



System Acceptance Review meeting for ESTIA

ESTIA Network Infrastructure
=ESS.INFR.W02.W03.W55

Timing System Infrastructure
=ESS.INFR.K01.K410

PRESENTED BY JOHAN CHRISTENSSON

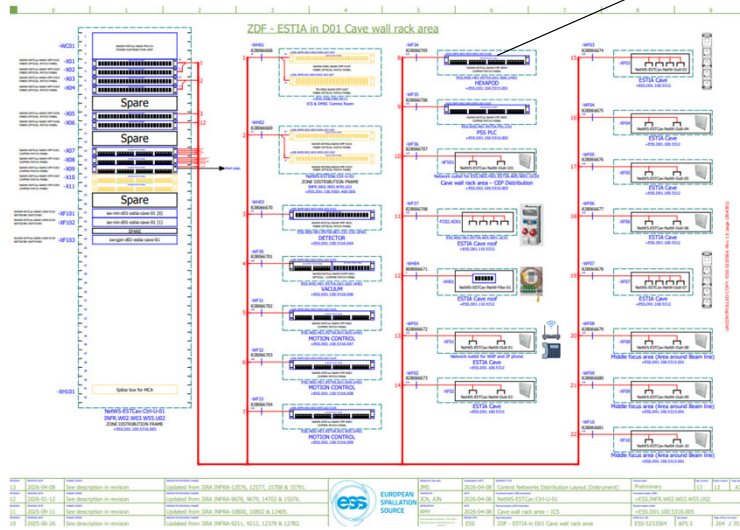
2026-06-10

Status Report

Network and Timing System Infrastructure



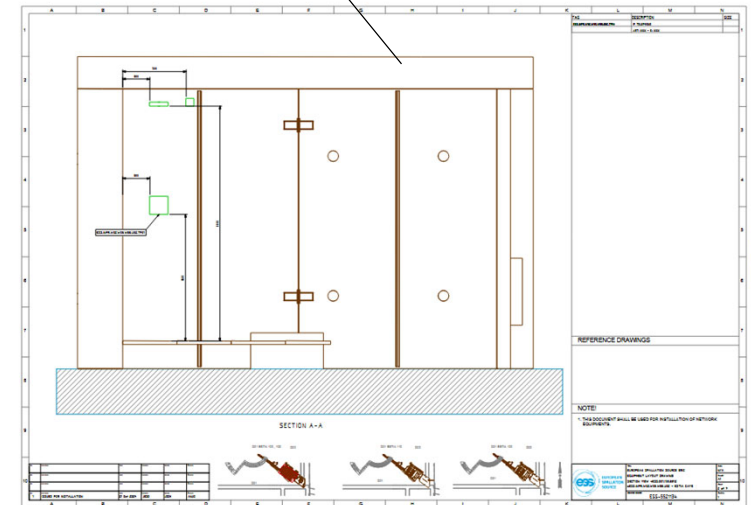
System name	FBS	CIDL	EPL	Delivered	Installed	Verification	Instrument Integration
Network Infrastructure Timing System Infrastructure	=ESS.INFR.W02.W03.W55 =ESS.INFR.K01.K410	CIDL OS-000038 CIDL OS-000036	ePlan: ESS-5233564	Requirement specification: ESS-4912878	Installation Drawings: Chess link	Verification report: ESS-5701673	Verification plan: ESS-5689547



Document Type: Requirement Specification
 Document Number: ESS-4912878
 Date: 04-2-2023
 Revision: 3
 Reason: Revised Internal
 Status: Confirmed
 Confidentiality Level: 1 (S)

ESTIA ICS/IT CONTROLS NETWORK CONNECTIVITY REQUIREMENT SPECIFICATION

Role	Name	Role/Title
Owner	John Omberson	Controls Infrastructure, Infrastructure Technology Engineer
Reviser	John Omberson	ESTIA, Instrumentation Engineer
Approver	Holger Helmberg	ICS Division, Senior Engineer role
	Asaphim Tzoref Galper Marmor	ICS Technics Projects, ICS Lead/Integration Engineer
	Rene Muehlberg	Controls Infrastructure, Group leader



Template: System Requirement Specification (ESS-000478) Rev. 4 Author: John May 24, 2020

Status Report

Network and Timing System Infrastructure



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.

