Carrier Interface Overview

March 2022

Handling instructions for SENSITIVE information are given at https://europa.eu/!qG39Vd

PUBLIC
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Legal Context
Legal context

EU regulations: 2021/1217 (the “EES Regulation”) and 2021/1224 (the “ETIAS Regulation”) set out the necessity to query EES and ETIAS in order to receive details regarding the status of third country nationals travellers arriving to Member States territory.

- The Entry/Exit System (EES) will replace the manual stamping of passports of third country-nationals, within the scope of the system, with an electronic record of entries and exits. **As of September 2022 (planned EiO)**, carriers will need to verify whether third-country nationals travelling to the EU on a short-stay, be it a single or double entry visa, have already used the number of entries authorised by their visa.

- **From May 2023 onwards (planned EiO)**, the European Travel Information and Authorisation System (ETIAS) will require carriers to verify, prior to boarding, that their visa-exempt passengers have a valid travel authorisation to enter Member States territory.
Carrier Interface Overview
Carrier Interface Overview

EU Central System

- EES and ETIAS
- Read only DB for carriers

Carrier Interface

- System to System
- Web Portal and Mobile Application

Response for each passenger:
- OK
- NOK EES
- NOK ETIAS
- NA

Response time:
- 2 sec for 1 passenger per message
- 4 sec for up to 99 passengers

BOOKING H - 48

Carrier’s query up to 99 passengers

DEPARTURE TIME

ARRIVAL BORDER CONTROL

ARRIVAL

Carriers
System

Carrier Authorised Staff

Response for each passenger:
- OK
- NOK EES
- NOK ETIAS
- NA

Carriers System

Carrier Authorised Staff
Carrier Web Portal and Mobile Application

Input Data

Passenger details can be provided:
• Manually
• Via an import of csv file
• Via MRZ scanner (optical scanning) for ICAO Passports
System to System Communication Protocol Options

**IBM MQ over Ipsec VPN:**
- An IPsec VPN must be set up between the DCS/Carrier and the Carrier Interface before exchanging the UN/EDIFACT messages over the IBM MQ.
- The Carrier Interface shall issue a private certificate 2048-bit Rivest-Shamir-Adleman (RSA) keys to the Carrier for each eu-LISA primary site (including secondary site).
- Both eu-LISA and the Carriers shall provide the communication means and technical details during the implementation phase (such as Internet Protocol (IP) addresses/Uniform Resource Locators (URLs), IBM MQ addresses/queues numbers to be contacted and certificates).

**REST API over mTLS:**
- The Carrier Interface supports the REST standard for the transmission of JSON or XML based messages between the Carrier and the CI.
- These messages must be exchanged over a secure connection based on the mTLS.
- Both eu-LISA and the Carriers shall provide the communication means and technical details during the implementation phase (including IP addresses/URLs to be contacted and certificates).
- To ensure data privacy and integrity between eu-LISA and the Carriers, TLS 1.3 shall be used as the communication standard.
System to System message formats

The carrier Interface manages the below message formats:

- **WCO PAXLST (version 15B)** and **CUSRES (12B)** definitions by IATA implementation guidelines
- **XML 1.0 (Fifth Edition)** as published at [https://www.w3.org/TR/xml/](https://www.w3.org/TR/xml/)
- **JSON** the baseline standard is **STD90 (RFC8259)** as published at [https://tools.ietf.org/html/std90](https://tools.ietf.org/html/std90)
Carrier Interface – Query/Reply
## Query – Passenger Data

