



arnes 

# Nadzor omrežja z NMaaS

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EVROPSKA UNIJA  
EVROPSKI SKLAD ZA  
REGIONALNI RAZVOJ  
NALOŽBA V VAŠO PRIHODNOST



REPUBLIKA SLOVENIJA  
MINISTRSTVO ZA IZOBRAŽEVANJE,  
ZNANOST IN ŠPORT

Naložbo sofinancirata Republika Slovenija in Evropska unija iz Evropskega sklada za regionalni razvoj

# Motivacija

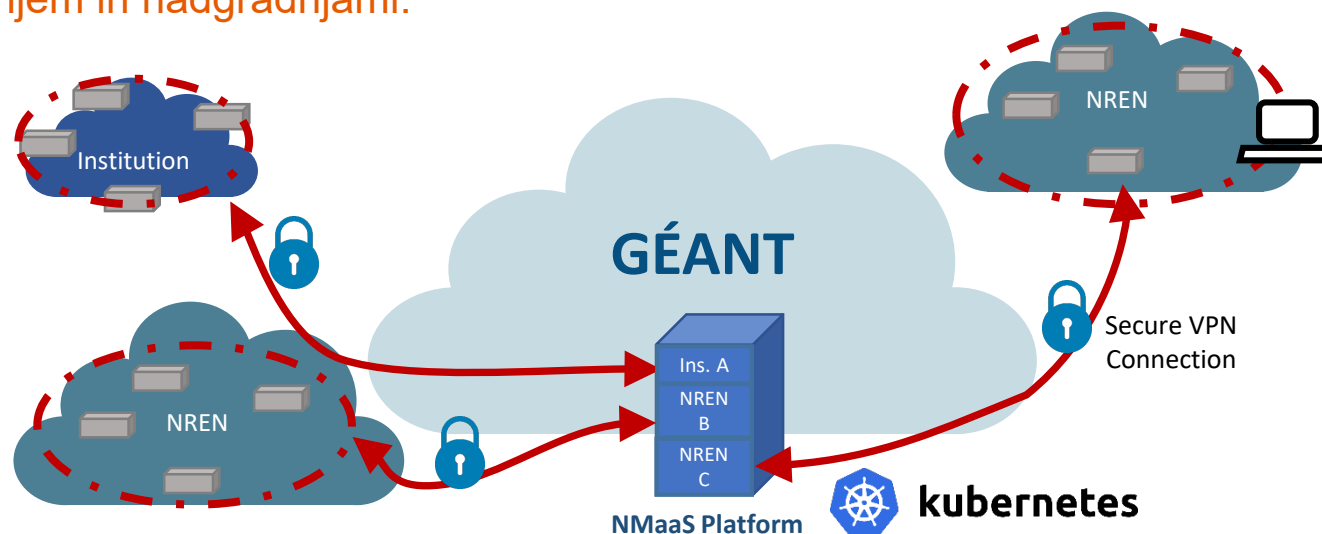
- Vedno bolj smo odvisni od interneta.
- Vedno bolj smo odvisni od mrežne infrastrukture v organizacijah.
- Vedno več imamo naprav, ki so priključene v omrežje.
- Informatiki rabimo čim boljši pogled v delovanje mrežne infrastrukture.

# Razvoj

- Prejšnje rešitve: Cacti, Icinga, Zabbix.
- Mnogo težav pri vzpostavitvi, vzdrževanju in pri nadgradnjah.
- Lokalne postavitve in lastna strojna oprema.
- Omejeni viri.

