



### Problem

Traditional enterprise IT infrastructures cannot control the speed, performance, security or flexibility needed to meet user experience requirements when expanding the digital business value chain to new partners, customers and users in different regions.



### Solution

Control as much of the user experience as possible by shortening the distance to the edge where partners and end users reside. To reduce response times for transactions and collaboration while ensuring secure interactions, install enterprise SaaS applications (e.g., CRM, ERP, Office Suites) into a virtual private cloud interconnected into a secure digital edge that offers interconnections to your partners. Install messaging and API management, a distributed transaction manager along with audit logging and object storage for complex, long-lived transactions. Interconnect to partners and customers in the digital ecosystem and remote offices near this edge.



### Constraints

1. The user experience for business collaboration and transaction processing cannot be completely controlled through the corporate network as these activities move to geographically dispersed ecosystem value chains.
2. Transaction processing and collaboration over the internet is unreliable and insecure, adversely affecting user experience.
3. SaaS services do not solve for the distance to the edge where users are, affecting performance.
4. Investing in significant capital expenditures for bandwidth is not cost-effective, as increased MPLS usage will not guarantee lower latency, which is critical in minimizing response time.



### Steps

1. Establish or leverage a geographic hub based on population and business intersection advantages for a region.
2. Consolidate endpoint management for all traffic sources and types, including the internet.
3. Use intra-colocation (cross connect) networking to enable direct cloud services.
4. Segment and control regional traffic at the edge, minimizing latency and response time.
5. Introduce security services where they are needed to protect the firm, its users and partners.
6. Install a message gateway and API management and discovery services in the cloud.
7. Connect to required cloud SaaS applications for partner integration (e.g., CRM, Office 365).
8. Install a distributed transaction manager with audit logs and object stores.



### Forces

- The number of users and locations and the required volume is growing rapidly as new business models emerge.
- Improved partner engagement through real-time collaboration is strategic for company growth across the value chain.
- The workforce and value chain partners are becoming more geographically dispersed with growing numbers of participants, increasing the need for reliable and robust business ecosystem interconnection.
- Positive user experience is heavily based on consistent, reliable, real-time engagement capabilities.
- Applications' user experience must be as effective for mobile users (employees, customers and partners) as those based in traditional offices.



### Results

- Technical**
- Localizing traffic in the hub shifts latency from ~20 ms/~20 hops to <1 ms/hop (or wire speed) with unlimited local bandwidth.
  - Having interconnections to a wide range of available partners expands choice, lowers costs and opens new markets while reducing complexity.
- Business**
- Increased connectivity choice reduces costs.
  - Reliable user experience with minimized response times and optimized bandwidth utilization.
  - New cloud services and ecosystem engagements.
- Potential New Challenges**
- Managing a growing user and partner population.
  - Extending to multicloud-based application integration while balancing security and complexity.

### Reference View

