



PUBLIC

API Definition: Integration with E-Invoicing Service Providers

Intended for Service Providers

V1.0

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1. Change History

Version	Date	Comments
1.0	September 2022	Initial version

2. Introduction

This document contains information about the API definition **Integration with E-Invoicing Service Providers**. This API definition aims to enable service providers in Turkey to integrate seamlessly with SAP Document and Reporting Compliance, an electronic document solution from SAP. A WSDL file is attached to this document to help service providers better understand the content of this document. Service providers can ask for a sample SOAP UI project to check out sample request and response structures for different operations.

Notes:

- All elements of the WSDL file belong to SAP's own namespace. All UBL packages have their own namespace and are sent using base64 encoding. Details about each service operation contain such information.
- Ensure that you define all the parameters and input/output names for the operations in the same way as the WSDL file does.

3. List of Service Operations

Service Operation Name	Description	SOAP Action Value
getUserList	Gets the list of users who have registered for electronic invoicing with the tax authorities (Turkish Revenue Administration, TRA).	getUserList
sendUBL	Sends UBL documents (envelops, invoices, and application responses) to service providers.	sendUBL
getStatus	Gets document statuses.	getStatus
getInvoiceView	Gets the PDF, XML, or HTML versions of submitted documents.	getInvoiceView
getUBLList	Gets a list of UUIDs of submitted documents or incoming documents (UUIDs only).	getUBLList
getUBL	Gets submitted documents or incoming documents (complete document data).	getUBL
sendUBeLeArchiveInvoice	Sends consumer invoices.	sendUBeLeArchiveInvoice
CanceleArchiveInvoice	Cancel consumer invoices.	CanceleArchiveInvoice
getStatusArchiveInvoice	Gets statuses of consumer invoices.	getStatusArchiveInvoice

3.1 Service Operation getUserList

This service operation gets the list of users who have registered for electronic invoicing with the TRA. The format in which a user list is sent should follow the specifications defined by the TRA. Companies may want to call this operation daily to keep the user lists in their SAP systems up to date.

Request	Description
Identifier	Sender alias (GB) or receiver alias (PK) for user authentication when requesting data
VKN_TCKN	Sender VKN or receiver VKN for user authentication when requesting data
Role	Role of users to be requested: PK (receiver role) or GB (sender role)

Response	Description
DocData	Base64 encoded list of registered electronic invoice users

3.2 Service Operation sendUBL

This service operation sends UBL documents (envelops, invoices, and application responses) to service providers.

Request	Description
VKN_TCKN	Sender VKN
SenderIdentifier	Sender alias (required only if documents are sent without an envelope)
ReceiverIdentifier	Receiver alias (required only if documents are sent without an envelope)
DocType	Type of document to be sent (ENVELOPE , INVOICE , or APP_RESP)
Parameters	Placeholder to pass additional parameters from the SAP system to the service provider Note: This parameter isn't used currently.
DocData	UBL XML file in zip format It contains the actual payload in UBL format. The payload uses the namespace specified by the UBL format rather than the SAP namespace.

Response	Description
EnvUUID	Envelope UUID
UUID	Invoice UUID
ID	Invoice ID
CustInvID	Customer invoice ID (required only if invoice IDs are generated by the service provider)

Error during submission should be returned using fault exceptions. See a list of error codes in the [Appendix chapter of this document](#).

There are two options for invoice ID generation:

- **The service provider generates invoice IDs.**

The service provider should send back invoice IDs to the SAP system in responses.

The SAP system needs to provide a customer invoice ID and the document type code **Cust_Inv_ID** in an **AdditionalDocumentReference** node within an invoice XML file. Customer Invoice IDs are used by the service provider to identify duplicate documents submitted from the SAP.

```
<cac:AdditionalDocumentReference> <cbc:ID>A1000</cbc:ID>
<cbc:IssueDate>2015-06-22</cbc:IssueDate>
<cbc:DocumentTypeCode>CUST_INV_ID</cbc:DocumentTypeCode>
</cac:AdditionalDocumentReference>
```

- **The SAP system generates invoice IDs.**

The service provider should send back UUIDs of submitted invoices and other mandatory parameters in responses.

