Nextech Electronics Pvt. Ltd.

NEXTECH

Your Source for Advanced Technology Solutions..

25th ANNIVERSARY

Trusted Partner in Network Tools for over 25 Years

Allegro Packets

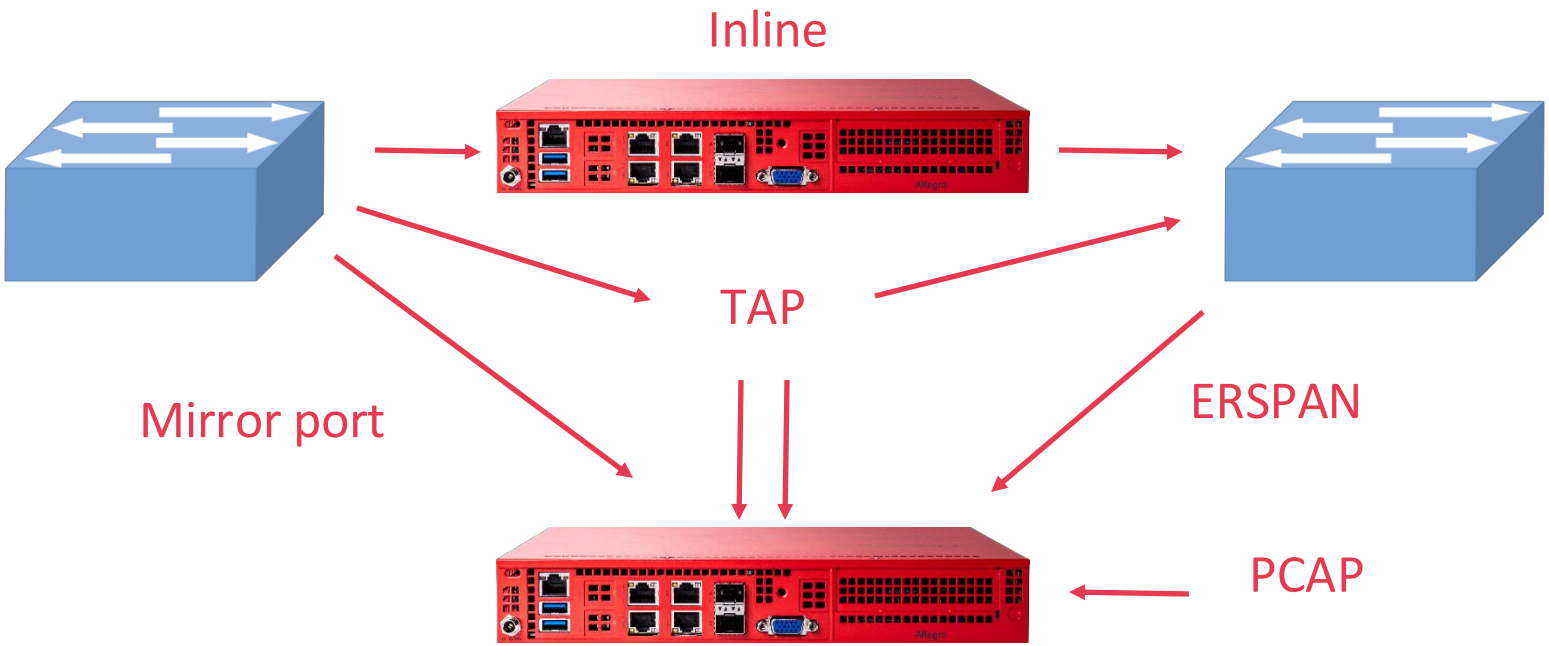
Network Multimeter

Monitoring and Trouble-shooting with the Allegro Network Multimeter

Allegro Packets
About us

- Manufacturer of the Allegro Network Multimeter
- Headquarter office: Leipzig
- Founded: June 2014
- Specialized in network test equipment and performance optimisation
- Managing directors: Katrin Pflugfelder, Klaus Degner
- Product developed completely in Leipzig, Germany

Connecting the Allegro Network Multimeter
Various possibilites



Allegro Overview

Allegro Packets
Network Multimeter

Allegro Packet Special Features

Easy-to-Understand Real-Time Packet Analysis Solution

1 Next-Gen Architecture & Real-Time Analysis

- Fast Analysis of High-Volume Traffic with Ultra High-Speed Proessing
- Support Back-in-Time Analysis to Review Point of Istio
- Provide Real-Time Visibility from L2~L7 with 1-Second Granularity
- Easy to Identify Causes by Examining Packets and TCP Flows Together

2 Intuitive Operating Environment & Convenience

- Simple to Install and Use with Plug & Play Design
- Identify Needed Information at a Glance with Widget-Based Dshboards
- Korean Language UI & Intuitive Menus for Quick Adaptation
- Instantly Extract Needed Data with Filtering Functionality

3 Flexible Scalability & All-in-One Structure

- Perform Integrated Capture, Analysis, and Storage with a Single Unit
- Support Wide Range of Performance from Portable to Data Cente Scale
- Enable End-to-End Path Analysis by Connecting Multiple Units
- Scalable Storage Space with JBOD Integration

Fast Analysis
Quickly Identify in Real-Time

Easy Operation
Easily and Efficiently for Anyone

Scalability
Flexibly Connect and Expand

>>>

Complex Packet Analysis
Easier and Faster

Allegro Overview

Allegro Packets
Network Multimeter

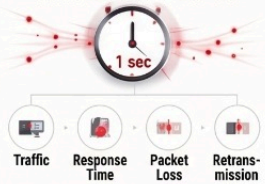
With Allegro Network Analyzer, Real-Time 1-Second Granularity, Fast Problem Solving!

Leveraging powerful performance, easy operation, and AI to solve network problems quickly and accurately.

- Network changes even at this moment. Don't miss instant problems with 1-second granularity real-time analysis.
- Discover problems quickly and support stable operation by identifying causes within a few seconds
- Manage the network easily and efficiently with powerful performace, easy operation, and AI analysis.

