

# Monitoring and Instrumentation the Joel Jaeggli version

Joel Jaeggli  
For Afnog 2011

# Agenda

- SNMP - John Kemp
- Nagios – Joel Jaeggli
- Cacti – John Kemp
- Smokeping – Joel Jaeggli

# Nagios

- What does it do:
  - Host, network asset and service availability monitoring
  - Alarming
  - Provide a tactical overview of services

# Our Nagios - Tactical

The screenshot displays the Nagios Core web interface. The browser address bar shows the URL `196.200.219.200/nagios/index.php`. The interface is divided into several sections:

- Tactical Monitoring Overview:** Last Updated: Mon May 30 14:46:42 UTC 2011. Updated every 90 seconds. Nagios® Core™ 3.2.3 - [www.nagios.org](http://www.nagios.org). Logged in as *guest*.
- Monitoring Performance:**
  - Service Check Execution Time: 0.00 / 4.02 / 0.792 sec
  - Service Check Latency: 0.00 / 0.40 / 0.111 sec
  - Host Check Execution Time: 0.00 / 4.02 / 3.808 sec
  - Host Check Latency: 0.00 / 0.88 / 0.146 sec
  - # Active Host / Service Checks: 42 / 158
  - # Passive Host / Service Checks: 0 / 0
- Network Outages:** 0 Outages
- Network Health:** Host Health: Service Health:
- Hosts:**

0 Down	0 Unreachable	40 Up	2 Pending
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- Services:**

60 Critical	0 Warning	0 Unknown	68 Ok	30 Pending
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60 Unhandled Problems
- Monitoring Features:**

Flap Detection	Notifications	Event Handlers	Active Checks	Passive Checks
Enabled All Services Enabled No Services Flapping All Hosts Enabled No Hosts Flapping	Enabled 2 Services Disabled All Hosts Enabled	Enabled All Services Enabled All Hosts Enabled	Enabled All Services Enabled All Hosts Enabled	Enabled All Services Enabled All Hosts Enabled

The left sidebar contains navigation menus for General, Current Status, Reports, and System. The 'Current Status' menu is expanded, showing options like Tactical Overview, Map, Hosts, Services, Host Groups, Service Groups, Problems, and Network Outages.

# Our Nagios - Host-groups

The screenshot displays the Nagios Core web interface. The browser address bar shows the URL `196.200.219.200/nagios/index.php`. The interface is divided into a left sidebar and a main content area.

**Left Sidebar:**

- Nagios®**
- General**
- Home
- Documentation
- Current Status**
- Tactical Overview
- Map
- Hosts
- Services
- Host Groups
  - Summary
  - Grid
- Service Groups
  - Summary
  - Grid
- Problems
  - Services (Unhandled)
  - Hosts (Unhandled)
  - Network Outages
- Quick Search:
- Reports**
- Availability
- Trends
- Alerts
  - History
  - Summary
  - Histogram
- Notifications
- Event Log
- System**

**Main Content Area:**

**sse servers (actual-servers)**

Host	Status	Services	Actions
<a href="#">196.200.219.200</a>	UP	1 OK 1 PENDING	
<a href="#">196.200.219.201</a>	UP	2 OK	
<a href="#">196.200.219.202</a>	UP	1 OK 1 PENDING	
<a href="#">196.200.219.203</a>	UP	2 OK	
<a href="#">196.200.219.204</a>	UP	1 OK 1 PENDING	
<a href="#">196.200.219.205</a>	UP	2 OK	
<a href="#">196.200.219.206</a>	UP	1 OK 1 PENDING	

**FreeBSD Servers (freebsd-servers)**

Host	Status	Services	Actions
<a href="#">localhost</a>	UP	8 OK	

**sse virtual box virtualized servers (virtual-servers)**

Host	Status	Services	Actions
<a href="#">196.200.219.1</a>	UP	2 OK 2 CRITICAL	
<a href="#">196.200.219.10</a>	UP	2 OK 2 CRITICAL	
<a href="#">196.200.219.11</a>	UP	2 OK 2 CRITICAL	
<a href="#">196.200.219.12</a>	UP	2 OK 2 CRITICAL	
<a href="#">196.200.219.13</a>	UP	2 OK 2 CRITICAL	
<a href="#">196.200.219.14</a>	UP	2 OK 2 CRITICAL	
<a href="#">196.200.219.15</a>	UP	2 OK 2 CRITICAL	
<a href="#">196.200.219.16</a>	UP	2 OK 2 CRITICAL	
<a href="#">196.200.219.17</a>	UP	2 OK 2 CRITICAL	
<a href="#">196.200.219.18</a>	UP	2 OK 2 CRITICAL	
<a href="#">196.200.219.19</a>	UP	2 OK 2 CRITICAL	
<a href="#">196.200.219.2</a>	UP	2 OK 2 CRITICAL	
<a href="#">196.200.219.20</a>	UP	2 OK 2 CRITICAL	
<a href="#">196.200.219.21</a>	UP	2 OK	

