

Best Practices Netzwerk-Visibilität

Der PacketBroker als Daten-Drehscheibe

Agenda

1. **Was ist ein PacketBroker?**
2. **Wie kommt man an die Messdaten?**
3. **Messaufbau / UseCase Visibility**
4. **Zusätzliche Features**
5. **Analyse im 400G Netz mit einem 10G Analyzer?**



Was ist ein PacketBroker?



Der PacketBroker ist ein «Handelsplatz» für Messdaten

- Sammeln von Messdaten aus verschiedenen Quellen
- Senden von Messdaten an Analyzer / Tools



Das richtige Paket, zur richtigen Zeit, beim richtigen Tool

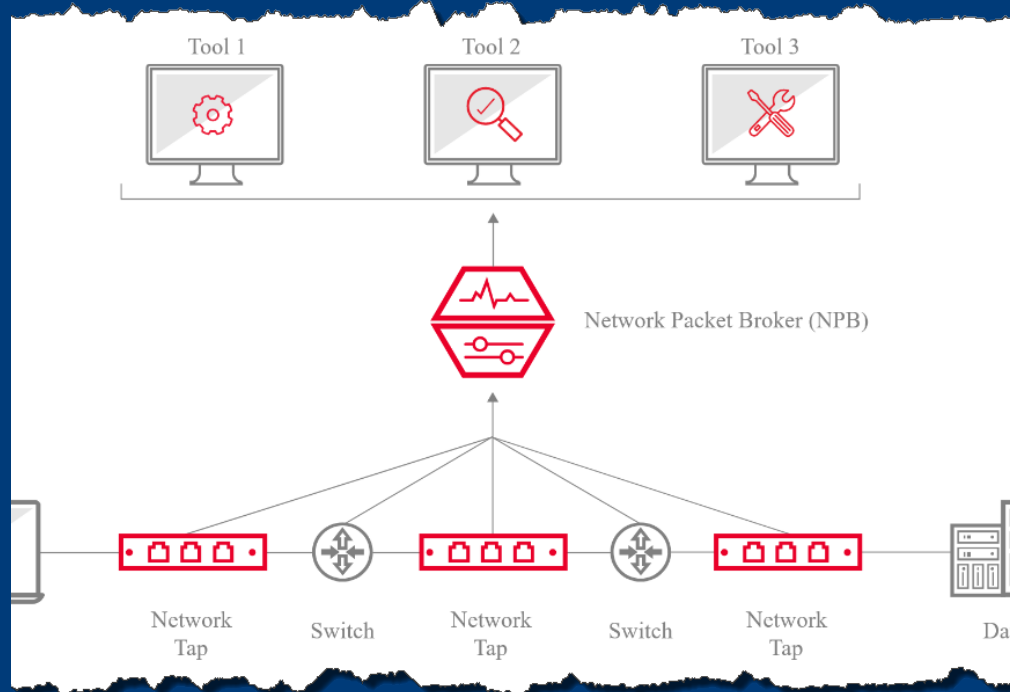


Paketverarbeitung



Lastverteilung auf mehrere Analyzer / Tools

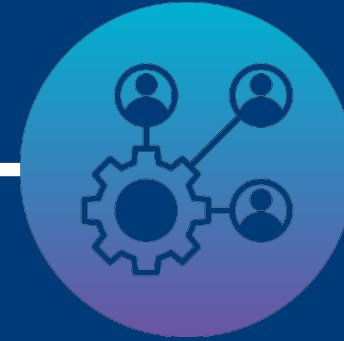
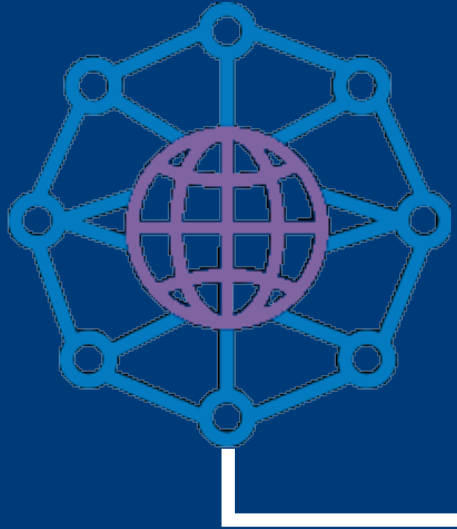
Wie kommt man an die Messdaten?



