

The Industry Standard in IT Infrastructure Monitoring

Purpose

This document describes how use the Website Defacement Wizard to monitor your websites for defacement, modification and malicious insertions with Nagios® XI™. The Website Defacement Wizard provides an automated method for monitoring your website for defacement, and notifies you when your website contains undesirable content.

Target Audience

This document is intended for use by Nagios XI Administrators and end-users who want to monitor their websites for defacement.

Considerations

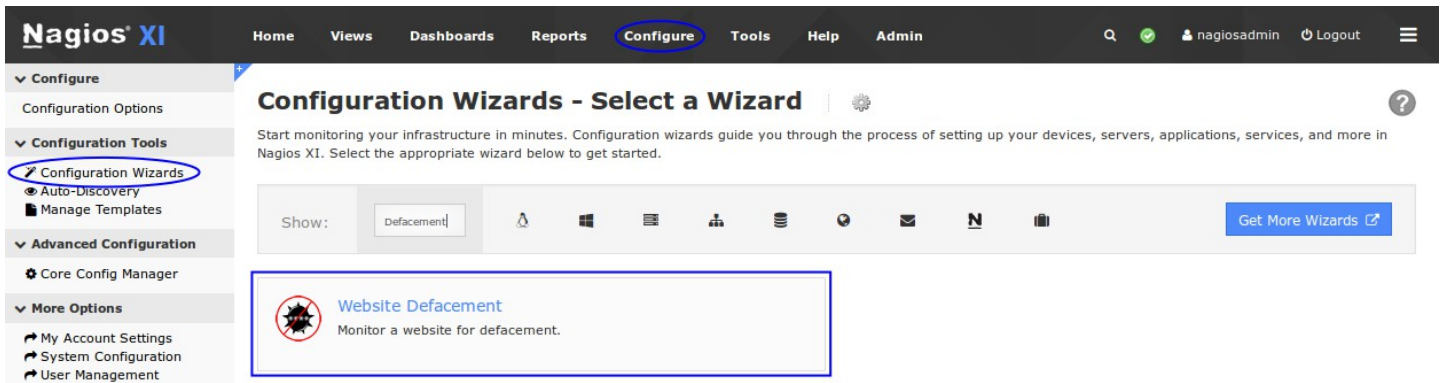
When monitoring a website for defacement, consider the following:

- The Website Defacement wizard uses a regular expression check to search for a specific string or multiple strings
- Strings do not have to be case sensitive and each one should be separated by a new line
- There are a few pre-defined lists of words you may want to search for, sorted into categories
- You can also load a custom wordlist file into the wizard for each site you want to monitor
- There is also a regular expression match check to verify that the website you are monitoring is up and running, but this is strictly optional and may be redundant if you are already monitoring this website with Nagios XI

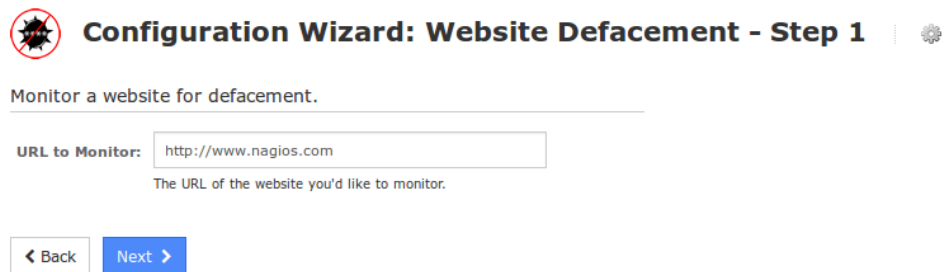
The Website Defacement Wizard

This Website Defacement wizard uses the regular expression check to find a specific string that you do not want to appear on your website. You receive a critical response when the check finds one or more of the strings it was instructed to search for on the website. To understand the capabilities of the wizard we will walk through an example.

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



In **Step 1**, enter the URL of the website you want to monitor into the **URL to Monitor** field.