<table>
<thead>
<tr>
<th>#</th>
<th>Attribute description</th>
<th>Mandatory (M) or Optional (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Surname (family name)</td>
<td>M</td>
</tr>
<tr>
<td>2</td>
<td>First name or names (given names)</td>
<td>M</td>
</tr>
<tr>
<td>3</td>
<td>Date of birth</td>
<td>M</td>
</tr>
<tr>
<td>4</td>
<td>Sex</td>
<td>M</td>
</tr>
<tr>
<td>5</td>
<td>Nationality</td>
<td>M</td>
</tr>
<tr>
<td>6</td>
<td>Type of the Travel Document</td>
<td>M</td>
</tr>
<tr>
<td>7</td>
<td>Number of the Travel Document</td>
<td>M</td>
</tr>
<tr>
<td>8</td>
<td>Three letter code of the issuing country of the TD</td>
<td>M</td>
</tr>
<tr>
<td>9</td>
<td>Date of expiry of the validity of the TD</td>
<td>M</td>
</tr>
</tbody>
</table>
## Query – Itinerary Data

<table>
<thead>
<tr>
<th>#</th>
<th>Attribute description</th>
<th>Mandatory (M) or Optional (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Scheduled location of entry</td>
<td>M</td>
</tr>
<tr>
<td>11</td>
<td>Scheduled local date and time of arrival at a location</td>
<td>M</td>
</tr>
<tr>
<td>12</td>
<td>Scheduled local date and time of departure</td>
<td>M</td>
</tr>
<tr>
<td>13</td>
<td>Identification number of scheduled means of transportation</td>
<td>M</td>
</tr>
<tr>
<td>14</td>
<td>Carrier operator</td>
<td>M (applicable for Sys2Sys channel)</td>
</tr>
<tr>
<td>15</td>
<td>Traveller in transit flag</td>
<td>O (if applicable)</td>
</tr>
<tr>
<td>16</td>
<td>Traveller out of scope flag</td>
<td>O (if applicable)</td>
</tr>
<tr>
<td>17</td>
<td>Query submission date and time in UTC time</td>
<td>M (applicable for Sys2Sys channel)</td>
</tr>
<tr>
<td>18</td>
<td>Passenger request identifier</td>
<td>M (applicable for Sys2Sys channel)</td>
</tr>
<tr>
<td>19</td>
<td>Notification request identifier</td>
<td>M (applicable for Sys2Sys channel)</td>
</tr>
<tr>
<td>20</td>
<td>Multiple entries required</td>
<td>M (if applicable) for land and maritime carriers only</td>
</tr>
</tbody>
</table>
Traveller classification as per EES and ETIAS EU regulations

**EES**

**Travelers with visa in scope of EES**
Third country nationals and holders of single or double entries visas

**Travelers - out of scope of EES**
Third country nationals as per article 2 (3) of EES regulation, such as:
- Holders of a residence card or residence permit
- Holders of a Long-stay visa
- Holders of Diplomatic passport or laissez-passer
- Persons exempt as per Article 6a(3) of the Regulation (EU) 2016/399
- EU nationals
- Nationals of Andorra, Monaco and San Marino and holders of a passport issued by the Vatican City State or the Holy See

For more details, please refer to EES and ETIAS regulations

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**ETIAS**

**Travelers in scope of ETIAS**
Nationals from visa exempt countries and not holders of any ETIAS out of scope category (reference to Article 2(2))

**Travelers from countries with visa requirements in scope of ETIAS**
Third country nationals exempt from the visa requirement as described in Article 2(1) b and c of the ETIAS Regulation (e.g., school pupils etc.)

**ETIAS out of scope**
Third country nationals as per article 2 (2) of ETIAS regulation, such as:
- Holders of a residence card or residence permit
- Holders of long-stay visa
- Refugee or stateless persons
- Holders of diplomatic passport or laissez-passer
- EU nationals
- Nationals of Andorra, Monaco and San Marino and holders of a passport issued by the Vatican City State or the Holy See
Carrier Interface replies
Before ETIAS entry into operation

In scope - EES
- Visa single or double entries
- Carrier Interface Response: OK or NOK EES

In scope - ETIAS
- Exempt from the visa requirement as per article 2(1) of ETIAS regulation (ex: School pupil)
- Nationals from visa exempt countries*
- Carrier Interface Response: NA

