

DoE DEMPA Status SLAC Report

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Technical

- Problem: Current SNMP MA requires RRDs to be local on perfSONAR machine
- Most sites already have RRDs of performance data for routers/switches (via MTRG/Cacti/In-house etc)
- Solution: Provide RRDSRV support for SNMP MA for remote access to RRD data
- Status: Complete

Configure xinetd

```
FILE: /etc/xinetd.d/rrdsrv
```

```
service rrdsrv
{
    disable = no
    socket_type      = stream
    wait            = no
    user            = netmon
    server          = /usr/local/bin/rrdtool
    server_args     = - /srv/tops/rrd
    only_from       = 172.18.192.0/24
    log_on_failure  += USERID
}
```

```
FILE: /etc/services
```

```
rrdsrv          390/tcp                # RRD server
```

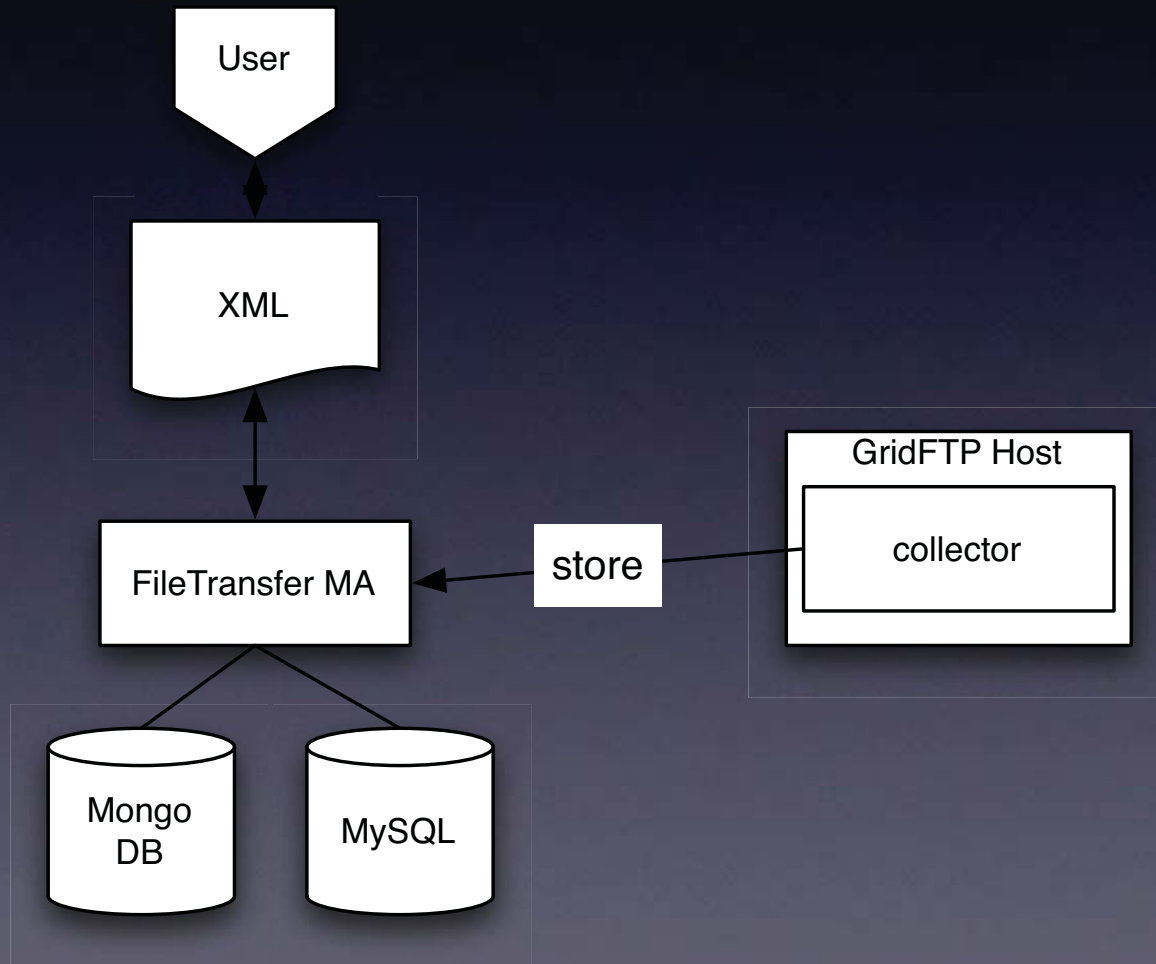
Modify SNMP Store XML

```
<nmwg:data xmlns:nmwg="http://ggf.org/ns/nmwg/base/2.0/"
  id="data1" metadataIdRef="rtr-border1.slac.stanford.edu:in">
  <nmwg:key id="key:rtr-border1.slac.stanford.edu:in">
    <nmwg:parameters id="param:rtr-border1.slac.stanford.edu:in">
      <nmwg:parameter name="type">
        rrdsvr
      </nmwg:parameter>
      <nmwg:parameter name="valueUnits">Bps</nmwg:parameter>
      <nmwg:parameter name="file">
        rrd://lanmon-store01.slac.stanford.edu:391//srv/tops/rrd/all/rtr-
border1.slac.stanford.edu/rtr-border1.slac.stanford.edu_rfc2863_1.rrd
      </nmwg:parameter>
      <nmwg:parameter name="dataSource">in0ctets</nmwg:parameter>
      <nmwg:parameter name="eventType">
        http://ggf.org/ns/nmwg/characteristic/utilization/2.0
      </nmwg:parameter>
    </nmwg:parameters>
  </nmwg:key>
</nmwg:data>
```