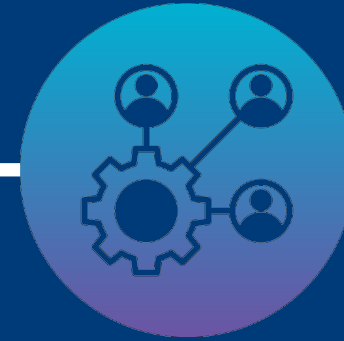


Messaufbau UseCase Visibility

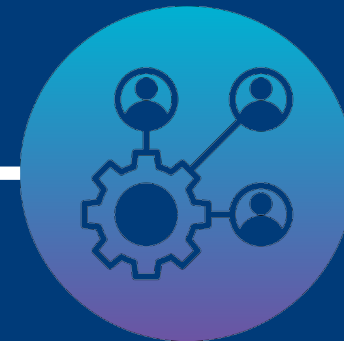
Ausgangslage



Storage Team



Security Team



Monitoring Team

Application Mix

MONITORING
(Gesamtverkehr)

SECURITY
(Web, DNS, Syslog)

STORAGE
(Backupserver SMB)

Testing Setup

Traffic Generator

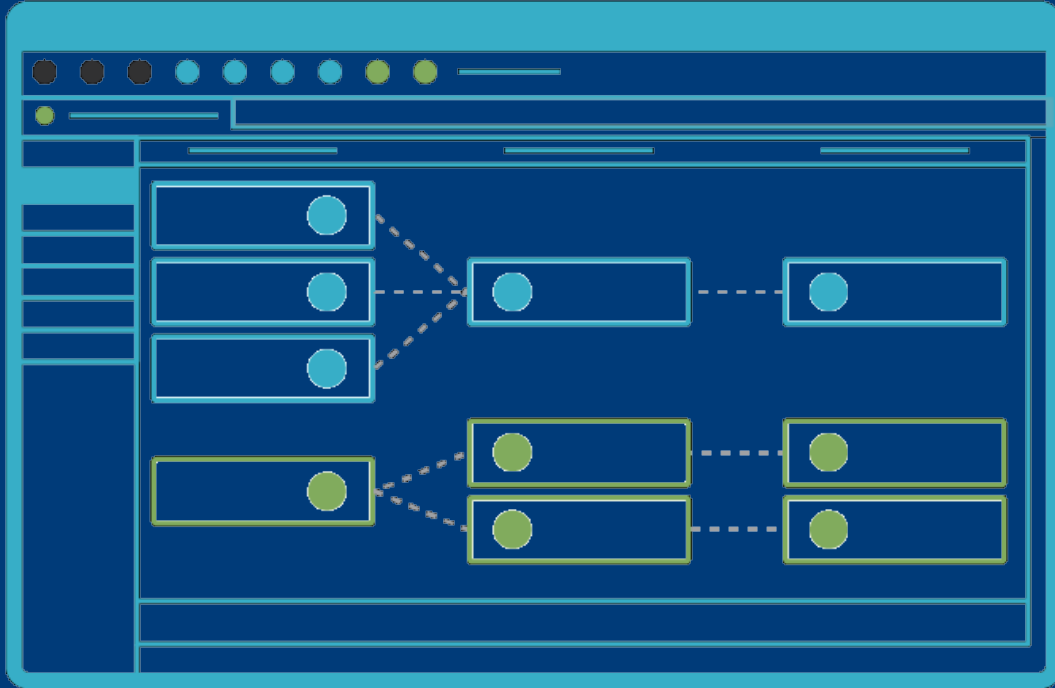


PacketBroker

Analyzer



Keysight PacketBrokers



Dynamische Paketverarbeitung
patentiert von Keysight

Messdaten können je nach Bedarf an
mehrere Tools/Analyzer verteilt werden.

Vision E40



[Startup Guide \(PDF\)](#)

[Web Console Help](#)

Welcome to Vision E40

The Vision E40 provides a cost effective solution to the challenges of monitoring enterprise networks by extending the range and depth of security and network tool coverage in the data center. This Vision E40 increases network visibility, optimizes tool utilization, and helps speed troubleshooting efforts. You can immediately optimize efficiency for a wide range of network tools such as application monitors, protocol analyzers, IDS, VoIP analyzers and data recorders.

