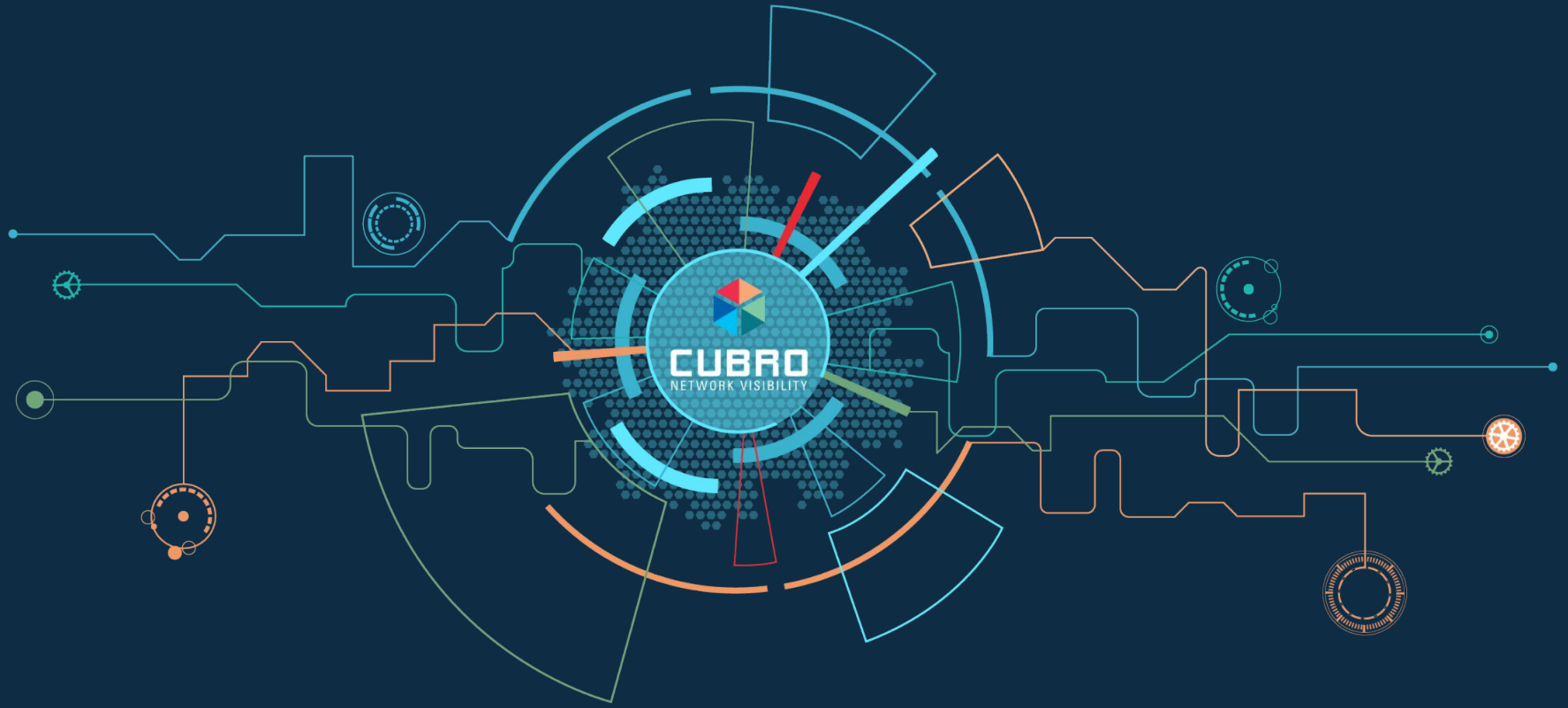


Cubro Aggregator C-Series Overview

January 2026

Aggregator C Series - Solution for 1G to 100G

The C-Series family consists of three products providing a flexible lineup of economical network packet brokers.

- **C32 - 32 x 40G/100G**
- C48 - 48 x 1/10/25G & 8 x 40G/100G
- C64 - 64 x 40G/100G

Aggregator C32

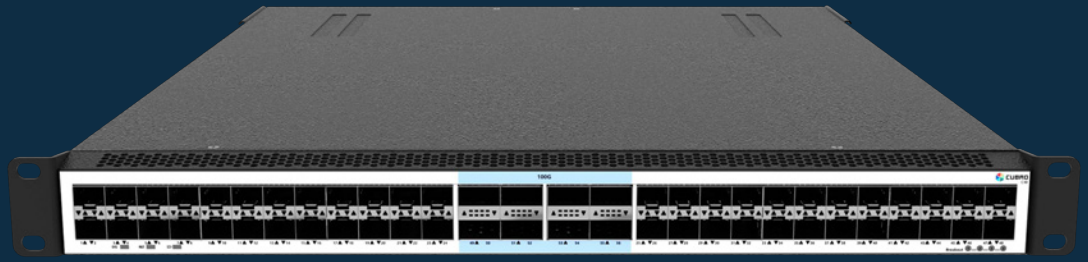
Key points:

- Non-blocking architecture
- All ports are included (no software license to enable ports) & 3rd party transceivers are supported
- Timestamping
- User Defined Filtering via Offset

C32

- **32 x 40G/100G** – 16 ports can be used in 4 x 1/10G or 4 x 10/25G split mode
- Each port can be used simultaneously as input and output and is totally independent of other ports
- Non-blocking architecture
    - 6,4 Tbit/s throughput
- All ports are included and open to 3rd party transceivers

