

# 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:

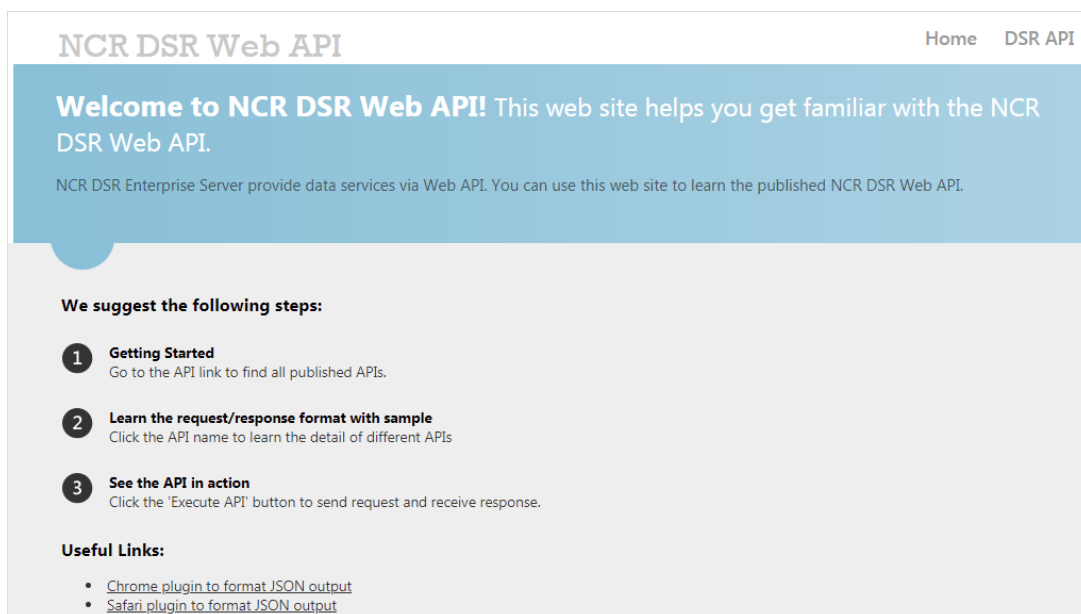
- *Getting Started with the DSR Web API*
  - *Accessing the NCR DSR Web API*
  - *Understanding HTTP requests*
  - *Understanding the API page*
  - *Understanding server responses*

## 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.

## NCR DSR Web API Help Page

### Introduction

This page documents all available NCR DSR Web API.

### AgeCode

Age Code APIs to POST, PUT, GET and DELETE AgeCode Information

API	Description
<a href="#">GET api/v7/AgeCode</a>	Retrieves the list of Age Code for a given tenant. The tenant information is verified through the token.
<a href="#">POST api/v7/AgeCode</a>	Add a new Age Code.
<a href="#">PUT api/v7/AgeCode</a>	Add or Update an AgeCode.
<a href="#">GET api/v7/AgeCode/{AgeCodeName}</a>	Retrieves the Age Code information for the given Age Code name.
<a href="#">DELETE api/v7/AgeCode/{AgeCodeName}</a>	Deletes an existing Age Code.

### Batchapply

API	Description
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## 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

[ProductVendorRequest](#)

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.

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## 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.

## 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.`

NCR DSR Web API

Home DSR API

**Welcome to NCR DSR Web API!** This web site helps you get familiar with the NCR DSR Web API.

NCR DSR Enterprise Server provide data services via Web API. You can use this web site to learn the published NCR DSR Web API.

**We suggest the following steps:**

- 1 Getting Started**  
Go to the API link to find all published APIs.
- 2 Learn the request/response format with sample**  
Click the API name to learn the detail of different APIs
- 3 See the API in action**  
Click the 'Execute API' button to send request and receive response.

**Useful Links:**

- [Chrome plugin to format JSON output](#)
- [Safari plugin to format JSON output](#)

- 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
<a href="#">POST api/v8/Security/Login</a>	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".
<a href="#">POST api/v8/Security/Logout</a>	Logs out a previously issued token. The token should be set in 'Authorization' header.
<a href="#">POST api/v8/Security/ResetPassword</a>	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.
<a href="#">GET api/v8/Security/ValidateToken</a>	Validate an issued token. The token should be set in 'Authorization' header.

