



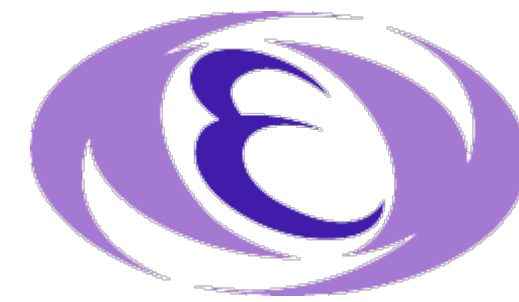
Network System Operation for J-PARC Accelerators

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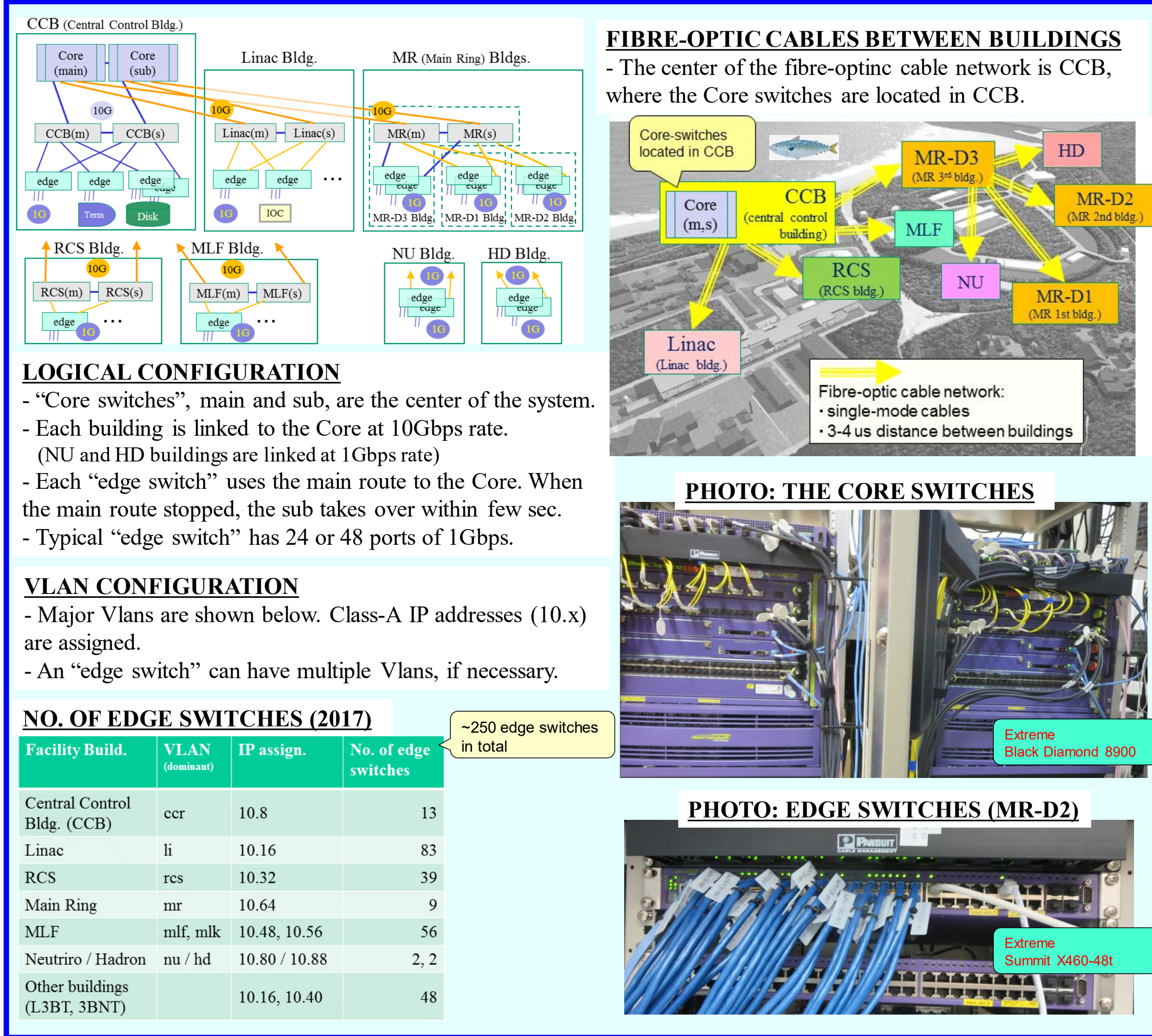
[3] Kanto Information Service (KIS)



