# Restarting Windows Services With NRPE For Nagios XI 2024

## Purpose

This document describes how to restart services in Windows using Nagios XI with NSClient++ via NRPE. This allows you to automate the process of restarting Windows Services. This document is intended for use by Nagios XI Administrators who want to automate starting, stopping, and restarting of Windows Services. A basic knowledge of NSClient++ and NRPE is recommended.

## Prerequisites

It is required you have NSClient++ installed, and NRPE configured on the Windows machine you intend to use for this task. NSClient++ must also be configured to allow NRPE checks from the Nagios server. This guide focuses on NSClient++ version 0.4.x and newer. Information on installing and configuring NSClient++ can be found in the following documents:

- Installing The Nagios XI Windows Agent
- Configuring The Nagios XI Windows Agent
- Enabling The NRPE Listener In NSClient_0.4.x

## Create A Batch File to Restart the Service

On your windows machine open Notepad and paste in the following code:

```
@echo off
net stop %1
net start %1
@exit 0
```

Once completed, save it as a batch file called restart_service.bat in your NSClient++ scripts directory (create the directory if it doesn't exist):

```
C:\Program Files\NSClient++\scripts\
```

The %1 argument is the name of the service, this will be received from an event handler which will be created later in this document.

## Configure NSClient++

Open C:\Program Files\NSClient++\nsclient.ini in Notepad and navigate to the [/settings/external scripts/scripts] section (if the section does not exist you will also need to add it).

```
[/settings/external scripts/scripts]
restart_service = scripts\restart_service.bat "$ARG1$"
```

Add the following line:

```
restart_service = scripts\restart_service.bat "$ARG1$"
```

Also, verify that allow `arguments = true` is configured. If this variable is not set correctly, you will not be able to pass arguments to your scripts and the `restart_service.bat` script will not work. This must be configured in BOTH sections:

```
[/settings/NRPE/server]
[/settings/external scripts]
```

Save the `nsclient.ini` file.

| Name | Description | Status | Startup Type | Log On As |
|---|---|---|---|---|
| Network Connected Devices ... | Network Co... | | Manual (Trigg... | Local Service |
| Network Connection Broker | Brokers con... | Running | Manual (Trigg... | Local System |
| Network Connections | Manages ob... | Running | Manual | Local System |
| Network Connectivity Assist... | Provides Dir... | | Manual (Trigg... | Local System |
| Network List Service | Identifies th... | Running | Manual | Network Se... |
| Network Location Awareness | Collects and ... | | Manual | Network Se... |
| Network Setup Service | The Network... | Running | Manual (Trigg... | Local System |
| Network Store Interface Serv... | This service ... | Running | Automatic | Local Service |
| NPSMSvc_18e754 | <Failed to R... | Running | Manual | Local System |
| NSClient++ Monitoring Age... | Monitoring ... | Running | Automatic | Local System |
| NVIDIA Display Container LS | Container se... | Running | Automatic | Local System |
| NVWMI | NVWMI Pro... | Running | Automatic | Local System |
| Offline Files | The Offline ... | | Manual (Trigg... | Local System |
| OpenSSH Authentication Ag... | Agent to hol... | | Disabled | Local System |
| Optimize drives | Helps the co... | | Manual | Local System |
| P9RdrService_18e754 | Enables trig... | | Manual (Trigg... | Local System |
| Parental Controls | Enforces par... | | Manual | Local System |
| Payments and NFC/SE Mana... | Manages pa... | | Manual (Trigg... | Local Service |
| Peer Name Resolution Proto... | Enables serv... | | Manual | Local Service |
| Peer Networking Grouping | Enables mul... | | Manual | Local Service |
| Peer Networking Identity M... | Provides ide... | | Manual | Local Service |
| PenService_18e754 | Pen Service | | Manual (Trigg... | Local System |
| Performance Counter DLL H... | Enables rem... | | Manual | Local Service |
| Performance Logs & Alerts | Performance... | | Manual | Local Service |
| Phone Service | Manages th... | | Manual (Trigg... | Local Service |
| Plug and Play | Enables a co... | Running | Manual | Local System |

NSClient++ must now be restarted to pick up the changes. Open the **Services** console under **Administrative Tools**. If you cannot locate this, use `services.msc` to open the Services console.