C48

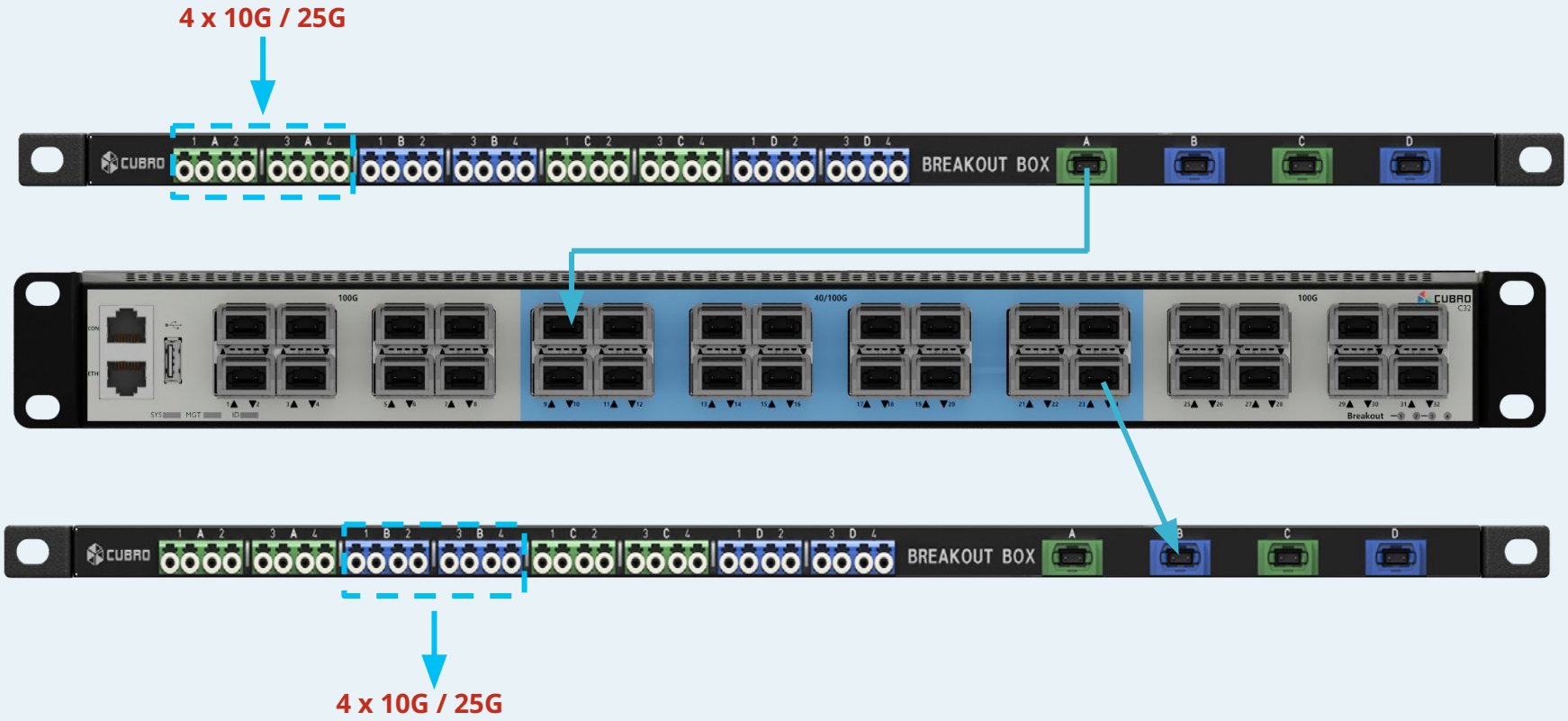


- **48 x 1/10/25G + 8 x 40G/100G**
- Each port can be used simultaneously as input and output and is totally independent of other ports
- Non-blocking architecture
  - 4000 Gbit/s throughput
- All ports are included and open to 3rd party transceivers

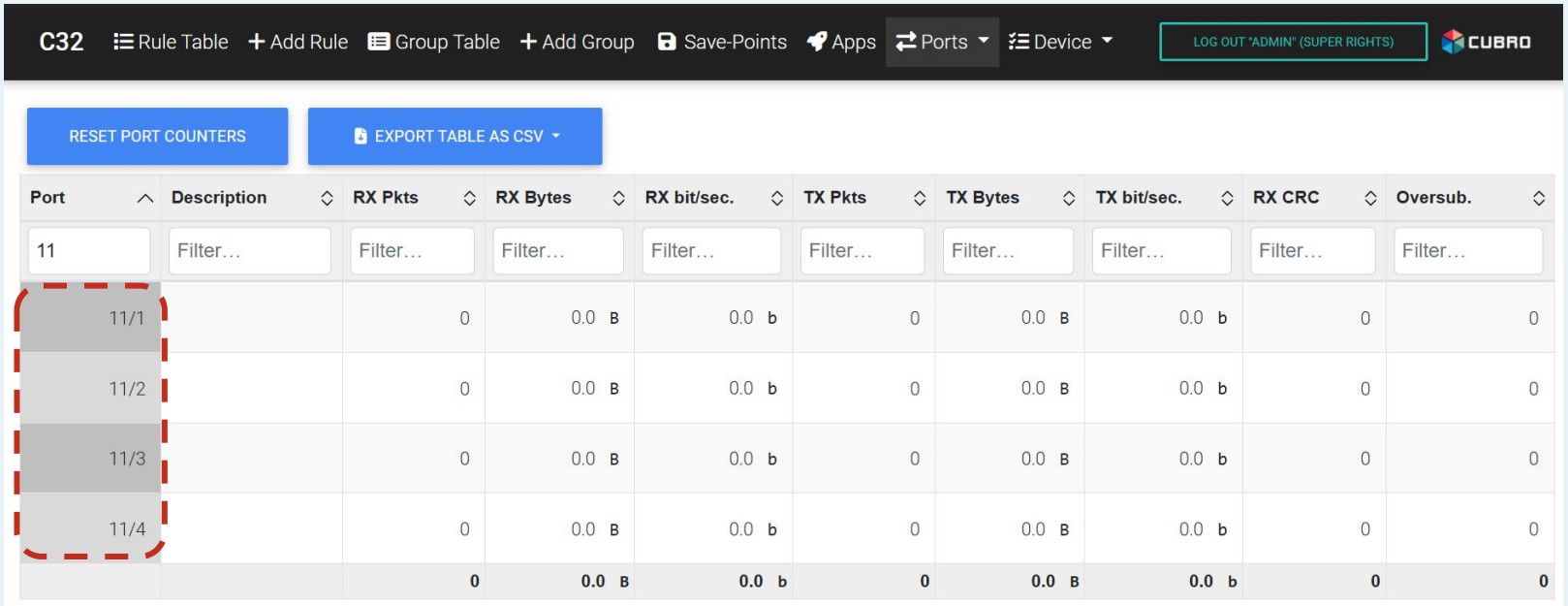
C64

- **64 x 40G/100G** - 16 ports can be used in 4 x 1/10G or 4 x 10/25G split mode
- Each port can be used simultaneously as input and output and is totally independent from other ports
- Non-blocking architecture
  - 12,8 Tbit/s throughput
- All ports are included and open to 3rd party transceivers

Break-out Mode (4 x 10G / 25G)



Every port within the split is completely independent



Break-out Cable vs Breakout Box

Break-out cable

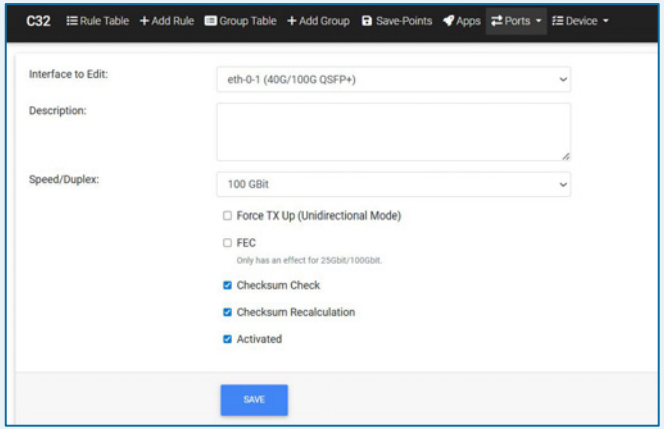
4 x

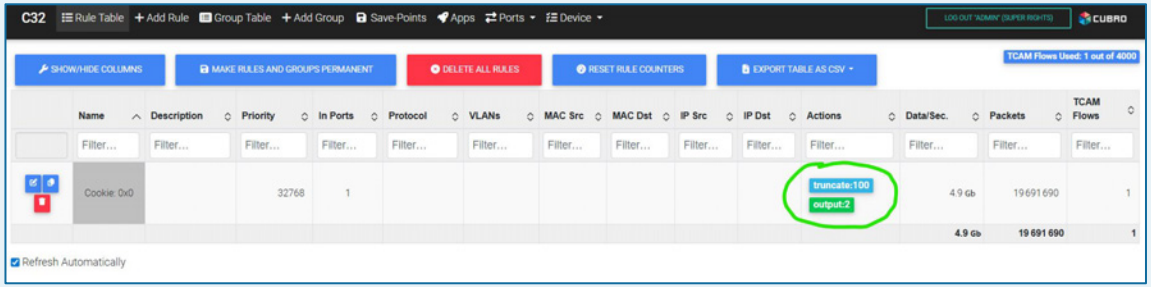
Cubro Break-out Box

- Physical conversion from LC to MTP and from MTP to LC
- Clearly labelled connectors - never get confused with TX and RX
- Ruggedized and firmly installed in 19” racks (does not somewhere “hang” in the rack like break-out cable)
- Two versions
  - 16 x LC (10G/25G) to 4 x MTP (40G/100G/400G) in 19” ⅓ U
  - 8 x LC (10G/25G) to 2 x MTP (40G/100G)/400G in 19” ⅓ U
- Fully passive, transparent and bidirectional
- Multimode and Singlemode version

Operation

- All main functions are accessible via WebUI
- In addition to WebUI, the CLI provides access to the full functionality including all enhanced features such as
  - User Defined Filtering
  - GRE Tunnel encapsulation & decapsulation
  - Packet Capture (1000 packets maximum)
  - Monitor Sessions for easy connection to external ad-doc capture tools
  - Timestamping





Most of the CLI functions are shown in WebUI

Filtering capabilities

The C-Series supports up to 4000 parallel running IPv4/IPv6 filters. These filters can be used to redirect a selected part of the incoming traffic to a low bandwidth monitoring tool.