Contact Information

Visit [our support page](#) for support and contact information. For more information about the full assortment of Keysight's products, please visit lxlacom.com.

Launching the Vision E40 Web Console

Use the default user name (admin) and default password (admin) to sign on to the system the first time.

Accessing the REST Web API documentation

Visit the [documentation page](#) to access a description of the REST Web API service available on this device.

Downloads

You may download and install the packages by clicking on the links below.

[SNMP MIBs](#)

[RADIUS Dictionary](#)

LAUNCH WEB CONSOLE

System Info

1 Vision E40
Status: Normal

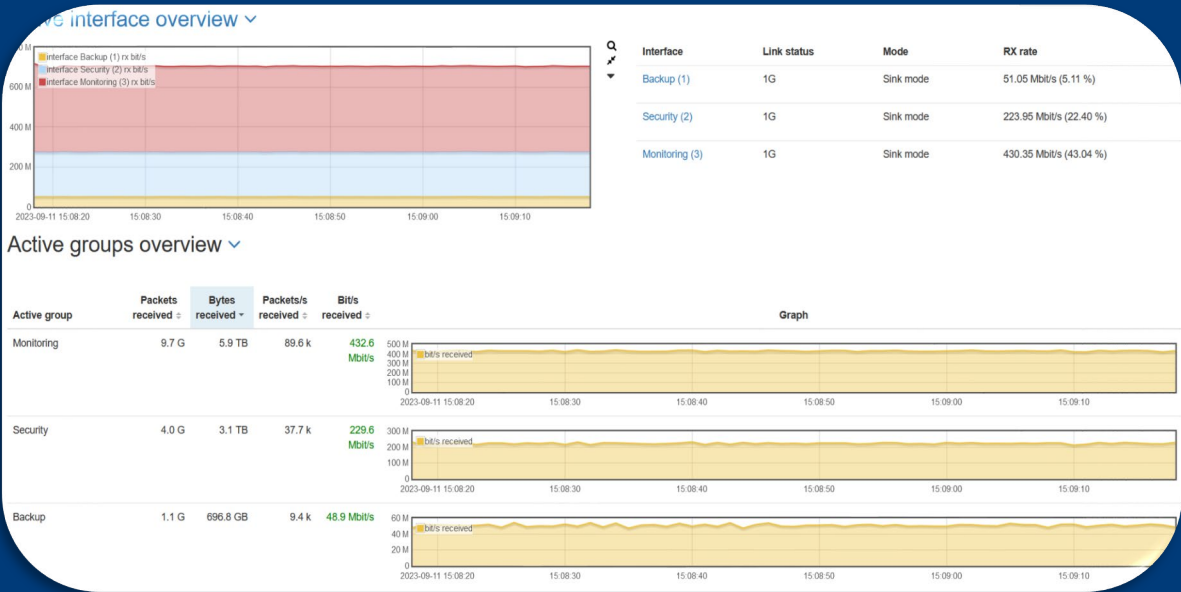
Server software version 6.2.1.9-20230530-135905-54be40

© Keysight Technologies 2008-2023 and [others](#)

