perfSONAR Beyond 5.0

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perfSONAR is developed by a partnership of
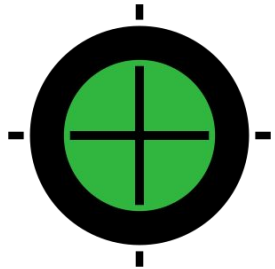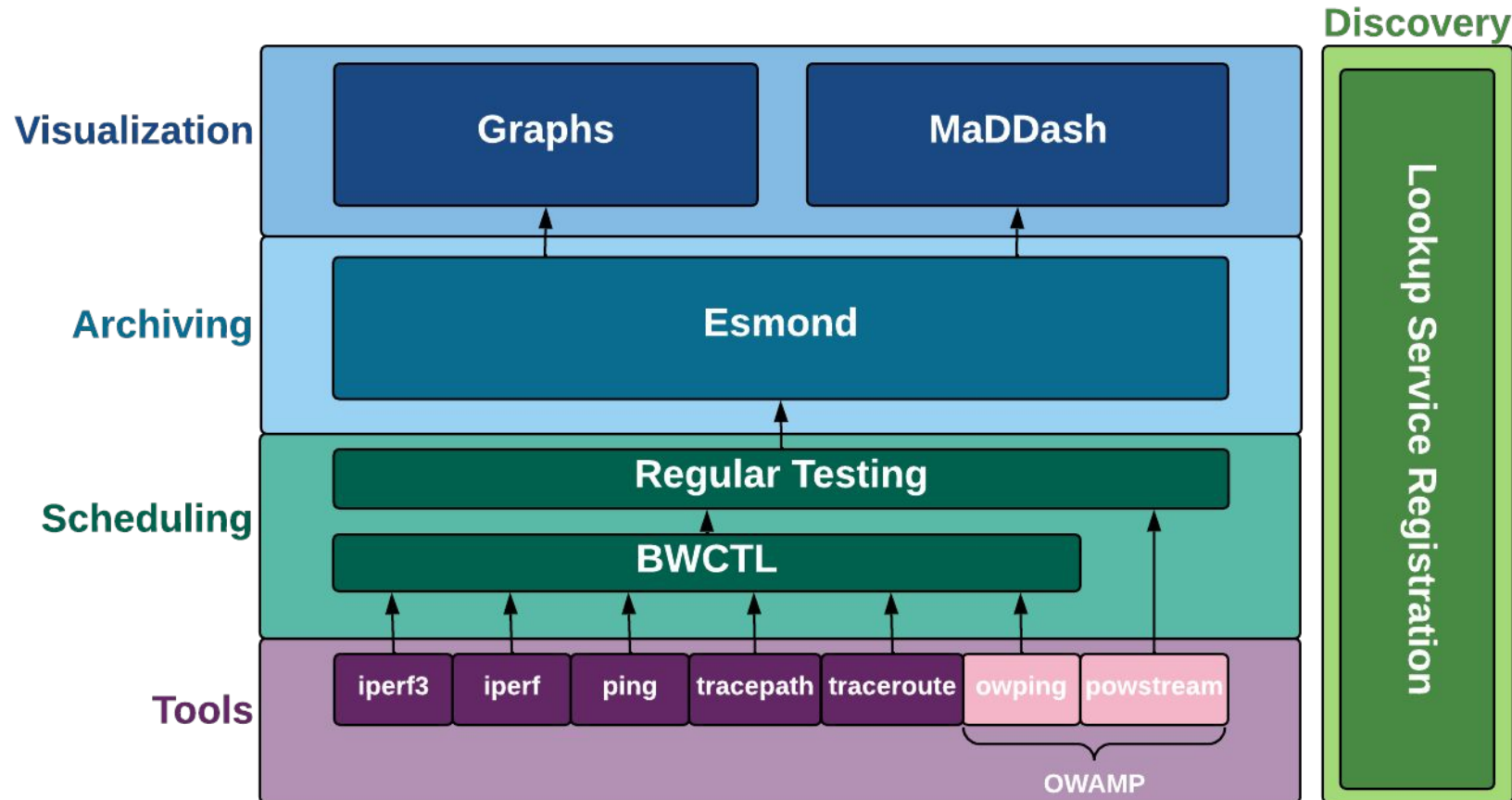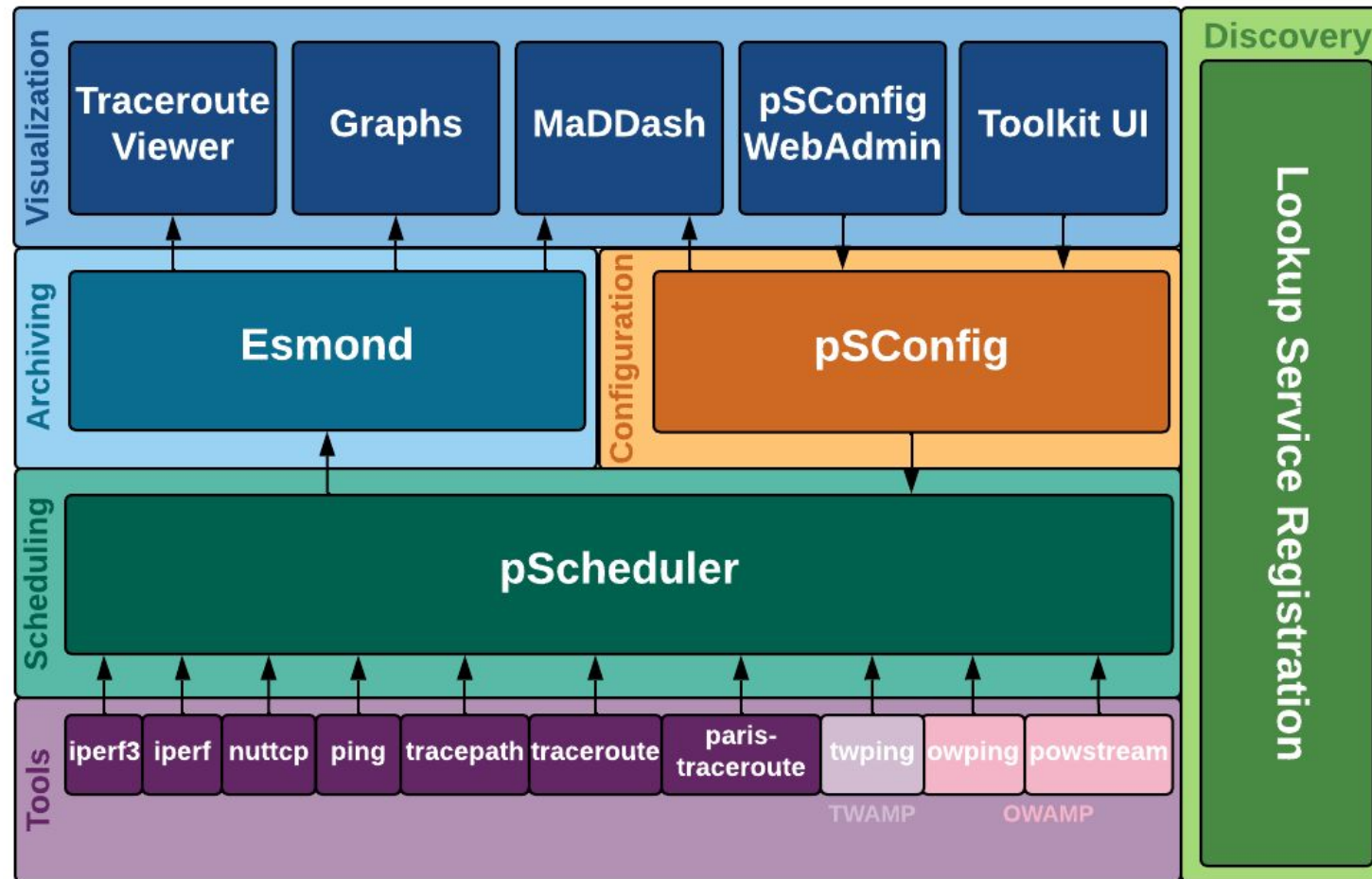