ThousandEyes Integration Synchronization PowerPack

Version 1.1.0

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Chapter 1

Introduction to the ThousandEyes Integration Synchronization PowerPack

Overview

This chapter describes how you can use the *ThousandEyes Integration* Synchronization PowerPack to automatically trigger SL1 events from ThousandEyes alerts. The integration is asynchronous, from ThousandEyes to SL1.

NOTE: After the 2.1.0 platform release, the *Integration Service* was rebranded as *SL1 PowerFlow*, and the *Automation Builder* was rebranded as *SL1 PowerFlow builder*.

NOTE: The label "SyncPack" is used in place of "Synchronization PowerPack" in the PowerFlow user interface.

This chapter covers the following topics:

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Prerequisites for this Synchronization PowerPack

This Synchronization PowerPack requires the following:

- A subscription that includes CMDB/Inventory Workflow Automations

The following table lists the port access required by PowerFlow and this Synchronization PowerPack:

Source IP	Destination	Source Port	Destination Port	Requirement
PowerFlow	SL1 API	Any	TCP 443	SL1 API Access
ThousandEyes	PowerFlow API	Any	TCP 443	PowerFlow API Access
PowerFlow	SL1 Database	Any	TCP 7706	SL1 Database Access

Contents of the Synchronization PowerPack

This section lists the contents of the *ThousandEyes Integration* Synchronization PowerPack.

PowerFlow Applications

- ***ThousandEyes: Process Alert***. This application processes ThousandEyes alert data and creates an SL1 event.

For more information about how to configure these applications, see *Configuring the ThousandEyes Application*.

Configuration Object

- ***ThousandEyes Base Config***. This configuration object can be used as a template after the Synchronization PowerPack is installed on the PowerFlow system. The configuration object includes the following:
    - Details for connecting to the SL1 database, including the URL, username, and password
    - Details for converting ThousandEyes alerts into SL1 events including event and yname format, device matching, default device, and custom attribute matching

Steps

The following steps are included in this Synchronization PowerPack:

- Get Alert Data From ThousandEyes
- Transform ThousandEyes Alert Data to SL1 Event
- Trigger ThousandEyes Event Payload

Installing the Synchronization PowerPack

A Synchronization PowerPack file has the **.whl** file extension type. You can download the Synchronization PowerPack file from the ScienceLogic Support site.

WARNING: If you are *upgrading* to this version of the Synchronization PowerPack from a previous version, make a note of any settings you made on the **Configuration** pane of the various integration applications in this Synchronization PowerPack, as these settings are *not* retained when you upgrade.

Downloading the Synchronization PowerPack

To locate and download the Synchronization PowerPack:

1. Go to the ScienceLogic Support Site.
2. Click the **[Product Downloads]** tab and select *PowerPack*.
3. In the ***Search PowerPacks*** field, search for the Synchronization PowerPack and select it from the search results. The **Release Version** page appears.
4. On the **[PowerPack Versions]** tab, click the name of the Synchronization PowerPack version that you want to install. The **Release File Details** page appears.
5. Click the **[Download File]** button or click the name of the **.zip** file containing the **.whl** file for this Synchronization PowerPack to start downloading the file.

NOTE: Synchronization PowerPacks do not require a specific license. After you download a Synchronization PowerPack, you can import it to your PowerFlow system using the PowerFlow user interface.

NOTE: If you are installing or upgrading to the latest version of this Synchronization PowerPack in an offline deployment, see "Installing or Upgrading in an Offline Environment" in the Synchronization PowerPack release notes to ensure you install any external dependencies.

Importing the Synchronization PowerPack

To import a Synchronization PowerPack in the PowerFlow user interface:

1. On the **SyncPacks** page of the PowerFlow user interface, click **[Import SyncPack]**. The **Import SyncPack** page appears.
2. Click **[Browse]** and select the **.whl** file for the Synchronization PowerPack you want to install.

TIP: You can also drag and drop a **.whl** file to the **Import SyncPack** page.

3. Click **[Import]**. PowerFlow registers and uploads the Synchronization PowerPack. The Synchronization PowerPack is added to the **SyncPacks** page.

> **NOTE:** You cannot edit the content package in a Synchronization PowerPack published by ScienceLogic. You must make a copy of a ScienceLogic Synchronization PowerPack and save your changes to the new Synchronization PowerPack to prevent overwriting any information in the original Synchronization PowerPack when upgrading.

