



Release 4.0

# **BroadWorks Dashboards and Discovery**

Kibana Plugins Installation and Usage Guide

Version 4.0  
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## Preface

The *BroadWorks Dashboards and Discovery Guide* contains instructions to configure Kibana and import the sample visualizations contain in file “BroadWorks Dashboards x.x”.

## Assumptions

These instructions assume that Elasticsearch is installed, functional and collecting data from BroadWorks. Kibana should also be installed with its configuration as instructed by the BroadWorks Dashboards and Discovery toolset installation guide.

## Documentation Suite

The *BroadWorks Dashboards and Discovery* software suite includes the following technical documentation.

Document Title	Description
BroadWorks Dashboards and Discovery -Kibana Dashboards Installation	Provides information Kibana Dashboards Installation
BroadWorks Dashboards and Discovery - initial release	Provides information on deploying the software on system.
BroadWorks Dashboards and Discovery Kibana Plugins	Overview of Kibana BroadWorks Dashboards and Discovery application.

## Acronym List

The following terms have been used in this guide:

Acronym	Definition
BDD	Broadworks Discovery and Dashboard
XSI	Xtended Services Interface
Xsp	Xtended Services Platform
XS	Execution Server

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# 1 Installation of Plugins

To install the Sip Analyzer and XSI App execute the following on the server where Kibana is installed

- `cd kibana-6.x.x-linux-x64`
- `./bin/kibana-plugin install file:///<Path to SipAnalyzer_x.x.zip>`
- `./bin/kibana-plugin install file:///<Path to XsiEvent_x.x.zip>`

Complete!

# 2 Supported version

This are all supported Elasticsearch and Kibana version for Sip Analyzer and XSIEvents Applications.

<u>Elasticsearch</u>	<u>Kibana</u>	<u>Sip Analyzer</u>	<u>XSI Events</u>
elasticsearch-6.2.2	kibana-6.2.2	SIP-2.4.0_K_6.2.2.zip	XSIEvent-2.4.0_K_6.2.2.zip
elasticsearch-6.2.1	kibana-6.2.1	SIP-2.4.0_K_6.2.1.zip	XSIEvent-2.4.0_K_6.2.1.zip
elasticsearch-6.2.0	kibana-6.2.0	SIP-2.4.0_K_6.2.0.zip	XSIEvent-2.4.0_K_6.2.0.zip
elasticsearch-6.1.3	kibana-6.1.3	SIP-2.4.0_K_6.1.3.zip	XSIEvent-2.4.0_K_6.1.3.zip

## 3 Overview of BDD SIP ANALYZER

SIP Analyzer is a toolkit which extends the Capabilities of Kibana. It is a web application which helps to find information about SIP calls and find the root cause of the issue.

- Display complete call flow by selected criteria: time frame, SIP Method and content.
- Shows the SIP Sequence Diagram for the given call.
- Displays the OCI Transaction Details.
- Log Collector - Collects entire events happened between the given correlation ID along with OCI Transaction and Tech Support Information.
- Capabilities to find XSI Logs from SIP App.
- Download it for offline analysis or inclusion in TAC ticket.

### 3.1 Getting Started with SIP ANALYZER

Open Kibana, you will be presented with the following screen – You can choose plugin which has Broadsoft Logo with name ‘SIP Analyzer’

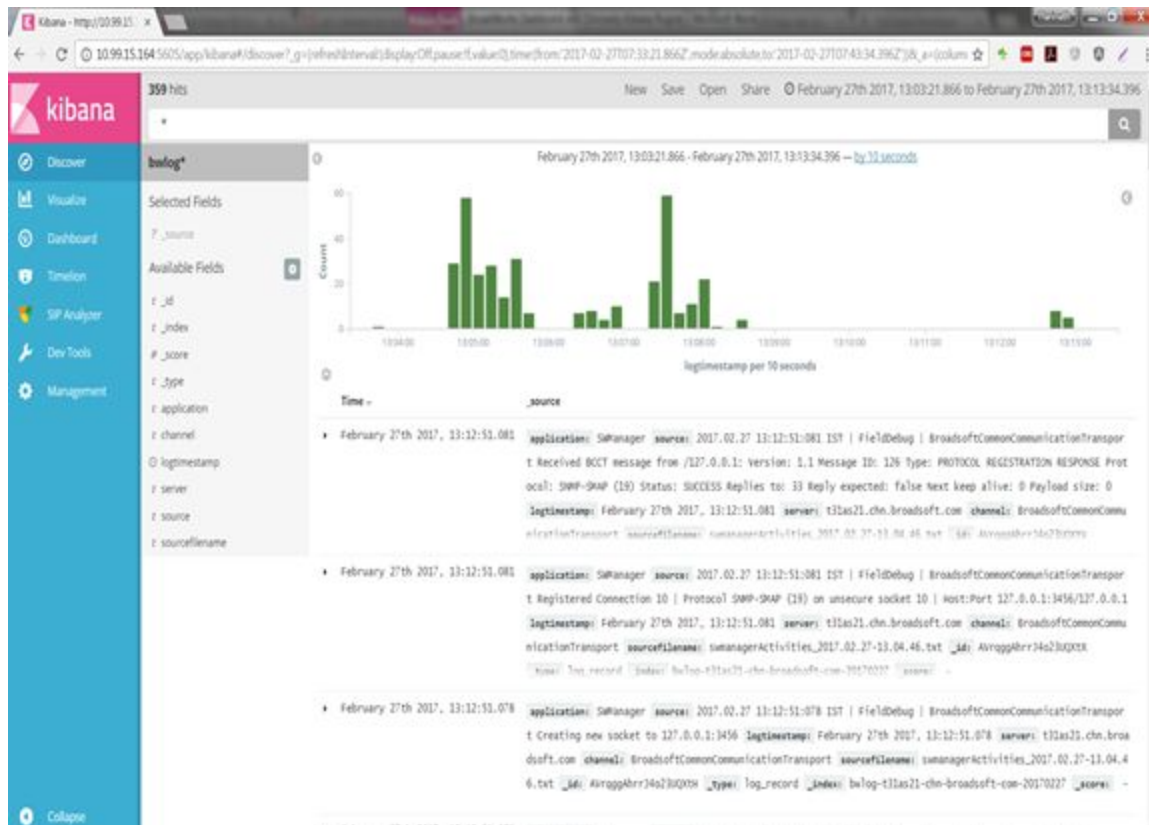


Figure 1 Kibana Discover Screen

Locate the SIP Analyzer app from navigation bar by Broadsoft logo.

