Axis 360 VendorAPI Documentation

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# Introduction

## Axis360 Overview

Axis360 is a patron centric environment which delivers content and primarily focuses on delivering all the patron specific e-resources for each library. Library patron is the prime user for accessing content delivered through library and can perform different set of operations as provided within the environment.

Axis360 platform as shown is developed based on the three-layer architecture, with application tier implemented in the form of different internet web applications allowing the access for Axis360 patron. The integration tier comprises of various web services communicating further on to the backend systems for retrieving the content. This tier is built upon the custom WCF services which include LIUD, ILS, BDL and FAST services mainly used for the all the operations performed on the application tier systems. Library patron is only authorized user allowed to navigate through the Axis360 environment and to access the library specific resources from the backend systems.

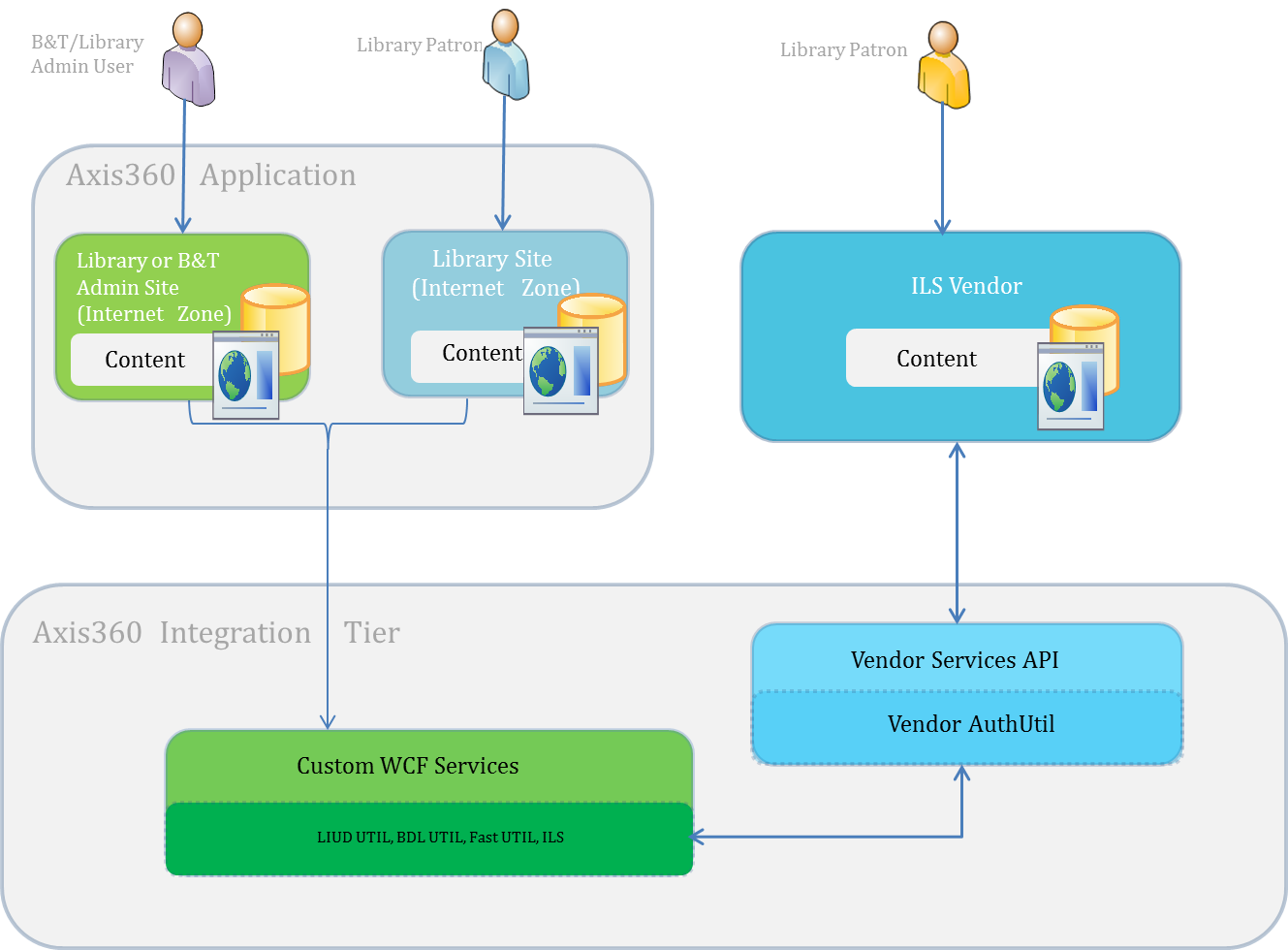


Figure: Overview of Axis360 Platform integrated with Vendor API

## Vendor API Overview

Vendor API is part of Axis360 web services, which in turn will be a common platform for facilitating the transfer of e-resources directly from the Axis360 system to libraries and related patrons through various ILS vendor’s implemented systems.

