CUBRO
NETWORK VISIBILITY

EXA64100

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DATA SHEET

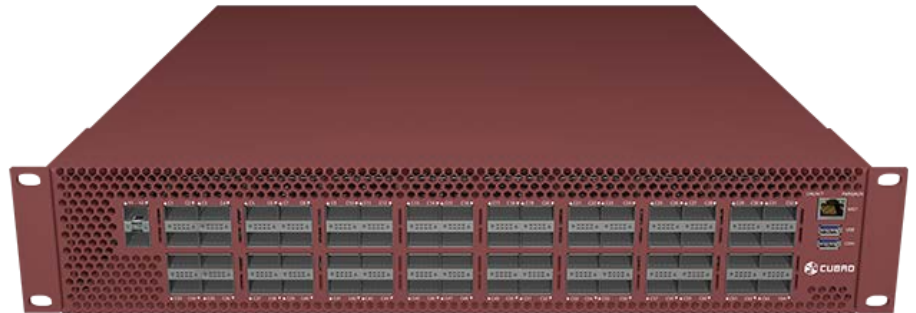# Advanced Network Packet Broker
At a glance

Definition

An Advanced Network Packet Broker is a switch-like device purpose-built to receive traffic from a variety of network sources (live link, TAPs, SPANs, mirror ports) and to filter, duplicate, and/or aggregate that traffic to monitoring and security tools.

Advantages of EXA64100

- Filter and load-balance traffic from 10, 25, 40 or 100 Gbps links to multiple monitoring tools
- Aggregates multiple 10 Gbps links to 25, 40, or 100 Gbps monitoring tools
- 64 x 40/100 Gbps (QSFP/ QSFP28)
- QSFP28 ports support breakout to 4 x 10/25G
- Supports data burst buffering
- Packet slicing support (any configurable packet size)
- IPv6 support
- Tunnel header stripping
- No additional port licensing fees or software feature licensing. All features and applications included in the unit price.
- 2-year base warranty period

Product Overview

The EXA64100 is a high-performance advanced network packet broker that aggregates, filters, duplicates, and load balances network traffic to security, monitoring and management tools. The EXA64100 is based on programmable switching fabric. It is based on an advanced multi-core, industry leading programmable switch chip architecture. This platform allows all filtering features to be implemented at the hardware level for unmatched throughput and performance. The EXA64100 enables high-performance deep protocol identification and processing, and data message pre-processing at the chip forwarding logic level. The multi-layer filtering capabilities of the EXA64100 is a powerful feature of this device which enables enhanced network visibility and better network performance.

Functions / Benefits:

- Easy to configure: secure Web GUI / ReST API
- Load balancing: hash-based, session aware load balancing on either outer or inner tunnel headers
- Ultra high port density: supports up to 64 x 40/100 Gbps or 256 x 25/10 Gbps ports and two dedicated SFP+/ SFP28 ports for 10G or 25Gbps
- Tunnel termination and filtering on multiple parameters including inner tunnel (VXLAN, GTP, ERSPAN, CFP, MPLS, etc)
- Up to 115688 simultaneously filtering rules without performance restrictions to see the traffic that is really needed
- ASCII string filtering inside the payload
- SNMPv2c and SNMPv3 support
- Straight and easy development of filtering strings using MS Excel with download function.

Product Capabilities / Features

Link/Port Aggregation	Aggregation many to any, and any to many at all link speeds
100G distribution/load balancing	Traffic can be easily distributed across 10G, 25G, and 40G links to monitor highly loaded 100 Gbps links.
Jumbo Frame Support	The Sessiomaster supports jumbo Ethernet frames with a size of up to 9192 bytes.
Support of IPv4 and IPv6	Yes
Ports	64 x QSFP 40 Gbps or QSFP28 100 Gbps with break-out possibility to 10Gbps or 25Gbps 2 x SFP+ 10Gbps or SFP28 25Gbps 1 x 10/100/1000 Base-T (Management) 1 x RS232 Console
Configuration / Communication	Web GUI, REST API
Performance	12,8 Tbps backplane 100 % throughput without any packet loss 4,8 Billion PPS
Aggregation latency	Average < 700 ns for 64-byte frames
MTBF	200.742 hours
Packet Buffer	22 MB
Different Power Versions	Dual 100-240 V AC or 36-72 V DC available

