



**Implementation**

**Guidelines**

Deal API

V01.00.00

**Owner: US IS Development**

**Revision Number: 1**

**Last Revision Date: Aug 21, 2017**

## Table of Contents

[Table of Contents 2](#_Toc491693779)

[Tables 3](#_Toc491693780)

[Revision History 4](#_Toc491693781)

[Preface 5](#_Toc491693782)

[1. Introduction 6](#_Toc491693783)

[Overview 6](#_Toc491693784)

[Audience 6](#_Toc491693785)

[Scope 7](#_Toc491693786)

[Prerequisites 8](#_Toc491693787)

[2. Message Guideline 10](#_Toc491693788)

[Guideline Annotations 10](#_Toc491693789)

[Request – Response Message Guidelines 11](#_Toc491693790)

[3. Appendix A: Developers’ Resources 15](#_Toc491693791)

[API Access URLs 15](#_Toc491693792)

[sFTP Details 15](#_Toc491693793)

[Implementation Resources: 15](#_Toc491693794)

[4. Appendix B: Glossary of Terms and Abbreviations 16](#_Toc491693795)

[5. Appendix C: Error Responses 17](#_Toc491693796)

[6. Appendix D: Ingram’s Internal Versions List 18](#_Toc491693797)

[7. Appendix E: Ingram’s Internal Country Code List 19](#_Toc491693798)

[8. Appendix F: Ingram’s Internal Vendor Code List 20](#_Toc491693799)

## Tables

[Table 1: Cardinality Values and Color Codes 9](#_Table_2:_Cardinality)

[Table 2: Request Message Guidelines](#_Table_3:_Request) 11

[Table 3: Detailed Response Message Guidelines 12](#_Table_4:_Detailed)

[Table 4: Glossary of Terms and Abbreviations 1](#_Appendix_B:_Glossary)5

[Table 5: List of all error responses sent by Ingram 1](#_Appendix_C:_)6

[Table 7: List of country codes allowed in the API request 18](#_Table_7:_List)

[Table 8: List of vendor codes allowed in the API request 19](#_Table_8:_List)

## Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| Rev No. | Revision Date | Description | Revised by |
| 1 | 8/17/2017 | Initiate new Implementation Guide for Deal API | Pavan Pasupuleti |
| 2 | 8/21/2017 | Many formatting changes | Pavan/Terry |
| 3 | 8/27/2017 | Added authorization number filed to the request object and Updated the request message guidelines section for the new mandatory fields ( country code and vendor code) | Pavan/Terry |
| 4 | 8/29/2017 | Included list of possible vendor and country codes | Pavan/Terry |
| 5 | 9/11/2017 | Updated on the OAuth authentication process and URI | Pavan/Terry |
| 6 | 10/02/2017 | Mandated dash in the customer number of the request object | Pavan/Terry |

## Preface

Deal API is a light-weight API for partners to request and receive deal specific information like Received On, expiration date, Customer, End user, Product Information etc. Key benefits of using deal API are as follows:

* Low cost integration
* Consistent deal information/experience

# Introduction

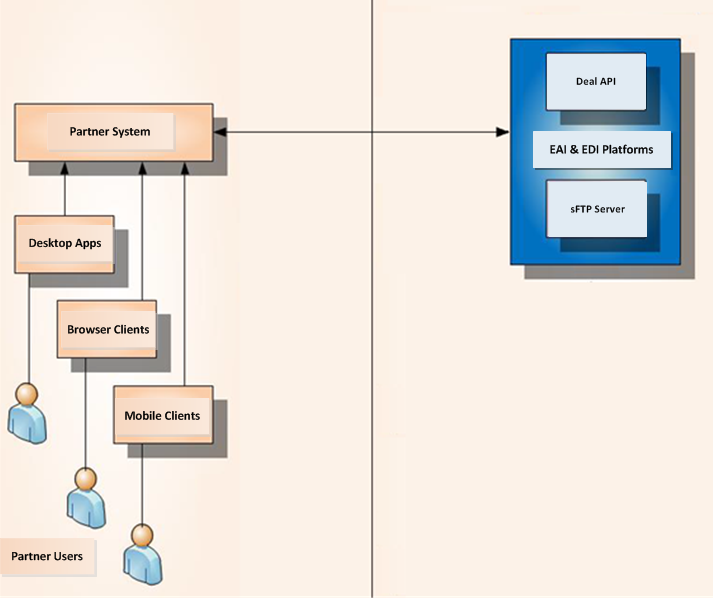
Ingram Micro has prepared this document to be used when integrating with Ingram’s deal API. This document describes how a request to the API needs to be structured and what to expect in the response.

