perfSONAR

2022 Update

Latest developments and news

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3rd European perfSONAR User Workshop

24-25 May 2022

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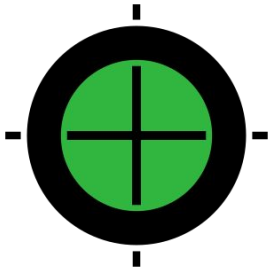

A quick look back…

… Zoom, April 2021

2nd European perfSONAR Users Workshop

- Online (Zoom) in April 2021, hosted by GÉANT
- 15 presentations from 11 organisations
- Around 70 participants in total

You asked for:

- Continued OS support
- Easier access to data
- Improve documentation and guides
- And more…

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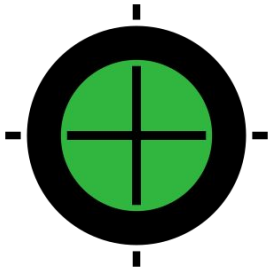
What happened since then?

- New maintenance releases
  - 4.4.0 to 4.4.4
- 2nd perfSONAR day hosted by Internet2 in November 2021
- No 5.0-beta release …
  - … yet
- But working on it
  - Lots of discussion, meetings, calls …
  - … and clearly some development work!



Deployments update

Around 2000 public nodes around the world

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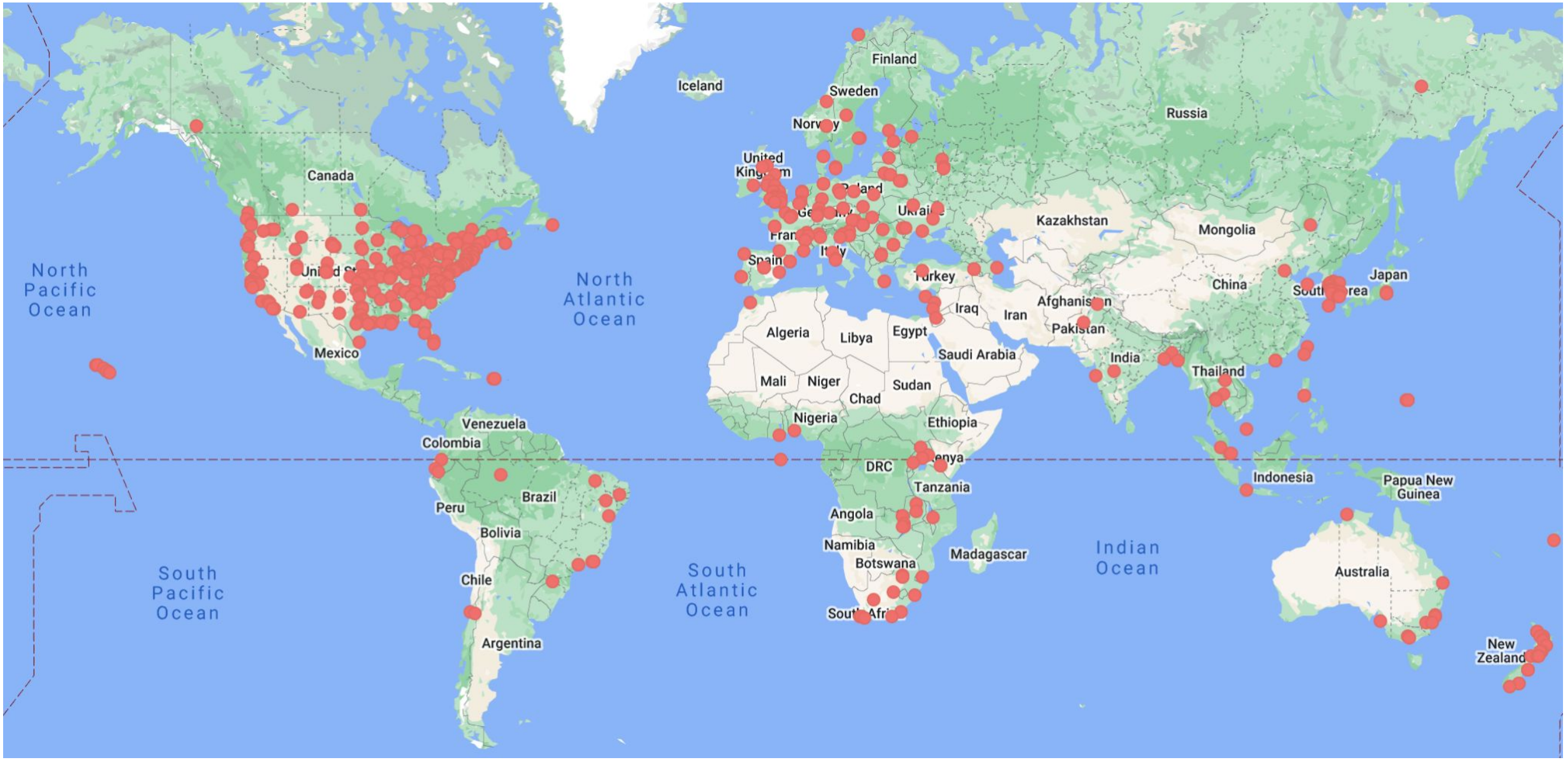

