



EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR MOBILITY AND TRANSPORT

Directorate SRD – Shared Resource Directorate MOVE/ENER

SRD.2 – Information management and systems

TENtec

Automatic Exchange of Parameters

API Documentation v0.1

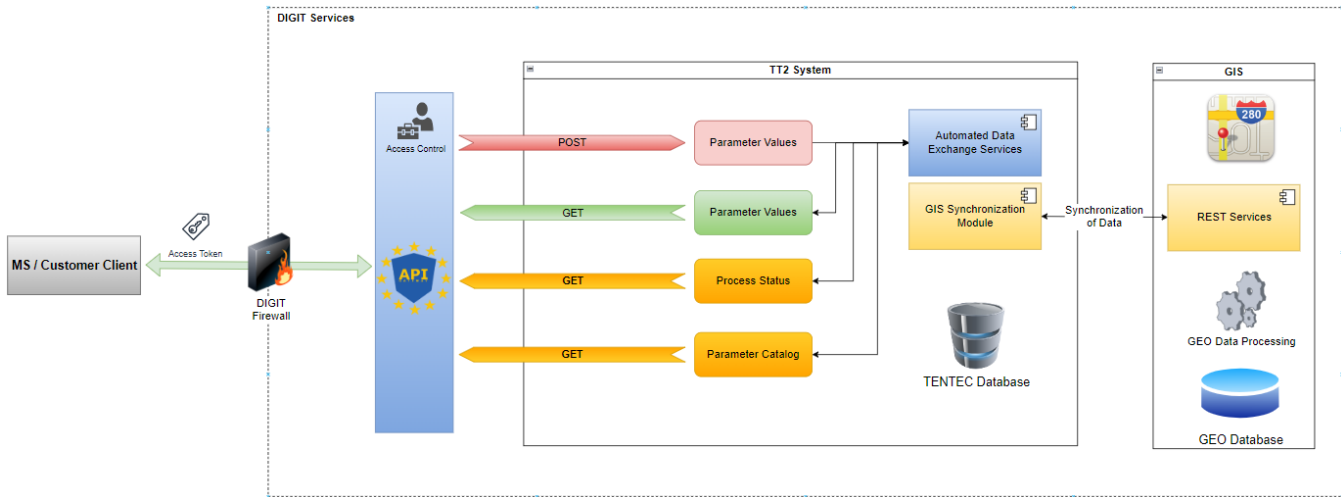
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Introduction

Member states need to push and pull parameters from TENtec. The Commission wants to provide a standard solution for all Member States that must be lightweight, highly scalable and maintainable.

For the actions described above, a RESTful API will be provided using JSON as the data format to be exchanged.



1 - Webservices Authorization

TENTec webservices are exposed by EC API Gateway, which validates incoming requests and forwards them to the internal services. Only the requests coming from authorized external applications will be forwarded to TENTec backend. TENTec webservices are secured using OAuth2 protocol.

1.1 Prerequisites

Each external application that will consume TENTec APIs will be assigned with a personalized/unique credentials. This personalized credentials will be considered as sensitive information and will not be shared with anyone.

The credentials are formed of a pair of keys, named *Consumer Key* and *Consumer Secret*; this can be assimilated with an *User* and a *Password*. These 2 static credentials will be used to generate a token that will be used for further usage/calling of the APIs.

1.2 Workflow

- Using *consumer key* and *consumer secret* as Basic authentication, the customer system user makes a call to EC API Gateway to generate the access token

API Call to generate access token

```
curl -k -X POST https://api.tech.ec.europa.eu/token -d "grant_type=client_credentials" -H"Authorization: Basic Base64(consumer-key:consumer-secret)"
```



Token Validity

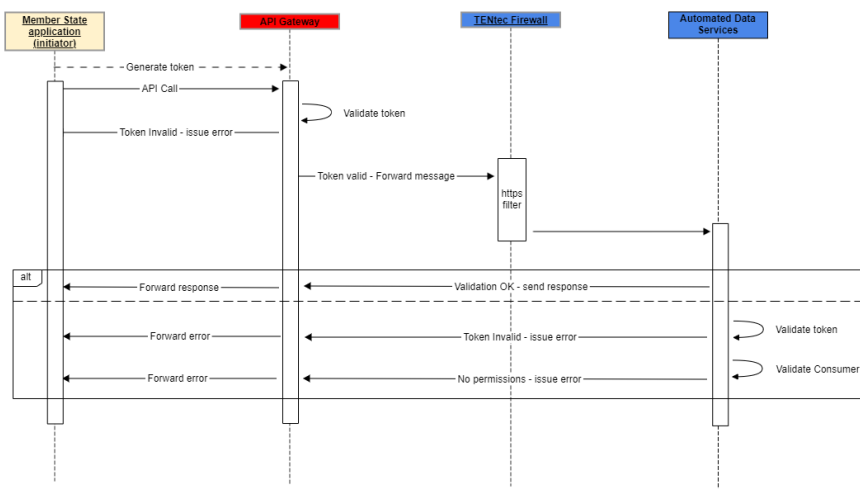
The generated access token is only valid for a finite period of time, which can be found in the token *exp* claim; during this period the same access token can be used. Upon expiration, a new token need to be generated.

