



Network Management & Monitoring

NAGIOS



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Introduction

Network Monitoring Tools

- Availability
- Reliability
- Performance

*Nagios actively monitors the **availability** of devices and services*

Introduction

- Possibly the most used open source network monitoring software.
- Has a web interface.
 - Uses CGIs written in C for faster response and scalability.
- Can support up to thousands of devices and services.

Installation

In Debian/Ubuntu

```
# apt-get install nagios3
```

Key directories

```
/etc/nagios3
```

```
/etc/nagios3/conf.d
```

```
/etc/nagios-plugins/conf
```

```
/usr/lib/nagios/plugins
```

```
/usr/share/nagios3/htdocs/images/logos
```

Nagios web interface is here:

<http://pcN.ws.nsrc.org/nagios3/>

Plugins

Plugins are used to verify services and devices:

- Nagios architecture is simple enough that writing new plugins is fairly easy in the language of your choice.
- There are ***many, many*** plugins available (thousands).
 - ✓ <http://exchange.nagios.org/>
 - ✓ <http://nagiosplugins.org/>



Features

- Configuration done in text files, based on templates.
- Nagios reads its configuration from a directory. You determine how to divide your configuration files.
- Uses parallel checking and forking for scalability

Features cont.

- Utilizes topology to determine dependencies.
 - Differentiates between what is *down* vs. what is *unreachable*. Avoids running unnecessary checks and sending redundant alarms
- Allows you to define how to send notifications based on combinations of:
 - Contacts and lists of contacts
 - Devices and groups of devices
 - Services and groups of services
 - Defined hours by persons or groups.
 - The state of a service.

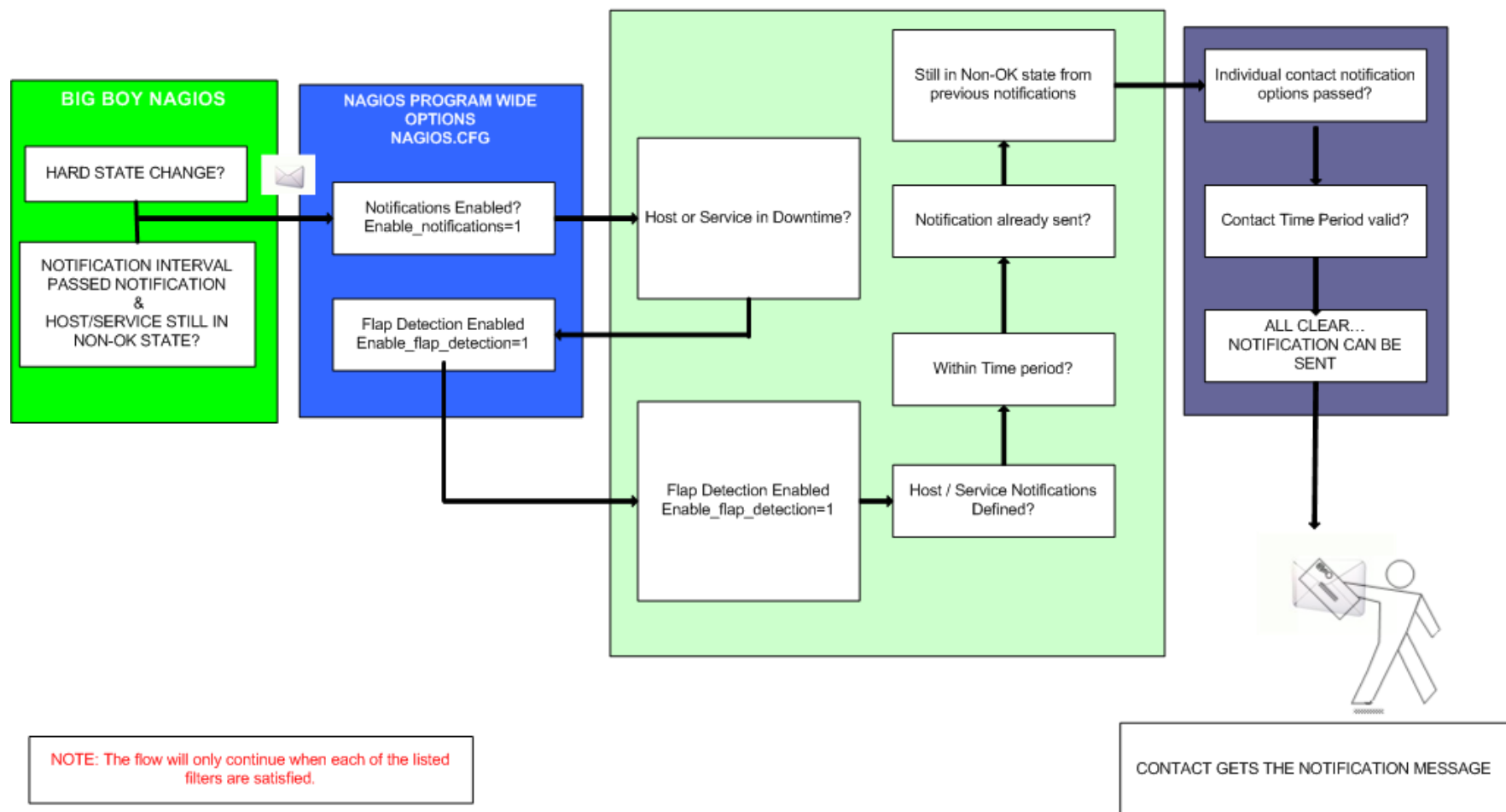
Notification Options (Host)

Host state:

When configuring a host you have the following notification options:

- **d:** DOWN
- **u:** UNREACHABLE
- **r:** RECOVERY
- **f:** FLAPPING
- **n:** NONE

NAGIOS - NOTIFICATION FLOW DIAGRAM



How checks work

- A node/host/device consists of one or more service checks (PING, HTTP, MYSQL, SSH, etc.)
- Periodically Nagios checks each service for each node and determines if state has changed. State changes are:
 - CRITICAL
 - WARNING
 - UNKNOWN
- For each state change you can assign:
 - Notification options (as mentioned before)
 - Event handlers

How checks work continued

Parameters

- Normal checking interval
- Re-check interval
- Maximum number of checks.
- Period for each check
- Node checks only happen when services respond.
 - A node can be:
 - DOWN
 - UNREACHABLE

How checks work continued

- By default Nagios does a node check 3 times before it will change the node's state to down.
- No response states goes to *warning* then *critical*

The concept of “parents”

Nodes can have parents:

