Endace Fusion Connector Guide

EDM09-99 - Version 6

Website

www.endace.com

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Introduction

Splunk® software is a powerful platform for analysis and visualization of machine data. In the network and security monitoring context this data is typically in the form of log events that are emitted by network elements and perimeter security devices. While the Splunk® software provides a broad overview of the network and correlation capabilities, occasionally a deep dive is needed and often the log event is not granular enough. EndaceProbes capture and index every packet and these packets are the "ground truth" from which network elements and security devices derive the information in the logs sent to the Splunk® software. In cases where the logs are insufficient, an analyst's only recourse for determining the root cause of the event (to resolve or mitigate the upstream issue) is to look at the packets provided by an EndaceProbe.

The Endace Fusion Connector App enables users to rapidly extract packets from an EndaceProbe that are related to a network or security event displayed by the Splunk® software. When a log event is selected in the Splunk® software dashboard the connector automatically extracts the date, time and IP tuple information that identifies the packets underpinning the event. A REST API request is sent to search for and then download these packets from any EndaceProbe.

This document is applicable to Endace Fusion Connector version 1.0.

Related Documents

- *EDM09-100 REST API V0 Reference*
- *EDM09-101 REST API V1 Reference*
- *EDM09-102 REST API V2 Reference*
- *EDM09-111 REST API V4 Reference*

Installation and Configuration

This section details how to install, upgrade and configure the Endace Fusion Connector App.

Software Requirements

This version of the Endace Fusion Connector App requires the following software:

- EndaceProbe OSm 6.2.1 or greater
- Splunk® software version 6.2, 6.0, 5.0

Note:
Use the appropriate version of the Endace Fusion Connector App for the version of the EndaceProbe OSm to ensure that the REST API versions match.

Installing the Endace Fusion Connector App

The Endace Fusion Connector App can be installed from a supplied file or from the SplunkBase website. After the initial installation, you must configure the connection to the EndaceProbe.
See Configure the Connection to the EndaceProbe (page 4).

To install from a supplied file

1. Login to your Splunk® software instance using an administration level user.
2. Navigate to the Manager > Apps page.
3. Click Install app from file.
   The Upload an app window displays.
4. Click the Browse... button and locate the Endace Fusion Connector App install file and then click Open.
5. Click Upload to install the selected install file.
6. When prompted, restart the Splunk® software and login.

To Install from the Splunkbase Website

1. Login to your Splunk® software instance using an administration level user.
2. Navigate to the Manager > Apps page.
3. Click Find more apps.
4. Locate the Endace Fusion Connector App.
5. Click Install and follow the on-screen instructions.
6. When prompted, restart the Splunk® software and login.

Configure the Connection to an EndaceProbe

The Endace Fusion Connector App connects to an EndaceProbe so it can retrieve the requested packets of interest. Each request for information is submitted to the EndaceProbe using the specified IP Address, port and user credentials entered on this page.

Field	Description
Hostname or IP Address	The hostname or IP address of the EndaceProbe that is to process the REST API requests.
Port	The port number on which the EndaceProbe is to receive requests. The connection to the EndaceProbe uses SSL. The entered port number must match the HTTPS port configured on the EndaceProbe. The default port number is 443.
Username	The user name to use to submit the request to the EndaceProbe. This user account must be configured on the EndaceProbe and must have the RBAC role of "app_user". Multiple users can be added. All configured users are listed in *$SPLUNK_HOME/etc/apps/endace/local/app.conf* file - the password is encrypted.
Password	The password for this EndaceProbe user. Once entered the actual password is stored encrypted.

Note:
Once entered, the user name and password are no longer displayed and the fields are shown as blank.

To configure the connection:

1. In the Splunk® software, navigate to the Manager > Apps page.
2. Select the Set up option for the Endace Fusion Connector App.
3. Enter the IP address and port number of the EndaceProbe to which the request will be sent.
4. Enter a valid EndaceProbe user name and password.
   This must have been previously configured on the EndaceProbe.
5. Click Save.
6. Restart the Splunk® software.

   Note:
   Changing the username or password, requires a restart of the Splunk® software.
7. Check the Splunk® software connects correctly to the defined EndaceProbe by completing a manual search on the Endace Fusion Connector App page.
   - If the entered details are incorrect, a message displays indicating which details are incorrect.
   - Correctly entered details will return either the search results or a message indicating no matching packets of interest were found

Upgrading the Endace Fusion Connector App

To upgrade the Endace Fusion Connector App from a file, complete the following steps:

1. Login to your Splunk® software instance using an administration level user.
2. Navigate to the Manager > Apps page.
3. Click Install app from file.
   The Upload an app window displays.
4. Click the Browse... button to locate the Endace Fusion Connector App install file, then click Open.
5. Check the Upgrade app... option.
6. Click Upload to install the selected install file.
7. When prompted, restart the Splunk® software and login.
   The installation overwrites the existing version.

The EndaceProbe connection details and user credentials are retained through the upgrade.

