

Peering Asia 2.0 @ Hong Kong

Why don't we exchange technical information for good peering in Asia Pacific region? 😊

~ BCOP document of router configuration for IX connection ~

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Introduction

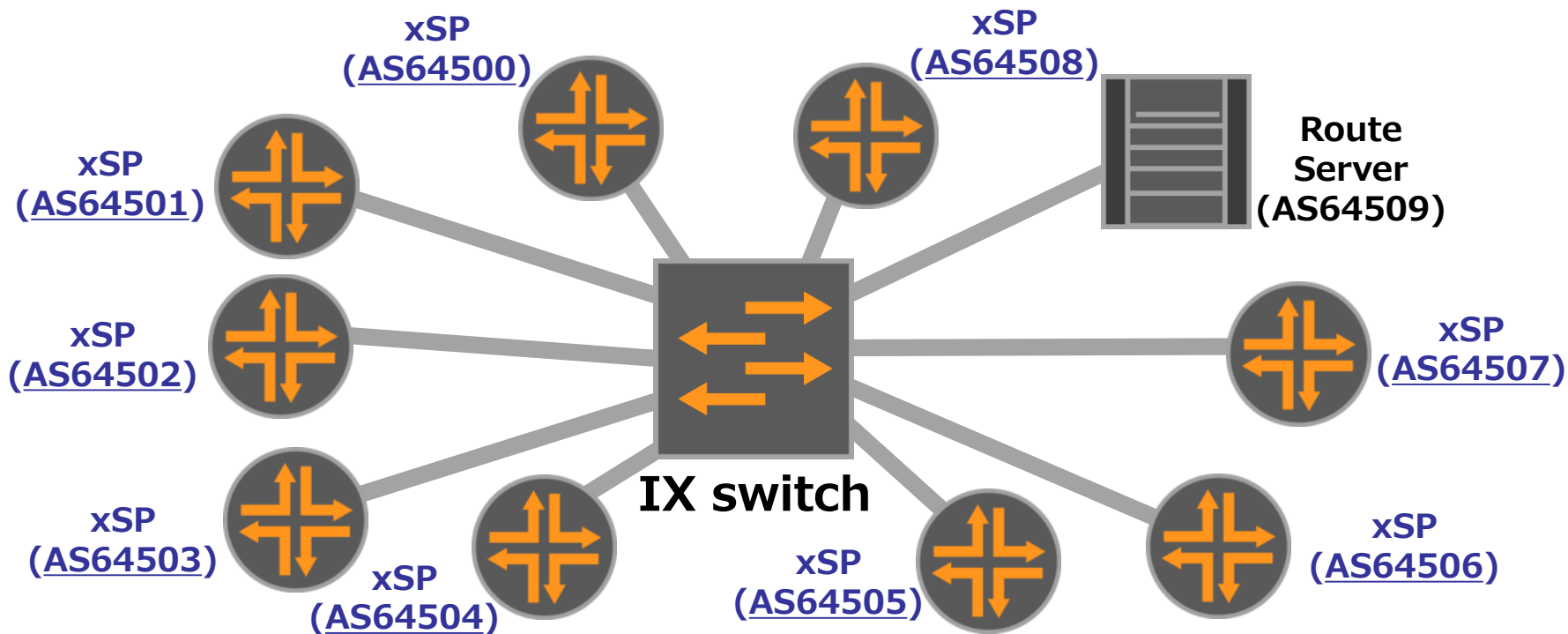
I'd like to exchange
the technical information
for our better peering activity
inside and outside of Japan...

