

TOPIC

Mastercard Trace Financial Crime Consolidated API Specifications

VERSION 1.0.1 (FIRST RELEASE)

DATE 22ND FEBRUARY 2023



Version history

Version	Date	Comments
1.0.0	15 June 2022	First Release
1.0.1	22 February 2023	Amended Production and MTF Server names.

```
openapi: 3.0.0
info:
 description: Consolidated page for the following API services
 version: 1.0.0
 title: Trace And Alert API
 contact:
  name: API Support
  email: apisupport@mastercard.com
  url: https://developer.mastercard.com/support
servers:
 - url: " https://trace.bancnet.fcs.mastercard.com "
  description: "Production server"
 - url: "https://trace.test.fcs.mastercard.com "
  description: "MTF server"
tags:
 - name: "Feedback"
  description: "These endpoints allow you to provide feedback on account, transaction and network alerts."
 - name: "Trace"
  description: "These endpoints allow you to trace the proceeds of financial crime through the payments
network."
 - name: "Alert"
  description: "These endpoints allow you to retrieve alerts on suspicious accounts, transactions and
dispersion networks."
 - name: "Match"
  description: "This endpoint allows you to match transactions without an id."
 /feedback:
  post:
   tags:
    - Feedback
   summary: "Provide feedback on financial crime."
   description: "Use this api to submit feedback about alerts. The feedback you provide may trigger a new
set of alerts which will be made available to other participants."
   operationId: "postFeedback"
   requestBody:
    $ref: "#/components/requestBodies/Feedback"
   responses:
    "200":
     $ref: "#/components/responses/PostFeedbackResponse"
     $ref: "#/components/responses/BadRequestErrorResponseFeedback"
    "401":
     $ref: "#/components/responses/UnauthorisedErrorResponse"
    "403":
     $ref: "#/components/responses/ForbiddenErrorResponseFeedback"
    "404":
     $ref: "#/components/responses/NotFoundErrorResponseFeedback"
    "405":
     $ref: "#/components/responses/MethodNotAllowedErrorResponseFeedback"
    "409":
     $ref: "#/components/responses/ConflictErrorResponseFeedback"
    "415":
     $ref: "#/components/responses/UnsupportedMediaTypeErrorResponseFeedback"
```

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"422":
     $ref: "#/components/responses/UnprocessableEntityErrorResponseFeedback"
    "429":
     $ref: "#/components/responses/RateLimitErrorResponse"
 /financial-crime/networks/{txn id}:
   operationId: "getNetworkById"
   tags:
    - "Trace"
   summary: "Trace the proceeds of financial crime through the payments network"
   description: "This endpoint allows you to retrieve the dispersion networks relating to the provided
transaction.
    This includes the submitted transaction as well as the subsequent movement of funds, and possibly
fund movement
    previous to the supplied transaction. Calling this endpoint may generate alerts for other involved
    participants."
   parameters:
    - $ref: "#/components/parameters/TransactionIdentifier"
    - $ref: "#/components/parameters/TraceType"
   responses:
    "200":
     $ref: "#/components/responses/GetNetworkByldResponseTrace"
     $ref: "#/components/responses/BadRequestErrorResponseTrace"
    "401":
     $ref: "#/components/responses/UnauthorisedErrorResponse"
    "403":
     $ref: "#/components/responses/ForbiddenErrorResponseTrace"
    "404":
     $ref: "#/components/responses/NotFoundErrorResponseTrace"
    "405":
     $ref: "#/components/responses/MethodNotAllowedErrorResponseTrace"
    "429":
     $ref: "#/components/responses/RateLimitErrorResponse"
 /financial-crime/visualisations/networks/{network_alert_id}:
  get:
   operationId: "getVizById"
   tags:
   summary: "Returns the dispersion network visualization for a given networkAlertID."
   description: "This endpoint returns the dispersion network visualisation asset for the participant
accounts."
   parameters:
   - $ref: "#/components/parameters/NetworkAlertIdTrace"
   - $ref: "#/components/parameters/VizFormat"
   - $ref: "#/components/parameters/VizWidth"
   - $ref: "#/components/parameters/VizHeight"
   - $ref: "#/components/parameters/VizLegend"
   - $ref: "#/components/parameters/VizAxis"
   - $ref: "#/components/parameters/VizColour"
   responses:
    "200":
     $ref: "#/components/responses/GetVizByIdResponseTrace"
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"400":
     $ref: "#/components/responses/BadRequestErrorResponseTrace"
     $ref: "#/components/responses/UnauthorisedErrorResponse"
    "403":
     $ref: "#/components/responses/ForbiddenErrorResponseTrace"
    "404":
     $ref: "#/components/responses/NotFoundErrorResponseTrace"
    "405":
     $ref: "#/components/responses/MethodNotAllowedErrorResponseTrace"
    "429":
     $ref: "#/components/responses/RateLimitErrorResponse"
 /alerts/accounts:
  get:
   tags:
    - Alert
   summary: "Retrieve a list of account alerts."
   description: "This endpoint allows you to retrieve a set of account alerts filtered by a comprehensive set
of optional parameters. Calling without any parameters will return a list of the most recent account alerts.
This endpoint can be called regularly to detect new alerts as they are generated or on an ad-hoc basis to
power an interface."
   operationId: "getAccountAlerts"
   parameters:
    - $ref: "#/components/parameters/SinceDate"
    - $ref: "#/components/parameters/LimitAlerts"
    - $ref: "#/components/parameters/PaginationToken"
    - $ref: "#/components/parameters/Filter"
   responses:
    "200":
     $ref: "#/components/responses/GetAccountAlertsResponseAlert"
     $ref: "#/components/responses/BadRequestErrorResponseAlert"
    "401":
     $ref: "#/components/responses/UnauthorisedErrorResponse"
    "403":
     $ref: "#/components/responses/ForbiddenErrorResponseAlert"
    "404":
     $ref: "#/components/responses/NotFoundErrorResponseAlert"
    "405":
     $ref: "#/components/responses/MethodNotAllowedErrorResponseAlert"
    "429":
     $ref: "#/components/responses/RateLimitErrorResponse"
 /alerts/transactions:
  get:
   tags:
    - "Alert"
   summary: "Retrieve a list of transaction alerts"
   description: "This endpoint allows you to retrieve a set of transaction alerts fitting various parameters."
   operationId: "getTransactionAlerts"
   parameters:
    - $ref: "#/components/parameters/SinceDate"
    - $ref: "#/components/parameters/LimitAlerts"
    - $ref: "#/components/parameters/PaginationToken"
    - $ref: "#/components/parameters/Filter"
```

```
responses:
    "200":
     $ref: "#/components/responses/GetTransactionAlertsResponseAlert"
    "400":
     $ref: "#/components/responses/BadReguestErrorResponseAlert"
    "401":
     $ref: "#/components/responses/UnauthorisedErrorResponse"
    "403":
     $ref: "#/components/responses/ForbiddenErrorResponseAlert"
    "404":
     $ref: "#/components/responses/NotFoundErrorResponseAlert"
    "405":
     $ref: "#/components/responses/MethodNotAllowedErrorResponseAlert"
     $ref: "#/components/responses/RateLimitErrorResponse"
 /alerts/networks:
 get:
   tags:
    - "Alert"
   summary: "Retrieve a list of dispersion network alerts"
   description: "This endpoint allows you to retrieve a set of dispersion network alerts fitting various
parameters."
   operationId: "getNetworkAlerts"
   parameters:
    - $ref: "#/components/parameters/SinceDate"
    - $ref: "#/components/parameters/LimitAlerts"
    - $ref: "#/components/parameters/PaginationToken"
    - $ref: "#/components/parameters/Filter"
    - $ref: "#/components/parameters/IncludeAllAlerts"
   responses:
    "200":
     $ref: "#/components/responses/GetNetworkAlertsResponseAlert"
    "400":
     $ref: "#/components/responses/BadRequestErrorResponseAlert"
    "401":
     $ref: "#/components/responses/UnauthorisedErrorResponse"
    "403":
     $ref: "#/components/responses/ForbiddenErrorResponseAlert"
    "404":
     $ref: "#/components/responses/NotFoundErrorResponseAlert"
    "405":
     $ref: "#/components/responses/MethodNotAllowedErrorResponseAlert"
    "429":
     $ref: "#/components/responses/RateLimitErrorResponse"
 /alerts/accounts/{account alert id}:
 get:
  tags:
    - "Alert"
   summary: "Retrieves the account alert for a given alertID."
   description: "This endpoint allows you to retrieve an account alert for a given alertID."
   operationId: "getAccountAlertByAlertID"
   parameters:
    - $ref: "#/components/parameters/AccountAlertId"
   responses:
```