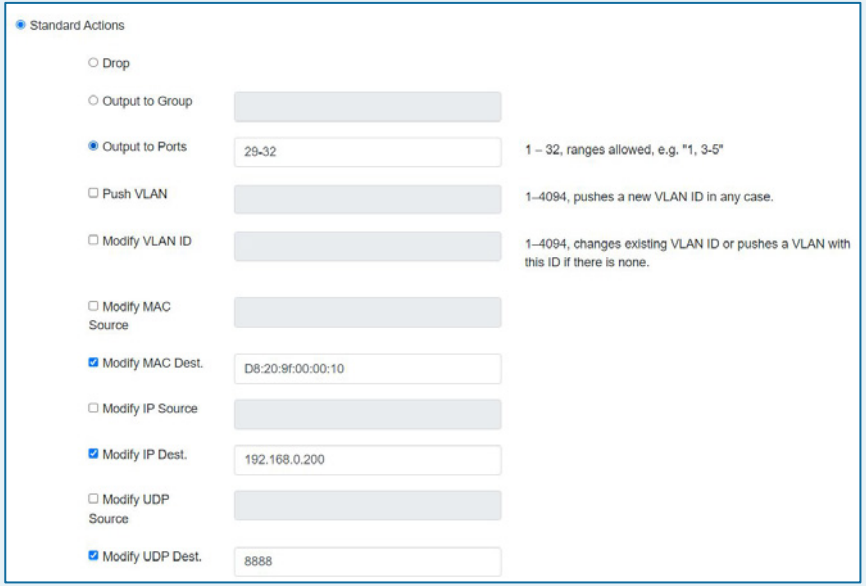
Filtering parameters include:

Layer 2	**Layer 3**	**Layer 4**
MAC Src / Dst	IPv4 Src / Dst	Port Src / Dst
VLAN tag (QinQ)	IPv6 Src / Dst	TCP/UDP/SCTP Port Number
Ethertype	Protocol	
MPLS		

Output Actions

The C-Series supports a wide range of different output actions so that filtered traffic can be provided to the appropriate tools.

- Forward Action
  - single port
  - multiple (parallel) ports
  - load-balanced ports
    - single load-balancing group
    - multiple load-balancing group
- Drop Action
  - delete filtered traffic
- Modify Egress traffic
  - Supports to modify header parameters like
    - MAC Src/Dest, IP Src/Dest, UDP/TCP Src/Dest.

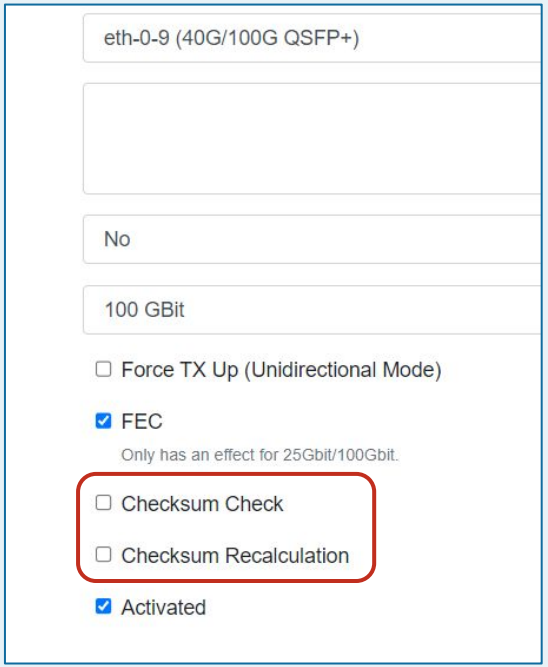


Distribute traffic as required

CRC transparency

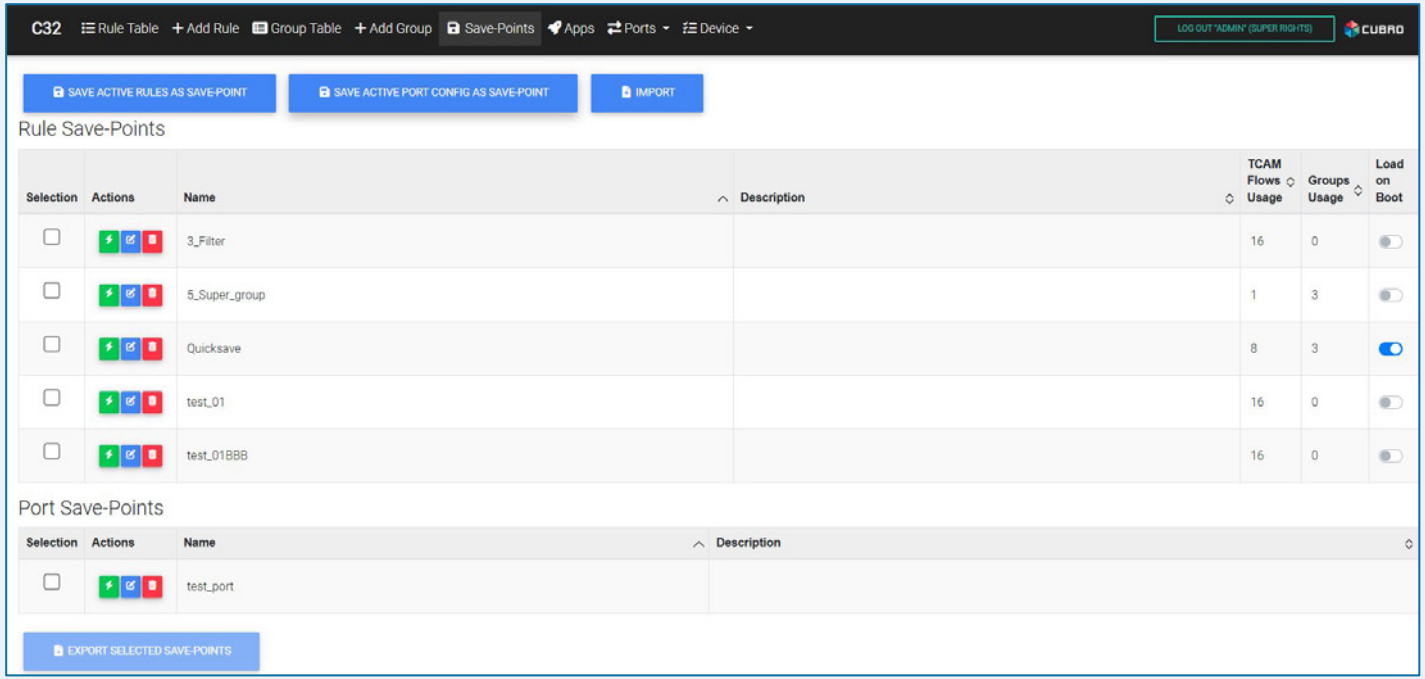
The platform not only allows 100% transparency to L2 protocols but also to CRC errors.

