Purpose

This document describes how to add Inputs to Nagios Log Server.

Target Audience

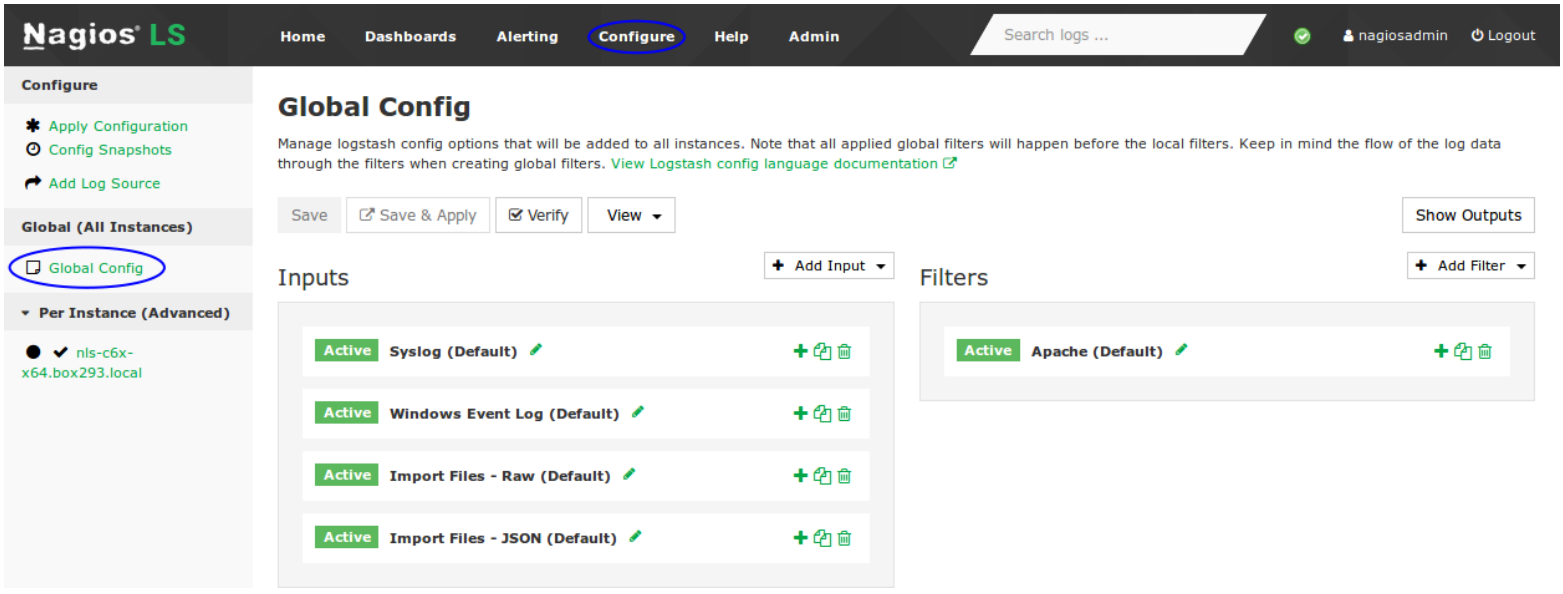
This document is intended for use by Nagios Log Server Administrators who want to customize their Nagios Log Server Inputs.

What Are Inputs?

Inputs allow Nagios Log Server to collect data from various places, like TCP/UDP ports, SNMP Traps, Unix sockets, long running command pipes, etc.

Input Configuration Location

Nagios Log Server is a cluster oriented application that uses Logstash to receive and process logs. The base configuration provided with a default installation of Nagios Log Server has all of the inputs defined as part of the Global Config. The Global Config is an easy way to set up the same Logstash configuration on all your instances. To access the configuration navigate to **Configure** > **Global (All Instances)** > **Global Config**.



Input Configuration Options

On the Global Config page there are two main tables named Inputs and Filters *(and a third table called Outputs which is hidden)*. Inputs, Filters and Outputs are all used by Logstash to process incoming log data and do something with it, which normally is to store it in the Elasticsearch database. This document will be focusing on **Inputs**.

In the Inputs table there are several pre-configured inputs that come as part of Nagios Log Sever, these are called **blocks**. The blocks have several icons which are explained as follows.