- Each subsequent request to TENTec Webservices needs to have the generated access token sent as part of the *Authorization* header

Authorization header

```
Authorization: Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiIxMjMONTY3ODkwIiwibmFtZSI6IkpvaG4gRG91IiwiaWF0IjoxNTE2MjM5MDIyLCJleHAiOjE0NzU4Nzg5NTd9.Kp77j7dWHP4IYmvqKArdeXTLbxkiaM_I6SgqTxDYsSQ
```

Sequence Diagram



1.3 Example

1. Base64 encode the system users credentials: *Base64.encode(CONSUMER_KEY:CONSUMER_SECRET)*
= *Q09OU1VNRVJfS0VZOKNPTlNVTUVVSX1NFQ1JFVA==*
2. Use the encoded value as Basic Authorization header to make the request to generate the token

Generate access token request

```
curl -k -X POST https://api.acceptance.tech.ec.europa.eu/token -d "grant_type=client_credentials" -H "Authorization: Basic Q09OU1VNRVJfS0VZOKNPTlNVTUVVSX1NFQ1JFVA=="
```

Generate access token response

```
{
  "access_token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiIxMjM0NTY3ODkwIiwibmFtZSI6IkpvaG4gRG9lIiwiaWF0IjoxNTE2MjM5MDIyLCJleHAiOiE0NzU4Nzg5NTd9.Kp77j7dwHP4IYmvqKArdeXTLbxkiaM_I6SgqTxDYsSQ",
  "scope": "default",
  "token_type": "Bearer",
  "expires_in": 2680
}
```

3. Use the *access_token* as part of the Authorization header in all subsequent requests until the access token expires; upon expiration, step 2 need to be repeated

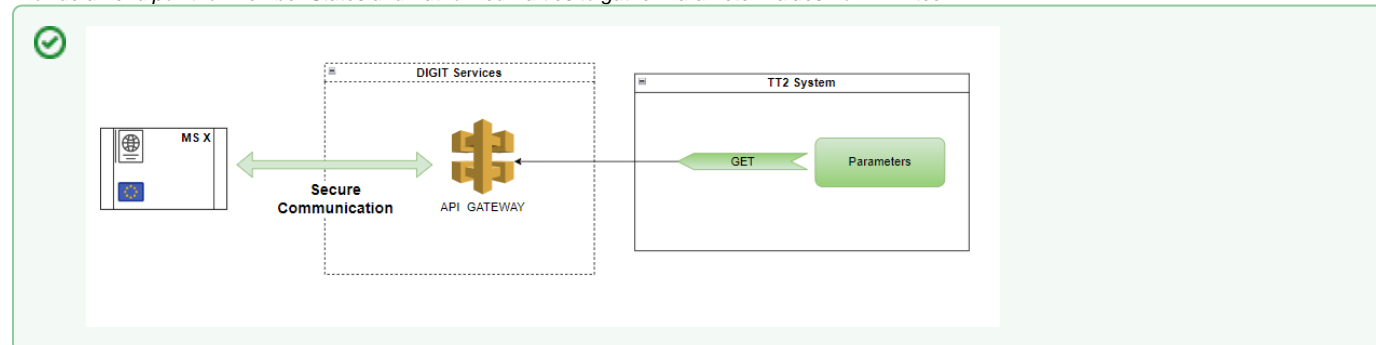
Webservice request

```
curl --location --request GET 'https://api.acceptance.tech.ec.europa.eu/TENTEC/parameters/values/{TICKET_ID}/status' \
--header 'Authorization: Bearer eyJhbGciOiJSUzI1NiJ9.eyJzdWIiOiJFQ0xEQVBTRVJWRVJcL2JvYmVpc29AY2FyYm9uLnNlcGVyIiwiaWF0IjoxNjY0MzU4NDc1LCJhenAiOiJKQlplDQ3BaS18zeUU5SGhOM0ZFSE9IM2sxV0lhIiwic2NvcGUiOiJhcGltOmFwcF9tYW5hZ2UgYXBpbTpzdWJzY3JpYmUiLCJpc3MiOiJodHRwczpcL1wvYXBpLmFjY2VwdGFuY2UudGVjaC5lYy5ldXJvcGEuZXVcL2ZlZGVyYXRpb25cL29hdXR0XC90b2t1biIsImV4cCI6MzYwMDE2NjQzNTg0NzUsImh0dCI6MTY2NDM1ODQ3NSwianRpIjoizjljYTlmNWMTNGZhNi00M2ZhLWFmNzItZDNlZGVmNjVhMjY1In0.bT0Pl3qKUS3iik08ed0I5amQB_5wTTt8LTsCn0HbNZELksKrbCBillwcCdACYHmnBdYyRqbTKbjHNWJ1unLBocS1cuGVrRhp2Rmc9_aNULq2S42BsvklprSmIxgK4QBL5moKVjuD-2kAPhcQUmhMZ_iWPJruLSBiLy8TcImk2-wuIY-GdBHmNZeZo891Y5LaGolyfglq598ncaOs0966Dd3E4wikwLoZXcsrIHQTjefGwNNigDJPT-VofbmkmGjZGDH-qL3T6eCTcEJkLKGhsACIzbYhfOITuGWHr8KMtehoQAlq84tF4yTUTmTTvXVM53YKDPJDKQilTsHu8L7Qw' \
--header 'Content-Type: application/json' \
```

2 - Parameter Values - GET

2.1 Goal

Provide an end point for Member States and Authorized Parties to gather Parameter Values from TENtec.



