HCP Adding New Telemetry 1

Adding a New Telemetry Data Source

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Adding a New Telemetry Data Source

Part of customizing your Hortonworks Cybersecurity Platform (HCP) configuration is adding a new telemetry data source. Before HCP can process the information from your new telemetry data source, you must use one of the telemetry data collectors to ingest the information into the telemetry ingest buffer.

Prerequisites

Before you add a new telemetry device, you must meet both the HCP and your user requirements.

- Install HDP and HDF, and then install HCP.
- The following use case assumes the following user requirements:
    - Proxy events from Squid logs must be ingested in real-time.
    - Proxy logs must be parsed into a standardized JSON structure suitable for analysis by Metron.
    - In real-time, the Squid proxy events must be enriched so that the domain names contain the IP information.
    - In real-time, the IP within the proxy event must be checked against for threat intelligence feeds.
    - If there is a threat intelligence hit, an alert must be raised.
    - The SOC analyst must be able to view new telemetry events and alerts from Squid.
    - HCP must profile the Squid data and incorporate statistical features of the profile into the threat triage rules.
    - HCP must be able to deploy a machine learning model that derives additional insights from the stream.
    - HCP must incorporate user's machine learning model into user's threat triage rule along with threat intel, static rules, and statistical rules.
    - Set HCP values.

      When you install HCP, you will set up several hosts. You will need the locations of these hosts, along with port numbers, and the Metron version. These values are listed below.

        - KAFKA_HOST = The host where a Kafka broker is installed.
        - ZOOKEEPER_HOST = The host where a ZooKeeper server is installed.
        - PROBE_HOST = The host where your sensor, probes are installed. If don't have any sensors installed, pick the host where a Storm supervisor is running.
        - SQUID_HOST = The host where you want to install SQUID. If you don't care, install SQUID on the PROBE_HOST.
        - NIFI_HOST = Host where you will install NIFI. This should be the same host on which you installed Squid.
        - HOST_WITH_ENRICHMENT_TAG = The host in your inventory hosts file that you put under the group "enrichment."
        - SEARCH_HOST = The host where you have Elastic or Solr running. This is the host in your inventory hosts file that you put under the group "search". Pick one of the search hosts.
        - SEARCH_HOST_PORT = The port of the search host where indexing is configured (for example, 9300).
        - METRON_UI_HOST = The host where your Metron UI web application is running. This is the host in your inventory hosts file that you put under the group "web."
        - METRON_VERSION = The release of the Metron binaries you are working with (for example, 0.2.0BETA-RC2).

Stream Data into HCP

The first step in adding a new data source telemetry is to stream all raw events from the telemetry data source into its own Kafka topic.

Install Your New Data Source

Prior to adding a new telemetry data source, you must install it. If you have already installed your data source and have a log source, you can skip this section and move to the next one. All procedures in the Runbook use the Squid telemetry data source.

Procedure

1. Log into the sensor node on which you want to install Squid:

```
ssh $SQUID_HOST
```

2. Install and start Squid:

```
sudo yum install squid
sudo service squid start
```

Install NiFi

NiFi is built to automate the flow of data between systems. As a result, NiFi works well to collect, ingest, and push data to HCP. If you haven't already done so, install NiFi.

Important:

NiFi cannot be installed on top of HDP, so you must install NiFi manually to use it with HCP.

Create a NiFi Flow to Stream Events to HCP

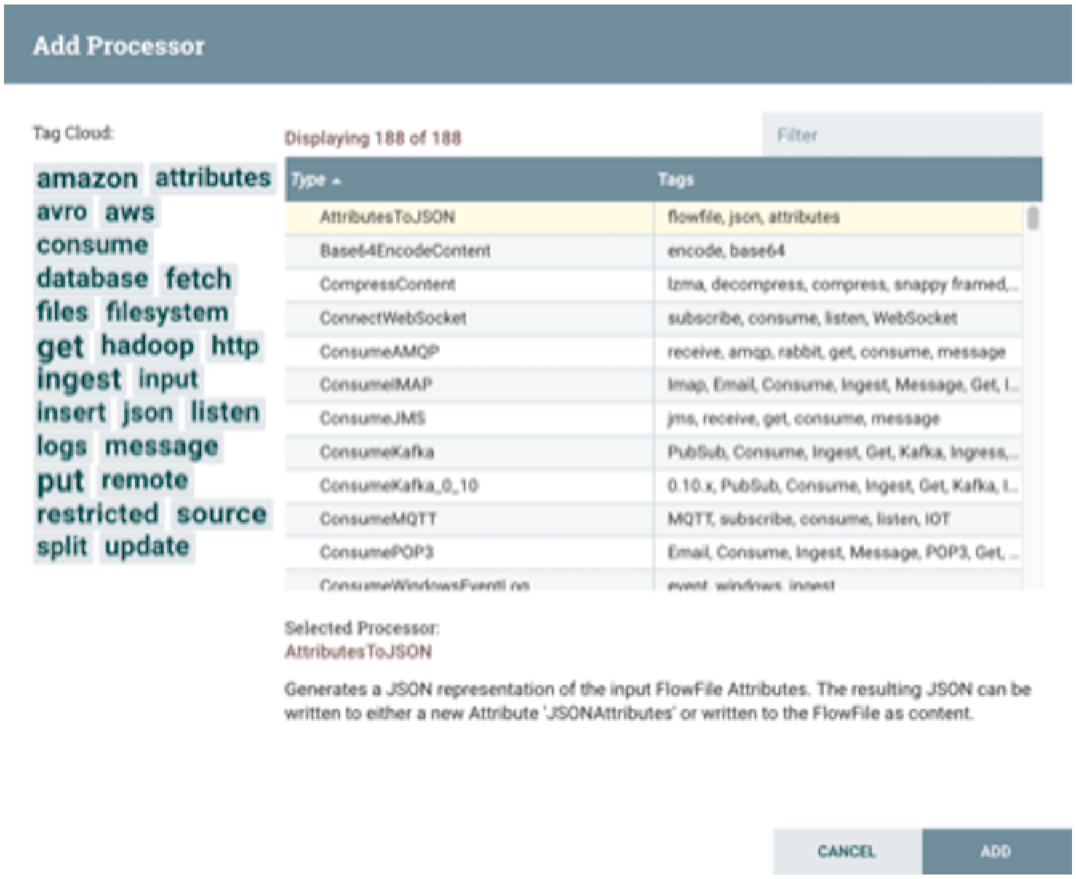
You can use NiFi to create a data flow to capture events from Squid and push them into HCP. For this task we will use NiFi to create two processors, one TailFile processor that will ingest Squid events and one PutKafka processor that will stream the information to Metron. When we create and define the PutKafka processor, Kafka will create a topic for the Squid data source. We'll then connect the two processors, generate some data in the Squid log, and watch the data flow from one processor to the other.

Procedure

1. Drag the first icon on the toolbar

   (the processor icon) to your workspace.

   NiFi displays the Add Processor dialog box.


Add Processor
Tag Cloud:
amazon attributes avro aws consume database fetch files filesystem get hadoop http ingest input insert json listen logs message put remote restricted source split update
Filter
CANCEL
ADD

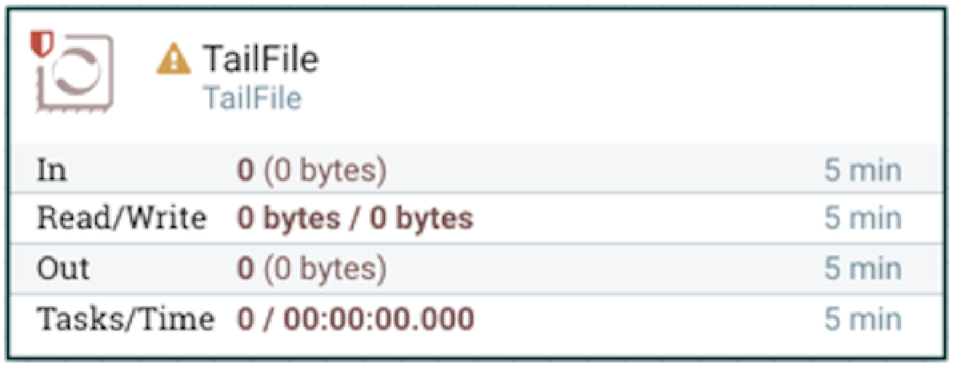
Displaying 188 of 188

Type	Tags
AttributesToJSON	flowfile, json, attributes
Base64EncodeContent	encode, base64
CompressContent	lzma, decompress, compress, snappy framed,...
ConnectWebSocket	subscribe, consume, listen, WebSocket
ConsumeAMQP	receive, amqp, rabbit, get, consume, message
ConsumeIMAP	Imap, Email, Consume, Ingest, Message, Get, I...
ConsumeJMS	jms, receive, get, consume, message
ConsumeKafka	PubSub, Consume, Ingest, Get, Kafka, Ingress,...
ConsumeKafka_0_10	0.10.x, PubSub, Consume, Ingest, Get, Kafka, I...
ConsumeMQTT	MQTT, subscribe, consume, listen, IOT
ConsumePOP3	Email, Consume, Ingest, Message, POP3, Get, ...
ConsumeWindowsEventLog	event, windows, ingest

