chapter7

GET
cf_etf_dividend_denormalize_mappings

http://localhost:9200/cf_etf_dividend_denormalize/_mappings

Headers

Content-Type	application/json

Example Request

cf_etf_dividend_denormalize_mappings

```
curl --location --request GET "http://localhost:9200/
cf_etf_dividend_denormalize/_mappings" --header "Content-
Type: application/json"
```

POST cf_etf_dividend_denormalize_search

http://localhost:9200/cf_etf_dividend_denormalize/_search

Headers

Content-Type	application/json

Body   raw (application/json)

```json
{
    "query": {
        "bool": {
            "must": [
                {
                    "range": {
                        "exDate": {
                            "lte": "2016-02-01"
                        }
                    }
                },
                {
                    "range": {
                        "amount": {
                            "gte": 0.1
                        }
                    }
                },
                {
                    "match": {
                        "symbol": "ACWF"
                    }
                }
            ]
        }
    }
}
```

```
curl --location --request POST "http://localhost:9200/
cf_etf_dividend_denormalize/_search" --header "Content-
Type: application/json" --data "{\"query\":{\"bool\":
{\"must\":[{\"range\":{\"exDate\":{\"lte\":
\"2016-02-01\"}}},{\"range\":{\"amount\":{\"gte\":0.1}}},
{\"match\":{\"symbol\":\"ACWF\"}}]}}}"
```

GET

cf_etf_dividend_array_object_mappings

http://localhost:9200/cf_etf_dividend_io/_mappings

Headers

Content-Type	application/json

Example Request

cf_etf_dividend_array_object_mappings

```
curl --location --request GET "http://localhost:9200/
cf_etf_dividend_io/_mappings" --header "Content-Type:
application/json"
```

POST cf_etf_dividend_array_object_search

http://localhost:9200/cf_etf_dividend_io/_search

Headers

Content-Type	application/json

Body   raw (application/json)

```json
{
    "query": {
        "bool": {
            "must": [
                {
                    "range": {
                        "announcement.exDate": {
                            "lte": "2016-02-01"
                        }
                    }
                },
                {
                    "range": {
                        "announcement.amount": {
                            "gte": 0.1
                        }
                    }
                },
                {
                    "match": {
                        "symbol": "ACWF"
                    }
                }
            ]
        }
```

```
        }
}
```

```
curl --location --request POST "http://localhost:9200/
cf_etf_dividend_denormalize/_search" --header "Content-
Type: application/json" --data "{\"query\":{\"bool\":
{\"must\":[{\"range\":{\"announcement.exDate\":{\"lte\":
\"2016-02-01\"}}},{\"range\":{\"announcement.amount\":
{\"gte\":0.1}}},{\"match\":{\"symbol\":\"ACWF\"}}]}}}"
```

POST cf_etf_dividend_array_object_search _none

http://localhost:9200/cf_etf_dividend_io/_search

Headers

Content-Type	application/json

Body   raw (application/json)

```
{
    "query": {
        "bool": {
            "must": [
                {
                    "range": {
```

```
                    "announcement.exDate": {
                        "lte": "2015-12-01"
                    }
                }
            },
            {
                "range": {
                    "announcement.amount": {
                        "gte": 0.2
                    }
                }
            },
            {
                "match": {
                    "symbol": "ACWF"
                }
            }
        ]
    }
}
}
```

```
curl --location --request POST "http://localhost:9200/
cf_etf_dividend_io/_search"  --header "Content-Type:
application/json"  --data "{ \"query\": { \"bool\":
{ \"must\": [ { \"range\": { \"announcement.exDate\":
{ \"lte\": \"2015-12-01\" } } }, { \"range\":
{ \"announcement.amount\": { \"gte\": 0.2 } } },
{ \"match\": { \"symbol\": \"ACWF\" } } ] } } }"
```

GET cf_etf_dividend_nested_mappings

http://localhost:9200/cf_etf_dividend_nested/_mappings

Headers

Content-Type	application/json

```
curl --location --request GET "http://localhost:9200/
cf_etf_dividend_nested/_mappings"   --header "Content-Type:
application/json"
```

