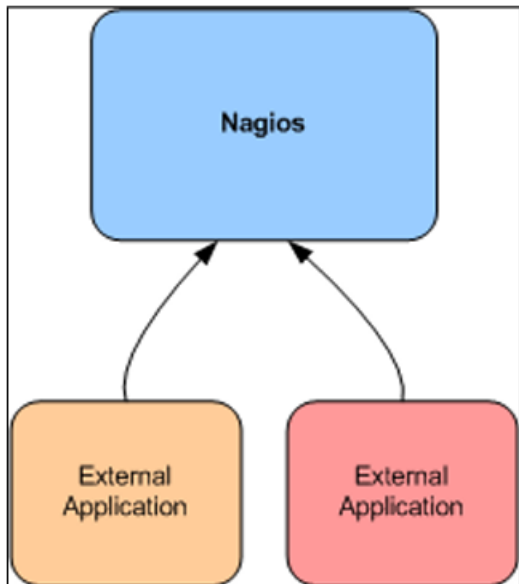


How To Configure Passive Services With Nagios XI 2024

Purpose

This document describes how to How To Configure Passive Services With Nagios XI 2024.



Passive Check Overview

Nagios does not actively check the status of a service that is configured only for passive checks. Instead, Nagios waits for external devices / applications to submit a check result for a particular service.

Passive checks are commonly used for integrating security alerts and event log data into Nagios, and are also used in distributed monitoring environments.

A comparison between an active check and a passive check might also help:

UPS device loses input power and is running on batteries.

- With an active check, if Nagios XI was checking the device on a 5 minute interval then it might be up to 5 minutes before Nagios XI is aware that the device is on batteries.
- With a passive check, the device immediately sends an SNMP Trap to Nagios XI when it is running on batteries.

This example scenario used an SNMP Trap as the method for receiving a passive check. This document does not focus on SNMP Traps however it is a good example to demonstrate the differences between active and passive checks.

How To Configure Passive Services With Nagios XI 2024

To see how to use NCPA with passive checks, see.

Sending Passive Checks To Nagios

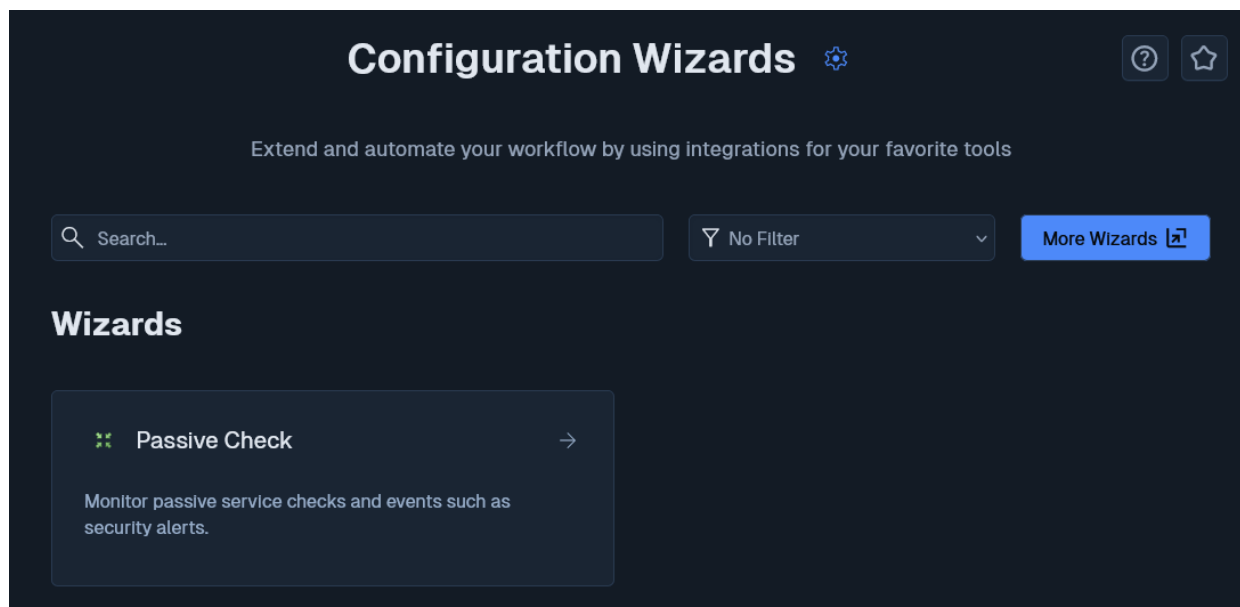
To send passive service checks from external applications and servers to Nagios, you'll need to use the NSCA or NRDP addon to facilitate the transfer of data to the Nagios XI server. Instructions on using NCPA, NSCA, and NRDP with Nagios XI can be found at:

- Using [NCPA](#)
- Using [NSCA](#)
- Using [NRDP](#)

Configuring Passive Services Within Nagios XI

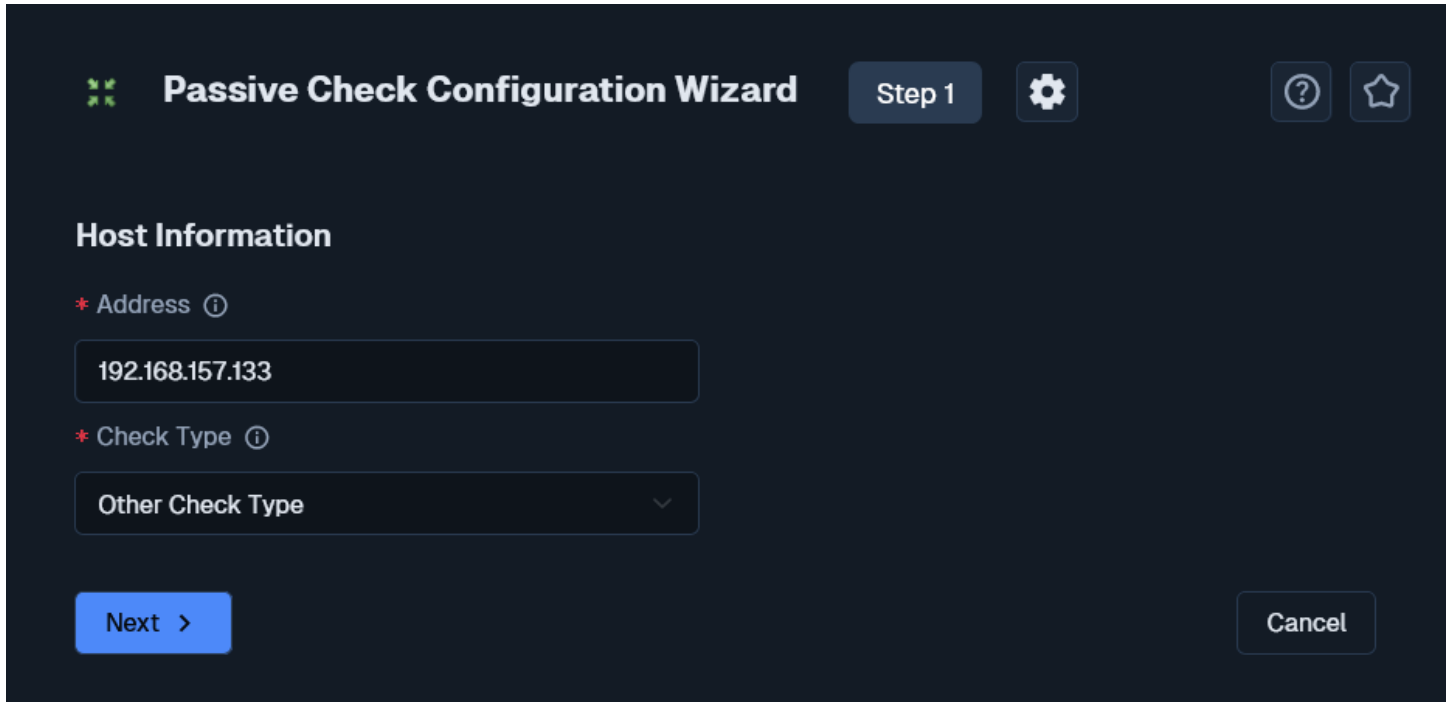
Each host or device that you wish to receive and process passive checks from must have a corresponding passive check service defined in Nagios XI. Nagios XI has the **Passive Check** wizard that makes the configuration of these passive checks quick and simple.

1. To begin using the **Passive Check** wizard navigate via the top menu bar to **Configure > Run a configuring wizard** and select the Passive Check Wizard. In the following screenshot you can see how the search field allows you to quickly find a wizard:



How To Configure Passive Services With Nagios XI 2024

2. When you run the **passive check** wizard, it will first ask you for the **Address of the host** that is associated with the **passive checks**.
3. You can also specify the **Check Type** for the passive check by selecting **SecurityRelated Check**, or **Other Check Type** from the drop-down.