This can be the main page of the website or any specific sub-page you want to monitor.

Click Next to proceed to Step 2.

Step 2 is where the majority of the configuration takes place and is broken up into multiple sections.

URL Details specifies the following:

- **Host Name** is the standard Nagios host name
- **Service Name Prefix** is a string that will be added to the beginning of any services created by the wizard for easier identification
- **IP Address** allows you to specify a different IP from the one that was auto-detected for the URL

Please refer to the screenshot on the following page.

URL Options specifies the following:

- **Use SSL** and **Port** can be configured in case HTTP/S are running on alternative ports
- **On Redirect** allows you to define how to handle redirected pages.
- **Credentials** allow you to specify a username and password for use in basic HTTP authentication

Please refer to the screenshot on the following page.



Configuration Wizard: Website Defacement - Step 2



URL Details

URL:

Host Name:
The name you'd like to have associated with this website.

Service Name Prefix:
The service name prefix that you'd like to have used for specific URL services you select below. This prefix helps to identify this URL when monitoring different URLs on the same web server.

IP Address:
The IP address associated with the website fully qualified domain name (FQDN).

URL Options

Use SSL: Monitor the URL using SSL/HTTPS.

Port: The port to use when contacting the website.

On Redirect:
How to handle redirected pages. sticky is like follow but will stick to the specified IP address. stickyport ensures the port stays the same.

Credentials:
The username and password to use to authenticate to the URL (optional). If specified, basic authentication is used.

Defacement Monitoring Services allows you to select which defacement methods you would like to use to monitor your website. If you check the box next to **Defacement Content Locator** then a **Website Defacement** service will be created.

The **Defacement Content Locator** allows you to enter a list of words which should be considered “bad” if they appear on the page.

- You can enter in a list of words manually, one on each line
- You can upload a custom text file of words, also one on each line
- You can choose from the pre-defined lists of default words from different categories

From the screenshot on the following page you can see that the **Gambling** checkbox was selected and the **Load Defaults** button was clicked. This loaded all the gambling related words to the text area input.

Defacement Monitoring Services

Specify which defacement services you'd like to monitor your website with.

Defacement Content Locator
Monitors the website to locate string values that are inserted in the field below. Click the Load Defaults to populate the field with commonly known strings.

You may also upload a text file to insert strings you want to keep track of into the text area:

Insert a list of strings, each seperated with a new line (if using a single quote you must escape it):

```
baccarrat
blackjack
casino
casinos
gambling
holdem
holdempoker
holdemsoftware
holdemtexasturbowilson
online-gambling
onlinegambling-4u
poker-chip
roulette
texas-holdem
slot-machine
```

Load File...

Pharmaceuticals Marketing Gambling Profanity

Web Page Regular Expression Match allows you to check that the content of the webpage includes specific words or expressions. If you check the box next to **Web Page Regular Expression Match** then a **Web Page Regex Match** service will be created.

You will then enter a string you wish to search for on the website. You will be alerted if the entered string does **not** appear on your website. You can also choose to invert the search by checking the **Invert Regex Search** check box. This will instead alert if the regex is found on your website.

Web Page Regular Expression Match
Monitors the website to ensure the specified regular expression is found in the content of the web page. A content mismatch may indicate that your website has experienced a security breach or is not functioning correctly. To include multiple expressions use the "|" after each expression with no spaces.

Regular Expression To Expect: Invert Regex Search

Once you've finished making your selections, click Next and then complete the wizard by choosing the required options in Step 3 – Step 5.

To finish up, click on **Finish** in the final step of the wizard, this will create the new hosts and services and begin monitoring.

Nagios XI – How To Monitor Website Defacement With Nagios XI

Once the wizard applies the configuration, click the **View status details for xxxxx** link to see the new host and services that were created.

