



## Purpose

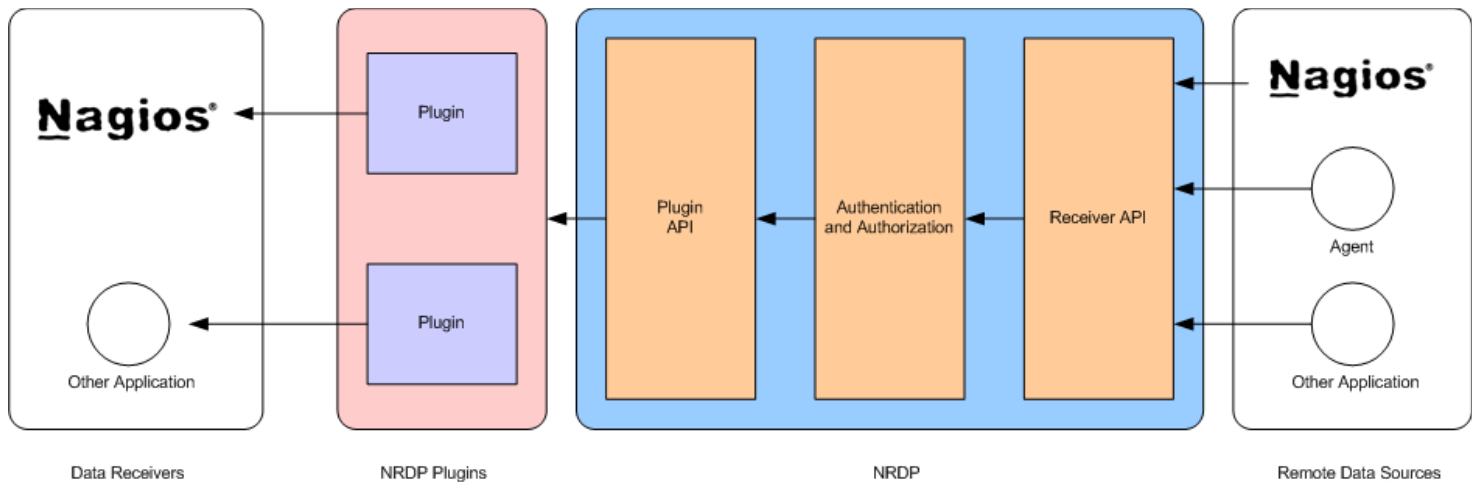
This document describes how to install, configure, and use the Nagios Remote Data Processor (NRDP) addon with either Nagios Core or Nagios XI.

## 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, built on top of web technologies which are becoming a more popular transport mechanism. It is designed with a simple and powerful architecture that allows for it to be easily extended and customized to fit individual users' needs.



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.

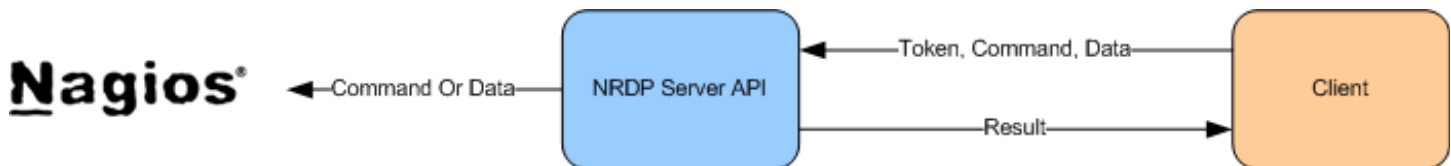
## Benefits Over NSCA

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

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 screenshot shows the Nagios XI web interface. The top navigation bar includes 'Home', 'Views', 'Dashboards', 'Reports', 'Configure', 'Tools', 'Help', and 'Admin' (circled). The left sidebar has a menu with 'System Information', 'Users', 'System Config', 'Monitoring Config', 'Check Transfers' (expanded), 'System Extensions', and 'System Backups'. Under 'Check Transfers', 'Outbound Transfers' and 'Inbound Transfers' (circled) are visible. The main content area is titled 'Inbound Check Transfer Settings'. It includes a description: 'These settings affect Nagios XI's ability to accept and process passive host and service check results from external applications, services, and remote Nagios servers. Enabling inbound checks is important in distributed monitoring environments, and in environments where external applications and services send data to Nagios.' Below this are two tabs: 'NRDP' (selected) and 'NSCA'. The 'NRDP Settings' section contains:
 

- Access Info:** The NRDP API can be accessed at <http://10.25.5.12/nrdp/>. **Note:** Remote clients must be able to contact this server on port 80 TCP (HTTP) or 443 TCP (HTTPS) in order to access the NRDP API and submit check results. You may have to open firewall ports to allow access.
- Authentication Tokens:** One or more (alphanumeric) tokens that remote hosts and applications must use when contacting the NRDP API on this server. Specify one token per line. A text area contains the token 'po4t9hAfEkdJ'.

