Elastic Suite for Magento 2
User Guide

SMILE

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I - INTRODUCTION

I.1 WHAT IS ELASTIC SUITE?

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 « **Global Elite** » partnership badge.

Since 2014, **Smile Lab** 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

Elastic Suite can be used with Magento Commerce (formerly: Magento Enterprise) and Magento Open Source (formerly: Magento Community). The version of Elastic Suite to use depend on the version of Magento.

Magento Version	Elastic Suite latest version
Magento 2.2.x Open Source (CE) / Commerce (EE)	Elastic Suite 2.5.x
Magento 2.1.x Open Source (CE) / Commerce (EE)	Elastic Suite 2.3.x
Magento 2.0.x Open Source (CE) / Commerce (EE)	Elastic Suite 2.1.x

Another version has been released for Magento 1 (see chapter « For more information » below).

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 Elastic Suite specificities.

I.4 ELASTIC SUITE EXTENSIONS

Depending on the project, several additional modules can be used to improve Elastic Suite. Each of them is published in open source and is shared on github.

Module name	Description
Elastic Suite Shared Catalog	Makes ElasticSuite compatible with Magento 2 B2B features. Requires Magento Commerce (formerly: Magento Enterprise) with Magento B2B module.
CMS Search	Add CMS pages in the search engine
Ratings	Filter products with product reviews
Custom Entities	Ability to add custom data on attributes values. For example, if you have a "brand" product attribute, then you can use this module to add a logo and a description on each brand.
TargetRules with Elasticsearch	In native Magento Commerce (formerly: Magento Enterprise), the "Related Products Rules" could lead to massive performances issues with large catalogs. This module strongly increases the performances of this feature using Elasticsearch queries. Requires Magento Commerce Edition.

ElasticSuite for Retailers	A complete suite of modules dedicated to retailers:
	○ Store locator.
	○ Prices and stocks managed per store.
	○ In-store delivery.

I.5 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 **Stores** > **Attributes** > **Product**.
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 displayed during typing in the search field.

I.6 FOR MORE INFORMATION

Elastic Suite official website	*http://magento-elastic-suite.io*
GitHub Elastic Suite for Magento 2	*https://github.com/Smile-SA/elasticsuite*
GitHub Elastic Suite for Magento 1	*https://github.com/Smile-SA/smile-magento-elasticsearch*

Demo store (Magento 2)   *http://demo.magento-elastic-suite.io*

Smile official website   *http://www.smile.fr*

II - SEARCH ENGINE

II.1 FUZZY SEARCH

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 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 ».

If all words in the request of the user return an exact match, then an exact search is performed without fuzzy search. Otherwise, if at least one word doesn't provide exact results, then a fuzzy search is performed for the entire query and an information banner is displayed to the user:

⚠ No search results for: **'trouper'**. We propose you approaching results.
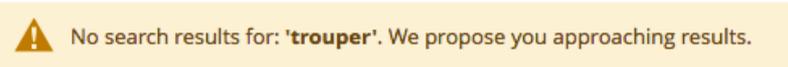
The fuzzy search can be enabled in the back-office:

1. Open the menu **Smile Elasticsuite** > **Search Relevance**

2. Open the tab **Spellchecking configuration** > **Search Fuzziness configuration**

Search fuzziness configuration

Enable fuzziness	Yes ▼	[CONTAINER - STORE VIEW]
Fuzziness value	AUTO Allowed values "0", "1" or "AUTO". See doc here for more information.	[CONTAINER - STORE VIEW]
Fuzziness Prefix Length	1 An integer between greater or equal than 0. See doc here for more information.	[CONTAINER - STORE VIEW]
Max. expansion	10 An integer between greater or equal than 0. See doc here for more information.	[CONTAINER - STORE VIEW]

3. Change the following settings:

Enable fuzziness: Enable/disable fuzzy search

Fuzziness value: Maximum number of letters that may be replaced to change one word into another. The allowed values are: 1, 2, and AUTO (note: the help message displayed on the screenshot above is not correct).

If this setting is set to « AUTO » then the search engine allows 1 wrong letter for words with 3 to 5 letters, and 2 wrong letters for words with 6 letters or more.

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.

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: AUTO
Fuzziness prefix lenght: 1
Fuzziness max. expansions: 10

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

4. Open the menu **Stores** > **Attributes** > **Products**

5. Select an attribute used by the search engine (the name, for example)

6. Open the tab **Storefront Properties**

7. Set **Used in spellcheck** to **Yes**

Used in spellcheck	Yes ▾

RECOMMENDED VALUES

It is recommended to enable spellcheck for all text attributes used by the search engine.