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

## NCR DSR Web API

[Home](#) [DSR 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.

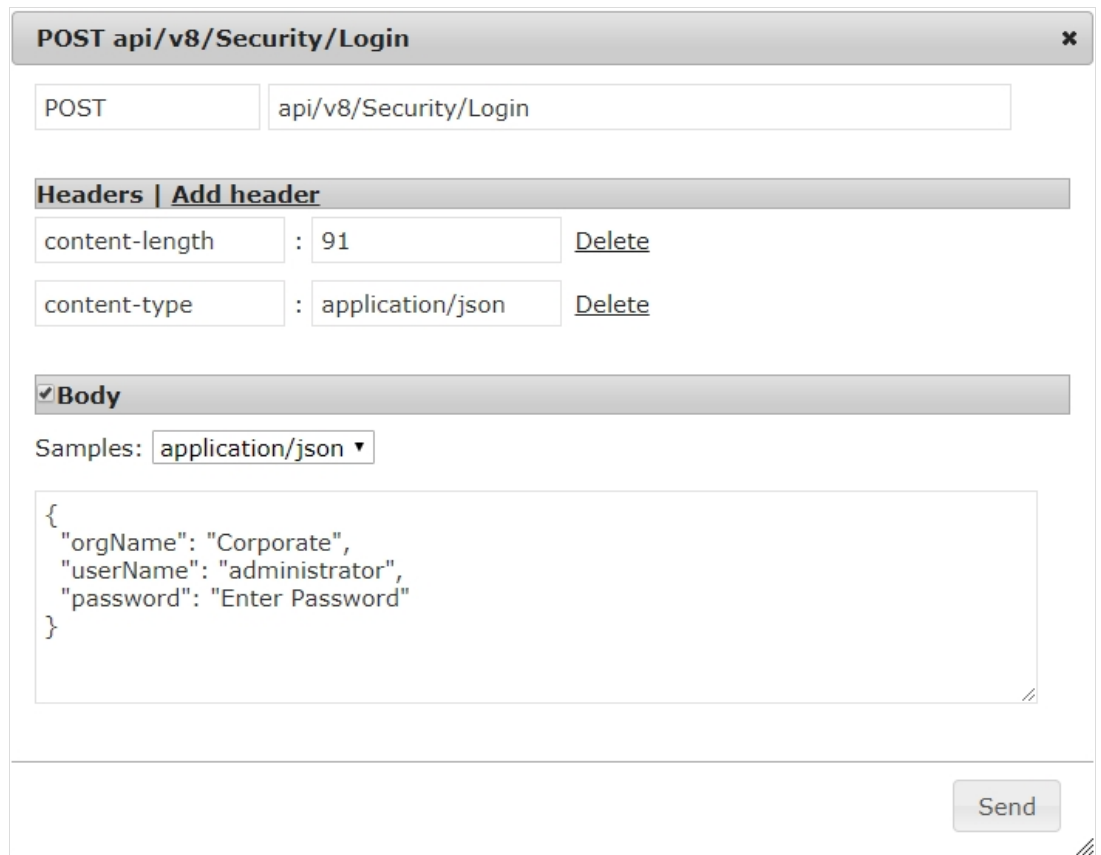
#### Request Formats

[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"
}
```

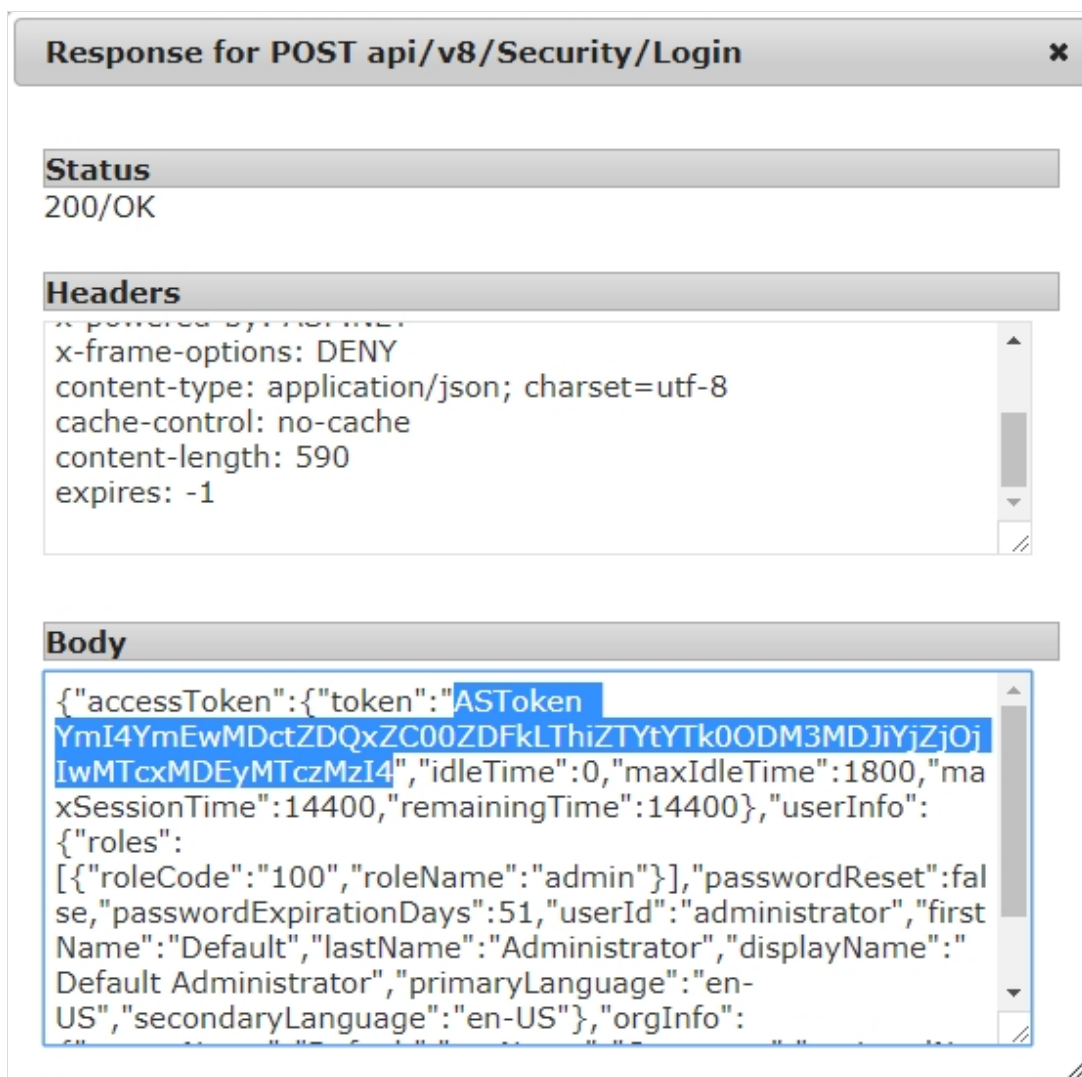
Send

**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, contact an NCR representative.

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



**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, ProductAttribute, 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
scaleableWeightedItem	Flag to determine if the item is scalable	boolean	No	None.
taxClassCode	Product Tax Class	string	No	String length: 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 length: between 1 and 10, inclusive

**Execute API**

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

The screenshot shows an API client window titled "POST api/v7/Products". At the top, the HTTP method is "POST" and the URL is "api/v7/Products". Below this is a "Headers" section with a tab labeled "Add header". It contains three header entries: "authorization" with a value field and a "Delete" link, "content-length" with the value "2073" and a "Delete" link, and "content-type" with the value "text/json" and a "Delete" link. Below the headers is a "Body" section, which is currently selected. It shows a "Samples:" dropdown set to "text/json". The body contains a JSON object: 

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

 At the bottom right of the window is a "Send" button.

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*.

## NCR DSR Web API Reference

This section contains reference information for the following API requests:

- [\*Hierarchies\*](#)
- [\*HierarchyLevels\*](#)
- [\*Products\*](#)
- [\*ProductVendors\*](#)
- [\*ProductAgeCode\*](#)
- [\*ProductDescriptions\*](#)
- [\*ProductPrices\*](#)
- [\*Taxes\*](#)
- [\*TaxTypes\*](#)
- [\*TaxClassTaxRules\*](#)
- [\*TaxClassTaxTypes\*](#)

