



Performance Measurement Platform (PMP) service

Szymon Trocha (Poznań Supercomputing and Networking Center)
WP6T3, PMP subtask

1st European perfSONAR User Workshop, London, May 5, 2019

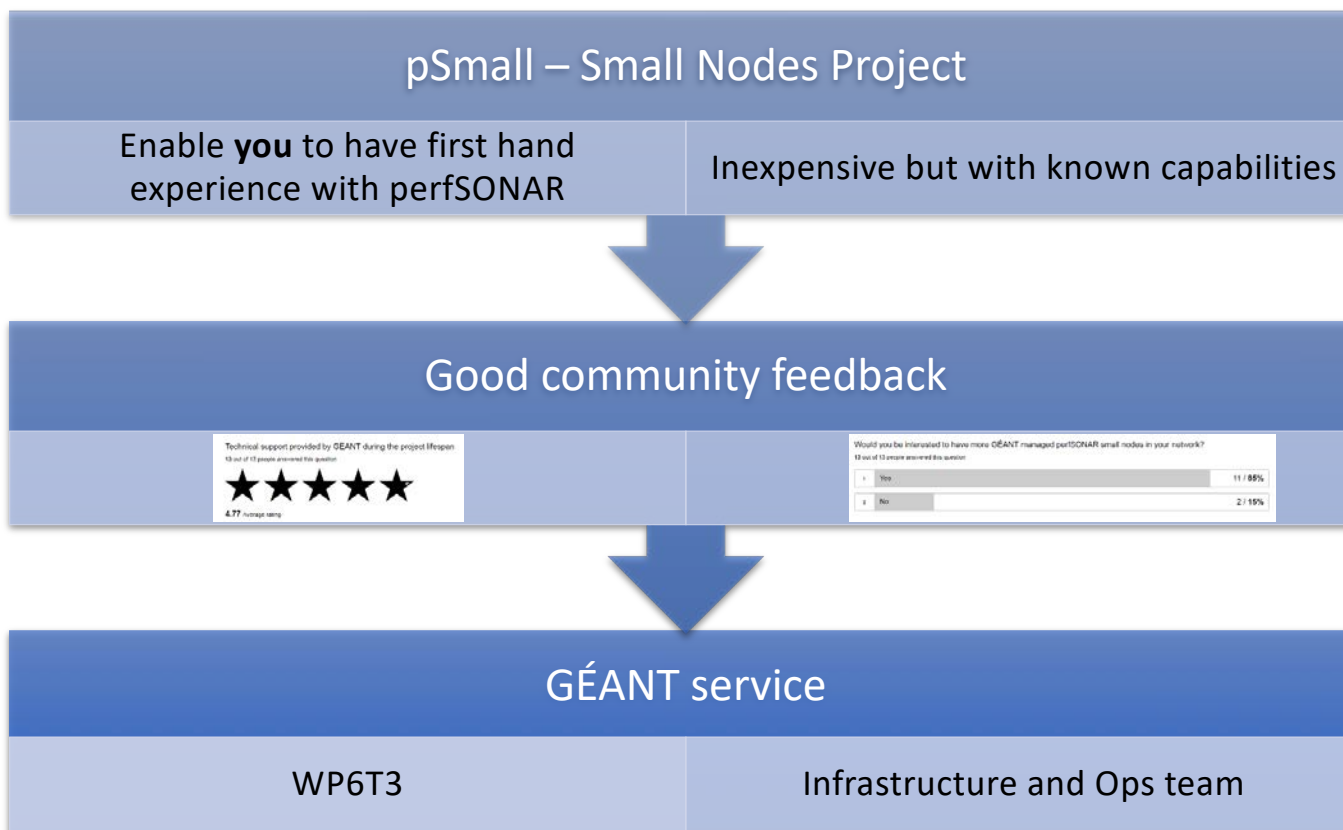
Public

www.geant.org

It all began at TNC16



A pilot transformed into GÉANT service



Performance Measurement Platform (1/2)

- Natural evolution of successful Small Nodes project
- Consists of a set of low-cost hardware nodes with preinstalled perfSONAR software
- Coupled with GÉANT MPs to create a partial mesh for NRENs
- The central components that manage the platform elements, gather, store and represent the performance data, are operated and maintained by the GÉANT project

Performance Measurement Platform (2/2)

