OSHEAN

SD-WAN   - Brian Schaefer

OSHEAN SD-SWAN

- Cost Savings

- Flexibility

- Designed as an extension of our Beacon 2.0 Network

- Layer3 or Layer2 capable

- True integrated solution

- No additional head end equipment needed

SD-WAN combines a suite technologies under one umbrella

SD-WAN PRIMER

SD-WAN has become the latest buzz word, so I thought I would take a moment to explain how we have implemented it. Being that this technology is relatively new, various vendors and ISP's all have their own take on it. But what is it exactly, what is OSHEAN's solution, can it be used for your organization?

So… what is SD-WAN?

SD-WAN stands for software defined wide area network. It is a technology with an IPSec foundation that is built over private or shared mediums, such as commodity internet, MPLS, 4G, LTE or even site-to-site WiFi. This flexibility of WAN mediums allows organizations to reduce costs by leveraging any IP based connection type.

SD-WAN encompasses technologies that are not necessarily new. I look at it as a suite of tools that are packaged under an easy to use and deploy umbrella. These tools offer a lot of options to put together an optimum custom architecture for your organization.

Benefits

One of the other major benefits of OSHEAN SD-WAN is cost savings. It is not always feasible to run a fiber circuit because of lateral costs, especially for a lower bandwidth site. We have rolled out Business Internet with our SD-WAN product for a low monthly charge. This has the added benefit of increasing data rates by replacing legacy circuits for SD-WAN in some cases.

OSHEAN has designed our SD-WAN offering to be an extension of our Beacon 2.0 fiber network, which makes adding an additional site work seamless with your existing design. OSHEAN SD-WAN is built into Beacon 2.0, which means site-to-site traffic does not go against your existing Internet subscription. This is a major advantage over the competition - typically you need to think about increasing your commodity Internet subscription to account for the additional traffic.

*"Site to site traffic does not go against your existing internet subscription."*

DESIGN

We have two designs that have been standardized for connecting to OSHEAN. The top diagram is for sites that peer with us through BGP (typically higher ED, Hospitals, Gvt, etc.) The bottom diagram is for managed core services (typically Schools, Libraries, etc.). Again, these are standard connections, but we always like to have a design session in the event that you have different requirements.

As you can see from both models, the foundation of SD-WAN starts by connecting remote site(s) on the left through the commodity internet using Ipsec tunnels, which then terminate to the OSHEAN SD-WAN core.

**BGP Peered Member Example (typical)**
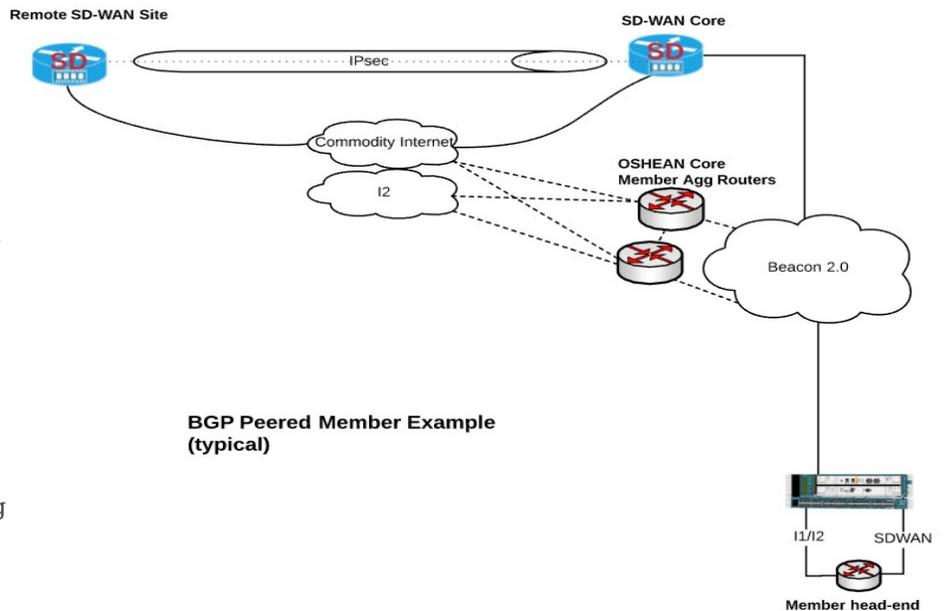
BGP Peered Members

The design for the BGP peered members continues from the OSHEAN SD-WAN core. Traffic is then delivered over Beacon 2.0 and handed off at your head end.

MNS Core Members

The design for the K-12 environment continues from the OSHEAN SD-WAN core. Traffic is then routed to either the head end for inter-site traffic or direct to the MNS-Core for Internet access. This design is identical to non head end sites today. In the diagram you will see the dotted red line which indicates site-to-site traffic, the black dotted line which indicates Internet traffic.

MNS-Core Example (typical)
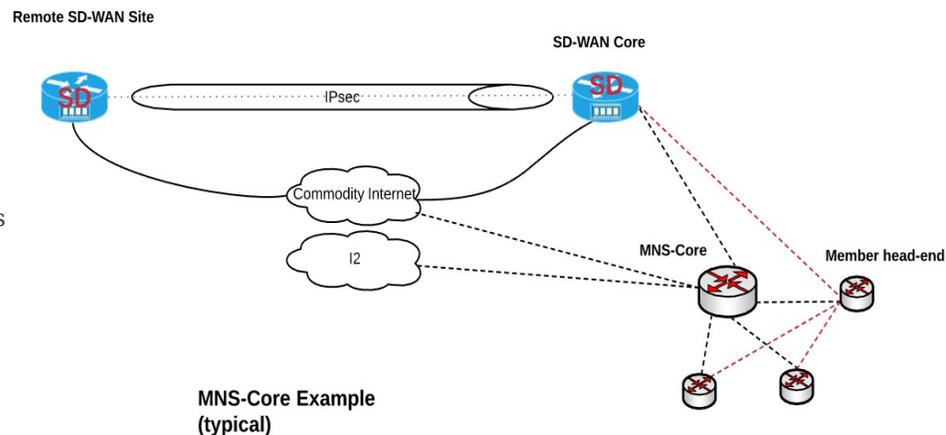
Commonalities

In both designs, site-to-site SD-WAN traffic is **separate from your internet subscription**! You will also see this design reduces the need for an additional appliance at your sites head-end, seeing that it is all being done in the OSHEAN core.

There are a magnitude of ways this can be designed, however this is the foundation from which we can build to meet your needs. From here, we can look at things such as dual provider, intelligent traffic routing, site-to-site traffic, routing protocols for resiliency, etc. OSHEAN's SD-WAN offering is typically built as a layer3 design, which is the most scalable and best practice. However, if a special need is required (for example file replication or DR site), **we can provide layer2 services**.

LEARN MORE

Do you want to find out more about how OSHEAN's SDWAN can work in your environment?

Contact us at **sdwan@oshean.org**