



OPEN TRANSIT PEERING POLICY

April 2021

Orange operates an IP network identified with the Autonomous System Number 5511 (AS5511) and called "Open Transit".

Orange wishes to interconnect with other transit operators pooling the interconnections of all end users (the "**Peer(s)**" or "**Peering Partner(s)**") through their IP networks on a settlement-free basis provided that traffic exchange arrangements are balanced.

This Peering Policy describes the guidelines used by Orange to evaluate requests made by prospective Peers, and to govern Orange relationship with the Peers exchanging IP traffic with Open Transit on a settlement-free basis.

Orange reserves the right, in its sole and absolute discretion, to revise this policy (the "**Peering Policy**") at any time and without notice.

1) General requirements to apply for a free peering relationship

A candidate for a free peering relationship with Open Transit shall meet the following requirements:

- operate a nationally-deployed IP network in the countries in which it desires a peering relationship,
- operate on dedicated IP circuits of at least nx100G in the US and/or in Europe,
- operate peering connections at speed of at least 10 gigabit per second ("**Gbps**"),
- open peering connections in all the Geographic Regions where it has network. A Geographic Region is a subdivision of a continent where Open Transit has Points of Presence. Open Transit operates in the 3 following Geographic Regions: North America, EMEA (Europe – Middle East – Africa) and Asia-Pacific. In case different AS numbers are used by the Peer, peering with Open Transit would be done in each continent with the respective applicable Peer's AS number,
- connect on a minimum of points of connection in each Geographic Region which are:
 - 3 among these 7 cities in the US : New-York, Ashburn, Palo Alto, Los Angeles, Dallas, Miami and Chicago,
 - 3 among the 5 following cities in Europe: Paris, London, Frankfurt, Amsterdam, Madrid.
- send/receive to/from Open Transit traffic of at least 10 Gbps in 95 percentile in the dominant direction,
- operate a fully staffed, twenty-four hour, seven-day-a-week ("24x7 ") Network Operations Center ("**NOC**"),



- carry full Classless Internet Domain Routing (“**CIDR**”) at edge routers using BGP-4 and aggregated routes,
- register routes (routing policy) with the Internet Routing Registry (“**IRR**”) or another AS5511-recognized Internet routing registry (RIPE, ARIN, RADB, etc.);
- implement route filtering at the Peering Partner’s network edge,
- provide consistent routing announcements, i.e., the same set of routes announced with the same autonomous system (“**AS**”) path length at all peering locations,
- not establish a route of last resort, i.e., default route, directed at AS5511,
- announce only its own customers’ routes to AS5511, not any routes from any of its other peers.

Meeting or exceeding any or all of the above criteria does not guarantee that Orange will enter into a settlement free peering relationship. Orange will evaluate a number of business and technical factors and reserves the right not to enter into a settlement free peering relationship with a candidate.

In order for Orange to check that a candidate for settlement-free peering relationship meets the criteria listed in this Peering Policy, Orange may implement a peering trial for an observation period of 6 months, renewable.

2) Free Peering relationship provisions

2.1) Traffic requirements

- IPv6 and IPv4 are considered as a whole, thus any IPv4 peers will apply for IPv6 peering too.
- Each Peering Partner shall meet the following traffic requirements:
 - (i) traffic to/from Open Transit must amount to at least 10 Gbps in 95 percentile in the dominant direction,
 - (ii) each peering connection with Open Transit shall have a minimum load of 20 % measured monthly in 95 percentile, and
 - (iii) all traffic must ingress and egress through peering points.
- Orange accepts a certain level of imbalance in the traffic exchanged with its Peering Partners. Orange calculates on a monthly basis the ratio between the average incoming traffic and the average outgoing traffic. This ratio is set at 2.5 to 1.



2.2) Upgrade requirements

Each additional peering connection shall be established in mutual interest of both parties. A Peering Partner shall be allowed to request an upgrade of an existing connection if:

- i) the ratio is 2.5 or less during three (3) consecutive months,
- ii) the peak load within the same Geographic Region exceeds 60% and,
- iii) the link load exceeds 80% during the peak hours (measured in 95 percentile) during at least one (1) month before the upgrade request.

2.3) Other requirements

- The Peering Partner shall respect the Open Transit Internet Acceptable Use Policy (AUP). This policy is designed to help protect Open Transit Internet's customers and the Internet community in general :
- Orange expects that each Peering Partner would not come into peering relationship with customers of other Peering Partners
- Peering relationship can be terminated by either party with thirty (30) days written notice.

3) Corrective Measures

If the Peering Partner fails to meet any of the obligations set forth in this Open Transit free Peering Policy, Orange shall send a written notice to the Peering Partner. If the Peering Partner fails to remedy the situation within one (1) month after the notice, Orange reserves the right to seek remedies, which could include but shall not be limited to:

- suspension of all peering upgrade requests until the end of a three (3)-month period during which the Open Transit requirements are met without discontinuity,
- suspension of any peering connection,
- termination of the peering relationship.