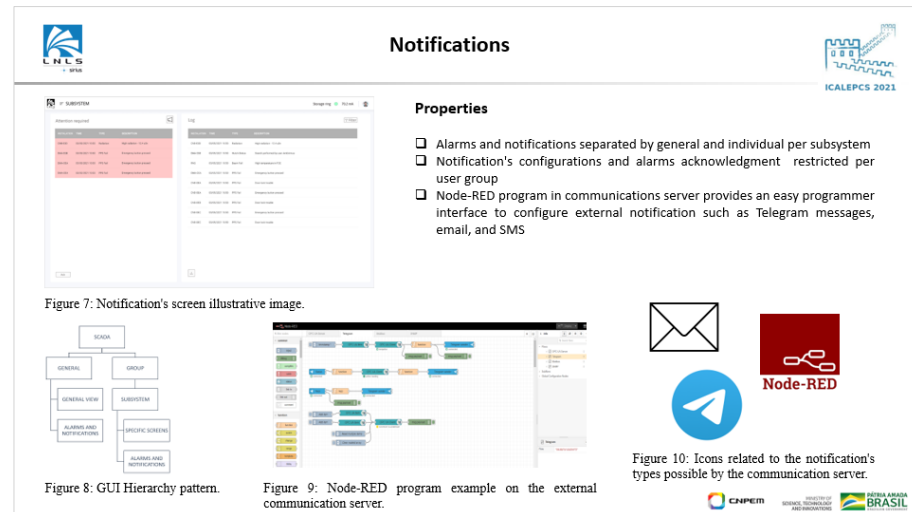
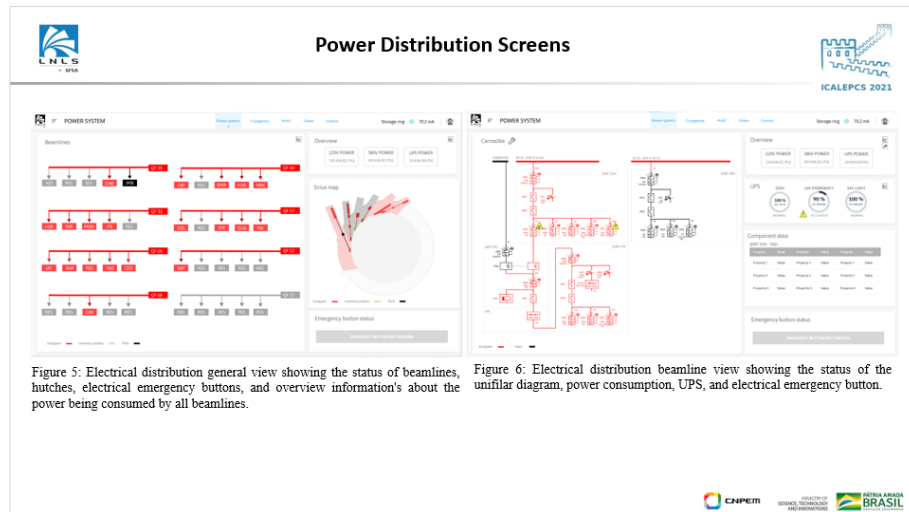
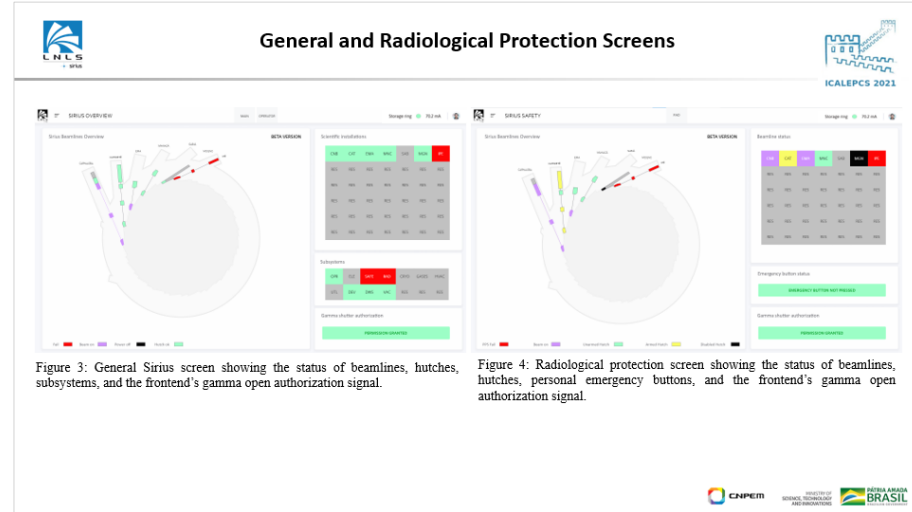
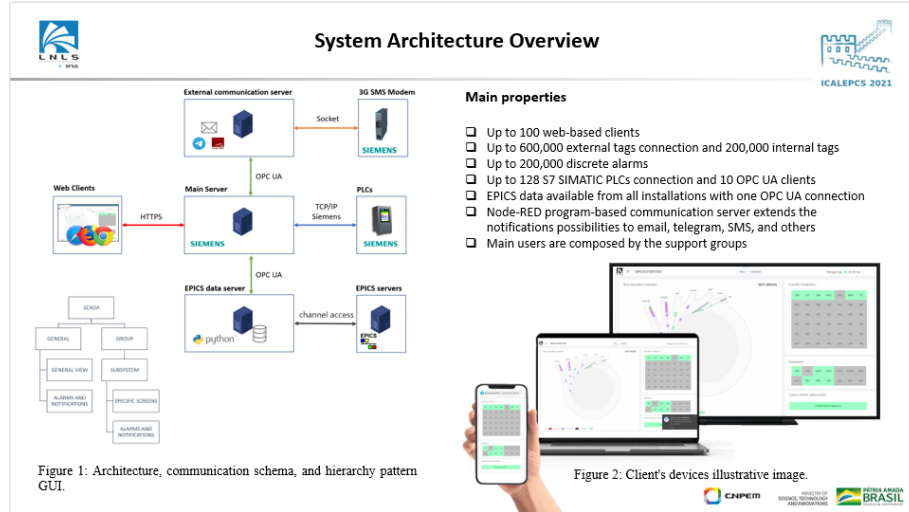


