Aster Developer Express

Accelerate Development and Deployment of Advanced Analytic Applications

Organizations rely on analytic applications to turn the massive volumes of data available to them into the rich insight that they need to make critical decisions. The explosion in the number of sources and volumes of multi-structured data has led to the emergence of a new generation of advanced, big data analytic applications – analytic applications designed to explore and investigate multi-structured data from many sources to uncover the relationships and insights in that data while scaling to huge data sets. These applications need to take advantage of analytic platforms that can embed analytics processing with the data to enable the performance and scalability required. However, development of these analytic applications has traditionally been hindered by complexity and inefficiency, delaying the deployment of new and updated analytics and forcing analysts and data scientists to spend significant effort on the mechanics of development rather than on the analytic logic that delivers important insights from data. Further, developers also need to easily leverage new technologies that have emerged as valuable tools for big data analytics, such as MapReduce processing, without requiring significant new training and skills. However, most MapReduce systems require specialized skills and significant complexity for developing, testing, and deploying analytics. To address these challenges, enterprises need tools that simplify and streamline the analytic application lifecycle from development and validation to deployment without sacrificing richness of analytics and the ability to leverage new technologies.

The Teradata Aster Solution

Aster Developer Express is the first integrated visual environment that simplifies and accelerates the creation of SQL and MapReduce analytic applications throughout the development lifecycle – from development and testing through to deployment. Developer Express delivers an intuitive visual environment for creating SQL-MapReduce® analytic applications for the analytic platform Aster Database, automates integration of analytic logic into that analytic platform, makes it possible for developers to rapidly and easily test their applications, and provides single-click push down of the application into the Teradata Aster analytic platform. Developer Express complements the Aster MapReduce Portfolio suite of powerful analytic functions for faster development of advanced analytic applications. Using Developer Express, analysts can significantly reduce the complexity and time needed to create advanced analytic applications so that they can more rapidly deliver deeper and richer analytic insights from their data.
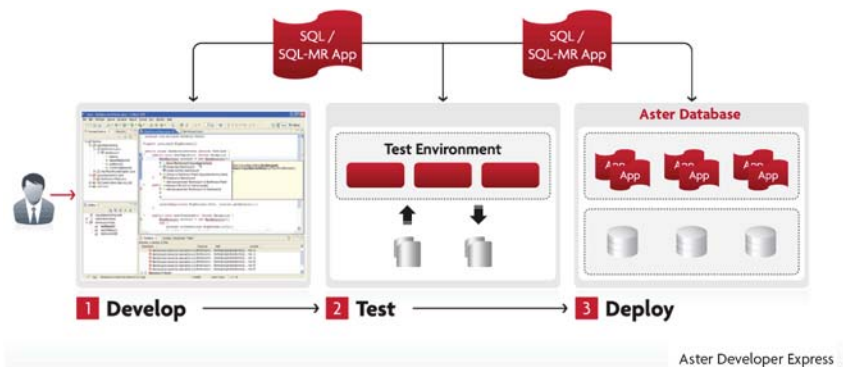

Figure 1: Aster Developer Express makes powerful big data analytics easy with the first integrated environment for developing, testing, and deploying analytics for SQL and MapReduce.

Overview

Aster Developer Express delivers an intuitive visual environment for developing, testing, and deploying SQL-MapReduce analytic applications for the Teredata Aster analytic platform.

Highlights

- Visual development environment for developing embedded SQL-MapReduce analytics for the Aster Database analytic platform

- Integration with Eclipse IDE provides the first integrated development environment for SQL and MapReduce-enabled applications

- Wizards automate the integration of analytic logic with the interfaces and packaging required to push the application into the analytic platform

- Desktop testing environment enables rapid testing of application logic on any desktop system

- One-click push down of applications into Aster Database simplifies embedding of analytic applications with data

- Complements Aster MapReduce Portfolio, the first suite of scalable MapReduce-enabled analytics functions for deep and rich analytics including time-series, pattern, and graph analysis and many others

"Teradata Aster's new integrated development environment will enable us to automate parts of development that currently take days, allowing us to build rich analytic applications significantly faster and more easily."

Don Watters, Principal Architect, Data Services MySpace

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Simplify Development

Aster Developer Express streamlines development of analytic applications by providing the first integrated visual development environment for SQL and MapReduce applications, providing intuitive development of MapReduce analytics that can easily integrate existing analytic logic and libraries into SQL-MapReduce analytics.

- **Integrated visual development environment.** Developer Express integrates with the popular Eclipse Integrated Development Environment (IDE) to enable developers to write applications leveraging SQL and MapReduce in a rich visual development environment. Developers can easily write, compile, and validate analytic applications within an intuitive visual environment; incorporate existing analytic code and libraries in SQL-MapReduce analytics; and leverage the Aster MapReduce Portfolio suite of analytic functions.

- **Wizards to automate application integration.** Developer Express includes wizards that automate the integration of analytic logic with the Teradata Aster analytic platform. Using these wizards, developers can focus on programming valuable analytic logic rather than on the mechanics of integrating it with the database.

Rapidly Test Applications on Any Desktop

Testing and validation of analytic code is frequently bottlenecked by waiting for access to a running database instance, which in turn requires additional work to configure and maintain even for the most basic tests. Aster Developer Express makes rapid, frequent testing possible by providing a lightweight testing environment that enables developers to quickly validate their application code directly on their desktop without requiring access to an Aster Database instance. Developers can directly launch tests of their SQL-MapReduce analytics from within the graphical development environment, using the desktop test environment to simulate application processing, and then view the results of their test within the Eclipse IDE. As a result, developers can quickly and iteratively develop analytic applications on any desktop, even without access to a running Aster Database instance.

Deploy Analytic Applications in a Single Click

Traditional systems make it cumbersome to push down analytic logic into the database because of the restrictions and limited flexibility of their models for supporting sophisticated analytic processing. Systems offering support for traditional User-Defined Functions (UDFs) typically have significant restrictions and a complicated deployment process involving multiple packaging and installation steps that require coordination among developers, analysts, and database administrators. Deployment of MapReduce jobs in typical systems is similarly a complex task requiring deep expertise in systems programming and specialized scripting tools.

Teredata Aster's Applications-Within® approach allows a wide range of rich analytic applications written in languages including C, C++, .NET, Java, Perl, and Python to be embedded in the analytic platform with full access to services provided by the platform. Developer Express supports this by making it possible for developers to push their completed applications to an Aster Database system with a single click directly from the IDE. As a result of this streamlined deployment process, developers spend less time working through the mechanics of deploying their applications, and administrators spend less time coordinating with developers and analysts to embed applications in the system.

About Teradata Aster

The Teradata Aster MapReduce Platform is the market-leading big data analytics solution. This analytic platform embeds MapReduce analytic processing for deeper insights on new data sources and multi-structured data types to deliver analytic capabilities with breakthrough performance and scalability. Teradata Aster's solution utilizes Aster's patented SQL-MapReduce® to parallelize the processing of data and applications and deliver rich analytic insights at scale.

"With our experience in developing big data applications, and Teradata Aster's elegant integration of MapReduce with SQL in a visual development environment, Impetus can reduce development time for solutions and build richer data-driven applications that empower our customers to deliver data monetization, higher customer satisfaction, and risk reduction."

Pankaj Mittal, Chief Technology Officer Impetus

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http://www.asterdata.com or
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