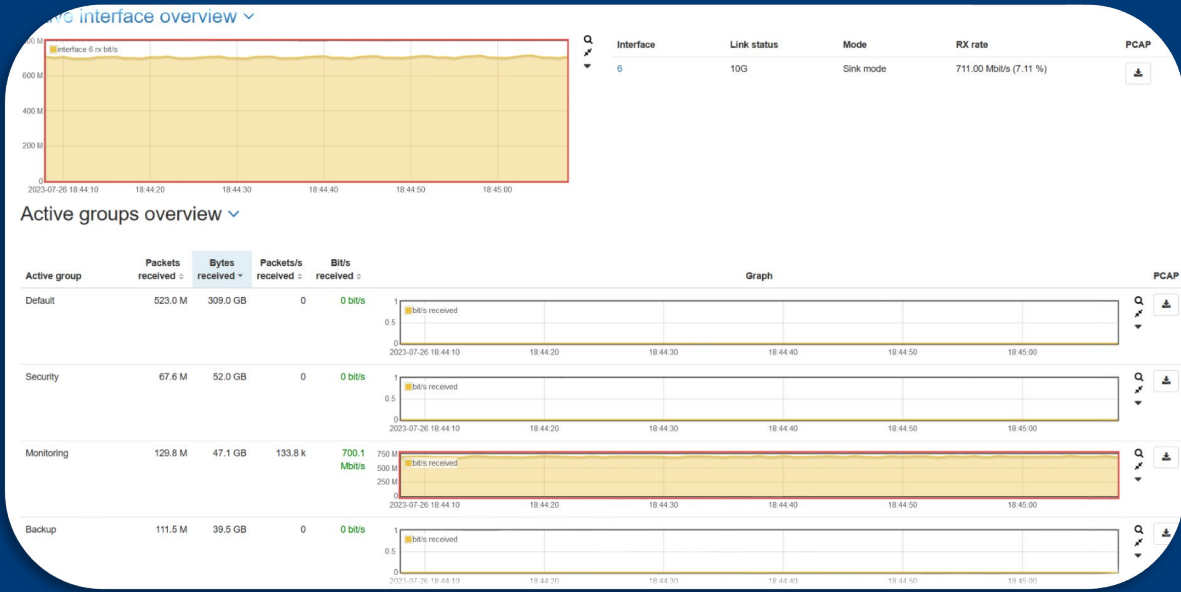
Emitec Group 

#1 in Test & Measurement, worldwide.

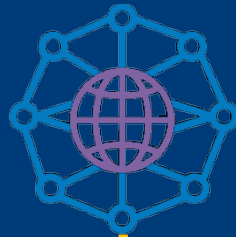
Keysight PacketBroker



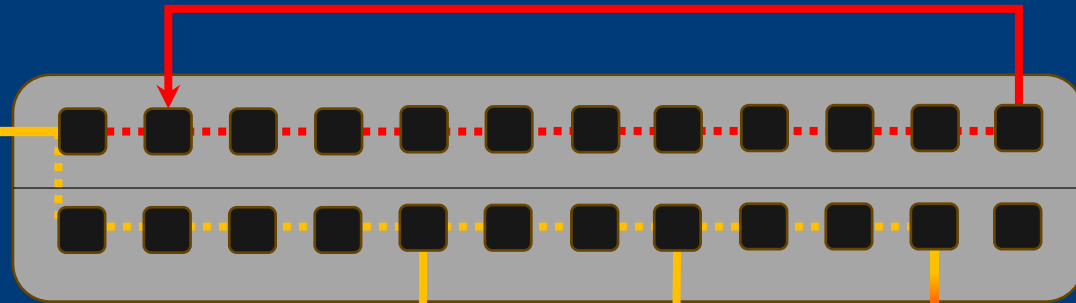
Herkömmliche PacketBroker



Herkömmliche PacketBroker



Messdaten werden nach einer festgelegten Reihenfolge verteilt.
Zusätzliche Ports für Loopback Konfiguration erforderlich.



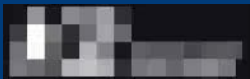
Storage



Security



Monitoring



- Device Status
- Port Management
- Statistics
- Traffic Management
- Authentication
- Administration

- Admin
- Logout
- Collapse

Active

Rule Sets

Rule Set ⓘ

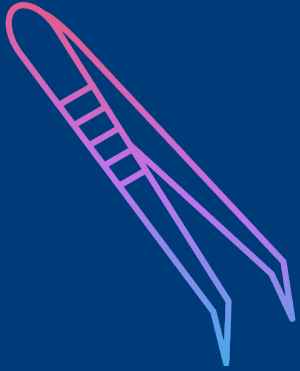
- Delete Rule Sets
- Export Rule Sets
- Import Rule Set
- Create Rule Set

<input type="checkbox"/>	Name	Description	Created By	Date Of Creation	Last Change
No Rule Sets available at the moment.					