Locate the **NSClient++** service.

Right click the **NSClient++** service and select **Restart**.

You can close the **Services** console as it's no longer required.

## Test The Command from The Nagios XI Server

Now we will test from the Nagios XI server that the command you just added to NSClient++ is working. This example is going to restart the spooler service as it is unlikely to cause any issues. Establish a terminal session to your Nagios XI server and execute the following command:

```
/usr/local/nagios/libexec/check_nrpe -H 10.25.14.3 -p 5666 -c
restart_service -a spooler
```


You can see from the screenshot that we received back the results from the **restart_service** command, it appears to be working.

## Create Event Handler Script

Next, we need to create a script that will be used by Nagios XI for the event handler. The script will be called `restart_service.sh` and will be in the `/usr/local/nagios/libexec/` directory on the Nagios XI server. Execute the following command:

```
vi /usr/local/nagios/libexec/restart_service.sh
```

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

Paste the code on the following page into the terminal session:

```
#!/bin/sh
case "$1" in
OK)
;;
```

```
WARNING)
;;
UNKNOWN)
;;
CRITICAL)
/usr/local/nagios/libexec/check_nrpe -H "$2" -p 5666 -c restart_service -a
"$3"
;;
Esac
exit 0
```

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

```
:wq
```

and press **Enter**.

Now execute the following commands to set the correction permissions:

### RHEL/Centos/Oracle

```
chown apache:nagios /usr/local/nagios/libexec/restart_service.sh
chmod 775 /usr/local/nagios/libexec/restart_service.sh
```

### Debian/Ubuntu

```
chown www-data:nagios /usr/local/nagios/libexec/restart_service.sh
chmod 775 /usr/local/nagios/libexec/restart_service.sh
```

You can now test the script works by executing the following command:

```
/usr/local/nagios/libexec/restart_service.sh CRITICAL 10.25.14.3 spooler
```

When the script is run, it receives three arguments which are referenced as $1, $2, $3 in the script.

$1 = The state of the service.

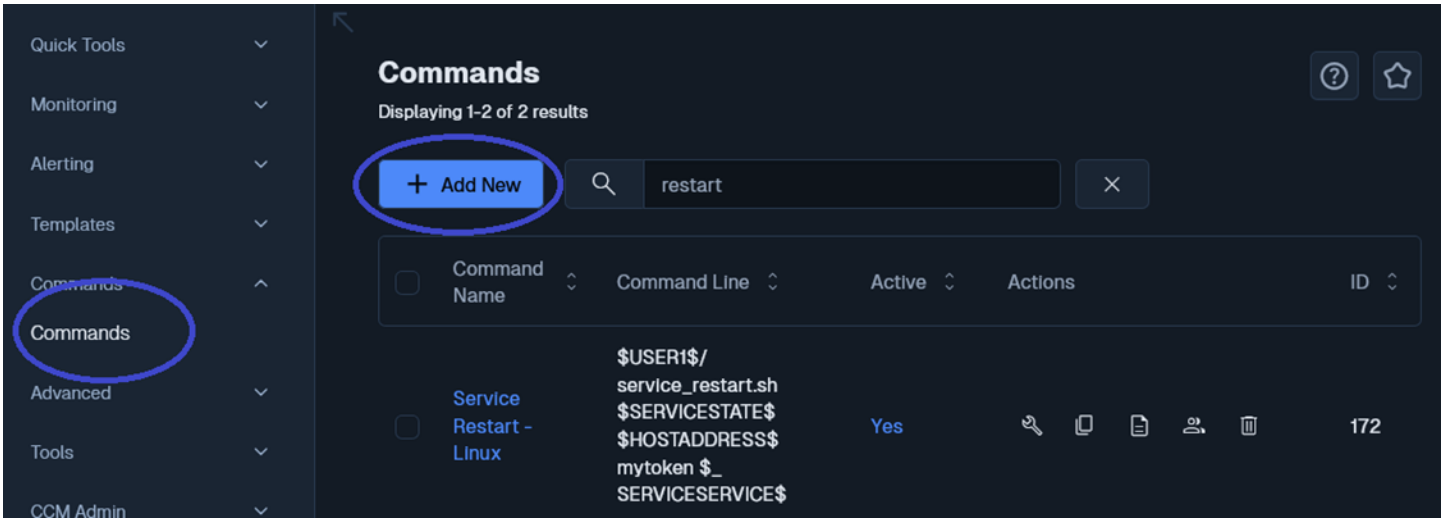
$2 = The host address of the Linux server.

