



Cyber Security Solutions

by **NETAS**

Nova V-GATE VoIP Application Firewall: Anomaly Detection by using Machine Learning

Dr. Hakan KILINÇ

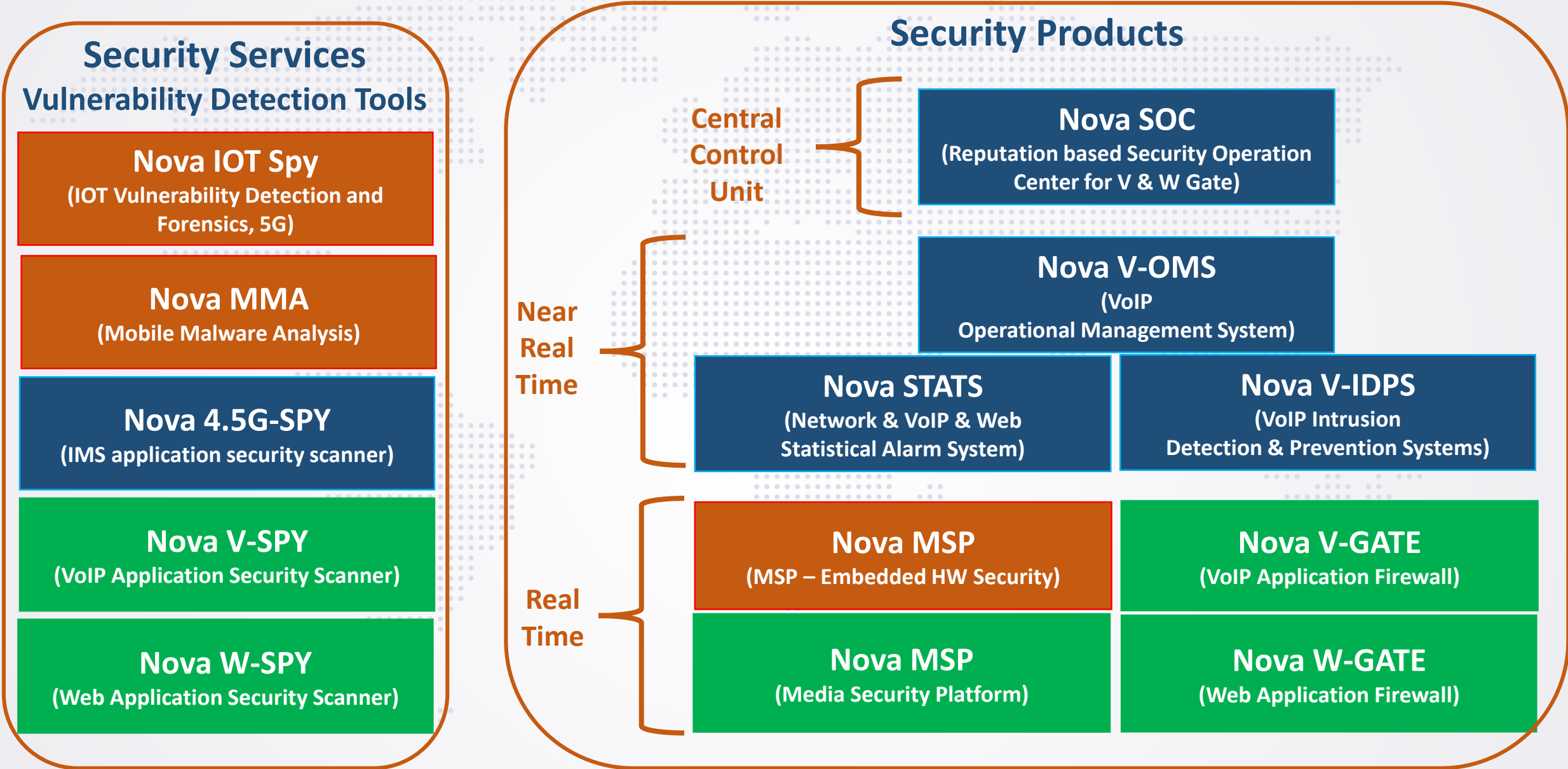
- **48 years experience**, first and largest private telecom and software development company in Turkey
- Develops **ICT software solutions** for more than **200 global operators**
- **The biggest ICT system integrator** company in the region
- **2200+ employees** - 750+ highly qualified R&D engineers (25% with MSc & PhD)
- Turkey's **software export champion**
- **65 scientific articles** (journal papers, conference precedeings) in three years
- **First runner-up of ICT sector** in Turkey's **patent classification** @2013, Over 70 yearly patent applications
- **R&D** 4G Development, IMS, VoIP services, Web applications, HW SW Communications, Cyber Security Products etc.

