PACNOG 07

NOC Tools
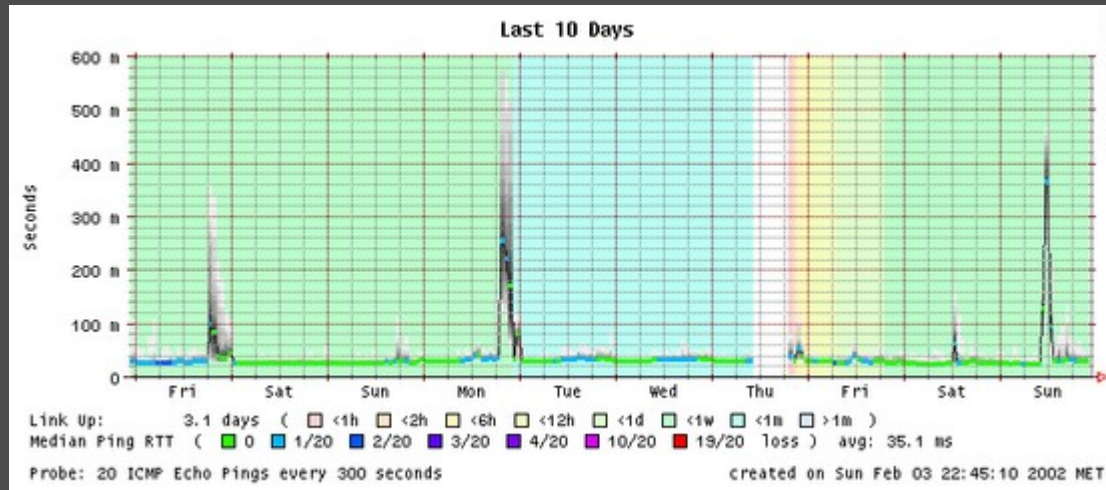
NMS, Instrumentation, Ticketing

Joel Jaeggli

Tools Examined

- Smoke Ping

- Trac

- Nagios

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.

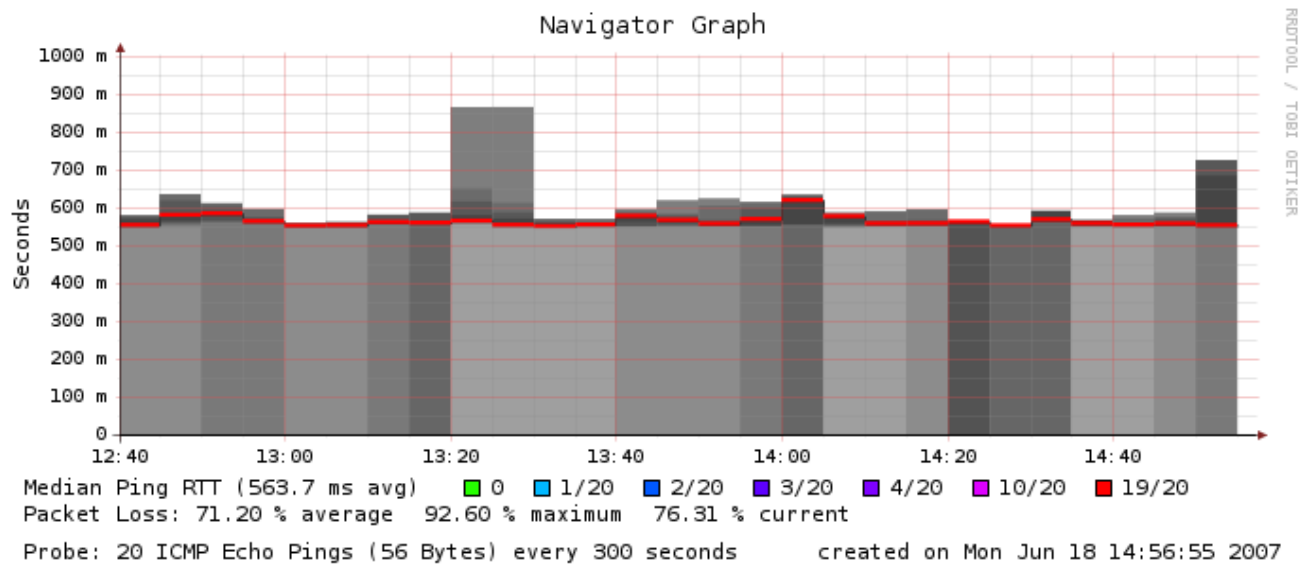# if-1-1.core1.VCW-Vancouver.teleglobe.net

Maintained by

Joe Random

Running on SmokePing-2.0.9 by

Tobi Oetiker and Niko Tyni

smokeping

RRDtool
logging & graphing

Navigator Graph

Median Ping RTT (563.7 ms 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 (56 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 proscribed levels.