Just a simple question

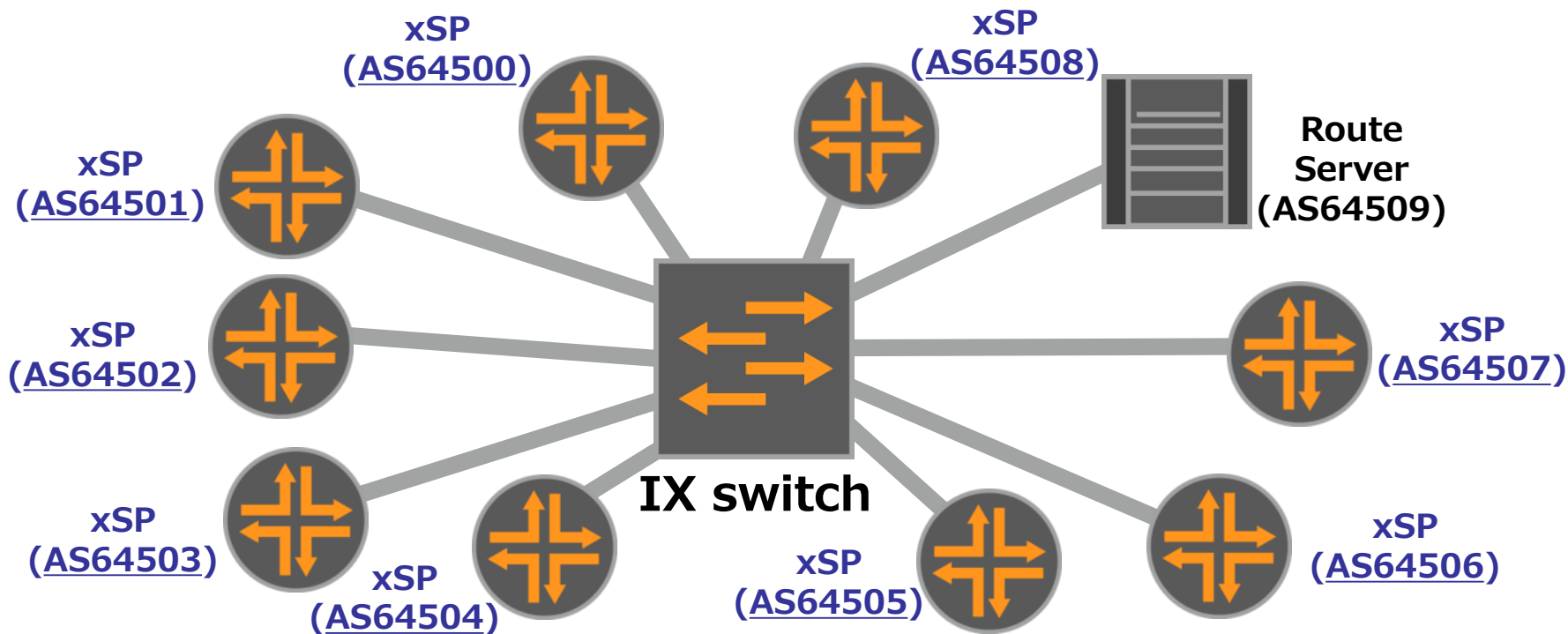
Why should we have
a document
about way to connect to
IX for our members?

As you all know, internet exchange is..

an important infrastructure
for exchanging internet traffic
between network service providers.



Thus, internet exchange has to be..
**operated in a way to maintain
their stability and security, as you all
also know.**



Conclusive answer

AS operators should have a common understanding and be aware of the technical requirements of connecting to IXs.

JANOG has documents for our community!

(These documents are called as JANOG Comment)

- JANOG (Japan Network Operators' Group)
 - A group for network operators in Japan
 - Please see: <http://www.janog.gr.jp/en/>
- JANOG Comment (2 types of documents)
 - about steering JANOG community
 - about technical essential relating to network operations
 - Recommendations for packet/route filter configuration for xSP router
 - JANOG Comment 1000 ~ 1004 (IPv4 filter), 1006 (IPv6 filter)
 - **Recommendations for router configuration for connecting to IX**
 - **JANOG Comment 1005**
 - <http://www.janog.gr.jp/doc/janog-comment/>
 - in Japanese. (sorry)

JANOG has published a BCOP document about the way to connect to an IX as JANOG Comment 1005 in 2005, and updated it with adapting to changes in the times this year

We have updated the BCOP document about recommended router configuration! in Japanese...

