

Compute API (BETA)

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Based on REST principles, the TrendMiner Compute API endpoints provide access to timeseries indexing functionality, timeseries analytics and timeseries index and plot optimized data.



# Chapter 1. Authentication

All requests to the web API require authentication. This is achieved by sending a valid Bearer access token in the request headers. Request tokens are obtained using OAuth2.0.

Requests to the API can be done authenticated as your client or authenticated as a specific user. In both cases, you will first need to create a client and request a token.

When performing actions authenticated as a client, they will belong to `service-account-CLIENTID`.

Make sure you are calling our services over HTTPS when retrieving an access token.

## 1.1. Creating a new client

A new client can be created in ConfigHub: Security → Clients → Add client

## 1.2. Retrieving an access token

To retrieve a token to authenticate as your client, you will need:

- Your client ID
- Your client secret (can be obtained in ConfigHub)

A token is requested from the token endpoint of the authentication service:

*Request*

```
curl --request POST \  
  --url 'https://YOUR_DOMAIN/auth/realms/trendminer/protocol/openid-connect/token' \  
  --header 'content-type: application/x-www-form-urlencoded' \  
  --data grant_type=client_credentials \  
  --data client_id=YOUR_CLIENT_ID \  
  --data client_secret=YOUR_CLIENT_SECRET
```

Upon valid authentication, the response will contain an access token.

*Response*

```
200 OK  
{  
  "access_token": "eyJhbGciOiJIUzUzIiwiaXNjaW50IjoiInR5cCIgOiAiSlldUIiwia2lkIiA6ICJwcXZ1UXB...", ①  
  "expires_in": 300,  
  "refresh_expires_in": 0,  
  "token_type": "Bearer",  
  "not-before-policy": 1571391000,  
  "scope": "email profile"  
}
```

- ① The access token is to be used in every request towards our services (see example below). A new token needs to be fetched when the token expires after 5 minutes.

## 1.3. Doing a request with an access token

*Example request with access token*

```
curl --request GET \  
  --url 'https://YOUR_DOMAIN/compute/[any api]' \  
  --header 'Authorization: Bearer ACCESS_TOKEN'
```

# Chapter 2. Resources

## 2.1. Calculations

### 2.1.1. Calculate the value of a tag on specific time ranges

POST /newCalculation

#### Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>CalculationRequest</b>		<a href="#">CalculationRequest</a>

#### Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok	List[ <a href="#">CalculationResult</a> ]
400	Invalid request	
422	Unprocessable entity (e.g. index not found)	

#### Produces

- application/json

### 2.1.2. Compare layers by a given algorithm

POST /newComparison

#### Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>ComparisonRequest</b>		<a href="#">ComparisonRequest</a>

#### Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok	List[ <a href="#">ComparisonResult</a> ]
400	Invalid request	
422	Unprocessable Entity (e.g. index does not exist)	

## Produces

- application/json

## 2.2. Charting

### 2.2.1. Check existence chart export

HEAD /charting/export/{id}/download

#### Parameters

Type	Name	Description	Schema
<b>Path required</b>	<b>id</b>		UUID

#### Responses

HTTP Code	Description	Schema
404	Chart export not found	
204	No Content	
401	Unauthorized	

### 2.2.2. Check if request exceeds maximum number of points

POST /charting/export/check-maximum-number-of-points

#### Parameters

Type	Name	Description	Schema
<b>Body required</b>	<b>ChartExportRequest</b>		<a href="#">ChartExportRequest</a>

#### Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	CheckMaximumNumberOfPointsResult
400	Invalid request	
422	Unprocessable Entity (e.g. index does not exist)	

## Produces

- /

### 2.2.3. Download chart export

GET /charting/export/{id}/download

#### Parameters

Type	Name	Description	Schema
<b>Path required</b>	<b>id</b>		UUID

#### Responses

HTTP Code	Description	Schema
404	Chart export not found	
204	No Content	
401	Unauthorized	
410	Chart export no longer exists	

### 2.2.4. Export focus chart data

POST /charting/export

#### Parameters

Type	Name	Description	Schema
<b>Body required</b>	<b>ChartExportRequest</b>		<a href="#">ChartExportRequest</a>

#### Responses

HTTP Code	Description	Schema
404	Not Found	String
202	Accepted	
400	Invalid request	
422	Unprocessable Entity (e.g. index does not exist)	

#### Produces

- /

### 2.2.5. Generate plot data to display on the context chart

POST /newContextChart

#### Parameters

Type	Name	Description	Schema
------	------	-------------	--------

<b>Body</b> <i>required</i>	<b>ChartRequest</b>		<a href="#">ChartRequest</a>
--------------------------------	---------------------	--	------------------------------

## Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok	List[ <a href="#">ContextChartResult</a> ]
400	Invalid request	

## Produces

- application/json

## 2.2.6. Generate plot data to display on the focus chart

POST /newFocusChart

### Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>ChartRequest</b>		<a href="#">ChartRequest</a>

## Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	List[ <a href="#">ChartResult</a> ]
400	Invalid request	

## Produces

- /
- application/json

## 2.2.7. Generate histograms for the requested tags

POST /newHistogram

### Parameters

Type	Name	Description	Schema
------	------	-------------	--------

<b>Body</b> <i>required</i>	<b>HistogramRequest</b>		<i>HistogramRequest</i>
--------------------------------	-------------------------	--	-------------------------

### Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	List[ <i>HistogramResultDTO</i> ]
400	Invalid request	
422	Unprocessable Entity (e.g. index does not exist)	

### Produces

- /
- application/json

## 2.2.8. Generate scatter plots for the each pair of requested tags

POST /scatterChart

### Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>ScatterChartRequest</b>		<i>ScatterChartRequest</i>

### Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok	List[ <i>ScatterChartResult</i> ]
400	Invalid request	
422	Unprocessable Entity (e.g. index does not exist)	

### Produces

- application/json

## 2.2.9. Export focus chart data

POST /charting/legacy-export

## Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>LegacyChartExportRequest</b>		<a href="#">LegacyChartExportRequest</a>

## Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	
400	Invalid request	
422	Unprocessable Entity (e.g. index does not exist)	

## Produces

- /

## 2.3. Data

### 2.3.1. Get index data

GET /data/index

## Parameters

Type	Name	Description	Schema
<b>Query</b> <i>required</i>	<b>timeSeriesId</b>		
<b>Query</b> <i>required</i>	<b>interpolationType</b>		
<b>Query</b> <i>required</i>	<b>startDate</b>		
<b>Query</b> <i>required</i>	<b>endDate</b>		
<b>Query</b> <i>required</i>	<b>numberOfIntervals</b>		



## Responses

HTTP Code	Description	Schema
404	Not Found	String
200	OK	List[ <a href="#">WrappedDataPoints</a> ]

## Produces

- /
- application/stream+json

### 2.3.2. Get last value

GET /data/last-value

## Parameters

Type	Name	Description	Schema
<b>Query</b> <i>required</i>	<b>timeSeriesId</b>		
<b>Query</b> <i>required</i>	<b>interpolationType</b>		

## Responses

HTTP Code	Description	Schema
404	Not Found	String
200	OK	LastValueModel
422	Unprocessable entity (e.g. index not found)	LastValueModel

## Produces

- /
- application/json

### 2.3.3. Get interpolated data

POST /interpolatedData

## Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>InterpolatedDataRequestAdapter</b>		<a href="#">InterpolatedDataRequestAdapter</a>

## Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	InterpolatedDataResult
400	Invalid request	
422	Unprocessable Entity (e.g. index does not exist)	MissingIndexDataBody

## Produces

- /
- application/json

### 2.3.4. Get paged interpolated data for some tag

POST /interpolatedData/paged

## Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>PagedInterpolatedDataRequest</b>		<i>PagedInterpolatedDataRequest</i>

## Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	InterpolatedDataPage
400	Invalid request	
422	Unprocessable Entity (e.g. index does not exist)	MissingIndexDataBody

## Produces

- /
- application/json

## 2.4. Indexing

### 2.4.1. Check if index needs repairing

POST /index/check

## Parameters

Type	Name	Description	Schema
------	------	-------------	--------

## Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok. Index check started	

## Produces

- /

### 2.4.2. Delete index data by time series id

`DELETE /index/{id}`

## Parameters

Type	Name	Description	Schema
<b>Path required</b>	<b>id</b>		String

## Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	

## Produces

- /

### 2.4.3. Get paged overview of indexing processes

`GET /index`

## Parameters

Type	Name	Description	Schema
<b>Query required</b>	<b>query</b>	Query to filter results (RSQL syntax)	
<b>Query optional</b>	<b>page</b>	Zero-based page index (0..N)	
<b>Query optional</b>	<b>size</b>	The size of the page to be returned	

<b>Query</b> <i>optional</i>	<b>sort</b>	Sorting criteria in the format: property(,asc	desc). Default sort order is ascending. Multiple sort criteria are supported.
---------------------------------	-------------	---	---

## Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	PagedModelIndexingDetail DTO

## Produces

- /
- application/json
- application/hal+json

### 2.4.4. Get index details by time series id

GET /index/{id}

#### Parameters

Type	Name	Description	Schema
<b>Path required</b>	<b>id</b>		String

## Responses

HTTP Code	Description	Schema
404	Index data for time series not found	
200	Ok	IndexingDetailDTO

## Produces

- application/json

### 2.4.5. Get last indexed point for a given time series

GET /index/{id}/last-indexed-point

#### Parameters

Type	Name	Description	Schema
<b>Path required</b>	<b>id</b>		UUID

## Responses

HTTP Code	Description	Schema
404	Time series or index data not found	
200	Ok	PointDTO

## Produces

- /

## 2.4.6. Check if repair is running

GET `/index/repair/status`

## Parameters

Type	Name	Description	Schema
------	------	-------------	--------

## Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	RepairIndexStatus

## Produces

- /

## 2.4.7. Get repair index overview

GET `/index/repair/progress`

## Parameters

Type	Name	Description	Schema
------	------	-------------	--------

## Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	RepairProgress

## Produces

- /

## 2.4.8. Index a specific tag by time series id

POST /index/{id}

### Parameters

Type	Name	Description	Schema
<b>Path required</b>	<b>id</b>		String

### Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok. Indexing started	
424	Index operation is not possible due to failed service dependencies	

### Produces

- /

## 2.4.9. Refresh index data by time series id

POST /index/{id}/refresh

### Parameters

Type	Name	Description	Schema
<b>Path required</b>	<b>id</b>		String

### Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok. Refresh index started	
424	Index operation is not possible due to failed service dependencies	

### Produces

- /

## 2.4.10. Repair index

POST /index/repair

## Parameters

Type	Name	Description	Schema
------	------	-------------	--------

## Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok. Index repair started	

## Produces

- /

# 2.5. IndexingByName

## 2.5.1. Delete index data by tag name

DELETE /indexing/byName

### Parameters

Type	Name	Description	Schema
<b>Query</b> <i>required</i>	<b>tagName</b>		

### Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok. Index deleted	String

### Produces

- /

## 2.5.2. Get indexed periods

GET /indexing/byName/periods

### Parameters

Type	Name	Description	Schema
<b>Query</b> <i>required</i>	<b>tagNames</b>		[String]

## Responses

HTTP Code	Description	Schema
404	If a tag cannot be found or the user is not authorised	
200	Ok	List[ <a href="#">IndexingPeriodDTO</a> ]
424	The DataSource service is not reachable	

## Produces

- /

### 2.5.3. Get indexing status by tag name

POST [/indexing/byName/newStatus/](#)

#### Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>IndexingStatusRequest</b>		<a href="#">IndexingStatusRequest</a>

## Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok. Indexing percentage	IndexingPercentage
424	DataSource not reachable	

## Produces

- application/json

### 2.5.4. Get indexing status by tag name

POST [/indexing/byName/status/](#)

#### Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>LegacyIndexingStatusRequest</b>		<a href="#">LegacyIndexingStatusRequest</a>

## Responses

HTTP Code	Description	Schema
-----------	-------------	--------



404	Tag not found	
200	Ok. Indexing status in legacy format	LegacyIndexingStatusResponse
424	Datasource not reachable	

### Produces

- application/json

## 2.5.5. Get search period

GET /indexing/byName/search-period

### Parameters

Type	Name	Description	Schema
Query <i>required</i>	<b>tagNames</b>		[String]
Query <i>required</i>	<b>interpolationTypes</b>		[String]

### Responses

HTTP Code	Description	Schema
404	If a tag cannot be found or the user is not authorised	
200	Ok	SearchPeriod
400	tag and interpolation types do not align	
424	The DataSource service is not reachable	

### Produces

- /

## 2.5.6. Get simplified indexing status by tag name

GET /indexing/byName

### Parameters

Type	Name	Description	Schema
Query <i>required</i>	<b>tagName</b>		

## Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok	SimplifiedIndexingStatus

## Produces

- application/json

## 2.5.7. Trigger indexing by tag name

POST /indexing/byName

### Parameters

Type	Name	Description	Schema
<b>Query</b> <i>required</i>	<b>tagName</b>		

### Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok. Indexing started	

## 2.6. PublicDownloadGenerator

### 2.6.1. Generate

POST /download/generate

### Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>LinkModel</b>	The model containing the requested link	<a href="#">LinkModel</a>

### Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	DataModel

## Produces

- /
- application/json

## 2.7. Searches

### 2.7.1. Download search request export

GET /search-requests/{searchRequestId}/export/{exportId}/download

#### Parameters

Type	Name	Description	Schema
<b>Path required</b>	<b>searchRequestId</b>		UUID
<b>Path required</b>	<b>exportId</b>		UUID

#### Responses

HTTP Code	Description	Schema
404	Search request export not found	
200	OK	
401	Unauthorized	
410	Search request export no longer exists	

### 2.7.2. Export results of search request

POST /search-requests/{searchRequestId}/export

#### Parameters

Type	Name	Description	Schema
<b>Path required</b>	<b>searchRequestId</b>		UUID
<b>Body required</b>	<b>SearchRequestExportRequest Model</b>		<a href="#">SearchRequestExportRequestModel</a>

#### Responses

HTTP Code	Description	Schema
404	Not Found	String
202	Accepted	
400	Invalid request	

## Produces

- /

### 2.7.3. Export search results

POST /searches/results/export

#### Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>SearchExportRequestModel</b>		<a href="#">SearchExportRequestModel</a>

#### Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	
400	Invalid request	

## Produces

- /

### 2.7.4. Get search request binning/sorting options

GET /search-requests/{searchRequestId}/binningOptions

#### Parameters

Type	Name	Description	Schema
<b>Path</b> <i>required</i>	<b>searchRequestId</b>		UUID
<b>Query</b> <i>optional</i>	<b>clientTimeZone</b>		

#### Responses

HTTP Code	Description	Schema
404	Search request does not exist	
200	Ok	BinningAndSortingOptions DTO
400	Invalid request	

## Produces

- application/json

## 2.7.5. Get bins for a search request

GET /search-requests/{searchRequestId}/bins

### Parameters

Type	Name	Description	Schema
<b>Path required</b>	<b>searchRequestId</b>	The id of the search request	UUID
<b>Query required</b>	<b>binBy</b>	The type of bins to retrieve for the search. Supported binning types: DATE DURATION	
<b>Query optional</b>	<b>lowerBound</b>	The lower bound for the bin type for which to generate bins	
<b>Query optional</b>	<b>upperBound</b>	The upper bound for the bin type for which to generate bins	
<b>Query optional</b>	<b>sort</b>	Sorting criteria in the format: binType(,asc	desc). Default sort ordering depends on the bin type binType needs to be equivalent to the defined binBy parameter
	<b>Query optional</b>	<b>clientTimeZone</b>	

### Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	BinsDTO

## Produces

- /
- application/json
- application/hal+json

## 2.7.6. Get search request

GET /search-requests/{searchRequestId}

### Parameters

Type	Name	Description	Schema
<b>Path</b> <i>required</i>	<b>searchRequestId</b>		UUID
<b>Query</b> <i>optional</i>	<b>clientTimeZone</b>		

### Responses

HTTP Code	Description	Schema
404	Search request not found	
200	Ok	SearchRequestDTO
400	Invalid request	

### Produces

- application/json

## 2.7.7. Get search results

GET /search-requests/{searchRequestId}/results

### Parameters

Type	Name	Description	Schema
<b>Path</b> <i>required</i>	<b>searchRequestId</b>	The id of the search request	UUID
<b>Query</b> <i>required</i>	<b>binBy</b>	The type of bins to retrieve for the search. Supported binning types: DATE DURATION	
<b>Query</b> <i>optional</i>	<b>lowerBound</b>	The lower bound for the bin type for which to generate bins	
<b>Query</b> <i>optional</i>	<b>upperBound</b>	The upper bound for the bin type for which to generate bins	
<b>Query</b> <i>optional</i>	<b>clientTimeZone</b>		
<b>Query</b> <i>optional</i>	<b>page</b>	Zero-based page index (0..N)	

<b>Query</b> <i>optional</i>	<b>size</b>	The size of the page to be returned	
<b>Query</b> <i>optional</i>	<b>sort</b>	Sorting criteria in the format: property(,asc	desc). Default sort order is ascending. Multiple sort criteria are supported.

## Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	PagedModelSearchResultDTO

## Produces

- /
- application/json
- application/hal+json

## 2.7.8. Highlight search request

POST /search-requests/{searchRequestId}/highlights

## Parameters

Type	Name	Description	Schema
<b>Path required</b>	<b>searchRequestId</b>		UUID
<b>Body required</b>	<b>SearchRequestHighlightRequest</b>		<a href="#">SearchRequestHighlightRequest</a>

## Responses

HTTP Code	Description	Schema
404	Not Found	String
202	Accepted	List[ <a href="#">SearchRequestHighlightRequest</a> ]
400	Invalid request	

## Produces

- /

## 2.7.9. Refinement search request

POST /search-requests/{searchRequestId}/refinementOptions

### Parameters

Type	Name	Description	Schema
<b>Path required</b>	<b>searchRequestId</b>		UUID
<b>Body optional</b>	<b>SearchRequestRefinementRequest</b>		<a href="#">SearchRequestRefinementRequest</a>

### Responses

HTTP Code	Description	Schema
404	Search request not found	
202	Accepted	List[ <a href="#">RefinementOption</a> ]
400	Invalid request	

### Produces

- /

## 2.7.10. Retrieve refinements for a search request

GET /search-requests/{searchRequestId}/refinements

### Parameters

Type	Name	Description	Schema
<b>Path required</b>	<b>searchRequestId</b>		UUID

### Responses

HTTP Code	Description	Schema
404	Search request not found	
200	Ok	List[ <a href="#">Refinement</a> ]

### Produces

- /

## 2.7.11. Perform an area search search

POST /areasearch/newSearch



## Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>AreaSearchRequest</b>		<a href="#">AreaSearchRequest</a>

## Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok	List[ <a href="#">DeprecatedSearchResult</a> ]
400	Invalid request	
422	Unprocessable Entity (e.g. index does not exist)	

## Produces

- application/json

## 2.7.12. Perform a context item search

POST /contextitemsearch/search

## Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>ContextItemSearchRequest</b>		<a href="#">ContextItemSearchRequest</a>

## Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	List[ <a href="#">DeprecatedSearchResult</a> ]
400	Invalid request	

## Produces

- /
- application/json

## 2.7.13. Detect fingerprint deviations (with early warning support)

POST /fingerprintsearch/earlywarning

### Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>FingerprintEarlyWarningRequest</b>		<a href="#">FingerprintEarlyWarningRequest</a>

### Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok	EarlyWarningResult
400	Invalid request	
422	Unprocessable Entity (e.g. index does not exist)	

### Produces

- application/json

## 2.7.14. Perform a fingerprint search

POST /fingerprintsearch/newSearch

### Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>FingerprintSearchRequest</b>		<a href="#">FingerprintSearchRequest</a>

### Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok	List[ <a href="#">SimilaritySearchResult</a> ]
400	Invalid request	
422	Unprocessable Entity (e.g. index does not exist)	

### Produces

- application/json

## 2.7.15. Perform a similarity search

POST /similaritysearch/newSearch

### Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>SimilaritySearchRequest</b>		<a href="#">SimilaritySearchRequest</a>

### Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok	List[ <a href="#">SimilaritySearchResult</a> ]
400	Invalid request	
422	Unprocessable Entity (e.g. index does not exist)	

### Produces

- application/json

## 2.7.16. Perform a step search

POST /stepsearch/newSearch

### Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>StepSearchRequest</b>		<a href="#">StepSearchRequest</a>

### Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok	List[ <a href="#">DeprecatedSearchResult</a> ]
400	Invalid request	
422	Unprocessable Entity (e.g. index does not exist)	

### Produces

- application/json

## 2.7.17. Perform a value-based search

POST /valuebasedsearch/newSearch

### Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>ValueBasedSearchRequest</b>		<a href="#">ValueBasedSearchRequest</a>

### Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok	List[ <a href="#">DeprecatedSearchResult</a> ]
400	Invalid request	
422	Unprocessable Entity (e.g. index does not exist)	

### Produces

- application/json

## 2.7.18. Search on index data

POST /search

### Parameters

Type	Name	Description	Schema
<b>Body</b> <i>required</i>	<b>SearchRequest</b>		<a href="#">SearchRequest</a>

### Responses

HTTP Code	Description	Schema
404	Tag not found	
200	Ok	List[ <a href="#">SearchResult</a> ]
400	Invalid request	
422	Unprocessable entity (e.g. index not found)	