Installing the Synchronization PowerPack

To activate and install a Synchronization PowerPack in the PowerFlow user interface:

1. On the **SyncPacks** page of the PowerFlow user interface, click the **[Actions]** button (⋮) for the Synchronization PowerPack you want to install and select *Activate & Install*. The **Activate & Install SyncPack** modal appears.

> **NOTE:** If you try to activate and install a Synchronization PowerPack that is already activated and installed, you can choose to "force" installation across all the nodes in the PowerFlow system.

> **TIP:** If you do not see the PowerPack that you want to install, click the Filter icon (⏷) on the **SyncPacks** page and select *Toggle Inactive SyncPacks* to see a list of the imported PowerPacks.

2. Click **[Yes]** to confirm the activation and installation. When the Synchronization PowerPack is activated, the **SyncPacks** page displays a green check mark icon (✓) for that Synchronization PowerPack. If the activation or installation failed, then a red exclamation mark icon (!) appears.
3. For more information about the activation and installation process, click the check mark icon (✓) or the exclamation mark icon (!) in the **Activated** column for that Synchronization PowerPack. For a successful installation, the "Activate & Install SyncPack" application appears, and you can view the Step Log for the steps. For a failed installation, the **Error Logs** window appears.
4. If you have other versions of the same Synchronization PowerPack on your PowerFlow system, you can click the **[Actions]** button (⋮) for that Synchronization PowerPack and select *Change active version* to activate a different version other than the version that is currently running.

Chapter 2

Configuring Applications for the ThousandEyes IntegrationSynchronization PowerPack

Overview

This chapter describes how to set up the PowerFlow application for the *ThousandEyes Integration* Synchronization PowerPack.

This chapter covers the following topics:

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Creating and Aligning a Configuration Object in PowerFlow

A ***configuration object*** supplies the login credentials and other required information needed to execute the steps for a PowerFlow application. The **Configurations** page ( ) of the PowerFlow user interface lists all available configuration objects for that system.

To use this Synchronization PowerPack, you will need to either use an existing configuration object in the PowerFlow user interface or create a new configuration object in the PowerFlow user interface and align that configuration object to the application that processes ThousandEyes alert information and creates an event in SL1.

