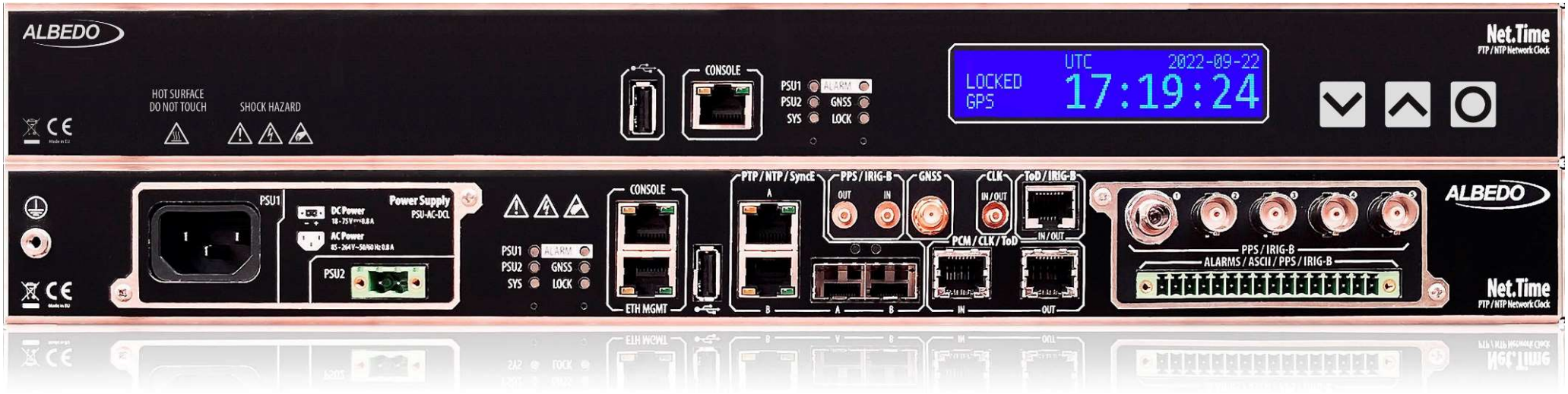
NeT.Time NMS: SyncMap

Network Management System for Net.Time

ALBEDO

Net.Time



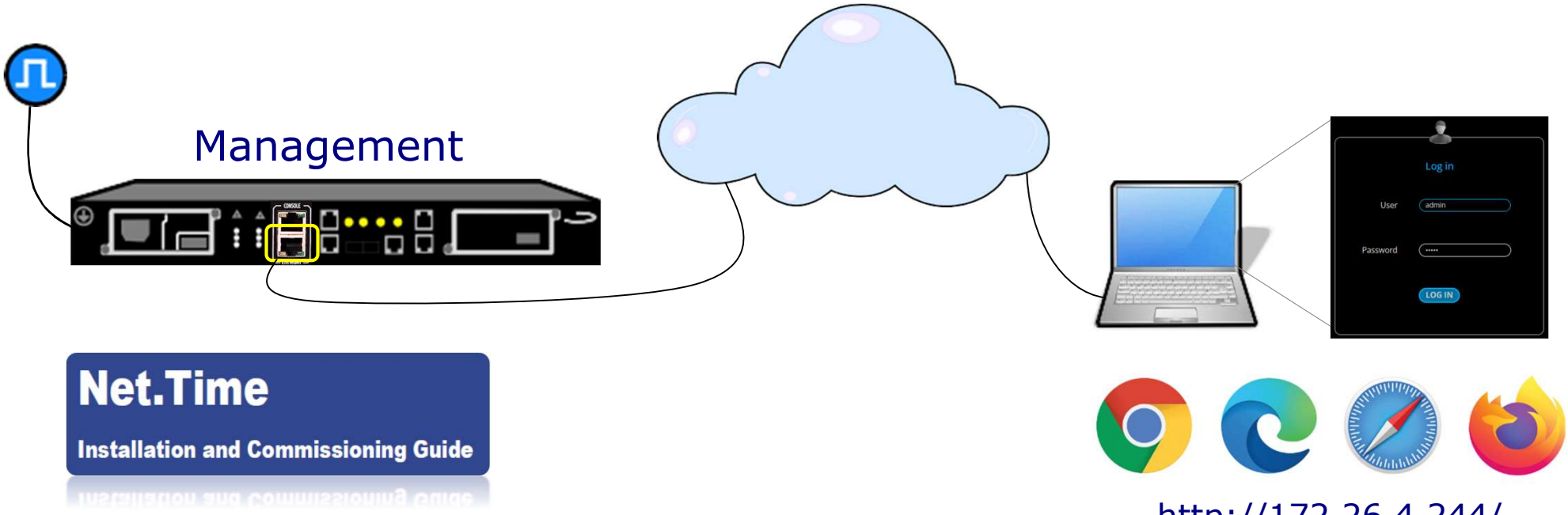
Net.Time is a PTP/NTP/PRP network clock that allows for multiple configurations to meet the timing demands of any industry, including data centres, stock exchange, broadcast, IoT, power utilities, or air traffic control.

Net.Time is reliable and fault-tolerant solution to loss of reference, network outages and power failures. Simultaneously Net.Time Ω simplifies the migration to PTP without abandoning investments in NTP, IRIG-B or BITS, facilitating on this way the integration, interaction and translation of all types of signals, profiles and protocols

Native Management

ALBEDO

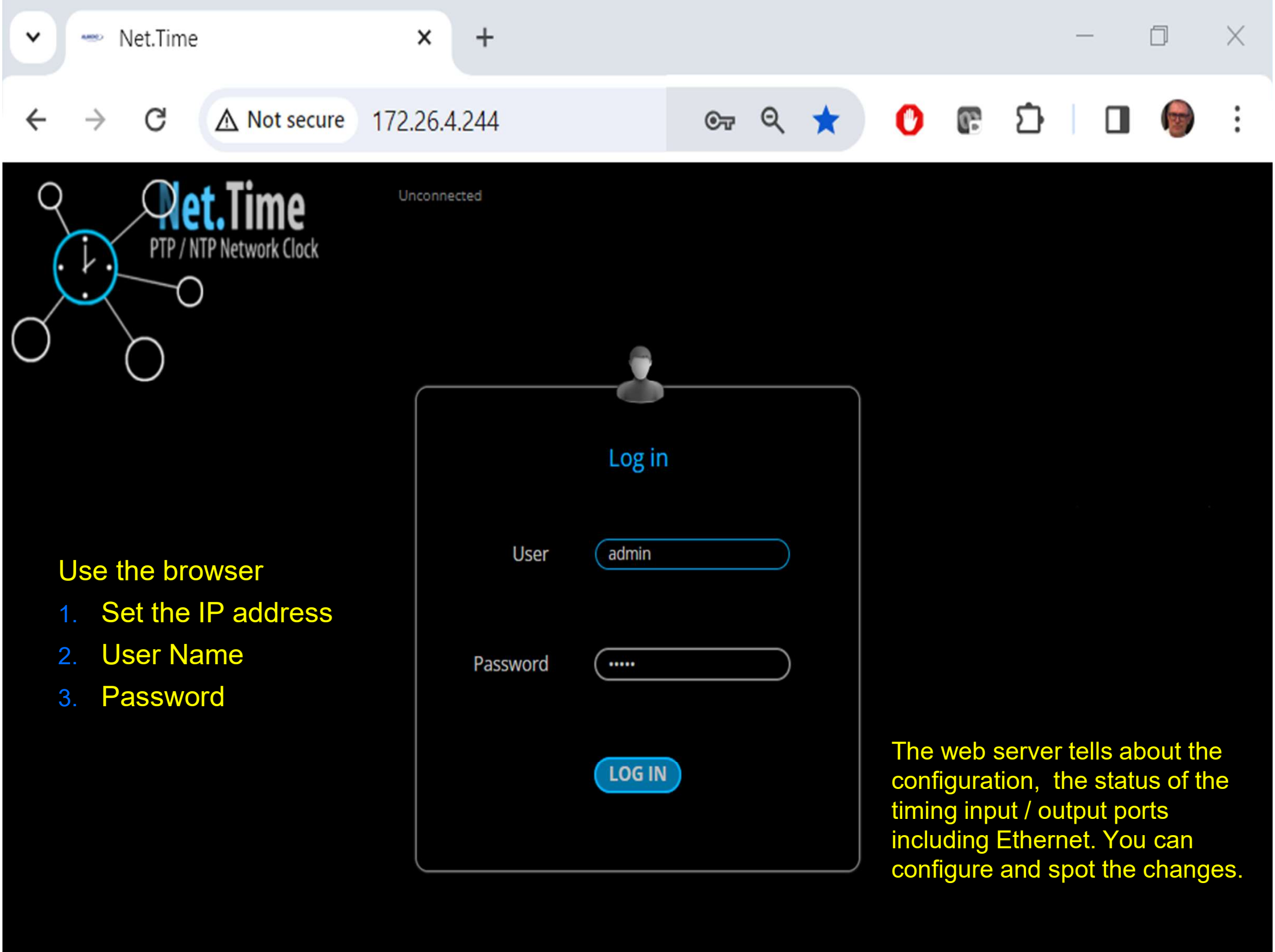
Initial Configuration: **Console Connection**

