OpenInvoice



OpenInvoice APIs

Technical Guide for Buyers

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OpenInvoice APIs

Introduction

OpenInvoice's application programming interfaces (APIs) provide the ability to transfer data between your financial system and the OpenInvoice platform. All data transfers occur on demand when your system initiates a request. OpenInvoice never initiates a data transfer. This provides your company the control and flexibility to determine what is transferred between the systems and when the transmissions will occur.

All OpenInvoice APIs include a version number. Oildex will increment an API's version number if an enhancement to the API is not backwards compatible.

Available APIs

GET	POST
Invoice: List of links, Individual XML Documents, Attachments, PDF Snapshot, Document Summary	Invoice: Create (Image Post, Transaction Upload), Approve, Dispute, Comment, Update Export Status, Update Payment Status, Release for Payment
Purchase orders accepted, rejected, counter-offered	Purchase order: Create, Change, Cancel
Receipt: List of links, Individual JSON Documents, Attachments, PDF Snapshot	Receipt: Approve, Dispute
Payment Status	Master Data: Users, AFEs, Cost Centers

Getting Started

The following activities must be completed in order to use the APIs to transfer data between your financial system and the OpenInvoice platform:

1. OpenInvoice Support enables the APIs for your company and imports your security certificate.
2. You configure your security profile to use Message Authentication Codes, Allowed IP Addresses, or both.
3. Based on your workflow and your needs, you decide which APIs to implement.
4. Your IT team develops the data transfer routines which call the OpenInvoice APIs.

The URI endpoints for the OpenInvoice APIs are:

- Production: api.openinvoice.com
- DOCPTest: staging-api.openinvoice.com

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Security Profile

In addition to your company's security certificate, you must configure your security profile within the OpenInvoice application. OpenInvoice requires that you use either Message Authentication Codes or you define a list of Allowed IP Addresses. For added security, you may use both options together.

Message Authentication Codes increase the assurance of message integrity and authenticity. If enabled, every request must include a valid HMAC (Hash based Message Authentication Code) token produced from the generated key. Any request that does not include a valid token will be rejected by OpenInvoice. For more information, refer to "HMAC Token Generation" on page 5.

Allowed IP Addresses increase the assurance that a message/request is sent from one of your authorized systems. You are able to configure up to 10 individual IP addresses. If enabled, any request that is from an IP address not included in the allowed list will be rejected by OpenInvoice.

How to Configure Your Security Profile

Permission: Corporate Integration

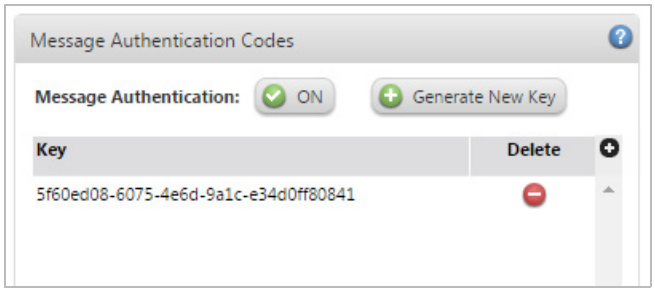
Prerequisite: OpenInvoice Support has granted access to the APIs.

Steps:

1. Go to **Corporate** > **Security Profile**.
2. Do one or both of the following:

To configure and enable Message Authentication Codes:

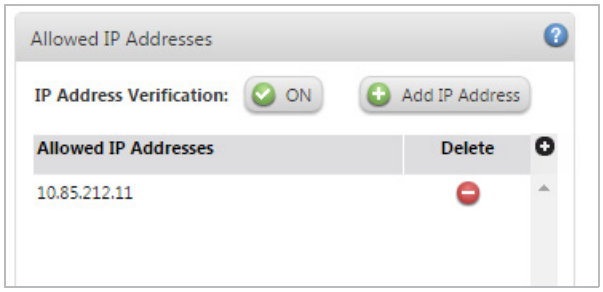
- In the **Message Authentication Codes** portlet, click **Message Authentication** to **ON**.
- Click **Yes, Proceed Anyway**.
- Click **Generate New Key**.



Configure and enable MAC.

To configure and enable allowable IP addresses:

- In the **Allowed IP Addresses** portlet, click **IP Address Verification** to **ON**.
- Click **Add IP Address**.
- Enter an allowable IP address.
- Click **Save**.



Configure and enable allowable IP addresses.

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HMAC Token Generation

Using the key generated by OpenInvoice, you encrypt each request's message using HMAC_SHA256 encryption and the UTF-8 character set. The resulting HMAC token is then included in the request using the 'mac" header parameter. When the request is received, OpenInvoice recalculates the HMAC token and compares the result to the token included in the request. If the results match the request is accepted.

The encryption algorithm needs two parameters: the signing key and the input string. The signing key is the key generated by OpenInvoice, the input string is the request message itself. In the case of a POST request this is the request payload, in the case of a GET request the input is an empty string.

The following sample java code can be used to generate HMAC tokens.

```
import javax.crypto.Mac;
import javax.crypto.spec.SecretKeySpec;
import javax.xml.bind.DatatypeConverter;

public class HMAC_Calc {
   public static final String getHMAC(String signingKey, String input) {

      byte[] signedDigestHash;
      Mac hmac = Mac.getInstance("HMACSHA256");
      SecretKeySpec secretKey = new SecretKeySpec(signingKey.getBytes("UTF-8"), "HMACSHA256");
      hmac.init(secretKey);
      signedDigestHash = hmac.doFinal(input.getBytes("UTF-8"));
      return DatatypeConverter.printBase64Binary(signedDigestHash);
   }
}
```

Session Timeout

OpenInvoice will process each request up to a maximum of 10 minutes before timing out. In order to ensure that you correctly receive the OpenInvoice response for each API call it is recommended that you set your timeout to be greater than 10 minutes.

Parsing XML and JSON Documents

it is strongly recommended that API developers use an established library to handle the parsing of XML and JSON documents. Both formats allow for element ordering to change without notice and still be a valid, parsable document. The use of position-based parsing in these cases will likely lead to errors.

For more information on JSON, including a list of libraries by language to read and write JSON, please refer to http://www.json.org.

File Compression

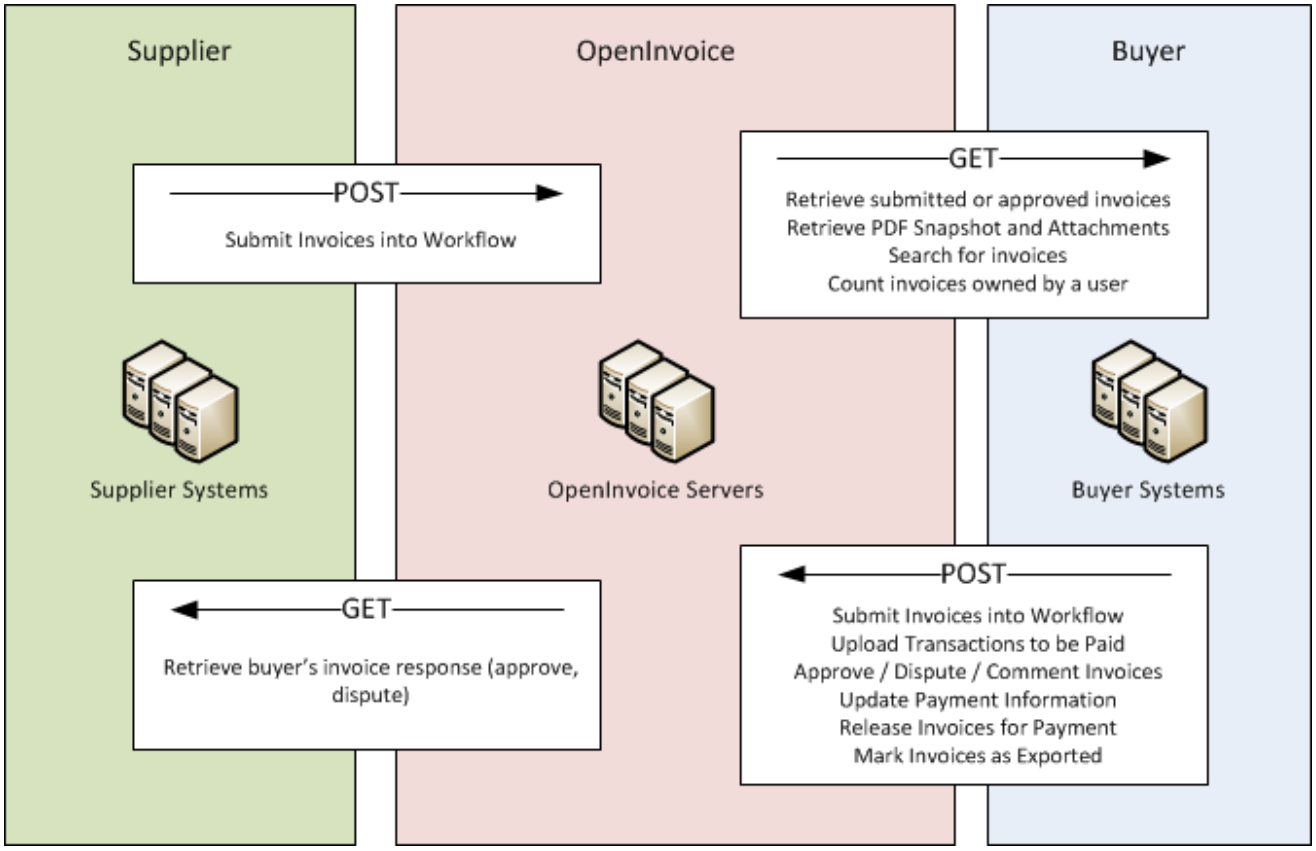
When streaming document attachments, OpenInvoice will automatically compress (zip) text files that are larger than 2 kb using gzip (this includes CSV files). Text files smaller than 2 kb as well as all other attachment types will not be compressed (zipped) prior to being streamed from OpenInvoice. It is recommended that your processes check the Content-Encoding header to determine whether or not the file is compressed (zipped).

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Invoices

Introduction

The invoice APIs allow you to retrieve submitted or approved invoices, including a PDF snapshot and attachments; retrieve the count of invoices owned by a user; search for invoices; submit new invoices into workflow; upload transactions to be paid in OpenInvoice; approve or dispute invoices; update payment information; release an invoice for payment in OpenInvoice; and mark an invoice as having been exported to your financial system.



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Identifying Invoices to Get from OpenInvoice

The available invoice APIs provide different ways to implement and manage how you get submitted and approved invoices from OpenInvoice. There are two options for identifying which invoices need to be retrieved from OpenInvoice, using a defined integration service, or searching for invoices. The following table provides a description, high-level processing steps, and the pros / cons of each option.

