

BroadWorks Dashboards and Discovery

Kibana Dashboards Installation Instructions

Document Version 1.0



Content

This document contains instructions to configure Kibana and import the sample visualizations contains in file “BroadWorks Dashboards x.x”.

These instructions assume that Elasticsearch is installed, functional and collecting data from BroadWorks. Kibana should also be installed with its default configuration.



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1. Create the Index Patterns on Kibana

Upon entering a new instance of Kibana the following screen will be presented prompting you to configure the index patterns:

kibana Discover Visualize Dashboard Settings

Indices Advanced Objects Status About

Index Patterns

Warning No default index pattern. You must select or create one to continue.

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?

a. Configure bwcd* index pattern as follows:

kibana Discover Visualize Dashboard Settings

Indices Advanced Objects Status About

Index Patterns

Warning No default index pattern. You must select or create one to continue.

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-*

bwcd*

☐ 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.

Time-field name ⓘ refresh fields

starttime

Create

Click “Create”:

The screenshot shows the Kibana Indices page for the **bwlog*** index pattern. The left sidebar shows the 'Indices' section with a list of index patterns: **bwcd*** and **bwlog***. The main content area displays the **bwlog*** index pattern with a star icon, a refresh icon, and a delete icon. Below this, a text box explains that the page lists every field in the **bwlog*** index and the field's associated core type as recorded by Elasticsearch. It notes that while this list allows viewing the core type of each field, changing field types must be done using Elasticsearch's Mapping API. A 'Filter' input field is present. Below the filter, there are tabs for 'Fields (52)' and 'Scripted fields (0)'. The 'Fields (52)' tab is active, showing a table of fields with columns: name, type, format, analyzed, indexed, and controls. The table lists 20 fields, including **siptouser**, **apacheresponsemicroseconds**, **logtimestamp**, **usscmd**, **_source**, **impto**, **siptype**, **psociduration**, **psocitransactionid**, **ocitransaction**, **apacheremoteip**, **correlationid**, **apacheuri**, **usroomid**, **psocitransaction**, **ussrc**, and **ocictargetid**. Each row has a pencil icon in the 'controls' column.

name	type	format	analyzed	indexed	controls
siptouser	string			✓	
apacheresponsemicroseconds	string			✓	
logtimestamp	date			✓	
usscmd	string			✓	
_source	_source				
impto	string			✓	
siptype	string			✓	
psociduration	string			✓	
psocitransactionid	string			✓	
ocitransaction	string			✓	
apacheremoteip	string			✓	
correlationid	string			✓	
apacheuri	string			✓	
usroomid	string			✓	
psocitransaction	string			✓	
ussrc	string			✓	
ocictargetid	string			✓	

b. Configure bwlog* index pattern. Click “+Add New”:

The screenshot shows the 'Configure an index pattern' page in Kibana. The left sidebar shows the 'Indices' section with a list of index patterns: **bwcd*** and **bwlog***. The main content area has the title 'Configure an index pattern' and a text box explaining that in order to use Kibana you must configure at least one index pattern. It states that index patterns are used to identify the Elasticsearch index to run search and analytics against, and they are also used to configure fields. Below this, there are two checkboxes: **Index contains time-based events** (checked) and **Use event times to create index names [DEPRECATED]** (unchecked). The 'Index name or pattern' section has a text box with the value **bwlog*** and a note that patterns allow you to define dynamic index names using * as a wildcard, Example: **logstash-***. Below this, there is a checkbox **Do not expand index pattern when searching** (Not recommended) which is unchecked. A text box explains that 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. It also notes that 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. The 'Time-field name' section has a dropdown menu with the value **timestamp** and a 'refresh fields' link. At the bottom, there is a green 'Create' button.

Click “Create”:

Discover

Visualize

Dashboard

Settings

Indices

Advanced

Objects

Status

About

Index Patterns

★ bwcd*

bwlog*

bwlog*

★

↺

🗑

This page lists every field in the **bwlog*** index and the field's associated core type as recorded by Elasticsearch. While this list allows you to view the core type of each field, changing field types must be done using Elasticsearch's Mapping API 📄

