



Book Industry Communication

BIC Realtime

Standards for Instant Business Message Exchange

Post Financial Document

Version 2.0, 3 April 2020

This document: <https://www.bic.org.uk/files/pdfs/API/Trade/BICWSPostFinancialDocument-V2.0.pdf>

XML schema: https://www.bic.org.uk/files/xml/BICWSPostFinancialDocument_V2.0.xsd

WSDL file: https://www.bic.org.uk/files/xml/BICWSPostFinancialDocumentSOAP_V2.0.wsdl

XML namespace: <https://www.bic.org.uk/webservices/postFinancialDocument>

Next review date: 26 February 2021

This document specifies in human-readable form the *BIC Realtime* web services Post 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 protocol¹ 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* Post 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

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).

must be taken to ensure that the WSDL Definitions that describe the actual implementation is functionally equivalent to the BIC WSDL Definitions.

Business requirements

Where a suitable trading partner agreement exists, there is a need for a supplier to be able to post financial documents, currently invoices or credit notes, as digital documents to a buyer or to an aggregation service, both as original and as copy documents. There may in future be a need to post other financial documents, such as debit notes and statements.

Financial documents may only be posted in real-time in XML format. The XML formats for trade invoices and credit notes are the EDItX Trade Invoice and Trade Credit Note format developed by EDItEUR. All the financial documents posted in a single request must be of the same type – current either invoice or credit note – and all documents must be wrapped in a single EDItX XML Message wrapper.

Financial documents may be posted 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 request when using the HTTPS Post method and the request payload as a whole is in XML format. Financial documents in PDF format may only be posted via a URI link included in the request.

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

Invoices and credit notes may alternatively be posted in PDF format, in which case the request will include a URI from which the PDF file can be retrieved.

Example use case

A supplier wishes to trickle invoices to a customer or aggregation service in real time as they are raised. As each invoice is raised the supplier generates an XML invoice and posts it onto the customer's system using a *BIC Realtime* Post Financial Document web service implementation.

Correction and additions for Version 2.0 made January 2020

General	<p>Version number updated from '1.0' to '2.0' in specification tables and examples.</p> <p>Support for JSON implementation added to specification tables and examples.</p> <p>Text corrected in various places to make it clear that the SOAP protocol only supports XML payloads and not JSON payloads.</p> <p>Deprecated elements and code values removed.</p>
Page 2	Business requirements updated to clarify how financial documents may be retrieved in XML or PDF format.
Page 4	<p>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.</p> <p>HTTPS Request line 14: 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.</p>

- 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 7: Element DocumentAttachmentType added and made mandatory, for consistency with the BIC Realtime Retrieve Financial Document API.
- 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 6 Request detail: Clarification of the options for embedding or linking to a financial document.
- Request detail lines 9 and 10: Clarification that the elements XMLMessageSequenceNumber and XMLDocumentSequenceNumber are only used if the financial document itself is in XML format and is contained in XML Message detail rather than being linked.
- Request detail line 11: Element PDFDocumentURI replaced by element DocumentURI, to enable the linked document to be in any of the formats specified by the element DocumentFormat.
- Page 9 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.
- Page 10 Response detail line 5: 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.

POST 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. Only a single document, for which a URI for retrieval is specified, may be posted by this method.

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 post 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 post financial document requests All retrieved financial documents must relate to this account.	M	AccountIDValue
6	A date/time reference for this request	D	IssueDateTime
7	Document type. Permitted values are: 01 Invoice 02 Credit note 03 Remittance advice note 04 Account statement	M	DocumentType
8	Document number	M	DocumentNumber
9	Settlement due date – YYYYMMDD	D	SettlementDueDate
10	Gross value of invoice or credit note. If the document is a credit note, the value must be negative.	D	GrossValue
11	Net value of invoice or credit note. If the document is a credit note, the value must be negative.	D	NetValue
12	Currency of value(s) if not the default currency.	D	CurrencyCode
13	Document format. Permitted values are: 01 XML, i.e. EDItX invoice or credit note format defined by EDItEUR 02 PDF	M	DocumentFormat
14	URI of linked document	M	DocumentURI
15	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.bookbuyer.co.uk/FinancialDocumentReceivingService?AccountIDType=01&AccountIDValue=XYZ&DocumentType=01&DocumentNumber=01234567&DocumentFormat=02&DocumentURI=ftp://ftp.supplier.co.uk/invoices/0987654.pdf>

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 request document as the body of a request message. Requests using the SOAP protocol must include an XML document.

