

## Сайт для редактирования скрипта для магазина bitrix24:

[b24-x5iy25.bitrix24.ru](https://b24-x5iy25.bitrix24.ru)

### Сам магазин:

<https://b24-dy0v8s.bitrix24.shop/>

### Js для bitrix24

```
<script src="https://cdnjs.cloudflare.com/ajax/libs/mustache.js/3.0.0/mustache.min.js"></script>
<script src="https://code.jquery.com/jquery-3.3.1.js"></script>
<script src="https://requirejs.org/docs/release/2.3.6/minified/require.js"></script>
<script>
    requirejs.config({
        paths: {
            divolte: 'http://35.195.166.173:8290/divolte'
        }
    });
    require(['divolte']);
    require(['divolte'], function(divolte) {
        console.log('ok1');
        checkout_click = function() {
            console.log('ok2');
            var id_product = this.id.split('_buy_link')[0];
            var id_price_product = id_product.concat('_price');
            var id_price_total_product = id_product.concat('_price_total');
            var price_product =
document.getElementById(id_price_product).innerHTML.trim();
            try {
                var price_total_product =
document.getElementById(id_price_total_product).innerHTML.trim().split('
<strong>')[1].split('</strong>')[0];
            } catch(err) {
                price_total_product = price_product
            }
            divolte.signal("checkout", {id: id_product, price:
price_product, total_price: price_total_product});
            return false;
        };
        $(document.body).on('click', '.btn-primary', checkout_click);
    });
</script>
```

## Запуск divolte

```
sudo /home/ubuntu/divolte-collector-0.9.0/bin/divolte-collector
```

### divolte-env.sh

```
HADOOP_CONF_DIR=/usr/hdp/current/hadoop-client/conf
```

### divolte-collector.conf

```
divolte {
    mappings {
        my_mapping = {
```

```

        schema_file = "/home/ubuntu/divolte-collector-0.9.0/conf/
MyEventRecord0.avsc"
        mapping_script_file = "/home/ubuntu/divolte-collector-0.9.0/conf/
mapping0.groovy"
        sources = [a_source]
        sinks = [kafka]
    }
}
global {
    server {
        host = 0.0.0.0
        port = 8290
    }
    kafka {
        // Enable Kafka flushing
        enabled = true

        // The properties under the producer key in this
        // configuration are used to create a Properties object
        // which is passed to Kafka as is. At the very least,
        // configure the broker list here. For more options
        // that can be passed to a Kafka producer, see this link:
        // http://kafka.apache.org/082/
documentation.html#newproducerconfigs
        producer = {
            bootstrap.servers = "instance-1.europe-west1-b.c.de3-
npl.internal:6667"
        }
    }
}

sinks {
    // The name of the sink. (It's referred to by the mapping.)
    kafka {
        type = kafka
        // This is the name of the topic that data will be produced on
        topic = andrey.selivanov
    }
}

sources {
    a_source {
        type = browser
        // prefix = /tracking
    }
}
}

```

### **MyEventRecord0.avsc – схема avrò для rivolte**

```

{
  "namespace": "io.divolte.examples.record",
  "type": "record",
  "name": "MyEventRecord",

```

```

"fields": [
  { "name": "sessionId", "type": "string"},
  { "name": "timestamp", "type": "long" },
  { "name": "referer", "type": "string"},
  { "name": "remoteHost", "type": "string"},
  { "name": "eventType", "type": ["null", "string"],
"default": null },
  { "name": "location", "type": ["null", "string"],
"default": null },
  { "name": "localPath", "type": ["null", "string"],
"default": null },
  { "name": "userAgent", "type": ["null", "string"], "default":
null },
  { "name": "userAgentDeviceCategory", "type": ["null", "string"],
"default": null },
  { "name": "userAgentOsFamily", "type": ["null", "string"],
"default": null },
  { "name": "userAgentOsVersion", "type": ["null", "string"],
"default": null },
  { "name": "id_product", "type": ["null", "string"], "default":
null },
  { "name": "price_product", "type": ["null", "string"], "default":
null },
  { "name": "total_price_product", "type": ["null", "string"],
"default": null }
]
}

