



perfSONAR on-demand measurements UI

The GN5-2 Network Development Work Package – WP6

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Public (PU)

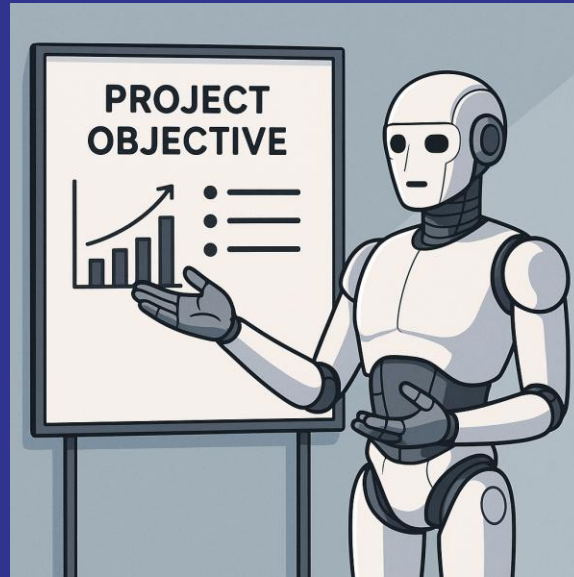


Project Objective

Implementation

Demo

Future work



Project Objective

When Network Performance Issues Are Detected:

- NOC engineers need simple, intuitive, and quickly available tools
- Command-line interfaces can be complex and slow to use
- pScheduler offers many CLI options, which can be overwhelming
- Should be accessible from mobile devices for on-the-go troubleshooting
- An easy-to-use graphical user interface (GUI) is the preferred and faster solution

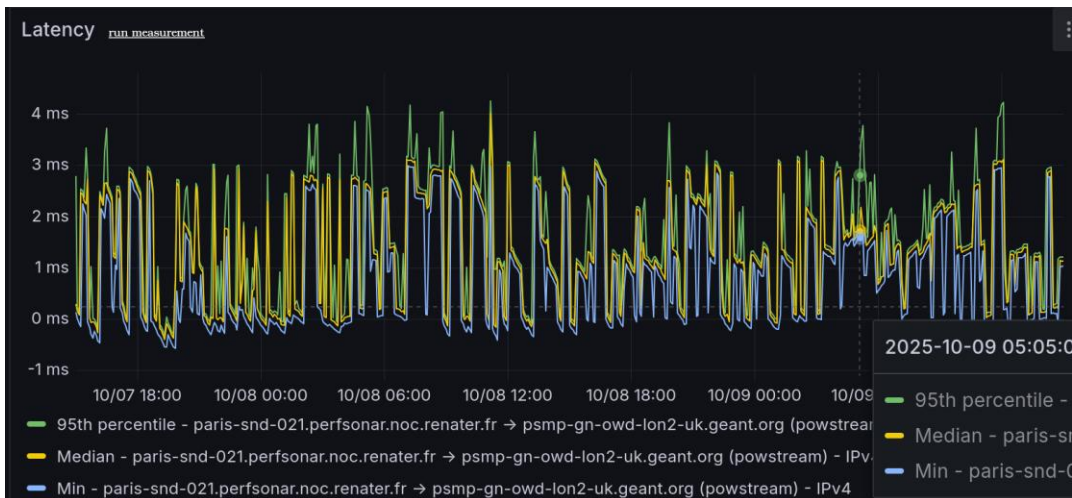
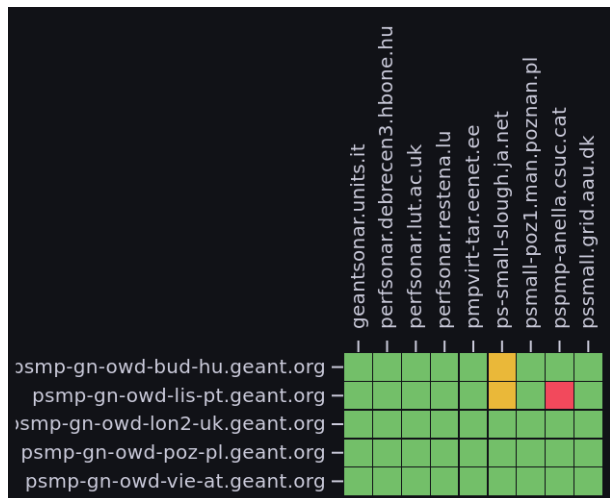
Develop a simple, intuitive, and quickly accessible graphical user interface for pScheduler that enables NOC engineers to efficiently troubleshoot perfSONAR-detected network issues.



Use Case

On-Demand testing from perfSONAR Grafana interface:

- Access tests directly from the Grafana measurement grid
- No need to wait for the next scheduled test
- Option to adjust measurement parameters as needed
- Access detailed results, including full packet delay histograms



Implementation



psGUI Architecture



Frontend and Backend Overview

Python Flask

- Serves as the backend framework, routing all pScheduler API requests through a local proxy

React

- JavaScript frontend library

Recharts

- Visualization library built on D3.js, providing React-friendly, dynamic graphing and plotting.

Github repos

Backend

- <https://github.com/perfsonar/psproxy>

Frontend + Docker install

- <https://github.com/perfsonar/psgui>

Simple install

psgui -> docker -> simple_install

- `docker-compose up --build -d`

Customization

`custom_config.py` - Backend config to customize PSCONFIG location of your mash

`custom_TestDefaultValues.js` - Frontend config to customize URL location of your mash

`docker-compose.yml`

Dockerfile

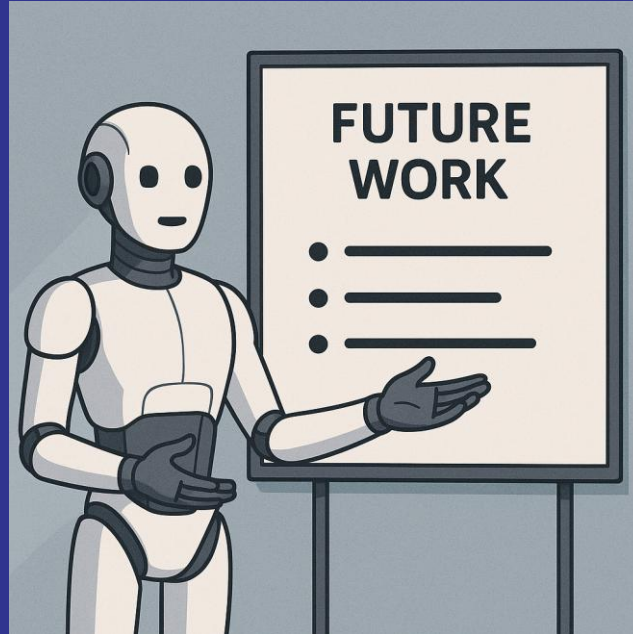
`.htpasswd` - default user:pass are psgui:psgui

`nginx.conf` - custom nginx config

`nginx.crt` - nginx self-signed certificate

`nginx.key` - nginx self-signed certificate key





Future work

Short term

- Release together with the perfSONAR version
- Allow user to add custom measurement node
- Improve mobile responsiveness of the graph results

Long term:

- **User feedback ...**



Thank You!

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