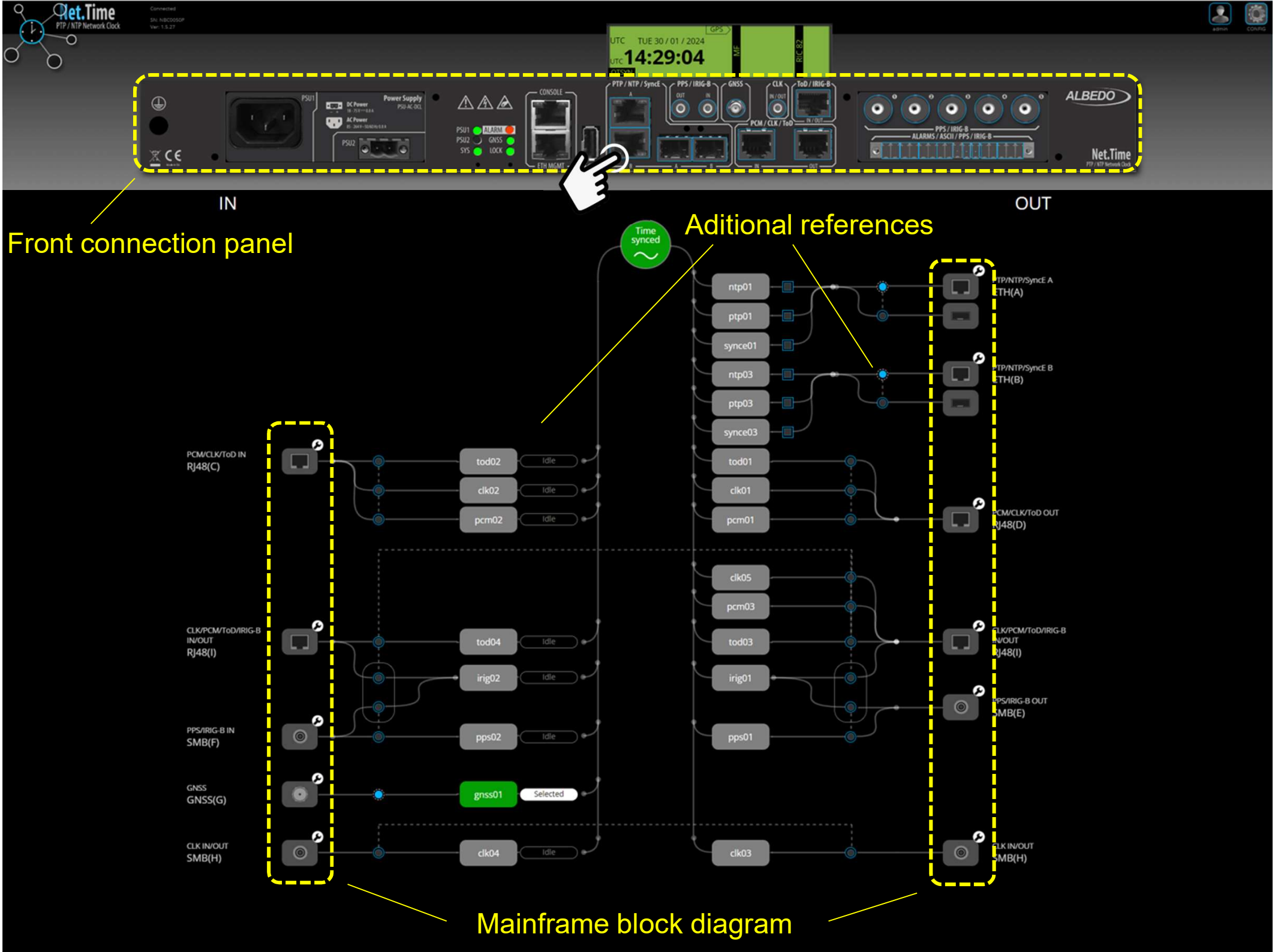


To run the application from a Labtop type the IP address in the browser. The protocol is HTTP or HTTPS, depending on the configuration.

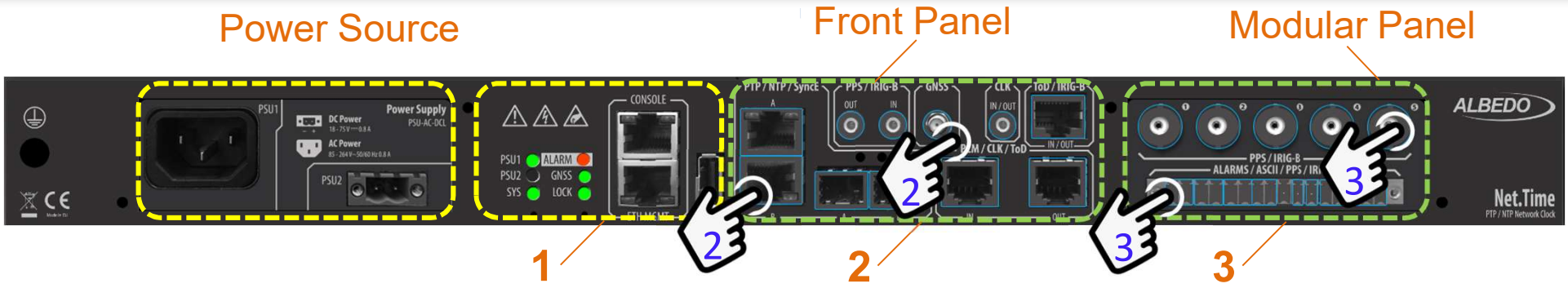
The application requires credentials (user name + password) then same as CLI and there are three kinds of users:

1. Administrators
2. Controllers
3. Viewers


Net.Time
Not secure
172.26.4.244
Net.Time
PTP / NTP Network Clock
Unconnected
Log in
User
admin
Password
LOG IN
Use the browser
1. Set the IP address
2. User Name
3. Password
The web server tells about the configuration, the status of the timing input / output ports including Ethernet. You can configure and spot the changes.


Net.Time
PTP / NTP Network Clock
UTC TUE 30 / 01 / 2024
UTC 14:29:04
ALBEDO
Net.Time
IN
OUT
Front connection panel
Aditional references
Time synced
PCM/CLK/ToD IN
RJ48(C)
CLK/PCM/ToD/IRIG-B IN/OUT
RJ48(I)
PPS/IRIG-B IN
SMB(F)
GNSS
GNSS(G)
CLK IN/OUT
SMB(H)
tod02
clk02
pcm02
tod04
irig02
pps02
gnss01
clk04
ntp01
ptp01
synce01
ntp03
ptp03
synce03
tod01
clk01
pcm01
clk05
pcm03
tod03
irig01
pps01
clk03
Idle
Selected
PTP/NTP/SyncE A
ETH(A)
PTP/NTP/SyncE B
ETH(B)
PCM/CLK/ToD OUT
RJ48(D)
CLK/PCM/ToD/IRIG-B
IN/OUT
RJ48(I)
PPS/IRIG-B OUT
SMB(E)
CLK IN/OUT
SMB(H)
Mainframe block diagram

Mainframe Block Diagram



This is a replica of the Net.Time that reproduces connectors, LEDs and other elements. Sub-panels depend on the hardware:

