



# Connect Everything Anywhere With Turnium And Red Hat

## Red Hat Software Partner



**As applications increasingly migrate towards the cloud, users are ever more dependent on their networks for access reliability. SD-WAN helps users to aggregate and more flexibly manage their network connectivity.**

## Software-Defined Infrastructure Drives Digital Transformation

The Internet and cloud services are changing the way businesses operate and interact with customers. Yet many businesses lack the skills, expertise and resources to build networks that support these Internet and cloud service models.

This gap creates challenges for end-users, who experience inconsistent quality of service, and for finance departments, who are sensitive to the high cost of implementation and maintenance. The cost-versus-performance challenge presents opportunities to adopt or integrate Software-Defined Wide Area Network (SD-WAN) technology into end-customer networks.

Red Hat and Turnium have teamed to deliver a complete SD-WAN networking solution with flexibility, management, reporting, and automation.

## Cloud Native SD-WAN for Faster Hybrid-Cloud Adoption

In order to rapidly deploy applications, support remote or mobile workforces, and introduce new products or services – such as the Internet of Things, 5G, etc., service providers and enterprises looking to capitalize on emergent opportunities need to quickly deploy and easily connect their networks to services using hybrid cloud environments. This scenario requires software-driven network solutions instead of traditional hardware-based models to enable easy implementation and reconfiguration with less specialized equipment.

Container-based technologies on commodity edge compute solutions meet this need. Using these technologies, service providers will be able to turn up edge clouds and connect hybrid cloud environments in much shorter timelines to meet demand and network growth.

The technical challenge is how to connect centralized computing resources with these new edge compute clouds. Turnium's Trusted Network as a Service (TNaaS) is a cloud native SD-WAN solution running on Red Hat OpenShift Container Platform that can be deployed anywhere, with edge clouds connecting to public clouds over private, highly resilient networks built on Telecommunications service provider connectivity. TNaaS creates an overlay wide area network (WAN) that removes the complexity of the underlying networks to deliver a seamless virtual network. Traditional private networking solutions are not necessary, as TNaaS provides resilience without the expense, coordination, and long lead times of deploying carrier MPLS or other single-vendor network technologies.

Red Hat OpenShift Container Platform is a modern container application platform that encompasses community innovation and an open ecosystem. It provides management capabilities for cloud native network functions such SD-WAN. Integration between Red Hat OpenShift and the Turnium's TNaaS simplifies the connectivity among customer branch office installations with private and multi-cloud infrastructure across your network(s).

## Red Hat & Turnium Solution Benefits

- Simplify deployment using converged off-the-shelf infrastructure.
- Connect customer sites with private, and multi-cloud infrastructure.
- Increase ROI by monetizing 3rd party networks and combining broadband, dedicated, and wireless connectivity.
- Provide end-to-end visibility and management across multiple networks and providers to verify SLO and SLA compliance.
- Reduce network complexity, increase ease of access to services, and reach off net sites.
- Rapidly deploy containers to reduce provisioning time and cost.

## Increase Flexibility, Visibility and Eliminate Network Lock-In

Traditional networking designs are often based on single-vendor architecture stacks which prevent, or make difficult, the end-customer choosing the best product or solution. Multi-jurisdictional solutions also require business and infrastructure integration with multiple telecommunications and cloud service providers, increasing the demands on service providers and end-customers.

TNaaS frees service providers and end-customers from the requirement to invest in the knowledge, resources and skills to build cost-effective solutions themselves. Turnium's complete turn-key SD-WAN service helps service providers and end-customers to eliminate lock-in, and increase flexibility. Combine any available broadband, dedicated and wireless bandwidth from local competitors. Bring-your-own connectivity optimizes costs by enabling customers to negotiate the best deals using commodity solutions.

Additionally, network visibility increases with TNaaS. Access to detailed information such as latency, jitter and last mile stability is readily available. As a layer-3 overlay, TNaaS separates underlying network complexity, provides real time visibility across multiple providers, and reduces the time and resources required to manage the end customer's network.

## Secure, Reliable Network Connectivity

TNaaS provides end to end encryption to protect end customer data on the virtual network. Per packet link load balancing and monitoring over last mile connectivity ensures that applications (such as VoIP, or other cloud-services) running over the network are unaffected by last mile challenges such as jitter, or single link failures. TNaaS bonds multiple private and public connections to increase bandwidth and deliver automatic failover as needed, automatically.

True bi-directional Quality of Service (QoS) from one end of the network to the other is achieved with TNaaS due to Turnium's ability to manage both sides of its proprietary overlay: QoS no longer stops at the network edge. Application based routing and policies increase the ease of network management and ensure that all applications and services running over the network remain available and accessible.

Turnium's TNaaS can be deployed as a virtual appliance and or in containers running on Red Hat OpenShift(r) Container Platform, making it highly versatile, and very flexible.



Technology Partner



### About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.



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