

3 Technical Bulletins

The following subitems will present the technical bulletins tasks organized by its types.

3.1 Hardware Preventive

These tasks are related to activities involving preventive maintenance for hardware related verifications.

3.1.1 TASK | StableNet – VCX-IP Temperature Sensors

TASK DETAILS:

This task verifies the status of the temperature sensors of each VCX-IP. It can be performed using the Default measurement tree on Infosim StableNet or FMS.

TASK PROPERTIES:

Main Product: SIS TEL ATN VCX

Frequency: Monthly

Level: Base

Expected Duration: 30min

#Technicians: 01

Equipment Out of Service: None

Unavailability Period: None

Way to Work: NA

Task Classification: NA

APPLICABLE HOST-TYPES:

All XXXX-L3-VCX-XX hosts

CONFIGURATION ITEM:**N/A.****PRE-REQUISITES:**

In case of unavailability of any of the below mentioned Pre-Requisites, contact Frequentis Support.

ID	Pre-Requisites
1	Verify NetBroker GUI access
2	Verify StableNet access
3	Verify FMS access

PREVENTIVE ACTIONS:

Check the Defaut Measurement Tree - FRQ VCX-IP alarm.

CORRECTIVE ACTIONS:

If VCX-IP temperature sensors with alarms are identified, check if there is a fan alarm, as explained in the 3.1.2. If not, ask for a local technician to check the environment conditions where the equipment is installed.

- How is the environment temperature?
- Is the cooling system working properly?

If not, ask for repairing. For any action performed, wait for 5 minutes and check the status in the NMS StableNet.

Obs: For more details about the correct temperature, see the documents **CIPE26EN3101_14** pages 80 and 82, the document **CIPE26EN53103_30_Iman** page 28 and the document **CIPE26EN50005_61 _Maintenance Manual** pages 155, 156, 157, 175 and 176.

TROUBLESHOOTING:

No troubleshooting.

INTERFACES:

Information is collected via SNMP from the VCX-IP and transmitted via VLAN50 on the ATN-Br network.

MONITORING:

The "Default Measurement Tree" can be used for monitoring alerts. The temperature sensors will be found in the VCX-IP tree of each site.