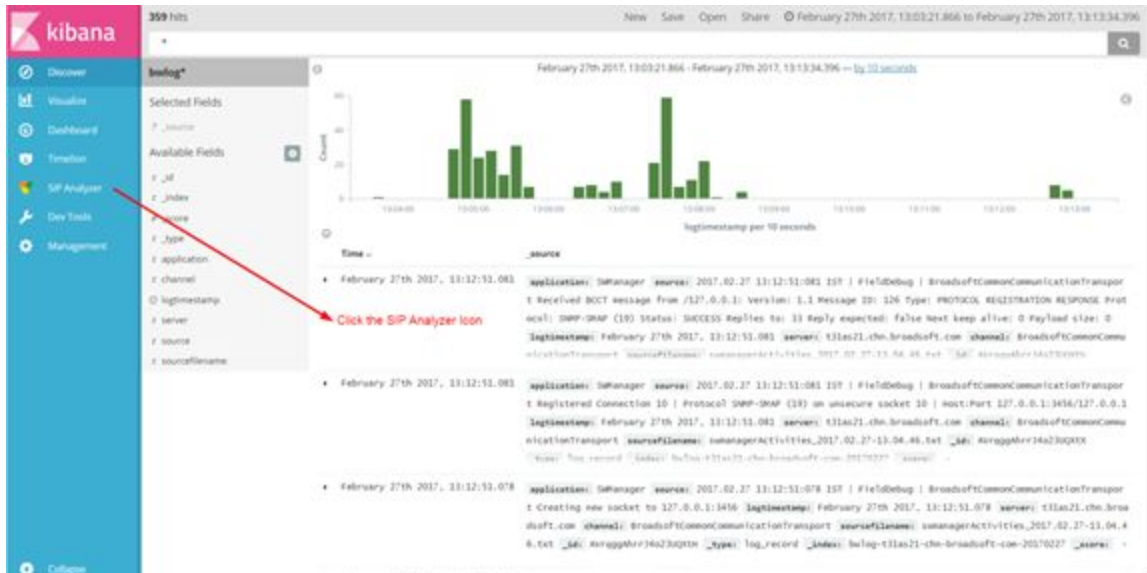


Figure 2 Choosing SIP Analyzer

Click SIP Analyzer Icon to open the SIP App and you will see the below home screen.

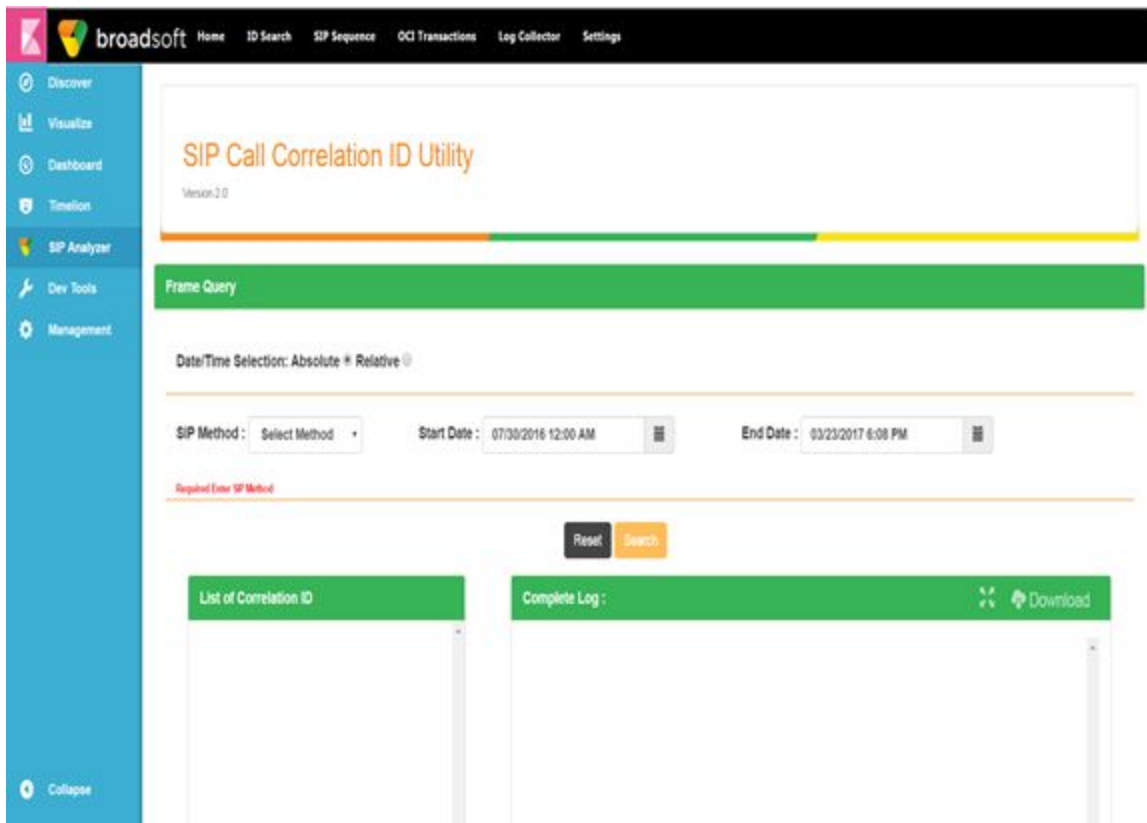


Figure 3 Home Screen of the SIP Analyzer App

You can collapse the side navigation bar by pressing the left arrow icon present in left bottom of the page

## 3.2 Searching Complete Log Flow

The selection criteria are made up several options. The first is selecting the timeframe.

- You can select an absolute time/window or a relative time (last 5 minutes, last 10 minutes etc.).
- Then you can select the criteria – SIP Method [2] and content – for example – select INVITE, with the FROM: domain is \*(wildcard). A snapshot is below showing this criteria and the result.
- You can increase the filter by clicking on press button plus (+) next to search box and remove filter by using minus (-) button
- Click on Search button to fetch the details from server.
- Result is displayed on bottom left pane - List of calls found matching the criteria
- When hovering over the call – a tooltip will be displayed showing the
- From: To: and Request URI of the selected call.

