GS1 US Data Hub | Product

Solution Providers Guide to Managing Enhanced Content

This guide is specifically written for Solution Partners who are certified under the CCP program and augments current GS1 US Developer API documentation. For information on the program, please contact us at CCP@gs1us.org.
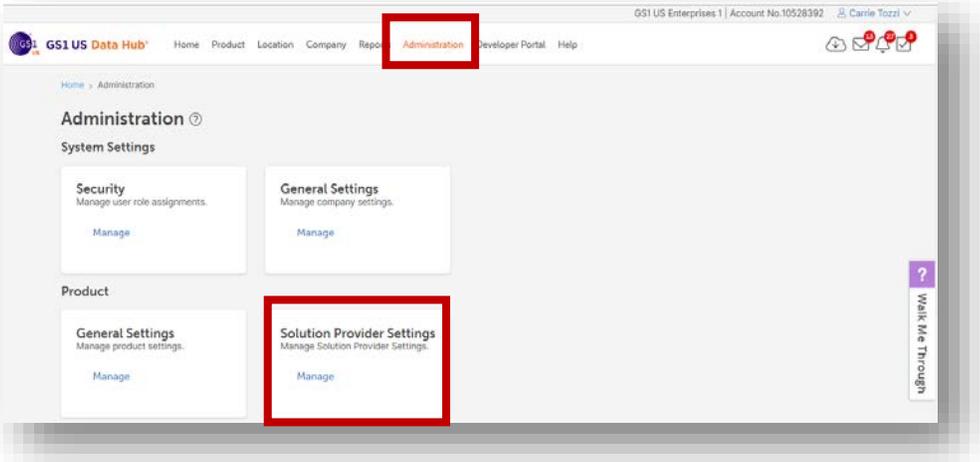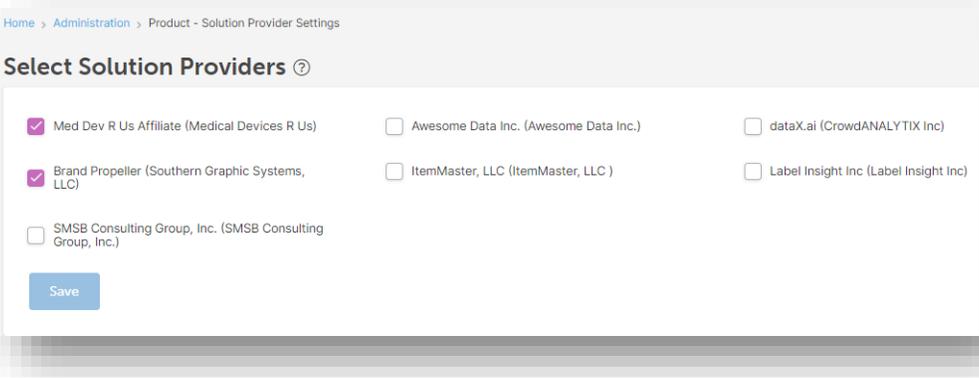
Version 4.5
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Contents

Brand Owner Experience

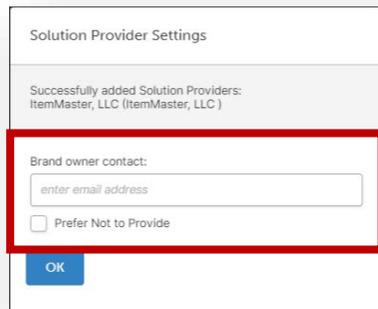## How A Brand Owner Selects A Solution Provider

After you negotiate your business agreement, a Brand Owner must take steps to ensure they select you as their CCP. These are the steps the Brand Owner initiates to get started.

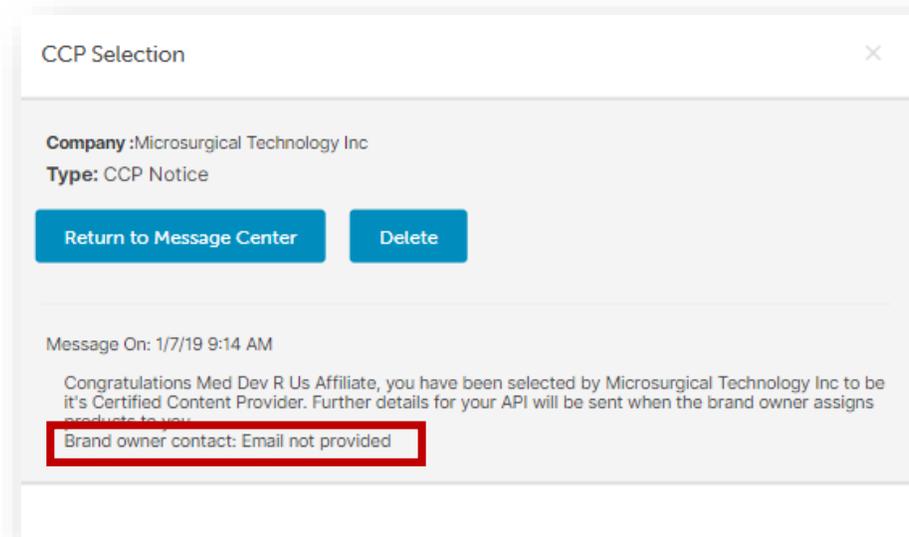| Step	Action
1.	A Brand Owner will assign their chosen Solution Provider from the main menu in GS1 Data Hub in the **Administration** screen, by clicking on Manage under the **Solution Provider Settings**:
2.	A list displays with available Solution Providers who participate in the Certified Content Provider Program. The Brand Owner clicks the box to the left of the company name to select that CCP and clicks Save**.** In this example, Med Dev R Us, a test company, and Brand Propeller, have been selected for illustrative purposes.

