

Financial services grid computing in AWS

Financial services grid computing on the cloud provides dynamic scalability and elasticity for operation when compute jobs are required, and utilizing services for aggregation that simplify the development of grid software.

The key point of this architecture is dividing roles and responsibilities

- Corporate data center manage customer-sensitive information
- The other part manage other roles like high performance computing, user experience stuffs without any restrictions in privacy information. For your information, all the information bypassed from Corporate Data Center is anonymized and impossible to reverse tracking.

On demand provisioning of hardware, and template driven development, combined with low latency access to existing on-premise data sources make AWS a powerful platform for high performance grid computing systems.

Gliffy Macro Error

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- The role of AWS DirectConnect provides low latency and reliable connection between the corporate data center site and AWS. For situations with lower bandwidth requirements, a VPN connection to the VPC gateway can be established.
- Grid controllers and grid engines are running Amazon Elastic Compute Cloud (Amazon EC2) instances started on demand from Amazon Machine Images (AMIs) that contain the operating system and grid software.
- The role of Amazon Dynamo DB is to store the results from Grid engine that is a kind of managed database providing configurable read and write throughput, allowing scalability on demand.
- The result of Amazon Dynamo DB are aggregated using a map/reduce job in Amazon Elastic MapReduce (Amazon EMR) and final output is stored in Amazon S3.
- Aggregate results can be achieved using Amazon Glacier, a low-cost, secure, and durable storage service.