```
"200":
    $ref: "#/components/responses/GetAccountAlertByAlertIDResponseAlert"
    $ref: "#/components/responses/BadRequestErrorResponseAlert"
   "401":
    $ref: "#/components/responses/UnauthorisedErrorResponse"
   "403":
    $ref: "#/components/responses/ForbiddenErrorResponseAlert"
   "404":
    $ref: "#/components/responses/NotFoundErrorResponseAlert"
   "405":
    $ref: "#/components/responses/MethodNotAllowedErrorResponseAlert"
   "429":
    $ref: "#/components/responses/RateLimitErrorResponse"
/alerts/transactions/{txn alert id}:
get:
  tags:
   - "Alert"
  summary: "Retrieves the transaction alert for a given alertID"
  description: "This endpoint allows you to retrieve a transaction alert for a given alertID"
  operationId: "getTransactionAlertByAlertID"
  parameters:
   - $ref: "#/components/parameters/TransactionAlertId"
  responses:
   "200":
    $ref: "#/components/responses/GetTransactionAlertByAlertIDResponseAlert"
   "400":
    $ref: "#/components/responses/BadRequestErrorResponseAlert"
   "401":
    $ref: "#/components/responses/UnauthorisedErrorResponse"
   "403":
    $ref: "#/components/responses/ForbiddenErrorResponseAlert"
   "404":
    $ref: "#/components/responses/NotFoundErrorResponseAlert"
    $ref: "#/components/responses/MethodNotAllowedErrorResponseAlert"
   "429":
    $ref: "#/components/responses/RateLimitErrorResponse"
/alerts/networks/{network alert id}:
get:
 tags:
   - "Alert"
  summary: "Retrieves the dispersion network alert for a given alertID"
  description: "This endpoint allows you to retrieve a dispersion network alert for a given alertID"
  operationId: "getNetworkAlertByAlertID"
  parameters:
  - $ref: "#/components/parameters/NetworkAlertIdAlert"
  - $ref: "#/components/parameters/IncludeAllAlerts"
  responses:
   "200":
    $ref: "#/components/responses/GetNetworkAlertByAlertIDResponseAlert"
    $ref: "#/components/responses/BadRequestErrorResponseAlert"
   "401":
```

```
$ref: "#/components/responses/UnauthorisedErrorResponse"
"403":
$ref: "#/components/responses/ForbiddenErrorResponseAlert"
"404":
$ref: "#/components/responses/NotFoundErrorResponseAlert"
"405":
$ref: "#/components/responses/MethodNotAllowedErrorResponseAlert"
"429":
$ref: "#/components/responses/RateLimitErrorResponse"
/transaction-id-matches:
post:
tags:
- "Match"
summary: "Returns the transaction IDs that are possible matches for the summary:
```

summary: "Returns the transaction IDs that are possible matches for the supplied transaction details" description: "This endpoint evaluates the supplied transaction details and returns a ranked set of transaction IDs that match those details as closely as possible. Note that the supplied transaction details can return multiple transactions. The response matches depends on the supplied service parameter:

* If service matches an onboarded service e.g. FPS, BACS, etc. the match is treated as a 'normal' match. In this case, all matches

HAVE to match the source_id and beneficiary_id exactly, but will allow for some variation in time and value.

* If service is 'OSS', the match is treated as an outbound match, which is a special case. In this case, the provided beneficiary_id is used to find a set of transactions sent by the beneficiary within a short time period after the provided timestamp. Here, OSS stands for 'Out of service scheme' and source_id and value are ignored for the purpose of the match."

```
operationId: "matchTransaction"
   requestBody:
    $ref: "#/components/requestBodies/TransactionIDMatches"
   responses:
    "200":
     $ref: "#/components/responses/MatchTransactionResponseMatchAPI"
    "400":
     $ref: "#/components/responses/BadRequestErrorResponseMatchAPI"
    "401":
     $ref: "#/components/responses/UnauthorisedErrorResponse"
    "403":
     $ref: "#/components/responses/ForbiddenErrorResponseMatchAPI"
    "404":
     $ref: "#/components/responses/NotFoundErrorResponseMatchAPI"
    "405":
     $ref: "#/components/responses/MethodNotAllowedErrorResponseMatchAPI"
    "415":
     $ref: "#/components/responses/UnsupportedMediaTypeErrorResponseMatchAPI"
    "422":
     $ref: "#/components/responses/UnprocessableEntityErrorResponseMatchAPI"
    "429":
     $ref: "#/components/responses/RateLimitErrorResponse"
components:
parameters:
 #Alert
 SinceDate:
   name: "since"
   description: "List account/transaction/network alerts generated since the supplied date, specified as a
```

ISO8601/RFC3339 date-time."

```
example: "2017-07-21T17:32:28Z"
   in: "query"
   schema:
    type: "string"
    format: "date-time"
  LimitAlerts:
   name: "limit"
   description: "Limit the last n account/transaction/network alerts"
   required: false
   example: 200
   in: "query"
   schema:
    type: "integer"
    minimum: 1
    maximum: 999
  PaginationToken:
   name: "pagination_token"
   description: "Parameter to be used to retrieve next or previous set of alerts"
   example: "asc:1617275388000:2SKqogOYg2UQRnP1a4oJ66TFHcvfpZpt"
   in: "query"
   schema:
    type: "string"
    minLength: 1
    maxLength: 256
  Filter:
   name: "filter"
   description: "The filter query parameter provides an ability to write filter expressions for alert records.
By supplying dimensions with comparison operators and expressions, the alerts response can be restricted
for certain records
    ## Following operators are available to filter dimensions:
    | Operator | URL Encoded Format | Description
    Example
    |------|
           | %3D%3D
                           | Equals
                                             Return
    results where networkID is exactly d41d8cd98f00b204e9800998ecf8427e
    | >=
           1 %3E%3D
                           | Greater than or equal to | Return
    results where dwellTime is greater than or equal to 2m5s
           | %3C%3D
                           | Less than or equal to | Return
    results where Generation is less than or equal to 6
           | %3E
                       Greater than
                                            Return
    results where length is greater than 10
           1 %3C
                        Less than
                                           | Return
    results where legitimate n is less than 2
     * Multiple filters can be applied by delimiting the expressions with comma (,)
     * Filter query values must be url encoded to ensure unsafe and non-ASCII characters are accepted."
```

required: false

```
required: false
   examples:
    account:
     value: "owningBank==934,muleScore>=0.7"
     summary: "Filter account alerts where the owning bank id is 934 and the mule score greater than or
equal to 0.7."
    transaction:
     value: "value<=10000,muleScore<0.7"
     summary: "Filter transaction alerts where the value is less than or equal to 10000 and mule score less
than 0.7."
    network:
     value: "dwellTime>=5m5s,Generation<=6"
     summary: "Filter network alerts so the dwell time is greater than or equal to 5m5s and the Generation
is less than or equal to 6."
   in: "query"
   schema:
    type: "string"
  IncludeAllAlerts:
   name: "include_all_alerts"
   description: "Whether to display non owning masked transaction alerts in the dispersion network"
   required: false
   example: true
   in: "query"
   schema:
    type: "boolean"
    default: false
  AccountAlertId:
   name: "account_alert_id"
   description: "Account alert ID to be retrieved"
   required: true
   example: "86781fb3-7854-4794-82e6-ead8a08c11f9"
   in: "path"
   schema:
    $ref: "#/components/schemas/EventIdentifierAlert"
  TransactionAlertId:
   name: "txn_alert id"
   description: "Transaction alert ID to be retrieved"
   required: true
   example: "86781fb3-7854-4794-82e6-ead8a08c11f9"
   in: "path"
   schema:
    $ref: "#/components/schemas/EventIdentifierAlert"
  NetworkAlertIdAlert:
   name: "network_alert_id"
   description: "Dispersion network alert ID to be retrieved"
   required: true
   example: "86781fb3-7854-4794-82e6-ead8a08c11f9"
   in: "path"
   schema:
    $ref: "#/components/schemas/EventIdentifierAlert"
  TransactionIdentifier:
   name: "txn_id"
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description: "Unique identifier of transaction to be traced"
 required: true
 example: "2b588f38-d1bc-40bf-85fc-91397bc98465"
 in: "path"
 schema:
  $ref: "#/components/schemas/TransactionIdentifierTrace"
TraceType:
 name: "type"
 description: "The type of transaction used to trigger the trace"
 required: true
 example: "FRAUD"
 in: "query"
 schema:
  $ref: "#/components/schemas/TraceTypeTrace"
NetworkAlertIdTrace:
 name: "network_alert_id"
 description: "Dispersion network alertID to be visualized."
 required: true
 example: "e99a18c428cb38d5f260853678922e03"
 in: "path"
 schema:
  $ref: "#/components/schemas/EventIdentifierTrace"
VizFormat:
 name: "format"
 description: "Format of the returned asset."
 required: false
 example: "SVG"
 in: "query"
 schema:
  $ref: "#/components/schemas/VizFormatTrace"
VizWidth:
 name: "width"
 description: "Width(px) of the returned asset."
 required: false
 example: 1280
 in: "query"
 schema:
  $ref: "#/components/schemas/VizWidthTrace"
VizHeight:
 name: "height"
 description: "Height(px) of the returned asset"
 required: false
 example: 720
 in: "query"
 schema:
  $ref: "#/components/schemas/VizHeightTrace"
VizLegend:
 name: "legend"
 description: "Boolean filter whether to return legend (true/false)."
 required: false
 example: true
 in: "query"
 schema:
  $ref: "#/components/schemas/VizLegendTrace"
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VizAxis:
  name: "type"
  description: "Type of X axis"
  required: false
  example: "SEQ"
  in: "query"
  schema:
   $ref: "#/components/schemas/VizAxisTrace"
 VizColour:
  name: "colour mode"
  description: "Colour palette of the returned asset."
  required: false
  example: "LIGHT"
  in: "query"
  schema:
   $ref: "#/components/schemas/VizColourTrace"
requestBodies:
 #Feedback
 Feedback:
  description: "Feedback provided on the specified alert ID"
  required: true
  content:
   application/json:
    schema:
     $ref: "#/components/schemas/Feedback"
 #MatchAPI
 TransactionIDMatches:
  description: "Response provided to match transactions without an id."
  required: true
  content:
   application/json:
    schema:
     $ref: "#/components/schemas/TransactionIDMatchesBody"
responses:
 #common
 UnauthorisedErrorResponse:
  description: "Unauthorised - your request could not be authorised."
  content:
   application/json:
    schema:
     $ref: "#/components/schemas/ErrorWrapper"
    examples:
     UnauthorisedExample:
      $ref: "#/components/examples/UnauthorisedExample"
 RateLimitErrorResponse:
  description: "Rate Limited - Exceed the designated rate limit."
  content:
   application/json:
    schema:
     $ref: "#/components/schemas/ErrorWrapper"
    examples:
     RateLimitExample:
      $ref: "#/components/examples/RateLimitExample"
 #Feedback
```