## Overview

The interactions between the partner systems and Ingram APIs are done by a request and response JSON interchange mechanism.

Partner users make a request to the APIs using JSON object encompassing key data elements as input and receive a JSON response consisting of deal information.

## Audience

The intended audience for this document is business analysts, IT engineers, and technical architects who are involved in the integration project. The document may also be used as a reference by other stakeholders who wish to understand business and/or technical aspects of integration.

## Scope

This document describes the implementation guidelines for request and response BODs for Deal API. The document details out various elements and structure that form the request and response objects involved in the API calls.

## Prerequisites

It is assumed that the reader has some familiarity with Ingram EAI & EDI platforms through either formal or informal training and / or demonstration. Provided below, are the links to get detailed information on onboarding and usage of the platform. The access to the links requires valid Partner client credentials in the Authorization header

In order to use Deal API and sFTP users need to follow below steps:

Deal API:

* Ingram Micro API authenticates clients using OAuth as the authentication method. Under this scheme, once we register a partner, the application will generate an APP ID and Secret key. The partner then needs to fetch the token against the App Id and Secret Key combination. This token expires every 14 days. This token needs to be renewed every 14 days. This token is passed in the authorization HTTP header field.
* To authenticate your API calls, just include your encoded token string in the Authorization header. Please refer [Appendix A: Developers’ Resources](#_Appendix_A:_) for any details on how to build request to implement API call in client application. Here’s an example, to authenticate your request when accessing the /deals/getdealinfo resource, send an HTTP message like the following:

POST /v1/deals/getdealinfo

Beta Host: api-beta.ingrammicro.com

Content-Type: application/json

Authorization: Bearer TG9vayBhdCB0aGF0OyBEdWNrcy4uLm9uIGEgbGFrZSEK

Production Host: api.ingrammicro.com

Protocol : HTTPS

* If your request is authenticated by the server, it will reply with the appropriate data for the request you made. Otherwise, it will reply with a ‘Credentials’ missing error.

**Note**: Ingram Micro's API protects customer and partner information by passing all communication through SSL. As such, all Ingram Micro API endpoints use the HTTPS protocol.

Below are the detailed steps to generate OAuth token and pass it in the Authorization HTTP header. –

* Replace the place-holders **<app\_id>** and **<secretkey\_for\_your\_app>** in the URI below with the appropriate App ID and Secret Key provided for you by the Ingram.

[http://developer-stage.ingrammicro.com/oauth/oauth20/token?client\_id=**<app\_id>**&client\_secret**=<secretkey\_for\_your\_app>**&grant\_type=client\_credentials](http://developer-stage.ingrammicro.com/oauth/oauth20/token?client_id=%3capp_id%3e&client_secret=%3csecretkey_for_your_app%3e&grant_type=client_credentials)

* Ensure to set the following request headers:

Accept: \*/\*

Cache-Control: no-cache

* All set to start consuming the API.

sFTP:

* Ingram will provide the partner with the sFTP connection details to access the deal files in JSON format.
* Client application can use any sFtp Client libraries to read these deal files that they are entitled to by providing the appropriate sFTP access credentials. Please refer [Appendix A: Developers’ Resources](#_Appendix_A:_) for sFTP details.

# Message Guideline

## Guideline Annotations

The guideline annotations that follow apply when creating a request to invoke deal API or interpreting a response from the same. Cardinality values specify if a Request or Response element is required or optional, and specify the frequency at which the value must occur.