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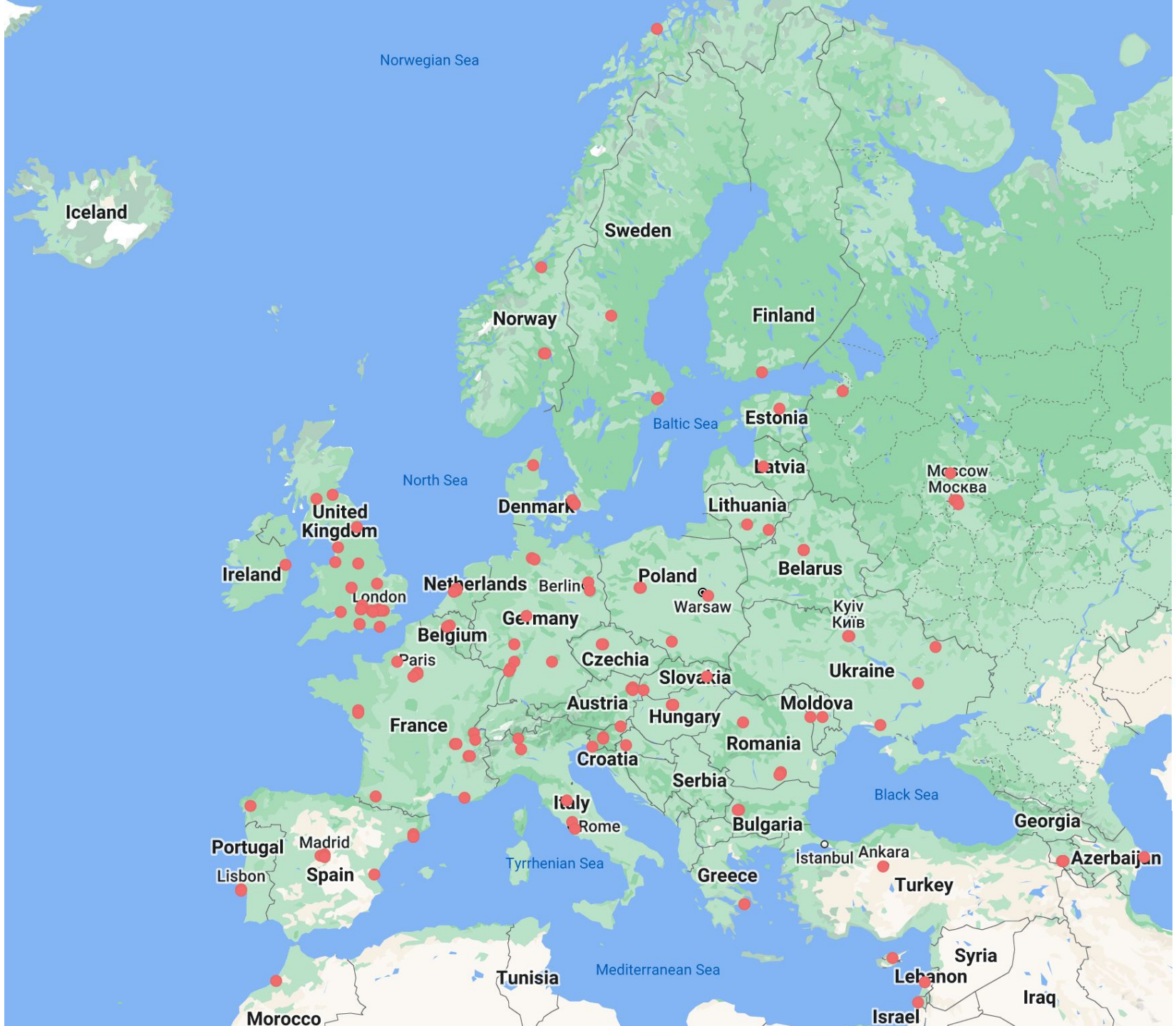
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Estonia
Latvia
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North Sea
Denmark
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Berlin
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Warsaw
Belarus
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Iraq
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Israel