II.2 PHONETIC SEARCH

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 for phonetic search is the language of the Magento store view.

If all words in the request of the user return an exact match, then an exact search is performed without phonetic search. Otherwise, if at least one word doesn't provide exact results, then a phonetic search is performed for the entire query and an information banner is displayed to the user:

⚠ No search results for: **'llaguing'**. We propose you approaching results.

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

1. Open the menu **Smile Elasticsuite** > **Search Relevance**

2. Open the tab **Spellchecking configuration** > **Phonetic search configuration**

| Enable phonetic search | No ▾ | [CONTAINER - STORE VIEW] |

Require Phonetic analysis plugin installation.

| Enable phonetic fuzziness | Yes ▾ | [CONTAINER - STORE VIEW] |

| Phonetic fuzziness value | AUTO | [CONTAINER - STORE VIEW] |

Allowed values "0", "1" or "AUTO". See doc here for more information.

| Phonetic fuzziness prefix length | 1 | [CONTAINER - STORE VIEW] |

An integer between greater or equal than 0. See doc here for more information.

| Phonetic fuzziness max expansion | 2 | [CONTAINER - STORE VIEW] |

An integer between greater or equal than 0. See doc here for more information.

3. Change the following settings:

Enable phonetic search: enable/disable phonetic search.

Enable phonetic fuzziness: enable/disable the fuzzy search in phonetic search.

Phonetic Fuzziness value: maximum number of phonemes that can be replaced when changing a word into another. The allowed values are: 1, 2, and AUTO (note: the help message displayed on the screenshot above is not correct).

If this setting is set to « AUTO » then the search engine will adjust the number of wrong phonemes allowed with the length of the word.

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.

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 fuzzyness 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:

Enable phonetic search: Yes
Enable phonetic fuzziness: No

Phonetic fuzziness should be used carefully because it may return results a bit far from the request of the user.

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

4. Open the menu **Stores** > **Attributes** > **Products**

5. Select an attribute used by the search engine (the name, for example)

6. Open the tab **Storefront Properties**

7. Set **Used in spellcheck** to **Yes**

Used in spellcheck   Yes   ▼

RECOMMENDED VALUES

It is recommended to enable spellcheck for all text attributes used by the search engine.

II.3 CUSTOMIZABLE THESAURUS

Feature added
in version 2.1.0

Users do not always formulate search queries using the best terms. Not "the best" means that the database does not contain the user entered terms and that the query may returns no result.

To prevent such issue, Elastic Suite search engine invoke a customizable thesaurus to increase the quality of the search results. The customizable thesaurus is considered as a meta-level process that is used to add more information to clarify the user's query. It is the process of rebuilding new informed queries from an existing one in order to improve the retrieval performance and help in matching additional documents.

The thesaurus can be used for:

○ Finding synonyms of words, and searching for the synonyms as well

EXAMPLE

The word « denim » could be set as a synonym of « blue ».

○ Finding all the various morphological forms of words by expanding each word in the search query

EXAMPLE

The word « bottom » could be expanded into « skirt », « pant », « short ».
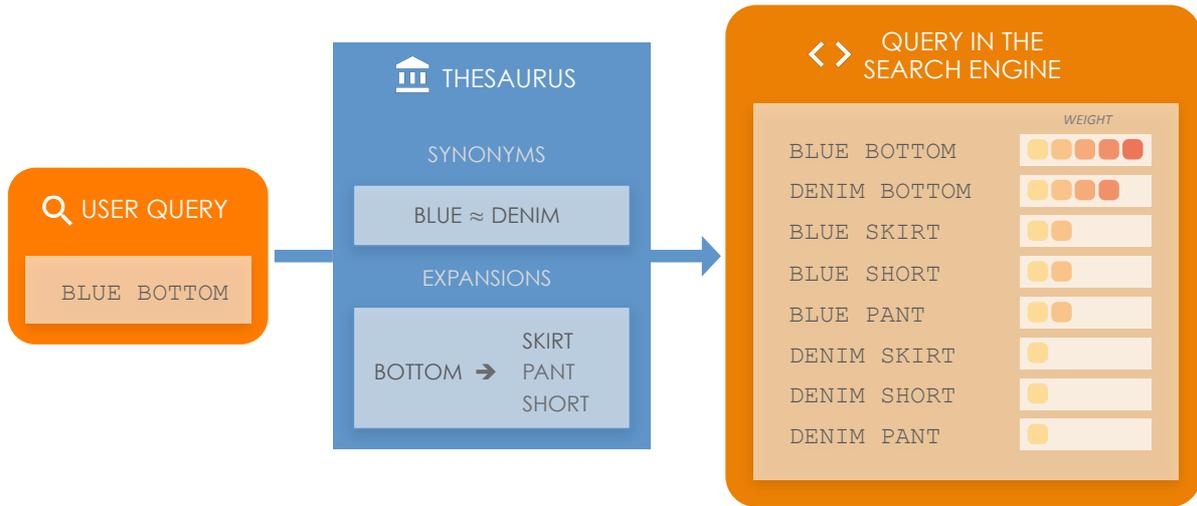
INFORMATION

On a technical point of view, the thesaurus doesn't generate multiple requests to the database. For each user query, all synonyms and expansions are sent to the database into one single request, ensuring the best performances.

