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# ThousandEyes SyncPack

Version 1.1.0 (Document Revision 1)

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# Chapter

# 1

## Introduction to the ThousandEyes SyncPack

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### Overview

This chapter describes how you can use the "ThousandEyes" SyncPack to automatically trigger SL1 events from ThousandEyes alerts. The integration is asynchronous, from ThousandEyes to SL1.

This chapter covers the following topics:

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## What Can I Do with this SyncPack?

The "ThousandEyes" SyncPack processes ThousandEyes alert data and creates an SL1 event. The integration is asynchronous, from ThousandEyes to SL1.

This SyncPack let you connect issues detected by ThousandEyes to SL1 Behavioral Correlation and incident management workflows.

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## Contents of the SyncPack

This section lists the contents of the "ThousandEyes" SyncPack.

### 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 SyncPack 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 SyncPack:

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

## Installing the ThousandEyes SyncPack

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### Overview

This chapter describes how to install the ThousandEyes SyncPack.

This chapter covers the following topics:

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## Prerequisites for this SyncPack

For the latest System Requirements, see the [SL1 PowerFlow SyncPack Release Notes](#).

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

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

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## Downloading and Installing the ThousandEyes SyncPack

A SyncPack file has the `.whl` file extension type. You can download the SyncPack file from the ScienceLogic Support site.

### Downloading the SyncPack

**NOTE:** If you are installing or upgrading to the latest version of this SyncPack in an offline deployment, see [Installing or Upgrading in an Offline Environment](#) to ensure you install any external dependencies.

To locate and download the SyncPack:

1. Go to the ScienceLogic Support Site at <https://support.sciencelogic.com/s/>.
2. Click the **[Product Downloads]** tab and select *PowerPacks & SyncPacks*.
3. In the **Search** field, search for the SyncPack and select it from the search results. The **Release Version** page appears.
4. On the **[Files]** tab, click the down arrow next to the SyncPack version that you want to install, and select *Show File Details*. The **Release File Details** page appears.
5. Click the **[Download File]** button to download the SyncPack.

After you download the SyncPack, you can import it to your PowerFlow system using the PowerFlow user interface.

### Importing the SyncPack

To import a SyncPack 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 SyncPack you want to install. You can also drag and drop a **.whl** file to the **Import SyncPack** page.
3. Click **[Import]**. PowerFlow registers and uploads the SyncPack. The SyncPack is added to the **SyncPacks** page.
4. You will need to activate and install the SyncPack in PowerFlow. For more information, see the following topic.

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

## Installing the SyncPack

To activate and install a SyncPack in the PowerFlow user interface:

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

**NOTE:** If you try to activate and install a SyncPack 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 SyncPack is activated, the **SyncPacks** page displays a green check mark icon (  ) for that SyncPack. 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 SyncPack. 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 SyncPack on your PowerFlow system, you can click the **[Actions]** button (  ) for that SyncPack and select *Change active version* to activate a different version other than the version that is currently running.

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# Chapter

# 3

## Configuring PowerFlow Applications for the ThousandEyes SyncPack

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### Overview

This chapter describes how to set up the PowerFlow application for the "ThousandEyes" SyncPack.

This chapter covers the following topics:

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# Workflow for Configuring the SyncPack

The following workflows describe how to configure SL1 and PowerFlow to work with the "ThousandEyes" SyncPack.

## Configuring ThousandEyes

1. [Create and configure a Webhook in ThousandEyes](#)

## Configuring SL1

1. [Define the API event policies](#)

## Configuring PowerFlow

1. [Create a configuration object](#)
2. [Align the configuration object and configure the ThousandEyes PowerFlow application](#)

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# Configuring ThousandEyes

To integrate PowerFlow with ThousandEyes, you must create an alert webhook in ThousandEyes. After you create the webhook, you will need to configure the webhook for your PowerFlow application.

To create and configure a webhook in ThousandEyes:

1. Follow the ThousandEyes documentation to create a webhook. For more information on creating webhooks in ThousandEyes, see <https://docs.thousandeyes.com/product-documentation/integration-guides/custom-webhooks>.
2. In ThousandEyes, navigate to the **Alert Rules** page (Alert > Alert Rules).
3. Expand an Alert Rule and select the **[Notifications]** tab.
4. 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.
5. 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.

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## Configuring SL1

The following topic covers how to set up your SL1 instance to work with the "ThousandEyes" SyncPack.

### Defining API Event Policies

You can create event policies that match your ThousandEyes alerts. You can use the configuration object in this SyncPack 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.

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 or 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 the **Event Policies** page (Events > Event Policies).
2. 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.

## Configuring PowerFlow

The following topics cover how to set up your PowerFlow instance to work with the "ThousandEyes" SyncPack.

### Creating 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 SyncPack, 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.

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

**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 SyncPack 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 SyncPack, 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. Update any of the remaining fields on the **Configurations** pane as needed.
5. Click **[Save]** to align that configuration with the application.

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