NRDP – Overview

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Purpose

This document describes how to install, configure, and use the NRDP (Nagios Remote Data Processor) addon with either Nagios Core or Nagios XI.

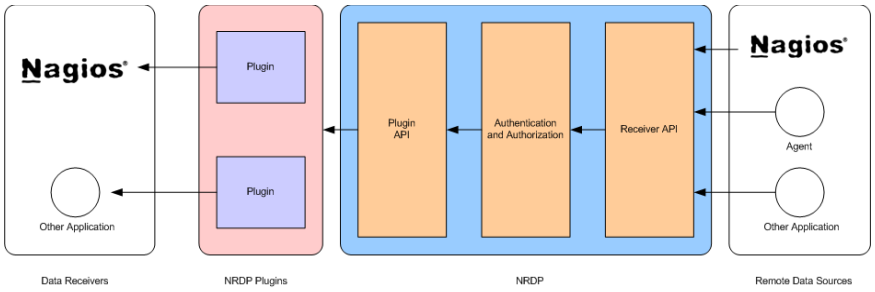
Target Audience

This document is intended for use by Nagios Administrators.

About NRDP

NRDP is designed to be a flexible data transport mechanism and processor for Nagios.

It is designed with a simple and powerful architecture that allows for it to be easily extended and customized to fit individual users' needs.



Capabilities

NRDP has the capability of allowing remote agents, applications, and Nagios instances to submit commands and host and service check results to a Nagios server. This allows Nagios administrators to use NRDP to configure distributed monitoring, passive checks, and remote control of their Nagios instance in a quick and efficient manner.

The capabilities for NRDP can be extended through the development of additional NRDP plugins.

Benefits Over NSCA

The NSCA (Nagios Service Check Acceptor) addon has historically been the addon of choice for Nagios administrators that need to establish data feeds or passive check transmission between Nagios installations. The NRDP addon allows administrators to migrate from using NSCA to NRDP fairly easily.

Updated – February, 2017

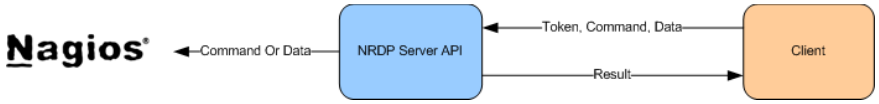
NRDP has several benefits over NSCA, including:

- Uses standard ports and web protocols, which means that firewall configuration and client development is simplified
- Uses the Apache web server to provide optional SSL encryption and authentication
- Supports multi-line host and service check output
- NRDP writes check output directly to the Nagios Core spool directory, bypassing the external command file for increased performance

How It Works

Submit Request

A remote client submits a request to the NRDP server API. The client needs to submit:



- A valid token that has been authorized in the NRDP server config file
- The command it is asking the NRDP server to process
- Data associated with the command

Verify

NRDP verifies the token and passes the client's request to the appropriate NRDP plugin.

Process

An NRDP plugin processes the client's request and submits data to Nagios or another application.

Return Result

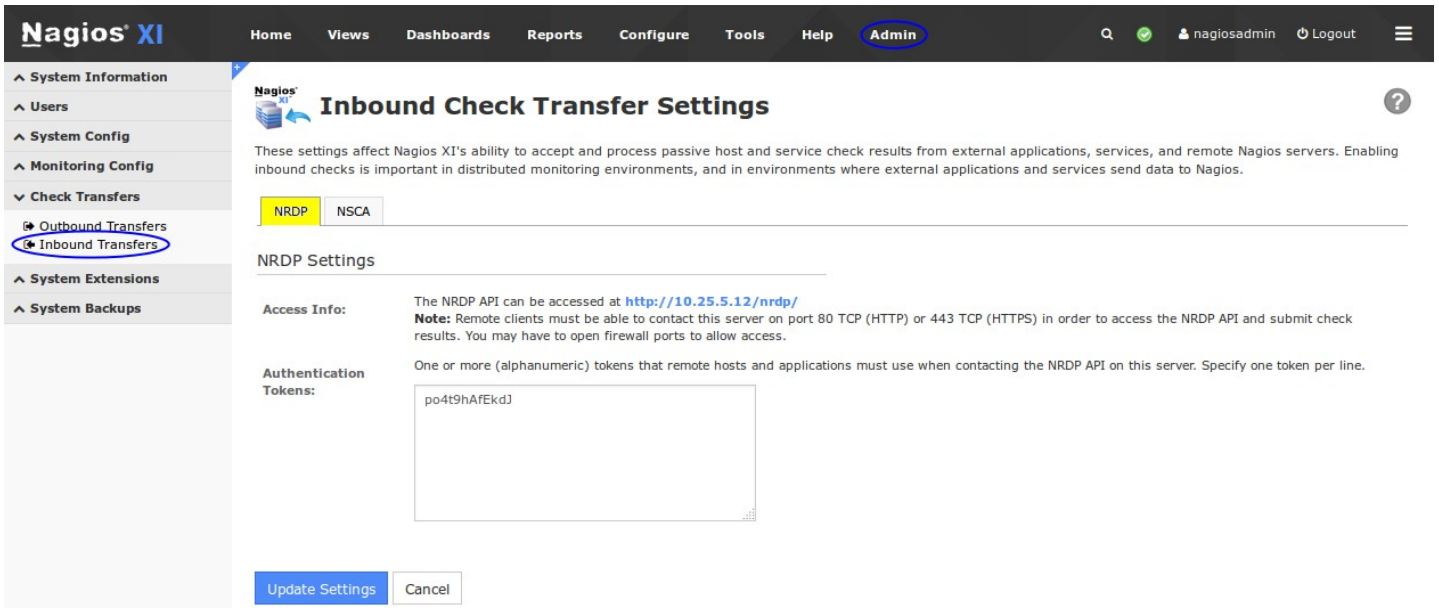
NRDP returns result information to the client in XML format.

