eduPERT 2016 - During the training

Workshop Agenda

			Slides	Hands-On Commands	Handouts (print)	
09:00	09:30	Welcome				
09:30	09:50	perfSONAR Architecture, workshop objectives, lab setup	pS - Architecture	—	pS - Architecture	AD
09:50	10:10	Central Measurement Archive	See pS - Architecture	install + conf	See pS - Architecture	AD
10:10	11:00	Measurement Mesh	Mesh Config	configuration	Mesh Config	IG
11:00	11:20	Break				
11:20	11:50	Measurement Point configuration	MP Config	configuration	MP Config	IG
11:50	12:30	Dashboard setup	see pS - Architecture	configuration	See pS - Architecture	AD
12:30	13:30	Lunch				
13:30	13:50	Measurements Analysis				IG
13:50	15:00	Tuning and Automation	Puppet Config		Puppet Config	IG - AD
15:00	15:20	Break				
15:20	15:40	perfSONAR Roadmap Update	pS Roadmap	—	—	AD
15:40	16:30	perfSONAR Advanced Features	MaDDash, pScheduler	—	—	AD - IG

Hands-On Commands

Central Measurement Archive

Installation

With these commands, you'll install all you need to run a central server (measurement archive software: esmond and dashboard software: maddash) on your central server.

Run as root

```
rpm -hUv http://software.internet2.edu/rpms/el6/x86_64/main/RPMS/Internet2-repo-0.6-1.noarch.rpm
yum install Internet2-repo-staging
rpm -hUv https://dl.fedoraproject.org/pub/epel/6/x86_64/epel-release-6-8.noarch.rpm
yum install perfsonar-centralmanagement
```

Configuration

Configuration files

Configuration files involved (but no change should be required):

- **`/etc/cassandra/`**
- **`/etc/esmond/`**
- **`/etc/httpd/conf.d/apache-esmond-proxy.conf`**
- **`/opt/rh/httpd24/root/etc/httpd/conf.d/apache-esmond.conf`**

Log files

Log files to check:

- **`/var/log/esmond/`**
- **`/var/log/cassandra/`**
- **`/var/log/httpd/`**
- **`/var/log/httpd24/`**

Run as root

```
# Examples:
tail /var/log/httpd/error_log
less /var/log/esmond/esmond.log
```

IP Authentication

With these commands, you'll configure esmond to accept data coming from a set of IP.

Run as root

```
# if esmond API key not set by the install process
/usr/lib/perfsonar/scripts/system_environment/configure_esmond
# IP based authorization
cd /usr/lib/esmond
source /opt/rh/python27/enable
/opt/rh/python27/root/usr/bin/virtualenv --prompt="(esmond)" .
. bin/activate
python esmond/manage.py add_user_ip_address edupert_users 10.0.160.0/19
```

Verifying

Then check the cassandra, httpd, httpd24 and postgres processes are running. esmond, through httpd and httpd24, is listening on port 80 and 11413. cassandra is listening on port 9160, postgres on port 5432 You should also be able to visit the esmond webinterface at an URL like http://pertcsxy.switch.ch/esmond/perfsonar/archive/

Run as root

```
ps aux | grep httpd
ps aux | grep cassandra
ps aux | grep postgresql
netstat -tunlep
chkconfig
# If needed (but shouldn't be)
chkconfig cassandra on
chkconfig https on
```

Measurement Mesh

Run as root

```
## Get an example of meshconfig template file (XML)
curl http://pertcs01.switch.ch/trainmesh.xml > mesh-config.xml


## Convert meshconfig in JSON
/usr/lib/perfsonar/bin/build_json -o mesh-config.json mesh-config.xml


## simply publish in /var/www/html
```

Measurement Point configuration

Run as root

```
## General mesh configuration + admin + reloads + pscheduler + tasks
/etc/perfsonar/meshconfig-agent.conf


## Specific tests from mesh and Esmond archives
/etc/perfsonar/meshconfig-agent-tasks.conf


## services:
service perfsonar-meshconfig-agent restart
service pscheduler-scheduler restart


## logs:
/var/log/perfsonar/meshconfig-agent.log
/var/log/messages
/var/lib/perfsonar/meshconfig/psc_tracker


## pScheduler commands:
psc debug off
psc task simplestream --timeout PT5S --source pertmp01 --dest pertmp02
psc task rtt --debug --count 100 --source pertmp01 --ip-version 4 --dest pertmp02
psc task latency --count 100 --source pertmp01 --ip-version 4 --dest pertmp02
```

Dashboard setup

Installation

Installation of MaDDash has already been done when installing the perfsonar-centralmanagement bundle package.

Configuration

Configuration files

Configuration files involved:

- **`/etc/maddash/maddash-server/maddash.yaml`**
- **`/etc/maddash/maddash-webui/config.json`**
- **`/etc/perfsonar/meshconfig-guiagent.conf`**

Log files

Log files to check:

- **`/var/log/maddash/`**
- **`/var/log/httpd/`**

Verifying

Checking the public dashboard at http://pertcsxy.switch.ch/maddash-webui/ If a change is done to the **`maddash-webui/config.json`** file, reload it from http://pertcsxy.switch.ch/maddash-webui/etc/config.json

Run as root

```
cd /etc/maddash/maddash-webui
# Compare config.json and config.example.json
vi config.json

# Reload http://pertcsXY.switch.ch/maddash-webui/etc/config.json in your browser after change!

# Add an HTML redirect in /var/www/html/index.html or in your apache config

# Check running processes
ps aux | grep maddash
ps aux | grep https

# Check log files
tail /var/log/httpd/access_log

# Start, stop or restart service
/etc/init.d/maddash-server start|stop|restart
```

Tuning and Automation