$3 = The name of the service being restarted.

You can see from the script above that it's only when the service is in a CRITICAL state that the `service_restart` command will be executed.

## Create Event Handler

Now an event handler on the Nagios XI server will be created which will be used by your services.




1. Navigate to **Configure > Core Config Manager**.
2. Select **Commands** from the list on the left, click the **>_ Commands** link and then click the A**dd New** button.
3. You will need to populate the fields with the following values:

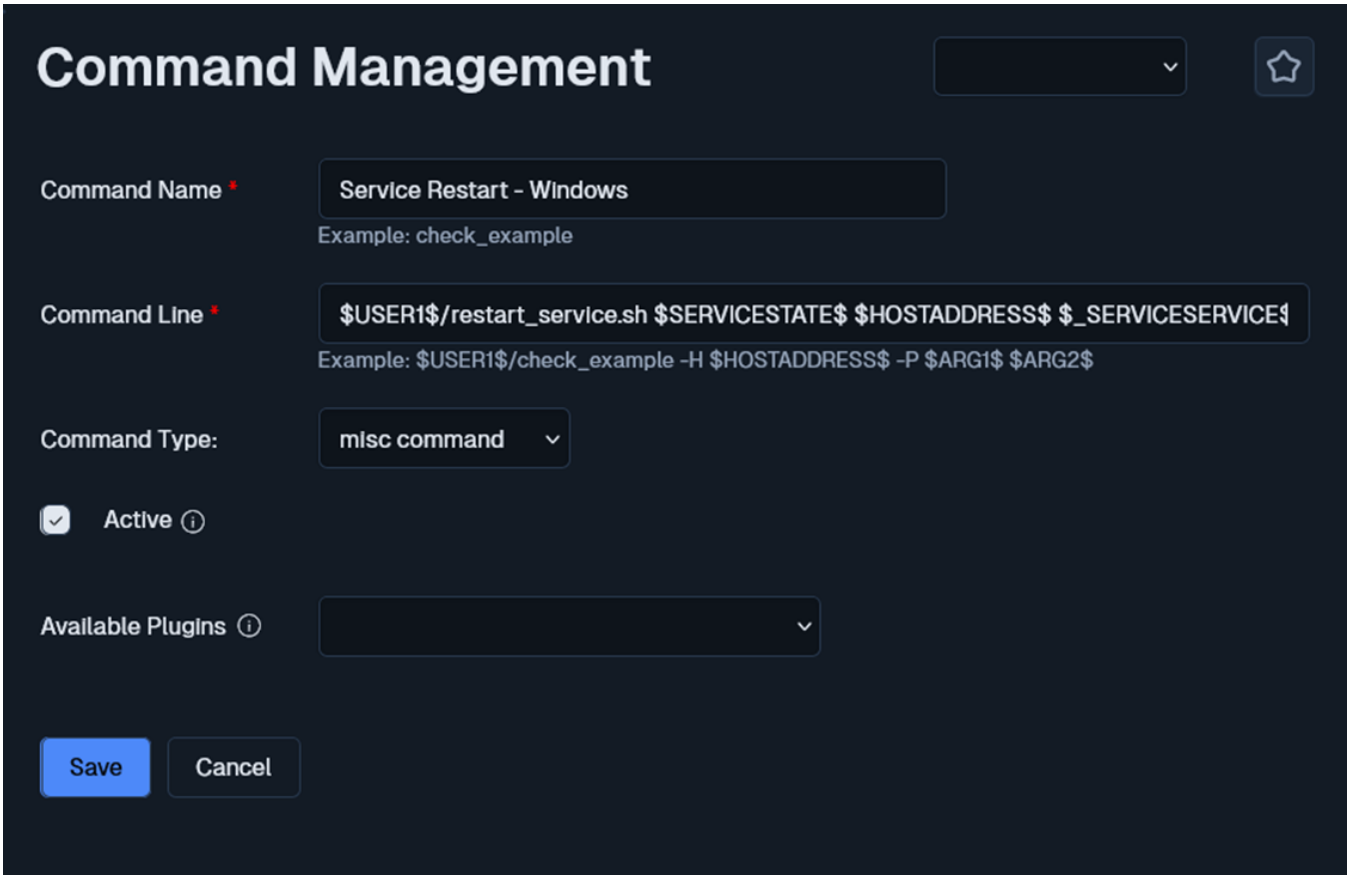
**Command**

```
Service Restart - Windows
```