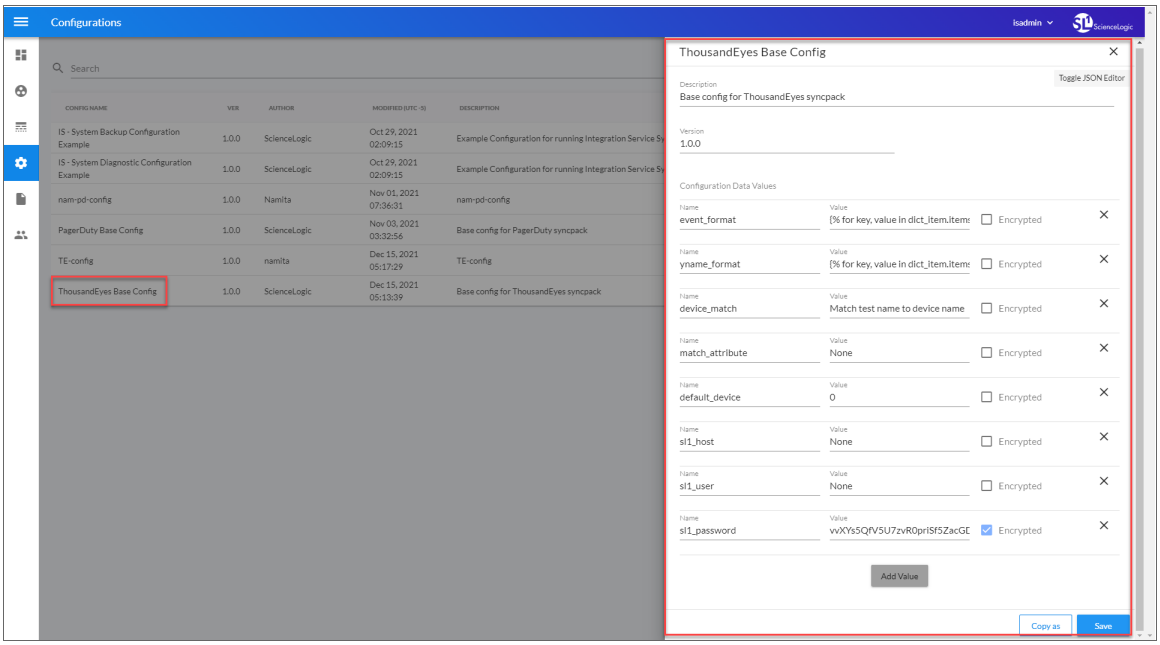
Creating a Configuration Object

For this Synchronization PowerPack, you can make a copy of the "ThousandEyes Base Config" configuration object, which is the sample configuration file that was installed with the *ThousandEyes Integration* Synchronization PowerPack.

TIP: The "ThousandEyes Base Config" configuration object contains all of the required variables. Simply update the variables from that object to match your SL1 and ThousandEyes settings.

To create a configuration object based on the "ThousandEyes Base Config" configuration object:

1. In the PowerFlow user interface, go to the **Configurations** page ( ).
2. Click the **[Actions]** button ( ) for the "ThousandEyes Base Config" configuration object and select *Edit*. The **Configuration** pane appears:



3. Click **[Copy as]**. The **Create Configuration** pane appears.
4. Complete the following fields:

    - ***Friendly Name***. Type a name for the configuration object that will display on the **Configurations** page.
    - ***Description***. Type a brief description of the configuration object.
    - ***Author***. User or organization that created the configuration object.
    - ***Version***. Version of the configuration object.

5. In the ***Configuration Data*** field, update the default variable definitions to match your PowerFlow configuration:

    - ***event_format***. The string to specify how the event message is constructed for the event.
    - ***yname_format***. The string to specify how the sub-entity name (yname) is constructed for the event.
    - ***device_match***. The value to specify which alert value in ThousandEyes will be matched to a device in SL1. You can enter the following values:

        - ***Match test ID to custom attribute***. The ThousandEyes alert test ID is matched to the custom attribute defined in the configuration object.
        - ***Match test name to custom attribute***. The ThousandEyes alert test name is matched to the custom attribute defined in the configuration object.
        - ***Match test name to device name***. The ThousandEyes test name is matched to the device name in SL1.
        - ***Always use default device***. The ThousandEyes alert is matched to the default device defined in the configuration object.

    - ***match_attribute***. The name of the SL1 custom attribute to match to when using the "Match test ID to custom attribute" or "Match test name to custom attribute" options.

    > **NOTE:** If you want to match multiple test names or test IDs to one device in SL1, you can enter each test in a comma-separated list in this attribute for that device. For example, enter "test1,test2,test3".

    - ***default_device***. The device ID to align SL1 events to if no device match is found.
    - ***sl1_host***. The hostname or IP address for your SL1 system.
    - ***sl1_user***. The username for your SL1 system.
    - ***sl1_password***. The password for your SL1 system.