POST
cf_etf_dividend_nested_object_search_none

http://localhost:9200/cf_etf_dividend_nested/_search

Headers

Content-Type	application/json

Body   raw (application/json)

```
{
    "query": {
        "bool": {
            "must": [
                {
                    "match": {
                        "symbol": "ACWF"
                    }
                },
                {
                    "nested": {
                        "path": "announcement",
                        "query": {
                            "bool": {
                                "must": [
                                    {
                                        "range": {

"announcement.exDate": {

                                                "lte":
"2015-12-01"

                                            }
                                        }
                                    },
                                    {
                                        "range": {

"announcement.amount": {

                                                "gte": 0.2
                                            }
                                        }
                                    }
                                ]
```

```
                                }
                            }
                        }
                    }
                ]
            }
        }
}
```

```
curl --location --request POST "http://localhost:9200/
cf_etf_dividend_nested/_search" --header "Content-Type:
application/json" --data "{\"query\":{\"bool\":{\"must\":
[{\"match\":{\"symbol\":\"ACWF\"}},{\"nested\":{\"path\":
\"announcement\",\"query\":{\"bool\":{\"must\":[{\"range\":
{\"announcement.exDate\":{\"lte\":\"2015-12-01\"}}},
{\"range\":{\"announcement.amount\":{\"gte\":
0.2}}}]}}}]}}}"
```

POST

cf_etf_dividend_nested_object_search_amount_0.1

http://localhost:9200/cf_etf_dividend_nested/_search

Headers

Content-Type	application/json

Body   raw (application/json)
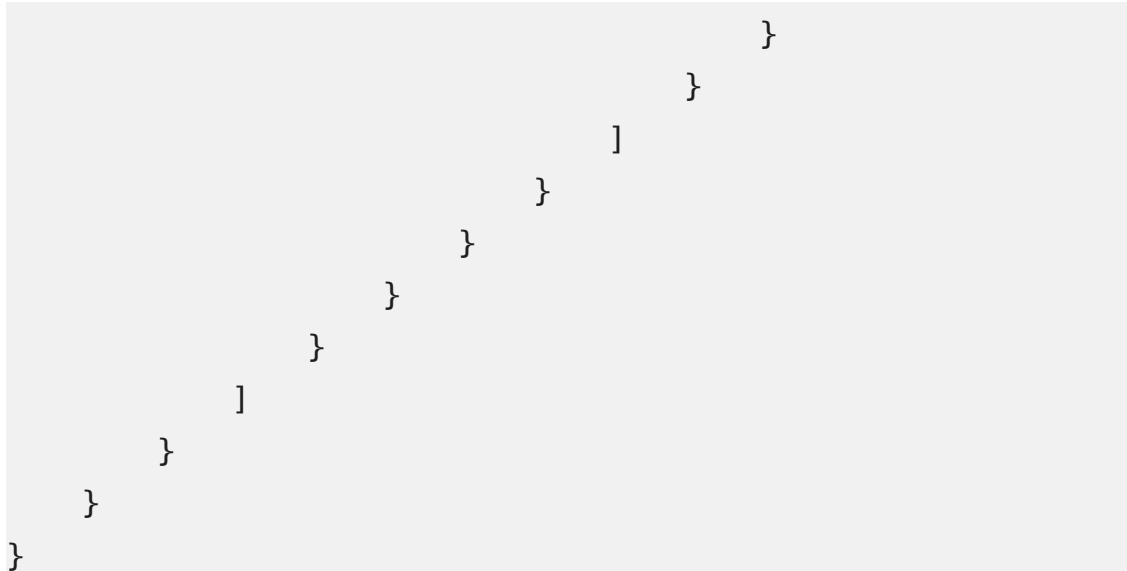
```
{
    "query": {
        "bool": {
            "must": [
                {
                    "match": {
                        "symbol": "ACWF"
                    }
                },
                {
                    "nested": {
                        "path": "announcement",
                        "query": {
                            "bool": {
                                "must": [
                                    {
                                        "range": {
                                            "announcement.exDate": {
                                                "lte": "2015-12-01"
                                            }
                                        }
                                    },
                                    {
                                        "range": {
                                            "announcement.amount": {
                                                "gte": 0.1
                                            }
                                        }
```

```
                    }
                  }
                ]
              }
            }
          }
        }
      ]
    }
  }
}
```

```
curl --location --request POST \

curl --location --request POST "http://localhost:9200/
cf_etf_dividend_nested/_search" --header "Content-Type:
application/json" --data "{\"query\":{\"bool\":{\"must\":
[{\"match\":{\"symbol\":\"ACWF\"}},{\"nested\":{\"path\":
\"announcement\",\"query\":{\"bool\":{\"must\":[{\"range\":
{\"announcement.exDate\":{\"lte\":\"2015-12-01\"}}},
{\"range\":{\"announcement.amount\":{\"gte\":
0.1}}}]}}}}]}}}"
```