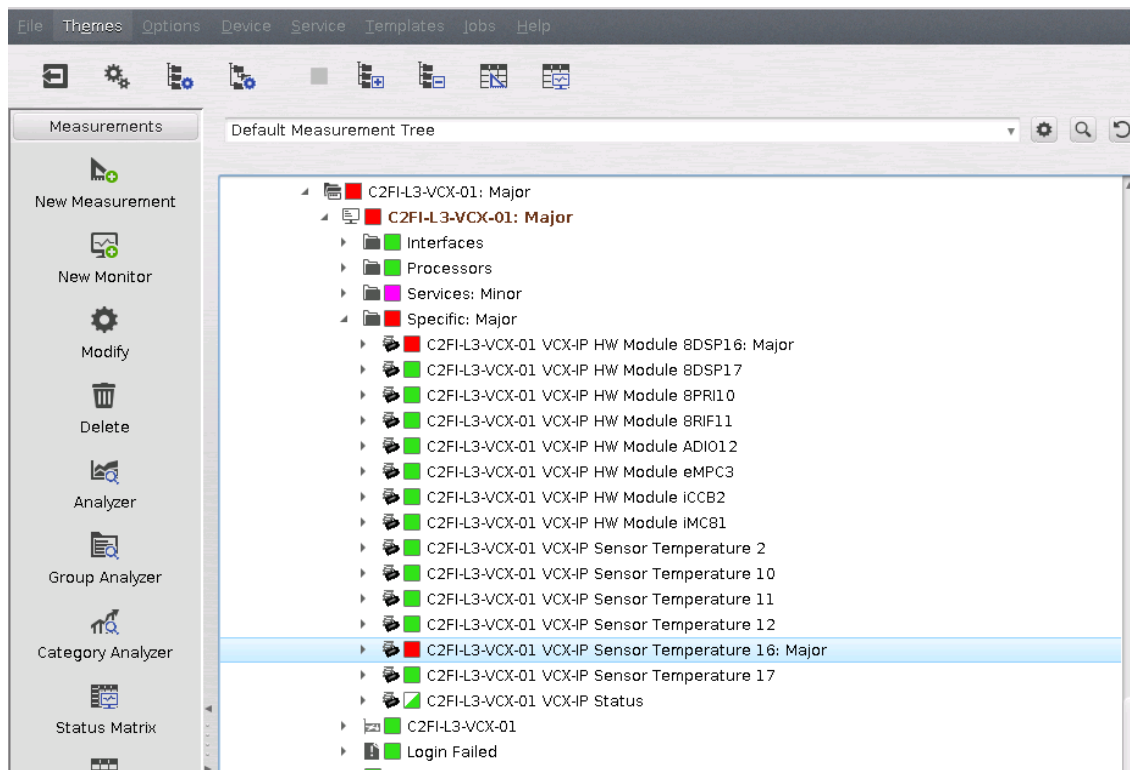


Fig. 1: StableNet "Default Measurement Tree – FRQ-VCX"

The temperature sensors can also be checked on FMS. It can be found in each VCX-IP in the Element Status window, on the option "Frequentis MIB Sensors" after right-clicking in the chosen device.

