

Using a Nagios Log Server Output To Create Nagios XI Passive Objects

Purpose

This document describes how to use a Nagios Log Server Output to create Passive Host and Service objects in Nagios XI. This document provides an example of how Nagios Log Server Outputs can perform tasks on the log data it receives.

Target Audience

This document is intended for use by Nagios Administrators who wish to automate the creation of passive host and service objects in Nagios XI. It also is a learning tool for how to use Outputs in Nagios Log Server.

Background

Passive monitoring is when your Nagios XI server receives check results from devices. This differs from Active monitoring where the Nagios XI server itself is responsible for scheduling the checks of devices.

When Nagios XI receives passive check results from devices that it does not know about, these end up in the **Unconfigured Objects** section of Nagios XI (and recorded in the `nagios.log` file). These will not be visible in the host and service status pages until they have been turned into monitoring objects, this is a manual step that needs to be performed by a Nagios Administrator.

Using Nagios Log Server, you can observe the `nagios.log` file for the specific passive events that are recorded. When those events are received by Nagios Log Server, an Output can be used to execute a command that will create the passive objects in Nagios XI.

Creating the passive objects in Nagios XI is performed by using the **REST API** in Nagios XI. A custom script is used that simplifies the creation of the object using the API.

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Requirements

This documentation has the following requirements:

- Nagios XI Server
 - Nagios XI 5.x
 - An administrative user account that has API access enabled
 - It receives passive check results
 - It is configured to send `nagios.log` to your Nagios Log Server (explained below)
- Nagios Log Server Instance
 - Requires that Nagios Log Server is configured with the Nagios Core Filter (explained below)

Configure Nagios Log Server to Receive Nagios XI Logs

Step 1: Create a Log Filter in Nagios Log Server

Follow the documentation [Sending Nagios Core Logs To Nagios Log Server](#) to :

- Create a filter in Nagios Log Server to process incoming `nagios.log` data into structured fields stored in OpenSearch.
- Configure Nagios XI to send its `nagios.log` file to Nagios Log Server.

Ensure both steps are completed before proceeding.

Step 2: Verify Logs are Being Received

1. Open a terminal session on your Nagios XI server.
2. Run the following two commands to simulate a passive host and service check (each command should be entered as a single line:

```
now_epoch=$(eval date +%s); printf "[$now_epoch] PROCESS_HOST_CHECK_RESULT;Test Host;0;Host output\n" > \
/usr/local/nagios/var/rw/nagios.cmd
```

```
now_epoch=$(eval date +%s); printf "[$now_epoch] PROCESS_SERVICE_CHECK_RESULT;Test Host;Test \
Service;0;Service output\n" > /usr/local/nagios/var/rw/nagios.cmd
```

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3. In Nagios Log Server, on the **Dashboards** page use the query **nagios_core**. You should see an event like the screenshot below:

Log Entry Details	
<input type="text" value="Search elements..."/>	
Key	Value
_index	"logstash-2024.12.11"
_id	"L6ndt5MByD6Ph1N19iFN"
_score	3.7770324
log_syslog_code	16
log_syslog_name	"local0"
log_priority	133
type	"syslog"
name	"nagios_core"
@timestamp	"2024-12-11T22:36:36.000Z"

Note: The `nagios_service` field will **not** be present for a passive host check result.

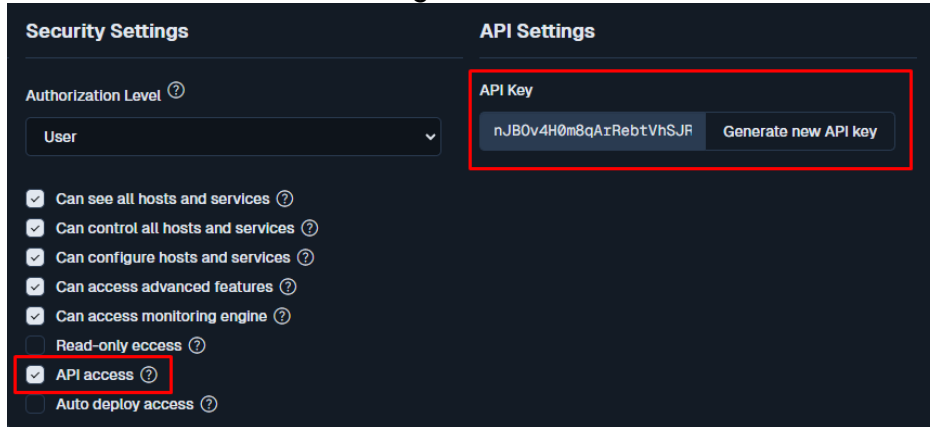
4. If your results are similar then you are ready to proceed to the next step.