NRDP In Nagios XI

NRDP is already installed in Nagios XI. To configure NRDP navigate to **Admin** > **Check Transfers** > **Inbound Transfers**.

The only configuration setting required is to defined Authentication Token(s) on the server. By default a randomly generated token is already defined in Nagios XI. You can define as many tokens as you require. The token is what the client uses to authenticate with NRDP on the Nagios XI server. You can use the same token on all your clients, or you could defined a different token for each client. Defining a different token for each client allows you to revoke access at a later date by removing the token, but it also adds an extra level of administration.

This screenshot shows NRDP in Nagios XI.



NRDP In Nagios Core

The latest version of NRDP can be obtained from GitHub:

https://github.com/NagiosEnterprises/nrdp/releases

To install NDRP please follow these steps.

NOTE: These steps are not required if you have Nagios XI, NRDP is already installed on Nagios XI.

Establish a terminal session to your Nagios Core server as the root user.

Download and unpack the NRDP package in the `/tmp` directory:

```
cd /tmp
wget https://github.com/NagiosEnterprises/nrdp/archive/1.4.0.tar.gz
tar xzf 1.4.0.tar.gz
```

Create an installation directory for NRDP:

```
mkdir /usr/local/nrdp
```

Copy the NRDP files to the installation directory:

```
cd nrdp-1.4.0
cp -R * /usr/local/nrdp/
```

Set permissions on NRDP directory/files:

```
chown -R nagios:nagios /usr/local/nrdp
```

Edit the NRDP server config file:

```
vi /usr/local/nrdp/server/config.inc.php
```

When using the vi editor, to make changes press ***i*** *on the keyboard first to enter insert mode. Press* ***Esc*** *to exit insert mode.*

Add at least one token string to the **`$cfg['authorized_tokens']`** variable. Example:

```
$cfg['authorized_tokens'] = array(
        "asd7fjk3l34",
        "df23m7jadI34",
);
```

You can define as many tokens as you require. The token is what the client uses to authenticate with NRDP on the Nagios Core server. You can use the same token on all your clients, or you could defined a different token for each client. Defining a different token for each client allows you to revoke access at a later date by removing the token, but it also adds an extra level of administration.

When you have finished, save the changes in vi by typing:

```
:wq
```

and press Enter.

Copy the Apache configuration file for NRDP.

```
cp nrdp.conf /etc/httpd/conf.d
```

Optionally edit the `/etc/httpd/conf.d/nrdp.conf` file to configure settings as you need to restrict access by address or enable SSL or basic authentication.

The NRDP server has now been installed, restart Apache to finish the installation:

```
service httpd restart
```

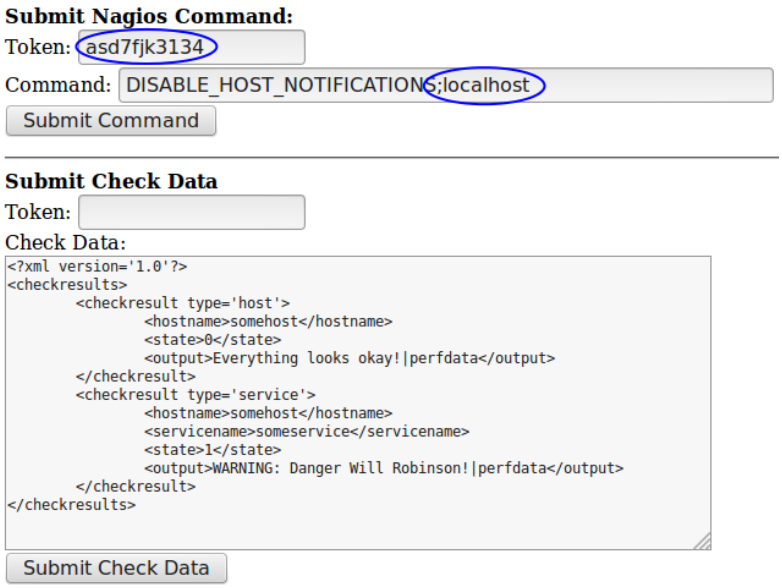
Testing The NRDP API

Once you install NRDP, you can test the NRDP server API by accessing:

```
http://<ipaddress>/nrdp
```

where *<ipaddress>* is the IP address of your Nagios XI or Nagios Core server.

