

The Industry Standard in IT Infrastructure Monitoring

Purpose

This document describes how to passively monitor Windows hosts using NRDS_Win. NRDS_Win is a lightweight client which can process Nagios plugins and pass back check results. This passive agent sends results back to Nagios over port 80 (HTTP) or port 443 (HTTPS). This is advantageous for situations where Nagios can't reach the hosts you wish to monitor because of firewall rules, but the host is able to contact Nagios. Passive monitoring is very scalable since all check processing is done by the clients, sending back only results.

NRDS_Win also has the ability to automatically update its configuration and plugins. All configurations are centrally managed by the NRDS configuration manager making administration of large environments a snap. You can also use NRDS_Win as a NRDP sender if you're using Nagios Core and not utilizing the config administration capability.

Target Audience

This document is intended for use by Nagios XI Administrators who want to setup passive agent monitoring using NRDS_Win.

Configuring NRDP Inbound Transfers

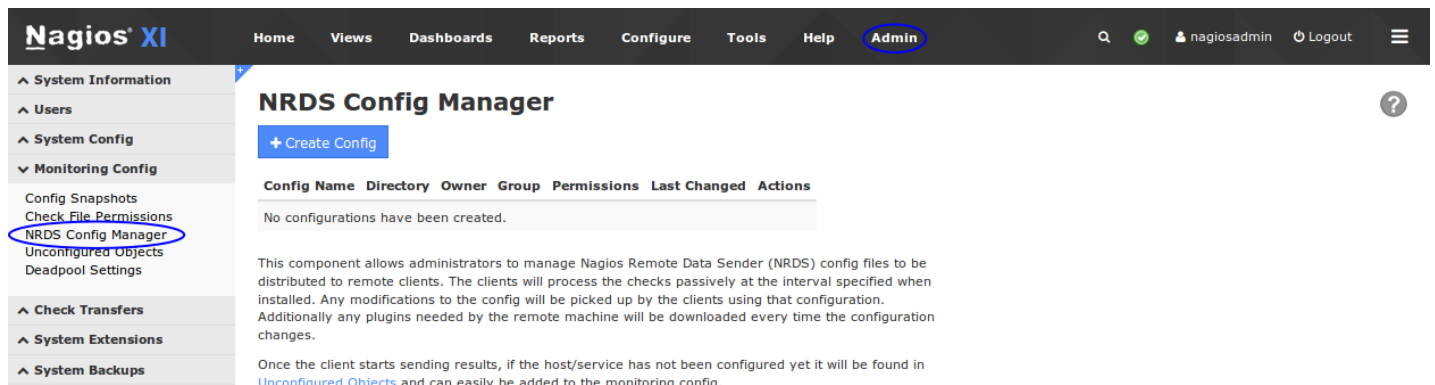
Before you can receive passive check results from NRDS agents you need to configure NRDP Inbound Transfers. This can be done by navigating to **Admin > Check Transfers > Inbound Transfers**.

Please refer to the following documentation **Configuring Inbound Checks** for detailed steps on configuring NRDP:

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

Using NRDS Config Manager

To use the NRDS config manager navigate to **Admin > Monitoring Config > NRDS Config Manager**.



Adding Configuration

Click the **Create Config** button, select the desired **Operating System** (in this example we will be using **Windows**) and then click Next.

Create NRDS Config

Operating System

You will be presented with the **Edit NRDS Config** screen which will be pre-populated with some defaults.

Main Config

The **CONFIG_NAME** field is a name used to identify this config. Your remote clients will be requesting the config with this name, so once you deploy the clients you should not change the name of the config (otherwise you'll need to manually update the name of the configs on each client).

The **URL** field should be your NRDP server URL and this URL must be accessible from the client machines. It should be correctly populated by Nagios XI, however it can be changed if required.

The **TOKEN** drop down list will have a choice of valid tokens that have been set up in the NRDP server. You will have done this when you configured Inbound Transfers under **Admin > Check Transfers**.

