

eTIR web services - Messages E1-E2

E1 - Register guarantee / E2 - Registration results



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1. Document revision note



This document has been published on **25/05/2021**, and is valid for the **eTIR international system version 1.0** based on the **eTIR specifications version 4.3a**.

Please ensure you get the latest version of this document from the [eTIR documentation portal](#) or contact the eTIR service desk ([Support and contact](#)).

2. Related documents

Project documents and collaboration platform

- eTIR documentation portal: <https://wiki.unece.org/display/ED/eTIR+documentation+-+Homepage>
- Project guidelines for customs to connect to the eTIR international system : <https://wiki.unece.org/download/attachments/106299939/Project%20Guidelines%20for%20customs%20to%20connect%20to%20the%20eTIR%20international%20system.pdf>
- eTIR web services - Introduction document: <https://wiki.unece.org/download/attachments/106299935/eTIR%20web%20services%20-%20Introduction%20document.pdf>
- eTIR web services - Messages I1-I2: I1 - Accept guarantee / I2 - Acceptance results <https://wiki.unece.org/download/attachments/106299935/eTIR-IS-I1-I2-messages-documentation.pdf>
- eTIR web services - Messages I5-I6: I5 - Query guarantee / I6 - Query results <https://wiki.unece.org/download/attachments/106299935/eTIR-IS-I5-I6-messages-documentation.pdf>
- eTIR web services - Messages I7-I8: I7 - Record declaration data / I8 - Record declaration data results <https://wiki.unece.org/download/attachments/106299935/eTIR-IS-I7-I8-messages-documentation.pdf>
- eTIR web services - Messages I9-I10: I9 - Start TIR operation / I10 - Start results <https://wiki.unece.org/download/attachments/106299935/eTIR-IS-I9-I10-messages-documentation.pdf>
- eTIR web services - Messages I11-I12: I11 - Terminate TIR operation / I12 - Termination results <https://wiki.unece.org/download/attachments/106299935/eTIR-IS-I11-I12-messages-documentation.pdf>
- eTIR web services - Messages I13-I14: I13 - Discharge TIR operation / I14 - Discharge results <https://wiki.unece.org/download/attachments/106299935/eTIR-IS-I13-I14-messages-documentation.pdf>
- eTIR web services - Messages I17-I18: I17 - Refusal to start TIR operation / I18 - Refusal results <https://wiki.unece.org/download/attachments/106299935/eTIR-IS-I17-I18-messages-documentation.pdf>

Legal framework

- TIR Convention handbook: <https://unece.org/transport/publications/tir-handbook-0>
- Annex 11 to the TIR Convention: <https://unece.org/DAM/trans/bcf/ac2/documents/2020/ECE-TRANS-WP30-AC2-2020-07e.pdf>

eTIR specifications

- Introduction to the eTIR conceptual, functional and technical v4.3: <https://unece.org/sites/default/>

[files/2021-03/WP30_GE1_id21-01e.pdf](#)

- eTIR concepts v4.3: https://unece.org/sites/default/files/2021-05/WP30-GE1_id21-02e.pdf
- eTIR Functional specifications v4.2: http://www.unece.org/fileadmin/DAM/trans/bcf/adhoc/conc_tech/documents/id17-07e.pdf
- Approved amendments to the eTIR specifications v4.2 to prepare v4.3: <http://www.unece.org/fileadmin/DAM/trans/bcf/wp30/documents/2020/ECE-TRANS-WP30-2020-07e.pdf>

Additional resources

- eTIR XML schemas: <https://wiki.unece.org/display/ED/Technical+artefacts>
- eTIR code lists: https://www.unece.org/fileadmin/DAM/trans/bcf/eTIR/documents/CodeLists0_4.pdf
- List of eTIR focal points: <https://unece.org/list-etir-focal-points>

3. Purpose

This document describes the **E1 - Register guarantee** request message, and the **E2 – Registration results** response message of the eTIR international system web services. It provides all the specifics required to use them (prepare or receive), explains how and when they should be used and explains the error codes that may be returned. It also contains examples and fallback procedures, if applicable.

