

iVvy API

Version 1.0

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Document Control

Document No.	1.0
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Revision History

Date	Change	Reference Section(s)
01/May/2015	Initial document created	
04/May/2015	Added the inviteContacts api call to the event namespace	inviteContacts
05/May/2015	Added the contact namespace	contact
06/May/2015	Added more options to the add/update contact	addOrUpdateContact
07/May/2015	Added the getSponsorshipList api call	getSponsorshipList
08/May/2015	Added the createLoginToken api call	createLoginToken
11/May/2015	Added the getSpeakerList api call	getSpeakerList
15/May/2015	Added the getCustomFieldDefinition api call	getCustomFieldDefinition
18/May/2015	Update the format required for dates and times	IVVY-Date header Date Responses ping Timestamp Format
20/May/2015	Added the progress, repost, restart and results api calls	progress repost restart results

20/May/2015	Added the venue namespace api calls	Venue Namespace (venue)
26/May/2015	Removed the X-API-Version header. The version is now part of the url.	
28/May/2015	Added the “marketplaceEventTypes” description to the sample venue api response.	
29/May/2015	Added the marketplace namespace api calls	Marketplace Namespace (marketplace)
5/June/2015	Changed the integer values of “marketplaceEventTypes”.	
10/June/2015	Added params, returns and throws to a lot of api calls	
18/Jun/2015	Updates to the getContact api call <ul style="list-style-type: none"> - Now returns the invoiceLinkYes, inviteLinkNo and response in the eventInvitations object - Now returns the eventCode, printTicketUrl, attendeeCount, invoiceUrl and guestDetails in the eventRegistrations object 	getContact
19/Jun/2015	Added details in eventInvitations section of getContact API <ul style="list-style-type: none"> ● added eventCode parameter ● added Value and its meaning for Response Field 	getContact
24/Jun/2015	Added more information in the getEventList api call. <ul style="list-style-type: none"> ● Added the eventType ● Added the events timezone ● Added venue ● Added tickets ● Added information ● Added the homepageContent 	getEventList
29/Jun/2015	Updated documentation for the	getContact

	getContact api call and added the invoices, currentStatus and confirmedDate properties to the eventRegistrations property	
23/Jul/2015	Updated getContact api call to return the eventStartDateTime and added a parameter to introduce sorting of the eventRegistrations and eventInvitations properties	getContact
14/Aug/2015	Update getContact api call to return links to pdf version of invoices and tickets	getContact
30/Aug/2016	Updated description of the ivvy headers and the string to sign to be more clear. Updated C# example for calculating the MD5 sum.	Signing the request, Calculating MD5
8/Nov/2016	Added the enum values in the currentStatus of the event	getEventList
06/Jun/2017	Allow filter by Filter properties (afterDate, beforeDate, Status) Allow ordering results by date	getEventList
09/Jun/2017	Added invoice namespace. Methods available <ul style="list-style-type: none"> - getInvoice - getInvoiceList - getOptions 	Invoice
30/Jun/2017	Allow filter by Filter property (fromModifiedDate, toModifiedDate)	getInvoiceList
23/Aug/2017	Added following methods to contact namespace <ul style="list-style-type: none"> - getCompanyList - getCompany - addOrUpdateCompany 	getCompanyList
24/Aug/2017	Updated host description.	HOST (Required)
11/Sep/2017	Allow filter by Filter property	getContactList

	(fromModifiedDate, toModifiedDate)	getCompanyList
12/Sep/2017	Added venueld to filter of getInvoiceList action	getInvoiceList
19/Sep/2017	Updated the response data (“include” and “display” properties) of getEvent action	getEvent
21/Sep/2017	Added refType to filter of getInvoiceList action	getInvoiceList
17/Oct/2017	<ul style="list-style-type: none"> - Added companies to addOrUpdateContact to update the companies while adding/updating a contact. - Updated response data of methods getContact and getContactList to return <ul style="list-style-type: none"> - companies (array of ids of companies) - externalId of the contact 	addOrUpdateContact getContactList getContact
22/Nov/2017	- Added booking reference code in getinvoiceList API	getInvoiceList
16/Jan/2018	<ul style="list-style-type: none"> - Added modifiedDateBefore, modifiedDateAfter filter in booking listing actions - Added eventType(string) in booking data 	getBookingList getBookingListForAccount getBooking
23/Jan/2018	<ul style="list-style-type: none"> - Added method to venue namespace - getVenueRoomList 	getVenueRoomList
1/Feb/2018	<ul style="list-style-type: none"> - Added below mentioned API’s details 1) addItemToBooking 2) addPaymentToBooking 3) addRefundToBooking 4) addOrUpdateCostCenter 5) getCostCenterList - Remove getTaxList API from invoice namespace and added the same to the Venue namespace 	addItemToBooking addPaymentToBooking addRefundToBooking addOrUpdateCostCenter getCostCenterList getTaxList

5/Feb/2018	- Added method to venue namespace - getVenueRatePlanList	getVenueRatePlanList
5/Mar/2018	Removed "rev no" column from revision history.	
5/Mar/2018	- Added action addOrUpdateEvent - Added section Timezone List	addOrUpdateEvent Timezone List
26/Apr/2018	- Added modifiedDate in getEventList API,	getEventList
9/May/2018	- Removed "salesPriceTax" property from addItemToBooking request - Updated descriptions for addItemToBooking request	addItemToBooking
01/June/2018	- Added daily revenue data to getBooking - Added the fee details to "payments" section of getInvoice - Added actions "getRegistration", "getRegistrationList", "getAttendee", and "getAttendeeList" to event namespace	getBooking getInvoice getRegistration getRegistrationList getAttendee getAttendeeList
05/June/2018	Add following endpoints: - addOrUpdateLead - addOrUpdateOpportunity - convertLeadToOpportunity	addOrUpdateLead addOrUpdateOpportunity convertLeadToOpportunity

Introduction

The iVvy system is built with flexibility in mind, and this API forms a large part of that promise.

The API described in this document follows an RPC (Remote Procedure Call) paradigm. Each RPC method is grouped into a few higher level namespaces to help organise this document in a more logical manner.

iVvy takes security very seriously and the API described in this document has been designed to be as secure as possible.

- All transport has been secured by utilising industry standard TLS
- Key generation can be done first authenticating with the iVvy backend system
- All requests must be signed using the key/secret pair to prove the request was made by a valid key
- All requests have a time limit to avoid future replay attacks

Obtaining Keys

Keys are defined as a pair of strings, the 'key' and the 'secret'. Each request must be signed using a 'secret' key. There are generated from within the accounts 'settings' section of the website.

Creating the request

Requests to the API are over the standard HTTP (HyperText Transfer Protocol). The protocol defines three parts to every request

1. the method/uri header
2. a number of request headers
3. optional body of the request

Note also that the HTTP request also needs to be secured by a TLS/SSL connection, often referred to as HTTPS (or HTTP over SSL). iVvy uses industry standard TLS (Transport Layer Security, the successor to SSL, Secure Sockets Layer) to secure the HTTP transport to the API to ensure eavesdropping on the connection by third parties is protected.

Method/URI Header

This is a line consisting of the method of the request, followed by the request URI, followed by the HTTP version. i.e.

```
POST /api/1.0/event?action=getEventList HTTP/1.0
```

This example is for a request, to iVvy's api 'event' namespace, calling the 'getEventList' API call, using HTTP version 1.0. Note the HTTP method for calls to the iVvy API are all POST requests. The api version being called is 1.0. Currently supported versions are:

- 1.0

The URI in the request must always start with /api/{version} (where {version} is the specific api version, e.g. 1.0) followed by the namespace of the eventual api call to make. All requests must also provide the action parameter indicating the API call to invoke.

Request Headers

Request headers are defined by the header name, followed by a colon (:) followed by a space, followed by the value of the header. A number of headers are used with the iVvy API

Standard Headers

HOST (Required)

This determines the host that is used for the request. This value is required and should be set to one of the following:

- api.ap-southeast-2.ivvy.com
- api.us-west-2.ivvy.com
- api.eu-west-2.ivvy.com

Contact support@ivvy.com if you are unsure which value to use.

```
HOST: api.ap-southeast-2.ivvy.com
```

Date (Required unless using [IVVY-Date header](#))

The date header determines the date the request was made. The iVvy API uses this date, compared to the date of the server to determine if the request is within the time to live setting. (Currently requests over 5 minutes old are deemed invalid, this value may change in the future.)

```
Date: Thu, 12 Apr 2012 07:17:06 UTC
```

Content-MD5 (Required)

This is the md5 sum of the body of the request. This header is used to verify the contents of the body of the request have not been altered during transport. Note that

if there is no content in the body, the MD5 for the request must still be calculated. See [Calculating MD5](#) for more details on how to calculate the value for this field.

Content-Type

The content type of the request body. Valid request types for the api are...

- application/json

Content-Length

The length of the request body, in bytes.

Custom Headers

A number of custom headers can be used with the request to the API.

IVVY-Date (Optional)

If your HTTP client does not allow the date header to be accessed or set, you can optionally use this header to use for the date string. Note if this header is used, the 'date' part of the [signed string](#) will need to be empty. The format of the value of this header will be the [iVvy Timestamp Format](#), NOT the string format of the standard Date header.

X-Api-Authorization (Required)

This is the same format at the standard HTTP Authorization header. For iVvy requests, the format is...

```
X-Api-Authorization: IWS key:signature
```

... where IWS is the authentication system used by iVvy, key is the key used to sign the request, and the signature is the HMAC-SHA1 signature of the request. See [Signing the request](#) for details on how to sign a request.

The iVvy API server will lookup the secret key associated with the key used in this header, then use the details in the request in association with the secret key, then reconstruct the [HMAC-SHA1](#) hash. Only when the calculated hash, and the signature sent through this header match will the request be authenticated.

Signing the request

Every request to the API must be signed with the accounts or users API key. Signing the request is obtained by the following pseudo-code:

```
method := POST
contentMd5 := md5(<body of the request>)
contentType := the value of the Content-Type header
contentSign := {contentMd5}{contentType}
date := the date header of the request (i.e. Tue, 03 Apr, 2012 22:23:24 utc)
NOTE: if using the IVVY-Date header, this field will be empty
```

requestString := the entire request string used in the request
apiVersion := the api version to use
ivvyHeaders := Concatenated string of all headers starting with IVVY, removing all the
 Dashes (-) and underscore (_) characters in the header, in
alphabetical order, joined together with the
 ampersand (&) character
initialStringToSign :=
{method}{contentSign}{date}{requestString}{apiVersion}{ivvyHeaders}
stringToSign := lowercase version of the initialStringToSign

For example, the following request...

```
POST /api/1.0/test?action=ping HTTP/1.0
Host: api.ap-southeast-2.ivvy.com
Date: Tue, 03 Apr 2012 22:23:24 UTC
Content-MD5: a09f600c77a6dbd947db24c61e8935ca
Content-Type: application/json
Content-Length: 18
X-API-Version: 1.0
X-API-Authorization: IWS {key:signature here}
IVVY-Date: 2012-04-03 22:23:24

{"example":"body"}
```

... will require the following string to be signed ...

```
posta09f600c77a6dbd947db24c61e8935caapplication/json/api/1.0/test?action=ping1.0ivvy
date=2012-04-03 22:23:24
```

Note the entire string is set to lowercase before signing.

Signing is achieved using the HMAC algorithm, using SHA1 encryption. See [HMAC-SHA1](#) for further details

Query Parameters

The api exposes a RPC interface. As such there is a required query parameter, the 'action' parameter. This will identify the RPC call to invoke.

Interpreting the response

The response will be given back will be the response in [JSON](#) format.

Collections

Some results return collections of objects. E.g. event?action=getEventList. The resulting [JSON](#) response for these collections will be an object with the following properties.

- meta: An object providing information about the result set. The following

keys may exist

- **totalResults**: The number of results in the complete collection
- **start**: The starting index of the collection this result represents
- **perPage**: The number of items per page of results
- **count**: The number of objects included in this result.
- **results**: An array of objects

Pagination

Some requests (mostly the requests that return [collections](#)) may also accept some pagination options.

- **perPage**: The number of items to return per page. Note that most requests have a cap on this number and providing a perPage option greater than that cap will not have any effect.
- **start**: The record to start paging from. Note this number is zero based, i.e. to return results from the very first result, the start will need to equal 0 (which is the default). Note also this is not the page to start at. For example to get the second page from a list of results that have 20 results per page, the start property will need to equal 20 (i.e. starting at the 21st result)

Filtering

Some requests (mostly requests that return [collections](#) and/or take [pagination](#) requests) may also accept a filter argument. The structure of this filter will be an object with the key's being what needs to be filtered, and the value will be the content of the filter.

There are a number of options that may modify the filter behaviour. These are appended to the end of the key to filter. The accepted modifiers are:

- **__CONTAINS**: Return the results that contain the value.
- **__NOTCONTAINS**: Return the results that do not contain the value.
- **__BEGINS**: Return the results that start with the value.
- **__ENDS**: Return the results that end with the value.
- **__LESSTHAN**: Return the results that are less than or equal to the value.
- **__GREATERTHAN**: Return the results that are greater than or equal to the value.
- **__NOT**: Return the results that are not equal to the value.
- **__EMPTY**: Returns results that are empty

If you want to search for 'Null' values, you can use the special value '**__ISNULL__**' for the filter value.

Example: Filter all the results where the firstName = Bob

```
{"filter":{"firstName":"Bob"}}
```

Example: Filter all results where the firstName starts with 'M'

```
{"filter":{"firstName__BEGINS":"M"}}
```

Example: Filter all results where the birthDay has not been set

```
{"filter":{"firstName":"__ISNULL__"}}
```

Exceptions

If an error occurred the response will be a [JSON](#) representation of what went wrong. This will provide the error code, a brief message as well as a specific code. The specific code is a useful piece of information to be provided in any bug reports.

Current exception codes and meanings are:

- 400: Bad Request
- 401: Unauthorized
- 403: Forbidden
- 404: Not Found
- 405: Method Not Allowed
- 406: Not Acceptable
- 429: Too Many Requests
- 460: Unknown
- 461: Failed Request
- 462: Session Expired
- 463: Key Revoked
- 500: Internal Server Error
- 501: Not Implemented

Some exceptions will have an additional piece of information associated with the exception, which will contain more specific message about the exception.

Exception: Specific Code 23016

A parameter provided in the request did not validate correctly. For example, the API might have been expecting a number, but a string was provided instead. This exception gets thrown when the first invalid parameter is found.

The additional messages will contain the messages from the validator as to why the value was not validated.

Example: Key does not validate error

Request (contact?action=getContact):

```
{"id":"wrong"}
```

Response:

```
{
  "errorCode":400,
  "message":"'id' does not validate",
  "specificCode":23016,
  "additionalMessages":["Value must be a whole number"]
}
```

Exception: Specific Code 23017

A required parameter was missing from the request.

Example: Key is required error**Request (contact?action=getContact):**

```
{}
```

Response:

```
{"errorCode":400,"message":"'id' is required","specificCode":23017}
```

Response Headers*Content-Type*

This header will identify the content type of the response. At this time only one content type is supported, the application/json type.

Dates

Responses from the iVvy API may contain dates. In all cases (unless otherwise stated in documentation for the specific action) the dates are in Universal Coordinated Time (UTC). Care must be taken when using or displaying these dates to ensure they: a) maintain their UTC time zone for communication with the API, and; b) represented in the appropriate time zone for users utilizing the date.

Dates may be represented as a string which must be parsed appropriately if it is to be used. Where possible any dates will be converted to the [iVvy Timestamp Format](#), which is a simple to understand text format to represent a specific point in time to the second.

API

There are a few things to note as per the structure of the API.

Namespaces

The API is segmented into various namespaces. The support namespaces for the API are...

- batch
- event
- Test
- invoice

Actions

Within each namespace will be a set of actions that can be performed via API calls. These behave like RPC calls. Each action is unique within the namespace. When calling the API both the namespace and the action must be provided in the following URI format...

```
/api/{version}/{namespace}?action={action}
```

i.e.

```
/api/1.0/batch?action=run
```

Each action may require some extra parameters as part of the call. These are provided in the BODY of the request as a JSON encoded object. The specifics for each call are outlined in this document.

Batch Namespace (batch)

As a way of providing asynchronous access to iVvy's API, there is a namespace added for batch requests. This also provides a way to run multiple api calls in a batch and provide the result of all the api calls via a URL callback.

run

Parameters

jobs	Array of api jobs to be run on the api. Each job needs to have the following keys: <ul style="list-style-type: none">• namespace• action• params	Required
callbackUrl	The URL to hit with a POST request after the batch has been run, with a JSON object of the responses	Required

Returns

asyncId	Identifier for the batch request
---------	----------------------------------

Throws

Specific Code: 24092	Incorrect Job Format
Specific Code: 24093	Empty job parameter found
Specific Code: 24091	The information was not saved

The run action takes an array of api calls and returns an identifier that can be used to identify the batch. Keep this identifier as it can be used to identify the response of the batch request, as well as being used to fetch the progress and results of the request.