Grey color coding advises a partner that the code is not used.

##### Table 1: Cardinality Values and Color Codes

|  |  |
| --- | --- |
| **Cardinality Value** | **Semantics** |
| 1 | Mandatory, only one instance |
| 1..n | Mandatory, one or more instances |
| 0..1 | Optional, zero or one instance |
| 0..n | Optional, zero or more instances |
| **Color Code and Formatting** | **Significance** |
| Grey Shaded | Not used |

## Request – Response Message Guidelines

User can make an API call through creating a request using key deal information like DealID, Branch Customer Number. Along with the deal information user can provide his or her preference for receiving deal info for a specific country by setting the Country code value. The possible values for the Country code are MD for US and FT for Canada.

|  |  |
| --- | --- |
|  | Use Case |
|  | **Request Status & Deal Information Package**  **(For a single deal)** |
|  | **Deal Identifier**  **Deal ID & Branch Customer Number** |
|  |  |

##### Ingram’s Internal Versioning

Ingram provides internal versioning system for the deal API based on the level of details a user requires.

By sending the version number in request, user can specify what level of detail is required for a deal in the response. Complete list of request details given below.

##### Table 2: Request Message Guidelines

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sr #** | **Cardinality** | **Elements** | **Guidelines/Description** | **Format/ Sample** | **Permissible List of values/Data Range** |
| 1 |  | getdealinfo | [Please refer Appendix D for List of valid Internal Versions](#_Appendix_D:_) | v1/deals/getdealinfo |  |
| 2 | 1 | |--DealRequest | Only 1 instance to be created for this HTTP POST request  Please refer [NOTES](#_NOTES_2) |  |  |
| 4 | 1 | | | --DealID | Deal ID | Format: String  Sample: 25587271 |  |
| 5 | 1 | | | --AuthorizationNumber | Authorization Number | Format: String  Sample: PROD-8232571-1708 |  |
| 5 | 1 | | | -- CustomerNumber | Branch Customer Number | Format: String  Sample: 20-125586 | {2 digit BranchNumber}-{6 digit CustomerNumber} |
| 6 | 1 | | | --CountryCode | Used to identify the customer Country | Format: String  Sample: US | Please refer [Appendix](#_Appendix_E:_) E |
| 7 | 1 | | | --VendorCode | Used to identify the associated Vendor | Format: String  Sample: CSI | Please refer [Appendix F](#_Appendix_F:_) |

##### NOTES

1. HTTP POST Request JSON document to be created and sent to fetch details for a single deal only. Passing multiple DealRequest (Table 3: Row 5) would generate Error # 2. Please refer [Appendix C](#_Appendix_C:_) for list of error responses from Ingram.
2. Internal version number (v1) post fixed with the GetDealInfo at row# 1 is a mandatory field.
3. Deal details will be retrieved on the basis of below table as per the presence of any of the four mandatory fields for v1 requests: The Customer Number, the Country Code and the Vendor Code with the combination of either of the Deal ID OR the Authorization Number

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Is field Present in Request? (Y/N) | | | | | Response | |
| Authorization Number(AN) | Deal ID (DI) | Branch Customer Number (BCN) | Country Code (CC) | Vendor Code (VC) | Valid Data | Invalid Data |
| N | Y | Y | Y | Y | Based on DI,BCN,CC & VC (has to be a valid combination) | Error # 1 |
| Y | N | Y | Y | Y | Based on AN,BCN,CC & VC (has to be a valid combination) | Error # 1 |
| N | Y | N | N | Y | Error | Error # 2 |
| N | N | Y | N | N | Error | Error # 2 |
| N | N | N | N | N | Error | Error # 2 |
| Y | N | N | Y | N | Error | Error # 2 |