Vendor API will act as communication gateway for all the vendor systems to interact with the Axis360 system and perform the major operations for a given patron-specific library with Axis360. This enhances patron experience, where the user will be able to perform different operations directly from specific library environments such as viewing the title availability information, check out a desired title if it is available in Axis360 for circulation, and place the desired title on hold if it is not currently available for circulation. This also provides patrons with a way to maintain central account information for accessing all the library resources and enhances the experience of a single web platform.

Vendor API is a service oriented platform which provides various request operations to perform on the Axis360 system on behalf of a library-specific patron. These operations will validate the authenticity of the requester accessing the Axis360 resources and thus provide a secure environment. Vendor API requires all the vendors to obtain access to this secured platform and can use that unique access to invoke API request operations. Each API request will perform a unique set of operations within Axis360 and retrieve the desired response for accessing the library resources.

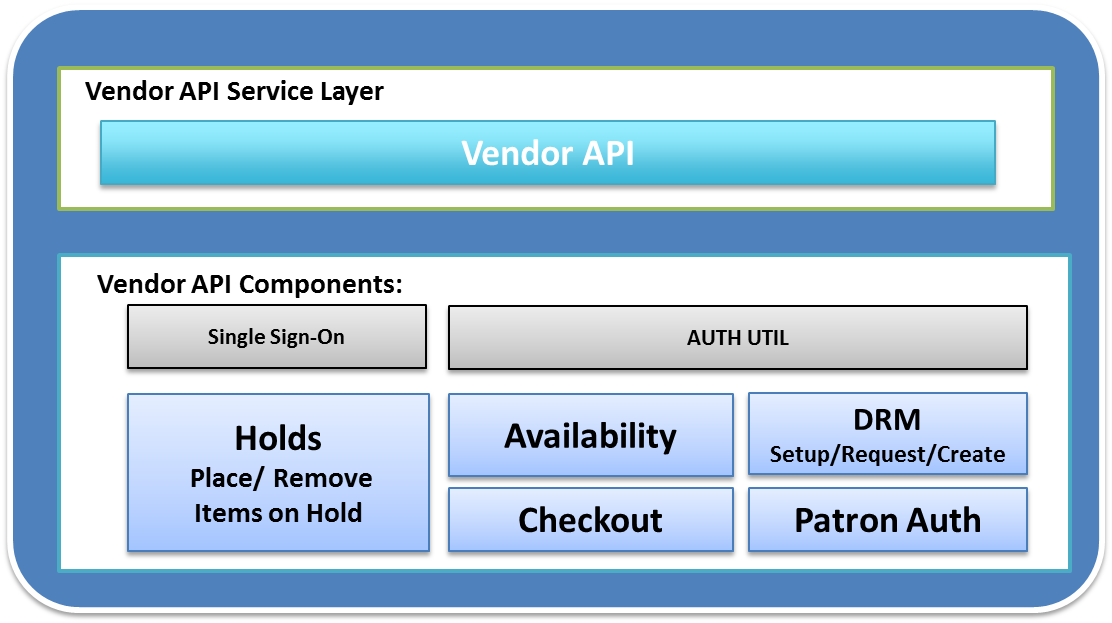


Figure: Overview of Vendor API Platform

# Web Service Calls

## Authentication

### Description

This is the key component of the vendor API, providing the functionality of secured access to e-resources from the Axis360 system by validating the authenticity of the access request. It performs operations which include vendor authorization for the token request, token generation and token response for API web service request.

This web service request supports POST request with the parameters included in the request authorization header.

### Request Parameters

The authentication process will be initiated by requesting the token using the following input parameters sent through authorization header. The request parameters should be base64 encoded delimited string as shown below.

