



METEL.EU
SECURITY & AUTOMATION

IPLOG & LAN-RING in a Critical Infrastructure

IPLOG



Water Sources



Energetics



Armed Forces

The open concept of IPLOG-GAMA controllers allows customers to flexibly expand their production software with other useful tools. Typical examples are the software packages described below for deployment, for example, in critical infrastructure objects. IPLOG-GAMA controllers connected to LAN-RING network infrastructure provide a comprehensive solution for network infrastructure user authentication, network configuration change logging, VPN tunnel encryption, and other useful features.



Access to the System by Encrypted VPN Tunnel



Logging of LAN-RING Configuration Changes



Network Users Authentication by IEEE 802.1X



Linux Operating System with Secure SSH and HTTPS Connection



Industrial Design with Operating Temperature -40°C to $+70^{\circ}\text{C}$



The Backup Route for System Faults Reporting



Access to the System by Encrypted VPN Tunnel

The production software includes an **OpenVPN** package for encrypted connection of remote clients (PCs) to a protected network. **OpenVPN** allows you to establish secure connections using a shared key, digital certificate, or user name and password.

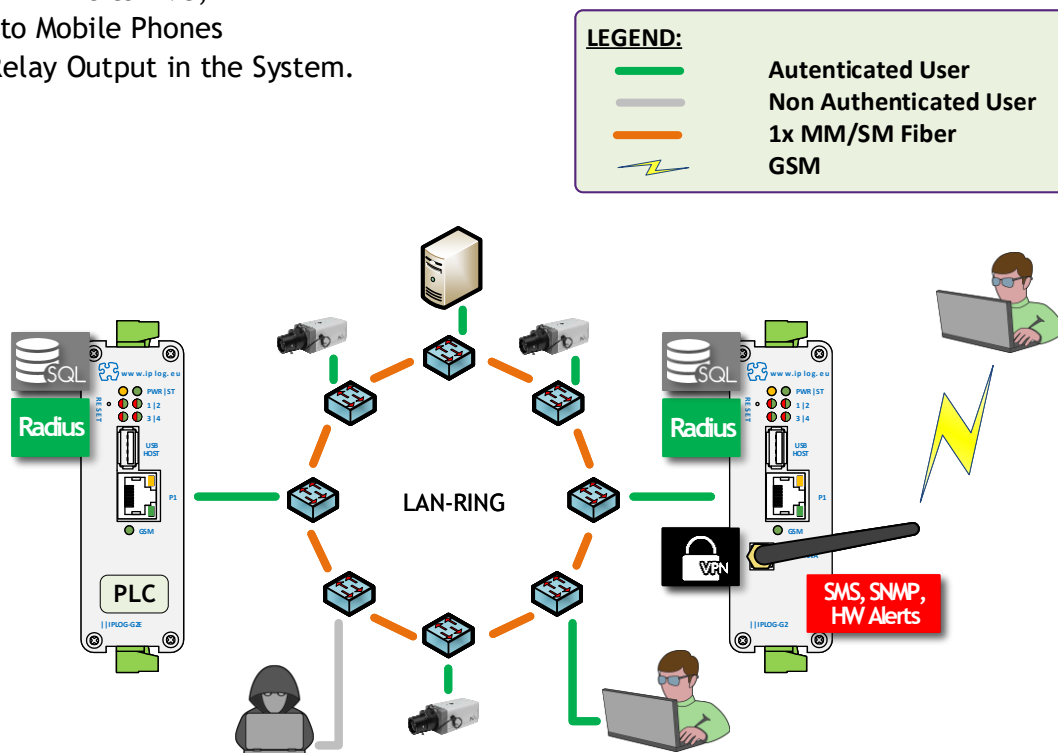
Logging of LAN-RING Configuration Changes

There is a risk of incorrect configuration in each system. The cause may be negligence, ignorance, or at worst, intent. The **metel-app-config-change-server** application is a useful preventive and analytical tool to eliminate these risks. All changes made to the LAN-RING configuration are stored in the MySQL database of the IPLOG-GAMA control unit. System security staff can then analyze them at any time.

Network Users Authentication by IEEE 802.1X

All network users are authenticated by the **freeradius-server** application installed in the IPLOG-GAMA controllers before connecting to the network. If a new user tries to connect to the network (PC, camera, server), the **freeradius-server** first checks its identity and only then, if the user has valid credentials, allow access to the network. Security incidents notifications will be sent:

- ❖ via SNMP TRAPs to BMS,
- ❖ via SMS to Mobile Phones
- ❖ to any Relay Output in the System.



Linux Operating System with Secure SSH and HTTPS Connection

IPLOG-GAMA controllers support secure configuration via SSH console, web interface with HTTPS or SNMPv3 support.

Industrial Design with Operating Temperature -40°C to $+70^{\circ}\text{C}$

When manufacturing IPLOG & LAN-RING equipment, we use components with a minimum operating temperature range of -40°C to $+85^{\circ}\text{C}$. Inputs and outputs always protect against overvoltage protection.

The backup Route for System Faults Reporting

The 2G, 3G and 4G / LTE interfaces can also be used as a back-up route for system fault reporting.