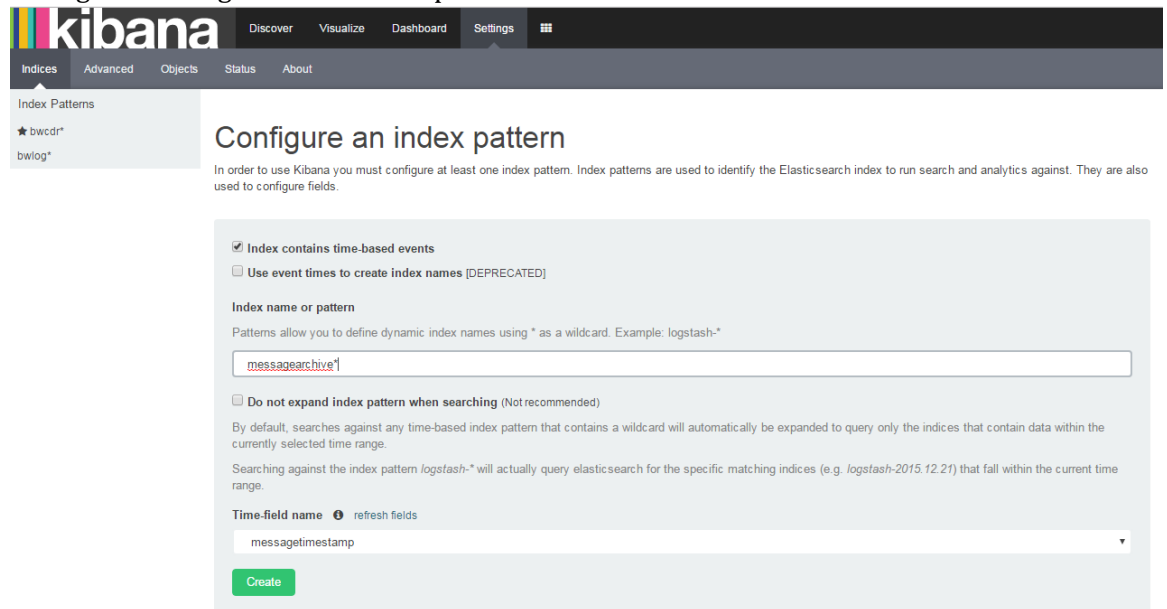
Filter

Fields (52)

Scripted fields (0)

name	type	format	analyzed	indexed	controls
siptouser	string			✓	🔧
apacheresponsemicroseconds	string			✓	🔧
logtimestamp	date			✓	🔧
usscmd	string			✓	🔧
_source	_source				🔧
impto	string			✓	🔧
siptype	string			✓	🔧
psociduration	string			✓	🔧
psocitransectionid	string			✓	🔧
ocitransaction	string			✓	🔧
apacheremoteip	string			✓	🔧
correlationid	string			✓	🔧
apacheuri	string			✓	🔧
usroomid	string			✓	🔧
psocitransaction	string			✓	🔧
ussrc	string			✓	🔧
ocictargetid	string			✓	🔧

- c. Configure messagearchive* index pattern. Click “+Add New”:



kibana Discover Visualize Dashboard Settings

Indices Advanced Objects Status About

Index Patterns

- ★ bwcd*
- bwlog*

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-*

messagearchive*

☐ 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.

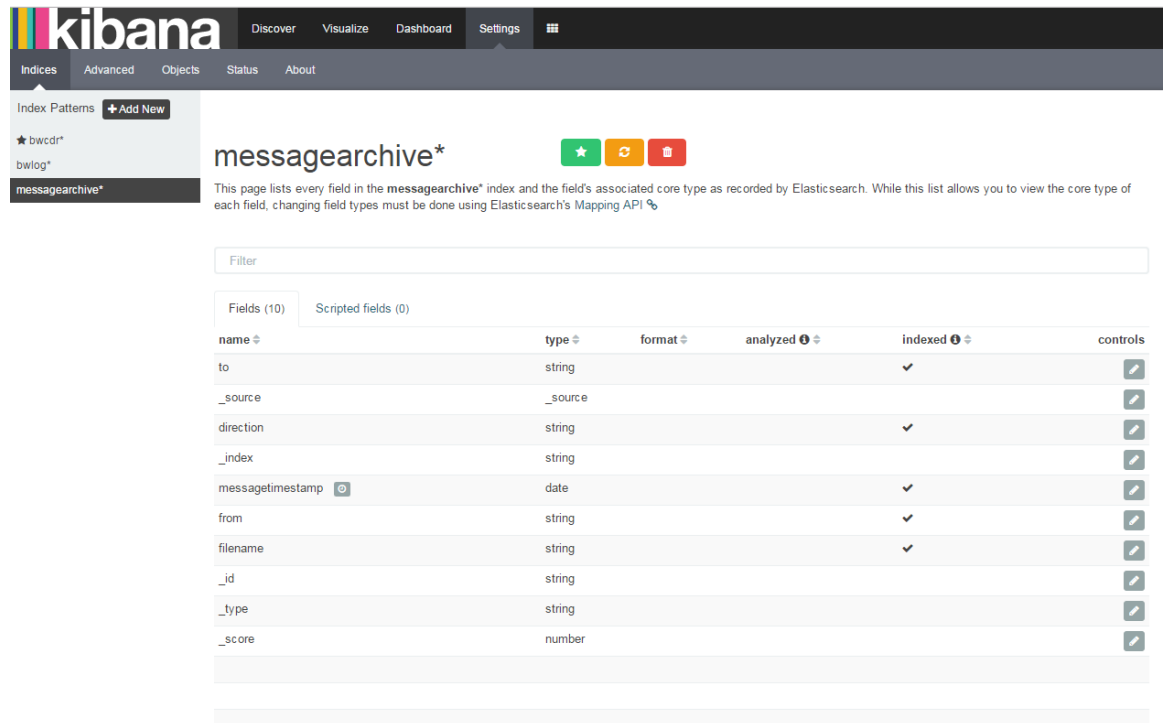
Searching against the index pattern *logstash-** will actually query elasticsearch for the specific matching indices (e.g. *logstash-2015.12.21*) that fall within the current time range.

