Flexible Engine User Guide

Direct Connect Premium through OBS Business VPN Galerie

The present document will guide you through the steps to implement the Flexible Engine Direct Connect Premium option through Orange Business VPN Galerie. It also documents the change management processes that you may need during the lifecycle of your service.

Its usage is restricted to Flexible Engine customers.

Orange Business Services
21 April 2020

Contents

1   Service overview

1.1   Flexible Engine Direct Connect Premium

Direct Connect is a Flexible Engine service that allows you to connect your internal private network to a Flexible Engine Virtual Private Cloud (VPC). To do that, you have 2 possibilities:

1) **Dedicated connections**: You can deploy your own network routers on Flexible Engine Direct Connect locations and connect your routers to Flexible Engine direct connect routers.

2) **Mutualized connections**: You can use a network service provider like Orange Business Service to connect your sites to Flexible engine.

Flexible engine direct connect premium service allows you to configure your Direct Connect through the Flexible Engine console.

Through our partners, we offer several Direct Connect options to fit with your network configuration and requirements.

This document presents the process to configure a Direct Connect with Orange Galerie VPN, the OBS solution to connect OBS BVPN/Flexible SD WAN customers to Flexible Engine.

Do not hesitate to contact our Service Desk to get more about all our solutions and partners and subscribe to a professional service offer if you need support to set-up this interconnection (obs-cloud-z3.servicedesk@orange.com).

1.2   OBS Galerie VPN Access to Flexible Engine: basic concept

OBS Galerie VPN provides you a secure access to your Flexible Engine environment via your corporate Business VPN without going through the public internet. Your connection to Flexible Engine benefits from the same security, reliability and performance levels than your Business VPN.
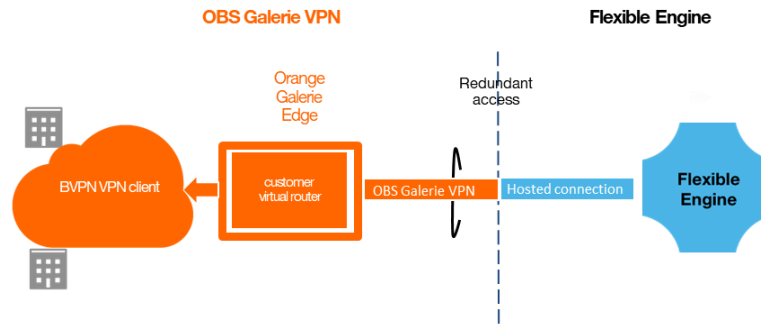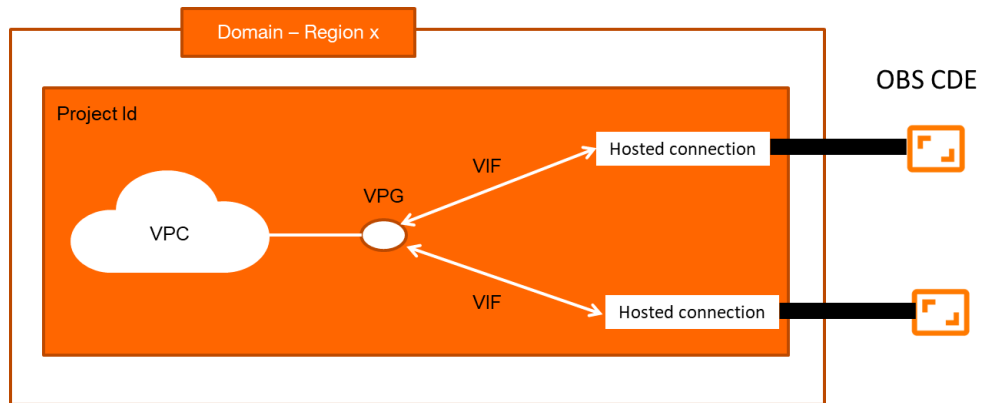
OBS network is providing an 'any to any' IP connectivity between all your BVPN sites, Flexible SD WAN sides and Flexible Engine.
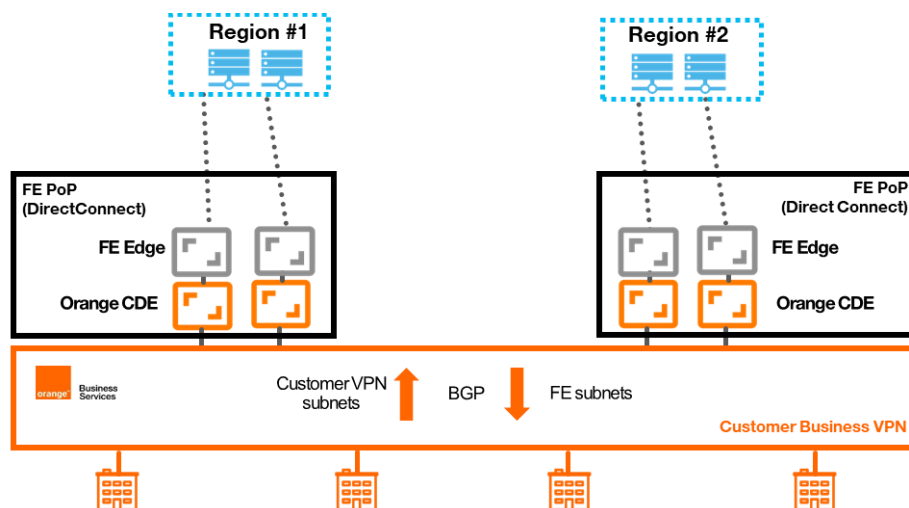
1.3   Flexible Engine design