2.2 Details

Web Service Type: RESTful

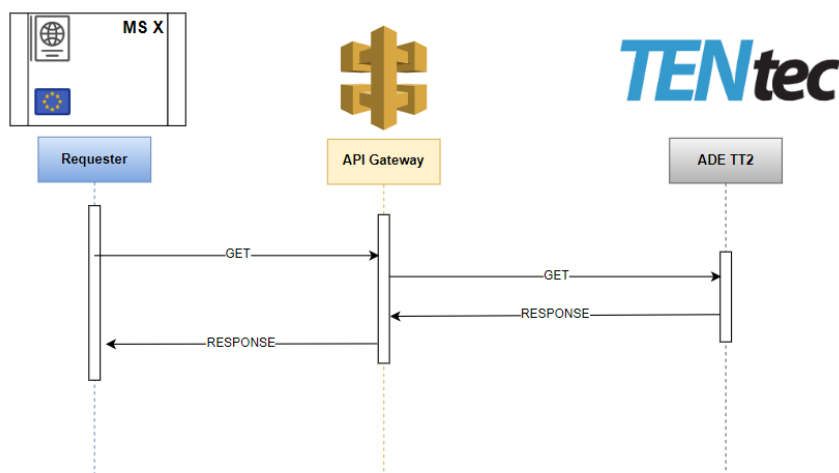
End Point: <https://api.acceptance.tech.ec.europa.eu/tentec/ade/parameter/values>

Method: GET

Process code: PVR

Live Documentation: Swagger - delivered together with service

Description: The service provided by this end point will process the request and give a response containing the Parameter Values.



2.3 Request Parameter

2.3.1 Required

1. "TRANSPORT_MODE"

Type: String;
Format: N/A;
Length: 100 UTF-8 Characters;
Ex.: "Inland Waterways", "Airports", "Rail-Road Terminals";
Case Sensitive: NO;
Notes:

2. "LAST_UPDATE"

Type: DateTime;
Format: "yyyy-MM-dd'T'HH:mm:ssZ"
Length: 24
Ex.: 2016-01-19T09:55:50-0800
Case Sensitive: N/A
Notes:

3. "COUNTRY"

Type: String;
Format: N/A;
Length: 2 UTF-8 Characters;
Ex.: "BE";
Case Sensitive: NO;
Notes: iso2Code

2.3.2 Optional

3. "CORE_NETWORK"

Type: Boolean
Format: N/A
Length: N/A
Ex.: true, false
Case Sensitive: N/A
Notes:

4. "CORRIDORS"

Type: array[string]
Format: N/A
Length: N/A
Ex.: ["E", "DE", "FI"]
Case Sensitive: NO
Notes:

5. "START_YEAR"

Type: Integer
Format: yyyy
Length: 4
Ex.: 2004, 2022, 2025
Case Sensitive: N/A
Notes: Value must be between 2000 and 9999.

6. "END_YEAR"

Type: Integer
Format: yyyy
Length: 4
Ex.: 2004, 2022, 2025
Case Sensitive: N/A
Notes: Value must be between 2000 and 9999.

7. "PARAMETER_IDS"

Type: array[Integer(\$int64)]
Format: N/A
Length: N/A
Ex.: [12,33,45]
Case Sensitive: N/A
Notes:

8. "SECTION_IDS"

Type: array[Integer(\$int64)]
Format: N/A
Length: N/A
Ex.: [32,776662,22]
Case Sensitive: N/A
Notes:

2.4 Responses

2.4.1 200 - OK

Media Type: application/json

RESPONSE BODY

```

{
  "REQUEST_DATE": "yyyy-MM-dd'T'HH:mm:ssZ",
  "END_PROCESS_REQUEST": "yyyy-MM-dd'T'HH:mm:ssZ",
  "QUERY_RESULT_COUNT": "QUERY_RESULT_COUNT"
  "REQUEST_PARAMETERS": {
    "TRANSPORT_MODE": "TRANSPORT_MODE",
    "LAST_UPDATE": "yyyy-MM-dd'T'HH:mm:ssZ",
    "COUNTRY": "XX",
    "CORE_NETWORK": "CORE_NETWORK",
    "CORRIDORS": [ "E", "DE", "FI" ],
    "START_YEAR": "START_YEAR",
    "END_YEAR": "END_YEAR",
    "PARAMETER_IDS": [ PARAMETER_ID, PARAMETER_ID, ... ]
    "SECTION_IDS": [ SECTION_ID, SECTION_ID, ... ]
  },
  "PARAMETERS_DATA": [
    {
      "SECTION_ID": "SECTION_ID",
      "CORRIDORS": [ CORRIDOR, CORRIDOR, CORRIDOR, ... ],
      "CORE_NETWORK": "CORE_NETWORK",
      "COUNTRY": "COUNTRY",
      "TRANSPORT_MODE": "TRANSPORT_MODE",
      "YEAR": "YEAR",
      "PARAMETER_ID": "PARAMETER_ID",
      "PARAMETER_NAME": "PARAMETER_NAME",
      "PARAMETER_VALUE": "PARAMETER_VALUE",
      "PARAMETER_SOURCE": "PARAMETER_SOURCE",
      "LAST_UPDATE": "LAST_UPDATE",
      "START_MEASURE": "START_MEASURE",
      "END_MEASURE": "END_MEASURE"
    },
    ...
  ]
}

```

2.4.1.1 Attributes**1. "REQUEST_DATE"**

Type: DateTime;
 Format: "yyyy-MM-dd'T'HH:mm:ssZ"
 Length: 24
 Ex.: 2016-01-19T09:55:50-0800
 Case Sensitive: N/A
 Notes:

2. "END_PROCESS_REQUEST"

Type: DateTime;
 Format: "yyyy-MM-dd'T'HH:mm:ssZ"
 Length: 24
 Ex.: 2016-01-19T09:55:50-0800
 Case Sensitive: N/A
 Notes:

3. "QUERY_RESULT_COUNT"

Type: Integer(\$int64)
Format: N/A
Length: N/A
Ex.: 600
Case Sensitive: N/A
Notes:

4. "REQUEST_PARAMETERS"

Type: Object
Notes: The content of REQUEST_PARAMETERS is described in sections 2.3.1 and 2.3.2.