**Command line**

```
$USER1$/restart_service.sh $SERVICESTATE$ $HOSTADDRESS$ $_SERVICESERVICE$
```

4. Check the **Active check** box.

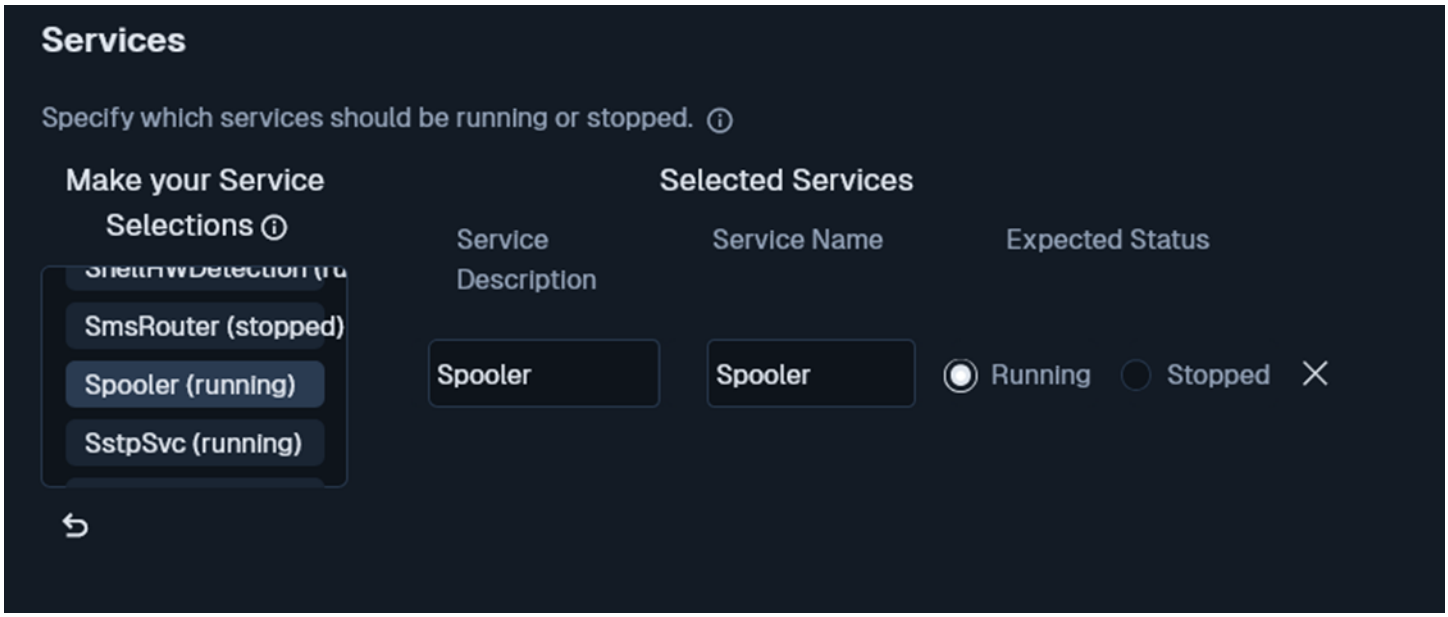



5. Click the **Save** button and then **Apply Configuration**.

## Adding a Service Check

Now we will need to create a Service using the Windows Server wizard. Navigate to **Configure** from the top menu of the Nagios XI web interface and select **Run a configuration wizard**.

