

perfSONAR 5.0 Migration

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perfSONAR is developed by a partnership of



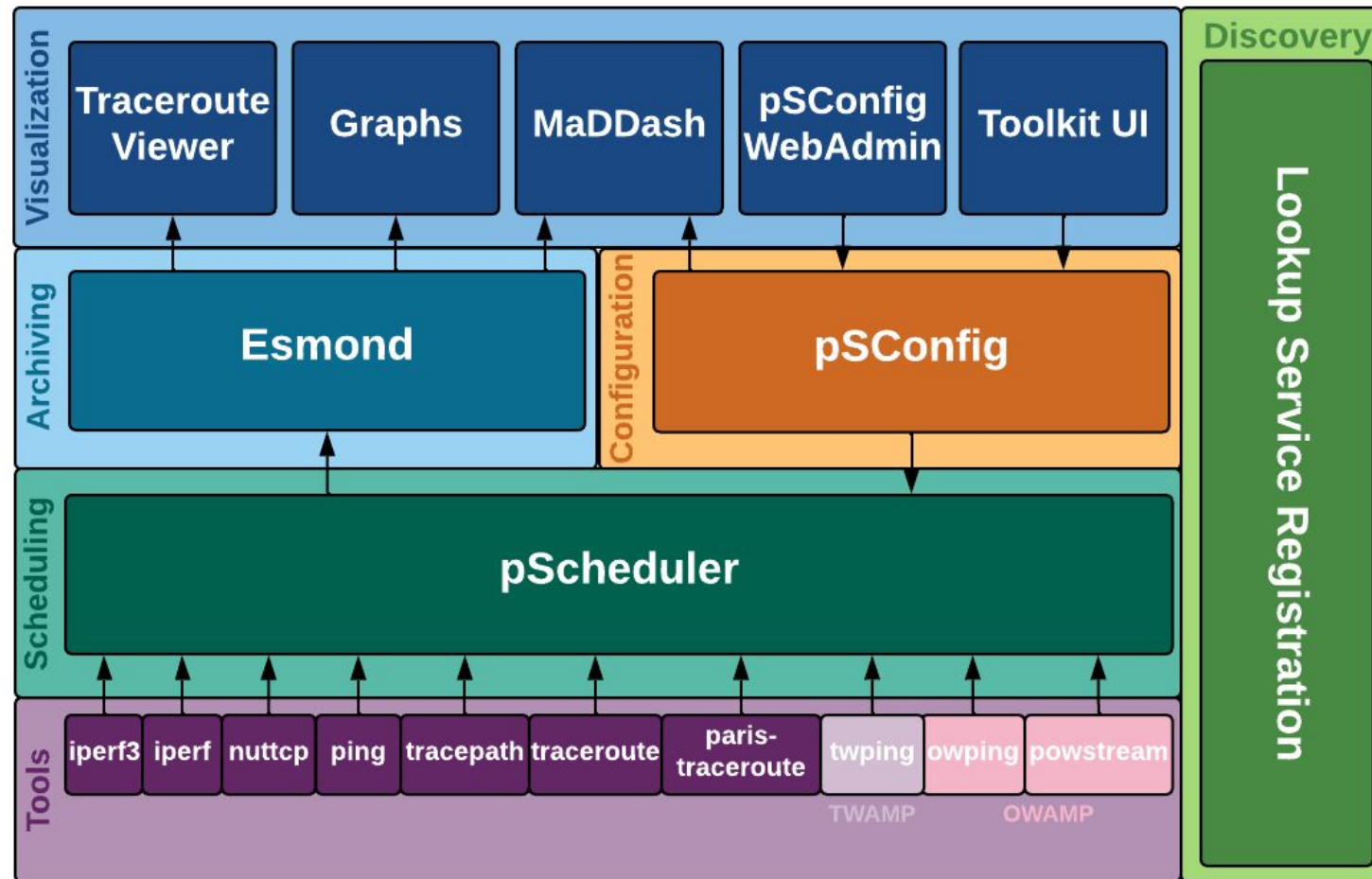
ESnet



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perfSONAR 4.X



perfSONAR Toolkit

- Currently most people run the **perfSONAR Toolkit**
 - Full suite of perfSONAR tools to configure, execute, collect, and visualize measurement results
 - CentOS-based ISO pre-tuned and configured with default system and security settings