Active Inactive

Each of these blocks are Active, which is indicated by the **Active** box next to each input

When you click the Active box the input will be marked as **Inactive** and the next time the configuration is applied this input will not be part of the running configuration

This allows you to save inputs even if you don't want to use them right away

Clicking the box again will toggle it back to Active

Rename

Allows you to rename the block

\+ Open / − Close

This will expand the block to show the input configuration in a text field

Please refer to the Input Structure section of this document for more information

The icon will change to a hyphen when open, clicking the hyphen will collapse the block

Copy

This will create a duplicate of that block

Allows you to easily create a new input based off the configuration of an existing input

Remove

Delete a block when it is no longer required

Any changes you make will not be saved until you click the **Save** button. Keep this in mind as when you navigate away from the page all of your changes will be lost.

Input Structure

The inputs are a structured format like this:

```
<plugin> {
     <config_option> => <config_value>
     <config_option> => <config_value>
}
```

`<plugin>` is the name of plugin that you wish to enable. Each plugin can have multiple `<config_option>` defined, depending on your requirements. Logstash allows a large amount of possible plugin types, here are two examples:

```
syslog {
     type => 'syslog'
     port => 5544
}
```

```
file {
     type => 'syslog'
     path => ['/log/file/location/*.log']
     start_position => 'beginning'
     add_field => { 'program' => 'your_program' }
}
```

The example on the left is using the `syslog` plugin that is configured by default in Nagios Log Server.

The example on the right is using the `file` plugin, you can see they have different options defined.

The purpose of showing you these two examples is to demonstrate how an input requires log data to come from "somewhere".

- In the left example the log data is coming via the network on port 5544 (TCP or UDP)
- In the right example the log data is coming from a file

In both examples you can see the option `type` has the value of `'syslog'`. This will label any logs coming in as `syslog` so you can easily manage them through the dashboard and queries. It also provides the ability for **filters** and **outputs** to work with this log data based on the value of the `type` field.

Another example is the `tcp` plugin configured for receiving Windows Event Logs. This is configured by default in Nagios Log Server:

```
tcp {
   type => 'eventlog'
   port => 3515
   codec => json {
        charset => 'CP1252'
   }
}
```

The first option is `type` and this has the value of `'eventlog'`. This will label any logs coming in as `eventlog` so you can easily manage them through the dashboard and queries.

The next option is `port` and this has the value of `3515`. This enables the Logstash listener to receive TCP network traffic on port `3515` *(because this is the `tcp` plugin, it does not listen for UDP traffic)*.

The next option is `codec` and this has the value of `json`. The `json` option has additional configuration options that can be defined. You can see in this example that the configuration option of `charset` is defined as `'CP1252'`.

The purpose of this example was to demonstrate that inputs can have a sub-set of configuration settings available, it allows for very flexible configurations.

Adding An Input

Click the **Add Input** drop down list and select **Custom**.

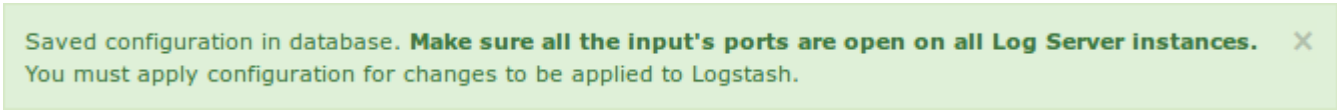
A new block will appear at the bottom of the list of Inputs.

Type a unique **name** for the input.

In the text field you will need to define the input configuration. Here is a basic example for a local file on the Nagios Log Server machine itself:


```
file {
     type => "testing"
     path => "/tmp/test.log"
}
```

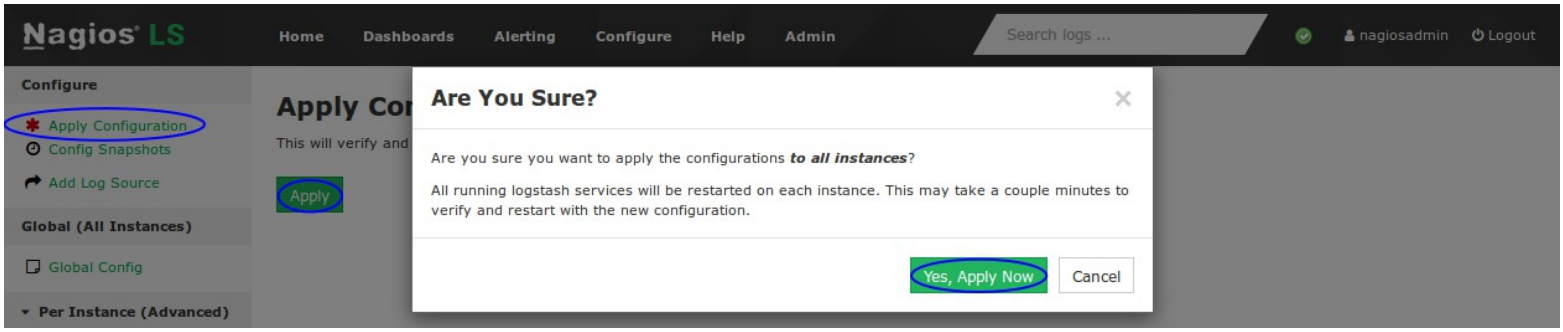
Once you have finished click the **Save** button.