4. Target audience

This guide is intended for the ICT teams of the guarantee chains in charge of interconnecting their guarantee chain systems to the eTIR international system.

5. Prerequisites



In order to ensure an implementation that delivers the best value and services to the TIR Carnet holders, we recommend the ICT team in charge of establishing the connection to the eTIR international system web services to be accompanied by a subject-matter expert on the TIR Convention.

This document is to be read after having an understanding of the [eTIR concepts](#) and having read the [eTIR functional specifications](#) as well as the [eTIR web services introduction document](#). It is highly recommended keeping the eTIR web services introduction document at hand as this document refers to many elements and diagrams that will be necessary and referred to when reading this document.

From a technical perspective, the following steps should have been completed at this point:

- the secured connection to one of the User Acceptance Testing (UAT) environments of the eTIR international system is established;
- the endpoint URL to the UAT environment is clearly identified and properly configured on the client side;
- all the tools required to connect, test and troubleshoot the messages are ready;

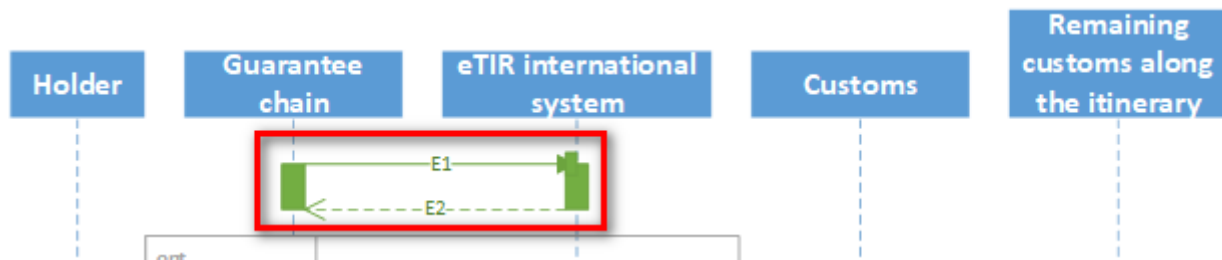


All eTIR messages are identified and belong to a flow described in the [eTIR web services introduction document](#) (see dedicated section). It is key to respect this sequencing else the eTIR international system will return errors due to invalid sequencing of the message as described in the [dedicated eTIR error code web page](#).

6. "E1 - Register guarantee" / "E2 – Registration results" messages

6.1. Sequence diagram

The following sequence diagrams highlight the role and sequence position of the **E1 - Register guarantee** and **E2 – Registration results** messages in the context of a TIR departure operation.



6.2. Message context

This message allows for the guarantee chain to register an eGuarantee for a TIR Transport in the eTIR international system, which is a prerequisite to start any TIR operation.

6.2.1. Message prerequisites

There is no prerequisite to sending an **E1 - Register guarantee** message as this one is the very first step to a TIR Transport.

6.2.2. Endpoint URL

The URL of the endpoint to use when sending the **E1 - Register guarantee** request message is: <https://etir-uat-01.unece.org/etir/v4.3/guaranteeChain/registerGuarantee>

Also note that the WSDL can be accessed at the following URL: <https://etir-uat-01.unece.org/etir/v4.3/guaranteeChain/registerGuarantee?wsdl>

6.3. "E1 - Register guarantee" request message

6.3.1. Description

The guarantee chain sends the **E1 - Register guarantee** request message to the eTIR international system to provide record the TIR Transport eGuarantee issued to the TIR Carnet holder in the eTIR international system.

The XSD file related to the **E1 - Register guarantee** message is available at the following URL: https://wiki.unece.org/download/attachments/106299941/WCO_eTIR_E1_1.xsd.