To run a batch job, an JSON object must be provided with the following keys:

- jobs: An array of jobs, each element being an object with the following keys
 - namespace: The namespace of the api call
 - action: The api call to make
 - params: Any parameters required for the api call
- callbackUrl: A URL that will be called after the batch has completed.
 - The request will be a POST request
 - The response will be a JSON object with the following keys

- **asyncId**: The async identifier provided when the batch was created
- **results**: An array of objects for each result of the batch, with the following keys
 - **namespace**: The namespace of the call for the response
 - **action**: The action of of the call for the response
 - **request**: The original request parameters used
 - **response**: The response of the api call

Example: Run a batch job inviting some contacts to different events

Request:

```
{ "jobs": [ { "namespace": "event", "action": "inviteContacts", "params": { "event": 1, "contacts": [1,2,3] } }, { "namespace": "event", "action": "inviteContacts", "params": { "event": 2, "contacts": [1,2,4] } }, ], "callbackUrl": "http://example.callback.url.com" }
```

Response:

```
{ "asyncId": "e35e06ee592d17a42dc9e6252a058617" }
```

progress

Parameters

async	The asyncId for the batch job to check progress for	Required
-------	---	----------

Returns

progress	The progress of the batch job, as a percentage of work completed.
----------	---

Throws

Specific Code: 24105	Could not find batch
----------------------	----------------------

The progress action takes the asyncId as a parameter and returns back the progress of the batch job as a percentage

Example: Fetch the progress of a batch job

Request:

```
{ "async": "a7ec88af7d710bf51b188004bb532d77" }
```

Response:

```
{ "progress": 33 }
```

restart

The restart action takes the asyncId as a parameter and returns the success of the call. Note a success of true does not mean the job will restart immediately.

Example: Restart a batch job

Request:

```
{"async": "a7ec88af7d710bf51b188004bb532d77"}
```

Response:

```
{"restarted": true}
```

repost

The repost action takes the asyncId as a parameter and returns the success of the call. Note a success of true does not mean the callback will be hit immediately.

Example: Restart a batch job

Request:

```
{"async": "a7ec88af7d710bf51b188004bb532d77"}
```

Response:

```
{"reposted": true}
```

results

Parameters

async	The asyncId for the batch job to show the results of	Required
-------	--	----------

Returns

results	The results of the batch. This will be an array of objects with the following keys <ul style="list-style-type: none">• namespace• action• request• response
---------	--

Throws

Specific Code: 24114	Batch job not completed
Specific Code: 24115	Could not find batch

The result action takes the asyncId as a parameter and returns an array of results from the batch job.

Example: Get the result of a batch job

Request:

```
{"async": "a7ec88af7d710bf51b188004bb532d77"}
```

Response:

```
{"results": [{"namespace": "contact", "action": "addOrUpdateContact", "request": {"id": 7766, "firstName": "Bob"}, "response": {"success": true, "id": 7766}}]}
```

Contact Namespace (contact)

getContactList

Parameters

perPage	The number of events to get in a single api call	Must be an integer greater than 0
start	The starting result of the page. Note this is zero based (i.e. sending start=0 will start from the first result.)	Must be an integer 0 or greater

Additional [Filter](#) Properties

fromModifiedDate	Filter by Modified Date	iVvy Timestamp Format
toModifiedDate	Filter by Modified Date	iVvy Timestamp Format

Returns

id	The unique identifier for the contact
firstName	The contact's first name
lastName	The contact's last name
email	The contact's email address
phone	The contact's phone number
customFields	The custom field information for the contact. This is an array of fields, each an object with the following keys: <ul style="list-style-type: none">• fieldId• displayName• value
groups	The subscription group information for the contact.
companies	This will be an array of company ids to which the contact belongs.
externalId	This will be the external id of the contact
modifiedDate	The modified date of the contact

The result from this call will be a [collection](#) of all the contacts the user has access to. This call also accepts the [pagination](#) and [filter](#) properties.

getContact

Parameters

id	The contacts identifier	Required Must be an Integer
useEventSortOrder	If true, the eventInvitations and eventRegistrations will be returned ordered by the Event Start Date	Must be a Boolean

Returns

id	The unique identifier for the contact
firstName	The contact's first name
lastName	The contact's last name
email	The contact's email address
phone	The contact's phone number
status	The contact's email status 1 = 'Subscribed' 2 = 'Unsubscribed' 3 = 'Bounced' 4 = 'Registering' 5 = 'No Marketing'
smsStatus	The contact's sms status 1 = 'Subscribed' 2 = 'Unsubscribed' 3 = 'Failed' 4 = 'No Marketing'
customFields	The custom field information for the contact. This is an array of fields, each an object with the following keys: <ul style="list-style-type: none"> • fieldId • displayName • value
groups	The subscription group information for the contact.
companies	This will an array company ids to which the contact belongs.

externalId	This will be an external id of the contact														
modifiedDate	The modified date of the contact														
eventInvitations	<p>An array of events the contact has been invited to. Each element of the array is an object with the following fields</p> <table border="1"> <tr> <td>eventId</td> <td>The event identifier of the invitation</td> </tr> <tr> <td>eventCode</td> <td>The code of the event of the invitation</td> </tr> <tr> <td>eventStartDateTime</td> <td>The timestamp the event is starting</td> </tr> <tr> <td>inviteLinkYes</td> <td>Invitation link for the Yes response for this contact to the event</td> </tr> <tr> <td>inviteLinkNo</td> <td>Invitation link for No response for this contact to the event</td> </tr> <tr> <td>response</td> <td> <p>The contacts response to the invitation. Possible values are</p> <ul style="list-style-type: none"> ● U = Undecided ● Y = Yes ● N = No </td> </tr> </table>	eventId	The event identifier of the invitation	eventCode	The code of the event of the invitation	eventStartDateTime	The timestamp the event is starting	inviteLinkYes	Invitation link for the Yes response for this contact to the event	inviteLinkNo	Invitation link for No response for this contact to the event	response	<p>The contacts response to the invitation. Possible values are</p> <ul style="list-style-type: none"> ● U = Undecided ● Y = Yes ● N = No 		
eventId	The event identifier of the invitation														
eventCode	The code of the event of the invitation														
eventStartDateTime	The timestamp the event is starting														
inviteLinkYes	Invitation link for the Yes response for this contact to the event														
inviteLinkNo	Invitation link for No response for this contact to the event														
response	<p>The contacts response to the invitation. Possible values are</p> <ul style="list-style-type: none"> ● U = Undecided ● Y = Yes ● N = No 														
eventRegistrations	<p>An array of events the contact has registered for. Each element of the array is an object with the following fields</p> <table border="1"> <tr> <td>eventId</td> <td>The event identifier of the registration</td> </tr> <tr> <td>eventCode</td> <td>The code of the event of the registration</td> </tr> <tr> <td>eventStartDateTime</td> <td>The timestamp the event is starting</td> </tr> <tr> <td>registrationId</td> <td>The unique identifier of the registration</td> </tr> <tr> <td>currentStatus</td> <td> <p>The status of the registration</p> <ul style="list-style-type: none"> ● 2 = Completed ● 3 = Cancelled ● 4 = Payment Required </td> </tr> <tr> <td>confirmedDate</td> <td>Timestamp of the date the registration was confirmed</td> </tr> <tr> <td>isPaymentWaiting</td> <td>If the registration is payment waiting or not</td> </tr> </table>	eventId	The event identifier of the registration	eventCode	The code of the event of the registration	eventStartDateTime	The timestamp the event is starting	registrationId	The unique identifier of the registration	currentStatus	<p>The status of the registration</p> <ul style="list-style-type: none"> ● 2 = Completed ● 3 = Cancelled ● 4 = Payment Required 	confirmedDate	Timestamp of the date the registration was confirmed	isPaymentWaiting	If the registration is payment waiting or not
eventId	The event identifier of the registration														
eventCode	The code of the event of the registration														
eventStartDateTime	The timestamp the event is starting														
registrationId	The unique identifier of the registration														
currentStatus	<p>The status of the registration</p> <ul style="list-style-type: none"> ● 2 = Completed ● 3 = Cancelled ● 4 = Payment Required 														
confirmedDate	Timestamp of the date the registration was confirmed														
isPaymentWaiting	If the registration is payment waiting or not														

printTicketUrl	The URL the registrations tickets	
printTicketUrlPdf	Link to the PDF for the registrations tickets	
attendeeCount	Total number of attendees for this registration	
invoiceUrl	The URL for the registration primary invoice	
invoiceUrlPdf	Link to the PDF for the registration primary invoice	
guestDetails	An array of objects with the following properties...	
	contactId	The identifier for the contact if known
	fullName	Name of guest
	email	Email address of guest
	attended	If the contact has attended the event
	attendedDateTime	When the contact attended the event
invoices	The list of invoices associated with the registration. Each element of the array is an object with the following fields	
	id	The unique identifier for the invoice
	reference	The reference number of the invoice
	title	The title of the invoice

		<table border="1"> <tr> <td>currentStatus</td> <td>The current status of the invoice. The value of this field will be one of the following... 0 = Not Paid 1 = Unconfirmed Paid 2 = Paid 3 = Written Off 4 = Cancelled 5 = Refunded</td> </tr> <tr> <td>description</td> <td>The description of the invoice</td> </tr> <tr> <td>currency</td> <td>The currency of the values of this invoice</td> </tr> <tr> <td>totalCost</td> <td>The total amount of the invoice</td> </tr> <tr> <td>totalPaid</td> <td>How much has been paid off the invoice</td> </tr> <tr> <td>invoiceUrl</td> <td>The URL for the invoice</td> </tr> <tr> <td>invoiceUrlPdf</td> <td>The URL for the invoice pdf</td> </tr> </table>	currentStatus	The current status of the invoice. The value of this field will be one of the following... 0 = Not Paid 1 = Unconfirmed Paid 2 = Paid 3 = Written Off 4 = Cancelled 5 = Refunded	description	The description of the invoice	currency	The currency of the values of this invoice	totalCost	The total amount of the invoice	totalPaid	How much has been paid off the invoice	invoiceUrl	The URL for the invoice	invoiceUrlPdf	The URL for the invoice pdf
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description	The description of the invoice															
currency	The currency of the values of this invoice															
totalCost	The total amount of the invoice															
totalPaid	How much has been paid off the invoice															
invoiceUrl	The URL for the invoice															
invoiceUrlPdf	The URL for the invoice pdf															

Throws

Specific Code: 24096	Unable to find contact
----------------------	------------------------

The contact identifier must be provided to fetch a specific contact from the system.

Example: Get a specific contact

Request:

```
{ "id": 6 }
```

Response:

```
{
  "id": "25146",
  "firstName": "Test",
  "lastName": "User",
  "email": "user@test.com",
  "phone": "0455550000",
  "customFields": [
    { "fieldId": "102", "displayName": "Dietary Requirements", "value": [ "" ] },
    { "fieldId": "103", "displayName": "Shirt Size", "value": [ "Medium" ] }
  ],
  "groups": [
```

```

        {"contactId":"25146","groupId":"2481","joinDate":"2012-04-16 21:07:04"},
        {"contactId":"25146","groupId":"2485","joinDate":"2014-05-6 12:32:12"}
    ],
    "companies":[
        4,5,6
    ],
    "externalId":"59fc43b6726be"
}

```

addOrUpdateContact

Parameters

id	The contact's identifier. (Leave empty to add the contact to the system.)	Must be an integer
firstName	The contact's first name	Required when the id parameter is missing
lastName	The contact's last name	Required when the id parameter is missing
email	The contact's email address	Must be a valid email.
phone	The contact's phone number	Must be a valid phone number.
groups	The array of subscription groups to set for the contact	Note this list will override any groups currently set for the contact
customFields	The array of custom fields to set on the contact	Each field will be validated depending on the type of field that is being set.
companies	The array of companies to set the contact.	Each values will be validated depending on the type of field as well as it will verify that the given company is exist or not.

Returns

success	If the contact was successfully added or updated
id	The unique identifier for the contact
message	Message of the failure (if success was false)

This call takes values for a contact, and either

1. Updates the values for that contact (after you have provided an id in the parameters), or
2. Adds the contact to the system (if the id parameter is missing)

The result of this call will contain the status of the result (either true or false) and the contact identifier of the updated or newly created contact.

The properties of the contact currently supported are:

- firstName
- lastName
- email
- phone
- groups
 - This is an array of group objects with the 'groupId' key.
- customFields
 - This is an array of custom field objects with 'fieldId' and 'value' keys
- Companies
 - This is an array of companies Ids

Example: Adding a contact

Request:

```
{"firstName":"Bob","lastName":"Smith","email":"bob@smith.com","groups":[{"groupId":2}, {"groupId":3}], "customFields":[{"fieldId":33443,"value":"Yes"}], "companies":[4,5]}
```

Response:

```
{"id":33884}
```

Example: Updating a contact

NOTE: the groups will be set to only group 10, destroying the existing value

Request:

```
{"id":33884,"firstName":"Bobby","groups":[{"groupId":10}], "customFields":[{"fieldId":33443,"value":"No"}], "companies":[4,5]}
```

Response:

```
{"id":33884}
```

getCustomFieldDefinition

Returns (an array of objects with the following properties)

fieldId	The unique identifier for this custom field
fieldType	The type of this field <ul style="list-style-type: none">● 0 = Small Text● 1 = Large Text● 2 = Single Select<ul style="list-style-type: none">○ Valid options are provided in the 'selectValues' key● 3 = Multiple Select<ul style="list-style-type: none">○ Valid options are provided in the 'selectValues' key● 4 = Address● 5 = Date● 6 = File<ul style="list-style-type: none">○ Valid file types are provided in the 'fileTypes' key● 7 = Static Text

	<ul style="list-style-type: none"> ○ Values cannot be set for this type ● 8 = Whole Number
displayName	The name of this field
isRequired	If this field is required or not
sortOrder	Order to display this field
selectValues	Values that can be selected with select fields
fileTypes	Types of files that can be uploaded with the file custom field

This call will return an array of custom fields available on the account. The result will have the fieldId which is the unique field identifier for the specific field, as well as the display name and any options required for each field.

As part of the field definition there is a 'fieldType' property which can be resolved to the following types

- 0 = Small Text
- 1 = Large Text
- 2 = Single Select
 - Valid options are provided in the 'selectValues' key
- 3 = Multiple Select
 - Valid options are provided in the 'selectValues' key
- 4 = Address
- 5 = Date
- 6 = File
 - Valid file types are provided in the 'fileTypes' key
- 7 = Static Text
 - Values cannot be set for this type
- 8 = Whole Number

getSubscriptionGroupList

Returns

An array with the following properties

id	The subscription group identifier
groupName	The name for the group
memberCount	The number of contacts in the group
tagColour	The designated colour for the group

Returns an array of subscription groups available on the account.

addContactsToSubscriptionGroup

Parameters

contacts	The contact identifiers to subscribe to the group	Required. This is an array of contact identifiers (each must be a valid integer)
group	The subscription group identifier to add the contacts to	Required. Must be a valid integer.

Returns

An array of objects with the following properties

contactId	The contact this result is for
status	If the contact was added to the group or not

Adds a number of contacts to a subscription group.

Example: Add 4 contacts to subscription group 2481

Request:

```
{"contacts": [4, 6, 55, 33], "group": 2481}
```

Response:

```
[{"contactId": 4, "status": true}, {"contactId": 6, "status": true}, {"contactId": 55, "status": true}, {"contactId": 33, "status": false}]
```

removeContactsFromSubscriptionGroup

Parameters

contacts	The contact identifiers to unsubscribe from the group	Required. This is an array of contact identifiers (each must be a valid integer)
group	The subscription group identifier to remove the contacts from	Required. Must be a valid integer.

Returns

An array of objects with the following properties

contactId	The contact this result is for
status	If the contact was removed from the group or not

Removes a number of contacts from a subscription group. This call is very similar to the [addContactsToSubscriptionGroup](#) call. It takes the same parameters and returns the same result.

getCompanyList

Parameters

perPage	The number of companies to get in a single api call	Must be an integer greater than 0
start	The starting result of the page. Note this is zero based (i.e. sending start=0 will start from the first result.)	Must be an integer 0 or greater

Additional [Filter](#) Properties

fromModifiedDate	Filter by Modified Date	iVvy Timestamp Format
toModifiedDate	Filter by Modified Date	iVvy Timestamp Format

Returns

id	The unique identifier for the company
externalId	Optionally a unique identifier of the company that is managed by an external application
businessName	The company's business name
tradingName	The company's trading name
businessNumber	The company's registration number
phone	The company's phone number
fax	The company's fax number
website	The company's website
email	The company's email address

address	The company's address. This is an an object with the following keys: <ul style="list-style-type: none"> • line1 • line2 • line3 • line4 • city • stateCode (e.g: QLD) • countryCode (e.g: AU) • postalCode
modifiedDate	The modified date of the company

The result from this call will be a [collection](#) of all the companies the user has access to. This call also accepts the [pagination](#) and [filter](#) properties.

getCompany

Parameters

The company's identifier	Required Must be an Integer
--------------------------	--------------------------------

Returns

id	The unique identifier for the company
externalId	Optionally a unique identifier of the company that is managed by an external application
businessName	The company's business name
tradingName	The company's trading name
businessNumber	The company's registration number
phone	The company's phone number
fax	The company's fax number
website	The company's website
email	The company's email address
address	The company's address. This is an an object with the following keys: <ul style="list-style-type: none"> • line1 • line2

	<ul style="list-style-type: none"> ● line3 ● line4 ● city ● stateCode (e.g: QLD) ● countryCode (e.g: AU) ● postalCode
modifiedDate	The modified date of the company

Throws

Specific Code: 24153	Unable to find company
----------------------	------------------------

The company identifier must be provided to fetch a specific company from the system.