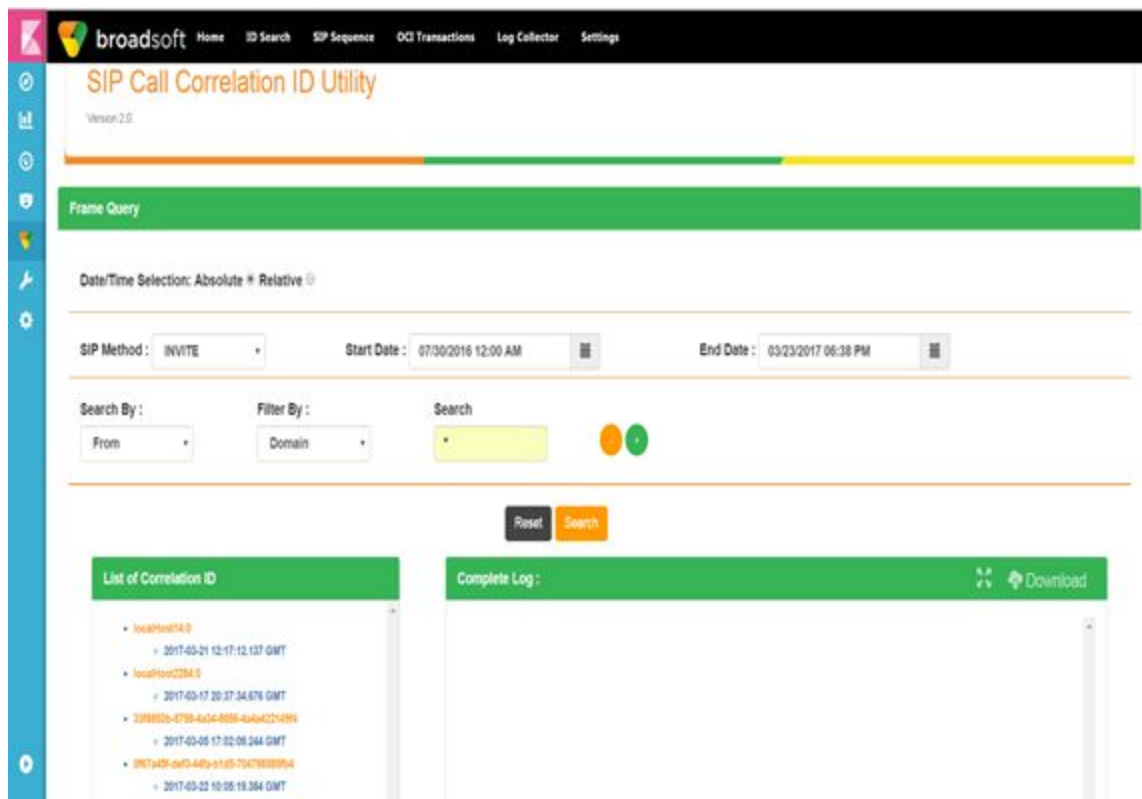
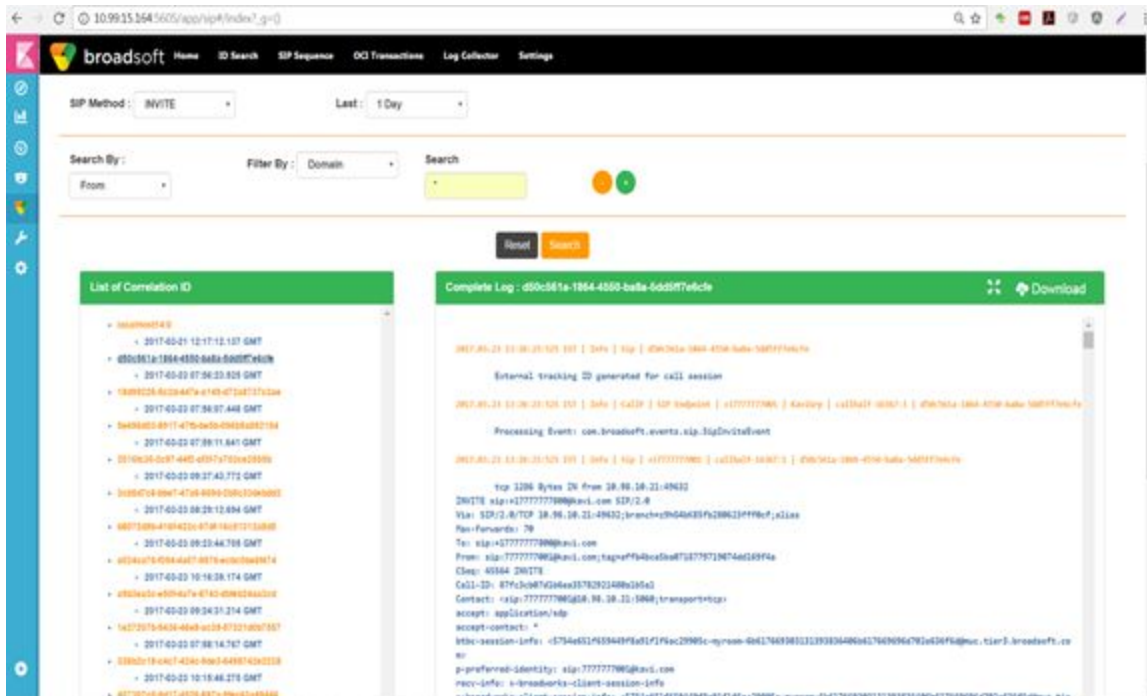


Figure 4 Displaying the List of Correlation ID Matching Input Criteria



By clicking on one of the calls will trigger the loading of the complete call flow.

An example of that is below:



The screenshot displays the Broadsoft dashboard interface. At the top, there's a navigation bar with links like Home, ID Search, SIP Sequence, OCS Transactions, Log Collector, and Settings. Below this, a search section allows filtering by SIP Method (set to INVITE) and Last (set to 1 Day). A search bar is present with a 'Search' button. The main content area is divided into two panels. The left panel, titled 'List of Correlation ID', shows a list of correlation IDs with their corresponding timestamps. The right panel, titled 'Complete Log: d00c561a-1864-4050-baba-6d5077e6c6', displays a detailed log for a selected correlation ID. The log includes various SIP messages and their details, such as 'INVITE', '200 OK', and 'ACK', along with headers like 'Via', 'To', 'From', 'Call-ID', 'Contact', 'Accept', 'Accept-Contact', 'Info', 'P-Preferred-Identity', 'MIME-Version', and 'Content-Type'.

Figure 5 Showing the Complete Log Flow for selected Correlation ID

### 3.3 Searching XSI Logs

- If complete log message contains EventID, SubscriptionID, ChannelID, click on the hyperlink to display the corresponding logs
- XSI ID are formatted for easy identification