##### Table 3: Detailed Response Message Guidelines

| **Sr #** | **Cardinality** | **Elements** | **Guidelines/Description** | **Format/ Sample** |
| --- | --- | --- | --- | --- |
| 1 | 1 | DealResponse |  |  |
| 2 | 1 | | |--RequestStatus | Status of response creation |  |
| 3 | 1 | | | |--Status | Result of API call. Could be SUCCESS or ERROR. SUCCESS = API call was successful in fetching the deal data. ERROR = There were some issues with the call and data couldn’t be fetched | Format: String  Sample : SUCCESS |
| 4 | 1 | | | |--StatusReason | Appropriate reason for the Status field value above | Format: String  Sample :Request Completed  Please refer [Appendix C](#_Appendix_C:_) for more response status messages |
| 5 | 1 | | | |--DealRequestedOn | Deal requested Date and time | Format yyyy-MM-dd HH:mm:ss Sample: 2017-08-17 12:22:00 |
| 6 | 1 | | |--DealInformationPackage |  |  |
| 7 | 1 | | | |--DealStatus | Status of the Deal | Format: String  Sample: Active  Possible Statuses: Active/InActive/Cancelled |
| 8 | 1 | | | |--DealInformation |  |  |
| 9 | 1 | | | ||--Header | Deal header entity |  |
| 10 | 1 | | | | | |--AuthorizationNumber | Deal Authorization Number | Format: String  Sample: PROD-8035294-1706 |
| 11 | 1 | | | | | |--DealID | Deal ID / Authorization Number | Format: String  Sample :25786104 |
| 12 | 1 | | | | | |--Version | version number | Format: integer  Sample: 2 |
| 13 | 1 | | | | | |--StartDate | Deal start date | Format yyyy-MM-dd  Sample: 2017-08-04 |
| 14 | 1 | | | | | |--ExpirationDate | Deal expiration Date | Format yyyy-MM-dd  Sample: 2017-12-17 |
| 15 | 1 | | | | | |--DealReceivedOn | Deal received date and Time | Format yyyy-MM-dd HH:mm:ss Sample: 2017-08-07 20:58:00 |
| 16 | 1 | | | | |--Customer |  |  |
| 17 | 1 | | | | | |--CustomerName | Deal customer name | Format: String  Sample: CPAK CORPORATION |
| 18 | 1 | | | | | |--BranchCustomerNumber | Branch Customer Number | Format: String  70570970 |
| 19 | 1 | | | | | --EndUser | Deal end user details entity |  |
| 20 | 1 | | | | | |--Name | End user name | Format: String  Sample: CPAK TECHNOLOGY SOLUTIONS |
| 21 | 0..1 | | | | | |--Contact | End user contact name | Format: String  Sample: Philip Abbott |
| 22 | 0..1 | | | | | |--Phone | End user contact phone ( read as it received from Vendor) | Format: String  Sample: (706) 416-1616 |
| 23 | 0..n | | | | | |--Email | End user contact email | Format: String  Sample: pabbott@cpak.com |
| 24 | 0..1 | | | | | |--AddressLine1 | End user address | Format: String  Sample: 133 MAIN ST |
| 25 | 0..1 | | | | | |--AddressLine2 | End user address | Format: String  Sample:”” |
| 26 | 0..1 | | | | | |--AddressLine3 | End user address | Format: String  Sample: GA |
| 27 | 0..1 | | | | | |--CityName | End user city name | Format: String  Sample: LAGRANGE |
| 28 | 0..1 | | | | | |--Country | End user country | Format: String  Sample: US |
| 29 | 0..1 | | | | | |--PostalCode | End user postal code | Format: String  Sample: 30240 |
| 30 | 1 | | | | | --Sender | Deal sender entity |  |
| 31 | 0..1 | | | | | |--Contact | Sender contact | Format: String  Sample: USA Admin |
| 32 | 0..1 | | | | | |--Email | Sender email | Format: String  Sample:usadmin@yourcompany.com |
| 33 | 0..1 | | | | | |--Phone | Sender Phone | Format: String  Sample: NOT AVAILABLE |
| 34 | 1 | | | | | --AdditionalContact | Deal sender additional contact entity |  |
| 35 | 0..1 | | | | | |--Contact | Additional contact | Format: String  Sample: contact name |
| 36 | 0..1 | | | | | |--Email | Additional contact email | Format: String  Sample: contact email |
| 37 | 0..1 | | | | | |--Phone | Additional contact Phone | Format: String  Sample: contact phone |
| 38 | 1 | | | | | --ProductInformation | Deal product information entity |  |
| 39 | 1..n | | | | | |--ManufacturePartNumber |  | Format: String  Sample: SFP-H10GB-CU3M= |
| 40 | 1..n | | | | | |--ApprovedQuantity |  | Format: integer  Sample: 12 |
| 41 | 1..n | | | | | |--RemainingQuantity |  | Format: integer  Sample: 12 |
| 42 | 1..n | | | | | |--ListPrice |  | Format: decimal  Sample: 1873 |
| 43 | 1..n | | | | | |--DiscountPercentage |  | Format: decimal  Sample:82.02 |
| 44 | 1..n | | | | | |--CustomerPrice |  | Format: decimal  Sample: 505.71 |