POST

cf_etf_dividend_nested_object_search_amount_0.1_inner_hit

http://localhost:9200/cf_etf_dividend_nested/_search

Headers

Content-Type	application/json

Body   raw (application/json)

```json
{
    "query": {
        "bool": {
            "must": [
                {
                    "match": {
                        "symbol": "ACWF"
                    }
                },
                {
                    "nested": {
                        "path": "announcement",
                        "query": {
                            "bool": {
                                "must": [
                                    {
                                        "range": {

"announcement.exDate": {

                                                "lte": "2015-12-01"

                                            }
                                        }
                                    },
                                    {
                                        "range": {
```

```
"announcement.amount": {
                                  "gte": 0.1
                              }
                          }
                      }
                  ]
              }
          },
          "inner_hits": {}
      }
  }
]
}
}
}
```

cf_etf_dividend_nested_object_search_amount_0.1_inner_hit

```
curl --location --request POST "http://localhost:9200/
cf_etf_dividend_nested/_search" --header "Content-Type:
application/json" --data "{\"query\":{\"bool\":{\"must\":
[{\"match\":{\"symbol\":\"ACWF\"}},{\"nested\":{\"path\":
\"announcement\",\"query\":{\"bool\":{\"must\":[{\"range\":
{\"announcement.exDate\":{\"lte\":\"2015-12-01\"}}},
{\"range\":{\"announcement.amount\":{\"gte\":0.1}}}]}},
\"inner_hits\":{}}}]}}}"
```

PUT cf_etf_dividend_join_index

http://localhost:9200/cf_etf_dividend_join/

Headers

Content-Type	application/json

Body   raw (application/json)

```
{
  "mappings": {
    "dynamic": false,
    "properties": {
        "cf_etf_dividend": {
                "type": "join",
                "relations": {
                        "cf_etf":"dividend"
                }
        },
        "symbol": {"type": "keyword"},
        "fund_name": {"type": "completion"},
        "rating": {"type": "byte"},
        "morningstar_category": {"type": "keyword"},
        "category": {"type": "keyword"},
        "family": {"type": "keyword"},
        "market_cap": {"type": "keyword"},
        "description": {
           "type": "text",
            "fields":{
                "raw": {
                        "type":"keyword"
                }
        },
        "analyzer":"description_analyzer",
```

```
            "search_analyzer":"description_analyzer"
        },
        "exchange": {"type": "keyword"},
        "amount": { "type": "float" },
        "declaredDate": { "type": "date" },
        "exDate": { "type": "date" },
        "flag": { "type": "keyword"},
        "paymentDate": { "type": "date" },
        "recordDate": { "type": "date" },
        "currency": { "type": "keyword"},
        "frequency": { "type": "keyword"}
      }
  },
      "settings": {
              "index": {
                      "number_of_shards":3
              },
              "analysis": {
                      "analyzer" : {
                              "description_analyzer": {
                                      "type": "custom",
                                      "tokenizer":
"description_tokenizer",
                                      "filter": ["lowercase",
"description_pattern_replace_filter",
"description_stemmer_filter", "description_stop_filter",
"description_length_filter", "unique"]
                              }
                      },
                      "tokenizer": {
                              "description_tokenizer" :
{"type":"char_group", "tokenize_on_chars": ["whitespace",
"digit", "symbol", "\\n", ",", ":", "!", "?", ";", ",",
```

```
"_", "{", "[", "}", "]", "(", ")", "\\", "\/","\""]}
                    },
                    "filter": {
                        "description_pattern_replace_
filter": {"type":"pattern_replace", "pattern": "(\\w{2,})\
\.", "replacement":"$1"},
                        "description_stemmer_filter"
: {"type":"stemmer", "name":"light_english"},
                        "description_stop_filter":
{"type":"stop", "stopwords_path":"stopwords"},
                        "description_length_filter":
{"type":"length", "min":2}
                    }
                }
        }
}
```

```
curl -XPUT localhost:9200/cf_etf_dividend_join -H "Content-
Type:application/json" --data-binary
@cf_etf_dividend_join_mappings.json
```