For more information on the API request and response parameters, refer to [\*Understanding the API page\*](#).

## Hierarchies

The Hierarchies API can be used to manage hierarchy information on the server.

Method	Request URL	Description
GET	api/v7/Hierarchies	Receives the list of hierarchies for the current tenant.
POST	api/v7/Hierarchies	Adds a new hierarchy.
PUT	api/v7/Hierarchies	Adds or updates an existing hierarchy.
GET	api/v7/Hierarchies/{hierarchyCode}	Receives the hierarchy information for the given hierarchy code.
DELETE	api/v7/Hierarchies/{hierarchyCode}	Deletes an existing hierarchy.
GET	api/v7/Hierarchies/GetDepartments	Receives the hierarchy information for all departments.
GET	api/v7/Hierarchies?hierarchyLevelCode={hierarchyLevelCode}	Receives the hierarchy information for the given hierarchy level code.
GET	api/v7/Hierarchies?hierarchyParentCode={hierarchyParentCode}	Receives the hierarchy information for the given hierarchy parent code.

### HTTP request details

**GET** *api/v7/Hierarchies*

**POST** *api/v7/Hierarchies*

**Request information**

### Body parameters

Name	Description	Conditions
hierarchyCode	Defines the hierarchy code.	This parameter is required.
hierarchyLevelCode	Defines the hierarchy level code.	This parameter is required.

Name	Description	Conditions
description	Defines the hierarchy description.	
culture	Defines the culture for the hierarchy.	
parentHierarchyCode	Defines the parent hierarchy code.	
externalId	Defines the external hierarchy ID.	
taxClassCode	Defines the tax class code for the hierarchy.	
taxTypeCodes	Defines the tax type of the hierarchy.	
salesCategoryCode	Defines the sales category code of the hierarchy.	
maxAllowedQuantity	Defines the maximum sales quantity allowed for any item under this hierarchy.	
ubcRequired	Indicates whether UBC is required for items sold at hierarchy.	
nonReturnable	Indicates whether an item sold by hierarchy is returnable.	
customerAuditDate	Defines the date when the audit information was last modified.	

### ***Sample JSON request format***