- Small nodes users can shape the predefined setup and configure additional measurements to their needs and get more familiar with the platform
 - Can become example measurement experimentation and training platform about network measurement, network management, network performance
 - Can provide an easy way to setup a new perfSONAR small nodes on new small devices through providing ways for image creation and guidelines

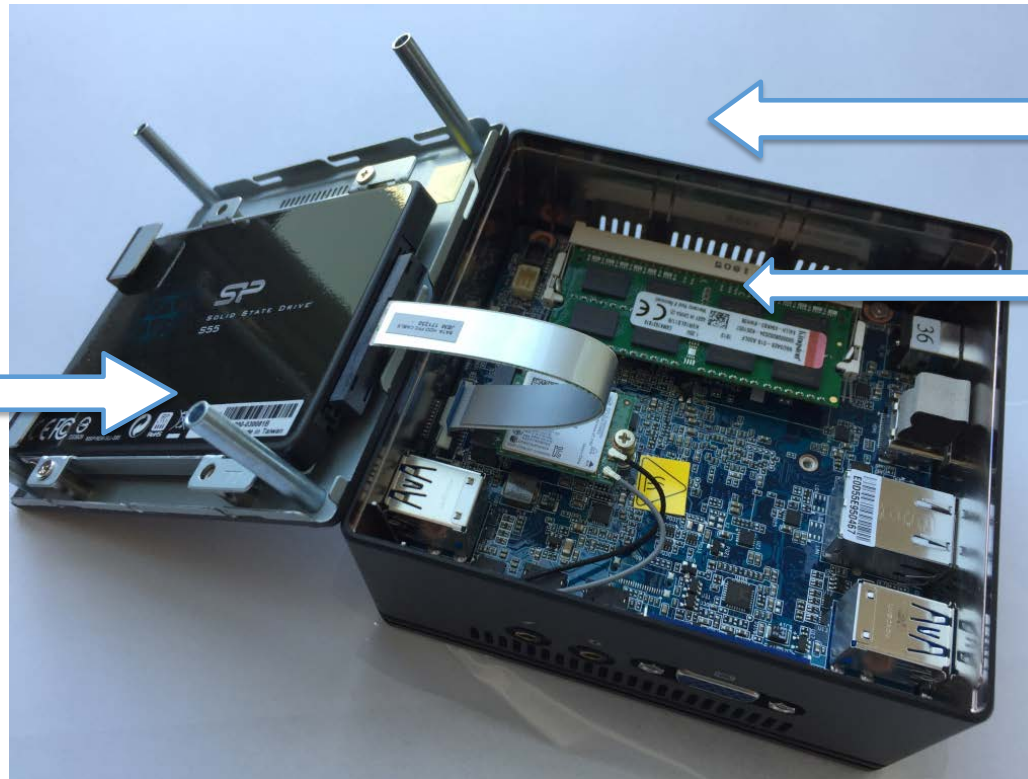
Small technology choice

56 x 107 x 114 mm

120GB
Patriot SSD

/	20 GB
/var/lib	86 GB
Swap	8 GB

**GIGABYTE BRIX
GB-BACE-3160**

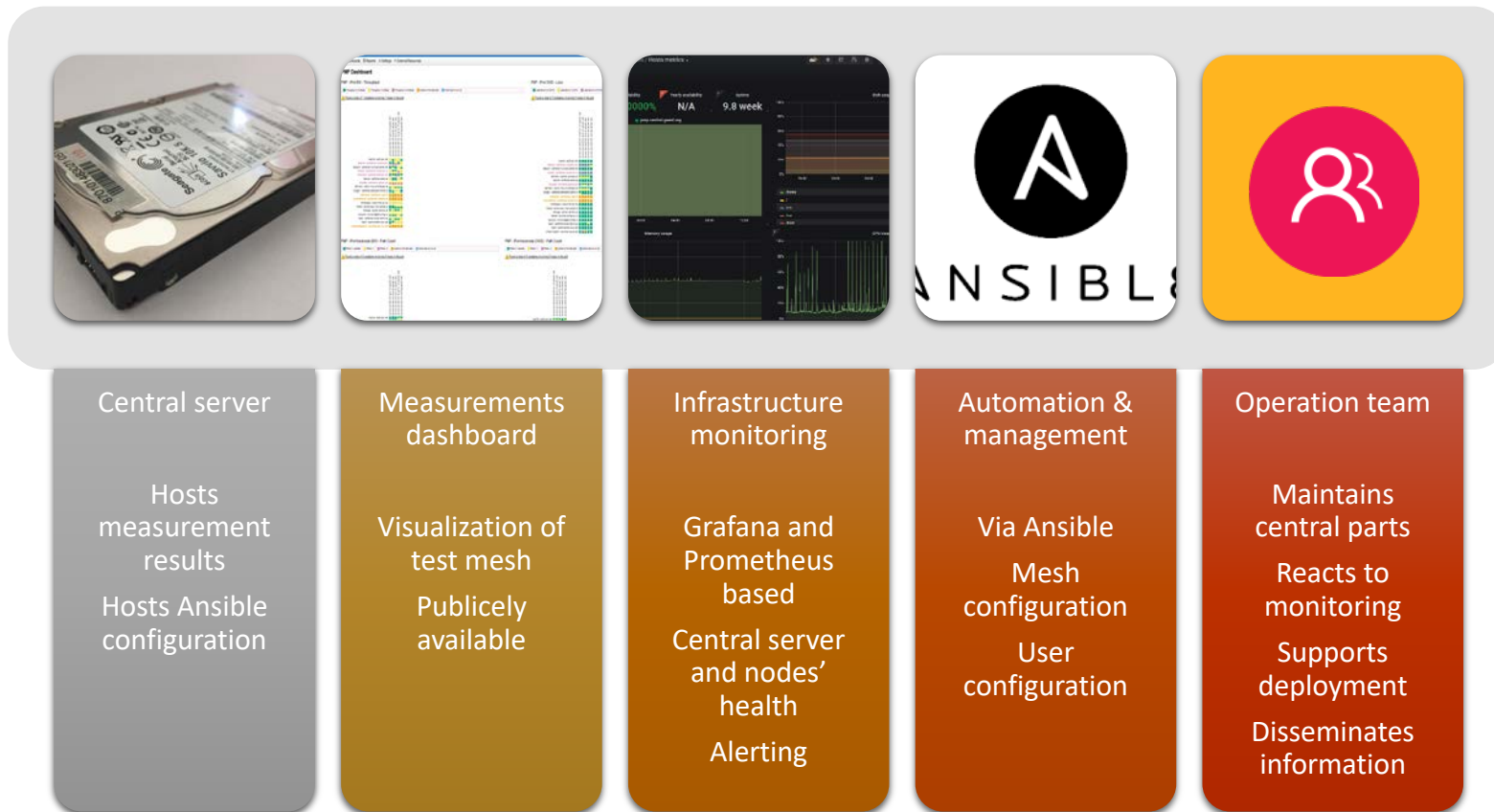


Intel Celeron J3160
1.6GHz (up to 2.24 GHz)
4 cores

8GB RAM
Kingston