### Produces

- application/json

## 2.7.19. Search on index data

POST /search-requests

### Parameters

Type	Name	Description	Schema
<b>Query</b> <i>optional</i>	<b>clientTimeZone</b>		
<b>Body</b> <i>required</i>	<b>SearchRequest</b>		<i>SearchRequest</i>

### Responses

HTTP Code	Description	Schema
404	Not Found	String
200	Ok	SearchRequestDTO
400	Invalid request	
422	Unprocessable entity (e.g. index not found)	

### Produces

- /
- application/json

## 2.7.20. Check existence search request export

HEAD /search-requests/{searchRequestId}/export/{exportId}/download

### Parameters

Type	Name	Description	Schema
<b>Path required</b>	<b>searchRequestId</b>		UUID
<b>Path required</b>	<b>exportId</b>		UUID

### Responses

HTTP Code	Description	Schema
404	Search request export not found	
204	No Content	
401	Unauthorized	

## 2.7.21. Update and trigger calculations

POST /search-requests/{searchRequestId}/calculations

### Parameters

Type	Name	Description	Schema
<i>Path required</i>	<b>searchRequestId</b>		UUID
<i>Query optional</i>	<b>clientTimeZone</b>		
<i>Body required</i>	<b>CalculationDefinition</b>		<a href="#">CalculationDefinition</a>

### Responses

HTTP Code	Description	Schema
404	Search request does not exist	
200	Ok	SearchRequestDTO
400	Invalid request	
409	Search request is already in progress	
412	Search request detected an error	

### Produces

- application/json

## 2.7.22. Update refinements request

PUT /search-requests/{searchRequestId}/refinements

### Parameters

Type	Name	Description	Schema
<i>Path required</i>	<b>searchRequestId</b>		UUID
<i>Body required</i>	<b>SearchRequestRefinementRequest</b>		<a href="#">SearchRequestRefinementRequest</a>

### Responses

HTTP Code	Description	Schema
404	Search request not found	
202	Accepted	List[ <a href="#">Refinement</a> ]
400	Invalid request	

## Produces

- /

# Chapter 3. Models

## 3.1. *AbstractSearchWarningDto*

Field Name	Required	Type	Description	Format
details		Map of <a href="#">[object]</a>		
message		String		
errorCode		String		

## 3.2. *AreaSearchDefinition*

Field Name	Required	Type	Description	Format
type		String		<i>Enum:</i> SIMILARITY_SEARCH, VALUE_BASED_SEARCH, AREA_SEARCH, STEP_SEARCH, CONTEXT_ITEM_SEARCH,
calculations		List of <a href="#">CalculationDefinition</a>		
queries		List of <a href="#">AreaSearchQuery</a>		
parameters		AreaSearchParameters		

## 3.3. *AreaSearchDefinitionAllOf*

Field Name	Required	Type	Description	Format
queries		List of <a href="#">AreaSearchQuery</a>		
parameters		AreaSearchParameters		



### 3.4. AreaSearchDetails

Field Name	Required	Type	Description	Format
name		String		
description		String		
type		String		
searchPeriod		SearchPeriod		
minimumIntervalLength		Long		int64
isInExtent		Boolean		
xTag		AxisTag		
yTag		AxisTag		

### 3.5. AreaSearchDetailsAllOf

Field Name	Required	Type	Description	Format
minimumIntervalLength		Long		int64
isInExtent		Boolean		
xTag		AxisTag		
yTag		AxisTag		

### 3.6. AreaSearchParameters

Field Name	Required	Type	Description	Format
minimumDuration		Long		int64
searchType		String		<i>Enum:</i> INSIDE_ AREA, OUTSID E_AREA,
searchArea		List of <a href="#">PointCoordinate</a>		

### 3.7. AreaSearchQuery

Field Name	Required	Type	Description	Format
xAxis		TimeSeriesDescriptor		
yAxis		TimeSeriesDescriptor		

### 3.8. AreaSearchRequest

Field Name	Required	Type	Description	Format
contextTimeRange		TimePeriod		
filters		List of <a href="#">FilterTimePeriod</a>		
query		DeprecatedAreaSearchQuery		
params		DeprecatedAreaSearchParameters		

### 3.9. AxisTag

Field Name	Required	Type	Description	Format
name		String		

### 3.10. BinDTO

Field Name	Required	Type	Description	Format
id		String		
upperBound		String		
lowerBound		String		
type		String		
size		Integer		int32
links		List of <a href="#">Link</a>		

### 3.11. BinningAndSortingOptionsDTO

Field Name	Required	Type	Description	Format
options		List of <a href="#">BinningOptionDTO</a>		

Field Name	Required	Type	Description	Format
calculations		List of <i>BinningOptionDTO</i>		
default		SortingOptionDTO		

### 3.12. *BinningOptionDTO*

Field Name	Required	Type	Description	Format
option		String		
links		List of <i>Link</i>		
sortKey		String		

### 3.13. *BinsDTO*

Field Name	Required	Type	Description	Format
bins		List of <i>BinDTO</i>		
size		Integer		int32
links		List of <i>Link</i>		

### 3.14. *BucketDTO*

Field Name	Required	Type	Description	Format
min		Float		float
max		Float		float
totalNumberOfResults		Integer		int32
refinedNumberOfResults		Integer		int32

### 3.15. *CalculationDefinition*

Field Name	Required	Type	Description	Format
name		String		

Field Name	Required	Type	Description	Format
type		String		<i>Enum:</i> MIN, MAX, MEAN, RANGE, START, END, DELTA, INTEGRAL, STDEV,
unit		String		
reference		TimeSeriesDescriptor		

### 3.16. CalculationParameters

Field Name	Required	Type	Description	Format
calculationType		String		<i>Enum:</i> MIN, MAX, MEAN, RANGE, START, END, DELTA, INTEGRAL, STDEV,

### 3.17. CalculationQuery

Field Name	Required	Type	Description	Format
tag		TagDescriptorDTO		
timePeriods		List of <a href="#">CalculationTimePeriod</a>		

### 3.18. CalculationRequest

Field Name	Required	Type	Description	Format
queries		CalculationQuery		
parameters		CalculationParameters		

### 3.19. CalculationResult

Field Name	Required	Type	Description	Format
startDate		Date		date-time
endDate		Date		date-time
value		Float		float
key		String		

### 3.20. CalculationTimePeriod

Field Name	Required	Type	Description	Format
startDate		Date		date-time
endDate		Date		date-time
key		String		

### 3.21. CalculationToExport

Field Name	Required	Type	Description	Format
name		String		
tagName		String		
unit		String		
operator		String		

### 3.22. ChartExportRequest

Field Name	Required	Type	Description	Format
layers		List of <i>Layer</i>		
filterTimePeriods		List of <i>TimePeriod</i>		

Field Name	Required	Type	Description	Format
chartDataResolutionInSeconds		Integer		int32
clientTimeZoneId		String		
excludeFilteredTimePeriods		Boolean		
viewName		String		
downloadName		String		
fileType		String		Enum: XLSX,
exportType		String		Enum: FOCUS_C HART, SEARCH _RESULT ,
downloadLink		String		

### 3.23. ChartRequest

Field Name	Required	Type	Description	Format
timePeriod		TimePeriod		
queries		List of <a href="#">TagDescriptorDTO</a>		
parameters		ChartRequestParameters		