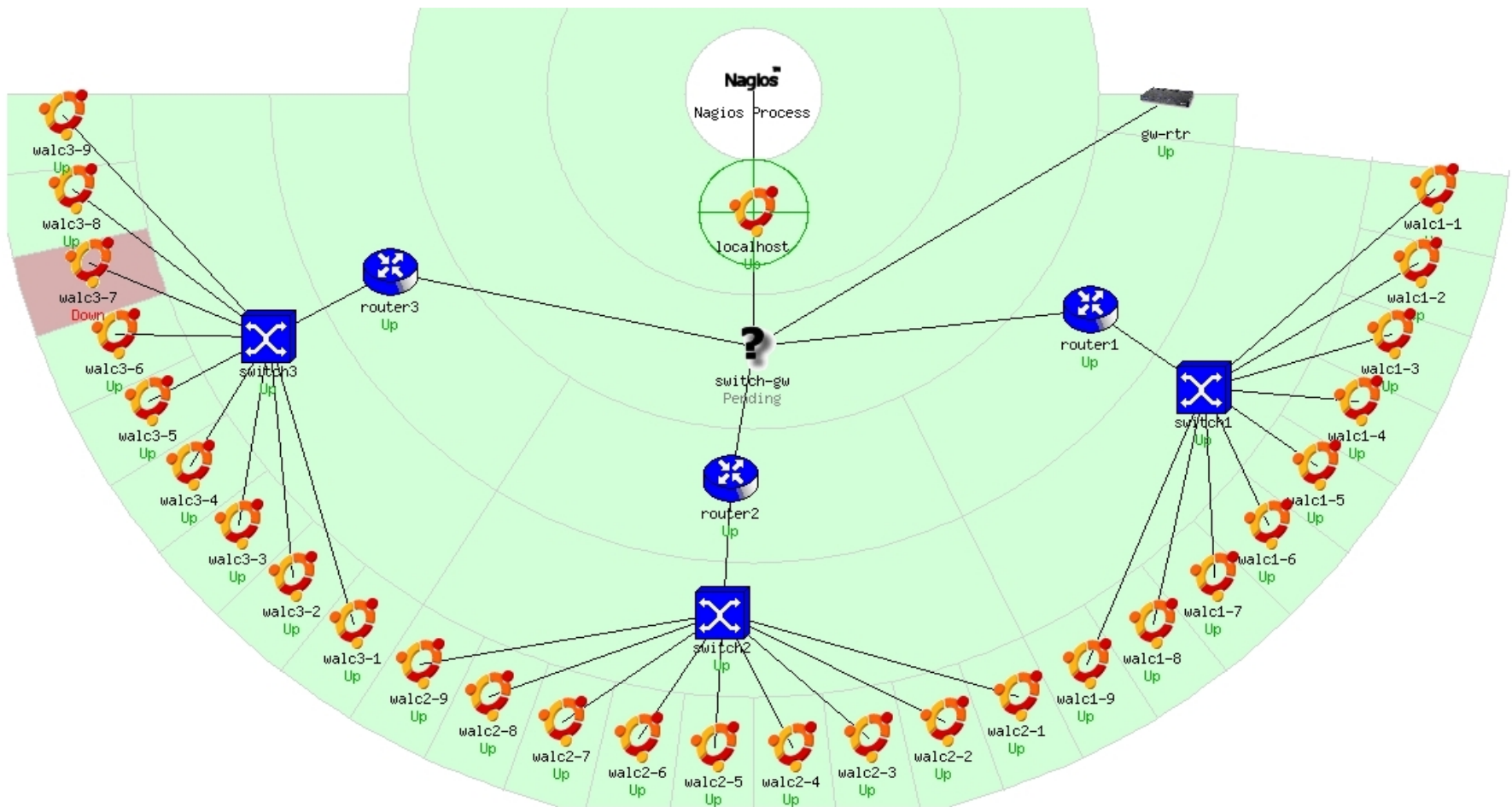
- The parent of a **PC** connected to a **switch** would be the **switch**.
- Allows us to specify the dependencies between devices.
- Avoids sending alarms when parent does not respond.
- A node can have multiple parents (dual homed).



Network viewpoint

- Where you locate your Nagios server will determine your point of view of the network.
- The Nagios server becomes the “root” of your dependency tree

Network viewpoint



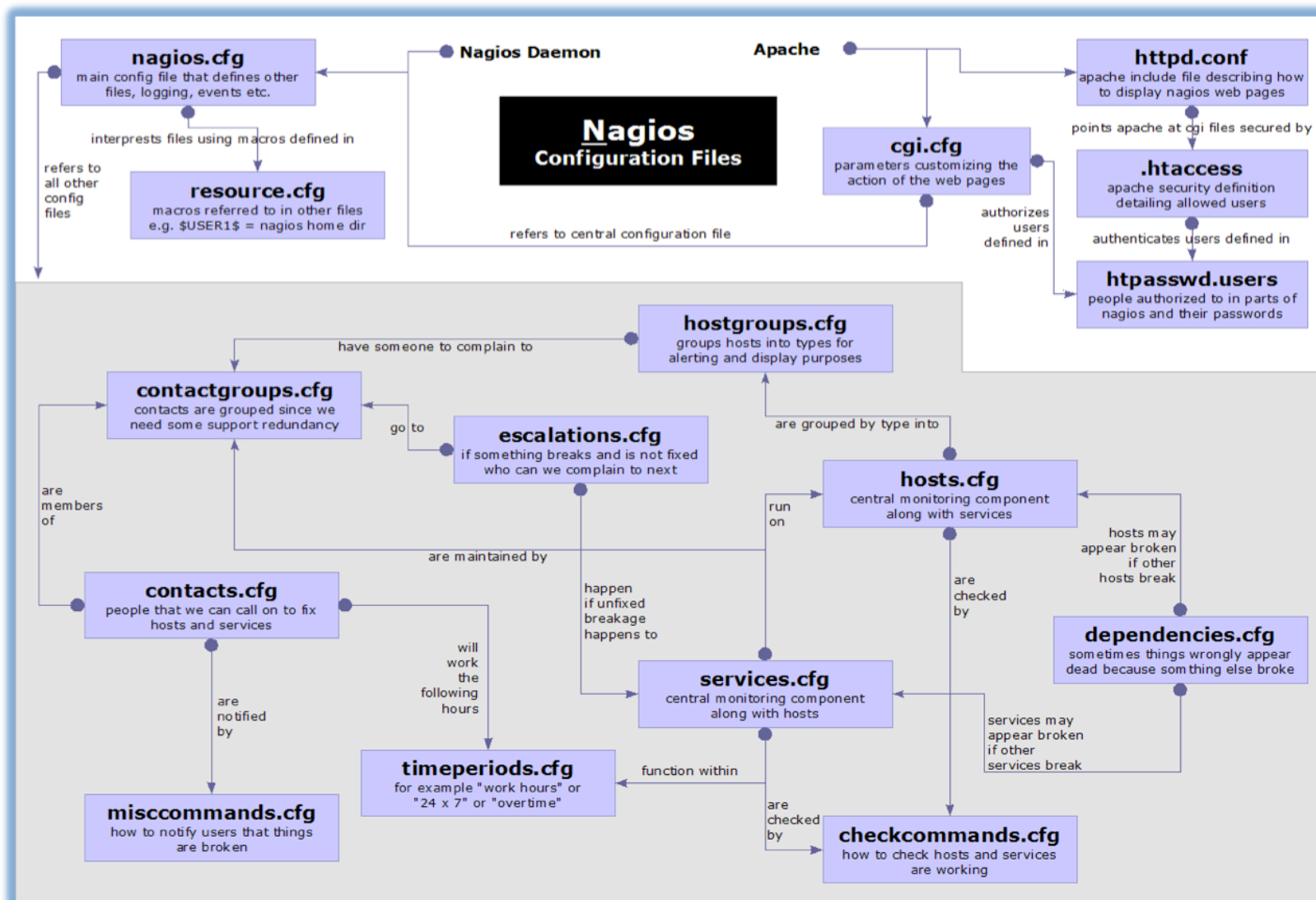


Demo Nagios

Configuration Files

- Lots!
- Can seem complex at first
- **Object oriented**
 - Objects (devices or services) inherit attributes.
 - Apply functionality to *groups of devices*.
 - Do not apply functionality to individual objects. Does not scale!
 - Once you understand Nagios configs the rest is easy...

