Sales Order API Documentation

Introduction

This document is to be used by 3rd party applications for adding sales orders to Intact iQ. The API is a RESTful API and contains the standard PUT, POST, GET, DELETE commands. This document concentrates on explaining the required endpoints when retrieving or posting a sales order. This document will cover:

- Customers
- Cash Customers
- Customer Delivery Contacts
- Addresses
- Sales Promotions
- Sales Orders

An explanation of each API endpoint will include the following:

1) A description of what it is used for
2) The supporting HTTP headers
3) An Example Request
4) An Example Response
5) An Object Overview Diagram
6) A breakdown of the objects used in the request & response.

Connecting to the API

To connect to the API your IP address must first be whitelisted on the Behrens firewall. Once this has been approved you can connect to the API using the base URI - https://api.behrens.co.uk:1026

To add or retrieve data from Intact iQ you must be issued with an active API Key for security purposes, this will allow you to add & retrieve sensitive data. The API key is passed in every API call made.

More information regarding searching, adding, retrieving records can be found on the API landing page. This includes information around pagination, search attributes and parameters and information relating to all individual endpoints.

Customers

Each Sales Order must contain a customer, the customer might be a credit account or a cash account. If it is a cash customer, the order must also contain a cash customer (See Cash Customer)

The customer who made the order should be used when posting orders. For example, if coming from a website the customers code is expected to be known by the website when the order is placed.

Due to Behrens new customer set up process new customers will not be able to be created or updated from using the API at the current time.

Example Request

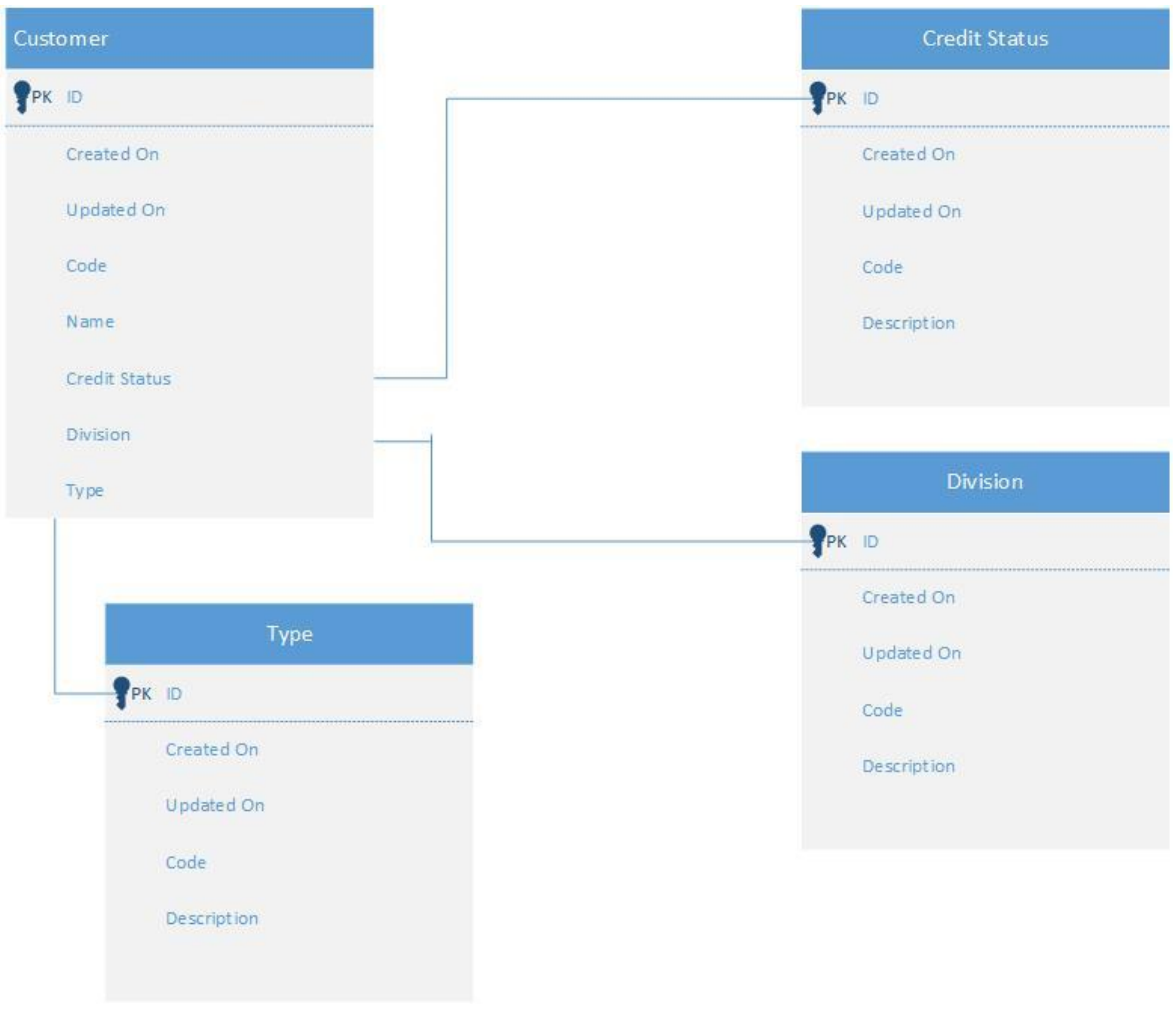
A specific customer can be found by calling the endpoint:

```
GET
/Customers?Code[eq]=52235
```