### 3.24. ChartRequestParameters

Field Name	Required	Type	Description	Format
numberOfIntervals		Integer		int32

### 3.25. ChartResult

Field Name	Required	Type	Description	Format
tag		TagDescriptorDTO		
values		List of <a href="#">PointDTO</a>		
error		String		

Field Name	Required	Type	Description	Format
errorCode		String		Enum: OUT_OF_ORDER, ONLY_RAW_VALUES_SUPPORTED, TIMEOUT, REMOTE_SERVICE, SERVICE_UNAVAILABLE, UNEXPECTED, VALIDATION_FAILED, PARSE_FAILED, NOT_ALLOWED, NOT_FOUND, TOO_MANY_REQUESTS, FAILED_DEPENDENCY, PLOT_PERIOD_TOO_LARGE, MISSING_INDEX_DATA,

### 3.26. CheckMaximumNumberOfPointsResult

Field Name	Required	Type	Description	Format
requestExceedsMaximumNumberOfPoints		Boolean		

Field Name	Required	Type	Description	Format
maximumNumberOfPoints		Long		int64

### 3.27. *ComparisonLayerResult*

Field Name	Required	Type	Description	Format
startDate		Date		date-time
endDate		Date		date-time
key		String		
value		Float		float
differenceToBase		Float		float

### 3.28. *ComparisonRequest*

Field Name	Required	Type	Description	Format
query		ComparisonRequestQuery		
params		ComparisonRequestParams		
filters		List of <a href="#">FilterTimePeriod</a>		

### 3.29. *ComparisonRequestParams*



Field Name	Required	Type	Description	Format
comparisonType		String		Enum: MIN, MAX, MEAN, RANGE, START, END, DELTA, INTEGRAL, STDEV, CORRELATION, EVOLUTION, STATISTICAL_SIMILARITY,

### 3.30. ComparisonRequestQuery

Field Name	Required	Type	Description	Format
tag		List of <a href="#">TagDescriptorDTO</a>		
referenceLayer		CalculationTimePeriod		
compareLayers		List of <a href="#">CalculationTimePeriod</a>		

### 3.31. ComparisonResult

Field Name	Required	Type	Description	Format
tag		TagDescriptorDTO		
referenceLayerResult		CalculationResult		
compareLayerResults		List of <a href="#">ComparisonLayerResult</a>		

### 3.32. *ContextChartResult*

Field Name	Required	Type	Description	Format
tag		TagDescriptorDTO		
values		List of <i>PointDTO</i>		
isFullyIndexed		Boolean		

### 3.33. *ContextItemSearchDefinition*

Field Name	Required	Type	Description	Format
type		String		<i>Enum:</i> SIMILARITY_SEARCH, VALUE_BASED_SEARCH, AREA_SEARCH, STEP_SEARCH, CONTEXT_ITEM_SEARCH,
calculations		List of <i>CalculationDefinition</i>		
queries		List of [map]		

### 3.34. *ContextItemSearchDetails*

Field Name	Required	Type	Description	Format
name		String		
description		String		
type		String		
searchPeriod		SearchPeriod		
queries		List of [map]		

### 3.35. *ContextItemSearchDetailsAllOf*

Field Name	Required	Type	Description	Format
queries		List of [map]		

### 3.36. ContextItemSearchRequest

Field Name	Required	Type	Description	Format
contextTimeRange		TimePeriod		
filters		List of <a href="#">FilterTimePeriod</a>		
queries		List of [map]		

### 3.37. CrossAssetValueBasedSearchDetails

Field Name	Required	Type	Description	Format
name		String		
description		String		
type		String		
searchPeriod		SearchPeriod		
contextTimeRange		TimePeriod		
filters		List of <a href="#">FilterTimePeriod</a>		
queries		List of <a href="#">CrossAssetValueBasedSearchQuery</a>		
params		CrossAssetValueBasedSearchParameters		
requestId		UUID		uuid

### 3.38. CrossAssetValueBasedSearchDetailsAllOf

Field Name	Required	Type	Description	Format
contextTimeRange		TimePeriod		
filters		List of <a href="#">FilterTimePeriod</a>		
queries		List of <a href="#">CrossAssetValueBasedSearchQuery</a>		

Field Name	Required	Type	Description	Format
params		CrossAssetValueBasedSearchParameters		
requestId		UUID		uuid

### 3.39. CrossAssetValueBasedSearchParameters

Field Name	Required	Type	Description	Format
assets		List of <a href="#">DataReference</a>		
minimumIntervalLength		Long		int64
operator		String		

### 3.40. CrossAssetValueBasedSearchQuery

Field Name	Required	Type	Description	Format
attributeTemplateId		String		
operator		String		
values		List of <a href="#">[float]</a>		float

### 3.41. DataModel

Field Name	Required	Type	Description	Format
data		String	the signed link data	

### 3.42. DataPoint

Field Name	Required	Type	Description	Format
ts		Date		date-time
value		Float		float

### 3.43. *DataReference*

Field Name	Required	Type	Description	Format
id		String		
name		String		
type		String		<i>Enum:</i> ASSET, ATTRIBUTE, UTE, TAG,

### 3.44. *DataReferenceDescriptor*

Field Name	Required	Type	Description	Format
id		String		
name		String		
type		String		<i>Enum:</i> ASSET, ATTRIBUTE, UTE, TAG,
shift		Long		int64
interpolationType		String		

### 3.45. *DeprecatedAreaPoint*

Field Name	Required	Type	Description	Format
x		Float		float
y		Float		float

### 3.46. *DeprecatedAreaSearchParameters*

Field Name	Required	Type	Description	Format
searchArea		List of <a href="#"><i>DeprecatedAreaPoint</i></a>		

Field Name	Required	Type	Description	Format
searchType		String		Enum: INSIDE_AREA, OUTSIDE_AREA,
minimumIntervalLength		Long		int64

### 3.47. *DeprecatedAreaSearchQuery*

Field Name	Required	Type	Description	Format
xAxisTag		TagDescriptorDTO		
yAxisTag		TagDescriptorDTO		

### 3.48. *DeprecatedSearchResult*

Field Name	Required	Type	Description	Format
startDate		Date		date-time
endDate		Date		date-time
openEnded		Boolean		

### 3.49. *DeprecatedSimilaritySearchParameters*

Field Name	Required	Type	Description	Format
focusTimePeriod		TimePeriod		
detectionThreshold		Float		float
limitResults		Integer		int32

### 3.50. *DeprecatedSimilaritySearchQuery*

Field Name	Required	Type	Description	Format
patternTag		TagDescriptorDTO		
searchInTag		TagDescriptorDTO		

Field Name	Required	Type	Description	Format
searchType		String		Enum: ABSOLUTE_VALUES, FINGERPRINT, SIGNAL_SHAPE,
range		SimilaritySearchRange		
weights		List of <a href="#">DeprecatedSimilaritySearchWeight</a>		

### 3.51. *DeprecatedSimilaritySearchWeight*

Field Name	Required	Type	Description	Format
weight		Float		float
start		Date		date-time
end		Date		date-time

### 3.52. *DeprecatedStepSearchQuery*

Field Name	Required	Type	Description	Format
tagDescriptor		TagDescriptorDTO		
from		StepSearchCondition		
to		StepSearchCondition		

### 3.53. *DeprecatedValueBasedSearchParameters*

Field Name	Required	Type	Description	Format
minIntervalInSeconds		Long		int64

Field Name	Required	Type	Description	Format
searchOperator		String		Enum: AND, OR,

