

# Smile

OPEN SOURCE SOLUTIONS

## Magento Elastic Suite

# User Guide

User guide for Magento 1

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# I - INTRODUCTION

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## I.1 WHAT IS MAGENTO ELASTIC SUITE?

« Magento Elastic Suite » is a set of modules for Magento that provides several enhancements to Magento:

- | A powerful and customizable search engine
- | Improvements on the layered navigation
- | New merchandising features
- | High performances & scalability

This set of modules has been designed to help merchants take up one of the biggest challenges in e-commerce: how to display the good product at the right time to the customers?

This set of modules has been created by Smile Lab and is released under the Open Software Licence version 3.0.

## I.2 WHO WE ARE

Set up in 1991, Smile is the first European integrator specialized in open source solutions.

On top of our engineering expertise, Smile offers a vast range of services: consulting upstream and in support of the projects, the interactive agency both in creation and web design and in editorial, strategic and e-marketing advice, application maintenance, training, support & maintenance in operational condition, hosting and exploitation.

Magento recognized Smile as a core partner through the « Gold » partnership badge.



Since 2014, Smilelab is the innovation and experimentation entity of Smile. Our multidisciplinary team brings together experts in technology, innovation, and new applications. Together we explore, invent, and test technologies of the future, to better serve our clients.

## I.3 REQUIREMENTS

Magento Elastic Suite has been successfully deployed and tested on the following Magento versions:

- | Magento EE 1.13
- | Magento EE 1.14
- | Magento CE 1.8
- | Magento CE 1.9

Another version has been released for Magento 2.

As far as possible, you should install the module at the early beginning of your Magento project, at the same time you install Magento. This way, your development team won't spend additional time to handle Magento Elastic Suite specificities.

## 1.4 TERMINOLOGY

Product attribute	A product attribute is a field in the product form. Product attributes can be managed in the back-office in the menu Catalog > Attributes > Manage Attributes.
Filter	On most e-commerce website, when a list of products is displayed, several filters are displayed in the left columns to help the user to find a product: filter by price, brand, category...
Facet	Synonym for « Filter ».
Layered Navigation	The « layered navigation » is the use of filters for navigation.
Stopword	A stopword is a word very frequently used and with little meaning for a search. For example: and, or, to, for, are, be, by, in,...
Boost	The ranking of a search engine is based on the calculation of a relevance score for each product. Applying a boost of +10% to some products means to increase the score of these products by +10%.
Fuzzy search	A fuzzy search allows small mistakes during typing, by allowing small changes in the letters entered by the user.
Phonetic search	The phonetic search allows spelling and grammatical errors during typing, by allowing changing a word by another with a similar sound.
Autocomplete	We call « Autocomplete » the suggestions that are displayed during typing in the search field.

## 1.5 FOR MORE INFORMATIONS

Magento Elastic Suite official website	<a href="http://magento-elastic-suite.io">http://magento-elastic-suite.io</a>
GitHub Magento Elastic Suite for Magento 1	<a href="https://github.com/Smile-SA/elastic-suite">https://github.com/Smile-SA/elastic-suite</a>
GitHub Magento Elastic Suite for Magento 2	<a href="https://github.com/Smile-SA/smile-magento-elasticsearch">https://github.com/Smile-SA/smile-magento-elasticsearch</a>
Demo store (Magento 2)	<a href="http://demo.magento-elastic-suite.io">http://demo.magento-elastic-suite.io</a>
Smile official website	<a href="http://www.smile.fr">http://www.smile.fr</a>

## II - SEARCH ENGINE

### II.1 FINE ADJUSTMENT OF THE WEIGHT OF EACH PRODUCT ATTRIBUTE

Feature added  
in version 1.3

When a user enters a query, this query can be related to several product attributes:

- | Name
- | Description
- | Brand
- | Material
- | ...

All of them don't have the same weight: for example, finding the query in the name of the product is more relevant than finding the query in the description of the product.

With Magento Elastic Suite, you can set up the list of product attributes that should be used by the search engine, and you can set up their relative weight:

1. Open the menu **Catalog > Attributes > Manage attributes**
2. Select the product attribute you want to edit
3. Choose if you want to use this attribute in search

Use in Quick Search  Yes  
 No

4. Enter the search weight (1 or + / a higher value increase the weight in search)

Search Weight



#### Note

Without Magento Elastic Suite, the weight can be customized only with SolR installation, and the weight must be an integer value between 1 and 5. With Magento Elastic Suite, the weight can be any integer value, allowing finer weight adjustment.



#### Recommended values

Examples of values that provided good results on past projects:

Product attribute	Search weight
SKU	10
Name	10

Brand	4
Description	1

## II.2 FUZZY SEARCH

Feature added  
in version 1.0

Fuzzy search is a way to correct mistakes during typing, using the « Levenstein distance ». With the Levenstein distance, the similarity of two words are evaluated by the number of letters that you should remove, add, or replace in order to change one word into another. The more the words are similar, the more Magento Elastic Suite will boost the product.



### Example

If a user enters the query « **trouper** », then we can assume that there is a high probability that the user is looking for a « **trouser** », because only 1 letter should be replaced in order to change the word « trouper » into « trouser ».