Technical Data / Specifications

Inputs*

64 x 40 Gbps / 100 Gbps full duplex Ports for any kind of QSFP/QSFP28
* Each port can be input and / or output depending on the application and configuration
*All QSFP/ QSFP 28 ports support breakout cables to 4x10G or 4x25G interfaces

Outputs*

64 x 40 Gbps / 100 Gbps full duplex Ports for any kind of QSFP/QSFP+

* Each port can be input and / or output depending on the application and configuration
*All QSFP/ QSFP 28 ports support breakout cables to 4x10G or 4x25G interfaces

Performance

- Performance up to 12,8 Tbps
- 4,8 Billion PPS
- Non-blocking design
- Boot time from power on to working 180 sec

Management

- Management Port: (1) RJ45 10/100/1000 Mbit Configuration
- Easy to use Web UI

Operating specifications:

Operating Temperature: 0ºC to 40ºC
Storage Temperature: -10ºC to 70ºC
Relative Humidity: 10% min, 95% max (non-condensing)

Mechanical specifications:

Dimension (WxDxH): 442 x 590 x 88 mm
Weight: 16 kg
Airflow: Front-back

Electrical specifications:

Input Power: 100-240 V AC or 36-72 V DC
Maximum Power Consumption: 540W

Certifications:

Fully RoHS compliant
CE compliant
Safety - UL 60950-1 / CSA C22.2 60950-1-07 / IEC 62368-1: 2014 EN 62368-1: 2014

Deduplication by filtering in VXLAN overlay networks (VXLAN VNI and IP filtering)

Usually, the duplicate traffic is caused by picking up the same traffic more than once due multiple tapping and/or aggregation devices.
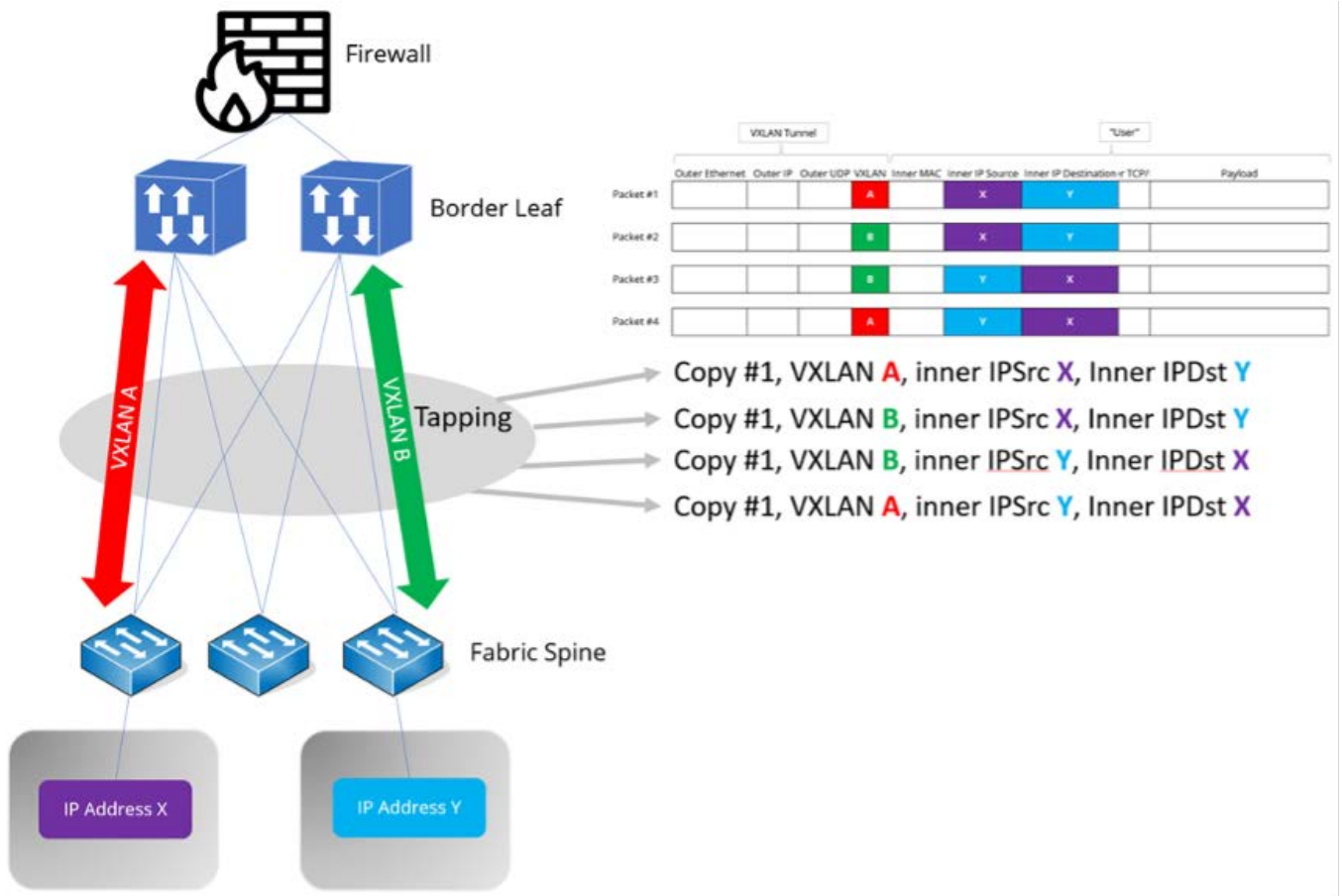
Traffic between IP X and IP Y passes the tapping two times and thus the same packets are visible twice at the tapping output. From user perspective every packet is received twice.
The EXA64100 offers an easy and straight-forward way to eliminate the duplicates by allowing filtering VXLAN VNI and inner IP simultaneously.