* Nationals from visa exempt countries and not under any of ETIAS out of scope cases
Carrier Interface replies
After ETIAS entry into operation

**In scope – EES**
- Visa single or double entries

Response: OK or NOK EES

**In scope - ETIAS**
- Exempt from the visa requirement as per article 2(1) of ETIAS regulation (ex: School pupil)
- Nationals from visa exempt countries*

Response: OK or NOK ETIAS

* Nationals from visa exempt countries and not under any of ETIAS out of scope cases
Carrier Interface replies
Nationality checks

Out of scope – EES and ETIAS
Nationals from AND, MCO, SMR and VAT

Response: NA

Out of scope – EES and ETIAS
Nationals from Member States

Response: NA
Carrier’s queries during the online check-in

Option 1

• During the online check-in, carriers may decide to send all passengers data to the carrier interface and receive a Not OK EES or Not OK ETIAS for out of scope passengers.

• In case a Not OK EES or Not OK ETIAS is returned, carriers need to check the travel documents of the passengers to clarify if they fulfil the conditions to enter the Schengen area.

• If verification of travel documents reveal that traveller has no such documents (example: Resident Permit, Long stay Visa...etc), meaning traveller is in the scope of the carrier interface. And by receiving a previous Not OK, it would mean that the traveller has neither a single and double entry visa nor ETIAS and therefore not able to enter the Schengen area.
Carrier’s queries during the online check-in
Option 2

- During the online check-in, carriers may decide to ask the passenger if he/she is out of scope before submitting the query to the carrier interface.
- Carriers may decide to submit or not queries with out of scope passengers. If the carrier sends a query for out of scope passengers, the query should include the out of scope indicator.

Proposed option by no means required by legal base
Carrier Interface
Web portal and Mobile Application
Carrier Web Portal and Mobile Application

Input Data

Passenger details can be provided:
- Manual data input
- Via an import of csv file
- Via MRZ scanner (optical scanning) for ICAO Passports

Carrier Interface

Carrier’s query up to 99 passengers

Response for each passenger:
- OK
- NOK EES
- NOK ETIAS
- NA

Web Portal and Mobile Application
Carrier Web Portal and Mobile Application

Option 1: Manual Data Input

The carrier authorised users provide manually the Travel information for all concerned passengers:

*All screenshots are not be considered as final version*
Carrier Web Portal and Mobile Application

Option 1: Manual Data Input

The carrier authorised users provide manually the passenger travel document details:

- Surname, First name
- Date of birth
- Sex
- Nationality
- Number of travel document
- Type of travel document
- Issuing country
- Date of expiration

*All screenshots are not be considered as final version*
Carrier Web Portal and Mobile Application

Option 2: Import Passenger List From a File

**CSV**

Surname;Given_names;Date_of_birth;Sex;Nationality;Travel_document_number;Travel_document_type;Issuing_country_of_travel_document;Expiry_date_of_travel_document;Target_country;Arrival_scheduled_date;Transport_identifier_number;Departure_scheduled_datetime;Transit;Out_of_scope;Double_entry_required

Maximum of 99 passengers are allowed to be submitted in one CSV file

*All screenshots are not be considered as final version*
Option 3: Input using MRZ Scanner

The Carrier Authorised users are able to input passenger information by scanning the Travel Document using a MRZ scanner. Imported data can then be manually edited before verification.

The MRZ Scanner is limited to ICAO Standards Travel documents

*All screenshots are not be considered as final version
Carrier Web Portal and Mobile Application

Browse Results of Verification

Results of the verification can be exported to a CSV file by the Carrier Authorised users.

New list could be submitted overwriting the previous one.

