



1 SERVICE DESCRIPTION FOR VENDOR MANAGED VPN SERVICE

1.1 General Service Description

Vendor Managed VPN Service ("**VMS VPN**") is a Network Service that provides secure IP internetworking and enables connectivity between Customer-edge ("**CE**") routers in an "any-to-any" environment. The Service relies on an Orange-approved third party carrier's VPN service and infrastructure ("**Third Party Carrier**"). Each CE router connects to the Third Party Carrier's infrastructure through an access medium. Each CE router is equipped with one or more LAN interface types that connect the customer's LAN to the Third Party Carrier's VPN.

VMS VPN is offered as an add-on option of the Orange Business VPN service. It enables an Orange IP VPN to be extended by one or more VPNs provided by one or more Third Party Carriers that are inter-connected to function as a single VPN.

These inter-connections are implemented in selected locations where both an Orange-managed CE router, connected to Orange MPLS network, and a Third Party Carrier-managed CE router, connected to the Third Party Carrier network, are co-located, and inter-connected using a dedicated Ethernet link. Border Gateway Protocol routing is used between Orange CE and Third Party Carrier at these interconnection sites.

VMS VPN only offers "any-to-any" topology which allows any CE router in the Third Party Carrier "**VPN**" to communicate with any other CE router connected to the same Third Party Carrier "**VPN**" or with any customer CE router connected to Orange IP VPN.

Orange will remain the customer's single-point-of-contact for service delivery and service support for all Third Party Carrier provided VPNs unless otherwise specifically agreed with the customer.

Any Service Level Agreements or Service Level Objectives for VMS VPN shall be established on a case-by-case basis in conjunction with the Orange-approved Third Party Carrier and shall be set forth in a Third Party Carrier Service Description reflecting the specifications for the Customer's VMS VPN solution.

As described in Clause 1.3 below, CE routers can be either supplied and managed by the Third Party or supplied and managed by Orange ("**VPN Profile**").

1.2 Standard Service Elements

The standard element of VMS VPN are as follows:

- (a) **Service Bandwidth and Managed CPE.** IP bandwidth ("**Service Bandwidth**") and a third party-managed or Orange -managed CE router for each Customer Location;
 - The Service Bandwidth parameter is limited to the bandwidth of the Tail Circuit, although the actual Service Bandwidth is less than the Tail Circuit bandwidth because of the overhead.
- (b) **Traffic Management.** Location-specific traffic management through Class of Service mechanisms ("**COS**").
 - Class of Service prioritizes Customer's network traffic by assigning different level of priority for data, voice, and video application traffic.
 - The Third Party Carrier specific COS implementation will be used for each site connected to the VMS VPN solution. This implementation differs depending on Third Party carriers and may be different from the one used on Orange MPLS network.
- (c) **Service Levels.** Service Levels, as available or agreed back to back with Third Party Carrier.
 - Applicable Service Levels will be determined by the VPN profile and back-to-back agreements with the Third Party Carrier.
 - Quality of service ("**QoS**") report is provided through the monthly Service Level report.
- (d) **MPLS VPN.** Secure VPN, which is provided through Multi-Protocol Label Switching technology.
- (e) **Access Circuit.** Access circuit will be provided by the Third Party Carrier as part of their "**VPN**" solution.
 - Where available, the access circuit can be delivered through different technologies such as xDSL, cable, WiMax, Ethernet, Leased Lines, etc. by the third party.
- (f) **Network and Incident Management.** Network management and incident management, which are provided through the Orange Service Select – Service Support:
 - Orange will remain the customer's single point of contact for service support for all sites delivered on the Third Party Carrier infrastructure.
 - VMS VPN being custom built, it is only supported under the Orange service Select – Customized support with a Dedicated Customer Service Center ("**DCSC**").

1.3 VPN Profiles

Different VPN profiles are available depending on Third Party Carrier's capabilities and Customer's Service Level requirements.

1.3.1 Third Party Carrier-managed CE. The CE router is supplied, installed, and configured by the Third Party Carrier as part of their "VPN" service.