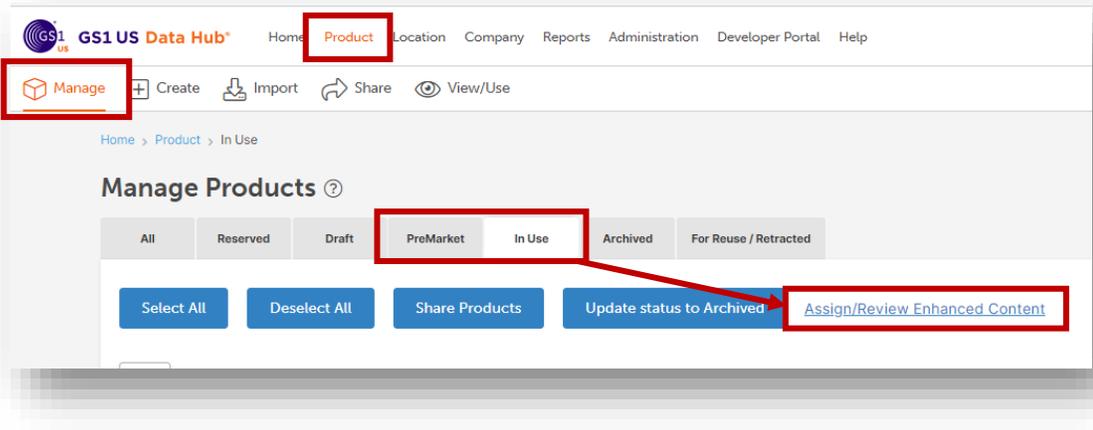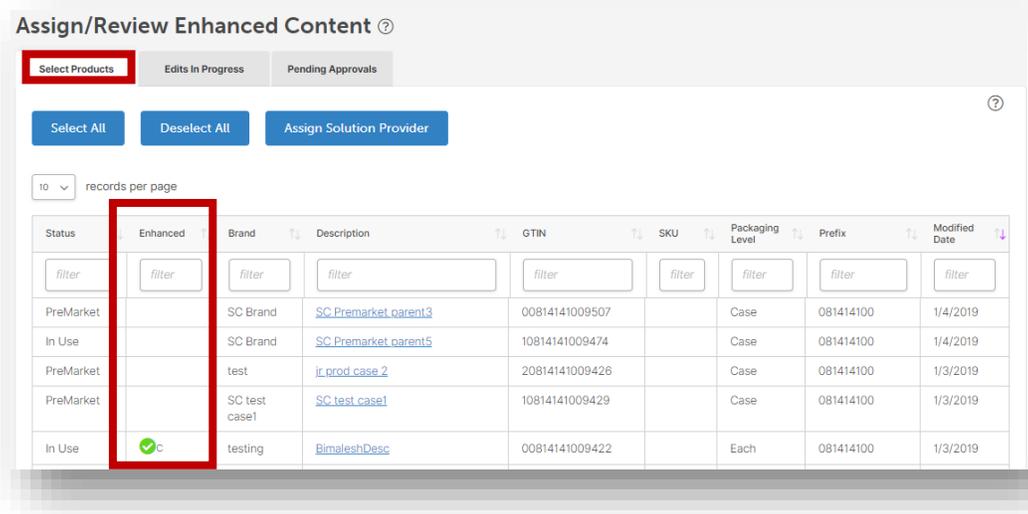| 3.	The **Solution Provider Settings** dialog box displays to confirm the Brand Owner's selection and allows them to enter an email address. The Brand Owner may elect not to provide an email address by checking the box "Prefer Not to Provide". The Brand Owner must act otherwise an error will display until one or the other action is taken. As a **best practice**, we recommend the Brand Owner provide an email address so that the Solution Provider can confirm receipt. The Brand Owner clicks **OK** to close the confirmation window**.** ![Solution Provider Settings dialog box] Solution Provider Settings Successfully added Solution Providers: ItemMaster, LLC (ItemMaster, LLC) Brand owner contact: _enter email address_ ☐ Prefer Not to Provide OK
4.	GS1 US Data Hub then initiates and sends a CCP Selection notification and email to the Solution Provider informing that they have been selected by the Brand Owner company. This notification contains the email address provided or the note "Email not provided" as shown in the sample below. CCP Selection ✕ **Company :** Microsurgical Technology Inc **Type:** CCP Notice [Return to Message Center] [Delete] Message On: 1/7/19 9:14 AM Congratulations Med Dev R Us Affiliate, you have been selected by Microsurgical Technology Inc to be it's Certified Content Provider. Further details for your API will be sent when the brand owner assigns products to you. Brand owner contact: Email not provided

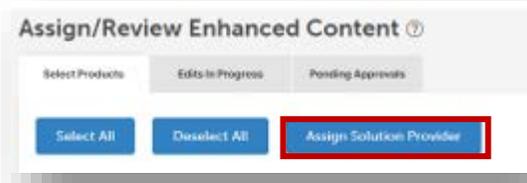## How a Brand Owner Assigns Product Records to a Solution Provider

After selecting a Solution Provider, the Brand Owner will select the product record(s) and assign them to a Solution Provider to enhance following these steps.

Step	Action
1.	The Brand Owner navigates to **Product> Manage** to display the data tables. Selects the **PreMarket** or **In Use** tab. Clicks the **Assign/Review Enhanced Content** link to display a new set of tables that only the Brand Owner can access.
2.	The **Select Products** table displays all PreMarket and In Use products available for assignment. The Enhanced column within the table provides a visual indicator for records that have already been modified. Visual indicators are intended to help the Brand Owner easily identify which product records have been enhanced under the CCP Program from records that have not.