Select **Windows Server** and click **Next**. Enter the IP address of the Windows Host you will be monitoring a service on and click **Next**.




On **Step 2** of the wizard, you need to add **spooler** under the **Windows Service** field and **Print Spooler** in the **Display Name** field.

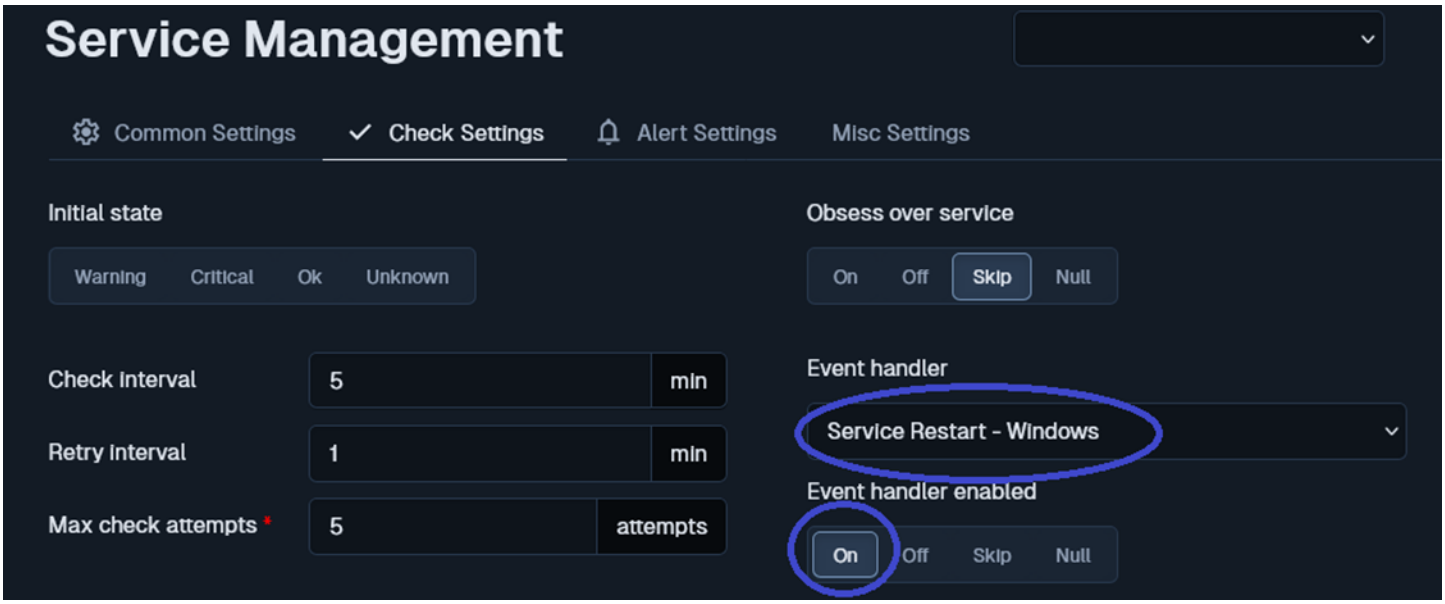
Finish the wizard to create the new service.

## Update Service with Event Handler

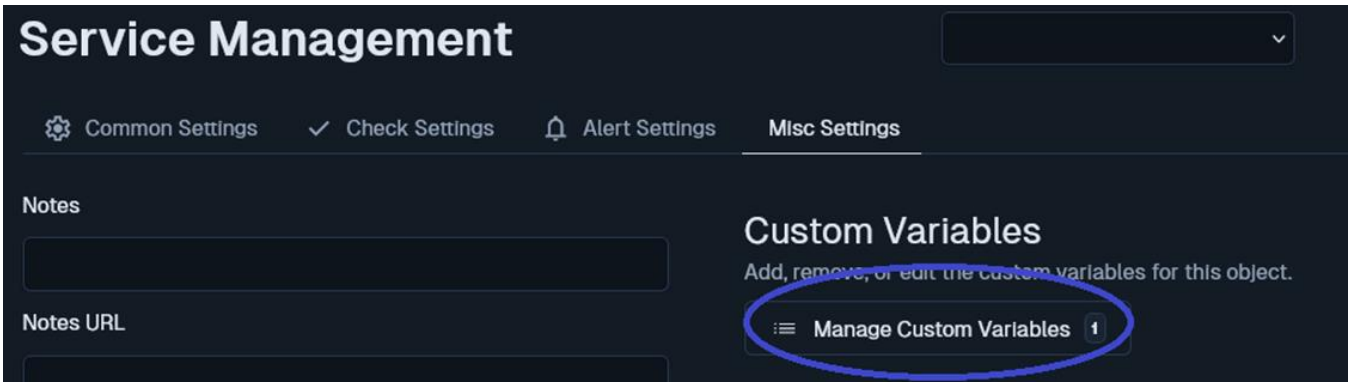
Now that the Nagios service is created, we need to do two things:

- Select **Event Handler**
- Add the name of the service we want to restart as a custom variable to the service object. This is how the event handler knows what the name of the service is to restart.

1. Navigate to **Configure > Core Config Manager > Monitoring > Services**.
2. Click the service **Print Spooler** to edit the service and then click the **Check Settings** tab.



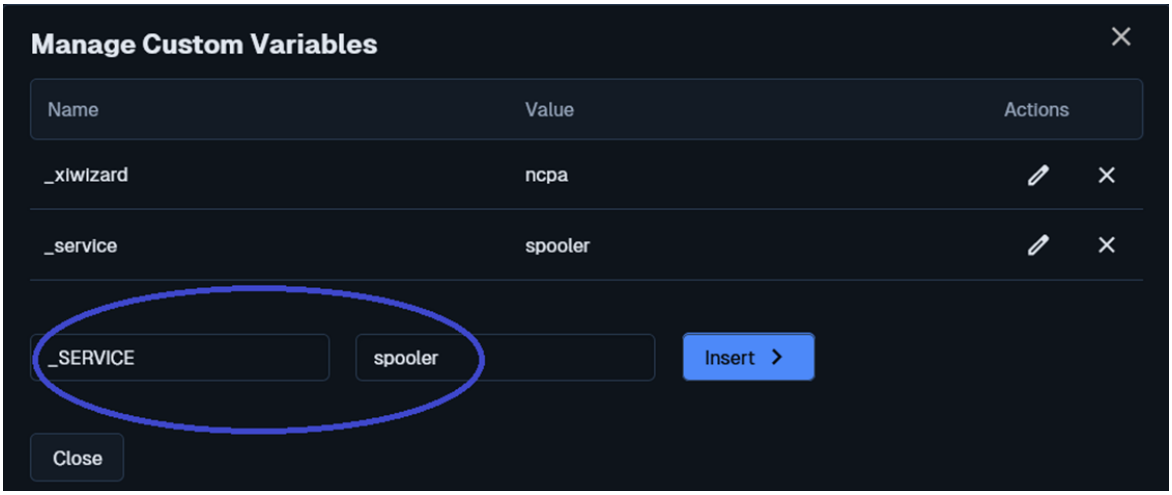

3. From the Event handler drop down list select the option **Service Restart - Windows**.
4. For Event handler enabled click **On**.
5. Click the **Misc Settings** tab and then click the **Manage Custom Variables** button.




6. We will be adding a custom variable so that the event handler knows the name of the service to restart.

```
Name:_SERVICE
Value: spooler
```

7. Click **Insert** and the variable will be added to the list on the right.




8. Click the **Close** button and then click the **Save** button. Click **Apply Configuration** for the changes to take effect.