Note:
Once the upgrade is complete, we recommend you clear the browser cache.
This ensures that any changes to the page layout, etc., are loaded. Refer to your respective browser documentation for specific details.

Using the Endace Fusion Connector App

This section describes how to use the Endace Fusion Connector App to retrieve metadata and packets of interest from the connected EndaceProbe or Central Management Server (CMS). These packets are typically identified by attributes present in a Splunk® software log event. Valid attributes are:

- the source or destination IP addresses
- date and time range of interest
- IP Protocol of interest

Once the Endace Fusion Connector App has submitted a search request for packets to the EndaceProbe or CMS, a summary displays the number, location and size (in bytes) of matching packets. This enables the user to determine if the download size is manageable, or if the search parameters need to be refined to produce a smaller data set.

Note:
Metadata is only generated for RotationFiles that are vision enabled.

Preparing a Search Request

A search request can be created in two ways:

- automatically - using a Splunk® software log event to populate the Endace Fusion Connector App page, or
- manually - entering the appropriate information into the Endace Fusion Connector App page.

For details on the Endace Fusion Connector App Search Parameters page, see the Search Parameters table below.

Automatic Population of Endace Flow Search Page

1. Use the Splunk® software search to locate a log event.
2. From the event's drop-down menu select Endace Flow Search.
   The Endace Flow Search page opens and pre-populates the search fields with the details from the log event.
3. Check the pre-populated search page and add or alter the information as required
4. Click Search to send the REST API request to the EndaceProbe and display the search results.
   Depending on the size of the request and the number of EndaceProbes in the monitored network the results may take time to return.

Manual Population of Endace Flow Search Page

1. Open the Endace Flow Search page.
2. Enter the details into the search fields.
3. Click Search to send the REST API request to the EndaceProbe and display the search results.
   Depending on the size of the request and the number of EndaceProbes in the monitored network the results may take time to return.

Search Parameters

The search parameter values are either automatically populated from the Splunk® software log event or entered manually. The REST API request is sent to the configured EndaceProbe or CMS to locate packets of interest.

Field	Description
Event	The date and time of the log event.
From & To	Select or enter the required time range around the log event. • Click the radio buttons next to the date and time to manually enter the required date and time range. • Click the radio buttons next to the selected time range to select a time range. The default is 30 seconds before and after.
Source IP & Destination IP	The source and destination IP addresses and port number (optional) from the log event. The port number may be present if available in the log event. These are required parameters to execute the search. The value must be given in CIDR notation (<IP address>/<prefix length>:<port number>).
Protocol	The IP protocol to use in the search. This field is pre-populated if the log event includes this information, otherwise enter a protocol.

Search Results

Once the search results are returned from the EndaceProbe, an option is provided to download them in PCAP or ERF format. Review each set of results and determine which set to download.

It is important to consider the size of the download as large downloads:

- may take a long time to complete,
- could saturate the management network, and
- may exceed the available memory of the local computer.

The results returned for each REST API request include:

- a combined set with all results found, and
- a set per RotationFile that contains relevant data.

Each set of results lists the following information:

Field	Description
Name	The name of the result set. The *All files* result set is a combined result and contains all the packets of interest for all RotationFiles available on the EndaceProbe. All other result sets are per RotationFile available on the EndaceProbe. The name includes details of the RotationFile host EndaceProbe. Applicable when connecting to a Central Management Server.
Matched Bytes	The number of bytes that match the REST API request out of the total number of bytes available within the specified time range.
Matched Packets	The number of packets that match the REST API request out of the total number of packets available within the specified time range.
TCP Dump Filter	The TCP Dump filter used to create the result set.
Filename	The default name of the download file. This can be changed if required.
Download	PCAP or ERF. Click on the required format button to star the download.

Notes:

- *Search results are collated using the RotationFile metadata. If the packets associated with this metadata have been removed from the RotationFile they will not be available to download. This may mean the number of packets actually downloaded is less than the search results indicated.*
- *Metadata is only generated for RotationFiles that are vision enabled.*

Downloading Search Results

Once you have determined which result set you want to download:

1. Check the default filename and update if required.
2. Click the required download format button (PCAP or ERF).

   A popup window displays requesting user credentials.

   Note:
   Depending on how your internet browser is configured to handle popup windows, the popup window may be blocked. Select the appropriate option to allow the popup window.
3. Enter a valid EndaceProbe user credentials.

   This user credential prompt is separate from those used by the Endace Fusion Connector App to request information from the EndaceProbe. You may use the same user credentials or use different ones as required.

   Note:
   If you incorrectly enter the user credentials, the browser will remember those details until you close the browser (all windows). To be able to re-enter the user credentials, you must recreate the download.
4. Open or save the result set.

Once the download is complete, the packets of interest will be available for inspection using your preferred application.

