Book Industry Communication

BIC Realtime

Standards for Instant Business Message Exchange

Retrieve Financial Document Request and Response

Version 2.0, 3 April 2020

This document: https://www.bic.org.uk/files/pdfs/API/Trade/BICWSFinancialDocument-V2.0.pdf
XML schema: https://www.bic.org.uk/files/xml/BICWSFinancialDocument_V2.0.xsd
WSDL file: https://www.bic.org.uk/files/xml/BICWSFinancialDocumentSOAP_V2.0.wsdl
XML namespace: https://www.bic.org.uk/webservices/financialDocument
Next review date: 26 February 2021

This document specifies in human-readable form the *BIC Realtime* web services Retrieve Financial Document Request and Response formats.

Three alternative formats are specified for Requests:

- an HTTPS query format for use with implementations that use the basic HTTPS protocol[1] and GET method – sometimes referred to as the REST approach
- an XML format for use with both implementations that use either SOAP or the basic HTTPS protocol and POST method.
- a JSON format for use with implementations that use the basic HTTPS protocol and POST method.

The Response payload format options (payload in XML or JSON) will both apply to basic HTTPS exchanges using the POST method, but XML is the only Response payload format supported for HTTPS requests using the GET method. A Request using the HTTPS GET method may be more limited than a Request using the HTTPS POST method, so the Response payload may use only a correspondingly limited subset of the content defined here. SOAP only supports XML as a Request or Response payload format.

The complete specification of the *BIC Realtime* Retrieve Financial Document Request/Response web service includes two machine-readable resources that are to be used by implementers in conjunction with this document:

- a WSDL Definition for the SOAP protocol version of the *BIC Realtime* web service
- an XML Schema for Requests and Response payloads in XML format.

It is strongly recommended that SOAP client implementations of this *BIC Realtime* web service be constructed using the BIC WSDL Definitions as a starting point, as this will promote interoperability between SOAP client and server implementations. In some development environments it may be easier to implement a SOAP server without using the BIC WSDL Definitions, but in this case care must be taken to ensure that the WSDL Definitions that describe the actual implementation is functionally equivalent to the BIC WSDL Definitions.

[1] Throughout the term 'HTTPS protocol' is to be interpreted as including secure internet protocols that are implemented either at the application layer (e.g. HTTPS) or are implemented at the transport layer (e.g. SSL/TLS).

Business requirements

Where a suitable trading partner agreement exists, there is a need for a buyer to be able to retrieve financial documents as digital documents from a supplier, either directly or through an aggregation service. There is a need to be able to retrieve both original documents and, where documents are missing or are altered outside the system, copies of originals.

This *BIC Realtime* web service can be used in association with the *BIC Realtime* Retrieve Financial Document List web service, which would be used to retrieve a list of reference numbers for financial documents that meet a given set of criteria. This *BIC Realtime* Retrieve Financial Document web service can then be used to retrieve the individual documents by number. Implementers should also consider the *BIC Realtime* Post Financial Document web service, which may be a more appropriate means of transferring financial documents from a distributor or wholesaler to an aggregation service in real-time.

Financial documents may be requested in real-time in XML or PDF format. A financial document in XML format must be in one of the EDItX formats developed by EDItEUR. Financial documents in XML format may only be embedded in the response when the response payload as a whole is in XML format. Financial documents in PDF format may only be retrieved via a URI link included in the response.

NOTE – This document does not provide format details for posting invoices and credit notes in XML format. Documentation and XML schemas for the EDItX XML Message, Trade Invoice and Credit Note formats are currently available from the EDItEUR website at the following web addresses:

EDItX XML Message V1.6:
https://www.editeur.org/files/EDItX%20-%20trade%20book/EDItX_Message_V1.6(corr).pdf

EDItX Trade Invoice V1.2:
http://www.editeur.org/files/EDItX%20-%20trade%20book/EDItX_TradeInvoice_V1.2.pdf

EDItX Trade Credit Note V1.0:
http://www.editeur.org/files/EDItX%20-%20trade%20book/EDItX_TradeCreditNote_V1.0(corr).pdf