```
{
  "hierarchyCode": "51",
  "hierarchyLevelCode": "2",
  "description": "merch hier 1",
  "culture": "en-US",
  "parentHierarchyCode": "1",
  "externalId": "MERCH-1",
  "taxClassCode": "100200",
  "salesCategoryCode": "normal",
  "maxAllowedQuantity": 50,
  "ubcRequired": false,
  "nonReturnable": false,
  "customerAuditDate": "2018-01-01T00:00:00"
}
```

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### ***Response information***

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***PUT api/v7/Hierarchies***

***GET api/v7/Hierarchies/{hierarchyCode}***

### ***Request information***

### URI parameters

Name	Description	Conditions
hierarchyCode	Defines the hierarchy code.	This parameter is required.

### Response information

Name	Description
hierarchyCode	Defines the hierarchy code.
hierarchyLevelCode	Defines the hierarchy level code.
description	Defines the hierarchy description.
culture	Defines the culture for the hierarchy.
parentHierarchyCode	Defines the parent hierarchy code.
externalId	Defines the external hierarchy ID.
taxClassCode	Defines the tax class code for the hierarchy.
taxTypeCodes	Defines the tax type of the hierarchy.
salesCategoryCode	Defines the sales category code of the hierarchy.
maxAllowedQuantity	Defines the maximum sales quantity allowed for any item under this hierarchy.
ubcRequired	Indicates whether UBC is required for items sold at hierarchy.
nonReturnable	Indicates whether an item sold by hierarchy is returnable.
customerAuditDate	Defines the date when the audit information was last modified.

### Sample JSON response format

```
{
  "hierarchyCode": "51",
  "hierarchyLevelCode": "2",
  "description": "merch hier 1",
  "culture": "en-US",
  "parentHierarchyCode": "1",
  "externalId": "MERCH-1",
  "taxClassCode": "100200",
  "salesCategoryCode": "normal",
  "maxAllowedQuantity": 50,
  "ubcRequired": false,
  "nonReturnable": false,
  "customerAuditDate": "2018-01-01T00:00:00"
}
```



***DELETE api/v7/Hierarchies/{hierarchyCode}***

***GET api/v7/Hierarchies/GetDepartments***

***GET api/v7/Hierarchies?hierarchyLevelCode={hierarchyLevelCode}***

***GET api/v7/Hierarchies?hierarchyParentCode={hierarchyParentCode}***