THPV001



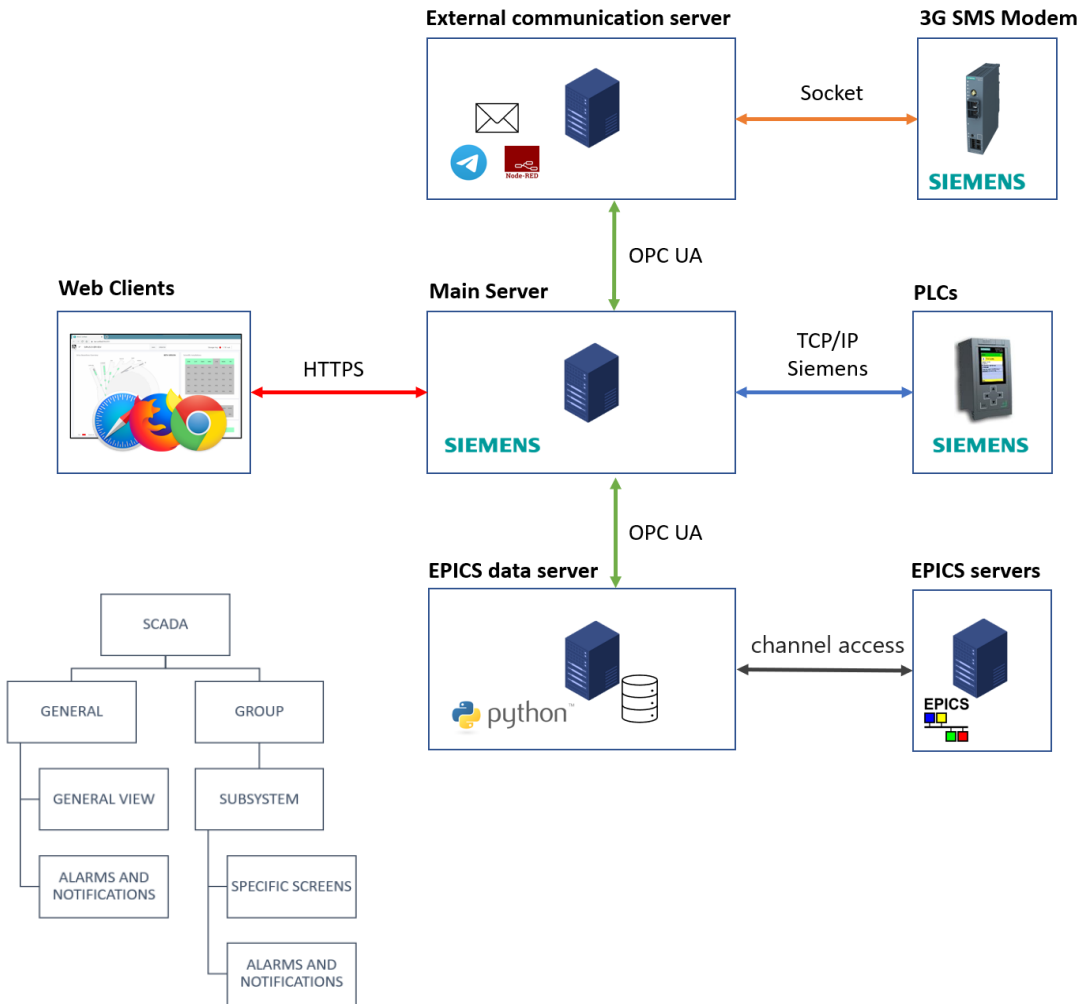


Figure 1: Architecture, communication schema, and hierarchy pattern GUI.

Main properties

- ❑ Up to 100 web-based clients
- ❑ Up to 600,000 external tags connection and 200,000 internal tags
- ❑ Up to 200,000 discrete alarms
- ❑ Up to 128 S7 SIMATIC PLCs connection and 10 OPC UA clients
- ❑ EPICS data available from all installations with one OPC UA connection
- ❑ Node-RED program-based communication server extends the notifications possibilities to email, telegram, SMS, and others
- ❑ Main users are composed by the support groups



Figure 2: Client's devices illustrative image.

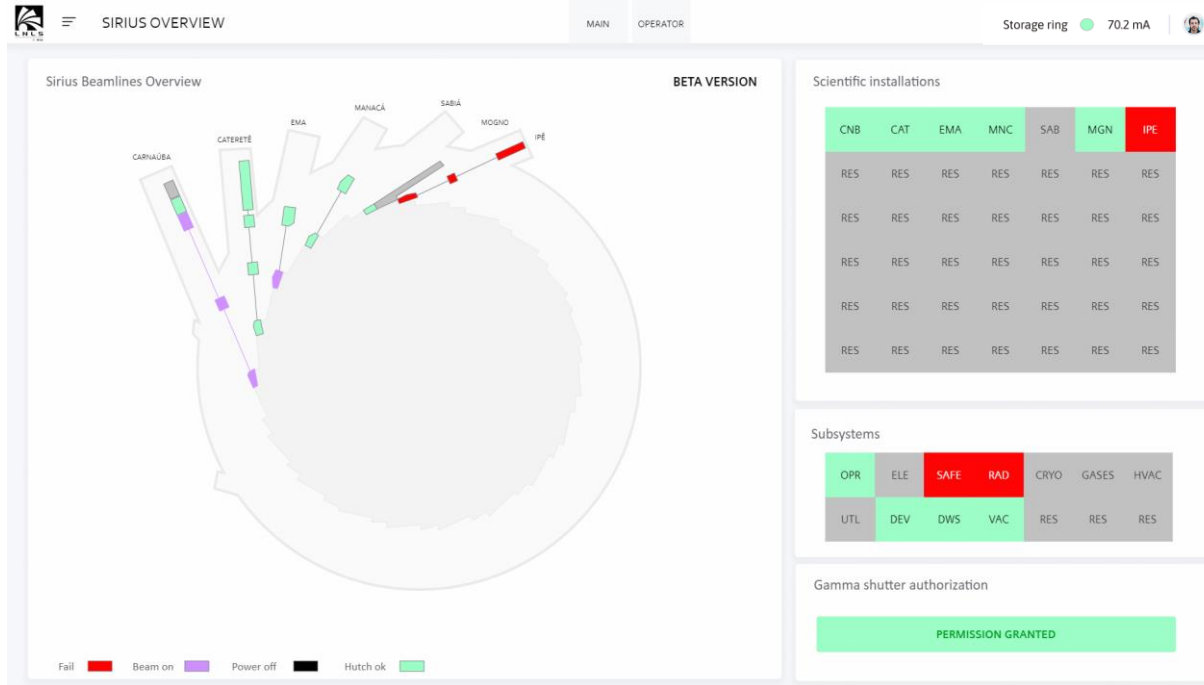


Figure 3: General Sirius screen showing the status of beamlines, hutches, subsystems, and the frontend's gamma open authorization signal.