- Per default, the device will drop incoming CRC packets
- Via simple configuration option, the ingress and egress interfaces transparently receive and forward incoming CRC errors.
- This option allows the monitoring appliance to provide statistics about CRC errors of the live network



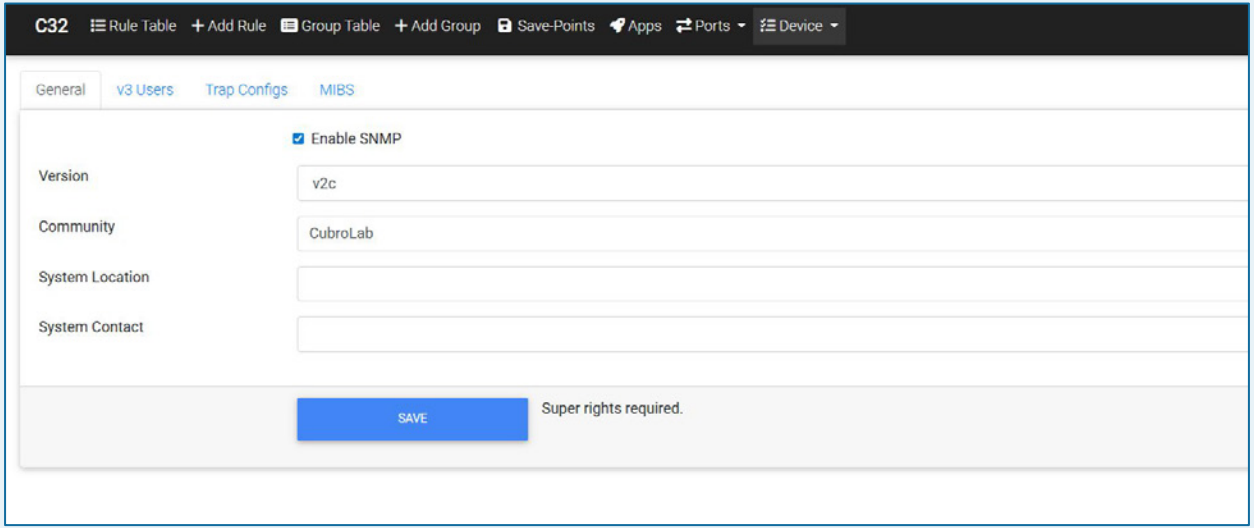
Easy to manage Setups

Save and Load Configurations fast and easy

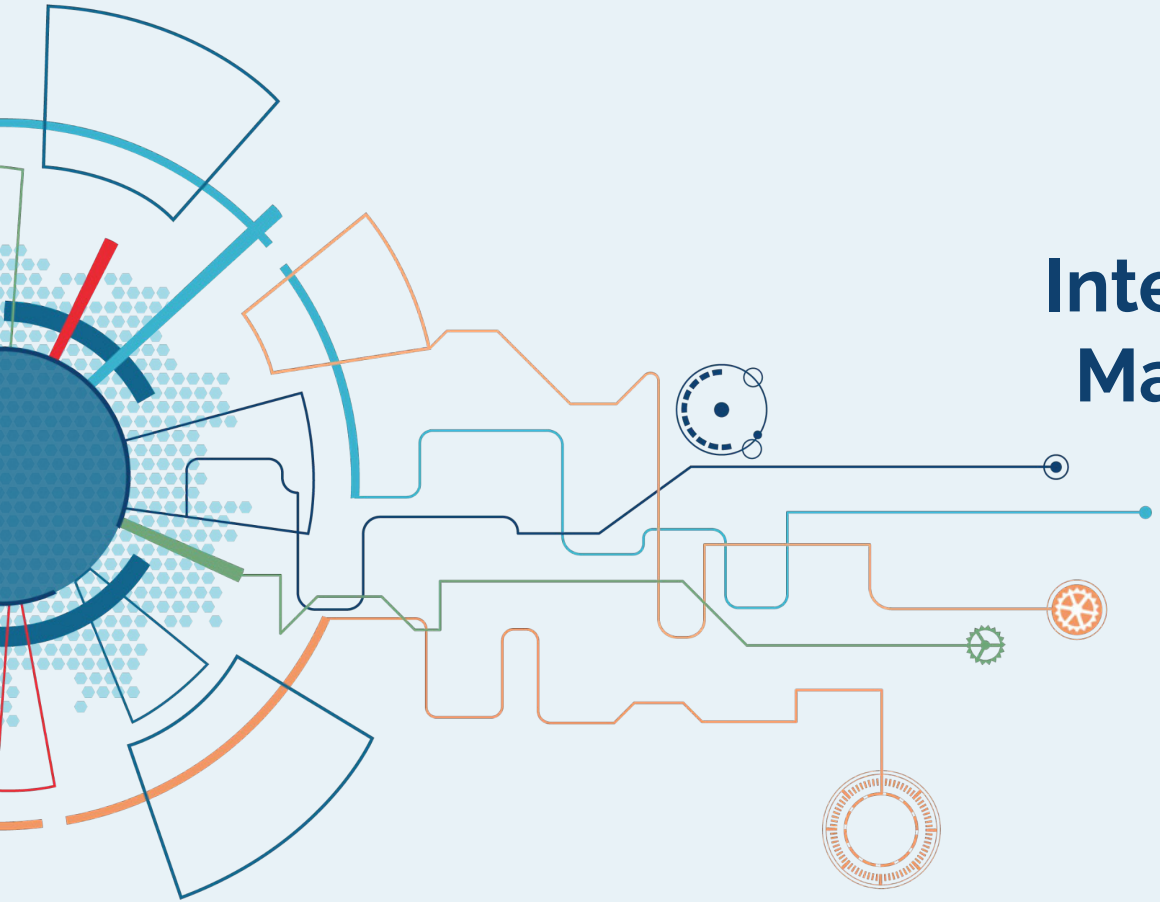


SNMP

- SNMP v1, v2c and v3 supported
- SNMP query and traps
- MIB file provided



CUBRO
NETWORK VISIBILITY



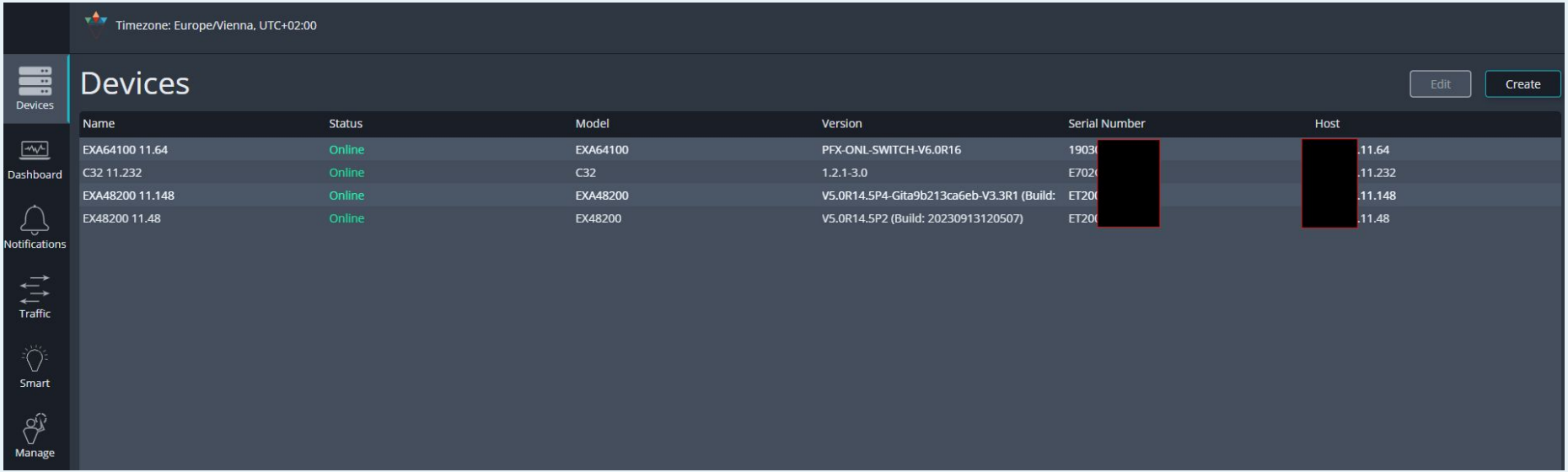
Integration into Cubro Management System

Integration into Cubro Vitrum Management Tool

Vitrum NG is Cubro's next-generation centralized network management software designed to provide businesses with advanced, real-time visibility and control over their network environments.