NOVA Cyber Security Technology Research&Development Centre

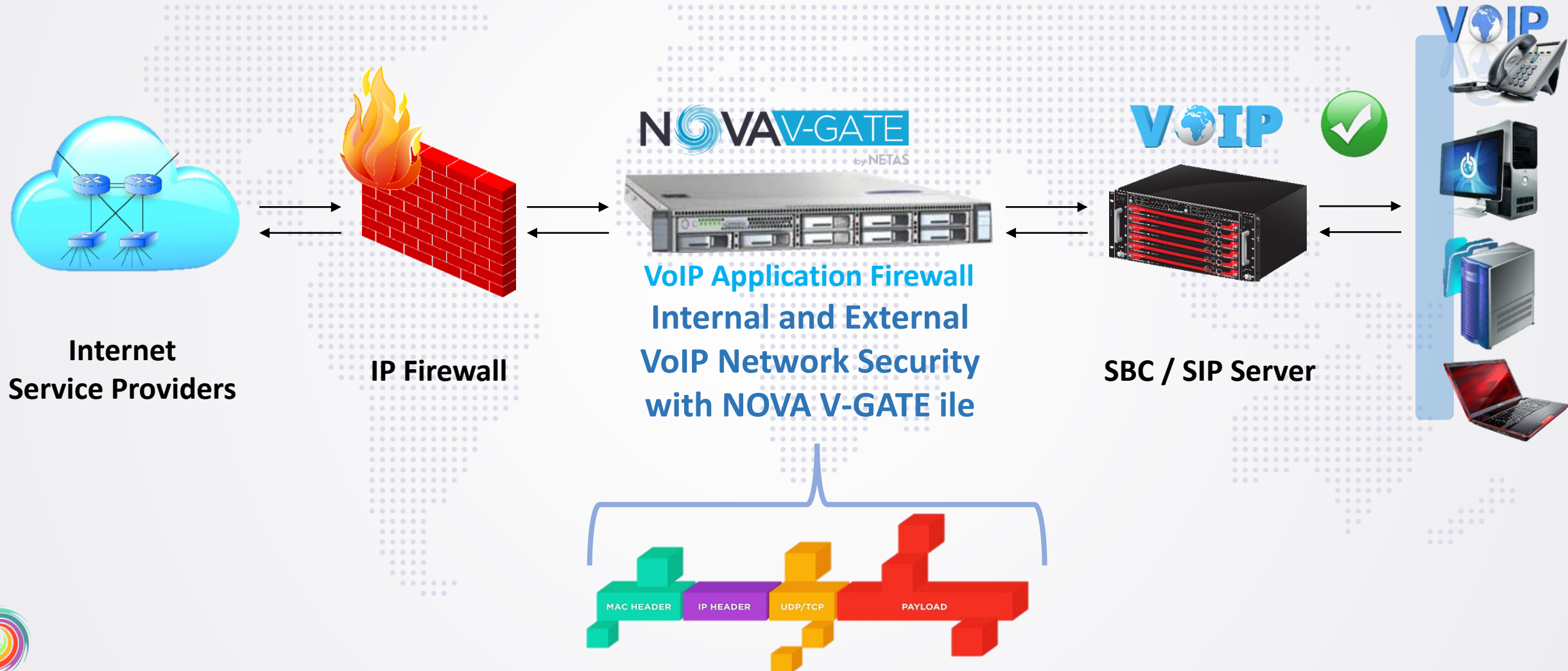
- **Mission:** Foster excellence through collaborative effort to delivers products and services that significantly enhances security and continuity of critical ICT systems that serves society and the businesses.
- **Research Areas**
 - Architecture for Scalable, Higly Available Network Data Processing with Low Latency
 - Big Data Analytics for Network/Applications, Machine Learning and Anomaly Detection, Behaviour Analysis
 - Media Communication Security , End-to-End Security
 - IoT/M2M System Architecture and Security
- **Products and Services**
 - VoIP & Web Application Firewalls
 - VoIP & Web Application Vulnarability Scanning Tools
 - Media Security Platform as secure communication infrastructure
 - Penetration Test for Enterprises (Network, VoIP, Web)