Time-field name ⓘ refresh fields

messagetimestamp

Create

Click “Create”:



kibana Discover Visualize Dashboard Settings

Indices Advanced Objects Status About

Index Patterns **+ Add New**

- ★ bwcd*
- bwlog*
- messagearchive***

messagearchive*

This page lists every field in the **messagearchive*** index and the field's associated core type as recorded by Elasticsearch. While this list allows you to view the core type of each field, changing field types must be done using Elasticsearch's Mapping API 🔗

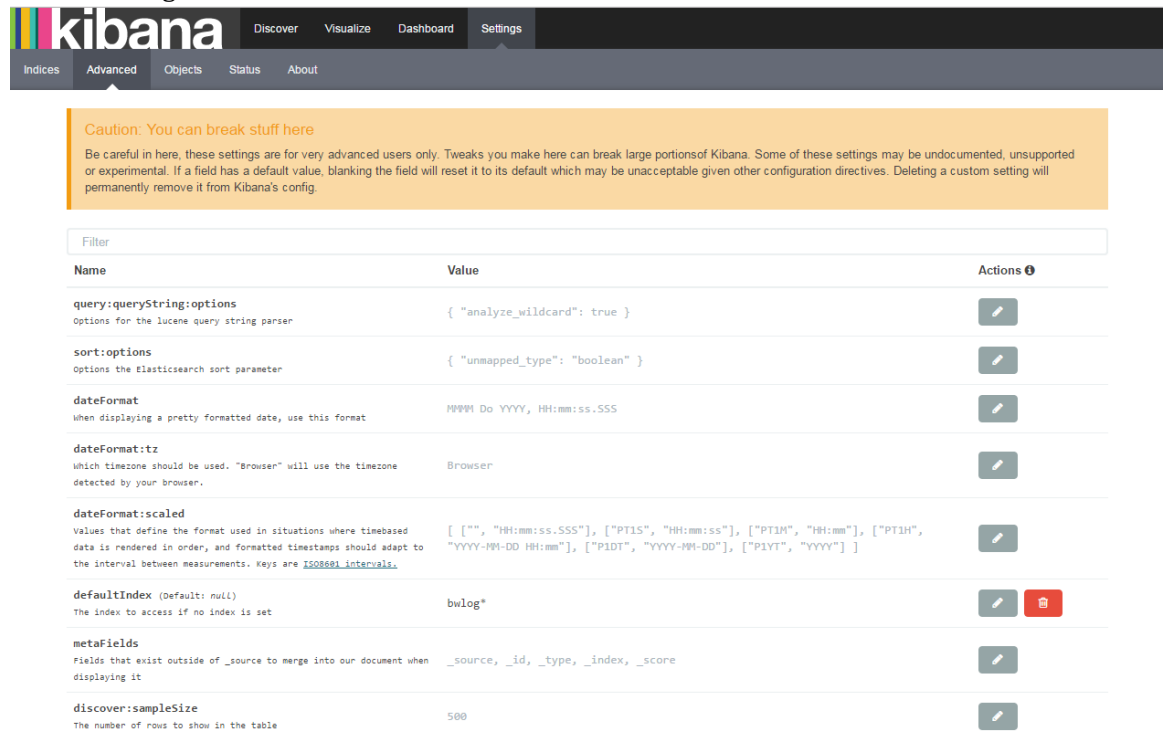
Filter

Fields (10) Scripted fields (0)

name ⓘ	type ⓘ	format ⓘ	analyzed ⓘ ⓘ	indexed ⓘ ⓘ	controls
to	string			✓	✎
_source	_source				✎
direction	string			✓	✎
_index	string				✎
messagetimestamp ⓘ	date			✓	✎
from	string			✓	✎
filename	string			✓	✎
_id	string				✎
_type	string				✎
_score	number				✎

2. Configure lucene string parser

a. Click “Settings”, click “Advanced”