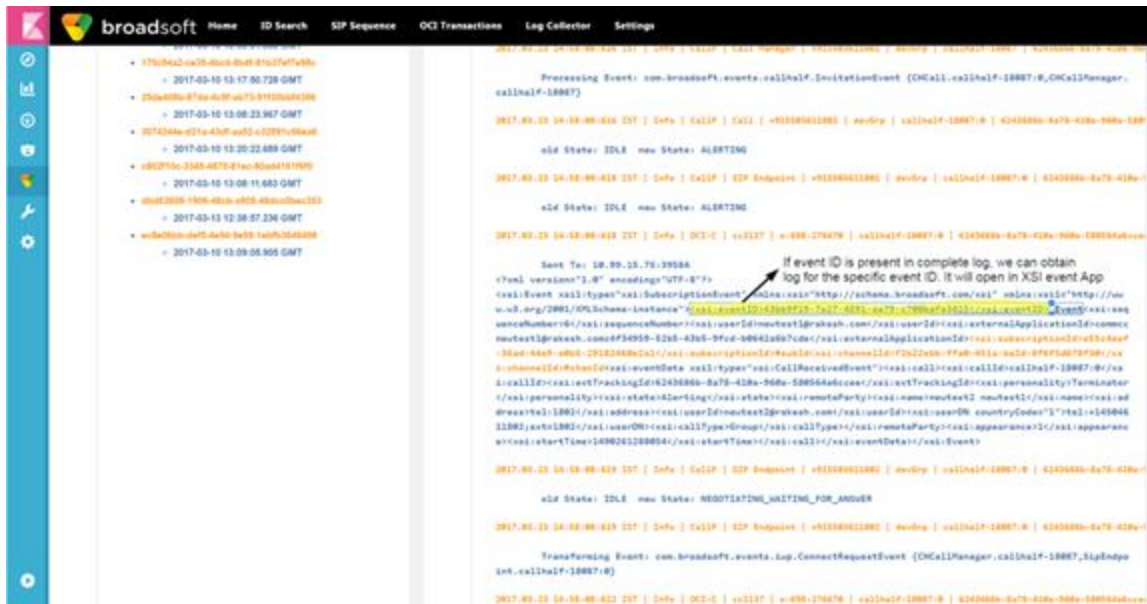


Figure 6 Selecting the EventID to Display corresponding logs

Below is the example of choosing Subscription ID in Complete log message. Which in turn open XSI App.

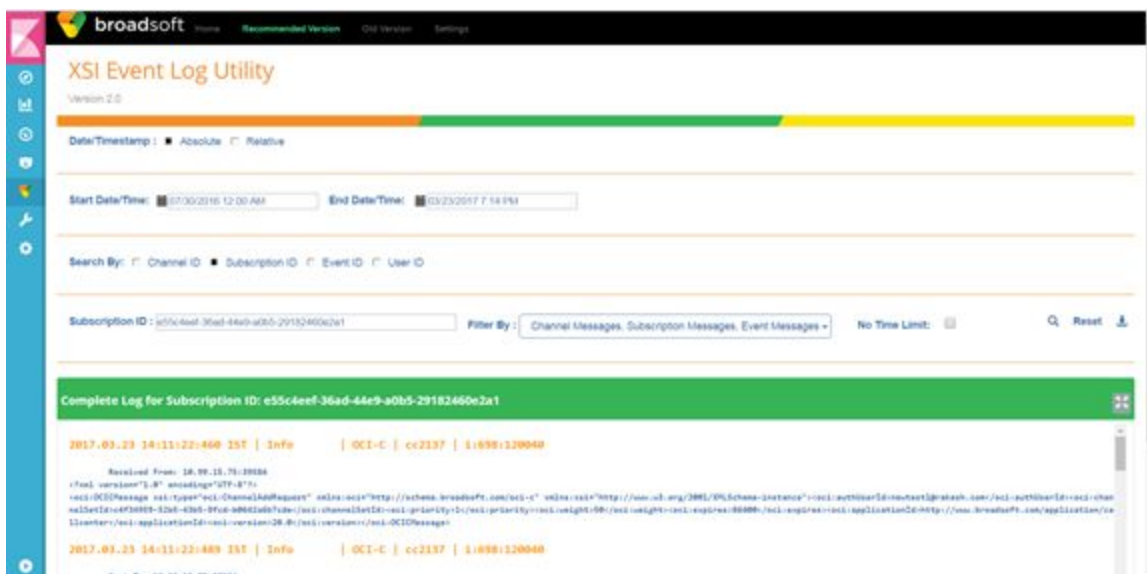


Figure 7 Displaying XSI – Subscription ID Logs

## 3.4 Download Log File and Full Screen Viewing

- Download the log file for the given correlation id by clicking download icon.
- View the Complete log container in full screen for distraction free reading.