Selected Processor:
AttributesToJSON

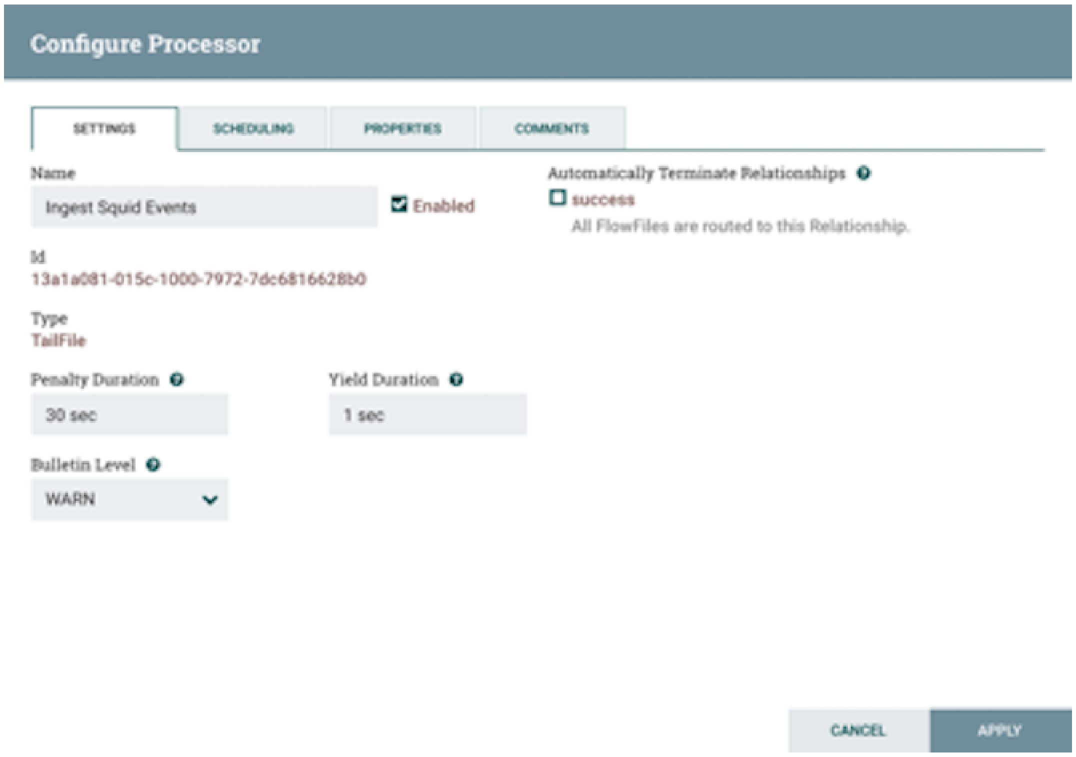
Generates a JSON representation of the input FlowFile Attributes. The resulting JSON can be written to either a new Attribute 'JSONAttributes' or written to the FlowFile as content.

2. Select the TailFile type of processor and click **Add**.
NiFi displays a new TailFile processor.



In	0 (0 bytes)	5 min
Read/Write	0 bytes / 0 bytes	5 min
Out	0 (0 bytes)	5 min
Tasks/Time	0 / 00:00:00.000	5 min

3. Right-click the processor icon and select **Configure** to display the **Configure Processor** dialog box.
a) In the **Settings** tab, change the name to Ingest Squid Events.



Name: Ingest Squid Events

☑ Enabled

Automatically Terminate Relationships

☐ success

All FlowFiles are routed to this Relationship.

Id: 13a1a081-015c-1000-7972-7dc6816628b0

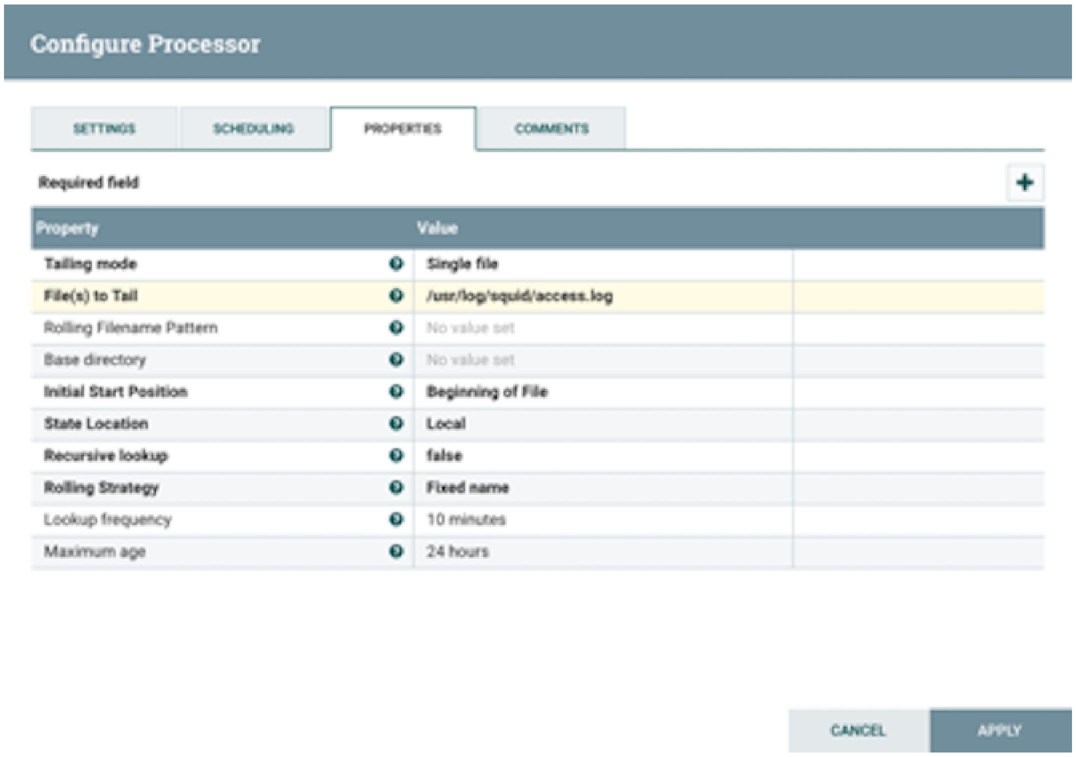
Type: TailFile

Penalty Duration: 30 sec

Yield Duration: 1 sec

Bulletin Level: WARN

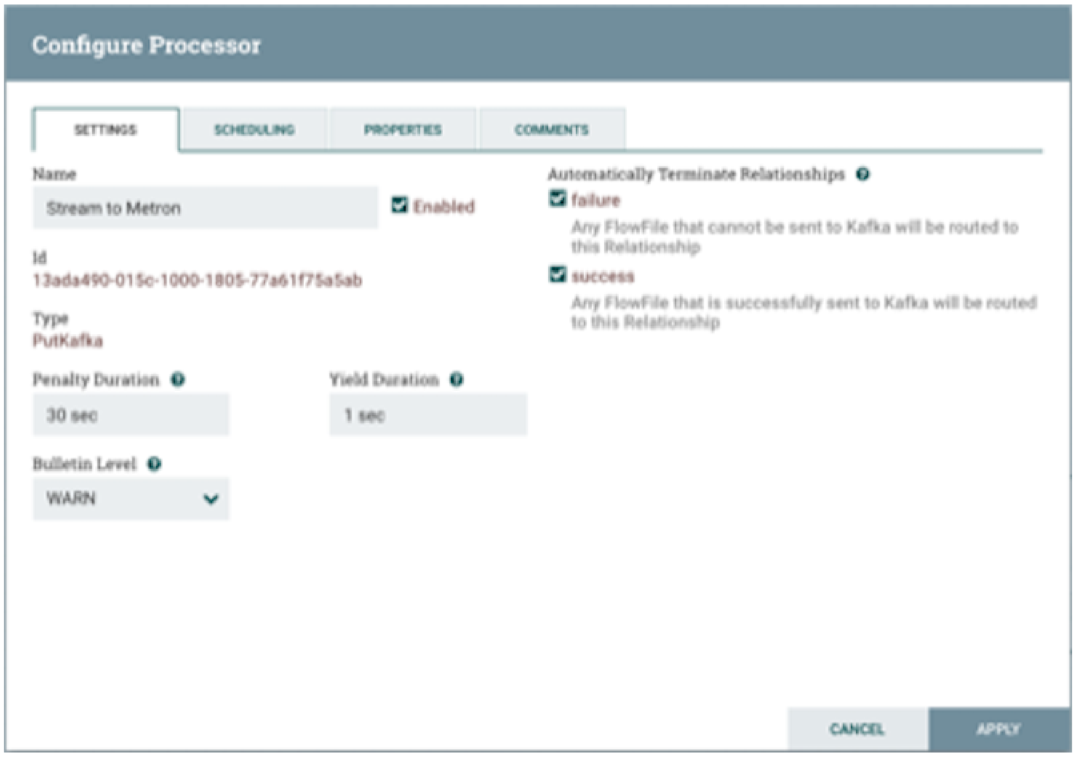
b) In the **Properties** tab, enter the path to the squid access.log file in the **Value** column for the **File(s) to Tail** property.