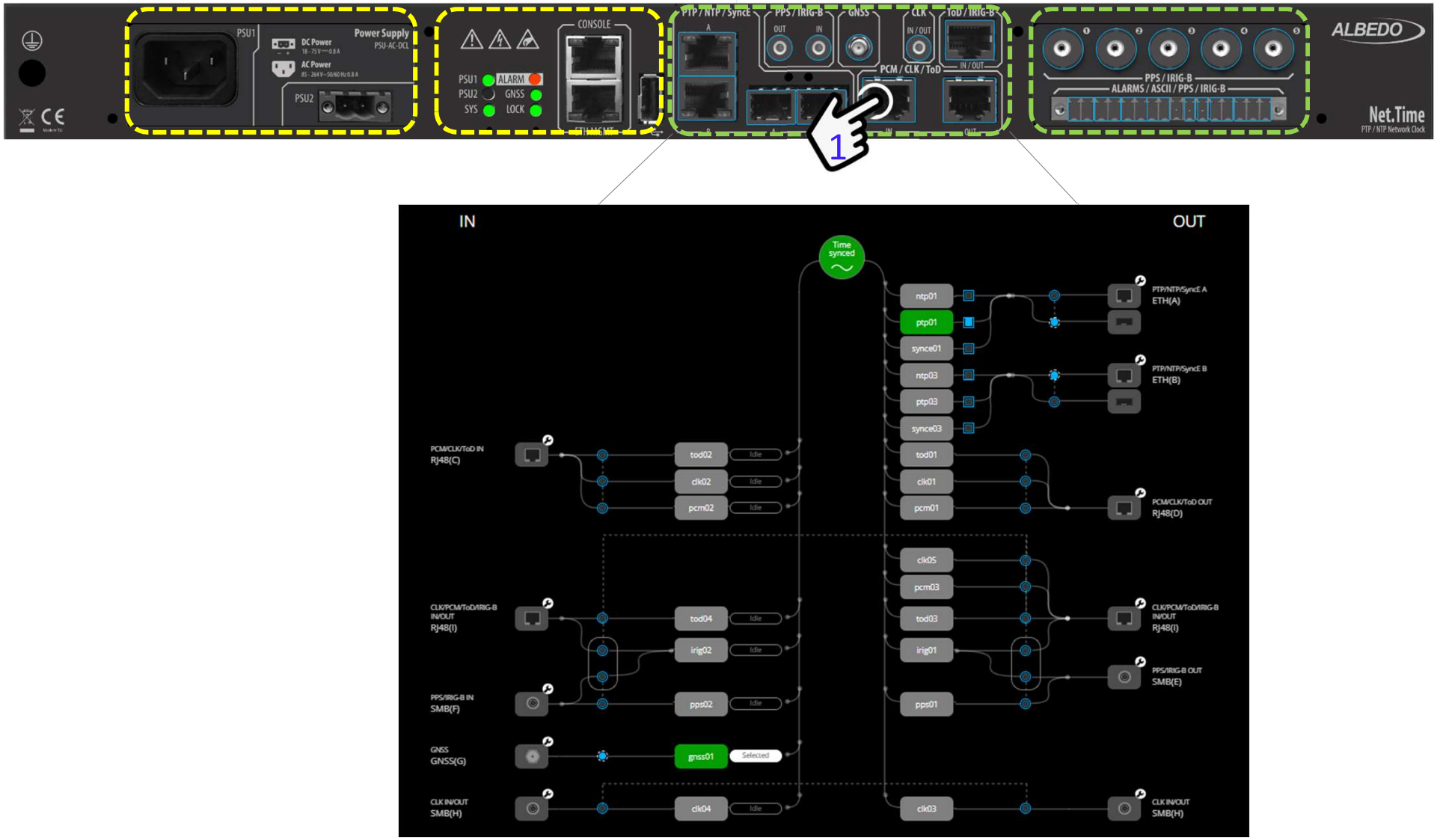
- Power sources
- Time references

There are 3 sub-panels

1. Management connectors and LEDs
2. Front Panel with the Mainframe clock references
3. Modular Panel with the Complementary clock references

You can Click any port of sub-panel 2 or 3 then it will be displayed a diagram that will permit you to know the configuration and change it.

Front Connection Panel



Some blocks can be inputs or outputs clock references (transmitted or received) other blocks are interfaces which are the clock references themselves.

Network Management System

Agnostic solution

F FAULT MANAGEMENT

C CONFIGURATION MANAGEMENT

A ACCOUNTING MANAGEMENT

P PERFORMANCE MANAGEMENT

S SECURITY MANAGEMENT

FCAPS-based system for multi-vendor and multi-technology network infrastructure.

Flexible and modular ideal for mission critical networks.

Monitoring of alarms, status, statistics, inventory, circuits, and performance. allowing for visualization of temporal correlation of events and their impact on services.

Consolidating the management of legacy and next generation networks, enabling OT&IT convergence.

Configuration and provisioning of E2E circuits, backup history, firmware update.

SyncMap solutions suite

OSS - Operations Support System

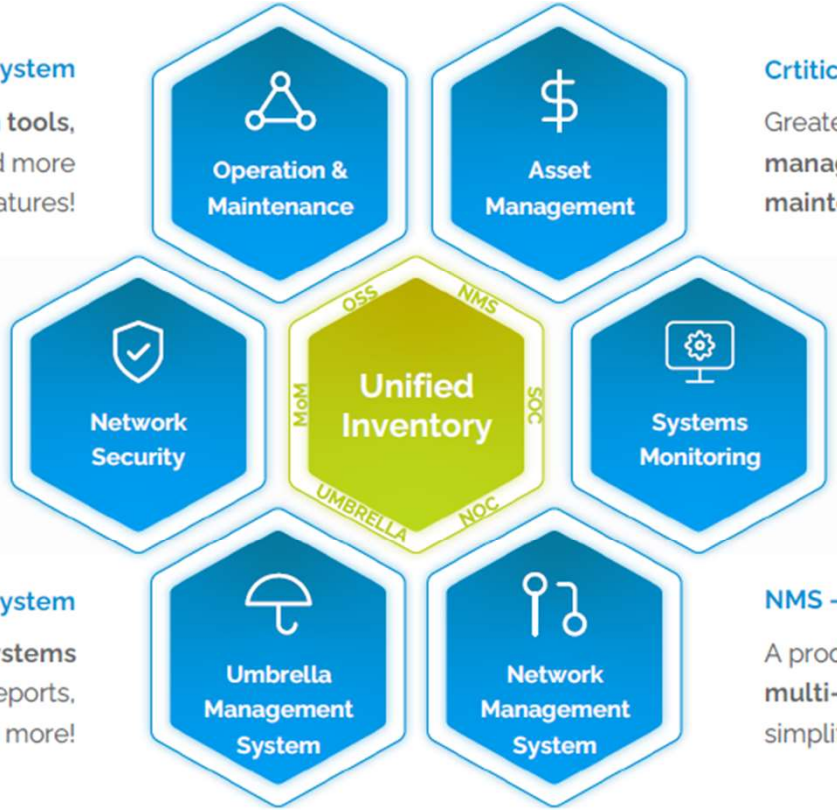
Service provisioning, fault correlation tools, massive backup execution. All of these and more features!

Network Security

Access control, authentication, DB encryption, reporting, and integration with external **cybersecurity systems** and more features.

UMS - Umbrella Management System

A **single solution integrating data from systems and monitoring tools**, delivering advanced reports, inventory and much more!



Crtitical Asset Management

Greater asset **visibility and control**, improved **management, configuration, operation and maintenance** processes.

Systems Monitoring

Monitor **critical network systems**, important **processes**, and essential **services** within your company's management.

NMS – Network Management System

A product with a strong background, designed for **multi-vendor** and **multi-technology networks** that simplifies monitoring and management operations

Highlighted features

F FAULT MANAGEMENT

- Network Topology.
- Alarm management and Correlation.
- Ad-hoc Dashboards and reports.
- Asset visualization.

C CONFIGURATION MANAGEMENT

- Asset Configuration
- Asset Auto-Discovery
- Asset Integrator
- Massive operations

