

# Managed SD-WAN

Today's businesses are digitally transforming, and they need a network that can keep up: greater flexibility, network agility, faster delivery of services. As new applications and technologies emerge—from the internet of things and smart cities to 5G and cloud computing—they're changing the way you rely on your network.

Our Managed SD-WAN solution helps evolve your network to support your digital transformation. It creates a virtual overlay network with application-aware routing—enabling you to connect your branches and multiple remote locations. It's a turnkey solution that offers software-based control to provide a highly secure, scalable and reliable virtual network. The result: a fully managed, white glove solution that gives you the visibility and the flexibility you need, without having to sacrifice the network performance you expect.

## Key Benefits

### Network agility

Scale your network based on application needs, with a more efficient location provisioning process and quicker changes to your sites.

### Cost efficient

Reduce your operational expenses and administrative fees with faster deployments that give you increased operational efficiency and free up key IT resources.

### Our network

With approximately 85,000 route miles of fiber and 900+ connected data centers, PoPs and COs, we own and operate one of the largest and densest networks in the country—giving you access to more diverse paths and unique routes.

### Flexibility

A turnkey solution that gives you the visibility and flexibility to meet the bandwidth and security requirements you need and the ability to add network diversity for extra peace of mind.

### Security

Highly secure access to your applications designed to work with encrypted connectivity and the option to add additional security features.

### Monitoring

Our integrated portal gives you higher levels of visibility into your network—allowing you to monitor your connections real-time with our locally based service teams and our around-the-clock Network Operations Center.

More than  
**25 Years**  
of Expertise

**NYSE**  
**S&P 500**

## Our Solutions

- › Towers
- › Small cells
- › Dark Fiber
- › Ethernet
- › Wavelength
- › **Managed SD-WAN**
- › Internet Access
- › Private Networks
- › Colocation
- › Cloud Connect
- › Optical Encryption
- › DDoS Defense
- › Bandwidth on Demand
- › Fixed Wireless
- › Ultra-Low Latency
- › Video Transport

### Managed SD-WAN features

- Monitoring, reporting, analytics
- Same IP address failover
- Application visibility and control
- Application QoS and SLA
- Dynamic path selection
- Multiple WAN links (2+)
- Site to site VPN
- CGNAT, VLAN
- DNS, DHCP, LAG on LAN
- L4 stateful firewall
- Topology (any)
- Routing and load balancing (advanced)
- Throughput (10Gbps)
- Service chaining and gateway
- High availability
- FEC, cloning, striping

### Security features

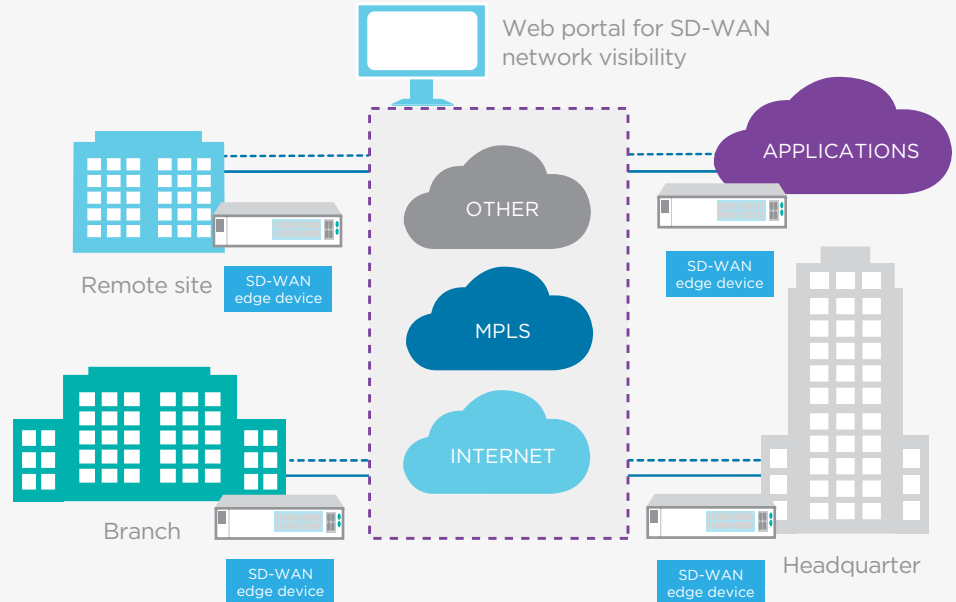
- SSL inspection
- URL reputation and filtering
- L7 application control
- IP reputation and filtering
- IDS/IPS and antivirus on unencrypted traffic

### Our solution

A fully managed SD-WAN turnkey solution that includes:

- Flexible bandwidth, up to 10Gbps
- Unique network design built for you
- Edge devices and software licenses, supporting up to 10Gbps
- Installation, fast service provisioning, site activation, maintenance and support
- Unified view of your network with portal access for performance monitoring, utilization reporting, analytics, historical data and near real-time tools
- Support for multiple underlay options including IP, MPLS, or bring-your-own-transport
- Add on features for increased reliability:
  - High availability configurations with redundant paths
  - Next generation firewall
  - App Assure hosted in your gateways

### Our managed SD-WAN network



Crown Castle owns, operates and leases more than 40,000 cell towers and approximately 85,000 route miles of fiber supporting small cells and fiber solutions across every major US market. This nationwide portfolio of communications infrastructure connects cities and communities to essential data, technology and wireless service—bringing information, ideas and innovations to the people and businesses that need them.