01 Real-Time 1-Second Granularity Analysis

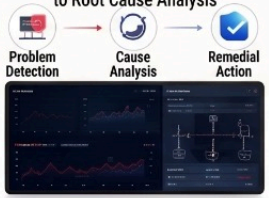
Collect & Analyze Network Status in 1-Second Intervals



- ✓ 1-Second Granularity Data Collection & Analysis
- ✓ Real-Time Change Detection
- ✓ Immediate Alarm & Visualization

02 Fast Problem Solving

Quickly from Problem Detection to Root Cause Analysis



- ✓ Real-Time Problem Detection
- ✓ Accurate Root Cause Analysis
- ✓ Shorter Downtime with Fast Resolution

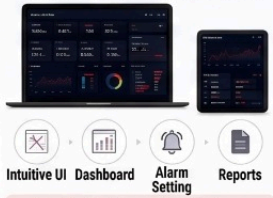
03 Powerful Performance

Handle High-Volume Traffic Stably and Quickly

- ✓ High-Performance Capture & Analysis Engine
- ✓ Stable High-Volume Traffic Handling
- ✓ Scalable Architecture

04 Easy Operation

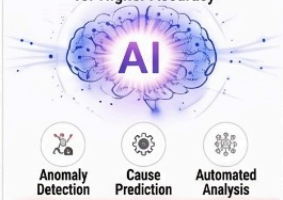
Intuitive UI & Convenient Operating Environment Provided



- ✓ Intuitive Dashboard Provided
- ✓ Simple Configuration & Operation
- ✓ Improved Management Efficiency with Automated Reports & Alarms

05 AI Utilization

AI-Based Intelligent Analysis for Higher Accuracy



- ✓ AI-Based Anomaly Detection & Prediction
- ✓ Intelligent Root Cause Analysis & Recommendations
- ✓ Continued Learning for Improved Analysis Accuracy

EXPECTED BENEFITS

Faster Problem-Solving Time
Significantly reduces MTTR with real-time analysis.

Improved Service Stability
Minimizes service downtime with failure prevention and quick response

Increased Operational Efficiency
Improves management efficiency with easy operation and automation

Network Performance Optimization
Eliminates bottlenecks and continually improves network performance with accurate analysis

Data-Driven Decision Making
Supports better decision-making with AI analysis and detailed reports