6.3.2. Field list

eTIR field name	Mapping to the XML element (XPATH)	Mandatory	Cardinality	Format	Code lists	Conditions	Rules
MESSAGE							
└ Message function, coded	Function	R	1..1	n..2	CL16		
└ Message identifier	ID	R	1..1	an..70			
└ Type, coded	TypeCode	R	1..1	an..3	CL26		
└─ GUARANTEE	ObligationGuarantee	R	1..1				
└ Validity	ObligationGuarantee/ExpirationDateTime	R	1..1	an..35			
└ Issuing date	ObligationGuarantee/IssueDateTime	R	1..1	an..35			
└ Reference	ObligationGuarantee/ReferenceID	R	1..1	an..35			
└ Guarantee type	ObligationGuarantee/SecurityDetailsCode	R	1..1	an..3	CL12		
└─ GUARANTEECHAIN	ObligationGuarantee/Surety	R	1..1				
└ Code	ObligationGuarantee/Surety/ID	R	1..1	an..35			
└─ HOLDER	ObligationGuarantee/Principal	R	1..1				
└ Code	ObligationGuarantee/Principal/ID	R	1..1	an..35			

6.3.3. Field descriptions

eTIR field name	Mapping to the XML element (XPATH)	Description	Usage
MESSAGE			
└ Message function, coded	Function	Code describing the function of the message	The value should be set to '9' (Original)
└ Message identifier	ID	Unique identifier of the message	The value should be a Globally Unique Identifier (GUID) as detailed in the dedicated section of the introduction document

eTIR field name	Mapping to the XML element (XPATH)	Description	Usage
└ Type, coded	TypeCode	Code of the message type	The value should be set to "E1"
└─ GUARANTEE	ObligationGuarantee	Class representing the guarantee of this TIR transport	
└ Validity	ObligationGuarantee/ExpirationDateTime	Date of the last day of validity of the guarantee	The value should be a date to be provided following the EDIFACT 102 format CCYYMMDD (https://www.unece.org/trade/untid/d00a/tred/tred2379.htm). For Example: 20200820 represents 20 August 2020.
└ Issuing date	ObligationGuarantee/IssueDateTime	Date of issuance of the eGuarantee by the guarantee chain	The value should be the "Issuing date" of the eGuarantee as recorded by the guarantee chain. The value should be a date to be provided following the EDIFACT 208 format CCYYMMDDHHMMSSZHMM (http://www.unece.org/trade/untid/d13b/tred/tred2379.htm). For Example: 20200820145600+0100 represents 20 August 2020 at 14:56 UTC+01:00.
└ Reference	ObligationGuarantee/ReferenceID	Unique identifier of the guarantee	The value should be the unique identifier of the guarantee for this TIR transport
└ Guarantee type	ObligationGuarantee/SecurityDetailsCode	Code of the guarantee type	This value should be the code of the guarantee type from the list Guarantee type code (eTIR) list
└─ GUARANTEECHAIN	ObligationGuarantee/Surety	Class representing the information related to the issuing guarantee chain (providing guarantee for the TIR transport)	
└ └ Code	ObligationGuarantee/Surety/ID	Unique identifier of the guarantee chain which issued the guarantee	The value should be 'IRU' for guarantees issued by the International Road transport Union
└─ HOLDER	ObligationGuarantee/Principal	Class representing the TIR Carnet holder (transporter) of this transport	
└ └ Code	ObligationGuarantee/Principal/ID	Unique identifier of the TIR Carnet holder	The value should be the unique identifier of the TIR Carnet holder as recorded in the International TIR Data Bank (ITDB)



When reading the values of the second columns for both tables, note that the "Declaration/" XML base element has been removed to improve the readability, as it is repeated on every line.

6.3.4. Referred code lists

The following code lists are referred to in the field lists and should be considered when sending the message:

- **CL12** - Guarantee type code (eTIR)
- **CL16** - Message function code (UN/EDIFACT 1225)
- **CL26** - Message types (eTIR)



All code lists are described in the [eTIR code lists document](#).