Correction and additions for Version 2.0 made January 2020

General	Version number updated from ‘1.1’ to ‘2.0’ in specification tables and examples.
	Support for JSON implementation added to specification tables and examples.
	Text corrected in various places to make it clear that the SOAP protocol only supports XML payloads and not JSON payloads.
	Deprecated elements and code values removed.
Page 2	Business requirements updated to clarify how financial documents may be retrieved in XML or PDF format.
Page 4	HTTPS Request lines 1 and 2: Parameters ClientID and ClientPassword made non-mandatory. It is recommended that HTTPS header-based authentication be used where possible.
	HTTPS Request line 12: Parameter DescriptionLanguageCode added to enable preferred language of descriptions to be specified. The value must be a three-letter language code from ONIX code list 74.
Page 5	Request header lines 1 and 2: Elements ClientID and ClientPassword made non-mandatory. It is recommended that HTTPS header-based authentication be used where possible.
	Request header line 8: Element DescriptionLanguageCode added to enable preferred language of descriptions to be specified. The value must be a three-letter language code from ONIX code list 74.

Page 9 Response header line 7: Description of response code ‘08’ clarified.

Response header line 7: Element DescriptionLanguageCode added to enable language of description to be specified. The value must be a three-letter language code from ONIX code list 74.

Response header line 8: Element DocumentAttachmentType made mandatory and description clarified.

Response detail: Clarification of the options for embedding or linking to a financial document.

Response detail line 6: Code value ‘08’ added for use with element ResponseType, to indicate that the embedded/linked financial document is not in the requested format.

Page 10 Response detail line 12: Element XMLDocument removed, to avoid any confusion caused by there previously having been two methods of embedding a financial document in XML format in the response.

Response detail lines 12 and 13: Clarification that the elements XMLMessageSequenceNumber and XMLDocumentSequenceNumber are only used if the financial document itself, in XML format, is contained in XML Message detail rather than in Response detail (line 12).

Response detail line 14: Element DocumentFormat added, to enable the format of a linked financial document to be specified if different from the format requested.

Response detail line 15: Element PDFDocumentURI replaced by element DocumentURI, to enable the linked document to be in any of the formats specified by the element DocumentFormat.

XML Message detail: Clarification that Response detail may be followed by one or more XML Message detail elements, each comprising an EDItXMessage element conforming to the current EDItX XML Message schema, details of which are available on the EDItEUR website.

RETRIEVE FINANCIAL DOCUMENT – REQUEST

Requests using the HTTPS protocol and the GET method

Requests using the HTTPS protocol and the GET method should include a query string containing parameters as specified below.

[2]	**Parameter description**	**M[3]**	**Name**	
1	A unique identifier for the sender of the Request. An alphanumeric string not containing spaces or punctuation. The form of the identifier used must be agreed between the parties to an exchange[4].	D	ClientID	
2	A password to further authenticate the sender of the request[4].	D	ClientPassword	
3	Identification number of this request	D	RequestNumber	
4	A code value from a BIC-controlled codelist for the scheme used for the customer account identifier (see ONIX codelist 44). Mandatory in all financial document requests. Permitted values are: *01* Proprietary *06* EAN-UCC GLN *07* SAN *11* PubEasy PIN	M	AccountIDType	
5	Account identifier for this request, using the specified scheme. Mandatory in all financial document requests All retrieved documents must relate to this account.	M	AccountIDValue	
6	A date/time reference for this request. Permitted formats are: YYYYMMDD YYYYMMDDTHHMM YYYYMMDDTHHMMZ (universal time) YYYYMMDDTHHMM±HHMM (time zone) where "T" represents itself, ie letter T	D	IssueDateTime	
7	If and only if this parameter is supported by the *BIC Realtime* web service implementation, a third party supplier may be specified where the web service host is not the invoicing supplier, in which case this parameter and the next must be included. This parameter contains a code value from a BIC-controlled codelist for the type of identifier of the supplier - see ONIX codelist 92. Permitted values are: *06* EAN-UCC GLN *07* SAN	D	SupplierIDType	
8	A unique supplier identifier of the specified type	D	SupplierIDValue	
9	Document type. Permitted values are: *01* Invoice *02* Credit note *03* Remittance advice note *04* Account statement	M	DocumentType	
10	Reference number(s) or string(s) for the requested document(s), space-separated if several documents are requested.	M	DocumentNumber	
11	Document format. Permitted values are: *01* XML, i.e.EDItX invoice or credit note format defined by EDItEUR *02* PDF	M	DocumentFormat	
12	Language in which the requester would prefer free-text descriptions to be expressed – use ONIX code list 74.	D	DescriptionLanguageCode	