A ACCOUNTING MANAGEMENT

- Network Inventory
- Advanced Analytics
- Reporting
- Integration

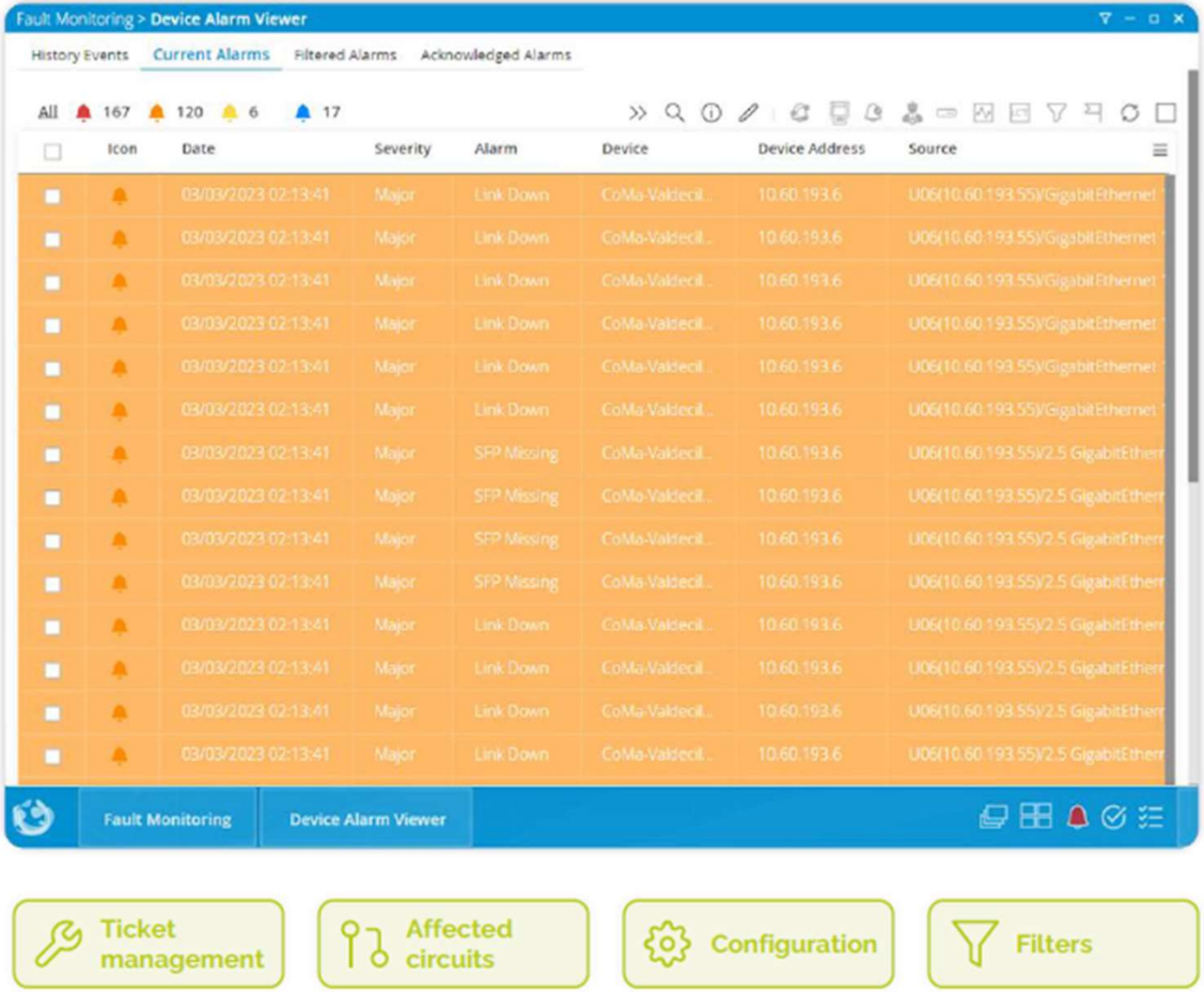
P PERFORMANCE MANAGEMENT

- Historical Statistics
- Real-Time Events
- Services performance
- Health indicators

S SECURITY MANAGEMENT

- Auditor
- User management
- Log activity
- High availability

Real-time & Historical **alarms + events**



Alarms, events and services monitoring

Real-time monitoring of alarms and fault locations, both for assets (equipment, circuits, or services) geographical locations.

Correlation and escalation

Combine, hide, compress, correlate alarms to improve diagnosis and prediction. Send by e-mail and whatsapp.

Protocol-agnostic and multi-layered

Receive events and alarms from protocols such as SNMP, Syslog, IEC61850, ports, SFPs, circuits, services

Alarm intelligence and configuration

Alarms priority, colour, description, actions, audible warning.

Inventory


Topology
Config
Events
Inventraty
Measurements
NTMS by ALBEDO
User: Aderito
Help
Device Tracker Summary
Network Clocks
Index by Name
Sao Paulo 12
Campinas
Bahia
Fortaleza
Itaipu
Rio Grande
Time References
PTP
GPS
Events Log
Topoly
Ceará
Manaos
Bahia
Minas
Sao Paulo
Rio Grande Sul
Inventory
Measurements
Configuration
Itaipu 23 - Clock
Net.Time Phi - v5.3
192.23.07.104
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Complete asset inventory

Full Network Inventory

- Network elements (devices, cards, ports, SFPs, VLANs, subnetworks, servers, edges)
- Maps (topology, family, access layers, IP, personalized maps, regions, stations, links)
- Circuits (PDH, SDH, MPLS-TP services, XC tables, tunnels, pseudo wires, EVCs, ECEs etc.)

Assets status and documentation

Manage the status of your assets: installed, stock, transit or under maintenance. Repositories (images, manuals, firmware, LCT)

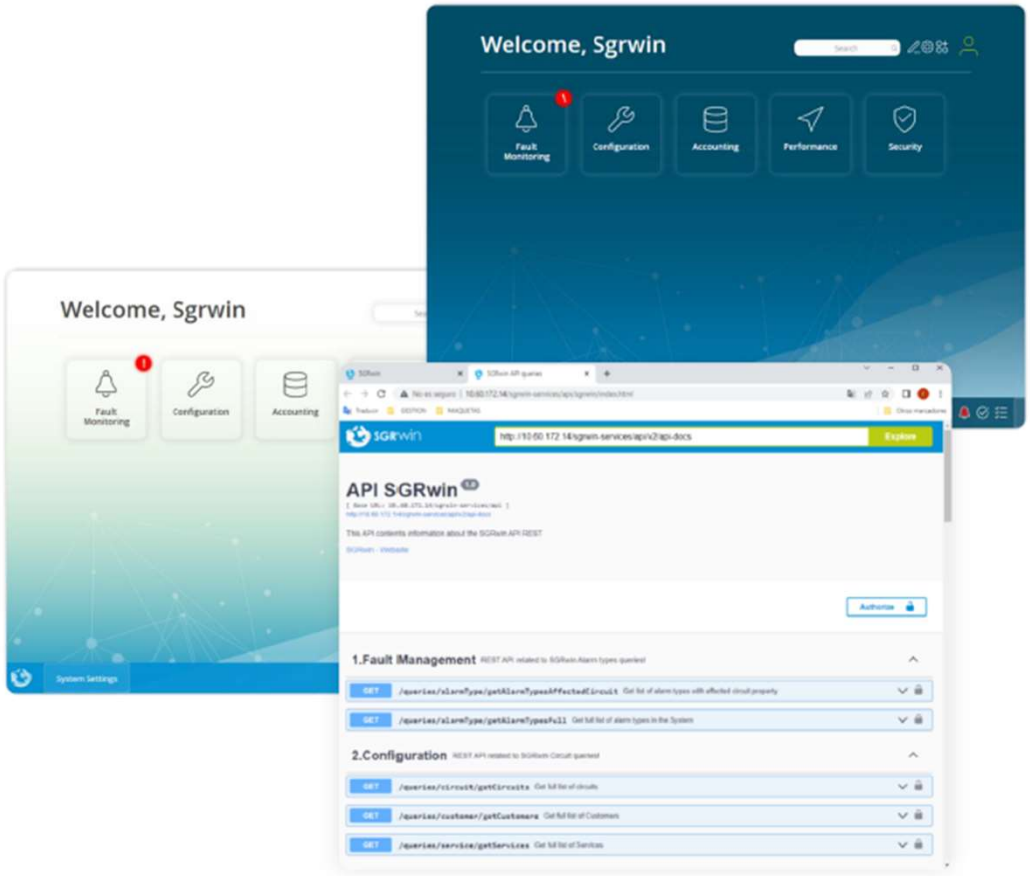
Network topology

Display all assets on a single map with various logical layers based on family, technology (access, transmission, IP), or topology.

Customize your views

Create, share and filter your own views.

System configuration



System and user customization

SyncMap allows for system customization, giving users the ability to change colors, wallpaper, and corporate logos. It also offers customization options for desktop and views, as well as sharing options.

Accessible environment with an API

Enrich your inventory by accessing your current asset information through our REST API or ODBC.

