

IFERC Newsletter

IFERC

IFERC-N-2022-08, 7 December 2022

International Fusion Energy Research Centre, Rokkasho, Aomori 039-3212, Japan

Status of REC activity

Highlights of REC activity

REC activity has concentrated on the collaboration with ITER Organization (IO) and the collaboration with IFMIF/EVEDA.

Cooperation between REC and ITER CODAC included the first tests in 2021/2022. The ITER Dashboard developed by IO was tested as the live data viewing tool, using the L2VPN dedicated line between REC and CODAC. The experience on the REC side was fed back to CODAC, and the corresponding modifications of the Dashboard were made by IO.

Subsequently to the successful test of the ITER Dashboard, preparations for the next tests related to CODAC application testing are ongoing. In the IFERC side, REC is setting up a CODAC terminal based on the CODAC Core System (CCS) to access CODAC application servers hosted in the IO site. In addition, in order to keep up-to-date the CCS terminal running in the remote site, a remote software repository server, so-called "Capsule", is being prepared since July 2022 to distribute the latest versions of the software developed in the CODAC to remote machines, while avoiding concentrated loads on the original repository server running in the IO site. In the IO side, the setting up of EPICS PV Gateway for JA is ongoing for additional live data viewing tests.

In addition the procurement of a 100Gbps network switch with large buffer memory (Arista 7280QR-C36) shown in Fig-1 below and the related work including electrical power supply and optical fibers between floors were completed for better network connection. An optical line between the switch and the access point of SINET6 was updated to 100Gbps as well.



Fig-1 The new 100Gbps network switch (bottom)

The collaboration with IFMIF/EVEDA project is ongoing in order to promote remote participation (RP) to the LIPAc experiment from EU.

A manual for administrators of the LIPAc remote server has been produced for collaborators outside

QST facilities, to access the LIPAc data and services installed in the F4E remote server in Barcelona. The server allows authorized users to have access to the operation interface (read-only) and other services. The remote access server also allows users to access to several LIPAc online tools using the web browser, that are normally only accessible from the LIPAc network in IFERC site.

In Rokkasho, in order to make further improvement of the RP environment, the procurement of a new high-performance firewall was completed by the end of March 2022 to simplify the firewall rules by separating the REC network from the IFERC network. User experience of the SSL-VPN access to the LIPAc DMZ has been also significantly improved.

In order to enable viewing real-time LIPAc data from the offices of IFMIF-PT and QST in Rokkasho (it was already possible from F4E), an additional modification of the LIPAc DMZ was completed by the end of August 2022. Now every IFMIF relevant user can always check the latest operation status of the LIPAc in his/her own office.

In addition, a new isolated network segment was dedicated to remote commissioning of partial components, and separated from the main LIPAc system, including the approval process of remote sessions. This new capability of secure and fast connection for remote sessions is operational since the end of May 2022, has been highly utilized, and is contributing to the progress of IFMIF project.

(REC TCs)