 At the bottom are 'Update Settings' and 'Cancel' buttons.

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.

## NRDP In Nagios Core

The latest version of NRDP can be obtained from GitHub:

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

To install NRDP please refer to the following KB article, it contains detailed instructions for many operating systems:

<https://support.nagios.com/kb/article/nrdp-installing-nrdp-from-source.html>

## 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.

### Submit Nagios Command:

Token:

Command:

### Submit Check Data

Token:

Check Data:

```
<?xml version='1.0'?>
<checkresults>
  <checkresult type='host'>
    <hostname>somehost</hostname>
    <state>0</state>
    <output>Everything looks okay!|perfdato</output>
  </checkresult>
  <checkresult type='service'>
    <hostname>somehost</hostname>
    <servicename>someService</servicename>
    <state>1</state>
    <output>WARNING: Danger Will Robinson!|perfdato</output>
  </checkresult>
</checkresults>
```

**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' ]` array 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.

```
-<result>
  <status>0</status>
  <message>OK</message>
</result>
```

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

Host	Status	Duration	Attempt	Last Check	Status Information
localhost	Up	6h 15m 3s	1/10	2017-02-21 16:47:33	OK - 127.0.0.1: rta 0.010ms, lost 0%

Last Updated: 2017-02-21

Notifications are disabled for this host

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Limit Results: 100

Host	Status	Last Check	Duration	Status Information
localhost	UP	02-21-2017 16:41:04	119d 5h 0m 9s	PING OK - Packet loss = 0%, RTA = 0.03 ms

Results 1 - 1 of 1 Matching Hosts

Notifications for this host have been disabled

## Using The NRDP Client

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

```
/usr/local/nrdp/clients/
```

You can distribute this standalone client to remote Linux servers that you want to submit check results or send commands from. The client you choose to use is entirely up to you, they each provide the same basic functionality.

Detailed examples on how to use each one of these clients can be found in the following KB article:

[https://support.nagios.com/kb/article/nrdp-send\\_nrdp-client.html](https://support.nagios.com/kb/article/nrdp-send_nrdp-client.html)

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

- 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:

[Nagios XI - Passive Monitoring With NRDS](#)

## Edit NRDS Config

### Main Config

URL is the NRDP URL on this server. The URL must be reachable by the client.

**VERSION:** 0

**CONFIG\_NAME**

**URL**

**TOKEN**

### Commands

(One per line) format:

command[SERVICE\_NAME]=/path/to/check\_plugin ARGS

```
command[HOST_PING]=/usr/local/nagios/libexec/check_ping -H localhost -w 200.0,40% -c 400.0,80% -p 1
command[Check Users]=/usr/local/nagios/libexec/check_users -w 5 -c 10
command[Check Load]=/usr/local/nagios/libexec/check_load -w 15,10,5 -c 30,25,20
command[Check Disk]=/usr/local/nagios/libexec/check_disk -w 20% -c 10% -p /
command[Check Zombie Procs]=/usr/local/nagios/libexec/check_procs -w 5 -c 10 -s Z
command[Check Total Procs]=/usr/local/nagios/libexec/check_procs -w 150 -c 200
```

### Additional Settings

These items are for advanced configurations and aren't normally changed.

**PLUGIN\_DIR**

**SEND\_NRDP**

**TMPDIR**

**COMMAND\_PREFIX**

**LOG\_FILE**

**UPDATE\_CONFIG**

**UPDATE\_PLUGINS**

## Finishing Up

This completes the overview of NRDP.

If you have additional questions or other support related questions, please visit us at our Nagios Support Forums:

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

The Nagios Support Knowledgebase is also a great support resource:

<https://support.nagios.com/kb>