Example: Get a specific company

Request:

```
{"id":6}
```

Response:

```
{
  "id":"25146",
  "businessName":"Test",
  "tradingName":"Test Trading",
  "businessNumber":"1234586",
  "email":"company@test.com",
  "phone":"0455550000",
  "fax":"0455550125",
  "website":"www.test.com",
  "address": {"line1": "Street Number", "line2": "Street Name", "line3": "",
"line4": "", "city": "Gold Coast", "stateCode": "QLD",
"countryCode": "AU", "postalCode": "4227"}
}
```

addOrUpdateCompany

Parameters

id	The company's identifier. (Leave empty to add the company to the system.)	Must be an integer
externalId	Optionally a unique identifier of the company that is managed by an external application	
businessName	The company's business name	Mandatory if adding a new company
tradingName	The company's trading name	

businessNumber	The company's registration number	
phone	The company's phone number	
fax	The company's fax number	
website	The company's website	
email	The company's email address	
address	<p>The company's address. This is an object with the following keys:</p> <ul style="list-style-type: none"> ● line1 ● line2 ● line3 ● line4 ● city ● stateCode (e.g: QLD) ● countryCode (e.g: AU) ● postalCode 	

Returns

success	If the company was successfully added or updated
id	The unique identifier for the company
message	Message of the failure (if success was false)

This call takes values for a company, and either

1. Updates the values for that company (after you have provided an id in the parameters), or
2. Adds the company to the system (if the id parameter is missing)

The result of this call will contain the status of the result (either true or false) and the company identifier of the updated or newly created company.

The properties of the company currently supported are:

- businessName
- externalId
- tradingName
- businessNumber
- phone
- fax
- website
- email
- address

- This is an object

Example: Adding a company

Request:

```
{ "businessName": "New Company", "tradingName": "ABC", "email": "company@test.com", "address": { "line1": "address line 1", "line2": "address line 2", "stateCode": "QLD", "postalCode": "4227", "countryCode": "AU" } }
```

Response:

```
{ "success": true, "id": 1618 }
```

Example: Updating a company

Request:

```
{ "id": 1618, "businessName": "Updated Company name", "address": { "line1": "address line 11", "line2": "address line 22", "stateCode": "QLD", "postalCode": "4227", "countryCode": "AU" } }
```

Response:

```
{ "id": 1618 }
```

addOrUpdateLead

Parameters

id	The unique identifier of lead(Leave empty to add the lead to the system.)	Must be an integer
qualityId	The quality of lead	Must be an integer
industryId	The unique industry id of lead	- Must be an integer - Required when lead belongs to contact and id parameter is missing
sourceId	The unique source id of lead	- Must be an integer - Required when the id parameter is missing
companyId	The unique company id of lead	- Must be an integer - Required when lead belongs to company and id parameter is missing
companyLeadContactId	The unique company id of lead	- Must be an integer - Required when lead belongs to company and id parameter is missing
contactId	The unique contact id of lead	- Must be an integer - Required when lead belongs to contact and id parameter is

		missing
name	The name for the lead	- Required when the id parameter is missing
ownerUserId	The sales person id of lead	Must be an integer
typeId	The type of lead	- Must be an integer - Required when the id parameter is missing
stageId	The stage of lead	- Must be an integer - Required when the id parameter is missing
stageReasonId	The unique stage reason id of opportunity	- Must be an integer
channel	The channel of lead	Must be an integer
description	The description for the lead	

Returns

success	Whether or not the lead was added to the account
id	The unique id of the lead

Throws

Specific Code: 24215	The request is empty
Specific Code: 24216	The lead does not exist
Specific Code: 24218	The lead details are invalid
Specific Code: 23016	Channel details are invalid

This call takes values for a lead, and either

3. Updates the values for that lead (after you have provided an id in the parameters), or
4. Adds the lead to the system (if the id parameter is missing)

The result of this call will contain the status of the result (either true or false) and the lead identifier of the updated or newly created lead.

Event Namespace (event)

addOrUpdateEvent

Parameters

id	The event's unique identifier. Exclude to add an event. Include to update an existing event.	Integer > 0
eventType	Required: always. The type of event. Value must be 12 (Record Event Details). The value cannot be changed for an existing event.	Integer >= 0
code	The event's unique code. Can be excluded when adding an event (system will assign a unique code). The value cannot be changed for an existing event.	String Max length: 12
title	Required: when adding an event. The title of the event.	String Max length: 140
timezone	Required: when adding an event. The timezone of the event.	Timezone
startDateTime	Required: when adding an event. The start date & time of the event.	Timestamp
endDateTime	Required: when adding an event. The end date & time of the event. The value must be on or after startDateTime.	Timestamp
capacity	The maximum number of attendees who can register for the event. A value of 0 (zero) represents no limit.	Integer >= 0
budget	A budget amount assigned to the event.	Float
costCenterId	A cost center assigned to the event. The value is an identifier of a cost center in the account, which must be assignable to events.	Integer > 0

primaryContactUserId	The primary contact user of the event. The value is an identifier of a user in the account.	Integer > 0
secondaryContactUserId	The secondary contact user of the event. The value is an identifier of a user in the account.	Integer > 0
eventTypelds	Zero or more tags assigned to the event. The value is an array of event tag identifiers.	Array of Integers
isAccommIncluded	Whether or not the event requires accommodation.	Boolean
venueId	The venue assigned to the event. The value is an identifier of an event venue in the account.	Integer > 0

Returns

success	Whether or not the action succeeded (i.e. the event as added or updated).	Boolean
id	The event's unique identifier. The value will be null on failure.	Integer > 0
code	The event's unique code. The value will be null on failure.	String Max length: 12

This action call accepts the parameters of an event and will;

- 1) Add a new event to the account
- 2) Update an existing event in the account when the id parameter is provided.

NOTE: This action call only supports "Record Event Details" type events (i.e. eventType value of 12).

Example Request:

```
{
  "eventType": 12,
  "title": "A New Event",
  "timezone": "Australia/Sydney",
  "startDateTime": "2018-03-05 03:00:00 UTC",
  "endDateTime": "2018-03-05 06:00:00 UTC",
  "capacity": 10,
```

```

    "budget": 150,
    "costCenterId": 834,
    "primaryContactUserId": 7821,
    "eventTypeIds": [56,57],
    "isAccommIncluded": false
  }

```

Example Response:

```

{
  "success": true,
  "id": 98481,
  "code": "BAS4G248"
}

```

getEventList

Parameters

perPage	The number of events to get in a single api call	Must be an integer greater than 0
start	The starting result of the page. Note this is zero based (i.e. sending start=0 will start from the first result.)	Must be an integer 0 or greater
includeVenueDetails	If the response should include venue details	Must be a boolean
includeTicketDetails	If the response should include ticket details	Must be a boolean
includeInformationDetails	If the response should include the event information	Must be a boolean
includeHomepageContent	If the response should include the homepage content of the website	Must be a boolean
orderBy	Sort results	Supported parameter "startDate"
orderDir	Sort direction	'asc' or 'desc'

Additional [Filter](#) Properties

afterDate	Filter by start date	iVvy Timestamp Format
beforeDate	Filter by end date	iVvy Timestamp Format

status	Filter by status Array of the following values <ul style="list-style-type: none"> ● 0 = Draft ● 1 = Closed ● 3 = Launched 	Must be an array
--------	---	------------------

Returns

A collection object with the following properties in the results

id	The unique event identifier
code	The code for the event
eventType	The type of event. <ul style="list-style-type: none"> ● 0 = Other ● 1 = Party ● 2 = Festival ● 3 = Golf Day ● 4 = Wedding ● 5 = Meeting ● 6 = Seminar ● 7 = Conference ● 8 = Exhibition ● 9 = Roadshow ● 10 = Simple ● 11 = Party (21st / 18th) ● 12 = Record Event Details
title	The title of the event
domainName	The domain name of the event
startDateTime	The start of the event, at UTC
endDateTime	The end of the event, at UTC
numRegistered	The number of registrations
currentStatus	The current status of the event <ul style="list-style-type: none"> ● 0 = Draft ● 1 = Closed ● 3 = Launched
contactEmail	The contact email address on the event
websiteUrl	The URL for the event website

websiteTemplateBannerImageUrl	Banner that is displayed on the website																				
venue	<p>Details of the venue of the event (if the includeVenueDetails flag is set on the request)</p> <table border="1"> <tr> <td>name</td> <td>The venue name</td> </tr> <tr> <td>description</td> <td>The description of the venue</td> </tr> <tr> <td>address</td> <td>The address of the venue</td> </tr> <tr> <td>imageUrl</td> <td>The URL to the image of the venue</td> </tr> </table>	name	The venue name	description	The description of the venue	address	The address of the venue	imageUrl	The URL to the image of the venue												
name	The venue name																				
description	The description of the venue																				
address	The address of the venue																				
imageUrl	The URL to the image of the venue																				
tickets	<p>The tickets of an event (if the includeTicketDetails flag is set on the request)</p> <table border="1"> <tr> <td>id</td> <td>The unique identifier for the ticket</td> </tr> <tr> <td>title</td> <td>Title of the ticket</td> </tr> <tr> <td>capacity</td> <td>Capacity of the ticket</td> </tr> <tr> <td>description</td> <td>Description of the ticket</td> </tr> <tr> <td>amount</td> <td>Amount of the ticket</td> </tr> <tr> <td>isTaxFree</td> <td>Amount of the ticket is tax free</td> </tr> <tr> <td>subscriptionGroups</td> <td> <p>Subscription groups assigned to the ticket This an array of objects with the following properties...</p> <table border="1"> <tr> <td>id</td> <td>The subscription group identifier</td> </tr> <tr> <td>groupName</td> <td>The name for the group</td> </tr> <tr> <td>tagColour</td> <td>The designated colour for the group</td> </tr> </table> </td> </tr> </table>	id	The unique identifier for the ticket	title	Title of the ticket	capacity	Capacity of the ticket	description	Description of the ticket	amount	Amount of the ticket	isTaxFree	Amount of the ticket is tax free	subscriptionGroups	<p>Subscription groups assigned to the ticket This an array of objects with the following properties...</p> <table border="1"> <tr> <td>id</td> <td>The subscription group identifier</td> </tr> <tr> <td>groupName</td> <td>The name for the group</td> </tr> <tr> <td>tagColour</td> <td>The designated colour for the group</td> </tr> </table>	id	The subscription group identifier	groupName	The name for the group	tagColour	The designated colour for the group
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title	Title of the ticket																				
capacity	Capacity of the ticket																				
description	Description of the ticket																				
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id	The subscription group identifier																				
groupName	The name for the group																				
tagColour	The designated colour for the group																				
information	Event website information (if the includeInformationDetails flag is set on the request)																				

	This is an array of objects with the following properties...	
	description	Description of the information
	information	Content of the information
	fileUrl	Attached file url of event information
	sortOrder	The order in which to sort the information
homepageContent	Content of the website home page (if the includeHomepageContent flag is set on the request). Note this is the contents of the HTML that is entered in as the home page content of the event.	
eventTags	The tags of the event	
	id	The unique identifier for the event tag
	name	The name of the event tag
modifiedDate	timestamp	

The result from this call will be a [collection](#) of all the events the user has access to. This call also accepts the [pagination](#) and [filter](#) properties.

getEvent

Parameters

id	The event identifier	Required Must be an integer
----	----------------------	--------------------------------

Returns

id	The unique event identifier
code	The code for the event
title	The title of the event
domainName	The domain name of the event
startDateTime	The start of the event, at UTC

endTime	The end of the event, at UTC	
numRegistered	The number of registrations	
currentStatus	The current status of the event	
appTitle	The title to display on mobile platforms	
twitter	Twitter hashtag for this event	
appBanner	Banner to display on mobile platforms	
map	Map of the event	
includeSpeakers	Whether or not the event includes speakers	
displaySpeakers	Whether or not the speakers are displayed on the event website	
includeSponsors	Whether or not the event includes sponsors	
displaySponsors	Whether or not there are sponsors displayed on the event website	
includeBooths	Whether or not the event includes exhibition booths	
displayExhibitors	Whether or not there are exhibitors displayed on the event website	
includeAbstracts	Whether or not the event includes abstracts	
displayAbstracts	Whether or not there are abstracts displayed on the event website	
includeHotels	Whether or not the event includes hotel accommodation	
includeTravel	Whether or not the event includes travel (flights and transfers)	
includeMembership	Whether or not the event includes memberships	
eventTags	The tags of the event	
	id	The unique identifier for the event tag
	name	The name of the event tag

Throws

Specific Code: 24097	Unable to find event
----------------------	----------------------

The event identifier must be provided as part of this call to fetch the specific event.

E.g. {"id":1} can be used to fetch the details of an event with the identifier of 1.

getRegistration

Parameters

id	The registration identifier	Required Must be an integer
eventId	The event identifier to which registration belongs	Required Must be an integer

Returns

id	The unique registration identifier
currentStatus	The current status of the event
isExhibitor	Whether or not event registration is exhibitor
completedDate	The registered date time of event registration
firstName	The first name of the event registration
lastName	The last name of the event registration
phone	The phone number of event registration
modifiedDate	The date & time the registration was last modified

Throws

Specific Code: 24207	Unable to find event
Specific Code: 24208	Invalid Registration Id
Specific Code: 24209	Registration not found

getRegistrationList

Parameters

perPage	The number of registrations to get in a single api call	Must be an integer greater than 0 and maximum 100
start	The starting result of the page. Note this is zero based (i.e. sending start=0 will start from the first result.)	Must be an integer 0 or greater

eventId	The event identifier	Must be a Integer
---------	----------------------	-------------------

Additional [Filter](#) Properties

modifiedDate	Filter by modified date	iVvy Timestamp Format
--------------	-------------------------	---------------------------------------

Returns

A collection object with the following properties in the results

id	The unique registration identifier
currentStatus	The current status of the event
isExhibitor	Whether or not event registration is exhibitor
completedDate	The registered date time of event registration
mainContactId	The main contact id of event registration
firstName	The first name of the event registration
lastName	The last name of the event registration
phone	The phone number of event registration
invoiceTotalCost	The total cost of event registration
invoiceTotalPaid	The total amount paid of event registration
modifiedDate	The date & time the registration was last modified

The result from this call will be a [collection](#) of all the events the user has access to. This call also accepts the [pagination](#) and [filter](#) properties.

Throws

Specific Code: 24206	Unable to find event
----------------------	----------------------

getAttendee

Parameters

id	The attendee identifier	Required Must be an integer
----	-------------------------	--------------------------------

eventId	The event identifier to which attendee belongs	Required Must be an integer
---------	--	--------------------------------

Returns

id	The unique registration identifier	
registrationStatus	The registration status of the event attendee	
contactId	The contactId of event attendee	
registrationId	The registration id of event attendee	
ticketTitle	The title of ticket	
firstName	The first name of the event attendee	
lastName	The last name of the event attendee	
email	The email address of the event attendee	
hasAttended	Whether attendee has attended event or not	
sessionHasAttended	Whether attendee has attended session or not	
isPublic	Whether event attendee is public or not	
barcode	The barcode text of event attendee	
barcodeUrl	The barcode url of event attendee	
ticketUrl	The ticket url of event attendee	
attendedDatetime	The attended date time of event attendee	
sessionAttendedTimestamp	The session attended date time of event attendee	
cost	The cost of ticket of event attendee	
customFields	The array of custom fields data of event attendee with below details	
	name	The name of the custom field
	value	The value of the custom field for attendee

Throws

Specific Code: 24211	Unable to find event
Specific Code: 24212	Invalid Attendee Id
Specific Code: 24213	Attendee not found

getAttendeeList

Parameters

perPage	The number of attendees to get in a single api call	Must be an integer greater than 0 and maximum 100
start	The starting result of the page. Note this is zero based (i.e. sending start=0 will start from the first result.)	Must be an integer 0 or greater
eventId	The event identifier	Must be a Integer

Additional [Filter](#) Properties

No filters available

Returns

A collection object with the following properties in the results

id	The unique registration identifier
registrationStatus	The registration status of the event attendee
contactId	The contactId of event attendee
ticketTitle	The title of ticket
firstName	The first name of the event attendee
lastName	The last name of the event attendee
email	The email address of the event attendee
hasAttended	Whether attendee has attended event or not
sessionHasAttended	Whether attendee has attended session or not
isPublic	Whether event attendee is public or not
barcode	The barcode text of event attendee

barcodeUrl	The barcode url of event attendee				
ticketUrl	The ticket url of event attendee				
attendedDatetime	The attended date time of event attendee				
sessionAttendedTimestamp	The session attended date time of event attendee				
cost	The cost of ticket of event attendee				
customFields	The array of custom fields data of event attendee with below details <table border="1" data-bbox="657 642 1572 774"> <tr> <td>name</td> <td>The name of the custom field</td> </tr> <tr> <td>value</td> <td>The value of the custom field for attendee</td> </tr> </table>	name	The name of the custom field	value	The value of the custom field for attendee
name	The name of the custom field				
value	The value of the custom field for attendee				

The result from this call will be a [collection](#) of all the events the user has access to. This call also accepts the [pagination](#) and [filter](#) properties.

Throws

Specific Code: 24210	Unable to find event
----------------------	----------------------

inviteContacts

Parameters

event	The event identifier to invite the contact to	Required. Must be an integer.
contacts	An array of contact identifiers to invite to the event	Required Must be an array of integers

Returns

results	An array of objects with the following properties	
	contact	The contact identifier
	status	The status of the request

	inviteLinkYes	Invitation link for the YES responses
	inviteLinkNo	Invitation link fo the NO responses

To invite a contact to the event, pass through the event identifier and an array of contact identifiers through to this call. The result will be a an array indicating if each of the contacts invitation was successful or not, and if so the links for responding to the invitations for both yes and no.