Property	Value
Tailing mode	Single file
File(s) to Tail	/usr/log/squid/access.log
Rolling Filename Pattern	No value set
Base directory	No value set
Initial Start Position	Beginning of File
State Location	Local
Recursive lookup	false
Rolling Strategy	Fixed name
Lookup frequency	10 minutes
Maximum age	24 hours

4. Click **Apply** to save your changes and dismiss the **Configure Processor** dialog box.
5. Add another processor by dragging the **Processor** icon to the main window.
6. Select the **PutKafka** type of processor and click **Add**.
7. Right-click the processor and select **Configure**.

8. In the Settings tab, change the name to Stream to Metron and then select the Automatically Terminate Relationships check boxes for **Failure** and **Success**.



Configure Processor

SETTINGS | SCHEDULING | PROPERTIES | COMMENTS

Name: Stream to Metron
☑ Enabled

Id: 13ada490-015c-1000-1805-77a61f75a5ab

Type: PutKafka

Penalty Duration: 30 sec

Yield Duration: 1 sec

Bulletin Level: WARN

Automatically Terminate Relationships

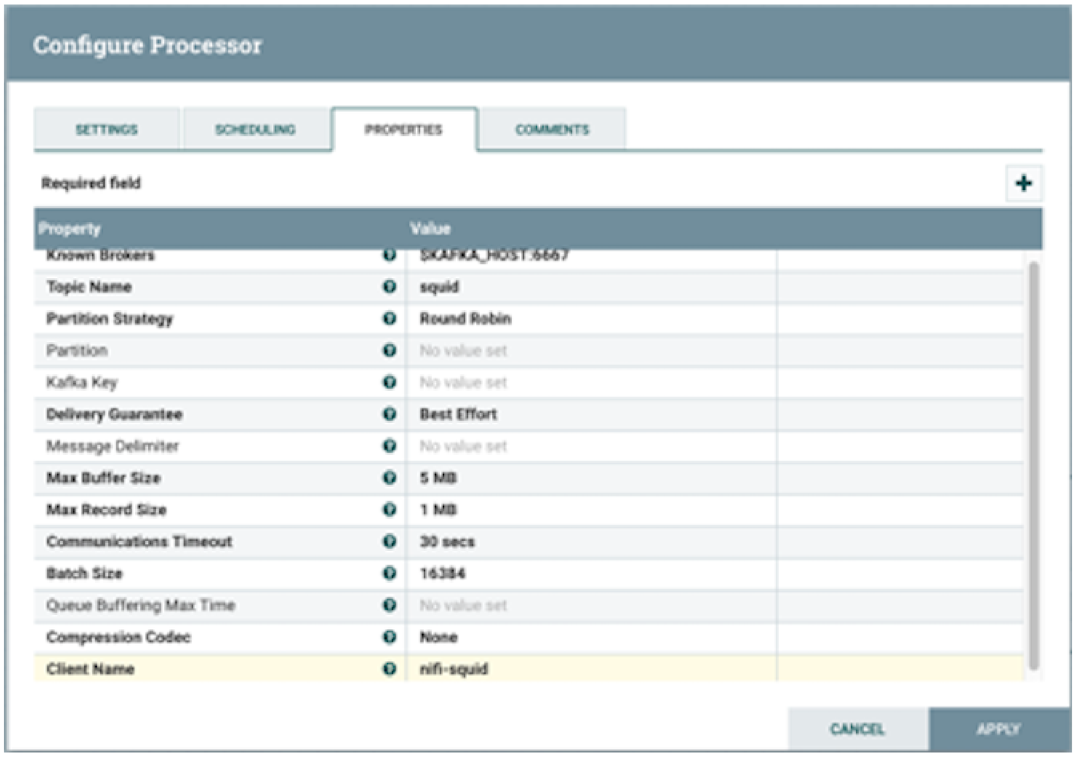
☑ failure
Any FlowFile that cannot be sent to Kafka will be routed to this Relationship

☑ success
Any FlowFile that is successfully sent to Kafka will be routed to this Relationship

CANCEL APPLY

9. In the Properties tab, set the following three properties:

- Known Brokers: $KAFKA_HOST:6667
- Topic Name: squid
- Client Name: nifi-squid



Configure Processor

SETTINGS | SCHEDULING | PROPERTIES | COMMENTS

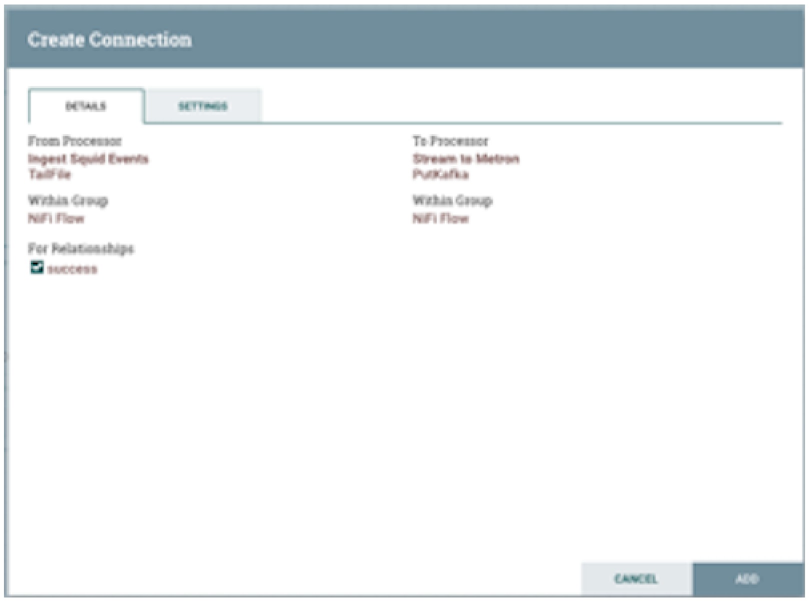
Required field

Property	Value
Known Brokers	$KAFKA_HOST:6667
Topic Name	squid
Partition Strategy	Round Robin
Partition	No value set
Kafka Key	No value set
Delivery Guarantee	Best Effort
Message Delimiter	No value set
Max Buffer Size	5 MB
Max Record Size	1 MB
Communications Timeout	30 secs
Batch Size	16384
Queue Buffering Max Time	No value set
Compression Codec	None
Client Name	nifi-squid

CANCEL APPLY

10. Click **Apply** to save your changes and dismiss the **Configure Processor** dialog box.
11. Create a connection by dragging the arrow from the Ingest Squid Events processor to the Stream to Metron processor.

    NiFi displays a **Create Connection** dialog box.



Create Connection

From Processor
Ingest Squid Events
TailFile

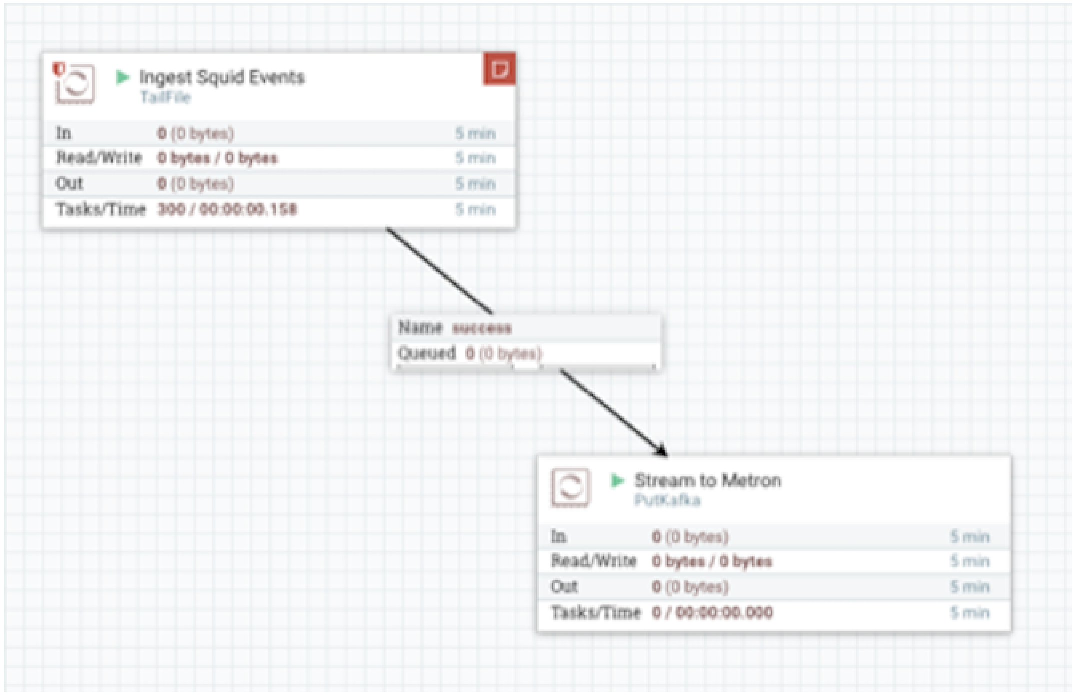
Within Group
NiFi Flow

For Relationships
☑ success

To Processor
Stream to Metron
PutKafka

Within Group
NiFi Flow

12. Click **Add** to accept the default settings for the connection.
13. Press the Shift key and draw a box around both parsers to select the entire flow.