5. "PARAMETERS_DATA"

Type: array[]
Format: N/A
Length: N/A
Notes: Array with parameter values requested.

5.1. "SECTION_ID"

Type: Integer(\$int64)
Format: N/A
Length: N/A
Ex.:
Notes:

5.2. "CORRIDORS"

Type: array[string]
Format: N/A
Length: N/A
Ex.: ["E", "DE", "FI"]
Notes:

5.3. "CORE_NETWORK"

Type: Boolean
Format: N/A
Length: N/A
Ex.: true, false
Notes:

5.4. "COUNTRY"

Type: String;
Format: N/A;
Length: 2 UTF-8 Characters;
Ex.: "BE";
Notes: iso2Code

5.5. "TRANSPORT_MODE"

Type: String;
Format: N/A;
Length: 100 UTF-8 Characters;
Ex.: "Inland Waterways", "Airports", "Rail-Road Terminals";
Notes:

5.6. "YEAR"

Type: Integer
Format: yyyy
Length: 4
Ex.: 2004, 2022, 2025
Notes: Value must be between 2000 and 9999.

5.8. "PARAMETER_ID"

Type: Integer(\$int64)
Format: N/A
Length: N/A
Ex.:
Notes:

5.9. "PARAMETER_NAME"

Type: String
Format: N/A
Length: 255 UTF-8 Characters;
Ex.: "Chamber lock width", "Downstream Chamber ID"
Notes:

5.10. "PARAMETER_VALUE"

Type: String
Format: N/A
Length: 255 UTF-8 Characters;
Ex.:
Notes:

5.11. "PARAMETER_SOURCE"

Type: String
Format: N/A
Length: 255 UTF-8 Characters;
Ex.:
Notes:

5.12. "LAST_UPDATE"

Type: DateTime;
Format: "yyyy-MM-dd'T'HH:mm:ssZ"
Length: 24
Ex.: 2016-01-19T09:55:50-0800
Notes:

5.13. "START_MEASURE"

Type: Number(\$double)
Format: N/A
Length: N/A
Ex.:
Notes:

5.14. "END_MEASURE"

Type: Number(\$double)
Format: N/A
Length: N/A
Ex.:
Notes:

2.4.2 204 - No Response

Description: There is no response for the parameters used. The user agent may update its cached headers for this resource with the new ones.

2.4.3 400 - Bad Request

Description: The server cannot or will not process the request due to something that is perceived to be a client error.

Media Type: application/json

RESPONSE BODY

```
{
  "REQUEST_DATE": "yyyy-MM-dd'T'HH:mm:ssZ",
  "END_PROCESS_REQUEST": "yyyy-MM-dd'T'HH:mm:ssZ",
  "ERROR": "ERR-0001",
  "MESSAGE": "error message",
  "DETAIL": "details on the error",
  "HELP": "https://xxxxx.com/help/error/ERR-0001"
}
```

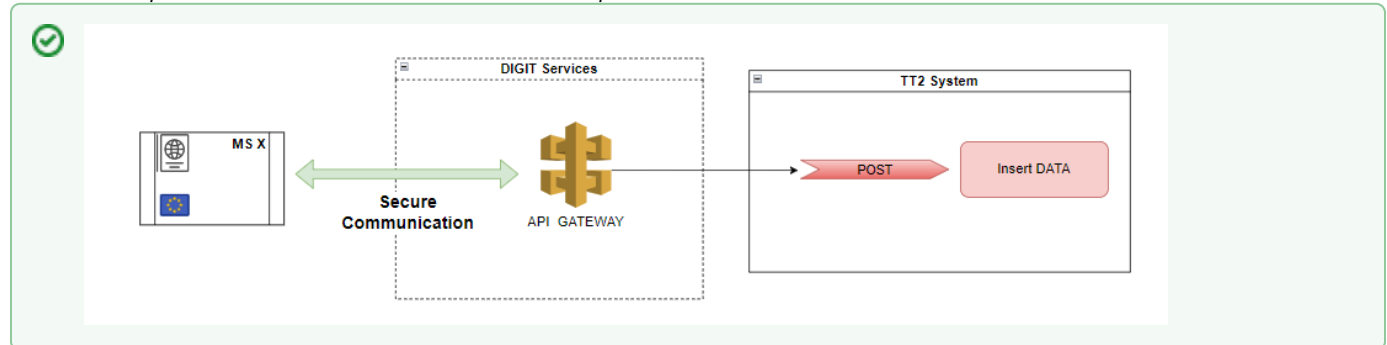
2.4.4 Errors

Please refer to the [page 6](#) - Known Errors

3 - Parameter Values - POST

3.1 Goal

Provide an end point for Member States and Authorized Parties to push Parameter Values to TENtec.



3.2 Details

Web Service Type: RESTful

End Point: <https://api.acceptance.tech.ec.eurropa.eu/tentec/ade/parameter/values>

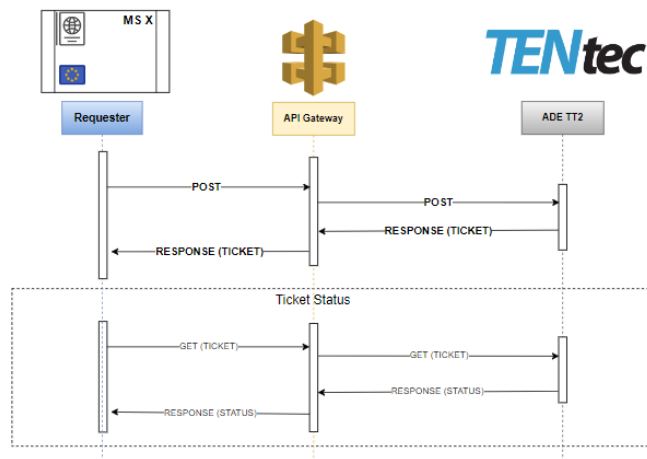
Method: POST

Process code: PVP

Live Documentation: Swagger - delivered together with service

Description: The service provided by this end point was designed to receive the information and return a ticket that allows the requester to track the request process.