# Our Nagios - host-detail

**Nagios Core**  
 196.200.219.200/nagios/index.php

**Current Network Status**  
 Last Updated: Mon May 30 14:53:38 UTC 2011  
 Updated every 90 seconds  
 Nagios® Core™ 3.2.3 - [www.nagios.org](http://www.nagios.org)  
 Logged in as *guest*

**Host Status Totals**

Up	Down	Unreachable	Pending
1	0	0	0

**Service Status Totals**

Ok	Warning	Unknown	Critical	Pending
2	0	0	2	0

**Service Status Details For Host '196.200.219.13'**

Host	Service	Status	Last Check	Duration	Attempt	Status Information
<a href="#">196.200.219.13</a>	PING	OK	05-30-2011 14:52:36	0d 20h 28m 34s	1/10	PING OK - Packet loss = 0%, RTA = 0.53 ms
	<a href="#">http</a>	CRITICAL	05-30-2011 14:50:47	0d 20h 26m 51s	3/3	Connection refused
	<a href="#">smtp</a>	CRITICAL	05-30-2011 14:52:30	0d 20h 25m 8s	3/3	Connection refused
	<a href="#">ssh</a>	OK	05-30-2011 14:51:41	0d 20h 31m 57s	1/3	SSH OK - OpenSSH_5.4p1 FreeBSD-20100308 (protocol 2.0)

4 Matching Service Entries Displayed

**General**

- Home
- Documentation

**Current Status**

- Tactical Overview
- Map
- Hosts
- Services
- Host Groups
  - Summary
  - Grid
- Service Groups
  - Summary
  - Grid
- Problems
  - Services (Unhandled)
  - Hosts (Unhandled)
  - Network Outages

Quick Search:

**Reports**

- Availability
- Trends
- Alerts
  - History
  - Summary
  - Histogram
- Notifications
- Event Log

**System**

# Installation notes

- Dependancies
  - Apache server
  - PHP5
- We'll going to install from packages where possible and ports where we have to.
- The installation instructions assume that we have a working apache server and php install already.

# SmokePing



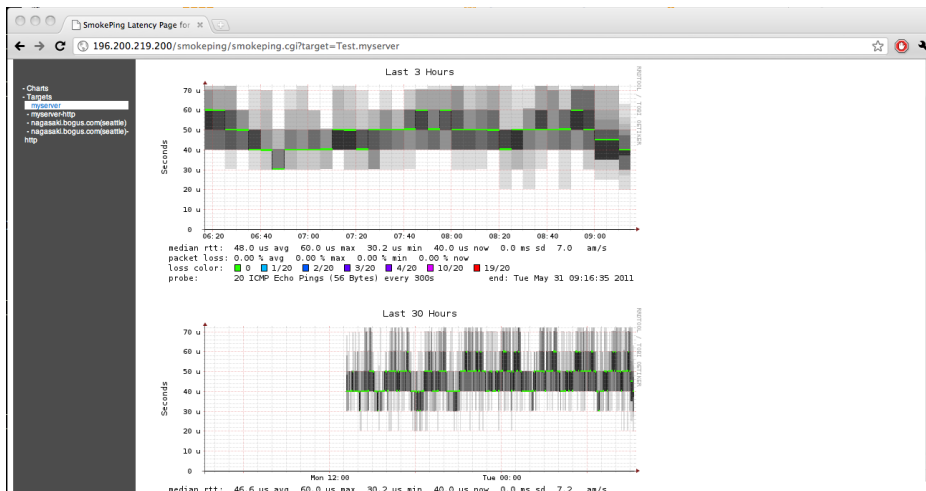
- Not just about ping
- Latency and failure frequency are key metrics to measure around internet service availability
- Can measure the relative performance of web api's



# Monitoring Facebook API performance

# Local smokeping instance

- The smaller the variation the spikier the graph.
- Unless you adjust the scale.



# Installation Notes

- We're going to build it in ports, because we need to add an additional options (curl probes) at build time.
- Make install will build additional packages.
- Information about probes and tools for writing your own probes are at <http://oss.oetiker.ch/smokeping/probe/index.en.html>