The image shows the 'Passive Check Configuration Wizard' in Nagios XI, specifically Step 1. The interface is dark-themed. At the top, there's a title bar with a green icon, the title 'Passive Check Configuration Wizard', a 'Step 1' indicator, a settings gear icon, and help/question mark and star icons. Below the title bar, the section 'Host Information' is visible. It contains two required fields, each marked with a red asterisk and an information icon. The first field is 'Address', which has the value '192.168.157.133' entered. The second field is 'Check Type', which is a dropdown menu currently showing 'Other Check Type'. At the bottom of the form, there are two buttons: a blue 'Next >' button and a grey 'Cancel' button.

Passive Check Configuration Wizard Step 1

Host Information

* Address ⓘ

192.168.157.133

* Check Type ⓘ

Other Check Type

Next > Cancel

How To Configure Passive Services With Nagios XI 2024

4. The next screen of the wizard allows you to define one or more **Service Names** that should be defined as passive checks. The following screenshot shows That a **CPU Usage** service has been added:

Passive Check Configuration Wizard Step 2

Host Information

Address: 192.168.157.133

Host Name: 192.168.157.133

Passive Services

Define one or more service names that should be configured as passive services associated with the host

Service Name(s): CPU Usage

Service Name(s): Enter Service Name(s):

Service Name(s): Enter Service Name(s):

Service Name(s): Enter Service Name(s):

Service Name(s): Enter Service Name(s):

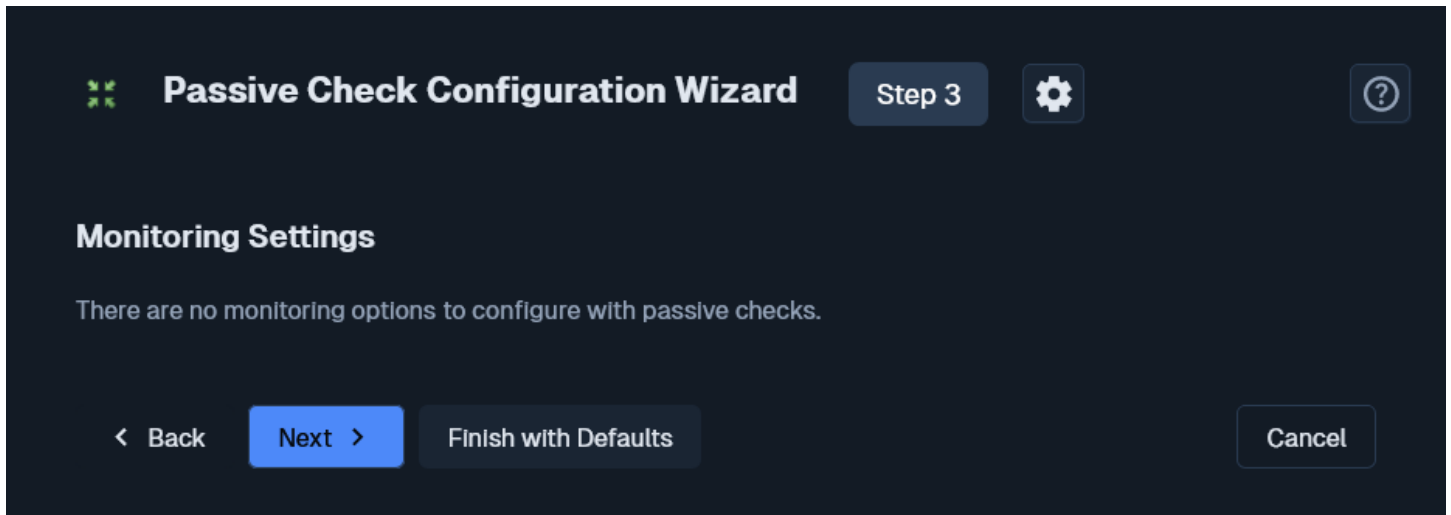
Service Options

* Volatility: Non-volatile

5. You can specify Volatility and Stalking options for the services to match your monitoring requirements. Both options are useful when monitoring security related events.

- Volatile events generate alerts each time anything other than an OK state event is received. (i.e. Critical, Warning, Unknown)
- Stalking services will have their own output data (textual alert information) logged by Nagios each time newly received output differs from the most recent previously received output.