- (a) **Configuration management.** The CE will be configured by the Third Party Carrier on behalf of Orange who will not have write-access to the CE router. Change management process and change management service level (for "urgent" or "emergency" changes) will be limited by the Third Party Carrier's capabilities and service level definition.
- (b) **Service Support – reactive.** Network management will be done by default on a "reactive" basis. "Proactive" support is possible but with the addition of the Orange Customized Infrastructure Care service that allows Orange support teams to monitor third party supplied devices.
- (c) **QoS reports.** QoS reports will be available as an option and on a case-by-case basis, either generated by the Third Party Carrier on behalf of Orange or by Orange. In that latter case, Customer will have to subscribe to the Orange Customized Infrastructure Care service.
- (d) **Access to CE.** Depending on service levels agreed back to back with customer and Third Party carrier, Orange may have read-access to the CE router and specific features (SNMP polling, reporting) may be enabled on the CE router for use by the Orange service management teams.

1.3.2 Orange-managed CE. The CE router is supplied, installed, and configured by Orange.

- (a) **Configuration management.** The CE router will be configured by Orange in accordance with the Third Party Carrier COS implementation. Orange change management process and service levels will apply.
- (b) **Service support – proactive.** Network management will be offered by default on a proactive basis. Reactive is also available as an option.
- (c) **QoS reports.** Some QoS reports will be available as standard via Orange customer portal.

1.4 Interconnections to Third Party Carrier VPN

For each interconnection site where Orange CE is connected to Third Party Carrier CE:

- The connection between Orange CE and Carrier CE is Ethernet based.
- Dedicated interfaces must be used for both Orange CE and Third Party Carrier CE for interconnection.
- Users' Local Area Network ("LAN") must be connected to Orange CE and not to Third Party Carrier CE.
- All inter-carrier traffic has to pass through the Orange IP VPN Backbone. No backdoor is permitted between Third Party Carriers.
- The direct back-to-back cable between the Orange CE and Third Party Carrier CE must be provided by Orange.

For VPN profile with Orange-managed CEs, one Orange CE acting as a gateway will be connected to both Orange MPLS and the Third Party Carrier's network.

The interconnection gateway(s) will normally be installed at a Customer Location; however, colocation in an Orange point of presence ("POP") or Third Party Carrier POP may be available as set forth in the Customer's Third Party Carrier Service Description and pending a specific study to confirm feasibility.

1.5 Classes of Service

Generally, the main objective of IP Classes of Service is to implement a traffic management approach that includes application awareness so that traffic congestions are addressed as they occur.

Orange will only be able to offer the Classes of Service ("CoS") implemented by the Third Party Carrier on its MPLS network.

Orange-approved Third Party Carriers usually offer a number of Classes of Service dedicated to data traffic with bandwidth allocation and prioritization principles and one Class of Service dedicated to voice traffic with real-time traffic management considerations. Some carriers may offer also one Class of Service dedicated to video traffic with specific video performance considerations.

The data CoS, and the video and voice CoS employ bandwidth management and prioritization mechanisms, which allocate the available Service Bandwidth in proportion to the relative weight of each CoS whenever traffic congestion occurs on the access circuit. These bandwidth management and prioritization mechanisms mitigate the occurrence of traffic congestion by proactively detecting over-capacity needs and by managing the congestion if the capacity needs exceed all of the buffer capacity of the CE router and the access circuit.

1.6 Third Party Carrier Service Description

A Customer's specific Third Party Carrier Service Description will include details about the Third Party Carrier VPN service, local loop technologies used, details of CoS definition and implementation, site topologies available (redundancy, offload) as well as CPE options.

Any Service Level Agreement, service management options, service management tools available from Third Party Carrier, as well as specific CE access arrangement or customer-specific configuration templates agreed with Third Party, will also be included.

1.7 Customer Care Services

1.7.1 Service Select Customized. Service Select Customized is a set of services that provide Customer with service management and network management support through a Dedicated Customer Service Center (DCSC) DCSC will act as a central service Desk for all customer-reported fault and change management activities. A Customer Service Manager ("**CSM**") will be assigned to the customer and act as the Single Point of Contact for all service related issues.

1.7.2 Reactive vs. proactive network management support. Both reactive and proactive support are available with a VMS VPN solution. Depending on VPN profile (Clause 1.3 above), customer may need to contract the Orange Customized Infrastructure Care service to get proactive support.

1.7.3 QoS reporting. Depending on VPN profile, QoS reports are available as standard or as an option. Customer may need to contract the Orange Customized Infrastructure Care service to get proactive support.

1.8 Service Level Agreement ("SLA")

Any Service Level Agreements or Service Level Objectives for VMS VPN shall be established on a case-by-case basis in conjunction with the Orange-approved Third Party Carrier. For the elements of the service under the Third Party responsibility, Orange will not commit to Customer more than what the Third Party can commit to Orange.

END OF SERVICE DESCRIPTION FOR VENDOR MANAGED VPN SERVICE