If a company submits one invoice at a time, then the service provider should check if performance issues have occurred. In addition, during onboarding, companies should be informed about the document type for invoice XML files (envelope or invoice).

3.3 Service Operation getStatus

This service operation gets statuses of documents (invoices, envelopes, and application responses).

Notes:

- The UUID field shouldn't be inside a nested string structure. It should be a structure like the one below:

```
<(namespace):UUID>(36 character UUID)</(namespace):UUID>
```
- A response code should always be returned. If an invoice is being processed, the response code 1000 or 1100 should be returned.

Request	Description
Identifier	Alias
VKN_TCKN	VKN
DocType (optional)	Document type (envelope or invoice)

UUID	List of document UUIDs
Parameters	Placeholder to pass additional parameters from the SAP system to the service provider Note: This parameter isn't used currently.

Response	Description
UUID	Envelope UUID
IssueDate	Issue date of a system response
DocumentTypeCode	Envelope type (SENDERENVELOPE or POSTBOXENVELOPE)
DocumentCode	Envelope type (SENDERENVELOPE or POSTBOXENVELOPE)
ResponseCode	System response code provided by the TRA
Description	System response description

3.4 Service Operation `getInvoiceView`

This service operation gets submitted invoices in XML, PDF, or HTML format. Usually, this service operation is called to get submitted documents in PDF format. It can also be called for inbound documents, such as incoming commercial invoices and basic invoices.

Companies may have specific requirements on the PDF layout. The service provider should check with companies about the PDF layout and then send PDF files with the required layouts to the SAP system. For incoming invoices, the XSLT file of the receiving company might not apply. If this is the case, a default format should be used for the specified document type.

Documents should be sent in unzipped base64 encoded format. In addition, the UUID field shouldn't be inside a nested string structure.

Request	Description
UUID	Invoice UUID
SERVICE_TYPE	Solution type (einvoice or earchive)
DocType (optional)	Document type (envelope or invoice)
VKN_TCKN	VKN
Identifier	Alias
Type	Indicates whether it's an outgoing invoice or incoming invoice. Possible values include outbound and inbound .
ViewType	View type (HTML, PDF, or XML)

Response	Description
DocData	Document binary data

3.5 Service Operation getUBLList

This service operation gets a list of incoming invoices for receivers or a list of application responses for senders. It can be resource-intensive.

Request	Description
VKN_TCKN	VKN
Identifier	Alias
UUID (optional)	List of document UUIDs
Type	Indicates whether it's an incoming invoice or outgoing invoice. Possible values include OUTBOUND and INBOUND .
DocType	Document type Possible values include ENVELOPE , INVOICE , APP_RESP , or SYS_RESP .
FromDate	Start date and time when documents are received by the service provider
ToDate	End date and time when documents are received by the service provider

Response	Description
VKN_TCKN	VKN
Identifier	Alias
UUID	Document UUIDs
EnvType (optional)	Envelope type Possible values include SENDERENVELOPE , POSTBOXENVELOPE , or SYSTEMENVELOPE .
EnvUUID (optional)	Envelope UUID
ID (optional)	Invoice ID, application response ID, or system response ID
InsertDateTime	Date and time when the document was saved in the service provider's system.

In the case of incoming invoices, the **Type** parameter should be set to **INBOUND** and the **Identifier** parameter should be set to the **VKN for the PK (receiver) role**. This is interpreted as a request for the documents that have been issued to the specified sender in the PK (receiver) role.

If an identifier with the GB (sender) role is used, it can be interpreted as a request for system responses and application responses for export invoices, or a request for application responses for commercial invoices. This service operation is also used in reconciliation use cases where information is pulled for the specified sender.