Example: Invite contacts with identifiers 1, 2 and 3 to event with the identifier 4

Request:

```
{"event":4,"contacts":[1,2,3]}
```

Response:

```
{
  "results":[
    {
      "contact":1,
      "status":true,
      "inviteLinkYes":"http://....",
      "inviteLinkNo":"http://...."
    },
    {"contact":2,"status":false},
    {
      "contact":3,
      "status":true
      "inviteLinkYes":"http://....",
      "inviteLinkNo":"http://...."
    }
  ]
}
```

getSponsorshipList

Parameters

event	The event identifier	Required Must be an integer
-------	----------------------	--------------------------------

Returns

A collection array with the following object properties in the results

id	The unique sponsor identifier
name	The name of the sponsor

description	The description of the sponsor
websiteAddress	The URL to the sponsor details
logoImageUrl	The URL to the sponsor details
level	The sponsorship level of the sponsor
customLevelId	The custom level identifier if this sponsor has a custom level assigned to it
sponsorshipAmount	How much this sponsorship is for
sponsorshipAmountPaid	How much has been paid by the sponsor so far

Throws

Specific Code: 24094	Event does not have sponsors
Specific Code: 24100	Unable to find event

Lists the sponsors that are sponsoring the event.

Example: Fetch the list of sponsors on an event

Request:

```
{"event":15593}
```

Response:

```
{"meta":{"totalResults":1,"start":0,"perPage":1,"count":1},"results":[{"id":"1","name":"Test Sponsor for event 1","description":"...", "websiteAddress":"www.sponsor1.com", "logoImageUrl":"https://.../554ac739bcc9a.png", "level":"9", "customLevelId":null, "sponsorshipAmount":"44", "sponsorshipAmountPaid":"4"}]}
```

getSpeakerList

Parameters

event	The event identifier	Required Must be an integer
-------	----------------------	--------------------------------

Returns

A collection object with the following properties of objects in the results

id	The unique speaker identifier
fullName	The speaker's name

organisation	The speaker's organisation
position	The position of the speaker
profileDescription	The speaker's profile
profileImageUrl	The URL to the speaker's profile image

Throws

Specific Code: 24124	Event does not have speakers
Specific Code: 24101	Unable to find event

Lists the speakers of the event.

Example: Fetch the list of speakers at an event

Request:

```
{"event":15593}
```

Response:

```
{"meta":{"totalResults":1,"start":0,"perPage":1,"count":1},"results":[{"id":"6","fullName":"Mr Speaker","organisation":"Google","position":"Lead Developer","profileDescription":"...", "profileImageUrl":"https://.../8869de9237bb1.png"}]}
```

createLoginToken

Parameters

event	The event identifier for the contact to be logged in to	Required Must be a valid number
contact	The contact identifier to allow the login	Required Must be a valid number
referrer	Referrer of the request which will be used in validating the token later	

Returns

token	Single use, time restricted token for the contact to login to the iVvy Event Website
loginUrl	The URL that must be used to authenticate the user with the token

Throws

Specific Code: 24099	Unable to generate token
Specific Code: 24098	Unable to find event

Creates a login token that can be used to login to an event, on the behalf of a registered contact. This call takes an event identifier and a contact identifier and an optional referrer url to generate a single-use, time restricted token.

The result will be the token and a URL that can be used to redirect the user to have them logged in to view their registration details without the use of a username and password.

If the referrer is provided when creating the token, the browser's referrer header will also be checked to ensure the request using the token has been redirected from the specific website saved against the token.

Example: Request a login token for a contact on an event

Request:

```
{"event":15593,"contact":297466}
```

Response:

```
{"token":"fc877d1bae56ebc5a8e19b29a3df67de","loginUrl":"http://wired.ivvy.com/event/SQ6EXR/registration/login/token?t=fc877d1bae56ebc5a8e19b29a3df67de&contact=297466"}
```

Test Namespace (test)

ping

Used for testing the access to the api. This call takes no parameters and responds to the request with an ack message, with the [timestamp](#) from the server.

Venue Namespace (venue)

getVenueList

The result from this call will be a [collection](#) of all the venues to which the user has access. This call also accepts the [pagination](#) parameters.

getVenue

The result from this call will be the details of a specific venue to which the user has access. The unique venue identifier is required, for example {"id":123}

Example: Get a specific venue

Request:

```
{"id":21}
```

Response:

```
{
  "id": 21,
  "hashId": "1efda3e35a75aabd13e8996037d35a79",
  "businessName": "iVvy Conference Centre",
  "businessNumber": 123123,
  "phone": "1300 004 889",
  "fax": "",
  "websiteAddress": "",
  "emailAddress": "support@ivvy.com",
  "description": "<p> Located by the River at Hamilton, this is the closest 5
star, full service Hotel to the Brisbane Cruise Terminal - Portside at Hamilton, the
Airport precinct, Gateway Arterial Bridge linking the Gold Coast to the Sunshine
Coast and is just minutes from the CBD.<br /><br /> Featuring 90 spacious, newly
refurbished and well appointed accommodation rooms, the hotel is an urban escape
perfect for business or leisure travellers alike. Most rooms feature magnificent
views of the widest reach of the Brisbane River spanning from the Brisbane City past
the Brisbane Cruise Terminal and to the Gateway Bridge.<br /><br /> Enjoy the
resort style pool, spa, sauna, gym and complimentary car parking & Wi-Fi for all
delegates, guests and visitors.<br /><br /> From the grandeur of the column free
Hamilton Ballroom which can easily divide into smaller configurations, the intimacy
of the Newstead Room or take advantage of the newly refurbished Executive Boardroom
the Brisbane Riverview Hotel has an option to suit your budget and requirements. The
resort style pool area is a fantastic venue for breakout sessions or lunches. This
is a flexible and well equipped conference venue can cater for intimate boardroom
meeting of 6 people up to large corporate events for up to 300 delegates. <br /><br
/> With expansive river views, Plates Restaurant offers a seasonal menu showcasing
superb produce from Queensland's freshest seafood, international cuisine, and
wood fired steaks and pizzas. It is the perfect place for business or pleasure,
mixing excellent atmosphere with great service.</p> ",
  "checkinTime": "11:00:00",
  "checkoutTime": "14:00:00",
  "childAge": 0,
  "infantAge": 0,
  "currencyCode": "AUD",
  "localeCode": "en_AU",
  "timezone": "Australia/Brisbane",
```

```

"hasSpaces": true,
"hasAccommodation": true,
"numMeetingRooms": 0,
"numAccommodationRooms": 200,
"maxSpaceArea": null,
"totalSpaceArea": null,
"longitude": 153.4065773,
"latitude": -28.0067947,
"primaryAddress": {
  "line1": "2 Boston Court",
  "line2": "",
  "line3": "",
  "line4": "",
  "city": "Varsity Lakes",
  "stateCode": "QLD",
  "stateName": null,
  "countryCode": "AU",
  "countryName": null,
  "postalCode": 4227
},
"videoUrls": ["https://www.youtube.com/embed/rxiPVWurK7Q"],
"airportName": "Gold Coast (OOL)",
"airportDistance": 20,
"starRating": 5,
"ratingAuthority": 2,
"maxSpaceCapacity": 100,
"facilities": [2, 3, 6, 12, 14, 19, 20, 24, 27, 30, 31, 34, 35],
"mainImage": {
  "url":
"https://s3-ap-southeast-2.amazonaws.com/ap-southeast-2.accounts.ivvy.com/account14/
venues/21/55403b462c0aa.jpg",
  "originalFileName": "main function sapce 2.jpg",
  "tags": [],
  "size": 2647159,
  "contentType": "image/jpeg"
},
"marketplaceBannerImage": {
  "url":
"https://s3-ap-southeast-2.amazonaws.com/ap-southeast-2.accounts.ivvy.com/account14/
venues/21/banner/banner.jpg",
  "originalFileName": "banner.jpg",
  "tags": [],
  "size": 2963936,
  "contentType": "image/jpeg"
},
"brochureFile": null,
"imageLibrary": [{
  "url":
"https://s3-ap-southeast-2.amazonaws.com/ap-southeast-2.accounts.ivvy.com/account14/
imageLibrary/5513b498229a6.jpg",
  "originalFileName":
"58443-room-types-5-vibe-hotel-sydney-executive-king.jpg",
  "tags": ["General"],
  "size": 46333,
  "contentType": "image/jpeg",
  "marketplaceEventTypes": [31]
}],

```

```

"packages": [{
  "id": 5,
  "name": "Day Delegate Package",
  "minPax": 30,
  "price": 98,
  "priceMethod": 1,
  "smallDescription": "At iVvy Conference Centre, intimate spaces are
combined with state-of-the-art technology and award-winning food. Our Day Delegate
Package is ideal for small to medium meetings or events, offering a range of menus
for your attendees",
  "largeDescription": "<p> At iVvy Conference Centre, intimate spaces are
combined with state-of-the-art technology and award-winning food. Our Day Delegate
Package is ideal for small to medium meetings or events, offering a range of menus
designed by our team of chefs to create a unique dining experience for your
attendees.</p> <p> At just $98 per person, our Day Delegate Package includes the
following:</p> <ul><li> Venue hire</li> <li> Pre-installed technical equipment
and services including a high definition projector or display, a PA system and
a presentation computer</li> <li> Free Wi-Fi</li> <li> Notepads and
pens</li> <li> Iced water and sweets</li> <li> Tea and coffee on arrival</li>
<li> Morning tea</li> <li> Networking lunch</li> <li> Afternoon tea.</li>
</ul>",
  "marketplaceName": "Day Delegate Package",
  "marketplaceEventTypes": [11, 21]
}],
"functionSpaces": [{
  "id": 6463,
  "name": "Special events and public holidays",
  "description": null,
  "area": null,
  "length": null,
  "width": null,
  "heightMaximum": null,
  "heightMinimum": null,
  "floorPressureMaximum": null,
  "marketplaceName": null,
  "minPax": 0,
  "maxPax": 1,
  "hasLayouts": true,
  "image": null,
  "layouts": []
}, {
  "id": 169,
  "name": "River Room",
  "description": "<p> Ocean and river views are a focal point of the
River room. This room has floor-to-ceiling glass with full length curtains if
required, and access to a large, central area for meet-and-greets or pre-dinner
cocktails. The large projector screen is perfect for meetings or special events and
this room has been fully soundproofed for privacy.</p> ",
  "area": null,
  "length": null,
  "width": null,
  "heightMaximum": null,
  "heightMinimum": null,
  "floorPressureMaximum": null,
  "marketplaceName": "River Room",
  "marketplaceEventTypes": [11, 21],
  "minPax": 30,

```

```

    "maxPax": 400,
    "hasLayouts": true,
    "image": {
      "url":
"https://s3-ap-southeast-2.amazonaws.com/ap-southeast-2.accounts.ivvy.com/account14/
venues/21/spaces/169/5540362637d5f.jpg",
      "originalFileName": "River Room.jpg",
      "tags": [],
      "size": 67933,
      "contentType": "image/jpeg"
    },
    "layouts": [{
      "id": 421,
      "type": 7,
      "paxMinimum": null,
      "paxMaximum": 400,
      "timeForSetup": null,
      "timeForTakedown": null
    }, {
      "id": 425,
      "type": 6,
      "paxMinimum": null,
      "paxMaximum": 150,
      "timeForSetup": null,
      "timeForTakedown": null
    }, {
      "id": 637,
      "type": 1,
      "paxMinimum": null,
      "paxMaximum": 250,
      "timeForSetup": null,
      "timeForTakedown": null
    }, {
      "id": 9019,
      "type": 5,
      "paxMinimum": null,
      "paxMaximum": 80,
      "timeForSetup": null,
      "timeForTakedown": null
    }, {
      "id": 9511,
      "type": 8,
      "paxMinimum": null,
      "paxMaximum": 50,
      "timeForSetup": null,
      "timeForTakedown": null
    }, {
      "id": 9655,
      "type": 4,
      "paxMinimum": null,
      "paxMaximum": 100,
      "timeForSetup": null,
      "timeForTakedown": null
    }, {
      "id": 9867,
      "type": 3,
      "paxMinimum": null,

```

```

        "paxMaximum": 100,
        "timeForSetup": null,
        "timeForTakedown": null
    }],
    "accommodation": [{
        "id": 53,
        "code": "14-53",
        "name": "1 Bedroom Residence",
        "description": "<ul><li> A studio apartment sleeps 1-5 and contains a
queen bed plus a sofa that can folded out to a double bed.</li> <li> Rollaways
also available.</li> </ul>",
        "numStandardAdults": 1,
        "numExtraAdults": 1,
        "extraAdultCost": 0,
        "canSmoke": false,
        "capacity": 20,
        "marketplaceName": "Studio",
        "image": {
            "url":
"https://s3-ap-southeast-2.amazonaws.com/ap-southeast-2.accounts.ivvy.com/account14/
venues/21/accommodation/53/5540352c9c2ca.jpg",
            "originalFileName": "Studio.jpg",
            "tags": [],
            "size": 48330,
            "contentType": "image/jpeg"
        }
    }
    ]
}

```

The following are properties in the example json response above that have special values.

ratingAuthority

One of the following values:

- 1 = AAA rated
- 2 = Self rated

facilities

An array of the following values:

- 1 = Air Conditioning
- 2 = Airport Shuttle
- 3 = Audio Visual
- 4 = BBQ
- 6 = Business Centre
- 7 = Ceremony On Site
- 8 = Child Minding
- 9 = Disabled Access
- 10 = Dry Cleaning
- 11 = Express Checkout

- 12 = Free Parking
- 13 = Gaming Area
- 14 = Gymnasium
- 15 = Internet Access
- 16 = Laundry
- 39 = Liquor License
- 17 = Mobile Bar
- 18 = Open 24 Hours
- 19 = Outdoor Area
- 20 = Parking Available
- 21 = Pay TV
- 22 = Playground
- 23 = Printing Services
- 24 = Public Transport
- 25 = Restaurant On Site
- 26 = Sauna Steam Room
- 27 = Smoking Permitted
- 28 = Spa
- 29 = Staging
- 30 = Street Parking
- 31 = Swimming Pool
- 32 = Tour Desk
- 33 = Undercover Parking
- 34 = Valet Parking
- 35 = Wheelchair Access
- 36 = Wifi Access
- 37 = Outside Catering Allowed
- 38 = BYO Allowed

priceMethod (package pricing)

One of the following values:

- 1 = Per person
- 2 = Flat rate

type (function space layout)

One of the following values:

- 0 = Custom
- 1 = Theatre
- 2 = Classroom
- 3 = U-Shape
- 4 = Cabaret
- 5 = Boardroom
- 6 = Banquet

- 7 = Cocktail
- 8 = Hollow Square

marketplaceEventTypes (packages, function spaces and image library files)

An array of the following values:

- 11 = Event
- 21 = Wedding
- 31 = Conference
- 41 = Meeting

getBookingList

The result from this call will be a [collection](#) of all the Booking of specific venue to which the user has access. This call also accepts the [pagination](#) parameters. The unique venue identifier and per page value is required, for example
`{"venueId":"1","perPage":10}`

Example: Get a specific venue's Booking List

Request:

```
{"venueId":"1","perPage":1}
```

Response:

```
{
  "meta":{
    "totalResults":256,
    "start":0,
    "perPage":1,
    "count":1
  },
  "results":[
    {
      "id":1,
      "venueId":1,
      "code":"HR5ZASGMQ1",
      "name":"Some Booking",
      "eventType":"Holiday",
      "company":{
        "id":4,
        "businessName":"Some Business"
      },
      "contact":{
        "id":3,
        "firstName":"Quamar",
        "lastName":"Boyer",
        "email":"faly@gmail.com",
        "phone":"+247-92-9848064"
      },
      "currentStatus":3,
      "totalAmount":105,
      "totalTaxAmount":5,
    }
  ]
}
```

```

    "amountOutstanding":-425.3,
    "accountTimezone":null,
    "venueTimezone":null,
    "createdDate":"2015-01-07 09:21:53 UTC",
    "modifiedDate":"2016-04-06 07:51:56 UTC",
    "dateEventStart":"2015-06-01 00:00:00 UTC",
    "dateEventEnd":"2015-06-04 00:00:00 UTC",
    "isAccomIncluded":true,
    "dateAccomStart":"2015-06-01 00:00:00 UTC",
    "dateAccomEnd":"2015-06-27 00:00:00 UTC",
    "hasPackages":true,
    "decisionDate":"",
    "isBeoFinalised":true,
    "beoFinalisedDate":"2015-02-09 03:37:39 UTC"
  }
]
}

```

currentStatus:

One of the following values:

- 1 = Prospective
- 2 = Tentative
- 3 = Confirmed
- 4 = Cancelled
- 5 = Ordering
- 8 = Not Accepted

Additional Parameters

modifiedDateBefore	Filter by Modified Date	iVvy Timestamp Format
modifiedDateAfter	Filter by Modified Date	iVvy Timestamp Format

Additional [Filter](#) Properties

companyId	Filter by unique id of company	integer
contactId	Filter by unique id of contact	integer

getBookingListForAccount

The result from this call will be a [collection](#) of all the Booking of an account to which the user has access. This call also accepts the [pagination](#) parameters. The per page value is required, for example {"perPage":10}