*Base64(<VendorId>:<Password>:<LibraryId>)*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Position** | **Parameter** | **Description** | **Example** | **Required** |
| 1 | Vendor Id | Unique Vendor Id associated with vendor.  Type: String | sd481 | Yes |
| 2 | Password | Password required to validate the identity  Type: String | Password1 | Yes |
| 3 | Library Id | Library ID associated with the vendor.  Type: String | NYPL | Yes |

### Response Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Description** | **Example** | **Required** |
| access\_token | The access token generated for the request | [See below sample](#_Sample_Response) | Yes |
| expires\_in | Time period for the token expiration (seconds) | 600 | Yes |
| token\_type | Type of the access token. | Bearer | Yes |

### 

### Errors

|  |  |  |
| --- | --- | --- |
| **Error**  **Code** | **Description** | **HTTP Status Code** |
| 2000 | Missing Vendor API Authorization header. | 400 |
| 2002 | The encoded input parameters are less than limit | 400 |
| 2003 | The encoded input parameters exceed limit | 400 |
| 2004 | Authorization string is not properly encoded | 400 |
| 2005 | Invalid Vendor Credentials. | 401 |
| 2006 | The library id is not associated with given vendor | 401 |
| 2007 | The library ID provided is invalid. | 403 |
| 5000 | An internal server error prevented this request from being fulfilled. | 500 |

### Examples

### Sample Request

* + - * 1. POST

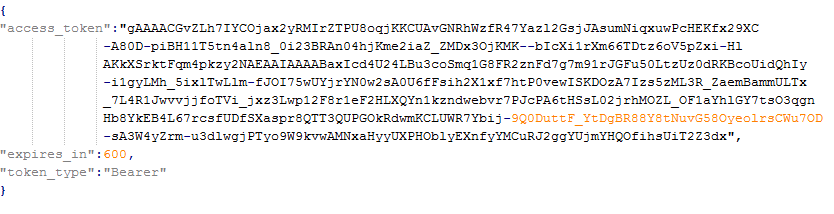
Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/accesstoken

Request Method Type: POST

Authorization: Basic {username}:{password}:{library prefix}

### Sample Response

* + - * 1. Success Response



* + - * 1. Error Response

**HTTP STATUS CODE:** 401 Unauthorized.

{

"ErrorMessage":" The library ID provided is invalid",

"ErrorCode":2007

}

## Availability

### Description

Availability is the API request method which will retrieve dynamic title information for any given single title or multiple titles for the specific library. The dynamic information provides the properties for the given title such as available quantity, format types etc. The Availability web request should include an Authorization Header with the access token, and a Custom Header named Library with the library Id.

An individual title could contain multiple formats. This is represented by adding a repeatable ‘format’ node for each title. Each of these formats contains a unique ItemId to be used for Checkout.

This web service request supports both GET requests, with the parameters included in the query, and POST requests, with the parameters included in the request body. Each request type supports key-value and positional-value requests, with positional-value being preferred.

### Request Parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** | |
| titleIds | Title ID of the title(s). Comma delimited list of title Ids for multiple title query  Type: String | 0010276999,0012384547 | No | Yes |
| patronId | Request parameter provides the identification for the given patron with in the Axis360. If provided, all titles the patron has on hold and on loan will be returned.  Type: String | NYtest2 | No |
| patronSessionID | If the patron has been authorized with PatronAuth (see below), the session ID may be passed instead of the patronID  Type: String (GUID) | 1E3F7192-1477-E211-9D13-0050569E1C51 | No |
| updatedDate | If included, will only return titles whose available quantity has changed after this date  Format:  MM-DD-YYYY HH:mm:ss  Type: string | 01-03-2012 00:00:00 | No |

### Response Parameters

A success response would be XML with the root element named **availabilityResponse**.

### Child elements of availabilityResponse

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** |
| title | A Repeatable wrapper element which contains the child elements in [Child elements of title](#_Child_elements_of). Each title element corresponds to one title. |  | Yes |
| status | Wrapper element to provide status if the request is successful/failure and status is included with in [child elements for the status](#_Child_elements_of_4). |  | Yes |