II.3.a **Thesaurus settings**

First you have to activate and configure the thesaurus:

1. Open the menu **Smile Elastic Suite** > **Search Relevance**
2. Open the tab **Thesaurus configuration**
3. Select a view

4. Change the following settings:

Enable synonyms search: enable/disable the thesaurus of synonyms.

Synonyms weight divider: the score of searches using a synonym will by divided by this value.

Enable search expansions: enable/disable the thesaurus of expansions.

Concepts weight divider: the score of searches using an expansion will by divided by this value.

> **RECOMMENDED VALUES**
>
> **Concepts weight divider**: we recommend setting this value to 10. Expansions are mainly used to populate the queue of the search results and to avoid responses without results. For this reason we recommend to set a high value.
>
> **Synonyms weight divider**: we recommend setting this value between 2 and 10, depending on the words in your thesaurus. Use a low value if each pair of synonyms has a very similar meaning; use a high value if the meaning is slightly different.

II.3.b Synonyms

Synonyms are set up in the back-office:

1. Open the menu **Smile Elastic Suite** > **Thesaurus**

2. Click on **Add new thesaurus**

3. Select **Synonym** in **Thesaurus Type**

General Information

Thesaurus Name ⁎ Colors

Store ⁎
```
All Store Views
Main Website
    Main Website Store
        Default Store View
```
❓

Column	Synonym terms	Action
	blue,denim	🗑
	rose,fuchsia	🗑

Add

4. Change the following settings:

Thesaurus name: Label used to identify this list of synonyms, for back-office use only. This name will not be used by the search engine.

Store: Select the store(s) view(s) where this list should be applied. You can select several store views by using the CTRL key of your keyboard.

Synonyms terms: Type in the column **Synonym terms** a list of words with a similar meaning with comma as a separator. For each new group of synonyms click on the **Add** button.

5. Click on **Save Thesaurus**

💬 **INFORMATION**

When a thesaurus is updated in the back-office, the search engine applies the change after about 1 minute.

II.3.c **Expansions**

Expansions are set up in the back-office:

1. Open the menu **Smile Elastic Suite** > **Thesaurus**

2. Click on **Add new thesaurus**

3. Select **Expansion** in **Thesaurus Type**

General Information

Thesaurus Name *	Areas of products

Store *
- All Store Views
- **Main Website**
- **Main Website Store**
- Default Store View

Column	Reference Term	Expansion terms	Action
	top	blouse,bodysuit,shirt,sweatshirt,t-shirt,tur	🗑
	bottom	pant,short,skirt	🗑
	sport	fitness,jogging,running	🗑

Add

4. Change the following settings:

Thesaurus name: Label used to identify this list of expansions, for back-office use only. This name will not be used by the search engine.

Store: Select the store(s) view(s) where this list should be applied. You can select several store views by using the CTRL key of your keyboard.

Reference term: Enter a word that may be expanded into several other words. Only one word is allowed.

Expansion terms: List of words that may be used for a search on the reference term. Use a comma as a separator.

5. Click on **Save Thesaurus**

INFORMATION

When a thesaurus is updated in the back-office, the search engine applies the change after about 1 minute.

II.4 AUTOMATIC STOPWORDS DETECTION

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.

Elastic Suite responds to this problem in a different way: the search engine calculates the frequency of each word in the catalog, and ignores 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:

1. Open the menu **Smile Elastic Suite** > **Search Relevance**

2. Open the tab **Relevance configuration** > **Cuttoff frequency configuration**

| Cutoff frequency | 0.15 | [CONTAINER - STORE VIEW] |

A number between 0 and 1. Used as automatic stopwords detection threshold.

3. Enter a value between 0 and 1 in the setting **Cutoff frequency**. Any word included in more than this percentage of indexed entities will be ignored by the search engine.

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.

II.5 PHRASE MATCHING

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

EXAMPLE

If a user enters the query « gone with the wind », then the search engine may produce bad results if he displays products including any of the words « gone », « with », « the » and « wind ». It will be much

better to display a product including the whole sentence « gone with the wind ».