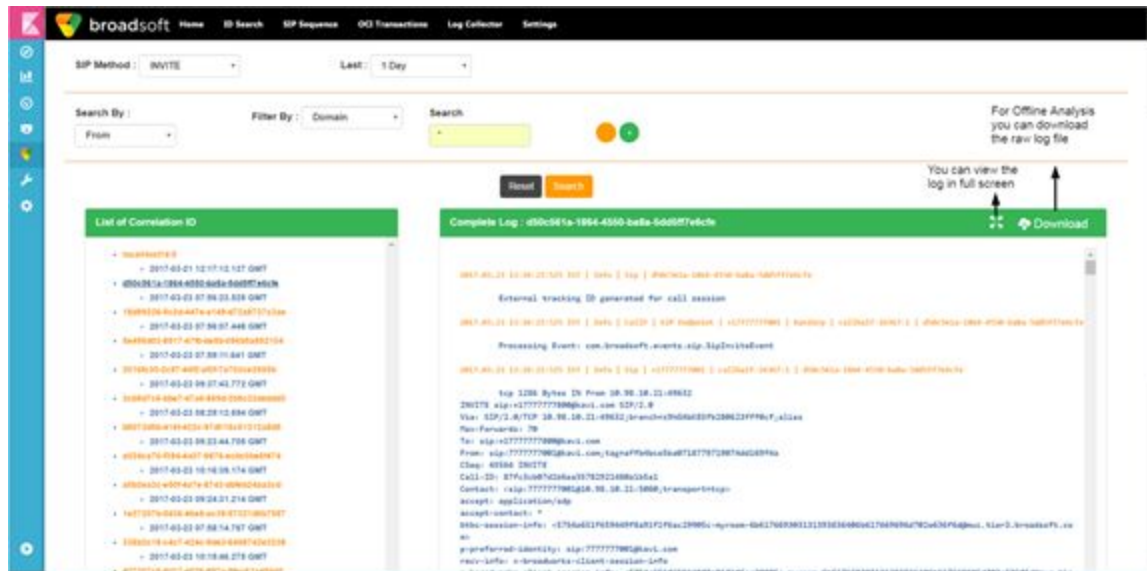


Figure 8 Choosing Full screen Mode and Downloading Log file

### 3.4.1 Action Button



This button searches for correlation ID  
Matches the given filtering condition



This button reset to default values



This button, remove last filter condition



This button, add new filter condition



This button, enables full screen reading of  
complete log message

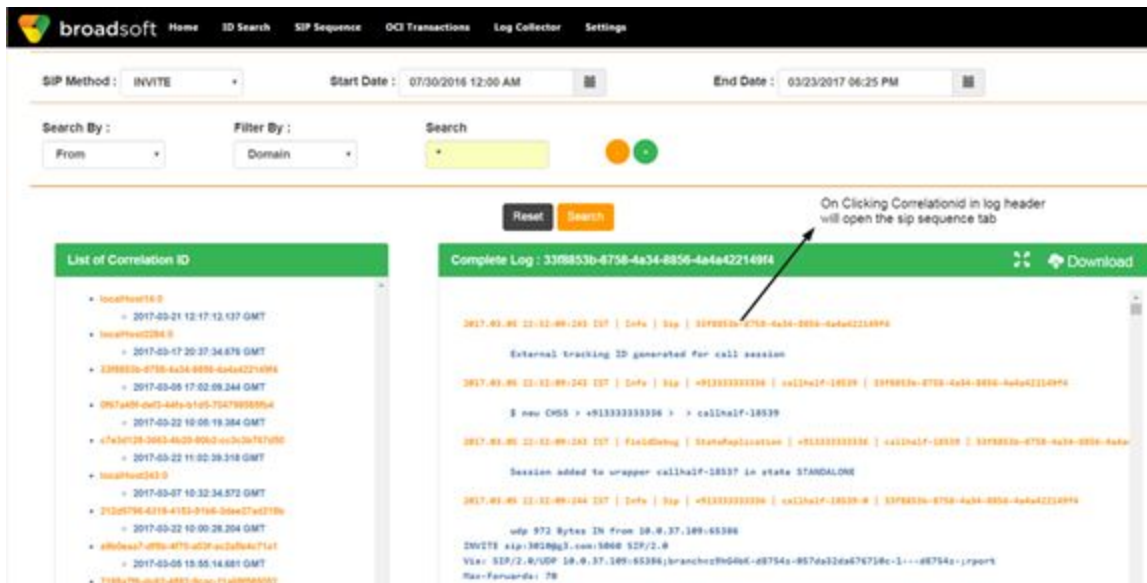


This button, enables downloading the  
Complete log message

## 3.5 SIP Sequence Diagram

SIP Sequence diagram helps to understand the signal flow happening between the systems. It shows diagrammatic view of the important SIP call flow.

- SIP Sequence diagram can be obtained by clicking the Correlation ID in log header.
- It will open the SIP Sequence tab and display the Call Sequence Diagram.



The screenshot displays the Broadsoft dashboard interface. At the top, there's a navigation bar with links like Home, ID Search, SIP Sequence, OCI Transactions, Log Collector, and Settings. Below this, a search section allows filtering by SIP Method (set to INVITE), Start Date (07/30/2016 12:00 AM), and End Date (03/23/2017 06:25 PM). Further down, there are dropdowns for 'Search By' (From) and 'Filter By' (Domain), along with a search input field. The main content area is divided into two panels. The left panel, titled 'List of Correlation ID', shows a list of correlation IDs with their corresponding timestamps. The right panel, titled 'Complete Log', displays a detailed log entry for a selected correlation ID. An arrow points from the text 'On Clicking Correlationid in log header will open the sip sequence tab' to the correlation ID in the log header.

Figure 10 Selecting the Correlation ID from Complete Log Flow message

- Call Sequence can also be obtained by providing the Correlation Id in search box.
- You can mouseover the label to get log message for the specific event.
- SIP Call Flow can also be downloaded by clicking download button.

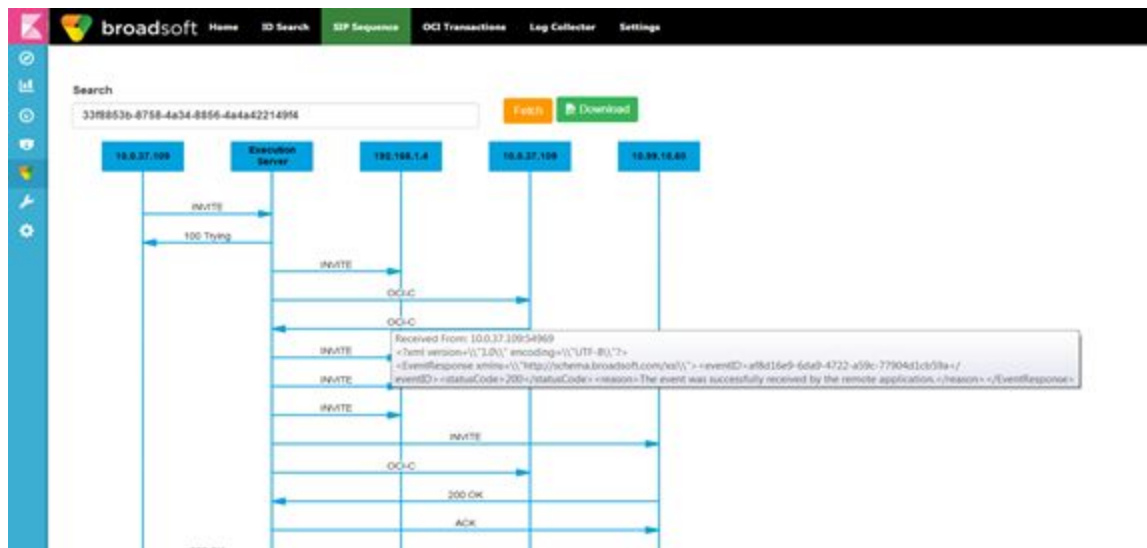


Figure 11 Displaying SIP Sequence Diagram for selected Correlation ID

- You can also get the SIP Sequence Diagram by selecting 'SIP SEQUENCE' tab
- Providing the Correlation ID in input box and press 'FETCH' button

## 3.6 Log Collector

Log Collector is utility which collects various information associated with the given correlation as single file. It does following operation

- Obtains the complete log flow for the given correlation ID.
- Collects Query user and query group Transaction information.
- Tech support.
- List of events happened during the given correlation time interval.

Step 1) Enter the correlation ID



Figure 12 – Phase 1 Enter the Correlation ID

## Step 2) Enter the QueryUser Service credentials

Retrieves corresponding group and service provider/enterprise information and lists the status of all the Broadworks services for the given user ID.

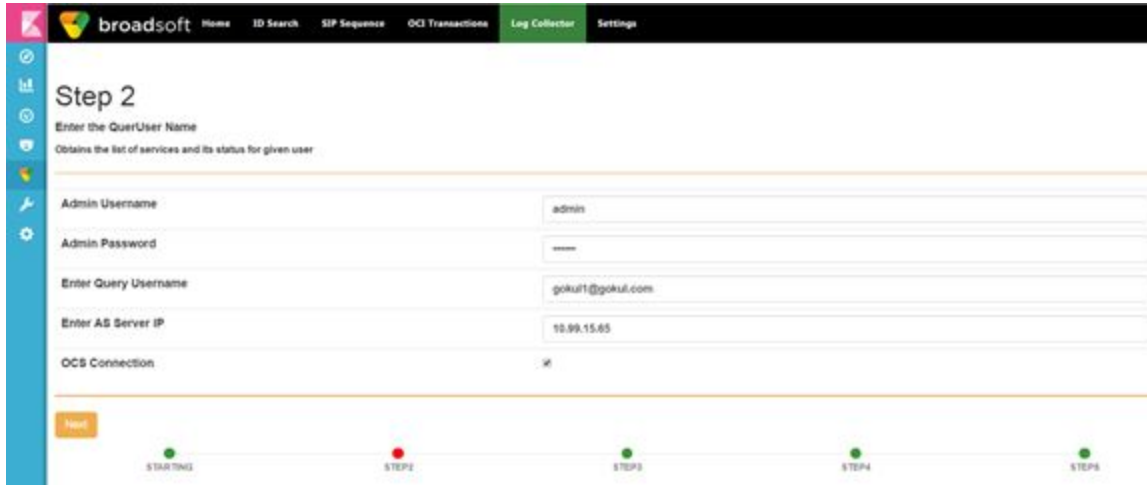


Figure 13 QueryUser Form

## Step 3) Enter the Query Group credentials

Retrieves group level information, including the status of Broadworks services for the given group ID.