### 3.54. *DeprecatedValueBasedSearchQuery*

Field Name	Required	Type	Description	Format
tagDescriptor		TagDescriptorDTO		
conditionOperator		String		Enum: LESS_THAN, LESS_THAN_OR_EQUAL, EQUAL, NOT_EQUAL, GREATER_THAN, GREATER_THAN_OR_EQUAL, GREATER_THAN_CONSTANT, INSET,
values		List of <a href="#">[float]</a>		float

### 3.55. *EarlyWarningResult*

Field Name	Required	Type	Description	Format
partial		Boolean		
mismatch		Boolean		
score		Float		float

### 3.56. *ErrorResponse*

Field Name	Required	Type	Description	Format
timestamp		Date		date-time



Field Name	Required	Type	Description	Format
errorCode		String		Enum: OUT_OF_ORDER, ONLY_RAW_VALUES_SUPPORTED, TIMEOUT, REMOTE_SERVICE, SERVICE_UNAVAILABLE, UNEXPECTED, VALIDATION_FAILED, PARSE_FAILED, INVALID_DUPLICATE_POINT, NOT_ALLOWED, NOT_FOUND, TOO_MANY_REQUESTS, PLOT_PERIOD_TOO_LARGE, MISSING_INDEX_DATA,
message		String		
details		Map of <a href="#">[string]</a>		

Field Name	Required	Type	Description	Format
HttpStatus		String		Enum: 100 CONTINUE, 101 SWITCHING_PROTOCOLS, 102 PROCESSING, 103 CHECKPOINT, 200 OK, 201 CREATED, 202 ACCEPTED, 203 NON_AUTHORITATIVE_INFORMATION, 204 NO_CONTENT, 205 RESET_CONTENT, 206 PARTIAL_CONTENT, 207 MULTI_STATUS, 208 ALREADY_REPORTED, 226 IM_USED, 300 MULTIPLE_CHOICES, 301 MOVED_PERMANENTLY, 302 FOUND, 302 MOVED
				51

Field Name	Required	Type	Description	Format
statusCode		Integer		int32

### 3.57. *ExportSimilaritySearchQuery*

Field Name	Required	Type	Description	Format
name		String		
shift		Long		int64
searchIn		SimilaritySearchQuerySearchIn		
searchType		String		
weights		List of <a href="#">SimilaritySearchWeight</a>		

### 3.58. *ExportValueBasedSearchQuery*

Field Name	Required	Type	Description	Format
operator		String		
shift		Long		int64
tagName		String		
value		List of <a href="#">string</a>		

### 3.59. *FilterTimePeriod*

Field Name	Required	Type	Description	Format
startDate		Date		date-time
endDate		Date		date-time
type		String		Enum: EXCLUDE, INCLUDE,

### 3.60. *FingerprintEarlyWarningRequest*

Field Name	Required	Type	Description	Format
contextTimePeriod		TimePeriod		
params		FingerprintSearchParameters		
queries		List of <a href="#">FingerprintSearchQuery</a>		

### 3.61. *FingerprintSearchParameters*

Field Name	Required	Type	Description	Format
detectionThreshold		Float		float
duration		Long		int64

### 3.62. *FingerprintSearchQuery*

Field Name	Required	Type	Description	Format
tag		TagDescriptorDTO		
hulls		List of <a href="#">HullValue</a>		

### 3.63. *FingerprintSearchRequest*

Field Name	Required	Type	Description	Format
contextTimePeriod		TimePeriod		
filters		List of <a href="#">FilterTimePeriod</a>		
params		FingerprintSearchParameters		
queries		List of <a href="#">FingerprintSearchQuery</a>		

### 3.64. *FocusChartTag*

Field Name	Required	Type	Description	Format
tagName		String		
shift		Integer		int32
interpolationType		String		

### 3.65. HistogramQueryDTO

Field Name	Required	Type	Description	Format
tag		TagDescriptorDTO		
scale		Scale		

### 3.66. HistogramRequest

Field Name	Required	Type	Description	Format
timePeriod		TimePeriod		
queries		List of <a href="#">HistogramQueryDTO</a>		
filters		List of <a href="#">FilterTimePeriod</a>		

### 3.67. HistogramResultDTO

Field Name	Required	Type	Description	Format
query		HistogramQueryDTO		
values		List of <a href="#">HistogramValue</a>		

### 3.68. HistogramValue

Field Name	Required	Type	Description	Format
frequency		Integer		int32
value		Float		float

### 3.69. *HullValue*

Field Name	Required	Type	Description	Format
minValue	X	Float		float
maxValue	X	Float		float
offset	X	Long		int64

### 3.70. *IndexingDetailDTO*

Field Name	Required	Type	Description	Format
id		String		
name		String		
status		String		
startDate		Date		date-time
endDate		Date		date-time
lastUpdatedDate		Date		date-time
indexingProgress		Float		float
links		List of <a href="#">Link</a>		

### 3.71. *IndexingPercentage*

Field Name	Required	Type	Description	Format
percentage		Float		float

### 3.72. *IndexingPeriodDTO*

Field Name	Required	Type	Description	Format
tagName		String		
startDate		Date		date-time
endDate		Date		date-time
indexed		Boolean		

### 3.73. *IndexingStatusQuery*

Field Name	Required	Type	Description	Format
tag		TagDescriptorDTO		

### 3.74. *IndexingStatusRequest*

Field Name	Required	Type	Description	Format
query		IndexingStatusQuery		

### 3.75. *InterpolatedDataPage*

Field Name	Required	Type	Description	Format
tag		TagDescriptorDTO		
values		List of <i>PointDTO</i>		
nextStartDate		Date		date-time

### 3.76. *InterpolatedDataRequestAdapter*

Field Name	Required	Type	Description	Format
tag		TagDescriptorDTO		
timePeriod		TimePeriod		
step		Integer		int32

### 3.77. *InterpolatedDataResult*

Field Name	Required	Type	Description	Format
tag		TagDescriptorDTO		
values		List of <i>PointDTO</i>		

### 3.78. *LastValueModel*

Field Name	Required	Type	Description	Format
value		Float		float

Field Name	Required	Type	Description	Format
ts		Date		date-time
upToDate		Boolean		

### 3.79. Layer

Field Name	Required	Type	Description	Format
name		String		
dataReferences		List of <a href="#">DataReferenceDescriptor</a>		
timePeriod		TimePeriod		

### 3.80. LegacyChartExportRequest

Field Name	Required	Type	Description	Format
tags		List of <a href="#">array</a>		
timePeriods		List of <a href="#">TimePeriod</a>		
filterPeriods		List of <a href="#">TimePeriod</a>		
multipleOfIndexBlockSize		Integer		int32
clientTimeZoneId		String		
viewName		String		

### 3.81. LegacyIndexingStatusRequest

Field Name	Required	Type	Description	Format
name		String		
shift		Long		int64
interpolationType		String		

### 3.82. LegacyIndexingStatusResponse

Field Name	Required	Type	Description	Format
allowSearch		Boolean		



Field Name	Required	Type	Description	Format
indexed		Boolean		
percentage		Float		float

### 3.83. *Link*

Field Name	Required	Type	Description	Format
rel		String		
href		String		
hreflang		String		
media		String		
title		String		
type		String		
deprecation		String		
profile		String		
name		String		

