

HKNOG 9.0 Conference 2020

IX operation during COVID-19 period

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Agenda

1. JPIX overview (JPIX TOKYO and JPIX OSAKA)
2. Traffic volume growth and network upgrading
3. Changed operation due to stay-at-home request
4. Lessons learned

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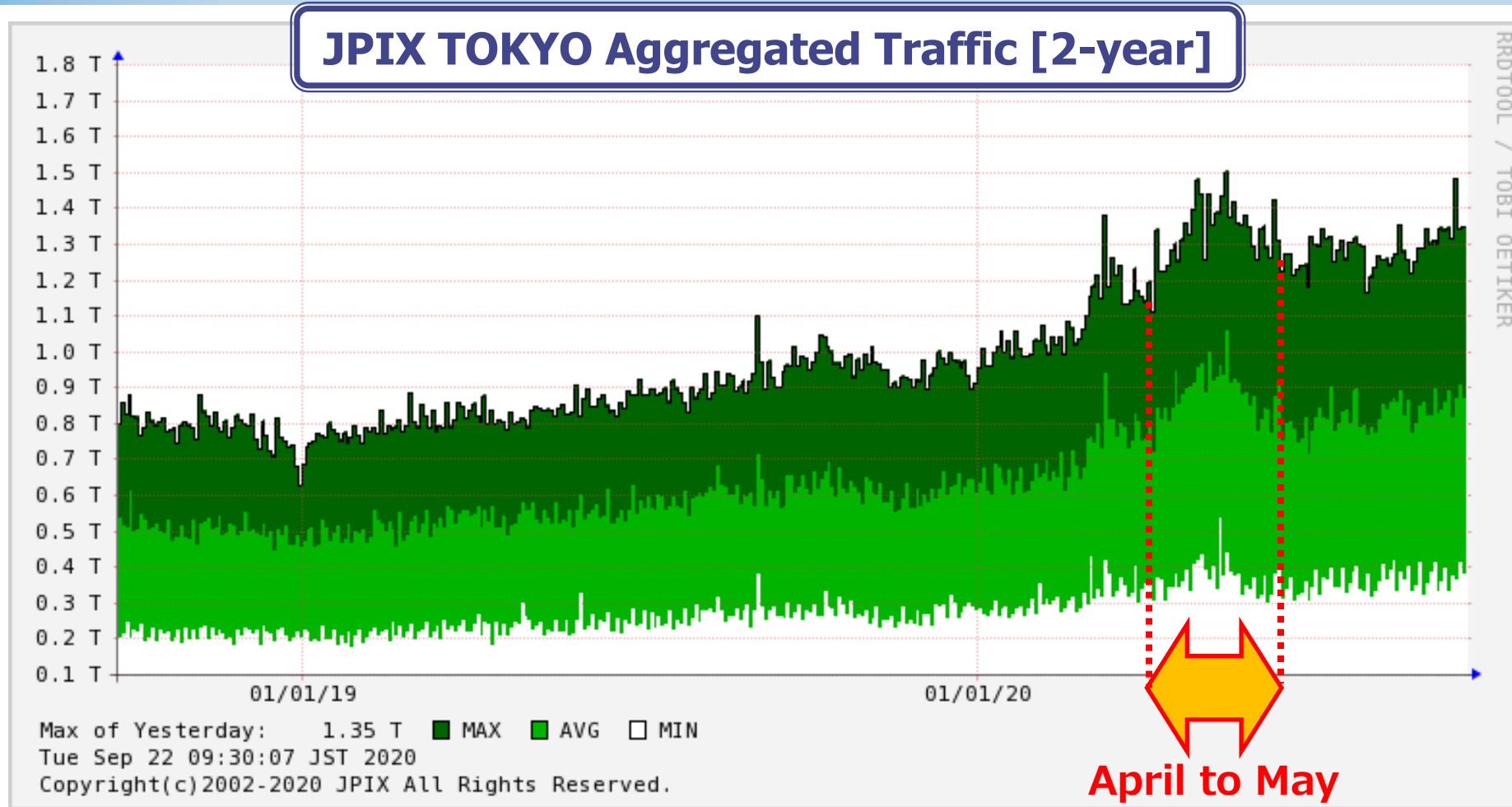
JPIX overview