In comparison, there is a lower probability that the user is looking for « **trainers** » because 4 letters needs to be replaced/added in order to change « trouper » into « trainers ».

The fuzzy search can be enabled in the back-office:

1. Open the menu **System > Configuration > Advanced Search Settings**

Search fuzziness configuration		
Enable fuzziness	<input type="text" value="Yes"/>	[STORE VIEW]
Fuzziness value	<input type="text" value="0.75"/> <small>▲ A number between 0 and 1. See doc <a href="#">here</a> for more information</small>	[STORE VIEW]
Fuzziness prefix length	<input type="text" value="1"/> <small>▲ A integer between greater or equal than 0. See doc <a href="#">here</a> for more information</small>	[STORE VIEW]
Fuzziness max. expansions	<input type="text" value="10"/> <small>▲ A integer between greater or equal than 0. See doc <a href="#">here</a> for more information</small>	[STORE VIEW]

2. Change the following settings:

- a. **Enable fuzziness:** Enable/disable fuzzy search
- b. **Fuzziness value:** The maximum number of letters that can be replaced when changing a word into another is given by:  $\text{length}(\text{word}) * (1 - \text{fuzziness value})$ . For example, for a word of 10 letters with a fuzziness 0.7, a word can be similar to this word only if less than  $10 * (1 - 0.7) = 3$  letters are different.
- c. **Fuzziness prefix length:** Number of letters at the beginning of the word that should not be changed (fuzzy search is not applied to the prefix). A lower value will provide better search results but will increase the workload on the server.

- d. **Fuzziness max. expansions:** Maximum depth of the fuzzy search algorithm. A higher value will search for a higher number of differences of letters but will increase the workload on the server.

Be careful: the query could be very heavy if **Fuzziness prefix length** is set to **0** and **Fuzziness max expansions** is set to a high number.



#### Recommended values

Examples of values that provided good results on past projects:

Fuzziness value: 0.75

Fuzziness prefix length: 1

Fuzziness max.expansions: 10

Then you have to enable fuzzy search on each product attribute used by the search engine:

5. Open the menu **Catalog > Attributes > Manage Attributes**
6. Select an attribute used by the search engine (the name, for example)
7. Set **Enable fuzziness** to **Yes**

Enable fuzziness	Yes
------------------	-----



#### Recommended values

It is recommended to apply fuzziness to all text attributes.

## 11.3 PHONETIC SEARCH

*Feature improved  
in version 1.3*

Phonetic search is a way to correct spelling and grammatical errors.

When phonetic search is enabled, the search engine will suggest products with a similar phonetic sound. The phonetic search can include fuzzy search in order to allow minor differences in the pronunciation.

In comparison with fuzzy search, the phonetic search allows more wrong letters, but fewer differences in the pronunciation.



#### Example

With fuzzy search, the query « **llaguing** » will produce no result or bad results.

With phonetic search, the query « **llaguing** » will return « **leggings** » products.

The Phonetic search is based on an algorithm called « Beider-Morse ». The list of supported languages is: English, French, German, Spanish, Italian, Russian, Hungarian, Romanian, and Turkish. The language used by the phonetic search is the language of the Magento store view.

The phonetic search can be set up in the back-office:

1. Open the menu **System > Configuration > Advanced Search Settings**

Phonetic search configuration		
Enable phonetic search	<input type="text" value="Yes"/>	[STORE VIEW]
	▲ Require Phonetic analysis plugin installation: <a href="https://github.com/elastic/elasticsearch-analysis-phonetic">https://github.com/elastic/elasticsearch-analysis-phonetic</a>	
Enable phonetic fuzziness	<input type="text" value="Yes"/>	[STORE VIEW]
Phonetic fuzziness value	<input type="text" value="0.5"/>	[STORE VIEW]
	▲ A number between 0 and 1. See doc <a href="#">here</a> for more information'	
Phonetic fuzziness prefix length	<input type="text" value="1"/>	[STORE VIEW]
	▲ A integer between greater or equal than 0. See doc <a href="#">here</a> for more information'	
Phonetic fuzziness max. expansions	<input type="text" value="2"/>	[STORE VIEW]
	▲ A integer between greater or equal than 0. See doc <a href="#">here</a> for more information'	

2. Change the following settings:

- a. **Enable phonetic search:** enable/disable phonetic search.
- b. **Enable phonetic fuzziness:** enable/disable fuzzy search in phonetic search.
- c. **Phonetic Fuzziness value:** The maximum number of phonemes that can be replaced when changing a word into another is given by:  $\text{length}(\text{phonemes}) * (1 - \text{fuzziness value})$ . For example, for a word of 10 phonemes with a fuzziness 0.7, a word can be by a similar to this word only if less than  $10 * (1 - 0.7) = 3$  phonemes are different.
- d. **Phonetic Fuzziness prefix length:** Number of phonemes at the beginning of the word that should not be changed (no fuzzy search in the prefix). A lower value will provide better search results but will increase the workload on the server.
- e. **Fuzziness max expansions:** the maximum number of iterations in the fuzzy search algorithm. A higher value will search for a higher differences of sounds but will increase the workload on the server.

