JPNAP Update

APNIC 21

Mar. 2006

Internet Multifeed Co.

ishii@mfeed.ad.jp

Toshinori Ishii

All communication flows through here.

全てのコミュニケーションはここを通る

internet mf   JP NAP

Internet Multifeed Co.

- Internet Data Center (=IDC) company in JAPAN
  - Established in Sep. 1997
  - Joint venture of IIJ, NTT, Japanese major ISPs and ICPs

- "Multifeed" concept
  - Direct broadband connection to the backbone of major ISPs (=many peers)
  - The best place for delivering content to the Internet

- Launched standard time distribution and audit service "TimeFEED"

- "JPNAP" the commercial Internet Exchange service
  - Launched in Jan. 2001

JPNAP service overview

- <u>Ja</u>Pan <u>N</u>etwork <u>A</u>ccess <u>P</u>oint

  `http://www.jpnap.net/english/index.html`

- Directly connected to IDC named "Multifeed"

- Services

  – JPNAP (Tokyo area: IPv4, 10GE, GE, FE. IPv6 Dual stack is optional)

  – JPNAP Osaka (Osaka area: IPv4, 10GE, GE, FE. IPv6 Dual stack is optional)

  – JPNAP6 (Tokyo area: FE. IPv6 only)

- Something Special (Free in charge)

  – LAG (10GE and GE)

  – Traffic Engineering Service "PeerWatcher®" (BGP Peer traffic graph)

  – IRR Server

  – NTP Server (Stratum 1)

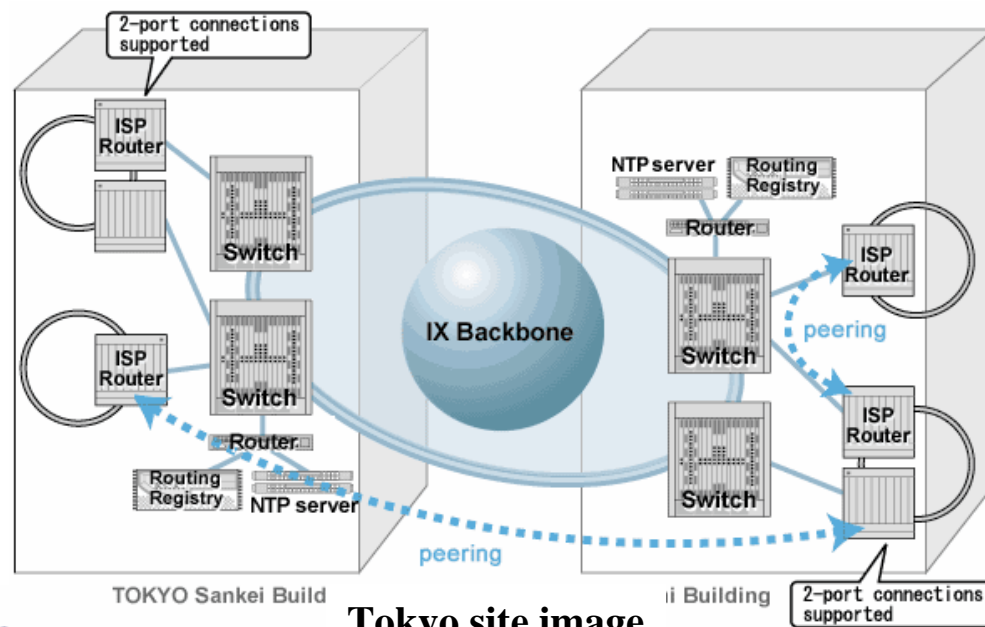All communication flows through here.
全てのコミュニケーションはここを通る

JPNAP service overview

- Ethernet based Layer2 IX
- Distributed IX service in Tokyo and Osaka
  - Providing the same service at both locations
  - Interconnecting distributed two sites (Tokyo: two sites, Osaka: two sites)
  - Not connected with Tokyo and Osaka each other

