

How to Manage Plugins on your Nagios XI 5

Purpose

This document describes how to manage plugins on your Nagios XI 5 system, including: finding and installing new plugins, defining commands, and using them in your services. Plugins are how Nagios talks to the devices you monitor, they are instrumental to extending the functionality of Nagios XI.

If you are managing plugins with Nagios XI 2024, see [Managing Plugins in Nagios XI 2024](#).

Locate Your Plugin

There are thousands of community-created Nagios plugins available for download at the [Nagios Exchange](#).

You can also find instructions for creating your own plugin [here](#).

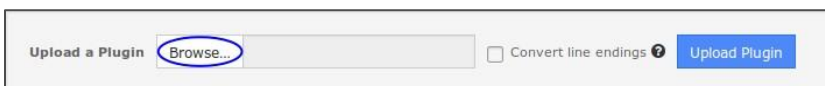
This guide is going to use the `countdown_to_date` plugin as the example in this documentation, it can be downloaded using the following [link](#).

Download the `countdown_to_date.zip` file and extract it. The `countdown_to_date.php` file that was in the zip file will be used in the next step.

Install Your Plugin

Installing a new plugin in Nagios XI is very simple. Navigate to **Admin > System Extensions > Manage Plugins**.

Click the **Browse** button to select the new plugin you want to install.



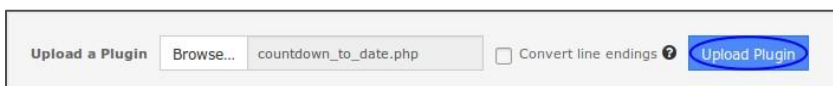
The screenshot shows the 'Upload a Plugin' interface. It includes a text input field with a 'Browse...' button, a checkbox for 'Convert line endings' with a help icon, and an 'Upload Plugin' button. The 'Browse...' button is highlighted with a blue circle.

Select the plugin file `countdown_to_date.php` that you previously downloaded using the window that appears and click **Open**.

The **Convert line endings** check box will convert the plugin's line endings to UNIX line endings.

- Sometimes the files saved on a Windows computer will not work on the Nagios XI server, this check box fixes the problem
- This process will not break already UNIX-formatted files

Click the **Upload Plugin** button to upload the plugin.



The screenshot shows the 'Upload a Plugin' interface. The text input field now contains the filename 'countdown_to_date.php'. The 'Upload Plugin' button is highlighted with a blue circle.

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Once the plugin is uploaded, you will receive a message saying it was installed and it will appear in the list of plugins.

Test Your Plugin From The Command Line



The next step is to test that the plugin works and understand what arguments the plugin allows. This is easiest to test using a terminal session. Plugins are located in the `/usr/local/nagios/libexec` directory.

Establish a terminal session to your Nagios XI server as the root user and execute the following command:

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

Now we should see if the plugin has a help argument that explains how it works. Execute the following command:

```
./countdown_to_date.php -help
```

I'm not going to paste the full output here however at the top of the output is the usage:

```
Usage: countdown_to_date.php --date <date> --warning <wdays> --critical <cdays>
```

So with that in mind, lets test using some real values:

```
./countdown_to_date.php --date 2017-01-19 --warning 60 --critical 30
```

This command will produce results which should be similar to the following:

```
WARNING: 50 days until 2017-01-19
```

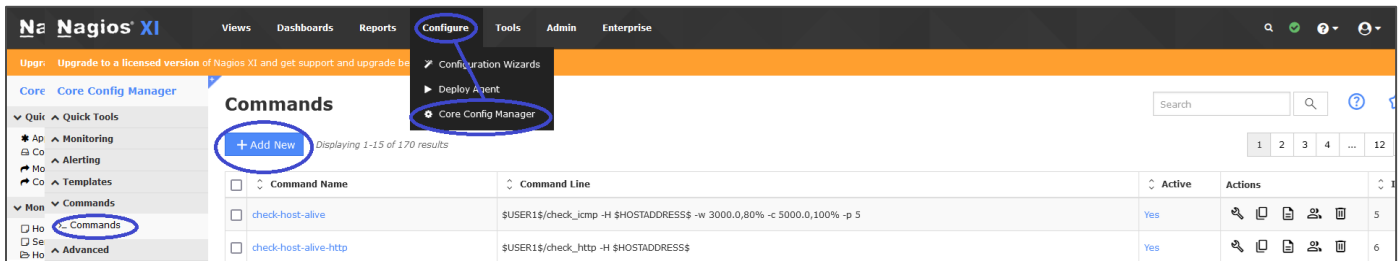
That example tested the plugin and helped us determine what arguments are required, `--date`, `--warning`, and `--critical`. The next step will show you how to define a command for the plugin.

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Define A Command

Now that your plugin is available and you know the command line arguments to run it, you should define a command in Nagios XI.

In the Nagios XI web interface navigate to **Configure > Core Config Manager > Commands**.