### Child elements of title

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** |
| titleId | Unique identifier for the title  Type: String | 0012384547 | Yes |
| productTitle | Name of the title  Type: String | Magic Tree House : Polar Bears Past Bedtime | Yes |
| titleUrl | Axis360 Title Url  Type: String | http://demo.axis360qa.baker-taylor.com/Title?itemId=0012388882 | Yes |
| contributor | Name of the title author(s)  Type: String | Mary Pope | Yes |
| isbn | ISBN for the given title  Type: String | 9780375894695 | Yes |
| subject | Subject description for the title  Type: String | JUVENILE FICTION | Yes |
| series | Name of the series  Type: String | A Stepping Stone Book | Yes |
| publisher | Publisher of the title  Type: String | Random House Inc | Yes |
| language | Language of the title  Type: String | ENGLISH | Yes |
| audience | Audience for the title  Type: String | General Adult | Yes |
| imprint | Imprint of the title  Type: String | Vintage Books | Yes |
| annotation | Annotation for the title  Type: String | ENGLISH | Yes |
| narrator | Narrator of the given acoustik title  Type: String | Hinnant, Skip | No |
| edition | Edition of the given acoustik title  Type: String | Unabridged | No |
| runtime | Runtime of the given acoustik title  Format: HH:mm  Type: String | 0:04 | No |
| fileSize | File size of the given downloadable acoustik title  Type: String | 15.9 MB | No |
| addedDate | Added date of the given title to the library Inventory  Type: DateTime | 2012-06-15 00:00:00.000 | Yes |
| publicationDate | Publication date of the title  Type: DateTime | 2011-10-25 00:00:00.000 | Yes |
| availability | Wrapper element which contains the child elements in [Child elements of availability](#_Child_elements_of_1). This element holds the availability information of a title. |  | Yes |
| minLoanPeriod | The smallest amount of time, in days, for which the title may be loaned.  Type: Integer | 1 | Yes |
| maxLoanPeriod | The largest amount of time, in days, for which the title may be loaned.  Type: Integer | 2 | Yes |
| defaultLoanPeriod | The checkout period, in days, that should be selected by default  Type: Integer | 1 | Yes |

### Child elements of availability

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Examples** | **Required** |
| availableFormats | Available formats for the given title. The format names are included in the [child elements of availableFormats](#_Child_elements_of_3) |  | Yes |
| availableCopies | The number of copies that can be checked out (i.e., that are not already checked out or reserved in another patron’s hold queue)  Type: Integer | 0 | Yes |
| totalCopies | The total number of copies of this title owned by the library  Type: Integer | 0 | Yes |
| holdQueueSize | The number of pending holds for the title  Type: Integer | 2 | Yes |
| holdQueuePosition | The current patron’s position in the hold queue.  This node would be shown only if the Patron ID is provided and the title is put on hold by the patron.  Type: Integer | 2 | No |
| isInHoldQueue | Indicates whether the title is put on hold by the given Patron. This node is shown only when the Patron ID is provided.  Type: Boolean | true | No |
| isReserved | Indicates whether the title is reserved for the given Patron. If no Patron ID is provided, this field is empty.  Type: Boolean | true | No |
| reservedEndDate | Indicates the Hold Queue End date. This node would be shown only if the Patron ID is provided and the title put on hold is reserved to the Patron for Checkout.  Type: DateTime | [Sample DateTime](#_Sample_Response_2) | No |
| isCheckedout | Indicates whether the title(s) are Checkedout by the given Patron. This node is shown only when the Patron ID is provided.  Type: Boolean | true | No |
| checkoutFormat | Format of the title selected by the given Patron for Checkout. This node would be shown only if the Patron ID is provided and the title is Checkedout by the Patron.  Type: String | ePub | No |
| checkoutStartDate | Checkout Start Date, This node would be shown only if the Patron ID is provided and the title is Checkedout by the Patron.  Type: DateTime | [Sample DateTime](#_Sample_Response_2) | No |
| checkoutEndDate | Checkout Expected End Date. This node would be shown only if the Patron ID is provided and the title is Checkedout by the Patron.  Type: DateTime | [Sample DateTime](#_Sample_Response_2) | No |
| downloadUrl | A download URL from which the title may be directly downloaded by the given patron. This would be shown only if the Patron ID is provided and if Patron selects specific format(s) during checkout operation which can be downloaded.  Type: String | [See Below](#_Sample_Response_1) | No |
| updateDate | The most recent date that title’s quantity was updated.  Type: DateTime | [Sample DateTime](#_Sample_Response_2) | Yes |
| Checkouts | List of patrons who have the title currently checkout out. See child elements of Checkouts for more details. **Not available with patron information in the request.** |  | No |
| Holds | List of patrons who have the title currently on hold. See child elements of Holds for more details. **Not available with patron information in the request.** |  | No |

### Child elements of availableFormats

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** |
| formatName | Format name for the given title  Type: String | Blio | Yes |

### Child elements of status

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** |
| Code | Status of the given request  Type: Integer | 0000 | Yes |
| Message | Description of the request status  Type: string |  | Yes |

### Child elements of Checkouts

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** |
| Patron | Username of patron who has the title checked out  Type: string | NYTester1 | Yes |
| StartDate | Date that the patron checked out the title  Type: Datetime | [Sample DateTime](#_Sample_Response_2) | Yes |
| EndDate | Date that the title will expire, based on the library’s allowed checkout duration. Note that the patron might check in the title early.  Type: DateTime | [Sample DateTime](#_Sample_Response_2) | Yes |
| Format | The format the title was checked out in.  Type: string | Blio | Yes |
| Active | True if the title is still checked out.  Type: Boolean | True | Yes |