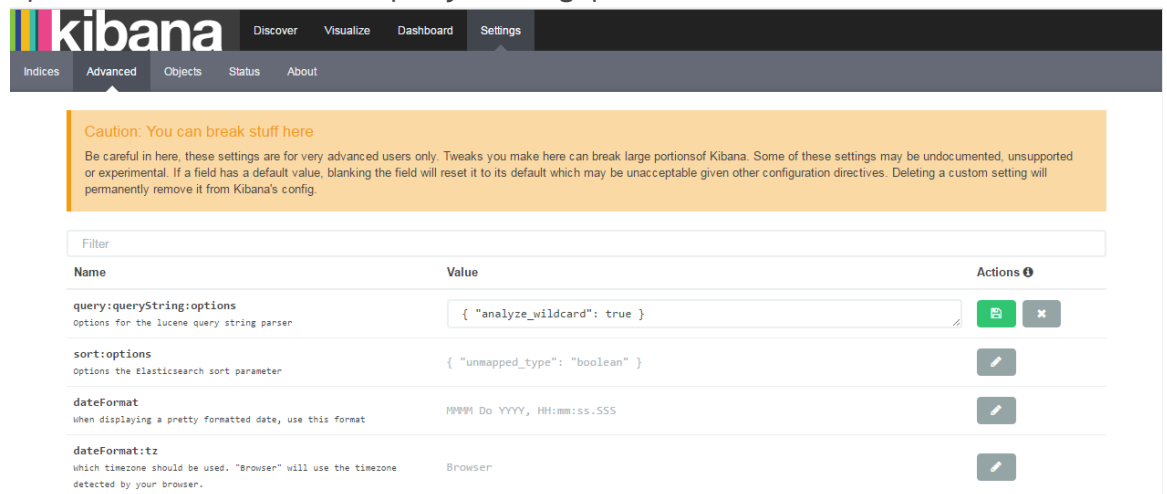


The screenshot shows the Kibana Settings page with the 'Advanced' tab selected. A warning banner at the top states: 'Caution: You can break stuff here. Be careful in here, these settings are for very advanced users only. Tweaks you make here can break large portions of Kibana. Some of these settings may be undocumented, unsupported or experimental. If a field has a default value, blanking the field will reset it to its default which may be unacceptable given other configuration directives. Deleting a custom setting will permanently remove it from Kibana's config.'

Name	Value	Actions
query:queryString:options Options for the lucene query string parser	{ "analyze_wildcard": true }	
sort:options Options the Elasticsearch sort parameter	{ "unmapped_type": "boolean" }	
dateFormat When displaying a pretty formatted date, use this format	MMMM Do YYYY, HH:mm:ss.SSS	
dateFormat:tz Which timezone should be used. "Browser" will use the timezone detected by your browser.	Browser	
dateFormat:scaled Values that define the format used in situations where timebased data is rendered in order, and formatted timestamps should adapt to the interval between measurements. Keys are ISO8601 intervals .	["", "HH:mm:ss.SSS", ["PT1S", "HH:mm:ss"], ["PT1H", "HH:mm"], ["PT1H", "YYYY-MM-DD HH:mm"], ["P1DT", "YYYY-MM-DD"], ["P1Y", "YYYY"]]	
defaultIndex (Default: null) The index to access if no index is set	bwlog*	
metaFields Fields that exist outside of _source to merge into our document when displaying it	_source, _id, _type, _index, _score	
discover:sampleSize The number of rows to show in the table	500	

b. Click Edit icon for query:queryString:options (Default: { "analyze_wildcard": true })

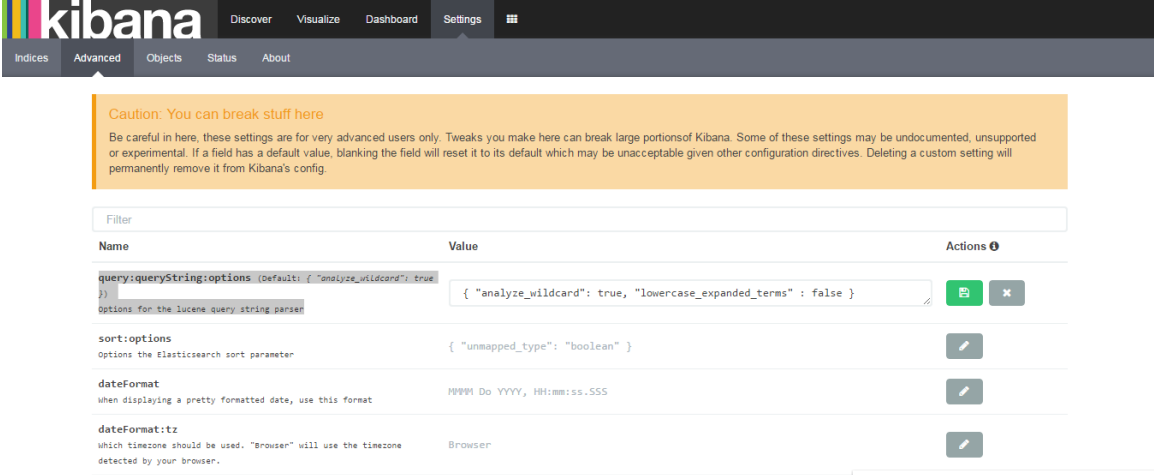
Options for the lucene query string parser








This screenshot shows the same Kibana Settings page, but the 'query:queryString:options' setting is being edited. The 'Value' field now contains a text input with the JSON { "analyze_wildcard": true }. The 'Actions' column for this row now includes an 'Add' icon (a plus sign in a green box) and a 'Remove' icon (an 'x' in a red box), in addition to the edit icon.