Use of Common Information Model Fields

The Endace Fusion Connector App conforms to the Splunk® software's Common Information Model (CIM) and interprets the Splunk® software log event to determine whether to display the Endace Flow Search option in the event menu. If at least one field is present in the log event, then the menu selection is displayed and the labeled fields are automatically pre-populated into the search fields in the Endace Flow Search page.

The fields used by the Endace Fusion Connector App are:

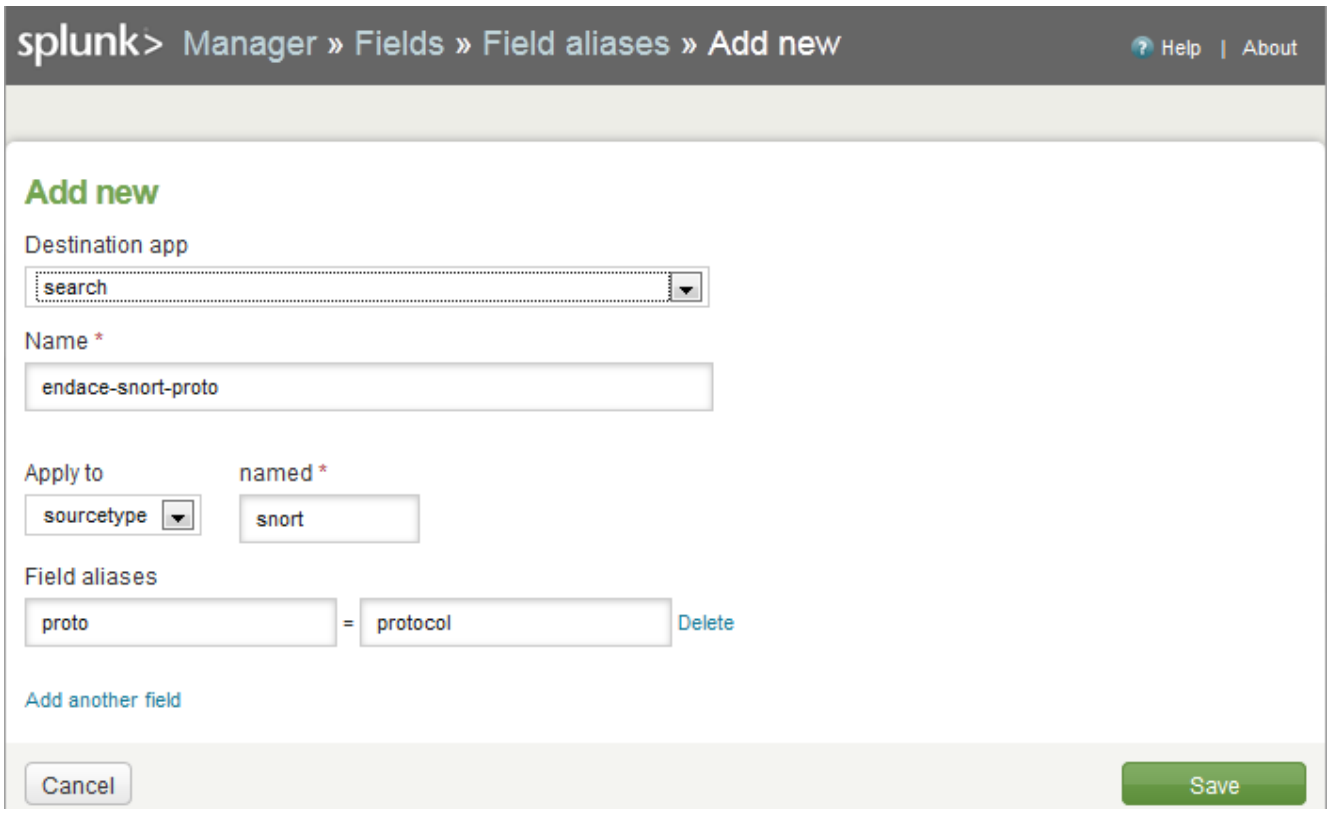
- src_ip
- src_port
- protocol
- dest_ip (optional)
- dest_port (optional)

If the log event contains any of the above fields but they are labeled using non-CIM field labeling, the Endace Fusion Connector App cannot interpret the fields appropriately and therefore will not pre-populate the Endace Flow Search page. To work around this, non-conforming fields can be manually added to the CIM using the Splunk® software field aliases.

For example

Within the SNORT® application the only field of concern is the protocol. By default, the SNORT® application names the field "proto". If left with the default field names the protocol will not automatically pass to the Endace Flow Search page. To get the protocol field to automatically populate the Endace Flow Search page, create a field alias for "proto" to the CIM field "protocol".

Use the Splunk® software field alias screen, to create a field alias:



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Version History

Version	Date	Reason
1	June 2013	First release.
2	August 2013	Minor updates
3	September 2013	Altered reference to Splunk® software & SNORT®.
4	October 2013	Updated field alias graphic
5	September 2015	Updating supported OSM release and Splunk version.
6	February 2016	Rebrand back to Endace.to


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