##### NOTES

All Amounts are in US Dollars (Table 4: Row 31 through 41).

Phone# and Postal code# are not formatted. They will be passed as they received from the given vendors.

All Date/Time type fields represent date and time data in **DateTime.Now**

# Appendix A: Developers’ Resources

## API Access URLs

UAT: **https://api-beta.ingrammicro.com:443/v1/deals/getdealinfo**

Production: [TBD]

Authorization Header Details: Will be shared in a separate encrypted communication

Sample Messages:



## sFTP Details

Host: venus.ingrammicro.com

Port: 22

Username & Password: Will be shared in a separate encrypted communication

Root folder: /{PartnerName}\_API/

Sample Push file:



## Implementation Resources:



Trial Recommendation:

Ingram recommends trying out the API over UAT environment first and then moving onto Production if satisfied.

# Appendix B: Glossary of Terms and Abbreviations

##### Table 4: Glossary of Terms and Abbreviations

|  |  |
| --- | --- |
| **Term/Acronym** | **Definition** |
| API | Application Program Interface |
| sFTP | Secure File Transfer Protocol |
| JSON | JavaScript Object Notation |
| EDI | Electronic Data Interchange |
| EAI | External Application Interface |

# Appendix C: Error Responses

Following is the list of all error responses sent by Ingram in case there were some technical or business issues with retrieval of deal information

##### Table 5: List of all error responses sent by Ingram

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr #** | **Error Codes** | **Error Message** | **Description** |
| 1 | DA001 | Deal not found or you're not authorized to access this deal | There may be issues with Deal ID and Customer Number in request. Invalid data or user not entitled to access a Deal |
| 2 | DA002 | Invalid input request JSON. Please correct the request and try again. | There may be issues with formatting or structure of input JSON object |
| 3 | DA003  DA004  DA005 | Technical error has occurred. Please contact CSD for additional support. | There may be technical issues with Ingram's internal systems causing the response generation to fail |

##### Sample Error Response:

"RequestStatus": {

"Status": "ERROR",

"StatusReason": " DA001: Deal not found or you're not authorized to access this deal",

"DealRequestedOn": "8/17/2017 2:26:28 PM"

}

# Appendix D: Ingram’s Internal Versions List

##### Table 6: List of all valid internal versions provided by Ingram

|  |  |  |
| --- | --- | --- |
| **Sr #** | **Internal Version Number** | **Description** |
| 1 | v1 | Generates Deal information based upon the Deal Id OR Authorization number along with other mandatory fields Customer Number, Country Code and Vendor Code. |

# Appendix E: Ingram’s Internal Country Code List

##### Table 7: List of all valid internal country codes

|  |  |  |
| --- | --- | --- |
| **Sr #** | **Internal Country Code** | **Name** |
| 1 | US | United States |
| 2 | CA | Canada |

# Appendix F: Ingram’s Internal Vendor Code List

##### Table 8: List of all valid internal vendor codes

|  |  |  |
| --- | --- | --- |
| **Sr #** | **Internal Vendor Code** | **Description** |
| 1 | CSI | Cisco Systems Inc. |