PACNOG 07

NOC Tools
NMS, Instrumentation, Ticketing

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Tools Examined

• Smoke Ping
• Trac
• Nagios
Last 10 Days

Link Up: 21 days

Median Ping RTT:

Probe: 20 ICMP Echo Pings every 300 seconds

Created on Sun Feb 03 22:45:10 2002 MET
Smoke Ping

• Latency and packet loss are critical measurements in terms of instrumenting your network.
• Qualitative effect on customer perception...
• Smoke Ping can also be used to measure the responsiveness of services like DNS HTTP etc.
• Low bandwidth active monitoring tool.
if-1-1.core1.VCW-Vancouver.teleglobe.net

Navigator Graph

Median Ping RTT (563.7 ns avg)  0  1/20  2/20  3/20  4/20  10/20  19/20
Packet Loss: 71.20 % average  92.60 % maximum  76.31 % current
Probe: 20 ICMP Echo Pings (55 Bytes) every 300 seconds  created on Mon Jun 18 14:56:55 2007

Time range: 2007-06-18 12:40 to now Generate
Smoke Ping

• Historical data gives you access to long term trends.

• Responsiveness data about services can uncover problems that other sorts of wellness monitoring might not highlight.

• Can be used to send alarm messages when latency or loss exceed prescribed levels.
Smoke Ping

• Used in conjunction with other tools like flow collection, snmp counters, it can help you diagnose some fairly bizarre problems.
Welcome to Trac 0.10.3

Trac is a minimalistic approach to web-based management of software projects. Its goal is to simplify effective tracking and handling of software issues, enhancements and overall progress.

All aspects of Trac have been designed with the single goal to help developers write great software while staying out of the way and imposing as little as possible on a team's established process and culture.

As all Wiki pages, this page is editable, this means that you can modify the contents of this page simply by using your web-browser. Simply click on the "Edit this page" link at the bottom of the page. WikiFormatting will give you a detailed description of available Wiki formatting commands.

"trac-admin yourusername" created a new Trac environment, containing a default set of wiki pages and some sample data. This newly created environment also contains documentation to help you get started with your project.

You can use trac-admin to configure Trac to better fit your project, especially in regard to components, versions and milestones.

TracGuide is a good place to start.

Enjoy!
The Trac Team

Starting Points

- TracGuide -- Built-in Documentation
  - The Trac project -- Trac Open Source Project
  - Trac FAQ -- Frequently Asked Questions
  - TracSupport -- Trac Support

For a complete list of local wiki pages, see TitleIndex.
Trac – Ticketing, Wiki's, Noc Tools

- Build an environment in which your operations staff can document events.
- Respond to customer requests.
- Assign and delegate tasks.
Wikis and Ticketing systems

• Have abundant applications outside the ISP environment.

• Trac was designed from the outset to support opensource projects but it's been used for lots of things.

• Need for this sort of application is common enough that running them as a manged service for customers is feasible.
Host Status Details For All Host Groups

<table>
<thead>
<tr>
<th>Host</th>
<th>Status</th>
<th>Last Check</th>
<th>Duration</th>
<th>Status Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>gh</td>
<td>IP</td>
<td>06-20-2007 21:30:15</td>
<td>1d 16h 52m 44s</td>
<td>(Host assumed to be up)</td>
</tr>
<tr>
<td>mcard</td>
<td>IP</td>
<td>06-20-2007 21:32:45</td>
<td>0d 0h 5m 31s</td>
<td>(Host assumed to be up)</td>
</tr>
</tbody>
</table>

2 Matching Host Entries Displayed
Nagios – Wellness Monitoring

• Monitor availability of systems and services

• Build hierarchies of systems so that you don't get spurious outage notifications for devices that are unreachable because the network is down.

• Notify the owners of a monitored device that it's down in an automated fashion.
Nagios

• Nagios is great… But…
  ‒ Maintaining a large Nagios system can become a full time job.
  ‒ Systems like this are far less useful when a number of the monitors are broken, when the NMS is not being actively maintained etc.

• A well run Nagios installation will allow you tell at a glance where in your network you should be looking for trouble!
Monitoring Other Stuff

- Nagios has become a cottage industry. People sell:
  - Applications to groom Nagios data
  - Appliances that can plug into nagios to monitor all sorts of things.
  - Dedicated Nagios appliances with support
Nagios on your Pager/SMS/Email

***** Nagios *****

Notification Type: PROBLEM
Host: eqpl
State: DOWN
Address: 144.223.246.110
Info: CRITICAL - Host Unreachable (144.223.246.110)

Date/Time: Sun Mar 25 22:26:10 PDT 2007
Other slides
Tools Surveyed

- Cacti
- Rancid
Cacti - SNMP stats collection