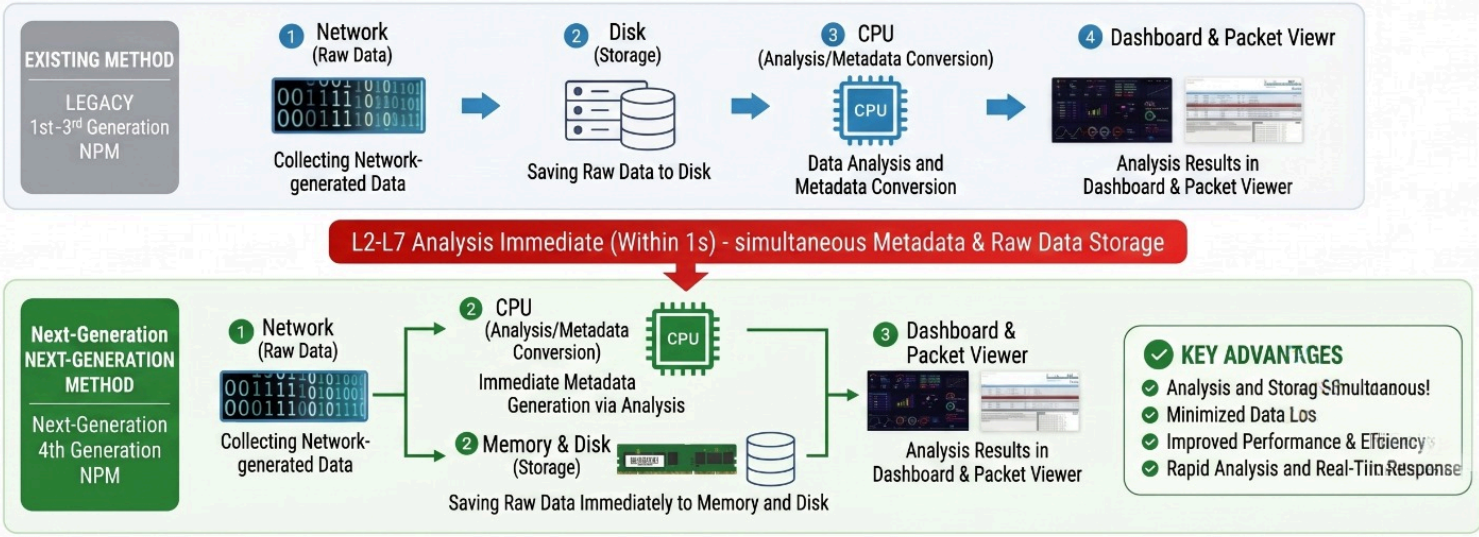
Allegro Overview

Allegro Packets
Network Multimeter

Limitations of Legacy NPM

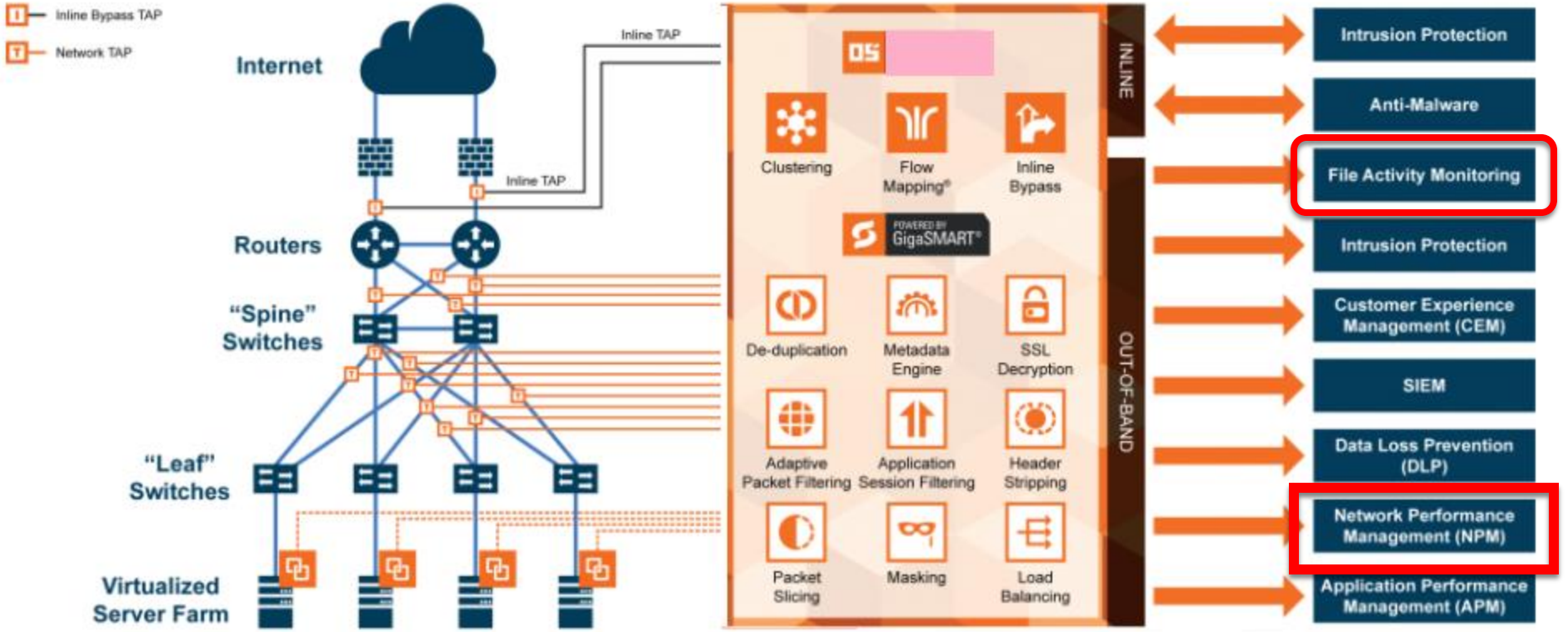
Save Data Quickly and Efficiently!

Metadata and Raw Data are saved simultaneously within 1 second during L2-L7 analysis.



Next-generation NPM improves customer work efficiency by storing data quickly and safely, without analysis delay.

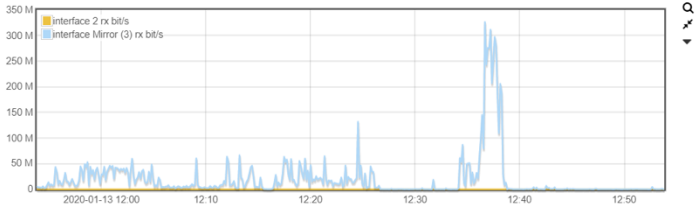
Allegro Packet in IT network.