Related Services: [4 - Parameter Value - TicketStatus - GET \(DRAFT\)](#)



3.3 Request Parameter

Not defined.

3.4 Request Body

Media Type: application/json

RESPONSE BODY
<pre>[{ "parameters":{ "SECTION_ID": "SECTION_ID", "YEAR": "YEAR", "PARAMETER_ID": "PARAMETER_ID", "PARAMETER_VALUE": "PARAMETER_VALUE", "PARAMETER_SOURCE": "PARAMETER_SOURCE", "START_MEASURE": "START_MEASURE", "END_MEASURE": "END_MEASURE" } }]</pre>

3.4.1 Attributes

1. "SECTION_ID"
Type: Integer(\$int64) Format: N/A Length: N/A Ex.: Case Sensitive: N/A Notes: NULLABLE: NO
2. "YEAR"
Type: Integer Format: yyyy Length: 4 Ex.: 2004, 2022, 2025 Case Sensitive: N/A Notes: Value must be between 2000 and 9999. NULLABLE: NO
3. "PARAMETER_ID"
Type: Integer Format: N/A Length: N/A Ex.: Case Sensitive: N/A Notes: NULLABLE: NO

4. "PARAMETER_VALUE"

Type: String
Format: N/A
Length: 255 UTF-8 Characters
Ex.:
Case Sensitive: YES
Notes:
NULLABLE: NO

5. "PARAMETER_SOURCE"

Type: String
Format: N/A
Length: 255 UTF-8 Characters
Ex.:
Case Sensitive: YES
Notes:
NULLABLE: NO

6. "START_MEASURE"

Type: Number(\$double)
Format: N/A
Length: N/A
Ex.:
Case Sensitive: N/A
Notes:
NULLABLE: YES

7. "END_MEASURE"

Type: Number(\$double)
Format: N/A
Length: N/A
Ex.:
Case Sensitive: N/A
Notes:
NULLABLE: YES

3.5 Responses

3.5.1 200 - OK

Media Type: application/json

RESPONSE BODY

```
{
  "TICKET_ID": "REQUEST_ID"
  "REQUEST_DATE": "yyyy-MM-dd'T'HH:mm:ssZ",
}
```

1. "TICKET_ID"

Type: Integer(\$int64)
Format: N/A
Length: N/A
Ex.:
Case Sensitive: N/A
Notes:

2. "REQUEST_DATE"

Type: String;
Format: "yyyy-MM-dd'T'HH:mm:ssZ"
Length: 24
Ex.: 2016-01-19T09:55:50-0800
Case Sensitive: N/A
Notes:

3.5.2 400 - Bad Request

Description: The server cannot or will not process the request due to something that is perceived to be a client error.

Media Type: application/json

RESPONSE BODY

```
{
  "REQUEST_DATE": "yyyy-MM-dd'T'HH:mm:ssZ",
  "END_PROCESS_REQUEST": "yyyy-MM-dd'T'HH:mm:ssZ",
  "ERROR": "ERR-0001",
  "MESSAGE": "error message",
  "DETAIL": "deatails on the error",
  "HELP": "https://xxxxx.com/help/error/ERR-0001"
}
```

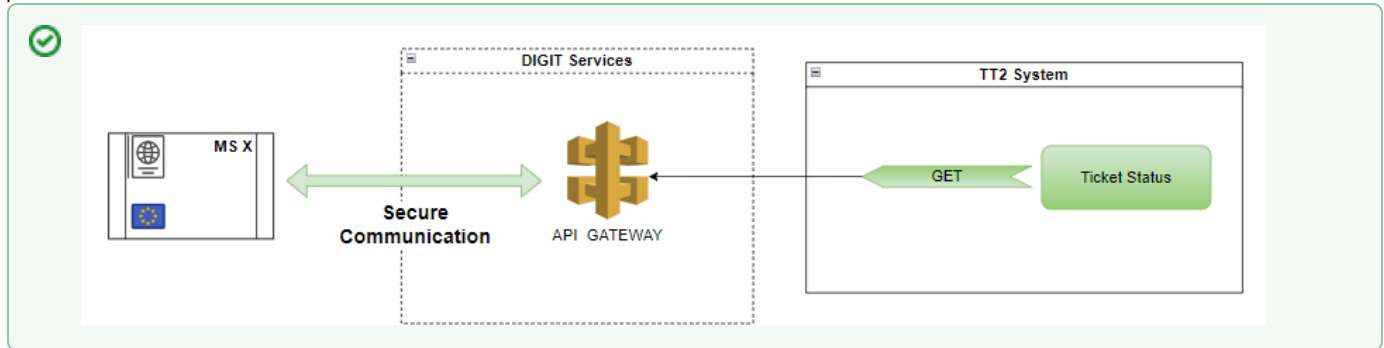
3.6 Errors

Please refer to the [page 6](#) - Known Errors

4 - Parameter Values - Ticket Status - GET

4.1 Goal

Provide an end point for Member States and Authorized Parties to gather information on a ticket, generated by a post.



