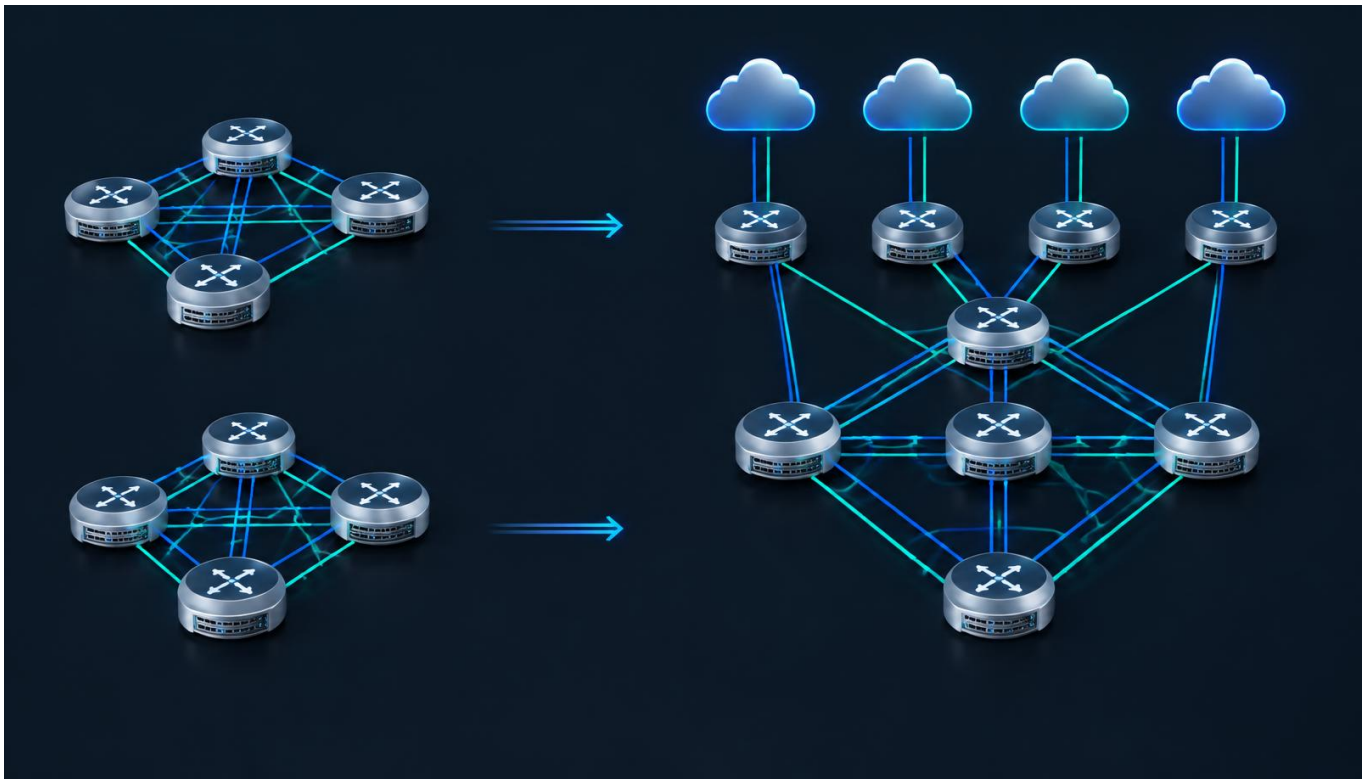
CASE STUDY · MARCH 2026

Zero-Downtime BGP ASN Consolidation for a Large Regional ISP

How Massive IT unified two production routing environments across more than 10 ISP network locations with zero customer-facing downtime.



Conceptual illustration only; not the customer’s production environment.

At a glance

Project dimension	Outcome and scope
Industry	Regional Internet Service Provider, Northeastern United States
Network footprint	More than 10 Points of Presence (PoPs)
Transformation	Two production BGP autonomous system numbers consolidated into one
Customer-facing downtime	Zero
Project duration	Approximately 1–3 months
Long-term support	Ongoing maintenance, engineering escalation support, and incident response retainer

The challenge: Integrating an acquired ISP network

Following an acquisition, a large regional ISP needed to bring separate routing environments under a unified network architecture. Multiple autonomous system numbers (ASNs), inherited static routes, Border Gateway Protocol (BGP) policies, Open Shortest Path First (OSPF) configurations, and undocumented dependencies complicated operations and increased the risk of routing changes.

In practical terms, the ISP needed its networks to operate as one without interrupting subscriber connectivity. The goals were simpler administration, improved redundancy and routing performance, and an architecture ready for further growth.

The solution: Discover, standardize, and migrate

Massive IT led network discovery, design, configuration, implementation, and validation with support from the ISP's engineering team.

1. Discover the routing environment

Engineers audited router configurations and mapped previously undocumented dependencies. This established the relationships and routing behavior that needed to be preserved during the transition.

2. Standardize the network foundation

The team removed obsolete routing configurations and standardized internal OSPF routing, BGP policies, prefix filters, and route advertisements. These changes prepared the separate environments for a consistent production design.

3. Migrate in controlled phases

Routers, external BGP peering relationships, and advertised IP prefixes were migrated in phases to a single production ASN. Planned maintenance windows, prevalidated configurations, carrier coordination, redundant network paths, live monitoring, and rollback procedures supported uninterrupted subscriber service.

Validation: Confirming production stability

After cutover, Massive IT verified BGP sessions with upstream carriers, confirmed correct prefix advertisements, validated OSPF propagation, performed redundancy and failover tests, and checked connectivity across network locations. The team monitored latency, packet loss, traffic, and routing stability for an extended post-migration period.

The results

Two ASNs became one, with zero customer-facing downtime across a network spanning more than 10 PoPs. Completed in approximately one to three months, the project simplified routing administration and troubleshooting, improved resiliency and routing efficiency, reduced operational overhead, and established a standardized platform for future expansion and acquisitions.

These outcomes describe this specific project, not a guarantee for future migrations.

Continued engineering support

Following the consolidation, the ISP engaged Massive IT on retainer for maintenance, advanced engineering escalations, and incident response, extending the relationship beyond the original migration project.

Modernize your network with Massive IT

Whether you are an ISP consolidating autonomous systems, an enterprise integrating an acquisition, or an IT provider seeking advanced network engineering support, Massive IT can help plan and execute complex routing changes with an emphasis on resilience and business continuity.

Schedule a consultation to discuss your network engineering requirements.