Allegro Network Multimeter
In-memory DB and packet ring buffer

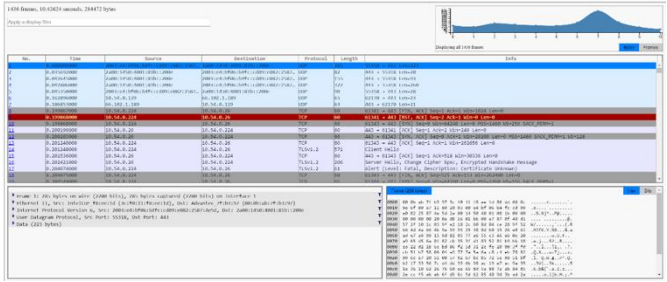
In-memory database

- metadata
- statistics
- presented in web-interface

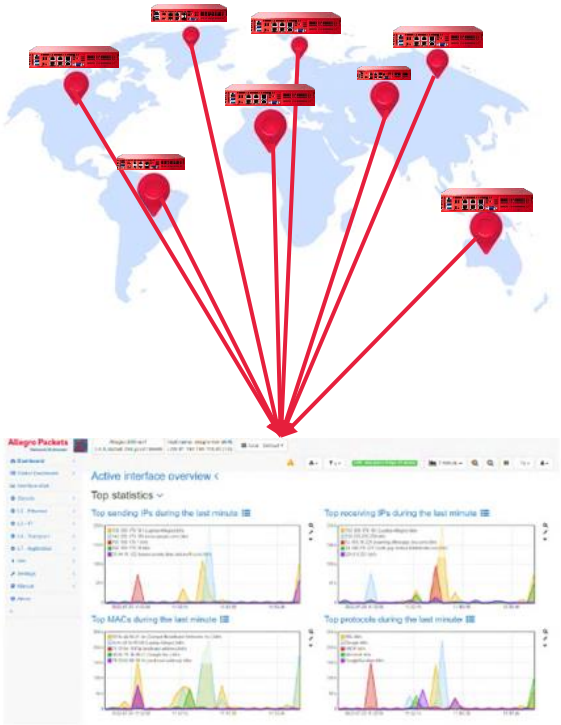


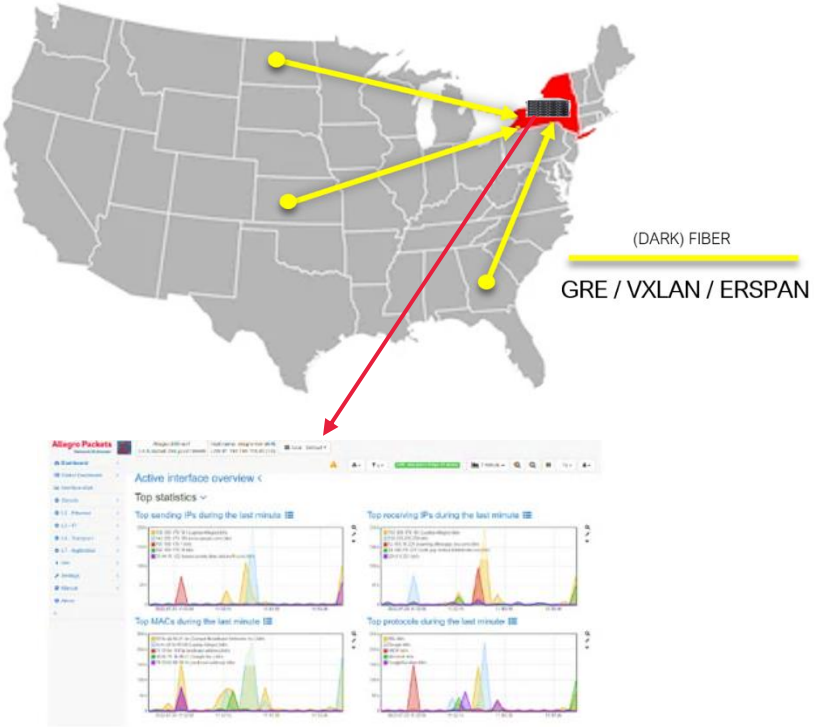
Packet ring buffer

- external/internal SSD or HDD
- for traffic replay
- for selective pcap extract
- may be fully encrypted



Single Pane Visibility & Management
Distributed Probes - Centralized Probes - Full Flexibility





Allegro Network Multimeter
Overview of Portable Series

Appliance	Virtual Edition	500	1010 3010	x210 Series
Max capture performance	1 GBit/s	4 GBit/s	40 GBit/s	120 GBit/s
Avg Throughput (full decode)	1 GBit/s	2 GBit/s	20 Gbit/s	60 GBit/s
Installed ports	1 x 1G Virtual	4 x 1G 1 x Wifi 6e	3 x 1G 2 x SFP28 1 x Wifi 6e	4 x SFP+ 1 x Wifi 6e
NIC slots	-	-	1	2
In-memory DB storage	Unlimited	4 – 8 GB	16 – 256 GB	32 – 576 GB
Internal packet ring buffer	Unlimited	0,5 – 4 TB	29,6 TB	Optional up to 106,4 TB

Allegro Network Multimeter
Overview of Rackmount Series

Appliance	Virtual Edition	x210 Series	x310 Series	x410 Series	x510 Series
Max capture performance	4 GBit/s	120 GBit/s	240 GBit/s	240 GBit/s	200 GBit/s
Avg Throughput (full decode)	2 GBit/s	60 GBit/s	120 GBit/s	120 GBit/s	120 GBit/s
Installed ports	8 x 1 G 2 x SFP 1 x Wifi 6e	4 x SFP+ 1 x Wifi 6e	2 x SFP+ 1 x Wifi 6e	2 x SFP+ 1 x Wifi 6e	No default ports 1 x Wifi 6e
NIC slots	-	2	2 + 1 OCP	6 + 1 OCP	4
In-memory DB storage	16 – 128 GB	32 – 576 GB	192– 6144 GB	192 – 6144 GB	192 – 3072 GB
Built-in packet ring buffer	960 GB – 3,84 TB	Optional up to 106,4 TB	configurable with external HDD/SSDs (limited by max # SSDs x largest SSD available)		

Allegro Packets
3rd Party Complementary / Compatibility

- **REST-API**
- **SYSLOG**
- **SNMP-traps**
- **ZABBIX**
- **KAFKA**
- **SNORT**
- **Influx-DB export**
- **IPFIX export**
- **Packets export**

KEYSIGHT TECHNOLOGIES

- ✅ Allegro on NPB (sw-option)
- ✅ External time stamps
- ✅ SRCMAC time stamps
- ✅ Custom packet trailers
- ✅ Hawkeye test-endpoint

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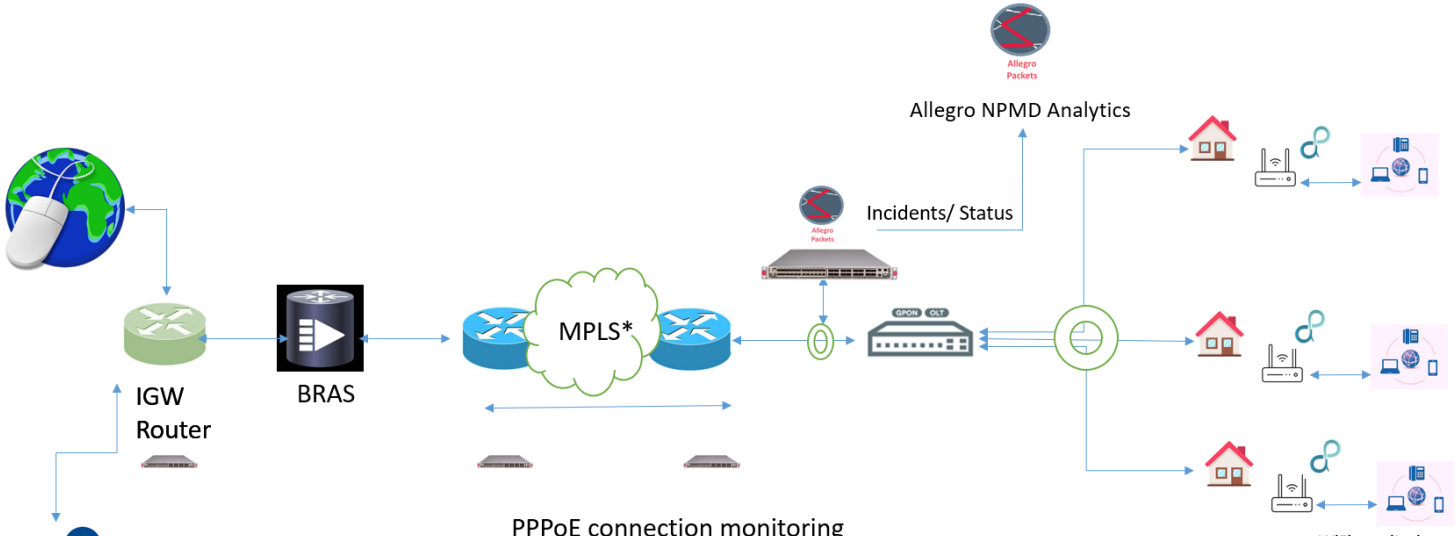
Allegro Packets
Network Multimeter