```
PostFeedbackResponse:
 description: "Feedback has been processed"
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/TraceFeedback"
BadRequestErrorResponseFeedback:
 description: "Bad Request."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    BadRequestExample:
     $ref: "#/components/examples/BadRequestExampleFeedback"
ForbiddenErrorResponseFeedback:
 description: "Forbidden - you do not have permission to make this request."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    AccessForbiddenExample:
     $ref: "#/components/examples/AccessForbiddenExample"
    ConsumerForbiddenExample:
     $ref: "#/components/examples/ConsumerForbiddenExampleFeedback"
    ForbiddenNotFoundExample:
     $ref: "#/components/examples/ConsumerForbiddenNotFoundExampleFeedback"
NotFoundErrorResponseFeedback:
 description: "Not found - the url path does not exist or alert id not found."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    NotFoundExample:
     $ref: "#/components/examples/NotFoundExample"
    TransactionNotFoundExample:
     $ref: "#/components/examples/AlertIdNotFoundExampleFeedback"
MethodNotAllowedErrorResponseFeedback:
 description: "Method not allowed - http method not supported."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    MethodNotAllowedExample:
     $ref: "#/components/examples/MethodNotAllowedExampleFeedback"
ConflictErrorResponseFeedback:
 description: "Conflict - Alert ID does not match the specified entity"
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
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examples:
    ConflictExample:
     $ref: "#/components/examples/ConflictExampleFeedback"
UnsupportedMediaTypeErrorResponseFeedback:
 description: "Unsupported media type - Only application/json is allowed."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    UnsupportedMediaTypeExample:
     $ref: "#/components/examples/UnsupportedMediaTypeExampleFeedback"
UnprocessableEntityErrorResponseFeedback:
 description: "Unprocessable Entity - Failed to process the body."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    UnprocessableEntityExample:
     $ref: "#/components/examples/UnprocessableEntityExampleFeedback"
#MatchAPI
MatchTransactionResponseMatchAPI:
 description: "Transaction has been matched"
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/TransactionIDMatchesMatchAPI"
BadRequestErrorResponseMatchAPI:
 description: "Bad Request."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    BadRequestExample:
     $ref: "#/components/examples/BadReguestExampleMatchAPI"
ForbiddenErrorResponseMatchAPI:
 description: "Forbidden - you do not have permission to make this request."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    AccessForbiddenExample:
     $ref: "#/components/examples/AccessForbiddenExample"
    ConsumerForbiddenExample:
     $ref: "#/components/examples/ConsumerForbiddenExampleMatchAPI"
    ForbiddenNotFoundExample:
     $ref: "#/components/examples/ConsumerForbiddenNotFoundExampleMatchAPI"
NotFoundErrorResponseMatchAPI:
 description: "Not found - the url path does not exist."
 content:
```

```
application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    NotFoundExample:
     $ref: "#/components/examples/NotFoundExample"
MethodNotAllowedErrorResponseMatchAPI:
 description: "Method not allowed - http method not supported."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    MethodNotAllowedExample:
     $ref: "#/components/examples/MethodNotAllowedExampleMatchAPI"
UnsupportedMediaTypeErrorResponseMatchAPI:
 description: "Unsupported media type - Only application/json is allowed."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    UnsupportedMediaTypeExample:
     $ref: "#/components/examples/UnsupportedMediaTypeExampleMatchAPI"
UnprocessableEntityErrorResponseMatchAPI:
 description: "Unprocessable Entity - Failed to process the body."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    UnprocessableEntityExample:
     $ref: "#/components/examples/UnprocessableEntityExampleMatchAPI"
#Alert
GetAccountAlertsResponseAlert:
 description: "Account alert has been processed"
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/AccountAlerts"
GetTransactionAlertsResponseAlert:
 description: "Transaction alert has been processed"
 content:
  application/json:
    $ref: "#/components/schemas/TransactionAlerts"
GetNetworkAlertsResponseAlert:
 description: "Network alert has been processed"
 content:
  application/ison:
   schema:
    $ref: "#/components/schemas/NetworkAlerts"
GetAccountAlertByAlertIDResponseAlert:
 description: "Account alert by id has been processed"
```

```
content:
  application/json:
   schema:
    $ref: "#/components/schemas/AccountAlert"
GetTransactionAlertByAlertIDResponseAlert:
 description: "Transaction alert by id has been processed"
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/TransactionAlert"
GetNetworkAlertByAlertIDResponseAlert:
 description: "Network alert by id has been processed"
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/NetworkAlert"
BadRequestErrorResponseAlert:
 description: "Bad Request."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    BadRequestExample:
     $ref: "#/components/examples/BadRequestExampleAlert"
ForbiddenErrorResponseAlert:
 description: "Forbidden - you do not have permission to make this request."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    AccessForbiddenExample:
     $ref: "#/components/examples/AccessForbiddenExample"
    ConsumerForbiddenExample:
     $ref: "#/components/examples/ConsumerForbiddenExampleAlert"
    ForbiddenNotFoundExample:
     $ref: "#/components/examples/ConsumerForbiddenNotFoundExampleAlert"
NotFoundErrorResponseAlert:
 description: "Not found - the url path does not exists or transaction not found."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    NotFoundExample:
     $ref: "#/components/examples/NotFoundExample"
    AlertIdNotFoundExample:
     $ref: "#/components/examples/AlertIdNotFoundExampleAlert"
MethodNotAllowedErrorResponseAlert:
 description: "Method not allowed - http method not supported."
 content:
  application/json:
   schema:
```

```
$ref: "#/components/schemas/ErrorWrapper"
   examples:
    MethodNotAllowedExample:
     $ref: "#/components/examples/MethodNotAllowedExampleAlert"
#Trace
GetNetworkByIdResponseTrace:
 description: "Transaction has been traced."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/TracedNetworks"
GetVizByIdResponseTrace:
 description: "Visualisation has been created."
 content:
  application/pdf:
   schema:
    format: "binary"
  image/svg+xml:
   schema:
    format: "string"
BadRequestErrorResponseTrace:
 description: "Bad Request."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    BadRequestExample:
     $ref: "#/components/examples/BadRequestExampleTrace"
ForbiddenErrorResponseTrace:
 description: "Forbidden - you do not have permission to make this request."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    AccessForbiddenExample:
     $ref: "#/components/examples/AccessForbiddenExample"
    ConsumerForbiddenExample:
     $ref: "#/components/examples/ConsumerForbiddenExampleTrace"
    ForbiddenNotFoundExample:
     $ref: "#/components/examples/ConsumerForbiddenNotFoundExampleTrace"
NotFoundErrorResponseTrace:
 description: "Not found - the url path does not exists or transaction not found."
 content:
  application/json:
   schema:
    $ref: "#/components/schemas/ErrorWrapper"
   examples:
    NotFoundExample:
     $ref: "#/components/examples/NotFoundExample"
    TransactionNotFoundExample:
     $ref: "#/components/examples/TransactionNotFoundExampleTrace"
MethodNotAllowedErrorResponseTrace:
```

```
description: "Method not allowed - http method not supported."
  content:
   application/json:
    schema:
     $ref: "#/components/schemas/ErrorWrapper"
    examples:
     MethodNotAllowedExample:
      $ref: "#/components/examples/MethodNotAllowedExampleTrace"
schemas:
#common
 ErrorWrapper:
  description: "A top level object for errors."
  type: "object"
  required:
   - Errors
  properties:
   Errors:
    $ref: "#/components/schemas/Errors"
 Errors:
  description: "Object that contains the list of errors."
  type: "object"
  required:
   - Error
  properties:
   Error:
    $ref: "#/components/schemas/ErrorList"
 ErrorList:
  description: "The list of errors."
  type: "array"
  minItems: 1
  items:
   $ref: "#/components/schemas/Error"
 Error:
  description: "A single error."
  type: "object"
  properties:
   Source:
    type: "string"
    description: "Information about where the error happened."
    example:
      - "FEEDBACK FINANCIAL CRIME"
      - "MATCH_FINANCIAL_CRIME"
      - "ALERT FINANCIAL CRIME"
      - "TRACE FINANCIAL CRIME"
    minLength: 1
    maxLength: 1000
   ReasonCode:
    type: "string"
    description: "The http error code in words."
    example: "BAD REQUEST"
    minLength: 1
    maxLength: 100
   Description:
    type: "string"
```