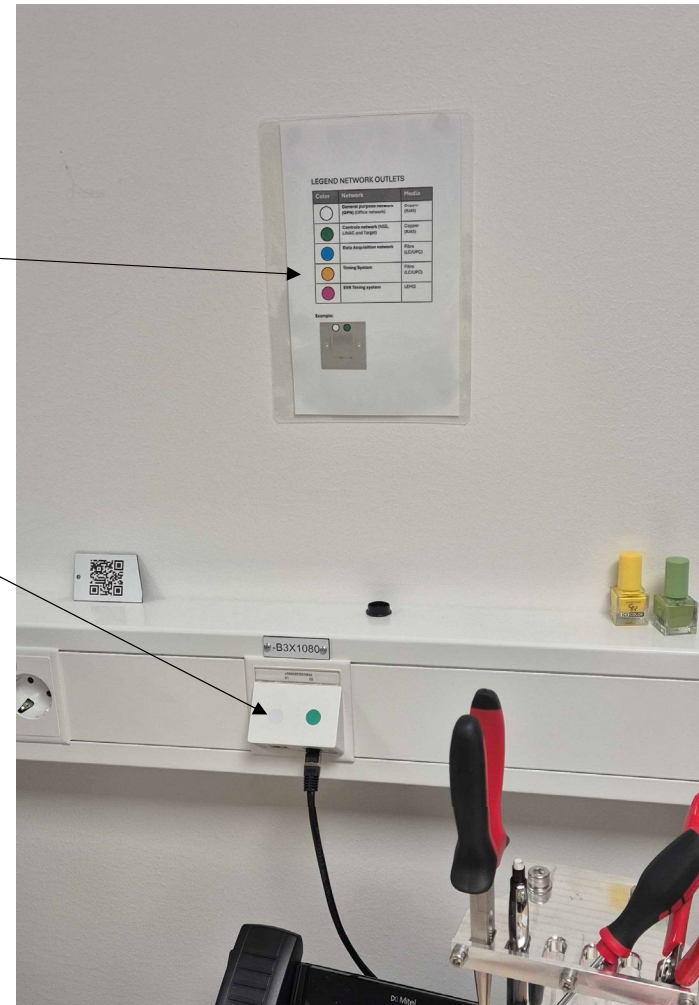


Status Report

Network and Timing System Infrastructure

Network guide

- Legends mounted on instrument whiteboard and inside control hutch
- Dot marking on each outlet with colour code referring to legend



Status Report

Network and Timing System Infrastructure




Verification:

- Inspection and test plan ESS-5701674
- Verification of passive and active equipment ESS-5701673
Instrument integration test plan ESS-5689547

Status:

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




Document Type: European Spallation Source
 Document Number: ESS-5701673
 Date: Dec 8, 2023
 Revision: 1
 Status: Released
 Confidentiality Level: Internal
 Page: 1/10

Table 1: Verification Approval Overview

VERIFICATION APPROVAL	INSTALLATION: <u>ESTA CAVE RACK</u>	RFQ:
<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> REJECTED	
PASSIVE NETWORK COMPONENTS TEST SIGN: <u>A7</u>	PASSIVE NETWORK COMPONENTS TEST SIGN: <u>[Signature]</u>	
PRINT: <u>[Signature]</u>	PRINT: <u>Karl Fredrik Degler</u>	
DATE: <u>2025-05-13</u>	DATE: <u>19/05-25</u>	
ACTIVE NETWORK COMPONENTS TEST SIGN:		
PRINT:		
DATE:		

TESTS TO BE PERFORMED
Tests to be performed may be adjusted as applicable

- Visual inspection**
 Comments:
- Passive Network components test**
 Comments: WSS.U02.K07/14
2025/01
2025/01
- Active Network components test**
 Comments:



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VERIFICATION APPROVAL	INSTALLATION: <u>ESTA BUNKER RACK</u>	RFQ:
<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> REJECTED	
PASSIVE NETWORK COMPONENTS TEST SIGN: <u>A7</u>	PASSIVE NETWORK COMPONENTS TEST SIGN: <u>[Signature]</u>	
PRINT: <u>[Signature]</u>	PRINT: <u>Karl Fredrik Degler</u>	
DATE: <u>2025-05-13</u>	DATE: <u>19/05-25</u>	
ACTIVE NETWORK COMPONENTS TEST SIGN:		
PRINT:		
DATE:		

	SUMMARY FINDINGS			
	applicable	Passed	Not Passed	NA
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
test		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
test		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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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)

Maintenance

- Power Distribution units in ICS/IT racks to be included in EAM maintenance plans (Yearly basis).
- Software for Active equipment updated according to maintenance schedule.
- All other equipment -> replace if broken