Configuration files (Official)



Configuration Files

Located in /etc/nagios3/

Important files include:

- **cgi.cfg** Controls the web interface and security options.
- **commands.cfg** The commands that Nagios uses for notifications.
- **nagios.cfg** Main configuration file.
- **conf.d/*** All other configuration goes here!

Configuration files continued

Under conf.d/*

- `contacts_nagios2.cfg` users and groups
- `extinfo_nagios2.cfg` make your UI pretty
- `generic-host_nagios2.cfg` default host template
- `generic-service_nagios2.cfg` default service template
- `host-gateway_nagios3.cfg` host at default gw
definition
- `hostgroups_nagios2.cfg` groups of nodes
- `localhost_nagios2.cfg` definition of nagios host
- `services_nagios2.cfg` what services to check
- `timeperiods_nagios2.cfg` when to check who to
notify

Configuration files continued

Under conf.d some other possible config files:

- **servicegroups.cfg** Groups of nodes and services
- **pcs.cfg** (hosts) Sample definition of PCs
- **switches.cfg** (hosts) Definitions of switches
- **routers.cfg** Definitions of routers (hosts)

Pre-installed plugins in Ubuntu

/usr/lib/nagios/plugins

check_apt	check_file_age	check_jabber	check_nttp	check_procs	check_swap
check_bgpstate	check_flexlm	check_ldap	check_nttps	check_radius	check_tcp
check_breeze	check_ftp	check_ldaps	check_nt	check_real	check_time
check_by_ssh	check_host	check_linux_raid	check_ntp	check_rpc	check_udp
check_cload	check_hppjd	check_load	check_ntp_peer	check_rta_multi	check_ups
check_cluster	check_http	check_log	check_ntp_time	check_sensors	check_users
check_dhcp	check_icmp	check_mailq	check_nwstat	check_simap	check_wave
check_dig	check_ide_smart	check_mrtg	check_oracle	check_smtp	negate
check_disk	check_ifoperstatus	check_mrtgtraf	check_overcr	check_snmp	urlize
check_disk_smb	check_ifstatus	check_mysql	check_pgsql	check_spop	utils.pm
check_dns	check_imap	check_mysql_query	check_ping	check_ssh	utils.sh
check_dummy	check_ircd	check_nagios	check_pop	check_ssmtp	

/etc/nagios-plugins/config

apt.cfg	disk-smb.cfg	ftp.cfg	ldap.cfg	mysql.cfg	ntp.cfg	radius.cfg	ssh.cfg
breeze.cfg	dns.cfg	hppjd.cfg	load.cfg	netware.cfg	pgsql.cfg	real.cfg	tcp_udp.cfg
dhcp.cfg	dummy.cfg	http.cfg	mail.cfg	news.cfg	ping.cfg	rpc-nfs.cfg	telnet.cfg
disk.cfg	flexlm.cfg	ifstatus.cfg	mrtg.cfg	nt.cfg	procs.cfg	snmp.cfg	users.cfg

Nodes and services configuration

Based on templates

- This saves lots of time avoiding repetition
- Similar to Object Oriented programming

Create default templates with default parameters for a:

- *generic node* (generic-host_nagios2.cfg)
- *generic service* (generic-service_nagios2.cfg)
- generic contact (contacts_nagios2.cfg)

Generic node template

generic-host nagios2.cfg

```
define host{
    name                generic-host ; The name of this host template
    notifications_enabled 1          ; Host notifications are enabled
    event_handler_enabled 1          ; Host event handler is enabled
    flap_detection_enabled 1         ; Flap detection is enabled
    failure_prediction_enabled 1     ; Failure prediction is enabled
    process_perf_data     1          ; Process performance data
    retain_status_information 1      ; Retain status information across program restarts
    retain_nonstatus_information 1    ; Retain non-status information across program restarts
    check_command          check-host-alive
    max_check_attempts     10
    notification_interval  0
    notification_period     24x7
    notification_options    d,u,r
    contact_groups          admins
    register                0        ; DONT REGISTER THIS DEFINITION - ITS NOT A REAL HOST, JUST A TEMPLATE!
}
```

Individual node configuration

```
define host{  
    use                generic-host  
    host_name          gw-rtr  
    alias              Main workshop router  
    address            192.0.2.1  
    contact_groups     router_group  
}
```

Generic service configuration

generic-service nagios2.cfg

```
define service{
    name                                generic-service
    active_checks_enabled                1
    passive_checks_enabled               1
    parallelize_check                    1
    obsess_over_service                  0
    check_freshness                      1
    notifications_enabled                1
    event_handler_enabled                1
    flap_detection_enabled               1
    process_perf_data                    1
    retain_status_information            1
    retain_nonstatus_information         1
    is_volatile                          0
    check_period                         24x7
    max_check_attempts                   5
    normal_check_interval                 5
    retry_check_interval                  1
    notification_interval                60
    notification_period                  24x7
    notification_options                 c,r
    register                             0
}
```