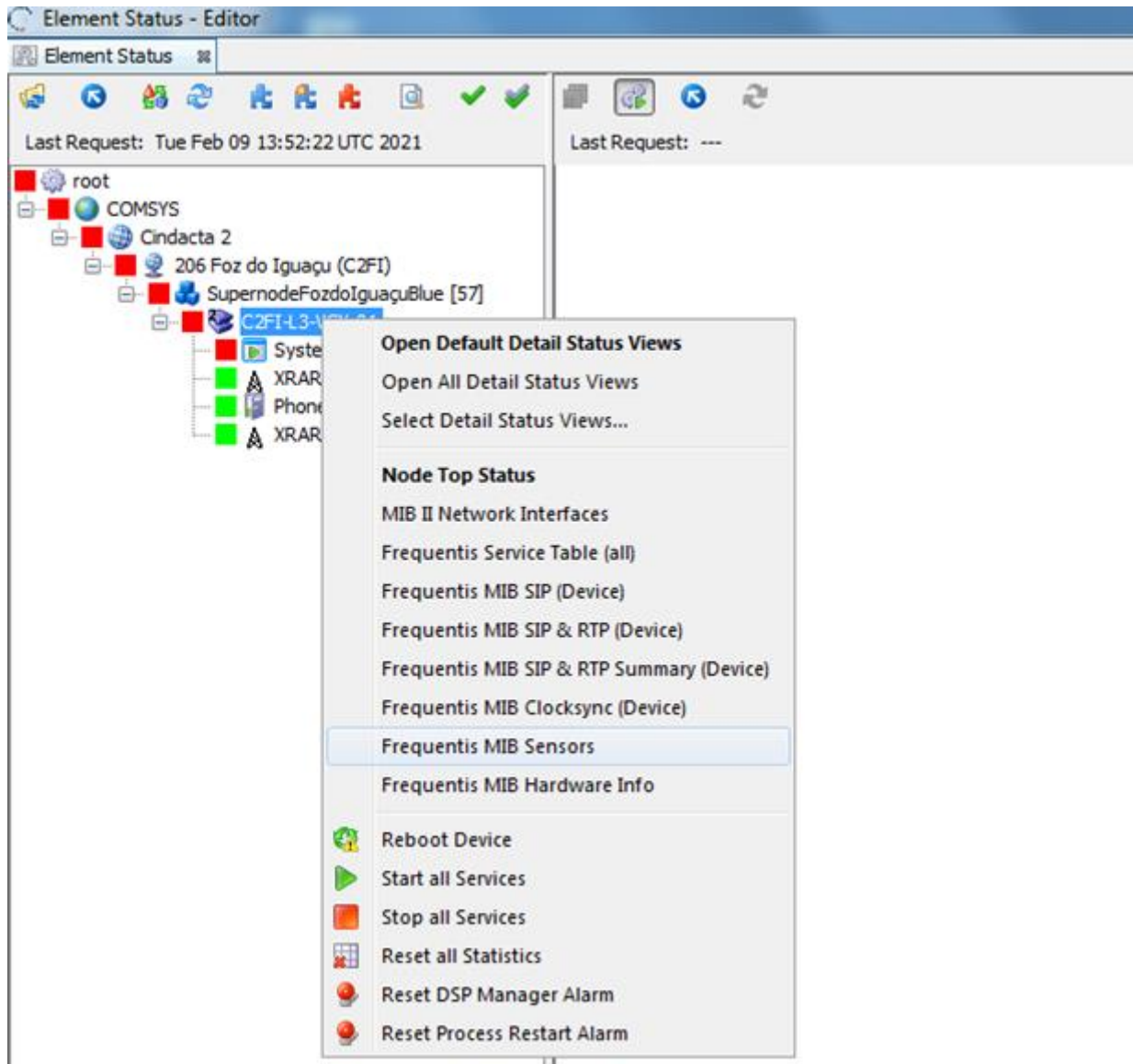


Fig. 2: FMS – Element Status – "Frequentis MIB Sensors"

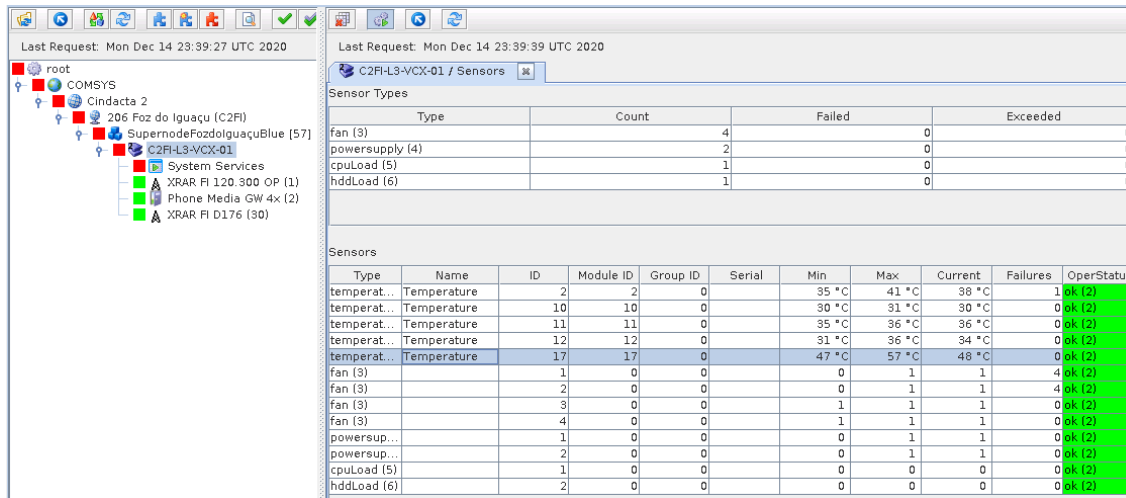


Fig. 3: FMS – Element Status – "Sensors Status – Temperature Check"

SECURITY:

No security steps are applicable for this task.

RELEASE:

StableNet 8.1.4a and above.

SUMMARY OF TASK VERIFICATION AND ACTIONS:

ITEM	DESCRIPTION
Failure Type	Electronic
Failure	VCX-IP cooling failure
Effect	Impaired services operation
Cause	VCX-IP Fan / Room cooling system failure
Solution	Change of Fan Module / Maintenance of Room Cooling System

3.1.2 TASK | StableNet - VCX-IP Fan Status Filtering

TASK DETAILS

As a routine task, a summary of all the alerts related to FANs at the ATN-Br environment can be extracted. This will display which fans are faulty, and at which shelves they are located.

Each shelf has a total of 4 (four) Fan sensors, each one indicating its respective Fan (Individually. Not the full Fan bank).

Example:

Displayed Alert	Fan Location
fan 1 fan_S_0_0	Fan 1 - Right-side bank
fan 2 fan_S_0_1	Fan 2 - Right-side bank
fan 3 fan_S_0_0	Fan 1 - Left-side bank
fan 4 fan_S_0_0	Fan 2 - Left-side bank

TASK PROPERTIES:

Main Product: SIS TEL ATN VCX

Frequency: Monthly

Level: Base

Expected Duration: 10min

#Technicians: 01

Equipment Out of Service: None

Unavailability Period: None

Way to Work: NA

Task Classification: NA

APPLICABLE HOST-TYPES:

All XXXX-L3-VCX-XX hosts

CONFIGURATION ITEM:

N/A.