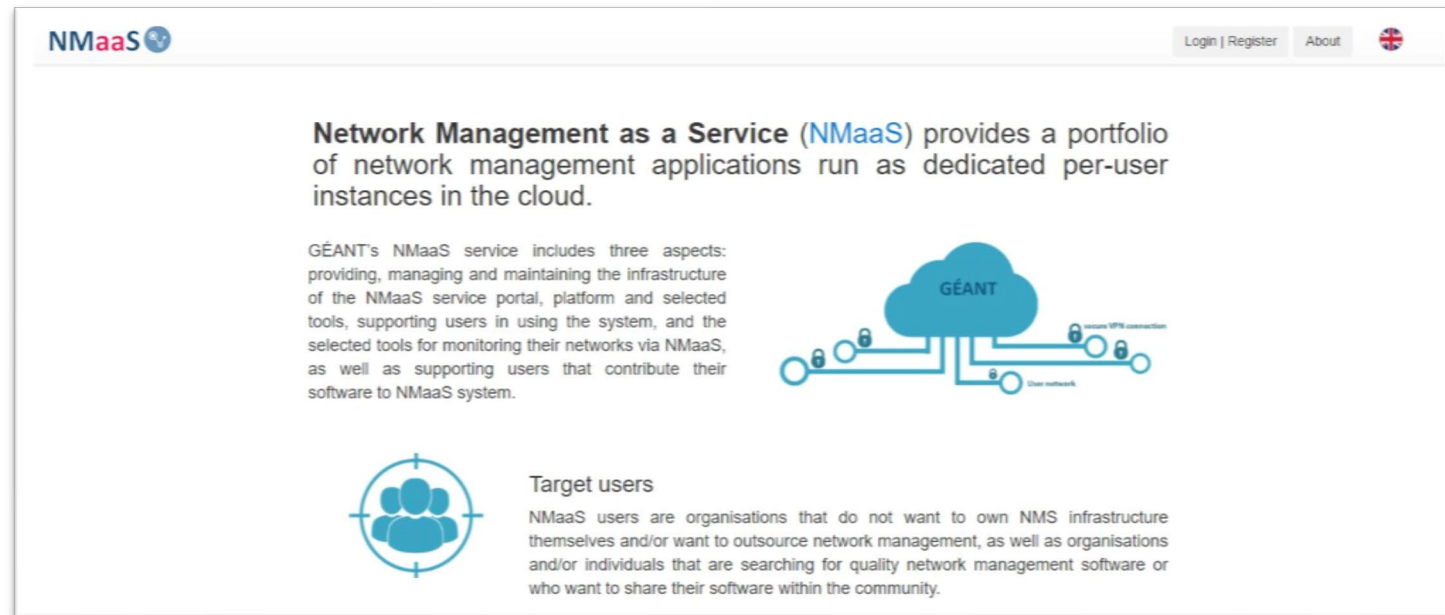
# GÉANT NMaaS (GÉANT Network Management as a Service)

- Deluje na principu storitve.
- Ni več potrebe po lastni strojni opremi.
- Ni več težav z vzpostavitvijo, vzdrževanjem in nadgradnjami.