Individual service configuration

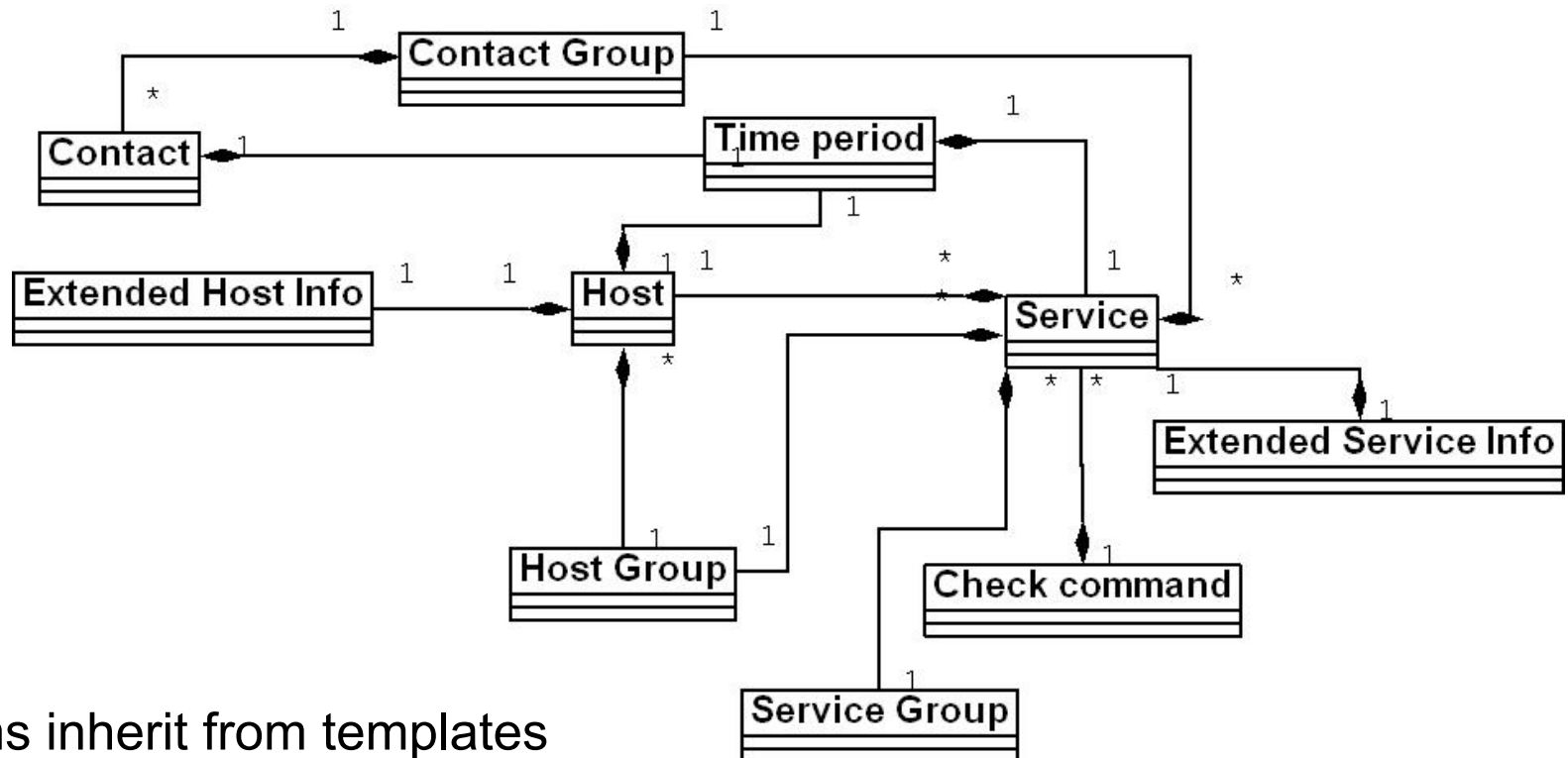
```
define service{
    hostgroup_name      servers
    service_description  PING
    check_command        check-host-alive
    use                 generic-service
    max_check_attempts  5
    normal_check_interval 5
    notification_options c,r,f
    notification_interval 0 ; set > 0 if you want to be renotified
}
```

c: Critical

r: Recovering

f: Flapping

Configuration flow

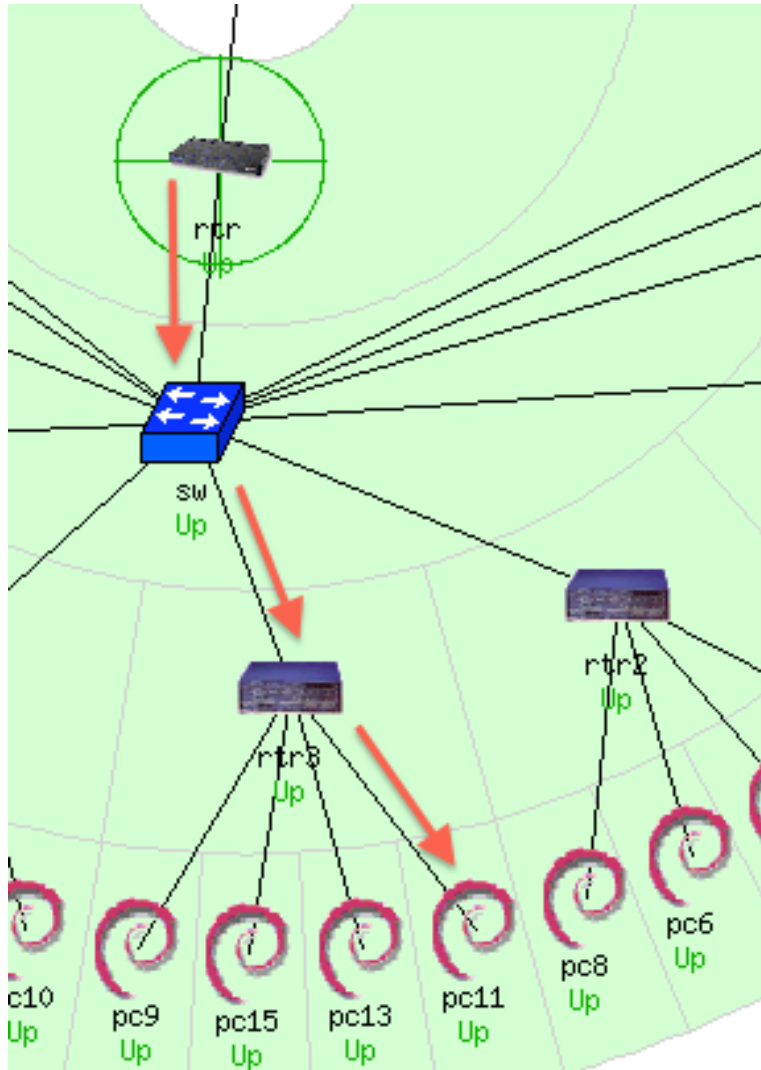


Items inherit from templates

We start with a host

- Place multiple hosts in a group
- Define parents
- Add a service check to the group
- Add extended info, if any

Another view of configuration



RTR

```
define host {  
  use  
  host_name  
  alias  
  address
```

```
generic-host  
rtr  
Gateway Router  
10.10.0.254 }
```

SW

```
define host {  
  use  
  host_name  
  alias  
  address  
  parents
```

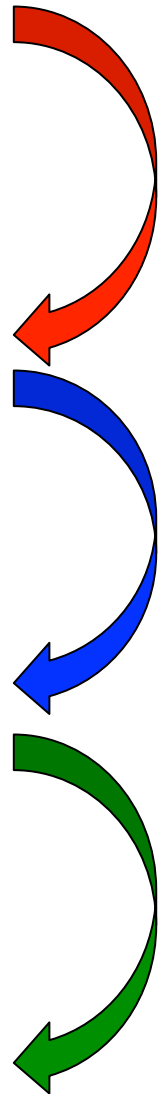
```
generic-host  
sw  
Backbone Switch  
10.10.0.253  
rtr }
```

RTR3

```
define host {  
  use  
  host_name  
  alias  
  address  
  parents
```

```
generic-host  
rtr3  
router 3  
10.10.3.254  
sw }
```

PC11...



OoB notifications

A critical item to remember: an SMS or message system that is independent from your network.

