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The Sunrise logo, consisting of the word "Sunrise" in a bold, red, sans-serif font.

Wholesale

Sunrise internet backbone peering policy

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1 Introduction: Peering Policy for zero-settlement with AS6730

This Peering Policy describes the criteria that Sunrise¹ has established for engaging in peering relationships in Switzerland with Internet backbone network AS6730. The policy will serve to establish peering connections between Sunrise and peer networks where such exchanges are equitable and cost-effective.

While this policy includes criteria for establishing a peering relationship, all peers will be required to enter into a peering agreement, which will govern the relationship between Sunrise and the peer. Sunrise conducts periodic internal reviews of its Peering Policy to ensure that the criteria for peering eligibility are consistent with Sunrise's business objectives and network growth. Existing peering partners may be asked at times to re-qualify for continued peering.

Sunrise defines the following criteria for entering into a zero-settlement peering. These criteria are designed to ensure that both Sunrise and the peering partner will benefit equally from the peering.

2 General principles

- Neither party will apply port, service or other charges to the other party
- The peer shall operate a 24 hour 7 day-per-week (24x7) Network Operations Center (NOC)
- The peer must have a valid Autonomous System Number (ASN)
- The peer must be a RIPE, ARIN or APNIC Local Internet Registry (LIR)

3 Requirements for Swiss peers

Each potential peering partner shall meet the following requirements:

- The peering partner shall have a nationally deployed, redundant Internet backbone in Switzerland with at least 20 POP's
- The peering partner shall be present in at least at 4 Internet Exchange Points (IXP) outside Switzerland and one of these IXP's must be in the US
- The peering partner provides a readable hard or soft copy map of its network, showing network topology and capacity between network nodes
- The peering partner needs a market share of at least 5% in the internet business respective in the internet consumer market
- The peering shall have a traffic ratio of at least 1:2 (traffic originating from the Peer's AS shall not be less than half of the traffic originating from Sunrise's AS6730)
- The peering shall carry a traffic load of at least 25Mbps (average traffic during business hours in one direction)

¹ As Sunrise is a brand name of TDC Switzerland AG in the associated documentation the terms "Sunrise" and "TDC Switzerland AG" have the same meaning and are therefore interchangeable

4 Requirements for peers outside Switzerland

- For peers who wish to peer outside Switzerland, the peer shall not have a Swiss network or have a large pan-european Network
- The peering shall have a traffic ratio of at least 1:4 (traffic originating from the Peer's AS shall not be less than a quarter of the traffic originating from Sunrise's AS6730)

5 Temporary test peering

Where Sunrise cannot measure a prospective peer's traffic because there is no existing connection or relationship between Sunrise and that prospective peer, Sunrise reserves the right to establish a temporary network connection with that prospective peer. Sunrise may then measure the prospective peer's traffic to determine if the prospective peer meets this Peering Policy's volume criteria.

These test peering shall be at no charge to each party according to general principles 1.1.

6 Private peering

For high volume peerings in Switzerland a private peering is preferred by Sunrise.

7 Routing requirements

Each peering partner shall meet the following requirements with respect to routing:

- Must have personnel available and agree to cooperate in addressing security and security related issues
- The peering partner shall not establish a route of last resort, i.e. default route directed at Sunrise
- The peering partner shall support Classless Internet Domain Routing ("CIDR") exchange at edge routers using BGP-4. The routes advertised shall be sufficiently aggregated routes
- The peering partner shall announce only its own customer routes to Sunrise, and will not announce any routes from any of its other peers
- Routes from peers are not announced to other peers (no transit)
- Routes from peers are not announced to upstream transit
- Routes from upstream transit providers are not announced to peers
- A peering partner must filter its BGP customer's routes by prefix or AS to ensure that these customers do not announce unauthorized Internet routes
- The peering partner will announce consistent routing announcements to Sunrise. Consistent announcements require that all routes be announced at all peering sites with the same aggregation properties

8 Policy notices

Sunrise has the right to terminate without notice a peering relationship if the Customer contravenes the above policy or any of the contract terms. Unless otherwise agreed, Sunrise may terminate a peering relationship without specifying a reason by giving 30 days notice in writing (which includes by e-mail). Sunrise reserves the right to modify the aforementioned policies without prior notice.

Note that these criteria are only guidelines. Sunrise reserves the right to decline to enter into a zero-settlement peering agreement even if the above criteria are nominally met by a potential peering partner.

A peering with Sunrise may be established at the following Internet Exchange Points:

Region	Internet Exchange Points
Switzerland	TIX (Zurich)
	CIXP (Geneva)
	SwissIX (Zürich)
Europe	LINX (London)
	AMS-IX (Amsterdam)
	DE-CIX (Frankfurt am Main)
	SFINX (Paris)
	MIX (Milan)
	VIX (Vienna)
USA	NYIIX (New York City)
	EQUINIX (Ashburn Va.)
	NAP OF THE AMERICAS (Miami FL)

Sunrise also allows peering via dedicated serial lines, however in this case the peering partner should bear the costs of the line to the nearest Sunrise POP.

9 Definitions

Autonomous System (AS) is defined as a group of connected Internet Protocol (IP) routers that are under one administrative control.

Peering is the exchange of IP traffic between two interconnected IP networks. This exchange is strictly limited to traffic destined for the other network. Traffic is exchanged on a bilateral basis between peering routers and is governed by BGP-4 peering sessions.

Zero-settlement peering is one where both ISPs assume that the traffic is approximately equal in both directions, and both benefit equally from the connectivity. Neither ISP buys a service from the other, and hence neither ISP bills the other.

Route announcement: The means by which two peering partners notify each other of address information in order for the peering partners to exchange Internet traffic. The current means is by the BGP-4 protocol.

Transit indicates a settlement based customer/provider relationship between networks, where one network uses the other network to provide upstream connectivity.

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