



# System Acceptance Review meeting for BIFROST

BIFROST Network Infrastructure

=ESS.INFR.W02.W03.W47

BIFROST Timing system Infrastructure

=ESS.INFR.K01.K113

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.W47 =ESS.INFR.K01.K113	ePlan: ESS-5233564	Requirement specification: ESS-4390096	BIFROST Installation Drawings: <a href="#">Chess link</a>	Verification report: ESS-5551568	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-5551579
- Verification of passive and active equipment ESS-55521568
- 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: Bifrost	RFQ: 216
<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>[Signature]</i>	PRINT: <i>[Signature]</i>	
DATE: 2024-11-19	DATE: 2024-11-19	
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
1. Visual inspection	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Comments: Tight but ok bend radius for the network copper cables.		
2. Passive Network components test	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Comments: BIFCAV CPP:102:23 BIFCAV CPP:103:20 BIFCHP CPP:101:07		
3. Active Network components test	<input type="checkbox"/>	<input type="checkbox"/>
Comments: N/A. Need power to do the tests.		

VERIFICATION APPROVAL	INSTALLATION: BIFROST	RFQ: 216
<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>[Signature]</i>	PRINT: <i>[Signature]</i>	
DATE: 2025-08-15	DATE: 2025-08-26	
TESTS TO BE PERFORMED	SUMMARY FINDINGS	
Tests to be performed may be adjusted as applicable	Passed	Not Passed
1. Visual inspection	<input type="checkbox"/>	<input type="checkbox"/>
Comments:		
2. Passive Network components test	<input type="checkbox"/>	<input type="checkbox"/>
Comments:		
3. Active Network components test	<input checked="" 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)