- You can utilize a cell phone connected to the Nagios server
- You can use packages like:
 - gnokii:** <http://www.gnokii.org/>
 - qpage:** <http://www.qpage.org/>
 - sendpage:** <http://www.sendpage.org/>

References

- **Nagios web site**
<http://www.nagios.org/>
- **Nagios plugins site**
<http://www.nagiosplugins.org/>
- *Nagios System and Network Monitoring*, by Wolfgang Barth. Good book about Nagios.
- **Unofficial Nagios plugin site**
<http://nagios.exchange.org/>
- **A Debian tutorial on Nagios**
<http://www.debianhelp.co.uk/nagios.htm>
- **Commercial Nagios support**
<http://www.nagios.com/>



Questions?

?

Additional Details

A few additional slides you may find useful or informative...

Features, features, features...

- Allows you to acknowledge an event.
 - A user can add comments via the GUI
- You can define maintenance periods
 - By device or a group of devices
- Maintains availability statistics.
- Can detect flapping and suppress additional notifications.
- Allows for multiple notification methods:
 - e-mail, pager, SMS, winpopup, audio, etc...
- Allows you to define notification levels for escalation

Main configuration details

Global settings

File: `/etc/nagios3/nagios.cfg`

- Says where other configuration files are.
- General Nagios behavior:
 - For large installations you should tune the installation via this file.
 - See: *Tunning Nagios for Maximum Performance* http://nagios.sourceforge.net/docs/2_0/tuning.html

CGI configuration

/etc/nagios3/cgi.cfg

- You can change the CGI directory if you wish
- Authentication and authorization for Nagios use:
 - Activate authentication via Apache's .htpasswd mechanism, or using RADIUS or LDAP.
 - Users can be assigned rights via the following variables:
 - authorized_for_system_information
 - authorized_for_configuration_information
 - authorized_for_system_commands
 - authorized_for_all_services
 - authorized_for_all_hosts
 - authorized_for_all_service_commands
 - authorized_for_all_host_commands

Time Periods

This defines the base periods that control checks, notifications, etc.

- Defaults: 24 x 7
- Could adjust as needed, such as work-week only.
- Could adjust a new time period for “outside of regular hours”, etc.

```
# '24x7'
define timeperiod{
    timeperiod_name 24x7
    alias            24 Hours A Day, 7 Days A Week
    sunday           00:00-24:00
    monday           00:00-24:00
    tuesday          00:00-24:00
    wednesday        00:00-24:00
    thursday         00:00-24:00
    friday           00:00-24:00
    saturday         00:00-24:00
}
```

Configuring service/host checks:

Definition of “host alive”

```
# 'check-host-alive' command definition
define command{
    command_name    check-host-alive
    command_line    $USER1$/check_ping -H $HOSTADDRESS$ -w 2000.0,60% -c
5000.0,100% -p 1 -t 5
}
```

- Located in /etc/nagios-plugins/config, then adjust in /etc/nagios3/conf.d/services_nagios2.cfg
- While these are “service” or “host” checks Nagios refers to them as “commands”

Notification commands

Allows you to utilize any command you wish.
We could use this to generate tickets in RT.

```
# 'notify-by-email' command definition
define command{
    command_name      notify-by-email
    command_line       /usr/bin/printf "%b" "Service: $SERVICEDESC$\nHost:
$HOSTNAME$\nIn: $HOSTALIAS$\nAddress: $HOSTADDRESS$\nState: $SERVICESTATE$
\nInfo: $SERVICEOUTPUT$\nDate: $SHORTDATETIME$" | /bin/mail -s
'$NOTIFICATIONTYPE$: $HOSTNAME$/$SERVICEDESC$ is $SERVICESTATE$'
$CONTACTEMAIL$
}
```

```
From: nagios@nms.localdomain
To: router_group@localdomain
Subject: Host DOWN alert for TLD1-RTR!
Date: Thu, 29 Jun 2006 15:13:30 -0700
```

```
Host: gw-rtr
In: Core_Routers
State: DOWN
Address: 192.0.2.100
Date/Time: 06-29-2006 15:13:30
Info: CRITICAL - Plugin timed out after 6 seconds
```

Group service configuration

```
# check that ssh services are running
define service {
    hostgroup_name      ssh-servers
    service_description SSH
    check_command        check_ssh
    use                  generic-service
    notification_interval 0 ; set > 0 if you want to be renotified
}
```

The “service_description” is important if you plan to create Service Groups. Here is a sample Service Group definition:

```
define servicegroup{
    servicegroup_name    Webmail
    alias                 web-mta-storage-auth
    members               srvr1,HTTP,srvr1,SMTP,srvr1,POP,srvr1,IMAP,
                        srvr1,RAID,srvr1,LDAP, srvr2,HTTP,srvr2,SMTP,
                        srvr2,POP,srvr2,IMAP,srvr2,RAID,srvr2,LDAP
}
```

Screen Shots

A few sample screen shots from a Nagios install.

General View

Nagios®

General

Home

Documentation

Monitoring

Tactical Overview

Service Detail

Host Detail

Hostgroup Overview

Hostgroup Summary

Hostgroup Grid

Servicegroup Overview

Servicegroup Summary

Servicegroup Grid

Status Map

3-D Status Map

Service Problems

Unhandled

Host Problems

Unhandled

Network Outages

Show Host:

Comments

Downtime

Process Info

Performance Info

Scheduling Queue

Reporting

Trends

Availability

Alert Histogram

Alert History

Alert Summary

Notifications

Event Log

Configuration

View Config

Tactical Monitoring Overview

Last Updated: Thu Sep 3 15:37:09 CDT 2009

Updated every 90 seconds

Nagios® 3.0.2 - www.nagios.org

Logged in as guest

Monitoring Performance

Service Check Execution Time: 0.01 / 4.07 / 0.115 sec

Service Check Latency: 0.02 / 0.25 / 0.117 sec

Host Check Execution Time: 0.01 / 0.13 / 0.018 sec

Host Check Latency: 0.01 / 0.28 / 0.137 sec

Active Host / Service Checks: 41 / 46

Passive Host / Service Checks: 0 / 0

Network Outages

0 Outages

Network Health

Host Health:

Service Health:

Hosts

0 Down0 Unreachable41 Up0 Pending

Services

0 Critical0 Warning0 Unknown46 Ok0 Pending

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 All Services Enabled All Hosts Enabled	Enabled All Services Enabled All Hosts Enabled	Enabled All Services Enabled All Hosts Enabled	Enabled All Services Enabled All Hosts Enabled

Service Detail

Nagios®

General

- Home
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- Tactical Overview
- Service Detail**
- Host Detail
- Hostgroup Overview
- Hostgroup Summary
- Hostgroup Grid
- Servicegroup Overview
- Servicegroup Summary
- Servicegroup Grid
- Status Map
- 3-D Status Map

Service Problems

- Unhandled
- Host Problems
 - Unhandled
- Network Outages

Show Host:

Comments

- Downtime

Process Info

- Performance Info
- Scheduling Queue

Reporting

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

Configuration

- View Config

Current Network Status

Last Updated: Thu Sep 3 14:46:07 CDT 2009
Updated every 90 seconds
Nagios® 3.0.2 - www.nagios.org
Logged in as guest