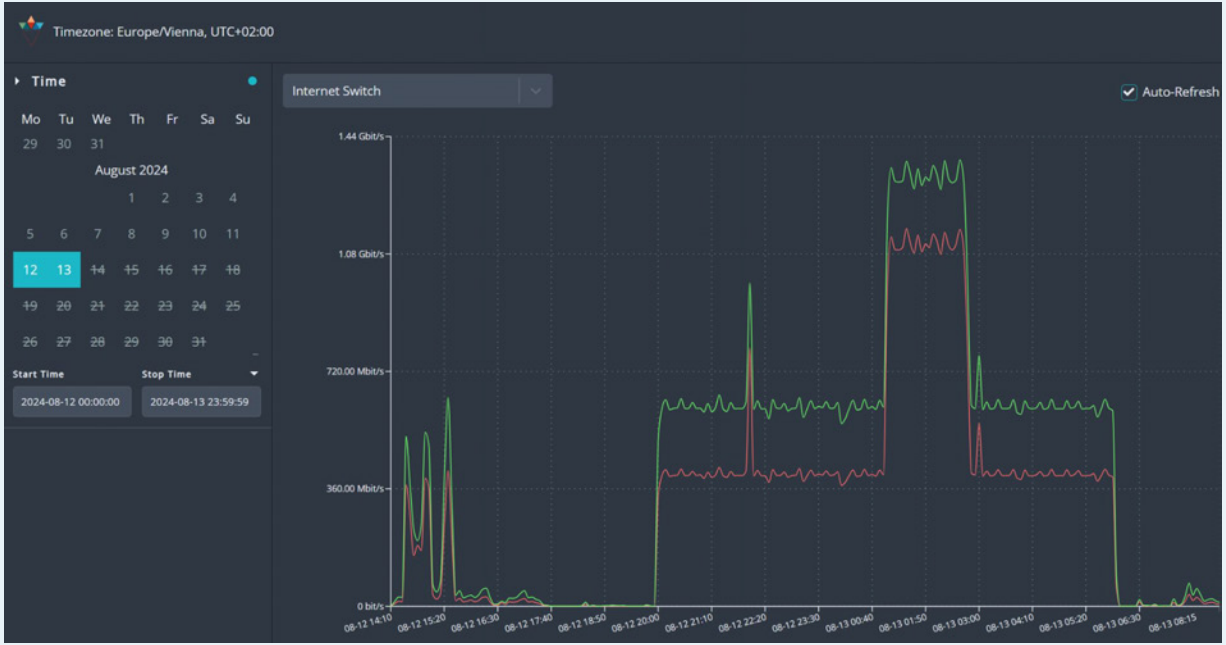
Device Overview

Effortless device tracking - No need to memorise IP addresses. Simply access each device's management website with a single click. Devices and ports can be easily named and annotated, providing clear visibility into each network equipment's role.



Overall Device statistics

View ingress and egress port statistics for each device instantly; no preconfiguration needed - statistics are auto-collected upon device addition.



Alarm Management

The error centre consolidates error events (e.g., device offline, port down) and issues on-page notifications for immediate attention. It maintains a comprehensive log of all historical events for linked devices.

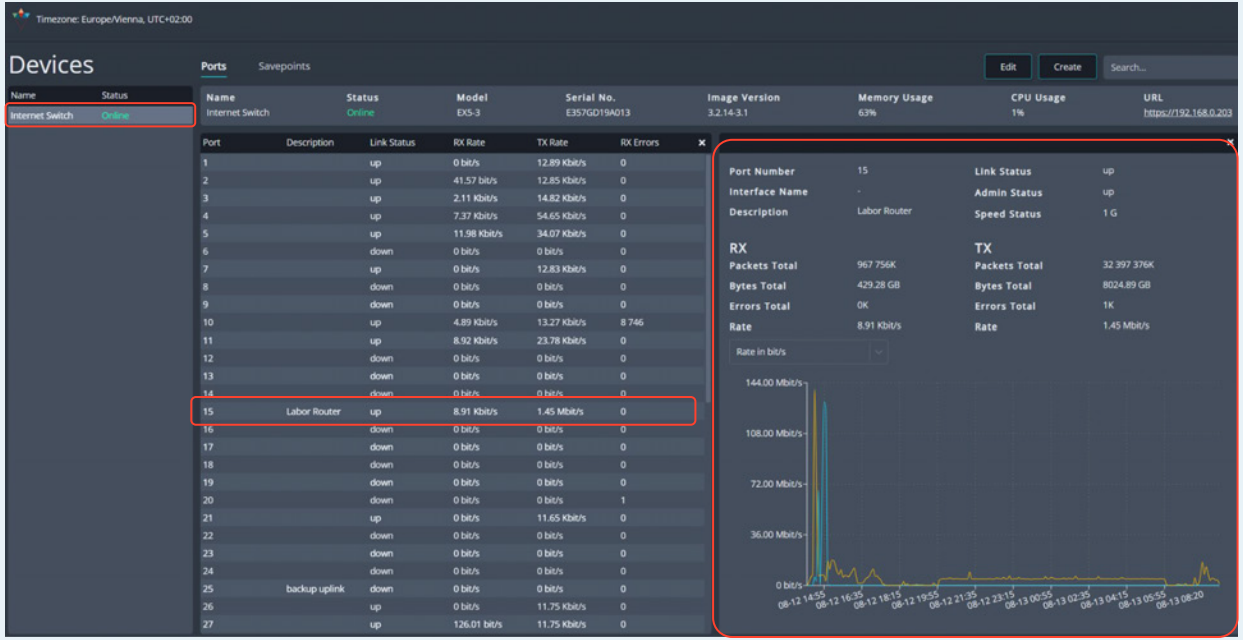
Filtering options, like time frame, type of notification etc.

Graphical view on when issues occured

Drill down to the individual port & rule statistics

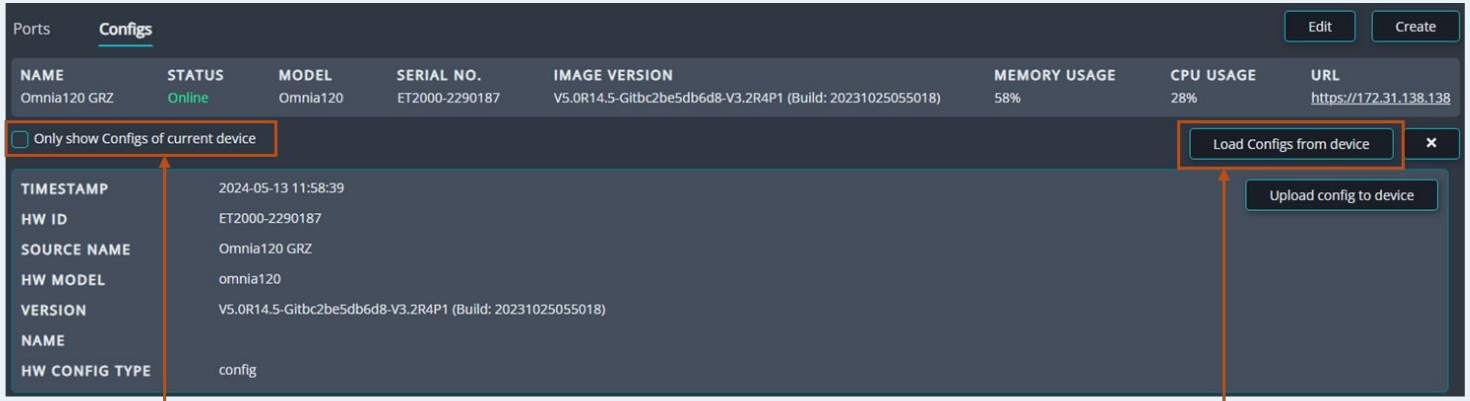
On the Device Overview page, each device can be selected to get an overview of all ports & rules statistics in table format.

Drill down to the individual ports & rules for in-depth troubleshooting.