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 the step 1, a lower boost on products provided by the step 2, and no boost at all on the products provided by the step 3.

The phrase matching can be set up in the back-office.

1. Open in the menu **Smile Elasticsuite** > **Search Relevance**
2. Select a view

View:	Catalog Product Search ▾

3. Open the tab **Relevance Configuration** > **Fulltext base settings**

Enable boost on phrase match	Yes ▾	[CONTAINER - STORE VIEW]
Phrase match boost value	4	[CONTAINER - STORE VIEW]

4. Change the following settings:

Enable boost on phrase match: enable/disable the phrase match boost

Phrase match boost value: multiplier to apply to the score of the search engine when a group of words is found

RECOMMENDED VALUES

We recommend enabling the phrase match boost.

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

II.6 MINIMUM NUMBER OF WORDS MATCHING THE QUERY

Feature added
in version 2.0.0

When a user enters a query with several words, several approaches could be used:

○ Display the products that includes ALL the words of the query

or

○ Display the products that includes AT LAST one word of the query

The first approach is better for relevancy, but may return no result for queries with a lot of words.

The second approach will return more results, but the results will be less relevant.

Elastic Suite allows you to select one of these approaches, or to select a compromise between both:

1. Open the menu **Smile Elasticsuite** > **Search Relevance**

2. Open the tab **Relevance Configuration** > **Fulltext base settings**

3. The setting **Minimum Should Match** allows you to choose the minimum percentage of words that should match in the user query in order to suggest a result. Stopwords are not taken into account when calculating this percentage.

Minimum Should Match	100%

EXAMPLE

If the **Minimum Should Match** is set to 60%, then:

- For a query with 3 words, a product will be suggested if at least 2 words are found in the datas of the product.

- For a query with 5 words, a product will be suggested if at least 3 words are found in the datas of the product.

RECOMMENDED VALUES

We recommend using a value of 100% (all words should match).

Optionally, a slightly lower value may improve the results for long queries.

II.7 TIE BREAKER: COMBINATION OF SEVERAL PRODUCT ATTRIBUTES

Feature added in version 2.0.0

The search engine sort products by a relevancy score. This score of a product is calculated in the following way:

Step 1. A relevance score is calculated for each attribute: name, description, SKU, brand, color…

Step 2. Each attribute score is multiplied by the search weight of the attribute.

Step 3. Resulting scores are combined together into a global score.

For the step 3, several methods of combination can be selected:

- Sum of all scores

or

- Maximum score

or

- Maximum score + (sum of other scores) * fixed_percentage

To change the calculation method:

1. Open then menu **Smile Elasticsuite** > **Search Relevance**

2. Open the tab **Relevance Configuration** > **Fulltext base settings**

3. The setting **Tie breaker** should be set to one of the following values:

Tie breaker | 1

1: Select the method « Sum of all scores ».

0: Select the method « Maximum score ».

Any value between 0 and 1: select the third method, and the value entered will be used as the « fixed_percentage ».

RECOMMENDED VALUES

We recommend using a value of 1.

A lower value may be interesting when several attributes with a similar weight include redundant keywords.

II.8 BETTER AUTOCOMPLETE

Feature added in version 2.1.0
Improved in 2.2.0+

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

With Elastic Suite the autocomplete also suggests products, categories, attributes, and with a quick development a developer can easily add other contents: static pages, shops, lookbooks…

Products suggestions are using all the powerful features of the search engine: search weight, fuzzy search, phonetic search, automatic stop words detection…

Autocomplete can be set up in the back-office:

1. Open the menu **Stores** > **Configuration**

2. Open the tab **ElasticSuite** > **Autocomplete**

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

Popular Term Autocomplete

Max Size
[store view]

2

Maximum number of popular search terms to display in autocomplete results.

Product Autocomplete

Max Size
[store view]

2

Maximum number of products to display in autocomplete results.

Category Autocomplete

Max Size
[store view]

3

Maximum number of categories to display in autocomplete results.

Product Attributes Autocomplete

Max Size
[store view]

3

Maximum number of product attributes to display in autocomplete results.

Then, you have to configure the products attributes:

4. Open the menu **Store** > **Attributes** > **Product**

5. Select a product attribute

6. Change the following settings:

Used in autocomplete   Yes ▼

Used in autocomplete: This setting is not used today.