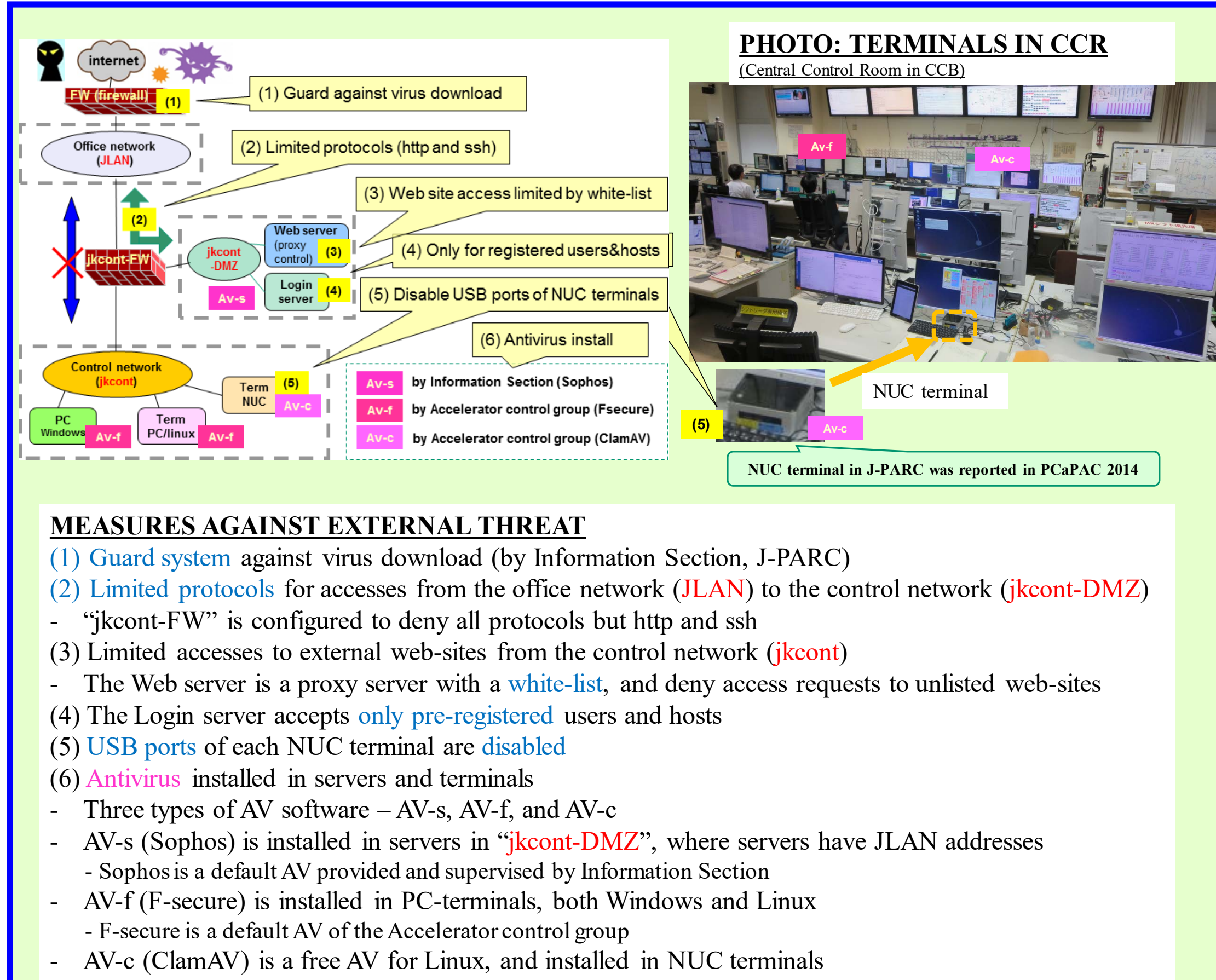
Abstract

The network system for J-PARC accelerators has been operated over ten years. An overview of the control network system, and relationships with other systems are given. In addition, recent security-related issues and operation experiences, including troubles, are also reported.

