How To Restart Services With NRPE In Nagios XI 5

Purpose

This document describes how to automatically restart problematic services on Linux servers using NRPE.

If you are restarting Linux services with NRPE in Nagios XI 2024, see Restarting Linux Services with NRPE in Nagios XI 2024

Prerequisites

You should already have the NRPE server configured on the Linux machine you would like to restart services on, please refer to the following documentation Installing: The Nagios XI Linux Agent

Background Information

In this guide you will be shown how to use an event handler to restart a service on a Linux server. This guide will be using a CentOS 6.x Linux server, which uses the command **service** to perform the service restart.

Configuring NRPE Command

First we'll create a command in the

```
/usr/local/nagios/etc/nrpe.cfg
```

file that will perform the restart command. Establish a terminal or SSH session to your Linux server as the root user and execute the following command:

```
vi /usr/local/nagios/etc/nrpe.cfg
```

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

Go to the end of the file by pressing Shift + G and add the following line:

```
command[service_restart]=sudo service $ARG1$ restart 2>&1
```

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

```
:wq
```


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and press **Enter**.

Remain logged into your Linux server as you'll need to perform more steps.

Granting NRPE Permission to Restart Services

The nagios user will also need to be granted permissions to execute the service command. Execute the following command as root to give NRPE permission to restart services:

```
echo "nagios ALL = NOPASSWD: `which service`" >> /etc/sudoers
```

It's very important to use the **back-tick** key on your keyboard around the `which service` words above, this key is commonly located to the left of the 1 key.

Testing the Commands from Nagios XI Server

Now we will test from the Nagios XI server that the command you just added to the NRPE client on the Linux server is working. This example is going to restart the crond 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 10.25.13.34 -p 5666 -c service_restart -a crond
```

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 `service_restart.sh` and will be located in the

```
/usr/local/nagios/libexec/
```

directory on the Nagios XI server. Execute the following command:

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

Paste the following into the terminal session:

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


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```
    ;;
        UNKNOWN)
    ;;
        CRITICAL)
/usr/local/nagios/libexec/check_nrpe -H "$2" -p 5666 -c service_restart -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:

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

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