```

#### **mapping0.groovy – groovy файл для divolte**

```

mapping {
  map sessionId() onto 'sessionId'
  map timestamp() onto 'timestamp'
  map referer() onto 'referer'
  map remoteHost() onto 'remoteHost'
  map eventType() onto 'eventType'
  map location() onto 'location'
  map userAgentString() onto 'userAgent'
  def ua = userAgent()
  map ua.deviceCategory() onto 'userAgentDeviceCategory'
  map ua.deviceCategory() onto 'userAgentDeviceCategory'
  map ua.osFamily() onto 'userAgentOsFamily'
  map ua.osVersion() onto 'userAgentOsVersion'
  map eventParameters().value('id') onto 'id_product'
  map eventParameters().value('price') onto 'price_product'
  map eventParameters().value('total_price') onto 'total_price_product'
  def locationUri = parse location() to uri
  def localUri = parse locationUri.rawFragment() to uri
  map localUri.path() onto 'localPath'
}

```

#### **kafka\_avro2json.py – скрипт для преобразования потока в Avro от divolte в json для ClickHouse**

```

from confluent_kafka import Consumer, Producer, KafkaError

```

```

from fastavro import writer, reader, parse_schema, schemaless_reader
import json
import io

with open('/home/ubuntu/divolte-collector-0.9.0/conf/
MyEventRecord0.avsc') as f:
    schema = parse_schema(json.loads(f.read()))

def decode(msg_value):
    message_bytes = io.BytesIO(msg_value)
    return schemaless_reader(message_bytes, schema)

def get0kk(lst):
    ret = {}
    for x,y in lst.items():
        if x in ['sessionId', 'timestamp', 'location', 'id_product']:
            if x == 'id_product':
                if y != None:
                    ret[x] = y
            else:
                ret[x] = y
                if x == 'location':
                    ret['id_item'] = ''
                    z = y.split('/')
                    if len(z) > 3:
                        n = (-2 if z[-1] == '' else -1)
                        if z[n-1] == 'item':
                            ret['id_item'] = z[n]
        elif x in ['price_product', 'total_price_product']:
            z = y if y == None else float(y[:-5].replace(' ', ''))
            if z != None:
                ret[x] = z
    if ret.get('id_product', '') > '':
        ret['item_count'] = (None if ret['price_product'] == None else
                             int(ret['total_price_product']/
ret['price_product']))
    return ret

ip, topic = '35.195.166.173:6667', 'andrey.selivanov'
topicTo1, topicTo2 = 'users_json', 'orders_json'
conf = {'bootstrap.servers': ip}
p1 = Producer(**conf)
p2 = Producer(**conf)
c = Consumer(
    {'bootstrap.servers': ip,
     'group.id': 'avro2json_group',
     'auto.offset.reset': 'latest',
     "enable.auto.commit": True})
c.subscribe([topic])

running = True
while running:
    msg = c.poll()
    if not msg.error():
        msg_value = msg.value()
        #print(msg_value)

```

```

try:
    event_dict = get0kk(decode(msg_value))
    if event_dict.get('id_product','') > '':
        p2.produce(topicTo2, json.dumps(event_dict))
    else:
        p1.produce(topicTo1, json.dumps(event_dict))
    #print(event_dict)
except:
    pass
elif msg.error().code() != KafkaError._PARTITION_EOF:
    print(msg.error())
    running = False

```

## Запуск ClickHouse:

- 1) `sudo nano /etc/clickhouse-server/config.xml`  
`<listen_host>::</listen_host>`
- 2) `sudo service clickhouse-server start`

## Скрипты для ClickHouse:

**создание таблицы статистики по посещению страниц, которая автоматом забирает записи из потока Кафки:**

```

CREATE TABLE users (
    sessionId String,
    timestamp UInt64,
    location String,
    id_item String
) ENGINE = Kafka('35.195.166.173:6667', 'users_json', 'users_group',
'JSONEachRow');

```

**создание view статистики по посещению страниц, которая сохраняет записи в нужном формате из users:**

```

CREATE MATERIALIZED VIEW view_users
ENGINE = MergeTree() ORDER BY (timestamp, sessionId, id_item) SETTINGS
index_granularity=8192 POPULATE AS
SELECT
    timestamp,
    sessionId,
    id_item,
    location
FROM users

```

**скрипт проверки работы и вывод необходимых для чекера полей (здесь deer насчитывается не совсем корректно, как общая сумма хитов по всей сессии, а не до страницы):**

```

select a.location, a.id_item, sum(a.total), avg(b.total)
from (select location, id_item, sessionId, count(*) as total from
view_users group by location, id_item, sessionId) a
ANY LEFT JOIN (select sessionId, count(*) as total from view_users group
by sessionId) b USING sessionId

