

perfSONAR

20 years of perfSONAR to bring you 5.0

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TNC22

perfSONAR is developed by a partnership of



ESnet



INDIANA UNIVERSITY



perfSONAR

***Performance
Service-Oriented
Network monitoring
ARchitecture***

perfSONAR is developed by a partnership of

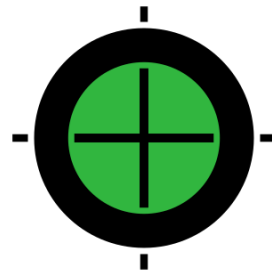


ESnet

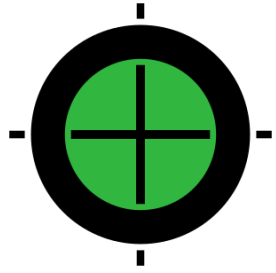


Inception

There is some debate



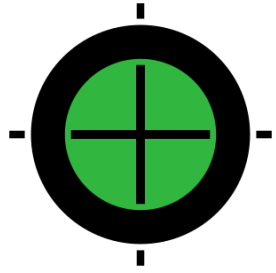
When was perfSONAR created?



First ideas

2000



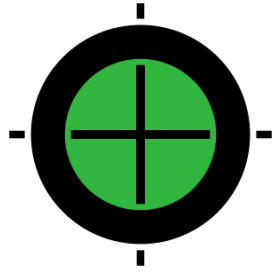


First meeting

OGF
Network
Measurement
Working
Group

2001

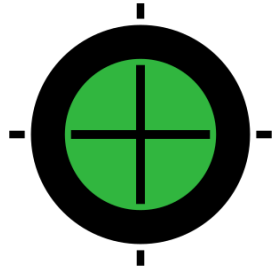




First practice groups

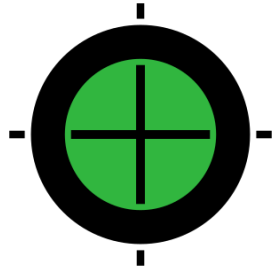
2002

Performance
Enhancement
Response
Team



First collaborative workshop

2004



First partnership

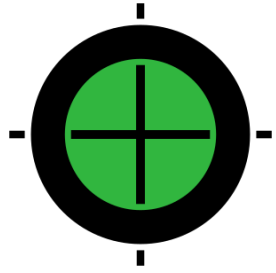


2004



2005



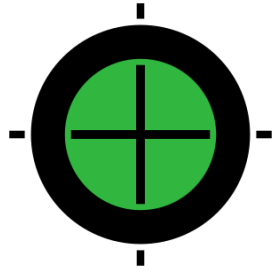


First joint presentation

2005

TERENA Conference

(Poznan)



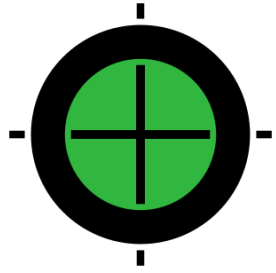
```

485 for(sum=0;sum<num_sum;sum++){
486     uint32_t    begin,end;
487
488     begin = ping_ctx.opt.numBucketPackets * sum;
489     end = ping_ctx.opt.numBucketPackets * (sum+1);
490     if(end > hdr.test_spec.npackets){
491         end = ~0;
492     }
493
494     /*
495     * Create temporary sum-session file.
496     */
497     if(ping_ctx.opt.printfiles){
498         strcpy(tfname,dirpath);
499         sprintf(startname,OWP_TSTAMPFMT,hdr.test_spec.start_time);
500         sprintf(&tfname[file_ose],"%s%s",startname,_OWPING_INC_EXT);
501         if( !(tfp = fopen(tfname,"w"))){
502             I2ErrLog(eh,"OWStatsParse: fopen(%s): %M",tfname);
503             return -1;
504         }
505     }
506     else{
507         tfp = stdout;
508     }
509
510     if( !OWPStatsParse(stats,(ping_ctx.opt.records?tfp:NULL),
511         stats->next_ose,begin,end)){
512         I2ErrLog(eh,"OWStatsParse: failed");
513         OWPStatsFree(stats);
514         return -1;
515     }