Example Response

```
{
    "TotalCount": 1,
    "Data": [
        {
            "ID": 8594239372443,
            "UpdatedOn": "2020-05-05T16:13:51.94Z",
            "CreatedOn": "2018-01-22T09:16:47.387Z",
            "Code": "52235",
            "Name": "Website Orders - La Beeby",
            "CreditStatus": {
                "ID": 8619999391678,
                "Code": "2 OVERDUE",
                "Description": "Overdue"
            },
            "D_Division": {
                "ID": 392329113413927l4,
                "Code": "LBY",
                "Description": "La Beeby"
            },
           "Type": {
                "ID": 8645769181880,
                "Code": "CASH",
                "Description": "Cash Debtors"
            }
        }
    ]
}
```

Object Overview Diagram



Cash Customers

If the customer is of type “CASH” then the order must also contain a Cash Customer. Cash Customers are a set of customers who don’t require credit. They may either pay for their order upfront, on before the goods are despatched. Cash Customers are linked through a single customer so for example an e-Commerce website will have one iQ Customer but many Cash Customers.

Since the majority of cash customers will have an email address as their log in on a website, the email address field has been selected as the Primary Key. This will need to be used to search for existing cash customers before creating a new one.

Example Get Request

```
GET
/CashCustomers?EmailAddress[eq]=rcurran@behrens.co.uk
```

Example Get Response

```
{
    "TotalCount": 2,
    "Data": [
        {
            "ID": 10522690524208,
            "UpdatedOn": "2020-04-28T17:26:15.693Z",
            "CreatedOn": "2018-08-14T10:34:56.053Z",
            "FullName": "Curran,Ryan",
            "FirstName": "Ryan",
            "LastName": "Curran",
            "Salutation": {
                "Value": 1,
                "Name": "Mr"
            },
            "EmailAddress": "rcurran@behrens.co.uk",
            "Phone": "",
            "Mobile": "07507994202",
            "Branch": {
                "ID": 4337916983871,
                "Code": "HQ",
                "Description": "Behrens Group"
            },
            "Address": {
                "ID": 4333642650671
            },
            "D_Division": {
                "ID": 39232911349295554,
                "Code": "D&D",
                "Description": "Dip & Doze"
            }
        }
    ]
}
```

If a record exists the response will return a Cash Customer ID. Due to GDPR Legislation the most up ro date personal information of the cash customer needs to be kept within the system. Therefore a Put request is required to update the cash customer

Example Put Request

```
PUT
/CashCustomers/10522690524208

{
  "FirstName": "Ryan",
  "LastName": "Curran",
  "EmailAddress": "rcurran@behrens.co.uk",
  "D_Division": "39232911349295554",
  "Mobile": "07507994202",
  "Branch": "4337916983871",
  "Address": "4333642650671"
}
```

Example Post Response

```
{
    "status": "Processed",
    "message": "Ok",
    "queueEntryId": 523170026979923,
    "items": [
        {
            "id": 10522690524208,
            "typeName": "Cash Customer",
            "info": "Curran,Ryan"
        }
    ]
}
```

If the cash customer doesn’t exist a new cash customer needs to be created.

Example Post Request

```
POST
/CashCustomers/
{
  "FirstName": "Ryan",
  "LastName": "Curran",
  "EmailAddress": "rcurran@test.com",
  "D_Division": "39232911374255618",
  "Phone": "01618721444",
  "Branch": "4337916983871",
  "Address": "4333644911379"
}
```