PRE-REQUISITES:

In case of unavailability of any of the below mentioned Pre-Requisites contact Frequentis Support.

ID	Pre-Requisites
1	Verify NetBroker GUI access
2	Verify StableNet access
3	Verify FMS access

PREVENTIVE ACTIONS:

Check the Defaut Measurement Tree – FANs alarm.

CORRECTIVE ACTIONS:

If fans with alarms are identified, trigger a module replacement.

To do so, send a local technician to the shelf and have him remove the fan cartridge as described in the **CIPE26EN50005_61_Maintenance Manual document pages 155, 156, 157, 175 e 176.**

Notice if the fans during removal are still spinning. If not, test each fan with your hand if you can move it.

If the fans filters are congested with dust, clean or replace as described in the **CIPE26EN50005_61_Maintenance Manual document pages 155, 156, 157, 175 e 176.**

If the fans move freely after badly congested and properly cleaned, reconnect the FAN module and verify if the alarm has been cleared.

For any action performed, wait for 5 minutes and check the status in the NMS StableNet.

Otherwise, replace the fan box with a spare

TROUBLESHOOTING:

No troubleshooting

INTERFACES:

Information is collected via SNMP from the VCX-IP hosts and transmitted via VLAN50 on the ATN-Br network.

MONITORING:

Using Infosim StableNet "Default Measurement Tree - Fans" for an easier filtering. The "Default Measurement Tree" can also be used for a bigger detail on alerts.

