

Smart Centralized Network Observability

SMARTFLOW provides a comprehensive and centralized environment for data interpretation and exploration. It has the flexibility to consume any type of structured data, enrich data in real time, and serve different solutions that can be tailored to your different observability, analysis, and logging requirements, to make the most of your network in an innovative way.

Product Overview

Nowadays, IT and network operation teams deal with more complex and extensive networks than ever before, leading to higher operational costs. Operators expect network engineers to handle, manage, optimize, monitor, forecast and troubleshoot multi-layer, multi-technology, and multi-vendor networks. In parallel, the market is systematically demanding higher reliability and lower time to resolution, and faster deployment times of new workloads and applications.

As new applications are introduced, network complexity grows exponentially. Without the capability to obtain complete visibility using traditional tools, administrators lack the insights required to ensure the network delivers optimal performance while anticipating relevant issues. Intelligent tools have become an inherent necessity.

SMARTFLOW is a platform that provides teams with the tools to overcome uncertainty and take control of networks by providing an extensive and centralized data interpretation and exploration environment. The data fabric has the flexibility to consume any type of structured data, enrich the data in real time, and serve different solutions that can adjust to your different observability, analytics and logging requirements, to unlock the full potential of your network environment, substantially cutting down the company's CAPEX and OPEX expenses.

Architecture and Key Components Our approach to network observability

Our solution is composed of a powerful and open data fabric, over which we build different solutions to add value to our deployments. Following are the key components of our data fabric architecture.



Powerful Collectors

SMARTFLOW applies data pipelines to process and interpret the input data (by batch processing and in real-time) and provides pre-processing, giving an end-to-end view of all network data. These views are dynamic and customizable, enabling operators to navigate application information as deeply as necessary in real-time.

Flexible Data handling & Programmability

SMARTFLOW consumes different data sources, and provides the means to enrich such data, while allowing you to export such information to any other system or data lake. Your information is your property and we provide flexibility to query via API the stored information from any other system.

Deep, Dynamic and Comprehensive Visualizations

SMARTFLOW dashboards efficiently provide 100% visibility of the collected data, such as network traffic and applications, or syslog events. Users can browse dashboards and drill down to view detailed information. Also, as dashboards are customizable and not fixed, **SMARTFLOW** has the flexibility to provide the visualizations just as you need them.

Reporting

SMARTFLOW provides powerful reporting capabilities by allowing customizable report templates that can be executed on-demand or periodically. Report templates can reference any data collected, and the engine allows you to customize the reports sections to receive information exactly as you need it.

RBAC

SMARTFLOW has a RBAC architecture implemented to control which users can access which information, and to limit functionalities according to your security requirements.

Programmable integration

As mentioned, our solution is open, and you own and have complete control over your enriched data. We allow API queries to any data stored in our database, to serve other tools and use cases. Also, we integrate programmatically to create strong collaboration with any tool available in your network.

Solutions

Using our Data Fabric, we build and offer different solutions to address multiple use cases and make the most out of the data collected and enriched.





Any flow, any vendor, understand and optimize your infrastructure

ADN SMARTFLOW eliminates the operational barriers associated with traditional infrastructure monitoring, providing a new advanced multidimensional analytics approach across network behaviors that allows service providers, cloud operators, and enterprises to quickly move from a reactive to a highly predictive model, thereby transforming network operations. We collect data from transport nodes in the network environment, to better understand the behavior of the overlay networks and provide the means to operate it properly.

SMARTFLOW dashboards efficiently provide 100% visibility of network traffic and applications, including endpoint conversations, bandwidth capacity and consumption, application traffic patterns, QoS policies, matrix of data, transport traffic characteristics, topology, and much more. Users can browse dashboards and drill down to view detailed information.

Data collection sources:

- xFlow (NetFlow, sFlow, NetStream, cFlow, IPFIX)
- SNMP

Use cases:

- Network Visibility
- Security and Compliance
- Root Cause Analysis
- Capacity Planning
- Usage Control



Take control of your CGN solutions to provide an optimized service

CGN SMARTFLOW allows you to track the most utilized traffic and services by customers, providing transparency in associating user identifiers, private and public IP addresses, as well as service names. Simultaneously, allows you to leverage this data to monetize the network through advanced analytics, enabling you to offer personalized services and generate additional value for your customers. With CGNAT, you can not only get insights from your network but also unlock new business opportunities.

Highlights:

- Multivendor
- Highly performant architecture
- API integrations with Authentication systems (Subscriber ID)
- Powerful and scalable collectors to address the required throughput

Data collection sources:

- xFlow (NetFlow, sFlow, NetStream, cFlow, IPFIX)
- Syslog
- SNMP

Use cases:

- CGN logging / IP Mapping
- API integration with Authentication systems (Complete tracking for legal requirements)
- Heavy users tracking
- User Flow Analysis
- CGN resources usage analytics



Understand and optimize your video and media applications delivery, to provide a flawless service

MCST SMARTFLOW allows you to monitor and better understand your video and content transport, by collecting, storing, and allowing deep visualizations over flow metrics of content delivery networks. This allows an advanced multidimensional analytics approach that grants a broader and faster understanding of your delivery network behavior. We collect data from transport nodes in the content delivery environment, to better understand the behavior of the applications, and provide the means to operate your network properly.

