Powerful Cloud-Based In-Memory Data Grids for Scalable Performance and Data Analysis

Overview

Cloud computing is quickly gaining popularity with companies in all industries. The cloud's on-demand elasticity, enabling it to expand its computational power as needed for peak loads, creates new and important benefits for enterprise computing. Its ability to provide access to additional computing resources when needed allows IT departments to cost-effectively shift their resources from data-center operations to focus on higher value, core tasks within the enterprise.

By dramatically simplifying and enhancing the deployment of scalable applications within cloud-based infrastructures, in-memory data grids play a key role in delivering on the cloud's promise of on-demand elasticity. ScaleOut StateServer®'s scalable, easy to use, in-memory data grid enable application data to be instantly shared across an elastic pool of cloud servers for quick access and fast analysis. This breakthrough technology within the cloud provides the perfect platform for both hosting and analyzing large data sets.

Scalable Access to Data

Scalable applications hosted in the cloud need to eliminate performance bottlenecks so that they can take full advantage of the cloud's elastic resources. The use of ScaleOut StateServer gives applications a scalable storage repository where data can be accessed without bottlenecks and shared across a pool of virtual servers. ScaleOut StateServer's architecture natively supports automatic expansion and contraction of its in-memory data grid in response to application requirements. As servers are added, the grid automatically scales, and applications benefit from linearly increased throughput on demand. When no longer needed, grid servers can be removed and data gracefully compacts into the remaining servers.

Transparent Data Migration

ScaleOut StateServer can also significantly reduce the complexity of migrating applications to the cloud, which helps both enterprise IT managers and third-party cloud providers meet the stringent performance and uptime needs of cloud deployments. ScaleOut StateServer enables in-memory data grids at different sites to be integrated into a single logical, uniform, and coherent distributed data grid. ScaleOut StateServer provides a "bridge" to the cloud, automatically migrating data between on-premise and cloud environments as needed. By making data seamlessly available regardless of location, ScaleOut StateServer avoids the need for applications to manually restage grid data into a separate cloud-based store. Applications benefit from a seamless transition of data into the cloud (or within the cloud across application instances) to take full advantage of the cloud's resources.

For example, consider a premise-hosted ecommerce Web farm that needs to scale into the cloud to handle high seasonal demand. The site administrator only needs to reconfigure the Web site's IP load-balancer to distribute Web requests across both on-premise and cloud-based Web servers. By using ScaleOut StateServer's in-memory
data grid, all of the site's Web (and application) servers seamlessly share session data within a single, logical, data grid; session data automatically migrate into and out of the cloud on demand.

**Data Analysis**

In addition to automatic scalability and transparent data migration, in-memory data grids open the door to performing powerful data analysis within the cloud. High performance computing (HPC) environments routinely process computational analyses of large data sets, such as stock price/volume histories, retail transactions, census data, and many others. A cloud-based in-memory data grid provides the perfect platform for these analyses since a large number of servers can be employed for only the time needed, not as a permanent investment.

ScaleOut StateServer Grid Computing Edition™ incorporates important capabilities for performing data-parallel analysis in the cloud. By providing a highly optimized implementation of the popular "map/reduce" programming model, ScaleOut StateServer delivers fast, scalable performance with low development cost and fast turnaround time. Its in-memory data grid avoids unnecessary data motion to efficiently implement parallel analysis of grid data and overcome the bandwidth limitations of typical cloud networks. The grid also takes full advantage of available cores, processors, and servers to quickly and efficiently analyze data. ScaleOut StateServer's unique, patented and patent-pending technology enables in-memory data grids to take full advantage of the computing power and economic benefits offered by clouds.

**Public and Private Clouds**

ScaleOut StateServer provides the same powerful benefits in both public or private cloud environments, as well as in combining multiple cloud environments, such as on-premise, private clouds and public clouds. ScaleOut StateServer is available for use in major public clouds and also can be deployed in private cloud deployments.

Contact us today to learn more about how our cloud computing solutions can benefit your business!

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