SmokePing

Targets:

- nokia.net routers
- tunnel endpoints
- transit
  - he.net
  - verizon
- outside

118.ATM1-0.GW8.PAO1.ALTER.NET

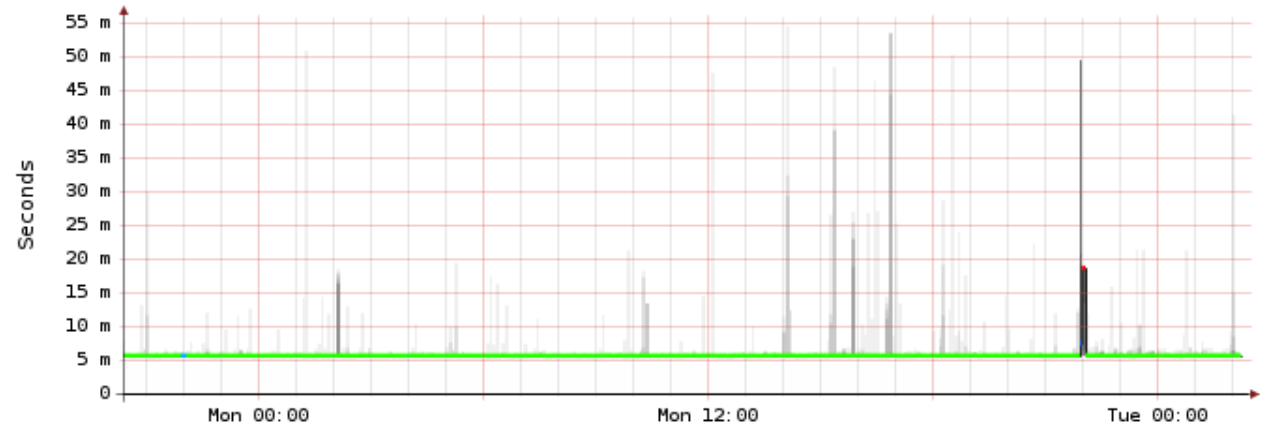## Last 3 Hours
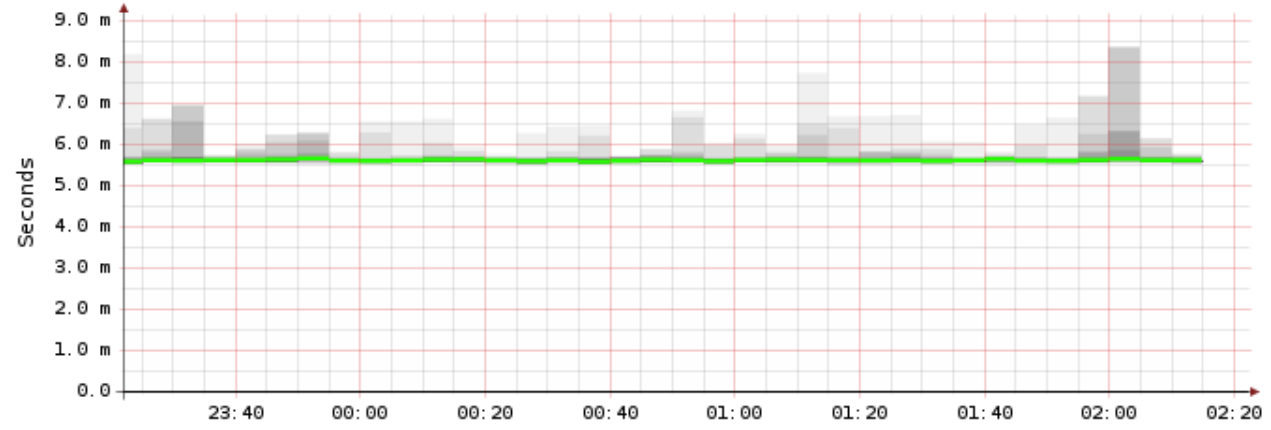
Median Ping RTT (5.6 ms avg)   ■ 0 ■ 1/20 ■ 2/20 ■ 3/20 ■ 4/20 ■ 10/20 ■ 19/20
Packet Loss: 0.00 % average   0.00 % maximum   0.00 % current

Probe: 20 ICMP Echo Pings (56 Bytes) every 300 seconds   created on Tue Jun 19 02:21:57 2007

Last 30 Hours

Median Ping RTT (5.6 ms avg)   ■ 0 ■ 1/20 ■ 2/20 ■ 3/20 ■ 4/20 ■ 10/20 ■ 19/20
Packet Loss: 0.19 % average   57.09 % maximum   0.00 % current

Probe: 20 ICMP Echo Pings (56 Bytes) every 300 seconds   created on Tue Jun 19 02:21:57 2007

Last 10 Days

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 *yourenvdir* initenv" 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.