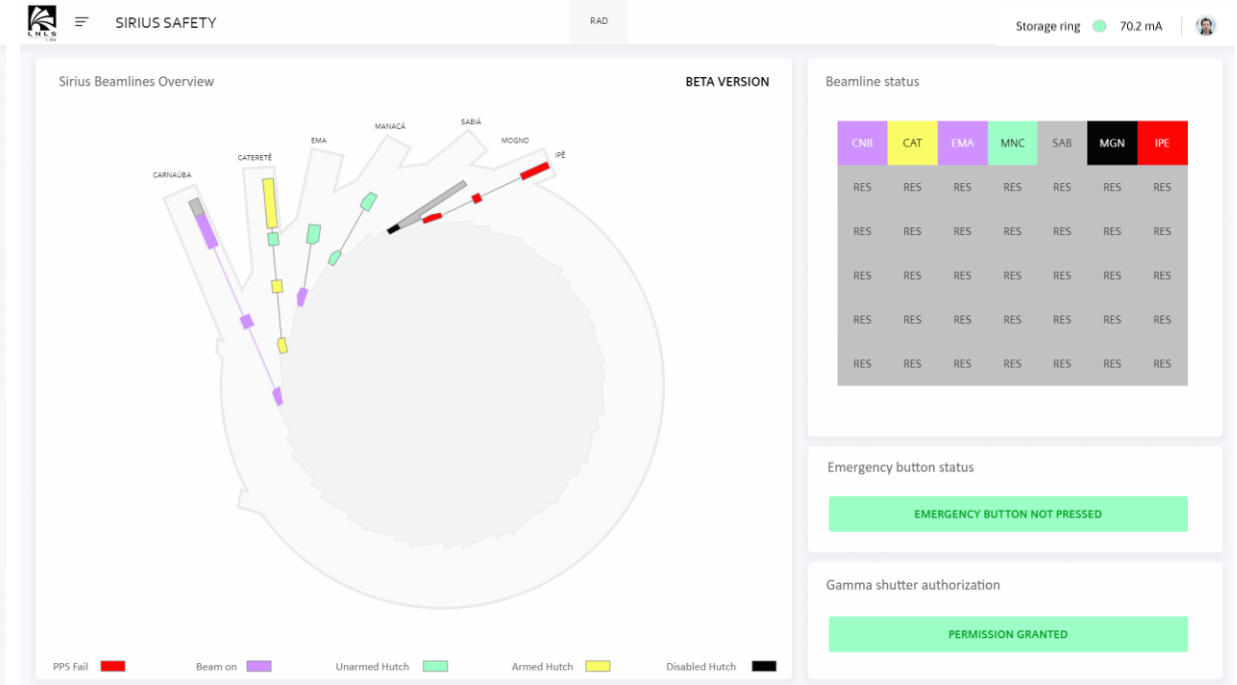


Figure 4: Radiological protection screen showing the status of beamlines, hutches, personal emergency buttons, and the frontend's gamma open authorization signal.