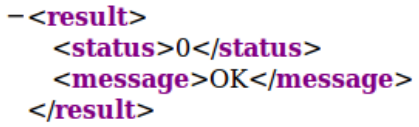
The API test page will allow you to submit either a command or one or more host and service checks to Nagios.



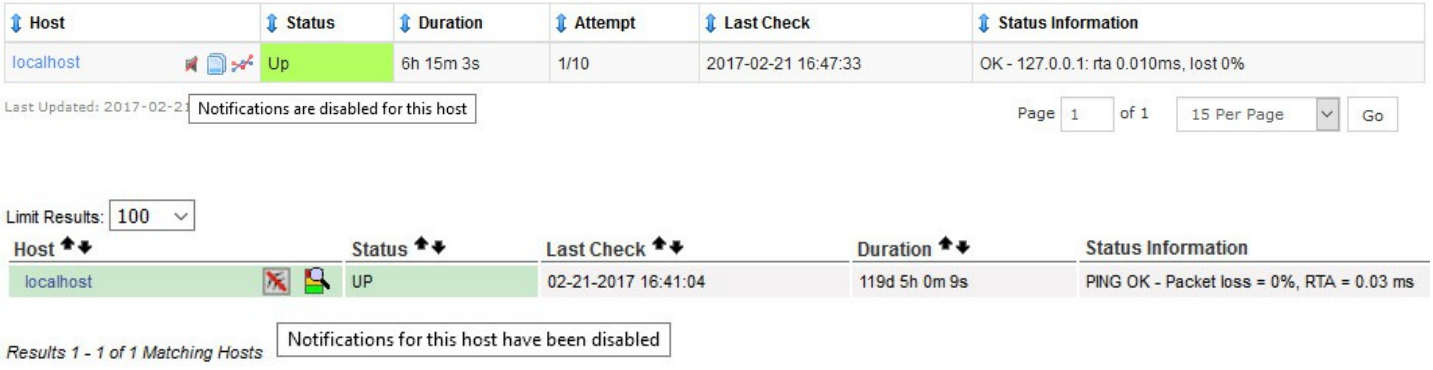
Note: You must enter a valid token in order to use the API. Use a token that you defined in Nagios XI Inbound Transfers OR in Nagios Core in the **`$cfg['authorized_tokens']`** variable in the NRDP server config file `config.inc.php`.

In the screenshot above you can see that under **Submit Nagios Command,** the **Token** has been provided and in the **Command** field the **localhost** object is being targeted.

Once you click the **Submit Command** button the screen will refresh with a result of the command in XML.



When you check the status in Nagios XI or Nagios Core you will see that notifications are now disabled:



Using The NRDP Client

A basic client is distributed with the NRDP addon. After NRDP is installed, you will find a `send_nrdp.php` client located on your Nagios server at the following location:

```
/usr/local/nrdp/clients/send_nrdp.php
```

You can distribute this standalone client to remote Linux servers that you want to submit check results or send commands from. The client requires that PHP be installed on the server the client runs from.

You can execute the client without command arguments to get usage information:

```
/usr/bin/php /usr/local/nrdp/clients/send_nrdp.php
```

The output from the client will show you the available options. Example:

```
send_nrdp - NRDP Host and Service Check Client
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Usage: /usr/local/nrdp/clients/send_nrdp.php --url=<url> --token=<token> --host=<hostname> [--
service=<servicename>] --state=<state> --output=<output>

   <url>           = The URL used to access the remote NRDP agent.
   <token>         = The secret token used to access the remote NRDP agent.
   <hostname>      = The name of the host associated with the passive host/service check result.
   <servicename> = For service checks, the name of the service associated with the passive check
result.
   <state>         = An integer indicating the current state of the host or service.
   <output>        = Text output to be sent as the passive check result.  Newlines should be encoded
with encoded newlines (\n).

Send a passive host or service check result to a remote Nagios instance using the NRDP agent.
```

An example usage of the client to send a passive check result to an NRDP server running at IP address 192.168.1.5 is as follows:

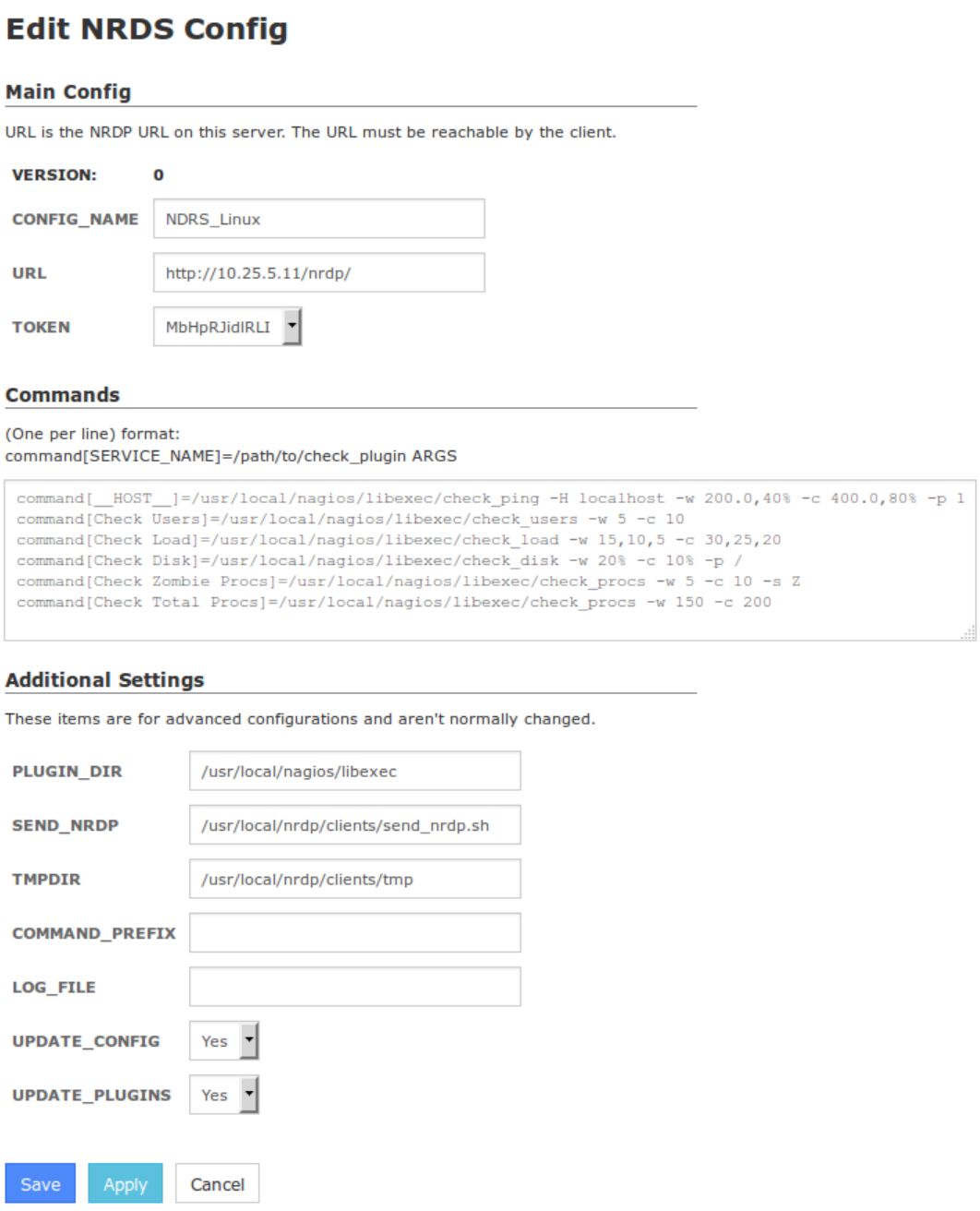
```
/usr/bin/php /usr/local/nrdp/clients/send_nrdp.php --url=http://192.168.1.5/nrdp --token=sometoken
--host=somehost --service=someservice --state=0 --output="The service looks okay"
```

NRDP – Overview

In Nagios XI you can use the NRDS Config Manager to extend the capabilities of the NRDP client. A summary of NRDS is as follows:

- Nagios Remote Data Sender (NRDS) allows you to create config files to be distributed to remote clients.
- The clients will process the checks passively at the interval specified when installed.
- Any modifications to the config will be picked up by the clients using that configuration.
- Additionally any plugins needed by the remote machine will be downloaded every time the configuration changes.

Here is an example screenshot of a NRDS config:



Please refer to the following documentation for more detailed information on NRDS:

https://assets.nagios.com/downloads/nagiosxi/docs/Passive_Monitoring_with_NRDS.pdf

Final Thoughts

If you have any issues with installing, configuration or using NRDP, please post your questions on the Nagios Support Forum at

https://support.nagios.com/forum/