Overview of the J-PARC Control Network

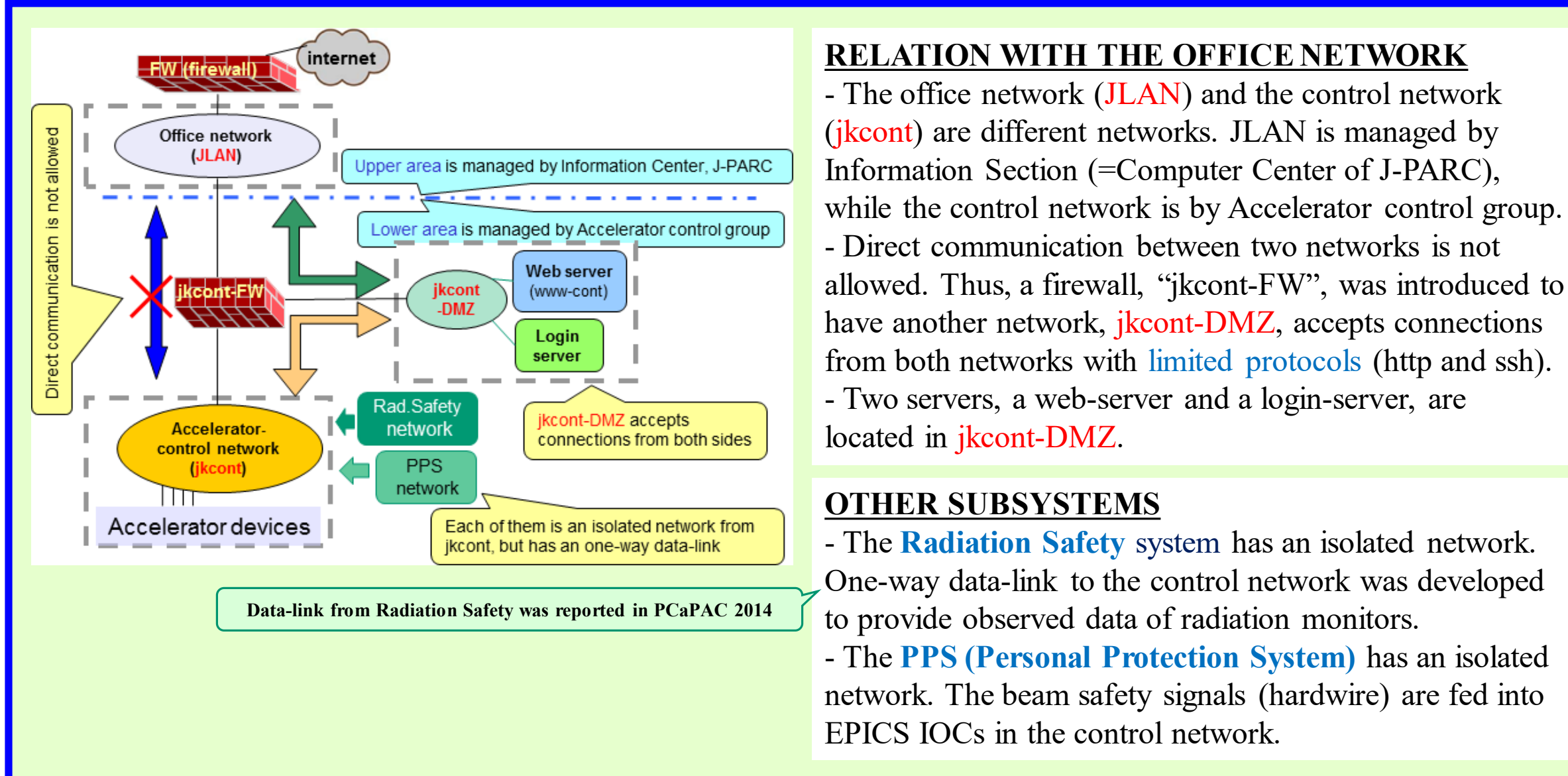


Security Measures

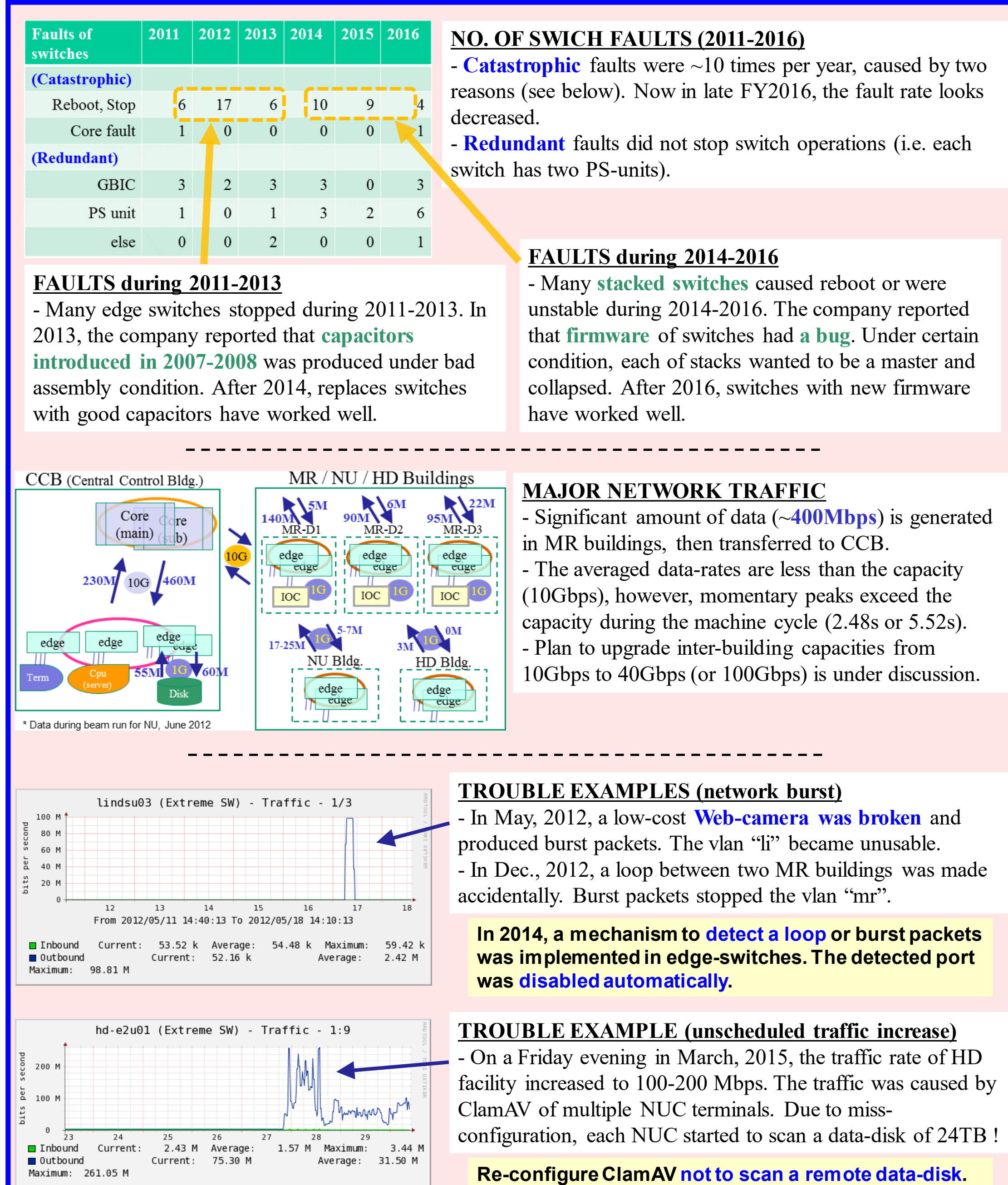


Before 2014, the guard system detected and stopped suspicious downloads, a few times in a year. The detections always caused by external web browsing. A white-list at the proxy server, introduced in Nov., 2014, showed a significant effect.

Relationships with Other Network Systems