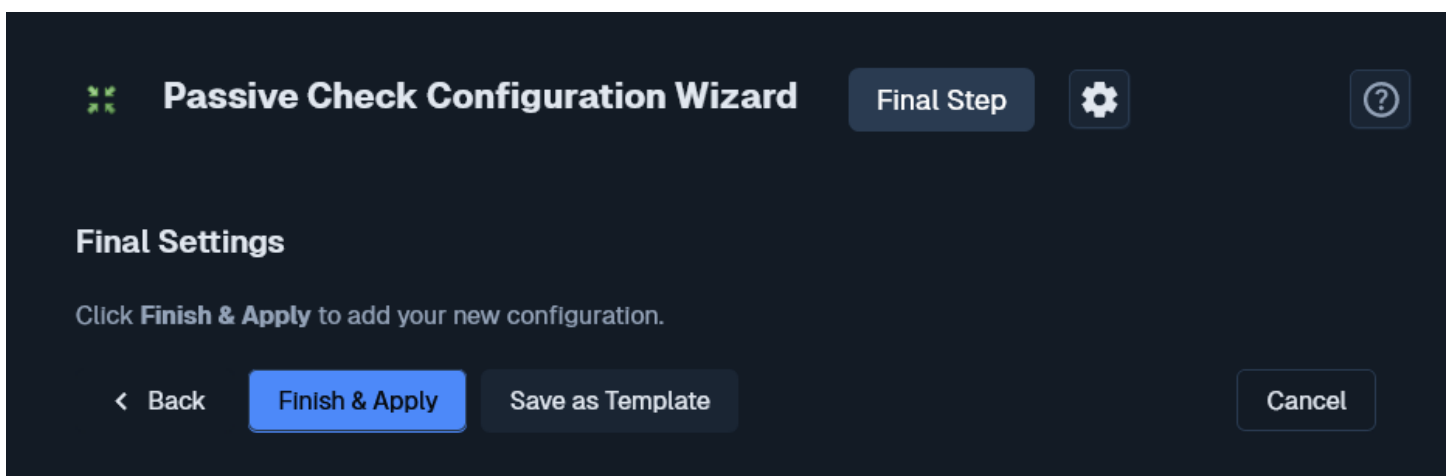
How To Configure Passive Services With Nagios XI 2024



The screenshot shows the 'Passive Check Configuration Wizard' at Step 3, 'Monitoring Settings'. The title bar includes a green icon, the wizard name, 'Step 3', a gear icon, and a help icon. The main content area is titled 'Monitoring Settings' and contains the text: 'There are no monitoring options to configure with passive checks.' The bottom navigation bar has four buttons: '< Back' (disabled), 'Next >' (active, highlighted in blue), 'Finish with Defaults' (disabled), and 'Cancel' (disabled).

6. **Step 3** of the wizard has no options as there are no monitoring settings for passive checks.

7. **Steps 4 and 5** have the standard options available in configuration wizards, populate the settings as required.



The screenshot shows the 'Passive Check Configuration Wizard' at the 'Final Step'. The title bar includes a green icon, the wizard name, 'Final Step', a gear icon, and a help icon. The main content area is titled 'Final Settings' and contains the text: 'Click **Finish & Apply** to add your new configuration.' The bottom navigation bar has four buttons: '< Back' (disabled), 'Finish & Apply' (active, highlighted in blue), 'Save as Template' (disabled), and 'Cancel' (disabled).

8. Once you've reached the **Final Step** click **Apply** to add the new passive objects.

How To Configure Passive Services With Nagios XI 2024

9. When the configuration is successfully applied, click the **status details** for xxx link which should direct you to a screen like the following:

The screenshot shows the Nagios XI 'Service Status' page for host 192.168.157.133. The page is divided into two main summary boxes: 'Host Status Summary' and 'Service Status Summary'. The 'Host Status Summary' shows 0 Up, 1 Down, 0 Unreachable, and 0 Pending. The 'Service Status Summary' shows 0 Ok, 0 Warning, 0 Unknown, and 3 Critical. Below these summaries, there is a table with 7 columns: Host, Service, Status, Duration, Attempt, Last Check, and Status Information. The table shows one record for 'CPU Usage' with a status of 'Pending' and a duration of 'N/A'. The page also includes pagination controls (Page 1 / 1, 15 Per Page) and a search bar.

Host	Service	Status	Duration	Attempt	Last Check	Status Information
192.168.157.133	CPU Usage	Pending	N/A	1/1	N/A	No check results for service yet...

If the server is successfully receiving passive check results you should start to see these services receive data:

The screenshot shows the Nagios XI 'Service Status' page for host 192.168.157.133, updated with data. The 'Host Status Summary' shows 1 Up, 0 Down, 0 Unreachable, and 0 Pending. The 'Service Status Summary' shows 3 Ok, 0 Warning, 0 Unknown, and 0 Critical. Below these summaries, the table shows one record for 'CPU Usage' with a status of 'Ok' and a duration of 'N/A'. The page also includes pagination controls (Page 1 / 1, 15 Per Page) and a search bar.

Host	Service	Status	Duration	Attempt	Last Check	Status Information
192.168.157.133	CPU Usage	Ok	N/A	1/1	2024-11-28 19:32:11	OK: Percent was 0.00 %

How To Configure Passive Services With Nagios XI 2024

More Information:

[Using Configuration Wizards](#)

Manually Submitting A Passive Check Result

Sometimes you will want to manually submit a passive check result for a service. This capability is particularly useful for resetting services to an OK state once the issue has been handled.