NOVA Cyber Security Services and Products (Vertical and Horizontal)



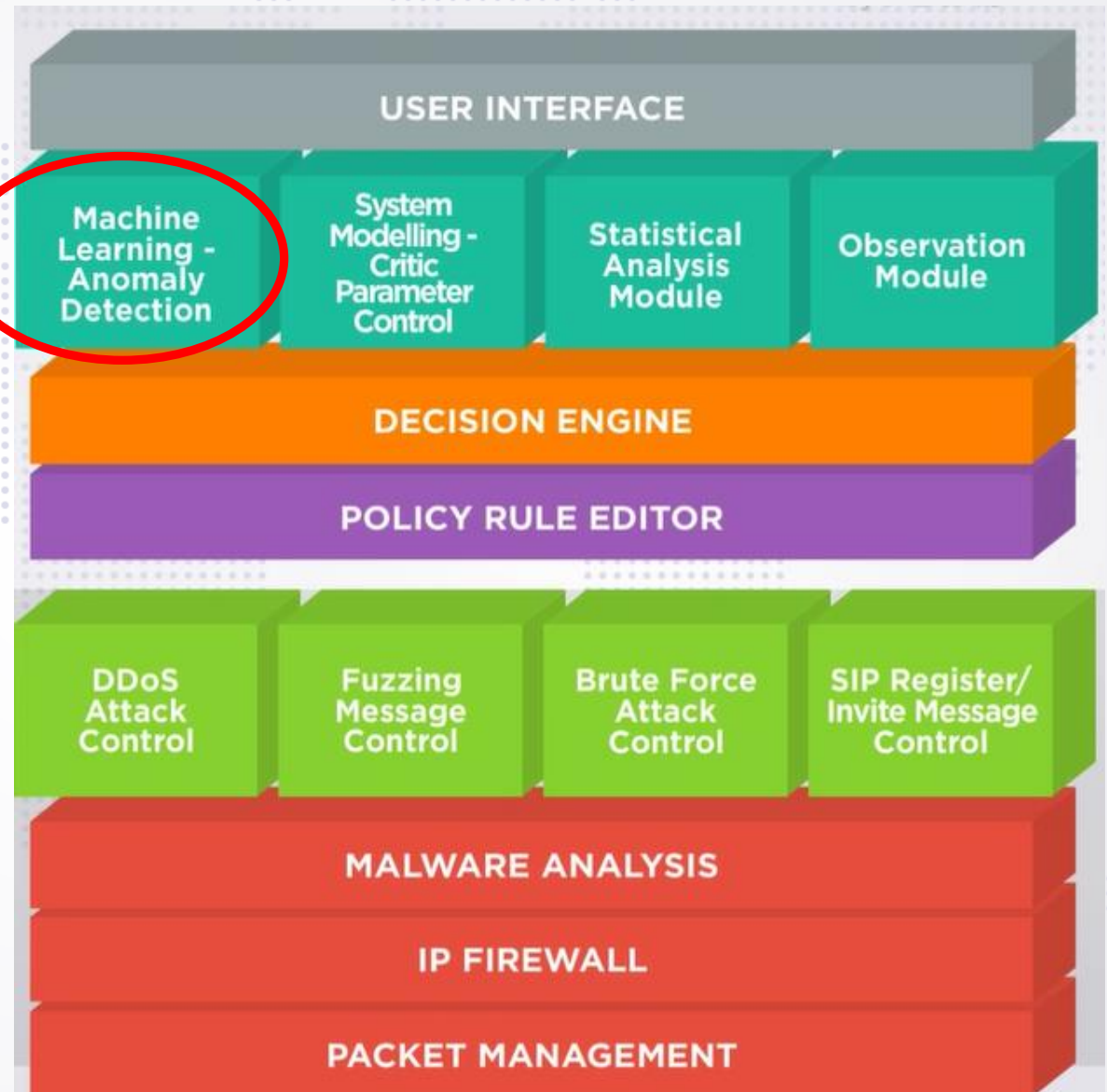
Nova V-Gate VoIP Application Firewall



Behaviour Analysis & Modelling