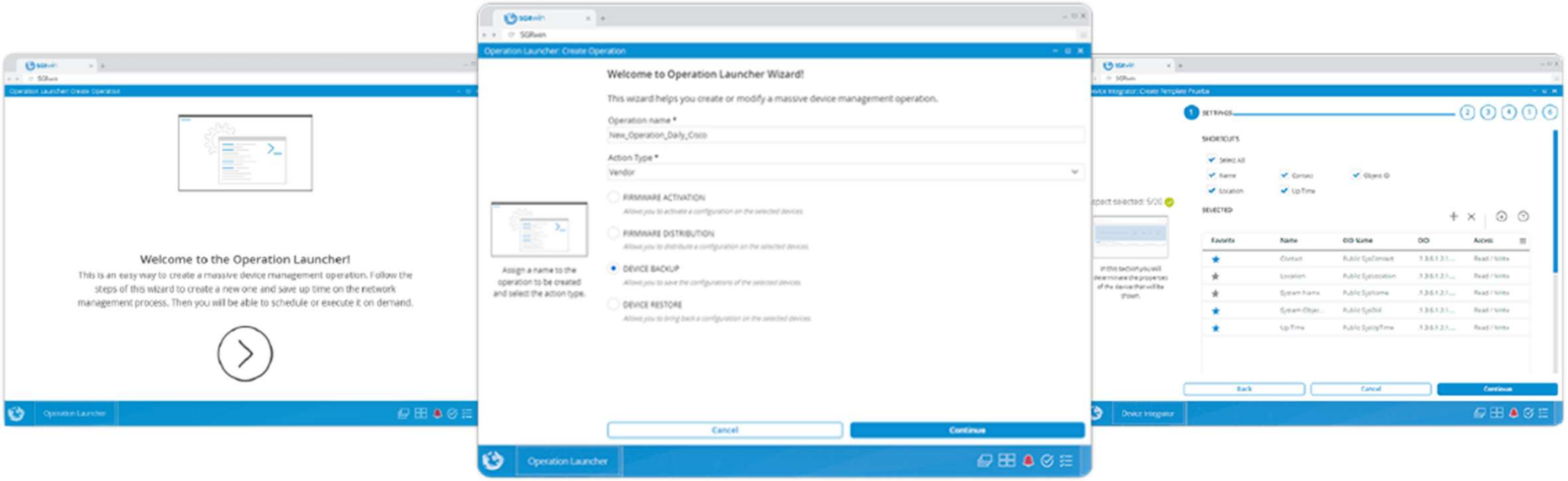
Management of scheduled tasks

Add system diagnostics and maintenance tasks.

Integration with corporate systems

Integration with mail servers, ticketing systems, LDAP, and other external tools can enhance the functionality of the system.

Assets configuration



MIB Browser

Manage your v1, v2 and v3 equipment and execute operations.

Device Integrator

Create a template for a new device model in just a few minutes.

MIB Compiler

Compile your MIBs to improve system efficiency.

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Real-time dashboards and reports

360°view organized by business units or regions

- Organize your network into multiple segments and user groups, manage networks and clients through one centralized system.
- Customize your dashboards using built-in FCAPS components and share them.
- Get real-time insights into THE business performance.

360°view of each network element

Create dashboards to monitor network assets such as equipment, links, circuits or stations.

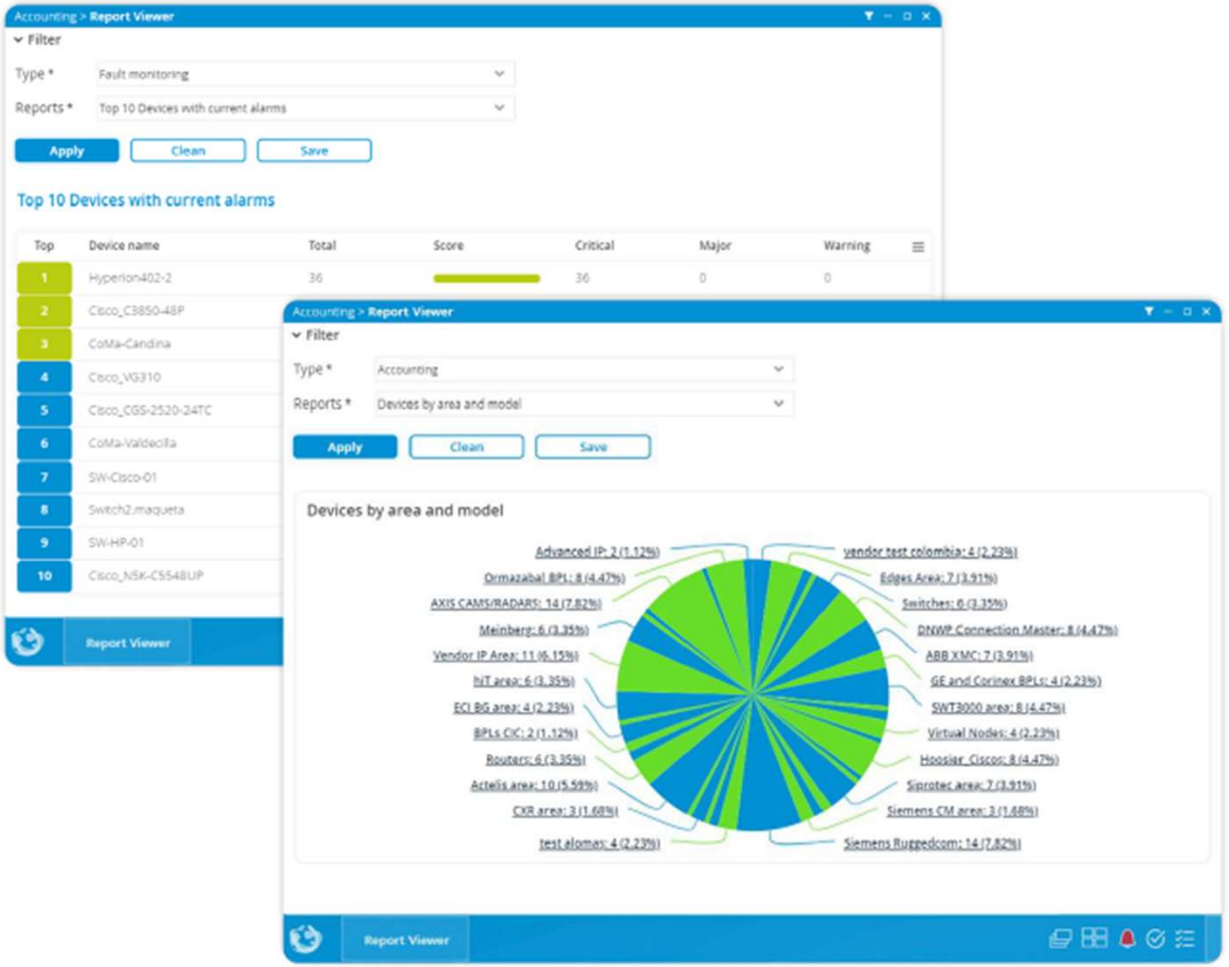
Personalized dashboards

We can create custom dashboards tailored to your specific information needs.

Personalized FCAPS reports

Obtain detailed reports on network performance and usage, presented in graphs, tables, or counters for various parameters.

Reports



Personalized FCAPS reports

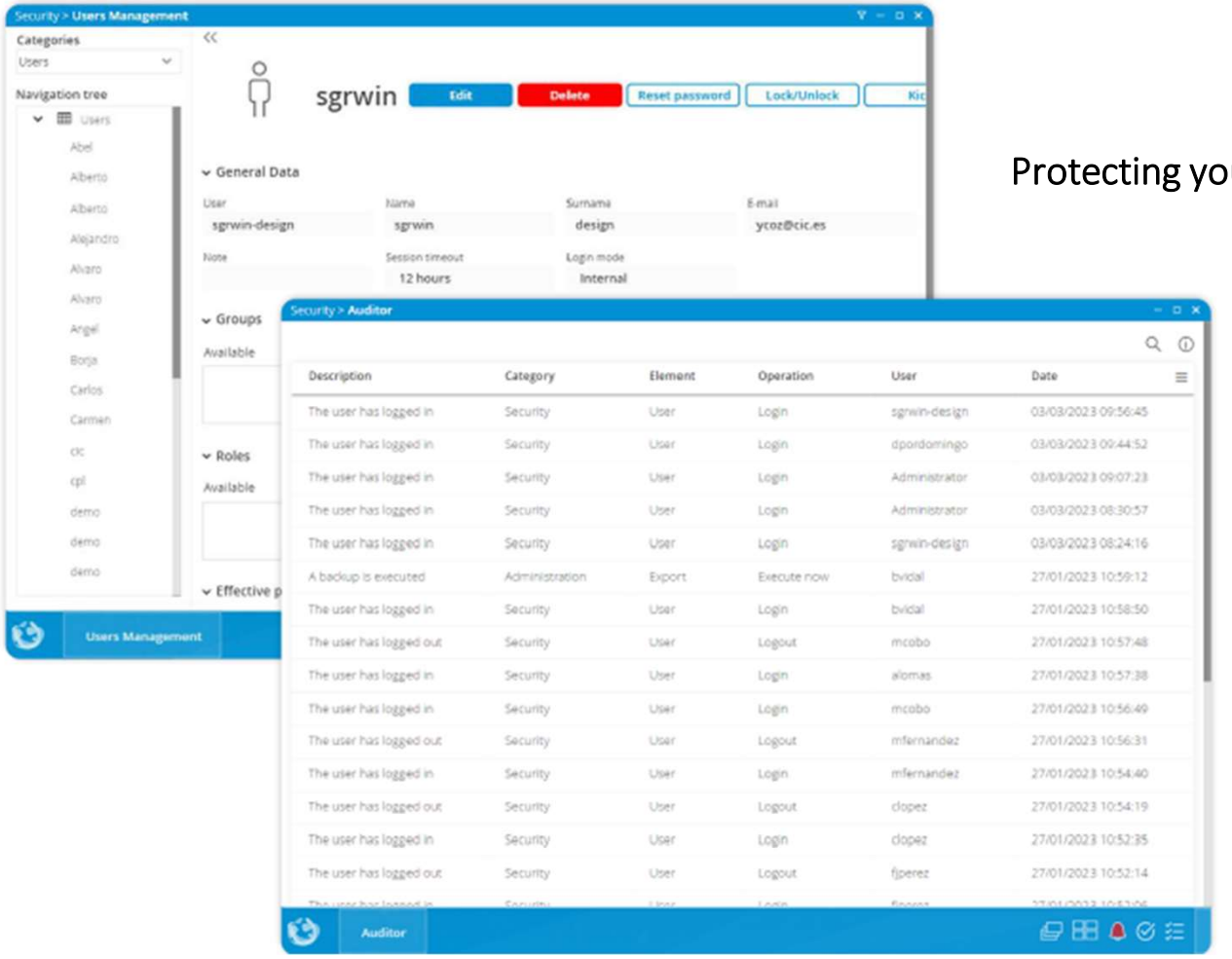
Obtain detailed reports on network performance and usage, presented in the form of graphs, tables, or counters for various parameters.