```
/usr/local/nagios/libexec/service_restart.sh CRITICAL 10.25.13.34 crond
```

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.

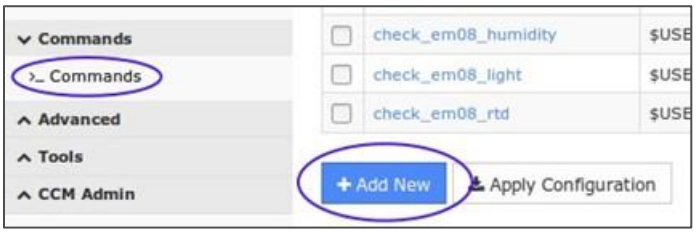
You can see from the script above that it's only when the service is in a **CRITICAL** state that the `service_restart` command will be executed.

Create Event Handler

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

Navigate to **Configure** > **Core Config Manager**.

Select **Commands** from the list on the left, click the **>_ Commands** link and then click the **Add New** button.



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You will need to populate the fields with the values on the following page:

Command Name

Service Restart - Linux

Command line

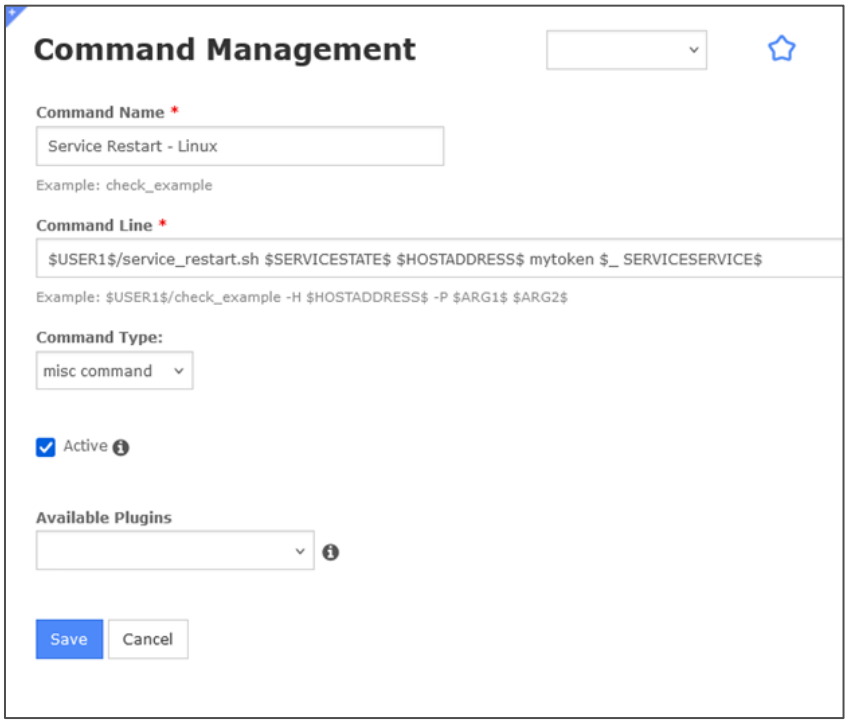
$USER1$/service_restart.sh $SERVICESTATE$ $HOSTADDRESS$ $_SERVICESERVICE$

Command type

misc command

Check the **Active** check box.

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

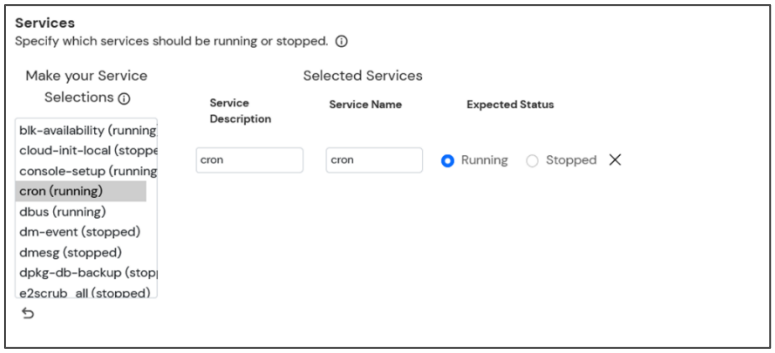


Adding a Service Check

Now we will need to create a Service using the Linux Server Monitoring Wizard. This guide will not go into the entire steps required, please refer to the steps in the following documentation: Monitoring Hosts Using NRPE

On **Step 2** of the wizard you need to select the **crond** service from the list of **Services**.

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.

Navigate to **Configure** > **Core Config Manager** > **Monitoring** > **Services**.

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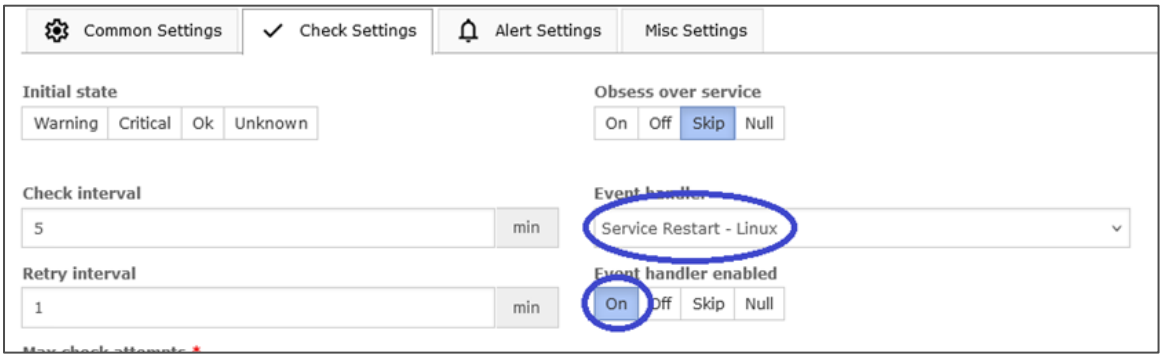
Click the service **Cron Scheduling Daemon** to edit the service.

Click the **Check Settings** tab.

From the **Event handler** drop down list select the option **Service Restart - Linux**.

For **Event handler enabled** click **On**.