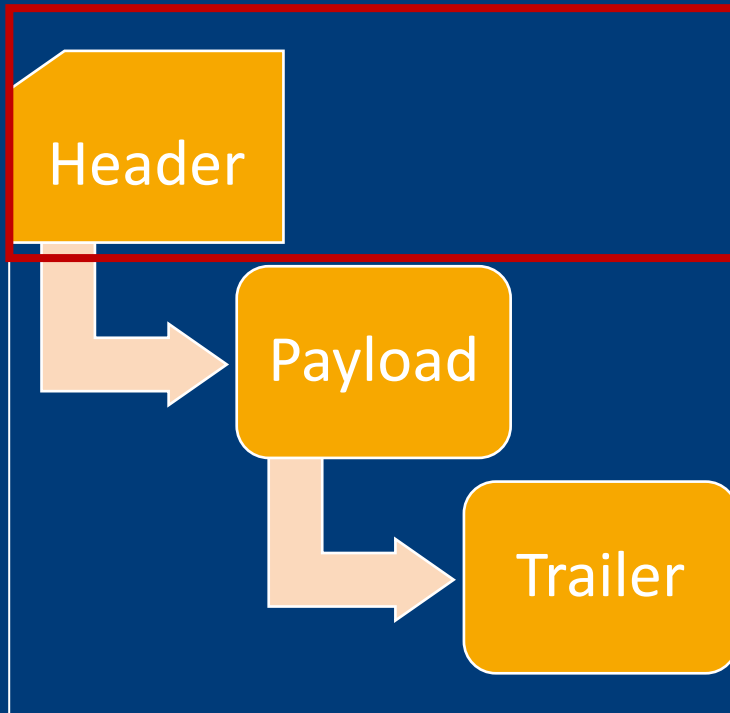
Zusätzliche Features

Worauf kommt es an?



Header Stripping

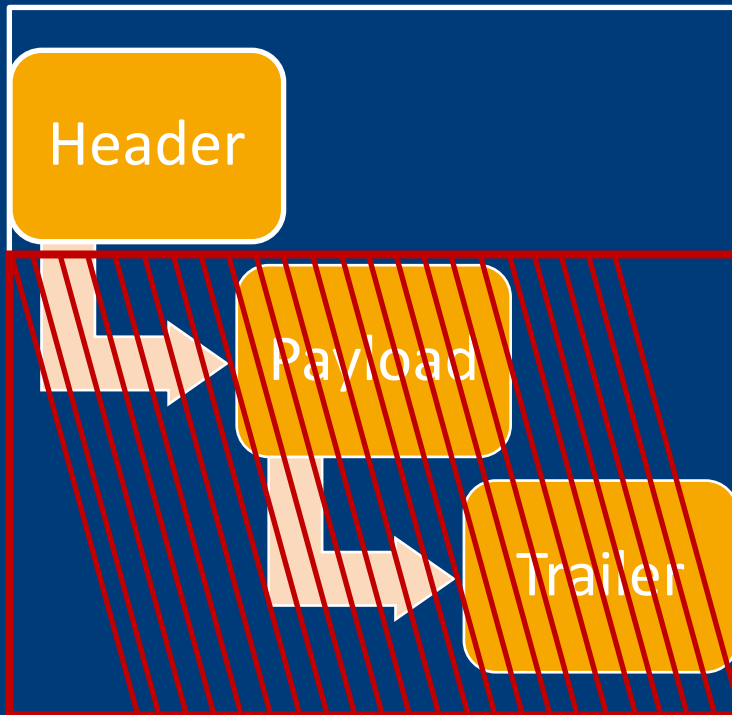
«Bestimmte Protokoll-Header oder Labels werden entfernt, bevor das Paket an ein Tool/Analyzer weitergeleitet wird. (z.B. GRE, MPLS, VLAN, VXLAN)»