VXLAN VNI and inner IP filtering:
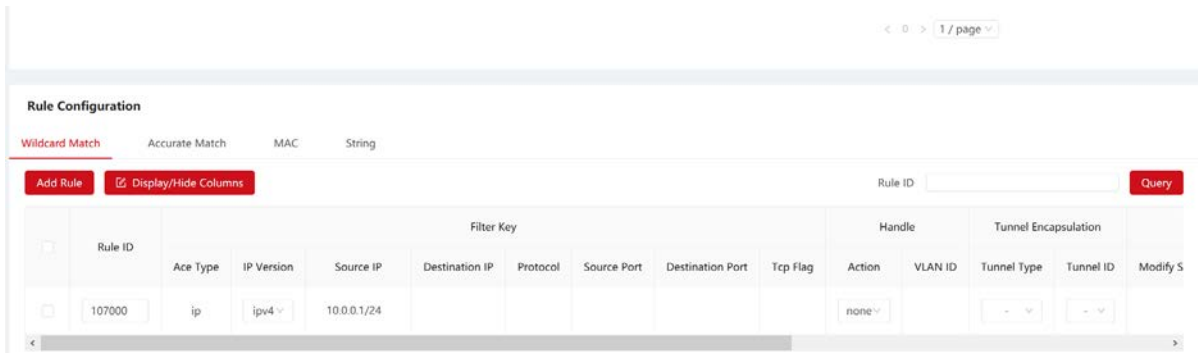
State-of-the-art tunnel functionality

The EXA64100 supports the termination of various tunnels such as:

- ERSPAN II and III
- GRE
- MPLS over UDP and MPLS over GRE
- GTP
- VXLAN
- IPinIP

Every port of the EXA64100 supports an independent MAC and IP setup. Thus, the EXA64100 can be used as an active tunnel end-point. Beside tunnel termination it also allows filtering inside tunnels.
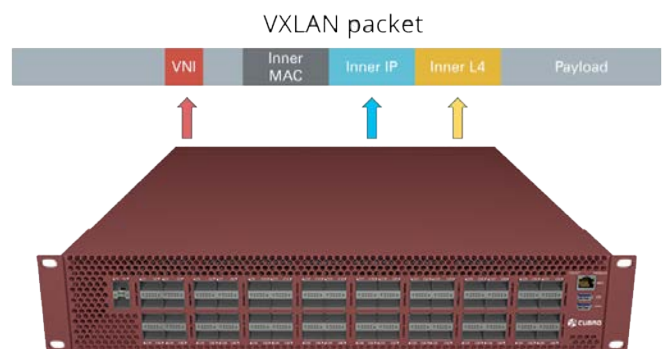
This superior functionality makes the EXA64100 perfectly suited for any modern overlay network.