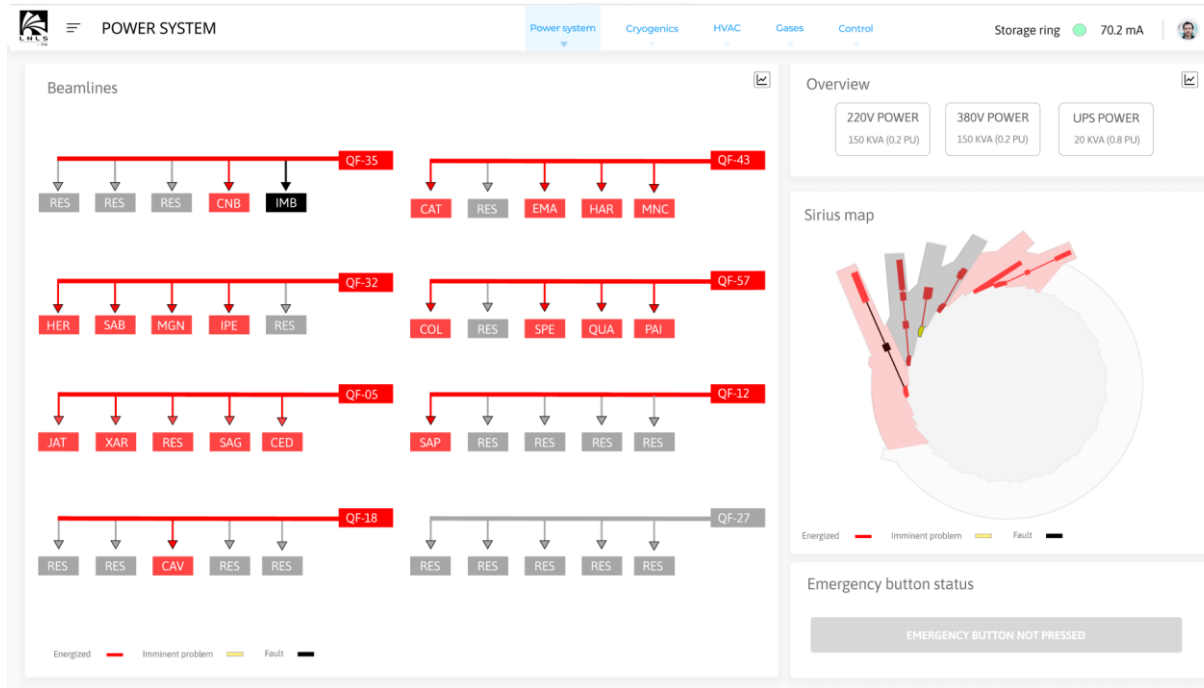


Figure 5: Electrical distribution general view showing the status of beamlines, hutches, electrical emergency buttons, and