Be careful, the query could be very heavy if **Phonetic fuzziness prefix length** is set to 0 and **Phonetic fuzziness max expansions** is set to a high number.



#### Recommended values

Examples of values that provided good results on past projects:

Phonetic fuzziness value: 1 (this value disable fuzziness in phonetic search)

Phonetic fuzziness prefix length: 1

Phonetic fuzziness max. expansions: 2

We highly recommend to set up a high value in **Phonetic fuzziness value**, otherwise the phonetic search will find similarities between words very different.

Then you have to enable phonetic search on each product attribute used by the search engine:

1. Open the menu **Catalog > Attributes > Manage Attributes**

2. Select an attribute used by the search engine (the name, for example)
3. Set **Use language analysis** to **Yes**

Use language analysis	<input type="text" value="Yes"/>
-----------------------	----------------------------------



#### Recommended values

It is recommended to apply phonetic search to all text attributes, except for attributes used to record a reference: SKU, EAN, supplier code...

## 11.4 AUTOMATIC STOPWORDS DETECTION

*Feature added  
in version 1.3*

When the user enters a query with several words, the short words like « and, or, to, for, are, be, by, in,... » are most of the time very frequently found in the catalog, so the short words might have a strong weight in the search result despite their lack of relevance. Most search engines on the market respond to this problem by using a list of « stop words ». The search engine will ignore any word in this list.

Magento Elastic Suite responds to this problem in a different way: the search engine calculate the frequency of each word in the catalog, and ignore the words with a frequency above a given limit, called « cutoff frequency ». If all words in the request are above the cutoff frequency, then the query is searched as a normal query.

This feature allows a more accurate and automatic detection of the meaningless words. And it also allows to process queries with only stop words, like « to be or not to be » for example.

The cutoff frequency can be set up in the back-office in the menu **System > Configuration > Advanced Search Settings**

<b>Advanced relevance settings</b>	
Cutoff frequency	<input type="text" value="0.15"/> [STORE VIEW]
▲ A number between 0 and 1. Used as automatic stopwords detection threshold.	



#### Recommended values

A usual value for the cutoff frequency is 0.15.

0.15 means that a word will not be significant for the search engine if this word is found in more than 15% of the indexed entities. An indexed entity is a product or a category.

## 11.5 ENHANCED SYNONYMS RECOGNITION

*Feature added  
in version 1.0*

In native Magento, synonyms can be set up in the menu **Catalog > Search Engine > Search terms**.

Select All   Unselect All   Select Visible   Unselect Visible   0 items selected				
	Search Query	Results	Number of Uses ↓	Synonym For
Any ↓	<input type="text"/>	From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>	<input type="text"/>
<input type="checkbox"/>	nike	8	95889	
<input type="checkbox"/>	swimwear	1	93363	beachwear
<input type="checkbox"/>	sportswear	34	17551	

With this tool, when « beachwear » is set up as a synonym for « swimwear », then the query « beachwear » will display the results of the query « swimwear ».

But the native Magento feature doesn't recognize synonyms inside a group of words. In the previous example, « men beachwear » will not be recognized as a synonym to anything else.

With Magento Elastic Suite, the synonym feature is applied to the words *inside* the query. It means that when « beachwear » is set up as a synonym for « swimwear », then any query including the word « beachwear » will be recognized as a synonym for « swimwear ». In the previous example, « men beachwear » will be automatically recognized as a synonym for « men swimwear ».

## 11.6 PHRASE MATCHING

*Feature improved  
in version 1.3*

The « phrase matching » recognize words that should be used together.



### Example

If a user enters the query « Empire State Building », then the search engine will produce bad results if he displays products including any of the word « Empire », « State », and « Building ». It will be much better to display a product including the whole sentence « Empire State Building ».

Magento Elastic Suite provides this feature natively.

The phrase matching is working by searching all the sub-groups of words into the query of the user. For each sub-group, a query is run to find the products including the words of the sub-group in the same order relative to each other. Then the results of all sub-groups are combined together, with a boost on the sub-groups including a higher number of words of the query of the user.



### Example

If a user enters the query "Dress Giorgio Armani", then the search engine will search for the following queries: (the symbol "." can replace any group of letters)

**Step 1.**

Search for "Dress...Giorgio...Armani"

**Step 2.**

Search for "Dress...Giorgio"  
Search for "Giorgio...Armani"  
Search for "Dress...Armani"

**Step 3.**

Search for "Dress"  
Search for "Giorgio"  
Search for "Armani"

When these 7 queries has been run, all the results are combined together, with a high boost on the products provided by step 1, a lower boost on products provided by step 2, and no boost at all on the products provided by step 3.

The phrase matching can be set up in the back-office in the menu **System > Configuration > Advanced Search Settings**

Phrase match configuration		
Enable boost on phrase match	<input type="text" value="Yes"/>	[STORE VIEW]
Phrase match boost value	<input type="text" value="10"/>	[STORE VIEW]



**Recommended values**

A usual value for the **Phrase match boost value** is 4.

## 11.7 BETTER AUTOCOMPLETE

*Feature added  
in version 1.0*

In native Magento, the autocomplete only suggests popular searches (similar queries from other customers).

