



Joel Stradling

Orange Business Services - Global WAN Services

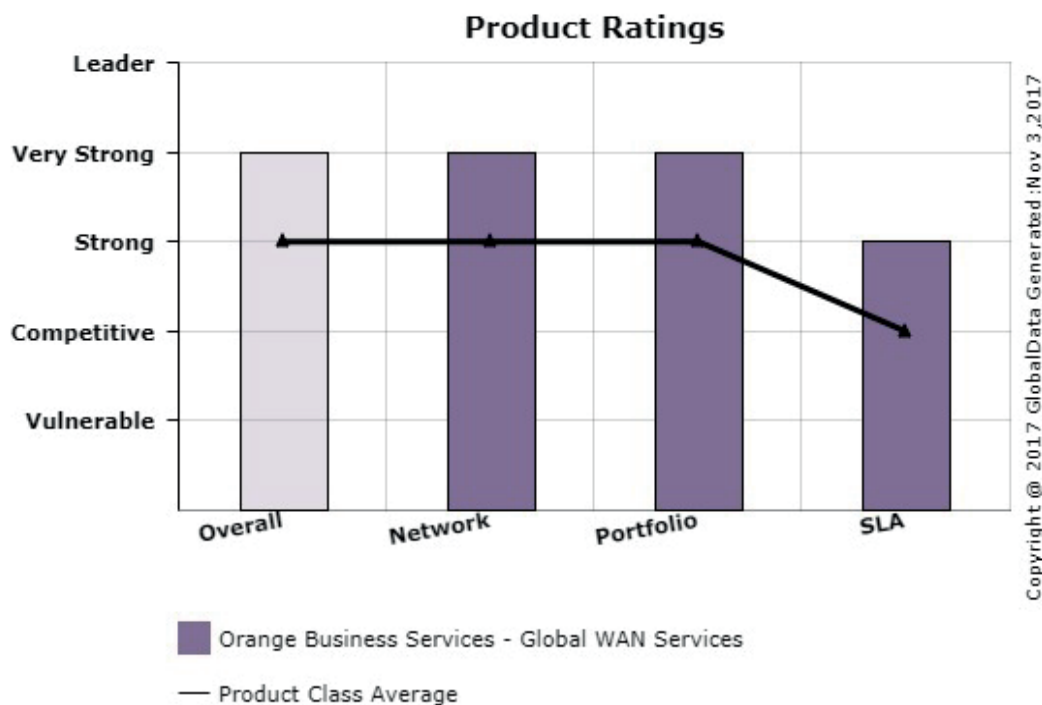
September 11, 2017

PRODUCT ASSESSMENT REPORT - GLOBAL WAN SERVICES

REPORT SUMMARY

Orange Business Services sells a very strong global WAN backed by a major MPLS network and worldwide sales and support. Orange is investing in SDN, SD-WAN, and virtualization technologies; and launched Easy Go Network SD-WAN during November 2016.

SUMMARY



WHAT'S NEW

- During March 2017, Orange Business Services (OBS) announced that it will deploy Riverbed SteelConnect technology within its hybrid network roadmap, with customer pilots to begin during Q2 2017. The solution that both partners are building is based upon cloud acceleration for apps running on Orange Business VPN Galerie.
- OBS has uCPE in pilot phases, with plans to launch before year-end 2017.

- Orange Business Services offers Internet-centric WANs.
- Orange Business Services is investing in an API catalogue; these are based on open standards and will focus on network device inventory, quotes and orders, and order/provision of SDN services.

