

Chapter 9 – Processing Documents in ingest Pipelines

Example Request - create_pipeline_range_ratio

PUT 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"
      }
    }
  ]
}
```

```
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\\" } } ] }'}
```

Example Request - delete_pipeline_range_ratio

DEL 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}}"
    }
}
]
}

```

```

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", \{"processors\":[ { \set\": { \field\": \range_ratio\", \value\":
\({{high}}-{{low}})/{{close}}\\" } } ] }\'

```

Example Request - delete_pipeline_wildcard_expression

DEL 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}}"
      }
    }
  ]
}

```

```

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", \{"processors\":[ { \set\": { \field\": \range_ratio\", \value\":
\({{high}}-{{low}})/{{close}}\\" } } ] }\'

```

Example Request - simulate_pipeline_range_ratio

POST 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"
    }
  ]
}
```

```
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"}} ] }'
```

Example Request - simulate_pipeline_ad_hoc_range_ratio

POST 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"}
  ]
}
```

```
}
```

```
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": [{ \ "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" } } ] }'
```

Example Request - index_with_pipeline_range_ratio

POST 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"
}
```

```
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" }'
```

Example Request - index_with_pipeline_range_ratio_doc

DEL 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"
}
```

```
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\"}'
```

Example Request - get_document_from_index_with_pipeline_range_ratio

GET http://localhost:9200/cf_etf_pipeline/_doc/1

HEADERS

Content-Type
application/json
accept
application/json

BODY

```
{
}
```

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

Example Request - simulate_pipeline_ad_hoc_kv_processor

POST 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 "}}
  ]
}
```

```
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 \"}} ] }'
```

Example Request - simulate_pipeline_grok_processor

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

HEADERS

Content-Type
application/json
accept
application/json

BODY

```
{
  "pipeline": {
    "description": "grok processor demo",
    "processors": [
      { "grok": {
        "field": "message",
        "patterns": [ "\\[%{TIMESTAMP_ISO8601:timestamp}\\]\\[%{LOGLEVEL:log-
level}%{SPACE}\\]\\[%{JAVACLASS:class}\\]\\[%{SPACE}\\]\\[%{DATA:node}\\]\\[%{SPACE}\\]\\[%{DATA:i
ndex_doc}\\]\\[%{GREEDYDATA: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"}}
    ]
}

```

```

curl --location --request POST "http://localhost:9200/_ingest/pipeline/_simulate" --
header "Content-Type: application/json" --header "accept: application/json" --data
$'{"pipeline": { \ "description\":"grok processor demo",
\ "processors\":[ { \ "grok\": { \ "field\": \ "message\","patterns\":
[ \ "\ \ \ \ [%{TIMESTAMP_ISO8601:timestamp} \ \ \ \ ] \ \ \ \ [%{LOGLEVEL:log-
level}%{SPACE} \ \ \ \ ] \ \ \ \ [%{JAVACLASS:class} \ \ \ \ ] \ \ \ \ [%{SPACE} \ \ \ \ ] \ \ \ \ [%{DATA:node} \ \ \ \ ] \ \ \ \ [%{SPACE} \ \ \ \ ] \ \ \ \ [%{DATA:index_doc} \ \ \ \ ] \ \ \ \ [%{GREEDYDATA: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 \ " } } ] }'

```

Example Request - simulate_pipeline_dissect_processor

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

HEADERS

Content-Type
application/json
accept
application/json

BODY

```

{
  "pipeline": {
    "description": "dissect processor demo",
    "processors": [
      {
        "dissect": {
          "field": "message",
          "pattern":
            "[%{timestamp}][%{log-level}][%{class}] [%{node}]"
        },
        "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" }
      }
    ]
  }
}

```

```

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} \ ],

```



```
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 - get_document_empty_rating_from_cf_etf

POST http://localhost:9200/cf_etf/_search

HEADERS

Content-Type
application/json
accept
application/json

BODY

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

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

Example Request - simulate_pipeline_conditional_execution_null_safe_operator

POST 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}}
    ]
}
```

```
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} ] }'
```

Example Request - define_for_market_cap_null_processor

PUT 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"
    }
  ]
}
```

```
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" } } ] }'
```

Example Request - define_for_market_cap_processor

PUT 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"
      } }
    ]
  }
}

```

```

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\\\" } } ] }'

```

Example Request - symbo_bil_market_cap_null_etf

GET http://localhost:9200/cf_etf/_search?q=symbol:BIL

HEADERS

Content-Type
application/json
accept
application/json

PARAMS

q
symbol:BIL

```

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

```

Example Request - simulate_pipeline_conditional_execution_switch_case

POST 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\\\"}} ] }'

```

Example Request - simulate_pipeline_hit_exception_error

POST 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 } } ] }
```