Unknown Attacks IDS & IPS

Operational Management

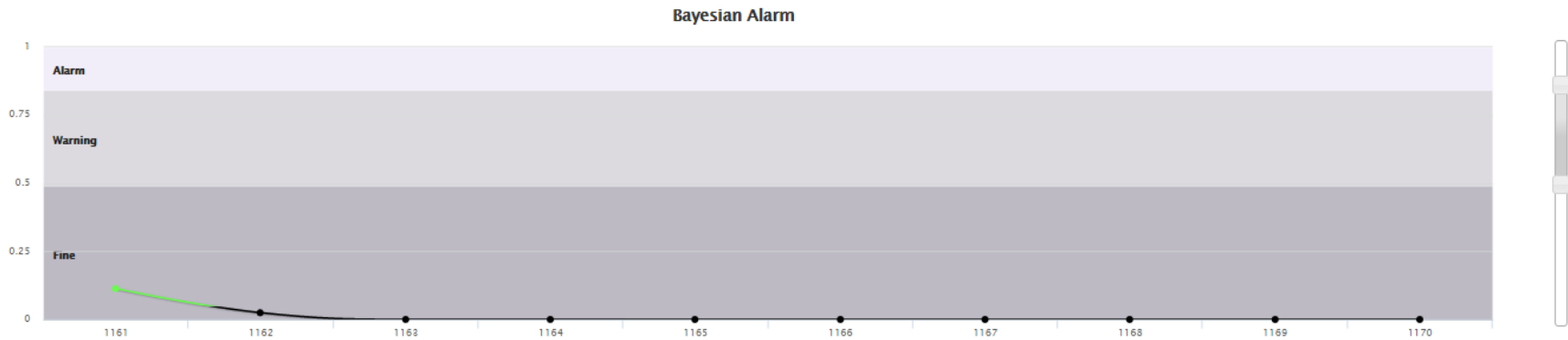
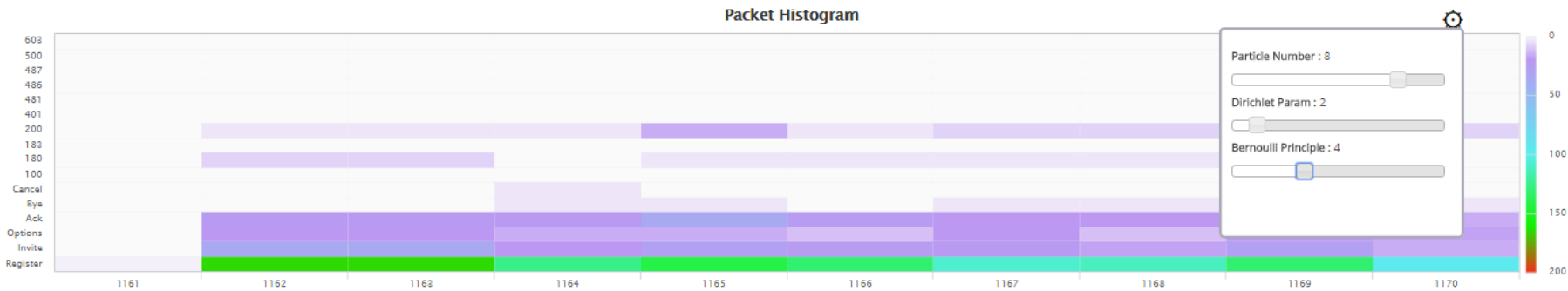
Known Attacks Detection and Prevention