	Integration Service	Invoice Search
Description	An integration service is configured by OpenInvoice Support. Based on workflow actions performed on your invoices, the service identifies and flags invoices that you need to get from OpenInvoice. The submitted invoice service automatically includes resubmitted invoices and the approved invoice service automatically includes amended invoices. In order to ensure you do not get duplicates you must update the export status on every invoice.	You programmatically search for invoices that have been submitted or approved since the last time you retrieved invoices from OpenInvoice. You will need to make separate API calls to search for submitted and resubmitted invoices, as well as separate calls for approved and amended invoices. In order to ensure you do not get duplicates you must track the date and time of when you last searched for invoices.
API Processing Steps	1. Get the list of invoices identified by OpenInvoice. 2. Loop through list to get invoice XML, PDFs, and attachments. 3. Update export status on each invoice.	1. Save the list of invoices that qualify for search criteria as a resource set. 2. Loop through the resource set to get invoice XML, PDFs, and attachments. 3. Save timestamp used to create resource set. 4. Optionally, update the export status on each invoice. **Note:** This is required if you wish to report on invoice export status and/or get invoices that were modified after your last get for the invoice. 5. Repeat steps 1 to 4 for each search.
Pros	OpenInvoice identifies the invoices that need to be retrieved (submitted and resubmitted; approved and amended invoices).	Provides greater flexibility on identifying which invoices need to be retrieved.

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	Integration Service	Invoice Search
Cons	Requires a minimum of two API calls per invoice.	Requires careful tracking of timestamps used for each call in order to ensure no invoices are missed and/or duplicates are avoided. Requires multiple searches to get all invoices.

Invoice Workflow Options

Based on your configuration and business processing requirements invoices can either be reviewed and workflowed in OpenInvoice or in your back office financial system (client workflow). The workflow used to process an invoice directly impacts how you implement the APIs. It is possible that some invoices will be processed in OpenInvoice while others are processed in your financial system. Consult with your business partners to determine which processing options you need to support in the APIs.

	OpenInvoice Workflow	Client Workflow
Description	Users review and process the invoice in OpenInvoice. Invoices are transferred to the financial system after they have been fully approved. Users may amend an invoice after it was fully approved in order to modify the coding.	Invoices are transferred to the financial system immediately after the supplier submits the invoice. Users review and process the invoice in the financial system and the financial system sends a status update (approve, dispute, or comment) to OpenInvoice.
API Processing Steps	1. Get approved invoices from OpenInvoice. 2. Get amended invoices from OpenInvoice.	1. Get submitted invoices from OpenInvoice 2. Post status update (approve, dispute, or comment) for each invoice.

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API Call Sequences

The options for identifying invoices to get from OpenInvoice combined with the invoice workflow options produce the following four sequences of API calls.

Note: These calls assume that you are getting the invoice XML with the associated links to the PDF Snapshot and Attachments for all invoices in a single call.

	Integration Service	Invoice Search
OpenInvoice Workflow	1. GET api.openinvoice.com/docp/supply-chain/v1/invoices?$filter=serviceType eq approved and serviceStatus eq pending 2. For each invoice and attachment do the following: ▪ GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxx/snapshot ▪ GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxx/attachments/yyy ▪ POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.exports.set **Note:** The payload must specify the approved serviceType as well as the invoice.	1. GET api.openinvoice.com/docp/supply-chain/v1/invoices?$filter=status eq approved and approvedDate ge yyyy-mm-ddT24:mm:ss-hh:00 and approvedDate le yyyy-mm-ddT24:mm:ss-hh:00 2. GET api.openinvoice.com/docp/supply-chain/v1/invoices?$filter=lastActionDate gt approvedExportDate **Note:** This will retrieve invoices modified after your last get and requires that you update the export status on each invoice. 3. For each invoice and attachment do the following: ▪ GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxx/snapshot ▪ GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxx/attachments/yyy 4. POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.exports.set **Note:** The payload must specify the submitted serviceType as well as the invoice.

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	Integration Service	Invoice Search
Client Workflow	1. GET api.openinvoice.com/docp/supply-chain/v1/invoices?$filter=serviceType eq submitted and serviceStatus eq pending 2. For each invoice and attachment do the following: ▪ GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxx/snapshot ▪ GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxx/attachments/yyy ▪ POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.exports.set **Note:** The payload must specify the submitted serviceType as well as the invoice. 3. For each invoice do one of the following: ▪ POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.approve ▪ POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.dispute ▪ POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.comment.add **Note:** The payload must specify the invoice and comment.	1. GET api.openinvoice.com/docp/supply-chain/v1/invoices?$filter=status eq submitted and lastActionDate ge 2015-05-01T08:00:00-07:00 and lastActionDate le 2015-05-01T08:59:59-07:00 2. GET api.openinvoice.com/docp/supply-chain/v1/invoices?$filter=status eq resubmitted and lastActionDate ge 2015-05-01T08:00:00-07:00 and lastActionDate le 2015-05-01T08:59:59-07:00 3. For each invoice and attachment do the following: ▪ GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxx/snapshot ▪ GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxx/attachments/yyy 4. For each invoice do one of the following: ▪ POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.approve ▪ POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.dispute ▪ POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.comment.add **Note:** The payload must specify the invoice.

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Get Invoices

The *get invoices* API allows you to retrieve one or more invoices from the OpenInvoice platform. You have the ability to retrieve just the portions of the invoice you need whether it be the invoice XML, attachments, the PDF snapshot, or some combination. Additional options allow you to retrieve a list of invoices that you then loop through to process or retrieve all invoice details in a single request.

API Call	Description
GET api.openinvoice.com/docp/supply-chain/v1/invoices	Retrieves a list of invoices. Use the $filter option to define the search criteria and the $skip and $top options to retrieve a subset of qualifying invoices. You can temporarily save the results in a resource set to ensure the dataset being processed does not change. By default, the list is returned in JSON and includes links to the qualifying invoices. Use the request header options to return all invoice details in XML and the $select option to indicate if attachments and the PDF snapshot should be included.
GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxxxxxx	Retrieves the XML for the specified invoice identifier. Use the $select option to indicate if attachments and the PDF snapshot should be included.
GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxxxxxx/attachments	Retrieves a list of attachments in JSON for the specified invoice identifier.
GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxxxxxx/attachments/yyyyyy	Retrieves the specified attachment for the specified invoice identifier.
GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxxxxxx/snapshot	Retrieves the PDF snapshot for the specified invoice identifier.

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Get List of Invoices: Request Header Options

Every request must specify how you want to receive the qualifying invoices. You can receive links to the invoices (a “minimal” request) in JSON format, or all of the invoice details (a “representational” request) in XML format.

To receive minimal results in JSON format specify the following header parameters:

Prefer: return=minimal
Accept: application/json

To receive representational results in XML format specify the following header parameters:

Prefer: return=representation
Accept: application/xml

In addition, when requesting all invoice details in XML format you can use the $select option to indicate if links to the attachments and the PDF snapshot should be included (see the request options section below for details).

Get List of Invoices: Request Options

When retrieving a list of invoices, the following options define how the qualifying list of invoices are returned.

Option	Default	Description
$count	False	Boolean (true/false); indicates if the attribute totalNumber should be included in the meta section of the results.
$top	Rep: 50 Min: 1000	Integer; the maximum number of invoices to include in the returned list. For representational, the default is 50 and the allowed maximum is 50. A value greater than 50 will be ignored. For minimal, the default is 1000 and the allowed maximum is 10,000. A value greater than 10,000 will be ignored.
$skip	0	Integer; number of invoices in the total list of all qualifying invoices to skip when creating the list of returned invoices.
resourceSetSaveIndicator	False	Boolean (true/false); indicates if the list of qualifying invoices should be stored in a temporary resource set.
resourceSetID		Integer; unique identifier of a previously saved resource set.

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Option	Default	Description
$select	All	Enumeration (all, invoice, attachments, snapshot), defines the elements to return if retrieving the complete invoice XML. This option is only applicable for representational requests. $select=* returns the invoice XML, links to the attachments, and a link to PDF snapshot. $select=invoice returns just the invoice XML; links to the attachments and PDF snapshot are excluded. $select=attachments returns the invoice XML and links to the attachments; the link to the PDF snapshot is excluded. $select=snapshot returns the invoice XML and a link to the PDF snapshot; links to the attachments are excluded.

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Get List of Invoices: Filters

The $filter option allows you to define the criteria that determines which invoices are included in the list. The criteria is defined using OData expressions. For information on creating OData expressions, refer to http://www.odata.org/documentation/odata-version-2-0/uri-conventions.

Filters can be defined based on configured export services and/or invoice attributes.

Filter	Supported Values
serviceType	approved, submitted, tracking
serviceStatus	pending, completed, failed
status	unapproved, approved, resubmitted, deleted, cancelled, disputed, stalled, AllViable, all • If no status is specified then all viable invoices are returned which includes submitted, re-submitted, disputed, approved and held. • All includes deleted and cancelled invoices. • If “all” or “deleted” are specified a date range must be supplied: ▪ 100 days max range ▪ If end-date is not supplied, the default is the current date/time ▪ If range is not specified or is too broad, a 400 code and message will be returned
submissionType	directentry, imagepost, imagescan, imageobo, lido, b2b, transactionupload, historicalupload, imagebpo
lastActionDate	accepts either a date or a date-time; dates are specified as yyyy-mm-dd; date-times use the 24 hour clock and must include a timezone offset yyyy-mm-ddT24:mm:ss-hh:00
approvedDate	accepts either a date or a date-time; dates are specified as yyyy-mm-dd; date-times use the 24 hour clock and must include a timezone offset yyyy-mm-ddT24:mm:ss-hh:00
approvedExportDate	accepts either a date or a date-time; dates are specified as yyyy-mm-dd; date-times use the 24 hour clock and must include a timezone offset yyyy-mm-ddT24:mm:ss-hh:00
invoiceNumber	value must be enclosed in single quotes; supports the use of an asterisk (*) as a wild card.
supplierNumber	value must be enclosed in single quotes; supports the use of an asterisk (*) as a wild card.
ownedByEmployeeNumber	value must be enclosed in single quotes; the use of wild cards is not supported.

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Get List of Invoices: Meta Data

When retrieving a list of invoices, the results include a meta section that provides information on the set of invoices returned.

Attribute	Description
completeIndicator	Boolean value (true/false); indicates if the returned list includes all qualifying invoices.
number	Integer; the number of invoices included in the returned list.
resourceSetID	Integer; unique identifier of the saved resource set that is used to reference the saved resource set in future requests. If the request included the resourceSetSaveIndicator then the value returned is the newly created resource set, otherwise the original value included in the request is returned.
startSequence	Integer; indicates the starting position of the returned list relative to the total list of all qualifying invoices. For example, if startSequence = 10 then the first invoice in the returned list is the 10th invoice in the total list of all qualifying invoices.
totalNumber	Integer; the total number of qualifying invoices. This attribute is only included in the meta data if the $count option is specified on the request.
truncatedIndicator	Boolean value (true/false); indicates if the total number of qualifying invoices is greater than the defined server maximum. This attribute is only included in the meta data when the value is true.