	The icons displayed under the Enhanced column indicate a CCP supplied content and/or images were reviewed and approved by the Brand Owner: ☐ content approved and enhanced ☐ image approved and enhanced ☐ content and image approved and enhanced
4.	The Brand Owner selects one or more product records(s) and clicks the **Assign Solution Provider** button. Note: User can select multiple product records using shift control or clicking on the Select All button.
5.	The **Assign Solution Provider** dialog box opens for the Brand Owner tp select your company from the dropdown menu. In this example, we selected the test company, Medical Devices R Us. Click **OK** to confirm your selection. **NOTE**: Only Solution Provider(s) that are preselected in the Administration screen will appear in the drop down. If the Brand Owner does not see
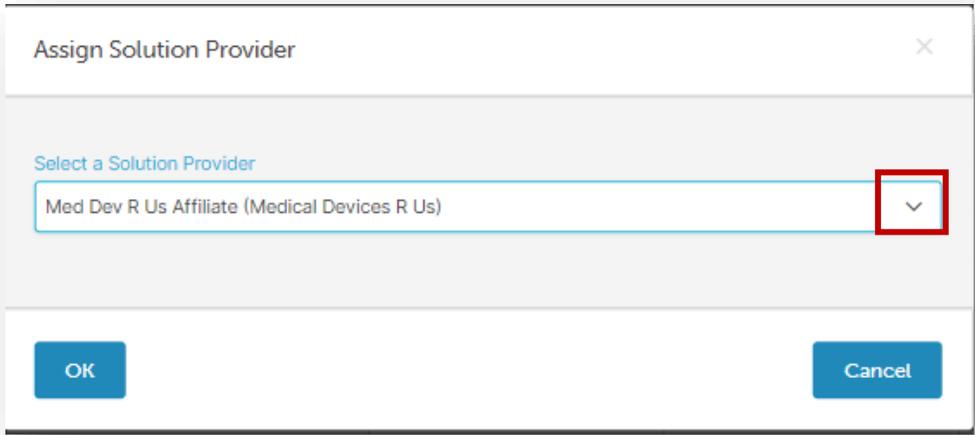
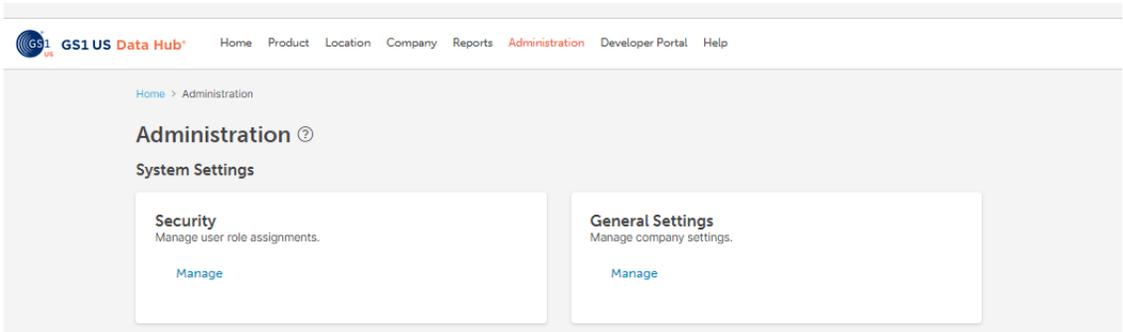|	
	your company listed, the Brand Owner needs to contact their Administrator to check Solution Provider Settings. To add your company as a preferred Solution Provider, the Brand Owner should review the steps in their guide on "Selecting a GS1 US Solution Provider in the Certified Content Program".
6.	GS1 US Data Hub initiates and sends a **Products Assigned** notification and email to you providing information that products have been assigned along with critical information that will enable you to access the product detail records using a Web Services (API) subscription. Below is a sample of the CCP Notice Data Hub sends to you. The EntityGLN is a critical piece of information you will need for the API to get and post assigned records. **Products Assigned** ✕ **Company :**GS1 US Enterprises 1 **Type:** CCP Notice [Return to Message Center] [Delete] Message On: 2/1/19 8:43 AM You have been assigned 1 product(s) by company GS1 US Enterprises 1. Please use EntityGLN: 0814141000009 to get the product details via the API. Please refer to developer portal or API documentation for instructions.
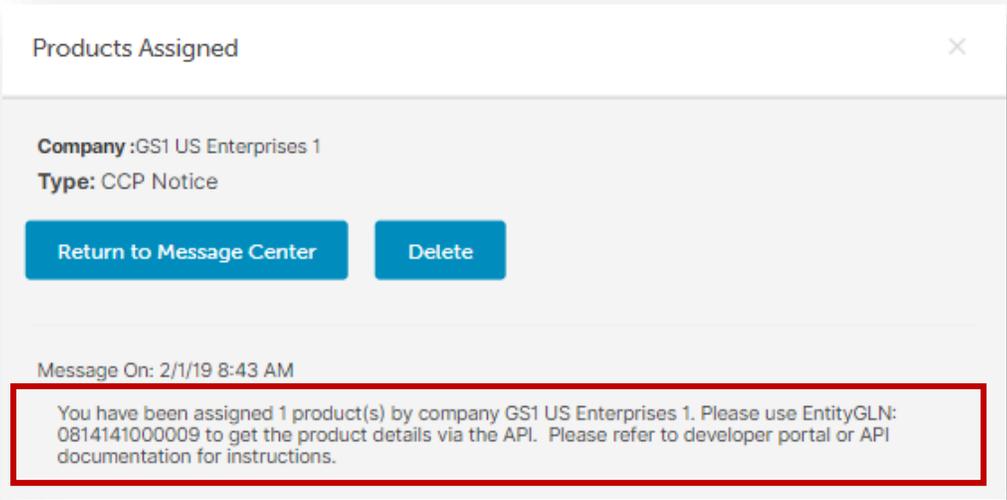
Brand Owners will select, assign/unassign records, review/approve content, review/reject content and images.

Screen views of all of the CCP Notices that Data Hub initiates and sends to a Solution Provider throughout the selection, assignment, review and approval process are provided in the Appendix.

Guidance for the Solution Partner in the Certified Content Provider Program
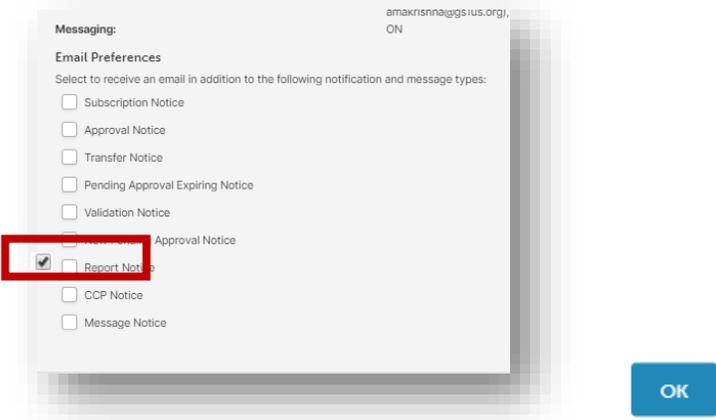
Getting Started: Setting Up Preferences to receive Messaging, Notifications and Email (Administrator Role)

To get started, your Data Hub Administrator needs to follow these initial set up steps to turn on messaging enabling individual users to set up email and CCP Notice preferences in their profile.

Step	Action
1.	On the home page of GS1 US Data Hub, click on **Administration** and navigate to **General Settings** to manage your company settings. Click **Manage**.
2.	Click on the box next to **Allow Messaging**. Click **Save**
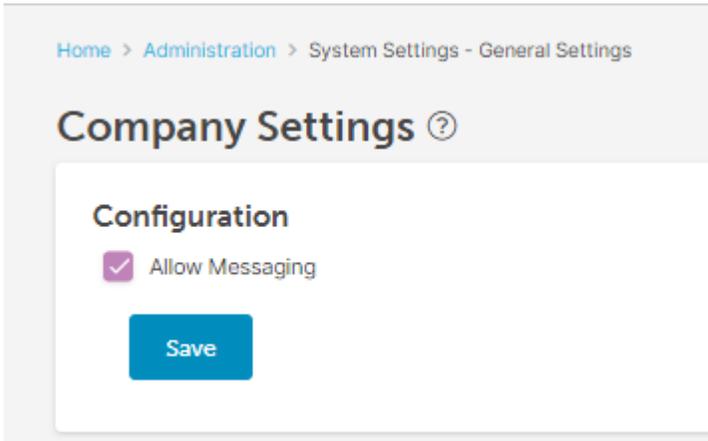
Setting Email Preferences in User Profile (User Role)

The User Profile defines how a user wishes to receive emails and notifications when using GS1 US Data Hub. Individual users will need to set their own email preferences.

Step	Action
1.	On the home page of GS1 US Data Hub, your user profile is located by clicking on the down arrow next to the user name (in most cases, this is your name) located at the top right side of the screen. Click the down arrow \\/ next to the username to reveal a submenu. Click **User Profile.**
2.	The **User Profile** screen will load. Use the scroll bar on the right side of the window to scroll down to view **Email Preferences**. Check the **CCP Notice** box to receive notifications and click the **OK** button to save.
3.	A green confirmation dialog box, Profile Update, dialog box appears in the top right corner to confirm your selection.
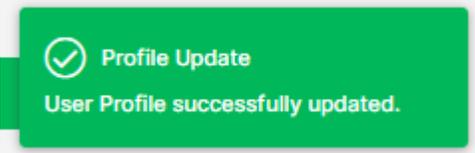
Using the Developer Portal

Refer to the **GS1 US Data Hub Developer API Mini Guide** located in the Help Center for instructions on using the Developer Portal. Below are extracts from pages 3 and 4 of the guide.