IX Name	<u>JPIX TOKYO</u>	<u>JPIX OSAKA</u>
City, Country	Tokyo, Nagoya and Okinawa, Japan	Osaka and Nagoya, Japan
Point of Presence	<ul style="list-style-type: none">• KDDI Telehouse Tokyo Otemachi• NTT DATA Otemachi• Comspace I• Equinix TY2• AT Tokyo• COLT TDC1• NTT DATA Mitaka DC EAST• NTT COM Nexcenter DC• Otemachi Place• Meitetsucom DC (Nagoya)• OCH DC (Okinawa)	<ul style="list-style-type: none">• NTT DATA Dojima (aka. Dojima Bldg. #4)• KDDI Telehouse Osaka 1&2• Equinix OS1• Meitetsucom DC (Nagoya)
# of connected ASN	213	73
Peak traffic	1.5Tbps	950Gbps
Route Servers	Yes (Cisco IOS-XE)	Yes (Cisco IOS-XE)
Remarks	Our IX switch in Nagoya can offer both JPIX TOKYO vlan and OSAKA one.	

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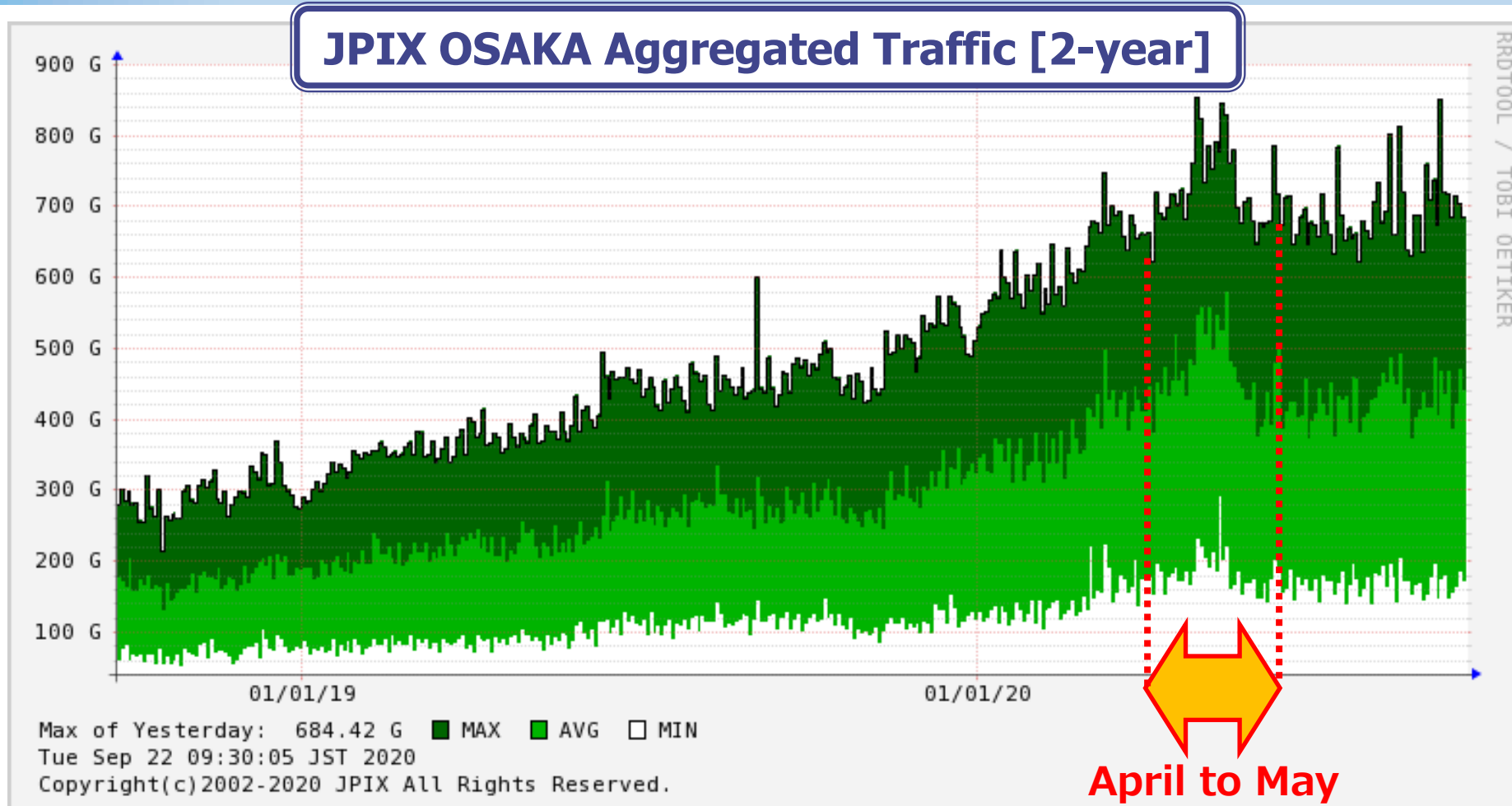
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Current traffic trend



