



CUBRO
NETWORK VISIBILITY

APPLICATION FILTERING WITH OMNIA120

COMPLETE LAYER 7 VISIBILITY



APPLICATION NOTE

21 NOVEMBER 2023

Key advantages of using Omnia120

- State-of-the-art chipset with a high throughput
- Inline traffic blocking via innovative Domain filtering
- DPI Analytics with detailed information and graphical GUI
- All-in-one solution for easy deployment, everything in one box

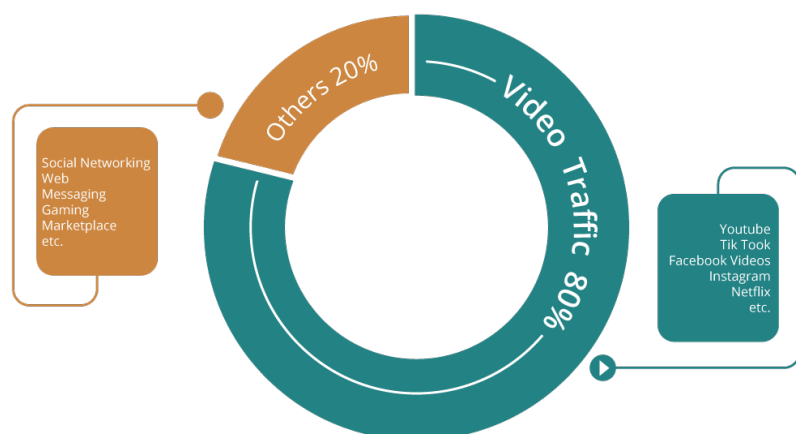
Introduction

Omnia120 is a versatile device that combines features of an advanced NPB such as aggregation, L2 to L4 filtering, load-balancing and deduplication with high throughput DPI analytics. Thus, it enables application-based filtering to feed the tools with only the relevant traffic to improve network visibility, tool efficiency and traffic handling while reducing the cost of security & performance monitoring. The application filtering feature of Omnia120 offers full layer 7 visibility and as a result it delivers the right data to the right tools.

High cost of security & performance monitoring

Network traffic monitoring and analysis for security, compliance and network operations are of key importance for service providers, operators, enterprises and governmental organizations. However, due to the surging traffic volume, the costs of monitoring and security tools are spiralling.

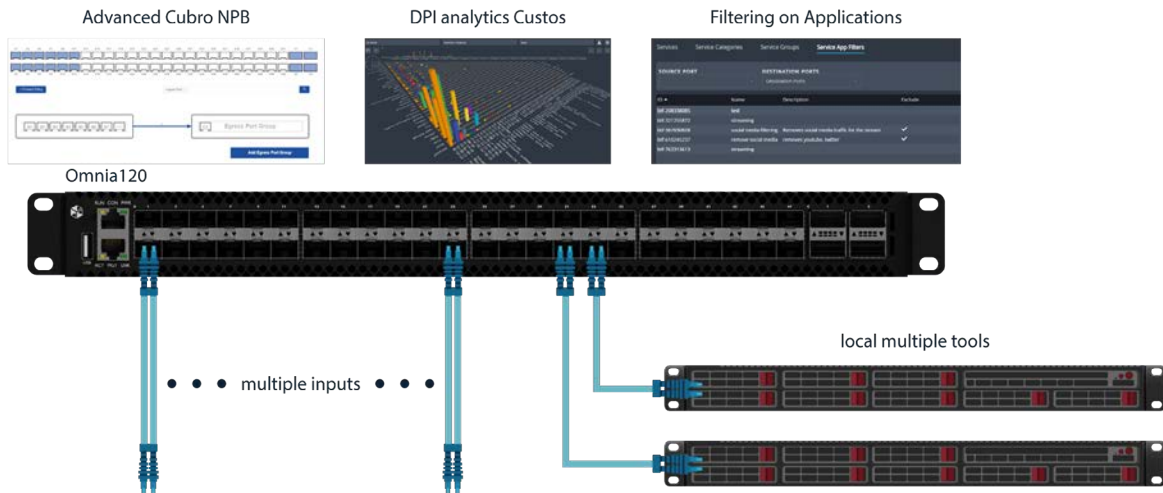
Traffic filtering by application is an excellent choice to release monitoring and security tools from overloading and maximizing the return on investment. Application filtering is useful not only because it makes monitoring less complicated but also eliminates irrelevant traffic, such as that from Social Media or video streaming. Global online video traffic is more than 80% of the total internet traffic and is anticipated to grow even more.