6.3.5. Example

The example below shows the XML data to be sent via POST method, by the guarantee chain system, to the eTIR international system [endpoint URL](#) to record the eGuarantee **XF95001234** which code **X03** allows for three TIR operations, issued by the eGuarantee provider **IRU** to the TIR Carnet holder **GEO/054/9890**, and expiring on **22/12/2022**.

E1 - Register guarantee request message

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:urn="etir:E1:v4.3" xmlns:urn1=
"etir:MetaData_DS:v4.3" xmlns:guar="etir:v4.3:guaranteeChain">
  <soap:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    (...)
    <wsa:Action>etir:v4.3:guaranteeChain/registerGuarantee</wsa:Action>
    <wsa:MessageID>uuid:2609af3e-e6c3-45ed-ad7a-46174d9c1fe7</wsa:MessageID>
    (...)
  </soap:Header>
  <soap:Body xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd" wsu:Id=
"id-92d67bf1-1b57-4176-8c58-11968a3f9f01">
    <guar:registerGuarantee>
      <urn:LPCO>
        <urn:FunctionCode>9</urn:FunctionCode>
        <urn:ID>680134b8-dafd-4beb-8658-03643cc384ce</urn:ID>
        <urn:TypeCode>E1</urn:TypeCode>
        <urn:ObligationGuarantee>
          <urn:ExpirationDateTime formatCode="102">20221222</urn:ExpirationDateTime>
          <urn:IssueDateTime formatCode="208">20201122113346+0400</urn:IssueDateTime>
          <urn:ReferenceID>XF95001234</urn:ReferenceID>
          <urn:SecurityDetailsCode>X03</urn:SecurityDetailsCode>
          <urn:Surety>
            <urn:ID>IRU</urn:ID>
          </urn:Surety>
          <urn:Principal>
            <urn:ID>GEO/054/9890</urn:ID>
          </urn:Principal>
        </urn:ObligationGuarantee>
      </urn:LPCO>
    </guar:registerGuarantee>
  </soap:Body>
</soap:Envelope>
```



Some field original contents have been shortened (...) in this document for the sake of readability, in particular the whole **header/security** content that is described in the [eTIR web services introduction document](#).

6.4. "E2 – Registration results" response message

6.4.1. Description

The **E2 – Registration results** message is a response to the **E1 - Register guarantee** message. It confirms the reception of the advance (declaration) amendment information necessary to the next TIR operation.

The XSD file related to the **E2 – Registration results** message is available at the following URL: https://wiki.unece.org/download/attachments/106299941/WCO_eTIR_E2_1.xsd.

6.4.2. Field list

eTIR field name	Mapping to the XML element (XPATH)	Mandatory	Cardinality	Format	Code lists	Conditions	Rules
MESSAGE							
└ Message function, coded	Function	R	1..1	n..2	CL16		
└ Original Message Identifier	FunctionalReferenceID	R	1..1	an..70			
└ Message identifier	ID	R	1..1	an..70			
└ Type, coded	TypeCode	R	1..1	an..3	CL26		
└ ERROR	Error	D	0..*			C006	
└ Error, coded	Error/ValidationCode	R	1..1	an..8	CL99		
└ POINTER	Error/Pointer	R	1..*				
└ Sequence number	Error/Pointer/SequenceNumeric	R	1..1	n..5			
└ Location	Error/Pointer/Location	R	1..1	an..512			

6.4.3. Field descriptions

eTIR field name	Mapping to the XML element (XPATH)	Description	Usage
MESSAGE			
└ Message function, coded	Function	Code describing the function of the message	The value should be "44" (Accepted without reserves) if the request was processed correctly. If at least one error is described in this message or if the content could not be accepted, the value should be "27" (Not accepted)
└ Original Message Identifier	FunctionalReferenceID	Unique identifier of the request message associated with this response	The value should be the one mentioned in the message identifier field of the request message (E1)
└ Message identifier	ID	Unique identifier of the message	The value should be a Globally Unique Identifier (GUID) as detailed in the dedicated section of the introduction document
└ Type, coded	TypeCode	Code of the message type	The value should be set to "E2"
└ ERROR	Error	Class representing the list of errors, if any	
└ Error, coded	Error/ValidationCode	Code of the error type	The value should be the code of the error from the list Error code (eTIR)
└ POINTER	Error/Pointer	Class representing the pointer to the erroneous field, if any	
└ Sequence number	Error/Pointer/SequenceNumeric	Index of the error in the list	The value should be the 1-based index of the error in the list
