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

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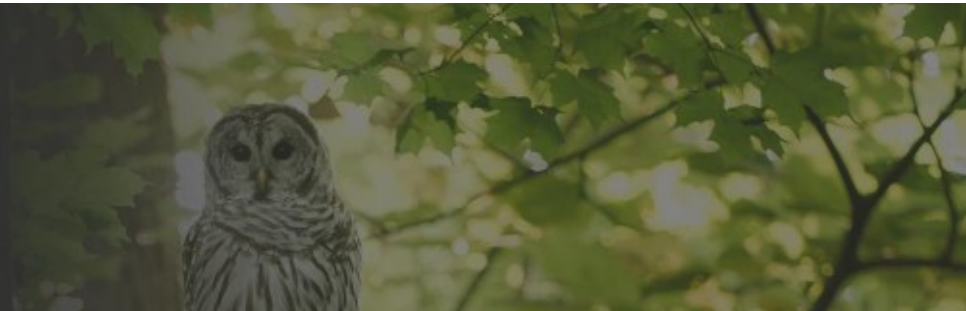
What is Nagios

- 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."
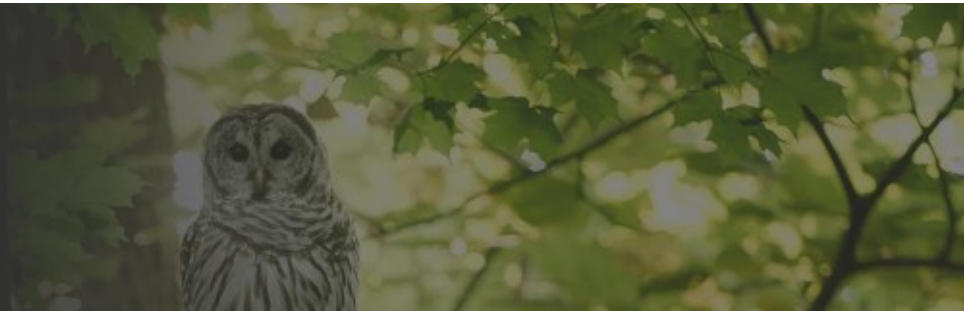
History

- 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.
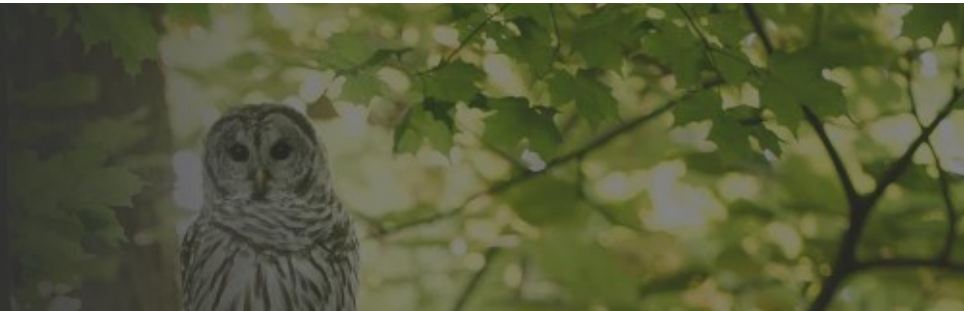
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Possible Implementations

- Monitor Public services
  - SSH, HTTP, Ping, etc...
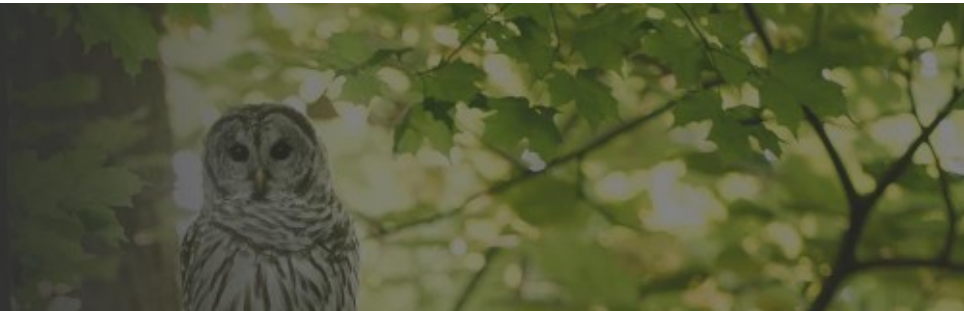
# Possible Implementations