Config Backup and Restore

Configuration backups for all Cubro Network Packet Brokers can be initiated with a single click. These backups can then be swiftly transferred to other devices, facilitating quick device cloning or preparation of backup devices.



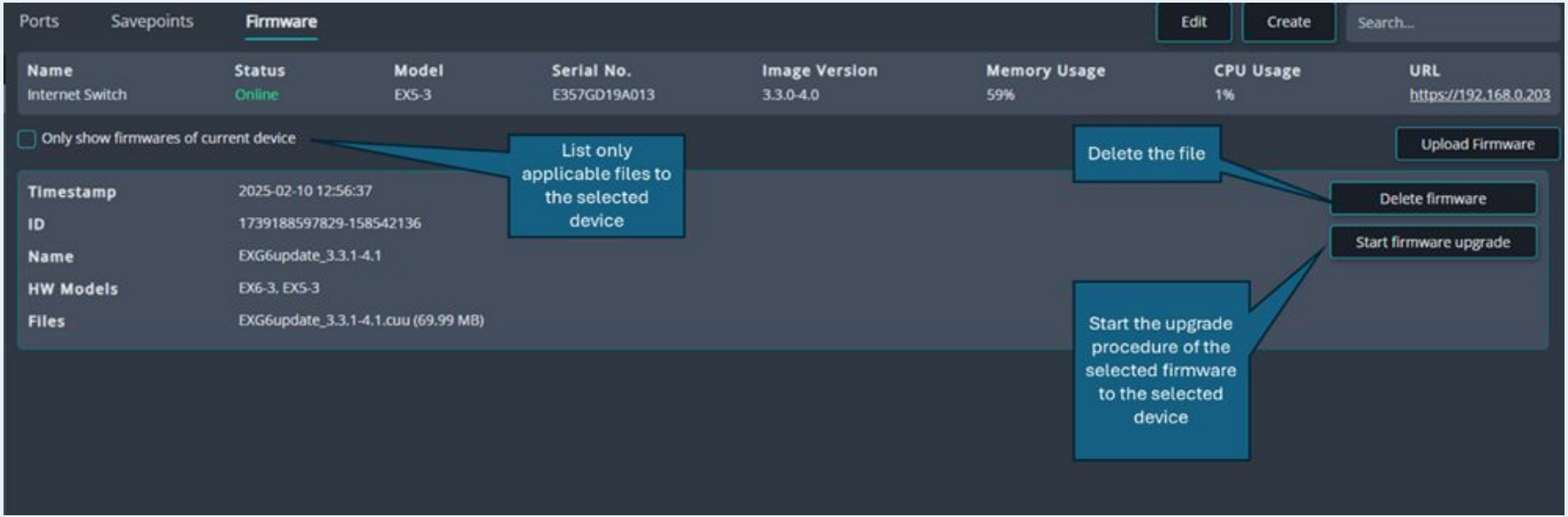
Show configuration from selected device, or from all devices from the same type

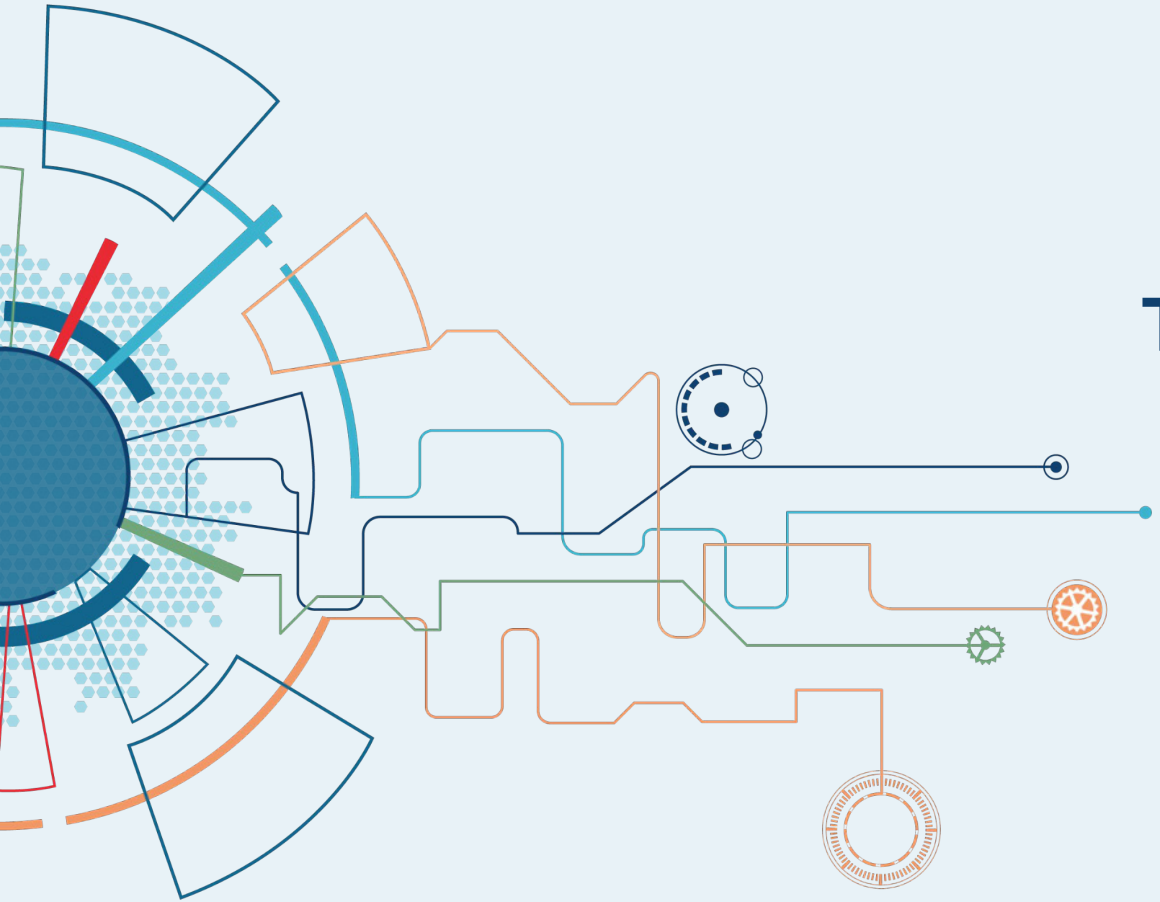
Download current running configuration

Central Firmware Upgrade

Use Vitrum as a centralised platform to upgrade the firmware of Cubro Devices.

Simply upload the Cubro firmware files using “Upload Firmware” and assign it to a device type.





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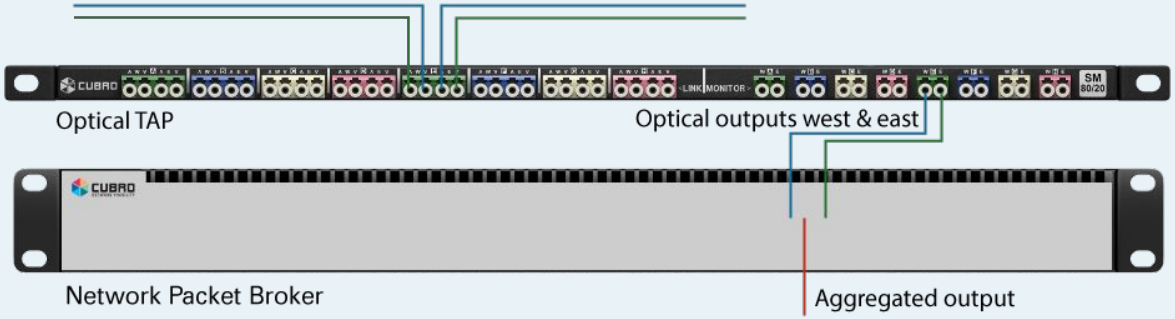
Typical Use-cases

