

IKON19

NETWORK INFRASTRURE UPDATE IN LUND EXPERIMENTAL HALLS REPORT FOR IKON19

Author(s): Jonathan Taylor, Anton Khaplanov

Date/time of session: [Monday, 28 September 2020]
14:15

This brief document describes the current status of network installation for instruments in experimental halls at ESS.

A full presentation by Johan Christensson (ICS Infrastructure group) can be found at:

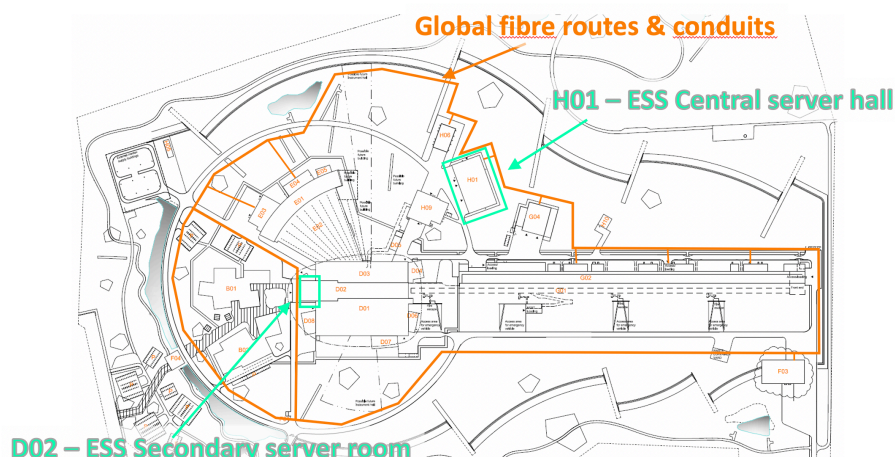
<https://confluence.ess.lu.se/display/CSI/Instrument+Networks>

There are three ESS networks:

- General Purpose Network (GPN) General distribution for IT
- Technical Network (TN) ICS network for Epics control system and timing system
- Neutron Instrument Network (NIN) DMSC network for instrument data & scientific computing.

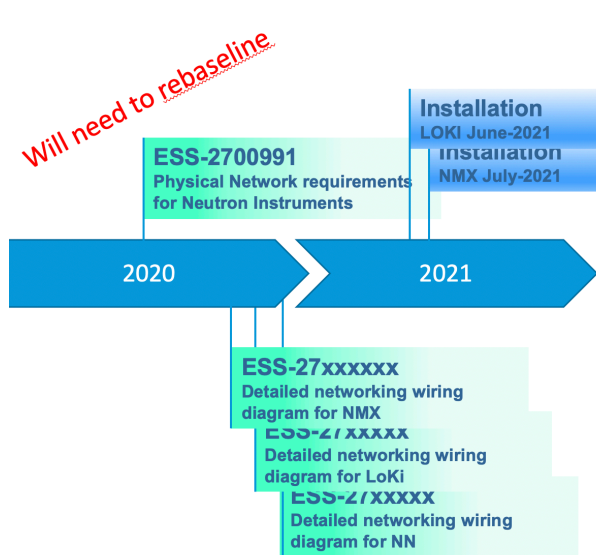
All three networks route from H01 to the instrument halls through comms rooms. The full design will provide a redundant route to the H01 data centre. (The day 1 installations will not be route redundant, this is not a risk for early operations)

The data centre in H01 has all the majority of the controls and storage systems.



The site infrastructure is coordinated by ICS infrastructure group. ICS will design the physical network required for installation on each instrument and document the design in eplan.

The table shows the pre-covid schedule for these tasks.



Activity ID	Activity Name	Start	Finish
A20152790	Collect requirements for neutron instruments	2020-03-31	2020-04-28
A20152800	Compile Physical Network requirements for Neutron Instruments	2020-05-05	2020-06-28
A20160400	MS Network requirements for Neutron instruments completed		2020-07-28
A20152790	Detailed networking wiring diagram for LoKi	2020-09-01	2020-09-07
	Detailed networking wiring diagram for NMX	2020-09-08	2020-09-16
A20152800	Detailed networking wiring diagram for ODIN	2020-09-17	2020-09-24
A20160400	Detailed networking wiring diagram for BEER	2020-09-25	2020-10-01
	Detailed networking wiring diagram for SKADI	2020-10-02	2020-10-09
A20152790	Detailed networking wiring diagram for DREAM	2020-10-10	2020-10-17
A20152800	Detailed networking wiring diagram for ESTIA	2020-10-18	2020-10-25
A20160400	Detailed networking wiring diagram for C-SPEC	2020-11-02	2020-11-09
A20152790	Detailed networking wiring diagram for FREIA	2020-11-16	2020-11-23
A20152800	Detailed networking wiring diagram for HEIMDAL	2020-11-30	2020-12-07
A20160400	Detailed networking wiring diagram for BIFROST	2021-01-15	2020-01-23
A20152790	Detailed networking wiring diagram for T-REX	2021-01-24	2021-02-02
	Detailed networking wiring diagram for MIRACLES	2021-02-03	2021-02-10
A20152800	Detailed networking wiring diagram for VESPA	2021-02-11	18
A20160400	Detailed networking wiring diagram for MAGIC	2021-02-19	2021-02-26

Physical installation and routing design are in principle the responsibility of the instrument.

The network, electrical distribution and PSS distribution all need careful coordination for physical installation on the instrument

Electrical Infrastructure project (level 3) will deliver design and installation for instruments – Please consider using this service level to allow ESS to manage the considerable interfaces and the on the in-instrument cable management & documentation.

The Electrical Project and other utilities are managed through a Common NSS Utilities Project, which is being set up. NSS level coordination is by Anton Khaplanov <anton.khaplanov@ess.eu>.

Next steps

Preliminary network installations in E03/04 and E01 will be made this Autumn to make a preliminary test of infrastructure from the BIFROST and NMX build areas to the central compute and storage for science and controls in the H01 Server room.