```
description: "A description of the error."
     example: "We could not handle your request."
     minLength: 1
     maxLength: 1000
    Recoverable:
     type: "boolean"
     description: "Indicates if the request can be presented again for processing."
    Details:
     type: "string"
     description: "More details about the error."
     example: "The request contains a bad payload"
     minLength: 1
     maxLength: 10000
 #Feedback
  Feedback:
   type: "object"
   required:
    - "alertID"
    - "alertType"
    - "entityID"
    - "decisionDate"
    - "feedback"
   properties:
    alertID:
     type: "string"
     description: "Reference to the original alertID on which feedback is based."
     example: "e99a18c428cb38d5f260853678922e03"
     minLength: 10
     maxLength: 100
    alertType:
     type: "string"
     description: "Type of alert provided by the trace financial crime api."
     example: "ACCOUNT_ALERT"
     enum:
      - "ACCOUNT_ALERT"
      - "TRANSACTION ALERT"
      - "NETWORK ALERT"
     minLength: 5
     maxLength: 100
    entityID:
     type: "string"
     description: "Unique, consistent account/transaction or network identifier depending on the
alertType, if account use IBAN following ISO 13616 where possible"
     example: "GB98MIDL07009312345678"
     minLength: 5
     maxLength: 100
    decisionDate:
     type: "string"
     description: "Date on which the decision was taken by the financial institution as per ISO 8601."
     example: "2017-07-21T17:32:28.001Z"
     format: "date-time"
    feedback:
```

```
type: "string"
    description: "The most recent feedback label received against this account alert"
    example: "ACTIONED MULE"
    enum:
     - "ACTIONED_MULE"
     - "CONFIRMED_LEGITIMATE"
    minLength: 5
    maxLength: 100
 TraceFeedback:
  type: "object"
  required:
   - "feedbackID"
  properties:
   feedbackID:
    description: "The unique ID of the feedback response."
    type: "string"
    example: "2b588f38d1bc40bf85fc91397bc98465"
    minLength: 1
    maxLength: 100
#MatchAPI
 TransactionIDMatchesBody:
  type: "object"
  required:
   - "service"
   - "sourceID"
   - "beneficiaryID"
   - "transactionTime"
   - "amount"
  properties:
   service:
    type: string
    description: "Code describing service that transaction is a part of."
    example: "FPS"
    enum:
    - "Bacs"
    - "FPS"
    minLength: 3
    maxLength: 4
   sourceID:
    type: string
    description: "Source account identifier"
    example: "GB98MIDL07009312345678"
    minLength: 5
    maxLength: 34
    nullable: false
   beneficiaryID:
    type: string
    description: "Recipient of the payment"
    example: "GB98MIDL07009312345678"
    minLength: 5
    maxLength: 34
    nullable: false
```

transactionTime:

```
type: "string"
     description: "Date time as per ISO 8601."
     example: "2017-07-21T17:32:28.001Z"
     format: "date-time"
    amount:
     type: "integer"
     description: "The integer value of the payment in the fractional unit (e.g. pence, cents) where used
and in the main unit (e.g. krÃ3na) when fractional units are not used."
     example: 10034
     format: "int64"
     minimum: 1
     maximum: 5000000000000
  AccountIdentifierMatchAPI:
   type: "string"
   description: "Unique, consistent account identifier, ideally the IBAN following ISO 13616 where
possible."
   example: "GB98MIDL07009312345678"
   minLength: 5
   maxLength: 34
   nullable: false
  ValueMatchAPI:
   type: "integer"
   description: "The integer value of the payment in the fractional unit (e.g. pence, cents) where used and
in the main unit (e.g. króna) when fractional units are not used."
   example: 10034
   format: "int64"
   minimum: 1
   maximum: 5000000000000
  TransactionIdentifierMatchAPI:
   type: "string"
   description: "Unique transaction identifier."
   example: "2b588f38-d1bc-40bf-85fc-91397bc98465"
   minLength: 10
   maxLength: 100
  TransactionIDMatchesMatchAPI:
   type: "object"
   properties:
    matchID:
     type: "string"
     description: "Unique match identifier."
     example: "e99a18c428cb38d5f260853678922e03"
     minLength: 10
     maxLength: 100
    sourceID:
     $ref: "#/components/schemas/AccountIdentifierMatchAPI"
    beneficiaryID:
     $ref: "#/components/schemas/AccountIdentifierMatchAPI"
    refTime:
     type: "string"
     description: "Time associated with a match as per ISO 8601."
     example: "2017-07-21T17:32:28.001Z"
     format: "date-time"
    matches:
     description: "List of matched transactions."
```

```
type: "array"
     items:
      properties:
       txnID:
        $ref: "#/components/schemas/TransactionIdentifierMatchAPI"
       time:
        type: "string"
        description: "Time associated with a transaction as per ISO 8601."
        example: "2017-07-21T17:32:28.001Z"
        format: "date-time"
       amount:
        $ref: "#/components/schemas/ValueMatchAPI"
 #Alert
  AlertsMetadata:
   type: "object"
   properties:
    totalRecords:
     type: "integer"
     description: "The number of alerts available with the search"
     example: 505
    displayedRecords:
     type: "integer"
     description: "The number of alerts displayed in the response"
     example: 56
    nextPaginationToken:
     description: "Token which can be used with 'pagination token' to retrieve next set of alerts"
     type: "string"
     example: "asc:1617275388000:2SKqogOYg2UQRnP1a4oJ66TFHcvfpZpt"
     minLength: 1
     maxLength: 256
    previousPaginationToken:
     description: "Token which can be used with 'pagination token' to retrieve previous set of alerts"
     type: "string"
     example: "asc:1617275388000:2SKqogOYg2UQRnP1a4oJ66TFHcvfpZpt"
     minLength: 1
     maxLength: 256
  EventIdentifierAlert:
   type: "string"
   description: "Unique event identifier."
   example: "e99a18c428cb38d5f260853678922e03"
   minLength: 10
   maxLength: 100
  AccountIdentifierAlert:
   type: "string"
   description: "Unique, consistent account identifier, ideally the IBAN following ISO 13616 where
possible."
   example: "GB98MIDL07009312345678"
   minLength: 5
   maxLength: 34
   nullable: false
  TransactionIdentifierAlert:
   type: "string"
   description: "Unique transaction identifier."
```

```
example: "2b588f38-d1bc-40bf-85fc-91397bc98465"
   minLength: 10
   maxLength: 100
  BankIdentifierAlert:
   type: "string"
   description: "Bank Identifier, can be Bank Identifier Code or Business Identifier Code (BIC) following ISO
9362; If this account is a source account, this field maps onto the pacs.008
FIToFICstmrCdtTrf/GrpHdr/InstgAgt for the first leg of the transaction. If this account is the destination
account this field maps onto the FIToFICstmrCdtTrf/GrpHdr/InstdAgt for the final leg."
   example: "DEUTDEFF"
   minLength: 1
   maxLength: 20
  MuleScoreAlert:
   type: "number"
   description: "The probability of an account being a money mule"
   example: 0.87
   minimum: 0
   maximum: 1
  GenerationAlert:
   type: "integer"
   description: "The generation of an account relative to the start of a specific dispersion. The account that
receives the fraudulent funds from the victim is generation 1."
   example: 4
   minimum: 1
   maximum: 100
  TraceTypeAlert:
   type: "string"
   description: "Description of the transaction, e.g. 'FRAUD', 'SUSPECT', 'RETRACTION', 'ROMANCE_SCAM',
'PURCHASE_SCAM','INVESTMENT_SCAM', 'INVOICE_SCAM', 'ADVANCE_FEE_SCAM',
'IMPERSONATION_SCAM','FAMILY_EMERGENCY_SCAM'"
   example: "FRAUD"
   minLength: 5
   maxLength: 100
  FeedbackStatus:
   type: "string"
   description: "The most recent feedback label received against this account alert, e.g. 'ACTIONED_MULE',
'CONFIRMED_LEGITIMATE'"
   example: "ACTIONED MULE"
   minLength: 5
   maxLength: 100
  AccountAlert:
   type: object
   required:
    - "id"
    - "networkAlertID"
    - "accountID"
    - "networkID"
    - "owningBankID"
    - "owningBankName"
    - "time"
    - "muleScore"
    - "endpointFlag"
    - "receivesSalary"
   description: "A minimal account model containing additional alert properties"
```