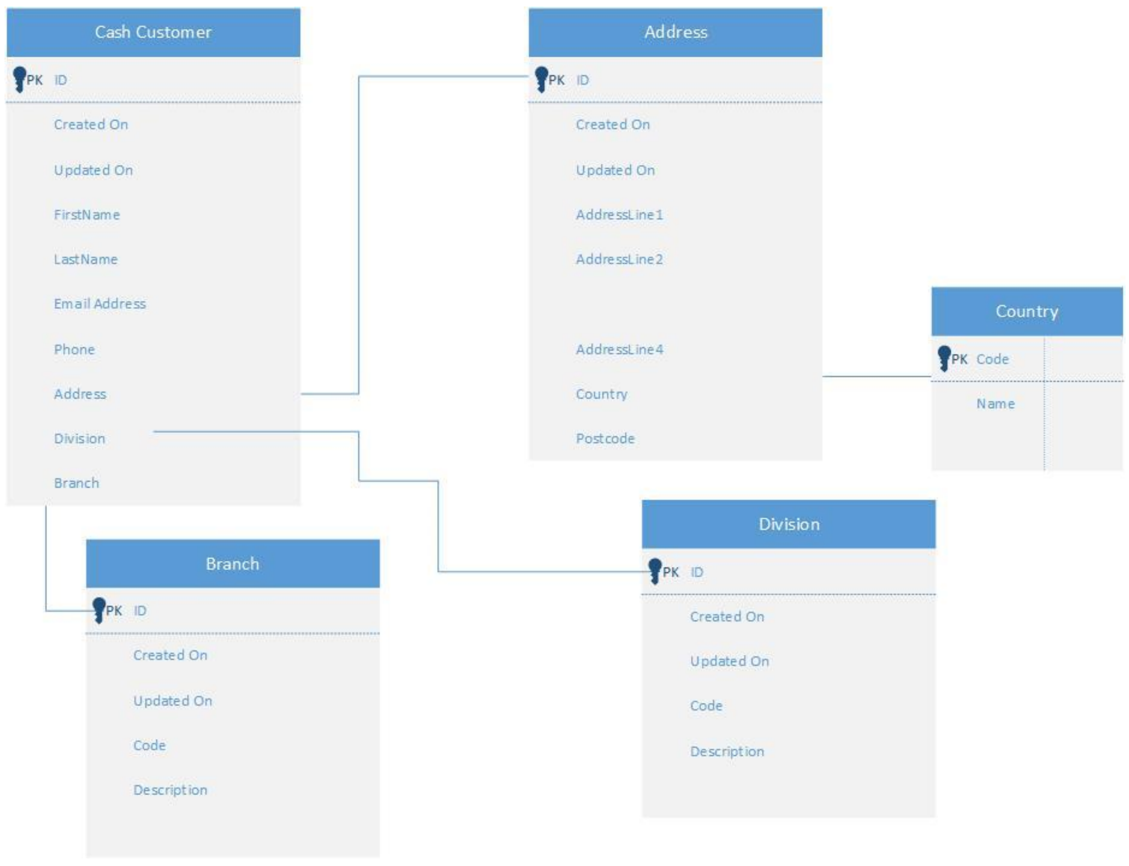
Example Post Response

```
{
    "status": "Processed",
    "message": "Ok",
    "queueEntryId": 523170026900191,
    "items": [
        {
            "id": 10522730449632,
            "typeName": "Cash Customer",
            "info": "Curran,Ryan"
        }
    ]
}
```

Properties

Property	Type	Description	Example
ID	bigint	The ID of the object	10522690524208
FullName	LastName,FirstName	Calculated Field	Curran,Ryan
FirstName	String	Customer First Name	Ryan
LastName	String	Customer Last Name	Curran
Salutation		Not Used	
EmailAddress	String (Required)	PK Email Address	rcurran@behrens.co.uk
Phone	String	Cash Customer Phone	
Mobile	String	Cash Customer Mobile	07507994202
Branch	Branch (Required)	Branch	4337916983871, HQ
Address	Address (Required)	Cash Customer Address	4333642650671
Division	D_Division (Required)	Cash Customer Division	39232911374255618, D&D

Object Overview Diagram



Addresses

The Address ID is usually used to retrieve an address.

Example Get Request

```
GET
/Addresses/4333644911379
```

Example Get Response

```
{
    "ID": 4333644911379,
    "UpdatedOn": "2020-04-28T17:22:19.45Z",
    "CreatedOn": "2018-09-11T09:15:54.68Z",
    "AddressLine1": "Centrepoint",
    "AddressLine2": "Marshall Stevens Way",
    "AddressLine3": "Trafford Park",
    "AddressLine4": "Greater Manchester",
    "Country": {
        "ID": 4372276717546,
        "Code": "GB",
        "Name": "United Kingdom"
    },
    "PostCode": "M17 1PP"
}
```

Due to GDPR legislation it is a requirement to try and maintain as accurate personal data within the system. Since I couldn't determine a suitable way of checking updated addresses against already existing ones. I decided the safest solution would be to post the new address with every order which links to the new or existing record. All countries exist within the system to ISO 3166-1 standard.

Example Post Request

```
POST
/SalesDeliveryNotes2/

{
  "AddressLine1": "Centrepoint",
  "AddressLine2": "Marshall Stevens Way",
  "AddressLine3": "Trafford Park",
  "AddressLine4": "Greater Manchester",
  "Country": "GB",
  "PostCode": "M17 1PP"
}
```

