

7. Collaboration Using SINET3

SNET is the network for the collaboration research built on SINET3 with L2/L3VPN service. SINET3 is the national-wide academic network operated by National Institute of Informatics (NII). SNET directly connects the universities, research institutes and NIFS. NIFS has operated SNET for the category of “LHD experiment remote participation” since March 2002. The categories of “Remote use of supercomputer system” and “Bilateral collaboration”, which is formerly called “All Japan ST research program”, were added to SNET in FY 2005.¹⁻³⁾ The facilities of “Bilateral collaboration” are Kyushu Univ.'s spherical tokamak experiment equipment (QUEST) at Kyushu Univ., GAMMA-10 at Tsukuba Univ. and High Density Plasma Experiment-I (HYPER-I) at Kyushu Univ. The number of sites is on the increase; 25 sites participate to the SNET as shown in Fig. 1.

The operation of QUEST was started in July 2008. It had been already connected by L2VPN. Because the number of clients was increased when the operation began, the rest of free IP address was decreased. To clear this problem, the network mask of L2VPN was changed from /27 (32 addresses) to /26 (64 addresses) on March 2010. The VLAN for QUEST at Univ. of Tokyo (Kashiwa campus) was included into this L2VPN.

In FY 2009, Hiroshima Univ. was added to QUEST activities of “Bilateral collaboration” category (6th site) with L3VPN on October 2009. The Univ. of Tokyo at Kashiwa campus (11th site) has been added to “LHD experiment remote participation” category on March 2010.

Kyoto Institute of Technology (KIT) has newly joined SNET as 12th site of “LHD experiment remote participation” category and 7th site of “Bilateral collaboration” category on March 2010. The campus LAN of KIT connects to the SINET node at Kyoto Univ. with the dedicated line because KIT does not have the SINET node. The new port for SNET was arranged at the SINET node of Kyoto Univ. by NII and connected the network of laboratory at KIT through the dedicated line between Kyoto Univ. and KIT and the campus LAN with tag VLAN. It is the first case that the remote site of SNET does not have a SINET node.

The separation of access area for “LHD experiment remote participation” and “All Japan ST research program” was done on March 2010. The remote site of latter category had been able to access the LHD experimental network at NIFS by the historical reason. The operation policy of SNET, which decided in FY 2009, requests the server which the remote sites of “All Japan ST research program” need to access clear. The access control list was inserted into L2/3 switch and the route from remote site to NIFS network was adjusted.

- 1) Tsuda, K., et al., Ann. Rep. NIFS (2006-2007) 402.
- 2) Yamamoto, T., et al., Ann. Rep. NIFS (2007-2008) 389.
- 3) Yamamoto, T., et al., Ann. Rep. NIFS (2008-2009) 333

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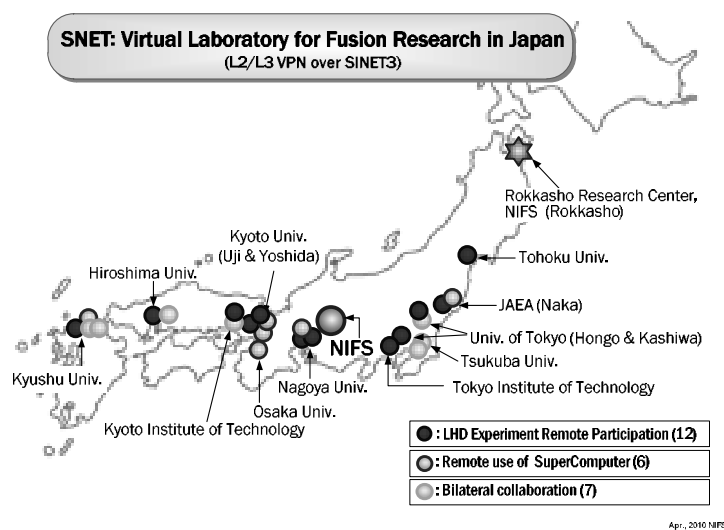


Fig.1 Connection map of SNET