For the new input to become active you will need to Apply Configuration, however it is recommended that you Verify the configuration first. The next step will be to Apply Configuration to put this new input into the running configuration so it can be tested and demonstrated.

Apply Configuration

To apply the configuration, in the left hand pane under **Configure** click **Apply Configuration**.



Click the **Apply** button and then on the modal that appears click the **Yes, Apply Now** button.

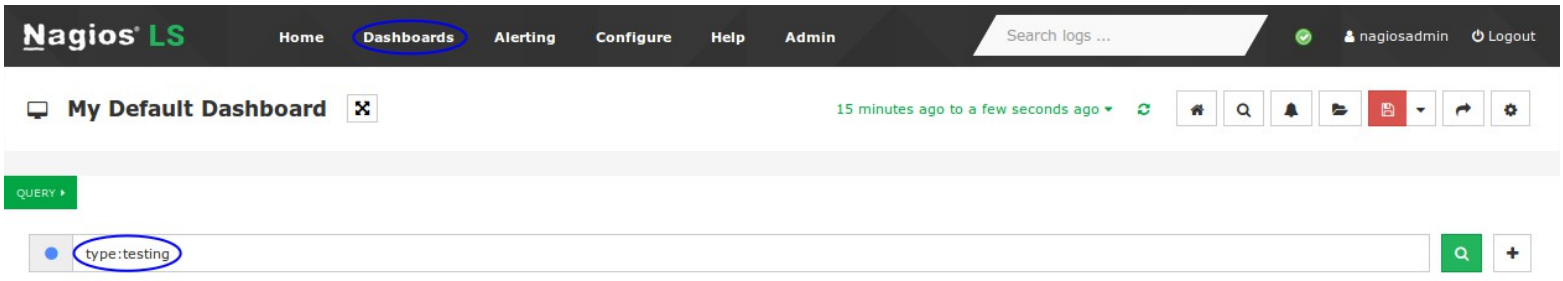
Wait while the configuration is applied. When it completes the screen will refresh with a completed message. Please proceed to the Test Input section.

Test Input

Using the input example created previously, these steps will show you how to confirm the input is working. Establish a terminal session to your Nagios Log Server instance and then execute the following command:

```
echo "This is a test log entry" >> /tmp/test.log
```

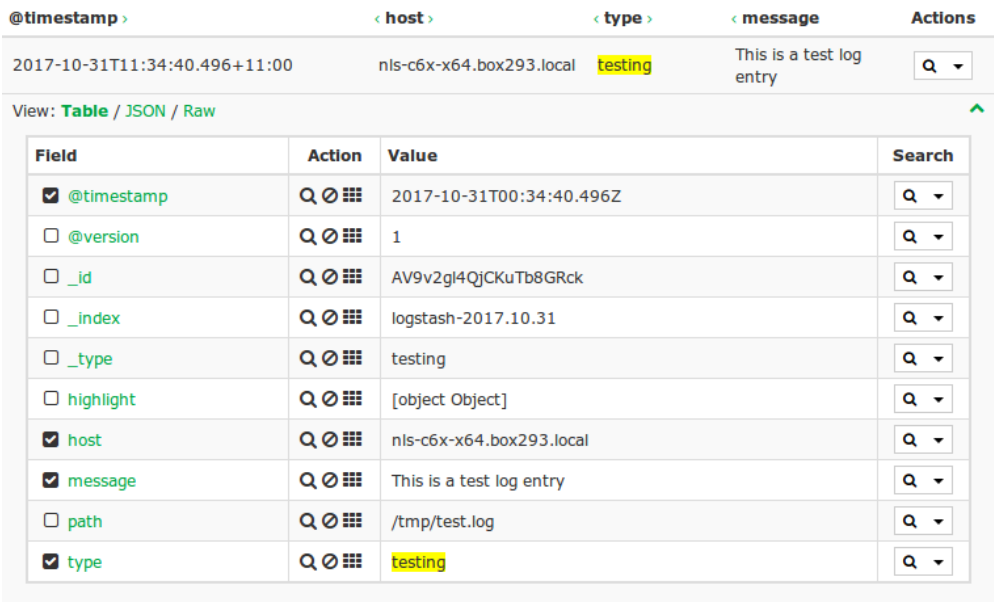
Now in Nagios Log Server open the Dashboards page and perform the query `type:testing` as per this screenshot:



The query should return one result in the ALL EVENTS panel.