```
properties:
    id:
     type: "string"
     description: "Unique account alert identifier."
     example: "e99a18c428cb38d5f260853678922e03"
     minLength: 10
     maxLength: 100
    networkAlertID:
     type: "string"
     description: "Unique network alert identifier."
     example: "e99a18c428cb38d5f260853678922e03"
     minLength: 10
     maxLength: 100
    accountID:
     $ref: "#/components/schemas/AccountIdentifierAlert"
    networkID:
     type: "string"
     description: "Unique network identifier."
     example: "2b588f38-d1bc-40bf-85fc-91397bc98465"
     minLength: 10
     maxLength: 100
    owningBankID:
     $ref: "#/components/schemas/BankIdentifierAlert"
    owningBankName:
     type: "string"
     description: "Owning bank name - this is the bank that owns the account."
     example: "OwningBank"
     minLength: 1
     maxLength: 100
    time:
     type: "string"
     description: "The time associated with the account alert as per ISO 8601."
     example: "2017-07-21T17:32:28.001Z"
     format: date-time
    name:
     type: "string"
     description: "Name against the account"
     example: "Charlié Döe"
     minLength: 1
     maxLength: 100
    muleScore:
     $ref: "#/components/schemas/MuleScoreAlert"
    sourceTransactionValue:
     type: "integer"
     description: "The value of the source transaction in a dispersion network as the integer value of the
payment in the fractional unit (e.g. pence, cents) where used and in the main unit (e.g. króna) when
fractional units are not used."
     example: 10034
     format: "int64"
     minimum: 1
     maximum: 5000000000000
    endpointFlag:
     type: "boolean"
     description: "This account alert is an endpoint"
```

```
example: true
    numOutboundRelationships:
     type: "integer"
     description: "The number of outbound relationships of this account at the time of the alert"
     example: 3
     minimum: 0
     maximum: 100
    numInboundRelationships:
     type: "integer"
     description: "The number of inbound relationships of this account at the time of the alert"
     example: 7
     minimum: 0
     maximum: 100
    numScheduledMandates:
     type: "integer"
     description: "The number of scheduled mandates associated with this account at the time of the alert"
     example: 2
     minimum: 0
     maximum: 100
    firstAppearance:
     type: "string"
     description: "The first time we observed this account in a dispersion"
     example: "2017-07-21T17:32:28.001Z"
     format: "date-time"
    mostRecentAppearance:
     type: string
     description: "The most recent time we observed this account in a dispersion, before this alert"
     example: "2017-07-21T17:32:28.001Z"
     format: "date-time"
    firstTransactionTime:
     type: "string"
     description: "The time of the first transaction ever seen associated with this account"
     example: "2017-07-21T17:32:28.001Z"
     format: "date-time"
    mostRecentTransactionTime:
     type: "string"
     description: "The time of the most recent transaction seen associated with this account relative to the
time of the alert"
     example: "2017-07-21T17:32:28.001Z"
     format: "date-time"
    receivesSalary:
     type: "boolean"
     description: "If true, this account is known to receive a salary"
     example: true
    dwellTime:
     type: string
     description: "If appropriate, the dwell time is the amount of time that funds spent in this account
during the dispersion that generated this alert. If this account was a source of funds or an endpoint then
this field will be blank. This field is formatted as an ISO8601 duration."
     example: "P3Y6M4DT12H30M5S"
     pattern:
"^P(?!$)(\\d+(?:\\.\\d+)?Y)?(\\d+(?:\\.\\d+)?M)?(\\d+(?:\\.\\d+)?D)?(T(?=\\d)(\\d+(?:\\.
\\d+)?H)?(\\d+(?:\\.\\d+)?M)?(\\d+(?:\\.\\d+)?S)?)?$"
    numNetworks:
```

type: "integer"

description: "The number of dispersion networks we have seen this account be a part of, including the dispersion that caused this alert"

example: 3 maximum: 1000 minimum: 1

numTracedNetworks:

type: integer

description: "The number of traced dispersion networks this account has been a part of"

example: 2 maximum: 1000 minimum: 1 generation:

\$ref: "#/components/schemas/GenerationAlert"

traceType:

\$ref: "#/components/schemas/TraceTypeAlert"

totalSuspiciousValueInbound:

type: integer

description: "The total value of suspicious funds that have been sent to this account as the integer value of the payment in the fractional unit (e.g. pence, cents) where used and in the main unit (e.g. króna) when fractional units are not used."

example: 10034 format: "int64" minimum: 1

maximum: 50000000000000 totalSuspiciousValueOutbound:

type: "integer"

description: "The total value of suspicious funds that have been sent from this account as the integer value of the payment in the fractional unit (e.g. pence, cents) where used and in the main unit (e.g. króna) when fractional units are not used."

example: 10034 format: "int64" minimum: 1

maximum: 5000000000000

totalValueInbound: type: "integer"

description: "The total value of funds that have been sent to this account over last 13 months as the integer value of the payment in the fractional unit (e.g. pence, cents) where used and in the main unit (e.g. $kr\tilde{A}^3$ na) when fractional units are not used."

example: 10034 format: "int64" minimum: 1

maximum: 5000000000000

totalValueOutbound: type: "integer"

description: "The total value of funds that have been sent from this account over last 13 months as the integer value of the payment in the fractional unit (e.g. pence, cents) where used and in the main unit (e.g. króna) when fractional units are not used."

example: 10034 format: "int64" minimum: 1

maximum: 5000000000000

generations: type: "array"

```
items:
      type: "integer"
      minimum: 1
      maximum: 100
     description: "The generations that this account has appeared in across all the other dispersion
networks it has occurred in"
     example:
      - 1
      - 1
      - 2
      - 3
      - 3
      - 3
    mostRecentFeedback:
     $ref: "#/components/schemas/FeedbackStatus"
    parentAlertID:
     type: "string"
     description: "Reference to the original alertID on which feedback was based"
     example: "e99a18c428cb38d5f260853678922e03"
     minLength: 10
     maxLength: 1000
    decisionDate:
     type: "string"
     description: "Date on which the decision was taken by the financial institution"
     example: "2017-07-21T17:32:28.001Z"
     format: "date-time"
  AccountAlerts:
   allOf:
    - $ref: "#/components/schemas/AlertsMetadata"
    - type: "object"
     properties:
      alerts:
       description: "List of account alerts"
        $ref: "#/components/schemas/AccountAlert"
  ValueAlert:
   type: integer
   description: "The integer value of the payment in the fractional unit (e.g. pence, cents) where used and
in the main unit (e.g. króna) when fractional units are not used."
   example: 10034
   format: int64
   minimum: 1
   maximum: 9223372036854776000
  TransactionAlert:
   type: object
   required:
    - "networkAlertID"
    - "networkID"
    - "time"
    - "txnTime"
    - "sourceID"
    - "destID"
    - "sourceBankID"
    - "destBankID"
```

```
- "value"
description: "A minimal transaction model containing additional alert properties."
properties:
id:
 type: "string"
  description: "Unique transaction alert identifier."
 example: "e99a18c428cb38d5f260853678922e03"
  minLength: 10
  maxLength: 100
 txnID:
 type: "string"
 description: "Unique transaction identifier."
 example: "2b588f38-d1bc-40bf-85fc-91397bc98465"
 minLength: 10
  maxLength: 100
 networkAlertID:
 type: "string"
 description: "Unique network alert identifier."
 example: "e99a18c428cb38d5f260853678922e03"
  minLength: 10
  maxLength: 100
 networkID:
 type: "string"
 description: "Unique network identifier."
 example: "2b588f38-d1bc-40bf-85fc-91397bc98465"
  minLength: 10
 maxLength: 100
 time:
 type: "string"
 description: "The time associated with the transaction alert as per ISO 8601."
 example: "2017-07-21T17:32:28.001Z"
  format: "date-time"
 txnTime:
 type: "string"
 description: "The time associated with the transaction as per ISO 8601."
 example: "2017-07-21T17:32:28.001Z"
 format: "date-time"
 sourceID:
  $ref: "#/components/schemas/AccountIdentifierAlert"
 destID:
 $ref: "#/components/schemas/AccountIdentifierAlert"
 sourceBankID:
  $ref: "#/components/schemas/BankIdentifierAlert"
 sourceBankName:
 type: "string"
  description: "Source bank name - this is the bank that owns the source account."
 example: "Barclays"
 minLength: 1
 maxLength: 100
 destBankID:
 $ref: "#/components/schemas/BankIdentifierAlert"
 destBankName:
 type: "string"
  description: "Destination bank name - this is the bank that owns the destination account."
```