6. Click **[Save]**. You can now align this configuration object with the application.

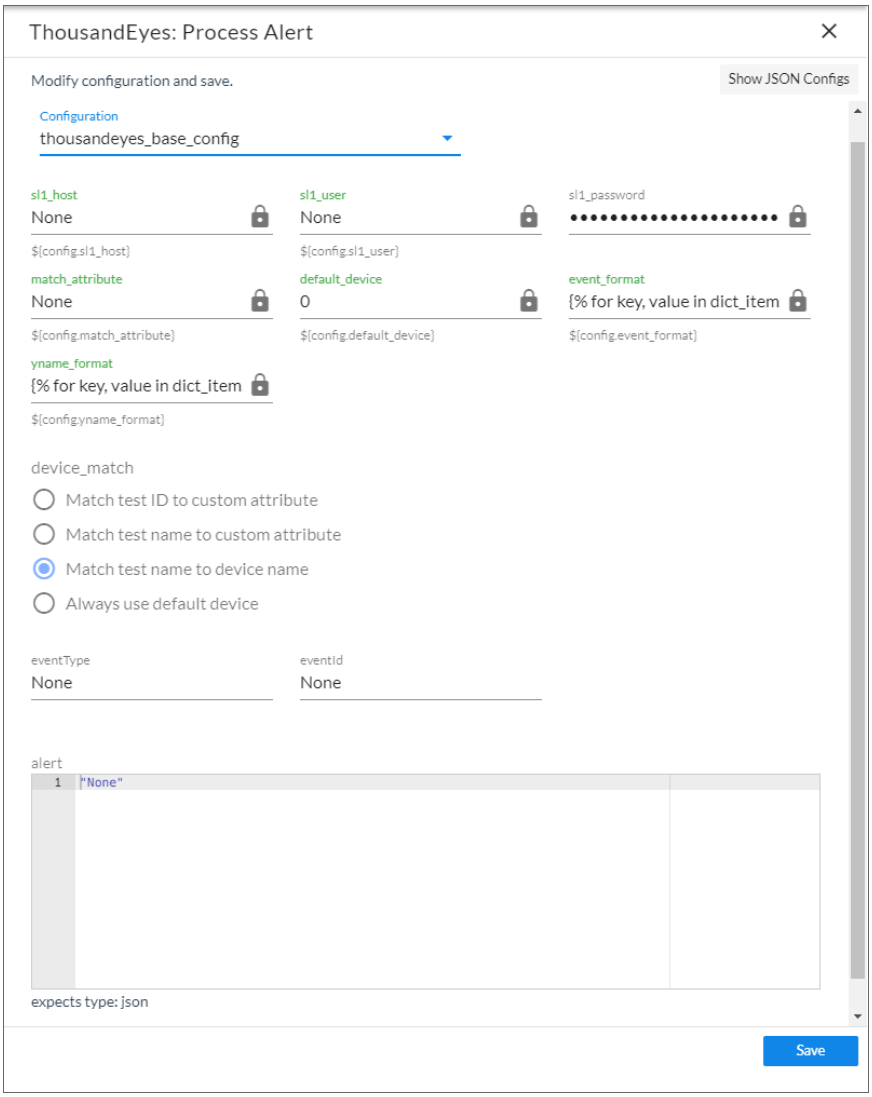
Aligning a Configuration Object and Configuring the Application

When ThousandEyes triggers an outbound HTTP request, the Synchronization PowerPack uses that request to collect ThousandEyes alert information, which the PowerFlow application then processes and uses to generate a corresponding event in SL1.

To run this Synchronization PowerPack, you must "align" the configuration object to run with the "ThousandEyes: Process Alert" PowerFlow application and, if needed, update any other fields on the **Configuration** pane for the applications.

To align the configuration object with the relevant PowerFlow application:

1. On the **Applications** page of the PowerFlow user interface, open the "ThousandEyes: Process Alert" PowerFlow application and click **[Configure]** ( ). The **Configurations** pane for that application appears:



2. From the ***Configurations*** drop-down, select the configuration object you want to use.

> **NOTE:** The values for **sl1_host** and the other parameters that appear in the **Configuration** pane with a padlock icon (🔒) are populated by the configuration object you aligned with the application. Do not modify these values. If you encounter an error, make sure your configuration object is configured properly.

3. Select an option to specify how ThousandEyes alerts will be matched to a device in SL1. You can choose from the following options:
    - ***Match test ID to custom attribute***. The ThousandEyes alert test ID is matched to the custom attribute defined in the configuration object.
    - ***Match test name to custom attribute***. The ThousandEyes alert test name is matched to the custom attribute defined in the configuration object.
    - ***Match test name to device name***. The ThousandEyes test name is matched to the device name in SL1.
    - ***Always use default device***. The ThousandEyes alert is matched to the default device defined in the configuration object.
4. Click **[Save]** to align that configuration with the application.
5. Wait until you see the "App & Confg modifications saved" pop-up message before proceeding.