Click the **Misc Settings** tab and then click the **Manage Custom Variables** button.

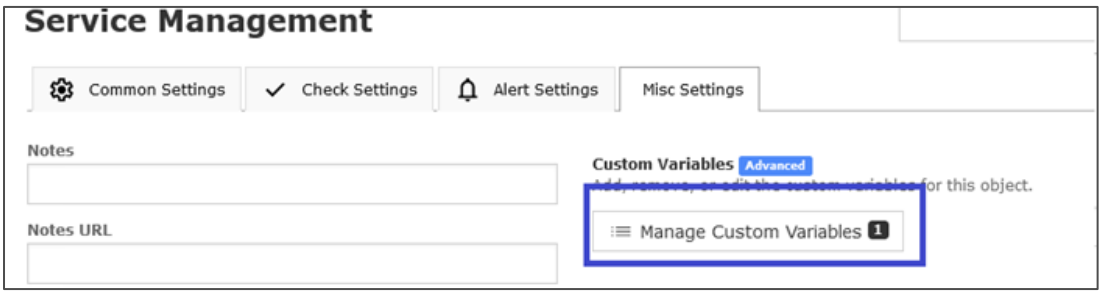
We will be adding a custom variable so that the event handler knows the name of the service to restart.

Name:

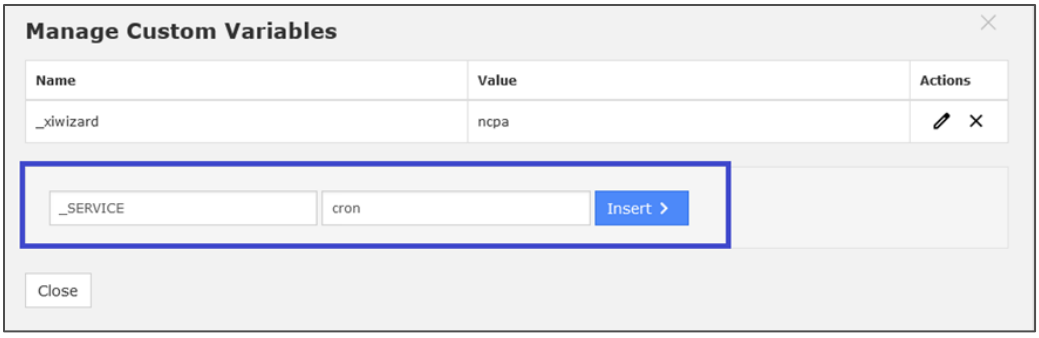
_SERVICE

Value:

crond



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



Click the **Close** button and then click the **Save** button.

Click **Apply Configuration** for the changes to take affect.

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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

Test

To test simply force the service to stop on the Linux machine. Execute the following command on your Linux machine:

```
service crond stop
```

Wait for the Nagios service to go to a critical state or force the next check. Once the Nagios XI **Cron Scheduling Daemon** service is in a critical state the event handler will be executed and the Linux **crond** service will be restarted. The next time Nagios XI checks the **Cron Scheduling Daemon** service it will return to an **OK** state as the Linux **crond** 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: 10.25.13.34;Cron Scheduling Daemon;CRITICAL;SOFT;1;crond is 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/service_restart.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 `service_restart.sh` command.

If the command returns *"NRPE: Unable to read output"* when run manually, make sure that NRPE command definition redirects stderr to stdout; i.e., change

```
command[service_restart]=sudo service $ARG1$ restart
```

to

```
command[service_restart]=sudo service $ARG1$ restart 2>&1
```


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Finishing Up

This completes the documentation on how to restart Linux services with NRPE in 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:

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