Request document name and version

	Post Financial Document request Version 2.0		<pre><PostFinancialDocumentRequest version="2.0"> { "PostFinancialDocumentRequest": { "version": ...</pre>	
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Request 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 post 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, i.e. letter T	D	IssueDateTime	
6	Document format. All posted documents must be in the same format. Permitted values are: 01 XML, i.e..EDItX invoice or credit note format defined by EDItEUR 02 PDF	M	DocumentFormat	
7	Document attachment type. Mandatory. 01 URIs embedded in Request detail 02 Documents in XML Message detail. May only be specified if the request payload is in XML format.	M	DocumentAttachmentType	
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

Each item detail must contain *either* a pair of sequence numbers indicating the position of the XML document within the embedded XML Message detail (lines 9 and 10), *or* a link (line 11) to a document that can immediately be retrieved from the specified URI. If the request is in JSON format, the financial documents may only be linked, not embedded.

	Item detail	M	ItemDetail.	R
1	Post financial document line number	M	LineNumber	
2	Party to whom the document is to be sent Party identifier Party ID type 01 Proprietary 06 EAN-UCC GLN 07 SAN Identifier string Party name	M M M M D	DocumentToParty. PartyID PartyIDType IDValue PartyName	
3	Document type. Permitted values are: 01 Invoice 02 Credit note 03 Remittance advice note 04 Account statement	M	DocumentType	
4	Document number. If posting a document in XML format (see Header line 6), this number must correspond to a uniquely numbered document within the XML Message detail (see below).	M	DocumentNumber	
5	Settlement due date – YYYYMMDD	D	SettlementDueDate	
6	Gross value of invoice or credit note. If the document is a credit note, the value must be negative.	D	GrossValue	
7	Net value of invoice or credit note. If the document is a credit note, the value must be negative.	D	NetValue	
8	Currency of value(s) if not the default currency.	D	CurrencyCode	
9	XML message sequence number. Must be included if the document format is specified at the header level to be XML and the document is contained in XML Message detail.	D	XMLMessageSequenceNumber	
10	XML document sequence number within the XML message specified in line 9. Must be included if the document format is specified at the header level to be XML and the document is contained in XML Message detail.	D	XMLDocumentSequenceNumber	
11	URI of linked document in the format specified in Header line 6.	D	DocumentURI	

XML Message detail

The XML Message detail follows the last Request detail element and must be one or more EDItX XML Messages that conform to the specification and XML schema published by 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 Request detail.

	EDItX Message version 1.6	D	EDItXMessage version="1.6"	R
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Example of a Post Financial Document Request JSON payload using the HTTPS protocol and the POST method, including a URI for an invoice in PDF format:

```
{
  "PostFinancialDocumentRequest": {
    "version": "2.0",
    "xmlns": "http://www.bic.org.uk/webservices/postFinancialDocument",
    "Header": {
      "AccountIdentifier": {
        "AccountIDType": "01",
        "IDValue": "12345"
      },
      "RequestNumber": "001",
      "IssueDateTime": "20190725T1525",
      "DocumentFormat": "02"
    },
    "ItemDetail": [
      {
        "LineNumber": 1,
        "DocumentToParty": {
          "PartyID": {
            "PartyIDType": "07",
            "IDValue": "99999"
          }
        },
        "DocumentType": "01",
        "DocumentNumber": "0987654",
        "SettlementDueDate": "20190725",
        "GrossValue": 999.99,
        "NetValue": 999.99,
        "DocumentFormat": "02",
        "DocumentURI": "ftp://ftp.supplier.co.uk/invoices/0987654.pdf"
      }
    ]
  }
}
```

