

# chapter9

## PUT create\_pipeline\_range\_ratio

http://localhost:9200/\_ingest/pipeline/range\_ratio

### HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
  "description": "calculate the range of high and low and divide by the close price",
  "processors": [
    {
      "script": {
        "source": "ctx.range_ratio = (ctx.high-ctx.low)/ctx.close"
      }
    }
  ]
}
```

Example Request  
create\_pipeline\_range\_ratio

```
curl --location --request PUT "http://localhost:9200/_ingest/pipeline/range_ratio" --header "Content-Type: application/json" --header "accept: application/json" --data '${\"description\": \"calculate the range of high and low and divide by the close price\", \"processors\": [ { \"script\": { \"source\": \"ctx.range_ratio = (ctx.high-ctx.low)/ctx.close\" } } ] }'}
```

## DEL delete\_pipeline\_range\_ratio

http://localhost:9200/\_ingest/pipeline/range\_ratio

### HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
  "description": "calculate the range of high and low and divide by the close price",
  "processors": [
    {
      "set": {
        "field": "range_ratio",
        "value": "({{high}}-{{low}})/{{close}}"
      }
    }
  ]
}
```

Example Request  
delete\_pipeline\_range\_ratio

```
curl --location --request DELETE "http://localhost:9200/_ingest/pipeline/range_ratio" --header "Content-Type: application/json" --header "accept: application/json" --data $'{"description\":"calculate the range of high and low and divide by the close price", \n"processors\":[ { \n"set\": { \n"field\":"range_ratio", \n"value\": \n"({{high}}-{{low}})/{{close}}\n" } } ] }'
```

## DEL delete\_pipeline\_wildcard\_expression

http://localhost:9200/\_ingest/pipeline/range\_ratio\*

### HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
  "description":"calculate the range of high and low and divide by the close price",
  "processors":[
    {
      "set": {
        "field": "range_ratio",
        "value": "({{high}}-{{low}})/{{close}}"
      }
    }
  ]
}
```

Example Request  
delete\_pipeline\_wildcard\_expression

```
curl --location --request DELETE "http://localhost:9200/_ingest/pipeline/range_ratio*" --header "Content-Type: application/json" --header "accept: application/json" --data $'{"description\":"calculate the range of high and low and divide by the close price", \n"processors\":[ { \n"set\": { \n"field\":"range_ratio", \n"value\": \n"({{high}}-{{low}})/{{close}}\n" } } ] }'
```

## POST simulate\_pipeline\_range\_ratio

http://localhost:9200/\_ingest/pipeline/range\_ratio/\_simulate

### HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
  "docs" :[
    {
      "_source": {
        "date": "2018-12-26",
        "open": 24.8706,
        "high": 25.6553,
        "low": 24.7117,
        "close": 25.6553,
        "volume": 422158,
        "change": 0.84425,
        "changePercent": 3.403,
        "label": "Dec 26, 18",
        "changeOverTime": 0,
        "symbol": "ACWF"
      }
    }
  ]
}
```

```
}
]
```

Example Request  
simulate\_pipeline\_range\_ratio

```
curl --location --request POST "http://localhost:9200/_ingest/pipeline/range_ratio/_simulate" --header
"Content-Type: application/json" --header "accept: application/json" --data $'{"docs\" :[ {"_source\":
{"date\": \"2018-12-26\", \"open\": 24.8706, \"high\": 25.6553, \"low\": 24.7117, \"close\": 25.6553,
\"volume\": 422158, \"change\": 0.84425, \"changePercent\": 3.403, \"label\": \"Dec 26, 18\",
\"changeOverTime\": 0, \"symbol\": \"ACWF\"}} ] }'
```

**POST** simulate\_pipeline\_ad\_hoc\_range\_ratio

http://localhost:9200/\_ingest/pipeline/\_simulate

HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
  "pipeline": {
    "description": "calculate the range of high and low and divide by the close price",
    "processors": [{
      "script": {
        "source": "ctx.range_ratio = (ctx.high-ctx.low)/ctx.close"
      }
    ]
  },
  "docs" :[
    {"_source": {"date": "2018-12-26", "open": 24.8706, "high": 25.6553, "low": 24.7117,
"close": 25.6553, "volume": 422158, "unadjustedVolume": 422158, "change": 0.84425, "changePercent":
3.403, "vwap": 25.2926, "label": "Dec 26, 18", "changeOverTime": 0, "symbol": "ACWF"}}
  ]
}
```

Example Request  
simulate\_pipeline\_ad\_hoc\_range\_ratio