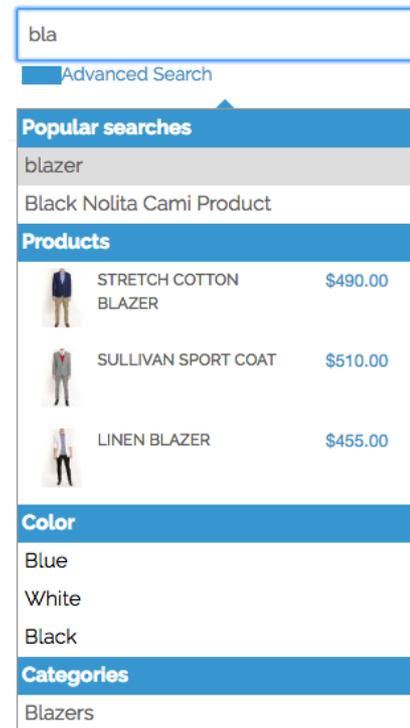
With Magento Elastic Suite, the autocomplete suggests:

- Popular searches
- Products
- Categories

And you can also add any other product attribute in the autocomplete, for example:

- Brands
- Colors
- Author
- Designer
- Etc.

And with a quick development a developer can easily add others contents: static pages, shops, lookbooks,...



With Magento Elastic Suite, all the power of the search engine is natively available in autocompletion: search weight, fuzzy search, phonetic search, automatic stop words detection...

Autocomplete can be set up in the back-office:

1. Open the menu **System > Configuration > Advanced Search Settings**
2. Change the fuzziness settings (see chapter [Erreur ! Source du renvoi introuvable.](#) for more details)

Autocomplete fuzziness configuration		
Enable fuzziness in autocomplete	<input type="text" value="Yes"/>	[STORE VIEW]
Autocomplete fuzziness value	<input type="text" value="0.5"/> <small>▲ A number between 0 and 1. See doc <a href="#">here</a> for more information'</small>	[STORE VIEW]
Autocomplete fuzziness prefix length	<input type="text" value="1"/> <small>▲ A integer between greater or equal than 0. See doc <a href="#">here</a> for more information'</small>	[STORE VIEW]
Autocomplete fuzziness max. expansions	<input type="text" value="20"/> <small>▲ A integer between greater or equal than 0. See doc <a href="#">here</a> for more information'</small>	[STORE VIEW]

3. Change the maximum number of results that can be displayed with the settings **Max size**.

Popular Searches Autocomplete		
Max size	<input type="text" value="5"/>	[STORE VIEW]

Product Autocomplete		
Max size	<input type="text" value="6"/>	[STORE VIEW]

Attribute Autocomplete		
Max size	<input type="text" value="2"/>	[STORE VIEW]

Category Autocomplete		
Max size	<input type="text" value="5"/>	[STORE VIEW]

Then you have to set how products attributes are used in autocomplete:

4. Open the menu **Catalog > Attributes > Manage attributes**
5. Select a product attribute
6. Change the following settings:

Used in autocomplete	<input type="text" value="No"/>
Display in autocomplete	<input type="text" value="No"/>

**Used in autocomplete:** if set to **Yes**, then this attribute will be used for product suggestions. For example, if this parameter is set to Yes on the product attribute «color», then when a user enters «black» the autocomplete will suggest black products.

Products		
	STRETCH COTTON BLAZER	\$490.00
	SULLIVAN SPORT COAT	\$510.00

**Display in autocomplete:** if set to **Yes**, then this attribute may be displayed in the suggestions. For example, if this parameter is set to Yes on the product attribute « color », then when a user enters « bla » the autocomplete will suggest the color « Black ».

Color
Blue
White
Black

## III - FILTERS

### III.1 MULTIPLE SELECT IN LAYERED NAVIGATION

Feature added  
in version 1.0

With the native search engine of Magento, the customer can use several filters in the same time.



#### Example

Material = Polyester AND Color = Black

Magento Elastic Suite enhances this feature by adding the ability to select multiple values in the same filter.



#### Example

Material = Polyester OR Nylon

#### MATERIAL

- Polyester ( 5 )
- Fleece ( 4 )
- Hemp ( 2 )
- Nylon ( 2 )
- Rayon ( 2 )
- CoolTech™ ( 1 )
- LumaTech™ ( 1 )
- Wool ( 1 )

Multiple selections can be combined with other filters, like in Magento native search engine.



#### Example

(Material = Polyester OR Nylon) AND (Color = Black)

### III.2 ENHANCED PRICE SLIDER

Feature added  
in version 1.0

Magento Elastic Suite displays the price filter as a slider instead of fixed price bands, providing more flexibility on the selection of the price range.

PRICE ^

- € 20,00 - € 29,99 (4)
- € 30,00 - € 39,99 (7)
- € 40,00 and above (1)

Native Magento

PRICE

\$29.00 \$76.00

11 products

OK

With Magento Elastic Suite

## III.3 SUPPORT OF LARGES CATALOGS

Feature added  
in version 1.0

### III.3.a Support of a high number of filters

On larges catalogs, a simple search query may return dozens of filters, too much filters to be displayed entirely. As a result, some important filters may not be displayed.