The API under the Certified Content Program is unique and referred to as **CCP-API**. Only Solution Providers in the program have access to this API. The Profile screen

(access Profile by clicking the down arrow at the account name in upper right portion of the screen) provides specific information, such as the APIKey, you will use in your calls.

Your Product and Company view/use subscriptions also allow you to use the Company and Product APIs to perform searches by GTIN, GLN or Company name. Results provide prefix certificate ownership information.

Retrieving Assigned Product Records from a Brand Owner

To determine what products have been assigned to you, use this method to retrieve assigned product record details from the Brand Owner's Data Hub product list.

<mark>The request URL in step 1 is for USER TESTING. Remove "usertest" from the url for production.</mark>

Step	Action
1.	Refer to the CCP-API v2 to retrieve assigned records, using the Get Assigned Products method. **Try It** allows you to try the request right from the UI.
2.	Use **Request URL/parameter/header** http://api.gs1us.org/product/v2/getassignedproducts/{GLN} **{GLN}** is the request parameter. This is the entityGLN value provided in the CCP Selection notification. **APIKey** is the primary or secondary subscription key provided in your Profile. The **Try It** function prepopulates this value.
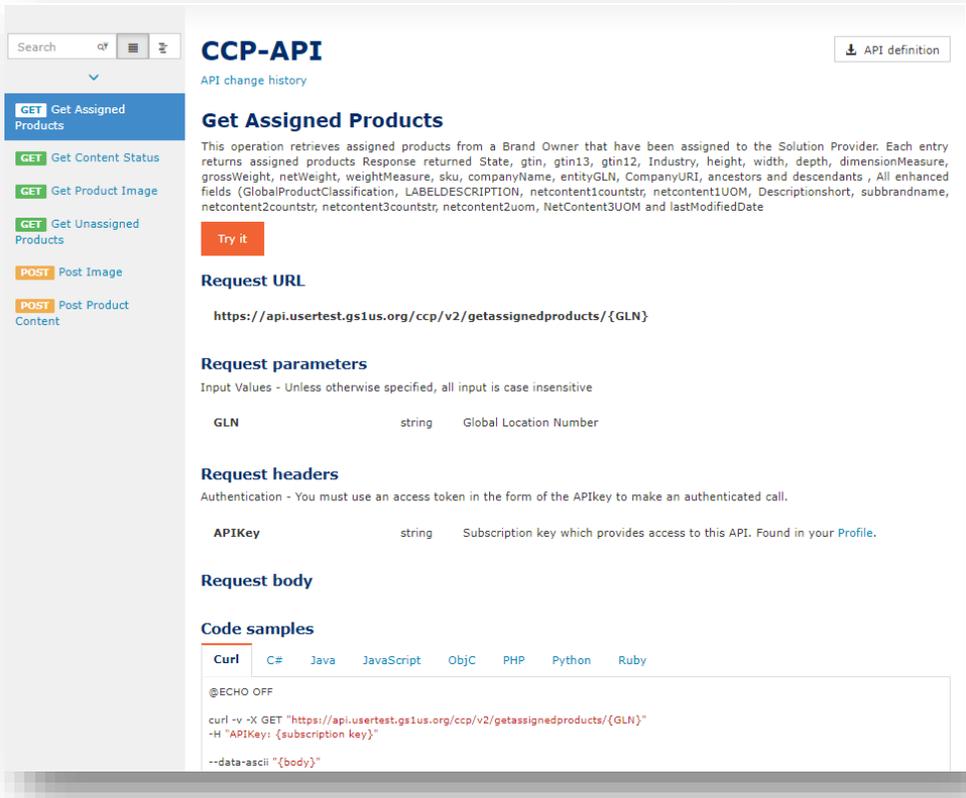
3.	If using Try It, click **SEND** to submit the API request.

4.	If the call is successful, the response will return the product details as a reference, shown in the example below:
	
	Response:
	
	`200 OK` 808.75 ms
	DETAILS
	{
	"success": true,
	"productInformation": {
	"gtin": "XXXXXXXnnnnnn",
	{
	"products": [
	{
	"brandName": "Brian's Best",
	"description": "Reserved Item",
	"state": "In Use",
	"status": "Assigned",
	"actionDate": "2018-01-22T09:13:50.5",
	"gtin": "XXXXXXXX000733",
	"gtin13": "",
	"gtin12": "XXXXXXX00733",
	"industry": "General",
	"height": null,
	"width": null,
	"depth": null,
	"dimensionMeasure": null,
	"grossWeight": null,
	"netWeight": null,
	"weightMeasure": null,
	"sku": null,
	"companyName": "GS1 US Enterprises 1",
	"entityGLN": "XXXXXXX000009",
	"CompanyURI": "/company/v2/company/XXXXX500105283920",
	"ancestors": [],
	"descendants": [],

5.	One or more product detail records may be retrieved in a single query against the entityGLN, if the Brand Owner assigns them. These results may include both **PreMarket** and **InUse** records.
6.	Submit changes one record at a time. See **Adding Enhanced Content to an Assigned Product Record via the API**

Adding Enhanced Content to an Assigned Product Record

To add enhanced content to product records assigned to you, use the POST method using the command "postproductcontent" in the request URL.

<mark>The example Request URL in step 1 below is for USER TESTING. Refer to step 2 for the Request URL.</mark>

