Case Study:

Multi-Cloud Connectivity for High-Volume Financial Transactions and Trading

In the fast-paced world of high-volume financial transactions and trading, seamless connectivity is paramount. Optimizing costs without compromising on performance is critical in the highly competitive brokerage industry, but traditional cloud connectivity solutions often fall short in delivering cost-effective options for multi-cloud environments.

Challenges

Latency
High-volume trading demands ultra-low latency. Traditional single-cloud setups struggle to meet these stringent requirements.

Scalability
Handling massive transaction volumes necessitates elastic scalability. Monolithic architecture often falls short.

Data Security and Compliance
Financial data must be secure and compliant with regulations like GDPR and PCI DSS. They should also be compliant with EU's MiFiD, US RegNMS, and the SEBI regimes.

This requires significant investment in technology, essentially pushing executions from screens and phones to electronic trading platforms which are hosted on multiple clouds. Several of the largest exchange operators have made substantial moves in the past two years to adopt multiple clouds. Connecting all of these together can lead to challenges in

Data Movement

Efficiently moving data across geographies and clouds without compromising speed or security.

Complexity of Integration

Integrating disparate trading platforms and systems across multiple clouds while maintaining seamless communication and data consistency can be technically intricate and complex.

Risk Management

Managing risk in real-time amidst high volume trading requires advanced analytics and predictive capabilities, which may be hindered by data silos and lack of unified visibility across cloud environments.

Our Solution

IZO™ Multi Cloud Connect is a software-defined cloud interconnect (SDCI) that offers a secure and performant solution for high-volume trading platforms to connect their cloud-based applications.

Unified Connectivity: IZO™ Multi Cloud Connect offers a unified platform for connecting multiple clouds, enabling seamless communication and data transfer between different cloud environments.

Dynamic Scalability: Trading institutions and platforms can dynamically scale their infrastructure to meet fluctuating demands, ensuring optimal performance during peak trading periods.

Enhanced Security and Compliance: By leveraging secure and compliant connections between clouds, it mitigates the risk of data breaches and ensures adherence to regulatory requirements.

Benefits for High-Volume Trading Platforms

Higher Availability: IZO™ Multi Cloud Connect fabric delivers 100% availability over a redundant set-up ensuring zero downtime helping avoid millions in loss.

Improved Performance: Reduced latency and enhanced data transfer speeds lead to faster trade executions and improved overall performance (at least 30%) as compared to Internet based solutions enhancing competitiveness in the market.

Greater Agility: The ability to seamlessly move workloads between clouds enables them to adapt quickly to the changing market conditions and customer demands and deliver a superior customer experience.

Robust Security: Built-in security features such as encryption, access controls, and threat detection ensures data integrity and confidentiality across multi cloud environments, bolstering trust and confidence among the users of these applications.

Improved Cost Efficiency: By optimizing resource utilization and leveraging cost-effective cloud services across multiple providers, organizations can realize significant cost savings (~25%+) without compromising on performance or security.

Additionally, IZO™ Multi Cloud Connect, combining services with our Global public and private connectivity fabric will deliver:

Centralized Management: A platform for multi cloud connectivity with tracking capabilities, providing a single pane of glass view across all connected clouds for simplified administration and troubleshooting.

Orchestration and Automation: Automated provisioning and orchestration of network resources streamline deployment and management tasks, reducing manual overhead and accelerating time to market for any new capabilities.

IZO™ Multi Cloud Connect empowers high-volume trading platform enterprises to thrive in a dynamic landscape, ensuring improved performance, security, scalability, and cost efficiency.

Case Study: Enhancing Connectivity for a leading high-volume trading platform

A leading financial services provider faced significant challenges with their existing infrastructure.

Challenges

Connectivity Issues: Inadequate reliability and availability between their private data centres (DCs) in Mumbai and Chennai and cloud providers hindered real-time transaction processing.

Uptime Concerns: Downtime and disruptions impacted critical trading applications, leading to potential financial losses and diminished customer satisfaction.

Dependency on Incumbent Provider: Relying solely on other providers 400 Mbps connection limited scalability and redundancy options, exacerbating reliability issues.

Our Solution

Full Mesh Cloud-to-Cloud and Hybrid Cloud Architecture: Leveraging peer-to-peer (P2P) connections to cloud providers, we deployed a full mesh topology to ensure seamless communication and redundancy.

Seamless Failover through Fabric: By deploying our fabric technology, we enabled automatic failover between the platforms' private DCs and cloud environments, ensuring continuous uptime and mitigating the risk of disruptions.

Optimized Network Infrastructure: Through IZO™ Multi Cloud Connect fabric, we designed and implemented a high-capacity, low-latency network infrastructure to support the platform's high-volume, real-time applications, including testing and production environments, as well as their web layer on AWS.

Benefits

Enhanced Reliability: Seamless failover capabilities and a full mesh topology improved connectivity reliability (~100%) and availability, minimizing the risk of downtime and ensuring uninterrupted trading operations.

Improved Performance: Optimized network infrastructure and low-latency connections facilitated faster transaction processing, enhancing the overall user experience for their clients.

Scalability and Redundancy: The adoption of hybrid cloud solutions and full mesh connectivity provided scalability and redundancy options, empowering the customer to expand their infrastructure and accommodate future growth without sacrificing performance or reliability.

Through IZO™ Multi Cloud Connect the enterprise was able to overcome their connectivity challenges, achieving a highly reliable and efficient network infrastructure capable of supporting their high-volume, real-time transaction requirements and scaling with ease.

For more information, visit us at **www.tatacommunications.com**

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