PRODUCT OVERVIEW

Product Name	Easy Go Network, Business VPN, Network Boost and Business VPN Galerie	
Description	<p>Orange Business Services offers a number of sub-products within its connectivity range including Business VPN, which is its flagship fully managed global IP VPN - MPLS service. It also offers a hybrid VPN service that combines private IP with public Internet for connectivity. Business VPN Galerie is its cloud-ready IP VPN service whereby SaaS and IaaS partners are already integrated onto the network, allowing clients to deploy and use cloud-based applications quickly. Orange Business Services also sells its Layer 2 Ethernet VPN offering 'IEL,' which can be provisioned multipoint-to-multipoint, hub-and-spoke and point-to-point. The operator's Business VPN Internet Accelerate service delivers WAN and cloud connectivity over the public Internet for a low-cost base with business-grade performance. Acceleration technologies improve SaaS applications accessed globally by up to ten times, according to Orange Business Services. Finally, Easy Go Network is an overlay SD-WAN solution launched during November 2016 available in 75 countries.</p>	
Components	<ul style="list-style-type: none"> • Business VPN • Business VPN Internet • Business VPN Galerie • International Ethernet Link (IEL) • Business VPN Internet Accelerate • Easy Go Network 	
Key Customers	<ul style="list-style-type: none"> • Halliburton • Hertz • Lloyd's Register • Merck 	<ul style="list-style-type: none"> • PMI • International Red Cross • AngloGold Ashanti
Key Rivals	<ul style="list-style-type: none"> • BT • Telefonica • Verizon • AT&T 	<ul style="list-style-type: none"> • Tata Communications • Telstra • Vodafone

ESSENTIAL ANALYSIS

Strengths

- **MPLS Reach and Operations:** Orange Business Services manages and operates one of the largest on-net global MPLS PoP footprints and installed MNC customer bases.
- **Internet Gateway Coverage and Business VPN Galerie for Cloud Connectivity:** OBS has 19 Internet gateways in 16 cities globally, and its Open Transit Internet (OTI) network strengthens the operator's hybrid VPN. Meanwhile, its Business VPN Galerie supports virtualized firewalls and WAN optimization via direct connections with 18 cloud providers. Galerie Acceleration is available as an add-on option based on Riverbed Enterprise Application Management (EAM) and InfoVista.
- **Applications-Aware Networking:** OBS offers application-aware networking as a part of the Orange hybrid VPN service, which includes virtualized cloud acceleration with Riverbed, dynamic app routing with Cisco SP-IWAN and application visibility with InfoVista.
- **Two Flavors to Cover the Bases:** Cisco SP-IWAN is available today and Orange is developing two SD-WAN concepts: an overlay SD-WAN named 'Easy Go Network' launched November 2016, as well as a future offering in 2017 that will support NFV to the customer site; and a universal CPE.
- **Management Portal:** ServiceNow integration lets large enterprises manage their global WAN services together with their IT services, integrated together on a single SaaS platform
- **International Access and Local Support:** Global subsidiaries provide local operational support and access to domestic networks. OBS has also set up partnerships for domestic capillarity in the U.S., China, Germany, Africa and Latin America.

Limitations

- **More Nimble Rivals:** Smaller, more regional providers with global ambitions (e.g., Interoute, Singtel, Sprint and PCCW Global) can be more flexible and customer-centric to regional MNCs.
- **Market Disruption:** Certain asset-light rivals are competing aggressively and disruptively, citing that network ownership is no longer the key selling point for deploying cloud-based apps and software-defined WANs.
- **Large Regional Incumbents:** Major global providers with headquarters outside of Europe (e.g., NTT Communications, AT&T and Verizon) are tough to beat in their home regions as well as widely present in Europe.
- **Competitors Are Making Progress:** Rival carriers are also investing in relevant areas to develop hybrid networking and direct connectivity to cloud providers.