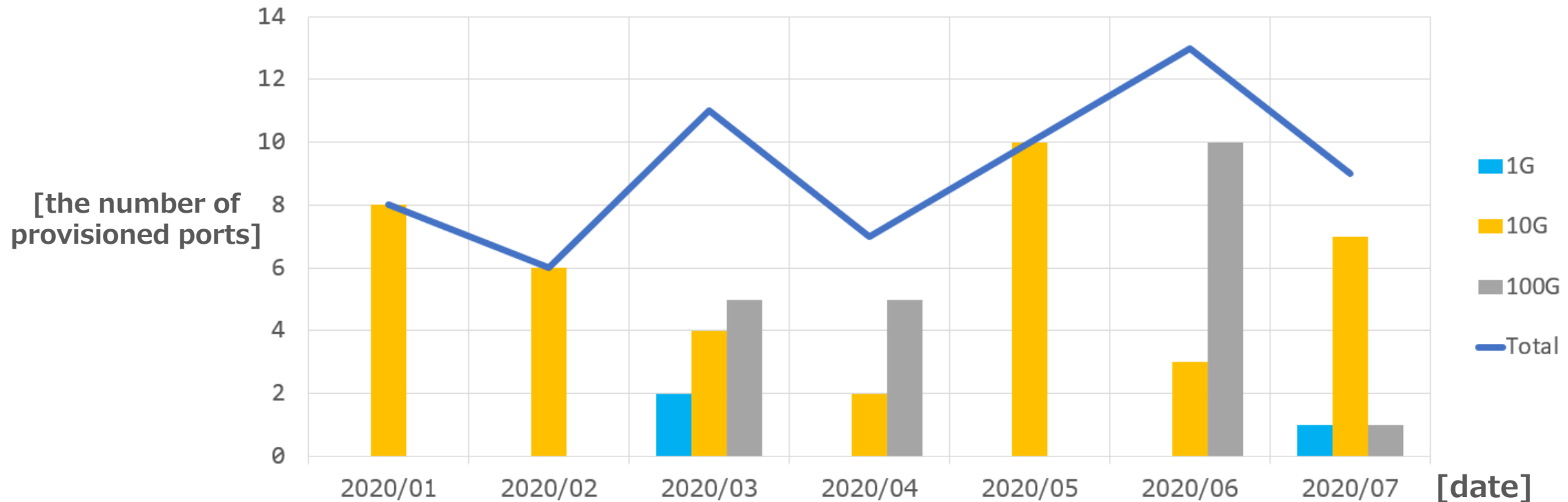
- Traffic volume peak appeared between late April and mid-May.
- 1Tbps (2020.02.01) to 1.5Tbps (2020.07.21) : 50% jumping