[View History For all hosts](#)
[View Notifications For All Hosts](#)
[View Host Status Detail For All Hosts](#)

Host Status Totals

Up	Down	Unreachable	Pending
41	0	0	0

All Problems	All Types
0	41

Service Status Totals

Ok	Warning	Unknown	Critical	Pending
46	0	0	0	0

All Problems	All Types
0	46

Service Status Details For All Hosts

Host	Service	Status	Last Check	Duration	Attempt	Status Information
DNS-ROOT	SSH	OK	2009-09-03 14:43:51	43d 0h 55m 19s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
ISP-DNS	SSH	OK	2009-09-03 14:41:21	16d 3h 57m 24s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
ISP-RTR	SSH	OK	2009-09-03 14:43:57	43d 5h 35m 13s	1/4	SSH OK - Cisco-1.25 (protocol 2.0)
NOC-TLD1	SSH	OK	2009-09-03 14:41:27	1d 0h 1m 59s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
NOC-TLD2	SSH	OK	2009-09-03 14:44:04	1d 22h 44m 22s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
NOC-TLD3	SSH	OK	2009-09-03 14:41:34	1d 22h 40m 58s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
NOC-TLD4	SSH	OK	2009-09-03 14:44:10	1d 22h 44m 16s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
NOC-TLD5	SSH	OK	2009-09-03 14:41:40	1d 22h 41m 46s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
NOC-TLD6	SSH	OK	2009-09-03 14:44:17	1d 22h 44m 9s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
NOC-TLD7	SSH	OK	2009-09-03 14:41:47	1d 22h 41m 39s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
NOC-TLD8	SSH	OK	2009-09-03 14:44:23	1d 22h 44m 3s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
NS1-TLD1	SSH	OK	2009-09-03 14:41:53	1d 0h 1m 33s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
NS1-TLD2	SSH	OK	2009-09-03 14:44:30	1d 22h 43m 56s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
NS1-TLD3	SSH	OK	2009-09-03 14:42:00	1d 22h 41m 26s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
NS1-TLD4	SSH	OK	2009-09-03 14:44:36	1d 22h 43m 50s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
NS1-TLD5	SSH	OK	2009-09-03 14:42:06	1d 22h 41m 20s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)
NS1-TLD6	SSH	OK	2009-09-03 14:44:42	1d 22h 43m 42s	1/4	SSH OK - OpenSSH_5.1p1 Debian-3ubuntu1 (protocol 2.0)

Host Detail

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Monitoring

- Tactical Overview
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- Host Detail**
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- Servicegroup Grid
- Status Map
- 3-D Status Map

- Service Problems
 - Unhandled
- Host Problems
 - Unhandled
- Network Outages

Show Host:

- Comments
- Downtime
- Process Info
- Performance Info
- Scheduling Queue

Reporting

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

Configuration

- View Config

Current Network Status

Last Updated: Thu Sep 3 14:55:18 CDT 2009
Updated every 90 seconds
Nagios® 3.0.2 - www.nagios.org
Logged in as guest

[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
41	0	0	0

All Problems	All Types
0	41

Service Status Totals

Ok	Warning	Unknown	Critical	Pending
46	0	0	0	0

All Problems	All Types
0	46

Host Status Details For All Host Groups

Host ↑↓	Status ↑↓	Last Check ↑↓	Duration ↑↓	Status Information
DNS-ROOT	UP	2009-09-03 14:51:41	43d 1h 7m 0s	PING OK - Packet loss = 0%, RTA = 0.33 ms
ISP-DNS	UP	2009-09-03 14:51:41	16d 4h 11m 25s	PING OK - Packet loss = 0%, RTA = 0.29 ms
ISP-RTR	UP	2009-09-03 14:51:51	43d 5h 47m 40s	PING OK - Packet loss = 0%, RTA = 1.24 ms
NOC-TLD1	UP	2009-09-03 14:52:01	1d 0h 10m 56s	PING OK - Packet loss = 0%, RTA = 4.02 ms
NOC-TLD2	UP	2009-09-03 14:52:01	1d 22h 53m 46s	PING OK - Packet loss = 0%, RTA = 2.23 ms
NOC-TLD3	UP	2009-09-03 14:52:11	1d 22h 53m 36s	PING OK - Packet loss = 0%, RTA = 2.62 ms
NOC-TLD4	UP	2009-09-03 14:52:21	1d 22h 53m 36s	PING OK - Packet loss = 0%, RTA = 1.09 ms
NOC-TLD5	UP	2009-09-03 14:52:31	1d 22h 54m 6s	PING OK - Packet loss = 0%, RTA = 5.20 ms
NOC-TLD6	UP	2009-09-03 14:52:31	1d 22h 53m 56s	PING OK - Packet loss = 0%, RTA = 10.49 ms
NOC-TLD7	UP	2009-09-03 14:52:41	1d 22h 53m 56s	PING OK - Packet loss = 0%, RTA = 1.05 ms
NOC-TLD8	UP	2009-09-03 14:52:51	1d 22h 53m 56s	PING OK - Packet loss = 0%, RTA = 1.00 ms
NS1-TLD1	UP	2009-09-03 14:53:01	1d 0h 10m 26s	PING OK - Packet loss = 0%, RTA = 10.19 ms
NS1-TLD2	UP	2009-09-03 14:53:01	1d 22h 53m 56s	PING OK - Packet loss = 0%, RTA = 5.06 ms
NS1-TLD3	UP	2009-09-03 14:53:11	1d 22h 53m 36s	PING OK - Packet loss = 0%, RTA = 1.03 ms
NS1-TLD4	UP	2009-09-03 14:53:21	1d 22h 53m 36s	PING OK - Packet loss = 0%, RTA = 1.15 ms
NS1-TLD5	UP	2009-09-03 14:53:21	1d 22h 54m 6s	PING OK - Packet loss = 0%, RTA = 1.12 ms
NS1-TLD6	UP	2009-09-03 14:53:31	1d 22h 53m 36s	PING OK - Packet loss = 0%, RTA = 1.06 ms
NS1-TLD7	UP	2009-09-03 14:53:41	1d 22h 53m 46s	PING OK - Packet loss = 0%, RTA = 1.11 ms
NS1-TLD8	UP	2009-09-03 14:53:51	1d 22h 53m 36s	PING OK - Packet loss = 0%, RTA = 1.18 ms
TLD1-RTR	UP	2009-09-03 14:53:51	1d 22h 54m 6s	PING OK - Packet loss = 0%, RTA = 2.22 ms
TLD2-RTR	UP	2009-09-03 14:54:01	1d 22h 53m 46s	PING OK - Packet loss = 0%, RTA = 2.38 ms

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Current Network Status

Last Updated: Thu Sep 3 14:55:28 CDT 2009
Updated every 90 seconds
Nagios® 3.0.2 - www.nagios.org
Logged in as guest

[View Service Status Detail For All Host Groups](#)
[View Host Status Detail 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
41	0	0	0
All Problems		All Types	
0		41	

