## HOW TO USE ELASTIC ENTERPRISE SEARCH WITH GITHUB



Elastic Company has acquired Swiftype for its product portfolio, branding it <u>Elastic Enterprise</u> <u>Search</u>. This product gives users the ability to query a variety of data sources, including public sources and internal company documents and data sources.

We previously explained <u>how to install Enterprise Search</u>. In this article, I'll illustrate how it works by connecting it to GitHub.

(This article is part of our <u>ElasticSearch Guide</u>. Use the right-hand menu to navigate.)

### **Overview: How Elastic Enterprise Search works**

Enterprise Search offers the ability for users to query data sources using natural language. It is particularly useful within organizations who share internal documents. Popular sources you can query with Enterprise Search include:

- Dropbox
- Google Docs
- GitHub
- Microsoft OneDrive
- Jira
- Salesforce
- Custom sources (via APIs)

Enterprise Search works by indexing search data in ElasticSearch and connecting to the data source using <u>OAuth</u>, an industry standard for authenticating apps. To understand OAuth, I like it to when you

use Facebook or Google credentials to look into an app.

### **Note on GitHub limitations**

You cannot use Enterprise Search with your own personal GitHub repository. Instead you must use an organizational repository. In other words, if you are an employee named **Fred** working at **Smith Airlines**, then you can search Smith Airlines. You cannot search Fred. That makes sense since Enterprise Search is designed for an enterprise and not a single individual.

## **Setting up Elastic Enterprise Search**

Follow these steps to set up Elastic Enterprise Search.

- 1. Create an OAuth App in GitHub. This is where you define the callback URLs that points to your Enterprise Search Installation. It also creates the Client ID and Client Secret needed to connect to Enterprise Search.
- 2. Create the GitHub source in Enterprise Search.
- 3. Enterprise Search polls GitHub for activity.
- 4. Start searching.

## **Configuring GitHub OAuth Settings**

Login to GitHub and click on Settings --> Developer setting for the repository. Make sure you click the organizational repository settings and not your personal settings.

In this example the repository is **walkerrowe**:



the callback URL, use these links:

Homepage URL

Authorization callback URL

https://(your server):3002

http://(your server):3002/ent/

**Note:** the Swiftype documentation mentions **localhost.** Do not use that. (GitHub cannot reach your localhost.) Instead, it must be the public IP address of your Enterprise Search server or the private IP if you are running GitHub internally. You will need to open firewall port 3002.

Drag & drop	Upload new logo You can also drag and	drop a picture from your computer.
Application name *		
BMC ES Oauth		
Something users will	recognize and trust.	
Homepage URL *		
https://walkercode	tutorials.com:3002	
The full URL to your a	pplication homepage.	
Application descrip	tion	
Application descrip	otion is optional	

This is displayed to all users of your application.

### Authorization callback URL \*

http://walkercodetutorials.com:3002/ent/

Your application's callback URL. Read our OAuth documentation for more information.

Click Register

**Application** then note the **client ID** and **client secret**. You will put those credentials into Enterprise Search.

#### BMC ES Oauth



Add GitHub Source in Elastic Enterprise

### Search

Click on Add a Source.



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5	Filter	sources	Dy	name or	type



screens. If you are already logged into GitHub, it will try to use those credentials. So, logout of GitHub.



ID and secret. You don't put the URL like github.com/(your organization). Instead GitHub locates your repository by your client ID.



see if you are logging into some application using Facebook or Google, GitHub asks you for permission to connect the two. If you get any error message here, check the callback URL you put above. GitHub needs to be able to reach that from the GitHub servers.



Click through

this screen.



# 

# **Connect to GitHub**

Select GitHub organizations to sync

walkerrowe







# GitHub connected!

Your content is currently being synced, and wil be available for search as soon as the initial syncing process is complete.

**Connect Another Content Source** 

or manage your sources

## **Changing configuration and handling debug errors**

If you make a mistake, don't click on "Add a source" again. Instead, go into settings in Enterprise Search, also located on the left-hand menu.



Then select the **configure** button shown



### Verifying your connection works

You should see some activity now:



### **Recent Activity**

GitHub synced successfully

GitHub was successfully connected

### Searching

Oddly enough, the search screen in Enterprise Search is hidden. It's not on the main landing http://(your server):3002. Instead, look on the left-hand side for **Go to Search Application**.



Their search syntax is natural language,

but you do need to use certain keywords (see <u>Help with the Search Syntax).</u> It's not well

documented, yet.

When I type:

creator is walkerrowe

It shows these objects:

Clear All	Showing results for creator is walkerrowe from G	Showing results for <b>creator is walkerrowe</b> from GitHub		
✓ All Sources				
O GitHub	2 https://github.com/walkerrowe			
	Last updated 21 minutes ago			
TYPE	esedich			
Organization	1 # esearch			
Repository	1 https://github.com/walkerrowe/esearch			
,	Last updated 21 minutes ago			

Then I typed

the name of a repository I created, **esearch.** It presented this screen. Click on the item and it gives you the chance to look at it in GitHub.



### Advice on search syntax

You can refer to the <u>Enterprise Search Searcher's Manual</u> for search syntax, but it gives very few examples. For example, it says that, as you type a search question, it highlights words that it finds in blue. That did not work for me using Chrome on Mac. It also seems to search files but not the

content of files. In other words, it's not indexing every word in your Google docs or Sheets.

Since the documentation is sparse, consider asking questions on the Enterprise Search community.