```

```
group by a.location, a.id_item
order by a.location
```

**А здесь точное определение средней глубины просмотра по заходу на страницу:**

```
select z.location, z.id_item, y.total, z.deep from
(select x.location, x.id_item, avg(x.deep) as deep from (
select a.location, a.id_item, a.sessionId, count(*) as deep
from (select location, id_item, sessionId, min(timestamp) as ts1 from
view_users group by location, id_item, sessionId) a
all left join view_users b USING sessionId
where timestamp >= 1541074972330 and b.timestamp <= a.ts1
group by a.location, a.id_item, a.sessionId) x
group by x.location, x.id_item) z
all left join (select location, count(*) as total from view_users where
timestamp >= 1541074972330 group by location) y USING location
order by z.location
```

**создание таблицы статистики по заказам, которая автоматом забирает записи из потока Кафки:**

```
CREATE TABLE orders (
    sessionId String,
    timestamp UInt64,
    location String,
    id_item String,
    id_product String,
    price_product Float32,
    total_price_product Float32,
    item_count UInt16
) ENGINE = Kafka('35.195.166.173:6667', 'orders_json', 'group_orders',
'JSONEachRow');
```

**создание view статистики по заказам, которая сохраняет записи в нужном формате из orders:**

```
CREATE MATERIALIZED VIEW view_orders
ENGINE = MergeTree() ORDER BY (timestamp, id_item) SETTINGS
index_granularity=8192 POPULATE AS
SELECT
    timestamp,
    id_item,
    location,
    total_price_product,
    item_count
FROM orders
```

**скрипт проверки работы и вывод необходимых для чекара полей:**

```
select max(location) as url, id_item, sum(total_price_product) as price,
sum(item_count) as count
from view_orders
```

```
--where timestamp > 1541069788510
group by id_item;
```

### Запуск сайта для чекера:

```
cd api
./app.py
```

### api.py – сайт на flask

```
#!/flask/bin/python
from flask import Flask
from clickhouse_driver import Client
from datetime import datetime, timedelta
import time

cl = Client('35.195.166.173',port='9001')
def getTsHourBack():
    dt = datetime.now() - timedelta(hours=1)
    return int(time.mktime(dt.timetuple())*1000)

def getJson(recs,cols,ts):
    lst = []
    for rec in recs:
        d = {}
        for i,col in enumerate(cols):
            d[col] = rec[i]
        lst.append(d)
    return str({"timestamp": ts,"contents": lst,"check": True})

def getOrders(ts=None):
    if ts == None:
        ts = getTsHourBack()
    else:
        try:
            ts = int(ts)
        except:
            ts = 0

    q = ('select z.location, z.id_item, y.total, z.deep from'+
        ' (select x.location, x.id_item, avg(x.deep) as deep from ('+
        ' select a.location, a.id_item, a.sessionId, count(*) as deep'+
        ' from (select location,id_item,sessionId,min(timestamp) as ts1
from view_users group by location, id_item, sessionId) a'+
        ' all left join view_users b USING sessionId'+
        ' where b.timestamp <= a.ts1'+
        ' group by a.location, a.id_item, a.sessionId) x'+
        ' group by x.location, x.id_item) z'+
        ' all left join (select location, count(*) as total from
view_users where timestamp >= {} group by location) y'+
        ' USING location'+
        ' order by z.location;').format(ts)

    return getJson(cl.execute(q),['url','id_item','price','count'],ts)
```

```

def getUsers(ts=None):
    if ts == None:
        ts = getTsHourBack()
    else:
        try:
            ts = int(ts)
        except:
            ts = 0
    q = 'select a.location as url, a.id_item, count(*) as count,
avg(b.deep) as deep'+\
        ' from view_users a'+\
        ' ANY LEFT JOIN (select sessionId, count(*) as deep from
view_users group by sessionId) b USING sessionId'+\
        ' where a.timestamp >= '+str(ts)+'\
        ' group by a.location, a.id_item FORMAT JSONEachRow;'
    return getJson(cl.execute(q), ['url', 'id_item', 'count', 'deep'], ts)

app = Flask(__name__)
@app.route('/')
def index():
    return "Это API для чекеера"
@app.route('/api/v1.0/users/')
def users1():
    return getUsers()
@app.route('/api/v1.0/users/<ts>')
def users2(ts):
    return getUsers(ts)
@app.route('/api/v1.0/orders/')
def orders1():
    return getOrders()
@app.route('/api/v1.0/orders/<ts>')
def orders2(ts):
    return getOrders(ts)
if __name__ == '__main__':
    app.run(debug=True, host = "0.0.0.0", port=5001)

