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## Getting Started with the DSR Web API

The NCR DSR Web Application Programming Interface (API) provides HTTP-based RESTful API requests that can be used to add, update, or retrieve enterprise data.

This guide contains the following topics:

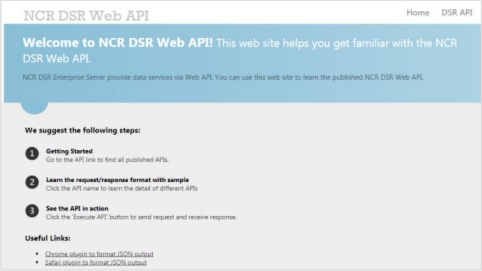
- *Getting Started with the DSR Web API*
  - *Accessing the NCR DSR Web API*
  - *Understanding HTTP requests*
  - *Understanding the API page*
  - *Understanding server responses*

Accessing the NCR DSR Web API

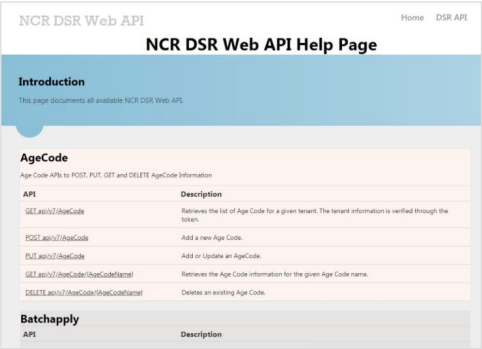
To access the NCR DSR Web API, follow these steps:

- 1. Open a Web browser and go to the NCR DSR Web API page.

**Example:** http://<NCR DSR Enterprise API Server Name>/NCRRetailONE.



- 2. From the upper-right corner of the page, select the **DSR API** link. The NCR DSR Web API Help Page is displayed. This page lists all the available API requests, divided into different categories.



## Understanding HTTP requests

HTTP requests are initiated in the Web API to communicate with the server. These requests define the action to be performed on the specified data. The following HTTP requests are used in the NCR DSR Web API:

- POST—creates new resources on the server.
- PUT—updates resource information on the server.
- GET—retrieves resource information on the server.
- DELETE—deletes existing resources on the server.

### Understanding the API page

Each API request has an information page that contains parameters and syntax details. The request and response actions are performed in this page.

NCR DSR Web API

HomeDSR API

Help Page Home

POST api/v7/ProductVendors

Accepts a product vendor information from a client.

Tables Impacted

ProductVendor

Request Information

URI Parameters

None.

Body Parameters

Product vendor information to insert/create in db.

Name	Description	Type	Required?	Additional information
productCode *	PLU Key	string	Yes	String length between 1 and 30, inclusive
caseCost	case Cost	decimal number	No	None.
caseSize	case Size	integer	No	None.

Execute API

- Tables Impacted—lists the database tables affected by the API request.
- Request Information—contains the data used to send the API request, composed of the following:
  - URI Parameters—defines the Uniform Resource Identifier. The URI parameters form part of the HTTP request URL.
  - Body Parameters—defines the complete set of parameters available for the request.
  - Request Formats—defines the sample request format. The NCR DSR Web API provides examples in the JSON and XML formats.
- Response Information—contains the data that the API sends as a response to the request, composed of the following:
  - Resource Description—defines the parameters or status response to the API request.
  - Response Formats—defines the sample response format. The NCR DSR Web API provides examples in the JSON and XML formats.

Understanding server responses

The Web API receives response codes that indicate the success or failure of an API request from the server. The most common responses received by the NCR DSR Web API are the following.

Response	Description
200	The request was successful.
201	The request was successful and a resource was created.
400	The request could not be understood or has missing required parameters.
401	The authentication failed or the user does not have permissions for the requested operation.
409	There was a conflict in the request. This can include an edit conflict between simultaneous updates, for example, a conflict in the data record sequence based on the date and time the data is applied.
500	There was an internal server error.