Name	Value	Actions
query:queryString:options Options for the lucene query string parser	{ "analyze_wildcard": true }	
sort:options Options the Elasticsearch sort parameter	{ "unmapped_type": "boolean" }	
dateFormat When displaying a pretty formatted date, use this format	MMMM Do YYYY, HH:mm:ss.SSS	
dateFormat:tz Which timezone should be used. "Browser" will use the timezone detected by your browser.	Browser	

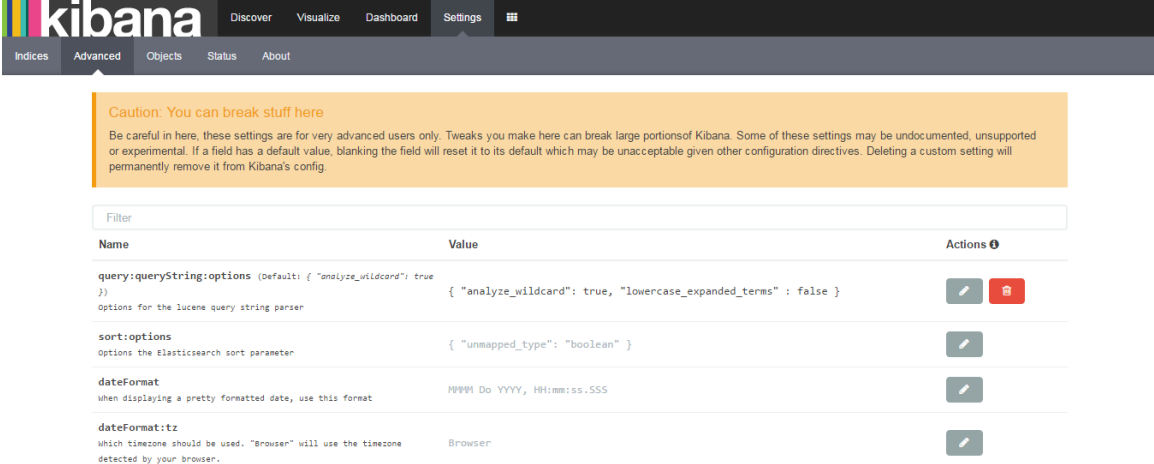
Enter the following value: { "analyze_wildcard": true, "lowercase_expanded_terms" : false } and click the Save icon








The screenshot shows the Kibana Settings page. At the top, there's a navigation bar with 'Discover', 'Visualize', 'Dashboard', 'Settings', and a hamburger menu. Below it, a sub-navigation bar has 'Indices', 'Advanced', 'Objects', 'Status', and 'About'. The 'Advanced' tab is selected. A yellow warning box at the top states: 'Caution: You can break stuff here. Be careful in here, these settings are for very advanced users only. Tweaks you make here can break large portions of Kibana. Some of these settings may be undocumented, unsupported or experimental. If a field has a default value, blanking the field will reset it to its default which may be unacceptable given other configuration directives. Deleting a custom setting will permanently remove it from Kibana's config.'

Name	Value	Actions
query:queryString:options (Default: { "analyze_wildcard": true }) <small>options for the lucene query string parser</small>	{ "analyze_wildcard": true, "lowercase_expanded_terms" : false }	 
sort:options <small>Options the Elasticsearch sort parameter</small>	{ "unmapped_type": "boolean" }	
dateFormat <small>When displaying a pretty formatted date, use this format</small>	HHMM Do YYYY, HH:mm:ss.SSS	
dateFormat:tz <small>Which timezone should be used. "Browser" will use the timezone detected by your browser.</small>	Browser	

Which results in the following screen:



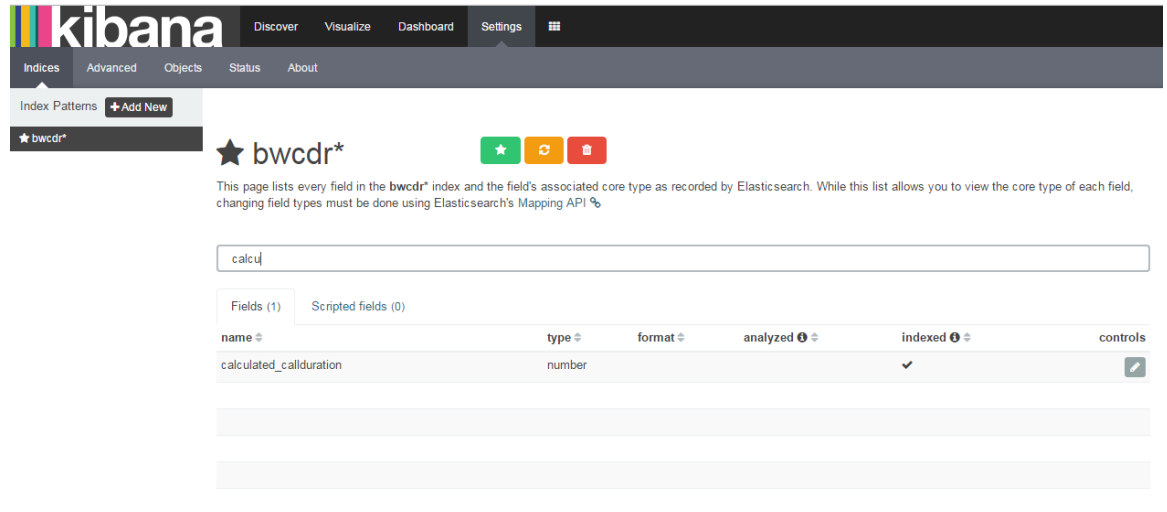
This screenshot shows the same Kibana Settings page as above, but with the 'query:queryString:options' value updated to { "analyze_wildcard": true, "lowercase_expanded_terms" : false }. The 'Save' icon (a green square with a white checkmark) is now visible in the Actions column, and the 'Delete' icon (a red square with a white X) is no longer present.