Get a Single Invoice: Request Options

When retrieving a specific invoice, the following options define which elements are returned.

Option	Default	Description
$select	All	Enumeration (all, invoice, attachments, snapshot), defines the elements to return if retrieving the complete invoice XML. $select=all returns the invoice XML, links to the attachments, and a link to PDF snapshot. $select=invoice returns just the invoice XML; links to the attachments and PDF snapshot are excluded. $select=attachments returns the invoice XML and links to the attachments; the link to the PDF snapshot is excluded. $select=snapshot returns the invoice XML and a link to the PDF snapshot; links to the attachments are excluded.

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Examples

The following table illustrates common *get invoice* API calls.

API Call	Description
GET api.openinvoice.com/docp/supply-chain/v1/ invoices?$filter=serviceType eq approved and serviceStatus eq pending&$count=true	Retrieves all approved invoices that have not been retrieved from OpenInvoice. The result's meta data will include the total number of invoices that need to be retrieved.
GET api.openinvoice.com/docp/supply-chain/v1/ invoices?$filter=status eq unapproved and lastActionDate ge 2015-01-01 and lastActionDate le 2015-01-31& resourceSetSaveIndicator=true	Creates a temporary resource set that includes all unapproved invoices that were modified in the month of January.
GET api.openinvoice.com/docp/supply-chain/v1/ invoices?resourceSetID=1234&$top=20&$skip=20	Retrieves invoices 21 to 40 from the previously saved resource set 1234.
GET api.openinvoice.com/docp/supply-chain/v1/invoices/ 5521340?select=snapshot	Retrieves the XML and a link to the PDF snapshot for invoice 5521340.
GET api.openinvoice.com/docp/supply-chain/v1/<invoices?$filter= status eq all and lastActionDate ge 2015-06-01 and lastActionDate le 2015-09-01&resourceSetSaveIndicator=true&$select=invoice	Retrieves all invoices from June 1, 2015 through September 1, 2015. Results will include invoices with a deleted and cancelled status.

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Get Document Summaries

The *get document summaries* API allows you to retrieve the count of invoices assigned to a specific employee. The counts are returned in XML format and is grouped by owner (department or user), action required, and status.

API Call	Description
GET api.openinvoice.com/docp/supply-chain/v1/document-summaries	Retrieves the count of invoices assigned to a specific employee. Use the $filter option to specify the employee.

Get Document Summaries: Filters

The $filter option allows you to specify which employee's document summary you wish to get.

Filter	Supported Values
employeeNumber	Value must be enclosed in single quotes; the use of wild cards is not supported.

Examples

The following table illustrates common *get document summaries* API calls.

API Call	Description
GET api.openinvoice.com/docp/supply-chain/v1/document-summaries?$filter=employeeNumber eq '1234'	Retrieves the count of invoices assigned to the user with employee number 1234.

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Post Invoice

The *post invoices* API allows you to create and submit new invoices that were previously scanned and indexed in your document imaging system. This API also allows you to upload transactions approved for payment in your financial system so that they can be paid using the OpenInvoice payment module. Because this API can be used for more than one function, the API's payload determines the action to be performed.

API Call	Description
POST api.openinvoice.com/docp/supply-chain/v1/invoices	Create and submit a single image invoice into OpenInvoice workflow or upload multiple transactions to be paid using the OpenInvoice payment module.

Creating and Submitting a new Invoice in the OpenInvoice Workflow

Request Details

When creating and submitting a new invoice into the OpenInvoice workflow, the payload is a MIME multi-part document consisting of two parts. The first part is the invoice XML based on the OpenImageInvoiceInput.xsd schema. The second part is the invoice attachment. The request header must specify the Content-Type as multi-part/mixed along with the MIME boundary.

Note: All invoices created and submitted into the OpenInvoice workflow through this API must include an attachment.

XML Schema	OpenImageInvoiceInput.xsd
Attachments Required/Optional/Not Supported	Required
Request Header Content-Type	Multipart/mixed:boundary="MIME-Boundary"
Maximum number of attachments	1
Attachment encoding	Base 64
Maximum file size for each attachment	6 MB

Response Details

The response sent by OpenInvoice uses the HTTP/1.1 status codes to indicate if the file was received and processed. Refer to the errors and warnings section of the DOResponse XML for information on any issues that may have occurred while processing the request.

Protocol Codes	HTTP/1.1
Content-Type	Application/xml
Content-Encoding	gzip
XML Schema	DOResponse.xsd

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Uploading Transactions to be Paid using the OpenInvoice Payment Module

Request Details

When uploading one or more transactions to be paid using the OpenInvoice payment module, the payload is a tab separated value (TSV) file consisting of one row representing the column headers and one row for each transaction to be uploaded. The request header must specify the Content-Type as text/plain.

Note: Transactions uploaded to be paid using the OpenInvoice payment module do not support attachments.

File Template	TransactionUpload.tsv
Attachments Required/Optional/Not Supported	Not Supported
Request Header Content-Type	Text/plain
Maximum number of attachments	N/A
Maximum number of transactions per file	5000

Response Details

The response sent by OpenInvoice uses the HTTP/1.1 status codes to indicate if the request was received and processed. Refer to the errors and warnings section of the DOResponse XML for information on any issues that may have occurred while processing the request.

Protocol Codes	HTTP/1.1
Content-Type	Application/xml
Content-Encoding	gzip
XML Schema	DOResponse.xsd

Note: The process will stop after the first occurrence of an error. The response XML will only include a single error.

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Post Invoice Events

The *post invoice event* APIs allow you to update the status of an invoice in OpenInvoice.

API Call	Description
POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.exports.set	Works in conjunction with the serviceType and serviceStatus filter options on the *get invoices* API. Updates the invoice serviceStatus to the specified value (success, inprogress, failure). When the status is updated to success, a corresponding **Exported** action is added to the Invoice Journal.
POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.approve	Changes the invoice status to **Approved**. The invoice has completed workflow and is now ready to be paid. If specified, the comment is added to the **Approved** action in the Invoice Journal and is visible only to users in your company.
POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.dispute	Changes the invoice status to **Disputed** and returns the invoice to the supplier for resolution. The specified comment is added to the **Disputed** action in the Invoice Journal and is visible to the supplier as well as users in your company.
POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.comment.add	No change to the invoice status. A comment is added to the Invoice Journal. Use the visibility setting to determine if the supplier can see the comment.
POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.payment.release	No change to the invoice status. Generates and schedules a payment for the invoice in the OpenInvoice payment module. **Note:** If specified, the comment is ignored. Support for comments is planned for a future release.
POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.payment.update	No change to the invoice status. Payment information is added to the Invoice Journal.

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Request Details

The event payload is in JSON and consists of two parts: the context which identifies the invoice and the transform which specifies the details of the status update.

All invoice events have the same context which provides you with two ways to identify the invoice:

1. The combination of Invoice Number and Supplier Number
2. The unique OpenInvoice document identifier

The invoice event transform details vary with each event. At any time, you can get the latest meta data for an event by calling the associated meta API. The meta data is returned in JSON and includes information on each element's data type, maximum length, supported values, default value, and whether or not the element is required.

For example, you can get the meta data for the invoice approve event with the API call:

GET api.openinvoice.com/docp/events/supply-chain/v1/invoice.approve/meta

Attachments Required/Optional/Not Supported	Not Supported
Request Header Content-Type	application/json
Maximum number of attachments	N/A
Maximum number of invoices per event	1

Response Details

The response sent by OpenInvoice uses the HTTP/1.1 status codes to indicate if the request was received and processed. Refer to the request status code, message type code (error or warning), and developer messages in the JSON response for information on any issues that may have occurred while processing the request.

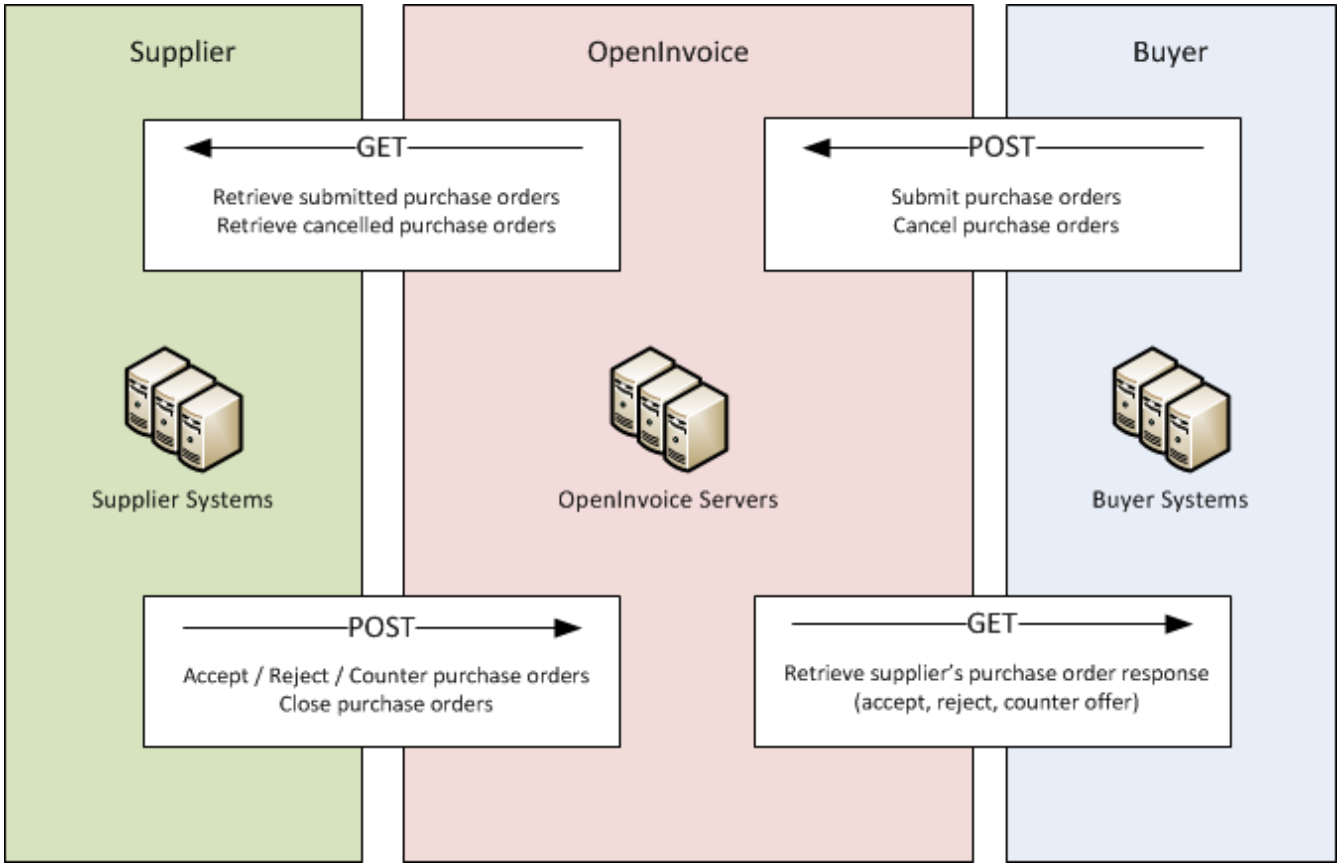
Protocol Codes	HTTP/1.1
Content-Type	Application/json
Content-Encoding	gzip

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Purchase Orders

Introduction

The purchase order APIs allow you to submit purchase orders and change requests to your suppliers; retrieve your supplier's response (accept, reject, counter) for purchase orders; and cancel existing purchase orders.



