



Area of activity

Telecommunication services

Challenges

Cost-efficient DDoS protection

Protection of internal network against advanced cyber threats, botnets, unknown malware, violation of policies

Fast resolution of operational and security incidents

Detailed visibility into remote peering points (New York, Copenhagen)

Solution benefits

Near real-time DDoS attacks detection and mitigation

One comprehensive solution covering Network Performance Monitoring, Network Security, and DDoS protection

Ease of use, professional maintenance and support

Deployed products

4x **Flowmon Probe** IFP-20000-SFP+

1x **Flowmon Collector** IFC-48000-VA

1x **Flowmon ADS** ADS-ISP10

1x **Flowmon DDoS Defender** 40

Greenland's sole ISP has deployed Flowmon to help protect the extensive infrastructure of the country against DDoS attacks and provide the IT Operations team with a detailed overview of all network traffic.

CUSTOMER REQUIREMENTS

Geographical background of the island of Greenland implies special demands by their sole ISP, government-owned TELE Greenland. The country with its 2,2 million km² and 56 000 inhabitants is six times larger than Germany, while the population is 1 500 times smaller. Price-to-value ratio is therefore very important when considering network and security solutions.

- Flow collection from the ISP network core
 - Export flow from existing Cisco infrastructure
 - Compatibility with NetFlow v9 format
- Flow collection from remote peering points
 - Situate flow probes for generation flows at remote peering points
 - Reliable unsampled flow export from 10G fiber links
- Volumetric DDoS attack detection and mitigation
- Analytics engine for network performance monitoring, troubleshooting, capacity planning, bandwidth monitoring, drill-downs, reporting
- Network Behavior Analysis & anomaly detection for proactive security approach

CUSTOMER TESTIMONIAL

Peter Katborg, IT Operations manager at TELE-POST



"Having scanned the market for DDoS protection, we opted for PoC with Flowmon. We appreciated the vendor's support during the PoC as well as ease of deployment, use, and maintenance. Flowmon provided us with enhanced DDoS protection and network performance monitoring in a single solution."

■ THE DEPLOYED SOLUTION ■

The network infrastructure of TELE Greenland is built on Cisco components that allow exporting NetFlow data from the core network. **Flowmon Collector VA** with 48TB capacity has been deployed to store unsampled flow data with months of history without aggregation.

In order to get visibility at remote peering points (New York, Copenhagen), two **Flowmon Probes** have been deployed in each of those location. Flowmon Probes are high-performance IPFIX/NetFlow generators that provide enhanced visibility with NPM statistics and L7 information.

Flowmon DDoS Defender module was installed on the Collector to perform adaptive traffic baselining for each protected segment. In case of unexpected increase of the volumetric characteristics, it will immediately report an ongoing DDoS attack. The **BGP Flowspec** feature allows

sharing the dynamic signature of the attack with the border routers, along with instructions (for example, to drop traffic that matches the signature) – all in fully automatic or semi-automatic mode. Moreover, the solution architecture allows applying different mitigation strategies to each protected segment.

Flowmon Collector was also equipped with **Flowmon ADS** module that complements the perimeter security with signature-less technology, referred to as *Network Behavior Analysis (NBA)*. It uses machine-learning algorithms to detect advanced threats that can bypass traditional protection, for example targeted attacks, botnet attacks, unknown malware, insider threats such as data leakage, and more. Thanks to Flowmon ADS, TELE Greenland is alerted on malicious behavior in the network in real time, and able to act on it immediately.



Deployed solution architecture

ABOUT THE COMPANY ■



TELE-POST is collective name for three business units (TELE, POST and The Coastal Radio Service) of the TELE Greenland A/S group owned by the Government of Greenland. TELE Greenland has over 450 employees and covers an area spanning over thousands of square kilometers, providing its scattered population of 56,000 with telecommunication, IT and postal services. Even the smallest village has a radio, TV and a telephone line, and all settlements with more than 70 residents have broadband Internet connection and GSM mobile phone service. Telecommunication is the technology that connects Greenland together.

The fundamental telecommunications infrastructure consists of a digital radio link from Nanortalik in South Greenland to Upernavik in North Greenland. The far North and East Greenland are covered by satellites providing both domestic and international connections. A marine cable runs from Nuuk to Newfoundland in Canada and further down to New York and the rest of the US; east of Nuuk, it continues north to Aasiaat and south to Qaqortoq and further on to Iceland. From Iceland there are leased lines to Copenhagen and London, providing connection to the rest of the world. With the response time of 23 milliseconds, it is one of the fastest digital routes across the Atlantic.