└ Location	Error/Pointer/Location	Location of the erroneous field	The value should be the location of the erroneous field following the XPath syntax. Additional details regarding the location of the fields per error code are available on the page dedicated to errors



When reading the values of the second columns for both tables, note that the "Response/" XML base element has been removed to improve the readability, as it is repeated on every line.

6.4.4. Referred code lists

The following code lists are referred to in the field lists and should be considered when sending the message:

- [CL16](#) - Message function code (UN/EDIFACT 1225)
- [CL26](#) - Message types (eTIR)
- [CL99](#) - Error code (eTIR)



All code lists are described in the [eTIR code lists document](#).

6.4.5. Conditions and Rules

The following conditions of the [eTIR conditions list](#) are referred to in the field lists and should be considered in the message:

- **C006:** IF(MESSAGE.Message function, coded) = '6' OR '11' OR '44' OR '45'
THEN EMPTY(ERROR)
ELSE
IF(MESSAGE.Message function, coded) = '10' OR '27'
THEN NOT EMPTY(ERROR)

6.4.6. How to use response data in the guarantee chain system

The eTIR international system will return whether there were errors while processing the request message by filling in the "Error" list. Therefore, and as for all response messages expected from the eTIR international system, the first step when parsing the **E2 – Registration results** response message should always be to look for potential error elements in the response message and address them accordingly as mentioned in the Error Management section of the [Introduction document](#).

If there was no error, and the response message content is as expected, the eGuarantee was properly registered in the eTIR international system and a TIR Transport can be planned to use it. The next step will be for the TIR Carnet holder to send advance TIR data (for instance by sending an **E9 - Advance TIR data**) to the initial customs office of departure.

6.4.7. Applicable error codes

As the eTIR international system may return error codes, the [eTIR web services introduction document](#) contains a dedicated section describing how and where to find those error codes in the response messages. Find below the list of error codes that may be returned as part of the **E2 – Registration results** response message as well as the recommended actions to address them:

100 - Invalid message

Kindly check the message itself and its format as it is not recognized by the eTIR international system. Kindly contact the eTIR service desk sending the content of the message communicated, the timestamps and the steps to reproduce this issue in order to address it.

101 - Missing field

Kindly check the message parameters, in particular the parameters marked as mandatory in the message description section of this document, and make sure that all mandatory parameters are part of the message.

102 - Invalid domain for the value

Kindly check the coded parameter, its values and corresponding code lists. Make sure that each coded parameter is using one of the values of the corresponding code list.

103 - Malformed date

Kindly check the date parameters and their format. Make sure that each date format has the format indicated and that the value follows the format/pattern.

105 - Max value length exceeded

Kindly check the parameter value lengths. Make sure that each parameter length does not exceed the max length as defined in the documentation in the Format column.

106 - Invalid pattern

Kindly check the pattern of the parameter value as it does not match the requirements set for this attribute in XML Schema Definition of the message.

107 - Invalid element

Kindly check the element specified as it may not follow the order defined in the XML Schema Definition of the message.

200 - Invalid State

Kindly check the state of the referred object (transport, guarantee, ...) and make sure it is consistent with the eTIR international system requested web service called.

204 - eGuarantee already registered

Kindly check the state of the eGuarantee you tried to register as it seems to be already registered. You may use Query guarantee web service to check its existence in the eTIR international system.

300 - Invalid Operation

Kindly check the message content as it triggered a technical error in the eTIR international system but this one could not identify the source of the issue.

301 - eGuarantee not found

Kindly check the value of the eGuarantee reference ID in the message and make sure it matches the value received in previous messages.