- 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
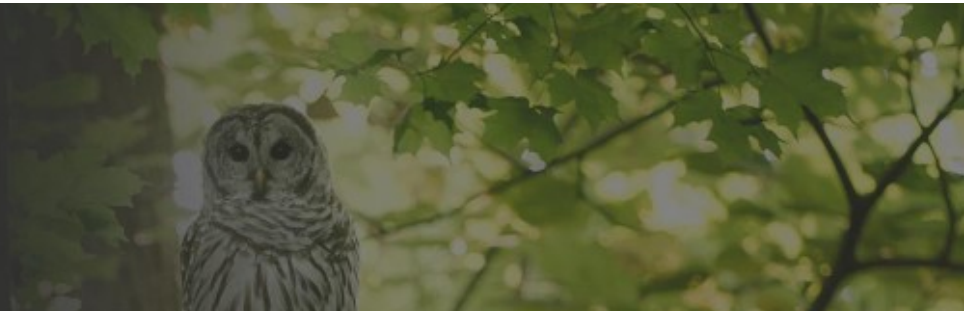
Nagios Core

- ## **Website GUI Dashboard for Monitoring**

  - Quickly and easily identify hosts & services by using groups

  - Turn off & acknowledge alert notifications
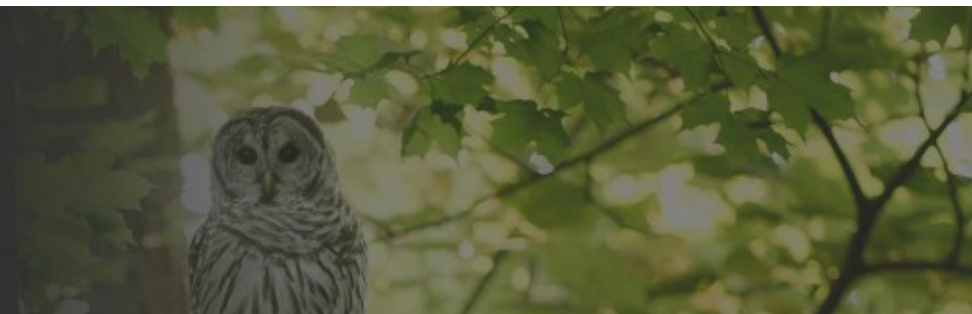
  - View logs & alert history

Example Host Group

Example Service Group

Nagios Core

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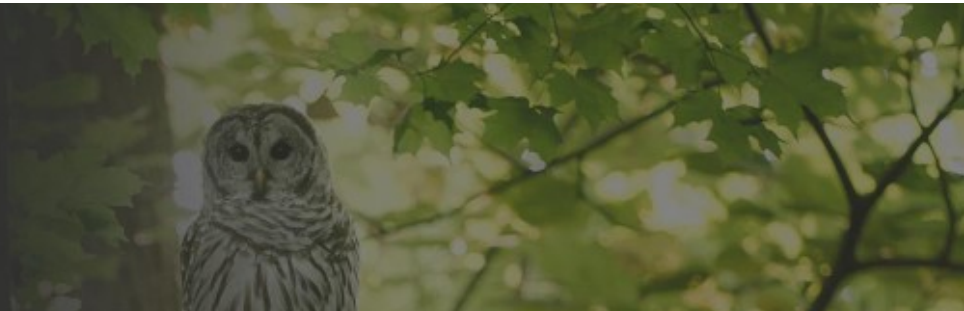
Nagios Core