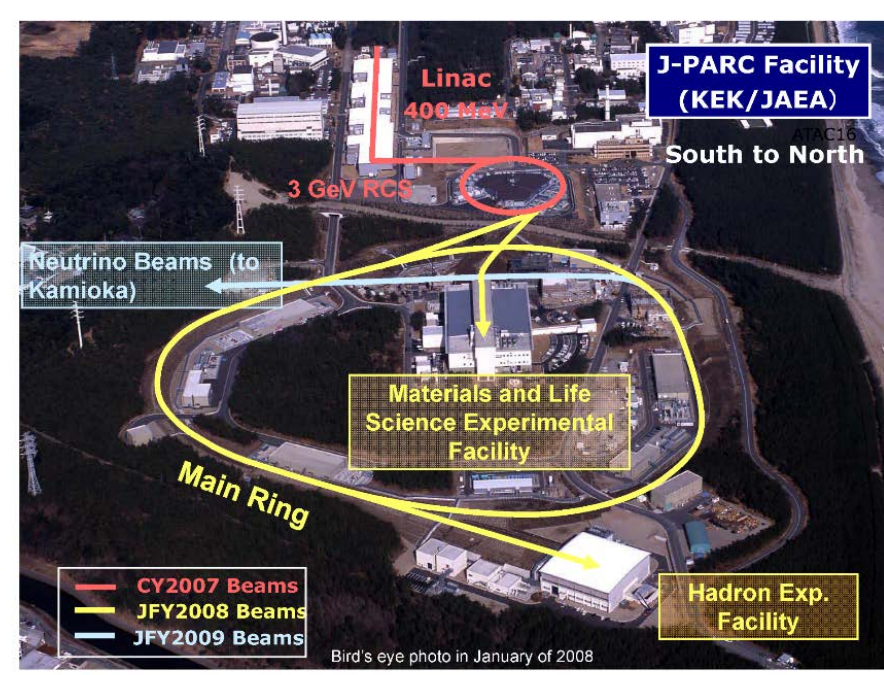


Operation Experience



About J-PARC

J-PARC accelerators : Linac, RCS, and MR (Main Ring)



Operation online: <http://j-parc.jp/Acc/en/operation.html>
Web: <http://j-parc.jp>

Overview of J-PARC control was given in Icaleps 2011

Control for J-PARC Accelerators

- Control for J-PARC was developed around 2005-2008.
- J-PARC control is based on EPICS toolkit. Thus, a TCP/IP network system has been used for accelerator controls.

J-PARC Accelerator Complex

- High-intensity proton accelerators and experimental facilities. 1st beam into Linac was in 2006.
- Three accelerators: 400MeV Linac, 3GeV RCS, and 30GeV MR (Main Ring).
- Three experimental facilities: MLF (Material and Life science), NU (Neutrino), and HD (Hadron).

J-PARC is located in Tokai-mura, Ibaraki, Japan

Tokai
Tokyo-Narita Int'l Airport