## Using the DSR Web API

This section contains the following topics:

- [Requesting authorization](#)
- [Sending an API request](#)
- [Loading Data Using Batch Apply](#)

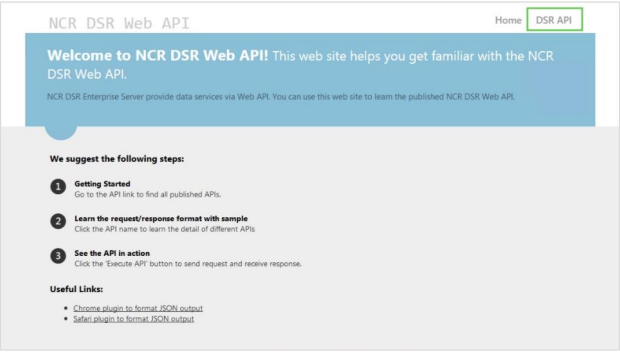
Requesting authorization

The NCR DSR Web API requires authorization for each request. This authorization is granted through a token that is issued by the API. For security purposes, tokens are configured with an expiration limit.

To obtain the security token, called an *ASToken*, follow these steps:

- 1. Ensure that the Ncr.Retail.BatchApply service is *Running*.
- 2. Open a Web browser and go to the NCR DSR Web API page.

**Example:** http://<NCR DSR Enterprise API Server Name>/NCRRetailONE.



3. From the upper-right corner of the page, select the **DSR API** link. The NCR DSR Web API Help Page is displayed.

SecurityV8

Newer version(V8) of Security APIs for 'Login', 'Logout', 'Token validation' and 'Reset password' for the system

API	Description
POST api/v8/Security/Login	Issues an authentication token to a user based on provided orgName, user name and password. The tenant name is optional which can be set via a custom header "nep-organization".
POST api/v8/Security/Logout	Logs out a previously issued token. The token should be set in 'Authorization' header.
POST api/v8/Security/ResetPassword	Change the current user password based on provided user-name and password within an organization context. The tenant name is optional which can be set in the "nep-organization" header.
GET api/v8/Security/ValidateToken	Validate an issued token. The token should be set in 'Authorization' header.

4. Scroll down to the *SecurityV8* API, and then select the **POST api/v8/Security/Login** request. The API information page page is displayed.

NCR DSR Web API

HomeDSR API

Help Page Home

POST api/v8/Security/Login

Issues an authentication token to a user based on provided orgName, user name and password. The tenant name is optional which can be set via a custom header "nep-organization".

Request Information

URI Parameters

None.

Body Parameters

Request can be an 'AuthenticationRequest' type containing 'orgName', 'username', and 'password'

Authentication Request

Name	Description	Type	Required?	Additional information
orgName *	Organization Name	string	Yes	None.
username *	User Name	string	Yes	None.
password *	Password	string	Yes	None.

Request Formats

application/json, text/json

Execute API



5. Select **Execute API**. The POST api/v8/Security/Login request window is displayed.

POST api/v8/Security/Login

POST    api/v8/Security/Login

**Headers | Add header**

content-length	:	91	Delete
content-type	:	application/json	Delete

☒ **Body**

Samples: application/json ▾


```
{
  "orgName": "Corporate",
  "userName": "administrator",
  "password": "Enter Password"
}
```

Send

 **Note:** This image displays the default values of the *Body* section details.

6. In the *Body* section, enter the following details:

- **orgName**
- **userName**
- **password**

 **Note:** Use the Corporate administrator account credentials. The values entered must be enclosed in quotation marks. For more information, consult with an NCR Representative.

7. Select **Send**. A response window with the ASToken is displayed.

Response for POST api/v8/Security/Login

Status

200/OK


Headers

x-frame-options: DENY  
content-type: application/json; charset=utf-8  
cache-control: no-cache  
content-length: 590  
expires: -1

Body

```
{
  "accessToken": {
    "token": "ASToken
YmI4YmEwMDctZDQxZC00ZDFkLThtYTtYtk0ODM3MDJiYjZjOj
lwMTcxMDcyMTczMzI4",
    "idleTime": 0,
    "maxIdleTime": 1800,
    "maxSessionTime": 14400,
    "remainingTime": 14400,
    "userInfo": {
      "roles": [
        {
          "roleCode": "100",
          "roleName": "admin"
        }
      ],
      "passwordReset": false,
      "passwordExpirationDays": 51,
      "userId": "administrator",
      "firstName": "Default",
      "lastName": "Administrator",
      "displayName": "Default Administrator",
      "primaryLanguage": "en-US",
      "secondaryLanguage": "en-US"
    },
    "orgInfo": {

```

 **Note:** The Status 200/OK indicates that the API message was sent successfully.


8. Copy the *ASToken* from the Body text box of the Response window. The ASToken is the text in between the opening and closing <token> tags. In this example, the token is displayed as the highlighted text in the image above. This token will be used when running using an API function.