# GÉANT NMaaS - prijava

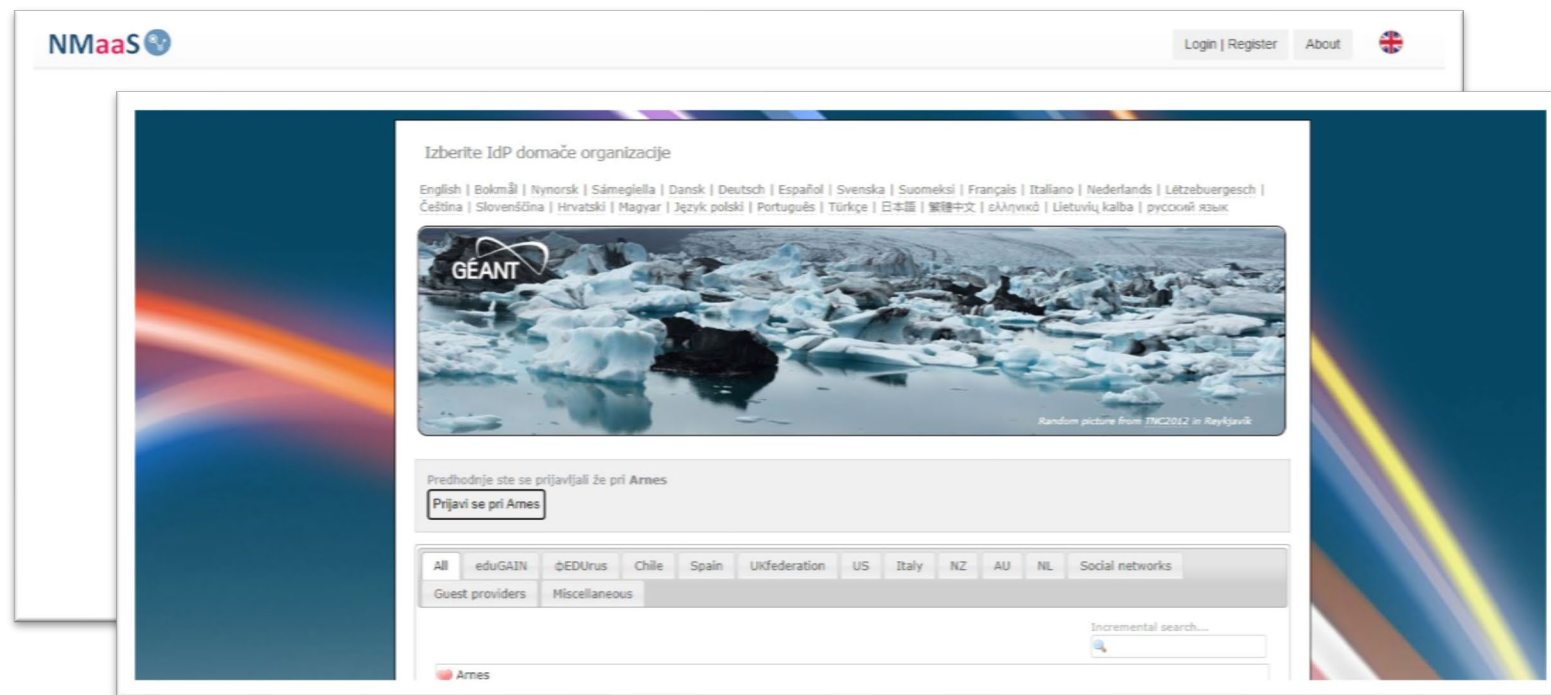
<https://nmaas.eu>



The screenshot shows the homepage of the NMaaS service. At the top left is the 'NMaaS' logo. At the top right are links for 'Login | Register', 'About', and a language selector icon (UK flag). The main heading reads: 'Network Management as a Service (NMaaS) provides a portfolio of network management applications run as dedicated per-user instances in the cloud.' Below this, a paragraph describes the service: 'GÉANT's NMaaS service includes three aspects: providing, managing and maintaining the infrastructure of the NMaaS service portal, platform and selected tools, supporting users in using the system, and the selected tools for monitoring their networks via NMaaS, as well as