



Many parts of the world still have only limited Internet service and bandwidth. Greenland is such a place and providing that valuable resource for the people at Thule Air Base has been a major challenge. Internet traffic management from ipoque is helping IT meet that challenge.

Greenland Contractors (GC) is responsible for the daily operations and maintenance at Thule Air Base. Its employees, working near the North Pole, face a difficult environment. Ice as far as the eye can see. Complete darkness for 3 months and nearly perpetual sunlight for 6 months. Winds of 107 knots and temperatures as low as -52 °C. Thule is remote, with the next town 45 minutes away by helicopter. The Air Base is over 50 square kilometers wide, and the buildings are spread across the whole base. The fiberglass cables that connect the buildings have to resist the extreme cold and dryness—tough conditions for technical equipment.

### **“You can’t just call a technician.”**

Lars Gudmundsen, GC’s IT administrator in charge of developing and planning the network, knows what that means: “If you have a problem, you have to resolve it. You can’t just call a technician.”

### **Needed effective bandwidth management**

Greenland Contractors’ employees live on the base and have free Internet access provided by GC. For the most part, they use the Internet to keep in touch with their families at home, mainly via Skype.

The island’s sole Internet service provider (ISP) could not deliver the bandwidth GC needed. Depending on the season, 400 to 650 employees share an Internet up-link of only 2 megabits per second. Also, the ISP charges per megabyte of traffic rather than a flat rate—it costs GC a lot per month just to have Internet available.

Because of the small bandwidth, Skype calls were often interrupted. When a new connection was started, it caused delays on others. If someone began to download a movie, for example, not much else could take place in the network. It was clear that GC needed effective bandwidth management, with Internet access



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### **Challenges**

- Limited bandwidth: 2 Mbit/s for up to 650 concurrent users
- Importance of Skype for the communication
- Network congestion causing call drops and poor voice quality

### **Solution**

- Prioritization of Skype
- Effective management of high-bandwidth applications
- Integrated bypass for uninterrupted network connectivity

limited to only a few applications and protocols.

Two challenges had to be mastered: Applications with a high download volume—especially P2P—had to be limited, and, of particular importance, Skype had to be prioritized regardless of how busy the link might be. Gudmundsen and his team tested a number of devices but found none that could reliably detect, throttle and prioritize protocols.

### **Prioritizing Skype with PRX Traffic Manager**

ipoque provided the solution. With its PRX Traffic Manager, the vendor of Internet traffic management solutions offered exactly the capability GC needed: an effective, powerful and fail-proof system for Internet traffic management. PRX prioritizes Skype above all other traffic. All kinds of P2P protocols are rigorously throttled in order to avoid overloading the network and to reduce communication costs.

PRX Traffic Manager combines deep packet inspection (DPI) technology with bandwidth management, enabling effective analysis and optimization of applications.

### **“Now we reach our families without delays, call drops or noise.”**

The benefits for Gudmundsen and his team are the protocol-based bandwidth management and the ability to prioritize certain applications. “PRX is a lot faster than website-based traffic management, and it saves me a great deal of work,” he says.

The deployment of PRX Traffic Manager has solved an urgent problem at Thule Air Base. “People are able to talk with their families now without interruptions, noise, and long delays,” Gudmundsen says. “It makes my job easier, too. I don’t have to sit and analyze the traffic anymore. The PRX Traffic Manager does that for me.”

“With PRX Traffic Manager we can reach our families via Skype without delays, interruptions and noise and it saves me a great deal of work.”

Lars Gudmundsen,  
IT-Administrator,  
Greenland Contractors at Thule  
Airbase



### **Key Benefits**

- Guarantees Skype call quality for undisturbed conversations with family and friends
- Application detection enables effective control of bandwidth usage
- Reliable application classification with DPI and behavioral analysis



#### **About Greenland Contractors:**

Greenland Contractors (GC) is the Base Maintenance Contractor at Thule Air Base. Thule AB is like a village community, so GC must provide all of the services needed to make everyday life possible. These include operation of an airport, a port, fire protection, medical clinic, hotel, fitness center and recreational activities, dining facility, maintenance of the infrastructure and buildings, power-, heat-, and water production, accommodations, janitorial services and an engineering and environmental section.

More information at <http://www.greenlandcontractors.dk>

#### **About ipoque:**

ipoque is the leading European provider of deep packet inspection (DPI) solutions for Internet traffic management and analysis. Designed for Internet service providers, enterprises and educational institutions, ipoque’s PRX Traffic Manager allows to effectively monitor, shape and optimize network applications. These include the most critical and hard-to-detect protocols used for peer-to-peer file sharing (P2P), instant messaging (IM), Voice over IP (VoIP), tunneling and media streaming, but also many legacy applications.

More information at <http://www.ipoque.com>