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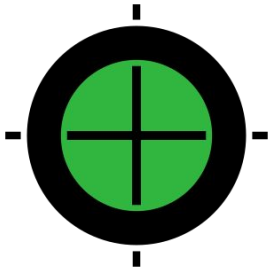

Software update

Latest releases

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perfSONAR 4.4.0 - 4.4.4

- A few minor new features:
  - Loopback throughput tests
  - AS numbers lookup in pScheduler limits
  - Graphs Archive Whitelist
  - New RabbitMQ archiver
- Bug and security fixes when required

Thank you for your reports!

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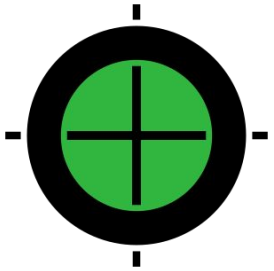


2nd European pS Users Workshop

Online, April 2021

2nd European perfSONAR Users Workshop

We discussed:

- perfSONAR installations and usage
  - From 10Gbps mobile testing to scaling up a pS deployment
  - From Central Management server setup to CNaaS deployment
- New tools and usage
- pScheduler plugins development
- OS Support

Addressing your requests

- ✅ No OS lock-in
- ✅ Continue Ubuntu support
- ✅ Different architectures
- ❌ Stay near the edge instead of well behind
- ✅ Scriptable configuration
- ✅ Containerisation
- ✅ Simple installs
- ✅ And even simpler for on-demand testing
- ✅ Easy export of measurement data

Improved OS Support

Continued Ansible Support

Continued Docker Support

Upcoming 5.0 release

OS Support

- Workshop poll and follow up discussions
- Long term need to move away from CentOS, and go towards:
  - Rocky / Alma Linux
  - Debian / Ubuntu
- Continue looking at CentOS / RedHat evolution

OS Support: What happened so far?

- Discontinued Ubuntu 16
- Unfortunately no Ubuntu 20 support yet
- Continued investigation
- Porting code with a new unified build mechanism
  - Unibuild

Unibuild

- Create a unified setup to build any perfSONAR repository
  - Support both RPM and Deb formats
  - OS aware (builds, dependencies, …)
  - Snapshot and release builds
- Initially developed for pScheduler builds
  - Then generalised for the other perfSONAR repositories
  - Currently being integrated in the general build process
- Then using Docker and QEMU to build for different architectures

Upcoming 5.0 Release

- New backend: OpenSearch
- Middleware to transition: Elmond
- Opening up possibilities
  - Easier access to data
  - Different displays
  - Correlations with other data sources