Example of a Request using the HTTPS protocol and the GET method:

https://www.booksupplier.co.uk/FinancialDocumentRetrievalService?DocumentType=01
&DocumentNumber=0987654&DocumentFormat=01

[2] The order of parameters in an HTTPS GET Request is insignificant.
[3] In the column headed "M", "M" means mandatory, and "D" means dependent.
[4] It is recommended that HTTPS header-based authentication be used where possible.

Requests using the SOAP or basic HTTPS protocol and the POST method

Requests using the HTTPS POST method should include an XML or JSON document as the body of a request message. Requests using the SOAP protocol must include an XML document. Multiple invoices may be specified using this method.

Request document name and version

	Financial document request Version 2.0		**<FinancialDocumentRequest version="2.0">** **{ "FinancialDocumentRequest": { "version": ...**	

Header

	Request header	**M**	**Header.**	[5]
1	A unique identifier for the sender of the request. An alphanumeric string not containing spaces or punctuation	D	ClientID	
2	A password to further authenticate the sender of the request	D	ClientPassword	
3	Account identifier. Mandatory in all financial document requests. A code value from a BIC-controlled codelist for the scheme used for the account identifier (see ONIX codelist 44). Permitted schemes are: *01* Proprietary *06* EAN-UCC GLN *07* SAN *11* PubEasy PIN Account identifier for this request, using the specified scheme	M M M	AccountIdentifier. AccountIDType IDValue	
4	Identification number / string of this request	D	RequestNumber	
5	Document date/time: the date/time when the request was generated. Permitted formats are: YYYYMMDD YYYYMMDDTHHMM YYYYMMDDTHHMMZ (universal time) YYYYMMDDTHHMM±HHMM (time zone) where "T" represents itself, ie letter T	D	IssueDateTime	
6	Supplier to whom this whole request should be forwarded, if it is not addressed to the *BIC Realtime* web service host (use only for requests sent to aggregators, and only at the header level if the request relates to a single supplier). Supplier ID type - see ONIX codelist 92 ID type name, only if ID type = proprietary Identifier	D M D M	SupplierIdentifier. SupplierIDType IDTypeName IDValue	
7	Document format. Permitted values are: *01* XML, i.e.EDItX invoice or credit note format defined by EDItEUR *02* PDF	M	DocumentFormat	
8	Language in which the requester would prefer free-text descriptions to be expressed – use ONIX code list 74.	D	DescriptionLanguageCode	

[5] An 'R' in the right-most column means that the element is repeatable. If implementing this API using the JSON format option, all repeatable elements must be represented by JSON array objects.

Request detail

	Item detail	D	ItemDetail.	R
1	Request line number	M	LineNumber	
2	Supplier to whom the request for this specific item should be forwarded, if it is not addressed to the *BIC Realtime* web service host (use only for requests sent to aggregators, and only at the item detail level if the request concerns multiple suppliers).	D	SupplierIdentifier.	
	Supplier ID type - see ONIX codelist 92	M	SupplierIDType	
	ID type name, only if ID type = proprietary	D	IDTypeName	
	Identifier	M	IDValue	
3	Document type. Permitted values are: *01* Invoice *02* Credit note *03* Remittance advice note *04* Account statement	M	DocumentType	
4	Document number. A document number must be included in each response line, matching the corresponding post request line.	M	DocumentNumber	