Magento Elastic Suite provides a solution to display only the filters that are the most relevant for the query of the user. This can be achieved by setting up the minimum percentage of products that should share an attribute in order to display the attribute in the list of filters. This percentage is called the **Facet coverage rate**.



#### Example

The search query « Black » returns 1000 products. A lot of filters can be applied to that query:

- | Price (attribute shared by 1000 products)
- | Color (attribute shared by 900 products)
- | Size (attribute shared by 400 products)
- | Battery Capacity (attribute shared by 30 products)
- | Etc.

After setting up a « minimum coverage rate » of 20%, Magento Elastic Suite will display the filters Price, Color, and Size (shared by more than 20% of the products), and will **not** display the Battery Capacity filter (shared by less than 20% of the products).

This Minimum Coverage Rate can be set up in the back-office:

1. Open the menu **Catalog > Attributes > Manage Attribute**
2. Select an attribute that can be used as a filter
3. Change the value of the **Facet coverage rate**

Facet coverage rate	90
	▲ Ex: Brand facet will be displayed only if 90% of the product have a brand.



#### Recommended values

The value of the coverage rate should be adjusted depending on two factors:

- (1) the percentage of products using this attribute in the catalog
- (2) the number of filters in the whole catalog

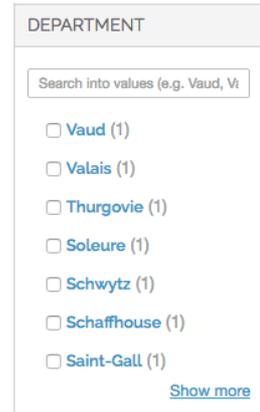
For example, if the Battery Capacity is used by 5% of the products (1), then we can assume that this filter is relevant only if more than 5% of products in the search results are sharing this attribute. Thus the Facet Coverage Rate should be set to a value higher than 5.

It is recommended to start by setting up the Facet Coverage Rate to the value of the percentage (1) multiplied by a ratio of 2. When this work has been done on all filters, it is recommended to run several queries and look at how many filters are displayed. Depending on the results, the ratio can be adjusted to a higher or to a lower value.

### III.3.b Support of filters with a high number of values

Magento Elastic Suite provides several enhancements for filters with a high number of values:

- 1. A real-time search in the values of the filter.
- 2. A link « Show more » to fold/unfold a long list of values in the filter.
- 3. Several options to sort the values. Changing the default sorting can be used to display the most relevant values *before* the link « Show more ».



The number of values displayed before the « Show more » link can be set up in the back-office:

1. Open the menu **Catalog > Attributes > Manage Attribute**
2. Select an attribute that can be used as a filter
3. Change the value of **Facet max. size**

The screenshot shows a configuration field for 'Facet max. size'. The field is a text input box containing the number '7'. Below the input box, there is a small triangle icon followed by the text 'Max number of values returned by a facet query.'

The sorting order of the values can be set up in the same screen:

4. Change the value of **Facet sort order**

The screenshot shows a configuration field for 'Facet sort order'. The field is a dropdown menu with a list of options: 'Result count' (which is selected and has a checkmark), 'Admin sort', 'Name', and 'Relevance'. The dropdown menu is open, showing the list of options.

**Result count:** The values shared by the most products will be displayed first.

**Admin sort:** Manual sorting order, can be managed from the menu Catalog > Attributes > Manage Attributes.

**Name:** Alphabetical order.

**Relevance:** The values shared by the products in the top of the list will be displayed first.

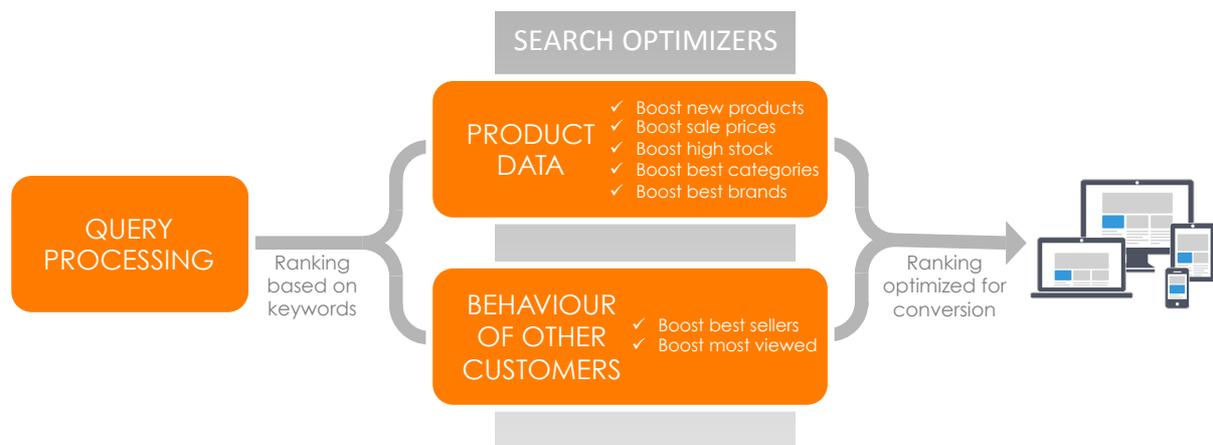
## IV - MERCHANDISING

### IV.1 SEARCH OPTIMIZERS

*Smile only  
Feature not yet shared in github*

Most search engines are providing results based on an analysis of the keywords in the query of the user.