Packet Trimming

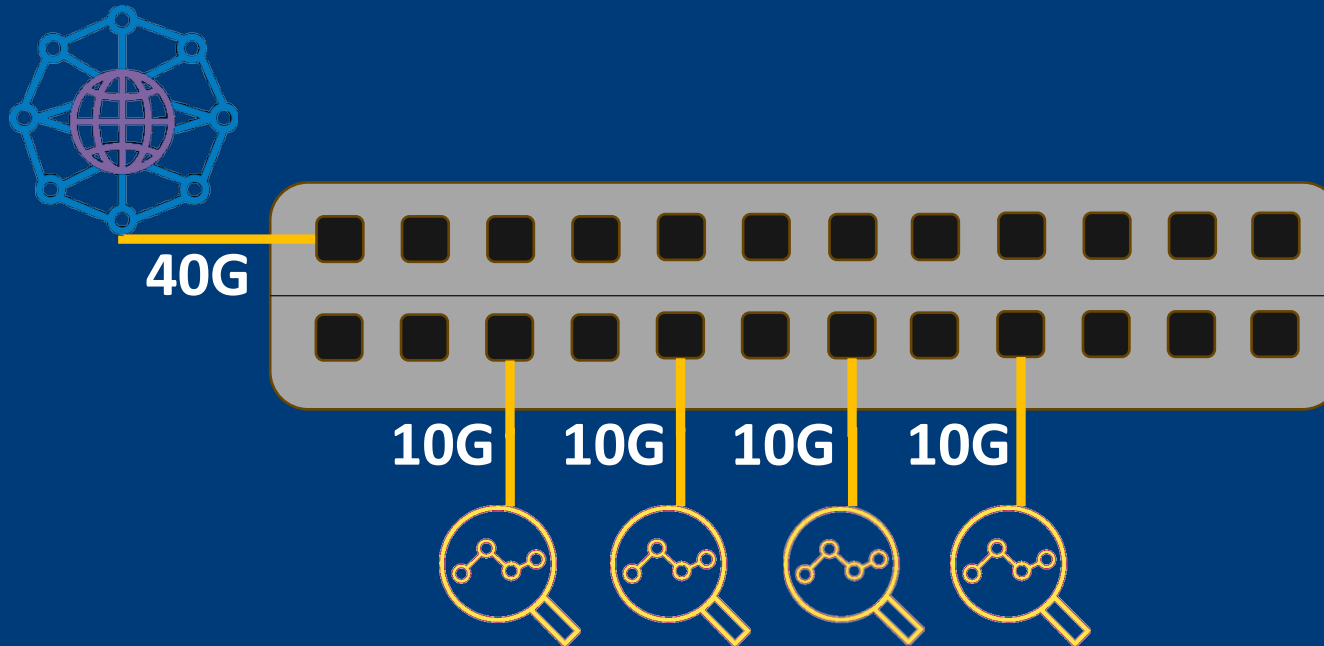
«Ein Teil des Pakets wird entfernt, bevor es an ein Tool / Analyzer weitergeleitet wird.»





Load Balancing

«Messdaten werden **sessionbased** auf mehrere Ports verteilt.»





Tagging

«Hinzufügen von Kennzeichnungen innerhalb der Ethernet-Frames»