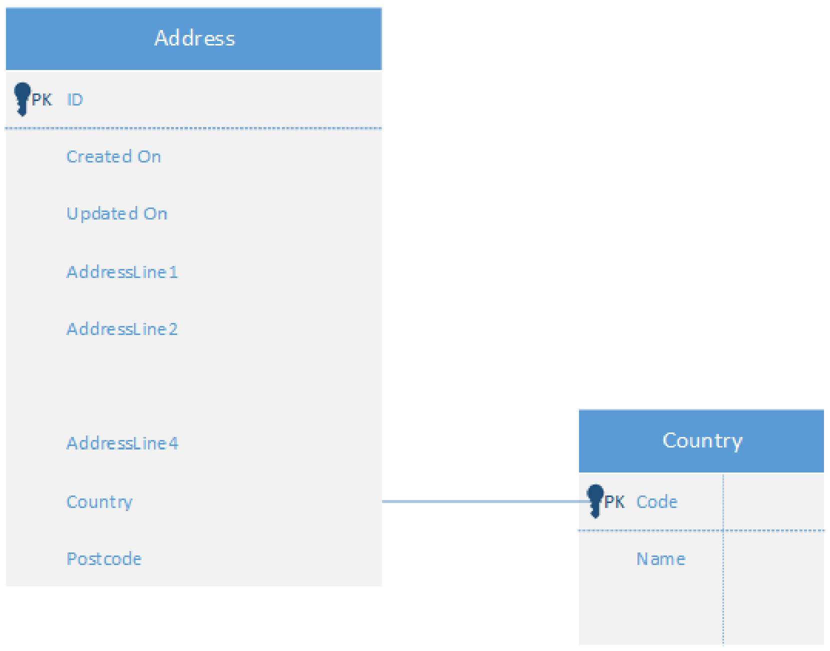
Example Post Response

```
{
    "status": "Processed",
    "message": "Ok",
    "queueEntryId": 523170026900282,
    "items": [
        {
            "id": 4333682576187,
            "typeName": "Address",
            "info": "Centrepoint, Marshall Stevens Way, Trafford Park, Greater 
Manchester, United Kingdom, M17 1PP"
        }
    ]
}
```

Properties

Property	Type	Description	Example
ID	bigint	The ID of the object	4333682576187
AddressLine1	String (Required)	Address Line 1	Centrepoint
AddressLine2	String	Address Line 2	Marshall Stevens Way
AddressLine3	String (Required)	Address Line 3	Trafford Park
AddressLine4	String	Address Line 4	Greater Manchester
Country	Country (Required)	Country (ISO 3166-1 Standard)	GB
Postcode	String (Required)	Postcode	M17 1PP

Object Overview Diagram



Customer Delivery Contacts

Delivery Contacts are linked to the customer (LookupCustomer) and Cash Customer. To determine if the Delivery Contact exists within the system we decided to use the customer email address and their most recent postcode with spaces removed. Due to other systems the FirstName and LastName fields had to be used for this.

Example Get Request

```
GET
/CustomerDeliveryContacts2?lastname[eq]=M171PP&firstname[eq]=rcurran@behrens.co.uk
```

Example Get Response

```
{
    "TotalCount": 1,
    "Data": [
        {
            "ID": 8680149554231,
            "UpdatedOn": "2019-07-03T15:42:59.993Z",
            "FullName": "rcurran@behrens.co.uk M171PP",
            "FirstName": "rcurran@behrens.co.uk",
            "LastName": "M171PP",
            "CashCustomer": {
                "ID": 10522690524208,
                "FullName": "Curran,Ryan"
            },
            "LookupCustomer": {
                "ID": 8594243213789,
                "Code": "60237",
                "Name": "Website Orders - Dip And Doze"
            },
            "EmailAddress": "rcurran@behrens.co.uk",
            "D_ContactName": "Ryan Curran",
            "CompanyName": null,
            "Mobile": "07507 994202",
            "Phone": null,
            "Address": {
                "ID": 4333661664992
            }
        }
    ]
}
```

If the record exists, then a PUT request should only update the relevant details (FirstName, LastName, D_ContactName, Mobile, Phone and Address). This is due to GDPR legislation we should try and maintain up-to-date information of customers personal information.

Example Put Request

```
PUT
/CustomerDeliveryContacts2/8680149554231
{
  "FirstName": "rcurran@behrens.co.uk",
  "LastName": "M171PP",
  "D_ContactName": "Ryan Curran",
  "Address": "4333682576187",
  "EmailAddress": "rcurran@behrens.co.uk",
  "Phone": "07507994202",
  "LookupCustomer": "8594243213789"
}
```

Example Put Response

```
{
    "status": "Processed",
    "message": "Ok",
    "queueEntryId": 523170026980228,
    "items": [
        {
            "id": 8680149554231,
            "typeName": "Customer.Delivery Contact",
            "info": "rcurran@behrens.co.uk M171PP"
        }
    ]
}
```

If a record doesn’t exist then a Delivery Contact needs to be created, this is done using a Post request.

Example Post Request

```
POST
/CustomerDeliveryContacts2/
{
  "FirstName": "rcurran@test.com",
  "LastName": "M171PP",
  "D_ContactName": "Ryan Curran",
  "CashCustomer": "10522730449632,
  "Address": "4333682576187",
  "EmailAddress": "rcurran@test.com",
  "Phone": "01618721444",
  "LookupCustomer": "8594243213789"
}
```