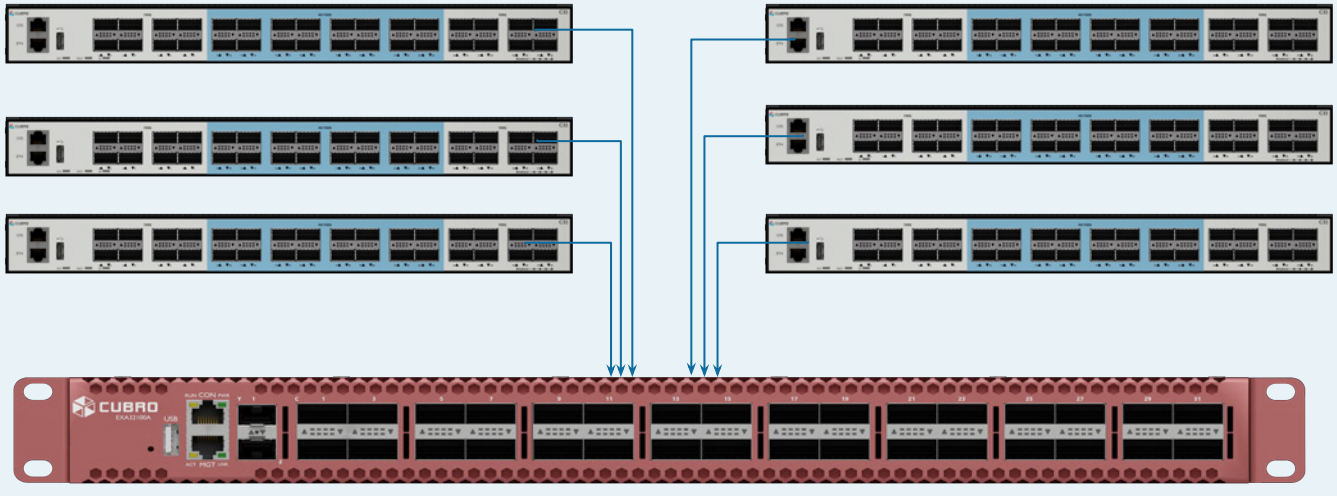
Aggregation & Simple Filtering

The C-Series aggregates traffic from one or more 40/100G links via inline TAP monitor ports. It combines up- and downstream traffic into a single output, optimising the use of connected probes and analytics tools.



The Aggregator's advanced filtering reduces traffic volume for faster, more accurate analysis. VLAN tagging per port enables easy identification of the packet's ingress point.

Economical solution to aggregate remote site 100G links



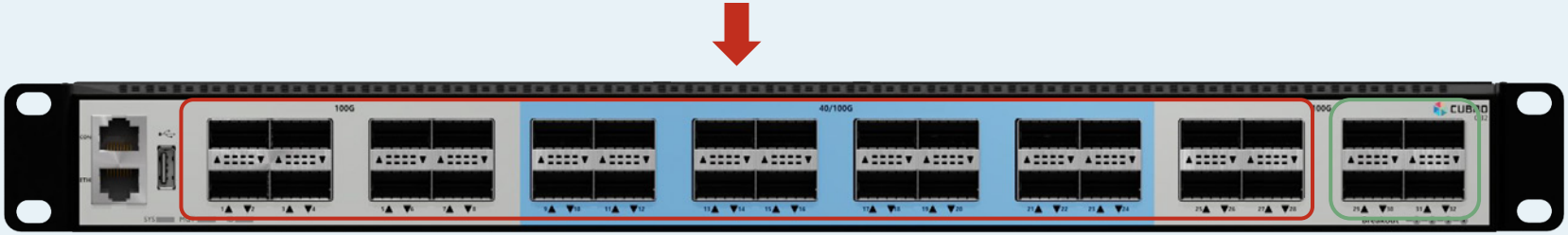
Pre-aggregation of remote/smaller sites to reduce input ports to advanced NPBs

Central Packet Processing (filtering, load-balancing)

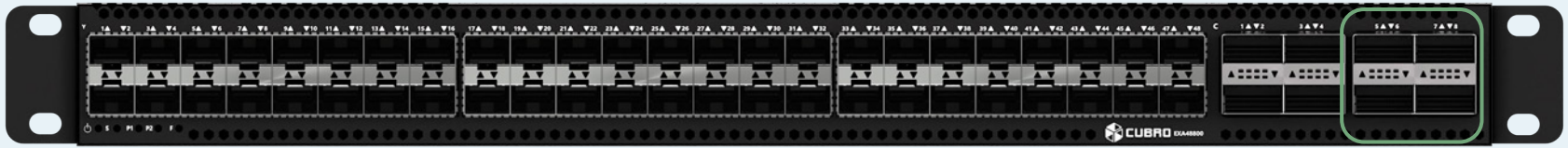
Central Filtering on EXA32100A allows easy management & operation

Extending 100G interfaces for “advanced” NPB functions

The Aggregator extends the capabilities of advanced NPBs like EXA48800 by adding flexible 100G interfaces. Paired with the EXA48800 Advanced series, it supports powerful Layer 7 filtering - by application, keyword, or Regex.