Step 3: Enable REST API Access On Nagios XI User

1. Log into the Nagios XI
2. Navigate to **Admin > User > Manage Users**.
3. Either edit the existing user or create a new user.

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4. Enable the **API access** setting for the user.



The screenshot shows the 'Security Settings' for a user in Nagios XI. On the left, under 'Authorization Level', the 'User' is selected. Below this, several permissions are listed with checkboxes: 'Can see all hosts and services', 'Can control all hosts and services', 'Can configure hosts and services', 'Can access advanced features', 'Can access monitoring engine', 'Read-only access', 'API access' (checked and highlighted with a red box), and 'Auto deploy access'. On the right, the 'API Settings' section is visible. It contains an 'API Key' field with the value 'nJB0v4H0m8qA1RebtVhSJf' and a 'Generate new API key' button. This entire section is also highlighted with a red box.

5. Copy the API Key and save it in a text file for later user. Double-clicking the key should highlight the entire value.

Step 4: Testing The API Script

A script will be used to create passive objects in Nagios XI. Follow these steps to test it:

1. Establish a terminal connection to your Nagios Log Server
2. Navigate to the scripts directory:
3. Run the following command (replacing placeholders with actual values):

```
./xi_api_create_passive_object.php --url='https://xxx.xxx.xxx.xxx/nagiosxi' \
--apikey='your_api_key' --type=host --host='Test Host'
```

Replace **xxx.xxx.xxx.xxx** with your Nagios XI server address (IP or DNS)

Replace **your_api_key** with the REST API key you obtained earlier

4. If successful, you should see

```
{"success": "Successfully added Test Host to the system. Config applied, Nagios Core was restarted."}
```

Once your script is working you're ready to create an Output in Nagios Log Server that will call the script. More information on the script can be found in the [API Script Notes](#) section of this document.

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Step 5: Create the Output in Nagios Log Server

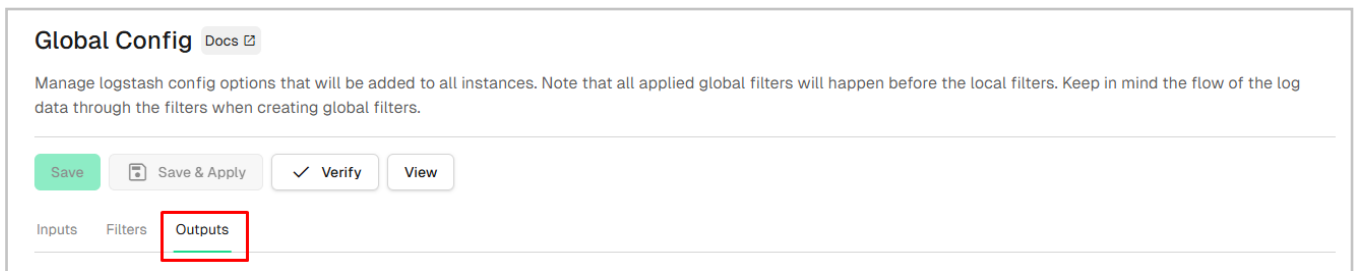
5. Visit the [Nagios XI Create Passive Object](#) page to obtain a copy of the Output file.
6. Open the file and scroll to the bottom to locate this line:

```
if [program] == "nagios_core" {
```