```
example: "Lloyds"
     minLength: 1
     maxLength: 100
    value:
     $ref: "#/components/schemas/ValueAlert"
    remitInfo:
     type: "string"
     description: "Remittance information as entered by the sender of the transaction. This field maps onto
pacs.008 /FIToFICstmrCdtTrf/CdtTrfTxInf/RltdRmtInf/RmtInf/Ustrd/ in the ISO20002 standard. See
https://www.iso20022.org/standardsrepository/type/RemittanceInformation16 for further information."
     example: "rent 10 Main St"
     minLength: 1
     maxLength: 140
    generation:
     type: "integer"
     description: "The generation the destination account appeared in the dispersion network that caused
this alert relative to the start of the dispersion. The account that receives the fraudulent funds from the
victim is generation 1."
     example: 4
     minimum: 1
     maximum: 100
    currency:
     type: "string"
     description: "The currency of the transaction based on a subset of ISO 4217."
     example: "GBP"
     minLength: 3
     maxLength: 3
    service:
     type: "string"
     description: "The service used for the payment, e.g. 'Bacs', 'FPS'"
     example: "FPS"
     minLength: 2
     maxLength: 10
    dwellTime:
     type: string
     description: "The amount of time that funds spent in the source account before the transaction
associated with this alert. This field will only be populated if this alert was generated as part of a dispersion,
and is formatted as an ISO8601 duration."
     example: P3Y6M4DT12H30M5S
"^P(?!$)(\\d+(?:\\.\\d+)?Y)?(\\d+(?:\\.\\d+)?M)?(\\d+(?:\\.\\d+)?W)?(\\d+(?:\\.\\d+)?D)?(T(?=\\d)(\\d+(?:\\.
\\d+)?H)?(\\d+(?:\\.\\d+)?M)?(\\d+(?:\\.\\d+)?S)?)?$"
    traceType:
     $ref: "#/components/schemas/TraceTypeAlert"
     $ref: "#/components/schemas/MuleScoreAlert"
    parentAlertID:
     type: "string"
     description: "Reference to the original alertID on which feedback was based"
     example: "e99a18c428cb38d5f260853678922e03"
     minLength: 10
     maxLength: 100
    decisionDate:
     type: "string"
```

```
description: "Date on which the decision was taken by the financial institution"
     example: "2017-07-21T17:32:28.001Z"
     format: "date-time"
    mostRecentFeedback:
     $ref: "#/components/schemas/FeedbackStatus"
 TransactionAlerts:
   allOf:
    - $ref: "#/components/schemas/AlertsMetadata"
    - type: "object"
     properties:
      alerts:
       description: "List of transaction alerts"
        $ref: "#/components/schemas/TransactionAlert"
  NetworkAlert:
  type: object
   required:
    - "id"
    - "time"
    - "networkID"
   description: Response data model for network alerts
   properties:
    id:
     $ref: "#/components/schemas/EventIdentifierAlert"
    time:
     type: string
     example: "2017-07-21T17:32:28.001Z"
     format: date-time
     description: The alert time
    networkID:
     $ref: "#/components/schemas/TransactionIdentifierAlert"
    transactionAlerts:
     type: array
     description: List of transaction alerts
      $ref: "#/components/schemas/TransactionAlert"
    accountAlerts:
     type: array
     description: List of account alerts
      $ref: "#/components/schemas/AccountAlert"
    vizURL:
     type: "string"
     format: "uri"
     description: "URL of the dispersion network visualisation."
     example:
"https://api.fcs.uk.mastercard.com/trace/financialcrime/viz/d41d8cd98f00b204e9800998ecf8427e"
     minLength: 12
     maxLength: 200
    sourceTxnID:
     type: "string"
     description: "Unique source transaction identifier."
     example: "2b588f38-d1bc-40bf-85fc-91397bc98465"
     minLength: 10
```

```
maxLength: 100
    sourceTxnType:
    $ref: "#/components/schemas/TraceTypeAlert"
    length:
    type: "integer"
     description: "The length of dispersion network, defined as the number of transactions in the
dispersion network."
    example: 20
     minimum: 1
     maximum: 1000
    generations:
    type: "integer"
     description: "The number of generations in the dispersion network."
    example: 3
     minimum: 1
     maximum: 10
    totalValue:
    type: "integer"
    description: "The total value of all the transactions in the dispersion network as the integer value of
payment in
      the fractional unit (e.g. pence, cents) where used and in the main unit (e.g. krÃ3na) when fractional
units are not
      used."
     example: 10034
     format: "int64"
     minimum: 1
     maximum: 9223372036854775807
    sourceValue:
    type: "integer"
     description: "The source value of a dispersion network as the integer value of payment in the
fractional unit (e.g.
      pence, cents) where used and in the main unit (e.g. króna) when fractional units are not used."
     example: 10034
    format: "int64"
     minimum: 1
     maximum: 5000000000000
    uniqueAccounts:
    type: "integer"
     description: "The number of unique accounts in this dispersion network."
    example: 16
     minimum: 2
    maximum: 100
    meanDwellTime:
    type: "string"
     description: "The average (mean) time funds remain in intermediary accounts in this dispersion
network specified as an ISO8601 duration string."
    example: "P3Y6M4DT12H30M5S"
     pattern:
\\d+)?H)?(\\d+(?:\\.\\d+)?M)?(\\d+(?:\\.\\d+)?S)?)?$"
    medianDwellTime:
    type: "string"
     description: "The average (median) time funds remain in intermediary accounts in this dispersion
```

network specified as an ISO8601 duration string."

```
example: "P3Y6M4DT12H30M5S"
              pattern:
\label{eq:poisson} $$ ''^P(?!\$)(\d+(?:\\lambda+)?Y)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?W)?(\d+(?:\\lambda+)?D)?(T(?=\d)(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+
\\d+)?H)?(\\d+(?:\\.\\d+)?M)?(\\d+(?:\\.\\d+)?S)?)?$"
           meanMuleScore:
             type: "number"
             description: "The average (mean) mule score of accounts in this dispersion network."
              minimum: 0
              maximum: 1.0
           elapsedTime:
             type: "string"
              description: "The amount of time this dispersion took, from the earliest transaction to the last
transaction specified as an ISO8601 duration string"
              example: "P3Y6M4DT12H30M5S"
              pattern:
"^P(?!$)(\\d+(?:\\.\\d+)?Y)?(\\d+(?:\\.\\d+)?M)?(\\d+(?:\\.\\d+)?W)?(\\d+(?:\\.\\d+)?D)?(T(?=\\d)(\\d+(?:\\.
\\d+)?H)?(\\d+(?:\\.\\d+)?M)?(\\d+(?:\\.\\d+)?S)?)?$"
           numActionedMules:
             type: "integer"
             description: "The number of actioned mules in this dispersion network."
              example: 2
              minimum: 0
              maximum: 100
           numLegitimate:
             type: "integer"
              description: "The number of confirmed legitimate accounts in this dispersion network."
             example: 7
              minimum: 0
              maximum: 100
           numNotInvestigated:
             type: "integer"
             description: "The number of accounts in this dispersion network that have not been investigated."
             example: 3
              minimum: 0
              maximum: 100
           parentAlertID:
             type: "string"
              description: "Reference to the original alertID on which feedback was based."
             example: "e99a18c428cb38d5f260853678922e03"
              minLength: 10
             maxLength: 100
           decisionDate:
             type: "string"
             description: "Time at which the decision was taken by the financial institution as per ISO 8601."
             example: "2017-07-21T17:32:28.001Z"
              format: date-time
           mostRecentFeedback:
             type: "string"
              description: "The most recent feedback label received against this account alert, e.g.
'ACTIONED MULE', 'CONFIRMED LEGITIMATE'"
              example: "ACTIONED MULE"
              minLength: 5
              maxLength: 100
```

```
NetworkAlerts:
   allOf:
    - $ref: "#/components/schemas/AlertsMetadata"
    - type: object
     properties:
      alerts:
       description: List of dispersion network alerts
        $ref: "#/components/schemas/NetworkAlert"
 #Trace
  TransactionIdentifierTrace:
   type: "string"
   description: "Unique transaction identifier, prepend with 'match' if an outbound transaction."
   example: "2b588f38-d1bc-40bf-85fc-91397bc98465"
   minLength: 10
   maxLength: 100
  TraceTypeTrace:
   type: "string"
   description: "Description of the transaction, e.g. 'FRAUD', 'SUSPECT', 'RETRACTION', 'ROMANCE_SCAM',
'PURCHASE SCAM', 'INVESTMENT SCAM', 'INVOICE SCAM', 'ADVANCE FEE SCAM',
'IMPERSONATION SCAM', 'FAMILY EMERGENCY SCAM'"
   example: "FRAUD"
   minLength: 5
   maxLength: 100
  EventIdentifierTrace:
   type: "string"
   description: "Unique event identifier."
   example: "e99a18c428cb38d5f260853678922e03"
   minLength: 10
   maxLength: 100
  TracedNetworks:
   description: "List of traced networks."
   type: "array"
   items:
    $ref: "#/components/schemas/TracedNetwork"
  TracedNetwork:
   description: "A single traced network."
   type: "object"
   required:
    - "id"
    - "time"
    - "networkID"
    - "transactionAlerts"
    - "accountAlerts"
    - "vizURL"
    - "sourceTxnID"
    - "sourceTxnType"
    - "length"
    - "generations"
    - "totalValue"
    - "sourceValue"
    - "uniqueAccounts"
    - "meanDwellTime"
    - "medianDwellTime"
```