SMARTFLOW dashboards efficiently provide 100% visibility of network traffic and applications, including endpoint conversations, multicast sources receivers and transit information, bandwidth capacity and consumption, application traffic patterns, QoS policies, matrix of data, transport traffic characteristics, topology, and much more. Users can browse dashboards and drill down to view detailed information.

Highlights:

- Multivendor
- Multicast flows observability
- Applications flows filtering and mapping
- QoS compliance

Data collection sources:

- xFlow (NetFlow, sFlow, NetStream, cFlow, IPFIX)
- SNMP

Use cases:

- CDN Optimization
- Top-n sources/receivers
- Geo-location and flow matrix
- QoS Analytics
- Sources Mapping
- Mcast flows observability

Analytics

Using the data enriched, collected and grouped in our different solutions, Smartflow offers a powerful analytics tool-set, that can be used to leverage the data and provide advanced insights on any solution.



Anomaly Detection

The **SMARTFLOW** platform incorporates a powerful AI engine, which can deploy and train several hundred models (the platform model factory defines the precise number) to learn normalities and patterns, and detect anomalies, from many different angles (combining all features present in the data collected). The entire AI process is unattended, from data acquisition to model productization. The platform uses standard input data and provides meaningful insights to guide network operators in the detection and interpretation of anomalies and network and application behavior.

SMARTFLOW provides a comprehensive AI solution, giving operators advanced AI techniques that process vast amounts of data to provide meaningful insights. Operators can use the solution's flexibility to drastically improve network operations and processes, developing and deploying thousands of models at scale.

Footprint behavior

The **SMARTFLOW** platform incorporates a powerful comparison engine that can be leveraged in solutions to build smart and flexible network state comparisons. This allows operations teams to have a fast and comprehensive way to explore pre-and post-activity data patterns for fast validations, allowing them to quickly spot issues and address them, drastically reducing failures and MTTR, while accelerating deployments.

Smart Discovery

SMARTFLOW includes an application and protocol discovery engine that can be used to detect users and applications behind a specific port, VLAN or network slice. This engine allows network administrators to quickly detect services behind a specific network element, and serves as a basis for different use cases, such as network migrations or network assessments. With this engine, smartflow can immediately provide insights on what's behind any network component, to better understand your network environment.

Specifications

Collection methods

- xFlow (NetFlow, Netstream, sFlow, cFlow, IPFIX)
- Telemetry
- SNMP
- Syslog
- CSV
- Any other structured data

EMS Capabilities

- Inventory view (Chassis/Card/Interface)
- Logs
- User traffic profiles
- QoS tracking

Visualization methods

- Customizable dashboard widgets
- Real-Time / Historical data
- Kivana engine

Analytics

- Comprehensive Anomaly Detection Root Cause Analysis
- Pre-Post activities analysis (Footprint Behavior)
- Services discovery (Smart Discovery)

Miscellaneous

- Multivendor capable
- Web-based GUI and REST APIs
- Docker container-based architecture with Kubernetes orchestration
- Database scale out and high availability

Deployment Models On-Cloud or On-premise, your choice!

SaaS - Managed by Auben

Available as a service, the **SMARTFLOW** Platform and its solutions are fully managed and monitored by Auben. Customer teams can use the RBAC module to provide differentiated access for different parts of the organization. Required data, such as metrics and telemetry, is sent between the network and **SMARTFLOW** cloud instance via a secure, TLS-encrypted channel.

The solution is built on top of a hardened operating system, installed in a highly available configuration, and hosted by us. We operate and run regular security scans and audits for security vulnerabilities.

On-Premise and Private Cloud - Managed by Auben

The platform may also be deployed as a scalable appliance within a customer's environment in data centers or clouds, including bare metal servers, hypervisor based VMs, Amazon Web Services, Google Cloud Platform, and Microsoft Azure. It can be installed on any physical or virtual machine instance running the required Linux operating system distribution. The internal microservices architecture of the platform maximizes the availability of the different components.

Licensing

The software subscription is priced based on the number of data collection units required and the storage time for the solution. The platform is licensed annually by solution, and our license includes:

- Deployment and Management
- Dashboards Customization
- 8x5 Support (7x24 for P1 events)
- PS Consultancy hours pack for data interpretation
- CI/CD

Get Started Today!

Contact us to explore our different Smartflow Solutions. Our experts are ready to help you by assessing your requirements and promptly providing a demo to highlight the advantages of implementing our solution in your network environment.

About Auben

AUBEN is a global company with more than 10 years in the telecommunications business. We are networking experts, who design solutions to help companies address their networking challenges, prioritizing innovation and creativity to empower communications.

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