4.2 Details

Web Service Type: RESTfull

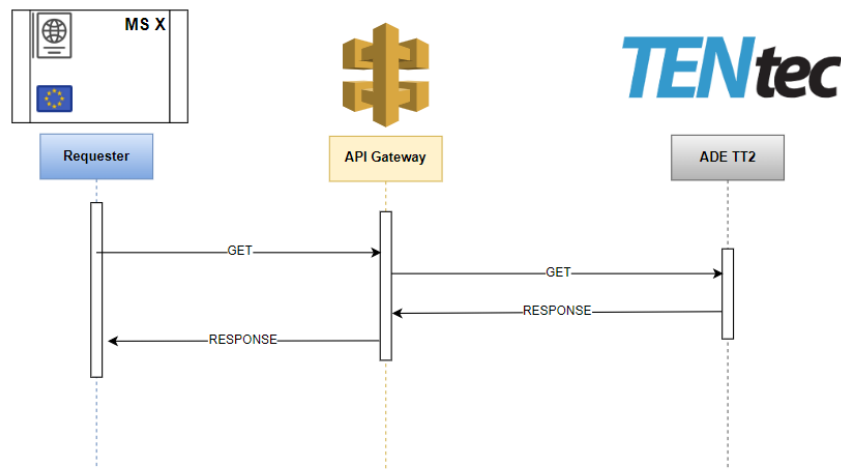
End Point: https://api.acceptance.tech.ec.europa.eu/tentec/ade/parameters/values/{TICKET_ID}/status

Method: GET

Process code: PVT

Live Documentation: Swagger - delivered together with service

Description: The service provided by this end point will gather the status for a specific TICKET_ID.



4.3 Request Parameters

4.3.1 Required

1. "TICKET_ID"
Type: Integer(\$int64) Format: N/A Length: N/A Ex.: Case Sensitive: N/A Notes:

4.4 Responses

4.4.1 200 - OK

Media Type: application/json

RESPONSE BODY
<pre>{ "TICKET_ID": "TICKET_ID", "REQUEST_DATE": "yyyy-MM-dd'T'HH:mm:ssZ", "PROCESS_NAME": "PROCESS_NAME", "PROCESS_CURRENT_STATUS": "PROCESS_CURRENT_STATUS", "PROCESS_REQUEST_DATE": "yyyy-MM-dd'T'HH:mm:ssZ", "PROCESS_END_DATE": "yyyy-MM-dd'T'HH:mm:ssZ", "PROCESS_ERRORS_COUNT": "PROCESS_ERRORS_COUNT" "ERRORS": [{ "ERROR": "ERROR_CODE", "MESSAGE": "error message", "DETAIL": "details on the error", "HELP": "https://xxxxx.com/help/error/ERR-0001" "DATA_PROVIDED": { "SECTION_ID": "SECTION_ID", "YEAR": "YEAR", "PARAMETER_ID": "PARAMETER_ID", "PARAMETER_VALUE": "PARAMETER_VALUE", "PARAMETER_SOURCE": "PARAMETER_SOURCE", "START_MEASURE": "START_MEASURE", "END_MEASURE": "END_MEASURE" } }, ...]</pre>

4.4.1.4 Attributes

1. "TICKET_ID"
Type: Integer(\$int64) Format: N/A Length: N/A Ex.: Case Sensitive: N/A Notes:

2. "REQUEST_DATE"

Type: DateTime;
Format: "yyyy-MM-dd'T'HH:mm:ssZ"
Length: 24
Ex.: 2016-01-19T09:55:50-0800
Case Sensitive: N/A
Notes: Date and time when the ticket status was requested.

3. "PROCESS_NAME"

Type: String
Format: N/A
Length: 50
Ex.: "POST PARAMETER VALUES"
Case Sensitive: YES
Notes: Name of the process to which the current status refers to.

4. "PROCESS_CURRENT_STATUS"

Type: String
Format: N/A
Length: 35
Ex.: "PROCESSING", "FINISHED", "WAITING_TO_START", "NOT_PROCESSED"
Case Sensitive: N/A
Notes: Status of the process to which the current status refers to. Please refer to the STATUS table available in this documentation.

5. "PROCESS_REQUEST_DATE"

Type: DateTime;
Format: "yyyy-MM-dd'T'HH:mm:ssZ"
Length: 24
Ex.: 2016-01-19T09:55:50-0800
Case Sensitive: N/A
Notes: Date and time when the process to which this ticket status refers to started.

6. "PROCESS_END_DATE"

Type: DateTime;
Format: "yyyy-MM-dd'T'HH:mm:ssZ"
Length: 24
Ex.: 2016-01-19T09:55:50-0800
Case Sensitive: N/A Notes:
Date and time when the process to which this ticket status refers to ended. Returns nothing in case the process didn't finished.

7. "PROCESS_ERRORS_COUNT"

Type: Integer
Format: N/A
Length: N/A
Ex.:
Case Sensitive: N/A
Notes: Number of errors in the process to which this ticket status refers to. If no errors, it returns 0.

8. "ERRORS"

Type: array[]
Format: N/A
Length: N/A
Ex.:
Case Sensitive: N/A
Notes: Array with information on errors.

8.1. "ERROR"

Type: String
Format: ERR-{PROCESS_CODE}-{ID}
Length: 15
Ex.: ERR-PVP-001
Case Sensitive: N/A
Notes: Code given to an specific error. Table with errors to be provided in this documentation.

8.2. "MESSAGE"

Type: String
Format: N/A
Length: 255
Ex.:
Case Sensitive: N/A
Notes: Resume on the error that happened.

8.3. "DETAIL"

Type: String
Format: N/A
Length: 1024
Ex.:
Case Sensitive: N/A
Notes: Details on the error that happened.

8.4. "HELP"

Type: String
Format: N/A
Length: 255
Ex.:
Case Sensitive: N/A
Notes: Link to help on the error.