Display in autocomplete   Yes ▼

Display in autocomplete: If set to **Yes**, then the values in this filter may be suggested during typing. For example, if this parameter is set to **Yes** on the product attribute « Brand », then when a user types the letters « ca » the autocomplete will suggest the brand « Cacharel ».

ca	🔍
Brand	
Cacharel BRAND	12
Lancaster BRAND	11
American Vintage BRAND	7

RECOMMENDED VALUES

It is highly recommended to enable this setting on the product attribute "Brand". It may also be interesting to enable it on a few other attributes like "color" or "material".

INFORMATION

When **Display in Autocomplete** is set to **Yes**, it is mandatory to set **Used in autocomplete** to **Yes** and **Use in search** to **Yes**.

II.9 REDIRECT ON ONE RESULT

Feature added in version 2.2.0

If the search query of a user returns only one product, then you can choose to redirect the user to the product page directly (instead of displaying the search result page).

This option can be enabled in the back-office:

1. Open the menu **Stores** > **Configuration**

2. Open the tab **Elasticsuite** > **Catalog Search**

3. Change the following setting:

Redirect to product page if only one result [store view]	Yes ▼
	If there is only one product matching a given search query, the user will be redirect to this product page.

III.1 MULTIPLE SELECT IN LAYERED NAVIGATION

Feature added
in version 2.0.0

With the native search engine of Magento, the customer is able to combine several filters in the same time.

EXAMPLE

Material = Cotton AND Color = Black

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

MATERIAL	⌄
☐ Polyester (22)	
☑ Cotton (16)	
☐ Spandex (13)	
☐ Nylon (10)	
☑ Organic Cotton (9)	
☐ CoolTech™ (6)	
☐ Fleece (6)	
☐ Lycra® (6)	

EXAMPLE

Material = Cotton OR Organic Cotton

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

EXAMPLE

(Material = Cotton OR Organic Cotton) AND (Color = Black)

III.2 CUSTOMIZE FILTERS PER CATEGORY

Feature added
in version 2.5.0

The customers should only see filters that are relevant to their browsing session. With Elastic Suite, you can override the automatic algorithm and customize filters category per category. You can use this feature to hide filters that are inappropriate or not a priority, and you can you it to push important filters to the top of the page.

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

2. Select a sub-category (it is not possible to customize filters on the root category)

3. Open the tab **Display settings**

4. Customize filters by changing the settings in the block **Layered Navigation Filters**:

Layered Navigation Filters

	Attribute	Display Mode	Facet coverage rate	Facet max. size	Sort Order	Pinned
⣿	Price	Auto ▾	90 ☑ Use Default Value	10 ☑ Use Default Value	Result count ▾ ☑ Use Default Value	⬤
⣿	Color	Auto ▾	90 ☑ Use Default Value	10 ☑ Use Default Value	Result count ▾ ☑ Use Default Value	⬤
⣿	Material	Auto ▾	90 ☑ Use Default Value	5 ☑ Use Default Value	Result count ▾ ☑ Use Default Value	⬤

Display Mode: use this setting to force the filter to be displayed or hidden

Facet Coverage Rate: use this setting to display the filter only when many product share this attribute. See chapter III.7 for more details.

Facet max. size: default number of values displayed in the filter. See chapter III.4 for more details.

Sort order: change the sorting order of the values in the filter. See chapter III.3 for more details.

Pinned: when enabled, the filter is moved to the top and a handle appears at the left. You can drag & drop this handle to customize the sorting order of the filters.

III.3 ABILITY TO SORT VALUES IN FILTERS

Feature added in version 2.0.0

The sorting order of the values in a filter can be customized for each filter:

1. Open the menu **Stores** > **Attributes** > **Product**

2. Select an attribute that can be used as a filter

3. Open the tab **Storefront Properties**

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

Facet sort order | Result count ▾

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

Admin sort: Manual sorting order. The sorting order is managed in the tab Properties.

Name: Alphabetical order.

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

ACTIVITY ⌄

☐ Gym (15)
☐ Recreation (9)
☐ Sports (8)
☐ Athletic (7)
☐ Yoga (7)
☐ Outdoor (4)

Values sorted by Result count

III.4 LINK "SHOW MORE" IN FILTERS

Feature added in version 2.3.0
Improved in 2.4.0

MATERIAL ⌃

Search (Polyester, Cotton, ...)

☐ Polyester (16)
☐ Cotton (14)
☐ Spandex (10)
☐ Organic Cotton (9)
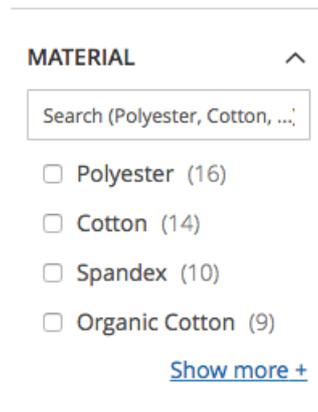
Show more +

In native Magento, a filter with a lot of values can have a very high height.

