

**APONet members will collaborate for the exhibition at**

**SC22, Dallas in Texas**

- Full 400Gbps E2E data/video transfer**

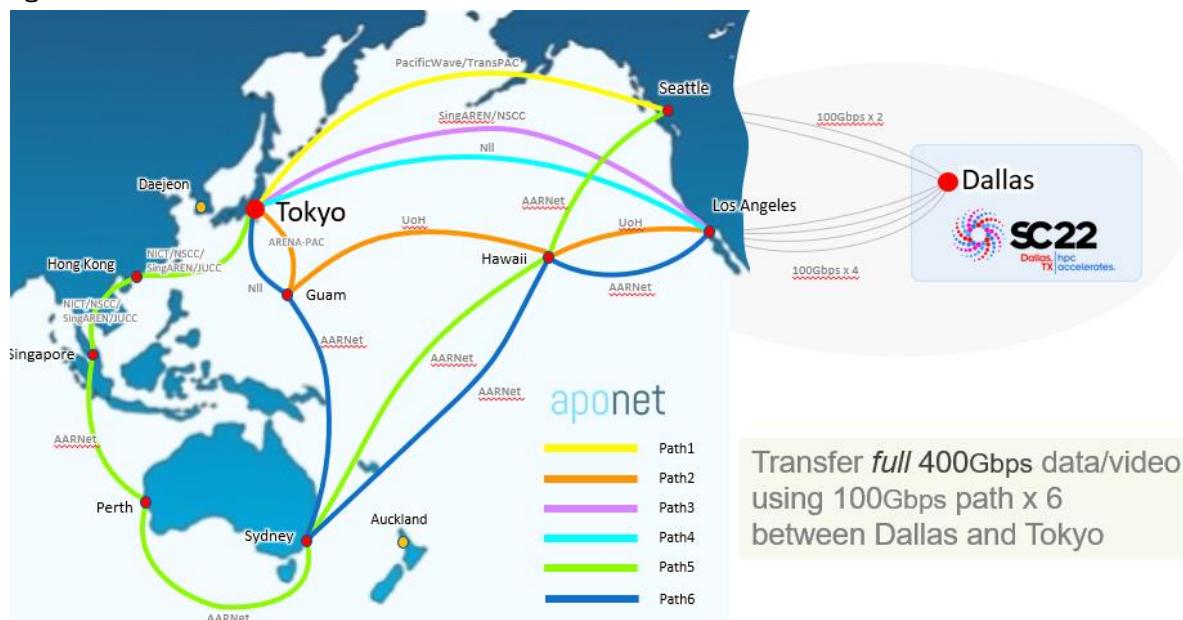
**using 6 links of 100Gbps across the Trans-Pacific**

- 8K video processing by service chaining method on 400Gbps capacity remote controlled edge device – the first in the world**

APONet members will collaborate for the exhibition by NICT ICT Testbed Research and Development Promotion Center at SC22, Dallas, in Texas, USA. SC is the international conference and exhibition held in the United States in November every year and it focuses on High Performance Computing, Networking and Storage and Analysis.

In the exhibition of SC22, NICT conducts 4 demonstrations. One of them NICT exhibits “Full 400Gbps E2E (End to End) data/video transfer across the Trans-Pacific” led by Information-technology Promotion Agency, Japan.

In the data transmission of 400Gbps, NICT utilizes 6 links of 100Gbps between Japan and U.S. in corporation with the members of APONet, to say Pacific Wave, TransPAC, UH, ARENA-PAC, SingAREN, NII, HARNET, AARNet. 6 links of 100Gbps are shown in the following figure ‘Network configuration for NICT demonstration at SC22’ .



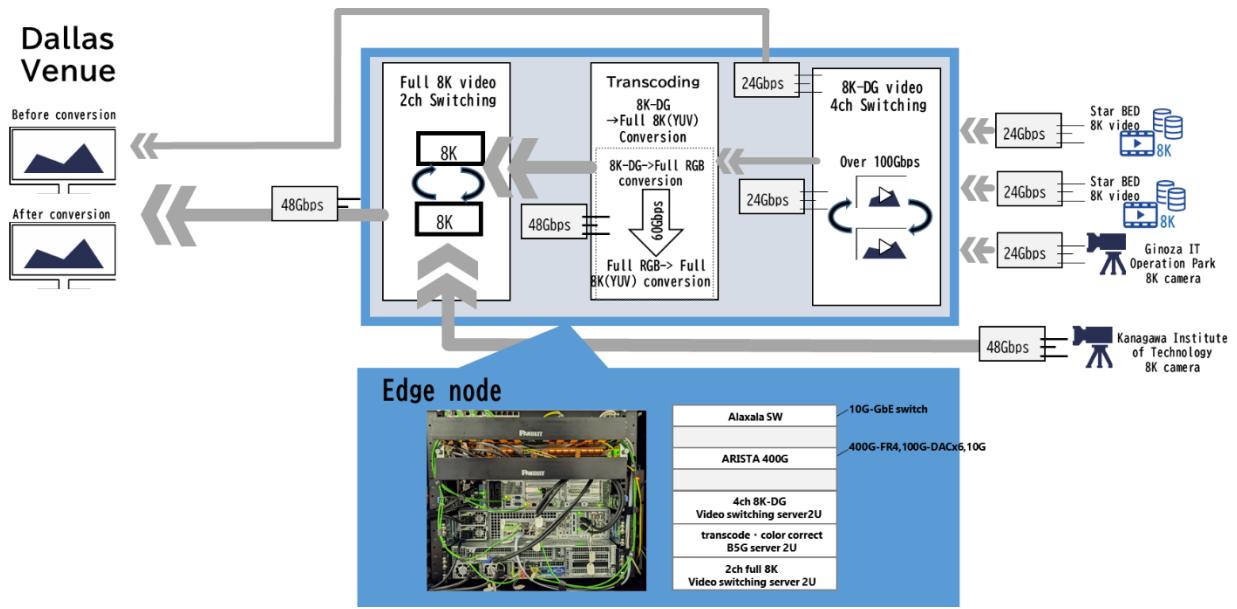
**Network configuration for NICT demonstration at SC22**

6 links of 100Gbps between Japan and U.S are going through Pacific ocean, the United States, and venue in Dallas. These 6 links have become a reality by closely co-operating with between JGN and APOnet as international academic research network.

In high capacity data transfer such as this time, NICT needs to process data traffic flowing through the network steadily and provide the effective bandwidth and video quality requested in the demonstration experiment.

Simultaneously advanced operations technologies and strong operational co-operation are needed internationally.

Secondly NICT exhibits “Uncompressed 8K video processing on edge-computing” led by Kanagawa Institute of Technology using 100Gbps link owned by Pacific Wave/TransPAC. The technology of DPDK(Data Plane Development Kit) enabled high speed video switching and additionally NICT has developed service chaining method by which we can link various video processes handling such as video switching, transcoding and color conversion of media. And in this demonstration, the edge device newly constructed in Japan with a video processing capacity of 400 Gbps will be remotely operated from the venue using the service chaining method for the first time in the world.



**Image figure of Service Chaining Method**

- \* SC22 held from 14 –17 November at Kay Bailey Hutchison Convention Center Dallas in Texas.
- \* APOnet connecting East Asia, Southeast Asia, Oceania, and North America. To create a production quality high-speed trans-oceanic network services delivery system and sharing of scientific instruments and data within research and education <https://www.aponet.global>
- \* Service chaining method linking various video processes handling flexibly such as video switching, transcoding and color conversion of media and latency adjustment and so on.