Cost-Effectively Scale Data Integration Environments with Grid Computing

Commodity hardware, such as blade servers, has shown a great deal of promise in scalable processing to dramatically lower costs. But these grid environments are dynamic. Nodes are constantly added to and removed from the grid. In addition, parallelization schemes require constant tuning to optimize performance.

The Informatica® PowerCenter® Enterprise Grid Option exploits grid computing architectures for data integration. This option minimizes the amount and frequency of data mapping modifications needed to respond to changing conditions. The parallel execution plan can be determined dynamically at run time. With this option, your IT organization can ensure uptime through self-monitoring of Informatica PowerCenter services for seamless resilience, failover, and recovery.

With the Enterprise Grid Option, your IT organization can reduce the administrative overhead of supporting grid computing environments and cost-effectively scale data integration initiatives using low-cost, commodity hardware.

The Enterprise Grid Option allows parallelization of a single session across a grid and offers high availability of the entire data integration platform, increasing both scalability and reliability.
Key Features

**Workflow and Session-on-Grid**
The Enterprise Grid Option distributes processing of a single session across multiple server nodes on a grid. It allows incremental investments in processing capacity. It helps to cost-effectively scale data integration initiatives using lower-cost commodity hardware, such as blade servers. This feature extends PowerCenter’s scalability, rendering it virtually unlimited.

**Adaptive Load Balancing**
This feature ensures smooth operations and reliable scale out when facing spikes in data volumes or unexpected utilization loads on the grid. You can select the best node for session execution based on resource requirements and availability. This feature factors in cost-based metrics such as CPU utilization, process size, and memory.

**Dynamic Partitioning**
This feature automatically adjusts the parallel execution plan in response to additions/removals of nodes from the grid without changing the logic. It exponentially improves PowerCenter performance by automatically adapting to exploit available grid resources.

**Web-Based Administration Console**
This console provides secure, centralized control over the provisioning of server nodes, PowerCenter resources, and PowerCenter services both into and out of the enterprise data integration grid.

**Robust Interoperability**
This option allows heterogeneous hardware operating systems to be used across the grid and to interoperate with enterprise grid resource software. It automatically applies all high-availability features to all data integration processing available on PowerCenter.

Key Benefits

**Enhance IT’s Agility and Responsiveness to Changing Business Demands**
Your IT organization often needs to address sudden and dramatic increases in data volumes. With this option, your IT organizations can cost-effectively scale your computing capacity as business needs grow.

**Scale Performance with Available Hardware**
This option provides unparalleled support for grid computing environments. In turn, IT organizations can cost-effectively scale to adjust and optimize data delivery to the enterprise. This option makes the best use of existing hardware assets or new cost-effective hardware options.

**Increase System Reliability and IT Productivity**
With PowerCenter’s unique architecture, the mapping specification is abstracted from the parallel execution plan, paving the way for the Enterprise Grid Option to offer dynamic partitioning and load balancing. Dynamic partitioning automatically adjusts the parallel execution plan in response to additions or removals of nodes from the grid or to changes in RDBMS table partitioning schemes. The partitioning capability boosts productivity by freeing developers and administrators from having to constantly refactor the parallelization scheme.