The **InsertDateTime** parameter should contain time zone information. In the example below, the “Z” stands for the UTC time zone.

```

1  <ns2:UBLList>
2    <ns2:UUID>541754b5-4a3d-4fc2-aa7b-d948918def3e</ns2:UUID>
3    <ns2:Identifier>GIB</ns2:Identifier>
4    <ns2:VKN_TCKN>3900383669</ns2:VKN_TCKN>
5    <ns2:EnvType>SYSTEMENVELOPE</ns2:EnvType>
6    <ns2:InsertDateTime>2022-01-07T10:21:18.053Z</ns2:InsertDateTime>
7  </ns2:UBLList>
8  <ns2:UBLList>
9    <ns2:UUID>57421345-393b-41ea-9451-5611d1d7787b</ns2:UUID>
10   <ns2:Identifier>urn:mail:defaultgb@elogo.com.tr</ns2:Identifier>
11   <ns2:VKN_TCKN>6090122074</ns2:VKN_TCKN>
12   <ns2:EnvType>SENDERENVELOPE</ns2:EnvType>
13   <ns2:InsertDateTime>2022-01-07T10:21:20.663Z</ns2:InsertDateTime>
14 </ns2:UBLList>

```

3.6 Service Operation getUBL

After getting a list of document UUIDs by calling the **getUBLList** service operation, the system calls this service operation to get the actual documents. In the SAP system, eDocuments are created as representations of incoming documents. Users can take further actions on eDocuments, such as Accept and Reject. In the case of reconciliation, this operation serves as the source of content to be verified in the SAP system.

This service operation can be resource-intensive. The document binary data should be sent in zipped base64 encoded format. Service providers should inform companies of the maximum number of documents that can be queried per request. Then companies can specify it in SAP configuration.

Request	Description
VKN_TCKN	VKN
Identifier	Alias
UUID (Multiple)	List of document UUIDs
Type	Indicates whether it's an incoming invoice or outgoing invoice. Possible values include OUTBOUND and INBOUND .
DocType	Document type (ENVELOPE , INVOICE , APP_RESP , or SYS_RESP)

Response	Description
UUID	Document UUID
DocData	Document binary data

3.7 Service Operation sendUBLArchiveInvoice

This service operation sends electronic consumer invoices. As of now, only one consumer invoice can be sent per request. Signed XML files should be returned synchronously. The **getInvoiceView** service operation can also be used to get signed XML files.

If the service provider generates invoice IDs, they should sent back the invoice IDs to the SAP system synchronously.

If errors occur, the response structure should be empty and an exception with error codes should be sent to the SAP system.

Request	Description
VKN_TCKN	Sender VKN or TCKN
SenderIdentifier (optional)	Sender alias (only if documents are sent without an envelope)
DocType (optional)	Document type (INVOICE)
Parameters	Placeholder to pass additional parameters from the SAP system to the service provider Note: This parameter isn't used currently.
DocData	UBL XML file in zip format

Response	Description
UUID	Invoice UUID
ID	Invoice ID
DocData	Signed XML file encoded in base64 format and zipped
ResponseCode	Response code
ResponseDescription	Response description

The service provider should receive the invoice shipping method inside an **AdditionalDocumentReference** tag. The shipping method in the **ID** field should be "*gonderimSekli*" and the document type in the **DocumentType** field should be "*ELEKTRONIK*" or "*KAGIT*" as appropriate.

```
<n3:AdditionalDocumentReference xmlns:n3="urn:oasis:names:specification:ubl:schema:xsd:CommonAggregateComponents-2">
```

```

<n2:ID xmlns:n2="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2">gonderimSekli</n2:ID>
<n2:IssueDate xmlns:n2="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2">2022-01-18</n2:IssueDate>
<n2:DocumentType xmlns:n2="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2">ELEKTRONIK</n2:DocumentType>
</n3:AdditionalDocumentReference>

```

In addition, a response code and a response description should be sent together with success/error codes.

Note: The cardinalities (number of times a field can appear) are described in the WSDL definition.

3.8 Service Operation `cancelArchiveInvoice`

This service operation cancels electronic consumer invoices. To trigger cancellation, the SAP system must provide either the invoice ID or UUID. The **Message** and **Code** response parameters are populated based on the result (success or error).