### 3.84. *LinkModel*

Field Name	Required	Type	Description	Format
link	X	String	The requested link.	
validity		Long	Validity of the requested token, in seconds.	int64

### 3.85. *MissingIndexDataBody*

Field Name	Required	Type	Description	Format
message		String		
path		String		
error		String		
status		Integer		int32
errorCode		String		
timestamp		String		

### 3.86. PageMetadata

Field Name	Required	Type	Description	Format
size		Long		int64
totalElements		Long		int64
totalPages		Long		int64
number		Long		int64

### 3.87. PagedInterpolatedDataRequest

Field Name	Required	Type	Description	Format
tag		TagDescriptorDTO		
timePeriod		TimePeriod		
step		Integer		int32

### 3.88. PagedModelIndexingDetailDTO

Field Name	Required	Type	Description	Format
links		List of <a href="#">Link</a>		
content		List of <a href="#">IndexingDetailDTO</a>		
page		PageMetadata		

### 3.89. PagedModelSearchResultDTO

Field Name	Required	Type	Description	Format
links		List of <a href="#">Link</a>		
content		List of <a href="#">SearchResultDTO</a>		
page		PageMetadata		

### 3.90. PointCoordinate

Field Name	Required	Type	Description	Format
x		Float		float
y		Float		float

### 3.91. *PointDTO*

Field Name	Required	Type	Description	Format
ts		Date		date-time
value		Float		float

### 3.92. *Refinement*

Field Name	Required	Type	Description	Format
option		String		
min		Float		float
max		Float		float

### 3.93. *RefinementOption*

Field Name	Required	Type	Description	Format
start		String		
min		Float		float
max		Float		float
buckets		List of <i>BucketDTO</i>		
option		String		

### 3.94. *RepairIndexStatus*

Field Name	Required	Type	Description	Format
running		Boolean		

### 3.95. *RepairProgress*

Field Name	Required	Type	Description	Format
totalNumberOfTags		Integer		int32
totalCheckedTags		Integer		int32
totalCorruptTags		Integer		int32

Field Name	Required	Type	Description	Format
corruptedTags		Map of <a href="#">[DateTime]</a>		date-time
failedTags		Map of <a href="#">[string]</a>		

### 3.96. Scale

Field Name	Required	Type	Description	Format
min		Float		float
max		Float		float

### 3.97. ScatterChartPoint

Field Name	Required	Type	Description	Format
x		Float		float
y		Float		float
ts		Date		date-time

### 3.98. ScatterChartRequest

Field Name	Required	Type	Description	Format
timePeriod		TimePeriod		
queries		List of <a href="#">TagDescriptorDTO</a>		
params		Integer		int32
filters		List of <a href="#">FilterTimePeriod</a>		

### 3.99. ScatterChartResult

Field Name	Required	Type	Description	Format
tagX		TagDescriptorDTO		
tagY		TagDescriptorDTO		
values		List of <a href="#">ScatterChartPoint</a>		

### 3.100. SearchDefinition

Field Name	Required	Type	Description	Format
type		String		Enum: SIMILARITY_SEARCH, VALUE_BASED_SEARCH, AREA_SEARCH, STEP_SEARCH, CONTEXT_ITEM_SEARCH,
calculations		List of <a href="#">CalculationDefinition</a>		

### 3.101. SearchDetails

Field Name	Required	Type	Description	Format
name		String		
description		String		
type		String		
searchPeriod		SearchPeriod		

### 3.102. SearchDetailsModel

Field Name	Required	Type	Description	Format
name		String		
description		String		

### 3.103. SearchExportRequestModel

Field Name	Required	Type	Description	Format
searchDetails		oneOf<AreaSearchDetails,ContextItemSearchDetails,CrossAssetValueBasedSearchDetails,SimilaritySearchDetails,StepSearchDetails,ValueBasedSearchDetails>		
results		List of <a href="#">SearchResultToExportModel</a>		
calculation		CalculationToExport		
clientTimeZoneId		String		

### 3.104. SearchPeriod

Field Name	Required	Type	Description	Format
startDate		Date		date-time
endDate		Date		date-time

### 3.105. SearchRequest

Field Name	Required	Type	Description	Format
contextTimePeriod		TimePeriod		
exclusionPeriods		List of <a href="#">FilterTimePeriod</a>		
definition	X	oneOf<AreaSearchDefinition,ContextItemSearchDefinition,SimilaritySearchDefinition,StepSearchDefinition,ValueBasedSearchDefinition>		

### 3.106. *SearchRequestDTO*

Field Name	Required	Type	Description	Format
id		UUID		uuid
createdAt		Date		date-time
status		String		<i>Enum:</i> IN_PROGRESS, DONE, ERROR,
completedAt		Date		date-time
errorCode		String		
warnings		List of <a href="#">AbstractSearchWarningDto</a>		
refined		Boolean		
links		List of <a href="#">Link</a>		

### 3.107. *SearchRequestExportRequestModel*

Field Name	Required	Type	Description	Format
searchDetails		SearchDetailsModel		
clientTimeZone		String		
resultType		String		<i>Enum:</i> SEARCH_RESULT, BIN,
results		List of <a href="#">[string]</a>		
sort		Sort		

### 3.108. *SearchRequestHighlight*

Field Name	Required	Type	Description	Format
start		Date		date-time
end		Date		date-time

### 3.109. *SearchRequestHighlightRequest*

Field Name	Required	Type	Description	Format
contextTimePeriod		TimePeriod		
maximumDistinguishablePeriods		Integer		int32

### 3.110. *SearchRequestRefinementRequest*

Field Name	Required	Type	Description	Format
refinements		List of <i>Refinement</i>		

### 3.111. *SearchResult*

Field Name	Required	Type	Description	Format
id		UUID		uuid
start		Date		date-time
end		Date		date-time
calculations		Map of <i>[object]</i>		
properties		Map of <i>[object]</i>		
duration		Long		int64

### 3.112. *SearchResultDTO*

Field Name	Required	Type	Description	Format
id		UUID		uuid
type		String		
start		Date		date-time
end		Date		date-time
duration		Integer		int32
calculations		Map of <i>[object]</i>		
properties		Map of <i>[object]</i>		



Field Name	Required	Type	Description	Format
links		List of <i>Link</i>		

### 3.113. *SearchResultToExportModel*

Field Name	Required	Type	Description	Format
start		Date		date-time
end		Date		date-time
dataReference		String		
calc		String		
score		Float		float

### 3.114. *SimilaritySearchDefinition*

Field Name	Required	Type	Description	Format
type		String		<i>Enum:</i> SIMILARITY_SEARCH, VALUE_BASED_SEARCH, AREA_SEARCH, STEP_SEARCH, CONTEXT_ITEM_SEARCH,
calculations		List of <i>CalculationDefinition</i>		
queries		List of <i>SimilaritySearchQuery</i>		
parameters		SimilaritySearchParameters		

### 3.115. *SimilaritySearchDefinitionAllOf*

Field Name	Required	Type	Description	Format
queries		List of <a href="#">SimilaritySearchQuery</a>		
parameters		SimilaritySearchParameters		