Click the **Add New** button and you will need to provide the following details:

Command Name:

```
countdown_to_date
```

Command Line:

```
$USER1$/countdown_to_date.php --date $ARG1$ --warning $ARG2$ --critical $ARG3$
```

Command Type:

```
check command
```

Make sure the **Active** box is **checked**.

The final command definition should resemble the screenshot to the right:

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Click **Save** when finished.

Command Management

Command Name *

Example: check_example

Command Line *

Example: \$USER1\$/check_example -H \$HOSTADDRESS\$ -P \$ARG1\$ \$ARG2\$

Command Type:

Active ⓘ

Available Plugins

`$USER1$` references the directory `/usr/local/nagios/libexec` from the `resources.cfg` file. This is the default path for plugins and scripts in Nagios XI.

The `$ARG1$`, `$ARG2$` and `$ARG3$` are macros that are a placeholder for an argument you will specify in the service that uses this command.

Macros allow you to use the same command in different services and each service can provide different values. This is one of the key features of Nagios XI that allows for flexible and dynamic monitoring configurations.

Click the **Apply Configuration** button to commit these changes to Nagios XI.

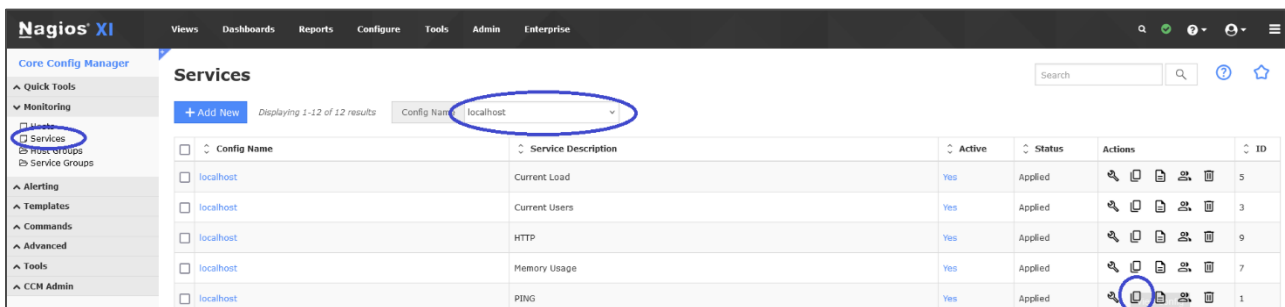
At this point you have a command defined; in the next step you will be shown how to assign the command to a service.

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Add A Service

For the purposes of keeping things simple, we are going to create a service for the Nagios XI **localhost**. There are already existing services for the localhost so we'll copy an existing service to use it to create the new service. By copying an existing service it allows us to focus just on the command part of the service, we won't need to focus on all the options as they will already be defined the service being copied.

Navigate to **Monitoring > Services** and select **localhost** from the **Config Name** dropdown.



We are going to copy the **PING** service, click the **copy** icon in the Actions column for the **PING** service.



When the screen refreshes, click the copied service `localhost_copy_1` to edit it.

Update the service with the following details:

- **Config Name:** localhost
- **Description:** Date Check
- **Check command:** countdown_to_date
- **\$ARG1\$:** 2017-01-19
- **\$ARG2\$:** 60
- **\$ARG3\$:** 90

Make sure the **Active** box is **checked**.

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The final command definition should resemble this screenshot:

The screenshot displays the 'Service Management' interface in Nagios XI. At the top, a red banner indicates the object is currently set as 'Inactive'. Below this, there are tabs for 'Common Settings', 'Check Settings', 'Alert Settings', and 'Misc Settings'. The 'Check Settings' tab is active.

The configuration fields are as follows:

- Config Name ***: localhost
- Description ***: Date Check
- Display name**: (empty)
- Check command**: countdown_to_date
- Command view**:

```
$USER1$/countdown_to_date.php --date $ARG1$ --warning $ARG2$  
--critical $ARG3$
```
- \$ARG1\$**: 2024-12-10
- \$ARG2\$**: 60
- \$ARG3\$**: 30
- \$ARG4\$**: (empty)
- \$ARG5\$**: (empty)
- \$ARG6\$**: (empty)
- \$ARG7\$**: (empty)
- \$ARG8\$**: (empty)

At the bottom, there are buttons for 'Add Arguments', 'Delete Arguments', 'Run Check Command', 'Save', and 'Cancel'. The 'Active' checkbox is checked.

Click **Save** when finished and then click **Apply Configuration**.

In the screenshot on the previous page, you can see in the **Command View** field the command you created in the last step of this document. The $\$ARGx\$$ macros refer to the fields underneath that allow you to provide the values you want to use for this particular service. For example, you can see how the `--date` argument uses the $\$ARG1\$$ macro which has the value `2024-12-01`.

As explained earlier, macros allow you to use the same command in different services and each service can provide different values. This is one of the key features of Nagios XI that allows for flexible and dynamic monitoring configurations.

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Verify Your Service Is Working

Now that you have created a service, you should check that it is working as expected. Use the **Search** field on the menu bar to search for **localhost**.