CURRENT PERSPECTIVE

Very Strong

Orange Business Services has one of the most extensive on-net MPLS footprints. Relevant cloud-based IT, security and all-IP are all present and robust in the carrier's messaging and offerings. Orange strengthened its global WAN proposition with the launch of a global end-to-end cloud networking solution named 'Business VPN Internet Accelerate' that is based on Akamai Cloud Networking to serve up reliable access to 'software as a service' (SaaS). Orange claims that this solution delivers speeds up to ten times faster than regular Internet access. Orange offers a feature-rich hybrid VPN offering backed by a major Internet backbone and gateways worldwide. Multiple foreign assets and subsidiaries allow Orange to provide global customer service and support. The Orange SD-WAN overlay solution, named Easy Go Network and launched during November 2016, leverages NFV within Orange's PoPs. Deploying VNFs from within Orange's PoPs is an ongoing process, with eight PoPs to be deployed by the end of 2016 spanning Europe (four) as well as in Asia and the U.S. (two each). Orange is targeting 18 PoPs by the end of 2017 and 40 PoPs in 2018. Orange has selected Juniper's MX Series 3D Universal Edge Routers, Contrail Controller and the virtual firewall to support the first Easy Go Network launch. As the operator builds its NaaS capability moving into 2017, it will be able to extend to customers an orchestration portal and universal CPE (zero-touch provisioning) that will allow clients management of connected sites and VNFs. Its Service Management Suite integrates operational information from Orange directly into the ServiceNow SaaS ITSM/process automation platform. ServiceNow has more than 3,000 enterprise customers globally and is growing rapidly. It gives IT administrators a single point of management across IT and network. Finally, enterprise mobility, IoT/M2M and participation in 'smart cities' projects are useful arrows in Orange's quiver and allow it to differentiate against BT.

Traditional private and dedicated MPLS circuit revenues are under threat as more enterprise customers seek to leverage the public Internet as a medium for sending less critical WAN traffic. AT&T and Verizon are highly threatening when it comes to competing for Orange's U.S.-based clients and for MNCs that require comprehensive domestic service in North America. Finally, several pan-Asian and global providers are making headway in the global MNC segment, including Tata Communications, NTT Communications and Telstra, for example.

COMPETITIVE RECOMMENDATIONS

Provider

- **Leverage Branch Site Sweet Spot of Easy Go Network:** Orange Business Services can leverage its SD-WAN capabilities to target smaller global enterprise clients in a bid to battle more nimble and smaller international rivals such as Colt and Interoute.
- **Akamai and SaaS Specialty:** Orange Business Services can portray the T-Systems/Akamai jointly delivered WAN offering as focusing on dedicated VPN, whereas the Orange/Akamai solution supports acceleration on a full hybrid SaaS environment.
- **Investment Benefits for Clients:** Orange Business Services can list its network upgrade program, adding reach and capacity in Asia, Africa and France, as concrete evidence that it is improving its WAN capabilities and can offer regional differentiation over competitors. The company can highlight its progress extending connectivity to carrier hotels to cloud services being on-net in 125 major data centers worldwide.
- **SDN Investment:** Orange Business Services can point to the investments at the group level made by Orange in SDN as a good reason to trust the carrier for supporting customers' move to future SDN platforms. EUR 100 million is being invested over the next five years in SDN.

Competitors

- **Asian Rivals:** Singtel, Tata Communications, NTT Communications and Telstra can each challenge Orange Business Services for Asia-based and -headquartered enterprise WAN services. These operators have solid SD-WAN programs and can also offer global connectivity leveraging investments and network partners.
- **T-Systems' ngena:** ngena can point to its partners for delivering a global support operation for SD-WAN. Orange Business Services is classically powerful in truly global customer service and support, but new alliance models can promise to do better.
- **Disruptors:** Early SD-WAN movers can continue to portray that massive MPLS network ownership is more of a liability than a strength in today's WAN market, due to the high costs of managing and maintaining these assets. Instead, customers can choose software-defined and cloud-based services from asset-light players including Aryaka and VeloCloud.