```

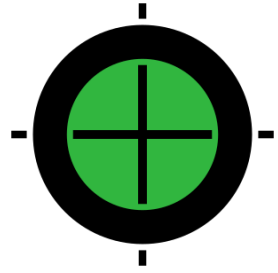
First line of code

2005



First release

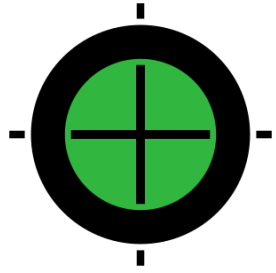
2006
v1.0



First fork

2008

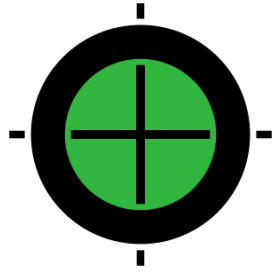
pS MDM



First 1000 deployments

2013

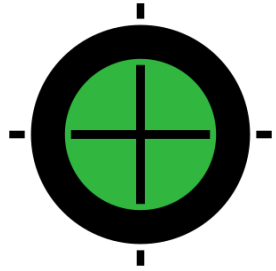
(1000 public instances)



First Debian packages

2015

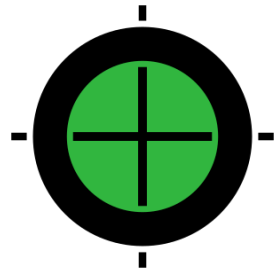




First 4.0

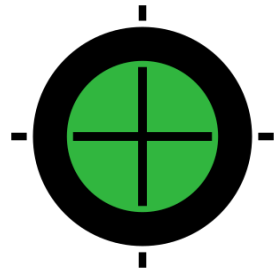
2017

(pScheduler)



All that ...

And more...



... to bring you 5.0

Already 5 years since 4.0

And multiple things going on development wise

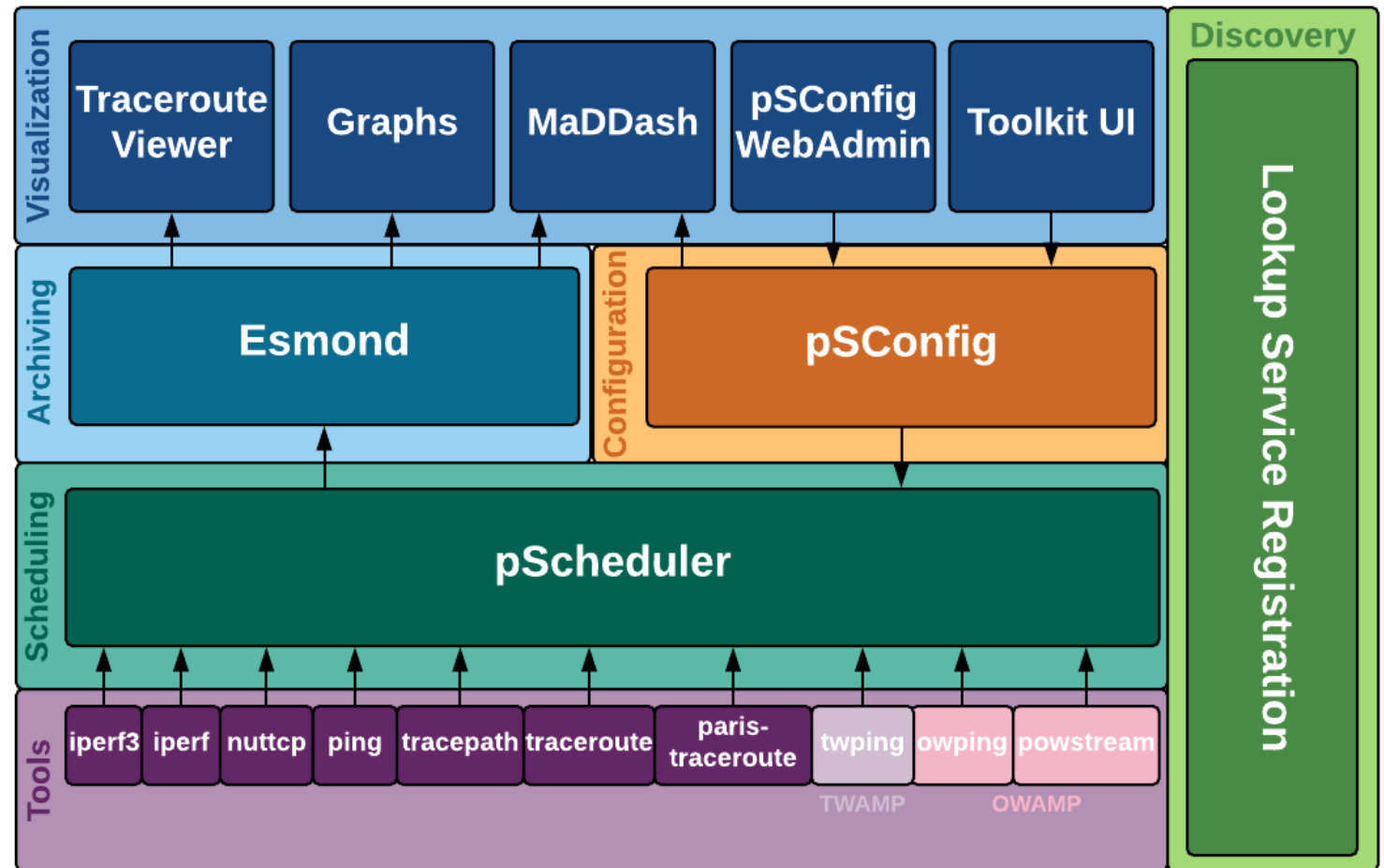
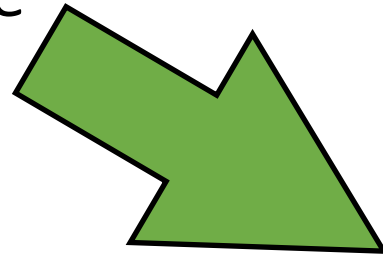
Looking closer at network problems