Example: Get Account's Booking List

Request:

```
{ "perPage": 1 }
```

Response:

```
{
  "meta":{
    "totalResults":325,
    "start":0,
    "perPage":1,
    "count":1
  },
  "results":[
    {
      "id":1,
      "venueId":1,
      "code":"HR5ZASGMQ1",
      "name":"Some Booking",
      "eventType":"Holiday",
      "company":{
        "id":4,
        "businessName":"Some Business"
      },
      "contact":{
        "id":3,
        "firstName":"Quamar",
        "lastName":"Boyer",
        "email":"faly@gmail.com",
        "phone":"+247-92-9848064"
      },
      "currentStatus":3,
      "totalAmount":105,
      "totalTaxAmount":5,
      "amountOutstanding":-425.3,
      "accountTimezone":null,
      "venueTimezone":"Australia/Brisbane",
      "createdDate":"2015-01-07 09:21:53 UTC",
      "modifiedDate":"2016-04-06 07:51:56 UTC",
      "dateEventStart":"2015-06-01 00:00:00 UTC",
      "dateEventEnd":"2015-06-04 00:00:00 UTC",
      "isAccomIncluded":true,
      "dateAccomStart":"2015-06-01 00:00:00 UTC",
      "dateAccomEnd":"2015-06-27 00:00:00 UTC",
      "hasPackages":true,
      "decisionDate":"",
      "isBeoFinalised":true,
      "beoFinalisedDate":"2015-02-09 03:37:39 UTC"
    }
  ]
}
```

currentStatus:

One of the following values:

- 1 = Prospective
- 2 = Tentative

- 3 = Confirmed
- 4 = Cancelled
- 5 = Ordering
- 8 = Not Accepted

Additional [Filter](#) Properties

modifiedDateBefore	Filter by Modified Date	iVvy Timestamp Format
modifiedDateAfter	Filter by Modified Date	iVvy Timestamp Format

getBooking

The result from this call will be the details of a specific booking to which the user has access. The unique venue identifier is required, for example {"id":123}

Example: Get a specific Booking

Request:

```
{"id":3}
```

Response:

```
{
  "id":3,
  "venueId":1,
  "code":"123a",
  "name":"Ava Donovan",
  "eventType":"Holiday",
  "company":null,
  "contact":null,
  "currentStatus":3,
  "totalAmount":2600,
  "totalTaxAmount":0,
  "amountOutstanding":2600,
  "accountTimezone":"Australia/Brisbane",
  "venueTimezone":"Australia/Brisbane",
  "createdDate":"2015-01-21 09:50:49 UTC",
  "modifiedDate":"2016-04-06 07:51:56 UTC",
  "dateEventStart":"1996-02-19 00:00:00 UTC",
  "dateEventEnd":"2002-11-06 00:00:00 UTC",
  "isAccommIncluded":false,
  "dateAccomStart": "",
  "dateAccomEnd": "",
  "hasPackages":true,
  "decisionDate": "",
  "isBeoFinalised":false,
  "beoFinalisedDate": "",
  "dailyRevenue":[
    {
      "costcenterId":1276,
      "revenueDate":"2015-09-04",
```

```

        "totalAmount":2500,
        "totalTaxAmount":227.273
    },
    {
        "costcenterId":1277,
        "revenueDate":"2015-09-04",
        "totalAmount":2500,
        "totalTaxAmount":227.273
    },
    {
        "costcenterId":1278,
        "revenueDate":"2015-09-04",
        "totalAmount":2500,
        "totalTaxAmount":227.273
    },
    {
        "costcenterId":1279,
        "revenueDate":"2015-09-04",
        "totalAmount":2500,
        "totalTaxAmount":227.273
    }
]
}

```

currentStatus:

One of the following values:

- 1 = Prospective
- 2 = Tentative
- 3 = Confirmed
- 4 = Cancelled
- 5 = Ordering
- 8 = Not Accepted

getVenueRoomList

The result from this call will be a [collection](#) of all the rooms of an venue to which the user has access. This call also accepts the [pagination](#) parameters. The venueId is required, for example {"venueId":10}

Example: Get a specific Venue's Room List

Request:

```

{"venueId":1}

```

Response:

```

{
  "meta":{
    "totalResults":1,
    "start":0,
    "perPage":null,
    "count":1
  },
}

```

```

"results":[
  {
    "id":1,
    "code":"2-1",
    "name":"Family RoomFamily",
    "description":"<p>The best family rooms:</p> <ul><li>One double bed</li> <li>Two child beds</li>
<li>Sitting area</li> <li>Balcony</li> </ul>",
    "numStandardAdults":2,
    "numExtraAdults":1,
    "extraAdultCost":100,
    "canSmoke":false,
    "capacity":10,
    "marketplaceName":null
  }
]
}

```

getVenueRatePlanList

The result from this call will be a [collection](#) of all the rate plans of an venue to which the user has access. This call also accepts the [pagination](#) parameters. The venueId is required, for example {"venueId":10}

Example: Get a specific Venue's Rate Plan List

Request:

```
{"venueId":1}
```

Response:

```

{
  "meta":{
    "totalResults":2,
    "start":0,
    "perPage":null,
    "count":2
  },
  "results":[
    {
      "id":1,
      "name":"Basic Rate Plan",
      "code":"2-1",
      "description":"<p>Basic Room Pan</p> "
    },
    {
      "id":2,
      "name":"Luxurious Plan",
      "code":"2-2",
      "description":"<p><strong>This is bit good:) here &#160;</strong></p> "
    }
  ]
}

```

addItemsToBooking

You can add one or more items to a booking with this API. The venueId and BookingId is required. Multiple items can be added together. There must be at least one additional item.

Parameters

venueId	The unique id of the venue to which the booking belongs	Required Must be a valid number															
bookingId	The unique id of the booking to which the additional items will be added	Required Must be a valid number															
items	<p>Array of multiple items with additional item details</p> <table border="1"> <tr> <td>description</td> <td>The complete description of the additional item</td> <td>String</td> </tr> <tr> <td>quantity</td> <td>The quantity of the additional item</td> <td>Number</td> </tr> <tr> <td>salePrice</td> <td>The sale price per quantity of the additional item. This amount will be interpreted as including or excluding a tax component based on the venue's tax settings.</td> <td>Number</td> </tr> <tr> <td>salePriceHasTax</td> <td>Whether or not the sale price of the additional item has a tax component</td> <td>Boolean</td> </tr> <tr> <td>salePriceTaxId</td> <td>The unique identifier of the venue tax. Use getTaxList api to get the list of venue taxes.</td> <td>Number</td> </tr> </table>	description	The complete description of the additional item	String	quantity	The quantity of the additional item	Number	salePrice	The sale price per quantity of the additional item. This amount will be interpreted as including or excluding a tax component based on the venue's tax settings.	Number	salePriceHasTax	Whether or not the sale price of the additional item has a tax component	Boolean	salePriceTaxId	The unique identifier of the venue tax. Use getTaxList api to get the list of venue taxes.	Number	There must be at least one additional item.
description	The complete description of the additional item	String															
quantity	The quantity of the additional item	Number															
salePrice	The sale price per quantity of the additional item. This amount will be interpreted as including or excluding a tax component based on the venue's tax settings.	Number															
salePriceHasTax	Whether or not the sale price of the additional item has a tax component	Boolean															
salePriceTaxId	The unique identifier of the venue tax. Use getTaxList api to get the list of venue taxes.	Number															

	cost	The cost per quantity of the additional item	Number
	costHasTax	Whether or not the cost of the additional item has a tax component	Boolean
	costCentreId	The unique identifier of the cost centre to which the additional item will be assigned	Number
	costCentreType	The type of cost centre to which the additional item will be assigned	Number
	startDate	Optionally the start date of the additional item, which must fall within the dates of the booking	Timestamp
	endDate	Optionally the end date of the additional item, which must fall within the dates of the booking	Timestamp
	excludedFromCommissions	Whether or not agents receive commission for the additional item	Boolean

Returns

success	Whether or not the items were added to the booking
items	The unique identifiers of the additional items in the same order as the request

Throws

Specific Code: 24140	There must be at least one additional item
Specific Code: 24141	An additional item has invalid data

Example: Add items to booking

Request:

```

{
  "venueId":2,
  "bookingId":2,
  "items":[
    {
      "description":"The complete description of the additional item",
      "quantity":10,
      "salePrice":500,
      "salePriceHasTax":true,
      "salePriceTaxId":2,
      "cost":15,
      "costHasTax":true,
      "costCentreId":5,
      "costCentreType":2,
      "startDate":"2015-01-19 00:00:00 UTC",
      "endDate":"2015-01-22 00:00:00 UTC",
      "excludedFromCommissions":true,
    }
  ]
}

```

Response:

```

{
  "success":true,
  "items":[
    501
  ]
}

```

addPaymentToBooking

We can add the payment details of a booking using this API. The venueId, Booking Id and payment details are required. This will also create a payment and booking invoice.

Parameters

venueId	The unique id of the venue to which the booking belongs	Required Must be a valid number
bookingId	The unique id of the booking to which the payment will be added	Required Must be a valid number

payment	paidDate	The date & time of the payment	Timestamp in UTC	The payment details to add to the booking
	amountPaid	The payment amount	Must be a valid number	
	paymentMethod	The payment method	0=Unknown, 1=Credit Card, 2=BPay, 3=Direct Deposit, 4=PayPal, 5=Cheque, 6=Cash, 7=Custom Gateway, 8=Accounts Receivable, 9=EFTPOS, 10=WriteOff, 11=Point of Sale, 12=Wire Transfer,	
	receiptNum	A receipt number of the payment transaction	string	
	notes	Additional notes about the payment	string	

Returns

success	Whether or not the payment was added to the booking
invoiceId	The unique id of the invoice to which the payment was added
paymentId	The unique identifier of the payment made

Throws

Specific Code: 24136	The payment details are invalid
----------------------	---------------------------------

Example: Add payment to booking

Request:

```
{
  "venueId":2,
  "bookingId":2,
  "payment":{
    "paidDate":"2015-01-22 00:00:00",
    "amountPaid":100,
    "paymentMethod":6,
    "receiptNum":12345,
    "notes":"Note for payment"
  }
}
```

Response:

```
{
  "Success":true,
  "invoiceId":1736,
  "paymentId":758
}
```

addRefundToBooking

We can add a refund to a booking using this API. The venueId, Booking Id and refund details are required. All invoice of the booking will be check for the refunded amount and if the amount is refundable then only the refund amount will be added to invoice.

Parameters

venueId	The unique id of the venue to which the booking belongs	Required Must be a valid number									
bookingId	The unique id of the booking to which the refund will be added	Required Must be a valid number									
refund	<table border="1"> <tr> <td>refundDate</td> <td>The date & time of the refund</td> <td>Timestamp in UTC</td> </tr> <tr> <td>amount</td> <td>The refund amount</td> <td>Must be a valid number</td> </tr> <tr> <td>notes</td> <td>Additional notes about the refund</td> <td>string</td> </tr> </table>	refundDate	The date & time of the refund	Timestamp in UTC	amount	The refund amount	Must be a valid number	notes	Additional notes about the refund	string	The paymentdetails to add to the booking
refundDate	The date & time of the refund	Timestamp in UTC									
amount	The refund amount	Must be a valid number									
notes	Additional notes about the refund	string									

--	--	--

Returns

success	Whether or not the refund was added to the booking	
refundDetails	A collection of invoiceId and refundId values	
	invoiceId	The unique id of the invoice
	refundId	The id of the invoice refund

Throws

Specific Code: 24149	The refund details are invalid
Specific Code: 24145	The booking does not have an amount that can be refunded
Specific Code: 24146	Cannot refund more than the total amount payable on a booking
Specific Code: 24147	The refund amount must be greater than zero
Specific Code: 24148	The full refund amount could not be applied to the booking

Example: Add refund to booking

Request:

```
{
  "venueId":2,
  "bookingId":2,
  "refund":{
    "refundDate":"2015-01-22 00:00:00 UTC",
    "amount":100,
    "notes":"Note for refund"
  }
}
```

Response:

```
{
  "Success":true,
  "refundDetails":[
    {
      "invoiceId":1736,
      "refundId":180
    }
  ]
}
```

getTaxList

This API will return all applicable tax list for the venue. venueId is required parameter to get the list of taxes.

Parameters

venueId	The unique identifier of venue to which taxes belong	Must be an integer greater than 0
---------	--	-----------------------------------

Returns

A collection object with the following properties in the results

id	The unique invoice identifier
name	The name of Tax

Example: Get Venues Tax List

Request:

```
{"venueId":2}
```

Response:

```
{
  "meta":{
    "totalResults":1,
    "start":0,
    "perPage":1,
    "count":1
  },
  "results":[
    {
      "id":2,
      "name":"GST"
    }
  ]
}
```

addOrUpdateOpportunity

Parameters

id	The unique identifier of opportunity(Leave empty to add the opportunity to the system.)	Must be an integer
venueId	The unique venue id of opportunity	Required Must be an integer
qualityId	The quality of opportunity	Must be an integer
companyId	The unique company id of opportunity	- Must be an integer - Required when lead belongs to company and id parameter is missing
industryId	The unique industry id of opportunity	- Must be an integer - Required when lead belongs to contact and id

		parameter is missing
sourceId	The unique source id of opportunity	- Must be an integer - Required when the id parameter is missing
confirmedQuoteId	The unique confirmed quote id of opportunity	Must be an integer
confirmedQuoteStatus	The unique cancelled quote id of opportunity	Must be an integer
cancelledQuoteId	The unique cancelled quote id of opportunity	Must be an integer
lostToCompetition	The reason to lost to competition of opportunity	
closedDate	The closed date of opportunity	
companyLeadContactId	The unique contact id of the company contact	- Must be an integer - Required when lead belongs to company and id parameter is missing
contactId	The unique contact id of opportunity	- Must be an integer - Required when lead belongs to contact and id parameter is missing
name	The name for the opportunity	- Required when the id parameter is missing
ownerUserId	The sales person id of opportunity	Must be an integer
typeId	The type of opportunity	- Must be an integer - Required when the id parameter is missing
stageId	The stage of opportunity	- Must be an integer - Required when the id parameter is missing
stageReasonId	The unique stage reason id of opportunity	- Must be an integer
channel	The channel of opportunity	Must be an integer
description	The description for the opportunity	

Returns

success	Whether or not the opportunity was added to the venue
id	The unique id of the opportunity

Throws

Specific Code: 24221	The request is empty
Specific Code: 24222	The opportunity does not exist
Specific Code: 24224	The opportunity details are invalid
Specific Code: 23024	The venue does not exist

This call takes values for a opportunity, and either

1. Updates the values for that opportunity (after you have provided an id in the parameters), or
2. Adds the opportunity to the system (if the id parameter is missing)
 - a. The result of this call will contain the status of the result (either true or false) and the opportunity identifier of the updated or newly created opportunity.}

convertLeadToOpportunity

Parameters

leadId	The unique identifier of lead	Required Must be an integer
venueId	The unique venue id of opportunity	Required Must be an integer
stageId	The stage of opportunity	Required Must be an integer

Returns

success	Whether or not the lead was converted to opportunity or not
---------	---

Throws

Specific Code: 24227	The request is empty
Specific Code: 24228	The lead does not exist

Specific Code: 24233	Only opportunity stageld is allowed
Specific Code: 24234	Invalid lead (Only lead can be converted to opportunity)

Marketplace Namespace (marketplace)

getVenueList

This api call allows you to search the iVvy marketplace for venues that match the following criteria:

- countryCode (required): The 2 letter country code (ISO_3166-1) of the venue
- city (optional): The location city of the venue. Currently one of the following values:
 - brisbane-qld
 - sydney-nsw
- eventTypes (optional): One or more of the following event types for which the venue can provide:
 - 11 = Event
 - 21 = Wedding
 - 31 = Conference
 - 41 = Meeting
- availabilityStartDate (optional): The start date of the period from which to include the function space availability details of the venues. The value must be a string with the format YYYY-MM-DD, for example: 2015-05-20
- availabilityEndDate (optional): The end date of the period from which to include the function space availability details of the venues. The value must be a string with the format YYYY-MM-DD, for example: 2015-05-25

This call also accepts the pagination parameters. By default, only the first 10 venues will be returned.