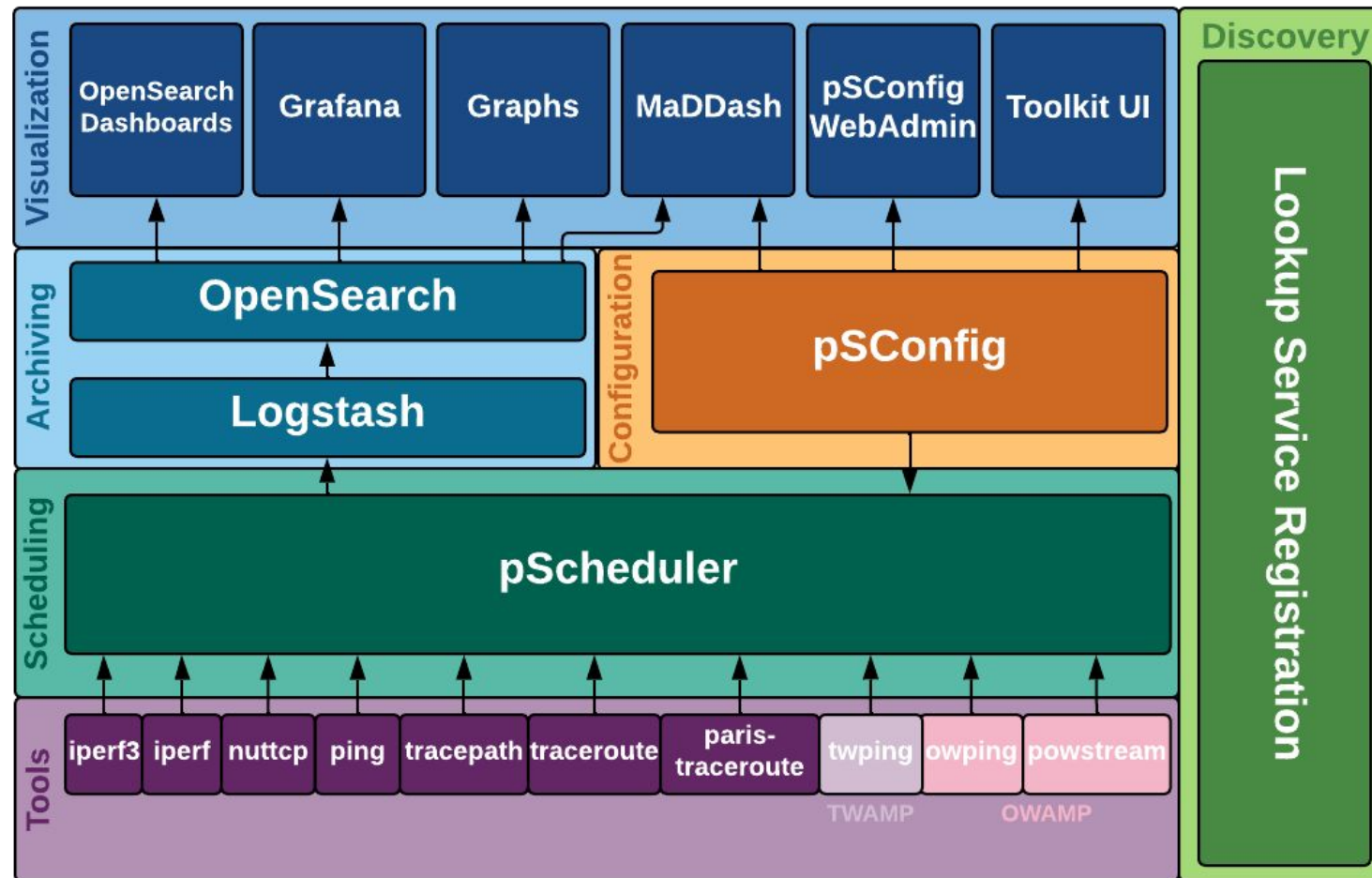


perfSONAR Bundles

- **perfsnar-tools**
 - Just the basics: OWAMP, iperf3, iperf, pscheduler CLI
 - Available as Docker image
- **perfsnar-testpoint**
 - *tools* + pscheduler + psconfig-pscheduler-agent + lookup service registration
 - Available as Docker image
- **perfsnar-core**
 - *testpoint* + esmond
- **perfsnar-centralmanagement**
 - esmond + maddash + psconfig-maddash-agent



perfSONAR 5.0



Migration Overview

- **No data migration from esmond to new archive.**
 - Would require high-powered system and data ages out after a few months anyways
 - Can re-enable esmond if have system resources
- **Auto-updates for everything but centralmanagement**
 - Want to drop support for esmond as soon as possible
 - Want to protect central archives that may be getting data from a variety of pS versions
- **API compatibility through elmond component**
 - URL and JSON format exactly the same as esmond
- **Only potential manual change is to pScheduler “test” limits**
 - Only required if you manually updated limits file to use deprecated limit
 - See next slide

pScheduler Limits Change

Old

```
{
  "#": "This prevents denial of service by scheduling long tasks.",
  "name": "idleex-default",
  "description": "Default limits for idleex",
  "type": "test",
  "data": {
    "test": "idleex",
    "limit": {
      "duration": {
        "range": {
          "lower": "PT1S",
          "upper": "PT2S"
        }
      }
    }
  }
}
```

New

```
{
  "#": "This prevents denial of service by scheduling long tasks.",
  "name": "idleex-default",
  "description": "Default limits for idleex",
  "type": "jq",
  "data": {
    "script": [
      "import \"pscheduler/iso8601\" as iso;",
      "if .test.type == \"idleex\" and",
      iso::duration_as_seconds(.test.spec.duration) > 2",
      "then \"Duration for idleex must be less than 2",