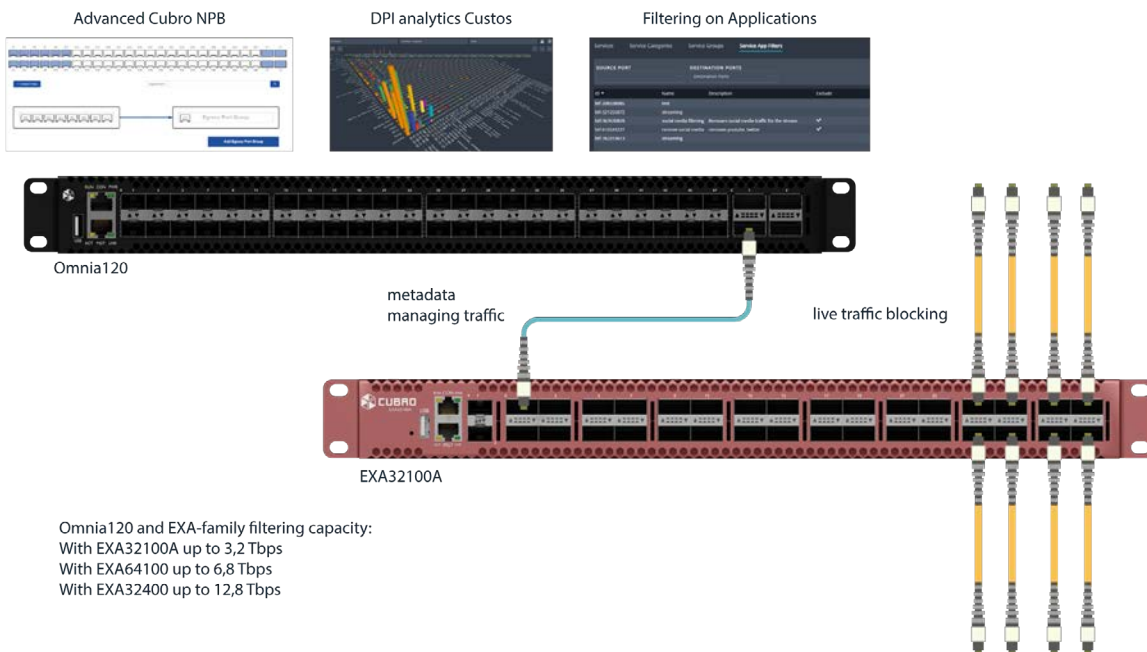
Usually application filtering per user is an expensive task. At Cubro we have a different approach that provides better return on investment while reducing the cost of monitoring. Our application-based filtering based on Omnia120 is an extremely economical way to reduce traffic and look at the relevant traffic in greater detail.

Technical Solution Overview & Key Use Cases

Application filtering with high bandwidth



Application filtering with Omnia120 beyond 1 Tbps



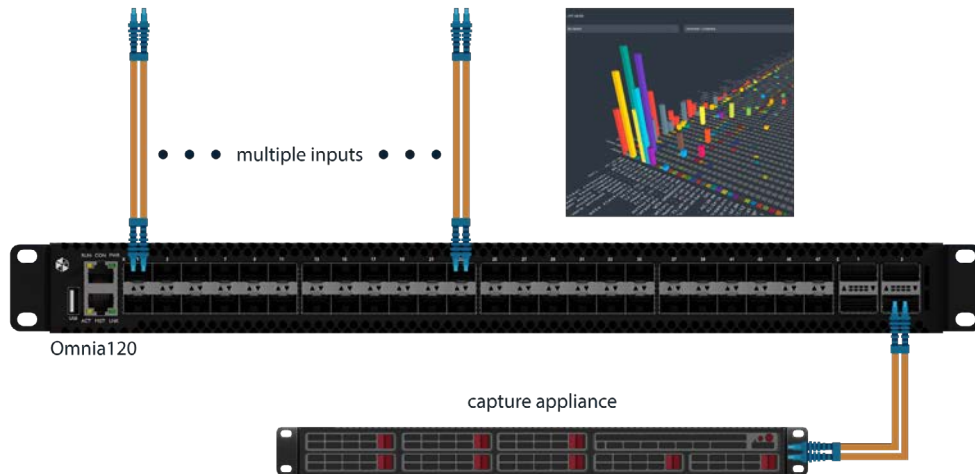
Omnia120 and EXA-family filtering capacity:
 With EXA32100A up to 3,2 Tbps
 With EXA64100 up to 6,8 Tbps
 With EXA32400 up to 12,8 Tbps

In combination with a Cubro Advanced Packet Broker the Omnia120 is a perfect choice for application filtering in Tbits networks.

Omnia120 can be used also in Inline mode, making it possible to remove defined traffic completely.