Name	Value	Actions
query:queryString:options (Default: { "analyze_wildcard": true }) <small>options for the lucene query string parser</small>	{ "analyze_wildcard": true, "lowercase_expanded_terms" : false }	 
sort:options <small>Options the Elasticsearch sort parameter</small>	{ "unmapped_type": "boolean" }	
dateFormat <small>When displaying a pretty formatted date, use this format</small>	HHMM Do YYYY, HH:mm:ss.SSS	
dateFormat:tz <small>Which timezone should be used. "Browser" will use the timezone detected by your browser.</small>	Browser	

3. Change calculated_callduration format (optional).

By default the calculated_callduration will be displayed in seconds. To display in hours:minutes:seconds (hh:mm:ss):

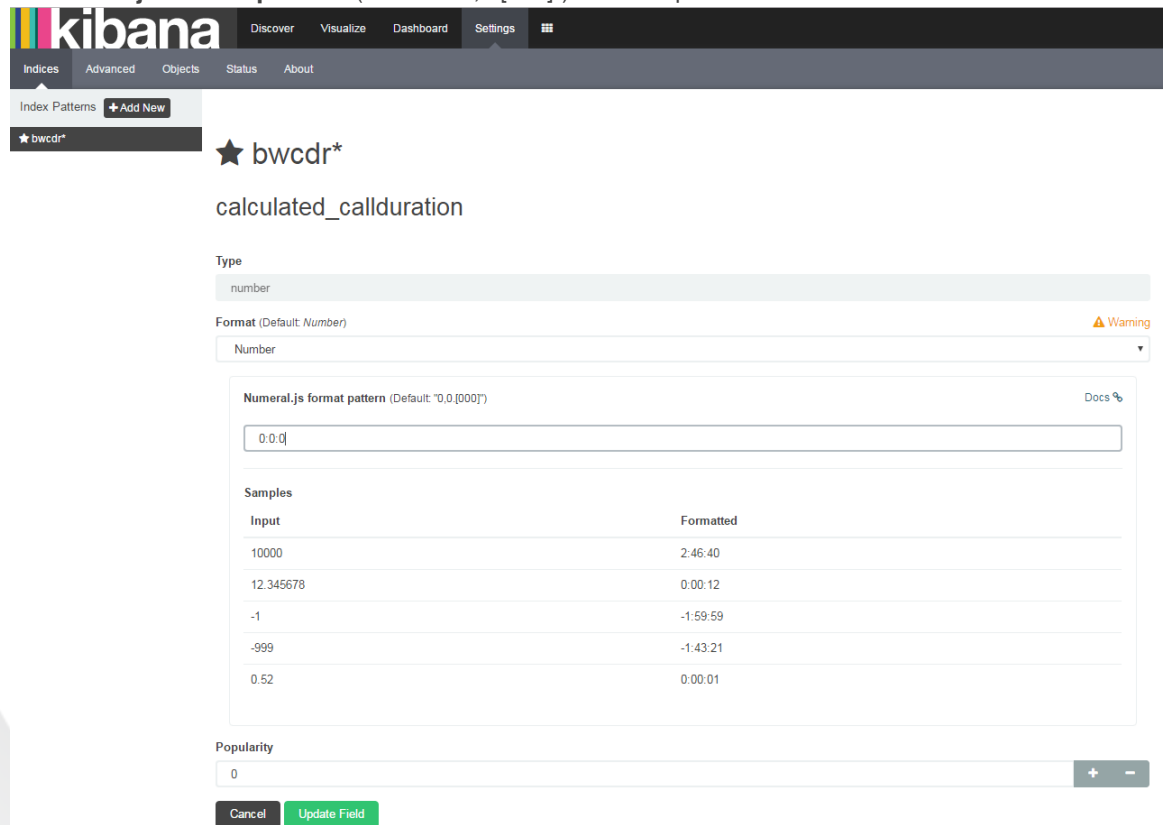
- a. Click “Settings”, then “Indices”, and start entering “calcu” in filter box:



Kibana interface showing the Indices page for the `bwcd*` index. The search filter is `calcu`. The table lists fields, showing `calculated_callduration` with type `number`. The controls column contains an edit icon.

name	type	format	analyzed	indexed	controls
calculated_callduration	number			✓	

- b. Click the edit icon under “controls” and enter “0:0:0” in the edit box below
”Numeral.js format pattern (Default: "0,0.[000]")”. Click “Update Field”