Example of a Retrieve Financial Document Request XML payload using either the SOAP or the HTTPS protocol and the POST method:

```
<FinancialDocumentRequest version="2.0"
 xmlns="http://www.bic.org.uk/webservices/financialDocument">
  <Header>
    <AccountIdentifier>
      <AccountIDType>01</AccountIDType>
      <IDValue>12345</IDValue>
    </AccountIdentifier>
    <RequestNumber>001</RequestNumber>
    <IssueDateTime>20190418T1525</IssueDateTime>
    <DocumentFormat>01</DocumentFormat>
  </Header>
  <ItemDetail>
    <LineNumber>1</LineNumber>
    <DocumentType>01</DocumentType>
    <DocumentNumber>0987654</DocumentNumber>
  </ItemDetail>
</FinancialDocumentRequest>
```

Example of a Retrieve Financial Document Request JSON payload using the HTTPS protocol and the POST method:

```
{
    "FinancialDocumentRequest": {
        "version": "2.0",
        "xmlns": "http://www.bic.org.uk/webservices/financialDocument",
        "Header": {
            "AccountIdentifier": {
                "AccountIDType": "01",
                "IDValue": "12345"
            },
            "RequestNumber": "001",
            "IssueDateTime": "20190418T1525",
            "DocumentFormat": "01"
        },
        "ItemDetail": [
            {
                "LineNumber": 1,
                "DocumentType": "01",
                "DocumentNumber": "0987654"
            }
        ]
    }
}
```

RETRIEVE FINANCIAL DOCUMENT – RESPONSE

The Response will use the protocol corresponding to the Request. If the Request uses the basic HTTPS protocol, the Response will be an XML or JSON document as specified below attached to a normal HTTPS header. If the Request uses the SOAP protocol, the Response will contain a SOAP response message whose body will contain the XML document specified below.

Response document name and version

	Financial document response **Version 2.0**		**<FinancialDocumentResponse version="2.0">** **("FinancialDocumentResponse": { "version": ...**	

Header

	Response payload header	**M**	**Header.**	
1	Document date/time: the date/time when the report was generated. Permitted formats are: YYYYMMDD YYYYMMDDTHHMM YYYYMMDDTHHMMZ (universal time) YYYYMMDDTHHMM±HHMM (time zone) where "T" represents itself, ie letter T	M	IssueDateTime	
2	Sender (*BIC Realtime* web service host) Sender ID type - see ONIX codelist 92 ID type name, only if ID type = proprietary Identifier	M M D M	SenderIdentifier. SenderIDType IDTypeName IDValue	
3	Identification number / string of this response	D	ResponseNumber	
4	Account identifier. Mandatory in all responses. A code value from a BIC-controlled codelist for the scheme used for the account identifier (see ONIX codelist 44). Must be specified if an account identifier is specified. Permitted schemes are: *01* Proprietary *06* EAN-UCC GLN *07* SAN *11* PubEasy PIN Account identifier for this request, using the specified scheme	M M M	AccountIdentifier. AccountIDType IDValue	
5	References: request number and/or date/time of request must be quoted if included in the request. Reference type *01* Number or date/time of associated financial document request Reference number / string Reference date or date and time. Mandatory if an IssueDateTime is included in the request.	D M D D	ReferenceCoded ReferenceTypeCode ReferenceNumber ReferenceDateTime	
6	Supplier identifier (only included if specified in the request header; mandatory if the response type code is '19') Supplier ID type - see ONIX codelist 92 ID type name, only if ID type = proprietary Identifier	D M D M	SupplierIdentifier. SupplierIDType IDTypeName IDValue	