Tokyo site image

Osaka

Tokyo

500km

History

- JPNAP History
  - Jan. 2001   in Tokyo   (trial)
  - May 2001   in Tokyo   (**JPNAP**)
  - Jan. 2002   in Osaka   (**JPNAP Osaka**)
  - Jun. 2002   in Tokyo IPv6   (**JPNAP6**)
  - Jan. 2003   in Tokyo supporting **10GE**
    - » It is first commercial 10GE IX service to customers in the world.
  - Nov. 2003   in Osaka supporting **10GE**
  - Feb. 2005   Participation with Euro-IX as its 1st member outside Europe
  - Jun. 2005   Providing "**PeerWatcher**" Service
    - » Traffic monitoring tool for each BGP peers.
  - Jul. 2005   in Osaka supporting **IPv4/6 Dual Stacking**
  - Feb. 2006   in Tokyo supporting **IPv4/6 Dual Stacking**
  - And now,   still growing up...
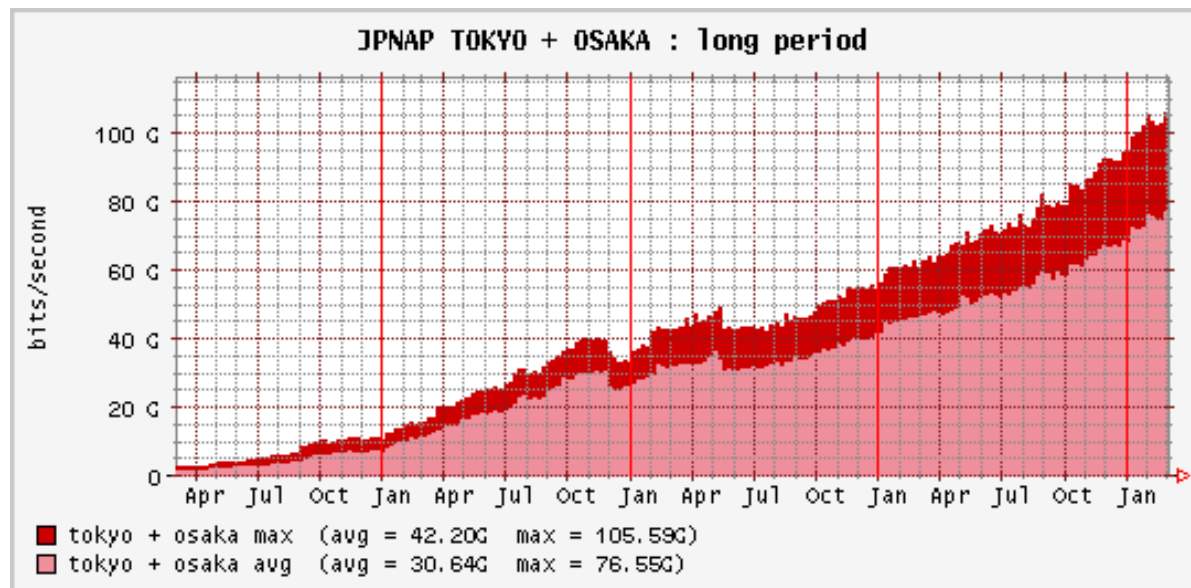   http://www.jpnap.net/english/corporate/press.html

All communication flows through here.
全てのコミュニケーションはここを通る

JPNAP traffic trend

- The traffic volume is huge and grows too fast
- Major ISPs use multiple 10GE links and send/receive more than 10Gbps peak traffic

<- 105. 6Gbps peak

Total traffic of JPNAP
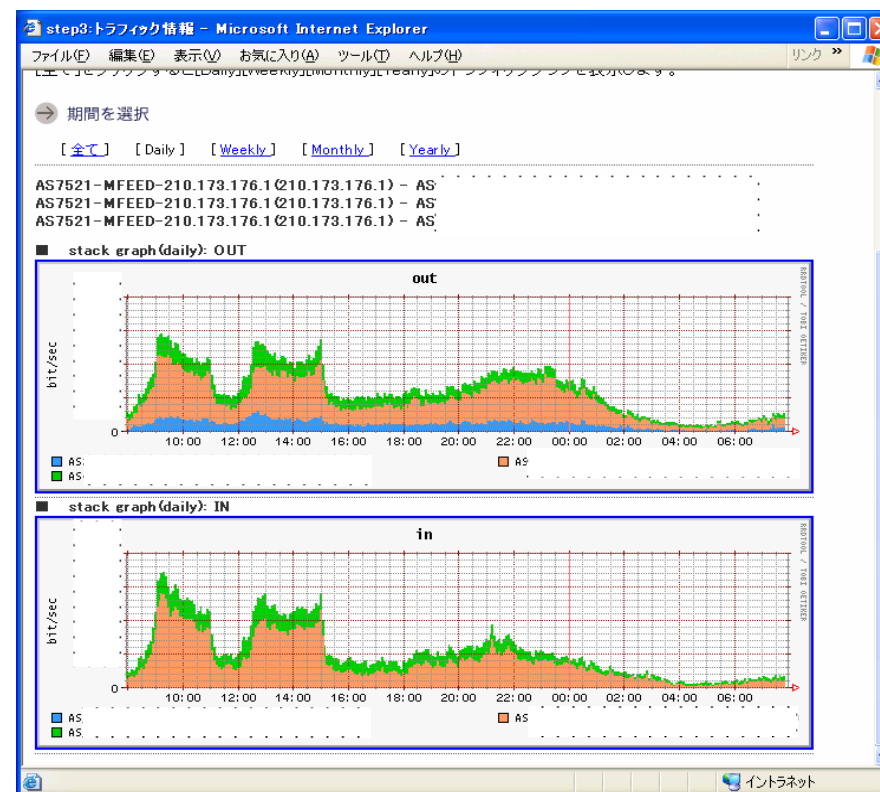
(c) INTERNET MULTIFEED CO.

