



## Bingo Elasticsearch

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## Introduction

As we all know that site search on Magento is always being a challenge -- with large data sets of course. The default Magento search feature is not much efficient in terms of performance and speed. So here I am writing this blog to explain how can we make our Magento store **Search Efficient** using *Elasticsearch*.

## What is Elasticsearch?

*“Elasticsearch is a search engine based on the Lucene library. It provides a distributed, multitenant-capable full-text search engine with an HTTP web interface and schema-free JSON documents. Elasticsearch is developed in Java and is released as open source under the terms of the Apache License.”*

## What is Bingo Elasticsearch?

The Bingo Elasticsearch extension for Magento 2 is specifically created to deliver you instantaneous and highly accurate search results. It is designed to help you measure the scalability. The Bingo Elasticsearch extension for Magento 2 also enables your web store to handle sophisticated and real-time search requirement. It is also fully customizable and can be tailored to deliver the most relevant search results at the top of your Magento 2 store's search listings.

Supported Platforms : Magento 2 CE, Magento 2 EE

## Key Features

The following key features pertaining to Bingo Elasticsearch extension for Magento 2 will help you understand the product functionality better. We have bifurcated them into two groups for you to easily assimilate, please have a read:

### **1. Greater Customer Experience**

A positive customer experience is the most important aspect for any company. To ensure that, Bingo Elasticsearch Extension for Magento 2 offers you the following:

- A complete support on searching stop words and synonyms
- Support for stemmed search with singular & plural words alongside long tail searches that are with hyphens, slashes, etc.
- Enables automatic location of search queries in any custom content
- Helps you to search through products, catalogues, description, attributes and SKUs
- Enables you to search through custom content and multiple content types
- It also has a built-in spell check with auto complete function that automatically suggests the complete word for faster search results and also make smart suggestions for the misspelled words

## 2. Admin Capabilities

Bingo Elasticsearch Extension for Magento 2 accommodates you to manage customer's searches. It offers the following administrative capabilities:

- It has a simplified installation process that enables Bingo on your Magento 2 web store
- It has the ability to select Bingo as the default search engine on Magento 2
- On enabling Bingo, it automatically creates an Elasticsearch index
- It contains smart search filters that enhances search accuracy
- It optimizes your web store search results
- It has the ability to process the layered navigation (filter) requests
- It customizes landing pages for custom search queries
- All data changes will be automatically synced with Elasticsearch server
- Adds ability for admins to manually sync your complete site data at any point of time by just a click
- Admins can also schedule a data sync manually for any change
- **Data will be automatically synced between Magento and Elasticsearch server whenever any product is Created, Updated or Deleted**

## How to create Elasticsearch account?

In order to get a test account, you can create free trial account from [Elasticsearch Cloud](#).

Although, in this blog I will explain how you can create a sandbox account using [Bonsai](#) without having a trial period expiration. **Bonsai** allows you to create a sandbox account with 1 cluster. This is really enough for our testing purposes and to learning with Elasticsearch integration as well.

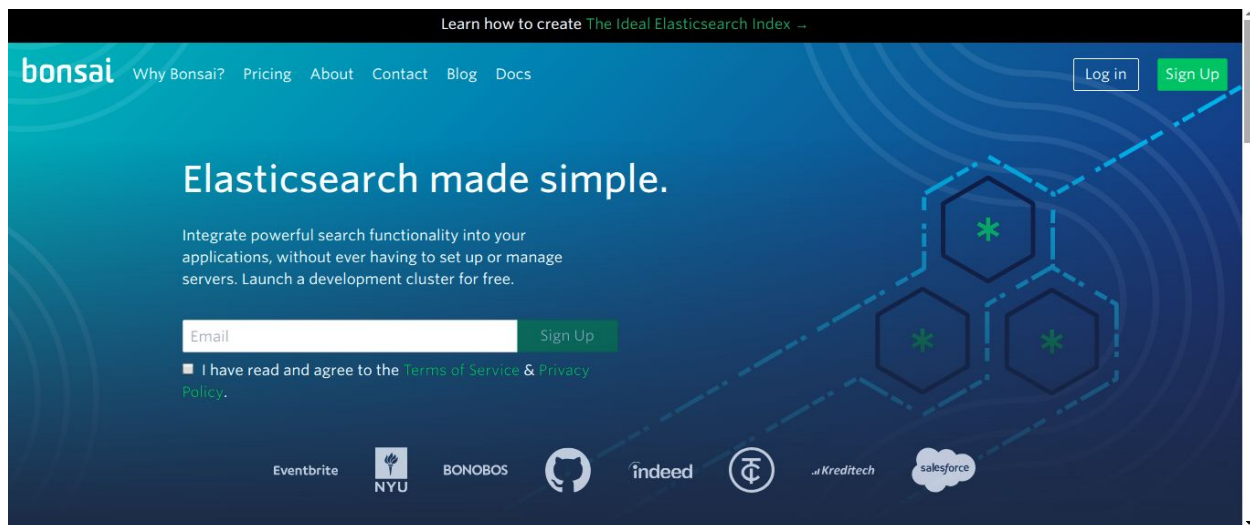
## Prerequisite

Before begin installation, you must install Magento 2 Elasticsearch client to your Magento store. You can easily install using command line:

***composer require elasticsearch/elasticsearch:~5.2***

## How to integrate Bingo Elasticsearch with Sandbox account?

1. Go to <https://bonsai.io/>
2. Provide your email address and get Sign Up



3. Fill out the required form and click Create Account

- 1 Create your account  
**Welcome!** Let's kick things off by setting up your account.
- 2 Describe your project
- 3 Set up your cluster details
- 4 Confirm your email

Plan  
Sandbox \$0 /mo

First Name

Last Name

Company Name

Phone optional

Password

☒ I have read and agree to the [Terms of Service & Privacy Policy](#).

☐ Subscribe to newsletter optional

Create Account →

4. Provide the required relevant information and click Next
5. Now create your cluster by providing your cluster a name and Region, click Continue

**bonsai**

- ✓ Create your account
- ✓ Describe your project
- 3 Set up your cluster details  
This will deploy a 3-node cluster that you can use in testing.
- 4 Confirm your email

Sign up & deploy an Elasticsearch cluster in seconds.

Plan  
Sandbox \$0 /mo

Cluster Name

ex: APP\_NAME\_testing

Elasticsearch Version  
6.2.4

Region  

AWS Asia Pacific (Sydney)

AWS EU West (Ireland)

AWS Germany (Frankfurt)

AWS US East (Virginia)

6. Now check your email inbox and confirm your email address.

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**bonsai**

- ✓ Create your account
- ✓ Describe your project
- ✓ Set up your cluster details
- 4** Confirm your email

Sign up & deploy an Elasticsearch cluster in seconds.

Success! 🎉

Check your email for your confirmation link.

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**bonsai**

## Just one more step...

Hello and welcome to Bonsai! We're excited to get your free Sandbox cluster up and running. Click the button below to confirm your email and complete your signup.

Confirm email

By continuing, you are agreeing to our [Terms of Service](#).

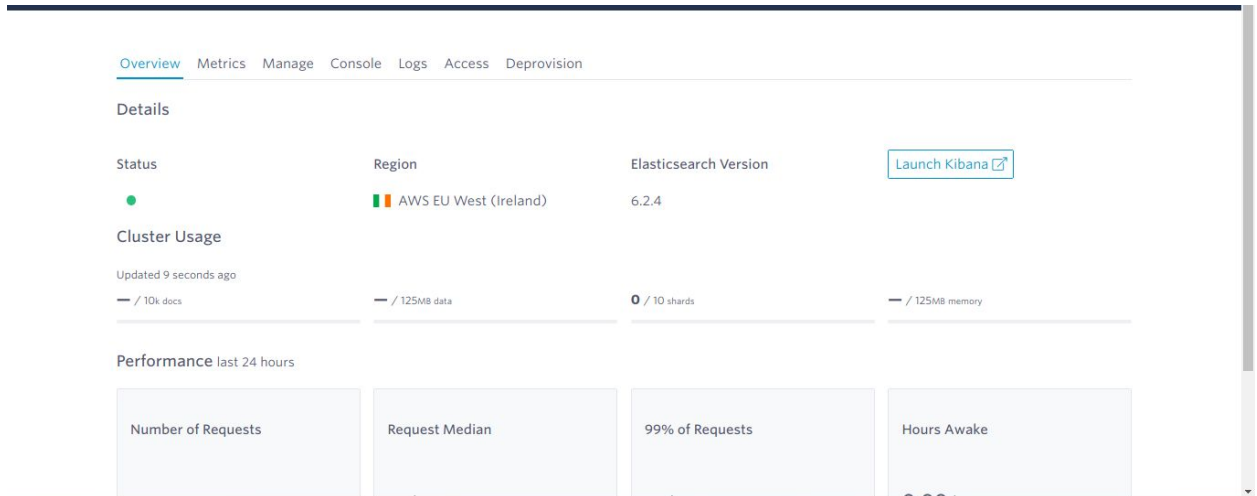


Bonsai is handcrafted in Austin, San Diego, and Omaha.

