

# JPNAP update

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http://www.jpnap.net/english/



# PNAP

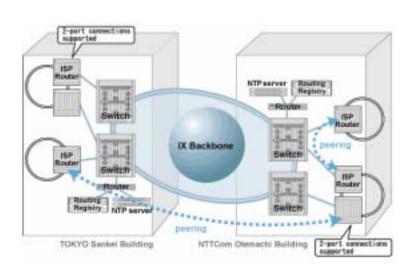
### JPNAP Update

- Topics
  - JPNAP overview
  - Recent traffic growth
  - 10GE at JPNAP
  - Optical switching
  - sFlow
  - Other news



#### JPNAP Overview

- One of the biggest IXs in the world
  - Located Tokyo and Osaka, Japan
  - Traffic volume is tremendously high
    - Total 60G+
  - JPNAP6 (IPv6) is also provided



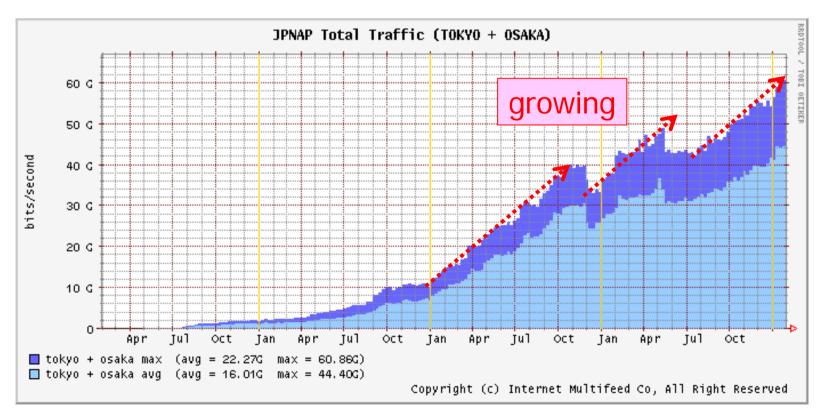


Tokyo site image



#### Recent Traffic Growth

In long term, JPNAP total traffic among Tokyo and Osaka is still growing.







#### **10GE at JPNAP**

- Many users are already using 10GE
  - # of connected 10GE ports ... about 20 ports
  - Interoperability between 10GE equipments
    - Almost no problem

#### Recent Trends:

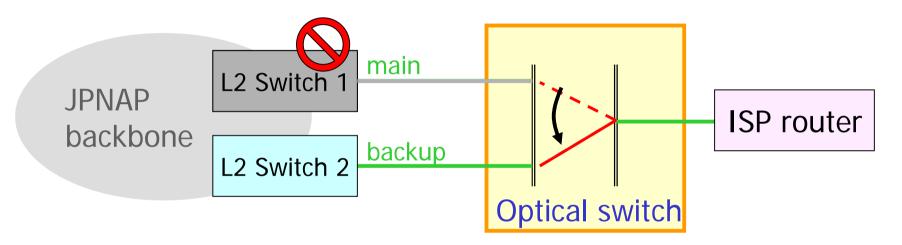
- 1, ISPs migrate from multiple GbE links to one 10GE link.
- 2, Some major ISPs start to use multiple 10GE links.





## **Optical Switching**

 Detecting failure and automatically switch to backup system by optical monitoring.

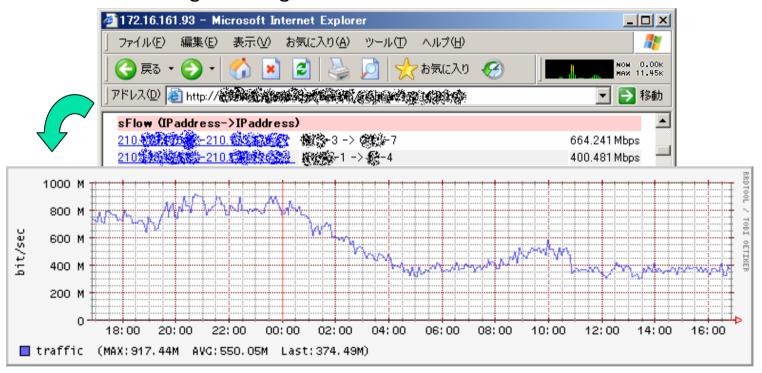


- It takes less than 10ms to switch
  - ISP routers will not detect "Link down".
- Power failure of optical switch makes no impact for communication between IX and ISP router.



#### **sFlow**

- Traffic Engineering using sFlow
  - For traffic engineering of JPNAP backbone



 Plan to disclose router-to-router traffic statistics for JPNAP customers. (2005 YQ2)





#### Other News

- JPNAP becomes 1<sup>st</sup> Euro-IX associate member <a href="http://www.jpnap.net/english/jpnap/press/20050216e.html">http://www.jpnap.net/english/jpnap/press/20050216e.html</a>
- Any comments?
- Thank you!