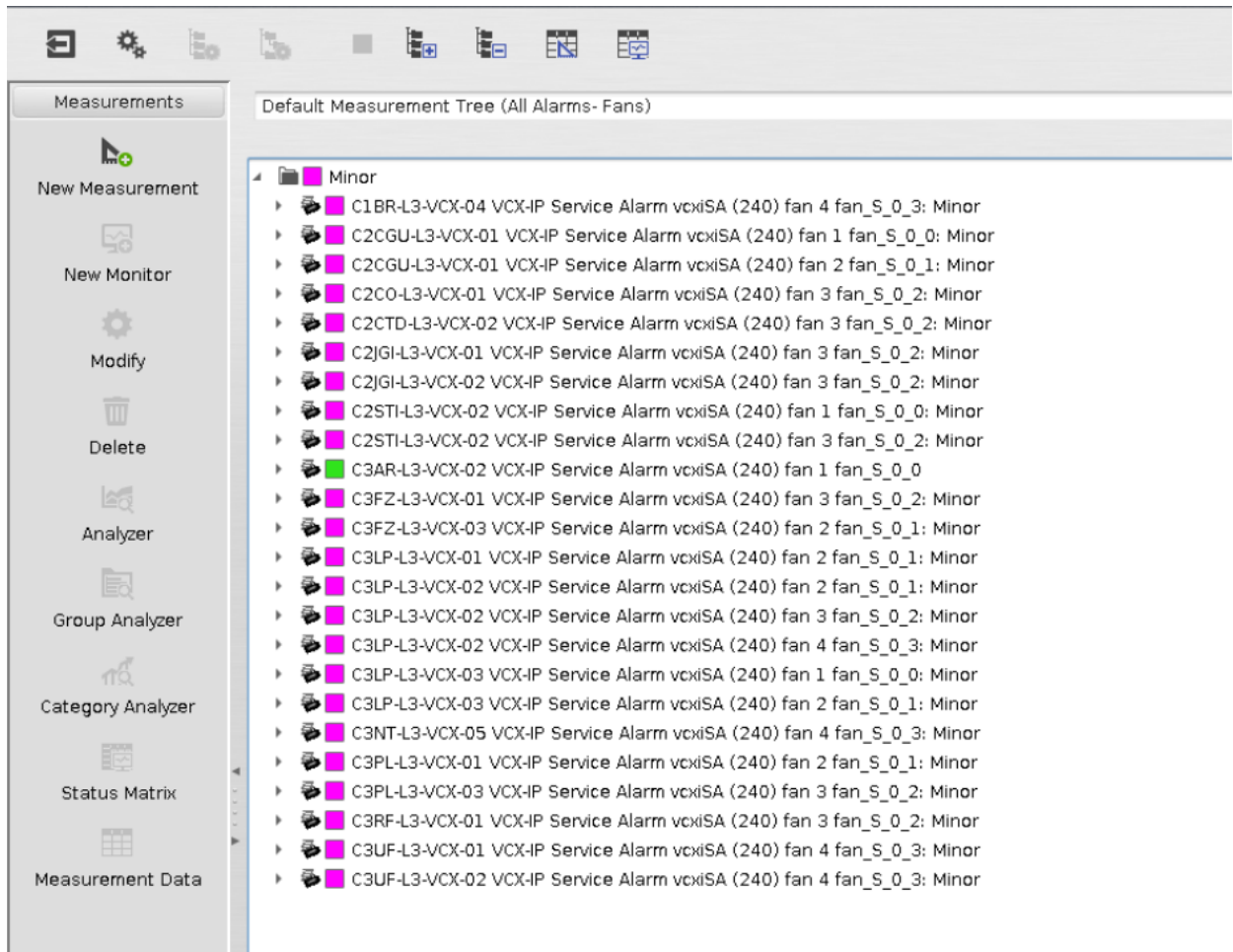


Fig. 4: StableNet "Default Measurement Tree - Fans"

A faulty FAN can also be checked on FMS. It can be found in each VCX-IP in the Element Status window, on the option “Frequentis MIB Sensors” after right-clicking in the chosen device.