Magento Elastic Suite is able to improve the results of the search engine by promoting products that are known to be good products, on the basis of product data and the behavior of other customer.



With his meta-language to set up the rules, the Search Optimizer is a very flexible and powerful feature of Magento Elastic Suite to increase the conversion rate.

**Search Optimizers are not only useful for the ranking of products in the search engine, they can also be used for the ranking in category pages, thus providing a way to do a smart and dynamic merchandising on the whole e-commerce website.**

#### IV.1.a Search Optimizers based on product data

Here are some examples of Search Optimizers based on product data:

- | Boost new products (1)
- | Boost products with a discount
- | Boost products with a high level of stock (2)
- | Decrease the ranking of products out of stock
- | Decrease the ranking of products without images
- | Boost products in a specific category
- | Boost products of a specific brand
- | Boost a specific list of products

- (1) This boost is using the product attributes **Set product as new from** and **Set product as new to**
- (2) This boost can be set up with a rule like « Quantity is greater than 100 »

Search Optimizers based on product data can be set up in the back-office:

1. Open the menu **Catalog > Search Engine > Search Optimizer**
2. Click **Add New Optimizer**
3. Select **Constant Score**

Type	
Optimizer type *	Constant score

4. Fill the form in the tab **Global Configuration**

General Information	
Optimizer Name *	<input type="text"/>

Activation	
Status *	Enabled
From Date	<input type="text"/>
To Date	<input type="text"/>
Query type *	<input type="text" value="Catalog product search query"/> <input type="text" value="Catalog product category listing"/> <input type="text"/>

5. Fill the form in the tab **Boost configuration**

Configuration	
Boost value (%) *	10 <small>▲ Between -99 and 10000</small>

Apply to products	
If <b>ALL</b> of these conditions are <b>TRUE</b> :	
Only new products	is <b>Yes</b>

The block **Configuration** is used to set up the percentage of boost in the search result. The percentage can be negative if you want to decrease the ranking of some products.

The block **Apply to products** is used to identify the products you want to boost. You can set-up a rule based on product datas using a meta-language. If a product attribute is missing, you can add it from the menu **Catalog > Attribute > Manage Attribute** by setting **Yes** in the parameter **Use for Promo Rules Condition**.

6. You can use the **Preview** tool to check the results of your Search Optimizer on any search query. This tool compare the results of the search engine with/without the Search Optimizer.

Preview : Fulltext query :  [Refresh](#)

Not optimized results	Optimized results
 <b>Alquier en Lagrasse - Francia</b> <i>Situado en un pueblo medieval, famoso por su abadía de siglo XI y clasificado...</i>	 <b>Crowne Plaza Montpellier Corum en Francia</b>  <i>Idealmente situado en el corazón de Montpellier, frente al forum, este esplen...</i>
 <b>Crowne Plaza Montpellier Corum en Francia</b> <i>Idealmente situado en el corazón de Montpellier, frente al forum, este esplen...</i>	 <b>Alquier en Lagrasse - Francia</b>  <i>Situado en un pueblo medieval, famoso por su abadía de siglo XI y clasificado...</i>
 <b>Les Chenets en Chenay (Francia)</b> <i>En un entorno natural, disfrute de la tranquilidad y la amabilidad. Esta casa...</i>	 <b>Les Chenets en Chenay (Francia)</b>  <i>En un entorno natural, disfrute de la tranquilidad y la amabilidad. Esta casa...</i>

## IV.1.b Search Optimizers based on customer behavior

Two kinds of optimizers can be set up:

- ! Boost best-seller products
- ! Boost the most viewed products

Search Optimizers based on customer behavior can be set up in the back-office:

1. Open the menu **Catalog > Search Engine > Search Optimizer**
2. Click **Add New Optimizer**

Type
Optimizer type * <input type="text" value="Popularity"/>

3. Select **Popularity**

**General Information**

Optimizer Name \*

---

**Activation**

Status \*

From Date

To Date

Query type \*

- Catalog product search query
- Catalog product category listing

4. Fill the form in the tab **Global Configuration**

**Configuration**

Popularity type \*

Scale function \*

Scale factor \*

▲ Value the field will be multiplied by the value before applying the scale function

---

**Apply to products**

If **ALL** of these conditions are **TRUE** :

5. Fill the form in the tab **Boost configuration**

**Preview :** Fulltext query :

Not optimized results	Optimized results
 <p><b>Alquiler en Lagrasse - Francia</b> Situado en un pueblo medieval, famoso por su abadía de siglo XI y clasificado...</p>	 <p><b>Crowne Plaza Montpellier Corum en Francia</b>  Idealmente situado en el corazón de Montpellier, frente al forum, este esplen...</p>
 <p><b>Crowne Plaza Montpellier Corum en Francia</b> Idealmente situado en el corazón de Montpellier, frente al forum, este esplen...</p>	 <p><b>Alquiler en Lagrasse - Francia</b>  Situado en un pueblo medieval, famoso por su abadía de siglo XI y clasificado...</p>
 <p><b>Les Chenets en Chenay (Francia)</b> En un entorno natural, disfrute de la tranquilidad y la amabilidad. Esta casa...</p>	 <p><b>Les Chenets en Chenay (Francia)</b>  En un entorno natural, disfrute de la tranquilidad y la amabilidad. Esta casa...</p>

6. You can use the **Preview** tool to check the results of your Search Optimizer on any search query. This tool compare the results of the search engine with/without the Search Optimizer.