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7. After confirmation, you will be redirected to your account dashboard





8. Make sure your status is showing Green i.e. the Elasticsearch server is ready and running perfectly
9. In order to get the Elasticsearch API credentials, go to **Access** tab



10. Copy the **Read & Write** hostname from the screen
11. Specify this hostname to your Magento 2 store configuration (**Store -> Configuration -> Folio3 Extensions -> Bingo Elasticsearch**). Please make sure that hostname must follow the following sample format
  - a. [https://\[username\]:\[password\]@xyz.us-east-1.aws.found.io](https://[username]:[password]@xyz.us-east-1.aws.found.io)
12. Username and Password must be specified in the hostname using above format
13. As you can see the provided host URL using HTTPS protocol, so we will use it's SSL port: **443** (Bonsai's SSL Port is 443. Explained further in the below section)
14. Next, copy the **Access Key & Access Secret** and paste into the **Username & Password** fields in the Magento store configuration
15. Click the **Test Connection** button to check if the connection is made successfully

16. If connection is not successful, re-check your configuration values specially *Port*, *Username and Password*
17. After the connection is established, now save your Magento store configuration
18. If no errors returned on Save, that means you have successfully integrated your Elasticsearch server with Magento store and it is now writable as well.
19. There are chances that you might face few errors. Don't worry this usually occurs to everyone due to the missing configurations from Elasticsearch Server.
20. See [How to resolve errors on Bingo Elasticsearch configuration](#)

## How to setup Elasticsearch on your Magento store?

- Go to Magento Marketplace, download and get *Bingo Elasticsearch* extension (<https://marketplace.magento.com/folio3ecommerce-magento2-module-bingo.html>)
- Follow the [Installation Guide](#) and install the extension on your Magento Store
- After installation, please execute following commands:
  - ***php bin/magento setup:upgrade***
  - ***php bin/magento setup:di:compile***
  - ***php bin/magento cache:clean***
- Follow the [User Guide](#) to setup and configure the Bingo Elasticsearch extension on your Magento store
- While specifying the Elasticsearch configurations, follow the documentation from your Elasticsearch hosting provider (e.g. AWS or Google Cloud Platform)
- It is strongly recommended that you use the **HTTPS** protocol for your Elasticsearch configuration on store
- Go through the documentation of your hosting provider and provide relevant Host address and SSL port. Example host address :  
[https://\[username\]:\[password\]@eu-west-1.aws.found.io](https://[username]:[password]@eu-west-1.aws.found.io) and port : **9243**
- This is very important to define correct port otherwise, you might receive error “**No alive nodes found in your cluster**”
- While specifying hostname, make sure to use this sample format :
  - [https://\[username\]:\[password\]@eu-west-1.aws.found.io](https://[username]:[password]@eu-west-1.aws.found.io)
- Username and password must also be provided in the Hostname string
- Please find below the relevant ports for commonly used Elasticsearch services :
  - Amazon Web Server (AWS)
    - SSL Port: **9243**
    - Other Ports: **9200**
    - **Port 9200 is not supported on all AWS regions**
  - Google Cloud Platform (GCP)
    - SSL Port: **9243**
    - **Port 9200 is not supported on the GCP platform**
  - Bonsaisearch

- SSL Port: **443**
- Other Ports: **9200, 80**
- Once you have specified the configurations, make sure that the *Catalog Search Engine* value is set to **Folio3 Bingo Elasticsearch** (Store -> Configurations -> Catalog -> Catalog Search -> Search Engine)
- Click the **Test Connection** button to check if the connection is made successfully
- If connection is not successful, re-check your configuration values specially **Port, Username and Password**
- After the connection is established, now save your Magento store configuration
- If no errors returned on Save, that means you have successfully integrated your Elasticsearch server with Magento store and it is now writable as well.
- If you get any error like “**Closing indices is disabled**” on save, do not panic this usually happens. Please see [How to resolve errors on Bingo Elasticsearch configuration](#)
- Next, you have to manually sync the data with Elasticsearch for the first time. Click **Schedule Data Sync on Elasticsearch Server** button
- Next, run indexing *php/bin magento index:reindex*
- Go to frontend and see your search results
- Your search results are now being served from the Elasticsearch server. That's it !

## Important Read

- **In order to make this extension work properly, please make sure that magento cron job is scheduled on your app server**
- You can view and setup crons from command line using : *crontab -e*

## Demo Links

You can perform live extension demo using following URLs

- [Frontend Demo](#)
- [Admin Demo](#) (username = *bingo*, password = *folio3\_bingoES*)

Note: You must have Elasticsearch account in order to perform the demo

## Related Topics

- [How to resolve errors on Bingo Elasticsearch configuration](#)