Clicking on the log entry will show you the full details about the entry.

Here you can see that the **type** is **testing** and the text has been stored in the **message** field.

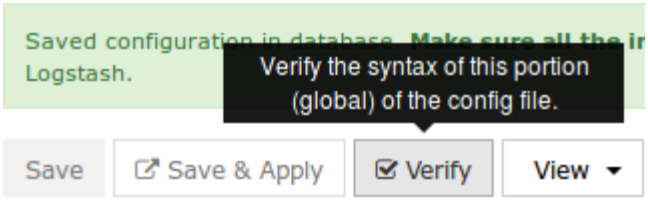


Obviously this test input we created isn't that useful however the purpose was to demonstrate how you can easily create an input and start receiving log data.

The remainder of this documentation explains the buttons available on the **Global Config** page.

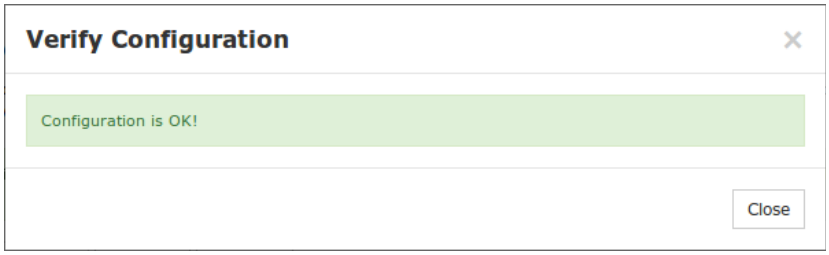
Verify

The Verify button ensures that the current saved configuration is valid. It can be useful when updating your configurations before attempting to Apply Configuration.



Wait while the configuration is verified.

If you do not receive a **Configuration is OK** message then you will need to fix the problem before applying the configuration.



Save vs Save & Apply

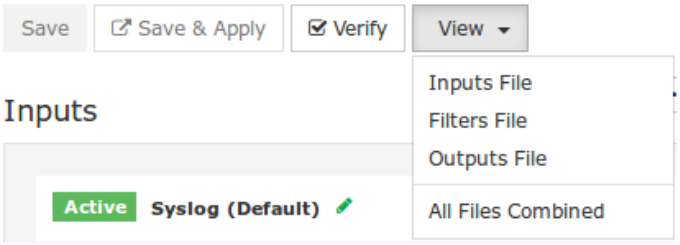
There are two separate buttons, **Save** and **Save & Apply**.

Save allows you to make changes but not make the changes become immediately active. It allows you to navigate away from the Configure screen without losing your work.

Save & Apply will save your changes and then make the changes become immediately active. This can be helpful if you changed a simple option in your config that does not need to be verified.

View

The View button allows you to view the raw Logstash configuration. When you click the button you have a choice of selecting an individual config or a combination of all the configs.



This will open a new modal window where the configuration can be viewed or copied.

Firewall Ports

If you add an input to Nagios Log Server that uses a network port to receive the data then the local operating system firewall will also require a rule to be added to open that network port. A detailed explanation of this can be found in the Sending syslog With SSL/TLS documentation. In that documentation the TCP port `7778` needs to be opened, which can be done with the following commands:

RHEL | CentOS | Oracle Linux

```
firewall-cmd --zone=public --add-port=7778/tcp
firewall-cmd --zone=public --add-port=7778/tcp --permanent
```

Debian:

The local firewall is not enabled on Debian by default and no steps are required here. **IF** it is enabled then the commands are:

```
iptables -I INPUT -p tcp --destination-port 7778 -j ACCEPT
```

Ubuntu:

The local firewall is not enabled on Ubuntu by default and no steps are required here. **IF** it is enabled then the commands are:

```
sudo ufw allow 7778/tcp
sudo ufw reload
```

If you plan on creating the Input as part of the Global Config, you will need to create this firewall rule on all the instances in your Nagios Log Server cluster.

External Resources

The following resources provide additional information on Logstash:

Structure Of A Logstash Configuration File:

https://www.elastic.co/guide/en/logstash/1.5/configuration-file-structure.html

Input Plugins Available For Logstash:

https://www.elastic.co/guide/en/logstash/1.5/input-plugins.html

Finishing Up

This completes the documentation on Configuring Inputs in Nagios Log Server. You should now have a more detailed understanding of what an input is and how you can expand the capabilities of Nagios Log Server. If you have additional questions or other support related questions, please visit us at our Nagios Support Forums:

https://support.nagios.com/forum

The Nagios Support Knowledgebase is also a great support resource:

https://support.nagios.com/kb