This section is describing the different direct connect logical components to configure your Direct Connect with an Orange Galerie VPN.

Your Orange Galerie VPN access is connected to your cloud services through a virtual connection called 'hosted connection' that is established by our OBS network partner in the selected region. For redundancy purpose, there are 2 hosted connections in distinct Availability Zones of the region to connect. The 2 hosted connections are configured by OBS network service providers.

In order to connect a Virtual Private Cloud (VPC) to your OBS Galerie VPN access, you need to create and configure the following logical components:

- **Virtual Gateway (VPG):** It is the logical gateway for accessing a VPC. A VPG can be associated with only one VPC. The VPG can be associated to the 2 hosted connections.

- **2 Virtual Interfaces (VIF):** A Virtual Interface associates a hosted connection with a Virtual Gateway which connects to a VPC so that your private network can access the cloud. Both redundancy purpose, you need to configure 2 Virtual Interfaces, one per hosted connection.

Should you need to connect several VPC to the same connection, you may use VPC Peering feature. The VPC connected to Direct Connect will act as a transit VPC to reach all your cloud resources.

N VPC sharing the same Direct Connect
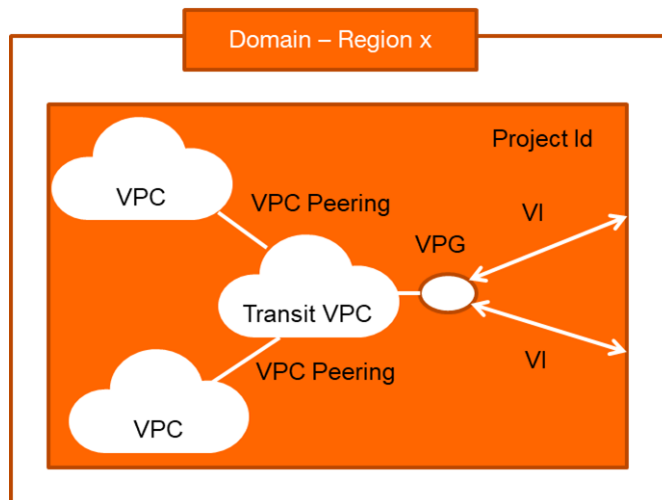
1.4 Process overview

In order to connect your Flexible engine cloud service to your OBS BVPN network, you should follow the 3 below steps:

- **Step 1: OBS Galerie VPN order**
  You need to order in the desired region an OBS Galerie VPN. You will need to provide OBS account manager the region, the FE contract Id, FE Domain name and FE Project Id, FE technical contact and the required bandwidth.

- **Step 2: OBS Galerie VPN processing**
  Once the order will be submitted to OBS customer network operation, OBS network partner will configure the access at the network interconnection and the 2 hosted connections. Once the access will be ready, OBS network partner will send you an email to inform that the access is ready. This notification will include all the technical parameters to configure your FE Direct Connect.

- **Step 3: FE Direct Connect configuration**
  Upon the reception of the OBS notification, you can configure your VPG and VIF with the technical parameters included in the notification.

1.5 Assistance

Should you face any difficulties in the implementation of the service or in its maintenance, do not hesitate to contact our Flexible Engine Service Desk (mailto:obs-cloud-z3.servicedesk@orange.com).

2   Creation process

2.1   Order your Business VPN Galerie connections

Your Business VPN owner should contact Orange Business Services to order a Galerie VPN Galerie access to Flexible Engine.