```
- "meanMuleScore"
    - "elapsedTime"
    - "numActionedMules"
    - "numLegitimate"
    - "numNotInvestigated"
    - "parentAlertID"
    - "decisionDate"
    - "mostRecentFeedback"
   properties:
    id:
     type: "string"
     description: "Unique request identifier."
     example: "e99a18c428cb38d5f260853678922e03"
     minLength: 10
     maxLength: 100
    time:
     type: "string"
     description: "The time associated with the traced network alert as per ISO 8601."
     example: "2017-07-21T17:32:28.001Z"
     format: date-time
    networkID:
     type: "string"
     description: "Unique network identifier."
     example: "2b588f38-d1bc-40bf-85fc-91397bc98465"
     minLength: 10
     maxLength: 100
    transactionAlerts:
     type: "array"
     items:
      $ref: "#/components/schemas/TransactionAlertBasicTrace"
    accountAlerts:
     type: "array"
     items:
      $ref: "#/components/schemas/AccountAlertBasicTrace"
    vizURL:
     type: "string"
     format: "uri"
     description: "URL of the dispersion network visualisation."
     example:
"https://api.fcs.uk.mastercard.com/trace/financialcrime/viz/d41d8cd98f00b204e9800998ecf8427e"
     minLength: 12
     maxLength: 200
    sourceTxnID:
     type: "string"
     description: "Unique source transaction identifier."
     example: "2b588f38-d1bc-40bf-85fc-91397bc98465"
     minLength: 10
     maxLength: 100
    sourceTxnType:
     $ref: "#/components/schemas/TraceTypeTrace"
    length:
     type: "integer"
     description: "The length of dispersion network, defined as the number of transactions in the
dispersion network."
```

```
example: 20
     minimum: 1
     maximum: 1000
    generations:
     type: "integer"
     description: "The number of generations in the dispersion network."
     example: 3
     minimum: 1
     maximum: 10
    totalValue:
     type: "integer"
     description: "The total value of all the transactions in the dispersion network as the integer value of
payment in
      the fractional unit (e.g. pence, cents) where used and in the main unit (e.g. króna) when fractional
units are not
      used."
     example: 10034
     format: "int64"
     minimum: 1
     maximum: 9223372036854775807
    sourceValue:
     type: "integer"
     description: "The source value of a dispersion network as the integer value of payment in the
fractional unit (e.g.
      pence, cents) where used and in the main unit (e.g. króna) when fractional units are not used."
     example: 10034
     format: "int64"
     minimum: 1
     maximum: 9223372036854775807
    uniqueAccounts:
     type: "integer"
     description: "The number of unique accounts in this dispersion network."
     example: 16
     minimum: 2
     maximum: 100
    meanDwellTime:
     type: "string"
     description: "The average (mean) time funds remain in intermediary accounts in this dispersion
network specified as an ISO8601 duration string."
     example: "P3Y6M4DT12H30M5S"
     pattern:
\label{eq:continuous} $$ ''^P(?!\$)(\d+(?:\\lambda)?Y)?(\d+(?:\\lambda)?M)?(\d+(?:\\lambda)?W)?(\d+(?:\\lambda)?D)?(T(?=\d)(\d+(?:\\lambda).
\\d+)?H)?(\\d+(?:\\.\\d+)?M)?(\\d+(?:\\.\\d+)?S)?)?$"
    medianDwellTime:
     type: "string"
     description: "The average (median) time funds remain in intermediary accounts in this dispersion
network specified as an ISO8601 duration string."
     example: "P3Y6M4DT12H30M5S"
     pattern:
"^P(?!$)(\\d+(?:\\.\\d+)?Y)?(\\d+(?:\\.\\d+)?M)?(\\d+(?:\\.\\d+)?D)?(T(?=\\d)(\\d+(?:\\.
\\d+)?H)?(\\d+(?:\\.\\d+)?M)?(\\d+(?:\\.\\d+)?S)?)?$"
    meanMuleScore:
     type: "number"
     description: "The average (mean) mule score of accounts in this dispersion network."
```

```
example: 0.845
               minimum: 0
               maximum: 1.0
            elapsedTime:
              type: "string"
               description: "The amount of time this dispersion took, from the earliest transaction to the last
transaction specified as an ISO8601 duration string"
               example: "P3Y6M4DT12H30M5S"
               pattern:
\label{eq:poisson} $$ ''^P(?!\$)(\d+(?:\\lambda+)?Y)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?W)?(\d+(?:\\lambda+)?D)?(T(?=\d)(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+)?M)?(\d+(?:\\lambda+
\\d+)?H)?(\\d+(?:\\.\\d+)?M)?(\\d+(?:\\.\\d+)?S)?)?$"
            numActionedMules:
              type: "integer"
              description: "The number of actioned mules in this dispersion network."
              example: 2
               minimum: 0
               maximum: 100
            numLegitimate:
              type: "integer"
               description: "The number of confirmed legitimate accounts in this dispersion network."
              example: 7
               minimum: 0
               maximum: 100
            numNotInvestigated:
               type: "integer"
              description: "The number of accounts in this dispersion network that have not been investigated."
              example: 3
               minimum: 0
               maximum: 100
            parentAlertID:
              type: "string"
               description: "Reference to the original alertID on which feedback was based."
              example: "e99a18c428cb38d5f260853678922e03"
               minLength: 10
               maxLength: 100
            decisionDate:
              type: "string"
              description: "Time at which the decision was taken by the financial institution as per ISO 8601."
              example: "2017-07-21T17:32:28.001Z"
               format: date-time
            mostRecentFeedback:
              type: "string"
               description: "The most recent feedback label received against this account alert, e.g.
'ACTIONED MULE', 'CONFIRMED LEGITIMATE'"
               example: "ACTIONED MULE"
               minLength: 5
               maxLength: 100
      TransactionAlertBasicTrace:
        type: "object"
         description: "A minimal transaction model containing additional alert properties."
         required:
            - "id"
            - "txnID"
```

- "networkAlertID"

```
- "networkID"
 - "time"
 - "txnTime"
- "sourceID"
 - "destID"
 - "sourceBankID"
- "sourceBankName"
- "destBankID"
- "destBankName"
- "value"
properties:
id:
 type: "string"
 description: "Unique transaction alert identifier."
 example: "e99a18c428cb38d5f260853678922e03"
  minLength: 10
  maxLength: 100
 txnID:
 type: "string"
  description: "Unique transaction identifier."
 example: "2b588f38-d1bc-40bf-85fc-91397bc98465"
  minLength: 10
  maxLength: 100
 networkAlertID:
 type: "string"
 description: "Unique network alert identifier."
 example: "e99a18c428cb38d5f260853678922e03"
  minLength: 10
  maxLength: 100
 networkID:
 type: "string"
 description: "Unique network identifier."
 example: "2b588f38-d1bc-40bf-85fc-91397bc98465"
  minLength: 10
 maxLength: 100
 time:
 type: string
 description: "The time associated with the transaction alert as per ISO 8601."
 example: "2017-07-21T17:32:28.001Z"
  format: date-time
 txnTime:
 type: string
  description: "The time associated with the transaction as per ISO 8601."
 example: "2017-07-21T17:32:28.001Z"
 format: date-time
 sourceID:
  $ref: "#/components/schemas/AccountIdentifierTrace"
 $ref: "#/components/schemas/AccountIdentifierTrace"
 sourceBankID:
 $ref: "#/components/schemas/BankIdentifierTrace"
 sourceBankName:
 type: "string"
 description: "Source bank name - this is the bank that owns the source account."
```

```
example: "Barclays"
   minLength: 1
   maxLength: 100
  destBankID:
   $ref: "#/components/schemas/BankIdentifierTrace"
  destBankName:
   type: "string"
   description: "Destination bank name - this is the bank that owns the destination account."
   example: "Lloyds"
   minLength: 1
   maxLength: 100
  value:
   $ref: "#/components/schemas/ValueTrace"
AccountAlertBasicTrace:
 type: "object"
 description: "A minimal account model containing additional alert properties."
 required:
  - "id"
  - "networkAlertID"
  - "accountID"
  - "networkID"
  - "owningBankID"
  - "owningBankName"
  - "time"
 properties:
  id:
   type: "string"
   description: "Unique account alert identifier."
   example: "e99a18c428cb38d5f260853678922e03"
   minLength: 10
   maxLength: 100
  networkAlertID:
   type: "string"
   description: "Unique network alert identifier."
   example: "e99a18c428cb38d5f260853678922e03"
   minLength: 10
   maxLength: 100
  accountID:
   $ref: "#/components/schemas/AccountIdentifierTrace"
  networkID:
   type: "string"
   description: "Unique network identifier."
   example: "2b588f38-d1bc-40bf-85fc-91397bc98465"
   minLength: 10
   maxLength: 100
  owningBankID:
   $ref: "#/components/schemas/BankIdentifierTrace"
  owningBankName:
   type: "string"
   description: "Owning bank name - this is the bank that owns the account."
   example: "OwningBank"
   minLength: 1
   maxLength: 100
  time:
```