Example: Find all the venues in Brisbane that can provide weddings. Include their availability from 1st July 2015 to 7th July 2015

Request:

```
{
  "countryCode": "AU",
  "city": "brisbane-qld",
  "eventTypes": [11],
  "availabilityStartDate": "2015-07-01",
  "availabilityEndDate": "2015-07-07"
}
```

Response:

A collection of venues that match the criteria. A single venue will be represented by the following json example:

```
{
  "id": 21,
  "hashId": "1efda3e35a75aab13e8996037d35a79",
}
```

```

    "businessName": "iVvy Conference Centre",
    "businessNumber": 123123,
    "phone": "1300 004 889",
    "fax": "",
    "websiteAddress": "",
    "emailAddress": "james.greig@ivvy.com",
    "description": "<p> Located by the River at Hamilton, this is the closest 5
star, full service Hotel to the Brisbane Cruise Terminal - Portside at Hamilton, the
Airport precinct, Gateway Arterial Bridge linking the Gold Coast to the Sunshine
Coast and is just minutes from the CBD.<br /><br /> Featuring 90 spacious, newly
refurbished and well appointed accommodation rooms, the hotel is an urban escape
perfect for business or leisure travellers alike. Most rooms feature magnificent
views of the widest reach of the Brisbane River spanning from the Brisbane City past
the Brisbane Cruise Terminal and to the Gateway Bridge.<br /><br /> Enjoy the
resort style pool, spa, sauna, gym and complimentary car parking & Wi-Fi for all
delegates, guests and visitors.<br /><br /> From the grandeur of the column free
Hamilton Ballroom which can easily divide into smaller configurations, the intimacy
of the Newstead Room or take advantage of the newly refurbished Executive Boardroom
the Brisbane Riverview Hotel has an option to suit your budget and requirements. The
resort style pool area is a fantastic venue for breakout sessions or lunches. This
is a flexible and well equipped conference venue can cater for intimate boardroom
meeting of 6 people up to large corporate events for up to 300 delegates. <br /><br
/> With expansive river views, Plates Restaurant offers a seasonal menu showcasing
superb produce from Queensland's freshest seafood, international cuisine, and
wood fired steaks and pizzas. It is the perfect place for business or pleasure,
mixing excellent atmosphere with great service.</p> ",
    "checkinTime": "11:00:00",
    "checkoutTime": "14:00:00",
    "childAge": 0,
    "infantAge": 0,
    "currencyCode": "AUD",
    "localeCode": "en_AU",
    "timezone": "Australia/Brisbane",
    "hasSpaces": true,
    "hasAccommodation": true,
    "numMeetingRooms": 0,
    "numAccommodationRooms": 200,
    "maxSpaceArea": null,
    "totalSpaceArea": null,
    "longitude": 153.4065773,
    "latitude": -28.0067947,
    "primaryAddress": {
      "line1": "2 Boston Court",
      "line2": "",
      "line3": "",
      "line4": "",
      "city": "Varsity Lakes",
      "stateCode": "QLD",
      "stateName": null,
      "countryCode": "AU",
      "countryName": null,
      "postalCode": 4227
    },
    "instantBookUrl":
    "http://stagemarketplace.ivvy.com/order/start?v=1efda3e35a75aab13e8996037d35a79",
    "availability": {
      "2015-05-20": {

```

```

        "isAvailable": true
    },
    "2015-05-21": {
        "isAvailable": true
    },
    "2015-05-22": {
        "isAvailable": true
    },
    "2015-05-23": {
        "isAvailable": true
    },
    "2015-05-24": {
        "isAvailable": true
    },
    "2015-05-25": {
        "isAvailable": true
    },
    "2015-05-26": {
        "isAvailable": true
    }
}
}

```

getVenue

The result from this call will be the public details of a specific venue in the iVvy marketplace. The unique venue hash identifier is required, for example {"hashId":"abcdefghijklmnop"}.

This call also accepts the *availabilityStartDate* and *availabilityEndDate* parameters that are described by [getVenueList](#). The behaviour is the same as `getVenueList`, but for only for the specific venue.

Example: Get a specific venue and it's availability from 1st July 2015 to 7th July 2015

Request:

```

{
  "hashId": "1efda3e35a75aabd13e8996037d35a79",
  "availabilityStartDate": "2015-07-01",
  "availabilityEndDate": "2015-07-07"
}

```

Response:

```

{
  "id": 21,
  "hashId": "1efda3e35a75aabd13e8996037d35a79",
  "businessName": "iVvy Conference Centre",
  "businessNumber": 123123,
  "phone": "1300 004 889",
  "fax": "",
  "websiteAddress": "",
  "emailAddress": "james.greig@ivvy.com",
  "description": "<p> Located by the River at Hamilton, this is the closest 5
star, full service Hotel to the Brisbane Cruise Terminal - Portside at Hamilton, the

```

Airport precinct, Gateway Arterial Bridge linking the Gold Coast to the Sunshine Coast and is just minutes from the CBD.

 Featuring 90 spacious, newly refurbished and well appointed accommodation rooms, the hotel is an urban escape perfect for business or leisure travellers alike. Most rooms feature magnificent views of the widest reach of the Brisbane River spanning from the Brisbane City past the Brisbane Cruise Terminal and to the Gateway Bridge.

 Enjoy the resort style pool, spa, sauna, gym and complimentary car parking & Wi-Fi for all delegates, guests and visitors.

 From the grandeur of the column free Hamilton Ballroom which can easily divide into smaller configurations, the intimacy of the Newstead Room or take advantage of the newly refurbished Executive Boardroom the Brisbane Riverview Hotel has an option to suit your budget and requirements. The resort style pool area is a fantastic venue for breakout sessions or lunches. This is a flexible and well equipped conference venue can cater for intimate boardroom meeting of 6 people up to large corporate events for up to 300 delegates.

 With expansive river views, Plates Restaurant offers a seasonal menu showcasing superb produce from Queensland's freshest seafood, international cuisine, and wood fired steaks and pizzas. It is the perfect place for business or pleasure, mixing excellent atmosphere with great service.</p>

```

    "checkinTime": "11:00:00",
    "checkoutTime": "14:00:00",
    "childAge": 0,
    "infantAge": 0,
    "currencyCode": "AUD",
    "localeCode": "en_AU",
    "timezone": "Australia/Brisbane",
    "hasSpaces": true,
    "hasAccommodation": true,
    "numMeetingRooms": 0,
    "numAccommodationRooms": 200,
    "maxSpaceArea": null,
    "totalSpaceArea": null,
    "longitude": 153.4065773,
    "latitude": -28.0067947,
    "primaryAddress": {
      "line1": "2 Boston Court",
      "line2": "",
      "line3": "",
      "line4": "",
      "city": "Varsity Lakes",
      "stateCode": "QLD",
      "stateName": null,
      "countryCode": "AU",
      "countryName": null,
      "postalCode": 4227
    },
    "instantBookUrl":
    "http://stagemarketplace.ivvy.com/order/start?v=1efda3e35a75aabbd13e8996037d35a79",
    "availability": {
      "2015-07-01": {
        "isAvailable": true
      },
      "2015-07-02": {
        "isAvailable": true
      },
      "2015-07-03": {
        "isAvailable": true
      }
    },
  },

```

```

    "2015-07-04": {
      "isAvailable": true
    },
    "2015-07-05": {
      "isAvailable": true
    },
    "2015-07-06": {
      "isAvailable": true
    },
    "2015-07-07": {
      "isAvailable": true
    }
  },
  "videoUrls": ["https://www.youtube.com/embed/rxiPVWurK7Q"],
  "airportName": "Gold Coast (OOL)",
  "airportDistance": 20,
  "starRating": 5,
  "ratingAuthority": 2,
  "maxSpaceCapacity": 100,
  "facilities": [2, 3, 6, 12, 14, 19, 20, 24, 27, 30, 31, 34, 35],
  "mainImage": {
    "url":
"https://s3-ap-southeast-2.amazonaws.com/ap-southeast-2.accounts.ivvy.com/account14/
venues/21/55403b462c0aa.jpg",
    "originalFileName": "main function sapce 2.jpg",
    "tags": [],
    "size": 2647159,
    "contentType": "image/jpeg"
  },
  "marketplaceBannerImage": {
    "url":
"https://s3-ap-southeast-2.amazonaws.com/ap-southeast-2.accounts.ivvy.com/account14/
venues/21/banner/banner.jpg",
    "originalFileName": "banner.jpg",
    "tags": [],
    "size": 2963936,
    "contentType": "image/jpeg"
  },
  "brochureFile": null,
  "imageLibrary": [{
    "url":
"https://s3-ap-southeast-2.amazonaws.com/ap-southeast-2.accounts.ivvy.com/account14/
imageLibrary/5513b498229a6.jpg",
    "originalFileName":
"58443-room-types-5-vibe-hotel-sydney-executive-king.jpg",
    "tags": ["General"],
    "size": 46333,
    "contentType": "image/jpeg",
    "marketplaceEventTypes": [21]
  }],
  "packages": [{
    "marketplaceName": "Day Delegate Package",
    "marketplaceEventTypes": [11, 21],
    "minPax": 30,
    "price": 98,
    "priceMethod": 1,
    "smallDescription": "At iVvy Conference Centre, intimate spaces are

```

combined with state-of-the-art technology and award-winning food. Our Day Delegate Package is ideal for small to medium meetings or events, offering a range of menus for your attendees",

"largeDescription": "<p> At iVvy Conference Centre, intimate spaces are combined with state-of-the-art technology and award-winning food. Our Day Delegate Package is ideal for small to medium meetings or events, offering a range of menus designed by our team of chefs to create a unique dining experience for your attendees.</p> <p> At just \$98 per person, our Day Delegate Package includes the following:</p> Venue hire Pre-installed technical equipment and services including a high definition projector or display, a PA system and a presentation computer Free Wi-Fi Notepads and pens Iced water and sweets Tea and coffee on arrival Morning tea Networking lunch Afternoon tea."

```
    }],
    "functionSpaces": [{
      "marketplaceName": "River Room",
      "marketplaceEventTypes": [11, 21],
      "description": "<p> Ocean and river views are a focal point of the River room. This room has floor-to-ceiling glass with full length curtains if required, and access to a large, central area for meet-and-greets or pre-dinner cocktails. The large projector screen is perfect for meetings or special events and this room has been fully soundproofed for privacy.</p> ",
      "area": null,
      "length": null,
      "width": null,
      "heightMaximum": null,
      "heightMinimum": null,
      "floorPressureMaximum": null,
      "minPax": 30,
      "maxPax": 400,
      "hasLayouts": true,
      "image": {
        "url":
"https://s3-ap-southeast-2.amazonaws.com/ap-southeast-2.accounts.ivvy.com/account14/venues/21/spaces/169/5540362637d5f.jpg",
        "originalFileName": "River Room.jpg",
        "tags": [],
        "size": 67933,
        "contentType": "image/jpeg"
      },
      "layouts": [{
        "type": 7,
        "paxMinimum": null,
        "paxMaximum": 400,
        "timeForSetup": null,
        "timeForTakedown": null
      }, {
        "type": 6,
        "paxMinimum": null,
        "paxMaximum": 150,
        "timeForSetup": null,
        "timeForTakedown": null
      }, {
        "type": 1,
        "paxMinimum": null,
        "paxMaximum": 250,
```

```

        "timeForSetup": null,
        "timeForTakedown": null
    }, {
        "type": 5,
        "paxMinimum": null,
        "paxMaximum": 80,
        "timeForSetup": null,
        "timeForTakedown": null
    }, {
        "type": 8,
        "paxMinimum": null,
        "paxMaximum": 50,
        "timeForSetup": null,
        "timeForTakedown": null
    }, {
        "type": 4,
        "paxMinimum": null,
        "paxMaximum": 100,
        "timeForSetup": null,
        "timeForTakedown": null
    }, {
        "type": 3,
        "paxMinimum": null,
        "paxMaximum": 100,
        "timeForSetup": null,
        "timeForTakedown": null
    }
    ]
}],
"accommodation": [{
    "code": "14-53",
    "marketplaceName": "Studio",
    "description": "<ul><li> A studio apartment sleeps 1-5 and contains a
queen bed plus a sofa that can folded out to a double bed.</li> <li> Rollaways
also available.</li> </ul>",
    "numStandardAdults": 1,
    "numExtraAdults": 1,
    "extraAdultCost": 0,
    "canSmoke": false,
    "capacity": 20,
    "image": {
        "url":
"https://s3-ap-southeast-2.amazonaws.com/ap-southeast-2.accounts.ivvy.com/account14/
venues/21/accommodation/53/5540352c9c2ca.jpg",
        "originalFileName": "Studio.jpg",
        "tags": [],
        "size": 48330,
        "contentType": "image/jpeg"
    }
}
}]
}

```

The following are properties in the example json response above that have special values.

ratingAuthority

One of the following values:

- 1 = AAA rated
- 2 = Self rated

facilities

An array of the following values:

- 1 = Air Conditioning
- 2 = Airport Shuttle
- 3 = Audio Visual
- 4 = BBQ
- 6 = Business Centre
- 7 = Ceremony On Site
- 8 = Child Minding
- 9 = Disabled Access
- 10 = Dry Cleaning
- 11 = Express Checkout
- 12 = Free Parking
- 13 = Gaming Area
- 14 = Gymnasium
- 15 = Internet Access
- 16 = Laundry
- 39 = Liquor License
- 17 = Mobile Bar
- 18 = Open 24 Hours
- 19 = Outdoor Area
- 20 = Parking Available
- 21 = Pay TV
- 22 = Playground
- 23 = Printing Services
- 24 = Public Transport
- 25 = Restaurant On Site
- 26 = Sauna Steam Room
- 27 = Smoking Permitted
- 28 = Spa
- 29 = Staging
- 30 = Street Parking
- 31 = Swimming Pool
- 32 = Tour Desk
- 33 = Undercover Parking
- 34 = Valet Parking
- 35 = Wheelchair Access
- 36 = Wifi Access
- 37 = Outside Catering Allowed

- 38 = BYO Allowed

priceMethod (package pricing)

One of the following values:

- 1 = Per person
- 2 = Flat rate

type (function space layout)

One of the following values:

- 0 = Custom
- 1 = Theatre
- 2 = Classroom
- 3 = U-Shape
- 4 = Cabaret
- 5 = Boardroom
- 6 = Banquet
- 7 = Cocktail
- 8 = Hollow Square

marketplaceEventTypes (packages, function spaces and image library files)

An array of the following values:

- 11 = Event
- 21 = Wedding
- 31 = Conference
- 41 = Meeting

Invoice Namespace (invoice)

getInvoiceList

Parameters

perPage	The number of invoices to get in a single api call	Must be an integer greater than 0
start	The starting result of the page. Note this is zero based (i.e. sending start=0 will start from the first result.)	Must be an integer 0 or greater

Additional [Filter](#) Properties

fromModifiedDate	Filter by Modified Date	iVvy Timestamp Format
toModifiedDate	Filter by Modified Date	iVvy Timestamp Format
venueId	Filter invoices that belong to a specific Venue	Must be an integer greater than 0
refType	Filter by a specific reference type The reference type of the invoice 0 = Custom 1 = Event Registration 2 = Membership Sign Up 3 = Membership Renewal 4 = Venue Booking	Must be an integer

Returns

A collection object with the following properties in the results

id	The unique invoice identifier
reference	The unique reference number of the invoice
title	The title of the invoice
description	The description of the invoice
currency	The currency of the invoice
totalCost	The total of the invoice

totalTaxCost	The tax of the invoice									
amountPaid	The amount paid against the invoice									
toContactEmail	The contact email of the invoice									
toContactName	The contact name of the invoice									
currentStatus	The status of the invoice <ul style="list-style-type: none"> ● 0 = Not Paid ● 1 = Un-confirmed Paid ● 2 = Paid ● 3 = Written Off ● 4 = Cancelled ● 5 = Refunded 									
createdDate	The created date of the invoice									
modifiedDate	The modified date of the invoice									
refType	The reference type of the invoice <ul style="list-style-type: none"> ● 0 = Custom ● 1 = Event Registration ● 2 = Membership Sign Up ● 3 = Membership Renewal ● 4 = Venue Booking 									
refId	The reference Id of the invoice									
taxRateUsed	The tax rate percent applied to invoice									
isTaxCharged	Whether tax charged on the invoice									
paymentDueDate	Payment due date of the invoice									
eventId	Event Identifier to which invoice is belongs to									
venueId	Venue Identifier to which invoice is belongs to									
toContactId	Contact Id against which invoice is created									
toAddress	The "to" Address of the invoice <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">line1</td> <td>Line 1 of the address (part of the "street")</td> </tr> <tr> <td>line2</td> <td>Line 2 of the address (part of the "street")</td> </tr> <tr> <td>line3</td> <td>Line 3 of the address (part of the "street")</td> </tr> <tr> <td>line4</td> <td>Line 4 of the address (part of the "street")</td> </tr> </table>		line1	Line 1 of the address (part of the "street")	line2	Line 2 of the address (part of the "street")	line3	Line 3 of the address (part of the "street")	line4	Line 4 of the address (part of the "street")
line1	Line 1 of the address (part of the "street")									
line2	Line 2 of the address (part of the "street")									
line3	Line 3 of the address (part of the "street")									
line4	Line 4 of the address (part of the "street")									

	city	The city name of the address
	stateCode	The state code of the address (e.g. QLD)
	stateName	The state name of the address (e.g. Queensland)
	countryCode	The country code of the address (e.g. AU)
	countryName	The country name of the address (e.g. Australia)
	postalCode	The postal code of the address
bookingCode	The unique reference code of the booking if refType is 4 (Venue Booking)	

The result from this call will be a [collection](#) of all the invoices the user has access to. This call also accepts the [pagination](#) properties.

getInvoice

Parameters

id	The invoice identifier	Required Must be an integer
----	------------------------	--------------------------------