8.5. "DATA_PROVIDED"

Type: Object
Format: N/A
Length: 255
Ex.:
Case Sensitive: N/A
Notes: Data that was provided that is related to the error.

8.5.1. "SECTION_ID"

Type: Integer(\$int64)
Format: N/A
Length: N/A
Ex.:
Case Sensitive: N/A
Notes:

8.5.2. "YEAR"

Type: Integer
Format: yyyy
Length: 4
Ex.: 2004, 2022, 2025
Case Sensitive: N/A
Notes: Value must be between 2000 and 9999.

8.5.3. "PARAMETER_ID"

Type: Integer
Format: N/A
Length: N/A
Ex.:
Case Sensitive: N/A
Notes:

8.5.4. "PARAMETER_VALUE"

Type: String
Format: N/A
Length: 255 UTF-8 Characters
Ex.:
Case Sensitive: YES
Notes:

8.5.5. "PARAMETER_SOURCE"

Type: String
Format: N/A
Length: 255 UTF-8 Characters
Ex.:
Case Sensitive: YES
Notes:

8.5.6. "START_MEASURE"

Type: Number(\$double)
Format: N/A
Length: N/A
Ex.:
Case Sensitive: N/A
Notes:

8.5.7. "END_MEASURE"

Type: Number(\$double)
Format: N/A
Length: N/A
Ex.:
Case Sensitive: N/A
Notes:

4.4.2 400 - Bad Request

Description: The server cannot or will not process the request due to something that is perceived to be a client request error.

Media Type: application/json

RESPONSE BODY

```
{
  "REQUEST_DATE": "yyyy-MM-dd'T'HH:mm:ssZ",
  "END_PROCESS_REQUEST": "yyyy-MM-dd'T'HH:mm:ssZ",
  "ERROR": "ERR-0001",
  "MESSAGE": "error message",
  "DETAIL": "deatails on the error",
  "HELP": "https://xxxxx.com/help/error/ERR-0001"
}
```

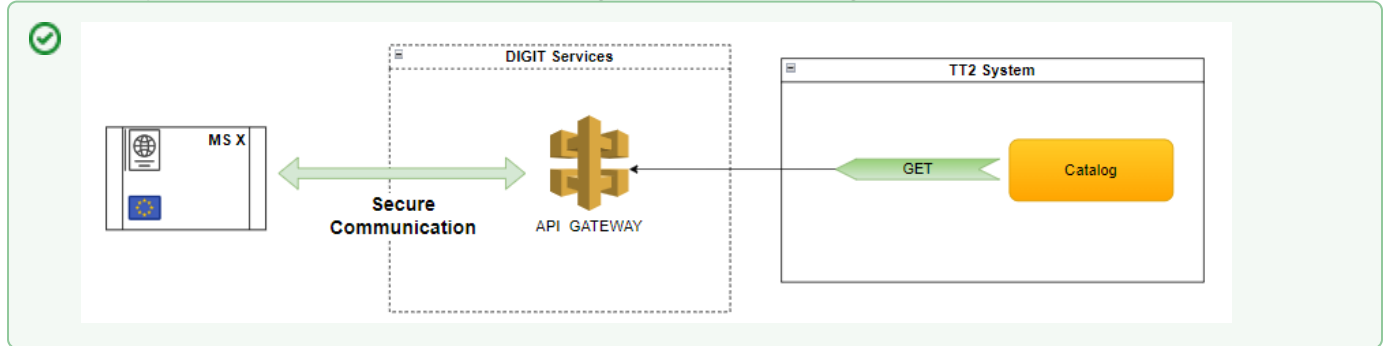
4.5 Errors

Please refer to the [page 6](#) - Known Errors

5 - Parameter Catalog - GET

5.1 Goal

Provide an end point for Member States and Authorized Parties to gather the Parameter Catalog.



5.2 Details

Web Service Type: RESTful

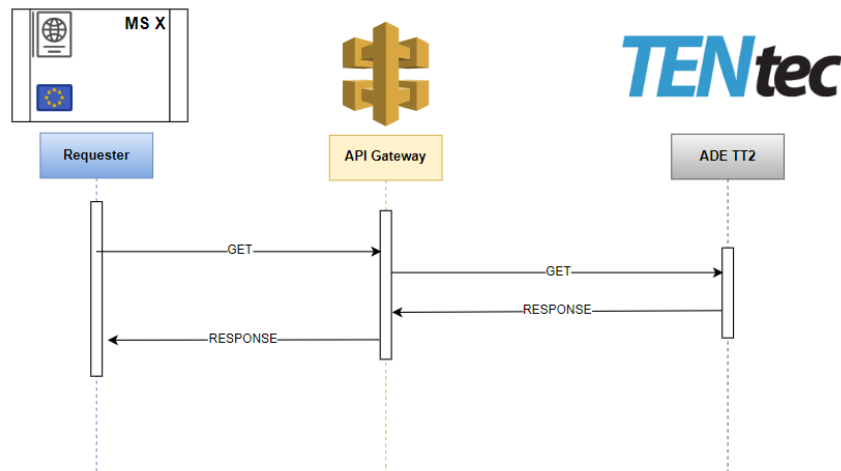
End Point: <https://api.acceptance.tech.ec.europa.eu/tentec2/ade/parameter/catalog>

Method: GET

Process code: PCG

Live Documentation: Swagger - delivered together with service

Description: The service provided by this end point provides a catalog with all Parameter Metadata Information.



5.3 Request Parameters

Not defined.