Sending an API request

To perform an API request, follow these steps:

- 1. Obtain an *ASToken* for authentication.

 **Note:** For more information, refer to [Requesting authorization](#).

- 2. Select an API request. The API request information page is displayed, containing the API parameters and sample formats.

 **Note:** For more information, refer to the following:

- [Understanding HTTP requests](#)
- [NCR DSR Web API Reference](#)
- [Understanding the API page](#)

**Example:** Select the **POST api/v7/Products** request to add a new product to the catalog.

POST api/v7/Products

Accepts a product information from a client.

Tables Impacted

Product, ProductDesc, ProductPrice, ProductDetail, ProductMinibute, CrossReference, Vendor

Request Information

URI Parameters

None.

Body Parameters

Product information to insert/create in db

Product Data Request

Name	Description	Type	Required?	Additional information
scalableWeightItem	Flag to determine if the item is scalable	boolean	No	None.
taxClassCode	Product Tax Class	string	No	String lengths between 1 and 10; inclusive
hierarchyCode *	Hierarchy Code of Product	string	Conditional	Conditionally required: A product must have hierarchycode. If this is a new product, hierarchycode is required. String lengths between 1 and 10; inclusive

Execute API

3. Select **Execute API**. The browser displays the API request window.

POST api/v7/Products

POST api/v7/Products

**Headers | Add header**

Header	Value	Action
authorization		Delete
content-length	2073	Delete
content-type	text/json	Delete

**Body**

Samples: text/json

```
{
  "scaleableWeightedItem": true,
  "taxClassCode": "009000",
  "hierarchyCode": "18",
  "productPrice": {
    "currencyCode": "USD",
    "effectiveStart": "2010-04-06T14:15:45",
    ...
  }
}
```

Send

4. In the *authorization* field under the *Headers* section, enter the **ASToken**.

5. Enter the necessary information in the *URI parameters* or *Body* sections.

6. Select **Send**. The API displays a response from the server.

 **Note:** For more information, refer to [Understanding server responses](#).

### AgeCode

The AgeCode API can be used to manage age code information on the server.

Method	Request URL	Description
GET	api/v7/AgeCode	Retrieves the list of age code of a specified tenant.
POST	api/v7/AgeCode	Adds a new age code for a tenant.
PUT	api/v7/AgeCode	Adds or updates an age code.
GET	api/v7/AgeCode/{AgeCodeName}	Retrieves the information of an age code using its name.
DELETE	api/v7/AgeCode/{AgeCodeName}	Removes an existing age code.

#### HTTP request details

- ✓ GET api/v7/AgeCode
- ✓ Request information
- None.

### ▼ Response information

The following table describes the information retrieved by the GET `api/v7/AgeCode` request.

Name	Description
AgeCodeName	Defines the unique name of the age code for the tenant.
BuyerAge	Defines the buyer's age restriction for the age code.
SellerAge	Defines the seller's age restriction for the age code.
culture	<p>Specifies the culture code of the age code.</p> <p><b>Example:</b> The following are sample values for this parameter.</p> <ul style="list-style-type: none"><li>• en-US</li><li>• fr</li><li>• fr-CA</li><li>• es</li><li>• ja-JP</li></ul>
description	<p>Defines the text description of the age code.</p> <p><b>Note:</b> This parameter is culture-specific.</p>
customerAuditDate	Specifies the audit information of the age code.

#### Sample JSON request format

```
[
  {
    "AgeCodeName": "sample string 1",
    "BuyerAge": 2,
    "SellerAge": 3,
    "culture": "sample string 4",
    "description": "sample string 5",
    "customerAuditDate": "2018-01-01T00:00:00"
  },
  {
    "AgeCodeName": "sample string 1",
    "BuyerAge": 2,
    "SellerAge": 3,
    "culture": "sample string 4",
    "description": "sample string 5",
    "customerAuditDate": "2018-01-01T00:00:00"
  }
]
```