Safe use & Integration

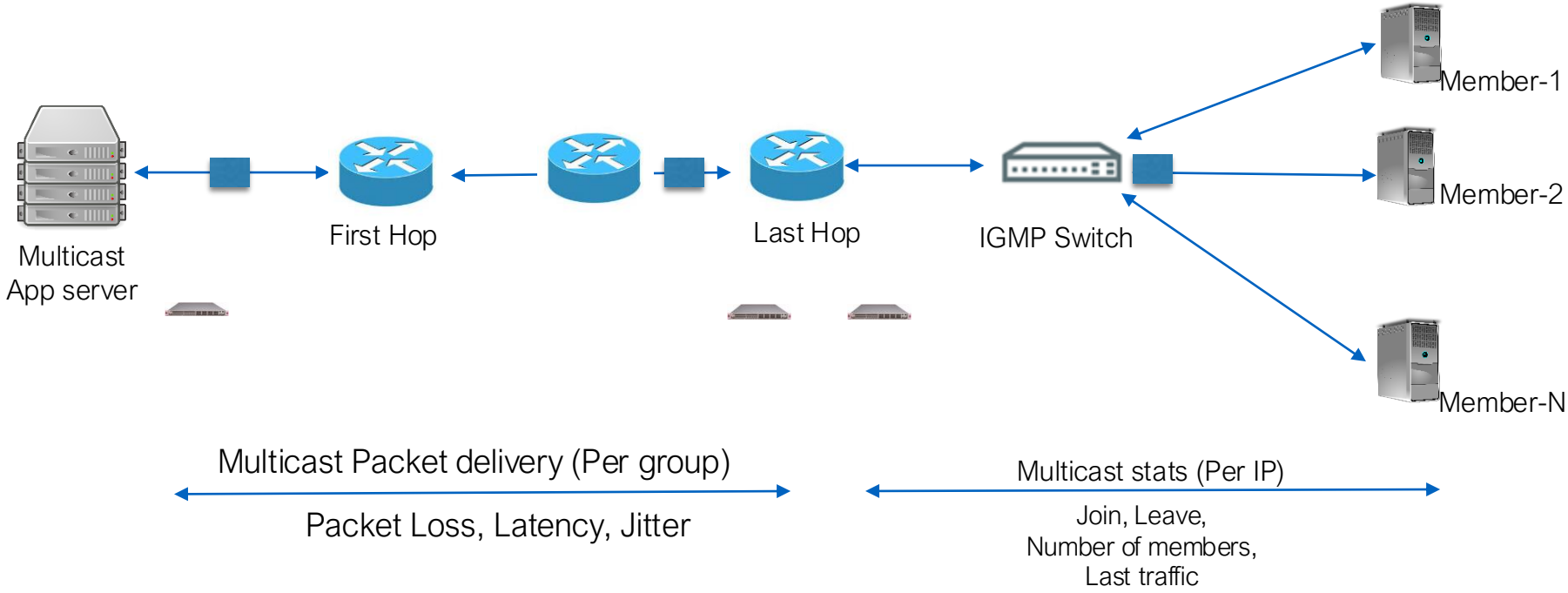
Enterprise-grade integration & Safety Options

- Role-Based Access Model
- 2FA / MFA Authentication
- LDAP
- TACACS+
- 802.1x / RADIUS
- PCAP-Anonymization