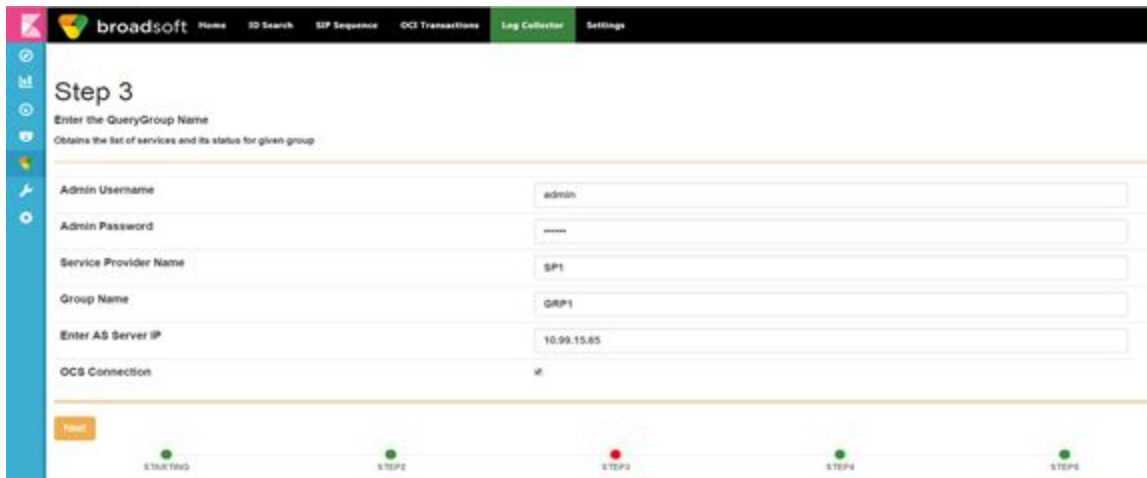


Figure 14 QueryGroup Form

## Step 4) Enter the Tech Support credentials.



Figure 15 TechSupport Form

Step 5) Press Finish now



Figure 16 Final Wizard to collect Logs

## 3.7 Tribe Node Configuration

Tribe Node allows to access Elasticsearch instance located at various data center. To use tribe node we need to set index name pattern of various data center Elasticsearch instance.

Setting page allows performing following actions:

- Adding the Index Pattern
- Selecting Index Pattern
- Updating Index Pattern
- Removing Index Pattern

### 3.7.1 Adding Index Pattern



On clicking Settings tab, it takes to adding Index Pattern. After entering click on Add button to add Index pattern.

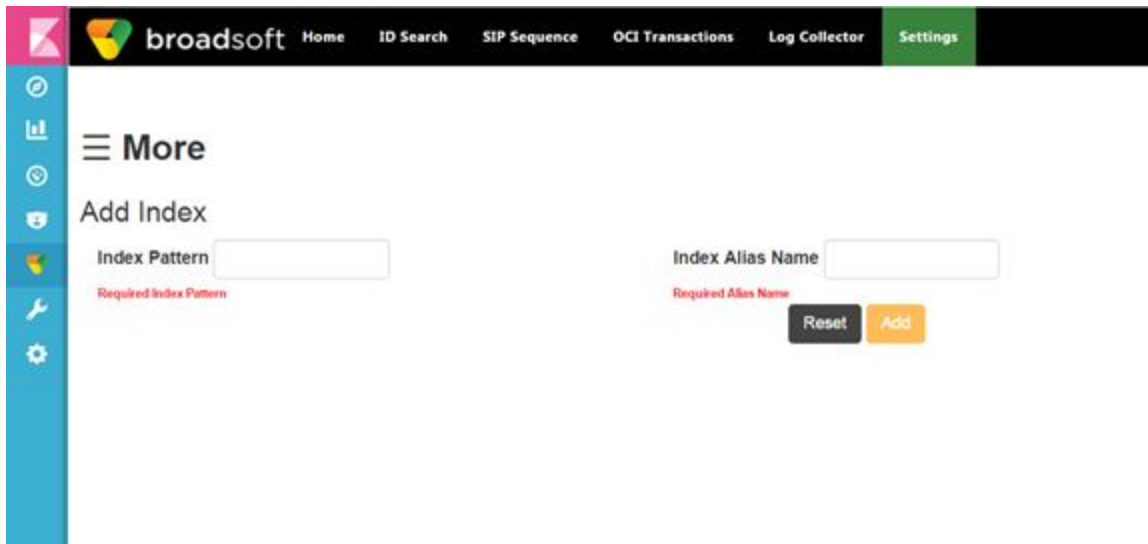


Figure 17 Adding Index Pattern

Provide the index pattern and index alias name for each example.

Sr. No.	Index Pattern	Index Alias Name
1	bwlog-t31as21-usa-broadsoft-com-20170309	USA
2	bwlog-t31as21-aus-broadsoft-com-20170309	AUS
3	bwlog-t31as21-chn-broadsoft-com-20170309	CHN

Table 1 Index Pattern and Index Alias Example

### 3.7.2 Switching the Actions

You can switch to other action in setting page by pressing the Icon near the more option.



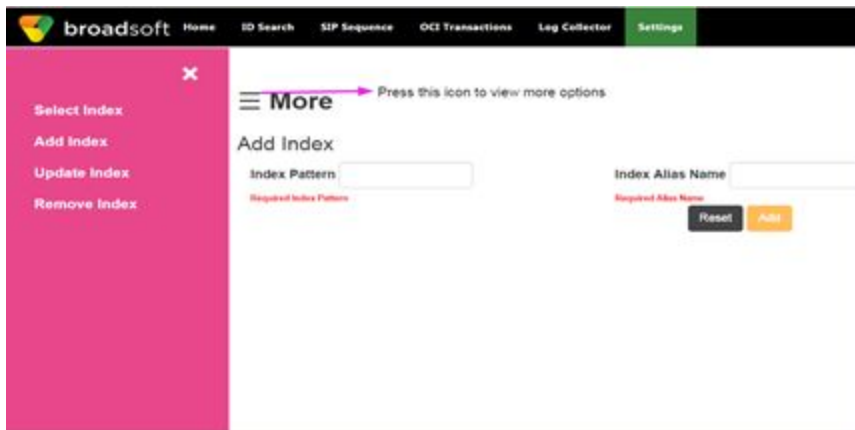


Figure 18 Choosing More Option

### 3.7.3 Selecting Index Pattern

You can choose '**Select Index**' to select index pattern page, which allows selecting index pattern while searching from SIP APP.