Technical (2)

- Problem: Need visibility into a scientist's remote file transfer performance
 - Instrument DoE experiment transfers
- Solution: Develop a File Transfer MA to provide statistical information regarding the history performance records of file transfers
- Status: Prototype up, migrating db to mysql

Components



Technical (3)

- Problem: It is often difficult to actually visualise the perfSONAR metrics
 - lots of nice looking demo's coming up
- Solution: Provide easy to use frontend to search and visualise perfSONAR data

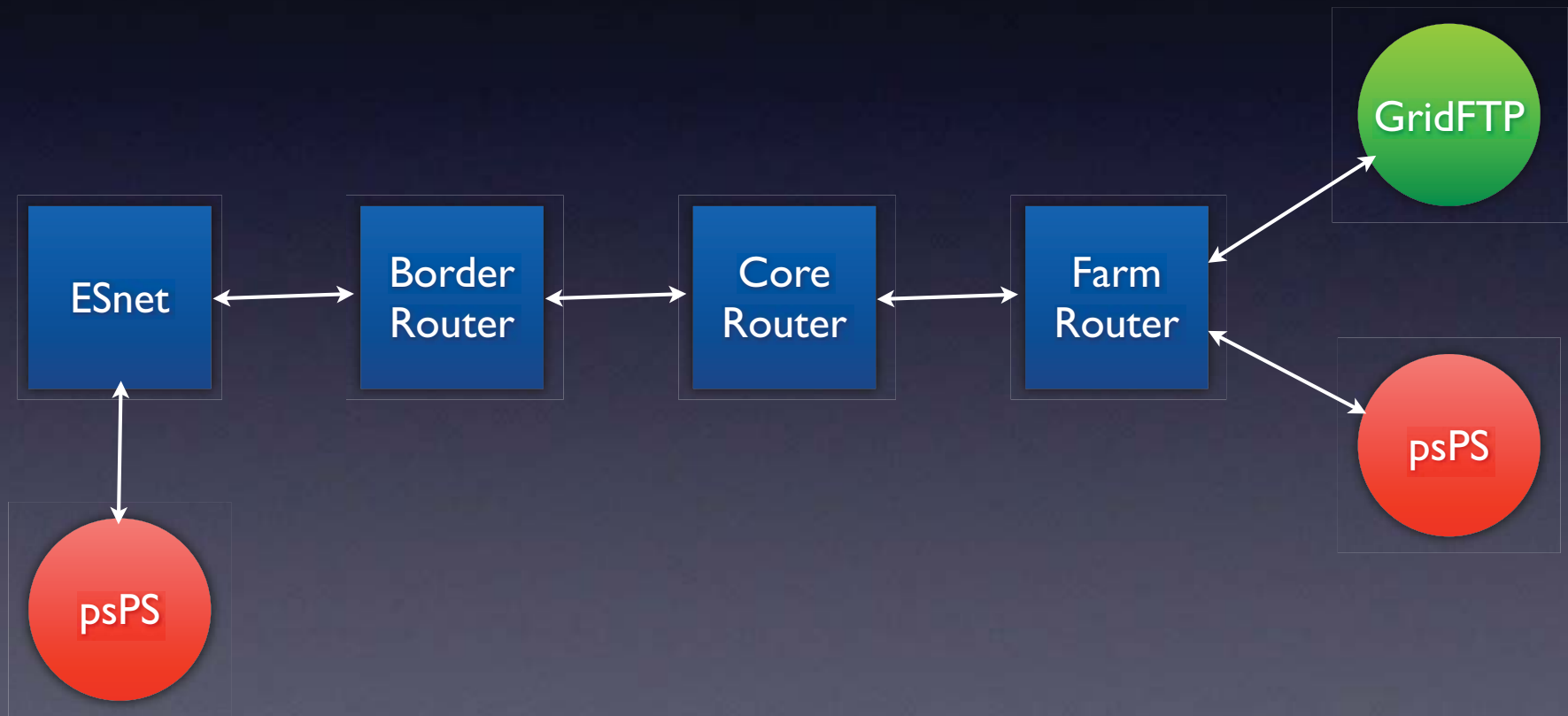
Demo

- <http://odev-vm-8.es.net:8080/>

SLAC perfSONAR Servers

- Not running CentOS bootdisk/netinstall
- Security didn't like:
 - non-standard kernel
 - lack of enforceable account management
 - java (NDT)
 - non-apache
- Currently running:
 - standard rhel5 server build (logging, updates, account management etc)
 - owamp, bwctl, pinger, traceroute
 - web pages behind a proxy for logging purposes
 - manual configuration (web interface isn't usable rpm)

Current Layout



Deployment

- Deploy internal perfSONAR services at SLAC to gain internal performance visibility
- Our cyber security group stated the following:
 - no topology nor utilisation information of our internal network to the public.
 - trusted users are *only* when a those who have a slac account and can log onto our slac machines (have signed our usage policies)
 - trusted users currently have visibility of our internal networks (excluding accelerator control, business and hr systems)
 - this visibility will likely be less in the future

Deployment (cont.)

- MOU required to proceed
 - Identify higher management to sign off
- Need to weigh benefits to risks:
 - internal deployment of extra equipment (to say doing internal mesh bwctl/owamp) is expensive (many many hosts required - not budgeted)
 - the local area networks are rarely the performance bottlenecks (usually cpu bound as SLAC)