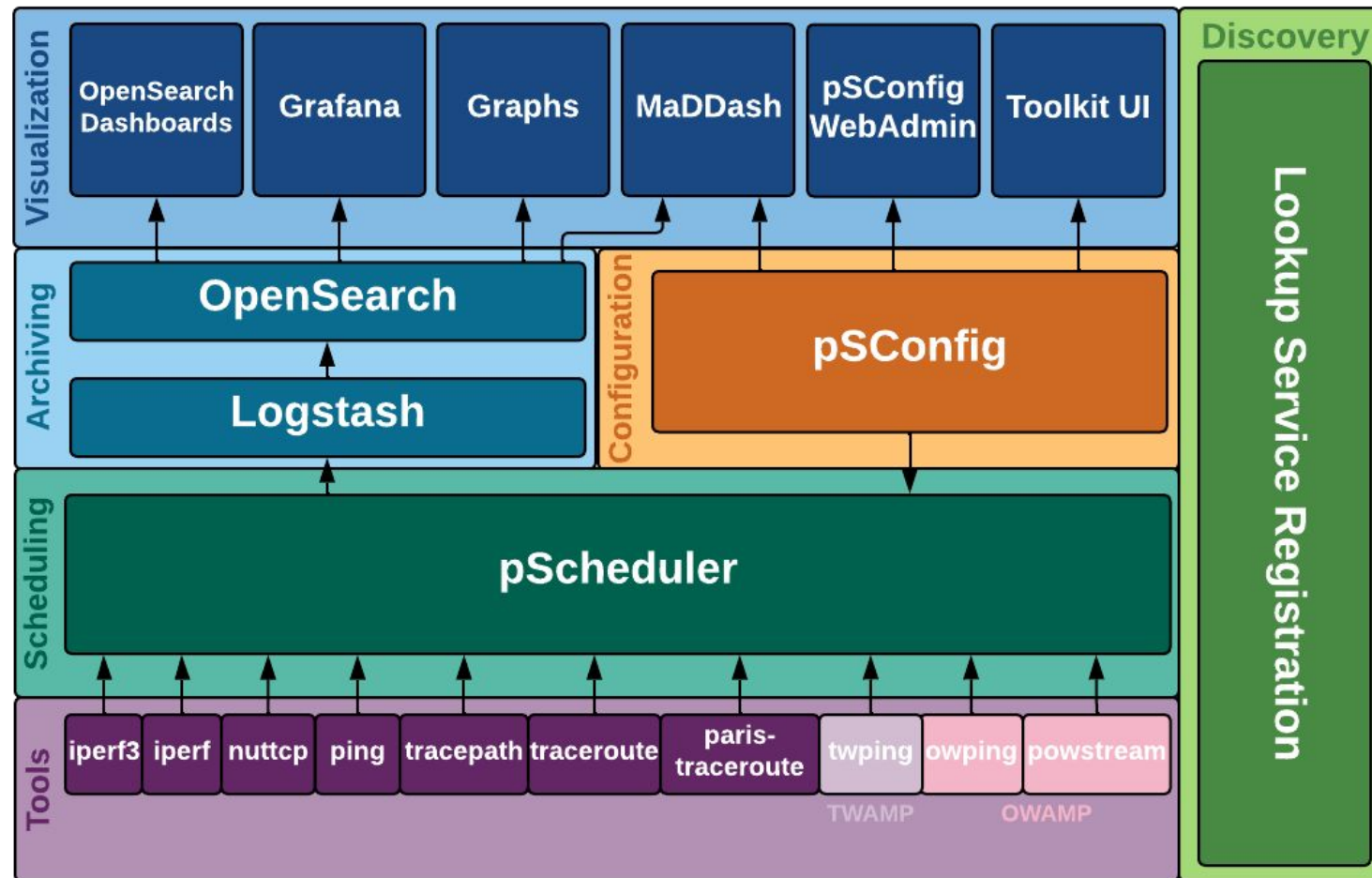
A Brief Architectural History
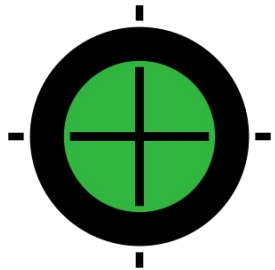
perfSONAR 3.X