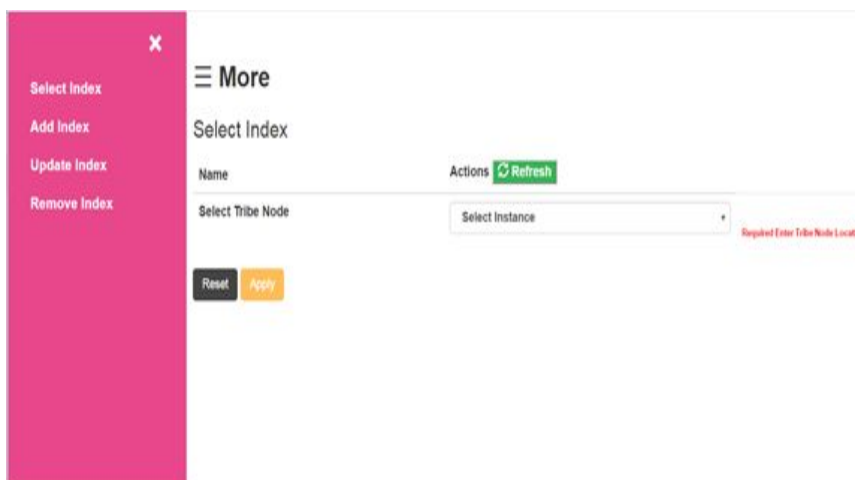


Figure 19 Select Index Patten Page

Press 'Refresh Button' to get the list of Index Pattern available and once you select you can press Apply button to make changes.

### 3.7.4 Updating Index Pattern

Index Alias name can be updated using Update Index Pattern.

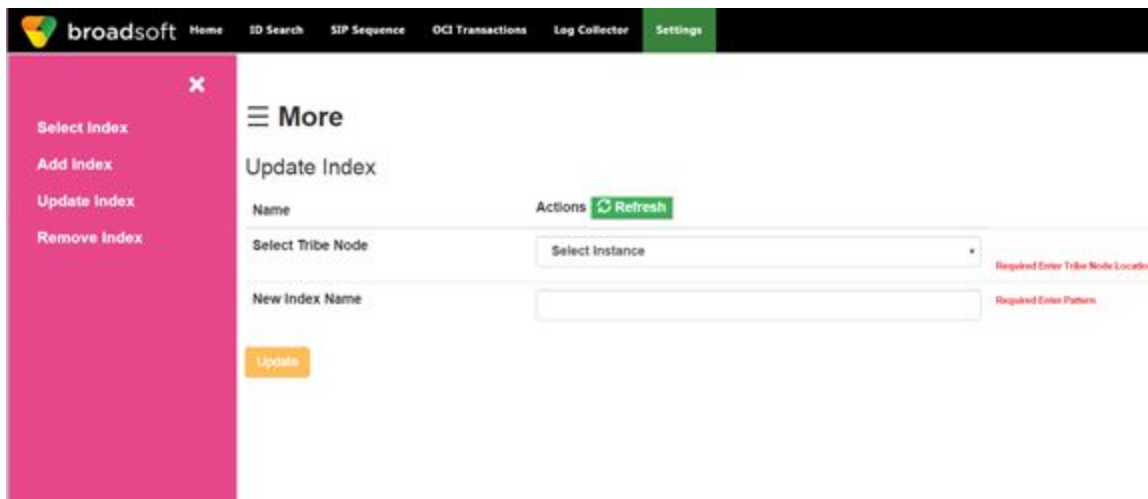


Figure 20 Index Alias Pattern

Note: Only Index Alias name can be updated, not the direct tribe node pattern itself

### 3.7.5 Removing Index Pattern

Index Pattern can be removed using Remove Index Page.

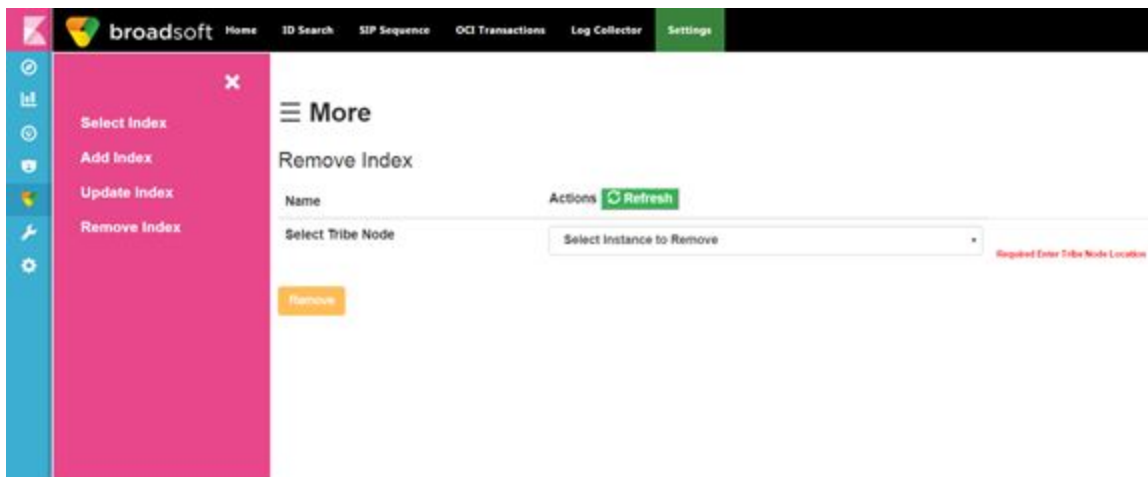


Figure 21 Removing Index Pattern

## 4 Overview of BDD XSI ANALYZER

Select the XSI Analyzer plugin. The following window will be displayed.