```
curl --location --request POST "http://localhost:9200/_ingest/pipeline/_simulate" --header "Content-Type:
application/json" --header "accept: application/json" --data $'{"pipeline\": {
\"description\":\n\"calculate the range of high and low and divide by the close price\", \"processors\":[{
\"script\": { \"source\": \"ctx.range_ratio = (ctx.high-ctx.low)/ctx.close\" } }] }, \"docs\" :[
{\"_source\": {\"date\": \"2018-12-26\", \"open\": 24.8706, \"high\": 25.6553, \"low\": 24.7117,
\"close\": 25.6553, \"volume\": 422158, \"change\": 0.84425, \"changePercent\": 3.403, \"label\": \"Dec
26, 18\", \"changeOverTime\": 0, \"symbol\": \"ACWF\"}} ] }'
```

**POST** index\_with\_pipeline\_range\_ratio

http://localhost:9200/cf\_etf\_pipeline/\_doc/1?pipeline=range\_ratio

HEADERS

Content-Type  
application/json  
accept  
application/json  
PARAMS

pipeline  
range\_ratio  
BODY

```
{
    "date": "2018-12-26",
    "open": 24.8706,
    "high": 25.6553,
    "low": 24.7117,
    "close": 25.6553,
    "volume": 422158,
    "change": 0.84425,
    "changePercent": 3.403,
    "label": "Dec 26, 18",
    "changeOverTime": 0,
    "symbol": "ACWF"
}
```

Example Request  
index\_with\_pipeline\_range\_ratio

```
curl --location --request POST "http://localhost:9200/cf_etf_pipeline/_doc/1?pipeline=range_ratio" --header "Content-Type: application/json" --header "accept: application/json" --data $'{"date\: \"2018-12-26\", \"open\: 24.8706, \"high\: 25.6553, \"low\: 24.7117, \"close\: 25.6553, \"volume\: 422158, \"change\: 0.84425, \"changePercent\: 3.403, \"label\: \"Dec 26, 18\", \"changeOverTime\: 0, \"symbol\: \"ACWF\"}'
```

**DEL** index\_with\_pipeline\_range\_ratio\_doc

http://localhost:9200/cf\_etf\_pipeline/\_doc/1

HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
    "date": "2018-12-26",
    "open": 24.8706,
    "high": 25.6553,
    "low": 24.7117,
    "close": 25.6553,
    "volume": 422158,
    "change": 0.84425,
    "changePercent": 3.403,
    "label": "Dec 26, 18",
    "changeOverTime": 0,
    "symbol": "ACWF"
}
```

Example Request  
index\_with\_pipeline\_range\_ratio\_doc

```
curl --location --request DELETE "http://localhost:9200/cf_etf_pipeline/_doc/1" --header "Content-Type: application/json" --header "accept: application/json" --data $'{"date\: \"2018-12-26\", \"open\: 24.8706, \"high\: 25.6553, \"low\: 24.7117, \"close\: 25.6553, \"volume\: 422158, \"change\: 0.84425, \"changePercent\: 3.403, \"label\: \"Dec 26, 18\", \"changeOverTime\: 0, \"symbol\: \"ACWF\"}'
```

## GET get\_document\_from\_index\_with\_pipeline\_range\_ratio

http://localhost:9200/cf\_etf\_pipeline/\_doc/1

### HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
}
```

### Example Request

get\_document\_from\_index\_with\_pipeline\_range\_ratio

```
curl --location --request GET "http://localhost:9200/cf_etf_pipeline/_doc/1"
```

## POST simulate\_pipeline\_ad\_hoc\_kv\_processor

http://localhost:9200/\_ingest/pipeline/\_simulate

### HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
  "pipeline": {
    "description": "kv processor demo",
    "processors": [
      { "kv": {
        "field": "input_field",
        "field_split": ",",
        "value_split": ":",
        "target_field": "output_field",
        "trim_key": " ",
        "trim_value": ""
      } }
    ],
    { "remove" : { "field": ["input_field"] } }
  ],
  "docs" : [
    { "_source": { "input_field": " a:b , c:d " } }
  ]
}
```

### Example Request

simulate\_pipeline\_ad\_hoc\_kv\_processor

```
curl --location --request POST "http://localhost:9200/_ingest/pipeline/_simulate" --header "Content-Type: application/json" --header "accept: application/json" --data $'{"pipeline": { "description": "kv processor demo", "processors": [ { "kv": { "field": "input_field", "field_split": ",", "value_split": ":", "target_field": "output_field", "trim_key": " ", "trim_value": " " } } ], { "remove" : { "field": ["input_field"] } } ], "docs" : [ { "_source": { "input_field": " a:b , c:d " } } ] }'
```



```
        {"remove": {"field":["message"]}}
    ],
    "docs" : [
        {"_source": {"message":"[2019-06-20T00:04:58,856][INFO ]
[o.e.c.m.MetadataDeleteIndexService] [WTW.local] [cf_etf/RiYRsKyxTGStNcHczbUxcQ] deleting index"}}
    ]
}
```