overview information's about the power being consumed by all beamlines.

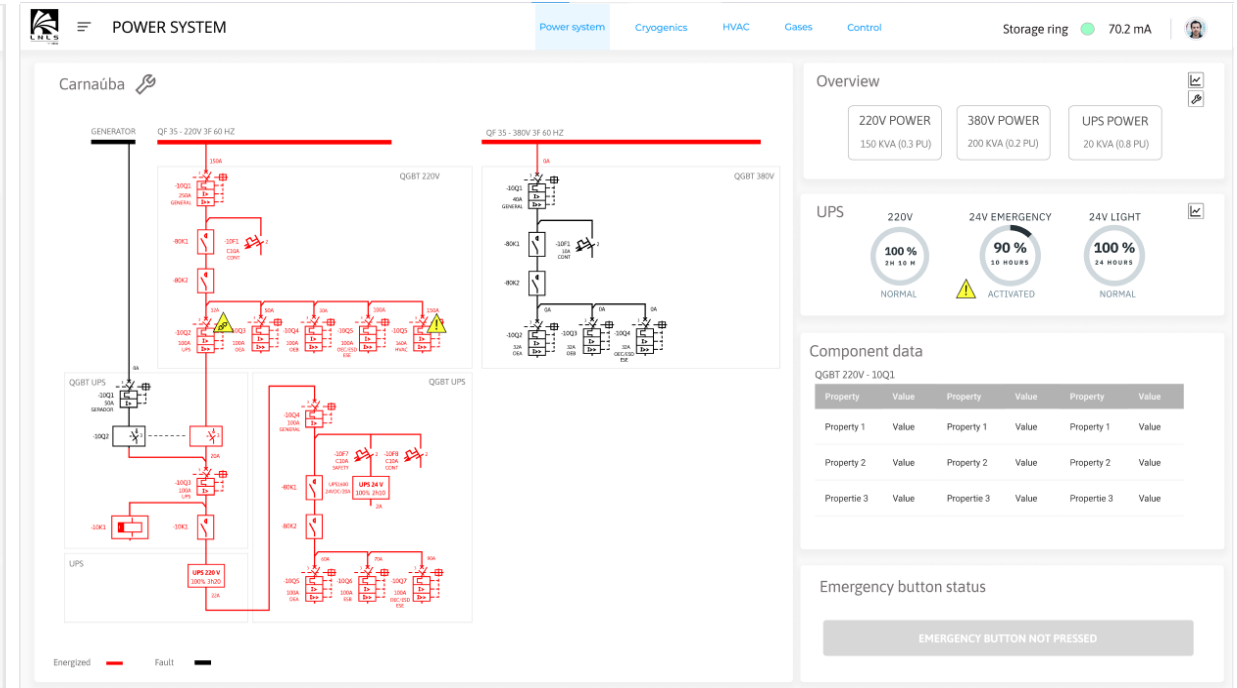
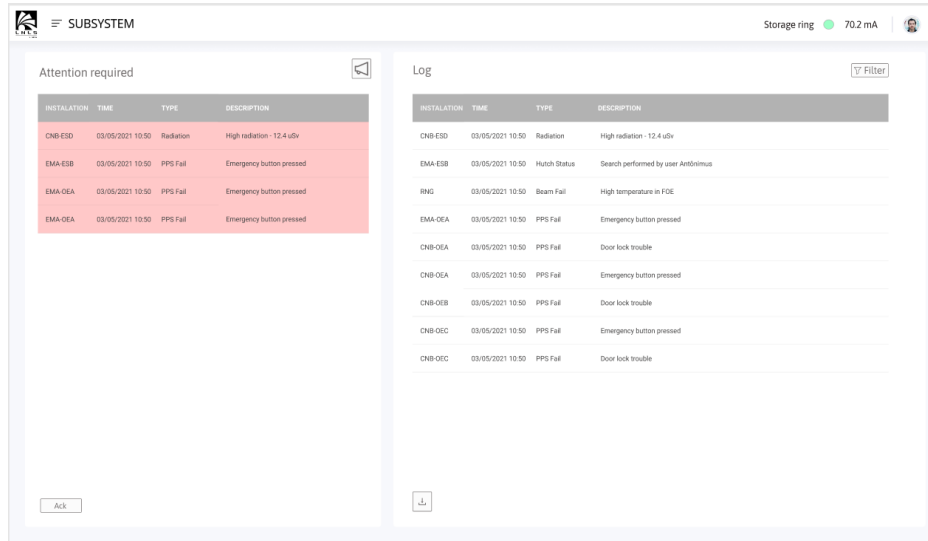