Step	Action
1.	To add content to assigned records, use the Post Product Content method using the command "postproductcontent" in the request URL.
2.	Use **Request URL** http://api.gs1us.org/ccp/v2/postproductcontent/
3.	Add a **Request Header** Enter in the Header Name: **APIKey** In the Header Value field enter the appropriate API key from your Profile
4.	Add **Body Content Type**: **application/JSON** The Body Content Type updates Data Hub enhanced content attributes.
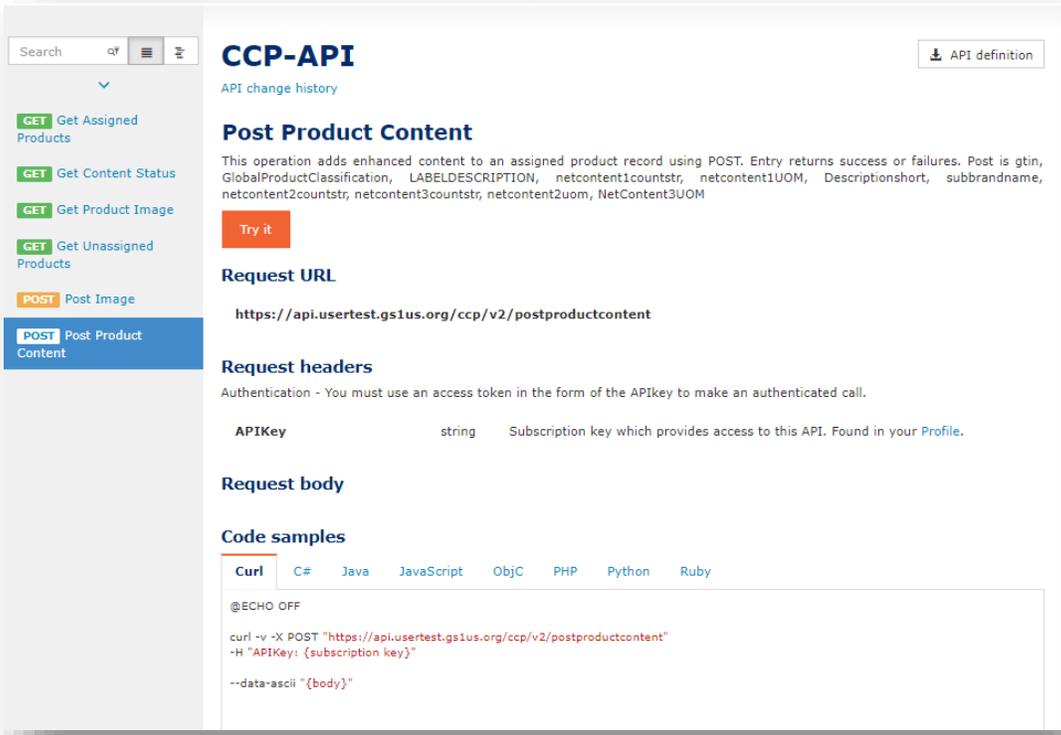
Use the following code to change the enhanced content. Recommendations: Copy and paste the syntax below, then change the individual field values. Save the syntax as a named template for repeated use.

Required fields for both PreMarket and InUse record states are: GTIN, LabelDescription, NetContent1Count, NetContent1UnitofMeasure, GlobalProductClassification and ImageURL

---

5. | Syntax for **PreMarket** Records

```
{
 "gtin": "00814141005059",
 "fields": [
  {
   "fieldName": "Description",
   "fieldValue": "SC Prod Test"
  },
  {
   "fieldName": "Height",
   "fieldValue": 1
  },
  {
   "fieldName": "Width",
   "fieldValue": 1
  },
  {
   "fieldName": "Depth",
   "fieldValue": 1
  },
  {
   "fieldName": "DimensionMeasure",
   "fieldValue": "inches"
  },
  {
   "fieldName": "GrossWeight",
   "fieldValue": 1
  },
  {
   "fieldName": "NetWeight",
   "fieldValue": 1
  },
  {
   "fieldName": "WeightMeasure",
   "fieldValue": "ounces"
  },
  {
```

```
    "fieldName": "SKU",
    "fieldValue": null
  },
  {
    "fieldName": "Country",
    "fieldValue": "USA"
  },
  {
    "fieldName": "Comments",
    "fieldValue": "Comment from API"
  },
  {
    "fieldName": "GlobalProductClassification",
    "fieldValue": "01234561"
  },
  {
    "fieldName": "LabelDescription",
    "fieldValue": "Test labelDescription"
  },
  {
    "fieldName": "Descriptionshort",
    "fieldValue": "test update from API"
  },
  {
    "fieldName": "SubBrandName",
    "fieldValue": "test update from API"
  },
  {
    "fieldName": "NetContent1CountStr",
    "fieldValue": "1.000"
  },
  {
    "fieldName": "NetContent1UOM",
    "fieldValue": "lb"
  },
  {
    "fieldName": "NetContent2CountStr",
    "fieldValue": "1"
  },
  {
    "fieldName": "NetContent2UOM",
    "fieldValue": "lb"
  },
  {
    "fieldName": "NetContent3CountStr",
    "fieldValue": "1"
  },
```

```json
    {
      "fieldName": "NetContent3UOM",
      "fieldValue": "oz"
    },
    {
      "fieldName": "ImageUrl",
      "fieldValue": "www.image.com"
    }
  ]
}
```

| 6. | Syntax for **In Use** Records |

```json
{
  "gtin": "00814141000931",
  "fields": [
    {
      "fieldName": "Description",
      "fieldValue": "Prod 831-00 Case1"
    },
    {
      "fieldName": "Height",
      "fieldValue": 6
    },
    {
      "fieldName": "Width",
      "fieldValue": 2.1
    },
    {
      "fieldName": "Depth",
      "fieldValue": 2.1
    },
    {
      "fieldName": "DimensionMeasure",
      "fieldValue": "feet"
    },
    {
      "fieldName": "GrossWeight",
      "fieldValue": 1
    },
    {
      "fieldName": "NetWeight",
      "fieldValue": 1
    },
    {
      "fieldName": "WeightMeasure",
      "fieldValue": "ounces"
```
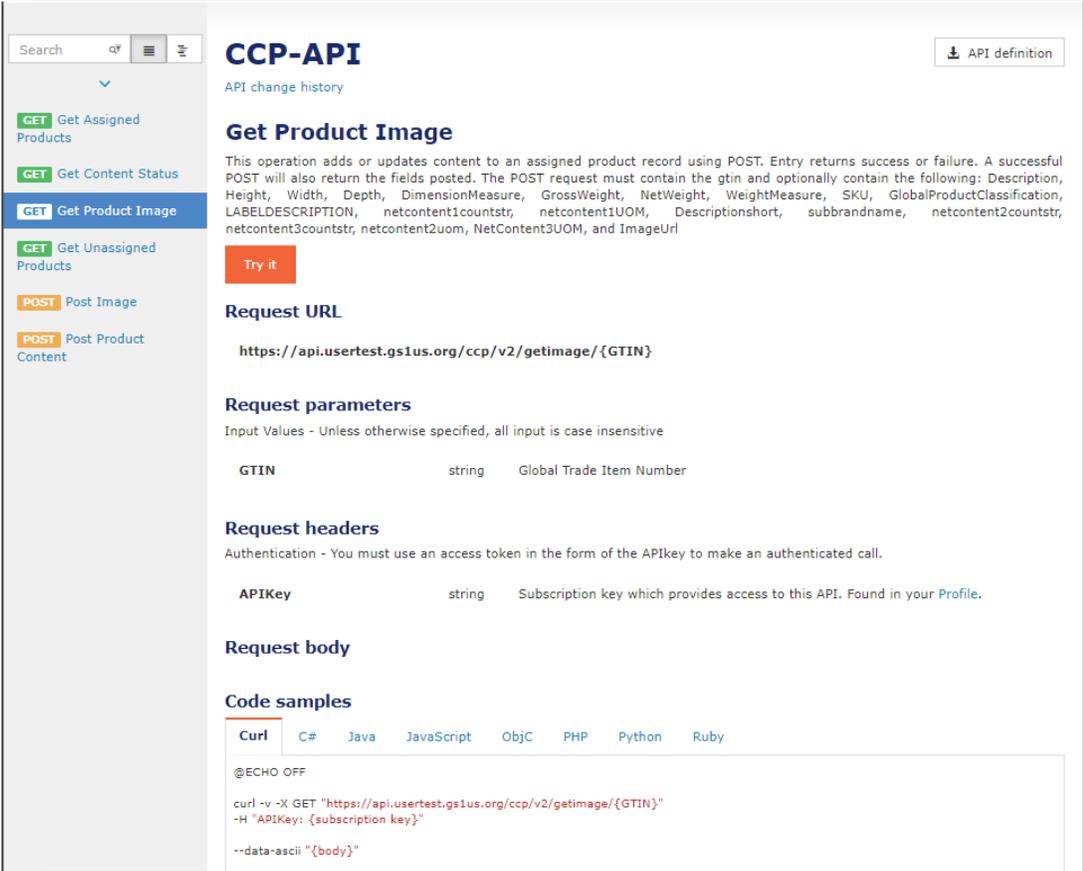
```json
    },
    {
      "fieldName": "GlobalProductClassification",
      "fieldValue": "01234561"
    },
    {
      "fieldName": "LabelDescription",
      "fieldValue": "Test label Description"
    },
    {
      "fieldName": "Descriptionshort",
      "fieldValue": "test update from API"
    },
    {
      "fieldName": "SubBrandName",
      "fieldValue": "test update from API"
    },
    {
      "fieldName": "TargetMarket",
      "fieldValue": "test update from API"
    },
    {
      "fieldName": "NetContent1CountStr",
      "fieldValue": "1.000"
    },
    {
      "fieldName": "NetContent1UOM",
      "fieldValue": "lbs"
    },
    {
      "fieldName": "NetContent2CountStr",
      "fieldValue": "123333"
    },
    {
      "fieldName": "NetContent2UOM",
      "fieldValue": "lbs"
    },
    {
      "fieldName": "NetContent3CountStr",
      "fieldValue": "123333"
    },
    {
      "fieldName": "NetContent3UOM",
      "fieldValue": "oz"
    },
    {
      "fieldName": "ImageUrl",
```