1. You can do this by navigating to **Home > Details > Service Detail** and clicking your passive check to bring up the Service Status Detail screen.
2. Select the Advanced tab and click on Submit passive check result. The following example is from the Windows Update Status service shown above that is in a critical state.

Service Status Detail / 192.168.157.133 / cpu usage

View Current Status of Service | View Service Notifications | View Service History | View Service Availability

Overview | Performance Graphs | **Advanced** | Configure | Capacity Planning | Custom Variables | Network Traffic Analysis

Advanced Status Details

Service State:	Ok
Duration:	3m 5s
State Type:	Hard
Current Check:	1 of 1
Last Check:	2024-11-28 19:35:12
Next Check:	Not scheduled
Last State Change:	2024-11-28 19:32:11
Last Notification:	Never
Check Type:	Passive
Check Latency:	0 seconds
Execution Time:	0 seconds
State Change:	0%
Performance Data:	'percent'=0.75%;60;80;

Service Attributes

Attribute	State	Action
Active Checks	Critical	✓
Passive Checks	Ok	✗
Notifications	Ok	✗
Flap Detection	Critical	✓
Event Handler	Ok	✗
Performance Data	Ok	
Obsession	Ok	✗

Commands

- Add comment
- Schedule downtime
- Submit passive check result**
- Send custom notification
- Delay next notification

More Options

- View in Nagios Core

How To Configure Passive Services With Nagios XI 2024

Submit Passive Check Result


Host Name *

192.168.157.133

Service *

CPU Usage

Check Result *

WARNING 

Check Output *

50

Performance Data

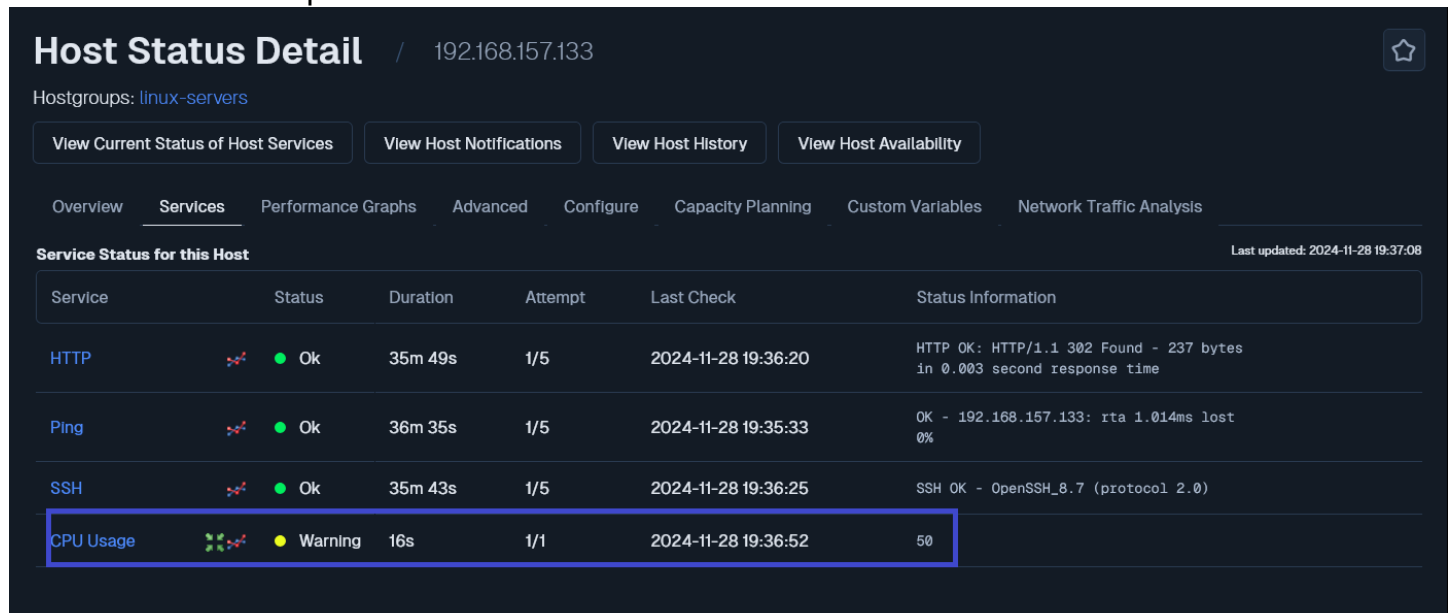
Submit

Cancel

3. You can specify the **Check Result** (service state) from the drop down, enter **Check Output** (textual data) for the passive check and any **Performance Data** collect by the check.
4. Click the **Commit** button to submit the passive check to Nagios.

