



COMPUTERS AND CONTROLS LTD
THE CLOUD COMPANY

CISCO MERAKEI SD-WAN PRODUCT NOTE



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Overview

Software Define Wide Area Network

Technology that simplifies the operation and management of the many network connections between sites in an organization.

Allows control of how traffic is directed and prioritized across multiple uplinks, and enables your network to immediately and intelligently adapt to changing performance conditions.

As a solution, an SD-WAN service may assist optimize traffic flows to enhance performance and cost at branch locations, allowing companies to dynamically route traffic across a hybrid-WAN based on current network condition by utilizing multiple connections.

Why Use SD-WAN

Cloud Solution: With digital transformation of the agendas of most businesses, more organizations are migrating their apps to the cloud and utilizing cloud services (**SaaS**- Software as a Service, **IaaS**- Infrastructure as a Service, **PaaS**- Platform as a Service)

Application Management: Businesses will interact with a wide range of applications, each with its own set of priorities and bandwidth requirements, indicating that the network must be totally scalable and manageable.

Bandwidth Management: Because of increasingly spread branches and remote employees, there is a greater requirement for edge bandwidth and better security measures where networks are accessed outside of headquarters.

Development: SD-WAN enables organizations with several locations to quickly and easily deploy new sites without wasting precious technical resources

Optimization: Having insights to all forms of connections across multiple providers helps organizations manage app performance, bandwidth, and protocols mor efficiently, resulting in cost savings on connection links.



Problems of a conventional WAN

Complexity

Legacy systems necessitate the hiring of costly technical experts to provide, manage, debug, and deploy.

New applications are thus frequently delayed for months while waiting for matching network problems, or worse, are not authorized due to the risk of disrupting a sophisticated network infrastructure.

Flexibility

In an increasingly digitized and competitive world, businesses frequently require the capacity to develop, grasp new opportunities, or pivot rapidly.

Legacy WANs are complicated, demanding lengthy provisioning cycles, and their lack of policy integration requires extensive security audits.

Visibility and Security

As more traffic travels out from the private network and into the Internet, managing application and user performance and security becomes increasingly difficult, because IT teams cannot guard against what they cannot see or control.

Cost

Provisioning wired connectivity can be expensive, if not impossible, for organizations with distributed offices, mobile workforces, or businesses that work in particularly remote locations; getting enough bandwidth to keep business moving during peak usage periods can be downright prohibitively expensive.

Branch sites have never demanded as much bandwidth as they do today with global business traffic and SaaS application usage both soaring. This results in legacy business WAN links, such as MPLS, rapidly exceeding the capacity for which they were originally designed.



Discover Meraki SD-WAN

The Meraki MX SD-WAN and security appliances are the quickest and easiest way to significantly reduce total WAN costs whilst delivering the desired level of performance for critical cloud applications.

The MX appliances elegantly create a framework for Cisco SD-WAN powered by Meraki by securely auto-provisioning IPsec VPN tunnels between sites. The Meraki dashboard automatically negotiates VPN routes, authentication and encryption protocols, and key exchange for all Meraki MX appliances in an organization to create hub-and-spoke or mesh VPN topologies.



Take advantage of low-cost WAN links such as broadband and fibre with the Meraki MX to significantly save on WAN costs and deliver the desired level of performance for business critical cloud applications.



Unbeatable Simplicity and Control

Meraki's SD-WAN solution leverages an intuitive, web-based dashboard to give you instant insights about your WAN's health, access to built-in live tools and packet capture, and centralized visibility and control over application usage both inside and between your networked sites.

Best in Class Security Built-In

SD-WAN capability is built into every Meraki MX Security Appliance — so you get enterprise-grade security and SD-WAN in a single box.

Real Time Monitoring and Analytics

Set your own thresholds for latency, loss, and jitter for individual applications — and decide which WAN uplink they should use in normal vs. degraded situations. Get granular visibility across uplinks to assist with decision-making.

Immediate visibility into Performance and Connectivity

In addition to the analytics and control delivered by our SD-WAN solution, you can leverage the intelligent diagnostics of Meraki Insight to drastically reduce troubleshooting time of ISP, WAN, and cloud-based app connectivity issues down to minutes

More Bandwidth Less Cost

Thrive in a multi-cloud world with ease

The MX appliances are available as virtualized images (vMX- Virtual Machine extensions), which can be deployed in private and all major public clouds. In three simple clicks, Meraki Auto VPN technology can establish secure and optimized connectivity from thousands of branch sites to vMXs in multi-cloud environments.

Allow branch sites access to cloud applications directly through a public Internet link using a single appliance – the Meraki MX.