      "seconds.\"'",
      "else true",
      "end"
    ]
  }
}
```

Tools and Testpoint

- Auto-updates
- No data stored on these hosts

Core and Toolkit

- Auto-update
- **No data migration**
 - Data is removed after a few months anyways
- May re-enable esmond to access old data
 - Make sure machine is up to spec
 - May be better to move data to new machine

Central Management

- No auto-updates
 - Central archives have a number of measurement hosts writing to them, potentially controlled by different organizations
 - Provide greater control of upgrade path
- No centralmanagement bundle in 5.0
 - Install “perfsnar-archive maddash” for same result (actually less characters to type)

Elmond

- Converts Esmond queries to queries understood by Elastic
- Python 3 Flask application

```
{  
  "ELASTIC_HOSTS": [  
    "https://admin:5y3...MsI@localhost:9200"  
  ],  
  "ELASTIC_PARAMS": {  
    "use_ssl": true,  
    "ca_certs": "/etc/elasticsearch/root-ca.pem",  
    "client_cert": "/etc/elasticsearch/admin.pem",  
    "client_key": "/etc/elasticsearch/admin-key.pem"  
  },  
  "PROXY_PATH": "/esmond/perfsonar/archive",  
  "FORCE_HTTPS_URLS": true,  
  [...]  
}
```

`/etc/perfsonar/elmond/elmond.conf`

Demo

Testing the Beta

- Beta available on May 31
- See instructions at https://docs.perfsonar.net/install_rcs.html

Summary

- pScheduler “test” type limit replaced with “jq” limit (only requires update if you manually changed limits)
- Tools and Testpoint bundles will auto-update. Since they don’t have archive then no data to worry about
- Core and Toolkit will auto-update and disable esmond. **No data migration.** Possible to access data by restarting esmond (assuming host can handle)
- Pre-5.0 Centralmanagement bundle will not auto-update allowing time to migrate measurement hosts.
- Centralmanagement no longer exists in 5.0, install “perfsonar-archive” package instead