How To Configure Passive Services With Nagios XI 2024

5. Once the passive check is processed, the status of the passive check will be updated. This will remain until the next passive check result is received.



Host Status Detail / 192.168.157.133

Hostgroups: [linux-servers](#)

[View Current Status of Host Services](#) [View Host Notifications](#) [View Host History](#) [View Host Availability](#)

Overview **Services** Performance Graphs Advanced Configure Capacity Planning Custom Variables Network Traffic Analysis

Service Status for this Host Last updated: 2024-11-28 19:37:08

Service	Status	Duration	Attempt	Last Check	Status Information
HTTP	Ok	35m 49s	1/5	2024-11-28 19:36:20	HTTP OK: HTTP/1.1 302 Found - 237 bytes in 0.003 second response time
Ping	Ok	36m 35s	1/5	2024-11-28 19:35:33	OK - 192.168.157.133: rta 1.014ms lost 0%
SSH	Ok	35m 43s	1/5	2024-11-28 19:36:25	SSH OK - OpenSSH_8.7 (protocol 2.0)
CPU Usage	Warning	16s	1/1	2024-11-28 19:36:52	50

Extending Passive Checks With Freshness Checks

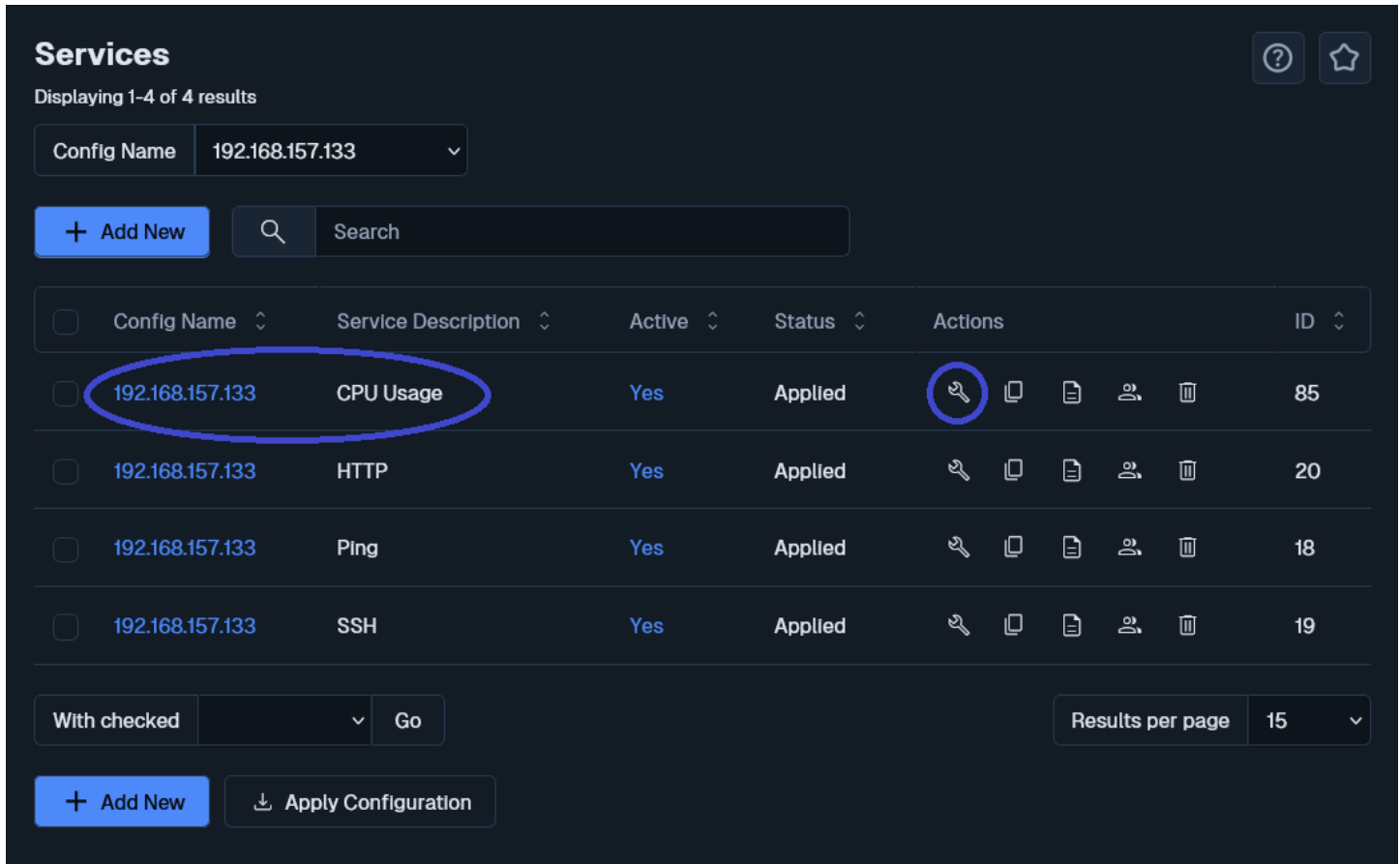
As explained earlier, it's the responsibility of the external devices / applications to send the check results through, all Nagios XI does is wait for the passive check results. If Nagios XI stops receiving passive check results from a device / application then Nagios XI will not know this has happened, it still has services in the state they were in the last time a passive check results is received.

