

Designing the Next Internet Exchange Point

How to create the
Best-IX-Ever (this is a trademark) ?

ORGANISATION (1/2)



➤ NEUTRAL ORGANIZATION

- ✓ Not-for-profit organization (French « association loi 1901 »)
- ✓ Each customer of the IXP becomes a member of the association
- ✓ Best-IX-Ever Association has a board
 - Collect requests from the members
 - Define global strategy of the IXP
 - Validate the budget of the Best-IX-ever Company (French SAS)
- ✓ The association is the unique shareholder of the SAS

ORGANISATION (2/2)

- ✓ The Best-IX-Ever SAS is the entity responsible for the IXP operations
 - Establish contracts with members
- ✓ Best-IX-ever Company has a board
 - May be different from the Association board

® **Optimization of costs** impacted to members
The “founding members” will provide the first resources.
There will be no financial impact of initial setup to members



INFRASTRUCTURE

- ✓ Dual-core infrastructure : high resiliency and availability
- ✓ Large footprint : Installed in the Main PoPs ...
- ✓ Presence in many DataCenters (neutrality issues)
- ✓ Partnerships and interconnections with other IXPs to consolidate



SERVICES (1/2)

✓ Peering

- Public peering
- Private peering and « closed user groups »
- Extension of peering possibilities via interconnections with other IXPs
- Route servers services to facilitate peering

✓ Ports

- 100 Mbps (RJ45)
- 1000 Mbps (RJ45)
- 1 Gbps (optical ports) – SFP modules
 - 1000 Base-SX (multi-mode)
 - 1000 Base-LX (single-mode)
- 10 Gbps (optical ports) – XFP modules
 - 10 Gigabit-Ethernet LR (single-mode)



=> No limitation of ports number/type for each member
(and possibility to ask for ports aggregation service)

SERVICES (2/2)

- ✓ Full IPv4 and IPv6 services (Unicast & Multicast)
 - IPv4 and IPv6 Unicast in same VLAN
 - Dedicated VLAN for Multicast



- ✓ Provide/facilitate direct access to resources
 - CDN resources, strategic DNS resources ...



- ✓ Portal for members
 - Access to statistics (Sflow, ...)
 - Access to technical information for members



- ✓ Synchronisation service (NTP)

=> All services managed by professional 24/7 NOC + specific resources for software developments

- ✓ Some more services to come ...

BUSINESS MODEL

- ✓ Not a free model ! Not a best-effort model !
 - Professional services
 - Need to be able to do some equipment/infrastructure investments
 - : stay aware of the market and provide advanced services
- ✓ Prices should be similar to what is done on other major IXPs (Market rate)
- ✓ Cost optimization in benefit of members because of the status of the organization (association)



Community around the IX

- ✓ Keep in touch with your members:
 - Just talk about them
 - If the community is not strong, just give your help and build something with them
- ✓ Keep in touch with the world :
 - Learn from other exchanges
 - Give your feedback about your test, ideas, don't stay alone