Personalized reports

Customized reports can be generated to provide clients with the specific information they require about their assets, including equipment, circuits, or services.

User, group, role and permissions management

Our tool enables you to improve your network security and compliance with regulations. Control everything on your network. Assign R/W permissions by asset type, application or LCT. Connect to your corporate LDAP.

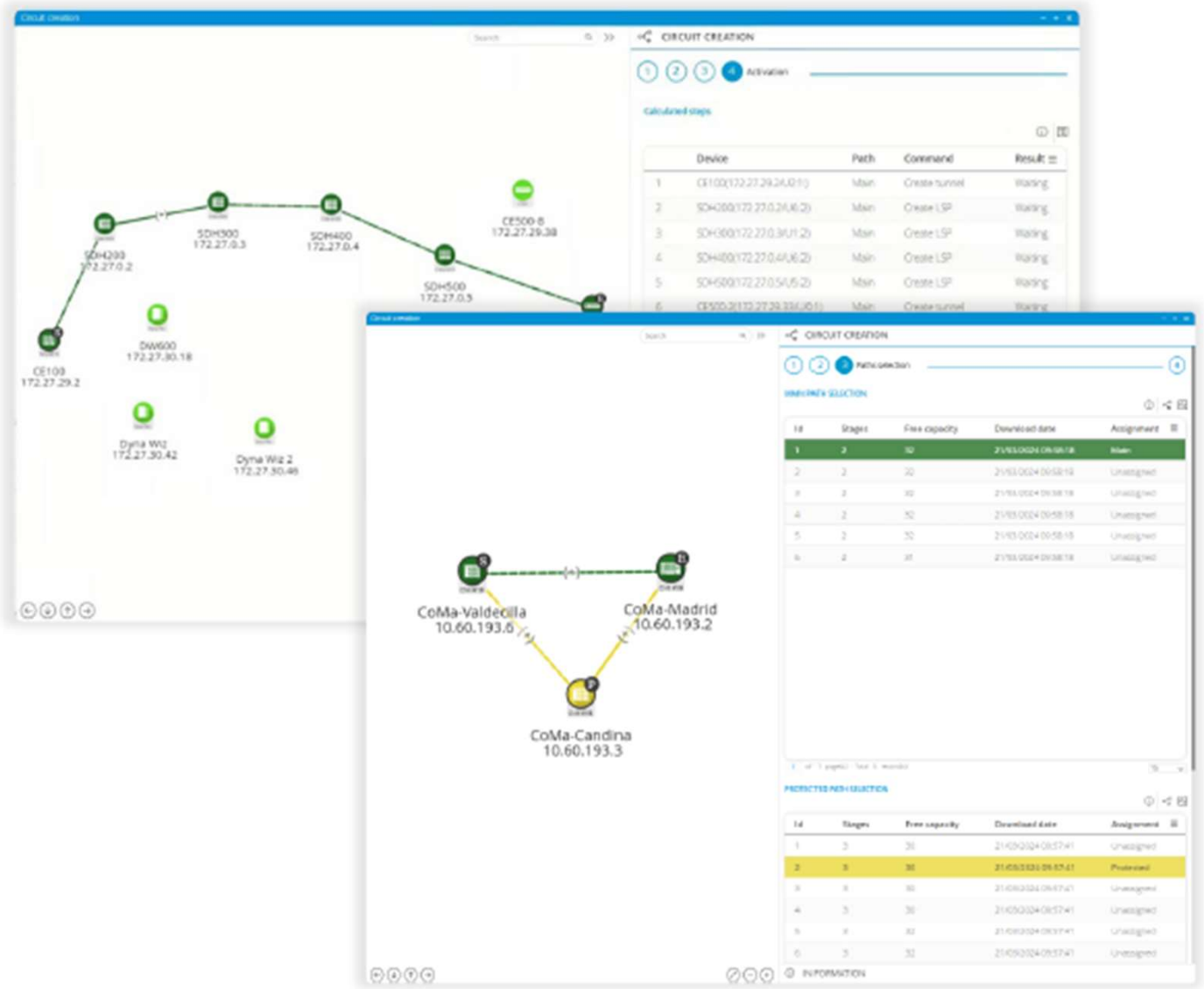


Protecting your network against security threats and risks

Auditor

Control the actions performed in your system with activity logs of each user or group. Also, you will be able to track last actions performed from the system.

End-to-end **facilities**



Circuit provisioning

Create, modify, protect, eliminate circuits forwarding of commands to the affected equipment automatically

Circuit tracing

MPLS-TP, SDH/SONET and PDH resources can be displayed allowing the user to know where the circuits are passing through.

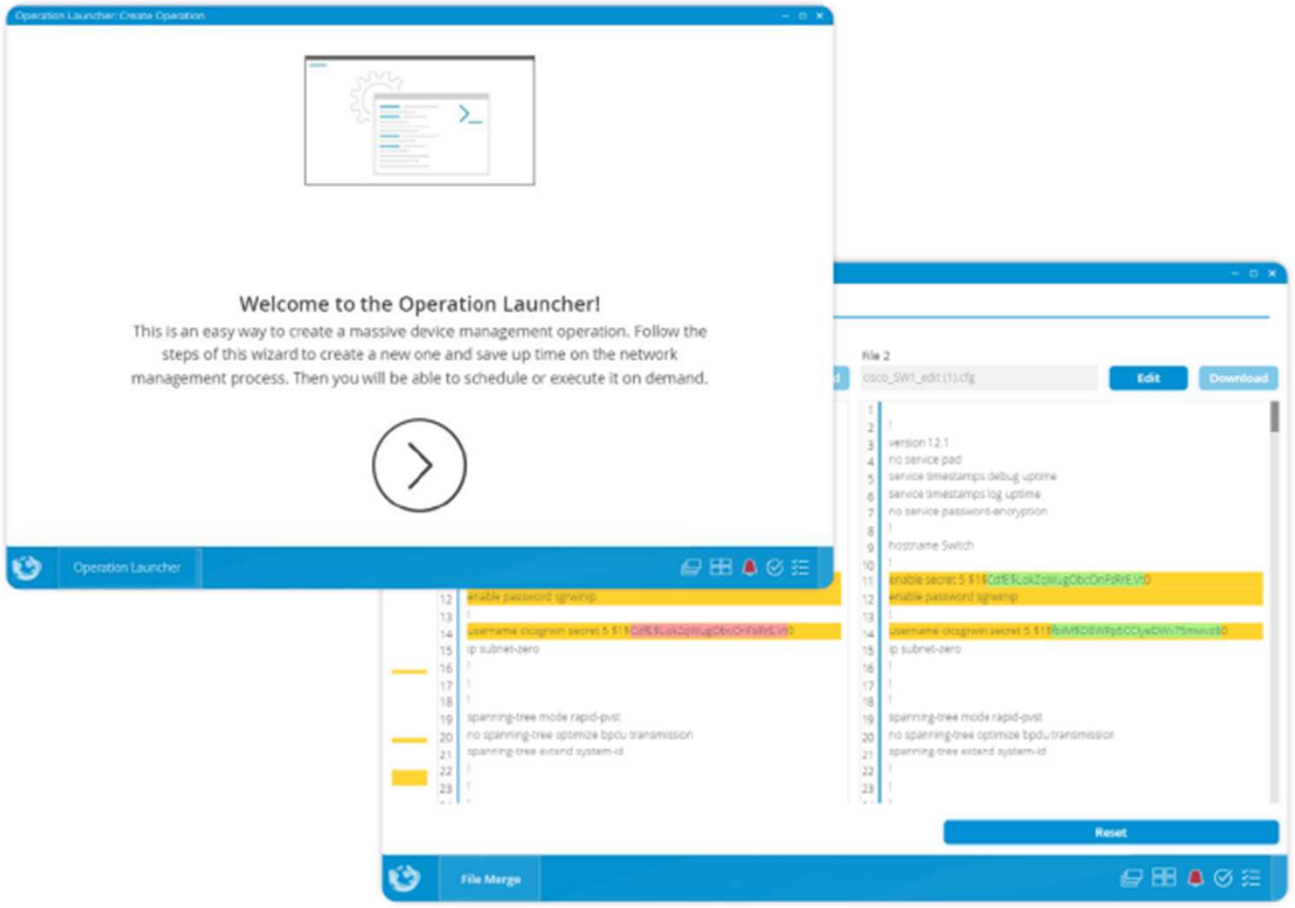
Automatic XC download

Eliminate worries and activate the automatic download of XC tables from network devices to get internal configuration of the devices.