*All screenshots are not to be considered as final version.
Illustrations – Air regular flights
Use Case 1: Passenger with single or double entries visa

- **Travel document preparation**
  - Single or double entries visa applied

- **Booking**
  - Booking confirmed

- **Check-in**
  - The passenger provide the passport details with China nationality to the carrier
  - The carrier submit the query to the carrier interface

- **Departure verification and Boarding**
  - Travel documents verification
  - Boarding accepted

- **Take-off**
  - Flight take off with boarded passengers

**Departure Control System**

**Query 1:**
- Passenger reference XX001
- Chinese passport details with no in/out of scope flag

**Reply 1:**
- Passenger reference XX001
- OK
Use Case 2: Passenger with short stay Schengen visa with number of entries consumed

- Single or double entries visa applied
- Booking confirmed
- The passenger provide the passport details with Moroccan nationality to the carrier
- The carrier submit the query to the carrier interface
- Travel documents verification
- Boarding not accepted
- Flight take off with boarded passengers

Query 1:
Passenger reference XX002
Moroccan passport details with no in/out of scope flag

Reply 1:
Passenger reference XX002
NOK EES
Use Case 3: Passenger with no valid visa

- Not prepared
- Booking confirmed
- The passenger provide the passport details with Tunisian nationality to the carrier
  - The carrier submit the query to the carrier interface
- Travel documents verification
- Boarding not accepted
- Flight take off with boarded passengers

Query 1:
- Passenger reference YY002
- Tunisian passport details with no in/out of scope flag

Reply 1:
- Passenger reference YY002
- NOK EES
Illustrations
Use Case 4: Passenger from Visa holders countries with Resident Permit

Option 1: The carrier decides to not send the "out of scope" flag in the query

1. Passenger from Visa required country with Resident Permit
2. The carrier send a query to the Carrier Interface for all passengers
3. Before the departure, the agent verify the passenger Travel documents
4. The Passengers is “Out of scope”, no need to send a new query to the Carrier Interface

Option 2: The carrier decides to send the "out of scope" flag in the query after the Travel document verification

1. Passenger from Visa required country with Resident Permit
2. The carrier send a query to the Carrier Interface for all passengers
3. Before the departure, the agent verify the passenger Travel documents
4. The Passengers is “Out of scope”, the carrier send a new query to the Carrier Interface with the “Out of scope” flag
Use Case 4: Passenger from Visa holders countries with Resident Permit

- Valid resident permit issued by EU member state

Booking confirmed

- The passenger provide the passport details with Indian nationality to the carrier
- The carrier submit the query to the carrier interface

Travel documents verification with presence of valid Resident Permit
- Boarding accepted as passenger is considered out of scope of EES and ETIAS verifications

Flight take off with boarded passengers

Query 1:
Passenger reference AA001
Indian passport details with no in/out of scope flag

Reply 1:
Passenger reference AA001
NOK EES

Option 1: The carrier decides to not send the “out of scope” flag in the query

No need to send a new query to the Carrier Interface as the passenger is considered “Out of scope” after travel documents verification
Use Case 5: Passenger from Member States

- **Travel document preparation**
  - Valid MS passport

- **Booking**
  - Booking confirmed

- **Check-in**
  - The passenger provide the passport details with French nationality to the carrier
  - The carrier submit the query to the carrier interface

- **Departure verification and Boarding**
  - Travel documents verification
  - Boarding accepted

- **Take-off**
  - Flight take off with boarded passengers

**Departure Control System**

**Query 1:** Passenger reference EE001 with French passport details with no in/out of scope flag

**Reply 1:** Passenger reference EE001 NA
Illustrations – Business Aviation Operators
Use Case 1: Passenger with single or double entries visa

- **Travel document preparation**
  - Single or double entries visa applied

- **Booking**
  - Booking confirmed

- **Pre-departure verification**
  - Passenger data collection
  - Travel documents verification
  - Boarding accepted