Note: If you need to change your token on the NRDP server, it would be advised to add the new token to the NRDP server, then change it in the NRDS configs. Allow enough time for all of your client machine to connect and download the new config before removing the old token from the NRDP server.

Commands

The commands are the checks you would like the client to run every time NRDS_Win is scheduled to run, the results will be returned to the Nagios server.

They are listed one per line in the following format:

```
command[SERVICE_NAME]=$PLUGIN_DIR$\plugin_to_run ARGS
```

One special **SERVICE NAME** is `__HOST__` and this will be used to specify the HOST check, whereas all other checks will be identified by whatever is in place of **SERVICE NAME**.

Additional Settings

The settings here should only need to be changed for custom setups.

PLUGIN_DIR - The plugin location on the client machine.

This location is substituted for `$PLUGIN_DIR$` when the checks are run.

SEND_NRDp - *Not used by NRDS_Win*

TMPDIR - *Not used by NRDS_Win*

COMMAND_PREFIX - *Not used by NRDS_Win*

LOG_FILE - The location on the client machine where the log file will be stored.

IGNORE_SSL_CERTIFICATE_ERRORS - If you have enabled SSL on your Nagios XI server, you can submit checks back using SSL. If however you don't have a certificate authority defined for the client, you can choose to ignore certificate errors and check results will still be received

UPDATE_CONFIG - If set to yes, the clients will all update their config files when changes are made.

UPDATE_PLUGINS - If set to yes, the clients will download new plugins if defined in the config file and they don't currently have them downloaded.

Once you've completed making all the changes, click the **Save** button.

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__] = $PLUGIN_DIR$\check_winning.exe -H 127.0.0.1 --warning 200,40% --critical 400,80%
command[Processes] = $PLUGIN_DIR$\check_winprocess.exe --warning 40 --critical 50
command[CPU Load] = $PLUGIN_DIR$\check_cpu.ps1 -w 70 -c 90
command[Disk Space] = $PLUGIN_DIR$\check_pdm.exe --disk --drive C: -w 97.5 -c 99.5
command[Event Log] = $PLUGIN_DIR$\eventlog_nrpe_nt.exe -m 7200
command[Memory Usage] = $PLUGIN_DIR$\check_pdm.exe --memory -w 90 -c 99
command[Physical Memory Usage] = $PLUGIN_DIR$\check_pdm.exe --memory pagefile -w 80 -c 95
command[Services] = $PLUGIN_DIR$\service_nrpe_nt.exe "DNS Client"
```

Additional Settings

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

PLUGIN_DIR:

SEND_NRDp:

TMPDIR:

COMMAND_PREFIX:

LOG_FILE:

IGNORE_SSL_CERTIFICATE_ERRORS:

UPDATE_CONFIG:

UPDATE_PLUGINS:

Once the configuration is created it will now appear in the list:

Config Name	Directory	Owner	Group	Permissions	Last Changed	Actions
NRDS_Windows_64	configs	apache	nagios	rw-rw----	2016-12-14 11:24:53	

Actions

In the list of configs there are four icons in the actions column which are explained as follows:



Edit

Edit the existing config.



Client Install Instructions

Please refer to the following section which explains this.



Download Client

You can download a `.exe` file of the client with the configs.



Delete

This will remove the config, once deleted the clients will not longer be able to receive any updates.

Client Installation Instructions

By clicking on the Client Install Instructions you will be presented with the download file of the client that needs to be installed on every machine that will be using this configuration (as an administrator).

When you run the NRDS_Win.exe installer you'll notice it includes your **NRDP URL**, **Token** and **Configuration Name** already populated. If they are not, you will need to provide them yourself.

You'll also need to provide:

HOSTNAME - The name the client will send to the Nagios server as the host.

INTERVAL - The frequency in minutes that you want the checks to be run. (1-59)

NRDS_Win Installer Setup: Token and NRDP Address

Nagios Enterprises LLC
NRDS for Windows R4

NRDS Configuration

NRDP URL:

Token:

Configuration Name:

Host Name:

Time Interval: Minute(s)

Nullsoft Install System v2.46

< Back Next > Cancel

The install process will perform the following operations:

- Install NRDS client
- Create scheduled task
- Download plugins from NRDP server
- Send initial check results to Nagios

Once the client starts sending results, if the host/service has not been configured yet it will be found under **Admin > Monitoring Config > Unconfigured Objects**. From here the received check results can be used to create the required services using the Unconfigured Object wizard.

More information on the Unconfigured Objects and passive services can be found in the following documentation:

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

<https://assets.nagios.com/downloads/nagiosxi/docs/Configuring-Passive-Services-With-Nagios-XI.pdf>

Client Installation Alternatives

Below are two alternative methods for installing the NRDS_Win, however they are not covered in this document.

You can download the latest NRDS_Win from exchange.nagios.org:

http://exchange.nagios.org/directory/Addons/Passive-Checks/NRDS_win/details

If you're using an automated deployment tool, you can install using the silent install line:

```
NRDS_WinR3-64.exe /S /NRDP="http://2.3.5.7/nrdp" /TOKEN=token /CONFIG=Windows64 /HOST=Callisto /INTERVAL=5
```

Plugins

Any plugins you want to run on the client machines should be loaded into the appropriate plugin sub-directory on the Nagios XI server.

The base location is:

```
/usr/local/nrdp/plugins
```

Plugins should be placed in the folder that best matches their OS, then architecture of the machine. NRDS will search for the best available plugin by searching in the following order:

```
/usr/local/nrdp/plugins/$OS$/$ARCH$/$OS_VER$
```

```
/usr/local/nrdp/plugins/$OS$/$ARCH$
```

```
/usr/local/nrdp/plugins/$OS$
```

```
/usr/local/nrdp/plugins/Generic/$ARCH$  
/usr/local/nrdp/plugins/Generic  
/usr/local/nagios/libexec
```

This allows the same config to deliver plugins specific to different OS/architecture.

The Nagios Exchange (<https://exchange.nagios.org/>) includes a listing of thousands of useful plugins which can be integrated with Nagios XI. Here is an example of downloading the following two plugins as an example.

1. Powershell plugin for checking for installed applications
2. Vbscript plugin for returning information about what configuration the client is running

Open a terminal session to your Nagios XI server as the root user. Change directories to where your plugins are stored by executing the following command:

```
cd /usr/local/nrdp/plugins/Windows/
```

Download the plugins from exchange executing the two commands:

```
wget https://exchange.nagios.org/directory/Plugins/Software/check_NRDS_config/visit -O  
check_NRDS_config.vbs
```

```
wget https://exchange.nagios.org/directory/Plugins/Operating-  
Systems/Windows/check_windows_app_installs/visit -O check_windows_app_installs.ps1
```

Change the permissions and owner of the downloaded files:

```
chmod +x check_NRDS_config.vbs  
chmod +x check_windows_app_installs.ps1  
chown nagios:nagios check_NRDS_config.vbs  
chown nagios:nagios check_windows_app_installs.ps1
```

```
[root@xi-r5x-x86 ~]# cd /usr/local/nrdp/plugins/Windows/  
[root@xi-r5x-x86 Windows]# wget https://exchange.nagios.org/directory/Plugins/Software/check_NRDS_config/visit -O che  
ck_NRDS_config.vbs  
2016-12-14 11:55:08 (1.64 MB/s) - `check_NRDS_config.vbs' saved [2597/2597]  
[root@xi-r5x-x86 Windows]# wget https://exchange.nagios.org/directory/Plugins/Operating-Systems/Windows/check_windows  
_app_installs/visit -O check_windows_app_installs.ps1  
2016-12-14 11:55:21 (2.00 MB/s) - `check_windows_app_installs.ps1' saved [2699/2699]  
[root@xi-r5x-x86 Windows]# chmod +x check_NRDS_config.vbs  
[root@xi-r5x-x86 Windows]# chmod +x check_windows_app_installs.ps1  
[root@xi-r5x-x86 Windows]# chown nagios:nagios check_NRDS_config.vbs  
[root@xi-r5x-x86 Windows]# chown nagios:nagios check_windows_app_installs.ps1
```

NRDS Config Manager

[+ Create Config](#)

Config Name	Directory	Owner	Group	Permissions	Last Changed	Edit	ns
NRDS_Windows_64	configs	apache	nagios	rw-rw----	2016-12-14 11:24:53		

This component allows administrators to manage Nagios Remote Data Sender (NRDS) 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.

Once the client starts sending results, if the host/service has not been configured yet it will be found in [Unconfigured Objects](#) and can easily be added to the monitoring config.

Navigate to **Admin > Monitoring Config > NRDS Config Manager**.

Click the **edit** icon under **Actions** for the config that you want to add the plugins to.

Add the following check commands to your config via the **Command** text box:

