October 13th 2010, USATLAS Distributed Facilities Workshop

Jason Zurawski, Internet2

pSPT 3.2 Development Update

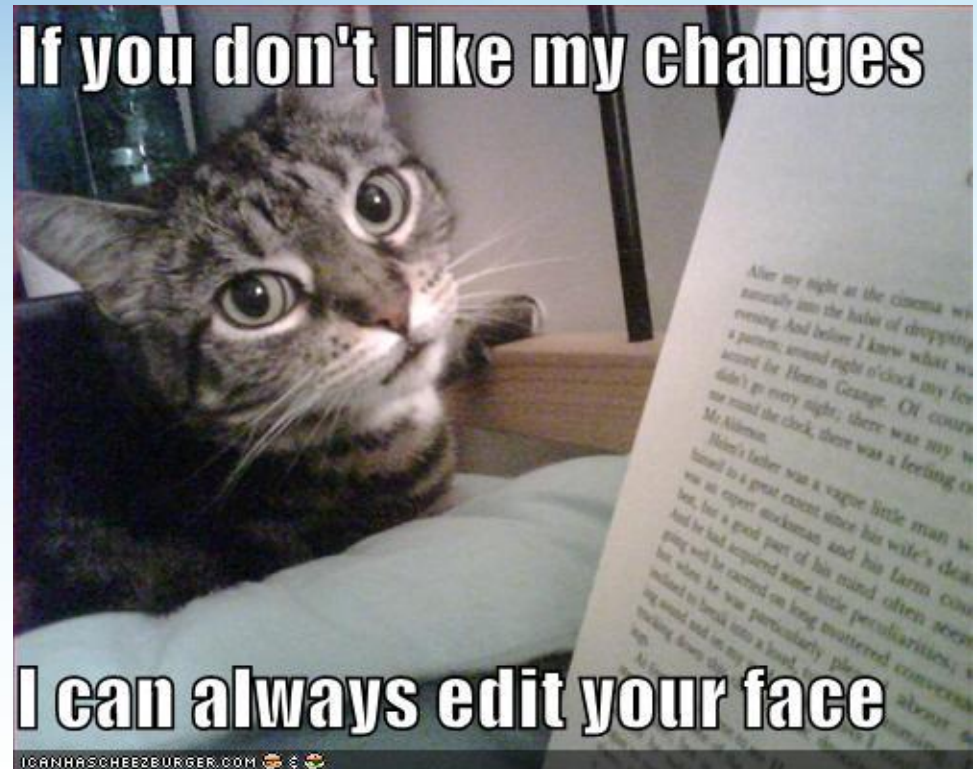# Overview

- Quick Demo
- Major Changes
- Captive Focus Group

INTERNET2

Overview

- Quick Demo
- Some Major Changes
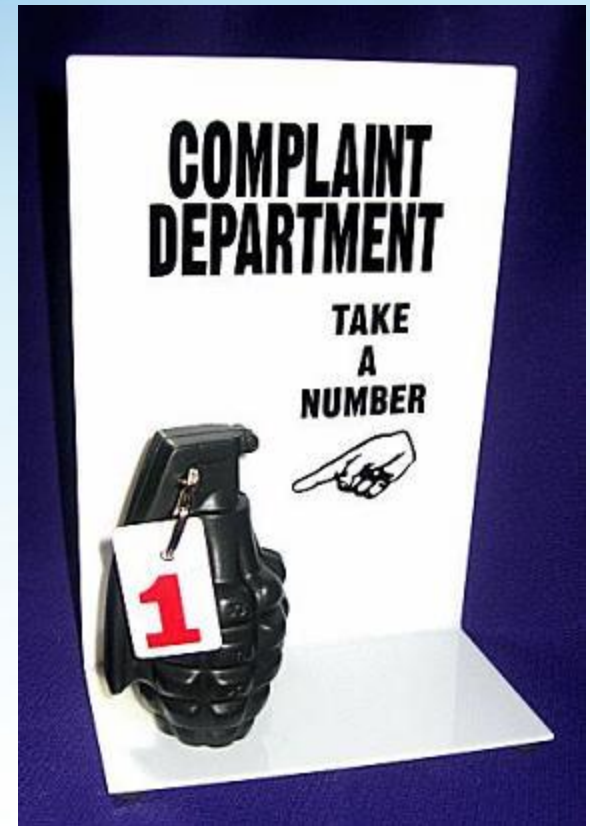- Captive Focus Group

INTERNET2

Major Changes

- CentOS 5.5 Lineage
  - Everything is now an RPM
  - 2.6.18.x.y Kernels (Using RedHat upstream patches)
  - Netinstall vs LiveCD
- The great TCP Congestion alg experiment
  - CUBIC let us down (even though we were careful to use a patched version)
  - HTCP does well, default for BWCTL etc. testing
  - RENO for NPAD/NDT still
- All software available through YUM
  - Not final yet, but something like this:
    - http://software.internet2.edu/toolkit/testing/rpms/
  - Will be different repos available (e.g. stable, testing)
  - Primary use is Netinstall, could be used on LiveCD in a pinch

INTERNET
2

Major Changes – cont.

- The Kernel
  - Since the pSPT will rely on CentOS and EPL upstream repos, a new kernel will be grabbed by yum when one is available
  - This will break NDT/NPAD since the kernel won't be web100
  - Our Strawman Proposal:
    - On announcement of CVEs, we will alert the 'performance-node-users' list that a new kernel is on its way from upstream, and from us
    - For important environments, we suggest that the new non-web100 kernel be used until we can patch (would also depend on severity of CVE)
    - We hope to patch/release within a short time period after the CentOS kernel release – don't want to give exact time estimates
  - Open Questions
    - Leave yumupdated your netinstalled/LiveCDed versions on automatic?
    - Rules to prohibit kernel upgrades? We suggest no.

INTERNET2

Major Changes – cont.

- Things not addressed (yet):
  - Graphing is still sub-par
  - NAGIOS Integration – not yet (but soon!)
  - GUIs that can graph multiple data sources
  - All tools on one machine, options:
    - Intelligent scheduler
    - Less sensitive OWAMP
    - Processor/NIC affinity tricks
- Other thoughts
  - GANGLIA? We can expose this now

COMPLAINT DEPARTMENT

TAKE A NUMBER

INTERNET2

Overview

- Quick Demo
- Major Changes
- Captive Focus Group

INTERNET2

Focus Group Questions

- GUI
  - What do you like, what do you hate?
  - Additions / Changes
    - Graphing is obvious
- Tools
  - What new tools would help, if any?
  - Which current tools are not as useful as they could be
- Installation Procedure
  - LiveCD and Netinstall now
  - Others useful (e.g. USB Key? PXE Boot?
- Integration with external sources
  - Tie ins to MDM Monitoring at Tier0/Tier1?
  - Other sites (besides backbones) of interest?

INTERNET2

Lastly …

- Winter 2011 ESCC/Internet2 Joint Techs
  - January 30 - February 3, 2010
  - http://events.internet2.edu/2011/jt-clemson/
- Strongly encourage T1/T2/T3 operators to submit talk proposals
- Areas that the audience wants to hear about
  - Campus Deployment Case Studies*
  - Challenges of processing large amounts of data
  - Development/Use of data movement/monitoring tools
- Contact me (zurawski@internet2.edu) if you are interested. I also may contact you ☺

* Special Request – If any campus is prepared for the challenges of data movement, it's a T2/T3 center.

INTERNET

pSPT 3.2 Development Update

October 13th 2010, USATLAS Distributed Facilities Workshop

Jason Zurawski, Internet2

For more information, visit http://psps.perfsonar.net/toolkit