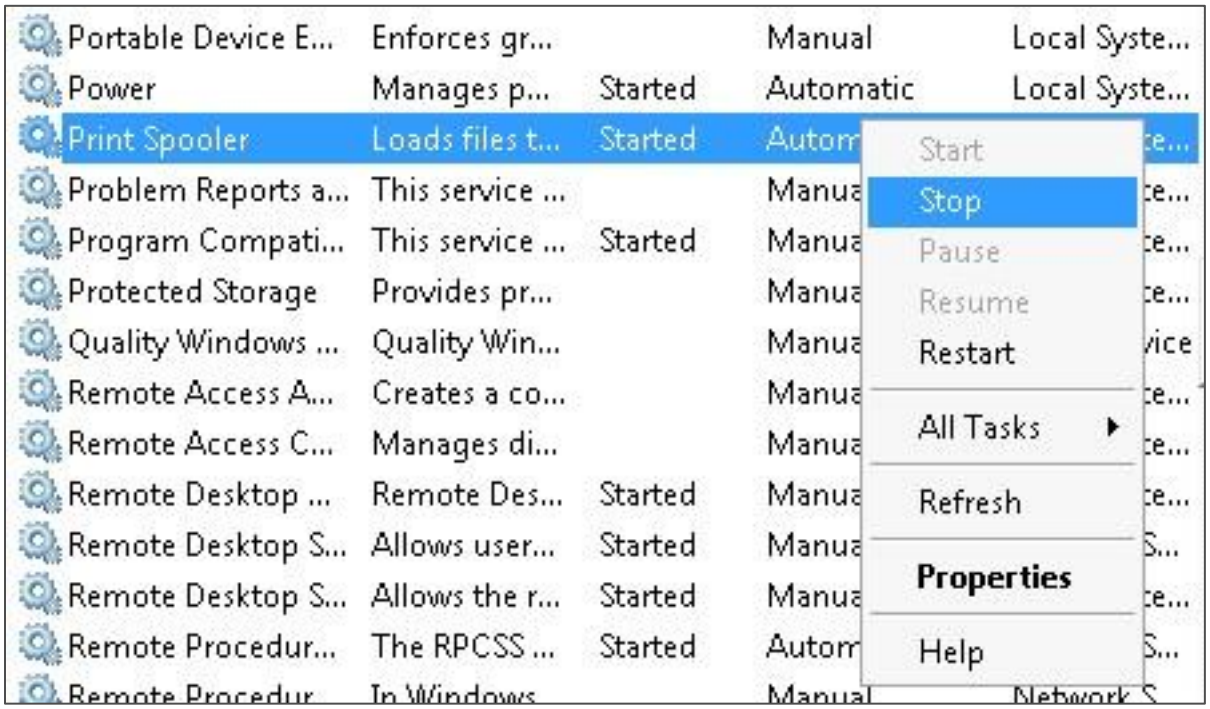
In the event handler command you created, you can see the macro `$_SERVICESERVICE$` was used. This is how a service macro is referenced by the Nagios Core engine. More information on custom variables can be found here:

https://assets.nagios.com/downloads/nagioscore/docs/nagioscore/4/en/customobjectvars.html

To test simply stop the **Print Spooler** service on the Windows machine.

Open the **Services** console under **Administrative Tools**.

Right click the **Print Spooler** service and select **Stop**.




Wait for the Nagios service to go to a critical state or force the next check.

Once the Nagios XI Print Spooler service is in a critical state the event handler will be executed, and the Windows Print Spooler service will be restarted. The next time Nagios XI checks the Print Spooler service it will return to an OK state as the Windows Print Spooler service will now be running.

## Troubleshooting

If the event handler does not appear to be working as expected, check the `/usr/local/nagios/var/nagios.log` file for any errors, for example:

```
[1481763272] SERVICE ALERT: 10.25.14.3;Print
Spooler;CRITICAL;SOFT;1;spooler:
Stopped
[1481763272] wproc: SERVICE EVENTHANDLER job 7 from worker Core Worker 12627
is a non-check helper but exited with return code 13
[1481763272] wproc:   early_timeout=0; exited_ok=1; wait_status=3328;
error_code=0;
```

```
[1481763272] wproc:   stderr line 01:
execvp(/usr/local/nagios/libexec/restart_service.sh, …) failed. Errno is 13:
Permission denied
```

In the log entries above you can see that the worker reported that it did not have permission to execute the `restart_service.sh` command.

## Finishing Up

This completes the documentation on Restarting Windows Services with NRPE for Nagios XI. If you have additional questions or other support-related questions, please visit us at our Nagios Support Forum, Nagios Knowledge Base, or Nagios Library:

Visit Nagios Support Forum  Visit Nagios Knowledge Base  Visit Nagios Library