



System Acceptance Review meeting for LOKI

LOKI Network Infrastructure

=ESS.INFR.W02.W03.W59

Timing System Infrastructure

=ESS.INFR.K01.K213

PRESENTED BY JOHAN CHRISTENSSON

2025-08-26

Status Report

Network and Timing System Infrastructure



| System name | FBS | EPL | Delivered | Installed | Verification | Instrument Integration |
|--------------------------------------------------------|---------------------------------------------|--------------------|-------------------------------------------|--------------------------------------------------------|-------------------------------------|-----------------------------------|
| Network Infrastructure Timing System Infrastructure | =ESS.INFR.W02.W03.W59 =ESS.INFR.K01.K213 | ePlan: ESS-5233564 | Requirement specification: ESS-4390095 | LOKI Installation Drawings: Chess link | Verification report: ESS-5551582 | Verification plan: ESS-5689547 |

System scope:

- Infrastructure for **GPN** (General Purpose Network) - Groups of office sub-networks. Used for general use by all ESS users. Access to services like E-mail, ESSOn, Confluence, Internet access, etc. Available on both wired and wireless networks
- Infrastructure for **NIN-CN** (Neutron Instrument Network- Controls Network) - Grouping of sub-networks for the operational technologies. Includes the controls network (EPICS/SCADA systems), including PLC networks, either for facilities control and monitoring (HVAC) or for the machine (LINAC, Cryogenics, Target or Neutron Instrument), as well as radiation and environment monitoring and interfaces to safety or safety related systems. Available on wired networks
- Infrastructure for **NIN-DAQ** (Neutron Instrument Network- Data Acquisition) - Experimental Data acquisition/curation networks. Data analyses, high-performance computing clusters. Available on wired networks
- Infrastructure for Timing system.

Status Report

Network and Timing System Infrastructure



Verification:

- Inspection and test plan ESS-5572322
- Verification of passive and active equipment ESS-5551582
- Instrument integration test plan ESS-5689547

Status:

- Installed and verified.
- Integrated and tested, at least one Chopper end device with confirmed data flow, synchronization with Timing System and access to Controls System.
- System working as intended.
- System ready for operation.

| | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------|--------------------------|--------------------------|
| VERIFICATION APPROVAL | | INSTALLATION: Loki | | RFQ: 215 |
| <input checked="" type="checkbox"/> APPROVED | | <input type="checkbox"/> REJECTED | | |
| PASSIVE NETWORK COMPONENTS TEST | | PASSIVE NETWORK COMPONENTS TEST | | |
| SIGN: <i>[Signature]</i> | | SIGN: <i>[Signature]</i> | | |
| PRINT: <i>Andreas Johansson</i> | | PRINT: <i>Karl Fredrik Degler</i> | | |
| DATE: <i>5/12/24</i> | | DATE: <i>5/12/24</i> | | |
| ACTIVE NETWORK COMPONENTS TEST | | | | |
| SIGN: | | | | |
| PRINT: | | | | |
| DATE: | | | | |
| TESTS TO BE PERFORMED | | SUMMARY FINDINGS | | |
| Tests to be performed may be adjusted as applicable | | Passed | Not Passed | NA |
| 1. Visual inspection | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Comments: | | | | |
| 2. Passive Network components test | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Comments: <i>LOK N 3K x04:18</i> <i>LOK N 3K x04:19</i> <i>LOK N 3K x04:19</i> <i>LOK N 3K x04:19</i> <i>LOK N 3K x04:19</i> | | | | |
| 3. Active Network components test | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Comments: N/A. Need power to do the tests. | | | | |

| | | | | |
|-----------------------------------------------------|--|-------------------------------------|--------------------------|--------------------------|
| VERIFICATION APPROVAL | | INSTALLATION: LOKI | | RFQ: 215 |
| <input checked="" type="checkbox"/> APPROVED | | <input type="checkbox"/> REJECTED | | |
| PASSIVE NETWORK COMPONENTS TEST | | PASSIVE NETWORK COMPONENTS TEST | | |
| SIGN: | | SIGN: | | |
| PRINT: | | PRINT: | | |
| DATE: | | DATE: | | |
| ACTIVE NETWORK COMPONENTS TEST | | ACTIVE NETWORK COMPONENTS TEST | | |
| SIGN: <i>[Signature]</i> | | SIGN: <i>[Signature]</i> | | |
| PRINT: <i>Johan Christensson</i> | | PRINT: <i>Andreas Johansson</i> | | |
| DATE: <i>2025-08-21</i> | | DATE: <i>2025-08-26</i> | | |
| TESTS TO BE PERFORMED | | SUMMARY FINDINGS | | |
| Tests to be performed may be adjusted as applicable | | Passed | Not Passed | NA |
| 1. Visual inspection | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Comments: | | | | |
| 2. Passive Network components test | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Comments: | | | | |
| 3. Active Network components test | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Comments: | | | | |



Hot commissioning

Network and Timing System Infrastructure

Network and Timing System Infrastructure ready for hot-commissioning – verification passed.

ICS/IT planned activities for hot commissioning:

- Support instrument team with network infrastructure related issues
- On-call support (part of Controls infrastructure regular on-call schedule)