- Current pS usage
- perfSONAR data
 - Loss
 - Latency
 - Throughput
 - Route traces
 - Application response time
 - ...
- Correlate with other data sources
 - Interface counters
 - Flow data
 - Optical layer
 - ...



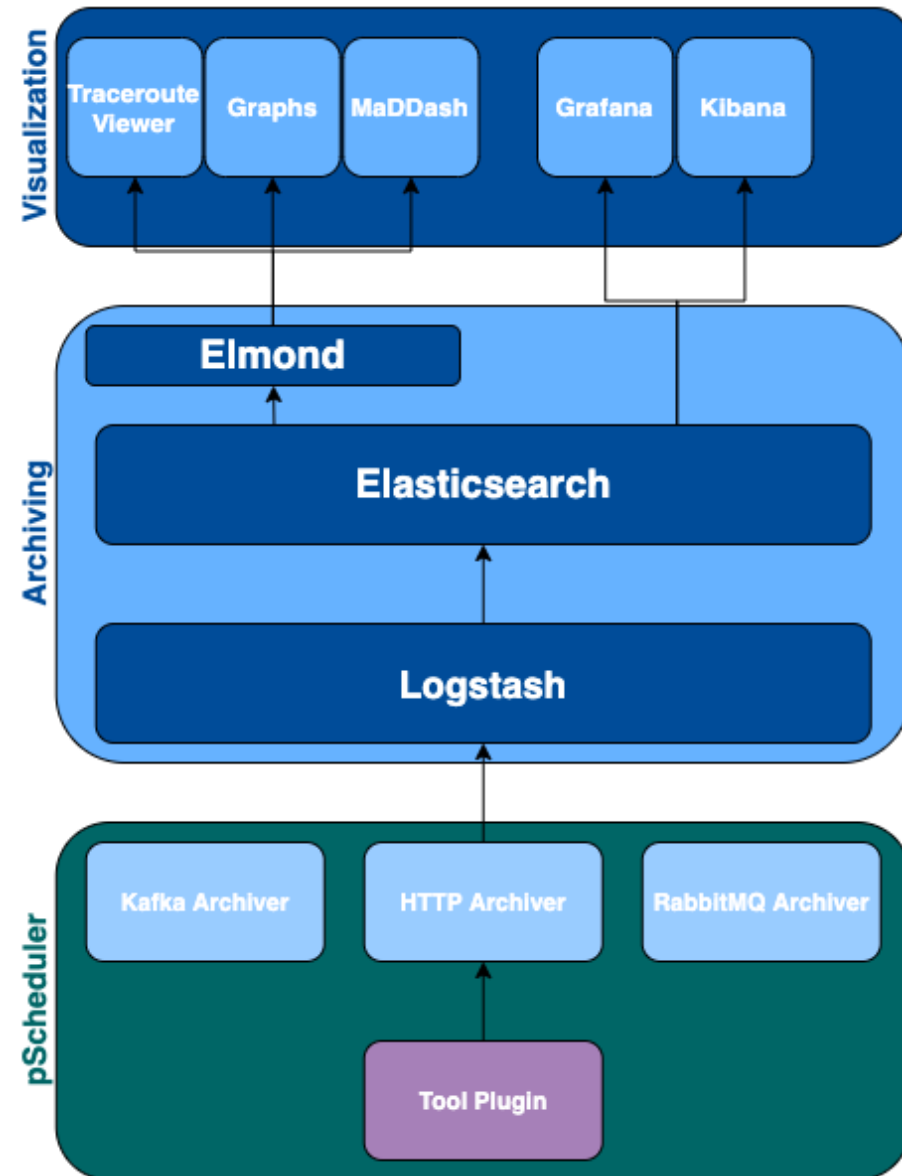
Changing the archive (backend)