With Elastic Suite, only the first values are displayed, and:

○ A link "Show more" / "Show less" expands/folds the list

○ A search field is displayed

This feature can be customized filter by filter:

1. Open the menu **Stores** > **Attributes** > **Product**

2. Select an attribute that can be used as a filter

3. Open the tab **Storefront Properties**

4. Change the value of **Facet max. size**

Facet max. size	5

Max number of values returned by a facet query.

If the number of values is higher than this setting, then a link "Show more" will be displayed and a search field appears.

III.5 ENHANCED PRICE SLIDER

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

Native Magento

With Elastic Suite
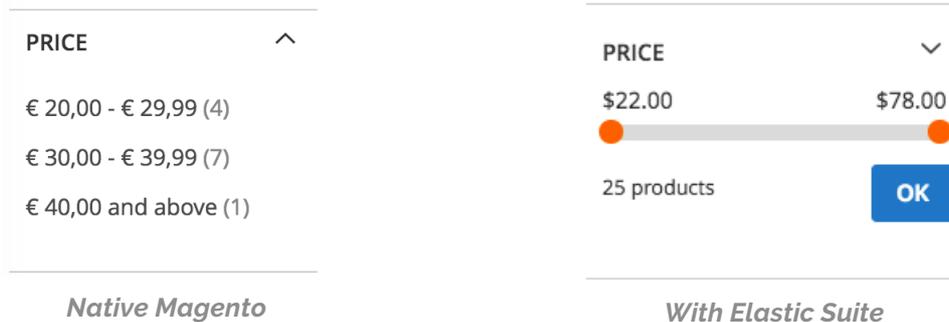
The price slider allows the user to filter by steps of +/- 1. If you want to change the size of the steps (could be useful for some currencies), it can be changed with the setting **Price Navigation Step Calculation** = **Manual** in the menu **Store** > **Configuration**, tab **Catalog** > **Layered Navigation**.

III.6 EXPAND FILTERS BY DEFAULT

Filter folded
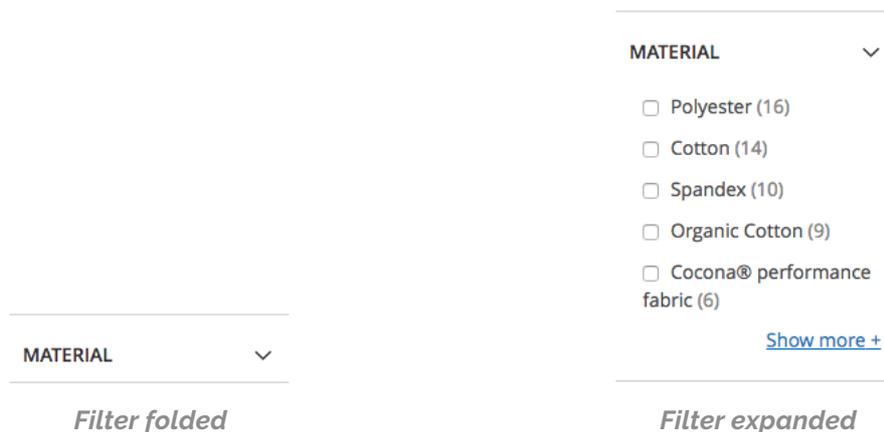
Filter expanded

In native Magento, filters are displayed folded by default. For a better call to action, Elastic Suite allows you to show several filters expanded by default.

This option can be enabled in the back-office:

1. Open the menu **Stores** > **Configuration**

2. Open the tab **Elasticsuite** > **Catalog Search**

3. Change the following setting:

Expanded facets [store view]	3

Number of facets to display expanded by default.

It is recommended to display the most important filters at the top by changing the sorting order of the filters:

4. Open the menu **Store** > **Attributes** > **Product**

5. Select a product attribute that can be used as a filter

6. Change the following setting:

Position	0

Position of attribute in layered navigation block.

The **Position** is a number equal or greater than 0. The filters are sorted by position; the lowest position is displayed at the top.

Particular case: the filter "Category" is always displayed in first position; the position of this filter can't be changed.

III.7 SUPPORT OF LARGE CATALOGS

Feature added in version 2.0.0

On large 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.

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%, Elastic Suite will display the filters Price, Color, and Size (shared by more than 20% of

the products), and will **not** display the filer Battery Capacity (shared by less than 20% of the products).

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

1. Open the menu **Stores** > **Attributes** > **Product**

2. Select an attribute that can be used as a filter

3. Open the tab **Storefront Properties**

4. 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.