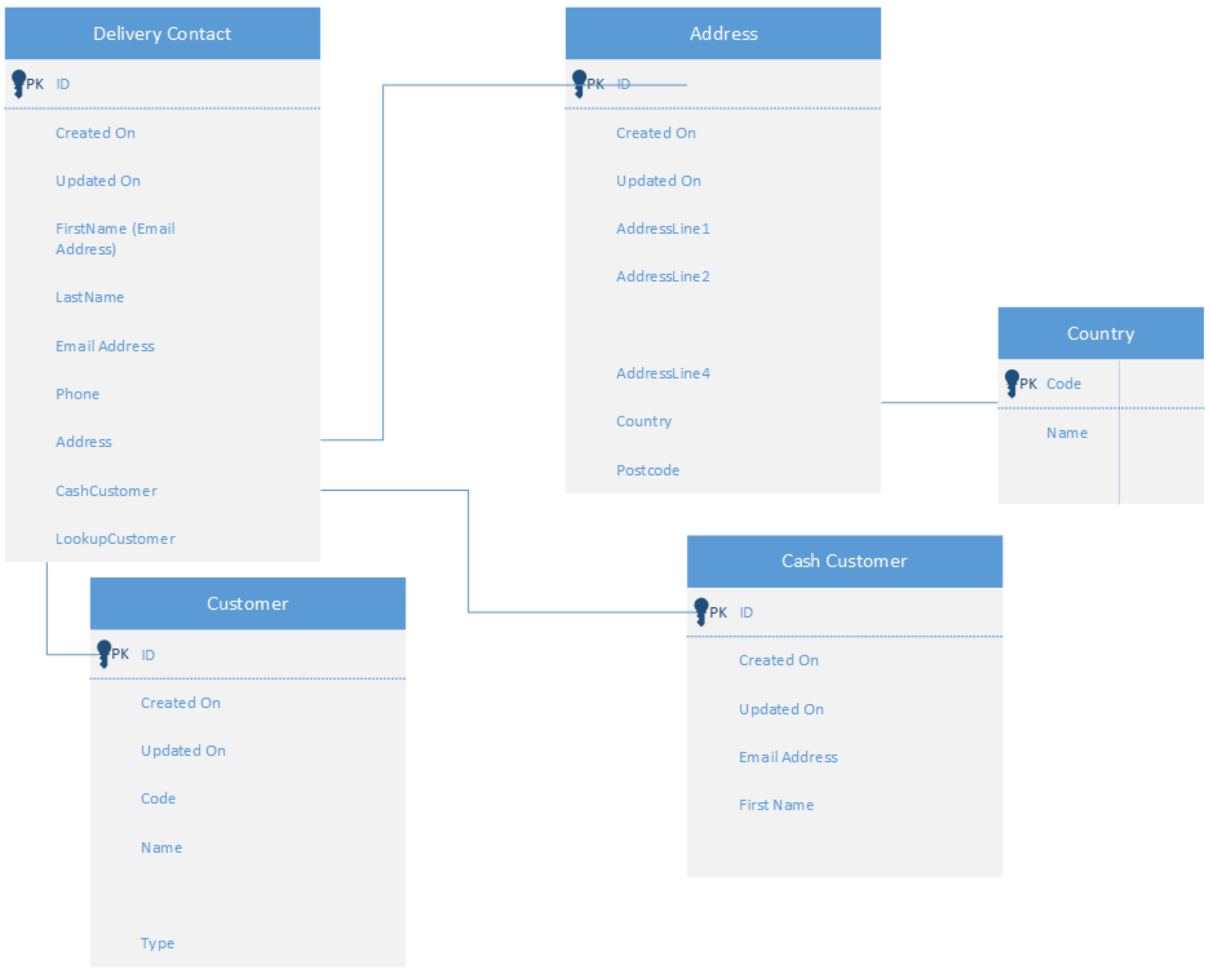
Example Post Response

```
{
    "status": "Processed",
    "message": "Ok",
    "queueEntryId": 523170026900469,
    "items": [
        {
            "id": 8680189479926,
            "typeName": "Customer.Delivery Contact",
            "info": "rcurran@test.com M171PP"
        }
    ]
}
```

Properties

Property	Type	Description	Example
ID	bigint	The ID of the Delivery Contact	8680189479926
FullName	String	Calculated Field	rcurran@behrens.co.uk M171PP
FirstName	String (Required)	Customer Email Address	rcurran@behrens.co.uk
LastName	String (Required)	Dellivery PostCode no Spaces	M171PP
CashCustomer	CashCustomer	Linked Cash Customer (If required)	10522690524208, rcurran@behrens.co.uk
LookupCustomer	Customer (Required)	Customer	8594243213789, D&D Website
EmailAddress	String	Customer Email Address	rcurran@behrens.co.uk
D_ContactName	String	Delivery Contact Name (If Exists)	Ryan Curran
CompanyName	String	Delivery Company Name (If Exists)	Dip & Doze
Mobile	String	Delivery Contact Mobile	07507994202
Phone	String	Delivery Contact Phone	
Address	Address (Required)	Address ID	4333661664992

Object Overview Diagram



Sales Promotions

If an order has a promotion code it is required that a promotion needs to be added or is already stored within the system. First the promotion code needs to be checked against the existing records in the system.

Example Get Request

```
GET
/SalesPromotions?Code[eq]=L_WELCOME1
```

Example Get Response

```
{
       "ID": 9921388238485,
        "UpdatedOn": "2019-12-10T13:40:37.52Z",
        "CreatedOn": "2018-03-20T10:15:53.81Z",
        "Code": "L_WELCOME1",
        "Description": "Welcome 10% Off LaBeeby"
}
```

I didn't think updating promotions was necessary between the systems. However, adding promotions is a necessity. Whether this is managed when the promotion is created within the 3rd party system or when an order is added depends on the systems capabilities.