5.4 Responses

5.4.1 200 - OK

Media Type: application/json

RESPONSE BODY

```
{
  "REQUEST_DATE": "yyyy-MM-dd'T'HH:mm:ssZ",
  "PARAMETERS": [
    {
      "PARAMETER_NAME": "PARAMETER_NAME",
      "PARAMETER_DEFINITION": "PARAMETER_DEFINITION",
      "DATA_TYPE": "DATA_TYPE",
      "LAYER": "LAYER"
    }, ...
  ]
}
```

5.4.1.1 Attributes

1. "REQUEST_DATE"

Type: DateTime;
Format: "yyyy-MM-dd'T'HH:mm:ssZ"
Ex.: 2016-01-19T09:55:50-0800
Notes: Date and time when the request was made.

2. "PARAMETERS"

Type: array[]
Format: N/A
Length: N/A
Notes: Array with parameter catalog.

3. "PARAMETER_NAME"

Type: String
Format: N/A
Length: 255
Notes: Parameter Name

4. "PARAMETER_DEFINITION"

Type: String
Format: N/A
Length: 1024
Notes: Definition of the parameter.

5. "DATA_TYPE"

Type: String;
Format: N/A
Length: 20
Ex.: STRING, ENUMERATION, BOOLEAN, DOUBLE, INTEGER
Notes: Parameter data type defines what type of information the parameter can receive.

6. "LAYER"

Type: String;
Length: 20
Ex.: INLAND_WATERWAYS, AIRPORTS, PORT_TERMINAL
Notes: Layer the parameter is part of.

5.4.2 400 - Bad Request

Description: The server cannot or will not process the request due to something that is perceived to be a client request error.

Media Type: application/json

RESPONSE BODY

```
{
  "REQUEST_DATE": "yyyy-MM-dd'T'HH:mm:ssZ",
  "END_PROCESS_REQUEST": "yyyy-MM-dd'T'HH:mm:ssZ",
  "ERROR": "ERR-0001",
  "MESSAGE": "error message",
  "DETAIL": "deatails on the error",
  "HELP": "https://xxxxxx.com/help/error/ERR-0001"
}
```

5.5 Errors

Please refer to the [page 6](#) - Known Errors

6 - Known Errors

In order to provide better errors treatment, Automated Data Exchange will work with Error Codes. This will be done as described in this document.

Error Code Pattern

Each error code will follow the pattern: ERR-{PROCESS_CODE}-{ERROR-ID}

- **PROCESS_CODE**: unique code given to each service;
- **ERROR_ID**: unique, sequential error id;

Process Codes

Service	Process	Method	PROCESS_CODE
Parameter Values	Send Data	POST	PVP
Parameter Values	Get Data	GET	PVR
Parameter Values	Ticket Status	GET	PVT
Parameter Catalog	Catalog	GET	PCG

Known error codes

Error Code	Message	Detail	HELP URL
ERR-PVR-001	Request Parameter TRANSPORT_MODE not found.	The request parameter "TRANSPORT_MODE" with value "XXXXX" provided does not exist.	TBP
ERR-PVR-002	Request Parameter LAST_UPDATE not valid.	The request parameter "LAST_UPDATE" provided is not valid.	TBP
ERR_PV R-003	Request Parameter COUNTRY not valid.	The request parameter "COUNTRY" provided is not valid.	TBP
ERR_PV R-004	Request Parameter RESULT_OFFSET not valid.	The request parameter "RESULT_OFFSET" cannot be lower than 0.	TBP
ERR_PV R-005	Request Parameter RESULT_RECORD_COUNT not valid.	The request parameter "RESULT_RECORD_COUNT" must be a value between 1 and MaxRecordCount. Current MaxRecordCount is XXXX	TBP
ERR_PV R-006	Request Parameter CORRIDOR not valid.	The request parameter "CORRIDORS" contains one or more corridors not valid.	TBP
ERR_PV R-007	Request Parameter START_YEAR not valid.	The request parameter "START_YEAR" must be a valid year between 2000 and 9999.	TBP
ERR_PV R-008	Request Parameter END_YEAR not valid.	The request parameter "END_YEAR" must be a valid year between 2000 and 9999.	TBP
ERR_PV R-009	Filtered period not valid.	The request parameters "START_YEAR" and "END_YEAR" when provided must follow the rule START_YEAR < END_YEAR.	TBP
ERR_RE Q-010	Request Parameter PARAMETER_ID not valid.	The request parameter "PARAMETER_IDS" contains one or more parameters not valid.	TBP
ERR_PV R-011	Request Parameter SECTION_ID not valid.	The request parameter "SECTION_IDS" contains one or more sections not valid.	TBP
ERR-PVP-001	Required attribute not provided	The attribute "SECTION_ID" is a required attribute and was not provided	TBP
ERR-PVP-002	SECTION_ID not found	The attribute "SECTION_ID" provided was not found.	TBP
ERR-PVP-003	Required attribute not provided	The attribute "YEAR" is a required attribute and was not provided.	TBP
ERR-PVP-004	YEAR not valid	The attribute "YEAR" provided is not valid. "YEAR" must be a value between 2000 and 9999.	TBP
ERR-PVP-005	Required attribute not provided	The attribute "PARAMETER_ID" is a required attribute and was not provided.	TBP

ERR-PVP-006	PARAMETER_ID not found	The attribute "PARAMETER_ID" provided was not found.	TBP
ERR-PVP-007	Required attribute not provided	The attribute "PARAMETER_VALUE" is a required attribute and was not provided.	TBP
ERR-PVP-008	"PARAMETER_VALUE" not valid	{SYSTEM_PROVIDES_DETAILS}	TBP
ERR-PVP-009	Required attribute not provided	The attribute "PARAMETER_SOURCE" is a required attribute and was not provided.	TBP

NOTE: the above table will grow as the services are build.