Passive Monitoring Solutions
For Remote Networks

Scott Wilkerson

swilkerson@nagios.com
Topics

- Difficulties with Remote Networks
- Firewall Challenges
- Types of Monitoring Active vs. Passive
- Possible Solutions
  - Nagios Remote Data Sender (NRDS)
  - Nagios Reflector
- Q & A / Discussion
Difficulties with Remote Networks

- **Active Checks**
  - Need Access through Firewall
    - Port forwarding
    - Multiple levels of NAT/firewall to go through
    - What port goes to which system?
    - What about Laptops with Dynamic IP?

- **Passive Checks**
  - Every monitoring change requires updating config and plugin on each machine monitored
  - Nagios server need to be reachable from remote system
Pitfalls with Remote Networks
Unlocking The Power of Passive Monitoring With NRDS
What the heck is NRDS?

- Nagios
- Remote
- Data
- Sender

NRDS
Nagios Remote Data Sender
Key Benefits of NRDS

- Central Configuration
  - Deploy once
  - Automatic updates
- Plugin Deployment
  - All plugins on one server
- Shared Configurations
  - Change config, deploy to all
  - Including needed plugins!
- Multiple Platforms and Architecture
How do(es) NRDS work?

The #1 programmer excuse for legitimately slacking off:
“MY CODE’S COMPILING.”

Hey! Get back to work!

Compiling!

Oh. Carry on.
What Makes NRDS tick?

- Primarily Nagios XI
  - NRDP (NRDS adds on to NRDP)
  - NRDS Config Manager Component
  - Plugin Cache in /usr/local/nrdp/plugins
  - Easy Addition Using XI's Unconfigured Objects

- Could be used with Core
  - Still need NRDP
  - Need to modify configs manually

- Client-side
  - Cron/Scheduled Tasks
  - *nix/Mac OS/X version use bash & curl/wget
NRDS
Nagios Remote Data Sender

Cron

nrds_updater.sh

Checks Nagios NRDP Server to
download nrds.cfg file and needed plugins

nrds.sh

send_nrdp.sh

If can’t be sent
Store for resend

Nagios NRDP

Config holds:
URL
Token
Checks to run

nrds.cfg file can be retrieved from server
along with plugins

Store files unable to
send
Pros & Cons of Passive Checks

Advantages

- No Need to Open Firewalls to Clients
- Reduce Nagios Server Load
- Central Config Management
- Central Plugin Management
- Easy setup, no compiling on every server

Disadvantages

- Nagios doesn't control when checks happen
- Some plugins have pre-reqs
- Nagios server needs to be accessible from remote system
Pros & Cons of Passive Checks

NRDS Links

- Pre-installed in Nagios XI 2012
- Component Download
- Passive Monitoring with NRDS Documentation
- Tutorial
Using the New Nagios Reflector to Monitor Remote Machines
What is the Nagios Reflector?

- Just Released

- Nagios Enterprise Hosted Results
  - Clients send data to Reflector
  - Nagios server Utilizes new check_reflector.py plugin to collect results via SSL HTTP

- Useful for Core and Nagios XI
  - Can accept NRDP or NSCA data
  - Zero Firewall setup, all connections outbound

- Conference attendees are the first people allowed access to Nagios Reflector
MySQL Backend

Reflector

Reflector

Reflector

Reflector Cluster

Nagios Reflector is a custom NRDP/NSCA server which needs to create API key for each Nagios server

Nagios makes an outbound SSL HTTP request to collect results

Client sends check results outbound via NRDP or NSCA

Remote Client

Firewall

Firewall

Nagios

Received token validated requests via custom NRDP server on https or NSCA with token pre-pended to host
Pros & Cons of Nagios Reflector

- **Advantages**
  - No Need to Open Firewalls (either)
  - Reduce Nagios Server Load
  - Works with dynamic IP assignments
  - Can pull data to multiple Nagios Servers
  - Integration with NRDS (Roadmap)

- **Disadvantages**
  - Nagios doesn't control when checks happen
  - Clients & Nagios need Internet Access
  - Some data is sent to remote network
Pros & Cons of Nagios Reflector

Reflector Links

- https://reflector.nagios.com
- Using Nagios Reflector with Nagios XI
- Using Nagios Reflector with Nagios Core
- Nagios XI Reflector Wizard
- Reflector Plugin
Contact Us

- **Hours of operation**: 9am - 5pm CST, Monday – Friday
- **Phone**: U.S.: 1-888-624-4671 ♦ International: +1-651-204-9102
- **Fax**: U.S.: 651-204-9103 ♦ International: +1-651-204-9103
- **Email**: sales@nagios.com
- **Mail**: Nagios Enterprises, LLC
  P.O. Box 8154
  Saint Paul, MN 55108
- **Websites**:
  - [http://www.nagios.org/](http://www.nagios.org/)
Thank you!

Additional Questions?