Example Request  
simulate\_pipeline\_dissect\_processor

```
curl --location --request POST "http://localhost:9200/_ingest/pipeline/_simulate" --header "Content-Type: application/json" --header "accept: application/json" --data $'{"pipeline": { "description":"dissect processor demo", "processors":[{" "dissect": { "field": "message", "pattern": "[%{timestamp}][%{log-level}][%{class}] [%{node}] [%{index_doc}]%{action}", "ignore_missing": true }}, {"remove": {"field":["message"]}} ] }, "docs" : [ {"_source": {"message":"[2019-06-20T00:04:58,856][INFO ] [o.e.c.m.MetadataDeleteIndexService] [WTW.local] [cf_etf/RiYRsKyxTGStNcHczbUxcQ] deleting index"}} ] }'
```

## POST simulate\_pipeline\_simple\_conditional\_execution

http://localhost:9200/\_ingest/pipeline/\_simulate

### HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
  "pipeline": {
    "description":"remove the rating field is the rating is equal to a single space string",
    "processors":[{"
      "remove": {
        "field": "rating",
        "if": "ctx.rating == ' '"
      }
    ]
  },
  "docs" : [
    {"_source": {"symbol":"AGT","fund_name":"iShares MSCI Argentina and Global Exposure ETF","rating":" ", "morningstar_category":"Miscellaneous Region","category":"International","family":"iShares","market_cap":"mid","description":"The investment seeks to track the investment results of the MSCI All Argentina 25\50 Index (the \"underlying index\").\n The fund generally will invest at least 90% of its assets in the component securities of the underlying index and in investments that have economic characteristics that are substantially identical to the component securities of the underlying index. The index is designed to measure the broad Argentina equity universe, while including a minimum number of constituents, as defined by MSCI, Inc. (the \"index provider\" or \"MSCI\"). The fund is non-diversified.\""}, "exchange":"Cboe Global Markets EDGX"}}
  ]
}
```

Example Request  
simulate\_pipeline\_simple\_conditional\_execution

```
curl --location --request POST "http://localhost:9200/_ingest/pipeline/_simulate" --header "Content-Type: application/json" --header "accept: application/json" --data $'{"pipeline": { "description":"remove the rating field is the rating is equal to a single space string", "processors":[{" "remove": { "field": "rating", "if": "ctx.rating == ' '\n" } } ] }, "docs" : [ {"_source": {"symbol":"AGT","fund_name":"iShares MSCI Argentina and Global Exposure ETF","rating":" ", "morningstar_category":"Miscellaneous
```

Region\", \"category\": \"International\", \"family\": \"iShares\", \"market\_cap\": \"mid\", \"description\": \"The investment seeks to track the investment results of the MSCI All Argentina 25\\50 Index (the \\\"underlying index\\\" ). The fund generally will invest at least 90% of its assets in the component securities of the underlying index and in investments that have economic characteristics that are substantially identical to the component securities of the underlying index. The index is designed to measure the broad Argentina equity universe, while including a minimum number of constituents, as defined by MSCI, Inc. (the \"index provider\" or \"MSCI\"). The fund is non-diversified.\", \"exchange\": \"Cboe Global Markets EDGX\"} } ] }'

POST get\_document\_empty\_rating\_from\_cf\_etf

http://localhost:9200/cf\_etf/\_search

HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
  "query": {
    "match": {
      "symbol": "AGT"
    }
  }
}
```

Example Request  
get\_document\_empty\_rating\_from\_cf\_etf

```
curl --location --request POST "http://localhost:9200/cf_etf/_search" --header "Content-Type: application/json" --header "accept: application/json" --data $'{"query": { "match": { "symbol": "AGT" } } }'
```

POST simulate\_pipeline\_conditional\_execution\_null\_safe\_operator

http://localhost:9200/\_ingest/pipeline/\_simulate

HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
  "pipeline": {
    "description": "calculate the range of high and low and divide by the close price",
    "processors": [
      { "set": {
        "field": "new_id",
        "value": "{{id}}",
        "if": "ctx.parent?.child != null"
      } }
    ]
  },
  "docs": [
    { "_source": { "id": 1, "parent": { "child": "value" } } },
    { "_source": { "id": 2, "parent": {} } },
    { "_source": { "id": 3 } }
  ]
}
```



Example Request  
simulate\_pipeline\_conditional\_execution\_null\_safe\_operator