```

## Результат:

← → ↺ 🏠 ⓘ Ненадежный | 35.195.166.173:5001/api/v1.0/users/ ☆ ⚠️ | Приостановлена A ⋮

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```

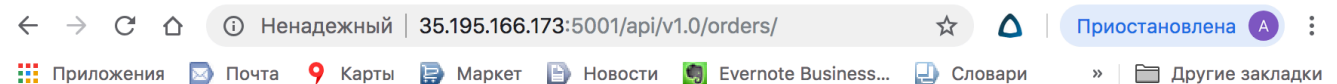
{'timestamp': 1541154847, 'contents': [{ 'url': 'https://b24-dy0v8s.bitrix24.shop/', 'id_item': '', 'count': 7, 'deep': 1.2}, { 'url': 'https://b24-ly0v8s.bitrix24.shop/dostavka/', 'id_item': '', 'count': 1, 'deep': 6.0}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/garantiya/', 'id_item': '', 'count': 1, 'deep': 7.0}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/kakkupit/', 'id_item': '', 'count': 1, 'deep': 5.0}, { 'url': 'https://b24-ly0v8s.bitrix24.shop/katalog/clothes/dresses/', 'id_item': '', 'count': 1, 'deep': 2.0}, { 'url': 'https://b24-ly0v8s.bitrix24.shop/katalog/clothes/shoes/', 'id_item': '', 'count': 4, 'deep': 3.0}, { 'url': 'https://b24-ly0v8s.bitrix24.shop/katalog/clothes/t-shirts/', 'id_item': '', 'count': 6, 'deep': 2.6}, { 'url': 'https://b24-ly0v8s.bitrix24.shop/katalog/item/dress-nightlife/', 'id_item': 'dress-nightlife', 'count': 1, 'deep': 1.0}, { 'url': 'https://b24-ly0v8s.bitrix24.shop/katalog/item/pantolety-bones-on-the-beach/', 'id_item': 'pantolety-bones-on-the-beach', 'count': 4, 'deep': 7.0}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/katalog/item/slippers-favorite-sport/', 'id_item': 'slippers-favorite-sport', 'count': 1, 'deep': 2.0}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/katalog/item/sports-suit-gentle-warmth/', 'id_item': 'sports-suit-gentle-warmth', 'count': 2, 'deep': 2.0}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/katalog/item/sports-suit-pink-vortex/', 'id_item': 'sports-suit-pink-vortex', 'count': 1, 'deep': 1.0}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/katalog/item/t-shirt-men-s-fire/', 'id_item': 't-shirt-men-s-fire', 'count': 2, 'deep': 2.0}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/katalog/item/women-s-t-shirt-night/', 'id_item': 'women-s-t-shirt-night', 'count': 3, 'deep': 4.5}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/katalog/item/women-s-t-shirt-purity/', 'id_item': 'women-s-t-shirt-purity', 'count': 3, 'deep': 4.5}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/kontakty/', 'id_item': '', 'count': 1, 'deep': 9.0}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/onas/', 'id_item': '', 'count': 1, 'deep': 8.0}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/personalnyyrazdel/korzina/', 'id_item': '', 'count': 16, 'deep': 1.7142857142857144}], 'check': True}

```



ABC location	ABC id_item	123 total	123 deep
<a href="https://b24-dy0v8s.bitrix24.shop/">https://b24-dy0v8s.bitrix24.shop/</a>		0	1,2
<a href="https://b24-dy0v8s.bitrix24.shop/dostavka/">https://b24-dy0v8s.bitrix24.shop/dostavka/</a>		0	6
<a href="https://b24-dy0v8s.bitrix24.shop/garantiya/">https://b24-dy0v8s.bitrix24.shop/garantiya/</a>		0	7
<a href="https://b24-dy0v8s.bitrix24.shop/kakkupit/">https://b24-dy0v8s.bitrix24.shop/kakkupit/</a>		0	5
<a href="https://b24-dy0v8s.bitrix24.shop/katalog/clothes/dresses/">https://b24-dy0v8s.bitrix24.shop/katalog/clothes/dresses/</a>		1	1,5
<a href="https://b24-dy0v8s.bitrix24.shop/katalog/clothes/shoes/">https://b24-dy0v8s.bitrix24.shop/katalog/clothes/shoes/</a>		0	3
<a href="https://b24-dy0v8s.bitrix24.shop/katalog/clothes/t-shirts/">https://b24-dy0v8s.bitrix24.shop/katalog/clothes/t-shirts/</a>		1	2,8333333333
<a href="https://b24-dy0v8s.bitrix24.shop/katalog/item/dress-nightlife/">https://b24-dy0v8s.bitrix24.shop/katalog/item/dress-nightlife/</a>	dress-nightlife	0	1
<a href="https://b24-dy0v8s.bitrix24.shop/katalog/item/dress-red-fairy/">https://b24-dy0v8s.bitrix24.shop/katalog/item/dress-red-fairy/</a>	dress-red-fairy	1	2
<a href="https://b24-dy0v8s.bitrix24.shop/katalog/item/pantolety-bones-on-the-beach/">https://b24-dy0v8s.bitrix24.shop/katalog/item/pantolety-bones-on-the-beach/</a>	pantolety-bones-on-the-beach	0	7
<a href="https://b24-dy0v8s.bitrix24.shop/katalog/item/slippers-favorite-sport/">https://b24-dy0v8s.bitrix24.shop/katalog/item/slippers-favorite-sport/</a>	slippers-favorite-sport	0	2
<a href="https://b24-dy0v8s.bitrix24.shop/katalog/item/sports-suit-gentle-warmth/">https://b24-dy0v8s.bitrix24.shop/katalog/item/sports-suit-gentle-warmth/</a>	sports-suit-gentle-warmth	0	2
<a href="https://b24-dy0v8s.bitrix24.shop/katalog/item/sports-suit-pink-vortex/">https://b24-dy0v8s.bitrix24.shop/katalog/item/sports-suit-pink-vortex/</a>	sports-suit-pink-vortex	0	7
<a href="https://b24-dy0v8s.bitrix24.shop/katalog/item/t-shirt-men-s-fire/">https://b24-dy0v8s.bitrix24.shop/katalog/item/t-shirt-men-s-fire/</a>	t-shirt-men-s-fire	0	2
<a href="https://b24-dy0v8s.bitrix24.shop/katalog/item/women-s-t-shirt-night/">https://b24-dy0v8s.bitrix24.shop/katalog/item/women-s-t-shirt-night/</a>	women-s-t-shirt-night	0	4,5
<a href="https://b24-dy0v8s.bitrix24.shop/katalog/item/women-s-t-shirt-purity/">https://b24-dy0v8s.bitrix24.shop/katalog/item/women-s-t-shirt-purity/</a>	women-s-t-shirt-purity	1	4,6666666667
<a href="https://b24-dy0v8s.bitrix24.shop/kontakty/">https://b24-dy0v8s.bitrix24.shop/kontakty/</a>		0	9
<a href="https://b24-dy0v8s.bitrix24.shop/onas/">https://b24-dy0v8s.bitrix24.shop/onas/</a>		0	8
<a href="https://b24-dy0v8s.bitrix24.shop/personalnvrazdel/korzina/">https://b24-dy0v8s.bitrix24.shop/personalnvrazdel/korzina/</a>		2	2.75

**Кол-во хитов считается от времени, а средняя глубина – от начала сессий**