Nagios XI has the ability to keep an eye on passive check results for host and service objects, if Nagios XI hasn't heard from the passively monitored device / application for a specified amount of time then it can take action. The most common action is to submit a check result to Nagios XI with a critical state, this ensures that notifications are triggered and it appears as critical in the monitoring interface.

This process is called freshness checking, and this section will show you how to set up freshness checks for your individual needs. This guide is going to demonstrate how to configure freshness for the **Drive C: Disk Usage** service. We will configure it so that if no passive check result has been received in 15 minutes (900 seconds) then it will put the service into critical state.

How To Configure Passive Services With Nagios XI 2024

1. Navigate to **Configure > Core Config Manager > Monitoring > Services** and click the appropriate service to be edited.























Services ? ☆

Displaying 1-4 of 4 results

Config Name: 192.168.157.133

[+ Add New](#)

<input type="checkbox"/>	Config Name	Service Description	Active	Status	Actions	ID
<input type="checkbox"/>	192.168.157.133	CPU Usage	Yes	Applied	    	85
<input type="checkbox"/>	192.168.157.133	HTTP	Yes	Applied	    	20
<input type="checkbox"/>	192.168.157.133	Ping	Yes	Applied	    	18
<input type="checkbox"/>	192.168.157.133	SSH	Yes	Applied	    	19

With checked Results per page: 15

[+ Add New](#) [↓ Apply Configuration](#)

How To Configure Passive Services With Nagios XI 2024

2. First, we'll start by defining the freshness threshold and other relevant settings, click the **Check Settings** tab. On this screen you'll need to specify a few options:

Service Management

Common Settings **✓ Check Settings** Alert Settings Misc Settings

Initial state

Warning Critical **Ok** Unknown

Check Interval 1 min

Retry Interval 1 min

Max check attempts 1 attempts

Active checks enabled

On **Off** Skip Null

Passive checks enabled

On Off Skip Null

Check period xl_timeperiod_24x7

Freshness threshold 900 sec

Check freshness

On Off Skip Null

Obsess over service

On Off **Skip** Null

Event handler

Event handler enabled

On Off **Skip** Null

Low flap threshold

%

High flap threshold

%

Flap detection enabled

On Off **Skip** Null

Flap detection options

Critical Warning **Ok** Unknown

Retain status information

On Off **Skip** Null

Retain non-status information

How To Configure Passive Services With Nagios XI 2024

Active checks enabled

Off

This ensures that the check command on the Common Settings tab used to put the service into a critical state will NOT be executed unless the freshness threshold is exceeded. The check command will be defined in the next step.

Passive checks enabled

On

This ensures the service is receiving passive check results. If this is already on Skip then it may already be inheriting the setting from a template.

Freshness threshold

900

If Nagios XI does not hear from the specified host or service in the specified freshness threshold period, it will execute the check command that will be defined on the Common Settings tab.