Example Post Request

```
POST
/SalesPromotions/

{
    "Code": "RCTEST",
    "Description": "TestPromotion"
}
```

Example Post Response

```
{
    "status": "Processed",
    "message": "Ok",
    "queueEntryId": 523170026980261,
    "items": [
        {
            "id": 9921435108262,
            "typeName": "Sales Promotion",
            "info": "RCTEST"
        }
    ]
}
```

Properties

Property	Type	Description	Example
ID	bigint	The ID of the Promotion	9921435108262
Code	String (10) (Required)	Promotion Code	RCTEST
Description	String	Promotion Description	TestPromotion

Sales Orders

Finally, once all the objects have been added the order can be posted. Due to rules within the system an order with the same reference cannot be posted, however, you could perform your own check to see whether orders are in the system.

Example Get Request

```
GET
/SalesOrders?AlternateReference[eq]=DOZE_115373555
```

Example Get Response

```
{
    "ID": 9234240331696,
    "UpdatedOn": "2020-05-05T14:05:08.19Z",
    "CreatedOn": "2020-05-05T14:05:08.19Z",
    "Number": "SO0139037",
    "AlternateReference": "DOZE_115378109",
    "Customer": {
        "ID": 8594243213789,
        "Name": "Website Orders - Dip And Doze",
        "Code": "60237"
    },
    "CashCustomer": {
        "ID": 10522714522384,
        "FullName": "Ryan Curran,rcurran@behrens.co.uk"
    },
    "Branch": {
        "ID": 4337916983871,
        "Code": "HQ",
        "Description": "Behrens Group"
    },
    "DespatchBranch": {
        "ID": 4337916983871,
        "Code": "HQ",
        "Description": "Behrens Group"
    },
    "D_Division": {
        "ID": 39232911349295554,
        "Code": "D&D",
        "Description": "Dip & Doze"
    },
    "DeliveryContact": {
        "ID": 8680173552422,
        "FullName": "rcurran@behrens.co.uk M17 1PP"
    },
    "Currency": {
        "ID": 4346506903774,
        "Code": "GBP",
        "Description": "Sterling"
    },
    "Items": [
        {
            "ID": 9238535298975,
            "Product": {
                "ID": 21479169499995,
                "Description": "600gsm, Organic & Fairtrade Slate Bath Mat",
                "Code": "DIP1019"
            },
            "Quantity": 4.000000,
            "SellingUnits": {
                "ID": 21539260997245,
                "Description": "Each"
            },
            "NetPrice": 14.166667,
            "DiscountPercentageValue": 0.0000,
            "TaxRate": {
                "ID": 4325032074116,
                "Code": "GB01",
                "Description": "20%  Resale"
            },
            "GrossPrice": 17.000000,
            "GrossPriceDiscountAmount": 0.000000
        }
    ]
}
```

It is not currently possible to update orders within iQ automatically however the capability is there. When posting an order numerous fields are compulsory for the order to post, some aren't and are determined by the system when the order is added due to system settings.

Example Post Request

```
POST
/SalesOrders/
{
  "AlternateReference": "BEH_TESTRC",
  "OrderType": "9247079131646",
  "Customer": "8594243213789",
  "Branch": "4337916983871",
  "DespatchBranch": "4337916983871",
  "CashCustomer": "10522730449632",
  "DeliveryContact": "8680189479926",
  "D_Division": "39232911374255618",
  "Currency": "4346506903774",
  "Promotion": "9921435029274",
  "DeliveryAgent": "4771713048715",
  "DeliveryAgentService": "4776063191099",
  "DeliveryTaxRate": "4325032074116",
  "DeliveryGrossAmount": "0",
  "Items": [
    {
      "Product": "DOZE1074",
      "Quantity": "1.0000",
      "SellingUnits": "Each",
      "TaxRate": "4325032074116",
      "GrossPrice": "15",
      "GrossPriceDiscountAmount": "1.5"
    },
    {
      "Product": "DOZE1071",
      "Quantity": "1.0000",
      "SellingUnits": "Carton",
      "TaxRate": "4325032074116",
      "GrossPrice": "70",
      "GrossPriceDiscountAmount": "7"
    }
  ]
}
```

Example Post Response

```
{
    "status": "Processed",
    "message": "Ok",
    "queueEntryId": 523170026900928,
    "items": [
        {
            "id": 9234240261608,
            "typeName": "Sales Order",
            "info": "SO0138887"
        }
    ]
}
```