Ingest Squid Events
TailFile

```
In           0 (0 bytes)               5 min
Read/Write   0 bytes / 0 bytes         5 min
Out          0 (0 bytes)               5 min
Tasks/Time   300 / 00:00:00.158        5 min
```

```
Name    success
Queued  0 (0 bytes)
```

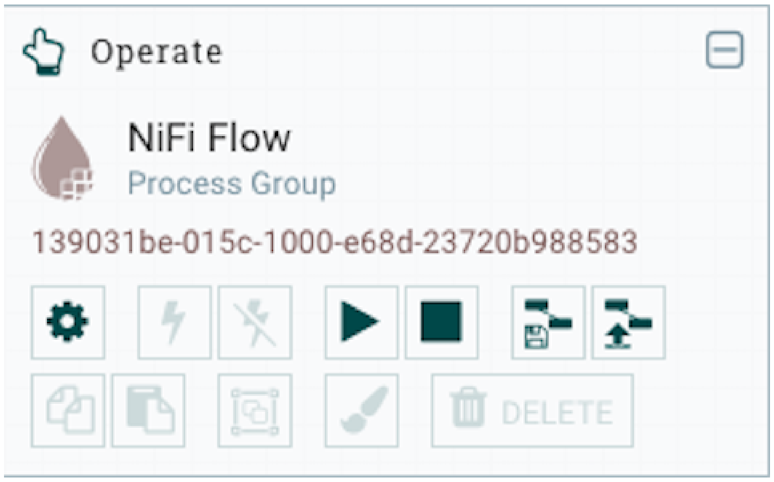
Stream to Metron
PutKafka

```
In           0 (0 bytes)               5 min
Read/Write   0 bytes / 0 bytes         5 min
Out          0 (0 bytes)               5 min
Tasks/Time   0 / 00:00:00.000          5 min
```

14. Click

    ▶

    (Start button) in the **Operate** panel.



15. Generate some data using the new data processor client.

a) Use ssh to access the host for the new data source.

b) With Squid started, look at the different log files that get created:

```
sudo su -
cd /var/log/squid
ls
```

The file you want for Squid is the access.log, but another data source might use a different name.

c) Generate entries for the log so you can see the format of the entries.

```
squidclient -h 127.0.0.1 "http://www.atmape.ru"
```

You will see the following data in the access.log file.

```
1481143984.330   1111 127.0.0.1 TCP_MISS/301 714 GET http://
www.atmape.ru/ - DIRECT/212.109.217.71 text/html
```

d) Using the Squid log entries, you can determine the format of the log entries is:

```
timestamp | time elapsed | remotehost | code/status | bytes | method |
 URL rfc931 peerstatus/peerhost | type
```

You should see metrics on the processor of data being pushed into Metron.

16. Look at the Storm UI for the parser topology and you should see tuples coming in.

a) Navigate to Ambari UI.

b) From the **Quick Links** pull-down menu in the upper center of the window, select **Storm UI**.

17. Before leaving this section, run the following commands to fill the access.log with data. You'll need this data when you enrich the telemetry data.

```
squidclient -h 127.0.0.1 "http://www.aliexpress.com/af/shoes.html?
ltype=wholesale&d=y&origin=n&isViewCP=y&catId=0&initiative_id=SB_20160622082445&Searc
squidclient -h 127.0.0.1 "http://www.help.1and1.co.uk/domains-c40986/
transfer-domains-c79878"
squidclient -h 127.0.0.1 "http://www.pravda.ru/science/"
squidclient -h 127.0.0.1 "http://
www.brightsideofthesun.com/2016/6/25/12027078/anatomy-of-a-deal-phoenix-
suns-pick-bender-chriss"
squidclient -h 127.0.0.1 "https://www.microsoftstore.com/store/msusa/
en_US/pdp/Microsoft-Band-2-Charging-Stand/productID.329506400"
squidclient -h 127.0.0.1 "https://tfl.gov.uk/plan-a-journey/"
squidclient -h 127.0.0.1 "https://www.facebook.com/Africa-Bike-
Week-1550200608567001/"
squidclient -h 127.0.0.1 "http://www.ebay.com/itm/02-Infiniti-QX4-Rear-
spoiler-Air-deflector-Nissan-Pathfinder-/172240020293?fits=Make%3AInfiniti
%7CModel%3AQX4&hash=item281a4e2345:g:iMkAAOSwoBtW4Iwx&vxp=mtr"
squidclient -h 127.0.0.1 "http://www.recruit.jp/corporate/english/company/
index.html"
squidclient -h 127.0.0.1 "http://www.lada.ru/en/cars/4x4/3dv/about.html"
squidclient -h 127.0.0.1 "http://www.help.1and1.co.uk/domains-c40986/
transfer-domains-c79878"
squidclient -h 127.0.0.1 "http://www.aliexpress.com/af/shoes.html?
ltype=wholesale&d=y&origin=n&isViewCP=y&catId=0&initiative_id=SB_20160622082445&Searc
```

What to do next

For more information about creating a NiFi data flow, see the NiFi documentation.

Parse the Squid Data Source to HCP

Parsers transform raw data (textual or raw bytes) into JSON messages suitable for downstream enrichment and indexing by HCP. There is one parser for each data source and the information is piped to the Enrichment/Threat Intelligence topology.

Parse the Squid Telemetry Event

Parsers transform raw data into JSON messages suitable for downstream enrichment and indexing by HCP. There is one parser for each data source and HCP pipes the information to the Enrichment/Threat Intelligence topology. You can transform the field output in the JSON messages into information and formats that make the output more useful. For example, you can change the timestamp field output from GMT to your timezone.
The following procedures use the Management UI whenever possible. If you would like to see these steps performed using the CLI, see the HCP Administration Guide.

Procedure

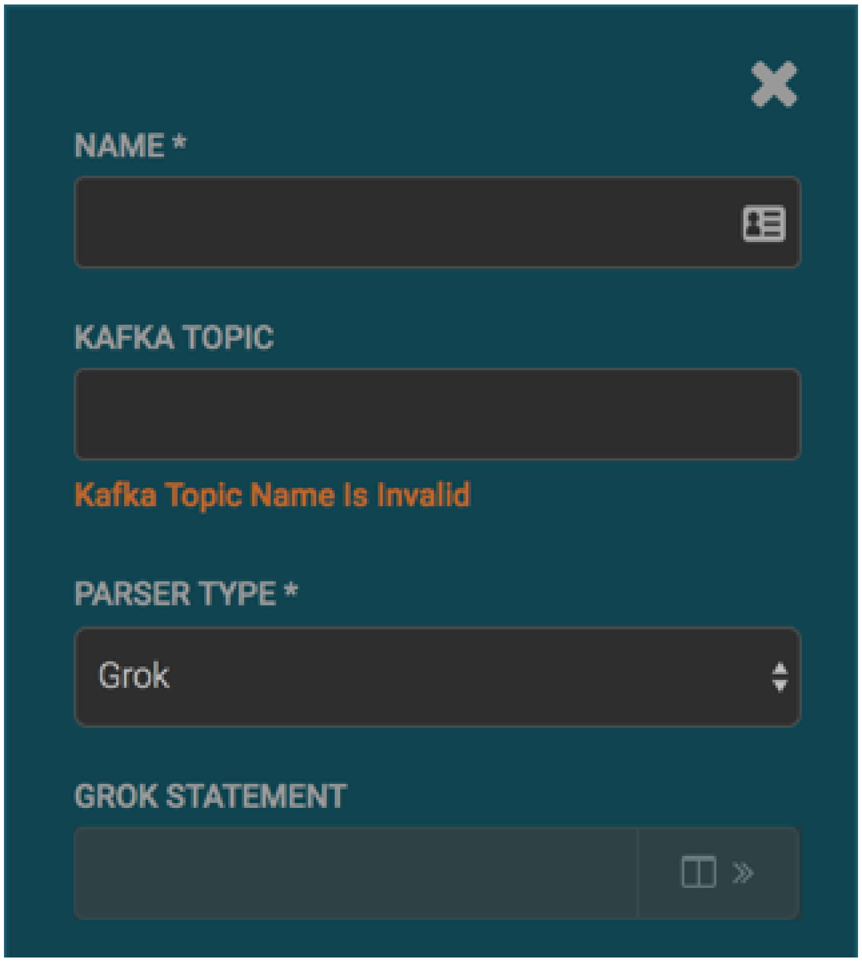
1. Launch the Management UI:
   a) From the Ambari Dashboard panel, click **Metron**.

      Make sure you have the **Summary** tab selected.
   b) Select **Management UI** from **Quick Links**.

      The **Management UI** tool should display in a separate browser tab.
2. Click **Sensors** on the left side of the window, under **Operations**.
3. Click

   (add button) in the lower right corner of the screen.

   The Management UI displays a panel used to create the new sensor.



4. Enter the following information:

```
Name: mysquid
Kafka Topic: mysquid
Parser Type: Grok
```

   If a Kafka topic already exists for the sensor name, the UI displays a message similar to **Kafka Topic Exists. Emitting** and displays the name of the **Parser Type**. You can skip to the next section, Verify Events are Indexed.