CASE STUDY- FRANCHISE RESTAURANTS



Here's a question for you:

What's the most important business driver for a multi-site restaurant chain?

The answer has nothing to do with food, equipment or even personnel. Hands-down, the most important element is connectivity.

Think about it.

A multi-site restaurant would not last 10 minutes without connection in today's hyper-connected society.

Simply put, when the network is down, business comes to a halt.

In the midst of the COVID-19 crisis, restaurants have been forced to swiftly transition to a takeout-and-delivery-only model, leaving businesses rushing to put the necessary infrastructure in place while simultaneously looking ahead to the industry's unclear future. Many businesses are discovering the importance of their network's capabilities as they rely more than ever on websites, apps, and digital communications.

If you are in charge of IT for a restaurant chain, you can combat network downtime by using software-defined wide area networking (SD-WAN)—a approach that decouples networking hardware from its control mechanism, greatly simplifying WAN management.

CISCO MERAKEI SD-WAN will keep your business online at all times, ensuring that your sites have the necessary connectivity they require to function.

RESTAURANT PROCESSES DEPENDANT ON CONNECTIVITY

POS SYSTEMS: Without connectivity, it becomes extremely difficult to process transactions and move customers out the door. Businesses typically have three options when connectivity is lost: Accept payment without a credit card authorization (which is risky); call to authorize each card transaction (which is time consuming); or accept only cash (which is bad for business). In one study, it should be noted, 50 percent of respondents said they carry cash less than half the time they are out. When they do carry cash, 76 percent keep less than \$50 while about half keep less than \$20.

SUBMITTING ORDERS: Without connectivity, it can be very difficult for servers to communicate with kitchen workers. Almost all restaurants today use electronic ticketing systems to process orders. When connectivity is lost, businesses have to resort to paper-based ordering systems, which can slow down operations considerably. Some companies may even have HR policies in place to prohibit paper-based ticketing systems from being used.

DATA LOSS: Further issues can arise if a branch continues operating without access to a centralized management system that tracks marketing, sales, research and inventory data. It's very important that companies access correct information, so that they can make accurate and informed decisions. Connectivity loss can lead to skewed reports, and lapses in market research.

HEALTH AND SAFETY ISSUES: Imagine headquarters receives notice of a product recall, and needs to halt lettuce from being distributed at 20 different locations. There's no time, in this situation, to manually call or visit each location. Alerts need to be immediately distributed from a centralized system, received and notarized. Without connectivity, it's very difficult to ensure this takes place.

Ultimately, a restaurant chain must function as a unified entity. Individual franchisees are not allowed to go wild and do anything they please. Connectivity is the glue that holds a chain of restaurants together—and when it fails, everything may fall apart rapidly.

It can result in significant income losses, disgruntled customers, and irate franchise owners.

Fortunately, organizations are finding it simpler to control their connectivity and avoid downtime. In reality, businesses now have more power than ever before.



HOW SD-WAN HELPS THE RESTAURANT INDUSTRY

The food service sector, like every other industry, has been undergoing digital change over the previous few decades. Restaurants first began to use computers and local area networks to handle internal operations. Then came wide area networks, the internet, and, eventually, the cloud.

The most recent generation is SD-WAN, which allows restaurants to build powerful WANs comprised of numerous connections from various carriers.

CISCO MERAKI SD-WAN solution essentially helps a business, such as McDonald's, to function as a service provider. The solution can offer superior connection as well as the flexibility to install and maintain it as needed—with no strings attached.

A restaurant can use CISCO MERAKI SD-WAN Solution to:

- **PREVENT DOWNTIME:** Our CISCO MERAKI SD-WAN is designed to route traffic over numerous circuits, and switch between them as needed. So if one link starts experiencing performance issues (like dropped packets), traffic can be automatically sent over another. With this system in place, it's possible to establish seamless failover, preventing individual branch locations from losing connectivity and eliminating the above-mentioned pain points.
- **CONTROL BANDWIDTH:** Restaurants will experience sudden spikes and lulls in traffic at various points of the day. Network administrators can use SD-WAN to apply quality of service (QoS) on a global scale, ensuring business critical applications remain up and running as needed while also preventing bandwidth from being wasted during off-peak hours.
- **COST REDUCTION:** Our CISCO MERAKI SD-WAN Solution can be deployed and managed for a fraction of the cost of current legacy systems.

[FIND OUT MORE](#)

Interested to find out more about our CISCO MERAKI SD-WAN Solution and if it is right for your business? Get in touch and we'd be happy to discuss.

THANK YOU

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