

Network Transformation and SD-WAN

Enterprises are embarking on the wave of digital transformation which is changing the fundamental approaches based on which current IT architectures were designed. The enterprise IT landscape needs to evolve rapidly to keep pace with the digitization of business models, multifold increase in mobile data consumption, coupled with increasing online collaboration usage, increased importance of cloud, the explosion of Software-as-a-Service (SaaS) and, the initial adoption of IoT (Internet of Things). Enterprises are no longer held back by the geographical boundaries and are going global.

Cloud is one of the key enablers of digital transformation and as cloud adoption increases, enterprises are dealing with problems that didn't exist before. Applications are moving from captive/third party data centers to Public/Hybrid Cloud but existing networks and teams are not geared up to cater to these change. Enterprises are lacking visibility on traffic, there is an increasing risks of data loss. Expertise in dealing with cloud-based networks is also not yet there with IT teams. Application behaviors are also different in cloud-based deployments. The traditional networks are not geared up for the kind of growth coming up with digital transformation. The rise of these new deployment models and their expected user experience and agility is bringing to light the inefficiencies of existing wide area network (WAN) architectures and the cost of the connectivity services they consume. Existing architectures face problems in the below areas

1. Load on MPLS links most of the times leading to scarce bandwidth availability for business applications.
2. The Secondary connectivity remains un-utilized most of the times as current CPEs do not support Active-Active utilizations.
3. Monitoring & Management is challenging as it requires device by device configurations with legacy CPEs.
4. Existence of different networks for different purposes result in complex management and additional costs.
5. Security management at various ingress and egress points

To address the above problems and ensure a highly visible, secure, easily managed and performance aware network, software functionality needs to be added above the network layer. This software layer will ensure deep visibility into different aspects of the network and users, simplified management of different devices, improved security management and, performance aware routing.

SDN as a network transformation enabler

Software-Defined Networking (SDN) is a network architecture approach that enables the network to be intelligently and centrally controlled, or 'programmed,' using software applications. In the cloud era, when we are witnessing a huge migration of workloads to the cloud, SDN is a big network transformation enabler. In other words, amongst many other

enablers & tools of Network Transformation SD-WAN (Software Defined - WAN) is one of the most important technology tools which delivers the full benefits.

1. **Agility and Security** in the new cloud era
2. **Cost optimization and cloud optimized network** by utilizing the full potential of the network nodes (Eg: Active - Active configuration, Bandwidth optimization)
3. **Application & End-user visibility**, thus giving wings to the network

To elaborate SD-WAN overcomes the shortcomings of legacy WAN architectures.

1. Customers can now utilize any Service provider, any transport type (MPLS/ILL/BB/4G-LTE) suiting Applications in their network.
2. Cloud based centralized monitoring and management platform provides real time visibility and unified management, device by device management is no more required.
3. SDWAN supports integration with legacy network architectures, so customers can do phase wise migration of sites.
4. Platform gives complete application awareness and policies to suit performance. Customers get clear visibility of site wise utilization of various Apps. App based SLA can be implemented.
5. All WAN links can be aggregated to give unified WAN pipe and links can be used in active-active. Real time quality assessment can be done to ensure dynamic traffic steering can be done basis link performance.

Sify as a SD-WAN Provider

Sify delivers a self-owned & managed SD-WAN platform that is built in partnership with Cisco and Versa. In addition to the above SD-WAN benefits, some of the salient features of Sify's SD-WAN offering is as below:

1. Supports multiple transport types - MPLS/ Internet/ LTE/ DSL
2. Support for 3rd party ISP links
3. 24 *7 End-to-End Managed Services Model- Edge CPEs, Subscription, Installation & Support
4. Cloud based, Multi-tenant platform hosted within Sify Core Network infrastructure
5. Geo-redundant core for business continuity (Mumbai and Chennai)
6. High level of redundancy for Connectivity links for the platform

Case Studies

Sify has had good traction in different segments on positioning SD-WAN. Some of the segment wise case studies are as below:

PHARMA: CIPLA

India's leading Pharma major (Cipla) wanted Unified Service provider for Internet, MPLS & SD-WAN along with End to End Managed Services. The objective was to refresh the routers which had reached the end of life, hence they were looking for scalable network capacities. And as a solution, Sify proposed the whole setup as a managed service, where Sify takes care of the connectivity, SD-WAN, analytics and management. Customer saw huge benefits in having a single owner for delivery of connectivity and SD-WAN infra.

CO-OPERATIVE BANKS: Bombay Mercantile Co-operative Bank

India's one of the Nationalized Cooperative Bank with pan India locations was looking for contract renewal for Primary MPLS networks and procuring Secondary connectivity along with Tech Refresh for End of Life routers. As a solution, Sify provided, SD-WAN based Tech refresh for all sites along with integration of Secondary connectivity with SDWAN and fully managed services. The customer experienced huge benefits from SD-WAN implementation, like, higher branch availability with seamless dual connectivity, network visibility & application analytics.

SECURITY COMPANIES: SIS Group

India's leading Security Services company (SIS India & SIS Cash) was looking for SD-WAN based deployment for 250+ locations in India. The core objective was to consolidate multiple Service Providers and Links in pan India office locations. The solution provided by Sify was SD-WAN based Tech refresh for all sites including Hub site along with fully managed services. SIS Group was benefitted by Sify's solution, they got unified SLA and implementation & support responsibility for pan India office locations. They could now have granular visibility - real-time dashboards and User wise, Application wise analytics.

HEALTHCARE: Metropolis Labs

India's leading Healthcare chain (Metropolis Labs) was looking for WAN architecture refresh in line to Cloud based deployments of Business Applications. The objective was to provide unified solution for Pan India Office locations to allow them seamless access for Business Applications hosted on Azure cloud. The solution suggested by Sify was, SDWAN based Tech refresh for all sites including Virtual Hub site at Azure Cloud which includes fully managed

services. The customer had a benefit by this solution as this improved Business Application Performance and gave single ownership & Management with Sify.