The Industry Standard in IT Infrastructure Monitoring

Purpose

This document describes how to create event chains with Nagios Reactor. Event chains are used to take action when some condition is met.

Target Audience

This document is intended for network administrators who wish to optimize their environment. We'll outline the process for running SSH commands against a remote client in order to restart HTTPD.

Creating a New Reactor Chain

In this section, we'll walk through creation of a new Reactor Chain which we'll use to restart the Apache Web-server on a remote machine.

After logging into Nagios Reactor, select **New Event Chain**

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Next, you will be prompted for details about the new event chain.

Details

- **Name** – Required name for the event chain

- **Tags** – Logical grouping, for example "Linux Servers"

- **Short Description** – A description to help you or others know what this chain is designed to do

- **Required Context Variables** – These are variables that can be passed to the chain at run time. You can either assign context here, which will always be passed to your chain, or via GET or POST when the chain is invoked.

Add Event Chain

| General | Permissions |

Name *	Restart HTTPD
Tags	Linux Servers ×
Short Description *	This is an example of how to restart httpd on Linux servers using SSH.
Required Context Variables	

Enter one variable name per line.
To provide a default value, use a colon, e.g.: *myvar:defaultvalue*

Save and Continue or Cancel

To complete the process of adding the chain, click **Save and Continue**

Save and Continue

Defining the Decision Process

This section describes how to define the actions that will be taken when the print service fails.

1. To begin, click the **Workflow** tab: The Workflow defines all steps to take and is how the decision structure is defined.

Home / Event Chains / Restart HTTPD Event

Success: The event chain was created.

Restart HTTPD Event

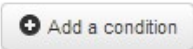① General | **Workflow** | Schedule | History

No blocks defined yet.

2. Next, let's start adding some items to our event chain:
   Click **Add a block**

② → ⊕ Add a block | ✔ Save Changes or Cancel

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With **Add Block**, we can define the logic that goes into our chain. The logic will flow like this:

To begin:

[Add a condition] We won't need an "If" condition in this example, so you can skip to **Then**.

Click **Add a success action**

Then:

No actions specified yet.

[Add a success action] ❓

1. From the Action Type dropdown, select *Execute a remote command via SSH*

2. Populate address and credentials. You can pass them as context variables or hard code them like in the example to the right. (The next example in this document will be using context variables)

3. In the Remote Command field, enter "service httpd restart"

After you've completed filling in the required fields, click **Save**.

[Save]

Edit action   X

Action Type *	Execute a remote command via SSH ▼ ❓
Hostname *	192.168.4.27 ❓
Remote User *	root ❓
Authentication Type *	Password ▼ ❓
Password *	•••••••• ❓
Remote Command *	service httpd restart ❓

☐ Disabled ❓

[Close] [Save]

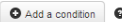Here's how our decision tree looks now:

Restart HTTPD Event

General | Workflow | Schedule | History

[⬇] [⌃] [⌄]

Block #1 | Logic Block ▼ | [✏ Nick] ❓   ▼
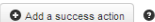
If [all ▼] of the following: ❓

No conditions added yet.

[Add a condition] ❓
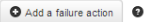
Then:

Execute command 'service httpd restart' via SSH on host '192... ⊙ ⊗

[Add a success action] ❓

Else:

No actions specified yet.

[Add a failure action] ❓

After successful review of your chain, click **Save Changes.**

[✔ Save Changes]

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Here is the Log from running our newly created chain. You can see that the chain steps have run:

1. The SSH connection resolved

2. Command execution was successful

3. Command output and the Run complete status of (0) , which is a successful run result.

Log Viewer - Restart HTTPD Event   X

qualified domain name, using 127.0.0.1 for ServerName [OK]
INFO - 2014-08-14 13:33:15: STEP 1 : ****** BEGIN RUN 1439 ******
INFO - 2014-08-14 13:33:15: STEP 1 : Matching all conditions for step 1
INFO - 2014-08-14 13:33:15: STEP 1 : Running success actions.
INFO - 2014-08-14 13:33:15: STEP 1 : action (Execute a remote command via SSH) : (context) : Running action: Execute command 'service httpd restart' via SSH on host '192.168.4.27'
INFO - 2014-08-14 13:33:15: STEP 1 : action (Execute a remote command via SSH) : (context) : Initializing ssh connection...
INFO - 2014-08-14 13:33:15: STEP 1 : action (Execute a remote command via SSH) : (context) : Using password authentication.
INFO - 2014-08-14 13:33:15: STEP 1 : action (Execute a remote command via SSH) : (context) : Authentication successful. Running remote command: service httpd restart
INFO - 2014-08-14 13:33:15: STEP 1 : action (Execute a remote command via SSH) : (context) : Got output: Stopping httpd: [OK] Starting httpd: httpd: apr_sockaddr_info_get() failed for Xldevel.localdomain httpd: Could not reliably determine the server's fully qualified domain name, using 127.0.0.1 for ServerName [OK]
INFO - 2014-08-14 13:33:15: STEP 1 : action (Execute a remote command via SSH) : (context) : (Execute command 'service httpd restart' via SSH on host '192.168.4.27') finished with result (0)
INFO - 2014-08-14 13:33:15: STEP 1 : Run complete (success)

Close

Context Variable Method

Now that we successfully executed a command using hard coded values, we will now run the same event chain using context variables.

Here is the previous chain, but with context variables added.

1. **Hostname** will be populated by the "%HOST%" context variable.

2. **Remote User** will be populated by the "%USER%" context variable.

3. The **Password** field currently has "%PASSWORD%" in the field even though it is hidden from view.

4. The **Remote Command** has the service "%SERVICE%" restart command. This will allow any service to be restarted.

Edit action   X

Action Type *	Execute a remote command via SSH ▼
① Hostname *	%HOST%
② Remote User *	%USER%
Authentication Type *	Password ▼
③ Password *	••••••••••
④ Remote Command *	service %SERVICE% restart

☐ Disabled

Close   **Save**

Here is a context variable example based on the new action we created above:

It is important to note that all the context variables that were added in the previous action are case sensitive.

Run Event Chain: Restart HTTPD Event   X

Context

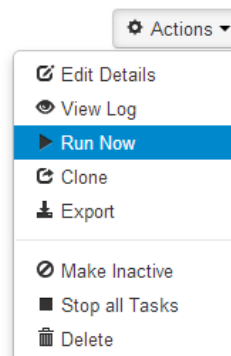|	
HOST	192.168.4.27
USER	root
PASSWORD	Xlpassword
SERVICE	httpd

⊕ Add

Cancel   **Run**

Troubleshooting

For testing and troubleshooting, you can launch the action manually

- On the right hand side > Choose "Actions" > Select "Run Now"

- Use the log viewer for debugging and finding out which parts of your chain are failing

⚙ Actions ▼

☑ Edit Details
👁 View Log
▶ **Run Now**
↻ Clone
⬇ Export

⊘ Make Inactive
■ Stop all Tasks
🗑 Delete

This concludes the process of running SSH commands via a remote machine.

Finishing Up

If you have any questions about executing remote commands via SSH with Nagios Reactor, contact our support team via our online forum at: http://support.nagios.com/forum

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