GRE Encapsulation Function

To transport filtered packets from site A to site B over a routed Layer 3 network, the EXA64100 supports a GRE encapsulation function.
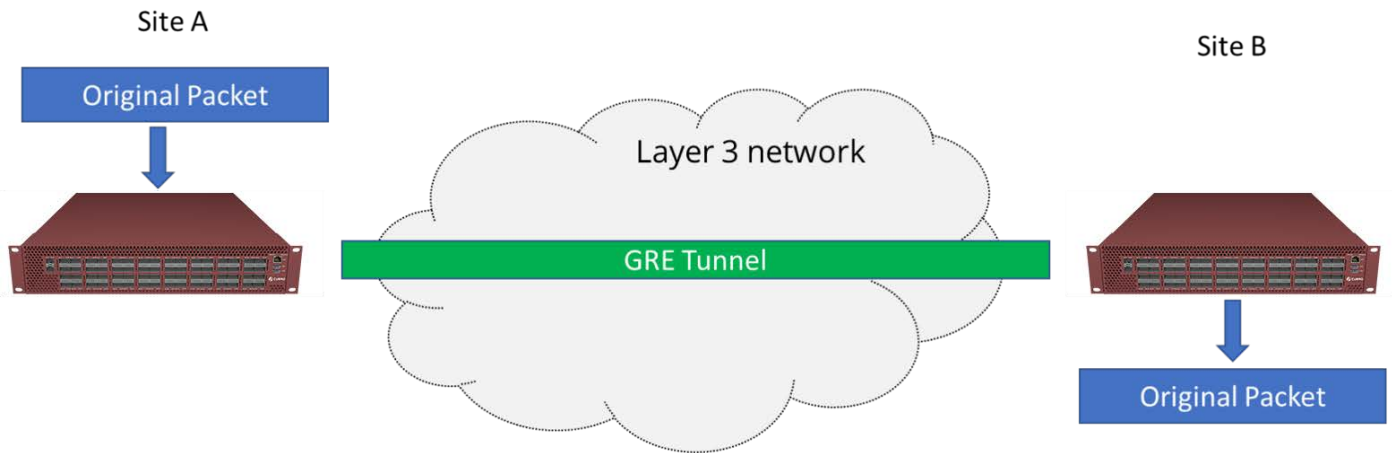
GTP user-plane load-balancing