POST cf_etf_acwf_join_bulk_index

localhost:9200/cf_etf_dividend_join/_bulk

Headers

Content-Type	application/json

Body   raw (application/json)

```
{"index":{"_index":"cf_etf_dividend_join",
"_id":"12345678"}}
{"symbol": "ACWF", "fund_name": "iShares Edge MSCI
Multifactor Global ETF", "rating": 3,
"morningstar_category": "World Large Stock", "category":
"Equity", "family": "iShares", "market_cap": "large",
"description": "The investment seeks to track the
investment results of the MSCI ACWI Diversified Multiple-
Factor 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
underlying index is designed to contain equity securities
from the MSCI ACWI Index (the \\\"parent index\\\") that
have high exposure to four investment style factors: value,
quality, momentum and low size, while maintaining a level
of risk similar to that of the parent index.","exchange":
"NYSE Arca", "cf_etf_dividend": {"name":"cf_etf"} }
```

Example Request

cf_etf_acwf_join_bulk_index

```
curl --location --request POST "localhost:9200/
cf_etf_dividend_join/_bulk" --header "Content-Type:
application/json" --data $'{"index":
{"_index":"cf_etf_dividend_join","_id":"12345678"}}
\n{"symbol":"ACWF","fund_name":"iShares Edge MSCI
```

Multifactor Global ETF","rating": 3,"morningstar_category":"World Large Stock","category":"Equity","family":"iShares","market_cap": "large","description":"The investment seeks to track the investment results of the MSCI ACWI Diversified Multiple-Factor 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 underlying index is designed to contain equity securities from the MSCI ACWI Index (the \\\"parent index\\\") that have high exposure to four investment style factors: value, quality, momentum and low size, while maintaining a level of risk similar to that of the parent index.", "exchange": "NYSE Arca", "cf_etf_dividend": {"name":"cf_etf"}}\n'

POST cf_etf_dividend_join_search_all

localhost:9200/cf_etf_dividend_join/_search

Headers

Content-Type	application/json

Body   raw (application/json)

{}

Example Request

cf_etf_dividend_join_search_all

```
curl --location --request POST "localhost:9200/
cf_etf_dividend_join/_search"  --header "Content-Type:
application/json" --data "{}"
```

POST cf_etf_dividend_join_bulk_index

localhost:9200/cf_etf_dividend_join/_bulk

Headers

Content-Type	application/json

Body   raw (application/json)

```
{"index":{"_index":"cf_etf_dividend_join",
"routing":"12345678"}}
{"cf_etf_dividend":
      {"name":"dividend", "parent":"12345678"},
      "exDate": "2017-12-19",
      "paymentDate": "2017-12-26",
      "recordDate": "2017-12-20",
      "declaredDate": "2016-12-28",
      "amount": 0.352788,
      "flag": "",
      "type": "Dividend income",
      "qualified": "",
      "indicated": "" }
{"index":{"_index":"cf_etf_dividend_join",
"routing":"12345678"}}
{"cf_etf_dividend":
```

        {"name":"dividend", "parent":"12345678"},
        "exDate": "2017-12-19",
        "paymentDate": "2017-12-26",
        "recordDate": "2017-12-20",
        "declaredDate": "2017-12-18",
        "amount": 0.352788,
        "flag": "FI", "type":
        "Dividend income",
        "qualified": "",
        "indicated": "" }
{"index":{"_index":"cf_etf_dividend_join",
"routing":"12345678"}}
{"cf_etf_dividend":
        {"name":"dividend", "parent":"12345678"},
        "exDate": "2017-06-20",
        "paymentDate": "2017-06-26",
        "recordDate": "2017-06-22",
        "declaredDate": "2017-06-19",
        "amount": 0.243309,
        "flag": "",
        "type": "Dividend income",
        "qualified": "",
        "indicated": "" }
{"index":{"_index":"cf_etf_dividend_join",
"routing":"12345678"}}
{"cf_etf_dividend":
        {"name":"dividend", "parent":"12345678"},
        "exDate": "2016-12-21",
        "paymentDate": "2016-12-28",
        "recordDate": "2016-12-23",
        "declaredDate": "2016-12-20",
        "amount": 0.23977,
        "flag": "",