### 3.116. *SimilaritySearchDetails*

Field Name	Required	Type	Description	Format
name		String		
description		String		
type		String		
searchPeriod		SearchPeriod		
originalStartDate		Date		date-time
originalEndDate		Date		date-time
cutOffPercentage		Float		float
tags		List of <a href="#">ExportSimilaritySearchQuery</a>		

### 3.117. *SimilaritySearchDetailsAllOf*

Field Name	Required	Type	Description	Format
originalStartDate		Date		date-time
originalEndDate		Date		date-time
cutOffPercentage		Float		float
tags		List of <a href="#">ExportSimilaritySearchQuery</a>		

### 3.118. *SimilaritySearchParameters*

Field Name	Required	Type	Description	Format
focusTimePeriod		TimePeriod		
detectionThreshold		Float		float

### 3.119. SimilaritySearchQuery

Field Name	Required	Type	Description	Format
source		TimeSeriesDescriptor		
target		TimeSeriesDescriptor		
searchType		String		Enum: ABSOLUTE_VALUES, FINGERPRINT, SIGNAL_SHAPE,
range		SimilaritySearchQueryRange		
weights		List of <a href="#">SimilaritySearchQueryWeight</a>		

### 3.120. SimilaritySearchQueryRange

Field Name	Required	Type	Description	Format
min		Float		float
max		Float		float

### 3.121. SimilaritySearchQuerySearchIn

Field Name	Required	Type	Description	Format
tagName		String		

### 3.122. SimilaritySearchQueryWeight

Field Name	Required	Type	Description	Format
weight		Float		float
start		Date		date-time
end		Date		date-time

### 3.123. *SimilaritySearchRange*

Field Name	Required	Type	Description	Format
min		Float		float
max		Float		float

### 3.124. *SimilaritySearchRequest*

Field Name	Required	Type	Description	Format
contextTimePeriod		TimePeriod		
filters		List of <i>FilterTimePeriod</i>		
queries		List of <i>DeprecatedSimilaritySearchQuery</i>		
params		DeprecatedSimilaritySearchParameters		

### 3.125. *SimilaritySearchResult*

Field Name	Required	Type	Description	Format
startDate		Date		date-time
endDate		Date		date-time
openEnded		Boolean		
score		Float		float

### 3.126. *SimilaritySearchWeight*

Field Name	Required	Type	Description	Format
weight		Integer		int32
startDate		Date		date-time
endDate		Date		date-time

### 3.127. *SimplifiedIndexingStatus*

Field Name	Required	Type	Description	Format
indexed		Boolean		

### 3.128. *Sort*

Field Name	Required	Type	Description	Format
sortKey		String		
direction		String		

### 3.129. *SortingOptionDTO*

Field Name	Required	Type	Description	Format
binningOption		BinningOptionDT O		
sort		String		

### 3.130. *StepSearchCondition*

Field Name	Required	Type	Description	Format
state		Float		float
duration		Integer		int32

### 3.131. *StepSearchDefinition*

Field Name	Required	Type	Description	Format
type		String		<i>Enum:</i> SIMILARITY_SEARCH, VALUE_BASED_SEARCH, AREA_SEARCH, STEP_SEARCH, CONTEXT_ITEM_SEARCH,
calculations		List of <a href="#">CalculationDefinition</a>		
queries		List of <a href="#">StepSearchQuery</a>		

### 3.132. StepSearchDefinitionAllOf

Field Name	Required	Type	Description	Format
queries		List of <a href="#">StepSearchQuery</a>		

### 3.133. StepSearchDetails

Field Name	Required	Type	Description	Format
name		String		
description		String		
type		String		
searchPeriod		SearchPeriod		
tagName		String		
stateFrom		StepSearchStateModel		
stateTo		StepSearchStateModel		
durationFrom		Integer		int32
durationTo		Integer		int32

Field Name	Required	Type	Description	Format
shift		Long		int64

### 3.134. StepSearchDetailsAllOf

Field Name	Required	Type	Description	Format
tagName		String		
stateFrom		StepSearchStateModel		
stateTo		StepSearchStateModel		
durationFrom		Integer		int32
durationTo		Integer		int32
shift		Long		int64

### 3.135. StepSearchQuery

Field Name	Required	Type	Description	Format
reference		TimeSeriesDescriptor		
from		StepSearchQueryCondition		
to		StepSearchQueryCondition		

### 3.136. StepSearchQueryCondition

Field Name	Required	Type	Description	Format
state		Integer		int32
duration		Long		int64

### 3.137. StepSearchRequest

Field Name	Required	Type	Description	Format
contextTimeRange		TimePeriod		
filters		List of <a href="#">FilterTimePeriod</a>		

Field Name	Required	Type	Description	Format
query		DeprecatedStepSearchQuery		

### 3.138. *StepSearchStateModel*

Field Name	Required	Type	Description	Format
name		String		

### 3.139. *TagDescriptorDTO*

Field Name	Required	Type	Description	Format
id		String		
shift		Long		int64
interpolationType		String		

### 3.140. *TimePeriod*

Field Name	Required	Type	Description	Format
startDate		Date		date-time
endDate		Date		date-time

### 3.141. *TimeSeriesDescriptor*

Field Name	Required	Type	Description	Format
id		String		
name		String		
interpolationType		String		<i>Enum:</i> LINEAR, STEPPE D,
shift		Long		int64



### 3.142. ValueBasedSearchDefinition

Field Name	Required	Type	Description	Format
type		String		Enum: SIMILARITY_SEARCH, VALUE_BASED_SEARCH, AREA_SEARCH, STEP_SEARCH, CONTEXT_ITEM_SEARCH,
calculations		List of <a href="#">CalculationDefinition</a>		
queries		List of <a href="#">ValueBasedSearchQuery</a>		
parameters		ValueBasedSearchParameters		

### 3.143. ValueBasedSearchDefinitionAllOf

Field Name	Required	Type	Description	Format
queries		List of <a href="#">ValueBasedSearchQuery</a>		
parameters		ValueBasedSearchParameters		

### 3.144. ValueBasedSearchDetails

Field Name	Required	Type	Description	Format
name		String		
description		String		
type		String		
searchPeriod		SearchPeriod		

Field Name	Required	Type	Description	Format
minimumIntervalLength		String		
operator		String		
queries		List of <a href="#">ExportValueBasedSearchQuery</a>		

### 3.145. ValueBasedSearchDetailsAllOf

Field Name	Required	Type	Description	Format
minimumIntervalLength		String		
operator		String		
queries		List of <a href="#">ExportValueBasedSearchQuery</a>		

### 3.146. ValueBasedSearchParameters

Field Name	Required	Type	Description	Format
minimumDuration		Long		int64
operator		String		Enum: AND, OR,

### 3.147. ValueBasedSearchQuery

Field Name	Required	Type	Description	Format
values		List of <a href="#">[float]</a>		float
reference		TimeSeriesDescriptor		
condition		String		

### 3.148. ValueBasedSearchRequest

Field Name	Required	Type	Description	Format
contextTimeRange		TimePeriod		

Field Name	Required	Type	Description	Format
filters		List of <i>FilterTimePeriod</i>		
queries		List of <i>DeprecatedValueBasedSearchQuery</i>		
params		DeprecatedValueBasedSearchParameters		

### 3.149. *WrappedDataPoints*

Field Name	Required	Type	Description	Format
points		List of <i>DataPoint</i>		
error		ErrorResponse		

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