supporting users that contribute their software to NMaaS system.' To the right of this text is a diagram showing a central cloud labeled 'GÉANT' connected to several smaller nodes, some labeled 'User network' and 'User VPN connection'. Below the text is an icon of three stylized people figures inside a circle, with the heading 'Target users' and a paragraph: 'NMaaS users are organisations that do not want to own NMS infrastructure themselves and/or want to outsource network management, as well as organisations and/or individuals that are searching for quality network management software or who want to share their software within the community.'

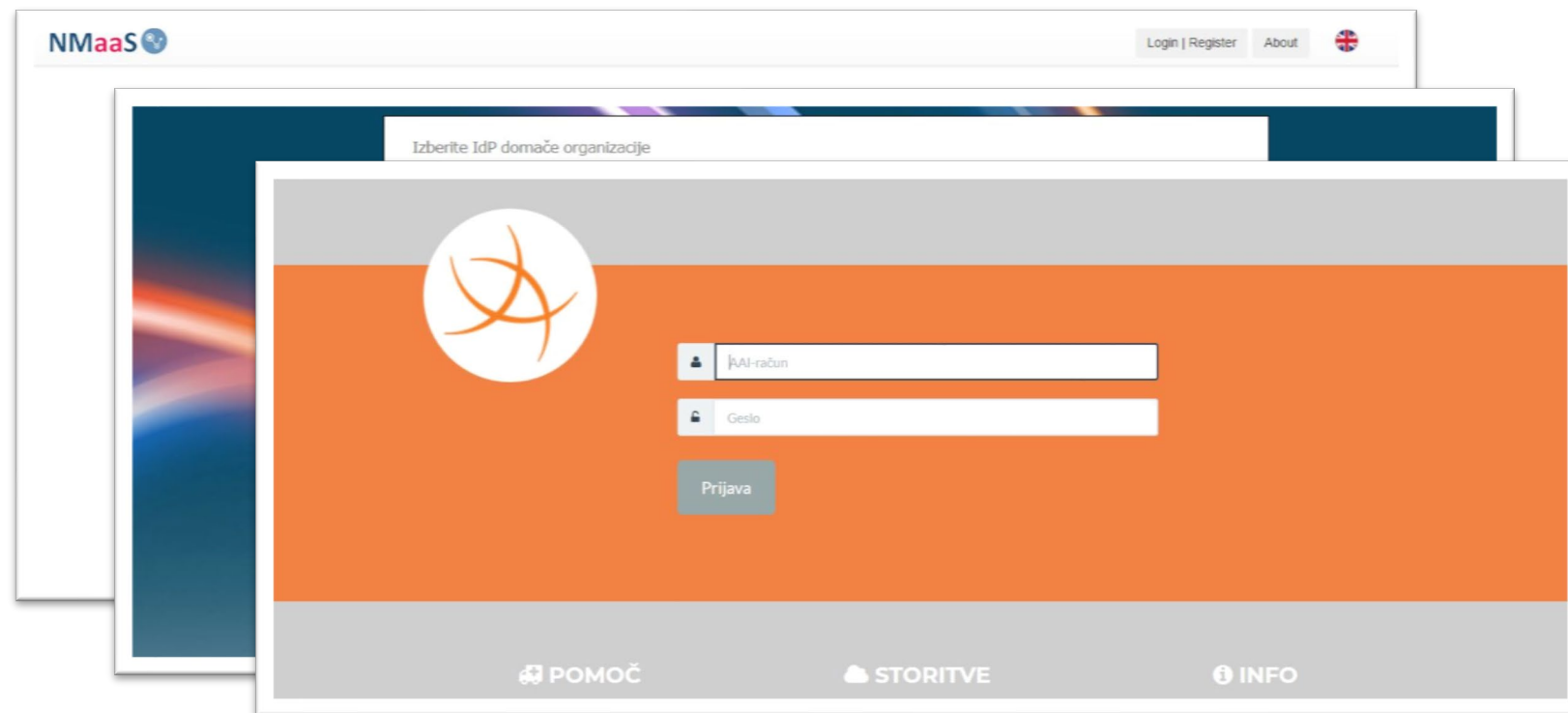
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# GÉANT NMaaS - prijava