Edit this page | Attach file

Download in other formats:
Plain Text

Trac – Ticketing, Wiki's, Noc Tools

- Build an environment in which your operations staff can document events.

- Respond to 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.

Nagios®

Current Network Status
Last Updated: Wed Jun 20 21:38:16 GMT 2007
Updated every 90 seconds
Nagios® - www.nagios.org
Logged in as *nagiosadmin*

View Service Status Detail For All Host Groups
View Status Overview For All Host Groups
View Status Summary For All Host Groups
View Status Grid For All Host Groups

Host Status Totals

Up	Down	Unreachable	Pending
2	0	0	0

All Problems	All Types
0	2

Service Status Totals

Ok	Warning	Unknown	Critical	Pending
2	0	0	0	0

All Problems	All Types
0	2

Host Status Details For All Host Groups

Host ↑↓	Status ↑↓	Last Check ↑↓	Duration ↑↓	Status Information
gw	UP	06-20-2007 21:30:15	1d 19h 52m 44s	(Host assumed to be up)
server	UP	06-20-2007 21:32:45	0d 0h 5m 31s	(Host assumed to be up)

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
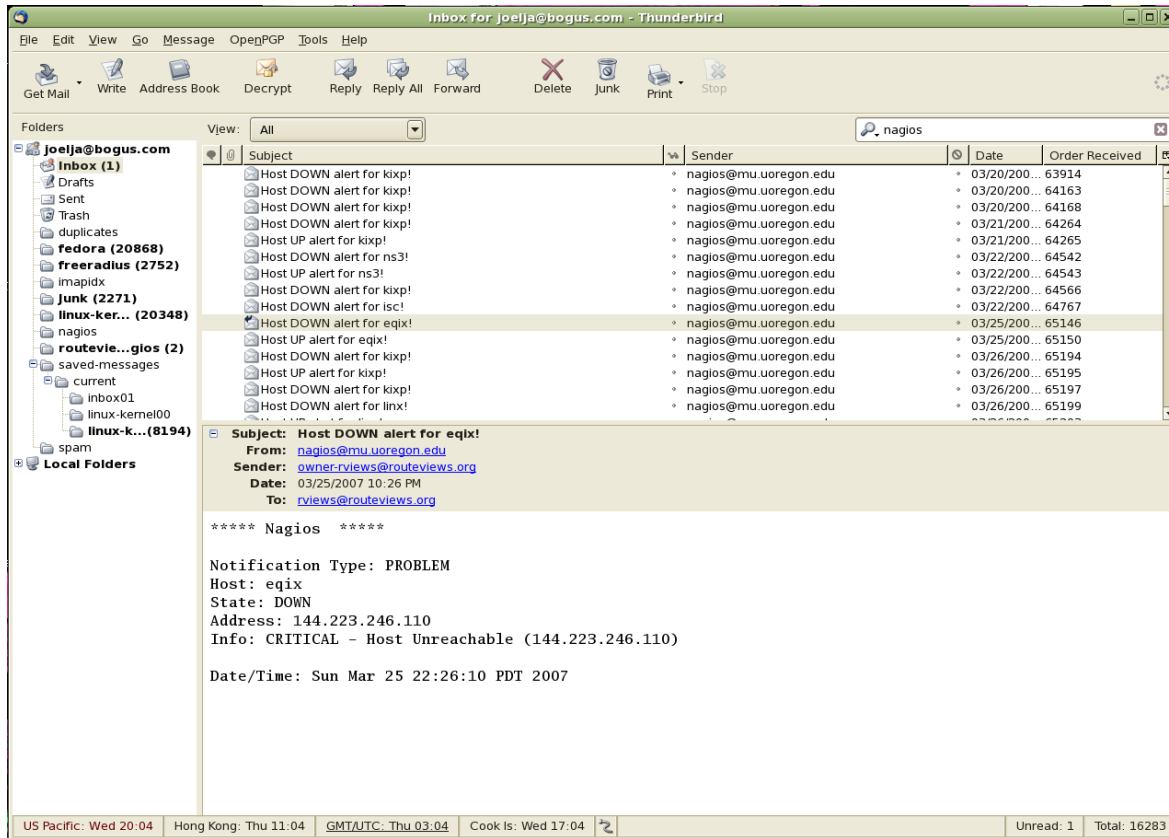
Other slides

Tools Surveyed

- Cacti

- Rancid

Cacti - SNMP stats collection