



Problem

Multicloud-based workflow and transaction interaction is complex to integrate and suffers from inconsistent responsiveness, putting transaction integrity at risk.



Solution

Control application interaction responsiveness (i.e., transactions, workflow collaboration) by effectively integrating application workload and services deployed across multiple clouds in a secure digital edge. Expand ecosystem partner interconnections at the edge. Colocate in-band security services, enabling applications to safely interact across clouds through the edge with very low latency, improving performance while enabling significant scale at predictable cost as volumes increase. Delays in cloud-to-cloud, SaaS-based interactions are reduced by an order of magnitude since cloud communication runs over interconnected links within the edge. Role-based access, secure cloud-based key management and deep packet inspection are applied to all traffic entering the digital edge node to ensure that once verified and allowed to enter, optimization of inter-cloud traffic can be achieved and all outbound traffic to users will be safe.



Constraints

1. Increased partner collaboration is becoming more cloud-centric, using SaaS-based applications.
2. As more partners and new applications are added to the value chain, multicloud interactions become prevalent, creating performance and security constraints.
3. A centralized network infrastructure where all multicloud interactions are backhauled will not meet user experience requirements.
4. Custom connections to each cloud-based service create delays in deployment and increase cost.
5. Identity and key management across clouds must be solved to ensure transactional integrity.



Steps

1. Choose from multiple interconnected clouds available that have the required SaaS-based applications (e.g., workflow manager, payment processing).
2. Expand security capabilities (e.g., cloud key management) to ease inter-cloud communication.
3. Solve for transactional latency in a multicloud deployment by introducing event processing and transactional caching.
4. Introduce distributed workflow management to coordinate multiparty activities across the value chain.
5. Leverage network interconnection capabilities to control the flow of application integration at the edge across clouds, greatly reducing response time and latency issues, while avoiding backhaul congestion.



Forces

- Creating new business models requires discovery and integration with new partners across business ecosystems.
- Expanding to different partner ecosystems makes multicloud application integration inevitable.
- Strategic, real-time, multipartner coordination requires the responsive integration of collaboration, workflow and transaction workloads.
- SaaS applications in heterogeneous cloud platforms experience unpredictable latency and response times, affecting user experience and results.



Results

- Technical**
- Provisioning a new connection is simplified, reducing the time from weeks to hours.
 - Cross-cloud application and business flows requiring low-latency interactions are easier to construct.
- Business**
- Expand reach with easy-to-construct, responsive partner, customer and user interactions.
 - As cloud service usage changes, adaptable and flexible topologies keep pace with the digital economy.
- Potential New Challenges**
- Growth to new locations, with new users, more devices and greater volumes, will stress any one cloud-based collaboration implementation.



Reference View