- The archive
- Storing
 - Metadata
 - Data
- Using
 - Esmond



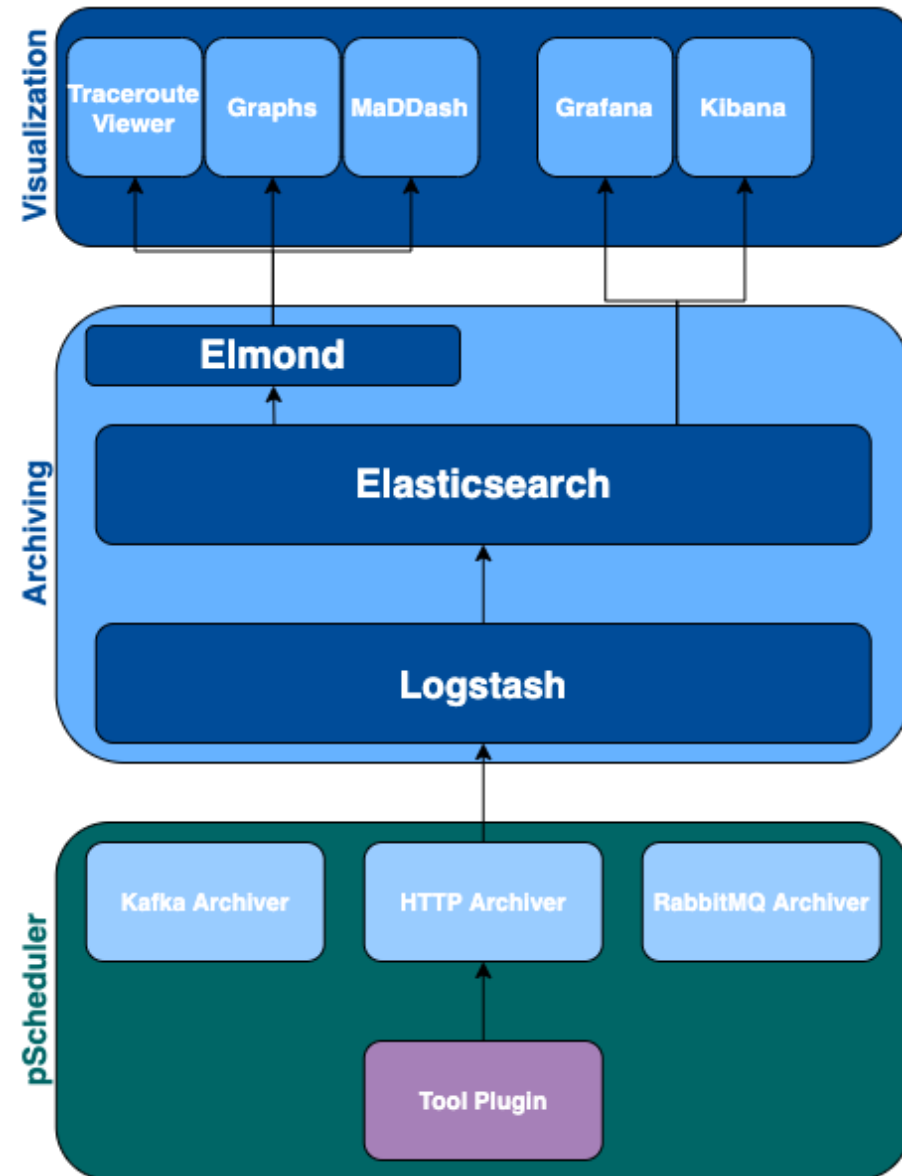
Changing the archive

- The archive
- Storing
 - Metadata
 - Data
- Using
 - ~~Esmond~~
 - Opensearch



Changing the archive

- Opening up
 - New integrations
 - New possibilities
- Backward compatible
 - Elmond
 - Same Esmond API
- Elasticsearch API
 - Grafana



Help us test it!

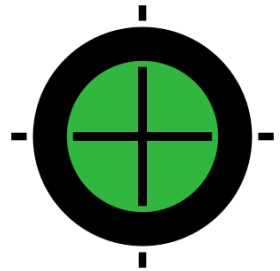
- Beta release available
 - <https://www.perfsonar.net/releasenotes-2022-05-31-5-0-0b1.html>
- Testing
 - https://docs.perfsonar.net/release_candidates/5.0.0/install_rcs.html
- Feedback
 - <https://lists.internet2.edu/sympa/info/perfsonar-user>

perfSONAR is a partnership



https://www.perfsonar.net/collab_about.html





And something important...

with collaboration...

Is to have a team...



that is having fun while working!