```
type: "string"
     description: "The time associated with the account alert as per ISO 8601."
     example: "2017-07-21T17:32:28.001Z"
     format: date-time
  AccountIdentifierTrace:
   type: "string"
   description: "Unique, consistent account identifier, ideally the IBAN following ISO 13616 where
possible."
   example: "GB98MIDL07009312345678"
   minLength: 5
   maxLength: 34
   nullable: false
  BankIdentifierTrace:
   type: "string"
   description: "Bank Identifier, can be Bank Identifier Code, e.g 1 or Business Identifier Code (BIC)
following ISO 9362; If this account is a source account, this field maps onto the pacs.008
FIToFICstmrCdtTrf/GrpHdr/InstgAgt for the first leg of the transaction. If this account is the destination
account this field maps onto the FIToFICstmrCdtTrf/GrpHdr/InstdAgt for the final leg."
   example: "DEUTDEFF"
   minLength: 1
   maxLength: 20
  ValueTrace:
   type: "integer"
   description: "The integer value of the payment in the fractional unit (e.g. pence, cents) where used and
in the main unit (e.g. króna) when fractional units are not used."
   example: 10034
   format: "int64"
   minimum: 1
   maximum: 50000000000000
  VizFormatTrace:
   type: "string"
   enum: ["SVG", "PDF"]
   default: "SVG"
   example: "SVG"
  VizWidthTrace:
   type: "integer"
   format: "int64"
   default: 1280
   example: 1280
  VizHeightTrace:
   type: "integer"
   format: "int64"
   default: 720
   example: 720
  VizLegendTrace:
   type: "boolean"
   default: true
   example: true
  VizAxisTrace:
   type: "string"
   default: "SEQ"
   enum: ["TIME", "SEQ", "GEN"]
   example: "SEQ"
```

VizColourTrace:

```
type: "string"
  default: "LIGHT"
 enum: ["LIGHT", "DARK"]
  example: "LIGHT"
examples:
#common
UnauthorisedExample:
 value:
   Errors:
    Error:
    - Source: "Gateway"
     ReasonCode: "Unauthorised"
     Description: "Invalid API key provided"
     Recoverable: false
     Details: null
RateLimitExample:
 value:
   Errors:
    Error:
     - Source: "Gateway"
      ReasonCode: "RATE LIMIT EXCEEDED"
      Description: "You have exceeded the service rate limit. Maximum allowed: ${rate_limit.output} TPS"
      Recoverable: true
      Details: null
NotFoundExample:
 value:
   Frrors:
    Error:
     - Source: "Gateway"
      ReasonCode: "NOT FOUND"
      Description: "URL not found"
      Recoverable: false
      Details: null
AccessForbiddenExample:
 value:
   Errors:
    Error:
     - Source: "Gateway"
      ReasonCode: "PERMISSION_DENIED"
      Description: "Invalid customer for third party"
      Recoverable: false
      Details: null
#Feedback
BadRequestExampleFeedback:
 value:
   Errors:
    Error:
     - Source: "FEEDBACK FINANCIAL CRIME"
      ReasonCode: "BAD_REQUEST"
      Description: "We could not handle your request"
      Recoverable: false
      Details: "The request body is expecting an array"
```

```
AlertIdNotFoundExampleFeedback:
   value:
    Errors:
     Error:
     - Source: "FEEDBACK_FINANCIAL_CRIME"
      ReasonCode: "NOT FOUND"
      Description: "Alert ID not found in our records"
      Recoverable: false
      Details: "Alert ID is valid but is not present in our records"
  MethodNotAllowedExampleFeedback:
   value:
    Errors:
     Error:
      - Source: "FEEDBACK_FINANCIAL_CRIME"
       ReasonCode: "METHOD NOT ALLOWED"
       Description: "Only POST method allowed"
       Recoverable: false
       Details: null
  ConflictExampleFeedback:
   value:
    Errors:
     Error:
      - Source: "FEEDBACK FINANCIAL CRIME"
       ReasonCode: "CONFLICT"
       Description: "Alert ID does not match the specified entity"
       Recoverable: false
       Details: null
  UnsupportedMediaTypeExampleFeedback:
   value:
    Errors:
    Error:
     - Source: "FEEDBACK FINANCIAL CRIME"
      ReasonCode: "UNSUPPORTED_MEDIA_TYPE"
      Description: "Unsupported media type"
      Recoverable: false
      Details: "The request media type 'application/x-www-form-urlencoded' is not supported by this
resource"
  UnprocessableEntityExampleFeedback:
   value:
    Errors:
     Error:
      - Source: "FEEDBACK_FINANCIAL_CRIME"
       ReasonCode: "UNPROCESSABLE ENTITY"
       Description: "Expects a single json object and not an array"
       Recoverable: false
       Details: null
  ConsumerForbiddenExampleFeedback:
   value:
    Errors:
     Error:
      - Source: "FEEDBACK FINANCIAL CRIME"
       ReasonCode: "PERMISSION DENIED"
       Description: "Invalid permission set"
       Recoverable: false
```

Details: "Consumer \${client.name} does not have permission to access the account requested" ConsumerForbiddenNotFoundExampleFeedback: value: Errors: Error: - Source: "FEEDBACK FINANCIAL CRIME" ReasonCode: "PERMISSION_DENIED" Description: "Sort Code not found in our records" Recoverable: false Details: "Consumer \${client.name} does not have permission to access the account requested" #MatchAPI BadRequestExampleMatchAPI: value: Errors: Error: - Source: "MATCH FINANCIAL CRIME" ReasonCode: "BAD_REQUEST" Description: "We could not handle your request" Recoverable: false Details: "The request body is expecting an array" MethodNotAllowedExampleMatchAPI: value: Errors: Error: - Source: "MATCH_FINANCIAL_CRIME" ReasonCode: "METHOD NOT ALLOWED" Description: "Only POST method allowed" Recoverable: false Details: null ConsumerForbiddenExampleMatchAPI: value: Errors: Error: - Source: "MATCH_FINANCIAL_CRIME" ReasonCode: "PERMISSION_DENIED" Description: "Invalid permission set" Recoverable: false Details: "Client identifier (X-Consumer-Custom-ID) header cannot be empty" ConsumerForbiddenNotFoundExampleMatchAPI: value: Errors: Error: - Source: "MATCH FINANCIAL CRIME" ReasonCode: "PERMISSION DENIED" Description: "Sort Code not found in our records" Recoverable: false Details: "Consumer \${client.name} does not have permission to access the account requested" UnsupportedMediaTypeExampleMatchAPI: value: Errors: Error: - Source: "MATCH FINANCIAL CRIME"

ReasonCode: "UNSUPPORTED_MEDIA_TYPE"

```
Description: "Unsupported media type"
      Recoverable: false
      Details: "The request media type 'application/x-www-form-urlencoded' is not supported by this
resource"
  UnprocessableEntityExampleMatchAPI:
   value:
    Errors:
     Error:
      - Source: "MATCH FINANCIAL CRIME"
       ReasonCode: "UNPROCESSABLE ENTITY"
       Description: "Expects a single json object and not an array"
       Recoverable: false
       Details: null
  #Alert
  BadRequestExampleAlert:
   value:
    Errors:
     Error:
      - Source: "ALERT FINANCIAL CRIME"
       ReasonCode: "BAD REQUEST"
       Description: "We could not handle your request"
       Recoverable: false
       Details: "The request contains a bad payload"
  AlertIdNotFoundExampleAlert:
   value:
    Errors:
     Frror:
     - Source: "ALERT FINANCIAL CRIME"
      ReasonCode: "NOT FOUND"
      Description: "Alert ID not found in our records"
      Recoverable: false
      Details: "Alert ID is valid but is not present in our records"
  MethodNotAllowedExampleAlert:
   value:
    Errors:
     Error:
      - Source: "ALERT FINANCIAL CRIME"
       ReasonCode: "METHOD NOT ALLOWED"
       Description: "Only POST method allowed"
       Recoverable: false
       Details: null
  ConsumerForbiddenExampleAlert:
   value:
    Errors:
     Error:
      - Source: "ALERT_FINANCIAL_CRIME"
       ReasonCode: "PERMISSION_DENIED"
       Description: "Invalid permission set"
       Recoverable: false
       Details: "Consumer ${client.name} does not have permission to access the account requested"
  ConsumerForbiddenNotFoundExampleAlert:
   value:
```

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Source: "ALERT_FINANCIAL_CRIME"ReasonCode: "PERMISSION DENIED"

Description: "Sort Code not found in our records"

Recoverable: false

Details: "Consumer \${client.name} does not have permission to access the account requested"

#Trace

BadRequestExampleTrace:

value: Errors: Error:

> - Source: "TRACE_FINANCIAL_CRIME" ReasonCode: "BAD_REQUEST"

Description: "We could not handle your request"

Recoverable: false

Details: "The request contains a bad payload"

ConsumerForbiddenExampleTrace:

value:

Errors:

Error:

Source: "TRACE_FINANCIAL_CRIME"
 ReasonCode: "PERMISSION_DENIED"
 Description: "Invalid permission set"

Recoverable: false

Details: "Consumer \${client.name} does not have permission to access the account requested"

Consumer Forbidden Not Found Example Trace:

value:

Errors:

Error:

- Source: "TRACE_FINANCIAL_CRIME"ReasonCode: "PERMISSION DENIED"

Description: "Sort Code not found in our records"

Recoverable: false

Details: "Consumer \${client.name} does not have permission to access the account requested"

Transaction Not Found Example Trace:

value:

Errors:

Error:

- Source: "TRACE_FINANCIAL_CRIME"

ReasonCode: "NOT_FOUND"

Description: "Transaction ID not found in our records"

Recoverable: false

Details: "Transaction ID is valid but is not present in our records"

MethodNotAllowedExampleTrace:

value:

Errors:

Error:

- Source: "TRACE_FINANCIAL_CRIME"
ReasonCode: "METHOD_NOT_ALLOWED"
Description: "Only POST method allowed"

Recoverable: false Details: null