        "type": "Dividend income",
        "qualified": "",
        "indicated": "" }
{"index":{"_index":"cf_etf_dividend_join",
"routing":"12345678"}}
{"cf_etf_dividend":
        {"name":"dividend", "parent":"12345678"},
        "exDate": "2016-06-22",
        "paymentDate": "2016-06-28",
        "recordDate": "2016-06-24",
        "declaredDate": "2016-06-21",
        "amount": 0.227895,
        "flag": "",
        "type": "Dividend income",
        "qualified": "",
        "indicated": "" }
{"index":{"_index":"cf_etf_dividend_join",
"routing":"12345678"}}
{"cf_etf_dividend":
        {"name":"dividend",
        "parent":"12345678"},
        "exDate": "2015-12-21",
        "paymentDate": "2015-12-28",
        "recordDate": "2015-12-23",
        "declaredDate": "2015-12-18",
        "amount": 0.103705,
        "flag": "",
        "type": "Dividend income",
        "qualified": "",
        "indicated": ""}
{"index":{"_index":"cf_etf_dividend_join",
"routing":"12345678"}}
{"cf_etf_dividend":

```
{"name":"dividend", "parent":"12345678"},
"exDate": "2015-06-25",
"paymentDate": "2015-07-01",
"recordDate": "2015-06-29",
"declaredDate": "2015-06-24",
"amount": 0.111075,
"flag": "",
"type": "Dividend income",
"qualified": "",
"indicated": ""}
```

Example Request

cf_etf_dividend_join_bulk_index

```
curl --location --request POST "localhost:9200/
cf_etf_dividend_join/_bulk" --header "Content-Type:
application/json" --data $'{\"index\":{\"_index\":
\"cf_etf_dividend_join\",\"routing\":\"12345678\"}}
\n{\"cf_etf_dividend\":{\"name\":\"dividend\",\"parent\":
\"12345678\"},\"exDate\":\"2017-12-19\",\"paymentDate\":
\"2017-12-26\",\"recordDate\":\"2017-12-20\",
\"declaredDate\":\"2016-12-28\",\"amount\":
0.352788,\"flag\":\"\",\"type\":\"Dividend income\",
\"qualified\":\"\",\"indicated\":\"\"}\n{\"index\":
{\"_index\":\"cf_etf_dividend_join\",\"routing\":
\"12345678\"}}\n{\"cf_etf_dividend\":{\"name\":
\"dividend\",\"parent\":\"12345678\"},\"exDate\":
\"2017-12-19\",\"paymentDate\":\"2017-12-26\",
\"recordDate\":\"2017-12-20\",\"declaredDate\":
\"2017-12-18\",\"amount\":0.352788,\"flag\":\"FI\",
\"type\":\"Dividend income\",\"qualified\":\"\",
\"indicated\":\"\"}\n{\"index\":{\"_index\":
```

\"cf_etf_dividend_join\",\"routing\":\"12345678\"}}
\n{\"cf_etf_dividend\":{\"name\":\"dividend\",\"parent\":
\"12345678\"},\"exDate\":\"2017-06-20\",\"paymentDate\":
\"2017-06-26\",\"recordDate\":\"2017-06-22\",
\"declaredDate\":\"2017-06-19\",\"amount\":
0.243309,\"flag\":\"\",\"type\":\"Dividend income\",
\"qualified\":\"\",\"indicated\":\"\"}\n{\"index\":
{\"_index\":\"cf_etf_dividend_join\",\"routing\":
\"12345678\"}}\n{\"cf_etf_dividend\":{\"name\":
\"dividend\",\"parent\":\"12345678\"},\"exDate\":
\"2016-12-21\",\"paymentDate\":\"2016-12-28\",
\"recordDate\":\"2016-12-23\",\"declaredDate\":
\"2016-12-20\",\"amount\":0.23977,\"flag\":\"\",\"type\":
\"Dividend income\",\"qualified\":\"\",\"indicated\":\"\"}
\n{\"index\":{\"_index\":\"cf_etf_dividend_join\",
\"routing\":\"12345678\"}}\n{\"cf_etf_dividend\":{\"name\":
\"dividend\",\"parent\":\"12345678\"},\"exDate\":
\"2016-06-22\",\"paymentDate\":\"2016-06-28\",
\"recordDate\":\"2016-06-24\",\"declaredDate\":
\"2016-06-21\",\"amount\":0.227895,\"flag\":\"\",\"type\":
\"Dividend income\",\"qualified\":\"\",\"indicated\":\"\"}
\n{\"index\":{\"_index\":\"cf_etf_dividend_join\",
\"routing\":\"12345678\"}}\n{\"cf_etf_dividend\":{\"name\":
\"dividend\",\"parent\":\"12345678\"},\"exDate\":
\"2015-12-21\",\"paymentDate\":\"2015-12-28\",
\"recordDate\":\"2015-12-23\",\"declaredDate\":
\"2015-12-18\",\"amount\":0.103705,\"flag\":\"\",\"type\":
\"Dividend income\",\"qualified\":\"\",\"indicated\":\"\"}
\n{\"index\":{\"_index\":\"cf_etf_dividend_join\",
\"routing\":\"12345678\"}}\n{\"cf_etf_dividend\":{\"name\":
\"dividend\",\"parent\":\"12345678\"},\"exDate\":
\"2015-06-25\",\"paymentDate\":\"2015-07-01\",
\"recordDate\":\"2015-06-29\",\"declaredDate\":

```
\"2015-06-24\",\"amount\":0.111075,\"flag\":\"\",\"type\":
\"Dividend income\",\"qualified\":\"\",\"indicated\":\"\"}
\n'
```

