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}}"
                    }
             }
      ]
```

```
}
```

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

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}}"
                            }
                    }
            ]
}
```

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

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, "unadjustedVolume": 422158, "change":
0.84425, "changePercent": 3.403, "vwap": 25.2926, "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,
\"unadjustedVolume\": 422158, \"change\": 0.84425,
\"changePercent\": 3.403, \"vwap\": 25.2926, \"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\":\"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\"}} ] }'
```

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,
    "unadjustedVolume": 422158,
    "change": 0.84425,
    "changePercent": 3.403,
    "vwap": 25.2926,
    "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,
\"unadjustedVolume\": 422158, \"change\": 0.84425,
\"changePercent\": 3.403, \"vwap\": 25.2926, \"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

```json
{
    "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

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, \"unadjustedVolume\": 422158,
\"change\": 0.84425, \"changePercent\": 3.403, \"vwap\":
25.2926, \"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

```
{


}
```

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

POST simulate_pipeline_grok_processor

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: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_grok_processor

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

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

HEADERS

Content-Type

application/json

accept

application/json

BODY

```json
{
    "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"}}
    ]
}
```

Example Request

```
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","mark
et_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 == \' \'\" } }] }, \"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"
                }}
        ]
}
```

```
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"
```

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"}}
     ]
```

```
}
```

Example Request

simulate_pipeline_conditional_execution_switch_case

```
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}}
      ]
}
```

Example Request

simulate_pipeline_hit_exception_error

```
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}}] }'

CHAPTER9