> note: Orange Business VPN Galerie can be ordered through your Orange Business sales contact.

You should provide the below information in the Technical Service Request Form:

cloud service: Flexible Engine

region: the region where the connectivity should be established (Paris)

bandwidth: bandwidth of the connection with Flexible Engine

contract reference: your Flexible Engine domain name ([1])

project ID: identifier of the project that will host the connection ([2])

contact: technical contact to be notified when the connection is established

([1]) it is the Domain Name (OCB0009999) that you can see under the 'My Credential' menu

([2]) you can find it under the 'My Credential' menu ; please, provide the hexadecimal identifier (eg. 1c64bc6394104f59a110fe6f9dg9ea16)

Upon reception of the order, Orange Business will extend the reach of your Orange Business VPN to the desired Flexible engine Direct Connect location and configure your hosted connections.

Once the connections are configured, you will receive a notification from Orange Business with the technical details. The OBS Galerie VPN hosted connections will appear in your Flexible Engine console.

2.2   Connect your cloud

Once the Business VPN Galerie connections are configured, they appear in the Flexible Engine console.

Step 1: Verify your connections are properly configured

Menu: Network > Direct Connect > Connections

Both connections should be displayed in your console (For Paris region: one for Equinix PA3 'Connection Name-PA3' and the other for Equinix PA4 'Connection name-PA4).

The type of each connection must be 'Hosted Connection'.

Verify the displayed bandwidth is the value you ordered to Orange Business. Before end of June 2020, your will see 50 Mbps for 20 Mbps/30 Mbps/40 Mbps OBS Galerie VPN. This issue will be fixed in July 2020.

If both connections appear properly, you can proceed with your direct connect configuration.

Step 2: Creation of the Virtual Gateway (VPG)

Menu: Network > Direct Connect > Virtual Gateways

From the Network console, select Direct Connect > Virtual Gateways menu and click on 'Create Virtual Gateway'.

Name   enter a name that will help you to identify the gateway

VPC   select the VPC to connect to the Direct Connect

Subnet CIDR block   the CIDR block(s) of the Flexible Engine subnets to be connected (eg. 192.168.0.0/16). If you have several subnets, use a comma separator (eg. 192.168.1.0/24, 192.168.2.0/24)

Description   optional

Step 3: Creation of the Virtual Interfaces (VIF)

Menu: Network > Direct Connect > Virtual Interfaces

/!\ To configure the Virtual Interfaces, you will need the technical data received from Orange Business Galerie VPN team by email.

From the Network console, select Direct Connect > Virtual Interfaces menu and click on 'Create Virtual Interface'.

Start by specifying the connection in PA3 location and the virtual gateway to be connected:

Finally, specify the routing rules:

Local gateway: enter the subnet provided in the email

Remote gateway: enter the subnet provided in the email

Remote subnet: subnets that can be reached from your VPC ; Recommended default values are: 10.0.0.0/8, 172.16.0.0/12, 192.168.0.0/16 (RFC1918). Cf note below

Routing mode: BGP

BGP ASN: enter the ASN provided in the email

BGP MD5 Authentication Key: enter the key provided in the email

Description:

Note about the remote subnets

- **remote subnet(s)**: The remote subnets are the reachable subnets through OBS Galerie VPN. **If your VPN addressing plan is compliant with the RFC 1918 (private IP addresses) and you do not want to reach any public IP address through OBS Galerie VPN, we do recommend configuring 10.0.0.0/8, 172.16.0.0/12, 192.168.0.0/16 (RFC1918) as default remote routes.** If your Flexible Engine VPC needs to reach public IP subnets though your Business VPN Galerie connection, please specify those IP subnets in that field or 0.0.0.0/0 as the default route.

- **Peer BGP routes: 100 routes maximum allowed**. Our BGP peer will accept up to 100 routes from your network connection (maximum number of routes that you can advertise towards Flexible Engine)

After the Virtual Interface has been successfully created in PA3, create the Virtual Interface in PA4 location.

Step 4: Validation

After having creating your Virtual Interfaces to link your connections to the VPG, your network is fully operational and ready for use.

