

Nagios XI - Receiving IPv6 SNMP Traps

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Overview

This KB article explains how to configure Nagios XI to receive SNMP Traps that come in via IPv6 ([Internet Protocol version 6](#)).

It is a requirement to have already followed this guide to install all the SNMP Trap pre-requisites:

[Documentation - How to Integrate SNMP Traps With Nagios XI](#)

Editing Files

In many steps of this article you will be required to edit files. This documentation will use the **vi** text editor. When using the vi editor:

- To make changes press **i** on the keyboard first to enter insert mode
- Press **Esc** to exit insert mode
- When you have finished, save the changes in vi by typing **:wq** and press Enter

Configure SNMPTRAPD

These steps configure `snmptrapd` to listen for IPv6 traps.

Establish an SSH session to your Nagios XI server as a root user.

Edit the `/etc/snmp/snmptrapd.conf` file and add the following line:

```
snmpTrapdAddr      udp:162,udp6:162
```

Save and close the file.

Now restart the SNMPTRAPD service:

RHEL 6 | CentOS 6 | Oracle Linux 6

```
service snmptrapd restart
```

RHEL 7 | CentOS 7 | Oracle Linux 7 | Debian | Ubuntu 16/18

```
systemctl restart snmptrapd.service
```

Ubuntu 14

```
service snmpd restart
```

Firewall Rules

You will also need to add a firewall rule allow IPv6 SNMP Traps using one of the commands below:

RHEL 6 | CentOS 6 | Oracle Linux 6

```
ip6tables -I INPUT -p udp --destination-port 162 -j ACCEPT
service ip6tables save
```

RHEL 7 | CentOS 7 | Oracle Linux 7

```
firewall-cmd --zone=public --add-port=162/udp
firewall-cmd --zone=public --add-port=162/udp --permanent
```

Debian

```
iptables -I INPUT -p udp --destination-port 162 -j ACCEPT
```

Ubuntu

```
ufw allow proto udp from any to any port 162
ufw reload
```

At this point your Nagios XI server will listen for SNMP IPv6 traps (as well as IPv4).

Update snmptraphandling.py Script

There is currently a bug in how the [Net-SNMP](#) libraries spool these received IPv6 traps. In brief, the side affects of this bug are:

- The IPv6 address is not formatted correctly
- `snmptrapd` is not able to resolve this address to a DNS record
- `snmptt` is not able to resolve this address to a DNS record
- This causes the address submitted to Nagios XI as a passive check result to be an incorrect address

Full details about the bug are reported here:

[#2704 IPv6 Trap addresses not processed correctly](#)

Without going into too much detail about the bug, lets compare the address in an IPv4 trap compared to an IPv6 trap:

- IPv4
 - `localhost.localdomain`
 - This was submitted as `127.0.0.1` but has been resolved, which is fine
- IPv6
 - UDP/IPv6: `:::1:50618`
 - The address should be `:::1` and if it was able to, it could have been resolved to a DNS record

Once the trap is spooled, it is processed by `snmptt` (SNMP Trap Translator).

Processed traps are submitted to Nagios using the EXEC statement, which executes the `/usr/local/bin/snmptraphandling.py` script and passes on the address value.

The following modifications to the `snmptraphandling.py` script allow:

- The corrected IPv6 address to be resolved to a DNS record, hence allowing the passive check result to correctly target the host object in Nagios
- If it's not able to be resolved to a DNS object, the correctly formatted IPv6 address will be submitted in the passive check result

Edit the file

```
/usr/local/bin/snmptraphandling.py
```

Change this:

```
host = sys.argv[1]
```

To this:

```
host = sys.argv[1]
if host.startswith("UDP/IPv6"):
    try:
        import socket
        host = socket.gethostbyaddr(sys.argv[1].partition('[')[-1].rpartition(')')[0])[0]
        #host = host.partition('.')[0]
    except:
        host = sys.argv[1].partition('[')[-1].rpartition(')')[0]
```

This line here:

```
host = socket.gethostbyaddr(sys.argv[1].partition('[')[-1].rpartition(')')[0])[0]
```

Will result in something like `myserver.mydomain.local`

If you uncomment this line:

```
#host = host.partition('.')[0]
```

The object will be the short version `myserver`

Final Thoughts

For any support related questions please visit the [Nagios Support Forums](#) at:

<http://support.nagios.com/forum/>

Posted by: **tlea** - Thu, Apr 28, 2016 at 1:50 AM. This article has been viewed 3460 times.

Online URL: <https://support.nagios.com/kb/article/nagios-xi-receiving-ipv6-snmp-traps-499.html>