An Introduction

Nagios®

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Where Does Nagios Fit?

Nagios, in some ways, ties it all together. We’ve seen things like:

- SNMP
- MRTG
- RRDTool
- Rancid
- Cacti
- Smokeping

You can and will use all this functionality in Nagios.

It is a monolithic tool:
- Big
- Complex
- Powerful

Why Nagios

- Open source
- Relatively scalable, Manageable, Secure and more
- Best documentation available
- Good log and database system
- Nice, informative and attractive web interface
- Very flexible
- Alerts automatically sent if condition changes
- Various notification options (Email, pager, mobile phone)

Why Nagios

- Avoidance of “Too many red flashing lights”
  - “Just the facts” – only want root cause failures to be reported, not cascade of every downstream failure.
  - also avoids unnecessary checks
  - e.g. HTTP responds, therefore no need to ping
  - e.g. power outage, no ping response, so don’t bother trying anything else
  - Services are running fine no need to do check if the host itself is alive
What Can it Do?

- Individual node status
  - Is it up?
  - What is its load?
  - What is the memory and swap usage?
  - NFS and network load?
  - Are the partitions full?
  - Are applications and services running properly?
- Aggregated node status
  - Same info, but across groups of nodes

What Can it Do?

A lot, including:

- Use databases to store history
- Graph generation from MRTG
- Very extensible via plug-ins, add-ons and local scripts.
- Can scale to large installations
- Allows for redundant monitoring
- Aggregation of like-data across multiple nodes.
- Ability to escalate alerts
- Runs on multiple Unices
- Licensed under GPL v2

Sample Setup

NAGIOS - NOTIFICATION FLOW DIAGRAM
Who is Notified?

Notification Email Sample

From: nagios@thuldai.mos.com.np
To: "ishwars@mos.com.np" <ishwars@mos.com.np>
Subject: Host DOWN alert for WORLD_BANK_L!

State: DOWN
Address: 202.52.239.70
Info: PING CRITICAL - Packet loss = 100%
Date/Time: Thu Feb 5 11:06:38 NPT 2004

Nagios configuration files

- Located in /etc/nagios2/
- Important files:
  - cgi.cfg controls the Web Interface options security
  - commands.cfg commands that Nagios uses to notify
  - nagios.cfg main Nagios configuration file
  - conf.d/* the core of the config files

Nagios configuration files

- Under conf.d/*, files "xxxx_nagios2.cfg":
  - contacts users and groups
  - generic-host "template" host (default)
  - generic-service "template" service
  - hostgroups host group definitions
  - services which services to check
  - timeperiods when to check and notify
Nagios plugin configuration

- /etc/nagios-plugins/config/
  - apt.cfg  ntp.cfg  dhcp.cfg  ping.cfg
  - disk.cfg  procs.cfg  dummy.cfg  real.cfg
  - ftp.cfg  ssh.cfg  http.cfg  tcp_udp.cfg
  - load.cfg  telnet.cfg  mail.cfg  users.cfg
  - news.cfg

Concepts: parents

- Hosts can have parents
  - Allows one to specify which dependencies there are in the network
  - Avoid sending alarms if we cannot know the state of a host...
Nagios Resources

Nagios Home
http://www.nagios.org/

Nagios Plugins and Add Ons Exchange
http://www.nagiosexchange.com/

Nagios Tutorial for Debian
http://www.debianhelp.co.uk/nagios.htm

Nagios Commercial Support
http://www.nagios.com/

Questions?