Service Status Totals

Ok	Warning	Unknown	Critical	Pending
46	0	0	0	0
All Problems		All Types		
0		46		

Service Overview For All Host Groups













[TRTI TLD1 Servers, Virtual Machines, Routers](#) (TLD1)

Host	Status	Services	Actions
NOC-TLD1	UP	1 OK	  
NS1-TLD1	UP	1 OK	  
TLD1-RTR	UP	1 OK	  
TRTI-TLD1	UP	1 OK	  











[TRTI TLD2 Servers, Virtual Machines, Routers](#) (TLD2)

Host	Status	Services	Actions
NOC-TLD2	UP	1 OK	  
NS1-TLD2	UP	1 OK	  
TLD2-RTR	UP	1 OK	  
TRTI-TLD2	UP	1 OK	  











[TRTI TLD3 Servers, Virtual Machines, Routers](#) (TLD3)

Host	Status	Services	Actions
NOC-TLD3	UP	1 OK	  
NS1-TLD3	UP	1 OK	  
TLD3-RTR	UP	1 OK	  
TRTI-TLD3	UP	1 OK	  













[TRTI TLD4 Servers, Virtual Machines, Routers](#) (TLD4)

Host	Status	Services	Actions
NOC-TLD4	UP	1 OK	  
NS1-TLD4	UP	1 OK	  
TLD4-RTR	UP	1 OK	  
TRTI-TLD4	UP	1 OK	  






[TRTI TLD5 Servers, Virtual Machines, Routers](#) (TLD5)

Host	Status	Services	Actions
NOC-TLD5	UP	1 OK	  
NS1-TLD5	UP	1 OK	  
TLD5-RTR	UP	1 OK	  
TRTI-TLD5	UP	1 OK	  







[TRTI TLD6 Servers, Virtual Machines, Routers](#) (TLD6)

Host	Status	Services	Actions
NOC-TLD6	UP	1 OK	  
NS1-TLD6	UP	1 OK	  
TLD6-RTR	UP	1 OK	  
TRTI-TLD6	UP	1 OK	  




[TRTI TLD7 Servers, Virtual Machines, Routers](#) (TLD7)

Host	Status	Services	Actions
NOC-TLD7	UP	1 OK	  
NS1-TLD7	UP	1 OK	  

[TRTI TLD8 Servers, Virtual Machines, Routers](#) (TLD8)

Host	Status	Services	Actions
NOC-TLD8	UP	1 OK	  
NS1-TLD8	UP	1 OK	  

[TRTI Management Virtual Machines \(VM-mgmt\)](#)

Host	Status	Services	Actions
DNS-ROOT	UP	1 OK	  
ISP-DNS	UP	1 OK	  

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Current Network Status

Last Updated: Fri Sep 4 13:29:20 CDT 2009
Updated every 90 seconds
Nagios® 3.0.2 - www.nagios.org
Logged in as guest

[View Service Status Detail For All Service Groups](#)
[View Status Summary For All Service Groups](#)
[View Service Status Grid For All Service Groups](#)

Host Status Totals

Up	Down	Unreachable	Pending
41	0	0	0
All Problems	All Types		
0	41		

Service Status Totals

Ok	Warning	Unknown	Critical	Pending
53	0	0	1	0
All Problems	All Types			
1	54			

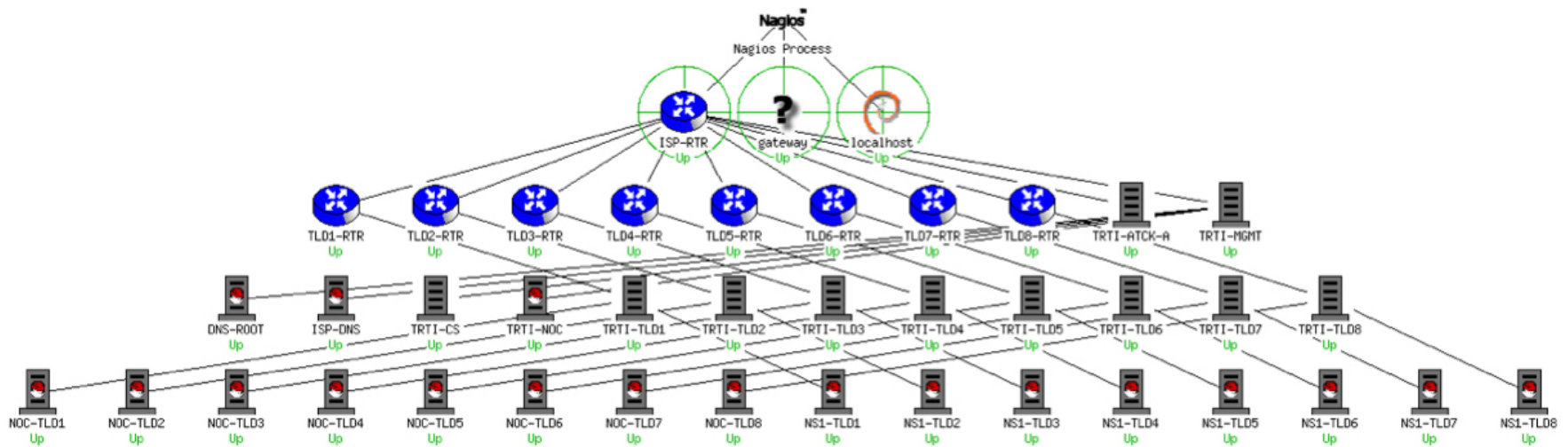
Service Overview For All Service Groups
[TLD Servers running Nagios \(NAGIOS\)](#)

Host	Status	Services	Actions
NS1-TLD1	UP	1 OK	
NS1-TLD2	UP	1 OK	
NS1-TLD3	UP	1 OK	
NS1-TLD4	UP	1 OK	
NS1-TLD5	UP	1 OK	
NS1-TLD6	UP	1 OK	
NS1-TLD7	UP	1 OK	
NS1-TLD8	UP	1 OK	

