

Modernizing Healthcare Networks: Exiting the Colocation Era

Delivering a network operating model for secure, compliant connectivity across hospitals, clouds, and partners, without colo hubs.

Executive Overview

Healthcare organizations such as health systems, payers, and life sciences companies are at an inflection point in network strategy. Many built colocation hubs to connect data centers to early cloud deployments. Today, those colo-anchored designs are aging toward end-of-life, while traffic patterns have changed. In the past, colos were used to aggregate MPLS links and serve as on-ramps to public clouds. Now, modern healthcare IT has to support **multi-cloud environments, AI-driven analytics, telemedicine, and real-time data exchange** across numerous locations. Critical applications and data now move cloud to cloud, site to cloud, and across regions. AI-driven workloads also increase east-west bandwidth demand and raise sensitivity to latency across both cloud and on-prem environments.

Networks built for a simpler era are now too costly and too rigid to support modern healthcare requirements. This solution brief outlines an alternative approach. Reduce or replace colocation hub dependence with **Network Infrastructure-as-a-Service (NlaaS)**, a cloud-delivered operating model that scales connectivity across clouds, data centers, sites, and partners while keeping segmentation and policy consistent.



The Healthcare Network Problem: Colo-Era Hubs Can't Keep Up

Healthcare environments have unique constraints: PHI protection, clinical availability, rapid onboarding of new locations, and constant third-party data exchange. Colo-centric architectures introduce structural friction:

- ✓ **High fixed costs and refresh cycles:** cages, cross-connect fees, power/cooling, hardware lifecycle planning, and “lift” projects to expand capacity.
- ✓ **Slow change velocity:** new connections and capacity increases often require physical work, long lead times, and multi-vendor coordination.
- ✓ **Operational fragmentation:** siloed tooling and per-site configuration patterns create inconsistent outcomes, higher change risk, and slower troubleshooting.
- ✓ **Inconsistent segmentation and policy enforcement:** security controls concentrated in hubs can create blind spots as traffic shifts cloud-to-cloud and site-to-cloud.
- ✓ **Not designed for AI/data traffic patterns:** imaging, analytics, and AI pipelines increase data movement across clouds and regions, often penalized by hub hairpinning and latency.

What Modern Healthcare Networks Require

To support digital care delivery and AI adoption, healthcare organizations need an operating model that can deliver:



Any-to-any connectivity across hospitals, clinics, data centers, and multiple clouds



Consistent segmentation for PHI and regulated workloads across hybrid and multi-cloud environments



Fast onboarding for new sites, partners, and acquisitions without redesigning the network each time



Centralized policy and visibility to reduce change risk and operational toil



Elastic capacity and predictable consumption economics aligned to demand variability (telehealth growth, data movement, seasonal business)

How Alkira Fits: Network Infrastructure for Healthcare Organizations

The Alkira Platform delivering NlaaS replaces physical hub dependency with a cloud-delivered network fabric operated through a centralized control plane. Healthcare organizations can use the platform to deploy a network fabric that connects sites, data centers, clouds, and partners with consistent segmentation and governance, while shifting from hardware refresh cycles and manual change workflows to on-demand consumption and centralized control.

Core capabilities



Cloud-delivered fabric with global reach

Deploy connectivity where you need it without standing up new colo hubs or re-architecting per region.



Connect sites, data centers, clouds, and partners in a unified topology

Support hybrid and multi-cloud connectivity patterns without forcing traffic to hairpin through centralized hubs.



Central policy, segmentation, and governance

Define segmentation intent once (e.g., PHI-sensitive applications vs corporate IT vs research) and apply consistently across environments to reduce drift and gaps.



Operational simplicity with a single control plane (console + API)

Standardize provisioning, change management, and visibility across the network to reduce the operational burden of multi-tool, multi-device environments common in colo-era designs.



On-demand consumption model

Shift from fixed, hardware-tied capacity planning to scalable service consumption that can align with real utilization.

Outcomes that Matter in Healthcare

Healthcare leaders evaluate networking by clinical impact, risk exposure, and time to deploy. It's no longer just bandwidth.

- ✓ **Accelerate plant and service rollout**
Bring new clinics, ambulatory locations, and cloud applications online faster by provisioning connectivity through software rather than physical hub expansion.
- ✓ **Improve segmentation consistency for regulated data flows**
Reduce policy drift across clouds and sites by centralizing segmentation and governance. This supports HIPAA-aligned architectures and improves audit readiness.
- ✓ **Reduce operational overhead and change risk**
Consolidate control, visibility, and configuration patterns to cut manual effort and reduce the likelihood of inconsistent configurations across environments.
- ✓ **Support AI and data-intensive healthcare workloads**
Enable high-volume, east-west data movement (imaging, analytics, AI pipelines) with connectivity patterns designed for modern cloud-to-cloud and hybrid traffic flows.

Representative Healthcare Use Cases

- 1. EHR/EMR modernization across a distributed footprint**
Connect hospitals and clinics to cloud-hosted clinical applications with consistent segmentation for PHI and predictable performance.
- 2. Imaging + AI workflows (radiology, cardiology, pathology)**
Move large imaging datasets securely between sites, clouds, and analytics platforms without redesigning hub capacity.
- 3. Partner connectivity and ecosystem exchange (labs, payers, acquired practices)**
Onboard third parties and acquisitions faster with standardized segmentation and controlled access patterns.

Next Steps

If you are approaching colo renewals, hardware end-of-life, or expanding multi-cloud and AI initiatives, Alkira can help you modernize the network operating model without inheriting more hubs, appliances, and fragmented operations.

Visit alkira.com to learn more about the Alkira Platform.