You can display the Virtual Gateway to check that you did not miss anything.
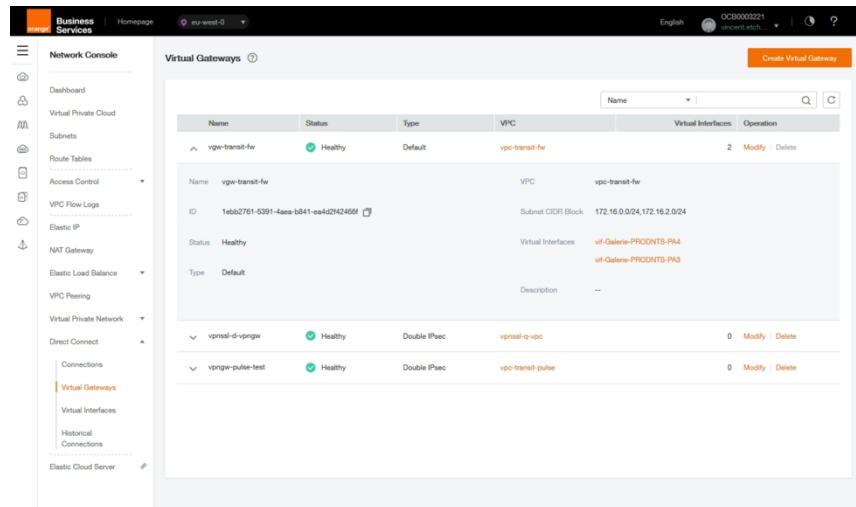
In the screenshot here above, the Virtual Gateway is associated to the 'vpc-transit-fw' VPC and is connected to the 2 hosted connections: vif-Galerie-PRODNTS-PA4 and vif-Galerie-PRODNTS-PA3. All traffic with a destination address within one of the 2 subnets 172.16.0.0/24 and 172.16.2.0/24 should be routed to 'vpc-transit-fw' as Flexible Engine will announce these 2 subnets to your Business VPN.

You could also display the Route table associate to your 'vpc-transit-fw' to check the the route to your OBS Galerie VPN.
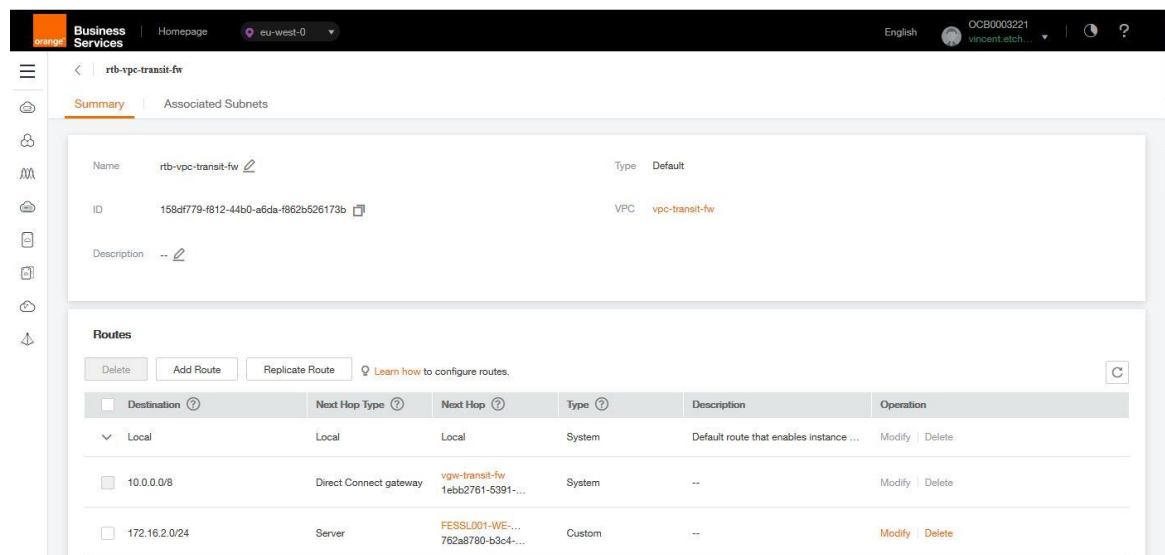
In that case, you can see that any address belonging to 10.0.0.0/8 will be routed to the Direct Connect Gateway.

3 OBS Galerie VPN bandwidth modification

If you want to increase or decrease the bandwidth of your OBS Galerie VPN access; you need to submit a change request to OBS network partner. Upon reception of the change order, OBS network operation will perform the configuration and will send a notification through an email. This operation does not require any configuration change at Flexible Engine level.

4   OBS Galerie VPN Cancellation

If you want to cancel your OBS Galerie VPN access, you need to delete your Virtual Interfaces. Once the 2 Virtual interfaces are deleted, you will submit a cancelation to OBS network partner. Upon reception of the cancellation, OBS network operation will delete the 2 hosted connections and OBS Galerie VPN access.