Current traffic trend



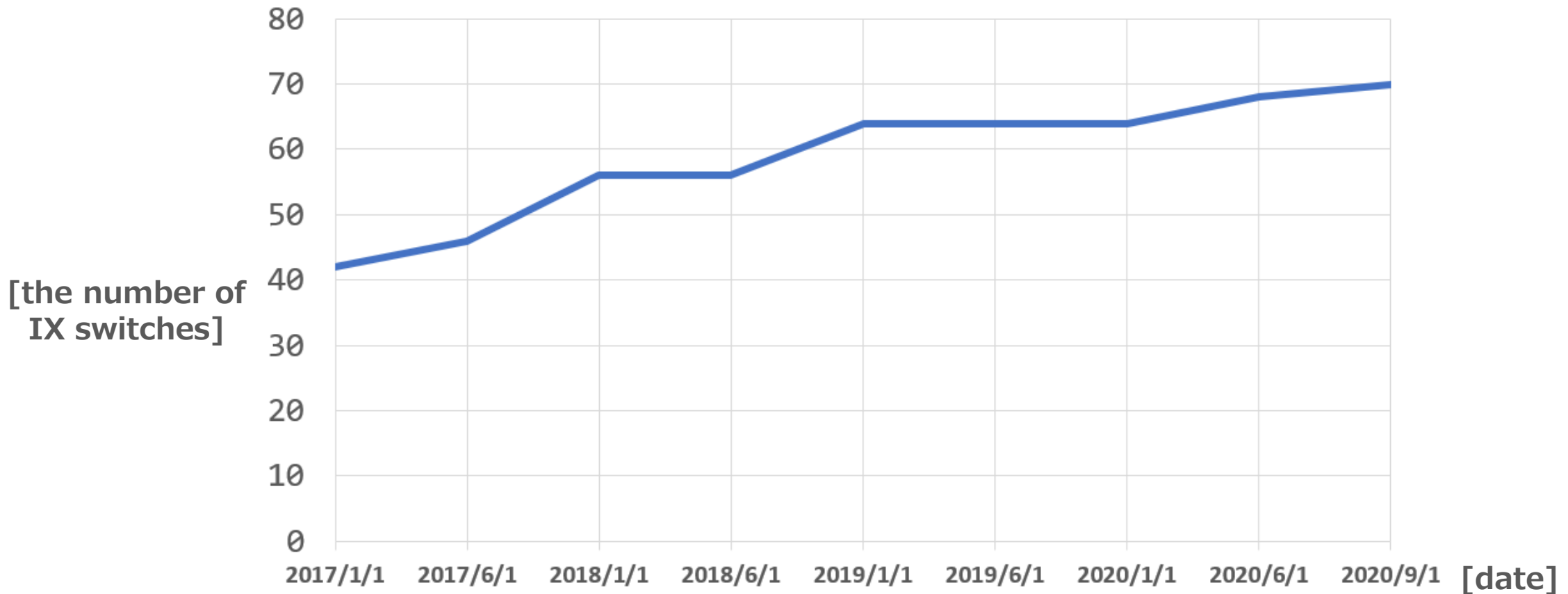
- Traffic volume peak appeared between end of April and mid-May.
- 580Gbps (2020.02.01) to 950Gbps (2020.05.13) : 64% jumping (OSAKA is more growth than TOKYO)

Provisioning of IX user ports



- IX port demand has increased due to growing traffic volume through IX in the situation.
- Uptrend has appeared from April through June in 2020.
- Increase of March was due to the end of fiscal year some customers had.