User-data interfaces in mobile networks such as S1-U are usually heavily loaded carrying up to Tbps of data. To make analysis possible these user-data needs to be spread across many analyzers and thus load-balancing is a key criteria. In order to keep the efforts for the analyzing/probing part as low as possible it is extremely important that user sessions stay together so that every packet of a user session arrives at the same analyzer interface.
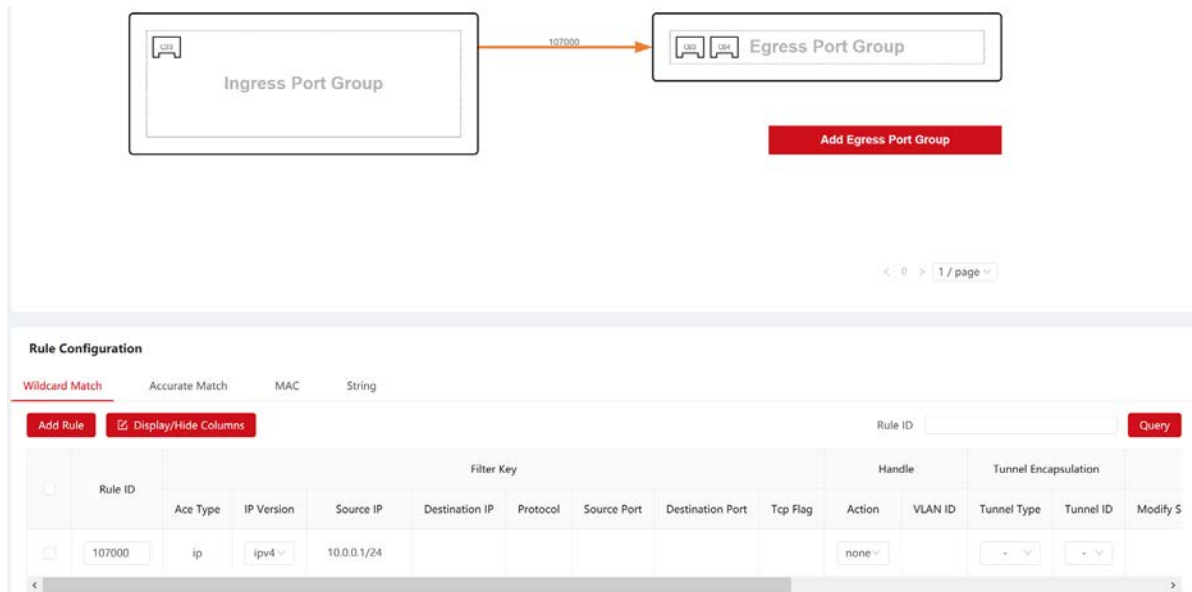
The Cubro EXA64100 distributes the packets based on a hash-key. The best choice for mobile user-data is that this hash-key is based on the inner IP address (=user IP) of the arriving packets. The EXA64100 handles inner IP load-balancing in hardware and supports Tbit/s of processing power.
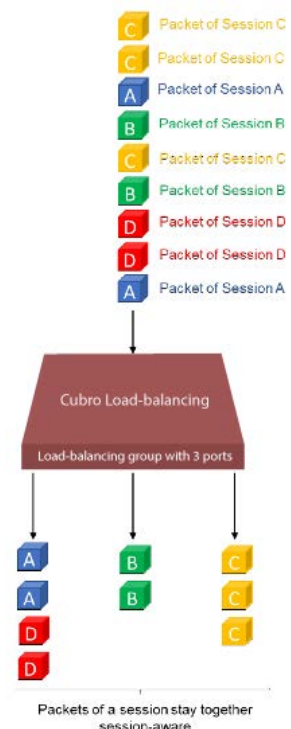
Web User Interface

The EXA64100 features an extremely easy to use graphical way of operation.
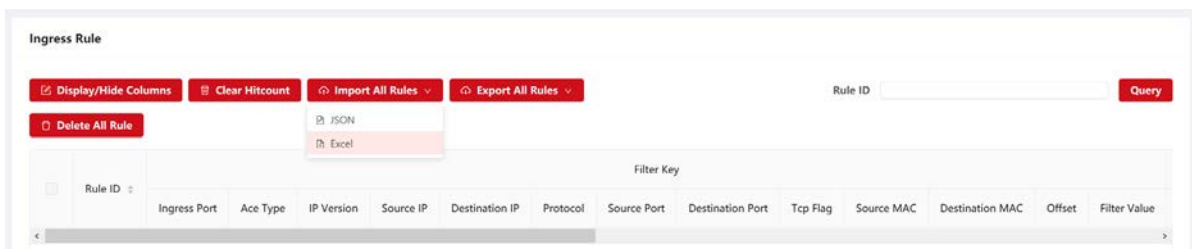
The innovative and logical WebUI allows the user to create a backup, setup new users, check port link status/statistics or define a powerful filtering scenario which will help to do the job quickly.

Filters can also be created using Microsoft® Excel and uploaded to the EXA64100.

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Ordering Information

Product Components:

- Cubro EXA64100
- AC/DC power supply
- European power cord
- Transceivers not included

Part Number	Description
CUB.SM-EXA64100	EXA64100 Advanced Network Packet Broker, 64x40/100G, AC power supply
CUB.SM-EXA64100-DC	EXA64100 Advanced Network Packet Broker, 64x40/100G, DC power supply

Spare parts:

Part Number	Description
CUB.PS-EXA64100-AC	AC Power supply module for CUBRO EXA64100
CUB.PS-EXA64100-DC	DC Power supply module for CUBRO EXA64100

For more information please check our website **www.cubro.com**.