<https://nmaas.eu>

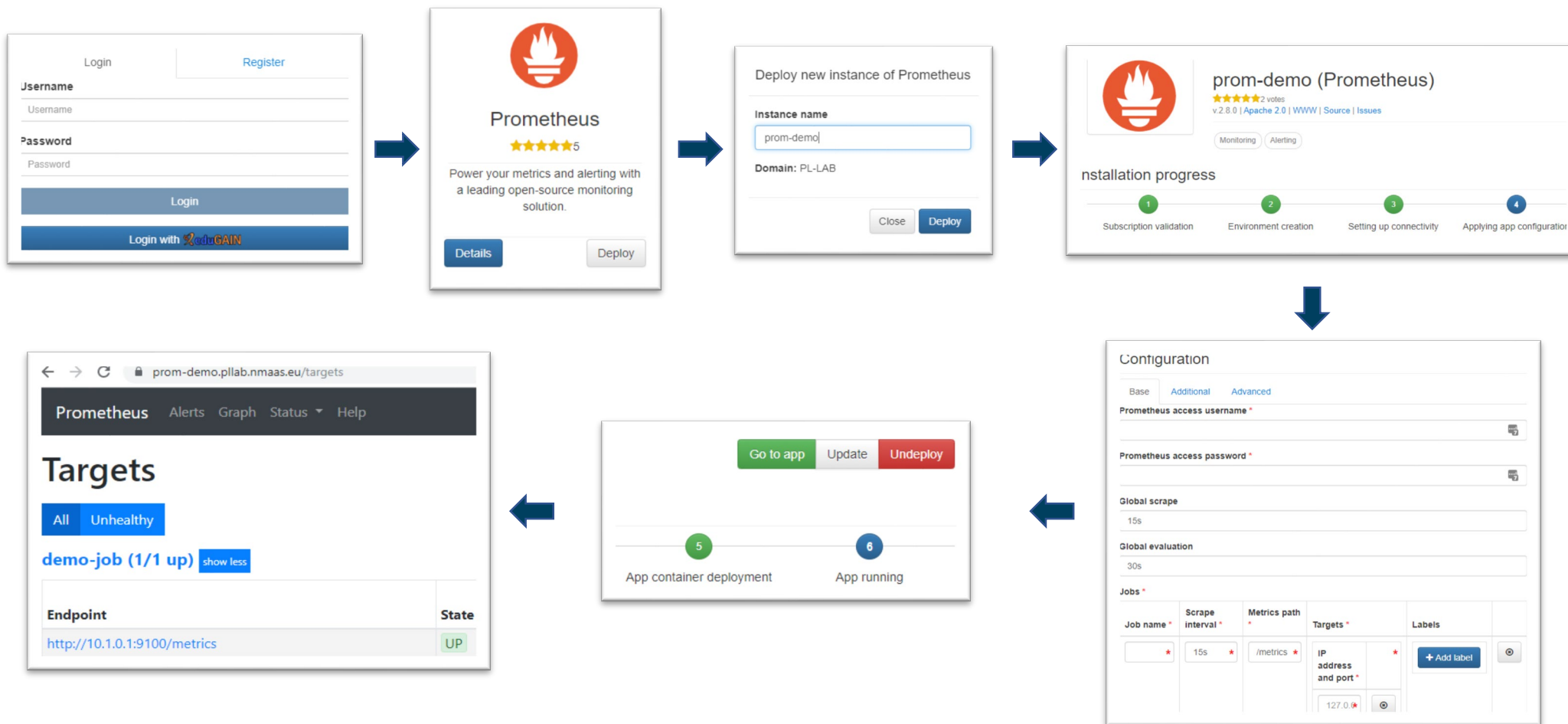


# GÉANT NMaaS – portal

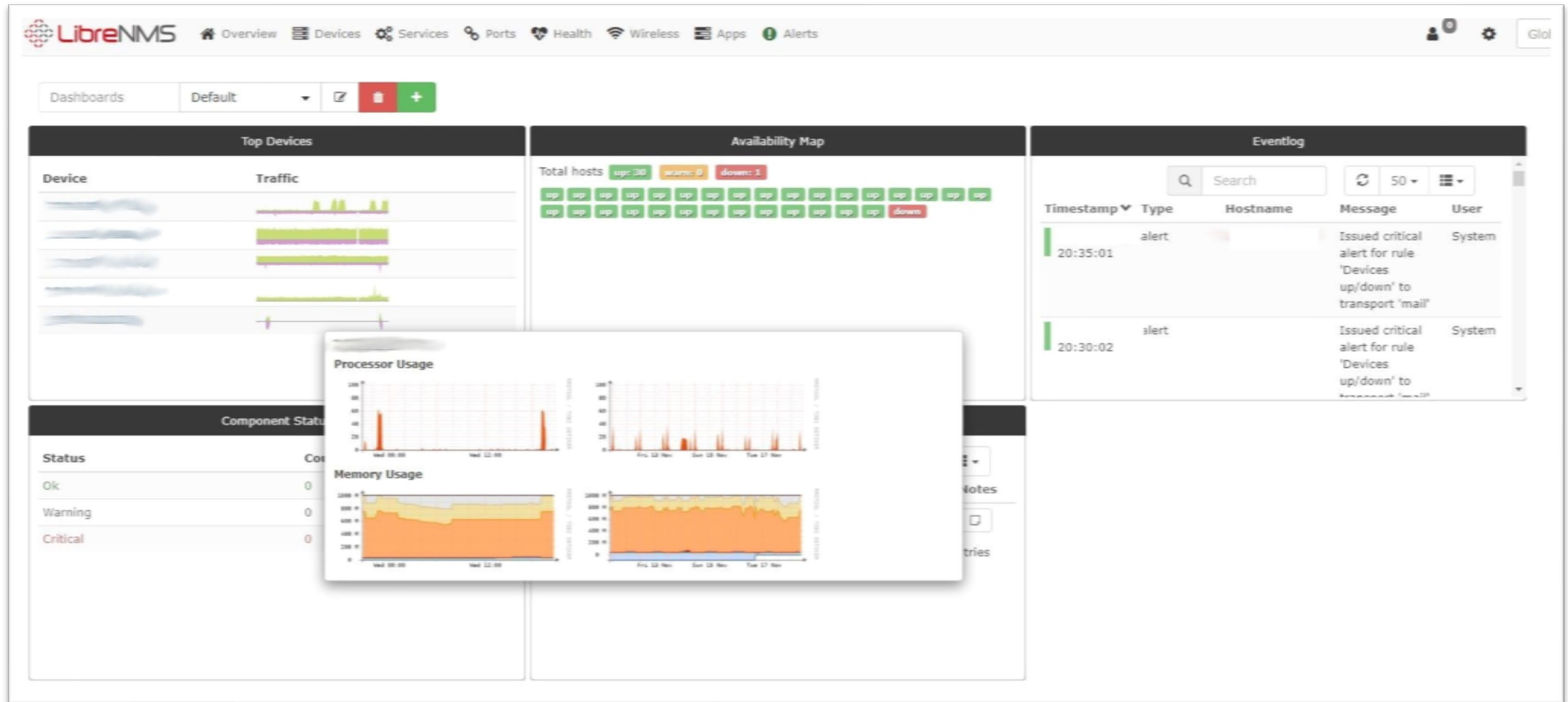
 <p><b>NAV</b> ★★★★★5 Network Administration Visualized - network management system</p>	 <p><b>LibreNMS</b> ★★★★★5 Autodiscovering SNMP based network monitoring tool</p>	 <p><b>Oxidized</b> ★★★★★5 Network device configuration backup tool</p>	 <p><b>Booked</b> ★★★★★5 Web-based calendar and schedule</p>	 <p><b>InfluxDB</b> ★★★★★0 Time series database</p>	 <p><b>SPA Inventory</b> ★★★★★0 Topology database with TMF-compliant API</p>	 <p><b>Debian repository</b> ★★★★★0 Debian package repository based on Reprepro</p>	 <p><b>Statping</b> ★★★★★0 Status Page &amp; Monitoring Server</p>
 <p><b>Bastion</b> ★★★★★5 Bastion server based on Ubuntu OS</p>	 <p><b>perfSONAR</b> ★★★★★0 Central Management perfSONAR Central Management</p>	 <p><b>perfSONAR</b> ★★★★★0 esmond Central Measurement Archive</p>	 <p><b>ELK Stack</b> ★★★★★0 Elasticsearch, Logstash and Kibana</p>	 <p><b>Grafana</b> ★★★★★5 Open source analytics &amp; monitoring solution for every database</p>	 <p><b>Prometheus</b> ★★★★★5 Monitoring system &amp; time series database</p>		
 <p><b>perfSONAR</b> ★★★★★0 MaDDash Monitoring and Debugging Dashboard</p>	 <p><b>perfSONAR</b> ★★★★★0 pSConfig Web Admin Web-based UI for perfSONAR administrators</p>	 <p><b>WiFiMon</b> ★★★★★0 WiFiMon Wireless Crowdsourced Performance Monitoring and...</p>	 <p><b>Jenkins</b> ★★★★★0 Leading open-source automation server</p>				