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Post Purchase Order

The *post purchase orders* API allows you to create new purchase orders and modify existing purchase orders for your suppliers.

API Call	Description
POST api.openinvoice.com/docp/supply-chain/v1/purchase-orders	Create or modify purchase orders you wish to present to your suppliers.

Request Details

The purchase order XML is based on the PIDX OrderChange.xsd schema and can be sent on its own or with attachments.

If sending the XML on its own, the request header must specify the Content-Type as application/xml. If sending the XML with attachments, the payload is a MIME multi-part document consisting of two or more parts. The first part is the XML followed by one part for each attachment. The request header must specify the Content-Type as multi-part/mixed along with the MIME boundary.

XML Schema	PIDX Order Change.xsd
Attachments Required/Optional/Not Supported	Optional

	With Attachments	Without Attachments
Request Header Content-Type	Multipart/mixed;boundary= “MIME-Boundary”	application/xml
Maximum number of attachments	unlimited	N/A
Attachment encoding	Base 64	
Maximum file size for each attachment	6 MB	

Response Details

The response sent by OpenInvoice uses the HTTP/1.1 status codes to indicate if the request was received and processed. Refer to the errors and warnings section of the DOResponse XML for information on any issues that may have occurred while processing the request.

Protocol codes	HTTP/1.1
Content-Type	Application/xml
Content-Encoding	gzip
XML Schema	DOResponse.xsd

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Post Purchase Order Events

The *post purchase order event* APIs allow you to update the status of a purchase order in OpenInvoice.

API Call	Description
POST api.openinvoice.com/docp/events/supply-chain/v1/purchase-order.cancel	Changes the purchase order status to **Cancelled**. The purchase order is no longer available to be referenced on invoices. If specified, the comment is added to the **Cancelled** action in the Purchase Order Journal and is visible to the supplier as well as users in your company.

Request Details

The event payload is in JSON and consists of two parts: the context which identifies the purchase order and the transform which specifies the details of the status update.

All purchase order events have the same context and identify purchase orders using the combination of Purchase Order Number and Supplier Number

The purchase order event transform details vary with each event. At any time, you can get the latest meta data for an event by calling the associated meta API. The meta data is returned in JSON and includes information on each element's data type, maximum length, supported values, default value, and whether or not the element is required.

For example, you can get the meta data for the purchase-order.cancel event with the API call:

GET api.openinvoice.com/docp/events/supply-chain/v1/purchase-order.cancel/meta

Attachments Required/Optional/Not Supported	Not Supported
Request Header Content-Type	application/json
Maximum number of attachments	N/A
Maximum number of purchase orders per event	1

Response Details

The response sent by OpenInvoice uses the HTTP/1.1 status codes to indicate if the request was received and processed. Refer to the request status code, message type code (error or warning), and developer messages in the JSON response for information on any issues that may have occurred while processing the request.

Protocol Codes	HTTP/1.1
Content-Type	Application/json
Content-Encoding	gzip

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Get Purchase Order Events

The *get purchase order event* APIs allow you to retrieve your supplier's response to purchase orders and change requests.

API Call	Description
GET api.openinvoice.com/docp/events/supply-chain/v1/purchase-order.accept	Retrieves a list of purchase orders that have been accepted by the supplier.
GET api.openinvoice.com/docp/events/supply-chain/v1/purchase-order.reject	Retrieves a list of purchase orders that have been rejected by the supplier.
GETT api.openinvoice.com/docp/events/supply-chain/v1/purchase-order.counter-offer	Retrieves a list of purchase orders that have been countered by the supplier.

Get List of Purchase Order Events: Request Header Options

All qualifying purchase orders are returned in JSON format. The request header options are optional and have no impact on the response format.

Prefer: return=representation
Accept: application/json

Get List of Purchase Order Events: Request Options

When retrieving a list of purchase orders, the following option defines how the qualifying list of purchase orders is returned:

Option	Default	Description
$count	False	Boolean (true/false); indicates if the attribute totalNumber should be included in the meta section of the results.

Get List of Purchase Order Events: Filter

The $filter option allows you to define the criteria that determines which purchase orders are included in the results. The criteria is defined using OData expressions. For information on creating OData expressions, refer to http://www.odata.org/documentation/odata-version-2-0/uri-conventions.

Filter	Supported Values
actionDate	accepts either a date or a date-time; dates are specified as yyyy-mm-dd; date-times use the 24 hour clock and must include a timezone offset yyyy-mm-ddT24:mm:ss-hh:00

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Get List of Purchase Order Events: Meta Data

When retrieving a list of purchase orders, the results include a meta section that provides information on the set of purchase orders returned.

Attribute	Description
completeIndicator	Boolean value (true/false); indicates if the returned list includes all qualifying purchase orders.
number	Integer; the number of invoices included in the returned list.
totalNumber	Integer; the total number of qualifying purchase orders. This attribute is only included in the meta data if the $count option is specified on the request.

Examples

The following table illustrates common *get purchase order events* API calls.

API Call	Description
GET api.openinvoice.com/docp/supply-chain/v1/purchase-order.accept?$filter= actionDate ge 2015-01-01 and actionDate le 2015-01-31	Retrieves all purchase orders that were accepted in the month of January.
GET api.openinvoice.com/docp/supply-chain/v1/purchase-order.reject?$filter= actionDate ge 2015-03-01 and actionDate le 2015-03-31	Retrieves all purchase orders that were rejected in the month of March.
GET api.openinvoice.com/docp/supply-chain/v1/purchase-order.counter-offer?$filter= actionDate ge 2015-06-01 and actionDate le 2015-06-30	Retrieves all purchase orders that were counter offered in the month of June.

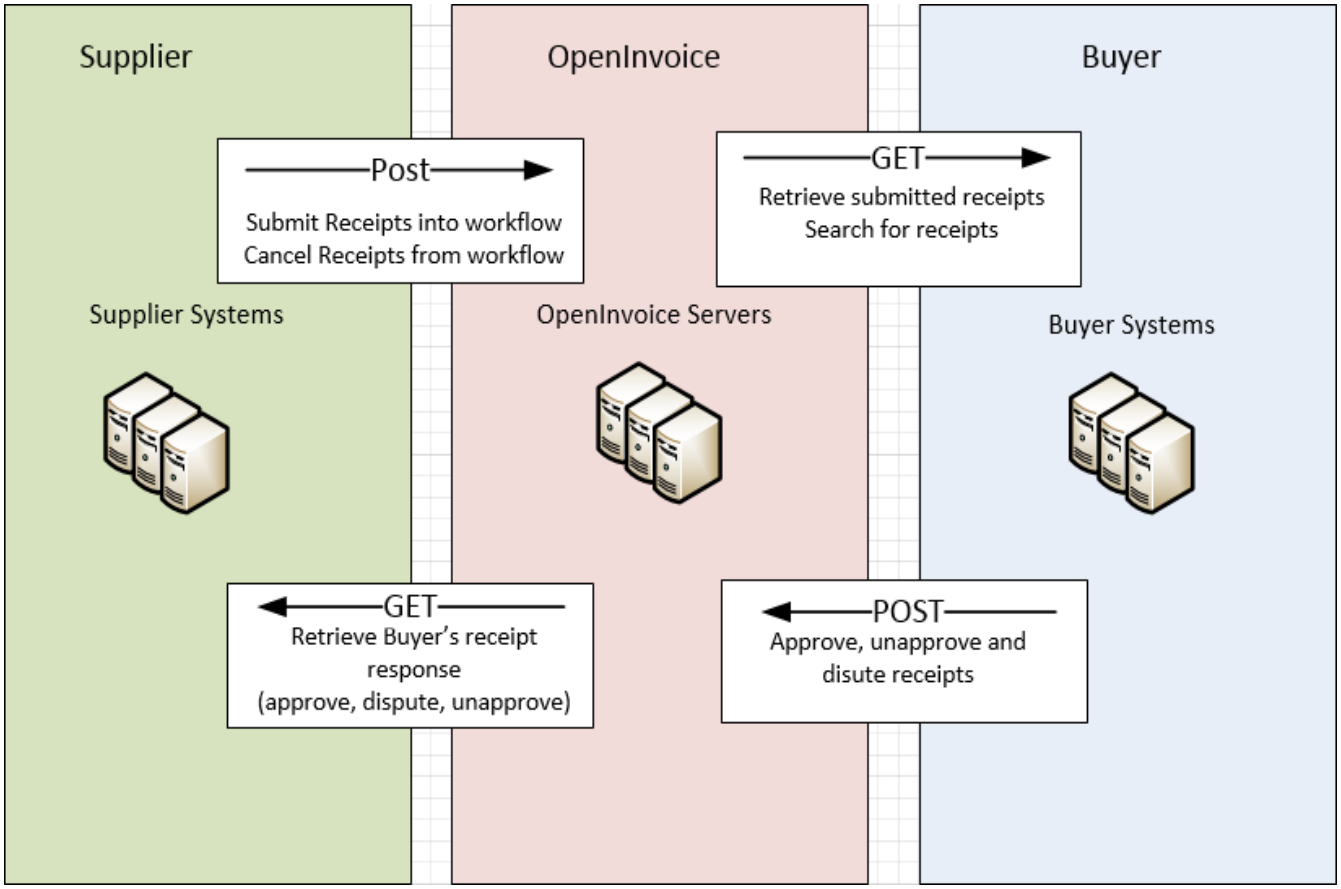
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Receipts

Introduction

The receipt APIs allow you to retrieve receipts, including a PDF snapshot and attachments; search for receipts; code and approve receipts; unapprove receipts; or dispute receipts

Refer to the Receipt section of the OpenInvoice *Schemas Technical Guide for Buyers* for more information on the receipt JSON schema.



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Attachments

Receipts with attachments are transmitted in Multipart MIME (Multipurpose Internet Mail Extensions) format. When posting a receipt with attachments, the receipt and all attachments are processed as a single transaction. If any piece of the message cannot be processed, the entire message will be rejected with neither the receipt nor the attachments being saved. When getting receipts with attachments, the receipt and each attachment are retrieved in individual requests and are processed independently of each other.

The maximum file size of each attachment is 9 MB and the maximum total of all attachments for each receipt is 70 MB.