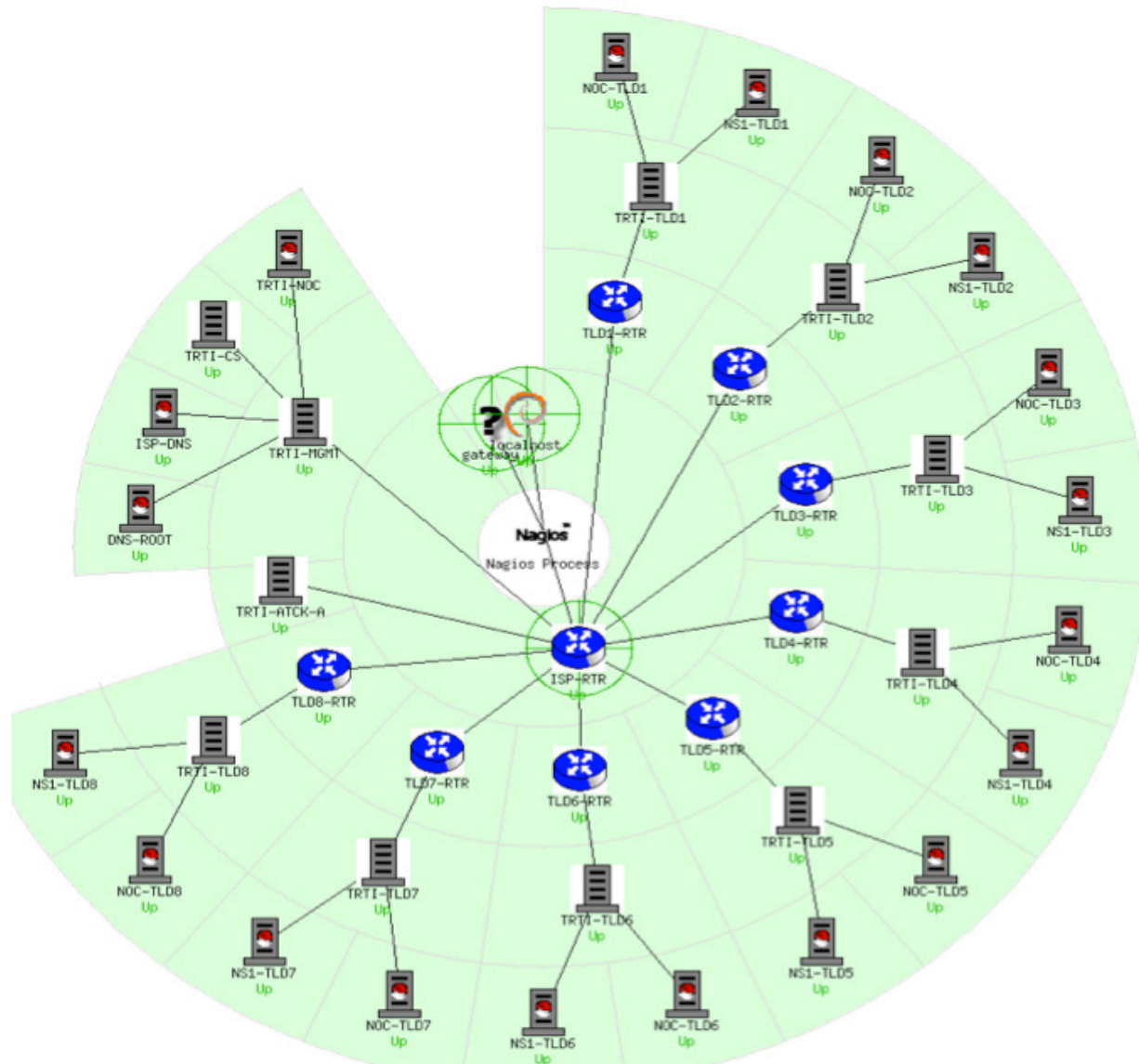
[TLD Servers running SSH \(SSH\)](#)

Host	Status	Services	Actions
NS1-TLD1	UP	1 OK	
NS1-TLD2	UP	1 CRITICAL	
NS1-TLD3	UP	1 OK	
NS1-TLD4	UP	1 OK	
NS1-TLD5	UP	1 OK	
NS1-TLD6	UP	1 OK	
NS1-TLD7	UP	1 OK	
NS1-TLD8	UP	1 OK	

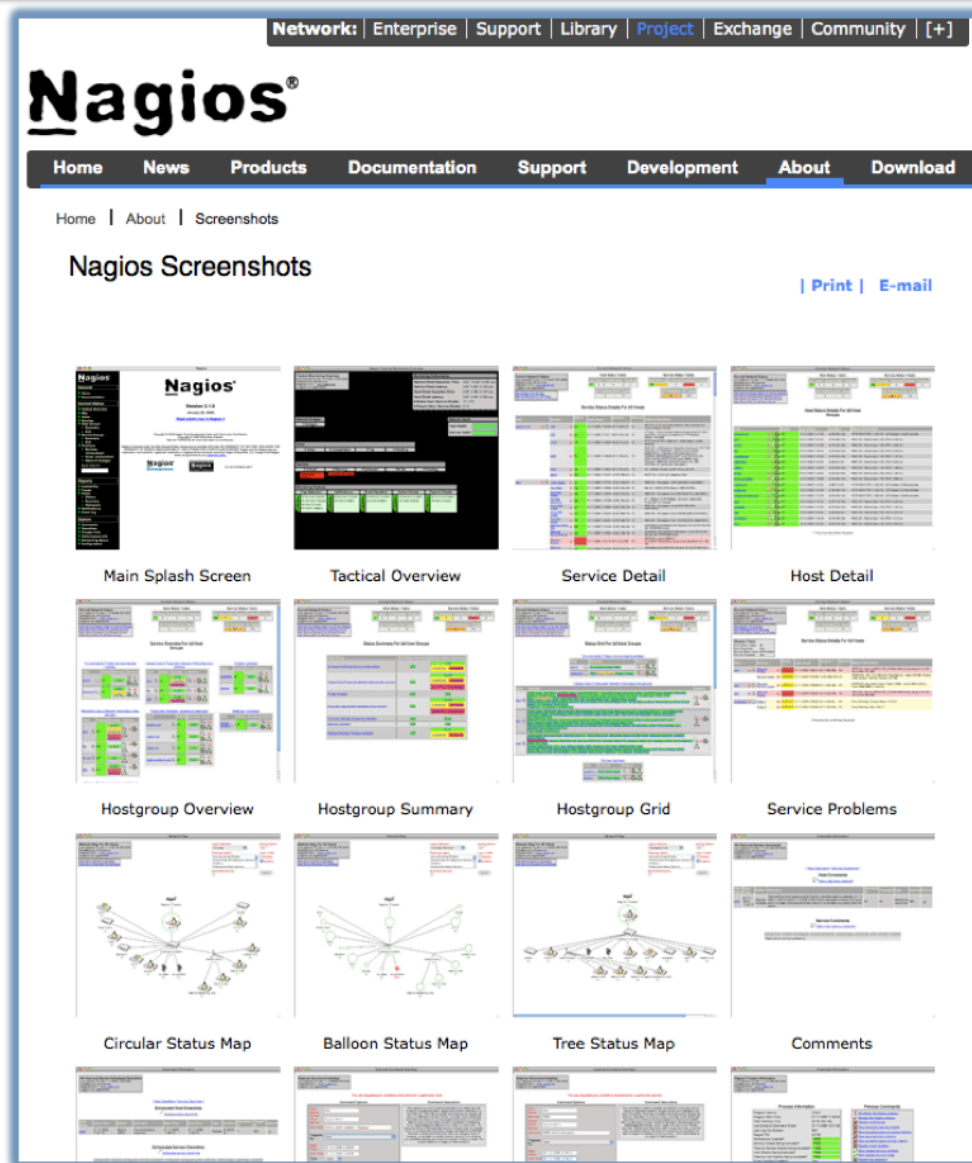
Collapsed tree status map



Marked-up circular status map



More sample screenshots



Many more sample
Nagios screenshots
available here:

[http://www.nagios.org/about/
screenshots](http://www.nagios.org/about/screenshots)