EMPOWERING ENERGY INTEGRATION

GOOSE Monitor

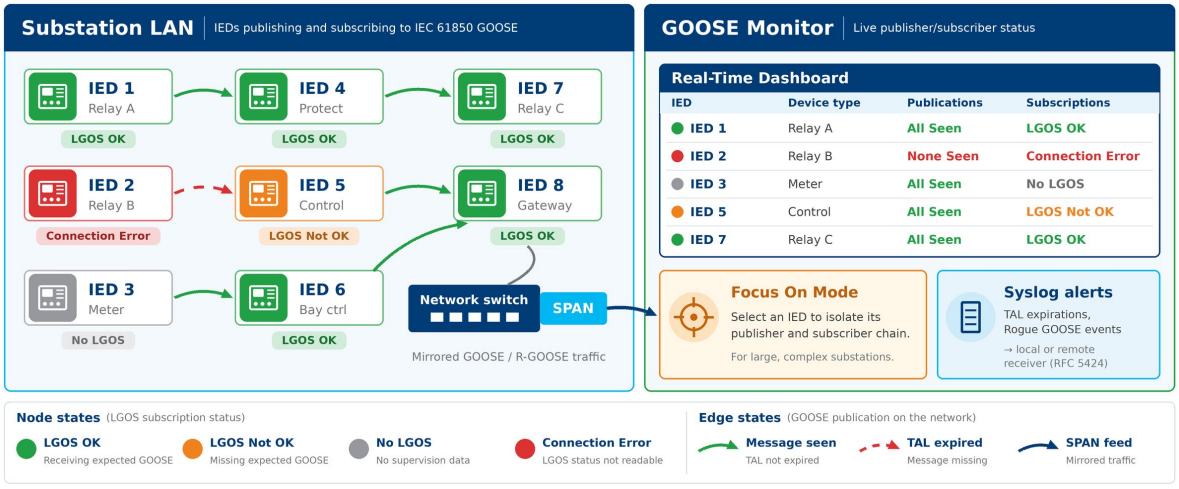
Pinpoint GOOSE Faults at a Glance

When IEC 61850 GOOSE messaging fails, protection schemes are at risk. Finding the cause with packet sniffers means decoding raw multicast traffic and checking IEDs one by one. GOOSE Monitor replaces that manual hunt with a live, color-coded map of every GOOSE publisher and subscriber on the network, so engineers see what is healthy, what has dropped, and where to look first.

Operational substations can carry thousands of GOOSE messages per second between hundreds of devices. Traditional network tools show the traffic, but not whether each subscriber is actually receiving what it expects. GOOSE Monitor shows both: publication status from the network and subscription status from each IED's GOOSE subscription supervision logical nodes (LGOS).

Why It Matters

- **See problems immediately.** Publish and subscribe status for every IED appears on one screen; problem devices and broken links stand out by color.
- **Go straight to the source.** Once alerted, engineers trace a fault through its publisher-subscriber chain instead of checking devices one at a time.
- **Expose rogue and misconfigured traffic.** Unconfigured publishers, duplicate sources, and configuration mismatches surface before they compromise protection.
- **Monitor proactively, locally or remotely.** Syslog alerts on error and potentially malicious conditions support maintenance and security teams.
- **Deploy in any IEC 61850 system.** Configure from SCL files, or manually when SCL files are incomplete or missing.
- **Cover LAN and WAN.** Monitors Ethernet GOOSE and Routable GOOSE (R-GOOSE) over IP multicast.

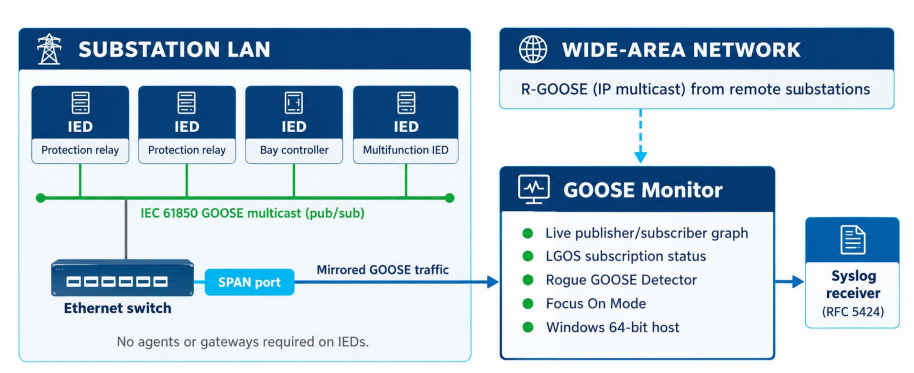


Example: IED 2 stops publishing, and GOOSE Monitor flags the affected subscriber (IED 5).

Key Capabilities

- **One-step configuration from SCL (IEC 61850-6).** One SCD import configures visualization and communications. CID files import singly or in bulk; manual or spreadsheet entry covers systems without SCL files.
- **Live subscription status (LGOS).** Node colors show which devices are not receiving the data they expect.
- **Live publication status.** Edge colors show whether each GOOSE message is present on the network, including time-allowed-to-live (TAL) expiration.
- **Focus On Mode.** Isolates one IED's publisher and subscriber relationships for a simplified view of large, complex substations.
- **Rogue GOOSE Detector.** Flags unconfigured GOOSE and error conditions, including duplicate publishers, out-of-sequence messages, and mismatched ConfRevNum.
- **Detailed inspection.** Hover to identify IEDs and control blocks; drill into data set values, device mode, LGOS subscriptions, quality, and timestamps.
- **Integrated Syslog client.** Sends TAL expirations, Rogue GOOSE events, and other error conditions to local or remote receivers.

Deployment Architecture



Standard Windows host. Mirrored station traffic in, Syslog alerts out. No agents on IEDs.

Technical Specifications

Parameter	Specification
GOOSE protocols	IEC 61850 GOOSE (Ethernet); R-GOOSE (IP multicast)
Configuration	SCL per IEC 61850-6: SCD import; CID import (single or bulk); manual and spreadsheet entry
Subscription supervision	LGOS (GOOSE subscription supervision logical node)
Network connection	Ethernet trunk or mirror (SPAN) port on network switch; multiple Ethernet adapters
Remote logging	Syslog client (RFC 5424)
Platform	64-bit application; Windows Server 2016, Windows Server 2019, Windows 10

Related SISCO tools: GOOSE Blaster (GOOSE/R-GOOSE simulation), R-GOOSE Gateway (GOOSE over the WAN), and KDC (IEC 62351-9 key distribution).

Next Step

Request a technical briefing scoped to your RAS portfolio and transmission corridors.
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