Provider 1



Provider 2



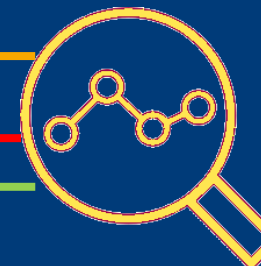
Colocation



VLAN10

VLAN20

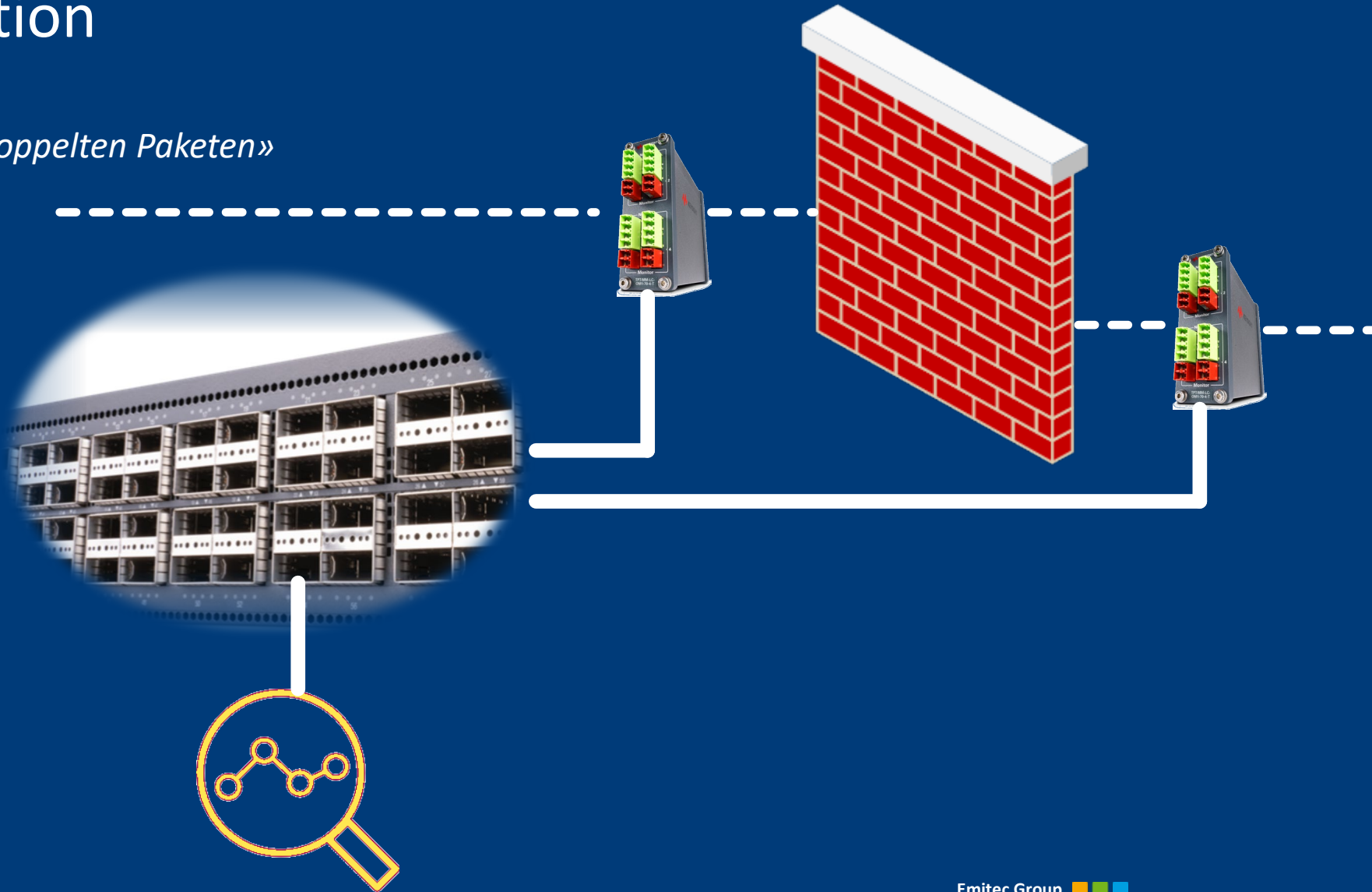
VLAN30





Deduplication

«Entfernen von doppelten Paketen»





Wo ist das Limit?

Troubleshooting im 400G Netz
mit einem 10G Analyzer?



400G



4x10G



Tool Port Statistics: P48 to Allegro P3 [Monitoring] (P48)

Port name: P48 to Allegro ... Port mode: Tool Media type: 1G SFP
Filter mode: Pass ... Filter criteria: Src filters: Monitoring (F1)

Pass All 1G SFP

Standard Graph

Counts:

	Packets	Bytes
Inspected	8,589,772	
Passed	8,589,772	4,966,621,674
Transmitted	8,589,772	4,966,621,674
Received Pause	0	

Drops (Pre-filter)

Dropped packet count: 1,692,425
Time since last drop: 0 sec

Drops Reset

Time since drops reset: 1 min 7 secs
Drops reset by: admin **Reset Drops**

Rates/Percentages:

	Current	Average	Peak	Time Since Peak
Dropped Packets/Sec (Pre-filter)	41,692	25,133	51,559	39 secs
Inspected Packets/Sec	197,859	127,563	236,473	33 secs
Transmitted Pkts/Sec	197,859	127,563	236,473	33 secs
% Packets Passed	100.0%	100.0%	100.0%	0 sec
Transmitted Bits/Sec	966,616,572	590,061,532	980,820,396	13 secs
Transmit Utilization	99.8%	61.0%	100.0%	2 secs

Refresh

Time of displayed stats: 09-11-2023 4:42:32pm CEST **Pause**
Refresh interval: 5 secs **Resume**

Reset

Time since stats reset: 1 min 7 secs **Reset Stats**
Stats Reset by: admin **Reset Open**

Close All **Close**

Tool Ports (3)