Deployment of IX switches



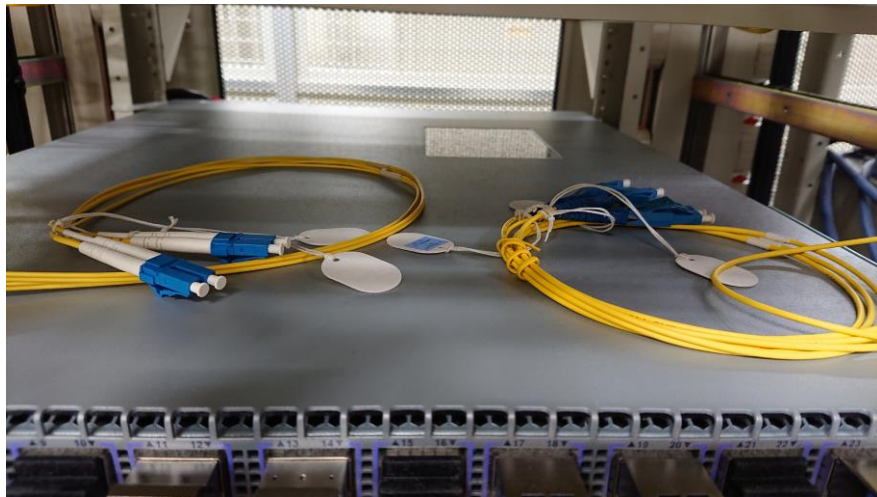
- Demand for the IX ports increased, and so more switches are needed.
- But we had to lessen physical tasks less than usual during the period to prevent the virus infection.

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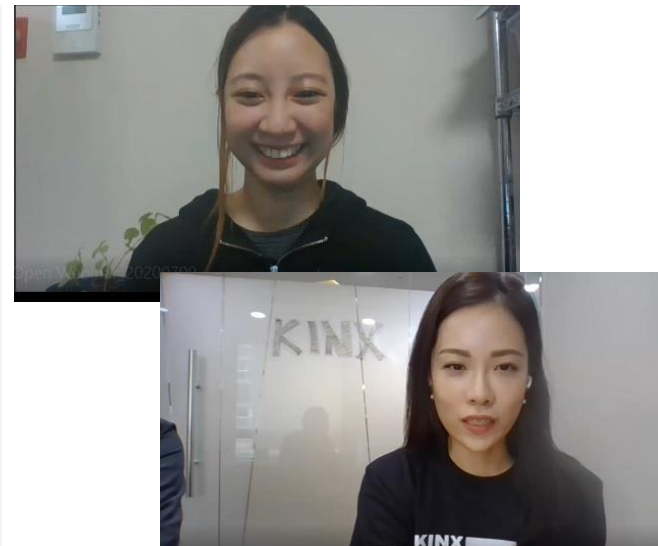
- Using remote hands service in DC
 - We made pre-patched circuits and ports for some potential customers or for backup for port failure.
 - When we have a new customer or any trouble on an IX switch port, we can promptly start to use them via remote-hands service without visiting DC by ourselves.



- WFH
 - We have prepared remote meeting tool for JPIX staff and our customers.
 - Most of JPIX staff members started to do WFH. Still continue presently.
 - We made WFH environment for our tier-1 customer support team as well.
 - We are putting multiple tasks into a single opportunity of visiting DC or business trip in order to make the most of each visit/trip while trying to keep ourselves safe from COVID-19.
 - We have distributed surgical masks and hand sanitizer for JPIX staff members.
 - We have started split operation in our engineering team for reducing infection risk.

Changed operation due to stay-at-home request

- Users meeting and events for JPIX users
 - We can't have on-site meeting just like before. Especially we can't hold the regular IX users meeting in the same manner as usual where a lot of people gather on-site.
 - But JPIX wants to be as close to our customers as possible. We have provided webinar events weekly or fortnightly where we talk with some invited guests about our situation during the period.



- Other challenges during this period
 - There has been restricted use of some DC work equipments (Desk, chair, stepladder, etc)
 - Fortunately, we managed to work in the datecenter without DC work equipments.
 - We have been faced with delivery delay of new IX switch.
 - We temporarily reuse IX switches we used before.

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- Good health is the most important for staff and our customers.
 - We can't do anything without good health.
- Necessary to be ready for the time of need.
 - We have realized the time is coming when we can't do things in the same manner as before.
 - We need to have enough spare things (Fiber, Transceiver, etc)
 - Remote meeting tool and being experienced with the tool are also important.
- Adapting ourselves to the situation is needed.
 - How can we work and build our network to adapt to the new normal.