Offload capture appliances

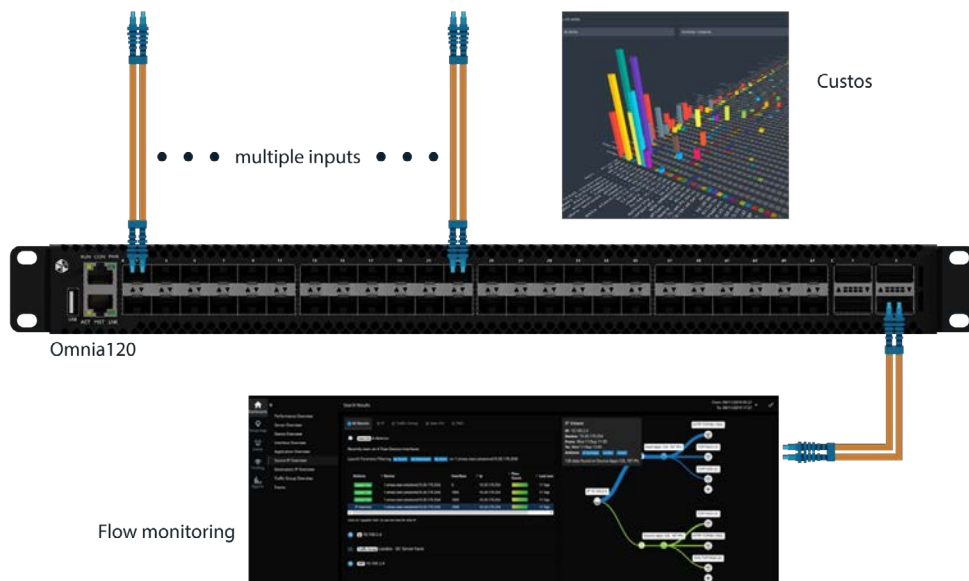
Metadata information for the full traffic and packets only for the relevant traffic



The Cubro solution helps to offload the capture appliance and at the same time delivers a DPI metadata view of the full traffic in all details, with a bandwidth resolution in 1 sec. This data can also be used for further analytics.

Offload flow monitoring appliances

Metadata information for the full traffic and flow data only for the relevant traffic



The Cubro solution helps to offload the NetFlow appliance and at the same time delivers a DPI metadata view of the full traffic in all details, with a bandwidth resolution in 1 sec. This data can also be used to enrich the flow data. The main advantage is that Custos handles the traffic, which is poison for Flow solutions. Cloud services with millions of flows.

Packet storage savings calculation

Original Traffic

Bandwidth in Gbit/s	1	3	6	12	24	Retention time in hours
0,1	0,08	0,25	0,5	1	2	
0,5	0,25	0,75	1,5	3	6	
1	0,46	1,375	2,75	5,5	11	
5	2,25	6,75	13,5	27	54	
10	4,50	13,5	27	54	108	
50	22,50	67,5	135	270	540	
100	45,00	135	270	540	1.080	in TB storage

After application traffic filtering

Bandwidth in Gbit/s	1	3	6	12	24	Retention time in hours
0,1	0,024	0,075	0,15	0,3	0,6	
0,5	0,075	0,225	0,45	0,9	1,8	
1	0,138	0,4125	0,825	1,65	3,3	
5	0,675	2,025	4,05	8,1	16,2	
10	1,35	4,05	8,1	16,2	32,4	
50	6,75	20,25	40,5	81	162	
100	13,5	40,5	81	162	324	in TB storage

These two tables show how much storage can be saved by removing relevant traffic. The calculation is very conservative – 70% (in reality it could be more).

This leads to several advantages.

- Save cost
- Longer observation time
- Faster response time

Feature/Application Benefit of Application Filtering

- Traffic classification and application detection with more than 4000 DPI signatures
- Application based filtering to feed the tools with relevant traffic to avoid overload of monitoring infrastructure
- Brings application awareness to SOC (Service Operations Center)/NOC (Network Operations Center) and security teams, helping teams to make better decisions faster
- Single box solution that includes a full-featured high performance advanced network packet broker for example for tunnel removal, inner tunnel filtering, and load-balancing

Omnia120 offers traditional packetmaster and sessionmaster features together with DPI functionality. Omnia also offers an application that utilises DPI with an advanced GUI.

Packetmaster Hardware Features	Sessionmaster Software Features	Software DPI Applications
<ul style="list-style-type: none"> • ACL filtering inline • Load balancing • GRE encapsulation • ERSPAN encapsulation • VLAN and VXLAN encapsulation • Timestamping • Packet slicing • Tunnel header removal • MAC modification • Offset stripping • GRE and VXLAN endpoint <p>Application Filtering</p>	<ul style="list-style-type: none"> • ACL filtering inline • Load balancing • GRE encapsulation • ERSPAN encapsulation • VLAN and VXLAN encapsulation • Timestamping • Packet slicing • Tunnel header removal • MAC modification • Offset stripping • Data masking • GRE and VXLAN endpoint • TCP Reordering & Packet Fragment Reassembling • Deduplication inline or on a SPAN port • Deduplication passive after an optical TAP • V5 and V9 NetFlow probe • Metadata exporter: • NetFlow / IPFIX 	<p>Metadata</p>

Operational and Business Value of the Cubro Solution

- Lower cost for security and performance monitoring
- Improve tool efficiency - lower processing and storage requirements by filtering unwanted traffic
- Improve security posture - focus only on the relevant applications/traffic
- Improve troubleshooting and capacity planning of your network and monitoring infrastructure

Ordering Information

CUB.OM-120-CBUNDLE

Omnia120 Bundle including all ports, CPUs, SM and Custos license, AC power