Circuit inventory

Register all the services of your network, properties and endpoints of the services.

Advanced features



LCT and Terminals

Operate 100% of your equipment by launching vendors' management interfaces directly from our system or utilize our proprietary Q1 or SNMP terminals.

Massive Operations Launcher

Execute bulk operations across multiple devices simultaneously, using preloaded scripts or predefined actions, either manually or on a scheduled basis. These operations can include firmware A/D, backups/restoration of device configurations.

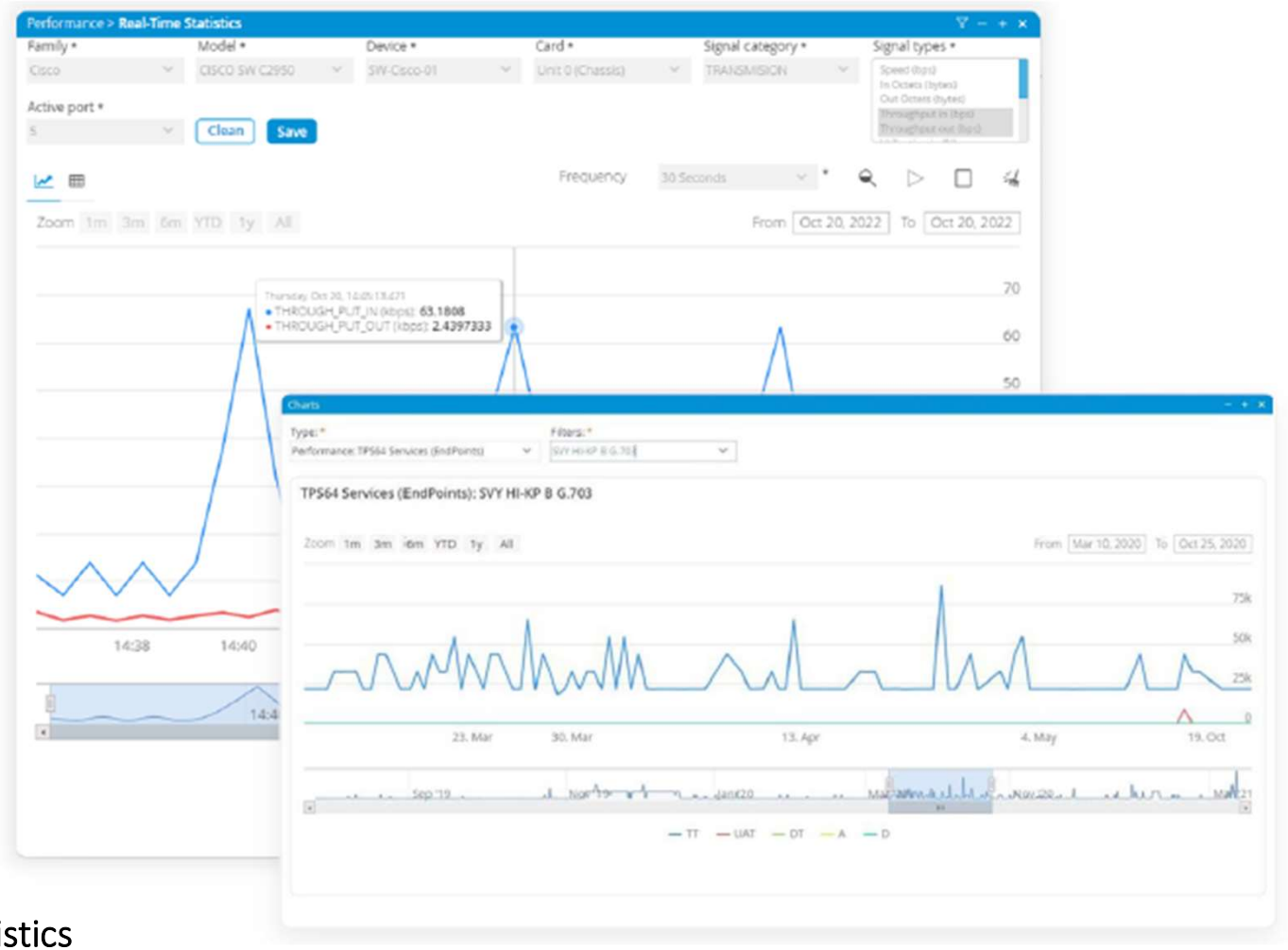
History and Comparison

Backup history for each device as needed. Compare two configurations and send a new configuration to the device.

Repositories

Store, edit, download, and share your documentation, firmware, backups, scripts, or LCTs related to specific devices or items.

Real time data



Statistics

Collect real-time statistics and signals from devices, cards, ports, and circuits.

Signal categories

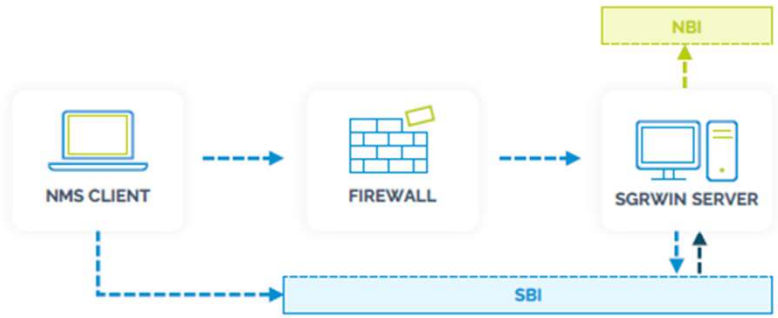
You can select multiple statistics and visualize all the data according to the time range you need.

Network performance

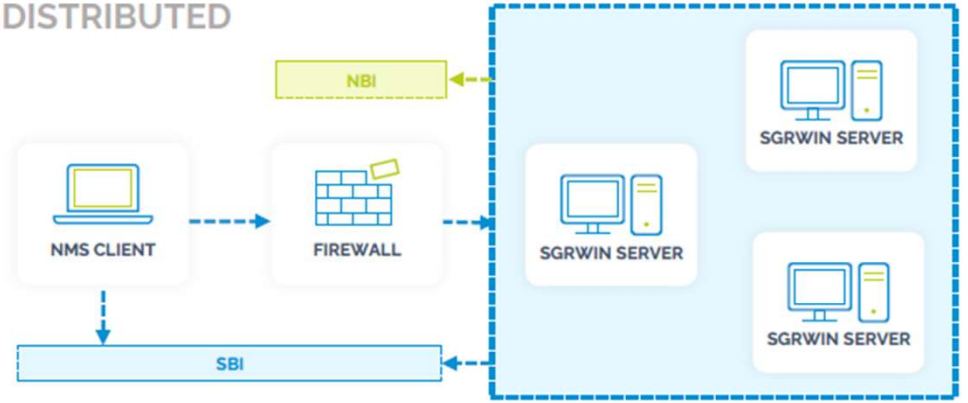
Collect data values at customizable frequencies to optimize network performance.