Properties

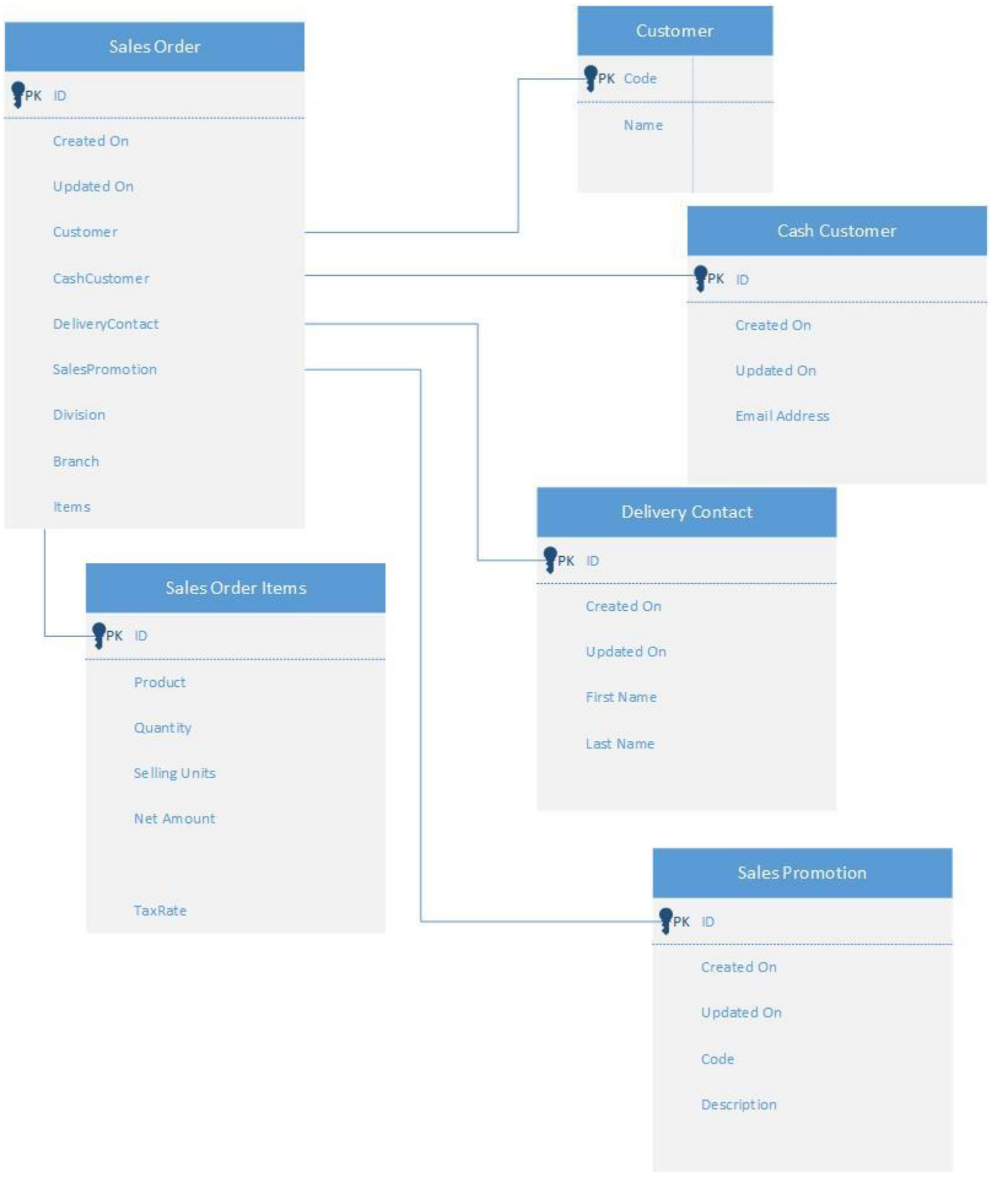
Sales Order Header

Property	Type	Description	Example
ID	Bigint (PK)	The ID of the Sales Order	9234240331696
Number	String (Unique)	The Intact Order Number	SO0123456
AlternateReference	String (Required)	Customer Reference	BEH_TESTRC
Customer	Customer (Required)	Customer	8594243213789, Behrens Website
CashCustomer	CashCustomer (Required if customer type = cash)	Cash Customer (If Cash Order)	10522730449632, rcurran@behrens.co.uk
Branch	Branch (Required)	Branch	4337916983871, HQ
DespatchBranch	Branch (Required)	Despatch Branch	4337916983871, HQ
D_Division	D_Division (Required)	Division	39232911374255618, D&D
DeliveryContact	DeliveryContact (Required)	Delivery Contact	8680189479926, rcurran
Currency	Currency (Required)	Order Currency	4346506903774, GBP
Promotion	SalesPromotion	Promotion	
DeliveryAgent	DeliveryAgent	Delivery Agent (if known)	4771713048715, DPD
DeliveryAgentService	DeliveryAgentService	Delivery Agent Service (if known)	4776063191099, Next Day
DeliveryAgentNetAmount	Numeric	Delivery Net Amount (where net pricing is used)	10
DeliveryAgentTaxRate	TaxRate	Delivery Tax Rate	4325032074116, GB01
DeliveryAgentGrossAmount	numeric	Delivery Gross Amount (where gross pricing is used)	12