<https://www.janog.gr.jp/doc/janog-comment/jc1005.txt>

JANOG Comment 1005 rev. 2

平尾利崇
KDDI株式会社
馬渡将隆
日本インターネットエクスチェンジ株式会社
川上雄也
インターネットマルチフィード株式会社
芦田宏之
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2018/03/16

Recommended Router Configuration in Connecting to IX

- IXに接続する際に推奨されるルータの設定について -

1. 概要

インターネットエクスチェンジ（以下、IXと言う）はネットワークサービス事業者間のトラフィック交換のための重要なインフラとして安定的に運用する必要があるため、AS運用組織がIXに接続するにあたって、技術的な要件に対して共通の理解や認識が必要となってきた。

本文書では、IXの安定した運用や可用性の向上を目的として、AS運用者がルータをIXに接続する際に推奨されるべきルータの設定や考慮すべき事項について、特にPeering LANと呼ばれる特定多数が接続するLANを対象に述べる。

We have updated the BCOP document about recommended router configuration! in Japanese...

<https://www.janog.gr.jp/doc/janog-comment/jc1005.txt>

JANOG Comment 1005 rev. 2

Japanese only...

Japanese people 😊

Non-Japanese people ☹️

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**But... I'd like to share
this document
also with network engineers
outside of Japan.**

We need an English version.

1. 概要

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We have translated it into English, and put it on APNIC website



Thank
you
APNIC

<https://www.apnic.net/wp-content/uploads/2018/07/JANOG-IX-Configuration-Best-Practices.pdf>

Recommended router configuration for connecting to an Internet Exchange

1. Abstract

An Internet Exchange (IX) is an important infrastructure for exchanging Internet traffic between network service providers. For this reason, AS operators should have a common understanding and be aware of the technical requirements of connecting to an IX.

This document aims to improve the operation and stability of an IX. It describes the recommended configuration of routers connected to an IX by an AS operator, including Peering LAN, a LAN on which many individual ASes connect to.

This document does not describe information about routing outside of connecting to an IX. For example, the contents of routing information which a network service provider advertises to their peers and the contents of traffic which is exchanged between network service providers are excluded from this document.

2. Terminology

Outline of the document

1. Abstract
2. Terminology
 - IX, IX Member, Connecting router, AS operator, Bilateral peering, Multilateral peering
3. Configuration of connection
 - Device, Access Line
4. Configuring a connection router
 - MAC configuration, IP configuration, Interface configuration, BGP configuration, Routing configuration
5. Acknowledgements
6. Appendix
 - IRR, PeeringDB

Please confirm followings for not troubling the other members ☺

~ Main topics on recommended router configuration ~

- Stop sending link-local traffic
 - Vendor proprietary protocols (CDP, FDP, EDP...), IGP protocols (OSPF, IS-IS, EIGRP...), Spanning Tree BPDU, Multicast routing protocols (PIM, DVMRP...), BOOTP/DHCP, HSRP/VRRP/ESRP, IPv6 RA, LLDP...
- Stop sending ICMP redirects
 - ICMP redirect function might contaminate the routing table of routers of IX members
- Prohibit forwarding directed broadcast packets
 - Directed broadcast might facilitate smurf attack to the IX segment
- Disable proxy ARP
 - Proxy ARP might cause BGP sessions bringing down between members
- Don't advertise the prefix of IX segments
 - Advertising the prefix of IX segment might cause malicious attacks from unexpected network and traffic loss due to BGP sessions down

Conclusion

- Translating the BCOP document of router configuration globally helps network engineers in their work.
- More distributing technical information between economies in Asia Pacific region!
No more language barrier. 😊

**Let's exchange your document
with each other
for our peering activity. 😊**



Japan Internet Exchange Co., Ltd.