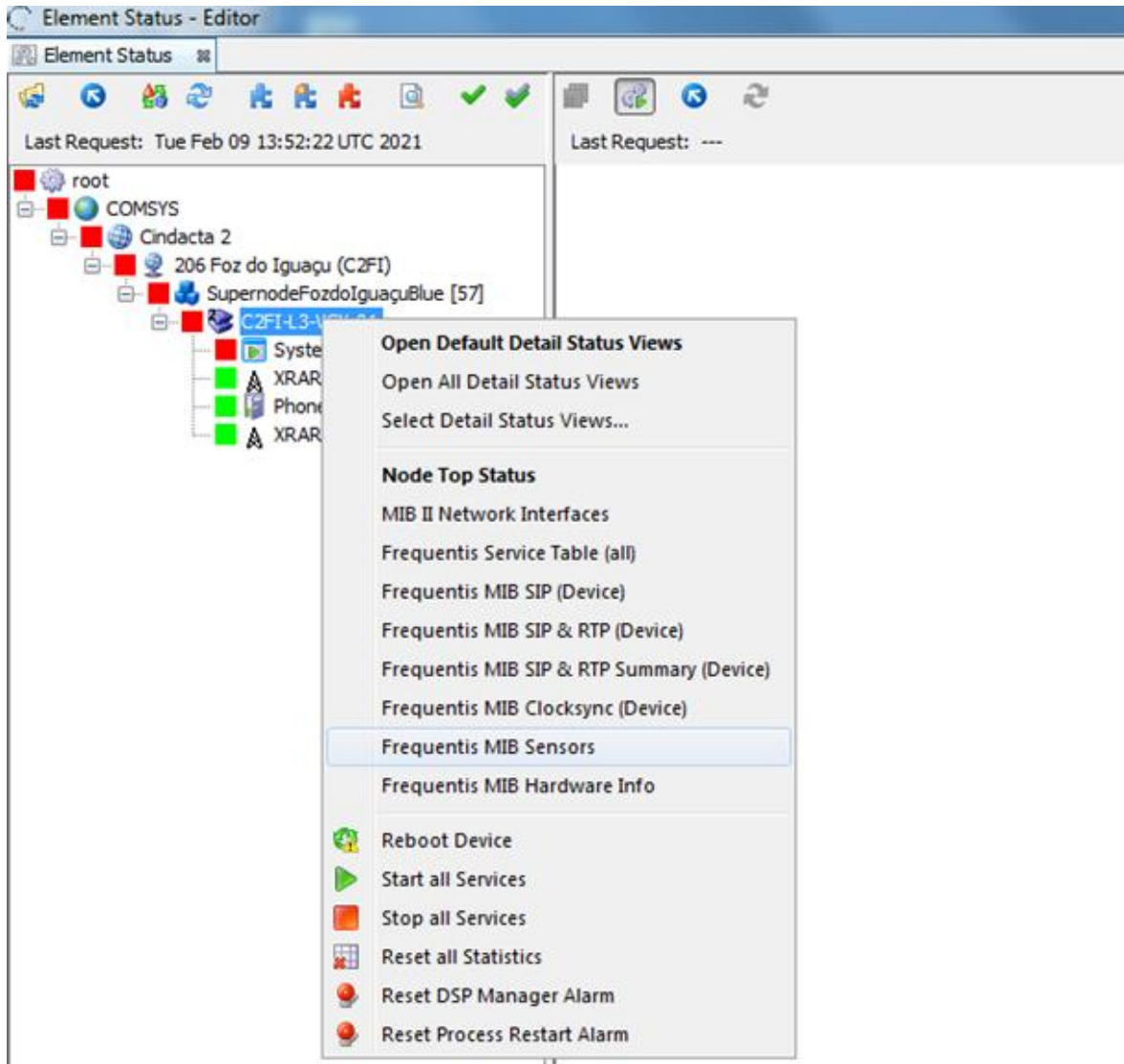


Fig. 5: FMS – Element Status – “Frequentis MIB Sensors”

Last Request: Tue Feb 23 12:28:16 UTC 2021

C3FZ-L3-VCX-01 / System Services | C3FZ-L3-VCX-01 / Sensors

Sensor Types

Type	Count	Failed	Exceeded
Fan (3)	4	1	0
powersupply (4)	2	0	0
cpuLoad (5)	1	0	0
hddLoad (6)	1	0	0

Sensors

Type	Name	ID	Module ID	Group ID	Serial	Min	Max	Current	Failures	OperStatus
temperature (2)	Temperature	2	2	0		27 °C	38 °C	31 °C	0	ok (2)
temperature (2)	Temperature	10	10	0		21 °C	32 °C	26 °C	0	ok (2)
temperature (2)	Temperature	16	16	0		35 °C	50 °C	43 °C	0	ok (2)
temperature (2)	Temperature	17	17	0		37 °C	57 °C	49 °C	0	ok (2)
Fan (3)		1	0	0		1	1	1	0	ok (2)
Fan (3)		2	0	0		1	1	1	0	ok (2)
Fan (3)		3	0	0		0	1	0	5	Failed (3)
Fan (3)		4	0	0		1	1	1	0	ok (2)
powersupply (4)		1	0	0		0	1	1	0	ok (2)
powersupply (4)		2	0	0		0	1	1	0	ok (2)
cpuLoad (5)		1	0	0		0	0	0	0	ok (2)
hddLoad (6)		2	0	0		0	0	0	0	ok (2)

Fig. 6: FMS – Element Status – "Sensors Status – Fan Status"

SECURITY:

No security steps are applicable for this task

RELEASE:

StableNet 8.1.4a and above.

SUMMARY OF TASK VERIFICATION AND ACTIONS:

ITEM	DESCRIPTION
Failure Type	Electronic
Failure	VCX-IP Fan Failure
Effect	Increased Heating on VCX-IP Shelves
Cause	Lack of Maintenance on VCX-IP Fans
Solution	Change/Maintenance of FAN Module

3.1.3 **TASK | Stablenet – VCX Power Supply Redundancy Status**

TASK DETAILS:

This task verifies the power supply redundancy status of each VCX-IP. It can be performed using the Default measurement tree on Infosim StableNet or FMS.

TASK PROPERTIES:

Main Product: SIS TEL ATN VCX

Frequency: Monthly

Level: Base

Expected Duration: 30min

#Technicians: 01

Equipment Out of Service: None

Unavailability Period: None

Way to Work: NA

Task Classification: NA

APPLICABLE HOST-TYPES:

All XXXX-L3-VCX-XX hosts

CONFIGURATION ITEM:

N/A

PRE-REQUISITES:

In case of unavailability of any of the below mentioned Pre-Requisites, contact Frequentis Support.

ID	Pre-Requisites
1	Verify NetBroker GUI access
2	Verify StableNet access
3	Verify FMS access

PREVENTIVE ACTIONS:

Check the Defaut Measurement Tree – FRQ VCX-IP alarm.

CORRECTIVE ACTIONS:

After identifying the power supply alarmed, send a technician to check the equipment. Verify if the power cables are correctly connected. If the cables are OK, you can exchange the cables from Power Supply A to Power Supply B to verify if there is an issue with the cable or eletricity. Before performing this action, align a maintenance window with the operational team, because when exchanging the cables, the VCX -IP will be turned off and all services configured on it will be down until the VCX-IP is powered up. If there is an issue with the power supply, replace it. For any action performed, wait for 5 minutes and check the status in the NMS StableNet.

