



Problem

Users collaborating across multiple cloud-based platforms do not experience consistently responsive results, negatively affecting employee, partner and customer engagement.



Solution

Control collaboration productivity as much as possible by effectively integrating multicloud and hybrid services in a secure, low-latency manner while bringing more applications to end users at the edge. Colocate in-band security services at the edge node, enabling applications across clouds to safely interact with very low latency, improving performance and security while enabling significant scale at predictable cost with positive user experience even as volumes increase. Cloud-to-cloud, SaaS-based interaction delays are reduced by an order of magnitude by interacting 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 is safe.



Constraints

1. As more services and applications are pushed to multicloud and hybrid cloud, their interactions are affected by performance and security constraints, especially across the public internet, hurting user experience.
2. Investing significant capital for bandwidth is not cost-effective as increased MPLS usage will not guarantee better latency, which is critical in minimizing jitter.
3. Custom connections to each cloud-based service creates delays in deployment and increases cost.
4. Identity and key management across clouds must be solved to drive safety.



Steps

1. Solve for distributed workflow and transactional latency in a multicloud deployment by utilizing locations near population centers.
2. Use intra-colocation (cross connect) networking to enable new connectivity paradigms through business peering and direct cloud connection to multiple clouds running SaaS-based collaboration tools.
3. Secure service interactions by expanding security capabilities (deep packet inspection, cloud key management).
4. Safely interconnect to digital ecosystems, improving response time and simplifying deployment.
5. Control the flow of application integration at the edge across clouds, greatly reducing response time and latency issues, while avoiding backhaul congestion.



Forces

- Owning the end-to-end experience of collaboration services is not feasible.
- Loss of collaboration ability can impede revenue growth.
- More enterprise applications and services are replaced with or pushed to cloud-based SaaS platforms to cut costs and in turn outpace the ability to solve for performance and security issues.
- SaaS applications in heterogeneous cloud platforms experience unpredictable latency and response times, affecting user experience and results.
- Collaboration becomes a tactical advantage for geographically dispersed value chains but depends on high user quality of experience (QoE) and security.



Results

- Technical**
- Inter-cloud security and performance are enhanced as all cloud traffic goes through the edge.
 - Digital ecosystem service composition at the edge provides choice, scale and flexibility while reducing complexity.
- Business**
- Core-based applications are successfully placed at the edge, optimizing for user experience.
 - Positive user experience for employees becomes a strategic advantage, enabling faster time to value and new business opportunities.
- 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

