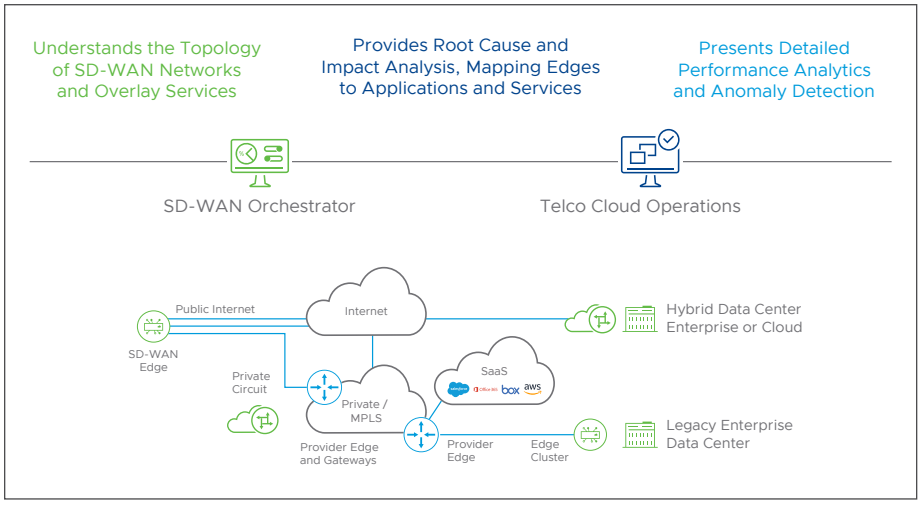
Unified Management of SD-WAN and Legacy Networks

AT-A-GLANCE

- **Single pane of glass visibility** for a holistic view of SD-WAN, traditional WAN and local area networks (LANs)
- **Automated discovery** of SD-WAN elements edges, hubs, gateways, tenants and tunnels
- **Manage multiple tenants** within the same user interface (UI)
- **Rapid identification** of issues through automated root cause analysis of faults in network
- **Impact analysis** by mapping edges to authorized applications and services
- **Performance analytics** based on machine learning (ML) with dynamic thresholding
- **Quick remediation** of issues through integration with third-party service management tools

Deliver a top-notch customer experience with VMware SD-WAN by VeloCloud and VMware Telco Cloud Operations

New insights are revealed and automated actions made possible through the integration of VMware® Telco Cloud Operations with VMware SD-WAN by VeloCloud, equipping communications service providers (CSPs) with unprecedented cross-domain visibility and holistic management.



VMware SD-WAN by VeloCloud

Software-Defined Wide Area Networks (SD-WAN) enable CSPs to rapidly evolve their networks, increase flexibility, deliver advanced services and drive revenue. With VMware SD-WAN, CSPs can deliver elastic transport, high performance for cloud applications and integrate advanced services all via a zero-touch deployment model.

VMware SD-WAN seamlessly integrates with existing service provider networks and is a transformational approach for WAN architectures. It enables bandwidth on demand, provides direct and optimal access to cloud-based applications, simplifies deployment of services and improves operational automation.

BENEFITS

- Visualize detailed performance analytics
- Increase agility
- Lower costs
- Gain 360-degree visibility
- Improve customer experience
- Meet service-level agreements (SLAs)

Unprecedented visibility

See what is happening in SD-WAN and traditional network

VMware Telco Cloud Operations

VMware Telco Cloud Operations is an automated service assurance solution designed to bridge the gap between the virtual and physical worlds. It provides integrated monitoring and network management across all layers for rapid insights, lower costs and improved customer experience.

VMware Telco Cloud Operations gives CSPs the operational intelligence they need to holistically manage their virtual, physical and SD-WAN networks as one to rapidly resolve any network performance issues and ensure consistent delivery of services to subscribers. Automated root cause analysis, rapid topology discovery and impact analysis maximize quality of service (QoS) and uptime while giving CSPs better control of the network.

Unified management: VMware SD-WAN by VeloCloud and VMware Telco Cloud Operations together, operators have a single pane of glass visibility

By using VMware SD-WAN by VeloCloud and VMware Telco Cloud Operations together, operators have a single pane of glass visibility for the whole network. This is especially valuable for managed service providers (MSPs) as they can offer an end-to-end outsourced management of their customer's networks. Operators can monitor and manage not only the SD-WAN network, but also the physical and virtual devices, protocols and services in their customer's data centers, remote offices and customer on-premises edge devices. If the MSP has access to the IP or multiprotocol label switching (MPLS) backbone network, they can also manage that with VMware Telco Cloud Operations. This gives MSPs unprecedented visibility into what is happening in both their customers' and the carrier network.

Dynamic discovery

Through an application programming interface (API) integration with VMware SD-WAN Orchestrator, VMware Telco Cloud Operations automatically discovers the SD-WAN physical and virtual edge devices, gateways, networks, tunnels, customers/tenants and services and their interactions. In this way, it creates a representation of the SD-WAN network and relates it to the underlaying infrastructure of physical devices and networks that the SD-WAN service is riding on. Infrastructure outside of the SD-WAN network is also discovered and the interrelation between the devices and networks is automatically determined and mapped. This relationship mapping is continuously updated as the network topology changes. Services are discovered on the LAN side and cloud software-as-a-service (SaaS) is profiled at the customer/branch SD-WAN edges. The VMware SD-WAN Orchestrator provides information on which applications/services are authorized at each edge site and VMware Telco Cloud Operations cross-correlates this information with the devices and services supported. This mapping allows VMware Telco Cloud Operations to perform impact analysis for services.

Performance analytics

Use machine learning to identify performance anomalies

Automated root cause analysis

By understanding the cross-domain relationships, VMware Telco Cloud Operations is able to monitor and manage the SD-WAN network, traditional physical and virtual networks as one entity. When problems arise, the self-adapting engine correlates events across all the networks to rapidly identify where the problem lies. Network operations center (NOC) teams do not need to spend valuable time trying to triage whether the problem is with a network infrastructure device, a service or within the SD-WAN network. VMware Telco Cloud Operations figures out what the true cause of the problem is by correlating all alarms. Operators are presented with a simple view of the root cause that allows them to drill down and see the extraneous alarms as infrastructure and service impacts. Once the cause is identified, NOC and service desk teams are alerted and through API integration with third-party service management tools such as ServiceNow or Remedy, tickets can be automatically generated for rapid resolution.

Tenant prioritization for SLA management

By combining information pulled from the VMware SD-WAN Orchestrator and the business impact manager tool within VMware Telco Cloud Operations, operators can use VMware Telco Cloud Operations to assign each application/service and tenant a business impact and cost score. Higher weight typically would be placed on mission-critical applications/services and tenants that have contracted higher SLAs. If a high-impact score is assigned, incidents that occur for these tenants or services will be flagged as a top priority for immediate resolution. In this way, the MSP can confidently offer higher SLAs to their customers, driving higher revenues, knowing they are able to proactively manage their networks.

Performance analytics

Telco Cloud Operations makes it easy for managers to understand how the network is performing and make better decisions about future deployments and capacity planning. It presents operations teams with in-depth SD-WAN performance data such as throughput, packet jitter, latency and loss. It also provides link statistics between SD-WAN sites, including bits per second (bps) of best path and packets transferred and received. Using machine learning, Telco Cloud Operations automatically establishes dynamic baselines, identifies anomalies and alerts operators when unusual behavior is detected. Because Telco Cloud Operations has a holistic view of both the underlay and overlay network, operators can accurately triage situations and take proactive actions to prevent serious impacts to application performance.

Learn more

For additional information about VMware Telco Cloud Operations:

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