### Requirement

Search Optimizers based on the pages viewed requires the installation of a tracker on the website frontend.

## IV.1.c Analyzing Search Optimizers

Optimizing Search Optimizers sometimes requires a fine tuning of each rules. Magento Elastic Suite provides a tool to help you to analyze the effect of each rule on a given product.

1. Open the menu **Catalog > Manage Products**
2. Select a product
3. Open the tab **Search Optimizers**

Catalog product search query	Catalog product category listing
0 %	0 %

Optimizer boost detail :				
Optimizer name	Apply to	Is applied	Boost value	
<b>Boost new products</b>	Catalog	No	N/A	<a href="#">Edit</a>
<code>((news_from_date:[* TO *] OR news_to_date:[* TO *]) AND ((-news_from_date:[* TO *] OR news_from_date:[* TO 2016-04-20]) AND (-news_to_date:[* TO *] OR news_to_date:[2016-04-20 TO *])))</code>	product category listing			
	Catalog product search query			

This tab displays the percentage of boosts provided by each Search optimizer on this product.

## IV.2 VIRTUAL CATEGORIES

*Feature added in version 1.0*

One of the key factor of the success of an e-commerce website is the ability to help customers to:

- **Find** quickly what they are looking for
- **Discover** all the range of products

A way to cover that need is to provide several axis of navigation in addition to the « main navigation » by department.

KIDS	SHOES & ACCESSORIES	LINGERIE	NIGHTWEAR	SALE
<b>BOYS BY AGE</b> Baby Boys (0 - 24 Months) Younger Boys (2 - 6 Years) Teen Boys (7 - 14 Years)	<b>GIRLS BY AGE</b> Baby Girls (0 - 24 Months) Younger Girls (2 - 6 Years) Teen Girls (7 - 14 Years)	<b>COLLECTIONS</b> Holiday Shop Character Shop Disney Frozen Minions Peppa Pig Minecraft Star Wars Marvel Spiderman Girls Fancy Dress Boys Fancy Dress Kids Schoolwear		
<b>BOYS</b> View All New Arrivals Coats & Jackets Knitwear Tops Jeans Trousers & Shorts Babygrows & All In Ones Nightwear & Slippers Underwear & Socks Shoes Accessories Sets & Outfits Swimwear Basics	<b>GIRLS</b> View All New Arrivals Coats & Jackets Dresses & Skirts Knitwear Tops Jeans Leggings & Jeggings Trousers & Shorts Babygrows & All In Ones Nightwear & Slippers Underwear & Socks Shoes Accessories Sets & Outfits Sportswear Swimwear Basics	<b>KIDS OFFERS</b> £3 Off Schoolwear  <b>GIFT CARD</b>  <b>E-GIFT CARD</b>		

■ Main category tree  
■ Secondary category trees

Example of use

Secondary categories can be created using manual selections of products, for example:

- Shop by look
- Gift ideas

With Magento Elastic Suite, secondary categories can also be created using an automatic selection of products based on a rule. When a rule has been set up, the list of products displayed to the customer **is updated in real-time**.



**Note**

In native Magento, it's possible from version 1.14 to create a category based on a rule, but the rule engine is not so advanced, and the rule is run only one time: when the category is created.

The list of product **is not** updated in real-time.

Examples of categories based on a rule:

- **Sale** : all discounted products
- **Brand page** : all products from a given brand
- **New products / New arrivals**
- **Good deals / Great offers** : all products with a price below a given limit
- **Shop by collection**, for example « Winter 2017 » : all products with the attribute « Collection = Winter 2017 »

- | **Shop by material**, for example « Linen selection » : all products with the attribute « Material = linen »
- | **Shop by age**, for example « Teen boys » : all products with the attribute « Age = 7-14 years » and « Gender = Men »
- | **Shop by size**