When sending or receiving receipt attachments the attachment file type is specified in the content-type of the attachment's mime boundary.

File Type	Content-Type
tiff	image/tiff
gif	image/gif
jpeg	image/jpeg
png	image/png
dwg	image/vnd.dwg
pdf	application/pdf
doc	application/msword
docx	application/vnd.openxmlformats-officedocument.wordprocessingml.document
xls	application/ms-excel
xlsx	application/vnd.openxmlformats-officedocument.spreadsheetml.sheet
csv	application/ms-excel
txt	text/plain
tsv	text/plain

Information about an attachment and its location within the multipart MIME message is defined using the Attachment element of the receipt schema.

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Get Receipts

The *get receipts* API allows you to retrieve one or more receipts from the OpenInvoice platform. You have the ability to retrieve just the portions of the receipt you need whether it be the receipt JSON, attachments, or some combination. Additional options allow you to retrieve a list of receipts that you then loop through to process.

API Call	Description
GET api.openinvoice.com/docp/supply-chain/v1/receipts	Retrieves a list of receipts. Use the $filter option to define the search criteria.
GET api.openinvoice.com/docp/supply-chain/v1/receipts/xxxxxxxx	Retrieves the JSON for the specified receipt identifier.
GET api.openinvoice.com/docp/supply-chain/v1/receipts/xxxxxxxx/attachments	Retrieves a list of attachments in JSON for the specified receipt identifier.
GET api.openinvoice.com/docp/supply-chain/v1/receipts/xxxxxxxx/attachments/yyyyyy	Retrieves the specified attachment for the specified receipt identifier.
GET api.openinvoice.com/docp/supply-chain/v1/receipts/xxxxxxxx/snapshot	Retrieves the PDF snapshot for the specified receipt identifier.

Get List of Receipts: Response Format

The list of receipts is returned in JSON format and is encoded using gzip. Depending on the options you specify, the response may include just the links to each qualifying receipt and/or a subset of receipt data elements.In order to get all details for the receipts you need to get each receipt one at a time using the receipt's unique identifier.

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Get List of Receipts: Request Options

When retrieving a list of recepts, the following options define how the qualifying list of receipts are returned.

Option	Default	Description
$count	False	Boolean (true/false); indicates if the attribute totalNumber should be included in the meta section of the results.
$select	links	Allows you to specify the specific data elements to include in the result set for each qualifying receipt. $select=links returns just the receipt links. $select=* returns all available data elements. Multiple data elements can be combined by specifying the elements in a comma separated list (do not include any spaces). For example: $select=receiptNumber,status,links.
$expand	N/A	Allows you to request additional elements be returned with the receipt. Available options are actionRules (only available when requesting a specific receipt), customLabelIndicator and fieldRules. If $select is used along with $expand, any elements listed in $expand must also be listed in the $select parameter.
$orderby	N/A	Allows you to request search results be returned according to the lastActionDate. Default order is ascending (ASC). For example: $orderby=lastActionDate DESC.

Get List of Receipts: Filters

The $filter option allows you to define the criteria that determines which receipts are included in the list. The criteria is defined using OData expressions. For information on creating OData expressions, refer to http://www.odata.org/documentation/odata-version-2-0/uri-conventions.

Filters can be defined based on configured export services and/or invoice attributes.

Filter	Supported Values
status	approved, disputed, submitted
lastActionDate	accepts either a date or a date-time; dates are specified as yyyy-mm-dd; date-times use the 24 hour clock and must include a timezone offset yyyy-mm-ddT24:mm:ss-hh:00
receiptNumber	value must be enclosed in single quotes; supports the use of an asterisk (*) as a wild card.
afe/number	value must be enclosed in single quotes; must be an exact match, the use of wild cards is not supported.

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Filter	Supported Values
costCenter/number	value must be enclosed in single quotes; must be an exact match, the use of wild cards is not supported.
location	value must be enclosed in single quotes; includes any receipts with a location that contains the specified value.
orderedByName	value must be enclosed in single quotes; must be the user's full name (ie, Firstname Lastname) supports the use of an asterisk (*) as a wild card.
supplierParty/name	value must be enclosed in single quotes; supports the use of an asterisk (*) as a wild card.
supplierParty/assignedByBuyer	value must be enclosed in single quotes; supports the use of an asterisk (*) as a wild card.

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Get List of Receipts: Meta Data

When retrieving a list of receipts, the results include a meta section that provides information on the set of receipts returned.

Attribute	Description
completeIndicator	Boolean value (true/false); indicates if the returned list includes all qualifying receipts.
number	Integer; the number of receipts included in the returned list.
startSequence	Integer; indicates the starting position of the returned list relative to the total list of all qualifying receipts. For example, if startSequence = 10 then the first receipt in the returned list is the 10th receipt in the total list of all qualifying receipts.
totalNumber	Integer; the total number of qualifying receipts. This attribute is only included in the meta data if the $count option is specified on the request.
truncatedIndicator	Boolean value (true/false); indicates if the total number of qualifying receipts is greater than the defined server maximum. This attribute is only included in the meta data when the value is true.
links	Object containing two elements; Represents the original API call used to generate the results. Rel indicates that the link is for the full set of results and href is the original API call.

Examples

The following table illustrates common *get receipt* API calls.

API Call	Description
GET api.openinvoice.com/docp/supply-chain/v1/receipts?$filter=status eq approved and lastActionDate ge 2015-01-01 and lastActionDate le 2015-01-31&$count=true	Retrieves the links for all approved receipts that were modified in the month of January.
GET api.openinvoice.com/docp/supply-chain/v1/receipts?$filter=status eq approved and lastActionDate ge 2015-01-01 and lastActionDate le 2015-01-31&$count=true&$select=receiptNumber,links	Retrieves the supplier defined receipt number and the link for all approved receipts that were modified in the month of January.
GET api.openinvoice.com/docp/supply-chain/v1/receipts?$filter=status eq approved and lastActionDate ge 2015-01-01 and lastActionDate le 2015-01-31&$count=true&$select=*	Retrieves all available data elements for all approved receipts that were modified in the month of January.

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Post Receipt Events

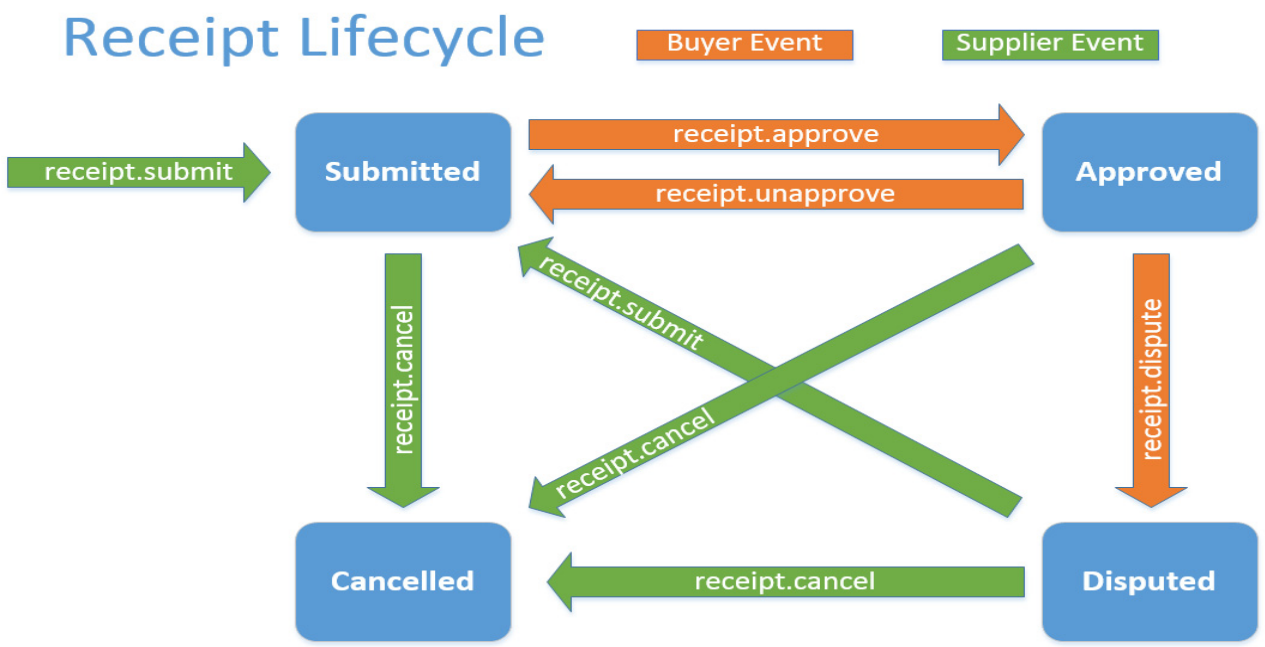
The *post receipt event* APIs allow you to update the status of a receipt in OpenInvoice.

API Call	Description
POST api.openinvoice.com/docp/events/supply-chain/v1/receipt.approve	Changes the receipt status to **Approved**. The is now ready to be invoiced. If specified, the comment is added to the **Approved** action in the Ticket Timeline and is visible to the supplier as well as users in your company
POST api.openinvoice.com/docp/events/supply-chain/v1/receipt.dispute	Changes the receipt status to **Disputed** and returns the receipt to the supplier for resolution. The specified comment is added to the **Disputed** action in the Ticket Timeline and is visible to the supplier as well as users in your company.
POST api.openinvoice.com/docp/events/supply-chain/v1/receipt.unapprove	A receipt can be unapproved as long as it has not been invoiced, and changes the receipt status to submitted.

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Receipt Lifecycle

The following diagram shows the lifecycle of a receipt and the events (actions) each party can undertake to progress the receipt through the lifecycle.



Request Details

The event payload is in JSON and consists of two parts: the context which identifies the receipt and the transform which specifies the details of the status update.

All receipt events have the same context which requires you to provide the unique OpenInvoice document identifier to identify the receipt. The receipt event transform details vary with each event.

Attachments Required/Optional/Not Supported	Not Supported
Request Header Content-Type	application/json
Maximum number of attachments	N/A

Response Details

The response sent by OpenInvoice uses the HTTP/1.1 status codes to indicate if the request was received and processed. Refer to the request status code, message type code (error or warning), and developer messages in the JSON response for information on any issues that may have occurred while processing the request.