Returns

id	The unique invoice identifier
reference	The unique reference number of the invoice
title	The title of the invoice
description	The description of the invoice
currency	The currency of the invoice
totalCost	The total of the invoice
totalTaxCost	The tax of the invoice
amountPaid	The amount paid against the invoice

toContactEmail	The contact email of the invoice													
toContactName	The contact name of the invoice													
currentStatus	The status of the invoice <ul style="list-style-type: none"> ● 0 = Not Paid ● 1 = Un-confirmed Paid ● 2 = Paid ● 3 = Written Off ● 4 = Cancelled ● 5 = Refunded 													
createdDate	The created date of the invoice													
modifiedDate	The modified date of the invoice													
refType	The reference type of the invoice <ul style="list-style-type: none"> ● 0 = Custom ● 1 = Event Registration ● 2 = Membership Sign Up ● 3 = Membership Renewal ● 4 = Venue Booking 													
refId	The reference Id of the invoice													
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toAddress	The "to" Address of the invoice <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">line1</td> <td>Line 1 of the address (part of the "street")</td> </tr> <tr> <td>line2</td> <td>Line 2 of the address (part of the "street")</td> </tr> <tr> <td>line3</td> <td>Line 3 of the address (part of the "street")</td> </tr> <tr> <td>line4</td> <td>Line 4 of the address (part of the "street")</td> </tr> <tr> <td>city</td> <td>The city name of the address</td> </tr> <tr> <td>stateCode</td> <td>The state code of the address (e.g. QLD)</td> </tr> </table>		line1	Line 1 of the address (part of the "street")	line2	Line 2 of the address (part of the "street")	line3	Line 3 of the address (part of the "street")	line4	Line 4 of the address (part of the "street")	city	The city name of the address	stateCode	The state code of the address (e.g. QLD)
line1	Line 1 of the address (part of the "street")													
line2	Line 2 of the address (part of the "street")													
line3	Line 3 of the address (part of the "street")													
line4	Line 4 of the address (part of the "street")													
city	The city name of the address													
stateCode	The state code of the address (e.g. QLD)													

	<table border="1"> <tr> <td>stateName</td> <td>The state name of the address (e.g. Queensland)</td> </tr> <tr> <td>countryCode</td> <td>The country code of the address (e.g. AU)</td> </tr> <tr> <td>countryName</td> <td>The country name of the address (e.g. Australia)</td> </tr> <tr> <td>postalCode</td> <td>The postal code of the address</td> </tr> </table>	stateName	The state name of the address (e.g. Queensland)	countryCode	The country code of the address (e.g. AU)	countryName	The country name of the address (e.g. Australia)	postalCode	The postal code of the address										
stateName	The state name of the address (e.g. Queensland)																		
countryCode	The country code of the address (e.g. AU)																		
countryName	The country name of the address (e.g. Australia)																		
postalCode	The postal code of the address																		
items	<p>List of invoice items</p> <p>Item Details</p> <table border="1"> <tr> <td>description</td> <td>The description of the item</td> </tr> <tr> <td>quantity</td> <td>Quantity of the item</td> </tr> <tr> <td>unitCost</td> <td>The unit cost of the item</td> </tr> <tr> <td>totalCost</td> <td>The total cost of the item</td> </tr> <tr> <td>totalTaxCost</td> <td>The tax of the item</td> </tr> <tr> <td>amountPaid</td> <td>The amount paid of the item'</td> </tr> <tr> <td>refType</td> <td>The reference type of the item</td> </tr> </table>	description	The description of the item	quantity	Quantity of the item	unitCost	The unit cost of the item	totalCost	The total cost of the item	totalTaxCost	The tax of the item	amountPaid	The amount paid of the item'	refType	The reference type of the item				
description	The description of the item																		
quantity	Quantity of the item																		
unitCost	The unit cost of the item																		
totalCost	The total cost of the item																		
totalTaxCost	The tax of the item																		
amountPaid	The amount paid of the item'																		
refType	The reference type of the item																		
payments	<p>List of payments of the invoice</p> <p>Payment Details</p> <table border="1"> <tr> <td>paymentId</td> <td>The identifier of the payment</td> </tr> <tr> <td>receiptNum</td> <td>The receipt number of the payment</td> </tr> <tr> <td>amountPaid</td> <td>The amount paid of the payment</td> </tr> <tr> <td>notes</td> <td>The notes of the payment</td> </tr> <tr> <td>chequeNumber</td> <td>The chequeNumber of the payment</td> </tr> <tr> <td>paymentMethod</td> <td>The payment method of the payment</td> </tr> <tr> <td>paidDate</td> <td>The paid timestamp of the payment</td> </tr> <tr> <td>feePercentage</td> <td>The percentage fee included in amountPaid</td> </tr> <tr> <td>feeAmount</td> <td>The fee amount included in amountPaid</td> </tr> </table> <p>Note about fee:</p>	paymentId	The identifier of the payment	receiptNum	The receipt number of the payment	amountPaid	The amount paid of the payment	notes	The notes of the payment	chequeNumber	The chequeNumber of the payment	paymentMethod	The payment method of the payment	paidDate	The paid timestamp of the payment	feePercentage	The percentage fee included in amountPaid	feeAmount	The fee amount included in amountPaid
paymentId	The identifier of the payment																		
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notes	The notes of the payment																		
chequeNumber	The chequeNumber of the payment																		
paymentMethod	The payment method of the payment																		
paidDate	The paid timestamp of the payment																		
feePercentage	The percentage fee included in amountPaid																		
feeAmount	The fee amount included in amountPaid																		

	If the payment is applied to multiple invoices, the fee amount is applied to the first invoice only.
--	--

Throws

Specific Code: 24137	Unable to find invoice
----------------------	------------------------

The invoice identifier must be provided as part of this call to fetch the specific invoice. E.g. {"id":1} can be used to fetch the details of an invoice with the identifier of 1.

getOptions

The invoice and item response contains a field called "refType". These are constants in the iVvy system to match the invoice or item to a specific entity. To find out a description of what these constants refer to, you can make a call to the api to get the complete list

Parameters

No parameters required.

Returns

invoiceRefTypes	The refType identifier and description of refTypes found in the invoice response.
invoiceLineRefTypes	The refType identifier and description of refTypes found in the items of the invoice response.
paymentMethods	The complete list of payment methods that might appear against a payment made on an invoice

Account Namespace (account)

addOrUpdateCostCenter

Add or update cost center details to the account. The cost center name and code are required.

Parameters

id	The unique identifier of the cost center (Leave empty to add the cost center to the account.)	Must be a valid number
name	The name of the cost center	Required String Value
code	The code of the cost center	Required String Value
description	The complete description of the cost center	Optional String Value

Returns

success	Whether or not the cost center was added to the account
id	The unique identifier of the cost center

Throws

Specific Code: 24150	Account does not exist
Specific Code: 24150	The cost centers details are invalid

Example: Add a cost center to an account

Request:

```
{
  "name": "test cost center",
  "code": "AB12",
  "description": "The complete description of the cost center"
}
```

Response:

```
{
  "Success": true,
  "Id": 5452
}
```

getCostCenterList

Fetches the list of cost centers in the account. No request params required.

Returns

id	The unique identifier of the cost center
name	The name of the cost center
code	The code of the cost center
description	The complete description of the cost center
defaultType	Set if one of the default cost centers

Throws

Specific Code: 24150	Account does not exist
----------------------	------------------------

Example: get cost center list of the account

Response:

```
{
  "meta":{
    "totalResults":2,
    "start":0,
    "perPage":2,
    "count":2
  },
  "results":[
    {
      "id":5451,
      "name":"test cost center",
      "code":2,
      "description":null,
      "defaultType":null
    },
    {
      "id":5452,
      "name":"test cost center",
      "code":"AB12",
      "description":null,
      "defaultType":null
    }
  ]
}
```

getEmailLogList

The result from this call will be a [collection](#) of all the email logs of specific account to

which the user has access. This call also accepts the [pagination](#) parameters.

Returns

id	The unique identifier of the email
contactId	The contact id of of the email
userId	The user id of of the email
eventId	The event id of of the email
type	The type of of the email
refType	The reference type id of of the email
refId	The reference id of of the email
from	The from address of of the email
to	The to address of the email
bcc	The bcc of the email
subject	The subject of the email
body	The body of the email
sentTime	The sent time of the email in UTC
success	Whether or not email has been sent or not

Throws

Specific Code: 24151	Account does not exist
----------------------	------------------------

Example: Get a specific account's Email Logs List

Response:

```
{
  "meta": {
    "totalResults": 1,
    "start": 0,
    "perPage": 100,
    "count": 1
  },
  "results": [
    {
      "id": 2,
      "contactId": 25943,
      "userId": null,
      "eventId": 50,
      "type": 1,

```

```
"refType": 5,  
"refId": 184133,  
"from": "5U2ZD@V5P7T.com",  
"to": "8X2PEZ@FF1UAL.com",  
"bcc": null,  
"subject": "CCWXL3A8",  
"body": "3N5RU3V5",  
"sentTime": "2013-07-04 07:18:29 UTC",  
"success": true  
}  
]  
}
```

refType:

One of the following values:

- 0 = Other
- 1 = Contact
- 2 = Event
- 3 = Membership
- 4 = Abstract
- 5 = Registration
- 6 = Invoice
- 7 = Author
- 8 = Task
- 9 = Credit Note
- 10 = Survey
- 11 = Venue Marketplace
- 12 = Booking
- 13 = Company
- 14 = Floor Plan

type:

One of the following values:

- 0 = Unknown
- 1 = Completed Event Registration
- 2 = Completed Event Registration (Waiting on Payment)
- 3 = Accommodation Confirmation
- 4 = Travel Confirmation
- 5 = Registration Payment Reminder
- 8 = Exhibitor Final Confirmation
- 11 = Abstract/Paper Submission Created
- 12 = Abstract/Paper Changes Requested
- 13 = Abstract/Paper Submission Rejected
- 14 = Abstract/Paper Submission Accepted
- 15 = Abstract/Paper Reviewer Added
- 16 = Contact Changed

- 17 = Hotel Changed
- 18 = Flight Changed
- 19 = Tickets Changed
- 20 = Exhibitor Confirmation
- 21 = Session Confirmation
- 22 = Session Changed
- 23 = Abstract Changed
- 24 = Final Confirmation
- 30 = Event Feedback
- 31 = Event Reminder
- 26 = Abstract
- 27 = API Leadtracker
- 28 = Contact Subscribed
- 29 = Transfer Changed
- 32 = Incomplete Registration
- 1000 = Password Reset
- 1001 = Notification
- 1002 = Task
- 1500 = Statement
- 1501 = Invoice
- 1502 = Credit Note
- 2000 = Membership Signup
- 2001 = Membership Renewal
- 2002 = Renewal Notice
- 3000 = Survey
- 1003 = New Company Added
- 4000 = Venue Booking Document
- 4001 = Venue Booking Floor Plan

Appendix A: Algorithms/Code

Calculating MD5

The body of the request must have an MD5 hash calculated to ensure the body has not been altered during transport. It is important this is calculated the same as the iVvy API server to ensure the signature is calculated correctly and the request is authorized.

Bash (Linux Command Line)

```
$ echo -e "string to hash" | md5sum
2fcc83d76f9b2d8ef372271d807a3364 -
```

Note that any white space either side of the string will also be hashed, creating a different hash

```
$ echo -e "  string to hash  " | md5sum
6b9202a3b05bd22803fe54767b30ee10 -
```

It is important you strip off any whitespace before hashing the string.

Note also it is possible to hash an empty string (in the case there is no body in the request)...

```
$ echo -e -n "" | md5sum
d41d8cd98f00b204e9800998ecf8427e -
```

C#

```
// Convert a string to a MD5 hash
static private string GetMd5Hash(string input) {
    MD5 md5Hash = MD5.Create();
    byte[] data = md5Hash.ComputeHash(Encoding.UTF8.GetBytes(input));
    return ByteToString(data);
}

// Helper function to convert a byte array to a string.
static private string ByteToString(byte[] data) {
    StringBuilder sBuilder = new StringBuilder();
    for (int i = 0; i < data.Length; i++) {
        sBuilder.Append(data[i].ToString("x2"));
    }
    return sBuilder.ToString();
}
```

Java

```
import java.security.*;
import java.io.File;
import java.io.FileReader;
```

```

import java.io.IOException;

public class MD5Test
{
    public static void main (String args[]) throws Exception {
        String s = "string to hash";
        MessageDigest md = MessageDigest.getInstance("MD5");
        byte[] bytesOfMessage = s.getBytes("UTF-8");
        byte[] thedigest = md.digest(bytesOfMessage);
        System.out.println(

javax.xml.bind.DatatypeConverter.printHexBinary(thedigest).toLowerCase());
    }
}

```

JavaScript

```

<script
src="http://crypto-js.googlecode.com/svn/tags/3.1.2/build/rollups/md5.js"></script>
<script>
    var hash = CryptoJS.MD5("string to hash\n");
    alert("" + hash);
</script>

```

Nodejs

This code assumes you have the crypto-js library installed (npm install crypto-js)

```

$ cat md5.js
var CryptoJS = require('crypto-js');
var hash = CryptoJS.MD5('string to hash\n');
console.log("" + hash);

$ node md5.js
2fcc83d76f9b2d8ef372271d807a3364

```

Objective-C

MD5 functionality can be included in IOS code by first adding the CommonCrypto library to your target, and including the following function in your AppDelegate (or appropriate class)

```

#import <CommonCrypto/CommonDigest.h>
...
+(NSString*) md5:(NSString*)input
{
    const char *cInput = [input UTF8String];
    unsigned char digest[CC_MD5_DIGEST_LENGTH];
    CC_MD5(cInput, strlen(cInput), digest);
    NSMutableString *output = [NSMutableString
stringWithCapacity:CC_MD5_DIGEST_LENGTH * 2];

```

```

        for (int i = 0; i < CC_MD5_DIGEST_LENGTH; i++) {
            [output appendFormat:@"%02x", digest[i]];
        }
        return output;
    }
    ...

```

PHP

```
echo md5('string to hash\n');
```

HMAC-SHA1

Bash

The openssl package available in most linux distributions include a way of creating the HMAC-SHA1 string from the command line...

```
echo -n "string to sign" | openssl dgst -sha1 -hmac "my secret key"
(stdin)= a993876ea1218921a1c8551923473da7b310dfae
```

C#

```

Encoding encoding = Encoding.UTF8;
byte[] secretBytes = encoding.GetBytes("my secret key");
HMACSHA1 hmacsha1 = new HMACSHA1(secretBytes);
hmacsha1.ComputeHash(encoding.GetBytes("string to sign"));
byte[] data = hmacsha1.Hash;

```

Javascript

Cryptographic functions are available from the CryptJS library at <https://code.google.com/p/crypto-js/>.

```

var stringToSign = "string to sign";
var secret = "my secret key";
var signature = CryptoJS.HmacSHA1(stringToSign, secret);

```

NodeJS

This code assumes you have the crypto-js library installed (npm install crypto-js)

```

$ cat hmacsha1.js
var CryptoJS = require('crypto-js'),
    message = "string to sign",
    secret = "my secret key",
    sig = CryptoJS.HmacSHA1(message, secret);
console.log("" + sig);

$ node hmacsha1.js
a993876ea1218921a1c8551923473da7b310dfae

```

Objective-C

HMAC-SHA1 functionality can be included in IOS code by first adding the CommonCrypto library to your target, and including the following function in your AppDelegate (or appropriate class)

```
#import <CommonCrypto/CommonDigest.h>
...
+(NSString*) hmac_sha1:(NSString*)input usingSecret:(NSString*)key
{
    const char *cKey = [key UTF8String];
    const char *cInput = [input UTF8String];
    unsigned char digest[CC_SHA1_DIGEST_LENGTH];
    if (cKey == nil || cInput == nil) {
        return @"";
    }
    NSMutableString *output = [NSMutableString
stringWithCapacity:CC_SHA1_DIGEST_LENGTH * 2];
    CCHmac(kCCHmacAlgSHA1, cKey, strlen(cKey), cInput, strlen(cInput), digest);
    for (int i = 0; i < CC_SHA1_DIGEST_LENGTH; i++) {
        [output appendFormat:@"%02x", digest[i]];
    }
    return output;
}

...
```

PHP

Generating the HMAC-SHA1 in PHP can be done using the following code.

```
<?php
$stringToSign = "string to sign";
$keySecret = "my secret key";
$signature = hash_hmac("sha1", $stringToSign, $keySecret);
echo $signature;
?>
```

This will generate an encrypted hash of the string. In this case the string will be

```
a993876ea1218921a1c8551923473da7b310dfae
```

Ruby

Start up the 'irb' and try the following

```
irb(main):001:0> require('openssl')
=> true
irb(main):002:0> OpenSSL::HMAC.hexdigest('sha1', 'my secret key', 'string to sign')
=> "a993876ea1218921a1c8551923473da7b310dfae"
```

JSON Encoding

JSON (JavaScript Object Notation) is an efficient way to describe data structures in a text document, that is easy for computers to parse as well as humans to read. The best description of JSON is from the website. <http://json.org/>.