Obs: For more details, see the documents **CIPE26EN50005_61 _Maintenance Manual** page 167 and the document **CIPE26EN53103_30_Iman** pages 30 and 42.

TROUBLESHOOTING:

No troubleshooting

INTERFACES:

Information is collected via SNMP from each device and transmitted via VLAN50 on the ATN-Br network.

MONITORING:

The "Default Measurement Tree" can be used for a view of the alerts.

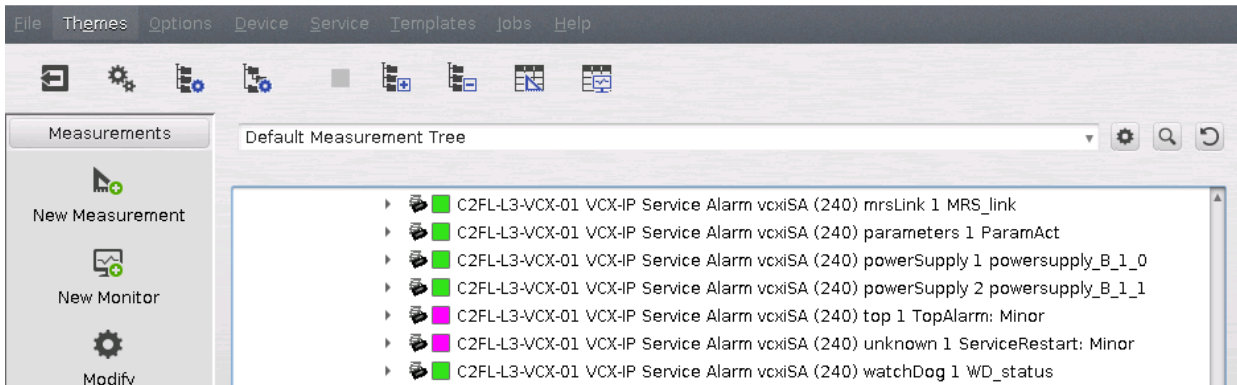


Fig. 7: StableNet "Default Measurement Tree – FRQ-VCX – Cx-L3-VCX-0y – Services"

The power supply status can also be checked on FMS.

Last Request: Tue Feb 23 12:39:42 UTC 2021

C2CT-L3-VCX-06-PL_NA / Sensors

Sensor Types		Type	Count	Failed	Exceeded
fan (3)			4	0	0
powersupply (4)			2	0	0
cpuLoad (5)			1	0	0
hddLoad (6)			1	0	0

Sensors		Type	Name	ID	Module ID	Group ID	Serial	Min	Max	Current	Failures	OperStatus
temperature (2)	Temperature	2	2	0				37 °C	41 °C	38 °C	0	ok (2)
temperature (2)	Temperature	10	10	0				28 °C	31 °C	29 °C	0	ok (2)
temperature (2)	Temperature	11	11	0				31 °C	34 °C	32 °C	0	ok (2)
temperature (2)	Temperature	17	17	0				49 °C	52 °C	50 °C	0	ok (2)
fan (3)		1	0	0				1	1	1	0	ok (2)
fan (3)		2	0	0				1	1	1	0	ok (2)
fan (3)		3	0	0				1	1	1	0	ok (2)
fan (3)		4	0	0				1	1	1	0	ok (2)
powersupply (4)		1	0	0				0	1	1	0	ok (2)
powersupply (4)		2	0	0				0	1	1	0	ok (2)
cpuLoad (5)		1	0	0				0	0	0	0	ok (2)
hddLoad (6)		2	0	0				0	0	0	0	ok (2)

Fig. 8: FMS – Element Status – "Sensors Status – Power Supply"

SECURITY:

No security steps are applicable for this task.

RELEASE:

StableNet 8.1.4a and above.

SUMMARY OF TASK VERIFICATION AND ACTIONS:

ITEM	DESCRIPTION
Failure Type	Electric
Failure	VCX-IP Power Supply Failure
Effect	Loss of VCX-IP Power Supply redundancy
Cause	Power Supply Failure
Solution	Replace VCX-IP Power Supply