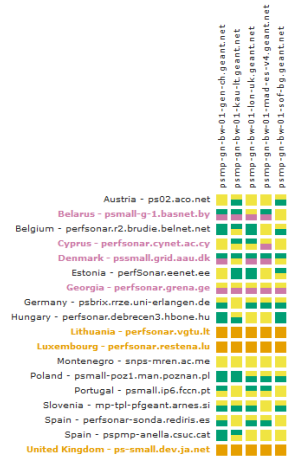
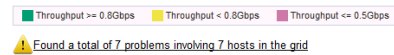
- 1Gb/s RJ45 LAN
Realtek
- WiFi + BT
- VGA, HDMI
- 4 x USB 3.0
- Micro SD
- External power supply

Central parts

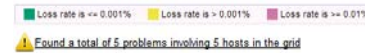


Measurements

PMP - IPv4 BW - Throughput



PMP - IPv4 OWD - Loss



PMP GÉANT

☰ Dashboards ☰ Reports ⚙ Settings 🌐 External Re

PMP **Dashboard**

- All Grids > PMP - IPv4 BW - Throughput
- PMP - IP PMP - IPv4 OWD - Loss
- Throughput PMP - IPv4 traceroute (BW) - Path Count
- Found a PMP - IPv4 traceroute (OWD) - Path Count
- PMP - IPv6 BW - Throughput
- PMP - IPv6 OWD - Loss
- PMP - IPv6 traceroute (BW) - Path Count
- PMP - IPv6 traceroute (OWD) - Path Count