	``
	    "fieldValue": "www.image.com"
	  }
	]
	}
	``

7.	Receive confirmation that the request was successful. **Response:** 200 OK 808.75 ms DETAILS { "Success"
8.	Scroll to Body for data

Retrieving an Existing Image from a Product Record

GS1 US is decommissioning the feature to store image files in GS1 US Data Hub. A CCP is requested to use the attribute: imageURL to point a user to an image library in an offsite location.

In rare cases, when it is necessary to retrieve an existing image file for the assigned product's record, follow the steps below. NOTE: This method works best using an external tool, such as, POSTMAN.
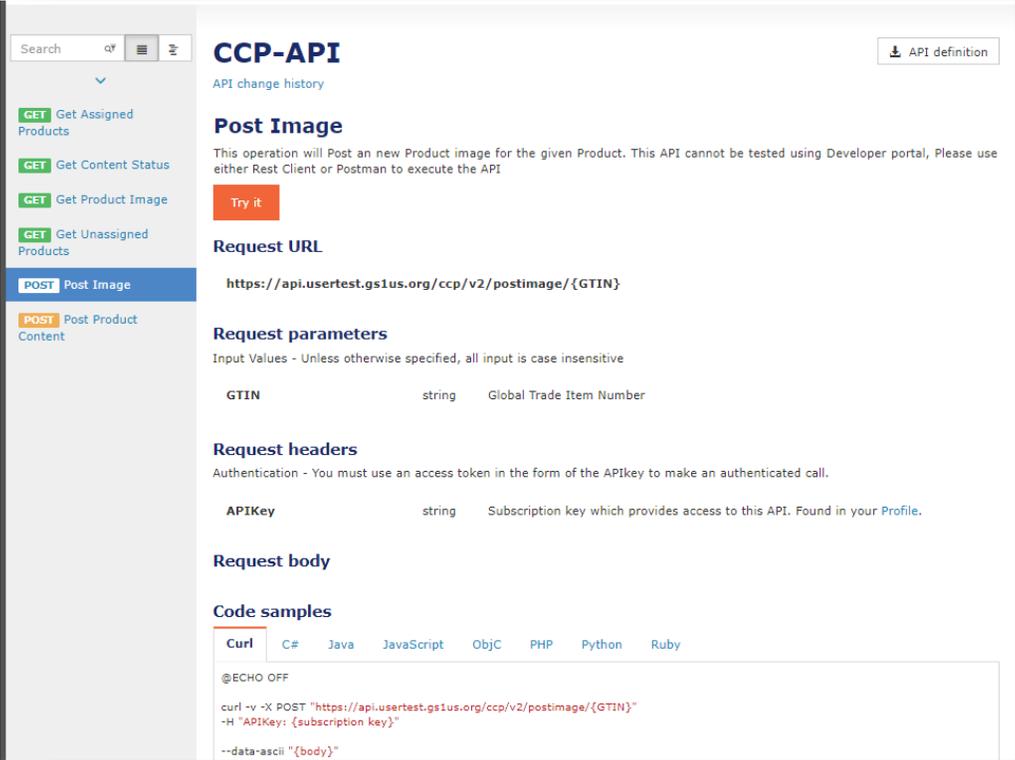
Step	Action
1.	Use **Method**: **Get Product Image** This method retrieves an existing image file from the Data Hub record. This method takes the GTIN of the product record assigned to you by the Brand Owner as its parameter. <mark>The example Request URL in step 1 below is for USER TESTING. Refer to step 2 for the Request URL.</mark>

2.	Use **Request URL:** http://api.gs1us.org/ccp/v2/getimage/{GTIN} Change the **{GTIN}** for the product record from which you want to retrieve image.	
3.	**Add a Header field.** Enter in the Header Name: **APIKey** In the Header Value field enter the appropriate API key.	
4.	Browse for and select the picture file to upload. Note: file size not to exceed 900k.	
5.	Update the **Field Name** with **File**.	
6.	Click **SEND** to submit the API request to Data Hub.	
7.	Receive confirmation that the request was successful.	
8.	**Response:** 200 OK 791.70 ms DETAILS "Success"	
9.	If a record is pending content approval, Data Hub will return an error that the record could not be found. Wait to resubmit, or until the enhanced record content has been approved or reassigned.	
10.	Scroll to the Body for data.	

Posting an Image to the Product Record

GS1 US is decommissioning the feature to store image files in GS1 US Data Hub. A CCP is requested to use the attribute: imageURL point a user to an image library in an offsite location.

In rare cases, when it is necessary to replace existing image files via the API, follow these steps., NOTE: This method works best using an external tool, such as, POSTMAN.