Timestamp Format

The iVvy API uses a timestamp format to represent dates and times. Every date used in the API is in UTC. It is up to the consumer of the API to convert the time to the correct timezone of the final recipient of the data. The format is a simple text-based format in the following form:

```
yyyy-mm-dd HH:mm:ss
```

Where

- yyyy = The 4 digit year of the date
- mm = The two digit month of the date, where January = 01 and December = 12
- dd = The two digit day of the month
- HH = The two digit hour
- mm = The two digit minute
- ss = The two digit second

Date Format

The iVvy API uses a date format to represent dates. The format is a simple text-based format in the following form:

```
yyyy-mm-dd
```

Where

- yyyy = The 4 digit year of the date
- mm = The two digit month of the date, where January = 01 and December = 12
- dd = The two digit day of the month

URLEncoding

To help pass special or reserved characters through URL's to the application, they must first be urlencoded. Most platforms provide such a feature. Following is a limited list of reserved characters you can provide the encoding to. Note this is NOT

a comprehensive list, but a limited set provided for example only. For a more comprehensive list, see http://www.w3schools.com/tags/ref_urlencode.asp

Character	Encoded
<space>	%20
?	%3F
&	%26
"	%22
%	%25
/	%2F
=	%3D
+	%2B

Timezone List

Timezone	Value
(UTC-11:00) Midway	Pacific/Midway
(UTC-11:00) Niue	Pacific/Niue
(UTC-11:00) Pago Pago	Pacific/Pago_Pago
(UTC-10:00) Hawaii Time	US/Hawaii
(UTC-10:00) Rarotonga	Pacific/Rarotonga
(UTC-10:00) Tahiti	Pacific/Tahiti
(UTC-09:30) Marquesas	Pacific/Marquesas
(UTC-09:00) Alaska Time	US/Alaska
(UTC-09:00) Gambier	Pacific/Gambier
(UTC-08:00) Los Angeles	America/Los_Angeles
(UTC-08:00) Tijuana	America/Tijuana
(UTC-08:00) Vancouver	America/Vancouver
(UTC-08:00) Whitehorse	America/Whitehorse
(UTC-08:00) Pitcairn	Pacific/Pitcairn

(UTC-07:00) Arizona	US/Arizona
(UTC-07:00) Chihuahua, Mazatlan	America/Chihuahua
(UTC-07:00) Dawson Creek	America/Dawson_Creek
(UTC-07:00) Edmonton	America/Edmonton
(UTC-07:00) Hermosillo	America/Hermosillo
(UTC-07:00) Yellowknife	America/Yellowknife
(UTC-06:00) Belize	America/Belize
(UTC-06:00) Mexico City	America/Mexico_City
(UTC-06:00) Regina	America/Regina
(UTC-06:00) Tegucigalpa	America/Tegucigalpa
(UTC-06:00) Winnipeg	America/Winnipeg
(UTC-06:00) Costa Rica	America/Costa_Rica
(UTC-06:00) Easter Island	Chile/EasterIsland
(UTC-03:00) Salvador	America/EI_Salvador
(UTC-06:00) Galapagos	Pacific/Galapagos
(UTC-06:00) Guatemala	America/Guatemala
(UTC-06:00) Managua	America/Managua
(UTC-05:00) Bogota	America/Bogota
(UTC-05:00) Cayman	America/Cayman
(UTC-05:00) Iqaluit	America/Iqaluit
(UTC-05:00) Montreal	America/Montreal
(UTC-05:00) Toronto	America/Toronto
(UTC-05:00) Grand Turk	America/Grand_Turk
(UTC-05:00) Guayaquil	America/Guayaquil
(UTC-05:00) Havana	America/Havana
(UTC-05:00) Jamaica	America/Jamaica
(UTC-05:00) Lima	America/Lima
(UTC-05:00) Nassau	America/Nassau
(UTC-05:00) Panama	America/Panama
(UTC-05:00) Port-au-Prince	America/Port-au-Prince
(UTC-05:00) Rio Branco	America/Rio_Branco
(UTC-04:30) Caracas	America/Caracas
(UTC-04:00) Antigua	America/Antigua
(UTC-04:00) Asuncion	America/Asuncion

(UTC-04:00) Atlantic Time - Halifax	America/Halifax
(UTC-04:00) Barbados	America/Barbados
(UTC-04:00) Bermuda	Atlantic/Bermuda
(UTC-04:00) Boa Vista	America/Boa_Vista
(UTC-04:00) Campo Grande	America/Campo_Grande
(UTC-04:00) Cuiaba	America/Cuiaba
(UTC-04:00) Curacao	America/Curacao
(UTC-04:00) Guyana	America/Guyana
(UTC-04:00) La Paz	America/La_Paz
(UTC-04:00) Manaus	America/Manaus
(UTC-04:00) Martinique	America/Martinique
(UTC-04:00) Palmer	Antarctica/Palmer
(UTC-04:00) Port of Spain	America/Port_of_Spain
(UTC-04:00) Porto Velho	America/Porto_Velho
(UTC-04:00) Puerto Rico	America/Puerto_Rico
(UTC-04:00) Santiago	America/Santiago
(UTC-04:00) Santo Domingo	America/Santo_Domingo
(UTC-04:00) Thule	America/Thule
(UTC-03:30) Newfoundland Time - St. Johns	America/St_Johns
(UTC-03:00) Araguaina	America/Araguaina
(UTC-03:00) Belem	America/Belem
(UTC-03:00) Buenos Aires	America/Buenos_Aires
(UTC-03:00) Cayenne	America/Cayenne
(UTC-03:00) Fortaleza	America/Fortaleza
(UTC-03:00) Godthab	America/Godthab
(UTC-03:00) Maceio	America/Maceio
(UTC-03:00) Miquelon	America/Miquelon
(UTC-03:00) Montevideo	America/Montevideo
(UTC-03:00) Paramaribo	America/Paramaribo
(UTC-03:00) Recife	America/Recife
(UTC-03:00) Rothera	Antarctica/Rothera
(UTC-03:00) Sao Paulo	America/Sao_Paulo
(UTC-03:00) Stanley	Atlantic/Stanley

(UTC-02:00) Noronha	America/Noronha Brazil/DeNoronha
(UTC-02:00) South Georgia	Atlantic/South_Georgia
(UTC-01:00) Azores	Atlantic/Azores
(UTC-01:00) Cape Verde	Atlantic/Cape_Verde
(UTC-01:00) Scoresbysund	America/Scoresbysund
(UTC+00:00) Abidjan	Africa/Abidjan
(UTC+00:00) Accra	Africa/Accra
(UTC+00:00) Bamako	Africa/Bamako
(UTC+00:00) Banjul	Africa/Banjul
(UTC+00:00) Bissau	Africa/Bissau
(UTC+00:00) Canary Islands	Atlantic/Canary
(UTC+00:00) Casablanca	Africa/Casablanca
(UTC+00:00) Conakry	Africa/Conakry
(UTC+00:00) Dakar	Africa/Dakar
(UTC+00:00) Danmarkshavn	America/Danmarkshavn
(UTC+00:00) Dublin	Europe/Dublin
(UTC+00:00) El Aaiun	Africa/El_Aaiun
(UTC+00:00) Faeroe	Atlantic/Faeroe
(UTC+00:00) Freetown	Africa/Freetown
(UTC+00:00) Coordinated Universal Time	UTC
(UTC+00:00) Lisbon	Europe/Lisbon
(UTC+00:00) Lome	Africa/Lome
(UTC+00:00) London	Europe/London
(UTC+00:00) Monrovia	Africa/Monrovia
(UTC+00:00) Nouakchott	Africa/Nouakchott
(UTC+00:00) Ouagadougou	Africa/Ouagadougou
(UTC+00:00) Reykjavik	Atlantic/Reykjavik
(UTC+00:00) Sao Tome	Africa/Sao_Tome
(UTC+00:00) St Helena	Atlantic/St_Helena
(UTC+01:00) Algiers	Africa/Algiers
(UTC+01:00) Amsterdam	Europe/Amsterdam
(UTC+01:00) Andorra	Europe/Andorra
(UTC+01:00) Bangui	Africa/Bangui
(UTC+01:00) Berlin	Europe/Berlin

(UTC+01:00) Brazzaville	Africa/Brazzaville
(UTC+01:00) Brussels	Europe/Brussels
(UTC+01:00) Budapest	Europe/Budapest
(UTC+01:00) Belgrade	Europe/Belgrade
(UTC+01:00) Prague	Europe/Prague
(UTC+01:00) Ceuta	Africa/Ceuta
(UTC+01:00) Copenhagen	Europe/Copenhagen
(UTC+01:00) Douala	Africa/Douala
(UTC+01:00) Gibraltar	Europe/Gibraltar
(UTC+01:00) Kinshasa	Africa/Kinshasa
(UTC+01:00) Lagos	Africa/Lagos
(UTC+01:00) Libreville	Africa/Libreville
(UTC+01:00) Luanda	Africa/Luanda
(UTC+01:00) Luxembourg	Europe/Luxembourg
(UTC+01:00) Madrid	Europe/Madrid
(UTC+01:00) Malabo	Africa/Malabo
(UTC+01:00) Malta	Europe/Malta
(UTC+01:00) Monaco	Europe/Monaco
(UTC+01:00) Ndjamena	Africa/Ndjamena
(UTC+01:00) Niamey	Africa/Niamey
(UTC+01:00) Oslo	Europe/Oslo
(UTC+01:00) Paris	Europe/Paris
(UTC+01:00) Porto-Novo	Africa/Porto-Novo
(UTC+01:00) Rome	Europe/Rome
(UTC+01:00) Stockholm	Europe/Stockholm
(UTC+01:00) Tirane	Europe/Tirane
(UTC+01:00) Tunis	Africa/Tunis
(UTC+01:00) Vienna	Europe/Vienna
(UTC+01:00) Warsaw	Europe/Warsaw
(UTC+01:00) Windhoek	Africa/Windhoek
(UTC+01:00) Zurich	Europe/Zurich
(UTC+02:00) Amman	Asia/Amman
(UTC+02:00) Athens	Europe/Athens
(UTC+02:00) Beirut	Asia/Beirut

(UTC+02:00) Blantyre	Africa/Blantyre
(UTC+02:00) Bucharest	Europe/Bucharest
(UTC+02:00) Bujumbura	Africa/Bujumbura
(UTC+02:00) Cairo	Africa/Cairo
(UTC+02:00) Chisinau	Europe/Chisinau
(UTC+02:00) Damascus	Asia/Damascus
(UTC+02:00) Gaborone	Africa/Gaborone
(UTC+02:00) Gaza	Asia/Gaza
(UTC+02:00) Harare	Africa/Harare
(UTC+02:00) Helsinki	Europe/Helsinki
(UTC+02:00) Istanbul	Asia/Istanbul Europe/Istanbul
(UTC+02:00) Jerusalem	Asia/Jerusalem
(UTC+02:00) Johannesburg	Africa/Johannesburg
(UTC+02:00) Kiev	Europe/Kiev
(UTC+02:00) Kigali	Africa/Kigali
(UTC+02:00) Lubumbashi	Africa/Lubumbashi
(UTC+02:00) Lusaka	Africa/Lusaka
(UTC+02:00) Maputo	Africa/Maputo
(UTC+02:00) Maseru	Africa/Maseru
(UTC+02:00) Mbabane	Africa/Mbabane
(UTC+02:00) Nicosia	Asia/Nicosia Europe/Nicosia
(UTC+02:00) Riga	Europe/Riga
(UTC+02:00) Sofia	Europe/Sofia
(UTC+02:00) Tallinn	Europe/Tallinn
(UTC+02:00) Tripoli	Africa/Tripoli
(UTC+02:00) Vilnius	Europe/Vilnius
(UTC+03:00) Addis Ababa	Africa/Addis_Ababa
(UTC+03:00) Aden	Asia/Aden
(UTC+03:00) Antananarivo	Indian/Antananarivo
(UTC+03:00) Asmera	Africa/Asmera
(UTC+03:00) Baghdad	Asia/Baghdad
(UTC+03:00) Bahrain	Asia/Bahrain
(UTC+03:00) Comoro	Indian/Comoro
(UTC+03:00) Dar es Salaam	Africa/Dar_es_Salaam

(UTC+03:00) Djibouti	Africa/Djibouti
(UTC+03:00) Kampala	Africa/Kampala
(UTC+03:00) Khartoum	Africa/Khartoum
(UTC+03:00) Kuwait	Asia/Kuwait
(UTC+03:00) Mayotte	Indian/Mayotte
(UTC+03:00) Minsk	Europe/Minsk
(UTC+03:00) Mogadishu	Africa/Mogadishu
(UTC+03:00) Kaliningrad	Europe/Kaliningrad
(UTC+03:00) Nairobi	Africa/Nairobi
(UTC+03:00) Qatar	Asia/Qatar
(UTC+03:00) Riyadh	Asia/Riyadh
(UTC+03:00) Syowa	Antarctica/Syowa
(UTC+03:30) Tehran	Asia/Tehran
(UTC+04:00) Baku	Asia/Baku
(UTC+04:00) Dubai	Asia/Dubai
(UTC+04:00) Mahe	Indian/Mahe
(UTC+04:00) Mauritius	Indian/Mauritius
(UTC+04:00) Moscow	Europe/Moscow
(UTC+04:00) Samara	Europe/Samara
(UTC+04:00) Muscat	Asia/Muscat
(UTC+04:00) Reunion	Indian/Reunion
(UTC+04:00) Tbilisi	Asia/Tbilisi
(UTC+04:00) Yerevan	Asia/Yerevan
(UTC+04:30) Kabul	Asia/Kabul
(UTC+05:00) Aqtau	Asia/Aqtau
(UTC+05:00) Aqtobe	Asia/Aqtobe
(UTC+05:00) Ashgabat	Asia/Ashgabat
(UTC+05:00) Dushanbe	Asia/Dushanbe
(UTC+05:00) Karachi	Asia/Karachi
(UTC+05:00) Kerguelen	Indian/Kerguelen
(UTC+05:00) Maldives	Indian/Maldives
(UTC+05:00) Mawson	Antarctica/Mawson
(UTC+05:00) Tashkent	Asia/Tashkent
(UTC+05:30) Colombo	Asia/Colombo

(UTC+05:45) Katmandu	Asia/Katmandu
(UTC+06:00) Almaty	Asia/Almaty
(UTC+06:00) Bishkek	Asia/Bishkek
(UTC+06:00) Chagos	Indian/Chagos
(UTC+06:00) Dhaka	Asia/Dhaka
(UTC+06:00) Yekaterinburg	Asia/Yekaterinburg
(UTC+06:00) Thimphu	Asia/Thimphu
(UTC+06:00) Vostok	Antarctica/Vostok
(UTC+06:30) Cocos	Indian/Cocos
(UTC+06:30) Rangoon	Asia/Rangoon
(UTC+07:00) Bangkok	Asia/Bangkok
(UTC+07:00) Christmas	Indian/Christmas
(UTC+07:00) Davis	Antarctica/Davis
(UTC+07:00) Hovd	Asia/Hovd
(UTC+07:00) Jakarta	Asia/Jakarta
(UTC+07:00) Omsk, Novosibirsk	Asia/Novosibirsk
(UTC+07:00) Phnom Penh	Asia/Phnom_Penh
(UTC+07:00) Vientiane	Asia/Vientiane
(UTC+08:00) Brunei	Asia/Brunei
(UTC+08:00) Casey	Antarctica/Casey
(UTC+08:00) Choibalsan	Asia/Choibalsan
(UTC+08:00) Hong Kong	Asia/Hong_Kong
(UTC+08:00) Kuala Lumpur	Asia/Kuala_Lumpur
(UTC+08:00) Macau	Asia/Macau
(UTC+08:00) Makassar	Asia/Makassar
(UTC+08:00) Manila	Asia/Manila
(UTC+08:00) Krasnoyarsk	Asia/Krasnoyarsk
(UTC+08:00) Singapore	Asia/Singapore
(UTC+08:00) Taipei	Asia/Taipei
(UTC+08:00) Ulaanbaatar	Asia/Ulaanbaatar
(UTC+08:00) Perth	Australia/Perth
(UTC+09:00) Dili	Asia/Dili
(UTC+09:00) Jayapura	Asia/Jayapura
(UTC+09:00) Irkutsk	Asia/Irkutsk

(UTC+09:00) Palau	Pacific/Palau
(UTC+09:00) Pyongyang	Asia/Pyongyang
(UTC+09:00) Seoul	Asia/Seoul
(UTC+09:00) Tokyo	Asia/Tokyo
(UTC+09:30) Adelaide	Australia/Adelaide
(UTC+09:30) Darwin	Australia/Darwin
(UTC+10:00) Dumont D'Urville	Antarctica/DumontDUrville
(UTC+10:00) Brisbane	Australia/Brisbane
(UTC+10:00) Canberra	Australia/Canberra
(UTC+10:00) Hobart	Australia/Hobart
(UTC+10:00) Melbourne	Australia/Melbourne
(UTC+10:00) Sydney	Australia/Sydney
(UTC+10:00) Guam	Pacific/Guam
(UTC+10:00) Yakutsk	Asia/Yakutsk
(UTC+10:00) Port Moresby	Pacific/Port_Moresby
(UTC+10:00) Saipan	Pacific/Saipan
(UTC+10:00) Truk	Pacific/Truk
(UTC+10:30 Lord Howe Island)	Australia/Lord_Howe
(UTC+11:00) Efate	Pacific/Efate
(UTC+11:00) Guadalcanal	Pacific/Guadalcanal
(UTC+11:00) Kosrae	Pacific/Kosrae
(UTC+11:00) Noumea	Pacific/Noumea
(UTC+11:00) Ponape	Pacific/Ponape
(UTC+11:30) Norfolk	Pacific/Norfolk
(UTC+12:00) Auckland	Pacific/Auckland
(UTC+12:00) Fiji	Pacific/Fiji
(UTC+12:00) Funafuti	Pacific/Funafuti
(UTC+12:00) Kwajalein	Pacific/Kwajalein
(UTC+12:00) Majuro	Pacific/Majuro
(UTC+12:00) Magadan	Asia/Magadan
(UTC+12:00) Nauru	Pacific/Nauru
(UTC+12:00) Tarawa	Pacific/Tarawa
(UTC+12:00) Wake	Pacific/Wake
(UTC+12:00) Wallis	Pacific/Wallis

(UTC+13:00) Apia	Pacific/Apia
(UTC+13:00) Enderbury	Pacific/Enderbury
(UTC+13:00) Fakaofu	Pacific/Fakaofu
(UTC+13:00) Tongatapu	Pacific/Tongatapu
(UTC+14:00) Kiritimati	Pacific/Kiritimati