

Фасетный поиск UMI.CMS на базе Sphinx

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Фасетный поиск

- ◆ Что такое?
- ◆ Зачем нужен?
- ◆ Где использовать?

Этапы реализации фасетного поиска в UMI.CMS

1. **Хранение и индексация данных**
2. **Поиск**

Хранение и индексация данных

Хранение данных

Real-time indexes и JSON attributes

Структура индекса sphinx:

```
index facetdemo
{
    type                = rt
    path                = /var/lib/sphinxsearch/data/facetdemo
    charset_type        = utf-8
    rt_field            = name
    rt_attr_uint         = type_id
    rt_attr_multi        = category_id
    rt_attr_float        = price
    rt_attr_json         = attrs
    rt_attr_uint         = active
    rt_attr_uint         = deleted
}
```

Индексация данных

Используем события UMI.CMS для индексации контента

Отслеживаемые события:

- ◆ systemCreateElement
 - ◆ systemModifyElement
 - ◆ systemMoveElement
 - ◆ systemSwitchElementActivity
 - ◆ systemDeleteElement
- etc...

Хранение и индексация данных

Обработка событий на примере systemCreateElement:

```
//events.php
new UmiEventListener('systemCreateElement', 'catalog', 'onCreateElementFacetIndexator');
//class.php
public function onCreateElementFacetIndexator(iUmiEventPoint $event)
{
    if($event->getMode() != "after") {
        return;
    }
    $element = $event->getRef("element");
    if ($element instanceof UmiHierarchyElement) {
        $objectTypesCollection = UmiObjectTypesCollection::getInstance();
        $hierarchyType = $element->getHierarchyType();

        if ($hierarchyType->getName() == 'catalog' && $hierarchyType->getExt() == 'object') {
            $id = $element->id;
            $name = $element->name;
            $objectTypeId = $element->getObjectTypeid();
            $category_id = $element->getParentId();
            $price = $element->price;
            //Получаем остальные данные для фильтрации
            ...
            $attrs = json_encode($props_array);
            $ln_sph = new PDO('mysql:host=127.0.0.1;port=9306');
            $stmt = $ln_sph->exec("REPLACE INTO facetdemo (id,name,type_id,active,price,category_id,attrs)
                VALUES({$id},'{$name}', {$objectTypeId}, {$active}, {$price}, ({$category_id}), '{$attrs}'
                ");
            $ln_sph = new PDO('mysql:host=127.0.0.1;port=9306');
            $stmt = $ln_sph->exec("INSERT INTO facetdemo (id,name,type_id,price,category_id)
                VALUES({$id},'{$name}', {$objectTypeId}, {$price}, ({$category_id}))
                ");
        }
    }
}
```

1. Построение фильтра по всему каталогу

```
> select * from facetdemo facet attrs.nositeli facet attrs.best_offers;
```

id	type_id	active	deleted	price	category_id	attrs
1	119	1	0	45.000000	2	{"weight":0.370000,"cvet":"336","zvuk":"337","best_offers":0}
53	119	1	0	580.000000	48	{"weight":11.200000,"cvet":"404","zvuk":"408","best_offers":0}
54	121	1	0	168.000000	39	{"weight":4.900000,"cvet":"404","nositeli":["405"],"vozmozhnost_zapisi":0,"best_offers":1}
55	119	1	0	88.000000	2	{"weight":0.320000,"cvet":"406","zvuk":"337","best_offers":0}
60	121	1	0	546.000000	39	{"weight":4.860000,"cvet":"420","nositeli":["405","421"],"vozmozhnost_zapisi":1,"best_offers":0}
61	121	1	1	680.000000	39	{"weight":5.600000,"cvet":"336","nositeli":["405"],"vozmozhnost_zapisi":1,"best_offers":0}
95	122	1	0	15.000000	41	{"cvet":"404","best_offers":1}

7 rows in set (0.02 sec)

attrs.nositeli	count(*)
NULL	4
405	3
421	1

3 rows in set (0.02 sec)

attrs.best_offers	count(*)
0	5
1	2

2 rows in set (0.02 sec)

2. Результат после применения фильтра

```
> select * from facetdemo where attrs.best_offers=1 facet attrs.nositeli facet attrs.best_offers;
```

```
+-----+-----+-----+-----+-----+-----+-----+
| id | type_id | active | deleted | price | category_id | attrs |
+-----+-----+-----+-----+-----+-----+-----+
| 54 | 121 | 1 | 0 | 168.000000 | 39 | {"weight":4.900000,"cvet":"404","nositeli":["405"],"vozmozhnost_zapisi":0,"best_offers":1} |
| 95 | 122 | 1 | 0 | 15.000000 | 41 | {"cvet":"404","best_offers":1} |
+-----+-----+-----+-----+-----+-----+-----+
```

2 rows in set (0.02 sec)

```
+-----+-----+
| attrs.nositeli | count(*) |
+-----+-----+
| 405 | 1 |
| NULL | 1 |
+-----+-----+
```

2 rows in set (0.02 sec)

```
+-----+-----+
| attrs.best_offers | count(*) |
+-----+-----+
| 1 | 2 |
+-----+-----+
```

1 row in set (0.02 sec)

Спасибо!

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