```
{'timestamp': 1541155248, 'contents': [{ 'url': 'https://b24-dy0v8s.bitrix24.shop/', 'id_item': '', 'price': 14457.0, 'count': 6}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/katalog/item/women-s-t-shirt-purity/', 'id_item': 'women-s-t-shirt-purity', 'price': 19380.0, 'count': 6}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/katalog/item/pantolety-bones-on-the-beach/', 'id_item': 'pantolety-bones-on-the-beach', 'price': 13485.0, 'count': 15}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/katalog/item/t-shirt-men-s-fire/', 'id_item': 't-shirt-men-s-fire', 'price': 3920.0, 'count': 4}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/katalog/item/women-s-t-shirt-night/', 'id_item': 'women-s-t-shirt-night', 'price': 6000.0, 'count': 8}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/katalog/item/sports-suit-pink-vortex/', 'id_item': 'sports-suit-pink-vortex', 'price': 11760.0, 'count': 3}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/katalog/item/dress-nightlife/', 'id_item': 'dress-nightlife', 'price': 4499.0, 'count': 1}, { 'url': 'https://b24-dy0v8s.bitrix24.shop/katalog/item/sports-suit-gentle-warmth/', 'id_item': 'sports-suit-gentle-warmth', 'price': 28700.0, 'count': 7}], 'check': True}
```