5. Create a Grok statement for the new parser:

   a) In the Grok Statement box, click the

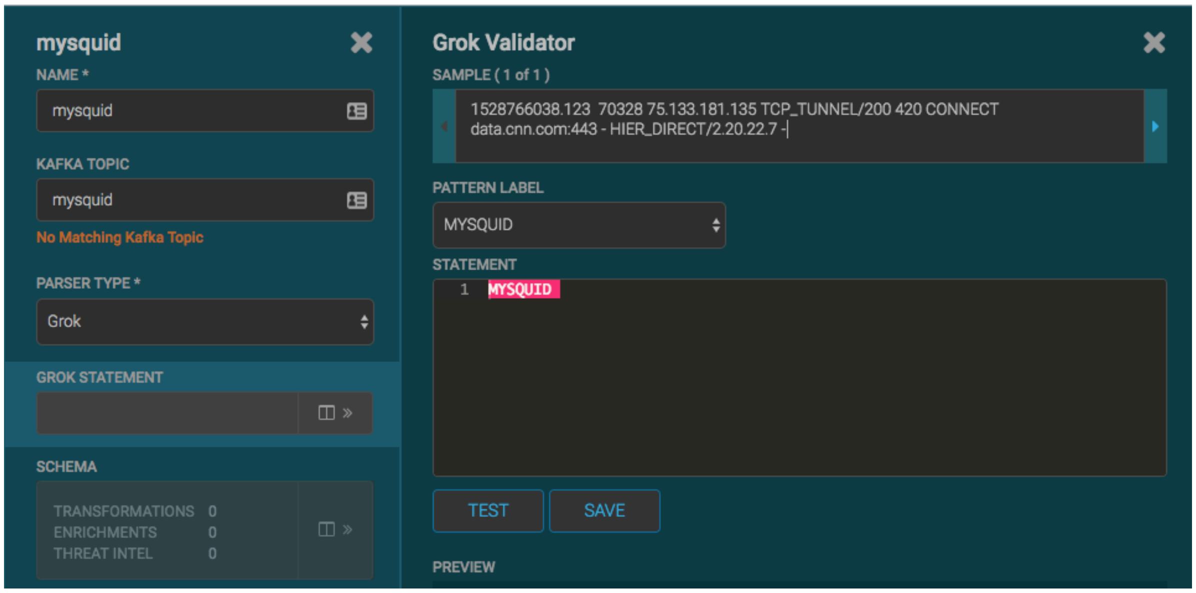
   (expand window) to display the **Grok Validator** panel.

   b) Choose or enter a name for the Grok statement in the **PATTERN LABEL** field.

   For our example, we chose MYSQUID.

   c) Enter a sample log entry for the data source.

   To create sample log entries, see Step 15 in *Create a NiFi Flow to Stream Events to HCP*.


mysquid

NAME *

mysquid

KAFKA TOPIC

mysquid

No Matching Kafka Topic

PARSER TYPE *

Grok

GROK STATEMENT

SCHEMA

TRANSFORMATIONS 0
ENRICHMENTS 0
THREAT INTEL 0

Grok Validator

SAMPLE (1 of 1)

```
1528766038.123  70328 75.133.181.135 TCP_TUNNEL/200 420 CONNECT
data.cnn.com:443 - HIER_DIRECT/2.20.22.7 -
```

PATTERN LABEL

MYSQUID

STATEMENT

```
MYSQUID
```

d) Refer to the format of the log entries you determined in Step 11d in *Create a NiFi Flow to Stream Events to HCP*.

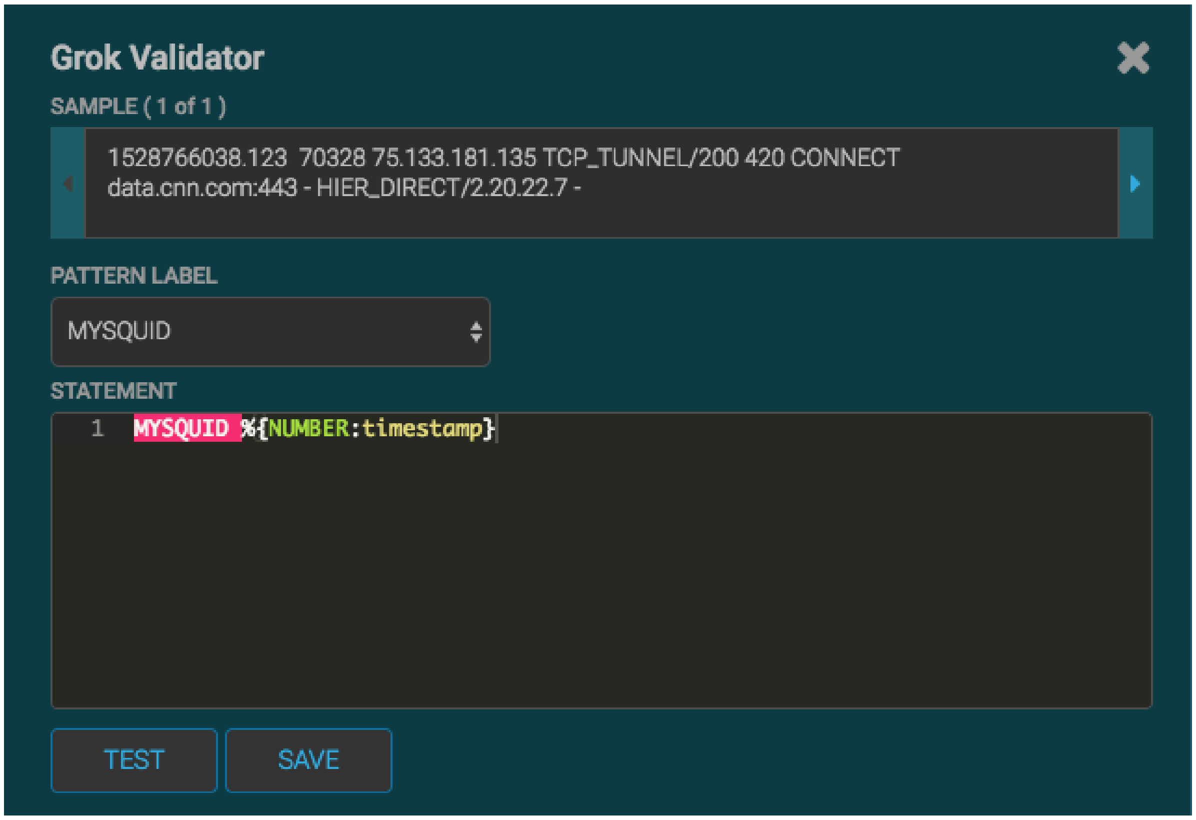
For example, the log entry format for Squid is:

```
timestamp | time elapsed | remotehost | code/status | bytes | method |
 URL rfc931 peerstatus/peerhost | type
```

e) In the **STATEMENT** field, enter the first element in the sensor log file.

For Squid, the first element in the sensor log file is timestamp which is a number, so we enter %{NUMBER:timestamp}.

Note: The Management UI automatically completes partial words in your Grok statement as you enter them.



```
1528766038.123  70328 75.133.181.135 TCP_TUNNEL/200 420 CONNECT
data.cnn.com:443 - HIER_DIRECT/2.20.22.7 -
```

PATTERN LABEL: MYSQUID

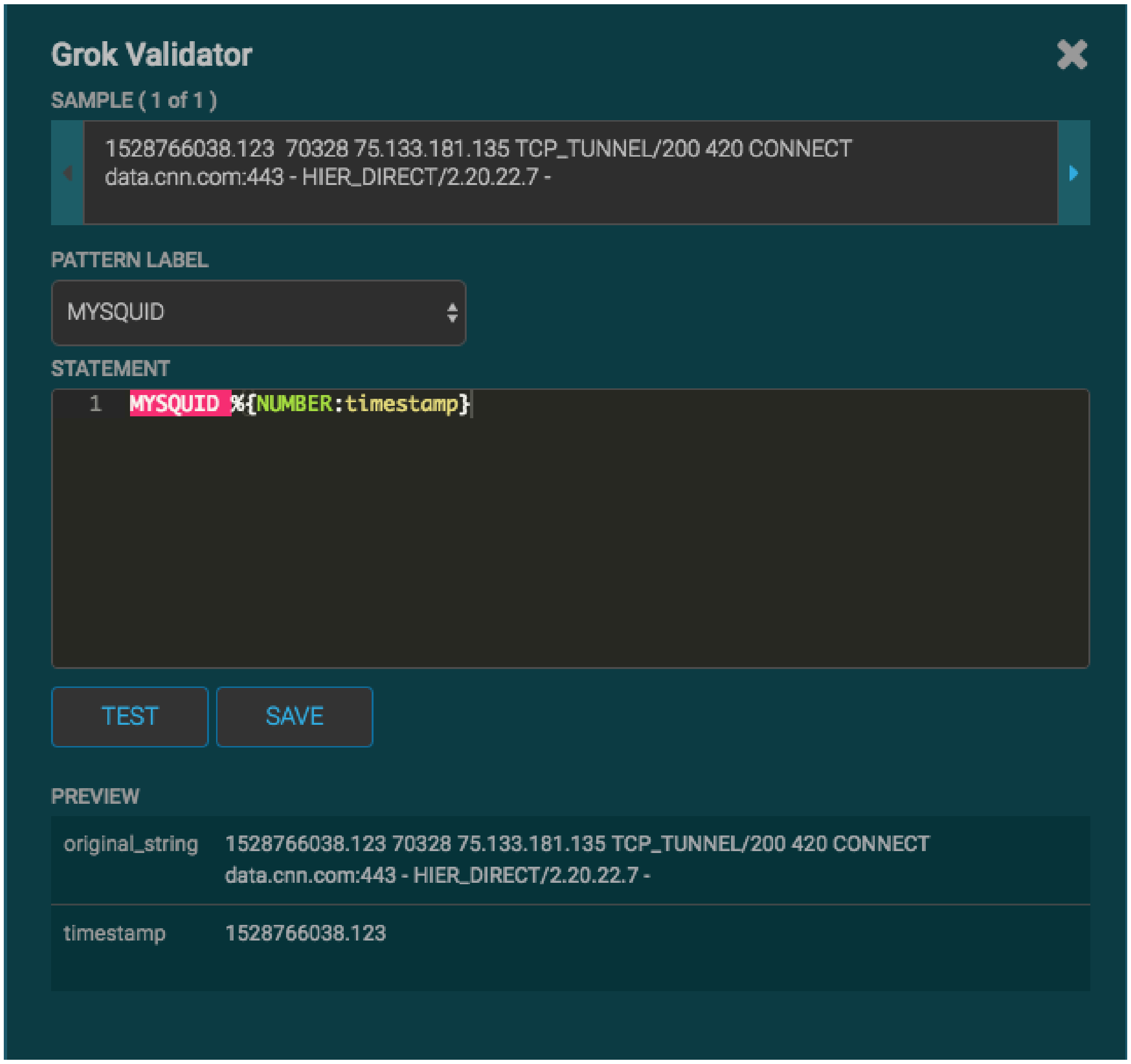
STATEMENT

```
MYSQUID %{NUMBER:timestamp}
```