FTTH Network monitoring

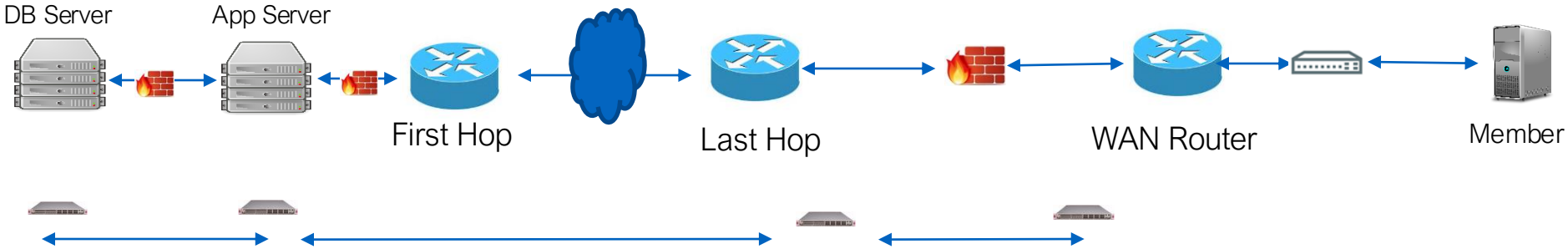


Allegro Packets
Multicast network monitoring



Allegro Packets

DataCentre Path Monitoring (Multi-Segment) and Micro-burst

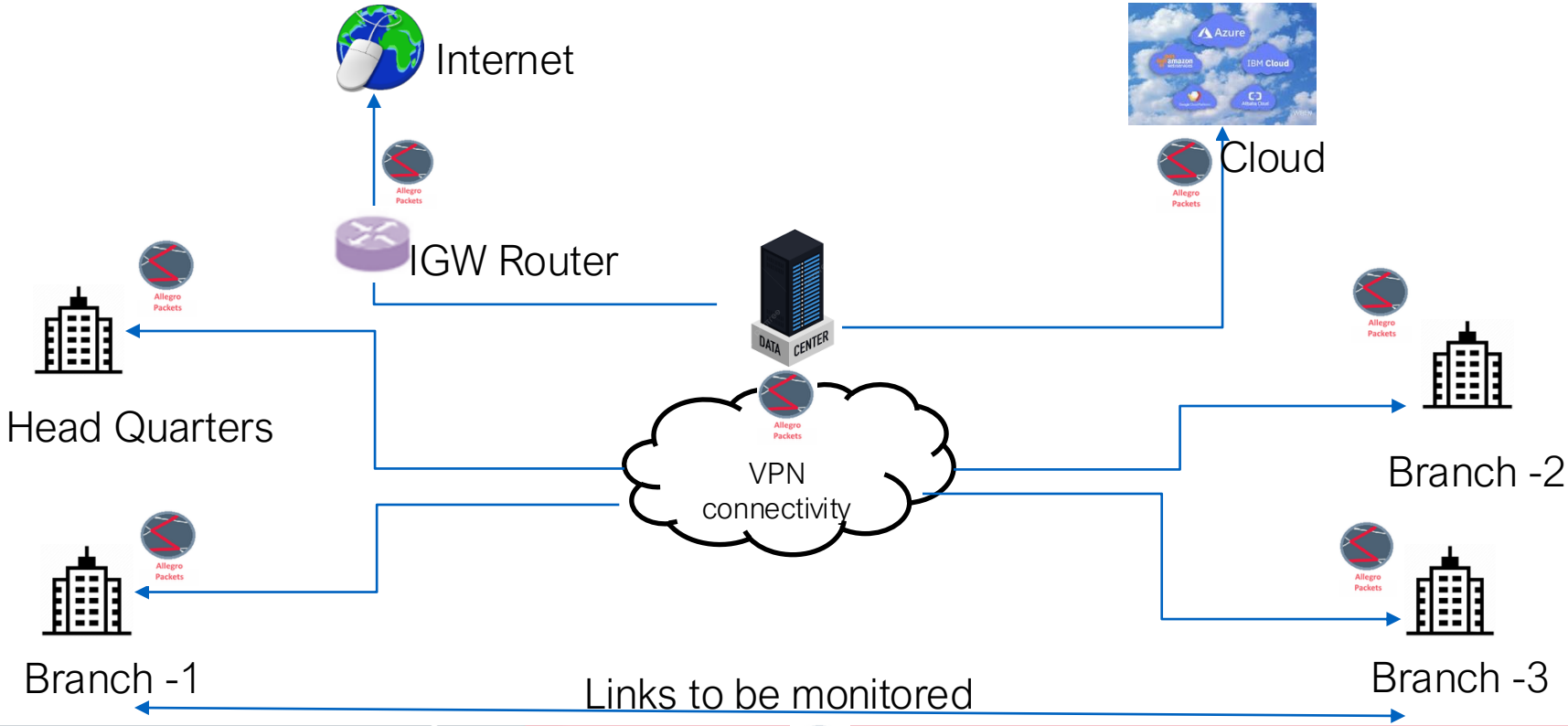


- Per segment / Per packet stats – Packet Loss, Latency and Jitter.
- Burst Analysis with 1ms resolution at L2 as well as L3.
- GPS synchronized timestamp accuracy

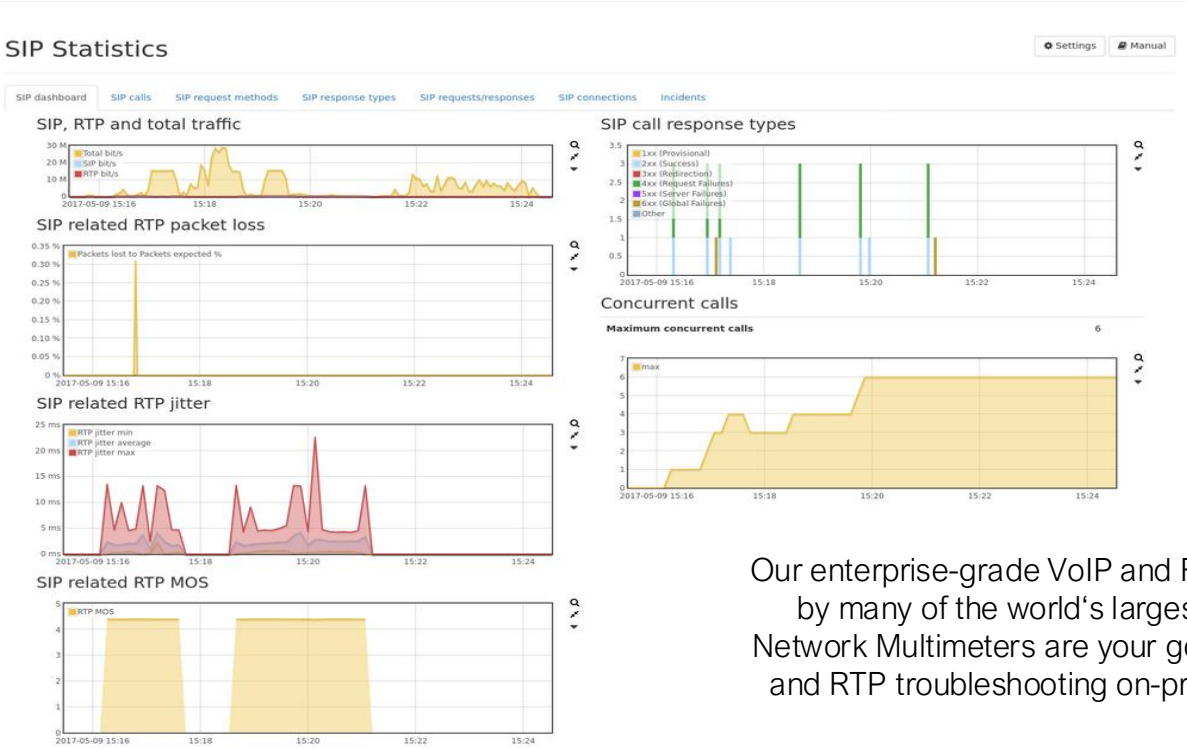
Integrate multiple Allegro Network Multimeters into one web-interface, for extensive multi-point observability and troubleshooting capabilities.
Switch between views and compare traffic between different sites.