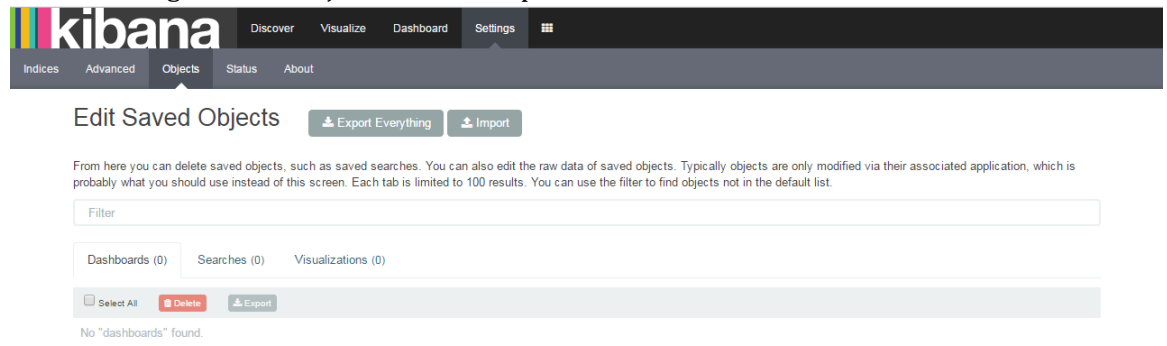


Kibana interface showing the field settings for `calculated_callduration`. The Type is `number`. The Format is `Number`. The Numeral.js format pattern is being edited to `0:0:0`. The table shows the formatted output for various input values.

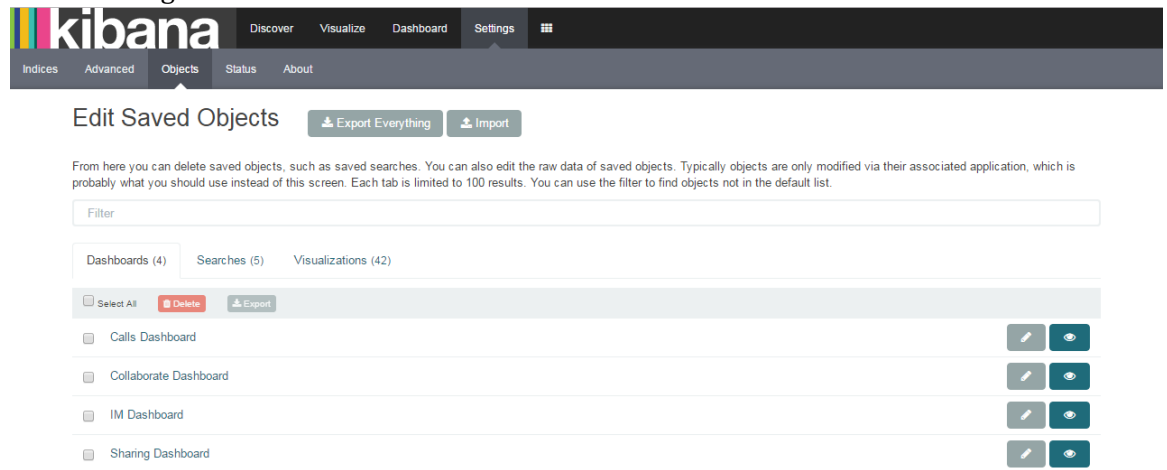
Input	Formatted
10000	2:46:40
12.345678	0:00:12
-1	-1:59:59
-.999	-1:43:21
0.52	0:00:01

4. Import Dashboards

- Go to “Settings”, click “Objects”, Click “Import”

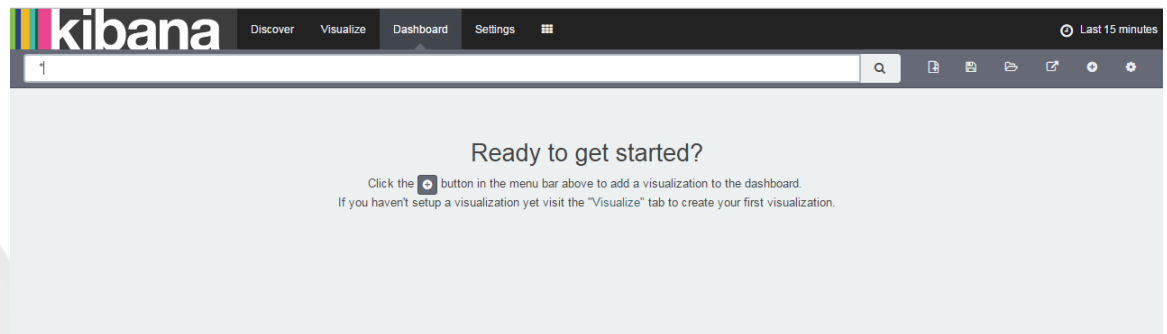


- Locate file “Broadworks Dashboards 1.0”, click Open. When import completes, the following screen should result:

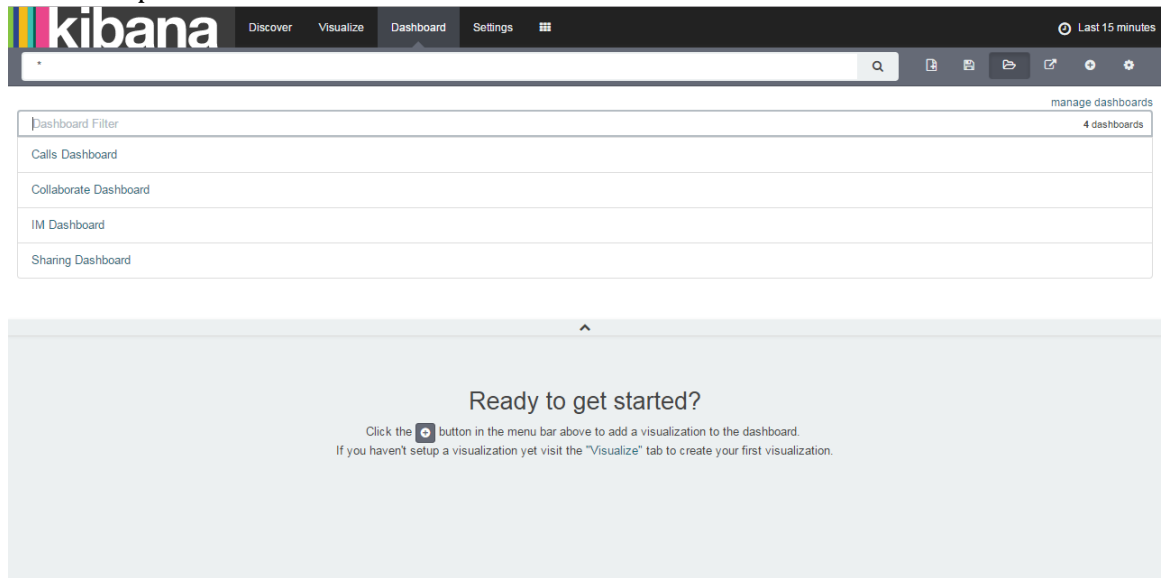


5. Start Dashboards

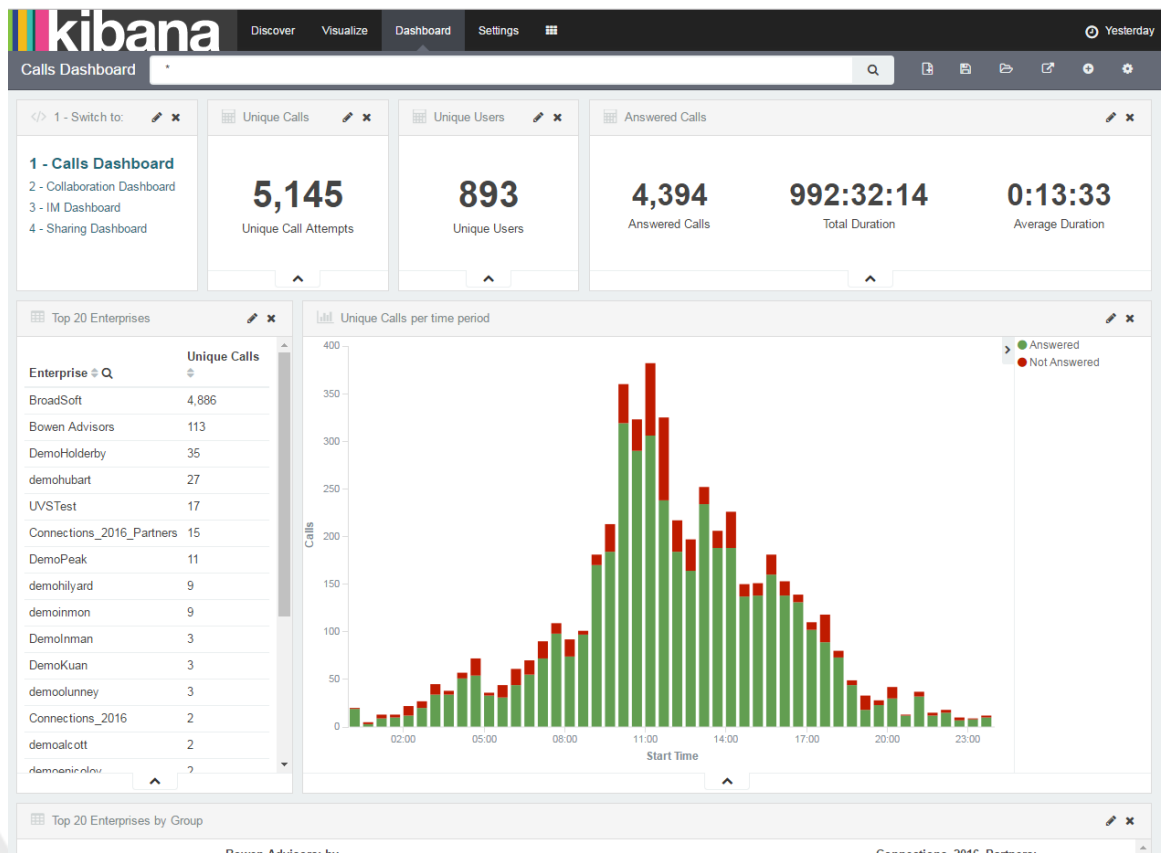
- Click “Dashboard”



- b. Click file open icon:



- c. Click "Calls Dashboard"



And you're done! You can switch dashboards by selecting it in the upper left menu.