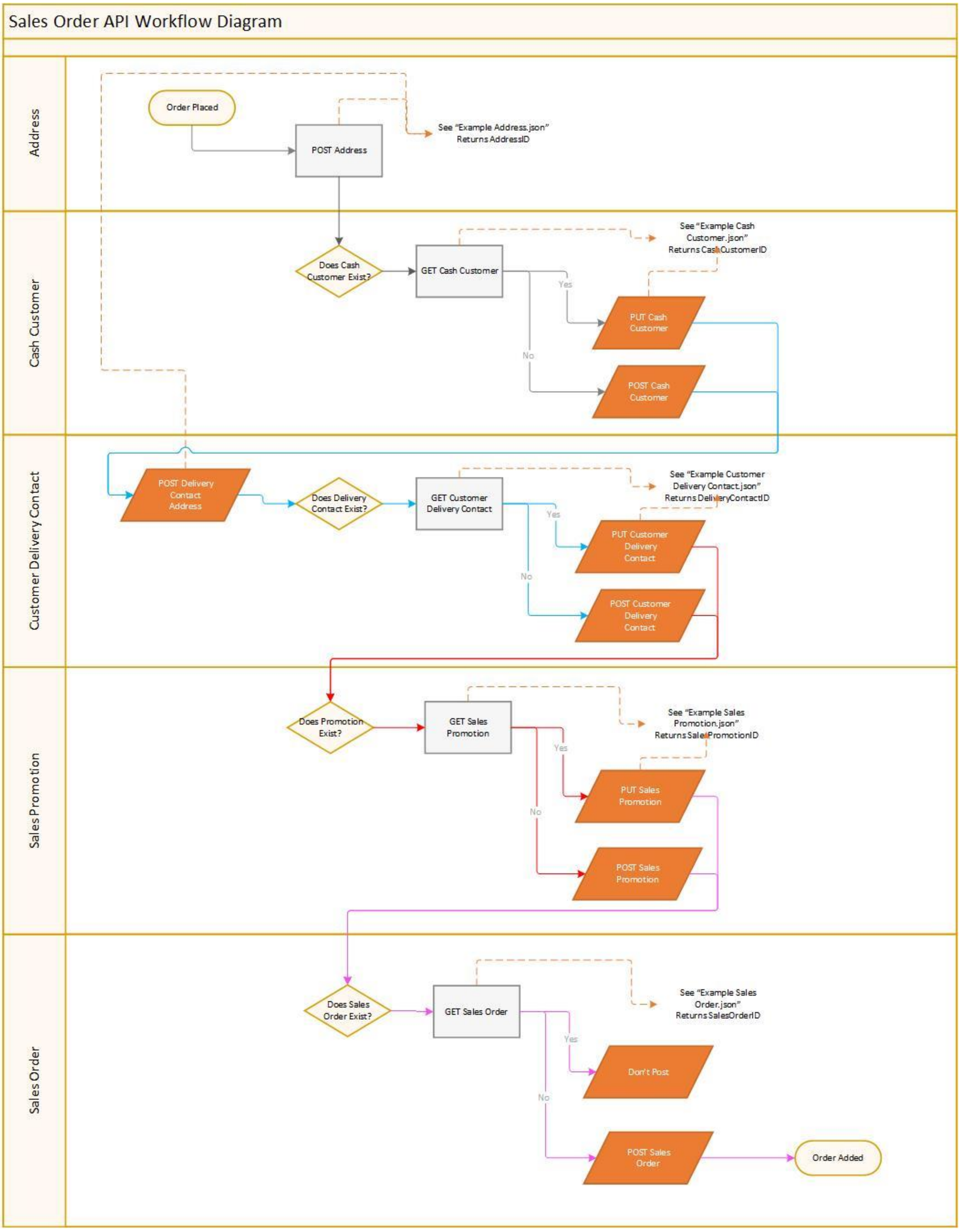
Sales Order Items

Property	Type	Description	Example
ID	Bigint (PK)	The ID of the Sales Order Line	9234240331696
Product	Product (Required)	Product ordered	DOZE1074
Quantity	Numeric (Required)	Quantity ordered	1
SellingUnits	UnitOfMeasure (Required)	Selling Units	Each
NetPrice	Numeric (Required if using net pricing)	Net price (where net pricing is used)	50
DiscountPercentageValue	Numeric	Discount amount (where net pricing is used)	5
TaxRate	TaxRate	Tax Rate	4325032074116, GB01
GrossPrice	Numeric (Required where using gross pricing)	Gross price (where gross pricing is used)	60
GrossPriceDiscountAmount	numeric	Gross Discount Amount (where gross pricing is used)	6

Object Overview Diagram



Sales Order API Workflow Diagram


Sales Order API Workflow Diagram
Address
Cash Customer
Customer Delivery Contact
Sales Promotion
Sales Order
Order Placed
POST Address
See "Example Address.json" Returns AddressID
Does Cash Customer Exist?
GET Cash Customer
See "Example Cash Customer.json" Returns CashCustomerID
Yes
No
PUT Cash Customer
POST Cash Customer
POST Delivery Contact Address
Does Delivery Contact Exist?
GET Customer Delivery Contact
See "Example Customer Delivery Contact.json" Returns DeliveryContactID
PUT Customer Delivery Contact
POST Customer Delivery Contact
Does Promotion Exist?
GET Sales Promotion
See "Example Sales Promotion.json" Returns SalesPromotionID
PUT Sales Promotion
POST Sales Promotion
Does Sales Order Exist?
GET Sales Order
See "Example Sales Order.json" Returns SalesOrderID
Don't Post
POST Sales Order
Order Added