Buyers

- **North America Coverage Through AT&T:** Orange Business Services can offer robust domestic network connectivity in the U.S. based on its partnership with AT&T.
- **ServiceNow Portal Sophistication:** Large enterprises should consider using OBS' Service Management Suite to integrate and control their system portal and dashboard sprawl. Using the ServiceNow platform, the offering can reduce complexity while integrating with existing internal IT service management systems.
- **VPN and Collaboration:** Clients should explore Orange Business Services' connectivity plus collaboration proposals, because in addition to proven global VPN credentials, the operators can deliver solid integrated Microsoft-centric Office365 services and Cisco HCS.

Metrics

NETWORK

Rating	Very Strong
Global Reach	<p>Business VPN is available as a fully managed IP/MPLS network service in 220+ countries.</p> <p>Orange supports WAN connectivity to 325,000 customer sites</p>
Platform	<p>Core routing composed of Cisco GSR 12000 series with redundancy built in. PE routers are a mix of Cisco ESR 10000 series and Cisco 76xx series with redundancy built in.</p> <p>Ethernet: Alcatel-Lucent</p> <p>Orange's SDN architecture is currently being deployed. The OBS SDN engine is composed of several elements: SDN OSS, network controller, VIM and X86 servers.</p>
Backbone	<p>Global core backbone relies on high-speed dedicated 10 Gbps Ethernet circuits in the core and access.</p> <p>In development is a 100G core with n x 10G access.</p> <p>Backbone: 2.5 Gbps to 10 Gbps.</p> <p>Additional backbone presence in 125 data centers worldwide.</p>

Access Types & Speeds	Business VPN: 64 kbps up to 10 Gbps. IEL standard point-to-point: up to 1 Gbps. For VPLS-enabled IEL: up to 1 Gbps.
Hybrid and Internet VPN Gateways	19 Internet gateways located in 16 cities globally.
Notes	---

PORTFOLIO

Rating	Very strong
Performance Monitoring and Management	<p>'My Service Space' gives a monthly SLA view. End-to-end network performance per CoS measured with five-minute granularity. Orange is working with ServiceNow for Service Management Suite. Enterprises using ServiceNow for IT/infrastructure management receive integrated Orange information as part of their IT service management (ITSM) environment, including performance and SLA information. The integrated platform is available worldwide.</p> <p>Orange offers performance monitoring and management advisory services. Historical performance data is kept for two months for five-minute polls and hourly averages and for one year for daily averages.</p>
Customer Portal Capabilities	<p>Reports are available online in near-real time on My Service Space, and the metrics can be rolled up to provide data per hour, day, week, month and year.</p> <p>Customers can initiate additional reporting online via the portal on any path or router, with up to 30-second granularity and for up to a one-hour period.</p>
Applications Performance Management and WAN Optimization	<p>Network Boost (Ipanema) and Enterprise Applications Management (Riverbed, Blue Coat, Juniper).</p> <p>Application Visibility (Ipanema) with application flow analysis is available on all Business VPN</p>
Dynamic Bandwidth	<p>For IP VPN dynamic bandwidth, the carrier offers usage-based billing (UBB) case by case.</p> <p>Dynamic bandwidth is not available with IEL.</p> <p>Fast modification (for single or multiple sites) can be managed via a self-care portal.</p> <p>New services will be activated in minutes instead of days or weeks. A try-before-you-buy option is available. New billing modes are also available (pay per use).</p>

Virtual Network Functions

Available now --
 vRouters: Cisco ISRv, and Juniper vSRX
 Firewall: Palo Alto, Fortinet
 WAN Optimization: Riverbed and Ipanema

Security

Business VPN Internet features built-in security, including security features such as firewall in the cloud to securely extend the customer hybrid experience to Internet traffic.

Business VPN Internet meets the customer's security policy worldwide. Managed firewall is available as an option.

Supports IPsec and 3DES, DES, EES encryption. PKI is available on a case by case basis.

Ethernet: Layer 3 IP security techniques apply.

Cloud-based Web Content Protection (WCP) leveraging Zscaler.