- **Take-off**
  - Flight take off with boarded passengers

Illustrations

- No check-in process
- No Departure Control System

**Carrier Interface**
Illustrations

Use Case 2: Passenger with long stay Visa

- Long stay visa applied
- Booking confirmed
- Passenger data collection
- Travel documents verification
- Boarding accepted
- Flight take off with.boarded passengers
- No check-in process
- No Departure Control System

After travel document verification, the traveller is considered out of the scope for EES and ETIAS obligations. Therefore, the carrier do not send any query to the Carrier Interface for this passenger.
Illustrations – Charter Airlines
Use Case 1: Group of passengers transported by a charter flight

**Travel document preparation**
- Valid travel documents prepared

**Booking**
- Booking confirmed

**Pre-departure verification**
- Passenger data collection
- Travel documents verification
- Boarding accepted for OK or Out of scope passengers

**Take-off**
- Flight take off with boarded passengers

**Carrier Interface**

**Query:**
Collected list of passengers' details under EES and ETIAS obligations

**Reply:**
OK  
NOT OK ETIAS  
NOT OK EES  
NA

The query could be submitted between 48h before the departure and the time of the departure.
Use Case 2: Group of EU nationals transported by a charter flight

- Valid EU passports for all passengers
- Booking confirmed
- Passenger data collection
- Travel documents verification
- Boarding accepted for all passengers
- Flight take off with boarded passengers

After travel document verification, all the travellers are considered out of the scope for EES and ETIAS obligations.
Therefore, the carrier do not send any query to the Carrier Interface for this passenger.
Illustrations – Cruise Lines
Use Case 1: Passenger with Visa single entry consumed

1. The passenger takes the flight from China to Spain
2. The Single Visa entry is consumed when entering in Spain

He plans to have a Mediterranean cruise trip with Turkey as a one stop in the journey with an expected new entry in the Schengen area
Illustrations

Use Case 1: Passenger with Visa single entry consumed

- Visa single entry consumed during the first entry in Spain
- Booking confirmed
- Passenger data collection
- Travel documents verification
- Embarkation not authorized

Carrier Interface

Query: Passenger reference XX001
Reply: Passenger reference XX001
NOK EES

The query could be submitted between 48h before the departure and the time of the departure
Use Case 2: Passenger with Visa double entries not consumed

1. The passenger takes the flight from China to Spain
2. The Single Visa entry is consumed when entering in Spain

He plans to have a Mediterranean cruise trip with Turkey as a one stop in the journey with an expected new entry in the Schengen area.
Use Case 2: Passenger with Visa double entries not consumed

- Visa single entry consumed during the first entry in Spain
- Booking confirmed
- Passenger data collection
- Travel documents verification
- Embarkation authorized

The query could be submitted between 48h before the departure and the time of the departure
Illustrations – Ferry Lines
Use Case 1: Passenger with valid single or double entries visa

- Single or double entries visa applied
- Booking confirmed
- Passenger data collection
- Travel documents verification
- Embarkation authorized

The passenger verification could be performed just before the entry in the Ferry via the Mobile application.
Use Case 2: Passenger with single or double entries visa consumed

- Single or double entries visa applied
- Booking confirmed
- Passenger data collection
- Travel documents verification
- Embarkation not authorized

The passenger verification could be performed just before the entry in the Ferry via the Mobile application.
Illustrations – International coaches
Use Case 1: Passenger with valid single or double entries visa

The passenger verification could be performed just before the entry in the coach via the Mobile application.
Illustrations
Use Case 2: Passenger with single or double entries visa consumed

Carrier Interface

Query 1:
Passenger reference XX001

Reply 1:
Passenger reference XX001
NOK EES

Pre-departure verification
- Passenger data collection
- Travel documents verification
- Entry not authorized in the coach

Booking
- Booking confirmed

Travel document preparation
- Single or double entries visa applied

Passenger with no valid visa

The passenger verification could be performed just before the entry in the coach via the Mobile application
Thank you!

eu-LISA
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