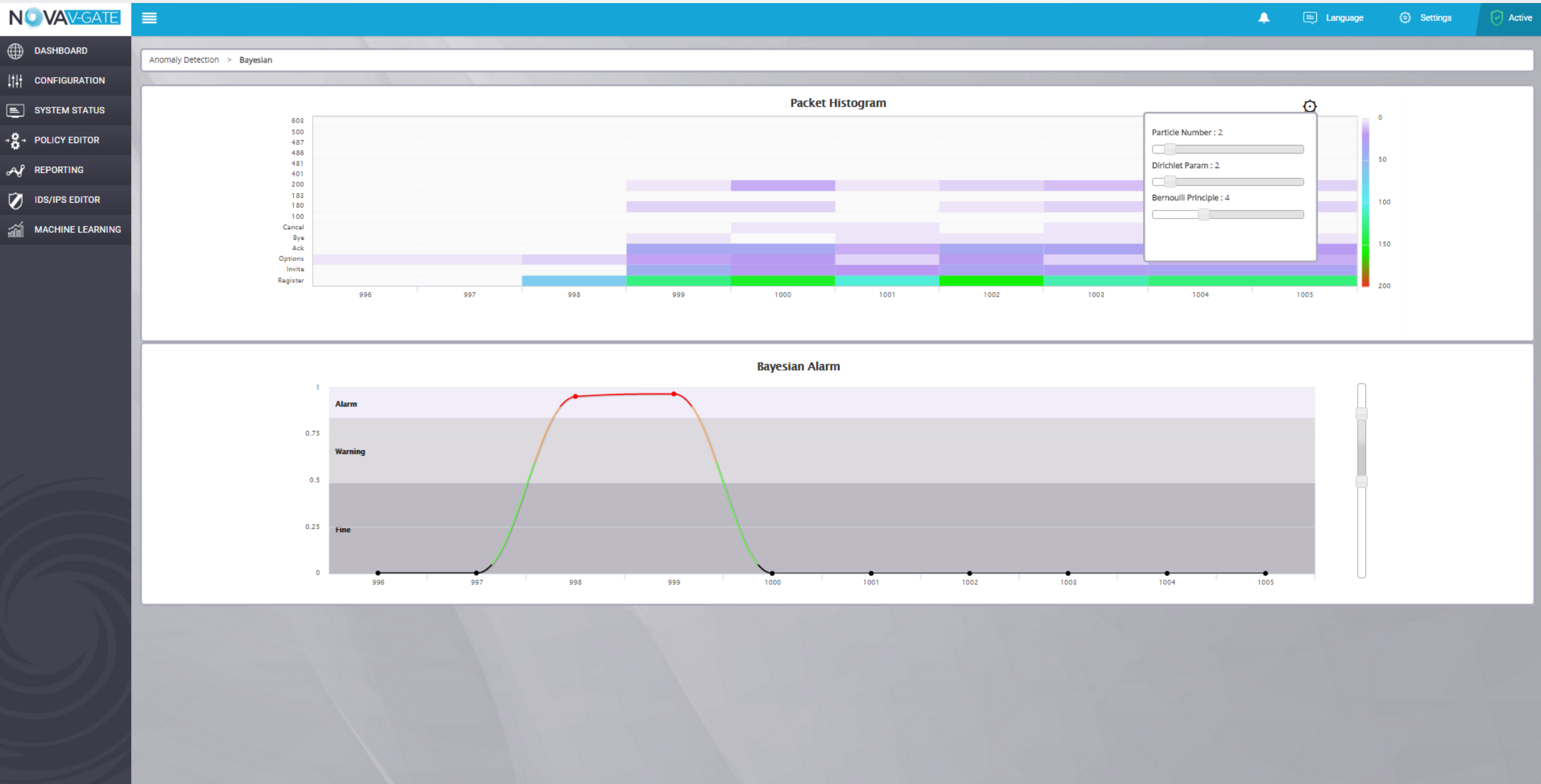
Machine Learning – Anomaly Detection – Bayesian Usual