psGUI: on-demand measurements

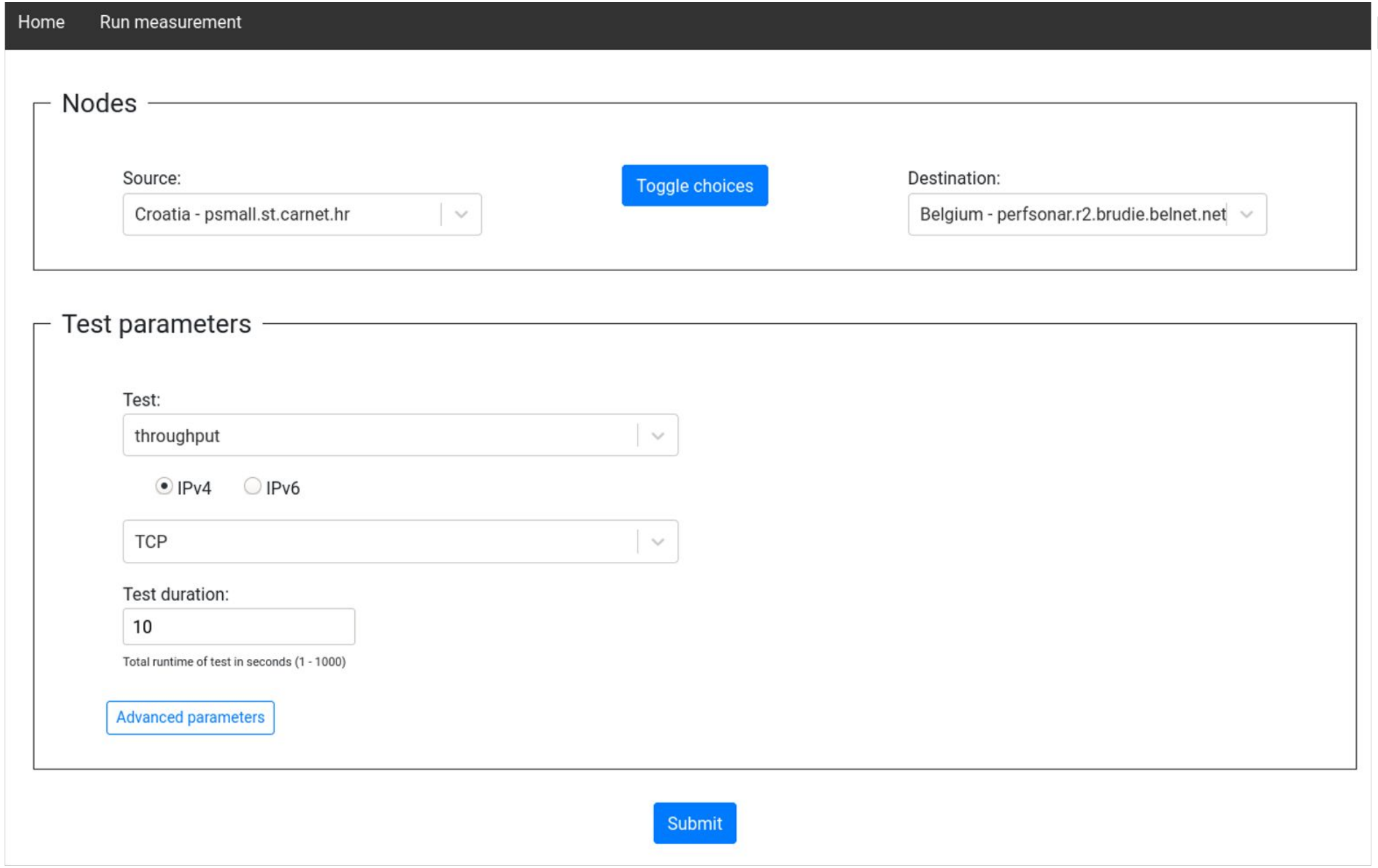
- Help network engineers work with pScheduler / perfSONAR

Create a GUI…

…To do perfSONAR On-Demand measurements

psGUI: 1st implementation

- Source and destination from a MaDDash grid
- Most used measurement types:
  - Latency
  - Throughput
  - Trace
  - RTT
- To enter public beta soon, stay tuned!



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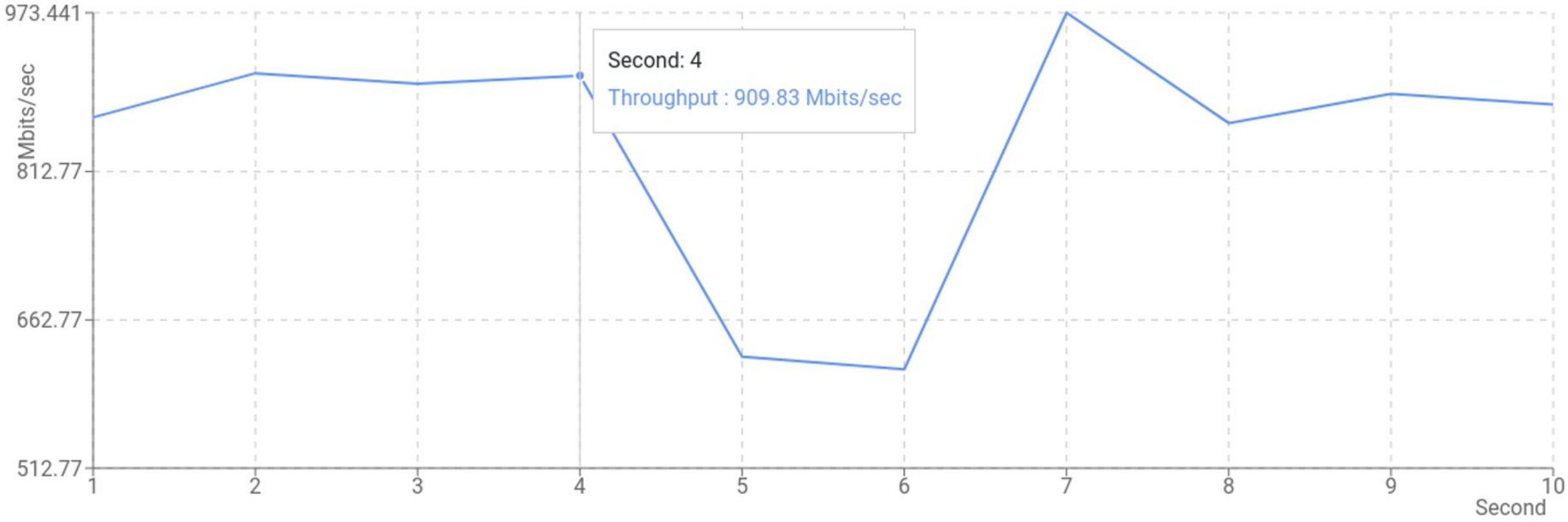
Home Run measurement