302 - eGuarantee chain not found

Kindly check the value of the eGuarantee chain ID in the message and make sure it matches the value received in previous messages.

303 - eGuarantee type not found

Kindly check the value of the eGuarantee type in the message and make sure it belongs to the [Guarantee type code \(eTIR\)](#) code list, and that it matches the value received in previous messages.

321 - Holder not authorized

Kindly check the value of the TIR carnet holder in the message and make sure it matches the value received in previous messages. If it does, kindly check the status of the holder using either eTIR I3 message, ITDB web service or ITDB web application.

322 - Holder not found

Kindly check the value of the TIR carnet holder in the message and make sure it matches the value received in previous messages. If it does, kindly double check the id of the holder using either eTIR I3 message, ITDB web service or ITDB web application.

330 - eGuarantee chain not authorized

Kindly check the value of the guarantee chain ID in the message and make sure it matches the value received in previous messages.

400 - eTIR internal errors

Kindly contact eTIR support (see [Support and contact](#)) sending the content of the message communicated, the timestamps and the steps to reproduce this issue in order to address it.



The full list of error codes can be found on the [dedicated error code list web page](#).

6.4.8. Example

The example below shows the XML data of the **E2 – Registration results** message received in response to the POST of the **E1 - Register guarantee** message. This response message (Function code **44 - Accepted without reserves**) of the type **E2**, containing no error codes, describes a positive acknowledgment of the guarantee registration. Therefore, it should be considered that the guarantee registration for this TIR operation has been duly recorded in the eTIR international system.

E2 – Registration results response message

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope">
  <soap:Header>
    (...)
    <Action xmlns="http://www.w3.org/2005/08/addressing"
      xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd"
      wsu:Id="id-bff8cc5d-47ff-4678-be8f-4dbdf02be491"
    >etir:v4.3:guaranteeChain/GuaranteeChainSEI/registerGuaranteeResponse
  </Action>
  <MessageID xmlns="http://www.w3.org/2005/08/addressing"
    xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd"
    wsu:Id="id-a6b3a606-b809-485b-9e1b-f7cc0588f32d">urn:uuid:32a7a4e9-ae61-403e-b547-3a4b1425605f
  </MessageID>
  (...)
</soap:Header>
<soap:Body xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd"
  wsu:Id="id-4440ce36-187c-4293-b387-05549263c66b">
  <ns2:registerResults xmlns:ns2="etir:v4.3:guaranteeChain" xmlns:ns3="etir:E2:v4.3">
    <ns3:Response>
      <ns3:FunctionCode>44</ns3:FunctionCode>
      <ns3:FunctionalReferenceID>680134b8-dafd-4beb-8658-03643cc384ce</ns3:FunctionalReferenceID>
      <ns3:ID>1bd43524-d171-4130-850d-85a06c25179e</ns3:ID>
      <ns3:TypeCode>E2</ns3:TypeCode>
    </ns3:Response>
  </ns2:registerResults>
</soap:Body>
</soap:Envelope>
```



Some field original contents have been shortened (...) in this document for the sake of readability, in particular the whole **header/security** content that is described in the [eTIR web services introduction document](#).

7. Fallback procedures

In the event that the **E1 - Register guarantee** could not be sent after several attempts or if no **E2 – Registration results** was received in response, we recommend the guarantee chain team to contact eTIR support ([Support and contact](#)).

Also note that the functional fallback procedures can be found in the [Approved amendments to the eTIR conceptual, functional and technical documentation](#).

8. Support and contact

Kindly note that in the context of the interconnections projects by guarantee chains, the TIR secretariat stands ready to assist their IT teams while interconnecting their information systems to the eTIR international system. Also, in case of questions or issues related to this document or to the eTIR international system, you can use the contact details below (contacts by email should be preferred).

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9. Version history

Date	Author	Version	Notes	eTIR specification version reference
25/05/2021	TIR Secretariat	1.0	Initial draft	4.3a