Request	Description
ID	Invoice ID
UUID	Invoice UUID
DocType	Document type (ENVELOPE or INVOICE)
VKN_TCKN	VKN
TotalAmount	Total invoice amount
CancelDate	Date on which cancellation is triggered

Response	Description
Result	Result of a cancellation request (SUCCESS or ERROR)
Message	Message description
Code	Code

3.9 Service Operation `getStatusArchiveInvoice`

This service operation is intended for electronic consumer invoices only. It should be called to get the statuses of consumer invoices for which signing isn't successful. The signed XML files must be sent back to the SAP system. As invoice IDs might not be available at the time of submission, invoice UUIDs are used as a request parameter. If invoice IDs are generated by the service provider, then they are not available at the time of submission.

Request	Description
Identifier	Alias
VKN_TCKN	VKN
UUID (Multiple)	List of invoice UUIDs
Parameters	Placeholder to pass additional parameters from the SAP system to the service provider Note: This parameter isn't used currently.

Response(Multiple)	Description
UUID	Invoice UUID
InvoiceID	Invoice ID
ReportID (optional)	ID of the report in which the invoice is reported
ResponseCode	System response code Possible values include: <ul style="list-style-type: none"> • 130: The invoice is already signed successfully, but not submitted yet as part of a report. • 110: Error while signing. No exception occurs in this scenario. • 140: A report is already prepared successfully, but not submitted yet. A Report ID must be sent in this case. • 150: A report is already submitted successfully. • 100: The invoice hasn't been signed yet.
Description	System response description
DocData	Signed XML file

4. Appendix

4.1 Error Codes

The error codes and error messages should follow the following rules:

- Codes starting with 10<XX> should represent technical issues at the service provider.
- Codes starting with 11<XX> should represent issues with business values. They are caused by either incomplete information or wrong information.
- Codes starting with 12<XX> should represent issues related to legal regulations or invalid requests. They require intervention by either SAP or the service provider.

The error codes and messages that should be used are listed below.

Code	Message
1000	"Invalid Parameter"
1001	"The difference between the dates should be 1 at most."
1002	"The maximum number has been exceeded per request."
1003	"Xslt could not be found."
1004	"You should activate the service."
1005	"Invalid Document Data"
1006	"Multiple files in a zip"
1007	"Invoice Not Found."
1008	"Only the successful document can be processed. "
1009	"Invalid Username or Password"
1010	"Account is not active"
1011	"Document Tax / Identity No and account tax number should be the same."
1012	"This invoice with different information before."
1013	"Not despatch user found in the Revenue Administration list."
1014	Document does not contain a valid xml.
1100	"CustInvld is null or empty."
1101	"Schematron error"
1102	"Schema error"
1103	"Not user found in the Revenue Administration list."
1104	"Not user found in the Revenue Administration list (Empty Alias)."
1105	"Multiple alias found for the user."
1106	"Envelope not found."
1107	"Data Not Found."
1108	"ID field should be empty."
1109	There is no file in the zip.
1200	"Invoice Found, You should send uuid and id together."
1201	"Cancellation cannot be made for past dated invoices."
1202	"The account is not authorized to use this service. "
1203	"Document Uuid used before."
1204	"You don't have active service to get the list."
1205	Since the supplier is included in the e-invoice application after the invoice date, the e-invoice should be issued as a paper or e-Archive invoice.
1206	Since the receiver is included in the e-invoice application after the invoice date, the e-invoice should be issued as a paper or e-Archive invoice
1207	Document Id used before.
1208	Application response cannot be created for unsuccessful Invoice.
1209	Application response cannot be created for Basic Invoice.
1210	Document not found. Empty download result.
1211	This invoice has been saved before and cannot be resent.
1212	An e-Archive invoice cannot be issued to an e-Invoice taxpayer

1213	E-archive service is not active on the date you want to make a transaction.
1214	The document is not a valid e-archive invoice xml. (ApplicationResponse)
1215	Application response not accepted (8 days late).
1216	Application response has been created for invoice before.
1217	An error occurred while generating the invoice number.
1218	Serial code information not found
1219	This serial code can only be used for invoices issued from the portal.
1220	Application response has been created for invoice before, the process is not completed.
9999	Unknown Error