Allegro Network Multimeter

Allegro Packets / WAN insights



VoIP/RTP Analysis



swisscom

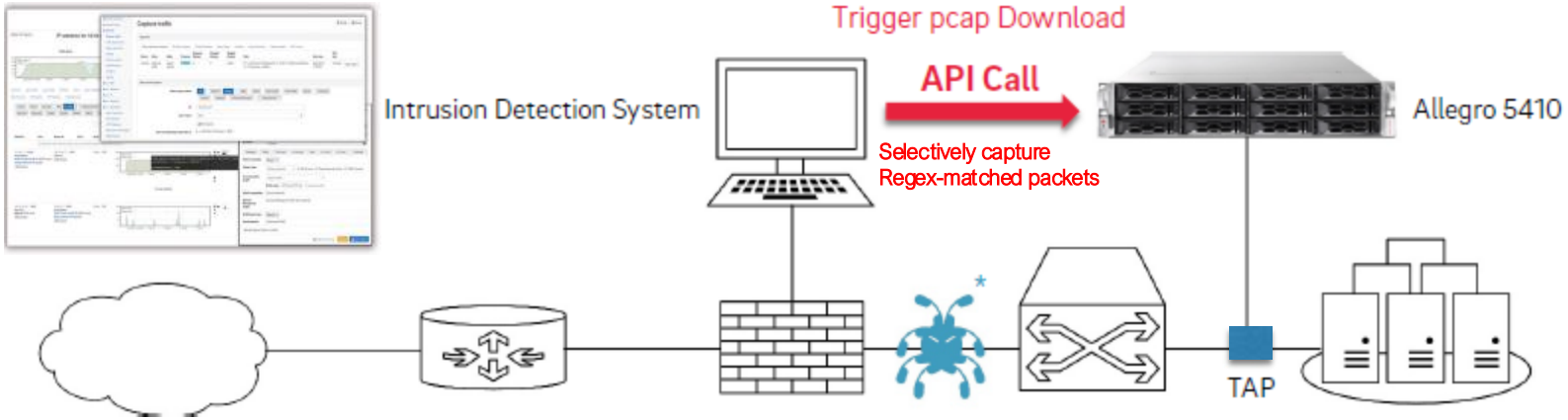
Our enterprise-grade VoIP and RTP analysis tools are actively used by many of the world‘s largest service providers. The Allegro Network Multimeters are your go-to solution for packet-based VoIP and RTP troubleshooting on-premises, in the DC and at the SBC

CyberSecurity

Pre-filtering of Pcaps According the Packets/Event Notification

Use case

- Provide packets, when IT Security Systems detect an incident
- First implementation: Packets are extracted manually from packet storage.
- Later: IT Security System triggers pcap download via REST API Call
- L2 to L7 analysis of the packets should also be possible



Multi-Cloud/ Multi-Link Monitoring scenarios

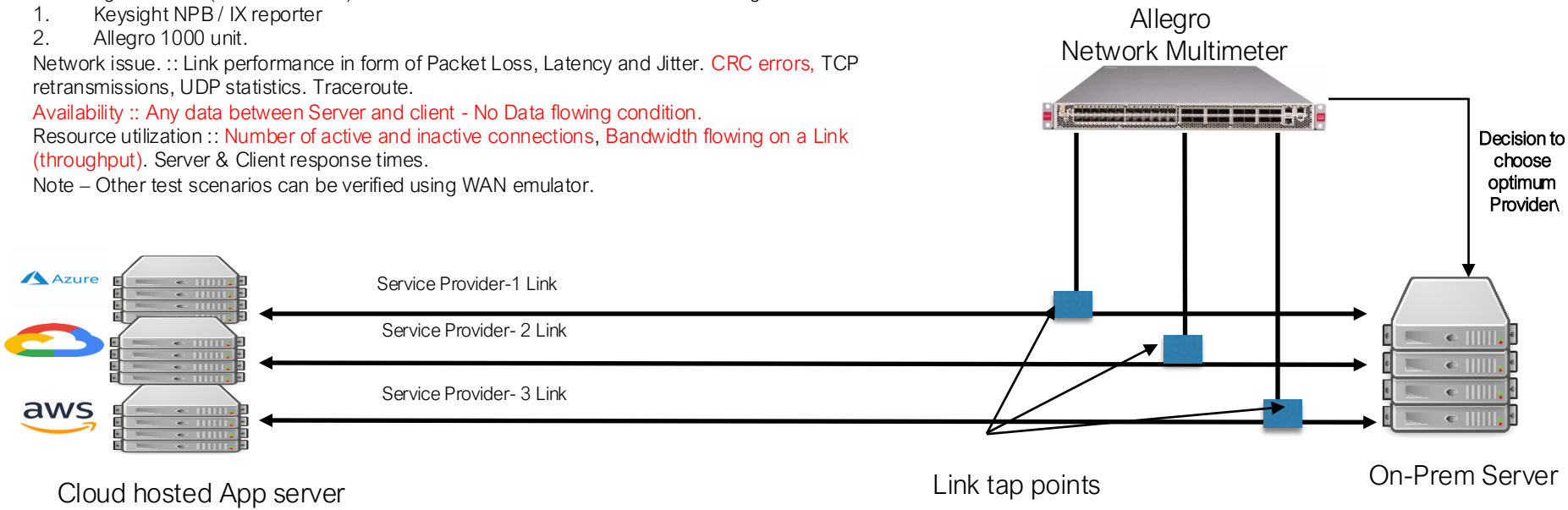
Following scenarios (Marked in RED) were detected and incident-alerts raised using
1. Keysight NPB / IX reporter
2. Allegro 1000 unit.

Network issue. :: Link performance in form of Packet Loss, Latency and Jitter. CRC errors, TCP retransmissions, UDP statistics. Traceroute.

Availability :: Any data between Server and client - No Data flowing condition.

Resource utilization :: Number of active and inactive connections, Bandwidth flowing on a Link (throughput). Server & Client response times.