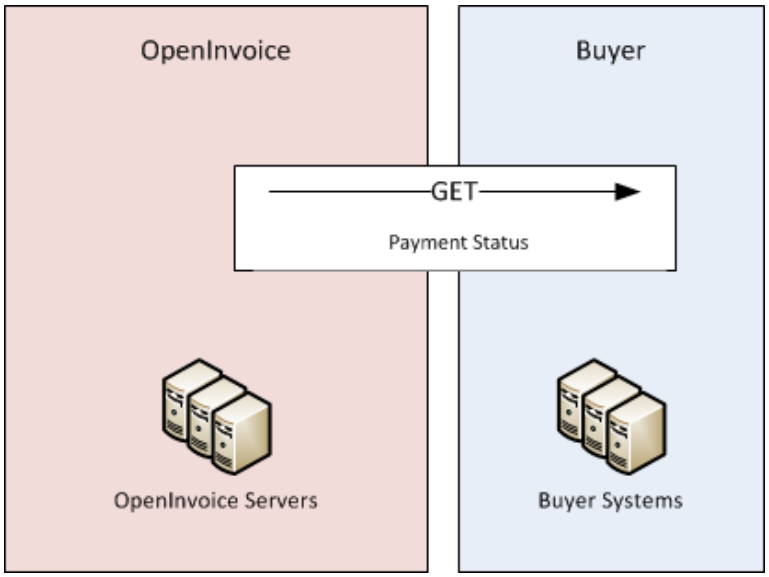
Protocol Codes	HTTP/1.1
Content-Type	Application/json
Content-Encoding	gzip

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Payments

Introduction

The payment APIs allow you to retrieve the current status of your outstanding payments.



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Get Payments

If you use OpenInvoice to process payments, the *get payments* API allows you to retrieve the current status of your outstanding payments.

API Call	Description
GET api.openinvoice.com/docp/supply-chain/v1/payments	Retrieves the current status of your outstanding payments.

Get List of Payment Statuses: Request Header Options

All qualifying payments are returned in JSON format. The request header options are optional and have no impact on the response format.

Prefer: return=representation

Accept: application/json

Get List of Payments Statuses: Request Options

When retrieving a list of payment statuses, the following option defines how the qualifying list of payment statuses is returned:

Option	Default	Description
$count	False	Boolean (true/false); indicates if the attribute totalNumber should be included in the meta section of the results.

Get Payments: Filter

The $filter option allows you to define the criteria that determines which payments are included in the list. The criteria is defined using OData expressions. For information on creating OData expressions, refer to http://www.odata.org/documentation/odata-version-2-0/uri-conventions.

Filter	Supported Values
lastActionDate	accepts either a date or a date-time; dates are specified as yyyy-mm-dd; date-times use the 24 hour clock and must include a timezone offset yyyy-mm-ddT24:mm:ss-hh:00

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Get List of Payments: Meta Data

When retrieving a list of payment statuses, the results include a meta section that provides information on the set of payment records returned.

Attribute	Description
completeIndicator	Boolean value (true/false); indicates if the returned list includes all qualifying payments.
totalNumber	Integer; the total number of qualifying payments. This attribute is only included in the meta data if the $count option is specified on the request.

Examples

The following table illustrates common *get payments* API calls.

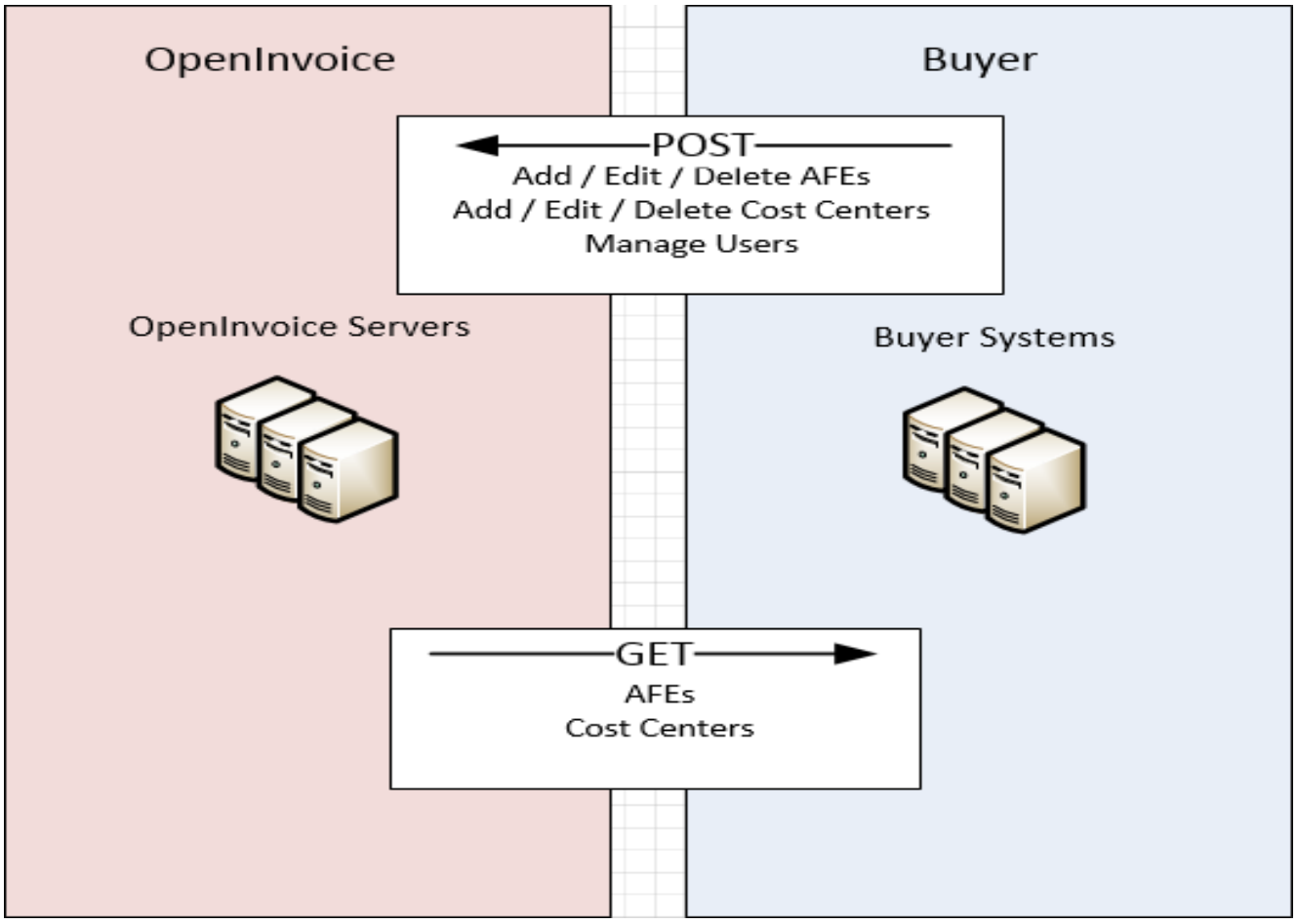
API Call	Description
GET api.openinvoice.com/docp/supply-chain/v1/payments?$filter= lastActionDate ge 2015-01-01 and lastActionDate le 2015-01-31	Retrieves the current status of all outstanding payments for the month of January.

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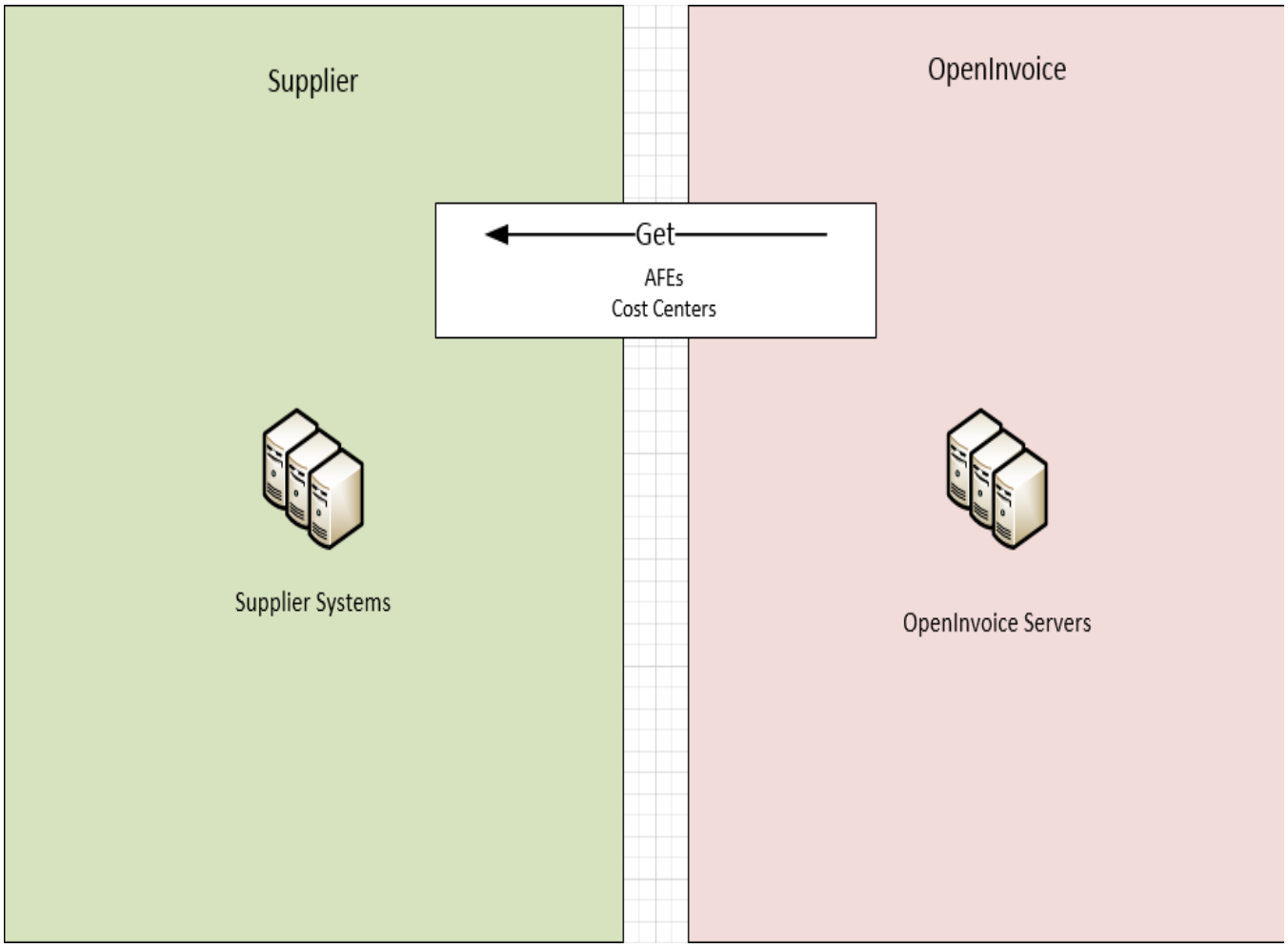
Master Data

Introduction

The master data APIs allow you to keep your AFEs, cost centers, and users in OpenInvoice synchronized with your back office systems.



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Post AFEs

The *post afes* API allows you to create new AFEs and/or update existing AFEs in the OpenInvoice platform.

API Call	Description
POST api.openinvoice.com/docp/supply-chain/v1/afes	Create new AFEs and/or update existing AFEs in the OpenInvoice platform.