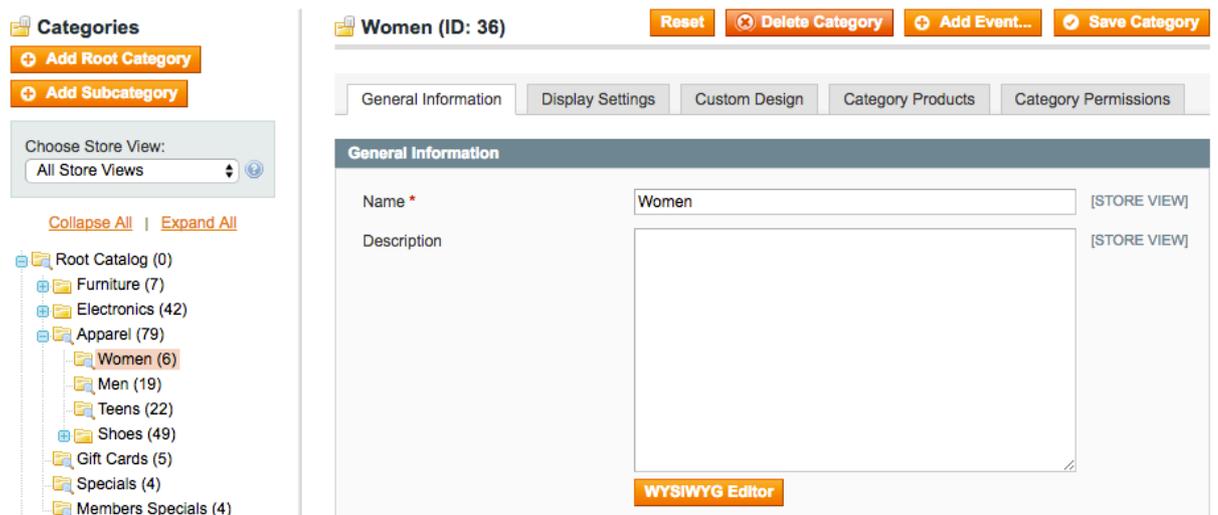


A virtual category can also have virtual sub-categories.



To create a new virtual category:

1. Open the menu **Catalog > Categories > Manage Categories**



2. Create a new category or select an existing category
3. Open the tab **Category Products**
4. Set **Yes** in **Enable virtual category**

Enable virtual category \*

5. Enter the rule of the virtual category.

If **ALL** of these conditions are **TRUE** :

Only new products **is Yes**

Category **is**

- Root Catalog (0)
- Furniture (7)
  - Electronics(42)
  - Apparel (79)
  - Gift Cards (5)
  - Specials (4)

You can set-up a rule based on product datas using a meta-language. If a product attribute is missing, you can add it from the menu **Catalog > Attribute > Manage Attribute** by setting **Yes** in the parameter **Use for Promo Rules Condition**.

## IV.3 MANUAL RANKING

*Feature added  
in version 1.2*

Magento provides a feature to rank manually the products in a category.  
Magento Elastic Suite adds two features:

- Manual ranking in a virtual category
- Manual ranking of a search result page

### IV.3.a Manual ranking in a virtual category

1. Open the menu **Catalog > Manage Categories**
2. Select a virtual category
3. Open the **Category Products** tab
4. Fill the **Position** column

**Preview :**

Page  of 3 pages | View  per page | Total 52 records found **Reset Filter** **Search**

ID	Name	SKU	Price	Position
<input type="text"/>	<input type="text"/>	<input type="text"/>	From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>
15296	LDS SHORT CHINO BELTED	AB7401	€79.90	<input type="text" value="1"/>
15295	WOMENS TURQUOISE STRETCH CAMI	AF7401	€79.90	<input type="text" value="2"/>
14062	WOMENS BLACK ZIP FRONT TUNIC DRESS	BC1101	€160.00	<input type="text" value="3"/>
15314	WOMENS WHITE CYCLE SHORTS	AKB401	€79.90	<input type="text" value="4"/>

The position must be an integer number (positive or negative).

The products will be ranked by ascending values; the product with the lowest position will be the first to be displayed. A product without any value in the column **Position** will be ranked after all others products.

## IV.3.b Manual ranking in a search result page

1. Open the menu **Catalog > Search Engine > Search Terms**
2. Select a query
3. Open the **Custom results position** tab
4. Fill the **Position** column

**Edit Search 'top'**

[Back](#) [Reset](#) [Delete Search](#) [Save Search](#) [Save and Continue Edit](#)

Page  of 26 pages | View  per page | Total 506 records found [Reset Filter](#) [Search](#)

ID	Name	SKU	Price	Position
			From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>
15869	WOMENS YELLOW ZIP POCKET T SHIRT	A62301	€59.90	<input type="text" value="1"/>
15747	WOMENS WHITE ZIP BACK T SHIRT	ASE301	€124.90	<input type="text" value="2"/>
15749	WOMENS KHAKI SHORT SLEEVE BLOUSE	AX6755	€124.90	<input type="text" value="3"/>
15847	WOMENS DARK BLUE PRINTED COLLAR BLOUSE	AK3301	€59.90	<input type="text" value="4"/>

The position must be an integer number (positive or negative).

The products will be ranked by ascending values; the product with the lowest position will be the first to be displayed. A product without any value in the column **Position** will be ranked after all others products.

## V - TECHNICAL IMPROVEMENTS

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Magento Elastic Suite is based on the search engine Elastic Search, providing several technical enhancements to the native Magento search engine.

### **| High Performances**

Built on top of Apache Lucene, ElasticSearch delivers high performances allowing you to perform complex queries on large catalogs.

### **| Massively Distributed**

Elasticsearch allows you to start with a small hardware and add more nodes later ; the cluster will automatically take advantage of the extra hardware.

### **| High Availability**

The replication feature detect new or failed nodes, and reorganize and rebalance data automatically, to ensure that your data is safe and accessible.

### **| Per-Operation Persistence**

Document changes are recorded in transaction logs on multiple nodes in the cluster to minimize the chance of any data loss.