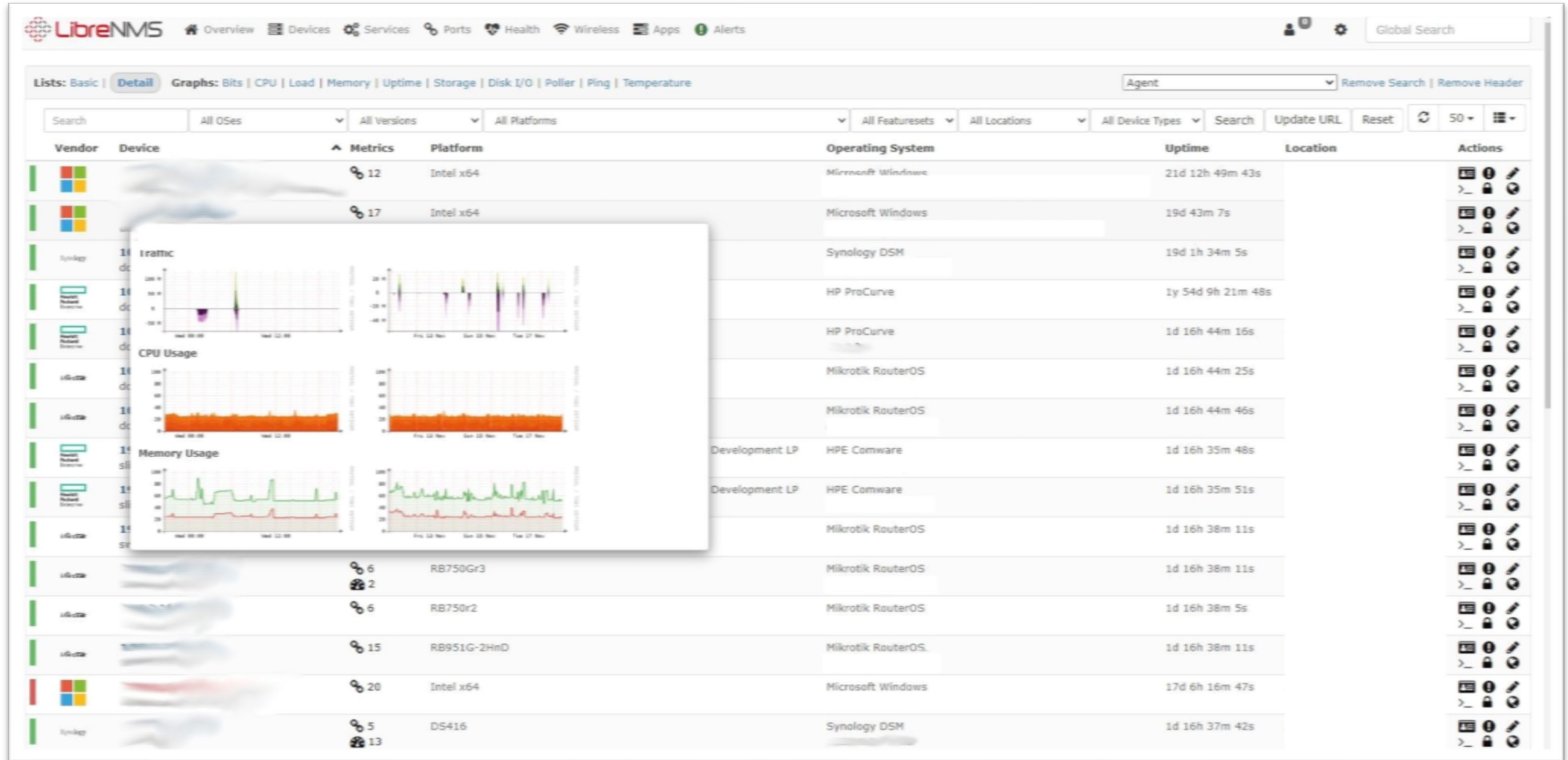
# GÉANT NMaaS – namestitev aplikacije



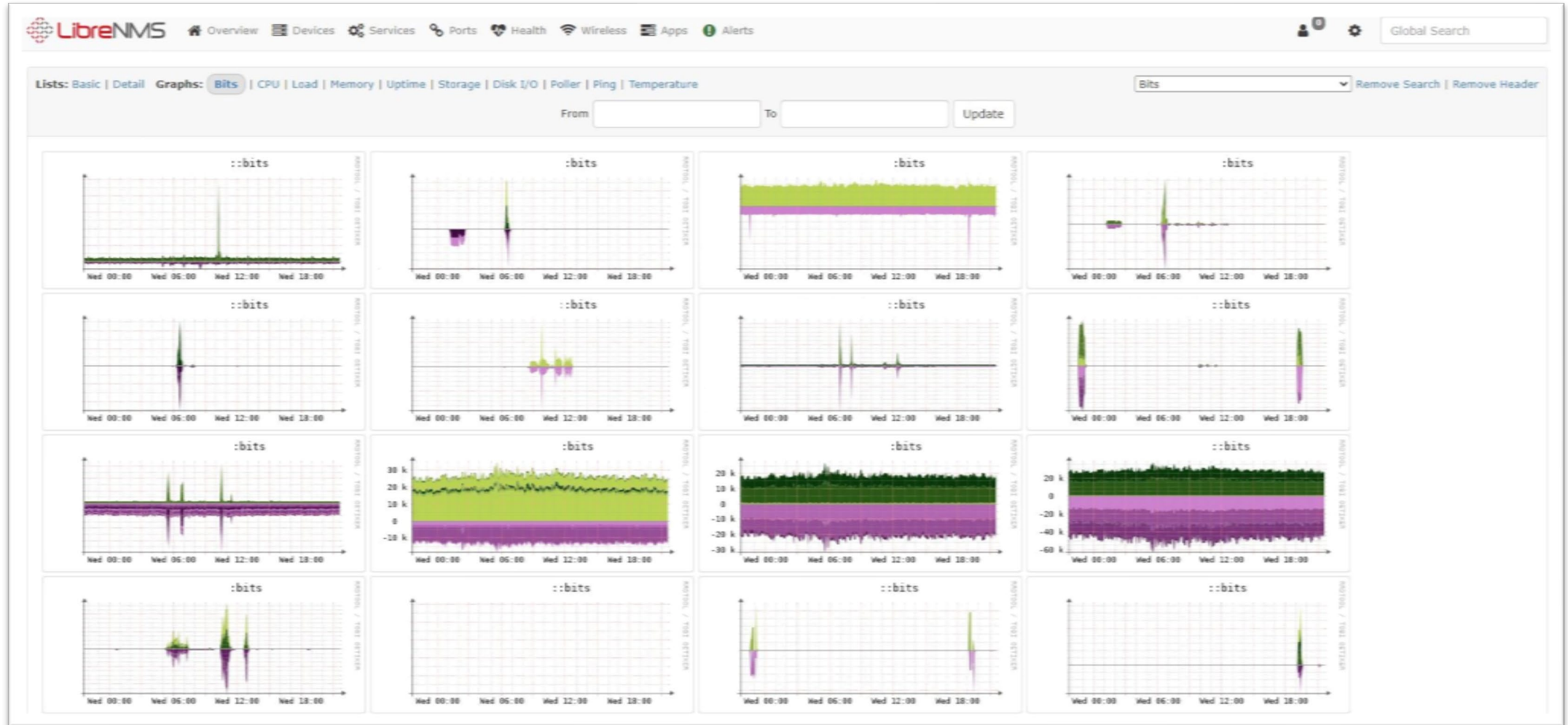
# GÉANT NMaaS – LibreNMS



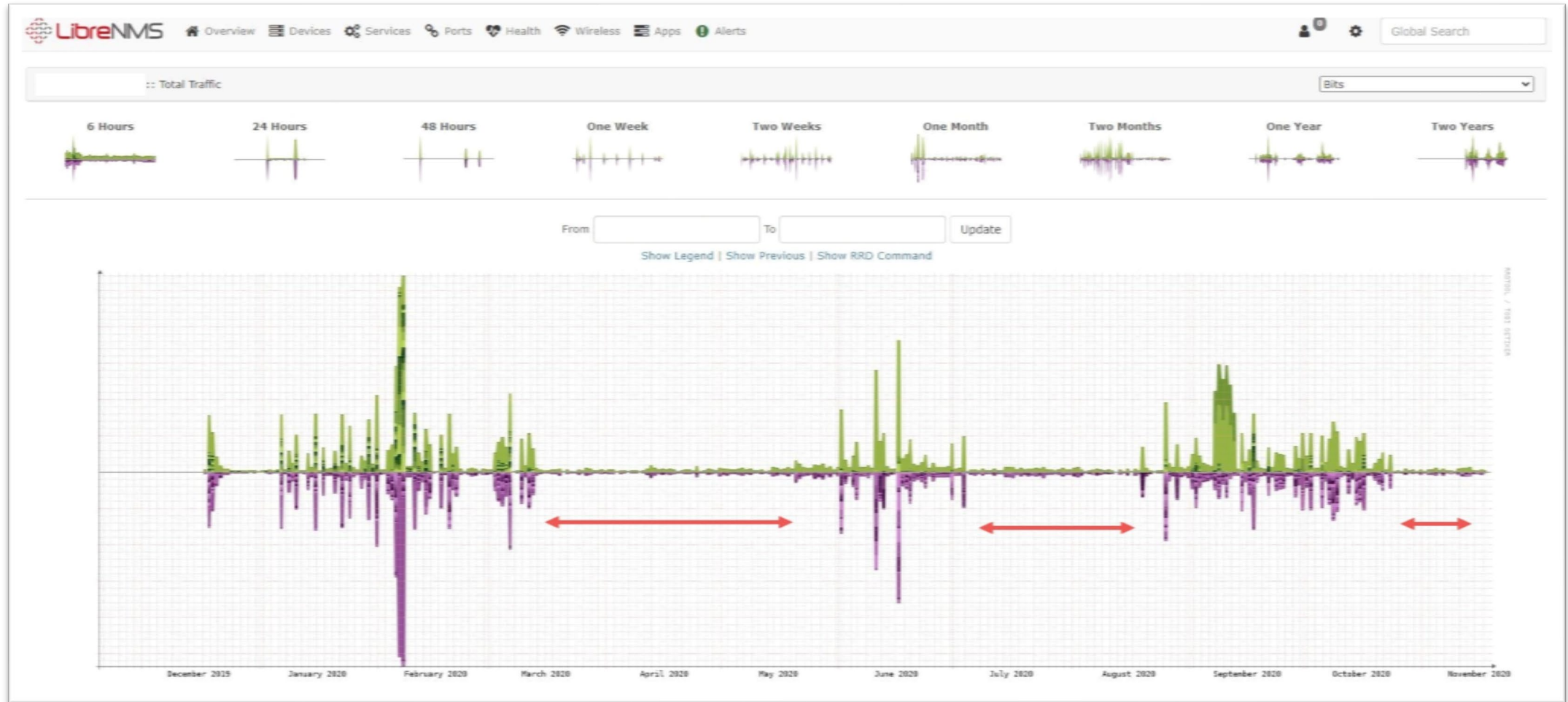
# GÉANT NMaaS – LibreNMS



# GÉANT NMaaS – LibreNMS



# GÉANT NMaaS – LibreNMS



# GÉANT NMaaS – vzpostavitev in omejitve

- Prijava na NMaaS portal.
- Namestitev aplikacij.
- Ureditev „birokracije“.
- Vzpostavitev Client-to-Site VPN.
- Vzpostavitev Site-to-Site VPN.
- Povezovanje opreme in uporaba aplikacij.
- V sistem lahko dodate opremo, ki jo upravlja organizacija.
- Opreme, ki jo upravlja Arnes, NE morete dodati v NMaaS.

Hvala

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