throughput: ps02.aco.net -> psmall.st.carnet.hr (iperf3)

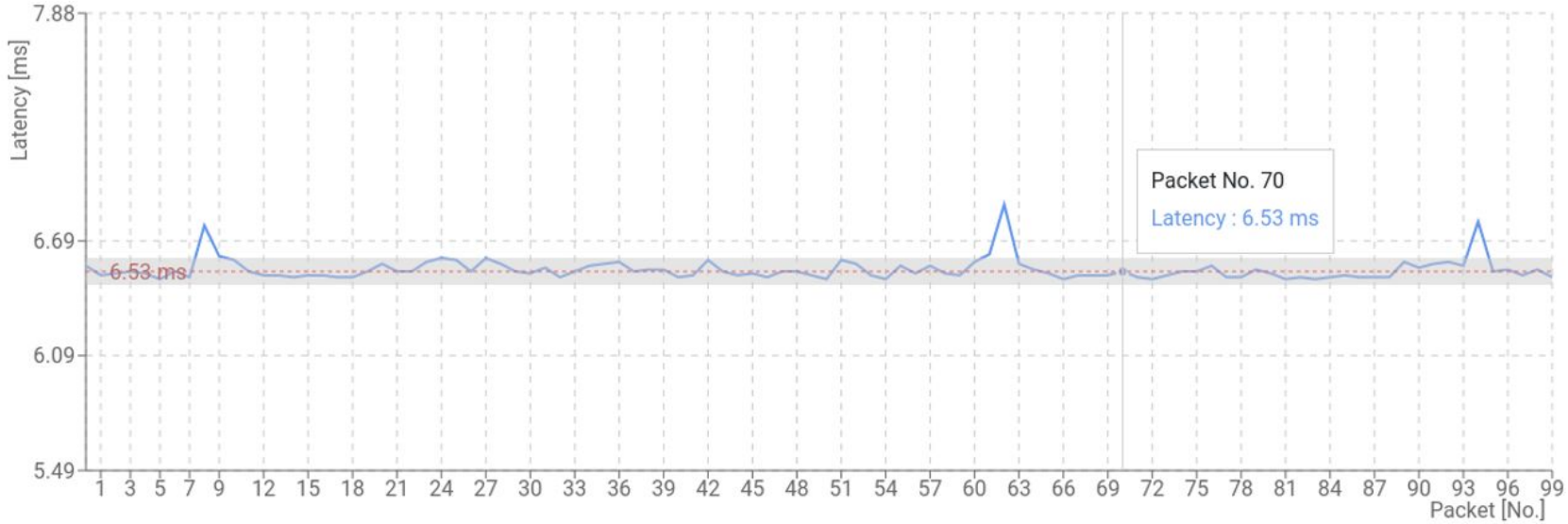
https://ps02.aco.net/pscheduler/tasks/c5301e91-66a7-45aa-a3f9-760adb65e633/runs/first