The screenshot shows the Nagios XI interface with the 'Service Status' page for 'localhost'. The 'Date Check' service is highlighted with a blue circle and labeled 'Pending'. The 'Host Status Summary' and 'Service Status Summary' tables are also visible.

Up	Down	Unreachable	Pending
5	0	0	1
Unhandled		Problems	
0		6	

Last Updated: 2024-11-26 03:36:16

Ok	Warning	Unknown	Critical	Pending
21	0	1	2	1
Unhandled		Problems		All
17		17		49

Last Updated: 2024-11-26 03:36:16

Showing 1-13 of 13 total matches for 'localhost' ✕

Host	Service	Status	Duration	Attempt	Last Check	Status Information
localhost	Current Load	Ok	4h 34m 58s	1/4	2024-11-26 03:32:18	OK - load average: 0.80, 0.98, 1.16
	Current Users	Ok	7d 21h 30m 35s	1/4	2024-11-26 03:35:47	USERS OK - 1 users currently logged in
	Date Check	Pending	N/A	1/4	N/A	No check results for service yet...
	HTTP	Ok	7d 21h 30m 10s	1/4	2024-11-26 03:35:58	HTTP OK: HTTP/1.1 200 OK - 2897 bytes in 0.004 second response time
	Memory Usage	Ok	7d 21h 29m 45s	1/4	2024-11-26 03:31:54	OK - 5176 / 7894 MB (65%) Free Memory, Used: 2617 MB, Shared: 31 MB, Buffers + Cached: 5021 MB
	PING	Ok	1h 7m 48s	1/4	2024-11-26 03:34:30	PING OK - Packet loss = 0%, RTA = 0.12 ms
	Root Partition	Ok	7d 21h 28m 55s	1/4	2024-11-26 03:32:57	DISK OK - free space: / 32597 MIB (70.02% inode=91%):
	SSH	Ok	7d 21h 28m 30s	1/4	2024-11-26 03:33:17	SSH OK - OpenSSH_9.6p1 Ubuntu-3ubuntu13.5 (protocol 2.0)
	Service Status - crond	Ok	7d 21h 28m 5s	1/4	2024-11-26 03:33:25	• cron.service - Regular background program processing daemon
	Service Status - httpd	Ok	7d 21h 27m 40s	1/4	2024-11-26 03:33:35	• apache2.service - The Apache HTTP Server
	Service Status - mysqld	Ok	7d 21h 27m 15s	1/4	2024-11-26 03:33:55	• mysql.service - MySQL Community Server
	Swap Usage	Ok	7d 21h 26m 50s	1/4	2024-11-26 03:34:16	SWAP OK - 100% free (4095 MB out of 4095 MB)
	Total Processes	Ok	7d 21h 26m 36s	1/4	2024-11-26 03:34:52	PROCS OK: 166 processes with STATE = RSZDT

Last Updated: 2024-11-26 03:36:16

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localhost

Click the new service to bring up the **Service Status Details** page.

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In this screenshot below, you can see that the service has the same output that the test in a terminal session produced, so we know the service is correctly working. This means that the new plugin that was added to Nagios XI is working as expected.

Service Status Detail

Date Check
localhost

Overview

Service check is pending...

Status Details	
Service State:	Pending
Duration:	N/A
Service Stability:	Unchanging (stable)
Last Check:	Never
Next Check:	Not scheduled

Quick Actions

- Disable notifications
- Force an immediate check

Misc
No notes or misc info

Acknowledgements and Comments
No comments or acknowledgements.

Performance Data

If you expect that your plugin will generate performance graphs, you will want to verify that it is collecting performance data. To do so, click the **Advanced** tab after your plugin has run a check and make sure you see some output under **Performance Data**. If you don't see anything there, you will not be able to see performance graphs with this plugin.

The `countdown_to_date.php` plugin used in this example does not output performance data so this field is empty.

Date Check
localhost

Advanced

Advanced Status Details

Service State:	Pending
Duration:	N/A
State Type:	Hard
Current Check:	1 of 4
Last Check:	Never
Next Check:	Not scheduled
Last State Change:	Never
Last Notification:	Never
Check Type:	Active
Check Latency:	0 seconds
Execution Time:	0 seconds
State Change:	0%
Performance Data:	

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The **PING** service is an example of performance data.

PING
localhost

Advanced

Advanced Status Details

Service State:	● Ok
Duration:	1h 13m 4s
State Type:	Hard
Current Check:	1 of 4
Last Check:	2024-11-26 03:39:30
Next Check:	2024-11-26 03:44:30
Last State Change:	2024-11-26 02:28:28
Last Notification:	Never
Check Type:	Active
Check Latency:	0.005665000062435865 seconds
Execution Time:	4.113894 seconds
State Change:	0%
Performance Data:	rta=0.118000ms;100.000000;500.000000;0.000000 pl=0%;20;60;0

After about 15 minutes (when enough data has been gathered) performance graphs will appear on the **Performance Graphs** tab.

Finishing Up

This completes the documentation on managing plugins 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:

[Visit Nagios Support Forum](#)

[Visit Nagios Knowledge Base](#)

[Visit Nagios Library](#)