GET cf_etf_dividend_join_mappings

http://localhost:9200/cf_etf_dividend_join/_mappings

Headers

Content-Type	application/json

Example Request

cf_etf_dividend_join__mappings

```
curl --location --request GET "http://localhost:9200/
cf_etf_dividend_join/_mappings" --header "Content-Type:
application/json"
```

POST
cf_etf_dividend_join_parent_id_query

localhost:9200/cf_etf_dividend_join/_search

Headers

Content-Type	application/json

Body   raw (application/json)

```json
{
    "query": {
        "parent_id": {
            "type": "dividend",
            "id": "12345678"
        }
    }
}
```

Example Request

cf_etf_dividend_join_parent_id_query

curl --location --request POST "localhost:9200/
cf_etf_dividend_join/_search" --header "Content-Type:
application/json" --data "{\"query\":{\"parent_id\":
{\"type\":\"dividend\",\"id\":\"12345678\"}}}"

POST
cf_etf_dividend_join_has_child_search_match_all

localhost:9200/cf_etf_dividend_join/_search

Headers

Content-Type	application/json

Body raw (application/json)

```json
{
    "query": {
        "has_child": {
            "type": "dividend",
            "min_children": 6,
            "max_children": 7,
            "query": {
                "match_all": {}
            }
        }
    }
}
```

```
curl --location --request POST "localhost:9200/
cf_etf_dividend_join/_search" --header "Content-Type:
application/json"--data "{\"query\":{\"has_parent\":
{\"parent_type\":\"cf_etf\",\"query\":{\"match_all\":
{}}}}}"
```

POST

cf_etf_dividend_join_has_child_search

localhost:9200/cf_etf_dividend_join/_search

Headers

Content-Type	application/json

Body   raw (application/json)

```
{
    "query": {
        "has_child": {
            "type": "dividend",
            "query": {
                "prefix": {
                    "currency": "USD"
                }
            }
        }
    }
}
```

cf_etf_dividend_join_has_child_search

```
curl --location --request POST "localhost:9200/
cf_etf_dividend_join/_search" --header "Content-Type:
application/json" --data "{\"query\":{\"has_child\":
{\"type\":\"dividend\",\"query\":{\"prefix\":{\"currency\":
\"USD\"}}}}}"
```

POST

cf_etf_dividend_join_has_parent_search_match_all

localhost:9200/cf_etf_dividend_join/_search

Headers

Content-Type	application/json

Body   raw (application/json)

```
{
    "query": {
        "has_parent": {
            "parent_type": "cf_etf",
            "query": {
                "match_all": {}
            }
        }
    }
}
```

Example Request

cf_etf_dividend_join_has_parent_search_match_all

```
curl --location --request POST "localhost:9200/
cf_etf_dividend_join/_search" --header "Content-Type:
application/json" --data "{\"query\":{\"has_parent\":
{\"parent_type\":\"cf_etf\",\"query\":{\"match_all\":
{}}}}}"
```

POST

cf_etf_dividend_join_has_parent_search

localhost:9200/cf_etf_dividend_join/_search?routing=12345678

Headers

Content-Type	application/json

Params

routing	12345678

Bodyraw (application/json)

```
{
    "query": {
        "has_parent": {
            "parent_type": "cf_etf",
            "query": {
                "match": {
                    "symbol": "ACWF"
                }
            }
        }
    }
}
```

Example Request

cf_etf_dividend_join_has_parent_search

```
curl --location --request POST "localhost:9200/
cf_etf_dividend_join/_search?routing=12345678" --header
"Content-Type: application/json" --data "{\"query\":
{\"has_parent\":{\"parent_type\":\"cf_etf\",\"query\":
{\"match\":{\"symbol\":\"ACWF\"}}}}}"
```