perfSONAR Visualization Integration Investigations

perfSONAR User Workshop

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Investigation Guidelines

- Only use perfSONAR native protocols:
  - pScheduler
  - Esmond
  - … i.e. no alternative backends (ES, Influx, etc.)
- Create sample scenarios of on-demand measurements and understand user experience/limitations:
  - throughput
  - latency
- Especially interested in Grafana interaction/integration

Issues ...

- Some issues became immediately apparent:
  - browser CORS protection
    - blocks javascript running in user's browser from communicating with perfSONAR nodes
  - self-signed certificates
    - avoid forcing users to disable certification validation
  - performance
    - pScheduler and Esmond weren't designed for this use case
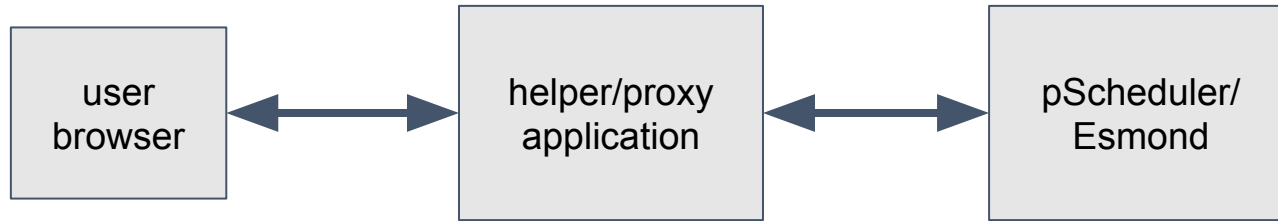 - other unexpected networking issues ...

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Development environment mitigation

instead of this ...

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Development environment mitigations

this …

Simple Javascript test

- http://test-psui-vis.geant.org:8001/sample/run-test

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Grafana: Esmond datasource

- *http://test-psui-vis.geant.org:3000/d/BxStjTYmk/esmond-ivan?orgId=1*

Grafana: pScheduler datasource

- *http://test-psui-vis.geant.org:8989/static/run-measurement.html*

- *http://test-psui-vis.geant.org:3000/d/rnxnRX3iz/pscheduler-poc?orgId=1*

Takeaways so far …

- Grafana is …
  - ***excellent*** for
    - representing long-term/regular time series data
  - ***not excellent*** for:
    - representing sparse/unusual time series data
    - as an interface for asynchronous information
    - capturing complex query/parameter combinations
    - as a control panel
- Esmond is …
  - inconvenient for real-time interactive access

- … a feature-comprehensive graphical interface may not be what we want

Next steps ...

- Better understand real on-demand testing use cases

- Look for the right balance between:
  - toolkit functionality (present and future)
  - complexity
  - simplicity

Thank you