Branch Office Simplification

Oracle's cost-effective solution delivers critical branch IT services while reducing complexity.

STATE OF THE ENTERPRISE BRANCH: NEW DEMANDS AND INCREASED COMPLEXITY

IT must provide branch offices with high-quality, reliable access to an emerging set of applications that exist in a variety of locations, such as the cloud. The deployment of these applications is increasing the types and number of required branch services resulting in added complexity, reduced flexibility, and higher support cost. While branch services and complexity are increasing, the required technical skills available in the branch to support the new infrastructure is frequently limited.

One option for addressing this issue is service consolidation which reduces the number of individual point products at the branch into all-in-one or branch-in-a-box devices. Key advantages of this approach are the integrated deployment and ongoing management that eases the support overhead required to manage the branch as well as OpEx reduction due to the procurement of fewer devices.

An alternative approach is to unify best-of-breed products that deliver the required branch services into a common solution. To enable this approach, IT must have the tools and information available to easily and quickly deploy and manage this multivendor approach on an ongoing basis.

An Oracle branch office simplification solution supports both these options by consolidating multiple core network and security functions, including emerging SD-WAN services, into an easy-to-deploy, virtual or physical appliance administered from a central location. The extensible solution works with leading third-party vendors to deliver the services your applications require in any branch location.

A COMPREHENSIVE BRANCH SERVICES PORTFOLIO

Critical services within the Oracle SD-WAN products help customers with branch simplification efforts. The following key services are supported by an Oracle branch office simplification solution:

- **IP routing.** With support for popular border gateway protocol (BGP) and open shortest path first (OSPF) routing protocol, Oracle SD-WAN appliances deliver a simplified deployment experience by discovering LAN subnets and advertising SD-WAN routes—reducing the reliance on error-prone and labor intensive static routes, improving high availability by detecting downstream changes to support failover, and lowering cost and complexity by eliminating branch routers.

Key Benefits

- Effortless deployment and management.
- Lower complexity with device consolidation.
- Scalable and easy service chaining.
- Partner ecosystem to deliver incremental capabilities.

ORACLE®

- **Encryption.** Oracle offers two levels of encryption—at the application level and network level—that improve the security of data as it traverses between the WAN and branch offices. Data sent across public links is encrypted using either 128-bit or 256-bit advanced encryption standard (AES) to ensure that data cannot be interpreted or compromised while in transit.

- **Virtual private network (VPN and IPsec).** Termination of IPsec tunnels enables Oracle SD-WAN appliances to integrate with traditional and popular IPsec infrastructures with support for up to eight IPsec VPN tunnels per device. This capability and scale allows customers to replace a dedicated appliance or router-based VPN concentrator supporting site-to-site IPsec connectivity with Oracle SD-WAN Edge, which leverages a 140-2 Level 1 FIPS- certified IPsec cryptographic binary.

- **SD-WAN.** Oracle SD-WAN services enable a smart and responsive network that is comprised of a variety of WAN link types including multiprotocol label switching (MPLS), internet, long-term evolution (LTE), and satellite. Through Oracle's technology, these links are enhanced to deliver a failsafe infrastructure that adapts in real time to bandwidth demand and actual network conditions, ensuring that, regardless of network issues, critical applications have priority and all applications take the best quality path through the network.

- **Virtual routing and forwarding (VRF).** With VRF, Oracle appliances can support data segmentation to enable a single device to appear as multiple, virtual devices from an IP routing perspective. This capability empowers network administrators to securely host multiple customer or department networks at a branch site or to create distinct routing domains to segment large corporate networks.

- **Firewall with network address translation (NAT).** Zone-based, stateful firewall supports policy-based filtering between services and security zones as well as static and dynamic NAT. This unique feature extends security zones across multiple branch locations, reducing the initial configuration and ongoing management of security services. To simplify the configuration process, firewall policies are created at the global level and can be applied to all branch sites within the network.

- **Dynamic host configuration protocol (DHCP) server and relay.** Devices on the same network as the Oracle SD-WAN appliance's LAN or VLAN interface may now use the DHCP server and DHCP relay features to provide those devices with their IP configuration. A robust set of IP addressing options is supported to ensure that clients obtain a comprehensive set of IP parameters locally or from a DHCP server located at a central site.

- **Central orchestration with reporting.** All functions and services are configured from a central appliance network control node (NCN) or management console (Oracle SD-WAN Aware) which greatly reduces the effort required to build and maintain the branch infrastructure in multiple sites. Also, networkwide reporting is integrated into the solution to assist with common activities such as troubleshooting network issues or capacity planning.

PARTNERSHIPS EXTEND THE SOLUTION

While Oracle has integrated a robust set of services into its appliances, customers may wish to include third-party offerings as part of their branch infrastructure to deliver incremental services or services from specific vendors such as a Palo Alto Networks. Oracle's ecosystem of technology providers can extend the value of Oracle SD-WAN solutions and enable enterprises to confidently engineer their networks and branch with agility, predictability, and dependability. Partners deliver network services, operating systems, hypervisors, cloud platforms, and wireless providers. For each of these partners, deployment guides are available to simplify the integration.
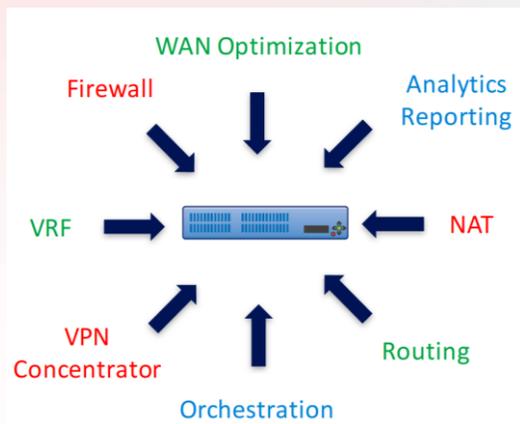
Key Features

- IP routing
- Encryption
- VPN and IPsec
- SD-WAN
- VRF
- Firewall with NAT
- DCHP server and relay
- Central orchestration and reporting

Figure 1. Oracle appliances support popular functions such as firewall, routing, WAN optimization, and more.

BENEFIT FROM BRANCH OFFICE SIMPLIFICATION

An Oracle branch office simplification solution delivers the following benefits:

- **Effortless deployment and management.** Deploying an Oracle SD-WAN appliance in the branch is fast and simple. By completing three steps, IT organizations can have an appliance online with central administration and reporting available to facilitate a production implementation.

- **Lower complexity with device consolidation.** More than just an SD-WAN device, Oracle appliances support popular functions such as firewall and routing. Instead of having multiple devices from a variety of vendors, you can now deploy one Oracle SD-WAN appliance and greatly reduce branch device sprawl and cost.

- **Scalable and easy service chaining.** Oracle can make the service chain provisioning process shorter and simpler by offering converged services with a common management interface.

- **Partner ecosystem to deliver incremental capabilities.** IT organizations can easily extend their Oracle branch office simplification solution to include popular third-party services and technology.

CONNECT WITH US

Call +1.800.ORACLE1 or visit oracle.com/sdwan.
Outside North America, find your local office at oracle.com/contact.

B blogs.oracle.com/oracle-communications   f facebook.com/OracleCommunications   twitter.com/OracleComms

Integrated Cloud Applications & Platform Services

Oracle is committed to developing practices and products that help protect the environment