Example of a Post Financial Document Request XML payload using either the SOAP or the HTTPS protocol and the POST method, including an invoice in XML format:

```
<PostFinancialDocumentRequest version="2.0"
  xmlns="http://www.bic.org.uk/webservices/postFinancialDocument">
  <Header>
    <AccountIdentifier>
      <AccountIDType>01</AccountIDType>
      <IDValue>12345</IDValue>
    </AccountIdentifier>
    <RequestNumber>001</RequestNumber>
    <IssueDateTime>20150725T0001</IssueDateTime>
    <DocumentFormat>01</DocumentFormat>
  </Header>
  <ItemDetail>
    <LineNumber>1</LineNumber>
    <DocumentToParty>
      <PartyID>
        <PartyIDType>07</PartyIDType>
        <IDValue>99999</IDValue>
      </PartyID>
    </DocumentToParty>
    <DocumentType>01</DocumentType>
    <DocumentNumber>0987654</DocumentNumber>
    <SettlementDueDate>20150725</SettlementDueDate>
    <GrossValue>999.99</GrossValue>
    <NetValue>999.99</NetValue>
  </ItemDetail>
  <EDItXMessage xmlns="" version="1.6">
    <Invoice>
      <Header>
        <InvoiceNumber>0987654</InvoiceNumber>
        ...
      </Header>
      <ItemDetail>
        ...
      </ItemDetail>
      ...
    </Invoice>
  </EDItXMessage>
</PostFinancialDocumentRequest>
```

POST 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

Post Financial Document response Version 2.0	<PostFinancialDocumentResponse version="2.0"> { "PostFinancialDocumentResponse": { "version": ...
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Response header

	Response header	M	Header.	6
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, i.e. letter T	M	IssueDateTime	
2	Sender (<i>BIC Realtime</i> 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 post financial document request Reference number / string Reference date or date and time. Mandatory if an IssueDateTime is included in the request.	D M M D	ReferenceCoded ReferenceTypeCode ReferenceNumber ReferenceDateTime	
6	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 16 Invalid or unknown account identifier 19 Server unable to process request – unable to contact party to whom the document is to be sent Free text description / reason for response Language of description. Mandatory if included in the request. See request payload line 7.	D M D D	ResponseCoded. ResponseType ResponseTypeDescription DescriptionLanguageCode	R

⁶ An 'R' in the right-most column means that the element is repeatable.

Response detail

	Details of each financial document that has been received. Mandatory unless the header reports a condition that prevents any response	D	ItemDetail.	R
1	Post Invoice 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	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	
5	Response code, if there are exception conditions. Response type code. Suggested code values: 03 Unable to process this item Free text description. Mandatory, as it will always be necessary to describe the exception condition in more detail. Language of description. Mandatory if included in the request. See request payload line 7.	D M D D	ResponseCoded. ResponseType ResponseTypeDescription DescriptionLanguageCode	R

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

```
<PostFinancialDocumentResponse version="2.0"
xmlns="http://www.bic.org.uk/webservices/postFinancialDocument">
  <Header>
    <IssueDateTime>20190725T153000</IssueDateTime>
    <SenderIdentifier>
      <SenderIDType>01</SenderIDType>
      <IDValue>XYZ</IDValue>
    </SenderIdentifier>
    <AccountIdentifier>
      <AccountIDType>01</AccountIDType>
      <IDValue>12345</IDValue>
    </AccountIdentifier>
    <ReferenceCoded>
      <ReferenceTypeCode>01</ReferenceTypeCode>
      <ReferenceNumber>001</ReferenceNumber>
      <ReferenceDateTime>20190725T152500</ReferenceDateTime>
    </ReferenceCoded>
  </Header>
  <ItemDetail>
    <ReferenceCoded>
      <ReferenceTypeCode>02</ReferenceTypeCode>
      <ReferenceNumber>1</ReferenceNumber>
    </ReferenceCoded>
    <DocumentType>01</DocumentType>
    <DocumentNumber>0987654</DocumentNumber>
  </ItemDetail>
</PostFinancialDocumentResponse>
```

Example of a Post Financial Document Response JSON payload using the HTTPS protocol and the POST method:

```
{
  "PostFinancialDocumentResponse": {
    "version": "2.0",
    "xmlns": "http://www.bic.org.uk/webservices/postFinancialDocument",
    "Header": {
      "IssueDateTime": "20190725T153000",
      "SenderIdentifier": {
        "SenderIDType": "01",
        "IDValue": "XYZ"
      },
      "AccountIdentifier": {
        "AccountIDType": "01",
        "IDValue": "12345"
      },
      "ReferenceCoded": {
        "ReferenceTypeCode": "01",
        "ReferenceNumber": "001",
        "ReferenceDateTime": "20190725T152500"
      }
    },
    "ItemDetail": {
      "ReferenceCoded": {
        "ReferenceTypeCode": "02",
        "ReferenceNumber": 1
      },
      "DocumentType": "01",
      "DocumentNumber": "0987654"
    }
  }
}
```