Configuring ThousandEyes to Run the PowerFlow Application

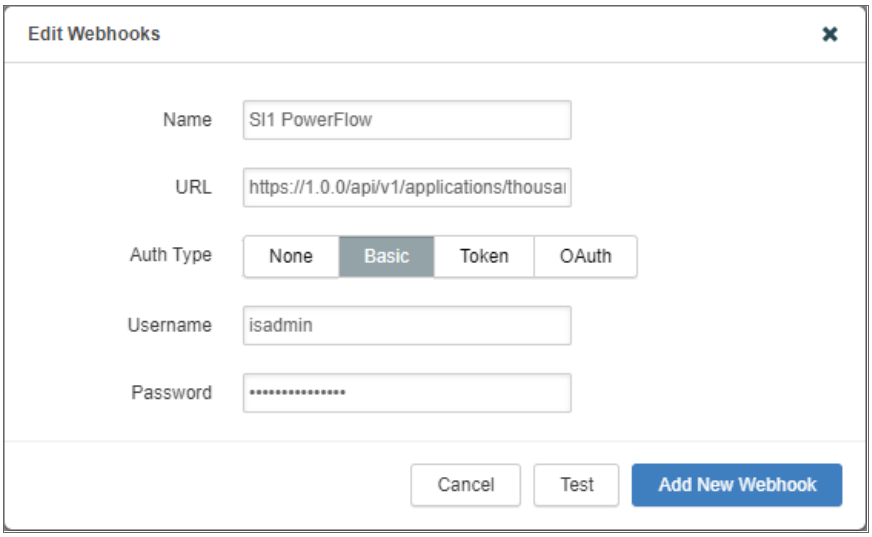
In order to integrate PowerFlow with ThousandEyes, you must create an alert webhook in ThousandEyes that is configured to run the PowerFlow application.

Creating a Webhook in ThousandEyes

Follow the ThousandEyes documentation to create a webhook. Once you reach the **Edit Webhook** page, use the following steps to enter the values required to configure the webhook for your PowerFlow application:

> **NOTE:** For more information on creating webhooks in ThousandEyes, see https://docs.thousandeyes.com/product-documentation/alerts/using-webhooks-server-sample-code-included.

1. Log in to ThousandEyes and navigate to the **Alert Rules** page (Alert > Alert Rules).
2. Expand an Alert Rule and select the **[Notifications]** tab.
3. In the ***WEBHOOKS*** field, click **[Configure Webhooks]**. (Alternatively, if you have already configured webhooks, click **[Edit webhooks]** and then **[Add New Webhook]**.) The **Edit Webhooks** page appears:



4. Enter values in the following fields:

   - ***Name***. Type a name for your webhook.
   - ***URL***. Enter your PowerFlow hostname or IP in the following URL: https://[enter-powerflow-hostname-or-ip]/api/v1/applications/thousandeyes_process_alert/run

     For example, if the IP for your PowerFlow system is 192.0.2.0, you should enter the following URL: https://192.0.2.0/api/v1/applications/thousandeyes_process_alert/run

   - ***Username***. Type your PowerFlow username.
   - ***Password***. Type your PowerFlow password

5. Optionally, you can click **[Test]** to test your webhook.
6. Click **[Add New Webhook]** to save your new webhook.

Chapter 3

Creating Event Policies for ThousandEyes Alerts

Overview

This chapter describes how to create event policies that match your ThousandEyes alerts. You can use the configuration object in this Synchronization PowerPack to specify how an event message is constructed and then create one or more API event policies to match the specification. The integration then processes the ThousandEyes alert information and makes an API request.

Use the following menu options to navigate the SL1 user interface:

- To view a pop-out list of menu options, click the menu icon ( ).
- To view a page containing all the menu options, click the Advanced menu icon (•••).

This chapter includes the following topics:

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Defining API Event Policies

All alerts generated using the /alert resources are matched against event policies of type "API".

When you create API event policies, the event messages are generated by inserting messages into the main database. These messages can be inserted by a snippet automation action, a snippet Dynamic Application, or by a request to the ScienceLogic API.

You can create one ore more API event policies to trigger an SL1 event based on your ThousandEyes alerts. Once you have created a configuration object and defined its ***event_format*** variable, you can determine how alerts match to events by creating an API event policy. The ***event_format*** variable from your configuration object matches against the ***Match String*** and optional ***Second Match String*** defined in your API event policy.