Request Details

The API payload is an XML file based on the AFEBatch.xsd. The request header must specify the Content-Type as application/xml.

XML Schema	AFEBatch.xsd
Attachments Required/Optional/Not Supported	Not Supported
Request Header Content-Type	Application/xml
Maximum number of attachments	N/A
Maximum file size	3 MB

Response Details

The response sent by OpenInvoice uses the HTTP/1.1 status codes to indicate if the request was received and processed. Refer to the errors and warnings section of the DOResponse XML for information on any issues that may have occurred while processing the request.

Protocol Codes	HTTP/1.1
Content-Type	Application/xml
Content-Encoding	gzip
XML Schema	DOResponse.xsd

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Get AFEs

The Get AFEs API allows you to retrieve one or more AFEs from the OpenInvoice platform. You have the ability to retrieve a specific AFE, or search for AFEs according to filter criteria.

API Call	Description
GET api.openinvoice.com/docp/supply-chain/v1/afes	Retrieves a list of AFEs. Use the $filter criteria to define the search criteria. Use the $select to return additional AFE attributes with the list of AFEs
GET api.openinvoice.com/docp/supply-chain/v1/afes/xxxxxxxxxx	Retrieves the JSON for the specified AFE. Use the $select to return specified AFE attributes only.

Get AFEs: Response Format

The list of AFEs is returned in JSON format and is encoded using gzip. Depending on the options you specify, the response may include just the links to each qualifying receipt and/or a subset of AFE data elements.

Get list of AFEs and single AFE: Request Options

When retrieving AFEs, the following options define how the qualifying list of receipts are returned.

Option	Default	Description
$select	links	Allows you to specify the specific data elements to retrieve in addition to the links in the result set for each qualifying receipt. $select=* returns all available data elements. Multiple data elements can be combined by specifying the elements in a comma separated list (do not include any spaces). Supported attributes are: itemID, number, property. Example: $select=number,property

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Get list of AFEs: Filters

The $filter option allows you to define the criteria that determines which AFEs are included in the list. The criteria is defined using OData expressions. For information on creating OData expressions, refer to http://www.odata.org/documentation/odata-version-2-0/uri-conventions.

Filter	Supported Values
number	AFE number; supports use of an asterisk (*) as a wild card
property	AFE property; supports use of an asterisk (*) as a wild card

Get List of AFEs: Meta Data

When retrieving a list of AFEs, the results include a meta section that provides information on the set of AFEs returned.

Attribute	Description
completeIndicator	Boolean value (true/false); indicates if the returned list includes all qualifying AFEs.
number	Integer; the number of AFEs included in the returned list.
startSequence	Integer; indicates the starting position of the returned list relative to the total list of all qualifying AFEs. For example, if startSequence = 10 then the first AFE in the returned list is the 10^{th} AFE in the total list of all qualifying AFEs.
totalNumber	Integer; the total number of qualifying AFEs. This attribute is only included in the meta data if the $count option is specified on the request.
links	Object containing two elements; Represents the original API call used to generate the results. Rel indicates that the link is for the full set of results and href is the original API call.

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Examples:

The following table illustrates common get AFE API calls.

API Call	Description
GET api.openinvoice.com/docp/supply-chain/v1/afes?$filter=number eq 09*	Retrieves the links for the AFEs that all start with “09”
GET api.openinvoice.com/docp/supply-chain/v1/afes?$filter=number eq 09*&$select=number	Retrieves the links and numbers for the AFEs that all start with “09”
GET api.openinvoice.com/docp/supply-chain/v1/afes/437823	Retrieves the AFE whose itemID is 437823
GET api.openinvoice.com/docp/supply-chain/v1/afes/437823?$select=number	Retrieves the AFE whose itemID is 437823, limiting the attributes returned to just the number and link

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Post Cost Centers

The *post cost centers* API allows you to create new cost centers and/or update existing cost centers in the OpenInvoice platform.

API Call	Description
POST api.openinvoice.com/docp/supply-chain/v1/cost-centers	Create new cost centers and/or update existing cost centers in the OpenInvoice platform.

Request Details

The API payload is an XML file based on the CostCenterBatch.xsd. The request header must specify the Content-Type as application/xml.

XML Schema	CostCenterBatch.xsd
Attachments Required/Optional/Not Supported	Not Supported
Request Header Content-Type	Application/xml
Maximum number of attachments	N/A
Maximum file size	3 MB

Refer to *OpenInvoice Integration for Buyers - AFE and Cost Center Import* for more information on the XML schema, allowed attachment formats, business rules, data mapping, and processing logic needed to create and submit an invoice.

Response Details

The response sent by OpenInvoice uses the HTTP/1.1 status codes to indicate if the request was received and processed. Refer to the errors and warnings section of the DOResponse XML for information on any issues that may have occurred while processing the request.

Protocol Codes	HTTP/1.1
Content-Type	Application/xml
Content-Encoding	gzip
XML Schema	DOResponse.xsd

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Get Cost Centers

The Get Cost Centers API allows you to retrieve one or more Cost Centers from the OpenInvoice platform. You have the ability to retrieve a specific Cost Center, or search for Cost Centers according to filter criteria.

API Call	Description
GET api.openinvoice.com/docp/supply-chain/v1/cost-centers	Retrieves a list of Cost Centers. Use the $filter criteria to define the search criteria. Use the $select to return additional Cost Center attributes with the list of Cost Centers.
GET api.openinvoice.com/docp/supply-chain/v1/cost-centers/xxxxxxxxx	Retrieves the JSON for the specified Cost Center. Use the $select to return specified Cost Center attributes only.

Get Cost Centers: Response Format

The list of Cost Centers is returned in JSON format and is encoded using gzip. Depending on the options you specify, the response may include just the links to each qualifying receipt and/or a subset of Cost Center data elements.

Get list of Cost Centers and single Cost Center: Request Options

When retrieving Cost Centers, the following options define how the qualifying list of receipts are returned.

Option	Default	Description
$select	links	Allows you to specify the specific data elements to retrieve in addition to the links in the result set for each qualifying receipt. $select=* returns all available data elements. Multiple data elements can be combined by specifying the elements in a comma separated list (do not include any spaces). Supported attributes are: itemID, number, property. Example: $select=number,property

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Get list of Cost Centers: Filters

The $filter option allows you to define the criteria that determines which Cost Centers are included in the list. The criteria is defined using OData expressions. For information on creating OData expressions, refer to http://www.odata.org/documentation/odata-version-2-0/uri-conventions.

Filter	Supported Values
number	Cost Center number; supports use of an asterisk (*) as a wild card
property	Cost Center property; supports use of an asterisk (*) as a wild card

Get List of Cost Centers: Meta Data

When retrieving a list of Cost Centers, the results include a meta section that provides information on the set of Cost Centers returned.

Attribute	Description
completeIndicator	Boolean value (true/false); indicates if the returned list includes all qualifying Cost Centers.
number	Integer; the number of Cost Centers included in the returned list.
startSequence	Integer; indicates the starting position of the returned list relative to the total list of all qualifying Cost Centers. For example, if startSequence = 10 then the first Cost Center in the returned list is the 10th Cost Center in the total list of all qualifying Cost Centers.
totalNumber	Integer; the total number of qualifying Cost Centers. This attribute is only included in the meta data if the $count option is specified on the request.
links	Object containing two elements; Represents the original API call used to generate the results. Rel indicates that the link is for the full set of results and href is the original API call.

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Examples:

The following table illustrates common GET cost center API calls.

API Call	Description
GET api.openinvoice.com/docp/supply-chain/v1/cost-centers?$filter=number eq 09*	Retrieves the links for the Cost Centers that all start with “09”
GET api.openinvoice.com/docp/supply-chain/v1/cost-centers?$filter=number eq 09*&$select=number	Retrieves the links and numbers for the Cost Centers that all start with “09”
GET api.openinvoice.com/docp/supply-chain/v1/cost-centers /437823	Retrieves the Cost Center whose itemID is 437823
GET api.openinvoice.com/docp/supply-chain/v1/cost-centers /437823?$select=number	Retrieves the Cost Center whose itemID is 437823, limiting the attributes returned to just the number and link

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Post Users

The *post users* API allows you to add new users and/or update existing users in the OpenInvoice platform.

API Call	Description
POST api.openinvoice.com/docp/supply-chain/v1/users	Create new users and/or update existing users in the OpenInvoice platform.

Request Details

The API payload is an XML file based on the UserBatch.xsd. The request header must specify the Content-Type as application/xml.

XML Schema	UserBatch.xsd
Attachments Required/Optional/Not Supported	Not Supported
Request Header Content-Type	Application/xml
Maximum number of attachments	N/A
Maximum file size	3 MB

Refer to UserImportIG.pdf for more information on the XML schema, business rules, data mapping, and processing logic needed to add and update users.

Response Details

The response sent by OpenInvoice uses the HTTP/1.1 status codes to indicate if the request was received and processed. Refer to the errors and warnings section of the DOResponse XML for information on any issues that may have occurred while processing the request.

Protocol Codes	HTTP/1.1
Content-Type	Application/xml
Content-Encoding	gzip
XML Schema	DOResponse.xsd

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Reference Detail

These APIs allow you to manipulate details of an existing Custom Reference Data Type.

API Call	Description
POST api.openinvoice.com/docp/supply-chain/v1/reference-type/{referenceTypeName}/reference-detail	Adds a detail to a Custom Reference Data type. referenceTypeName specifies the Custom Reference Data Type.
DELETE api.openinvoice.com/docp/supply-chain/v1/reference-type/{referenceTypeName}/reference-detail/{referenceDetailName}	Deletes a detail from a Custom Reference Data Type. referenceTypeName specifies the Custom Reference Data Type; referenceDetailName references the detail to be deleted.
GET api.openinvoice.com/docp/supply-chain/v1/reference-type/{referenceTypeName}/reference-detail/{referenceDetailName}	Returns a Custom Reference Data detail. referenceTypeName specifies the Custom Reference Data Type; referenceDetailName references the detail to be returned.
PUT api.openinvoice.com/docp/supply-chain/v1/reference-type/{referenceTypeName}/reference-detail/{referenceDetailName}	Modifies a Custom Reference Data detail. referenceTypeName specifies the Custom Reference Data Type; referenceDetailName references the detail to be modified.

Request Details

The event payload for the POST and PUT APIs are in JSON. The request header must specify the content type as application/json.

```
}
   "name": "Name1",
   "description": "Description1",
   "code": "Code1",
   "active": true
}
```

For a POST only the name attribute is mandatory.

For a PUT specify one or all of description, code or active attributes to change the values; to clear code or description specify an empty string.

Response Details

The response sent by OpenInvoice uses the HTTP/1.1 status codes to indicate if the request was received and processed. In case of an error, refer to the resource messages returned in the response for an indication of the error source.