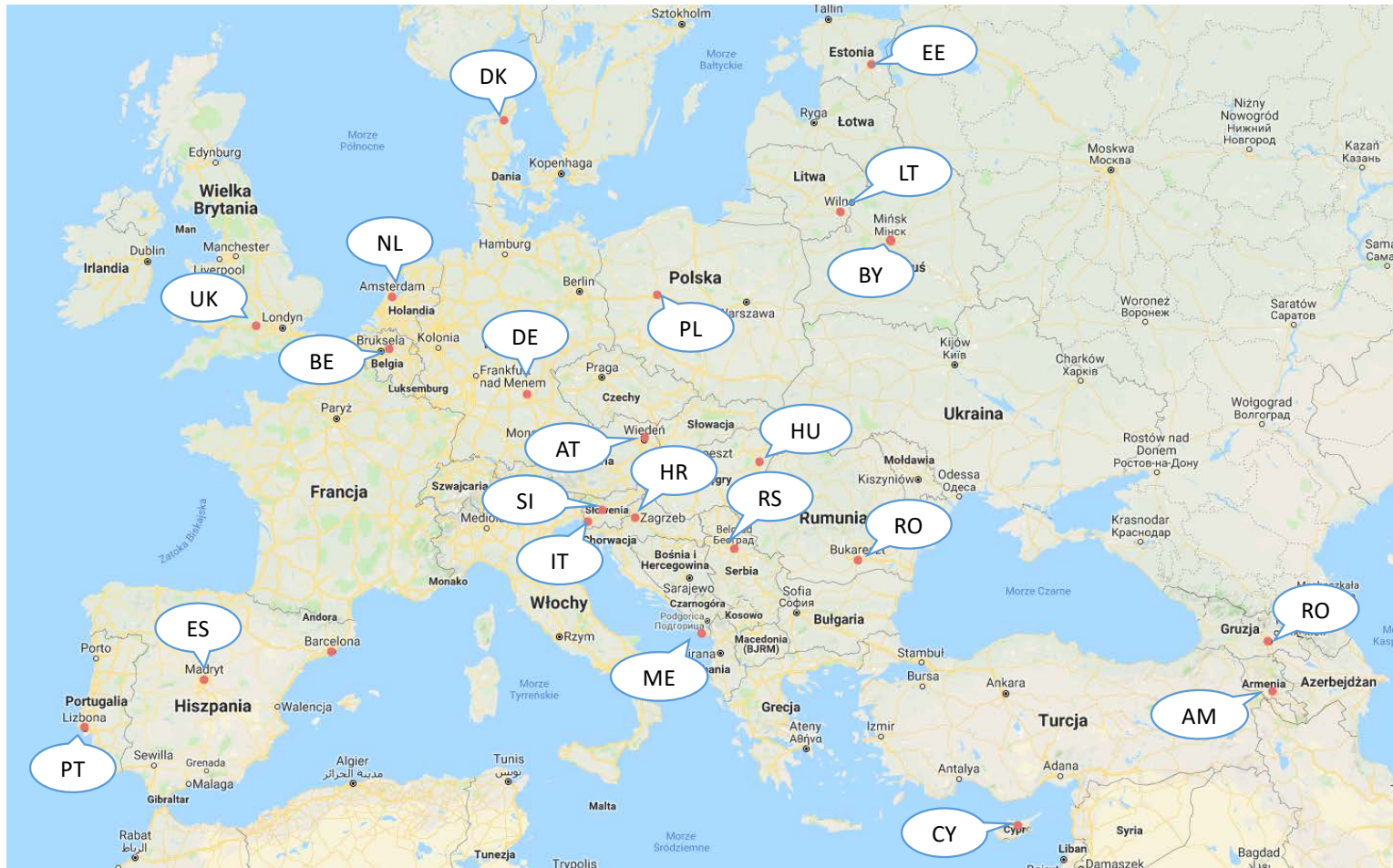
IPv6 (and IPv4)

- pre-install of the perfSONAR toolkit on **CentOS7**
- 1 master node, rest cloned
- Tagged with communities : GEANT, pSmall-GEANT, PMP-GEANT
- Monitoring with SNMP
- Central administration
- To 5 different GÉANT MPs
- Archive server in GÉANT

Current coverage

- +3 in African NRENs
- Some countries have >1

<http://stats.es.net/ServicesDirectory/>



Participation and resources

- Want to participate?
 - If you are an NREN or institution connected to an NREN
 - If you belong to the R & E community
 - Being part of a networking team, service or research group
- Identify responsible person and sign in

- www.perfsonar.net
- pmp-central.geant.org/maddash-webui/



Thank you

Any questions?

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