```
command[NRDS_config_ver] = $PLUGIN_DIR$\check_nrds_config.vbs "..\config.ini" "settings" "CONFIG_VERSION"
command[delta_install] = $PLUGIN_DIR$\check_windows_app_installs.ps1
```

Here is the updated configuration which will be downloaded and run by all clients:

```
command[__HOST__] = $PLUGIN_DIR$\check_winning.exe -H 127.0.0.1 --warning 200,40% --critical 400,80%
command[Processes] = $PLUGIN_DIR$\check_winprocess.exe --warning 40 --critical 50
command[CPU Load] = $PLUGIN_DIR$\check_cpu.ps1 -w 70 -c 90
command[Disk Space] = $PLUGIN_DIR$\check_pdm.exe --disk --drive C: -w 97.5 -c 99.5
command[Event Log] = $PLUGIN_DIR$\eventlog_nrpe_nt.exe -m 7200
command[Memory Usage] = $PLUGIN_DIR$\check_pdm.exe --memory -w 90 -c 99
command[Physical Memory Usage] = $PLUGIN_DIR$\check_pdm.exe --memory pagefile -w 80 -c 95
command[Services] = $PLUGIN_DIR$\service_nrpe_nt.exe "DNS Client"
command[NRDS_config_ver] = $PLUGIN_DIR$\check_nrds_config.vbs "..\config.ini" "settings" "CONFIG_VERSION"
command[delta_install] = $PLUGIN_DIR$\check_windows_app_installs.ps1
```

Once the client downloads the plugins and starts sending back check results you'll need to create the required services using the Unconfigured Object wizard (**Admin > Monitoring Config > Unconfigured Objects**).

Troubleshooting With NRDS_Debug.log

To verify that NRDS_Win has successfully sent the service check data to Nagios XI, you can check the NRDS_Debug.log file. The default location is C:\Program Files\Nagios\NRDS_Win\logs but you can change the log directory and file name by editing the LOG_FILE setting specified in the NRDS config.

```

1 token=v707ptkvfrf8&cmd=submitcheck&XMLDATA=<?xml version='1.0'?><checkres
2 </output></checkresult><checkresult type='service' checktype='1'><hostnam
3 </output></checkresult><checkresult type='service' checktype='1'><hostnam
4 </output></checkresult><checkresult type='service' checktype='1'><hostnam
5 <result>
6   <status>0</status>
7   <message>OK</message>
8   <meta>
9     <output>7 checks processed.</output>
10  </meta>
11 </result>

```

The screen to the right shows that Nagios has sent information back saying that all 7 included checks have completed.

If NRDS_Debug.log doesn't exist, verify the windows scheduled was created successfully and is running.



Name	Status	Triggers	Next Run Time
GoogleUpdat...	Ready	At 10:29 AM every day	6/20/2012 10:29:00 AM
GoogleUpdat...	Ready	At 10:29 AM every day - After triggered, repeat every 1 hour for a duration of 1 day.	6/19/2012 1:29:00 PM
NRDS_win	Ready	At 9:18 AM on 5/21/2012 - After triggered, repeat every 5 minutes indefinitely.	

Finishing Up

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

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