Step	Action
1.	Use **Method**: **POST Image** This method adds an enhanced image to the Data Hub record. This method takes a valid GTIN as its parameter. ==The example Request URL in step 1 below is for USER TESTING. Refer to step 2 for the Request URL.==

2.	Use **Request URL:** http://api.gs1us.org/ccp/v2/postimage/{GTIN} Change **{GTIN}** to the GTIN corresponding to the product image you need to replace.
3.	**Add Header field** Use Header Name: **APIKey** In the Header Value type **your API key**
4.	The **Body** will display a **Choose File** field. Click to search for your file
5.	Browse for and select the picture file to upload. Note: file size not to exceed 1MB
6.	Update the **Field Name** with File
7.	Click **Send** to submit the API request to Data Hub
8.	Receive confirmation that the request was successful
9.	**Response:** `200 OK` 791.70 ms DETAILS "Success"
10.	If a record is pending content approval, Data Hub will return an error that the record could not be found. Wait to resubmit, or until the enhanced record content has been approved or reassigned.
11.	Scroll to the Body for data
12.	Only one image file may be posted to a product record. Only one image file can be conveyed in a single API submission.

Determining the Status of Approved and Rejected Records

This step provides a way for you to determine the status of records assigned to you by the Brand Owner.

Step	Action
1.	Use **Method**: **Get Content Status** This method enables you to retrieve a list of approved and rejected records for a given Brand Owner. This method takes the valid entityGLN of the Brand Owner as its parameter.
2.	Use **Request URL:** http://api.gs1us.org/ccp/v2/getcontentstatus/{GLN} Change {GLN} to the entityGLN value provided in the CCP Selection notification
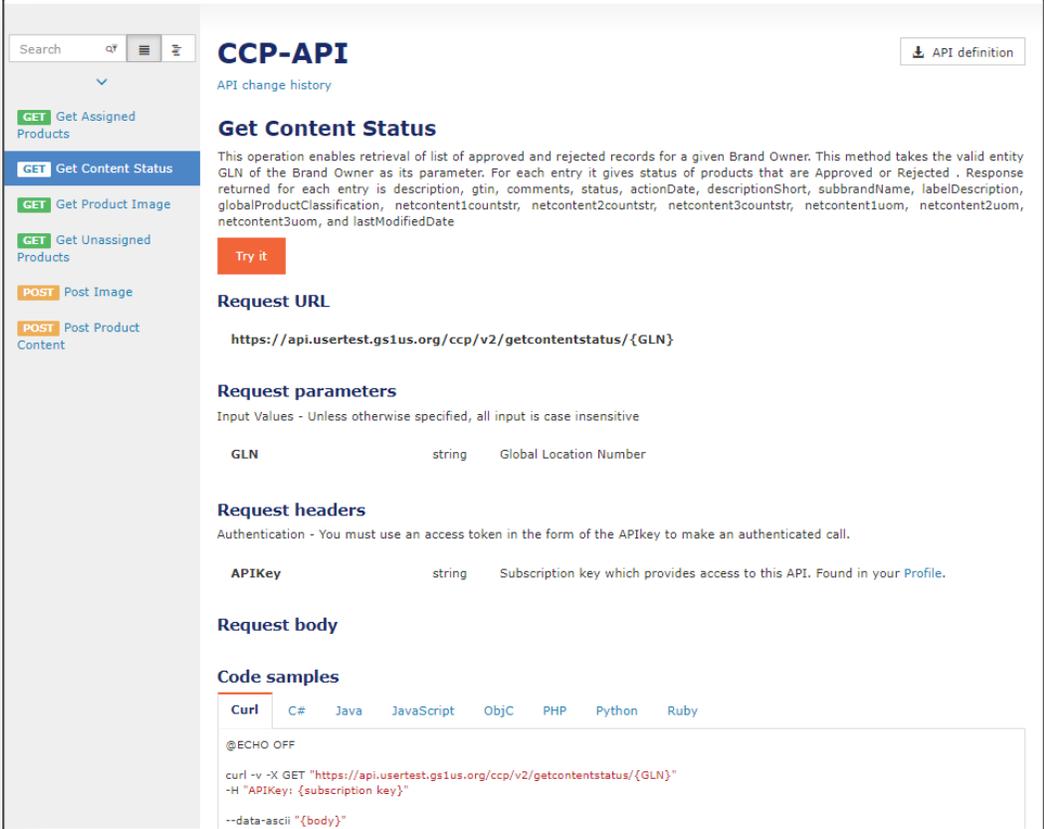
3.	**Add a Header field** Use the following under Header Name: **APIkey** In the Header Value type **your API key**
4.	Click **SEND** to submit the API request to Data Hub.
5.	Receive confirmation that the request was successful and scroll through the file to review results. **Response:** `200 OK` 791.70 ms DETAILS "Success"
6.	If a record is pending approval, Data Hub will return an error that the record can not be found. Wait to resubmit or until that record has been approved.
7.	Scroll to the Body for data

Retrieving a List of Records a Brand Owner Unassigned

This step provides a way for you to determine the status of records that were unassigned by the Brand Owner.

Step	Action
1.	Use **Method**: **Get Unassigned Products** This method enables you to retrieve a list of unassigned records for a given Brand Owner. This method takes the valid entity GLN of the Brand Owner as its parameter. The example Request URL in step 1 below is for USER TESTING. Refer to step 2 for the Request URL.
2.	Use **Request URL:** http://api.gs1us.org/ccp/v2/getunassignedproducts/{GLN}
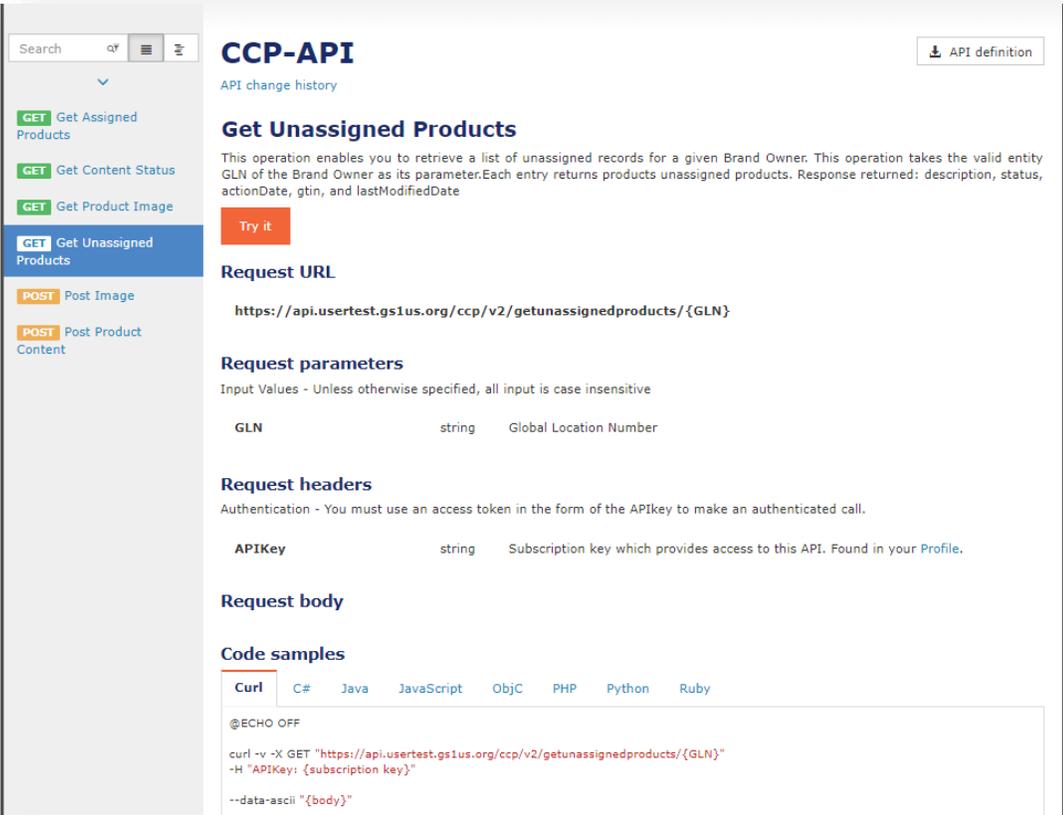
		Change the {GLN} to the entityGLN value provided in the CCP Selection notification
	3.	**Add Header field** Use Header Name: **ApiKey** In the Header Value type your **API Key**
	5.	Click **SEND** to submit the API request to Data Hub.
	6.	Receive confirmation that the request was successful and scroll through the file to review results. **Response:** 200 OK791.70 ms DETAILS "Success"
	7.	If a record is pending approval, Data Hub will return an error that the record could not be found. Wait to resubmit or until that record has been approved.
	8.	Scroll to the Body for data