- 🌐 DASHBOARD
- ⚙️ CONFIGURATION
- 📊 SYSTEM STATUS
- ⚙️ POLICY EDITOR
- 📈 REPORTING
- 🛡️ IDS/IPS EDITOR
- 📈 MACHINE LEARNING

Anomaly Detection > Bayesian



Machine Learning – Anomaly Detection – Bayesian Alarm



Machine Learning – Anomaly Detection – Bayesian Alarm

NOVA-V-GATE



Language



Settings



Active

DASHBOARD

CONFIGURATION

SYSTEM STATUS

POLICY EDITOR

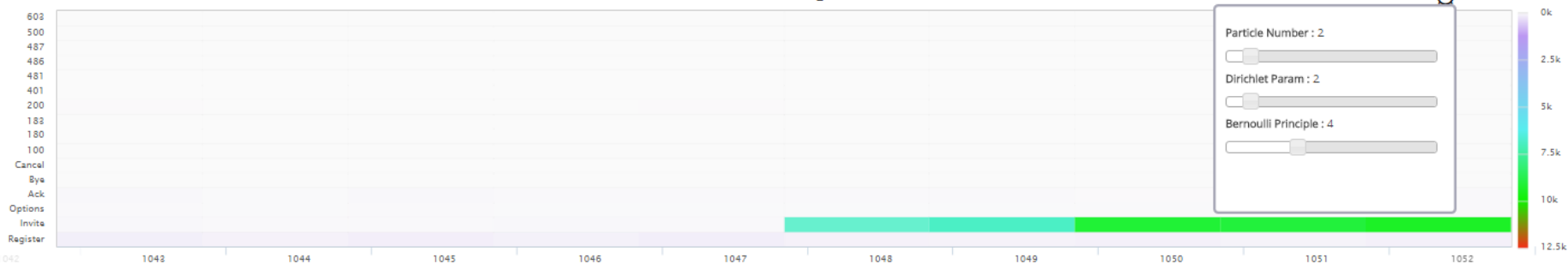
REPORTING

IDS/IPS EDITOR

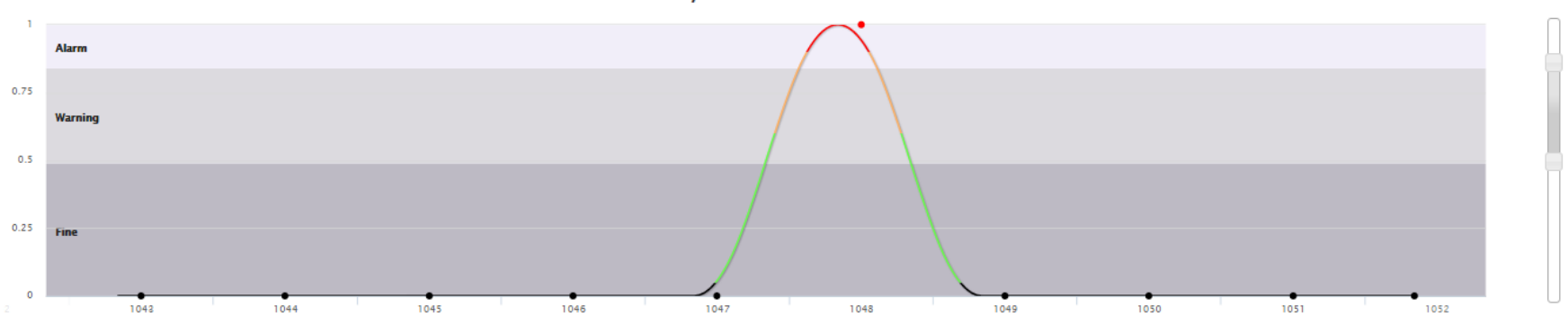
MACHINE LEARNING

Anomaly Detection > Bayesian

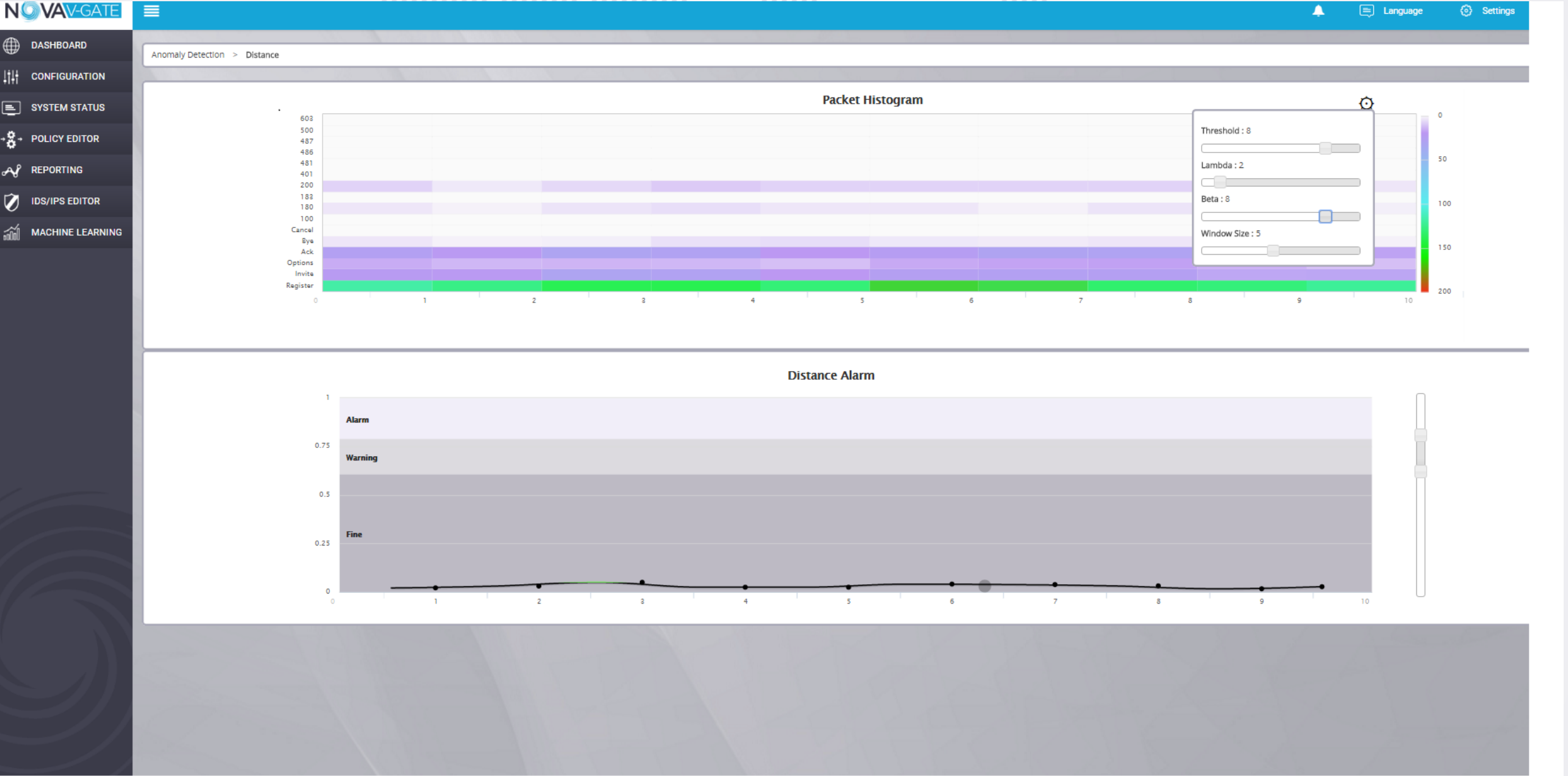
Packet Histogram



Bayesian Alarm



Machine Learning – Anomaly Detection – Distance Usual



A faint, light blue world map is visible in the background, composed of a grid of small dots.

THANK YOU