Architectures

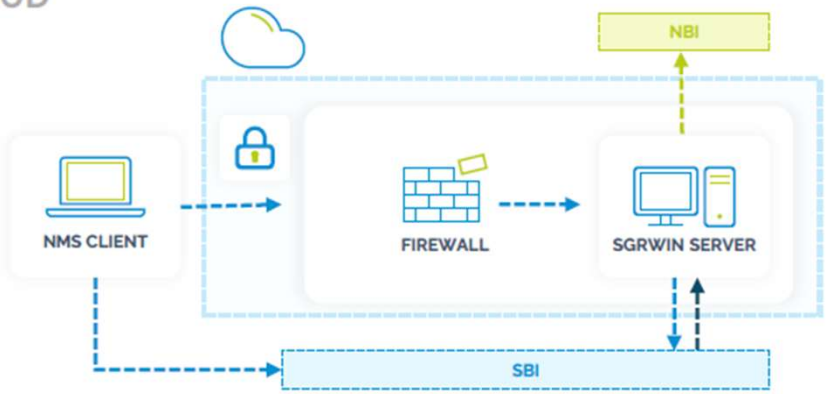
CENTRALIZED



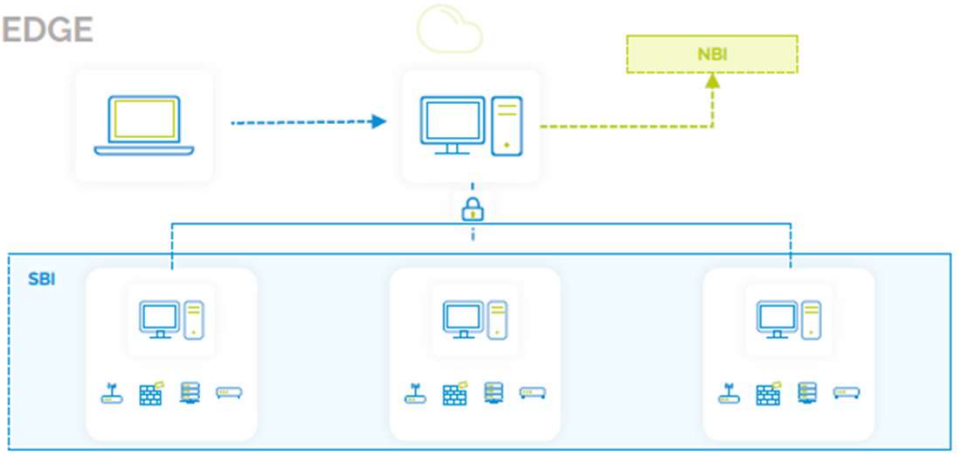
DISTRIBUTED



CLOUD



EDGE



HW/SW Requirements

PRODUCTION (PRIMARY)

SERVER	
SO	Windows server 2019/2022
Procesador	6 Core 2,1 GHz Intel
Memoria RAM	64 GB
CPU	2 TB

ADD ON: Advanced BI	
SO	Ubuntu 22
Procesador	4
Memoria RAM	16 GB
CPU	30 GB

ADD ON: Historical database	
SO	Ubuntu 22
Procesador	4 Core 2,1 GHz Intel
Memoria RAM	64 GB
CPU	10 TB

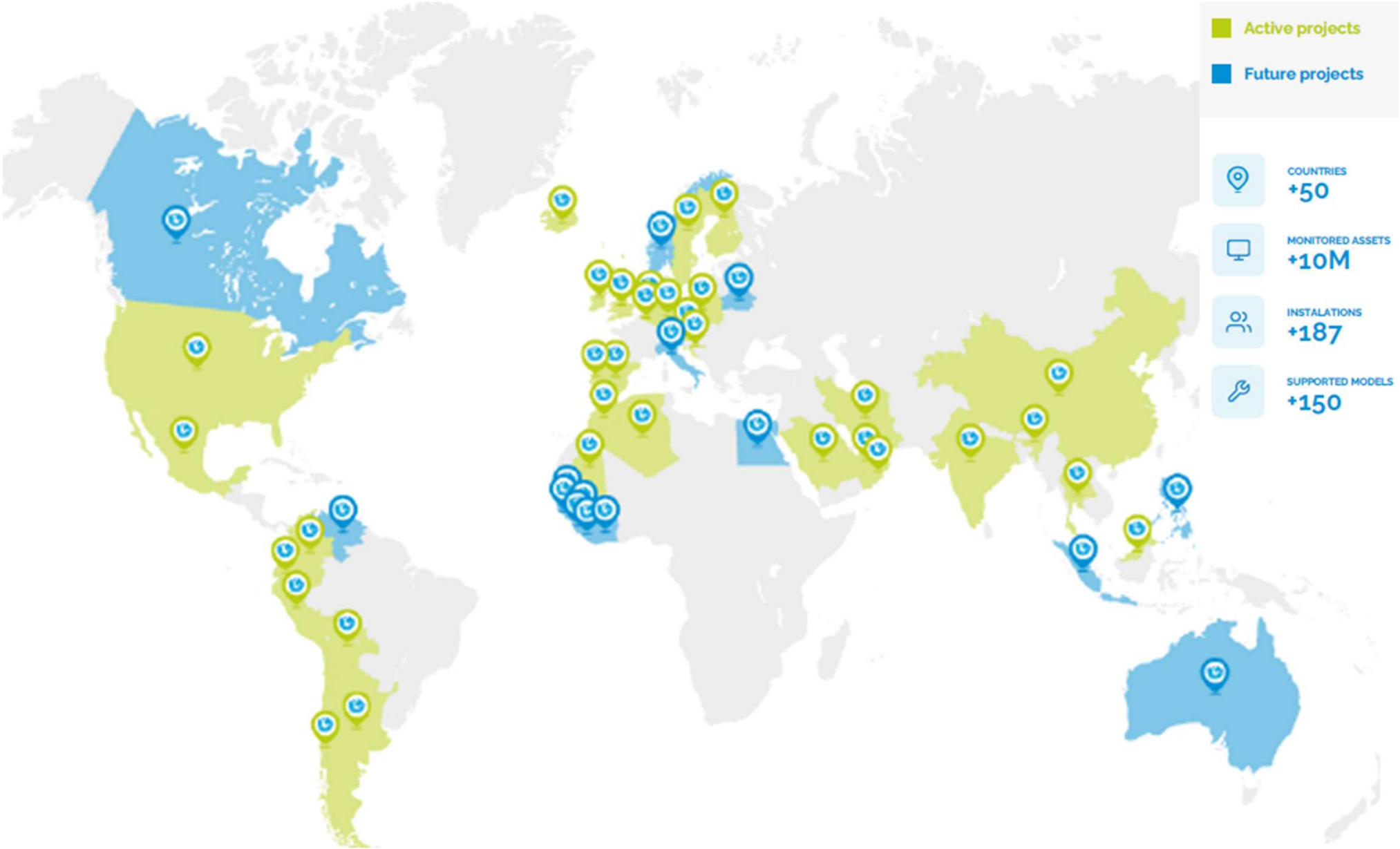
PRODUCTION (SECONDARY)

SERVER	
SO	Windows server 2019/2022
Procesador	6 Core 2,1 GHz Intel
Memoria RAM	64 GB
CPU	2 TB

ADD ON: Advanced BI	
SO	Ubuntu 22
Procesador	4
Memoria RAM	16 GB
CPU	30 GB

ADD ON: Historical database	
SO	Ubuntu 22
Procesador	4 Core 2,1 GHz Intel
Memoria RAM	64 GB
CPU	10 TB

SyncMap **World Customers**



Customers

POWER & ELECTRICY +48

WATER 3

OIL/GAS & MINING 20

RAILWAYS 12

AIRPORT 2

ROAD 2

GOVERNMENT 7

TELECOM & TV 10

Multi-vendor and multi-technology

JIRA · REDMINE · OTRS · LDAP.com (Lightweight Directory Access Protocol)

NOZOMI NETWORKS · OPENVIEW · IBM

FULL INTEGRATION WITH EXISTING SYSTEMS

Compatible with main tools and systems already installed and running in our clients

OT NETWORK

SDH, PDH, MPLS-TP, TETRA, MSH, Q1, Q3, QD2, GSM/LTE, IEC 61850 (GOOSE, MMS, SV), 101, 104, Modbus etc.

IT NETWORK

IP, Ethernet, IP-MPLS, WMI, Syslog, SFTP, SSH, SNMP (V1,V2,V3), IoT, SAI, HTTPS etc.

INTEROPERABLE AGNOSTIC SOLUTION

Supports numerous protocols for both IT and OT networks, enabling for a convergence.

cisco · hp · SIEMENS · Schneider Electric · NOKIA · ZNV · albis technologies · Marconi

ABB · GE · Nokia Siemens Networks · ERICSSON · Coriant · AVARA TECHNOLOGIES · EADS · CASSIDIAN

NEC · ECI · Actelis · TETRA · DragonWave · CXR Networks · Aviat Networks · DNWP

MULTI-VENDOR AND MULTI-TECHNOLOGY

SGRwin can reach and manage more than 100 different vendors, directly or by their own manager

That's all

ALBEDO
Telecom
the Path to Excellence