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Products/Services

Get Products/Services

The Get Product/Services API allows you to search for product/services and retrieve a specific product/service from the OpenInvoice platform. Search may be performed across all of a buyer's supplier's product/service catalogs or limited to a specific supplier.

API Call	Description
GET api.openinvoice.com/docp/supply-chain/v1/product-services	Searches your product/services catalog. Use $filter parameter to narrow the search.
GET api.openinvoice.com/docp/supply-chain/v1/product-services/xxxxxxxx	Returns a specific product/service.

Get Product/Services: Response Format

The list of products and services is returned in JSON format and is encoded using gzip. Depending on the request parameters specified, the resonse may include just the links to each matching receipt and/or a subset of Product/Service properties.

Get list of Product/Services and single Product/Service: Request Options

When retrieving products and services, the following options define how the matching list of products and services are returned.

Option	Default	Description
$filter		Supported parameters: code, default, usedBy, isUsed, supplierId, searchText. searchText value is matched against category, description and code; asterisk wilcard (*) may be used.
$expand		Use to include additional information in the result set. Supported parameters: supplier. If specified this must also appear in the $select list.
$select	links	Use to limit the number of product/service attributes returned. Supported values: *, itemID, code, category, description, unitOfMeasure, rate, publicService, links, usedBy.
$count	FALSE	If set to true the total number of records found is returned in the meta.
$top	10000	Limits the result set to the specified.
$skip	N/A	An offset from the start of the matched result set for the first item of the retuned result set.

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Option	Default	Description
$orderby	N/A	Returns the result set in the specified order. Multiple criteria must be listed separated by a comma. Specify sort order by ASC or DESC after the criteria. Supported values: code, description, category, unitOfMeasure, rate, publicService, buyerCount, supplier, invoiceLastUsedDate, purchaseOrderLastUsedDate, pricebookLastUsedDate, fieldTicketLastUsedDate.

Get List of Product/Services: Meta Data

When retrieving a list of Product/Services, the results include a meta section that provides information on the set of Product/Services returned.

Attribute	Description
completeIndicator	Boolean value (true/false); indicates if the returned list includes all qualifying Product/Services.
number	Integer; the number of Product/Services included in the returned list.
startSequence	Integer; indicates the starting position of the returned list relative to the total list of all qualifying Product/Services. For example, if startSequence = 10 then the first Product/Services in the returned list is the 10th Product/Service in the total list of all qualifying Product/Services.
totalNumber	Integer; the total number of qualifying Product/Services. This attribute is only included in the meta data if the $count option is specified on the request.
links	Object containing two elements; Represents the original API call used to generate the results. Rel indicates that the link is for the full set of results and href is the original API call.

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Examples:

The following table illustrates common GET Product/Service API calls.

API Call	Description
GET api.openinvoice.com/docp/api/supply-chain/v1/product-services?$filter=searchText eq SS&$expand=supplier&$select=*	Returns a list of product / services whose description, code or category matches "SS" for all suppliers, indicating which supplier the product / service belongs to.
GET api.openinvoice.com/docp/api/supply-chain/v1/product-services?$filter=searchText eq SS and supplierDUNS eq yyyyyyyyy&$expand=supplier&$select=*	Returns a list of product / services whose description, code or category matches "SS" for the supplier whose DUNS number is yyyyyyyyy indicating which supplier the product / service belongs to.

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Appendix

API Summary

API Call	Description
Get Invoices	
GET api.openinvoice.com/docp/supply-chain/v1/invoices	Retrieves a list of invoices. Use the $filter option to define the search criteria and the $skip and $top options to retrieve a subset of qualifying invoices. You can temporarily save the results in a resource set to ensure the dataset being processed does not change. By default, the list is returned in JSON and includes links to the qualifying invoices. Use the request header options to return all invoice details in XML and the $select option to indicate if attachments and the PDF snapshot should be included.
GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxxxxxx	Retrieves the XML for the specified invoice identifier. Use the $select option to indicate if attachments and the PDF snapshot should be included.
GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxxxxxx/attachments	Retrieves a list of attachments in JSON for the specified invoice identifier.
GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxxxxxx/attachments/yyyyyy	Retrieves the specified attachment for the specified invoice identifier.
GET api.openinvoice.com/docp/supply-chain/v1/invoices/xxxxxxxx/snapshot	Retrieves the PDF snapshot for the specified invoice identifier.
Get Document Summaries	
GET api.openinvoice.com/docp/supply-chain/v1/document-summaries	Retrieves the count of invoices assigned to a specific employee. Use the $filter to specify the employee.
Post Invoice	
POST api.openinvoice.com/docp/supply-chain/v1/invoices	Create and submit a single image invoice into OpenInvoice workflow or upload multiple transactions to be paid using the OpenInvoice Payment module.

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API Call	Description
Post Invoice Events	
POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.exports.set	Works in conjunction with the serviceType and serviceStatus filter options on the *get invoices* API. Updates the invoice serviceStatus to the specified value (success, inprogress, failure). When the status is updated to success, a corresponding **Exported** action is added to the Invoice Journal.
POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.approve	Changes the invoice status to **Approved**, the invoice has completed workflow and is now ready to be paid. If specified, the comment is added to the **Approved** action in the Invoice Journal and is visible only to users in your company.
POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.dispute	Changes the invoice status to **Disputed** and returns the invoice to the supplier for resolution. The specified comment is added to the **Disputed** action in the Invoice Journal and is visible to the supplier as well as users in your company.
POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.comment.add	No change to the invoice status. A comment is added to the Invoice Journal. Use the visibility setting to determine if the supplier can see the comment.
POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.payment.release	No change to the invoice status. Generates and schedules a payment for the invoice in the OpenInvoice payment module.
POST api.openinvoice.com/docp/events/supply-chain/v1/invoice.payment.update	No change to the invoice status. Payment information is added to the Invoice Journal.
Get Purchase Order Events	
GET api.openinvoice.com/docp/events/supply-chain/v1/purchase-order.accept	Retrieves a list of purchase orders that have been accepted by the supplier.
GET api.openinvoice.com/docp/events/supply-chain/v1/purchase-order.reject	Retrieves a list of purchase orders that have been rejected by the supplier.
GET api.openinvoice.com/docp/events/supply-chain/v1/purchase-order.counter-offer	Retrieves a list of purchase orders that have been counter offered by the supplier.
Post Purchase Orders	
POST api.openinvoice.com/docp/supply-chain/v1/purchase-orders	Create or modify purchase orders you wish to present to your suppliers.

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API Call	Description
Post Purchase Order Events	
POST api.openinvoice.com/docp/events/supply-chain/v1/purchase-order.cancel	Changes the purchase order status to **Cancelled**. The purchase order is no longer available to be referenced on invoices. If specified, the comment is added to the **Cancelled** action in the Purchase Order Journal and is visible to the supplier as well as users in your company.
Get Receipts	
GET api.openinvoice.com/docp/supply-chain/v1/receipts	Retrieves a list of receipts. Use the $filter option to define the search criteria and the $skip and $top options to retrieve a subset of qualifying receipts. By default, the list is returned in JSON and includes links to the qualifying invoices. Use the request header options to return all invoice details in XML and the $select option to indicate if attachments and the PDF snapshot should be included.
GET api.openinvoice.com/docp/supply-chain/v1/receipts/xxxxxxxx	Retrieves the JSON for the specified receipt identifier. Use the $select option to indicate if attachments and the PDF snapshot should be included.
GET api.openinvoice.com/docp/supply-chain/v1/receipts/xxxxxxxx/attachments	Retrieves a list of attachments in JSON for the specified receipt identifier.
GET api.openinvoice.com/docp/supply-chain/v1/receipts/xxxxxxxx/attachments/yyyyyy	Retrieves the specified attachment for the specified receipt identifier.
Post Receipt Events	
POST api.openinvoice.com/docp/events/supply-chain/v1/receipt.approve	Changes the receipt status to **Approved**. The is now ready to be invoiced. If specified, the comment is added to the **Approved** action in the Ticket Timeline and is visible to the supplier as well as users in your company
POST api.openinvoice.com/docp/events/supply-chain/v1/receipt.dispute	Changes the receipt status to **Disputed** and returns the receipt to the supplier for resolution. The specified comment is added to the **Disputed** action in the Ticket Timeline and is visible to the supplier as well as users in your company.

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API Call	Description
Get Payments	
GET api.openinvoice.com/docp/supply-chain/v1/payments	Retrieves the current status of your outstanding payments.
Post Master Data	
POST api.openinvoice.com/docp/supply-chain/v1/afes	Create new AFEs and/or update existing AFEs in the OpenInvoice platform.
POST api.openinvoice.com/docp/supply-chain/v1/cost-centers	Create new cost centers and/or update existing cost centers in the OpenInvoice platform.
POST api.openinvoice.com/docp/supply-chain/v1/users	Create new users and/or update existing users in the OpenInvoice platform.
POST api.openinvoice.com/docp/supply-chain/v1/reference-type/{referenceTypeName}/reference-detail	Adds a detail to a Custom Reference Data type. referenceTypeName specifies the Custom Reference Data Type.
DELETE api.openinvoice.com/docp/supply-chain/v1/reference-type/{referenceTypeName}/reference-detail/{referenceDetailName}	Deletes a detail from a Custom Reference Data Type. referenceTypeName specifies the Custom Reference Data Type; referenceDetailName references the detail to be deleted.
Get Master Data	
GET api.openinvoice.com/docp/supply-chain/v1/afes	Retrieves a list of AFEs. Use the $filter criteria to define the search criteria. Use the $select to return additional AFE attributes with the list of AFEs
GET api.openinvoice.com/docp/supply-chain/v1/afes/xxxxxxxxxx	Retrieves the JSON for the specified AFE. Use the $select to return specified AFE attributes only.
GET api.openinvoice.com/docp/supply-chain/v1/cost-centers	Retrieves a list of Cost Centers. Use the $filter criteria to define the search criteria. Use the $select to return additional Cost Center attributes with the list of Cost Centers.
GET api.openinvoice.com/docp/supply-chain/v1/cost-centers/xxxxxxxxx	Retrieves the JSON for the specified Cost Center. Use the $select to return specified Cost Center attributes only.
GET api.openinvoice.com/docp/supply-chain/v1/reference-type/{referenceTypeName}/reference-detail/{referenceDetailName}	Returns a Custom Reference Data detail. referenceTypeName specifies the Custom Reference Data Type; referenceDetailName references the detail to be returned.

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API Call	Description
PUT api.openinvoice.com/docp/supply-chain/v1/reference-type/{referenceTypeName}/reference-detail/{referenceDetailName}	Modifies a Custom Reference Data detail. referenceTypeName specifies the Custom Reference Data Type; referenceDetailName references the detail to be modified.
Get Products / Services	
GET api.openinvoice.com/docp/supply-chain/v1/product-services	Searches your product/services catalog. Use $filter parameter to narrow the search.
GET api.openinvoice.com/docp/supply-chain/v1/product-services/xxxxxxxx	Returns a specific product/service.

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