To define an API event policy:

1. Go to **Event Policies** page (Events > Event Policies).
2. In the **Event Policies** page, click the **[Create Event Policy]** button. The **[Policy Description]** tab of the **Event Policy Editor** appears.
3. On the **[Policy Description]** tab, enter the following information:
    - ***Policy Name***. Type a name for the event policy.
    - ***Enable Event Policy***. Turn this toggle on to enable the event policy, or toggle it off to disable the event policy.
    - ***Policy Description***. Type a description of the event policy.
4. Click the **[Match Logic]** tab, then enter the following information:
    - ***Event Source***. Specifies the source for the event. Select *API*.
5. After selecting and defining your ***Event Source***, enter values in the fields on the right side of the **Match Logic** tab:
    - ***String/Regular Expression***. Use this drop-down to select *String* or *Regular Expression*.
    - ***Match String***. Type a text string or a regular expression to match against the originating log message field of each alert generated through the API. The event will be generated if the message matches the ***Match String*** and the optional ***Second Match String*** values. This string can be up to 512 characters and length and can be any combination of alpha-numeric and multi-byte characters.

TIP: If you are using the default setting in your configuration object, the simplest match logic configuration is to enter "ThousandEyes" in the ***Match String*** field. This configuration will match all ThousandEyes alerts.

CAUTION: If you do not supply a value in the ***Match String*** field, your event policy will match all alerts generated through the API.

CAUTION: SL1's expression matching is case-sensitive.

- ***Second Match String (Optional)***. Optionally, a second text string or regular expression to match against the originating log message field of each alert generated through the API. The event will be generated if the message matches the ***Match String*** and the ***Second Match String*** values.

NOTE: The ThousandEyes integration accepts partial matching, so the ***Second Match String*** field is optional.

NOTE: The other fields on this page can be used to define specific event behavior or enable advanced event features. For a description of every option on this page, see the ***Events*** manual.

6. Click the **[Event Message]** tab, then enter the following information:

    - ***Event Message***. Define the message that appears in the **Event Console** page or the **Viewing Events** page when this event occurs.

TIP: It is best practice to set this field to "%M" to view the full message value.

NOTE: For more information about the ***Event Message*** field and descriptions of the other fields on this page that can be used to define the event severity, event masking, and other options, see the ***Events*** manual.

7. Optionally, you can click the **[Suppression]** tab, where you can define specific devices or device groups for which the event should not appear.

NOTE: For more information about the **[Suppression]** tab and the fields that appear on this page, see the ***Events*** manual.

8. After entering information in each tab, click **[Save]** to save your new event policy.

NOTE: For more information on generating API event policies, see the ***Using the ScienceLogic API*** manual.

Defining API Event Policies in the Classic SL1 User Interface

To create an event policy of type "API" in the classic SL1 user interface:

1. Go to the **Event Policy Manager** page (Registry > Events > Event Manager).
2. Click the **[Create]** button. The **Event Policy Editor** page is displayed.
3. Supply values in the following fields:

- ***Event Source***. Select API.
- ***Operational State***. Select whether the event policy is enabled or disabled.
- ***Policy Name***. Type a name for your event policy.
- ***Event Message***. Type the event message that will be displayed in the event console when this event is generated. You can use the %M (message), %V (value), and %T (threshold) substitution characters in this field to include information from the API request.

> TIP: It is best practice to set this field to "%M" to view the full message value.

- ***Policy Description***. Type descriptive text about your event policy. This text is displayed when a user selects the information icon ( ) for an instance of this event.

> **NOTE:** The ***Use Modifier*** checkbox is not applicable to API event policies.

4. Click the **[Advanced]** tab. The advanced options are displayed.
5. Supply values in the following fields:
    - ***First Match String***. Enter text or a regular expression to match against the message field of each alert generated through the API. The event will be generated if the message matches the ***First Match String*** and the ***Second Match String*** values.

> TIP: If you are using the default setting in your configuration object, the simplest match logic configuration is to enter "ThousandEyes" in the ***First Match String*** field. This configuration will match all ThousandEyes alerts.

> CAUTION: If you do not supply a value in the ***First Match String*** field, your event policy will match all alerts generated through the API.

    - ***Second Match String***. Optionally, a second text string or regular expression to match against the message field of each alert generated through the API. The event will be generated if the message matches the ***First Match String*** and the ***Second Match String*** values.
    - ***Match Logic***. Specifies whether the ***First Match String*** and ***Second Match String*** values are matched as text strings or regular expressions.

> **NOTE:** The other fields on this page can be used to define specific event behavior or enable advanced event features. For a description of every option on this page, see the ***Events*** manual .

6. Click the **[Save]** button.

NOTE: For more information on generating API event policies, see the ***Using the ScienceLogic API*** manual.

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