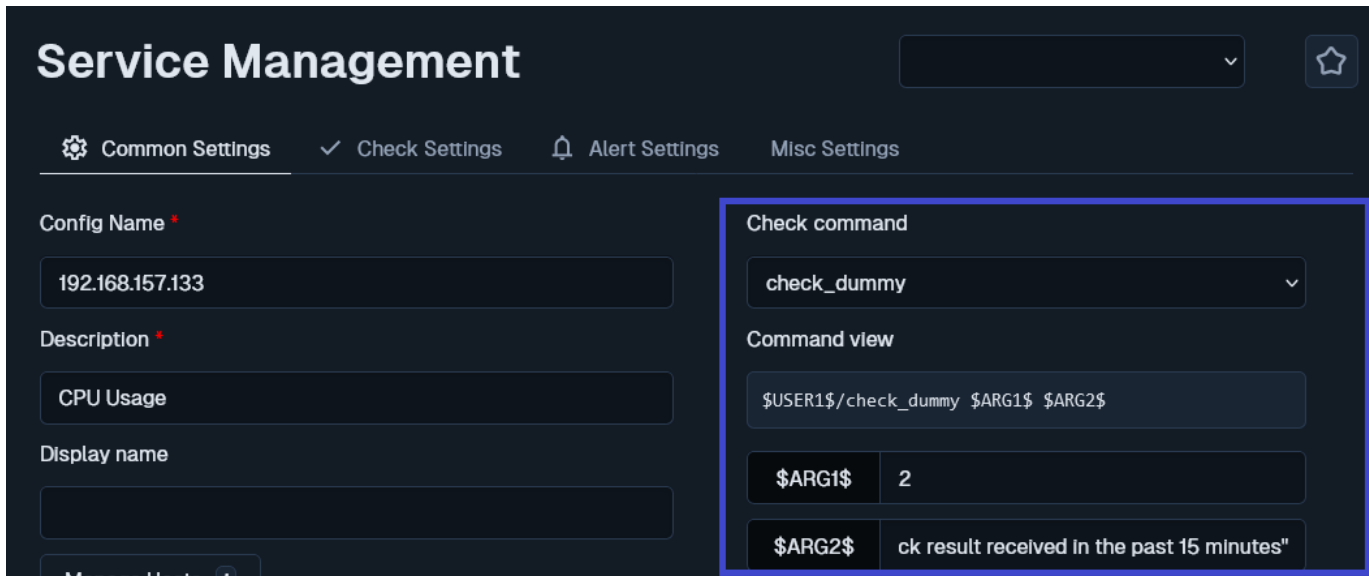
Check freshness

On

This enables the freshness checks for the host or service object.

3. Next we'll define the check command to be executed when the freshness threshold is exceeded, click the **Common Settings** tab. On this screen you'll need to specify a few options:

How To Configure Passive Services With Nagios XI 2024



The screenshot shows the 'Service Management' page in Nagios XI. The 'Check Settings' tab is active. On the left, the 'Config Name' is '192.168.157.133', the 'Description' is 'CPU Usage', and the 'Display name' is empty. On the right, the 'Check command' is set to 'check_dummy'. The 'Command view' section shows the command template '\$USER1\$/check_dummy \$ARG1\$ \$ARG2\$'. Below this, the '\$ARG1\$' field is set to '2' and the '\$ARG2\$' field is set to 'ck result received in the past 15 minutes'. A blue box highlights the 'Check command' and 'Command view' sections.

Check command

- **check_dummy**

This is the plugin that is executed when the freshness threshold is exceeded. check_dummy is a simple command that allows you to provide a return code (\$ARG1\$ field) and the status text to provide (\$ARG2\$ field).

- **\$ARG1\$**

2

The number 2 is how Nagios XI knows a service is in the critical state.

- **\$ARG2\$**

"No check result received in the past 15 minutes"

This is the status that will be shown in Nagios XI.

4. Once you've made these changes click the Save button and then Apply Configuration.

How To Configure Passive Services With Nagios XI 2024

The following screenshot shows that the freshness threshold was exceeded for this service:

Host Status Detail / 192.168.157.133

Hostgroups: linux-servers

View Current Status of Host Services

View Host Notifications

View Host History

View Host Availability

Overview

Services

Performance Graphs

Advanced

Configure





Capacity Planning

Custom Variables

Network Traffic Analysis

Service Status for this Host

Last updated: 2024-11-28 19:57:41

Service	Status	Duration	Attempt	Last Check	Status Information
HTTP	 Ok	56m 22s	1/5	2024-11-28 19:56:18	HTTP OK: HTTP/1.1 302 Found - 237 bytes in 0.003 second response time
Ping	 Ok	57m 8s	1/5	2024-11-28 19:55:33	OK - 192.168.157.133: rta 0.889ms lost 0%
SSH	 Ok	56m 16s	1/5	2024-11-28 19:56:25	SSH OK - OpenSSH_8.7 (protocol 2.0)
CPU Usage	 Critical	2m 9s	1/1	2024-11-28 19:55:32	CRITICAL: No check result received in the past 15 minutes

In this example we used the `check_dummy` plugin, however you could use any plugin that is available in Nagios XI.

Unconfigured Objects

The following documentation describes how to configure monitoring of previously unconfigured hosts and services that a Nagios XI server has received passive check results for.

[Monitoring Unconfigured Objects With XI](#)

How To Configure Passive Services With Nagios XI 2024

Finishing Up

This completes the documentation on How To Configure Passive Services With Nagios XI 2024. 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](#)