IV - **MERCHANDISING**

IV.1 **VIRTUAL CATEGORIES**

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.

Example of use

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

- **Shop by look**

- **Gift ideas**

With 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**.

INFORMATION

With native Magento, it's possible 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 sub-categories, created manually, or automatically by Elastic Suite.
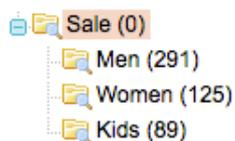
To create a new virtual category:

1. Open the menu **Products** > **Categories**

2. Create a new category or select an existing category

3. Open the tab **Merchandising**

4. Set **Yes** in **Virtual category**

5. Enter the rule of the virtual category.

You can set-up a rule based on product datas using a meta-language (*).

(*) The product attributes available in the rule condition are all the product attributes with **Use in search** set to **Yes**, and all product attributes with **Use in layered navigation** set to **Filterable**.

6. Option: if you want to display a facet « Category » in your virtual category, then you have to choose the category tree of this facet in the block **Virtual category root**

IV.2 SORT PRODUCTS AUTOMATICALLY USING SEARCH OPTIMIZERS

Feature added
in version 2.3.0

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

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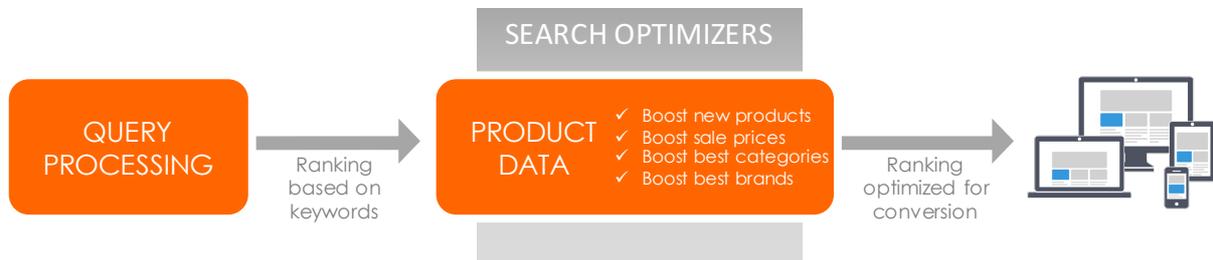
With his meta-language to set up the rules, the Search Optimizer is a very flexible and powerful feature of Magento Elastic Suite to increase the conversion rate.

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.

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

- Boost new products (*)

- Boost products with a discount

- 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

(*) This boost is using the product attributes **Set product as new from** and **Set product as new to**

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

1. Open the menu **Smile Elastic Suite** > **Optimizers**

2. Click **Add New Optimizer**

3. Fill the form

   Request type: you can use this field if you want to apply the optimizer only to the search engine, or only to the advanced search, or only to the category pages. Usually, all options are selected.

   Request type *
   Catalog Product Search
   Advanced Product Search
   Category Product View

Boost value: enter the percentage of boost to be applied. A value of 0 doesn't change the ranking of product. A positive value will boost the selected products toward the top of the page, a negative value will boost them toward the bottom of the page.

Boost value (%) *	[ ] ❓

Rule conditions: you can set-up a rule based on product datas using a meta-language (*).

Rule conditions	If ALL of these conditions are TRUE : ⊕

(*) The product attributes available in the rule condition are all the product attributes with **Use in search** set to **Yes**, and all product attributes with **Use in layered navigation** set to **Filterable**.

You can use the **Preview** tab to see how the optimizer changes the ranking of products on searches, categories, and autocomplete.

Preview

Request type *	Category Product ▾	Category Preview	Bottoms ▾	**Preview**

Base Results

	Erika Running Short $45.00 In Stock	Score : 1
	Ina Compression Short $49.00 In Stock	Score : 1
	Ana Running Short $40.00 In Stock	Score : 1
	Mimi All-Purpose Short $44.00 In Stock	Score : 1

Optimized Results

	Bess Yoga Short $28.00 In Stock	Score : 1.4 ↗
	Karmen Yoga Pant $39.00 In Stock	Score : 1.4 ↗
	Erika Running Short $45.00 In Stock	Score : 1 ↘
	Ina Compression Short $49.00 In Stock	Score : 1 ↘

## IV.3 SORTING PRODUCTS BY DRAG & DROP ON CATEGORY PAGES

Feature added
in version 2.1.0

In Magento Enterprise, a feature enables the merchant to sort manually the products in a category by drag & drop. But this feature has two strong limitations:

○ The merchant must sort each size and each color, involving a lot of operations to get the expected result.