```
curl --location --request POST "http://localhost:9200/_ingest/pipeline/_simulate" --header "Content-Type: application/json" --header "accept: application/json" --data $'{"pipeline": {
  "description": "calculate the range of high and low and divide by the close price",
  "processors": [
    {
      "set": {
        "field": "new_id",
        "value": "{{id}}",
        "if": "ctx.parent?.child != null"
      }
    }
  ],
  "docs": [
    {
      "_source": {
        "id": 1,
        "parent": {
          "child": "value"
        }
      }
    },
    {
      "_source": {
        "id": 2,
        "parent": {}
      }
    },
    {
      "_source": {
        "id": 3
      }
    }
  ]
}
```

## PUT define\_for\_market\_cap\_\_null\_processor

http://localhost:9200/\_ingest/pipeline/for\_market\_cap\_null\_processor

### HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
  "description": "for_market_cap_null_processor",
  "processors": [
    {
      "set": {
        "field": "market_cap_type",
        "value": "no_market_cap ETF"
      }
    }
  ]
}
```

Example Request  
define\_for\_market\_cap\_\_null\_processor

```
curl --location --request PUT "http://localhost:9200/_ingest/pipeline/for_market_cap_null_processor" --header "Content-Type: application/json" --header "accept: application/json" --data $'{"description": "for_market_cap_null_processor", "processors": [ {
  "set": {
    "field": "market_cap_type",
    "value": "no_market_cap ETF"
  }
} ] }'
```

## PUT define\_for\_market\_cap\_processor

http://localhost:9200/\_ingest/pipeline/for\_market\_cap\_processor

### HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
  "description": "for_market_cap_processor",
  "processors": [
    {
      "set": {
        "field": "market_cap_type",
        "value": "market_cap ETF"
      }
    }
  ]
}
```

Example Request  
define\_for\_market\_cap\_processor

```
curl --location --request PUT "http://localhost:9200/_ingest/pipeline/for_market_cap_processor" --header "Content-Type: application/json" --header "accept: application/json" --data $'{"description\":"for_market_cap_processor\", \"processors\":[ {\"set\":{ \"field\": \"market_cap_type\", \"value\": \"market_cap ETF\" }} ] }'
```

## GET symbo\_bil\_market\_cap\_null\_etf

http://localhost:9200/cf\_etf/\_search?q=symbol:BIL

### HEADERS

Content-Type  
application/json  
accept  
application/json  
PARAMS

q  
symbol:BIL

Example Request  
symbo\_bil\_market\_cap\_null\_etf

```
curl --location --request GET "http://localhost:9200/cf_etf/_search?q=symbol:BIL" --header "Content-Type: application/json" --header "accept: application/json"
```

## POST simulate\_pipeline\_conditional\_execution\_switch\_case

http://localhost:9200/\_ingest/pipeline/\_simulate

### HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
  "pipeline": {
    "description": "calculate the range of high and low and divide by the close price",
    "processors": [
      {
        "pipeline": {
          "name": "for_market_cap_null_processor",
          "if": "ctx.market_cap == null"
        }
      },
      {
        "pipeline": {
          "name": "for_market_cap_processor",
          "if": "ctx.market_cap != null"
        }
      }
    ]
  },
  "docs": [
    { "_source": { "id": 1, "market_cap": null } },
    { "_source": { "id": 2, "market_cap": "large" } }
  ]
}
```

```
curl --location --request POST "http://localhost:9200/_ingest/pipeline/_simulate" --header "Content-Type: application/json" --header "accept: application/json" --data $'{"pipeline": {
  "description": "calculate the range of high and low and divide by the close price",
  "processors": [
    { "pipeline": { "name": "for_market_cap_null_processor", "if": "ctx.market_cap == null" } },
    { "pipeline": { "name": "for_market_cap_processor", "if": "ctx.market_cap != null" } } ] },
  "docs" : [ { "_source": { "id": 1, "market_cap": null } }, { "_source": { "id": 2, "market_cap":
    "large" } } ] }'
```

POST simulate\_pipeline\_hit\_exception\_error

http://localhost:9200/\_ingest/pipeline/\_simulate

HEADERS

Content-Type  
application/json  
accept  
application/json  
BODY

```
{
  "pipeline": {
    "description": "test parameter on_failure when error occurs",
    "processors": [
      {
        "remove": {
          "field": "rating",
          "on_failure": [
            { "set": { "field": "error", "value": -1 } },
            { "set": { "field": "message", "value": "remove processor failure: {{
_ingest.on_failure_message }}" } } ]
          }
        }
      ]
    },
    "docs" : [
      { "_source": { "id": 3 } }
    ]
  }
}
```

```
curl --location --request POST "http://localhost:9200/_ingest/pipeline/_simulate" --header "Content-Type: application/json" --header "accept: application/json" --data $'{"pipeline": { "description": "test
parameter on_failure when error occurs", "processors": [ { "remove": { "field": "rating",
"on_failure": [ { "set": { "field": "error", "value": -1 } }, { "set": { "field": "message",
"value": "remove processor failure: {{ _ingest.on_failure_message }}" } } ] } } ] }, "docs" : [
{ "_source": { "id": 3 } } ] }'
```