

Nagios

A Basic Introduction



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ChaDevOps Meetup
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<http://www.meetup.com/chadevops/>

History



- B.A in Community Development from Covenant College
- Americorps Intern in Boston (Web Developer & Server Administrator)
- Ops Engineer Intern at Acquia
A Drupal Web Services Company in Boston
- Infrastructure Engineer at Lamp Post Group for 2 years

Current

- Founder & CEO of Develop CENTS
- Married since August 2014
- Live, work & go to church in East Lake
 - Project: Low-cost Internet for low-income homes
 - Project: Community Empowerment Hub

What is Nagios

- Monitoring Platform
 - Servers, Printers, Switches, other Network Devices
- Scalable & Modular
 - Configure it for high availability monitoring
 - Thousands of different plugins to chose from

“Nagios is a powerful monitoring system that enables organizations to identify and resolve IT infrastructure problems before they affect critical business processes.”

<https://www.nagios.org/about/>



History

- Ethan Galstad created the basic infrastructure in late 1990s
- 1999: Code is Open Sourced and called “NetSaint”
- 2002: Project renamed to Nagios
- 2014 Controversy

Nagios took control of the nagios-plugins website without notifying the community team. The original community team relaunched their project at <https://www.monitoring-plugins.org>.

Possible Implementations

- Monitor Public services
 - SSH, HTTP, Ping, etc...

Possible Implementations

- Monitor Private resources and services
 - Disk space, Memory Usage, Load, etc...
 - Using:
 - Nagios Core Agentless Technologies (SNMP and WMI – “Windows Management Instrumentation”)
 - Nagios Add-Ons including NRPE, NSCA, NRDP, etc...

My Use Case










Monitor Public Services with Nagios Core

- Monitor external services on a handful of servers
 - Ping, http status codes, and DNS checks
- Send an email to several email addresses, including my Verizon @vtext.com address so I get a text if something is amiss

Nagios Core


- **Website GUI Dashboard for Monitoring**
 - Quickly and easily identify hosts & services by using groups
 - Turn off & acknowledge alert notifications
 - View logs & alert history

Core (core)

Host	Status	Services	Actions
elmer.developcents.com	UP	1 OK	  
mail.developcents.com	UP	1 OK	  
myers.developcents.com	UP	3 OK	  

Example Host Group

URLs on Myers (MyersURLS)

Host	Status	Services	Actions
myers.developcents.com	UP	3 OK	  

Example Service Group

Nagios Core

- **Configurable through CLI**
 - Define monitoring & alert schedule (time periods)
 - Define groups, hosts, services, and contacts

Nagios Core

Example Host Definition:

```
define host {
    host_name        myers.developcents.com    ; The name of this host template
    alias            Myers
    address          10.10.10.10
    check_command     check-host-alive
    contact_groups    admins
    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
    notification_period 24x7                ; Send host notifications at any time
    register          1
    max_check_attempts 2
}
```

Example Host Group Definition:

```
define hostgroup{
    hostgroup_name    core
    alias             Core
    members            myers.developcents.com,elmer.developcents.com,mail.developcents.com
}
```



Nagios Core

Example Service Definition:

```
define service{
    host_name                myers.developcents.com
    service_description      URL: test.davidmartinwhite.com
    servicegroups            MyersURLS
    check_command            check_http_url!http://test.davidmartinwhite.com
    contact_groups           admins
    max_check_attempts       5
    check_interval           3
    retry_interval           1
    check_period             24x7
    notification_interval    30
    notification_period      24x7
}
```

Example Service Group Definition:

```
define servicegroup{
    servicegroup_name      MyersURLS
    alias                  URLs on Myers
}
```

Nagios Add-on: **NRPE**

- **Nagios Remote Plugin Executor**
- Nagios monitors a remote system using scripts located on that remote system
 - Secure, private connection, monitoring private resources

Nagios Add-on: **NRDP**

- **Nagios Remote Data Processor**
- Nagios monitors a remote system using scripts located on that remote system
 - Uses Standard Protocols (HTTP[s] and XML)
 - Can replace **NSCA** (another, older, Nagios add-on)

(Live Demo)

Useful Resources

Nagios Add-Ons

<https://www.nagios.org/downloads/nagios-core-addons/>

NRPE

<https://exchange.nagios.org/directory/Addons/Monitoring-Agents/NRPE--2D-Nagios-Remote-Plugin-Executor/details>

NRDP

<https://exchange.nagios.org/directory/Addons/Passive-Checks/NRDP--2D-Nagios-Remote-Data-Processor/details>

NRDP Overview

https://assets.nagios.com/downloads/nrdp/docs/NRDP_Overview.pdf

Configuring and Installing NRPE and NSCA into Nagios Core 4 on CentOS 6

<http://nuxref.com/2013/12/09/configuring-and-installing-nrpe-and-nsca-into-nagios-core-4-on-centos-6/>

The Monitoring Plugins Project (Used in several different monitoring applications)

<https://www.monitoring-plugins.org/>



Thanks

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