Figure 6: Electrical distribution beamline view showing the status of the unifilar diagram, power consumption, UPS, and electrical emergency button.



Properties

- ❑ Alarms and notifications separated by general and individual per subsystem
- ❑ Notification's configurations and alarms acknowledgment restricted per user group
- ❑ Node-RED program in communications server provides an easy programmer interface to configure external notification such as Telegram messages, email, and SMS

Figure 7: Notification's screen illustrative image.

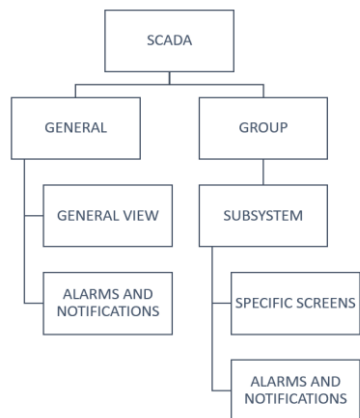


Figure 8: GUI Hierarchy pattern.

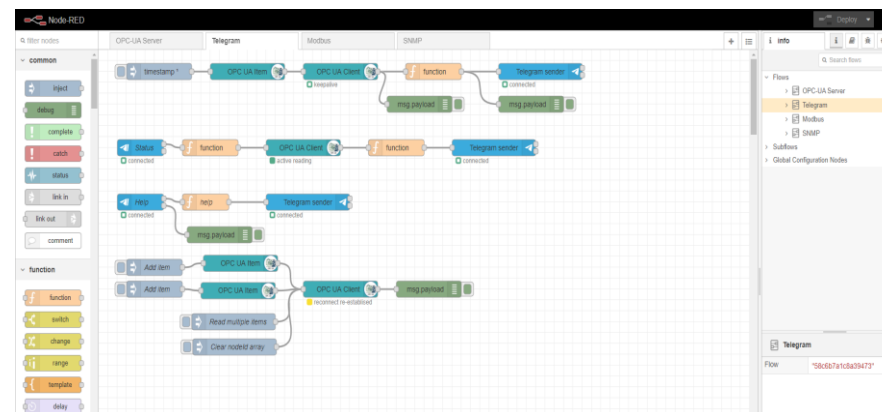


Figure 9: Node-RED program example on the external communication server.

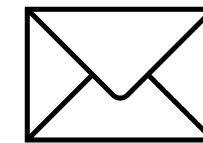


Figure 10: Icons related to the notification's types possible by the communication server.