APPENDIX

Notification Examples

CCP Selection ×

Company : Microsurgical Technology Inc
Type: CCP Notice

[Return to Message Center]   [Delete]

Message On: 1/7/19 9:14 AM

Congratulations Med Dev R Us Affiliate, you have been selected by Microsurgical Technology Inc to be it's Certified Content Provider. Further details for your API will be sent when the brand owner assigns products to you.
Brand owner contact: Email not provided

Products Assigned ×

Company :GS1 US Enterprises 1
Type: CCP Notice

[Return to Message Center]   [Delete]

Message On: 2/1/19 8:43 AM

You have been assigned 1 product(s) by company GS1 US Enterprises 1. Please use EntityGLN: 0814141000009 to get the product details via the API. Please refer to developer portal or API documentation for instructions.

Content Approved

Company : GS1 US Enterprises 1

Type: CCP Notice

Return to Message Center   **Delete**

Message On: 1/28/19 2:09 PM

Company GS1 US Enterprises 1 has approved 2 product(s). Please use the API to get the list.

Content Rejected

Company : GS1 US Enterprises 1

Type: CCP Notice

Return to Message Center   **Delete**

Message On: 1/2/19 12:02 PM

Company GS1 US Enterprises 1 has rejected content changes for this product 00814141003956.
Comments: rejected1

Products Unassigned ✕

Company : GS1 US Enterprises 1

Type: CCP Notice

[Return to Message Center] [Delete]

Message On: 12/20/18 9:05 AM

Company GS1 US Enterprises 1 has removed 1 product(s) from your work assignment. Please use the API to get an unassigned List, and contact the Brand Owner for more information.

API Commands for the CCP

Request URL: https://api.gs1us.org/ccp/v2/...

Desired Action	String to Append to Request URL
Retrieve list of products assigned by the Brand Owner referencing its entity GLN	getassignedproducts/{GLN}
Retrieve list of product records unassigned by the Brand Owner by its entity GLN	getunassignedproducts/{GLN}
Post the enhanced attributes to the GTIN records assigned by the Brand Owner	postproductcontent [see note below]
Retrieve the list of approved and rejected records and reasons for rejection in body of response	getcontentstatus/{GLN}
Retrieve the image file of an assigned GTIN	getimage/{GTIN}
Post the new image file of an assigned GTIN	postimage/{GTIN}

Note: These fields are always required for posting content to both record states:

    GTIN
    LabelDescription
    NetContent1Count
    NetContent1UnitofMeasure
    GlobalProductClassification
    ImageURL

Data Dictionary for the Enhanced Content Attributes

FieldName (*required)	FieldValue	Construct
GTIN (*)	Numeric	Enter reference as assigned
GlobalProductClassification (*)	Character string	8 Digit Numeric; not all zeroes
LABELDESCRIPTION (*)	Text	500 Characters
Netcontent1count (*)	Numeric	80 "characters" long, can be an integer or up to 4 decimal places
netcontent1UnitOfMeasure (*)	Text	90 Characters
imageURL	Character string	2080 Character limit

Notes:

1. Net Content must include both *count* and *UnitOfMeasure* field values

Modifiable Product Attributes	PREMARKET			IN USE		
Always post required fields **Always post all fields when correcting a rejected field**	Brand Owner		CCP	Brand Owner		CCP
GS1CompanyPrefix	R	R				
GTIN	R	R	R			R
PackagingLevel	R	R				
Product Description	R	R	O	O	O	O
SKU	O	O	O	*	*	*
Brand Name	R	R				
Status	R	R		O	O	
IsVariable						
IsPurchasable	R	R				
Certified	System generated			System generated		
Height	O	O	O	O	O	O
Width	O	O	O	O	O	O
Depth	O	O	O	O	O	O
DimensionMeasure	O	O	O			see note 2
GrossWeight	O	O	O	O	O	O
NetWeight	O	O	O	O	O	O
WeightMeasure	O	O	O			see note 2
Comments	O	O	O	*	O	O
CountryOfOrigin	Note: Scheduled to be removed in 2019					
ChildGTINs (UPPER LEVEL)[1]	O[1]	O[1]				
Quantity[1]	O[1]	O[1]				
SubBrand Name	O	O	O			O
Target Market	O	O	O			O
ProductDescriptionShort	O	O	O			O
LabelDescription	O	O	R	O	O	R
NetContent1Count	O	O	R			R[2]
NetContent1UnitOfMeasure	O	O	R			R[2]
NetContent2Count	O	O	O			O[2]
NetContent2UnitOfMeasure	O	O	O			O[2]
NetContent3Count	O	O	O			O[2]
NetContent3UnitOfMeasure	O	O	O			O[2]
GlobalProductClassification	O	O	R	O	O	R
ImageURL	O	O	R	O	O	R
Last Modified Date	System generated			System generated		

KEY

See Next page

KEY for Modifiable Product Attributes Table

Blank is not applicable or editable

R, R^2 = Required field

O, O^2 = Optional field

 ^{1} Required field for upper level packaging

 ^{2} Editable when null only

 * = revisit post Rel. 4.0