Host	Service	Status	Duration	Attempt	Last Check	Status Information
www.nagios.com	_ Web Page Regex Match	Critical	1m 29s	2/5	2016-12-07 11:33:31	HTTP CRITICAL: HTTP/1.1 301 Moved Permanently - pattern not found - 461 bytes in 0.582 second response time
	_ Website Defacement	Ok	7s	1/5	2016-12-07 11:33:55	HTTP OK: HTTP/1.1 301 Moved Permanently - 461 bytes in 0.525 second response time

In the screenshot above you can see that the **Web Page Regex Service** is in a critical state with the error "301 Moved Permanently - pattern not found". This will be resolved in the following troubleshooting section.

It's also worth mentioning that while the **Website Defacement Service** is in an OK state, it is also reporting "301 Moved Permanently - pattern not found" and will need to be corrected for the service to function properly.

Troubleshooting

Some sites will issue a HTTP 301 code which is just a simple redirect and can cause some issues with the `check_http` plugin (as seen in the previous screenshot). You will need to adjust the `-f xxxxx` switch on the services to use the `follow` argument.

Locate the services by navigating to **Configure > Core Config Manager > Monitoring > Services**.

Service Name	Service Description	Active	Status	Actions	ID
www.nagios.com	_ Web Page Regex Match	Yes	Applied		110
www.nagios.com	_ Website Defacement	Yes	Applied		109

Click of the services in the Service Name column to begin editing it.

Service Management

Common Settings | **Check Settings** | Alert Settings | Misc Settings

Config Name *
www.nagios.com

Description *
_ Web Page Regex Match

Display name

Manage Hosts 1 | Manage Templates 1 | Manage Host Groups 0 | Manage Servicegroups 0

Active ⓘ

Save Cancel

Check command
check_xi_deface

Command view
\$USER1\$/check_http -H \$HOSTADDRESS\$ -r '\$ARG1\$' -u '\$ARG2\$' \$ARG3\$

\$ARG1\$ infrastructure
\$ARG2\$ /
\$ARG3\$ -f ok
\$ARG4\$
\$ARG5\$
\$ARG6\$
\$ARG7\$
\$ARG8\$

Run Check Command

In the screenshot to the right you can see that \$ARG3\$ has the value:

-f ok

Change ok to follow.

Service Management

Common Settings | **Check Settings** | Alert Settings | Misc Settings

Config Name *
www.nagios.com

Description *
_ Web Page Regex Match

Display name

Manage Hosts 1 | Manage Templates 1 | Manage Host Groups 0 | Manage Servicegroups 0

Active ⓘ

Save Cancel

Check command
check_xi_deface

Command view
\$USER1\$/check_http -H \$HOSTADDRESS\$ -r '\$ARG1\$' -u '\$ARG2\$' \$ARG3\$

\$ARG1\$ infrastructure
\$ARG2\$ /
\$ARG3\$ -f follow
\$ARG4\$
\$ARG5\$
\$ARG6\$
\$ARG7\$
\$ARG8\$

Run Check Command

In the screenshot to the right you can see that \$ARG3\$ now has the value:




-f follow

Click **Save** to save the changes.

Repeat this for any other services than need updating and then click **Apply Configuration** to make the changes go into production.

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Once the configuration has applied go and view the services. After they've performed a check with the new setting they should be working correctly.

↓ Host	↕ Service	↕ Status	↕ Duration	↕ Attempt	↕ Last Check	↕ Status Information
www.nagios.com 	_ Web Page Regex Match 	Ok	3h 17m 8s	1/5	2016-12-07 14:51:15	HTTP OK: HTTP/1.1 200 OK - 57419 bytes in 2.606 second response time
	_ Website Defacement 	Ok	3h 19m 36s	1/5	2016-12-07 14:53:20	HTTP OK: HTTP/1.1 200 OK - 57431 bytes in 2.581 second response time

Finishing Up

This completes our tutorial of how to monitor website defacement with Nagios XI. If you still have questions about how to use the Website Defacement wizard, or for any other support related questions, please visit the Nagios Support Forums at:

<https://support.nagios.com/forum/>