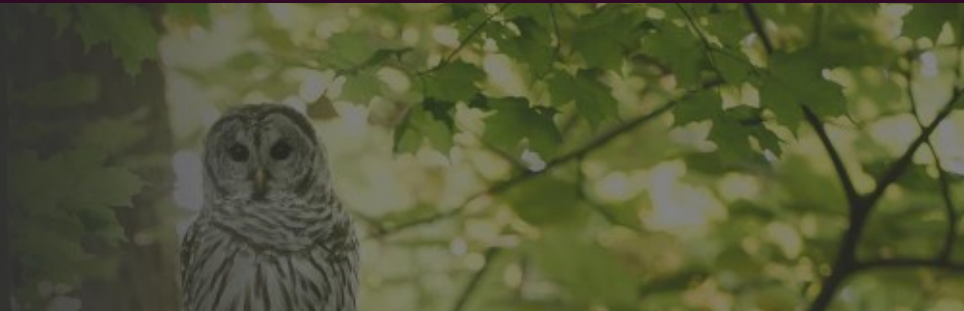## Example Host Definition:

```
define host       {
        host_name                      myers.developcents.com      ; The name of this host template
        alias                          Myers
        address                        ████████████
        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
}
```
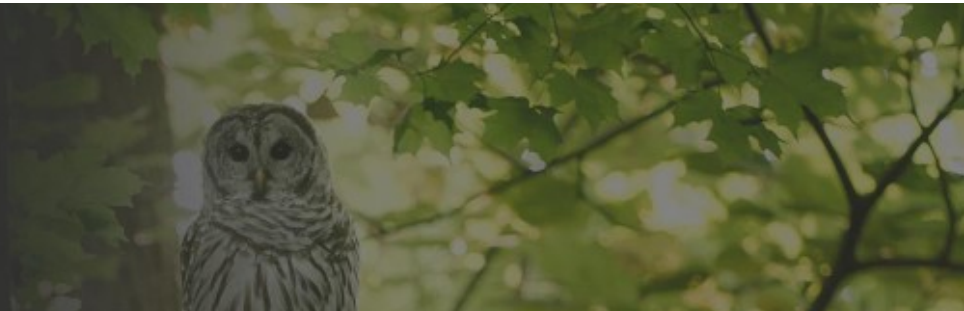
Example Service Group Definition:

```
define servicegroup{
        servicegroup_name         MyersURLS
        alias                     URLs on Myers
}
```
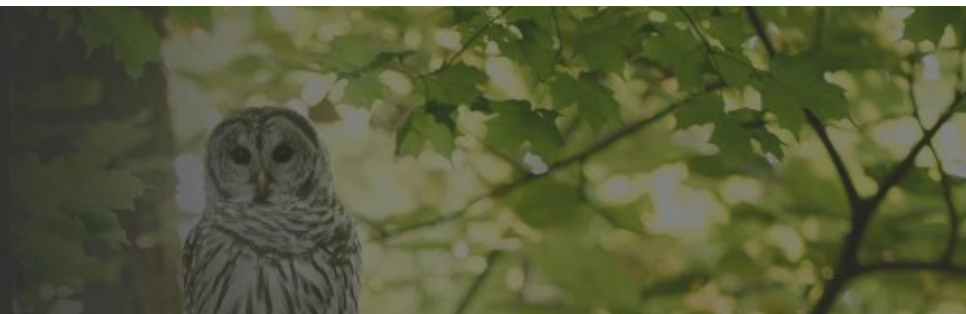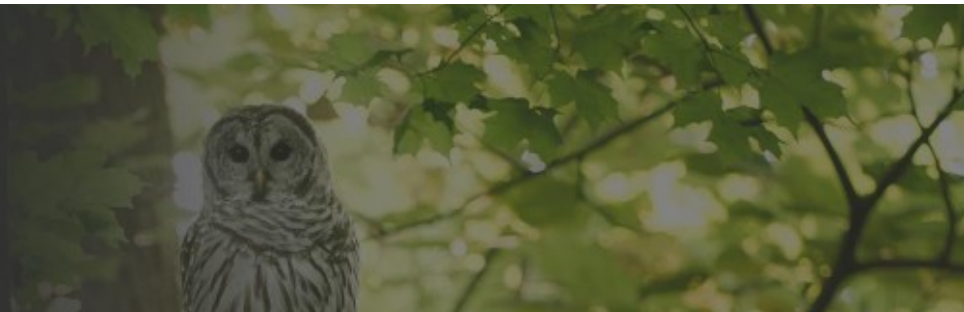
Nagios Add-on: **NRPE**

- **N**agios **R**emote **P**lugin **E**xecutor

- Nagios monitors a remote system using scripts located on that remote system

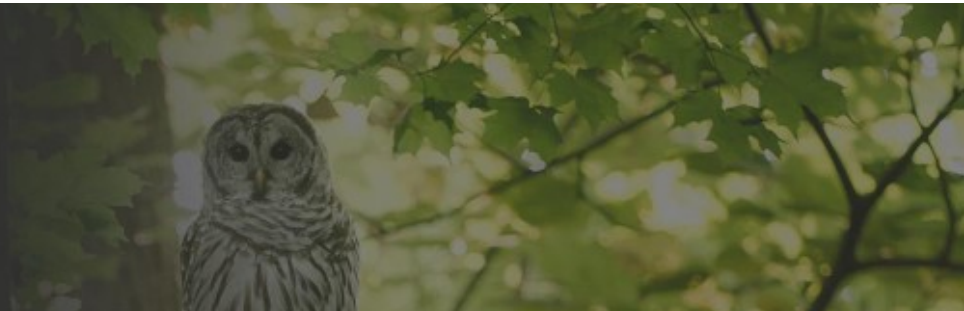 - Secure, private connection, monitoring private resources

Nagios Add-on: **NRDP**

- **N**agios **R**emote **D**ata **P**rocessor

- 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/

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