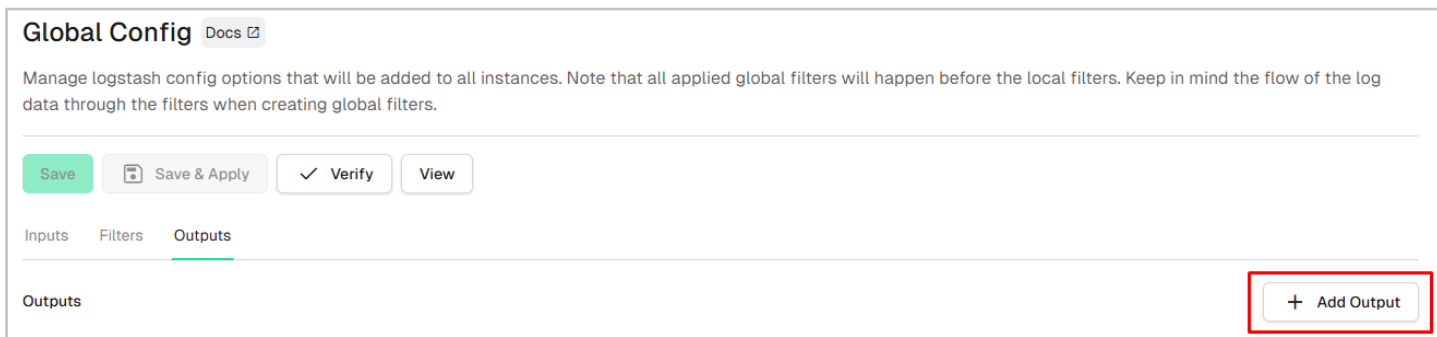
7. Copy everything from this line to the end of the file into your clipboard.
8. Open Notepad (or any text editor and paste the copied content).
9. Modify the following files.
 - a. **xxx.xxx.xxx.xxx** = Nagios XI server address (IP or DNS)
 - b. **your_api_key** = The REST API key you obtained earlier
10. Copy the modified content to your clipboard.

Step 6: Verify and Apply

1. Log into Nagios Log Server
2. Navigate to **Configure > Global (All Instances) > Global Config** and click the **Outputs** tab.



3. You can now click **+ Add Output**.



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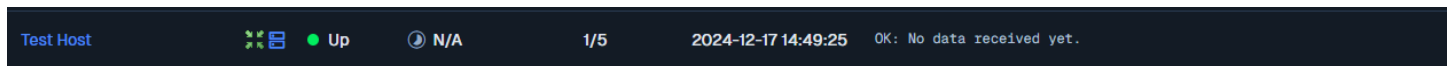
4. In the **Block Name** field. Enter descriptive title.
5. In the text area, paste the modified Output configuration.
6. Click the **Verify** button to check for errors.
7. If verification is successful, apply the configuration:
 - a. In the left panel, click **Apply Configuration**.
 - b. Click **Apply**
 - c. When prompted, click **Yes, Apply Now**.

Step 7: Final Test

1. Open a terminal session on your Nagios XI server.
2. Submit another passive check result using:

```
now_epoch=$(eval date +%s); printf "[%$now_epoch] PROCESS_SERVICE_CHECK_RESULT;Another \ \n\nHost;Test Service;0;Service output\n" > /usr/local/nagios/var/rw/nagios.cmd
```

3. Check Nagios Log Server. It should receive the log, execute the Output command, and create the new passive object in Nagios XI. Example:



Congratulations! You have now implemented automated passive object creation in Nagios XI using Nagios Log Server.

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API Script Notes

You might be wondering why the API script is required, surely the Output could talk to the API directly. The following explains why the script is used:

- It verifies it can successfully communicate with the API before creating new objects
- It checks to see if an object exists before creating the new object
- For passive service objects, it checks to see if the host object exists, if it does not it will create a passive host object before the service object

The script will initiate an Apply Configuration to be performed on your Nagios XI server when it creates the passive objects, this ensures they are part of the running configuration. The script has an **--apply** argument that allows you to disable this functionality, the syntax is:

```
--apply='false'
```

If you add that to the commands in your Output, the objects will still be added to Nagios XI however an Apply Configuration will not be performed. You will need to manually go into the Nagios XI **Core Configuration Manager** and perform an **Apply Configuration** for these new objects to be part of the running configuration.

Finishing Up

This completes the documentation on Using a Nagios Log Server Output to Create Nagios XI Passive Objects. 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](#)