Note – Other test scenarios can be verified using WAN emulator.



Lawful interception

Allegro Packets can be used for lawful interception and data retention purposes, capturing and storing network traffic for legal investigations.

JBOD solution can offer up to 2,244TB with 22TB hard drives and can be scaled to 11.2 Petabytes (11,220TB) by daisy-chaining five enclosures.

OT / Industrial Protocol Analysis & Troubleshooting

Allegro Packets can analyze traffic in industrial environments, including protocols like PROFINET, OPC-UA, and IEC 60870-5, to prevent production downtime.
Packet-based visibility includes communication relationships, top talkers, bandwidth consumption, jitter, frames, errors and alarms (PN-RT, PN-RTA and PNIO-CM).

Reference Customers of Allegro Packets

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BITMARCK®

ROTENBURGER WERKE
Angebote für Menschen mit Behinderung
Im Verbund der Diakonie

cewe

GRUPPE Josefs-Gesellschaft Köln

arvato BERTELSMANN

AIP Leibniz-Institut für Astrophysik Potsdam

Stadtwerke Unna
Unsere Energie.

Raiffeisen BANK

cnlab
Information Technology Research

LANXESS
Energizing Chemistry

TU Graz

DENSO
Crafting the Core

FESTO AG

Hochschule für den öffentlichen Dienst in Bayern
Fachbereich Polizei

FRITZ-HABER-INSTITUT
MAX-PLANCK-GESELLSCHAFT

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Allegro Packets Reference Customer Swisscom

Customer

- Nummer 1 telco in Switzerland
- VoIP network (telephony, mobile telephony, Internet and digital television)
- Longtime Allegro Packets customer with various devices in use (Allegro 200 to 5500)

Allegro 5500

Project

- Allegro 5500, 360 TB packet ring buffer storage, 512 GB In-memory DB and 40 GBit/s capture rate
- Voice analysis for 12 million pps with only one appliance
- Retrospective in depth analysis for SIP and RTP
- Recording of all traffic without violation of legal requirements.

Allegro Packets Reference Customer
Graz University of Technology

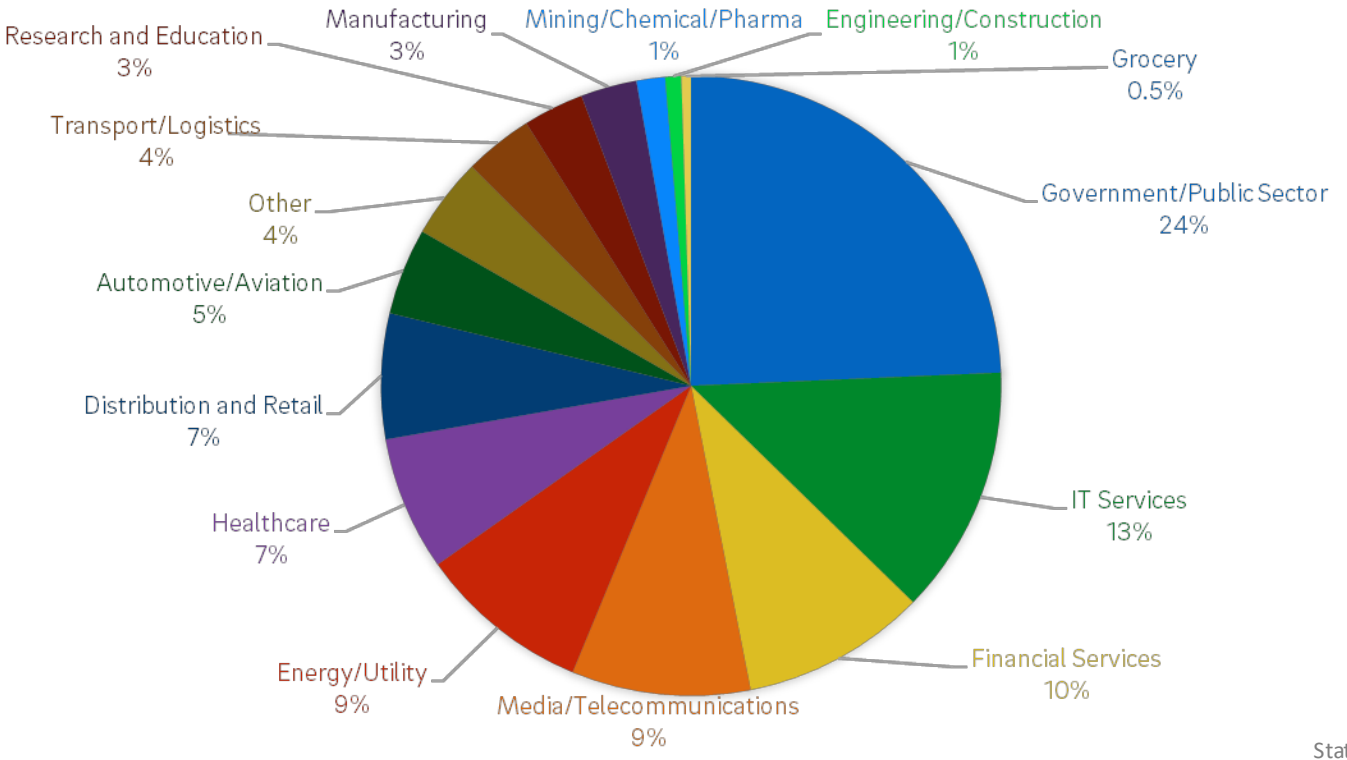
Customer

- University, founded in 1811
- 15,000 students and 3,000 employees, 7 Faculties
- Central IT Service: File and Web Server, Storage, VoIP, Desktop Services

Project

- Allegro 1200 and Allegro 3500
- with 4 x 10G ports, 192GB RAM
- 3 years Maintenance
- Packet Broker switches appliances into the different networks
- Troubleshooting of DHCP and DNS servers, response-time monitoring, QoS analysis, burst analysis, ensuring performance reserves in the network

Revenue of Allegro Packets Sorted by Sector



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