f) Click **TEST**.

If the validator finds an error, it displays the error information. If the validation succeeds, it displays the valid mapping in the **PREVIEW** field.

Because you entered the timestamp element, the validator parses the timestamp correctly and leaves the rest of the information as random data.



```
1528766038.123  70328 75.133.181.135 TCP_TUNNEL/200 420 CONNECT
data.cnn.com:443 - HIER_DIRECT/2.20.22.7 -
```

```
MYSQUID %{NUMBER:timestamp}
```

```
original_string   1528766038.123 70328 75.133.181.135 TCP_TUNNEL/200 420 CONNECT
                  data.cnn.com:443 - HIER_DIRECT/2.20.22.7 -
timestamp         1528766038.123
```

g) Click **Save**.

h) Verify that the sensor name and topic name are "mysquid" with NO extra spaces or special characters.

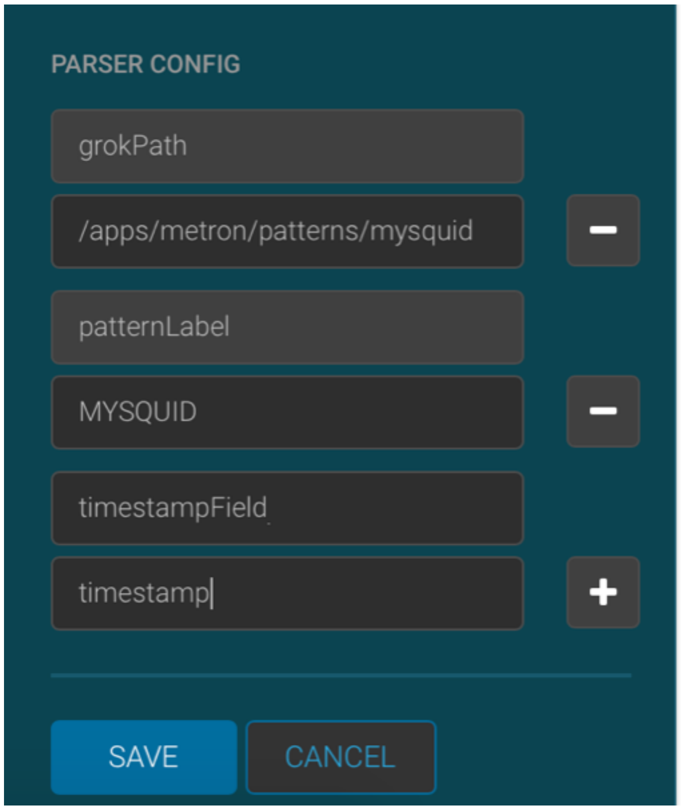
6. Click **Save** on the mysquid sensor.

The mysquid sensor appears in the Management UI. You might need to refresh your screen to see the new sensor.

7. Click the pencil icon to edit the mysquid sensor.

8. Scroll down to the **Parser Config** section.

9. In the first open field, indicated by **enter field**, enter timestampField.


PARSER CONFIG

grokPath

/apps/metron/patterns/mysquid

patternLabel

MYSQUID

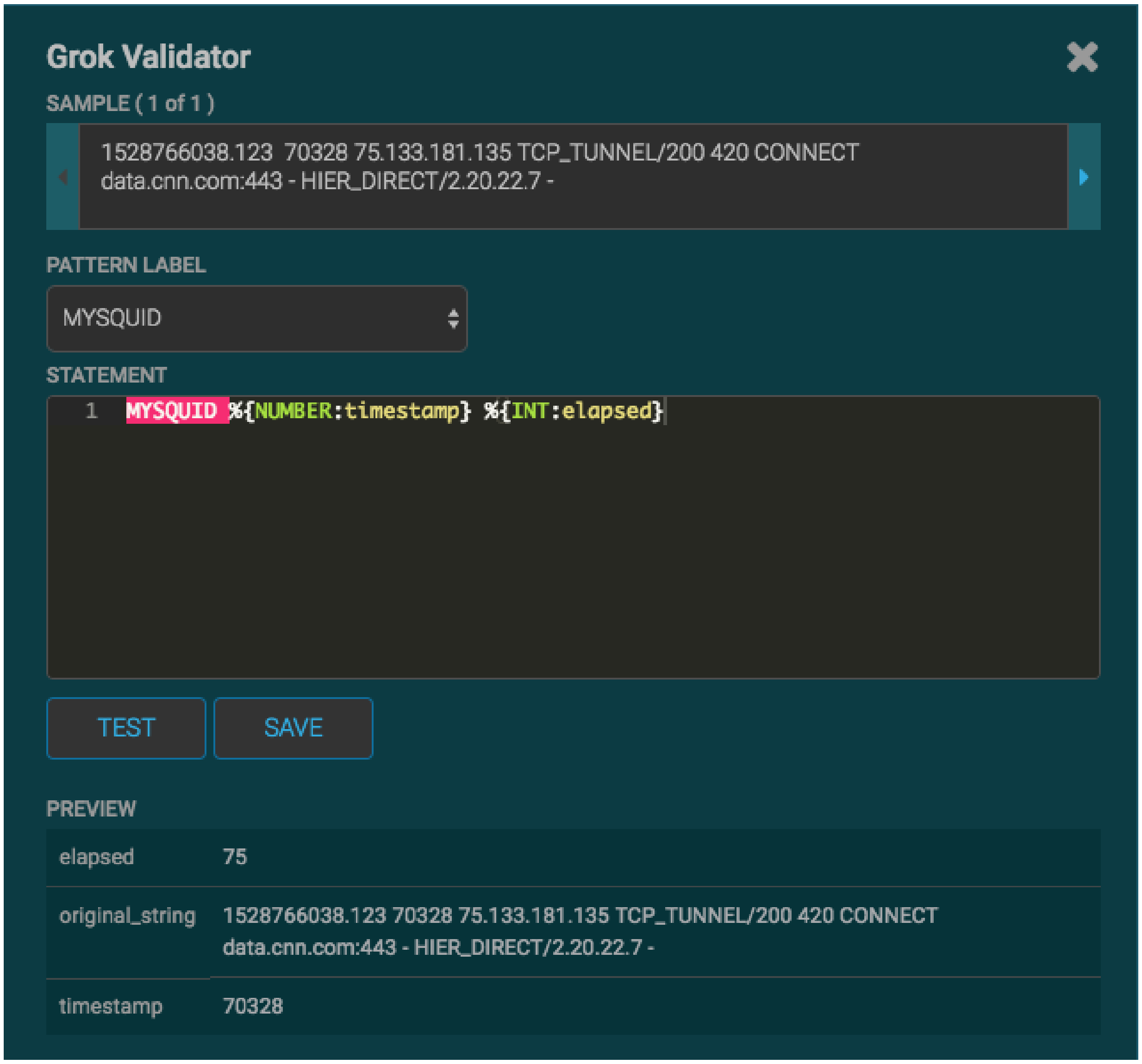
timestampField

timestamp

10. In next open field, enter timestamp.

11. Click **Save**.

12. Continue to build and test the Grok statement until you have entries for each element in the log entry.
For example, for Squid, the second element is elapsed, so we enter %{INT:elapsed} and click **TEST** again.



