upgrades in parallel to take full advantage of all resources,

optimizing performance for analytic processing. The Aster MapReduce Appliance delivers high availability through a disk RAID and software redundant design, and Teradata's advanced Server Management features proactively monitor the system with diagnostic tools to quickly detect and address any issues to maximize availability.

## ***Simply Plugs Into the Enterprise***

### ***Architecture***

The Aster MapReduce Appliance is easily accessible, delivering big data analysis, without requiring specialized software or hardware management skills in your data center or enterprise architecture. Existing Teradata customers will find the management consoles and capabilities familiar and complementary to their existing database and data warehouse deployments.

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 integrated data warehouse high-speed data transfer infrastructure; and native Hadoop connectivity are all included to enhance your enterprise solution.

### ***Complete Management, Service, and Support***

The platform features simplified platform administration, control, and monitoring through the single operational view on the Teradata Server Management and web-based Administration Workstation portal.

The Aster MapReduce Appliance delivers rich visibility and control of not only data, but also the SQL and MapReduce analytic applications running inside the system. It provides intuitive tools for centralized management combined with powerful capabilities for simplifying and automating administration and managing data and applications to minimize administrative work, even as the system scales.

The Aster MapReduce Appliance comes with the tools and utilities you need to build and maintain your analytic appliance, including:

**Integration with Teradata Server Management** – Enables proactive monitoring of hardware events such as disk or node failures. System warnings are sent to Teradata's global customer support team so that issues can be addressed quickly to minimize system down time.

**The Aster Management Console (AMC)** – To configure, manage, and monitor data, applications, and infrastructure. An intuitive graphical interface enables easy monitoring with summary dashboards, graphical views of query and process execution, and easy drill-down. It also makes administration easy with single-click scaling and point-and-click access to workload management policies.

### ***Always-On Online Maintenance*** –

The Aster Database supports simultaneous load and export during queries, online backup and recovery, online restoration, and online scaling to avoid scheduled downtime.

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## Aster MapReduce Appliance Description

<p><b>The Aster MapReduce Appliance features:</b></p> <ul style="list-style-type: none"><li>• Aster Database 4.6.2 or higher version</li><li>• SUSE Linux 11 64-bit Operating System</li><li>• Integrated Cabinet<ul style="list-style-type: none"><li>– Dual Intel Six Core Westmere Xeon® processors @ 3.06GHz per node</li><li>– 10Gb Ethernet Node Interconnect</li><li>– System Management Infrastructure and Teradata Administration</li><li>– Aster Teradata Adapter: high-speed data connector to the Teradata data warehouse</li></ul></li><li>• RAID High Availability</li><li>• Disk Capacities with 600GB Drives - uncompressed (3x compression typical)<ul style="list-style-type: none"><li>– Full Base Cabinet – 13.6TB user space (40TB compressed)</li><li>– Full Expansion Cabinet – 18.1TB user space (54TB compressed)</li></ul></li><li>• Scalable with expansion cabinets and larger network switch</li></ul>	<p><b>Specifications</b></p> <p><b>Cabinet Specifications</b></p> <ul style="list-style-type: none"><li>• Height: 77 in. (195.6 cm)</li><li>• Width: 24 in. (60.96 cm)</li><li>• Depth: 45 in. (114.3 cm)<ul style="list-style-type: none"><li>– 40 in. (101.6 cm) w/o the front and rear doors</li></ul></li><li>• Weight: 1,790 lbs. (812 kg) fully loaded with crate</li><li>• Installed Weight: 1,540 lbs. (699 kg) fully loaded w/o crate</li></ul> <p><b>Operating Specifications</b></p> <ul style="list-style-type: none"><li>• Operating Temperature: Allowable: 59°F to 77°F (15°C to 25°C); Recommended: 68°F to 77°F (20°C to 25°C)</li><li>• Relative Humidity: Allowable: 20% to 80% (non-condensing); Recommended: 40% to 55%</li><li>• Voltage Range: 200/240VAC with Single Phase; 220 - 240/380 - 415, 3~ +N +PE with three phase international</li><li>• Frequency: 50Hz – 60Hz</li></ul>	<ul style="list-style-type: none"><li>• Current: 24 amps – Four cords with 30 ampere North American – plugs – L6-30P and 32 amps with two cords three phase IEC plug</li><li>• Power: 8.8kW</li><li>• Dual AC: Standard</li><li>• Compliant with U.S. and International Safety and Emissions Standards</li></ul> <p><b>Support Services</b></p> <p><b>Maintenance and Support</b></p> <ul style="list-style-type: none"><li>• Integrated hardware and software maintenance and support</li><li>• Secure remote connectivity</li><li>• Fast response times</li><li>• Flexible coverage hours</li><li>• Robust diagnostic capabilities with Teradata Vital Infrastructure</li><li>• Easy access to software updates via Teradata @ Your Service</li><li>• Proactive system monitoring</li></ul> <p><b>Implementation Services</b></p> <ul style="list-style-type: none"><li>• System Installation</li><li>• Software Implementation</li></ul>
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In addition, Teradata offers you a full array of support advantages, including:

- > Industry certified regional and global Customer Care Centers with experienced service representatives 24x7.
- > Secure remote connectivity options to pinpoint problems and react rapidly.

### Why Teradata?

Teradata is the world's largest company focused on analytic data solutions through integrated data warehousing, big data analytics, and business applications. Only Teradata gives organizations the advantage to transform data across the organization into actionable insights empowering leaders to think boldly and act decisively for the best decisions possible.

### For More Information

To find out how an Aster MapReduce Appliance from Teradata can make your entry into big data 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](http://Teradata.com).

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