COS

MPLS IP VPN -- Five CoS tiers: real-time voice, real-time video, Data D1 (business-critical), Data D2 (general), Data D3 (best effort); and three 'out-of-profile' CoS tiers: D1 OOP, D2 OOP, D3 OOP.

Out-of-profile CoS options allow the operator to treat specifically the traffic that exceeds the contract of one class, in order to give preference to in-contract traffic.

CoS tiers are segmented into the different IP VPN service types: Silver, Gold, Platinum, Flexible, Lite.

Ethernet: Up to 4 CoS tiers; and up to 14 different CoS profiles.

Orange is developing a sixth CoS tier for its Business VPN portfolio, used to transport Internet traffic.

CPE Options Managed and Sourcing

Orange Business Services' managed Business VPN portfolio uses a subset of Cisco's ISR G2 and ASR series.

CPE-related services, including shipping, import, dispatch, installation and maintenance, are bundled as part of Orange Business Services' Business VPN offer.

Orange Business Services' CPE sourcing countries have the same global footprint as its global Business VPN service.

Resiliency Options

MPLS IP VPN: Backup via ISDN (NAS backup); backup via DSL (Always-On) with offload for non-critical traffic; dual connection (Dual) with load balancing option; last-mile diversity (case-by-case upon site survey study).

Backup of critical traffic with low-bandwidth requirements through mobile GPRS/UMTS technology (Air Backup) is available in 17 countries worldwide.

Ethernet: Four configuration choices for availability - standard (i.e., one CPE, one access link), dual fiber (i.e., one CPE, two accesses to one PoP), dual fiber and PoP diversity (i.e., one CPE, two accesses to two PoPs) and full diversity of network resources (i.e., two CPE, two accesses to two PoPs).

Pricing	MPLS IP VPN: Monthly recurring standard and usage-based on request. Ethernet: Bandwidth per route for end-to-end connection. Non-recurring charge and monthly recurring charge.
Notes	---

SLA

Rating	Strong
Network Latency	MPLS IP VPN: Variable according to client location. Ethernet: Circuit dependent.
Proactive or Reactive	MPLS IP VPN: SLA is reported proactively. Based on provided reports, customer can claim for credit if applicable. Proactive monitoring also optimizes troubleshooting performance. Ethernet: SLA is reported proactively.
Packet Loss	MPLS IP VPN: CE-to-CE PLR (packet loss ratio) varies from 0.05% to 0.3% in Western Europe, North America and most countries in Asia (e.g., China and India). Up to 0.5% packet loss for inter-continent traffic in other parts of the world. Ethernet: Packet-loss ratio -- Raw Bit Error Rate 10e[-3]; 10e[-4] depending on CoS. Can be customized.
Jitter	CE-to-CE jitter SLA is 10 ms worldwide.
Availability (POP-to-POP and CPE-to-CPE)	MPLS IP VPN: SLA is reported proactively. Based on provided reports, customer can claim for credit if applicable. Proactive monitoring also optimizes troubleshooting performance. Ethernet: SLA is reported proactively.
Mean Time To Repair	Guaranteed time-to-repair is 5 hours in 16 European countries over leased lines or Ethernet, and in 13 European countries for SDSL. Ethernet: 5 hours in major on-net cities across 20 countries
Provisioning Guarantee	MPLS IP VPN: Varies according to country. Ethernet: Varies according to partners
Notes	---

All materials Copyright 2017 GlobalData. Reproduction prohibited without express written consent. GlobalData logos are trademarks of GlobalData. The information and opinions contained herein have been based on information obtained from sources believed to be reliable, but such accuracy cannot be guaranteed. All views and analysis expressed are the opinions of GlobalData and all opinions expressed are subject to change without notice. GlobalData does not make any financial or legal recommendations associated with any of its services, information, or analysis and reserves the right to change its opinions, analysis, and recommendations at any time based on new information or revised analysis.