1528766038.123 70328 75.133.181.135 TCP_TUNNEL/200 420 CONNECT data.cnn.com:443 - HIER_DIRECT/2.20.22.7 -

MYSQUID

```
MYSQUID %{NUMBER:timestamp} %{INT:elapsed}
```

elapsed	75
original_string	1528766038.123 70328 75.133.181.135 TCP_TUNNEL/200 420 CONNECT data.cnn.com:443 - HIER_DIRECT/2.20.22.7 -
timestamp	70328

13. When your Grok statement is complete and valid, click **SAVE** to save the Grok statement for the sensor.

14. Click **SAVE** to save the sensor information and add it to the list of Sensors.

This new data source processor topology ingests from the $Kafka topic and then parses the event with the HCP Grok framework using the Grok pattern. The result is a standard JSON Metron structure that then is added to the "enrichment" Kafka topic for further processing.

15. Test that a Kafka topic has been created for the Squid parser:

a) Navigate to the following directory:

```
/usr/hdp/current/kafka-broker/bin
```

b) List all of the Kafka topics:

```
./kafka-topics.sh --zookeeper localhost:2181 --list
```

You should see the following list of Kafka topics:

- bro
- enrichments
- ubdexubg

- snort
- mysquid

Create an Index Template

To work with a new data source data in the Metron dashboard, you need to ensure that the data is landing in the search index (Elasticsearch) with the correct data types. You can achieve this by defining an index template. The index template specifies how to interpret the metron events and how to index strings using either a keyword or full text search.

Procedure

1. Launch the Metron dashboard in the browser.
2. Select **Dev Tools** from the left hand side of the Kibana page.

   The Dev Tools console is an easy way to interact with the index REST api. If the **Welcome** window appears, click the **Get to work** button.
3. Paste the following command into the left side of **Dev Tools** window:

```
PUT _template/mysquid
{
    "template": "mysquid_index*",
    "settings": {},
    "mappings": {
      "mysquid_doc": {
        "dynamic_templates": [
          {
            "geo_location_point": {
              "match": "enrichments:geo:*:location_point",
              "match_mapping_type": "*",
              "mapping": {
                "type": "geo_point"
              }
            }
          },
          {
            "geo_country": {
              "match": "enrichments:geo:*:country",
              "match_mapping_type": "*",
              "mapping": {
                "type": "keyword"
              }
            }
          },
          {
            "geo_city": {
              "match": "enrichments:geo:*:city",
              "match_mapping_type": "*",
              "mapping": {
                "type": "keyword"
              }
            }
          },
          {
            "geo_location_id": {
              "match": "enrichments:geo:*:locID",
              "match_mapping_type": "*",
              "mapping": {
                "type": "keyword"
              }
            }
          },
          {
            "geo_dma_code": {
              "match": "enrichments:geo:*:dmaCode",
              "match_mapping_type": "*",
              "mapping": {
                "type": "keyword"
              }
            }
          },
          {
            "geo_postal_code": {
              "match": "enrichments:geo:*:postalCode",
              "match_mapping_type": "*",
              "mapping": {
                "type": "keyword"
              }
            }
          },
          {
            "geo_latitude": {
              "match": "enrichments:geo:*:latitude",
              "match_mapping_type": "*",
              "mapping": {
                "type": "float"
              }
            }
          },
          {
            "geo_longitude": {
              "match": "enrichments:geo:*:longitude",
              "match_mapping_type": "*",
              "mapping": {
                "type": "float"
              }
            }
          },
          {
            "timestamps": {
              "match": "*:ts",
              "match_mapping_type": "*",
              "mapping": {
                "type": "date",
                "format": "epoch_millis"
              }
            }
          },
          {
            "threat_triage_score": {
              "mapping": {
                "type": "float"
              },
              "match": "threat:triage:*score",
              "match_mapping_type": "*"
            }
          },
          {
            "threat_triage_reason": {
              "mapping": {
                "type": "text",
                "fielddata": "true"
              },
              "match": "threat:triage:rules:*:reason",
              "match_mapping_type": "*"
            }
```

```
          }
        ],
        "properties": {
          "action": {
            "type": "keyword"
          },
          "bytes": {
            "type": "long"
          },
          "code": {
            "type": "long"
          },
          "domain_without_subdomains": {
            "type": "keyword"
          },
          "elapsed": {
            "type": "long"
          },
          "full_hostname": {
            "type": "keyword"
          },
          "guid": {
            "type": "keyword"
          },
          "ip_dst_addr": {
            "type": "ip"
          },
          "ip_src_addr": {
            "type": "ip"
          },
          "is_alert": {
            "type": "keyword"
          },
          "is_potential_typosquat": {
            "type": "boolean"
          },
          "method": {
            "type": "keyword"
          },
          "original_text": {
            "type": "text"
          },
          "source:type": {
            "type": "keyword"
          },
          "timestamp": {
            "type": "date",
            "format": "epoch_millis"
          },
          "url": {
            "type": "keyword"
          },
          "alert": {
            "type": "nested"
          }
        }
      }
    }
  }
```

4. Press the green play button.

   The result on the right hand side of the screen will display "acknowledged" : true.

Verify That the Events Are Indexed

After you finish adding your new data source, you should verify that the data source events are indexed and the output matches any Stellar transformation functions you used.

Procedure

From the Alerts UI, search the source:type filter for squid messages.

By convention, the index where the new messages are indexed is called squid_index_[timestamp] and the document type is squid_doc.

Add New Data Source to the Metron Dashboard

After a new data telemetry source has been added to HCP, you must add it to the Metron dashboard before you can create queries and filters for it and add telemetry panels displaying its data.

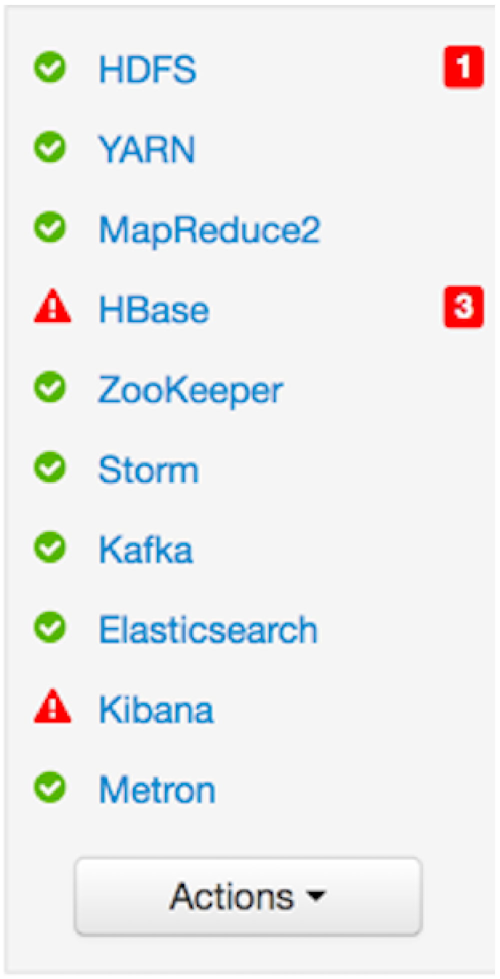
Configure a New Data Source Index in the Metron Dashboard

Now that you have an index for the new data source with all of the right data types, you need to tell the Metron dashboard about this index.

Procedure

1. Launch the Metron dashboard if you have not already done so: \

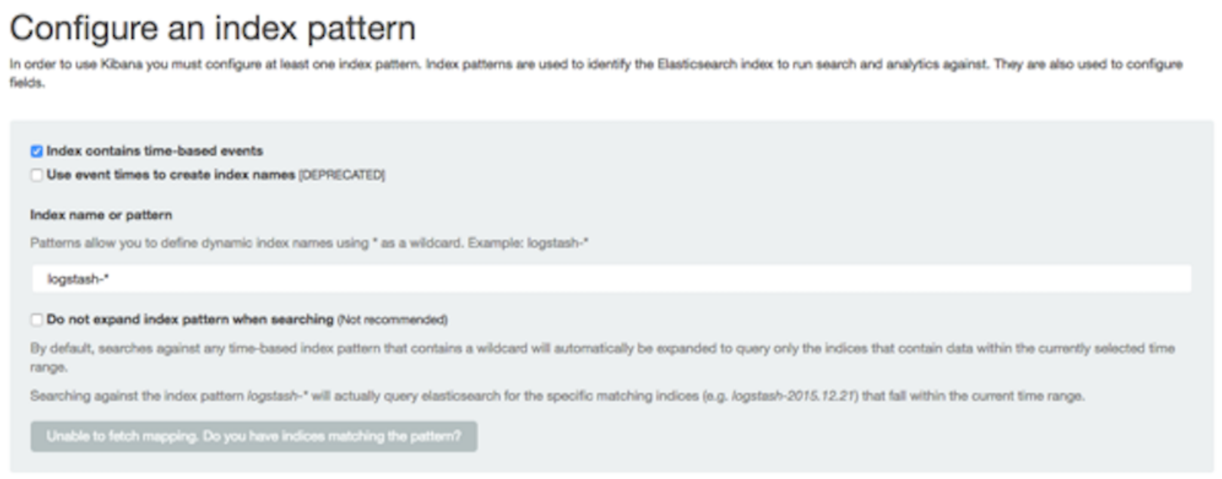
a) From Ambari, click Kibana in the list of quick tasks.



b) Select **Metron UI** from the Quick Links menu in the top center of the window.

2. Click the **Settings** tab on the Metron dashboard.
3. Make sure you have the **Indices** tab selected, then click **+Add New**.