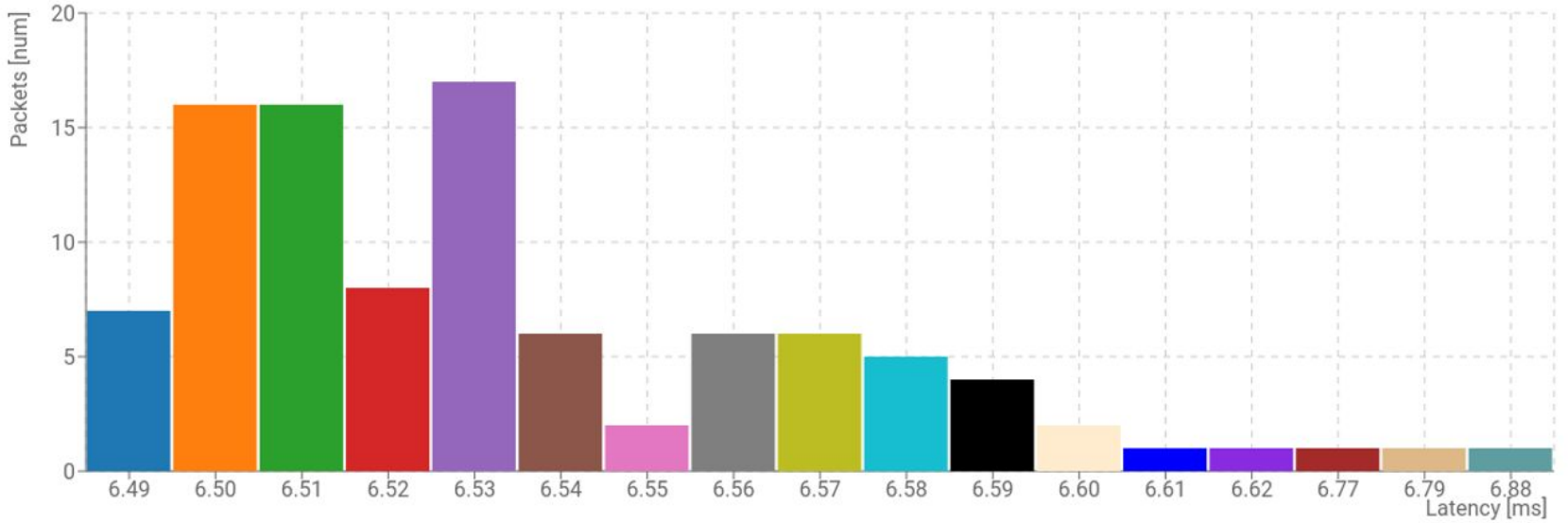


Home Run measurement

latency: ps02.aco.net -> psmall.st.carnet.hr (100 packets)

https://ps02.aco.net/pscheduler/tasks/a9df94db-3616-4544-96c8-81b680560273/runs/first





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Tracking progress and engagement

- Issue tracker
  - https://github.com/perfsonar/
  - Add your own bug report or feature request
- User lists reports and discussions
- Dev meetings and standups
  - Bi-weekly standups, weekly QA call, weekly automation and containers call
  - Fortnightly 1 hour open Dev call alternating with Docs & Training call
  - Yearly Developers meeting
- perfSONAR day, Workshops, Infoshares, Conferences

3rd European perfSONAR Users Workshop

- 1st day: Users experience, use cases
- 2nd day: Developers corner, new features, work in progress

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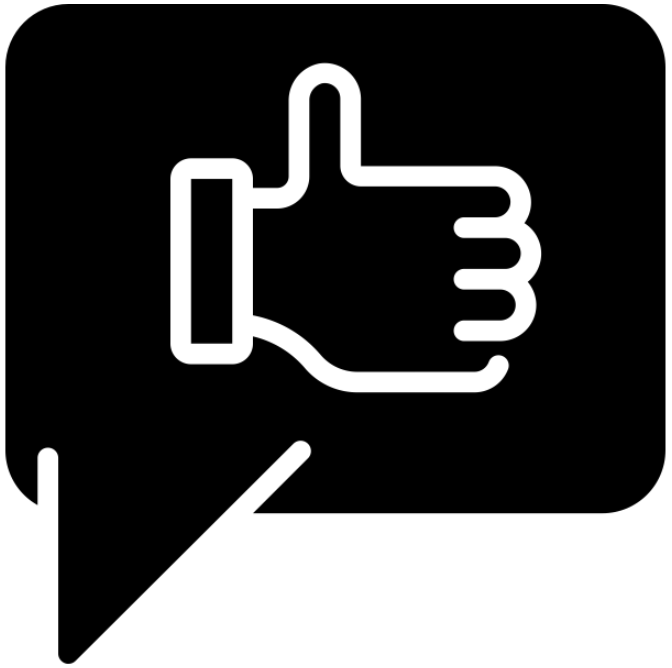

Thanks!

For more information,
please visit our web site:
https://www.perfsonar.net

Thanks icon by priyanka from The Noun Project

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