PeerWatcher®

- Shows traffic graph of each BGP peers
- For 10GE and GE users at Tokyo and Osaka
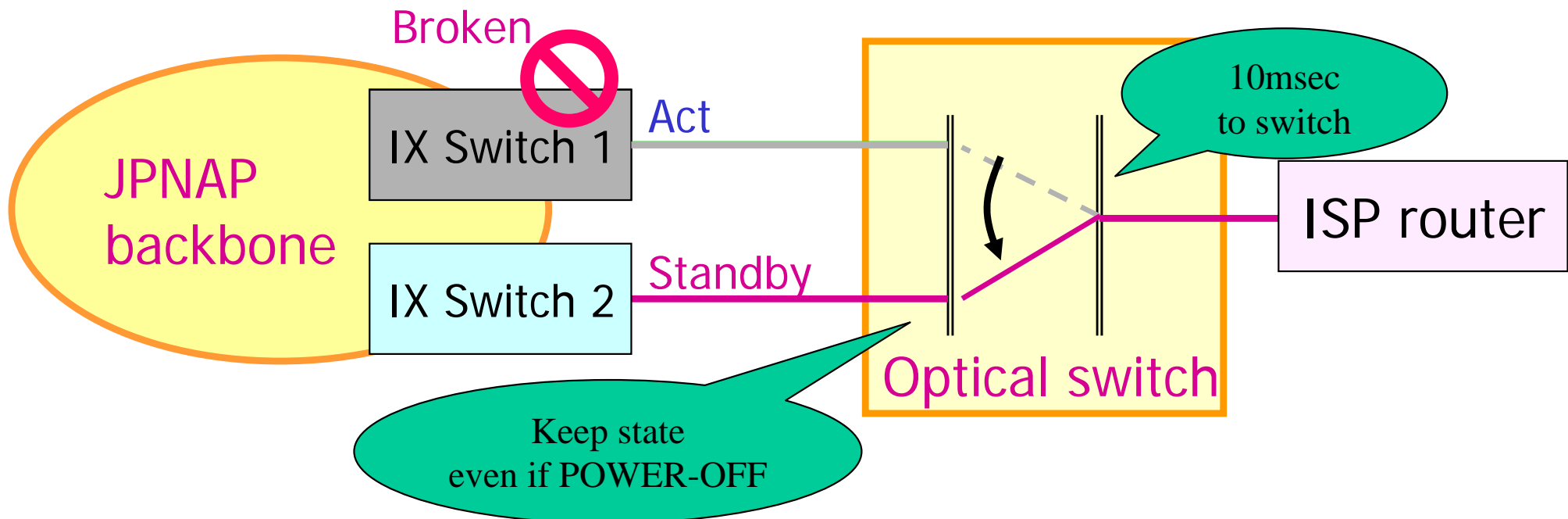
(c) INTERNET MULTIFEED CO.

Optical Switch

- Detects failure and automatically switch to standby system by optical monitoring
- JPNAP provides free backup IX port for all 10GE and GE users

(c) INTERNET MULTIFEED CO.

IPv4/v6 Dual Stack Service

- IX service supporting IPv6 (optional)
- At Tokyo (since Feb. 2006) and Osaka (since Jul. 2005)
- Supports 10GE, GE, FE
- Full redundant network
- Provides "Optical switch" and backup port (10GE and GE)

JPNAP Users' Meeting

- Closed meeting for JPNAP users

- Every 4 months

- The past topic
    - 10GE Users Panel

    - Specification of 10 Gigabit Ethernet IEEE802.3ae

    - Introduction of WDM equipment

    - Broadband access line's structure in Japan

    - Fight against SPAM, Botnet

    etc...

    (We are looking for the next topics ;-)

- Have a social gathering after the meeting

All communication flows through here.
全てのコミュニケーションはここを通る

internet
mf

JPNAP

(c) INTERNET MULTIFEED CO.

Conclusion

- Traffic volume is still rapidly increased
- JPNAP provides some advanced services
  - "PeerWatcher®"

    ... Traffic graph for each peers
  - "Optical Switch"

    ... Automatically switched optical patch panel
- JPNAP starts IPv4/v6 dual stack service

```
http://www.jpnap.net/english/index.html
```

All communication flows through here.
全てのコミュニケーションはここを通る

internet mf   JPNAP