Response header *(continued)*

	Element	**M**	**Header.**	
7	Response code, if there are exception conditions. Response type code. Suggested code values: *01* Service unavailable *02* Invalid ClientID or ClientPassword *03* Server unable to process request – a reason should normally be given as a free text description – see below *08* Unable to supply all documents in the requested format *16* Invalid or unknown account or supplier identifier *19* Server unable to process request – unable to contact supplier Free text description / reason for response Language of description. Mandatory if included in the request. See request header line 8.	D M D D	ResponseCoded. ResponseType ResponseTypeDescription DescriptionLanguageCode	R
8	Document attachment type. Mandatory. *01* URIs embedded in Response detail *02* Documents in XML Message detail. May only be specified if the response payload is in XML format.	M	DocumentAttachmentType	

Response detail

Details of each financial document that has been requested. Mandatory unless the header reports a condition that prevents any response. Depending upon the requested document format (Request Header line 7) and the document attachment type specified in Header line 8, each item detail must contain either a pair of sequence numbers indicating the position of the XML document within the XML Message detail (lines 12 and 13), or a link (line 15) of a document that can immediately be retrieved from the specified URI. If the response is in JSON format, financial documents may only be linked, not embedded.

	Response detail	**D**	**ItemDetail.**	**R**
1	Response item line number	D	LineNumber	
2	Request reference - request line number and reference date/time must be quoted if included in the request at the item detail level. Reference type code *02* Request line number Reference number / string Reference date or date and time	D M M D	ReferenceCoded ReferenceTypeCode ReferenceNumber ReferenceDateTime	
3	Supplier to whom the request for this specific item has been forwarded, if it is not addressed to the *BIC Realtime* web service host. Supplier ID type - see ONIX codelist 92 ID type name, only if ID type = proprietary Identifier	D M D M	SupplierIdentifier. SupplierIDType IDTypeName IDValue	
4	Document type. Permitted values are: *01* Invoice *02* Credit note *03* Remittance advice note *04* Account statement	M	DocumentType	
5	Document number	M	DocumentNumber	
6	Response code, if there are exception conditions. Response type code. Suggested code values: *08* Unable to supply document in the requested format *11* Invalid or unknown document number *16* Invalid or unknown account or supplier identifier *19* Server unable to process request – unable to contact supplier Free text description	D M D	ResponseCoded. ResponseType ResponseTypeDescription	R

Response detail *(continued)*

	Response detail	**D**	**ItemDetail.**	**R**
7	Settlement status of the invoice or credit note. Mandatory when retrieving invoices or credit notes. Permitted code values are: *01* Not yet fully settled *02* Fully settled	D	SettlementStatus	
8	Settlement due date – YYYYMMDD	D	SettlementDueDate	
9	Gross value of invoice or credit note. If the document is a credit note, the value must be negative.	D	GrossValue	
10	Net value of invoice or credit note. If the document is a credit note, the value must be negative.	D	NetValue	
11	Currency of value(s) if not the default currency.	D	CurrencyCode	
12	XML message sequence number. Must be included if the document format is XML and the document is contained in XML Message detail. This element may only be included if the response is in XML format.	D	XMLMessageSequenceNumber	
13	XML document sequence number. Must be included if the document format is XML and the document is contained in XML Message detail instead of in the XMLDocument element (line 12). This element may only be included if the response is in XML format.	D	XMLDocumentSequenceNumber	
14	Format of linked document. Mandatory if the format is different from that requested and response code '08' is included in the Header and in this line item. Permitted values are: *01* XML, i.e.EDItX invoice or credit note format defined by EDItEUR *02* PDF	D	DocumentFormat	
15	URI of linked document.	D	DocumentURI	

XML Message detail

The XML Message detail follows the last Response detail element and must be one or more EDItX XML Messages that conform to the specification and XML schema available from EDItEUR. Each EDItX XML Message will contain documents of a specific type (e.g. invoices). Only one EDItX XML Message may be included for each relevant document type (e.g. one for invoices, one for credit notes). Each document in the XML Message detail must correspond to a distinct line in the Response detail.