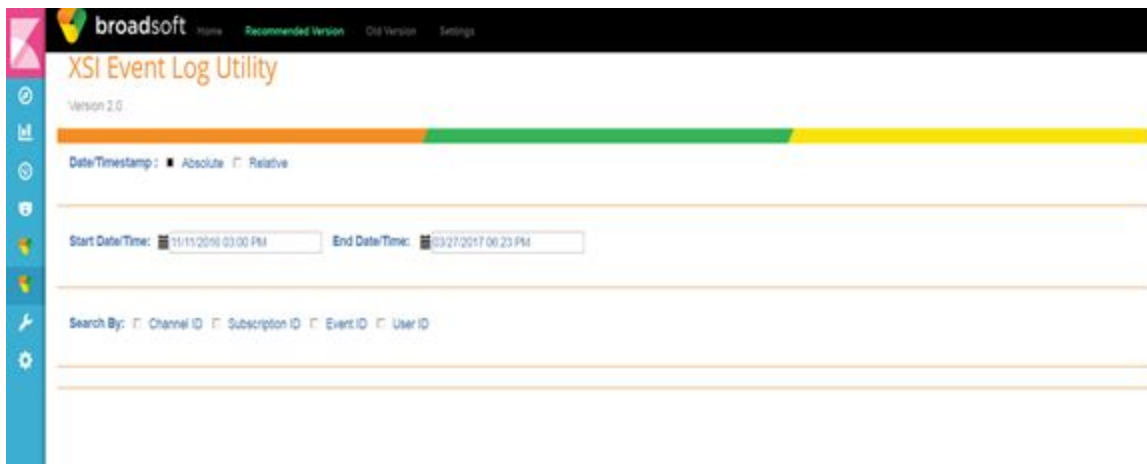


Figure 22 XSI Event Main Page

- The same type of options are available. Selecting an Absolute time or timeframe or a relative timeframe. The options following that is to search a User ID/Event/Channel or Subscription ID. Also we have Filter By option to select the type of messages to be displayed.
- We can also land up in XSI Event Plugin by clicking on Channel ID/Subscription ID/Event ID displayed in the logs of SIP Analyzer.
- A sequential flow of Channel messages, Subscription Messages and Event Messages will be displayed by selecting all type of messages in Filter By column.
- We can view the plugin in fullscreen by clicking on the fullscreen option. Option to download the log is also available.

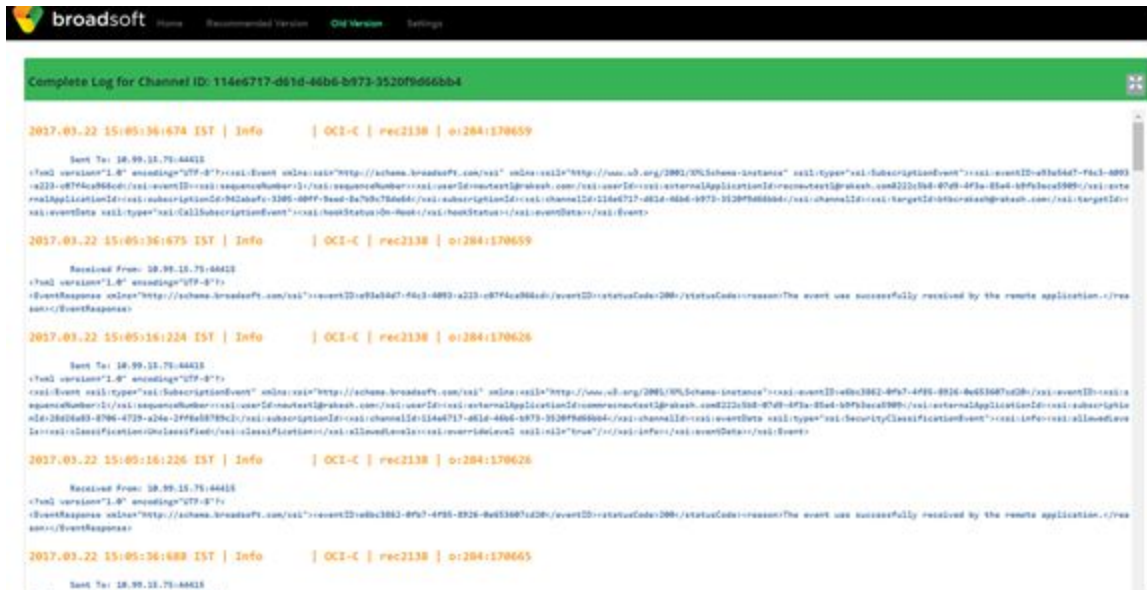


Figure 23 Full screen view of XSI Event plugin

- The Old version of XSI Event plugin contains options namely Channel ID and/or Subscription ID, User ID and/or Event ID, User ID and/or Event Name, Correlation ID. In case of User ID and/or Event ID, User ID and/or Event Name, Correlation ID the left pane displays the list of Channel IDs and right pane its corresponding logs.
- In case of Channel ID and/or Subscription ID the left pane displays the list of Correlation IDs and right pane its corresponding logs.



Figure 24 Old Version

Tribe node settings for XSI Event Plugin can be configured through Settings option.

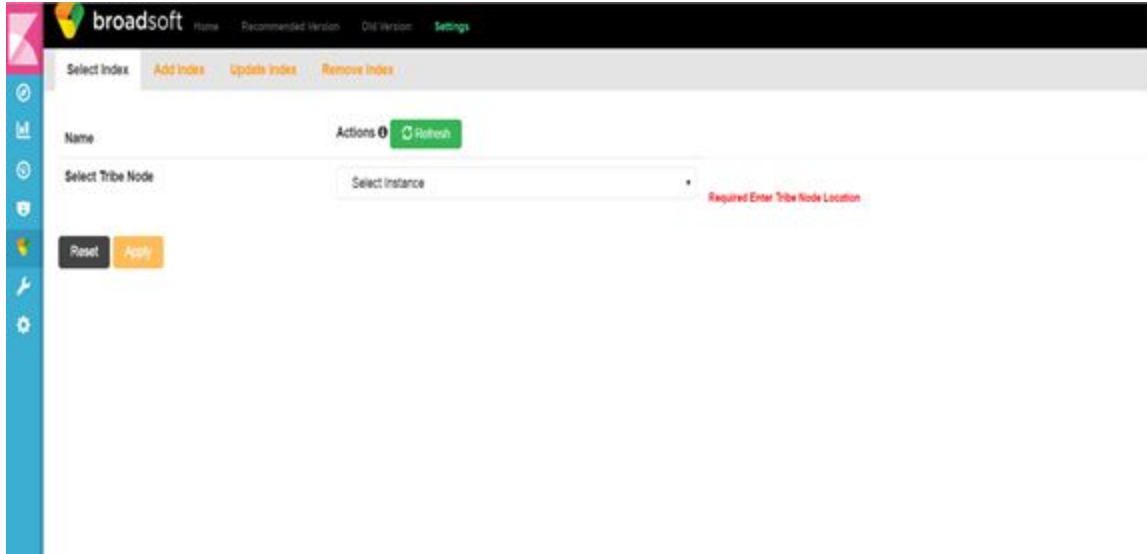


Figure 26 Settings page of XSI Event plugin

## References

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Retrieved 07:34, March 27, 2017, from  
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- RFC 3665 - Session Initiation Protocol (SIP) Basic Call Flow Examples  
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<https://www.elastic.co/guide/en/elasticsearch/reference/current/modules-tribe.html>.

## Appendix: Abbreviations

- SIP      Session Initiation Protocol
- OCI      Open Client Interface
- OCI-C    Open Client Interface-Call Control
- OCI-P    Open Client Interface-Provisioning
- OCI-R    Open Client Interface-Reporting
- URI      Uniform Resource Identifier
- URL      Uniform Resource Locator
- VMS      Voice Mail System
- VoIP     Voice Over Internet Protocol
- XML      eXtensible Markup Language
- XSD      XML Schema Definition