perfSONAR 4.X

perfSONAR 5.0

perfSONAR Development Beyond 5.0

Common Themes

- **A focus on the frontend**
  - Built a lot of infrastructure, let's use it
- **Consolidating technology stack**
  - Eliminate divergences that occurred as software has expanded
- **Cross Training**
  - Really an internal theme, but important nonetheless

pSConfig Web Admin (PWA) Rewrite

- Migrate MongoDB backend to PostgreSQL
    - Matches other pS components (e.g. pScheduler)
    - Eliminates MongoDB SSPL concerns

- Add flexibility of pSConfig to front-end
    - Currently requires code release to add new tests, etc

- Refresh UI
    - Update UI libraries
    - Maintain features like auto-complete

OWAMP Updates

- Parsing is currently highly suboptimal

- Large number of processes inflates system load
  - Currently 4 processes per test

- Additional output options for powstream
  - JSON format
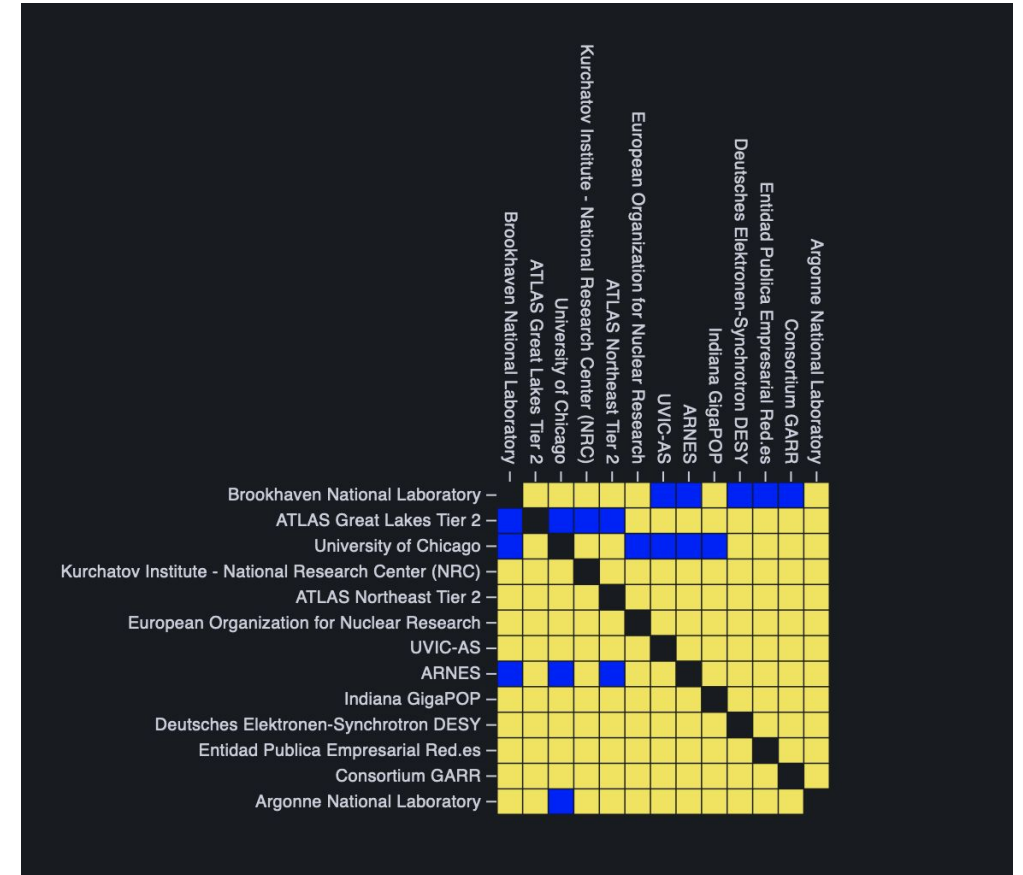 - Ability to stream raw measurements (not just summaries)

Lookup Service Development

- Improved reporting UI built in Grafana
- Adding historical data to watch pS deployments over time
- Better data typing

Replace MaDDash with Grafana

- Grafana plug-in under development for "adjacency-matrix"

- Allows for other visualizations built-in to Grafana

Eliminate Remaining Perl Components

- Many components still in Perl
  - pSConfig
  - LS Registration Daemon
  - Various toolkit-reated code

- Increasingly difficult to find perl developers

NO
CAMELS

Summary

- pSConfig Web Admin (PWA) Re-write
  - Aligning tech stack with rest of perfSONAR on backend
  - Front-end redesign - not sure if there will/should be alignment with any front-end work we are doing?
- OWAMP updates
  - Support for JSON output
  - Refactor process management which contribute to high load numbers
- Lookup Service Development
  - New reporting UI
  - Track LS data over time
- Replace MaDDash with Grafana
  - Adjacency Matrix plug-in will be key to this
- Eliminate remaining Perl components
  - pSConfig probably largest