	XML Message detail	**D**	**EDItXMessage xmlns="" version="1.6"**	**R**

Example of a Retrieve Financial Document Response XML payload using either the SOAP or the HTTPS protocol and the POST method, containing an invoice in XML format:

```
<FinancialDocumentResponse version="2.0"
xmlns="http://www.bic.org.uk/webservices/financialDocument">
<Header>
<IssueDateTime>20190418T1527</IssueDateTime>
<SenderIdentifier>
<SenderIDType>01</SenderIDType>
<IDValue>XYZ</IDValue>
</SenderIdentifier>
<AccountIdentifier>
<AccountIDType>01</AccountIDType>
<IDValue>12345</IDValue>
</AccountIdentifier>
<ReferenceCoded>
<ReferenceTypeCode>01</ReferenceTypeCode>
<ReferenceNumber>001</ReferenceNumber>
</ReferenceCoded>
</Header>
<ItemDetail>
<LineNumber>1</LineNumber>
<DocumentType>01</DocumentType>
<DocumentNumber>0987654</DocumentNumber>
<SettlementStatus>01</SettlementStatus>
<SettlementDueDate>20190725</SettlementDueDate>
<GrossValue>999.99</GrossValue>
<NetValue>999.99</NetValue>
<XMLDocument><!--XML INVOICE HERE--></XMLDocument>
</ItemDetail>
</FinancialDocumentResponse>
```

Example of a Retrieve Financial Document Response JSON payload using the HTTPS protocol and the POST method, containing a link to an invoice in PDF format:


```
{
  "FinancialDocumentResponse": {
    "version": "2.0",
    "xmlns": "http://www.bic.org.uk/webservices/financialDocument",
    "Header": {
      "IssueDateTime": "20190418T1527",
      "SenderIdentifier": {
        "SenderIDType": "01",
        "IDValue": "XYZ"
      },
      "AccountIdentifier": {
        "AccountIDType": "01",
        "IDValue": "12345"
      },
      "ReferenceCoded": {
        "ReferenceTypeCode": "01",
        "ReferenceNumber": "001"
      }
    },
    "ItemDetail": [
      {
        "LineNumber": 1,
        "DocumentType": "01",
        "DocumentNumber": "0987654",
        "SettlementStatus": "01",
        "SettlementDueDate": "20190725",
        "GrossValue": 999.99,
        "NetValue": 999.99,
        "DocumentFormat": "02",
        "DocumentURI": "https://accounts.supplier.com/documents/0987654.pdf"
      }
    ]
  }
}
```

Example of a Retrieve Financial Document Response XML payload using either the SOAP or the HTTPS protocol and the POST method, containing multiple XML documents in an EDItX XML Message wrapper:

```
<FinancialDocumentResponse version="2.0"
xmlns="http://www.bic.org.uk/webservices/financialDocument">
<Header>
<IssueDateTime>20190418T1527</IssueDateTime>
<SenderIdentifier>
<SenderIDType>01</SenderIDType>
<IDValue>XYZ</IDValue>
</SenderIdentifier>
<AccountIdentifier>
<AccountIDType>01</AccountIDType>
<IDValue>12345</IDValue>
</AccountIdentifier>
<ReferenceCoded>
<ReferenceTypeCode>01</ReferenceTypeCode>
<ReferenceNumber>001</ReferenceNumber>
</ReferenceCoded>
</Header>
<ItemDetail>
<LineNumber>1</LineNumber>
<DocumentType>01</DocumentType>
<DocumentNumber>0987654</DocumentNumber>
<SettlementStatus>01</SettlementStatus>
<SettlementDueDate>20190725</SettlementDueDate>
<GrossValue>999.99</GrossValue>
<NetValue>999.99</NetValue>
<XMLMessageSequenceNumber>1</XMLMessageSequenceNumber>
<XMLDocumentSequenceNumber>1</XMLDocumentSequenceNumber>
</ItemDetail>
<!-- Second and subsequent Response Detail lines here -->
<EDItXMessage xmlns="" version="1.6">
<EDItXMessageHeader><!-- Header here --></EDItXMessageHeader>
<EDItXMessagePayload><!-- EDItX Invoices here --></EDItXMessagePayload>
</EDItXMessage>
<!-- Other EDItX XML message element for Credit Notes here, if required -->
</FinancialDocumentResponse>
```