○ The merchant is able to sort the products only in the categories at the bottom of the category tree; it is not possible to sort the products on the parent categories (categories with « anchor = yes »).

Elastic Suite solves these two limitations and adds the support of sorting by drag & drop in virtual categories:

1. Open the menu **Products** > **Categories**

2. Select a category

3. Open the **Merchandising** tab

4. Enable the **Manual sort** on several products. Products sorted manually are automatically moved to the top of the page.
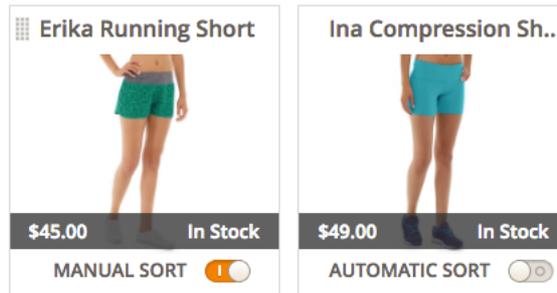
5. Click on the handle in the top left corner and drag & drop the products.
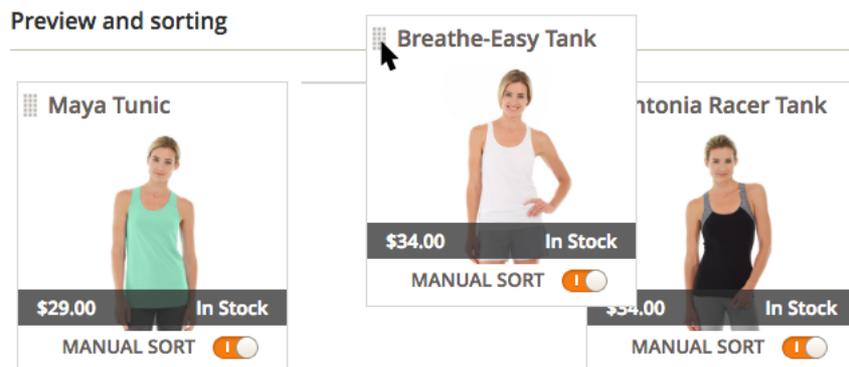

6. Save the category.

IV.4 SORTING PRODUCTS BY DRAG & DROP ON SEARCH RESULTS PAGE

Feature added in version 2.5.0

For the search terms that are the most frequently used, it may be interesting to adjust manually the ranking of products.

Elastic Suite allows that by adding the support of sorting by drag & drop in search results page:

1. Open the menu **Marketing** > **Search Terms**

2. Select a search term

3. Click the **Merchandising** button. A preview of the search results is displayed.

4. Enable the **Manual sort** on several products. Products sorted manually are automatically moved to the top of the page.
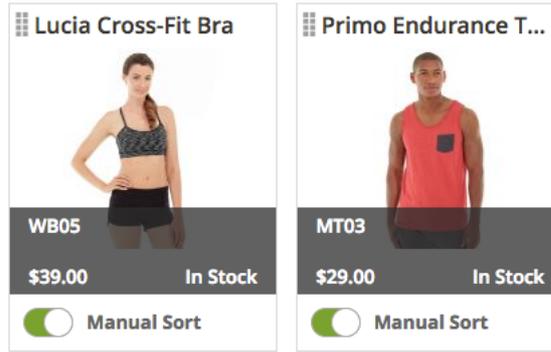
5. Click on the handle in the top left corner and drag & drop the products
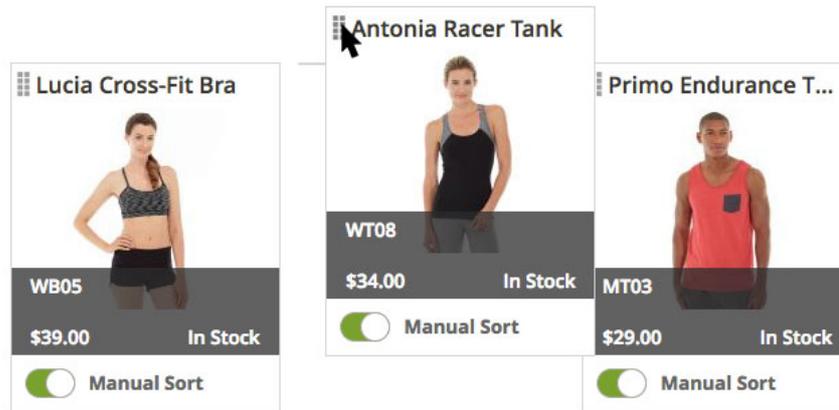
6. Click on the **Save** button

V - TECHNICAL IMPROVEMENTS

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 detects 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.