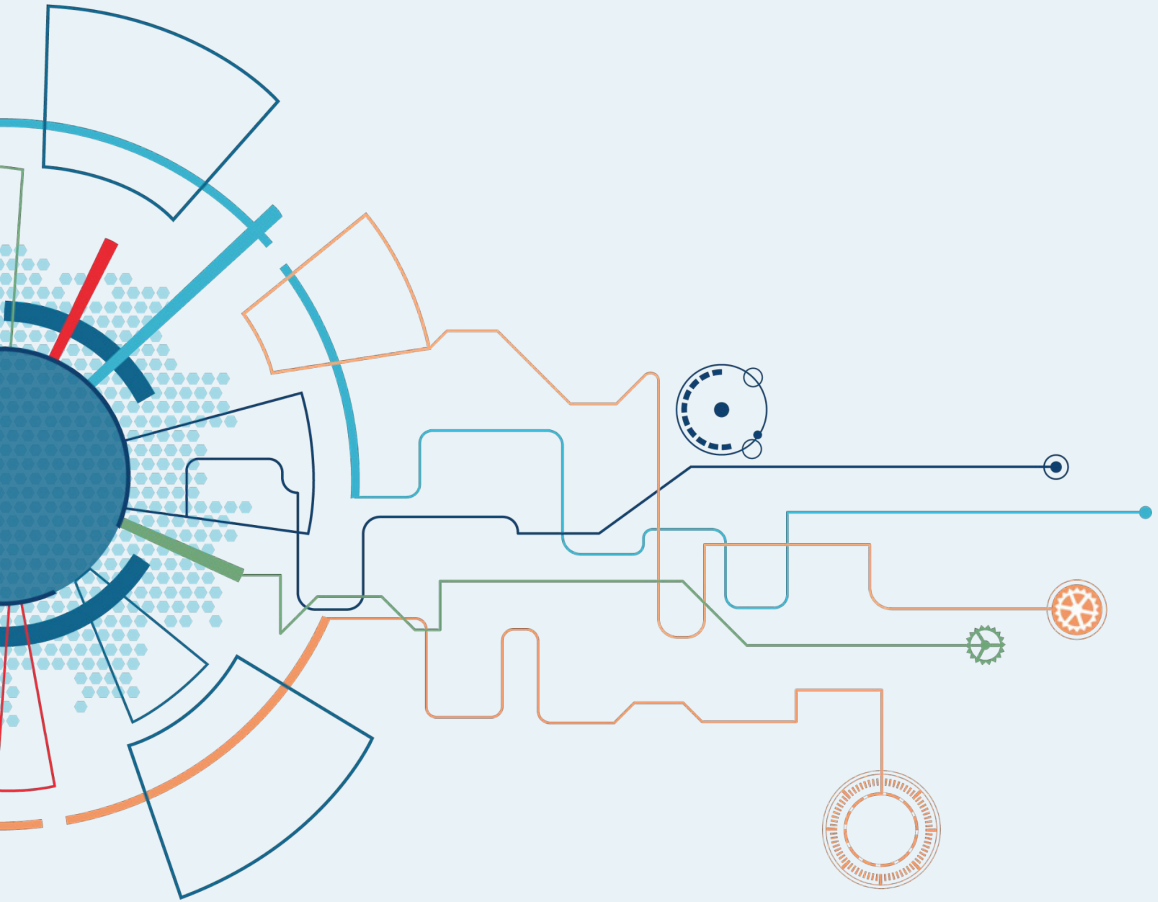


C32 as 20:4 aggregator



EXA48800 as advanced filtering / packet processing engine

Economic way to extend 100G port coverage



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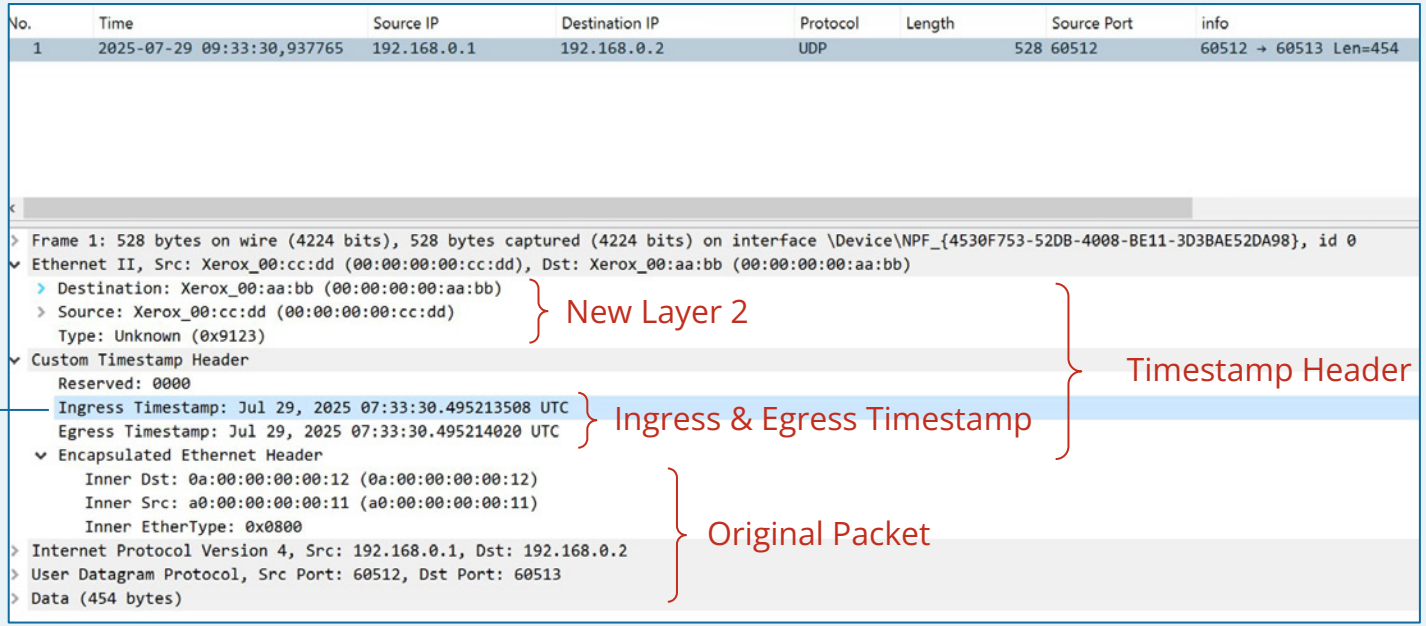
Timestamping

C-Series - Timestamping Overview

- NTP, PTP or internal clock as time-source
- Timestamp format
  - Adds 32 Byte to original Packet
    - New Outer MAC Src: 6 Byte (defined by user)
    - New Outer MAC Dst: 6 Byte (defined by user)
    - New Ether type: 2 Byte (defined by user)
    - Reserved: 2 Byte (currently set to 00 00)
    - **Ingress Timestamp**: 8 Byte (Date and Time in **ns resolution**)
    - **Egress Timestamp**: 8 Byte (Date and Time in **ns resolution**)

MAC Destination	Mac Source	Type	Reserved	Ingress Timestamp	Egress Timestamp	Original Packet incl. Layer 2	CRC Reculated
6 Byte	6 Byte	2 Byte	2 Byte	8 Byte	8 Byte		4 Byte

Timestamp Details



Cubro .lua file for Wireshark to decode timestamp in human-readable format

Timestamp Decode

hex 68 6b aa ad | 27 71 fb d0

Date and Time in sec
elapsed seconds since
01.01.1970 00:00:00

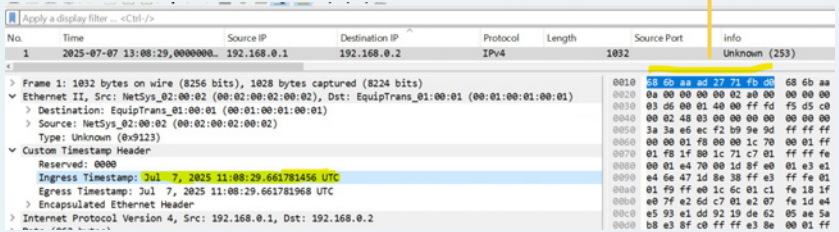
nano seconds

hex 686baaad converts to
dec 1751886509

hex 2771fbd0 converts to
dec 661781456

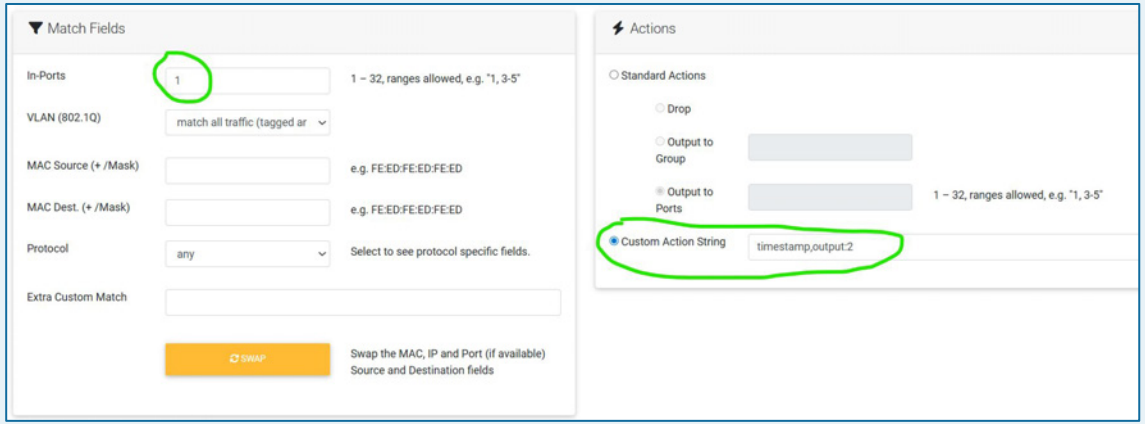
dec 1751886509 converts to
absolute Day & Time of
07.07.2025 11:08:29
(=dec/86400 + 25569 (01.01.1970 00:00:00)

Absolute Timestamp
07.07.2025 11:08:29,661781456



Operation

- Basic parameters via CLI
  - CubroC32# configure terminal
  - Enter configuration commands, one per line. End with CNTL/Z.
  - CubroC32(config)# timestamp sync systime
  - CubroC32(config)# timestamp-over-ether 0.0.aabb 0.0.ccdd 0x9123
    - #timestamp-over-ether <MAC DA in dot> <MAC SA in dot> 0x<Ethertype>
  - CubroC32(config)# timestamp sync systime
  - CubroC32(config)#exit
- Flow via WebUI



We have operations in all time zones.
Reach us at: support@cubro.com