   Kibana displays the **Configure an index pattern** window. Use the index pattern window to identify your telemetry source.



Configure an index pattern

In order to use Kibana you must configure at least one index pattern. Index patterns are used to identify the Elasticsearch index to run search and analytics against. They are also used to configure fields.

[✓] Index contains time-based events

[ ] Use event times to create index names [DEPRECATED]

Index name or pattern

Patterns allow you to define dynamic index names using * as a wildcard. Example: logstash-*

logstash-*

[ ] Do not expand index pattern when searching (Not recommended)

By default, searches against any time-based index pattern that contains a wildcard will automatically be expanded to query only the indices that contain data within the currently selected time range.

Searching against the index pattern *logstash-** will actually query elasticsearch for the specific matching indices (e.g. *logstash-2015.12.21*) that fall within the current time range.

Unable to fetch mapping. Do you have indices matching the pattern?

4. In the **Index name or pattern** field, enter the name of the index pattern of your data telemetry source.

   In most cases the name of the index pattern will match the sensor name. For example, the 'bro' sensor has an index pattern of 'bro-*'.
5. If your data telemetry source does not contain time-based events, clear the **Index contains time-based events** check box.

   If your data telemetry source does contain time-based events, leave the check box as is. Most of your data telemetry sources will contain time-based events.
6. Click **Create** to add the index pattern for your new data telemetry source.

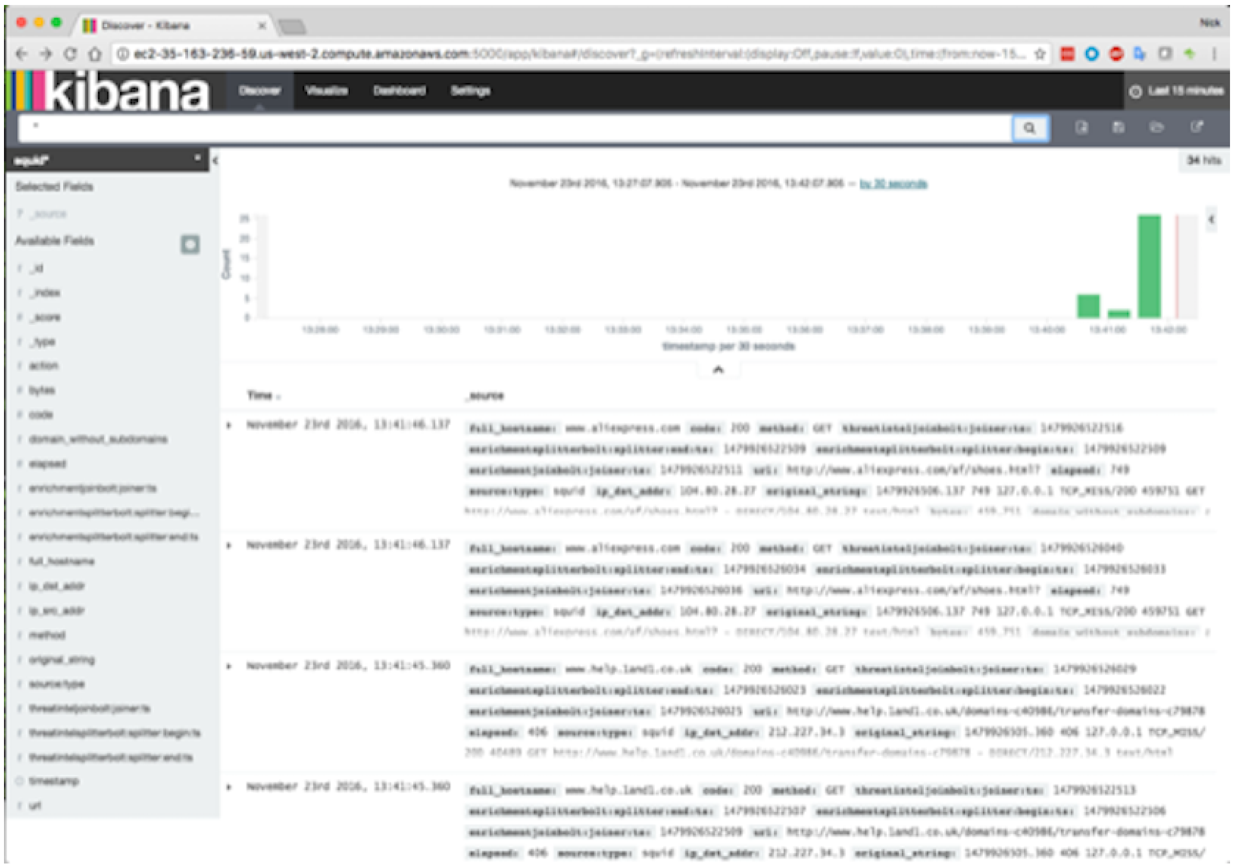
   If you would like this new index pattern to be the default, click the Green Star icon (★).

Review the New Data Source Data

Now that the Metron dashboard is aware of the new data source index, you can look at the data.

Procedure

1. Display the Metron dashboard.
2. Click on the **Discover** tab and then choose the newly created data source index pattern.
3. Click any of the fields in the left column to see a representation of the variety of data for that specific field.
4. Click the Right Facing Arrow icon next to a specific record in the center of the window (the **Document** table) to expand the record and display the available data.


Discover - Kibana
ec2-35-163-236-59.us-west-2.compute.amazonaws.com:5000/app/kibana#/discover?_g=(refreshInterval:(display:Off,pause:!f,value:0),time:(from:now-15...
kibana
Discover
Visualize
Dashboard
Settings
Last 15 minutes
squid*
Selected Fields
_source
Available Fields
_id
_index
_score
_type
action
bytes
code
domain_without_subdomains
elapsed
enrichmentjoinbolt:joiner:ts
enrichmentsplitterbolt:splitter:begi...
enrichmentsplitterbolt:splitter:end:ts
full_hostname
ip_dst_addr
ip_src_addr
method
original_string
source:type
threatinteljoinbolt:joiner:ts
threatintelsplitterbolt:splitter:begin:ts
threatintelsplitterbolt:splitter:end:ts
timestamp
url
34 hits
November 23rd 2016, 13:27:07.905 - November 23rd 2016, 13:42:07.905 — by 30 seconds
Count
timestamp per 30 seconds
Time
_source

```
November 23rd 2016, 13:41:46.137  full_hostname: www.aliexpress.com code: 200 method: GET threatinteljoinbolt:joiner:ts: 1479926522516
    enrichmentsplitterbolt:splitter:end:ts: 1479926522509 enrichmentsplitterbolt:splitter:begin:ts: 1479926522509
    enrichmentjoinbolt:joiner:ts: 1479926522511 url: http://www.aliexpress.com/af/shoes.html? elapsed: 749
    source:type: squid ip_dst_addr: 104.80.28.27 original_string: 1479926506.137 749 127.0.0.1 TCP_MISS/200 459751 GET
    http://www.aliexpress.com/af/shoes.html? - DIRECT/104.80.28.27 text/html bytes: 459,751 domain_without_subdomains:

November 23rd 2016, 13:41:46.137  full_hostname: www.aliexpress.com code: 200 method: GET threatinteljoinbolt:joiner:ts: 1479926526040
    enrichmentsplitterbolt:splitter:end:ts: 1479926526034 enrichmentsplitterbolt:splitter:begin:ts: 1479926526033
    enrichmentjoinbolt:joiner:ts: 1479926526036 url: http://www.aliexpress.com/af/shoes.html? elapsed: 749
    source:type: squid ip_dst_addr: 104.80.28.27 original_string: 1479926506.137 749 127.0.0.1 TCP_MISS/200 459751 GET
    http://www.aliexpress.com/af/shoes.html? - DIRECT/104.80.28.27 text/html bytes: 459,751 domain_without_subdomains:

November 23rd 2016, 13:41:45.360  full_hostname: www.help.1and1.co.uk code: 200 method: GET threatinteljoinbolt:joiner:ts: 1479926526029
    enrichmentsplitterbolt:splitter:end:ts: 1479926526023 enrichmentsplitterbolt:splitter:begin:ts: 1479926526022
    enrichmentjoinbolt:joiner:ts: 1479926526025 url: http://www.help.1and1.co.uk/domains-c40986/transfer-domains-c79878
    elapsed: 406 source:type: squid ip_dst_addr: 212.227.34.3 original_string: 1479926505.360 406 127.0.0.1 TCP_MISS/
    200 40489 GET http://www.help.1and1.co.uk/domains-c40986/transfer-domains-c79878 - DIRECT/212.227.34.3 text/html

November 23rd 2016, 13:41:45.360  full_hostname: www.help.1and1.co.uk code: 200 method: GET threatinteljoinbolt:joiner:ts: 1479926522513
    enrichmentsplitterbolt:splitter:end:ts: 1479926522507 enrichmentsplitterbolt:splitter:begin:ts: 1479926522506
    enrichmentjoinbolt:joiner:ts: 1479926522509 url: http://www.help.1and1.co.uk/domains-c40986/transfer-domains-c79878
    elapsed: 406 source:type: squid ip_dst_addr: 212.227.34.3 original_string: 1479926505.360 406 127.0.0.1 TCP_MISS/
```