### Child elements of Holds

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** |
| Patron | Username of patron who has the title on hold.  Type: string | NYindu | Yes |
| Email | Email address where the patron will be notified when the title becomes available.  Type: string | user@abc.com | Yes |
| HoldDate | Date that the patron placed the item on hold.  Type: DateTime | [Sample DateTime](#_Sample_Response_2) | Yes |
| Position | The number of holds ahead of this patron.  Type: integer | 1 | Yes |
| Reserved | True if there is a title available which fulfills the hold request.  Type: Boolean | True | Yes |

### Errors

|  |  |  |
| --- | --- | --- |
| **Error Code** | **Description** | **HTTP Status Code** |
| 2000 | Missing Vendor API Authorization header. | 400 |
| 2001 | Missing Vendor API Library ID header. | 400 |
| 3123 | Patron session ID expired | 403 |
| 3125 | Missing parameters. | 400 |
| 1000 | Authorization token is missing. | 401 |
| 1001 | Authorization token is invalid. | 401 |
| 1002 | Authorization token is expired. | 401 |
| 1003 | Authorization token is invalid for the given library. | 401 |
| 2008 | Library ID header contained an invalid library ID. | 403 |
| 3132 | Invalid inventory delta update datetime format | 400 |
| 3134 | Inventory delta datetime should not be future date | 400 |
| 5000 | An internal server error prevented this request from being fulfilled. | 500 |

### Examples

### Sample Request

* + - * 1. GET – Positional-Value (preferred)

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/availability/v2

Request Method Type: GET

Request parameters: https://axis360api.baker-taylor.com /Services/VendorAPI/availability/v2/0012384547,0010376056,0010276999/NYtest2/1E3F7192-1477-E211-9D13-0050569E1C51/01-03-2013 00:00:00

Library: {Prefix}

Authorization: {Token}

* + - * 1. GET – Key-Value

Request url: https://axis360api.baker-taylor.com /Services/VendorAPI/availability/v2

Request Method Type: GET

Request parameters: https://axis360api.baker-taylor.com /Services/VendorAPI/availability/v2? titleIds=0012384547,0010376056,0010276999&patronId=NYtest2&patronsessionId=1E3F7192-1477-E211-9D13-0050569E1C51&updatedDate=01-03-2013 00:00:00

Library: {Prefix}

Authorization: {Token}

* + - * 1. POST – Positional-Value (preferred)

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/availability/v2

Request Method Type: POST

Request parameters: https://axis360api.baker-taylor.com/Services/VendorAPI/availability/v2/0012384547,0010376056,0010276999/NYtest2/1E3F7192-1477-E211-9D13-0050569E1C51/01-03-2013 00:00:00

Library: {Prefix}

Authorization: {Token}

* + - * 1. POST – Key-Value

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/availability/v2

Request Method Type: POST

Request parameters: https://axis360api.baker-taylor.com/Services/VendorAPI/availability/v2? titleIds=0012384547,0010376056,0010276999&patronId=NYtest2&patronsessionId=1E3F7192-1477-E211-9D13-0050569E1C51&updatedDate=01-03-2013 00:00:00

Library: {Prefix}

Authorization: {Token}

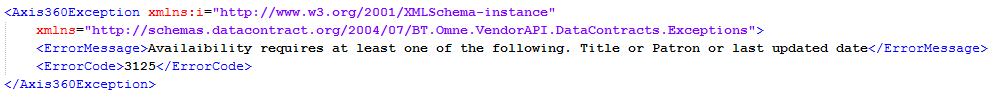
### Sample Response

* + - * 1. Success Response



* + - * 1. Error Response

**HTTP STATUS CODE:** 400 Bad Request.



## Checkout

### Description

Checkout is the API request method which will allow the patrons to initiate the checkout process of the title in the available, supported formats. The request will perform the process of checkout and provide the required response based on the format of the title. The web request should be associated with Authorization Header for access token and Custom Header named Library for library Id.

Note that if error 3105 (Invalid Account Credentials) is returned, the patron will need to have their credentials updated with the DRM Setup method. If error 3108 (DRM Credentials required) is returned, the patron will either need to have new credentials created with DRM Create, or existing credentials associated with their account with DRM Setup.

This web service request supports POST request with the parameters included in the request body. The request type supports key-value and positional-value requests, with positional-value being preferred.

### Request Parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** | |
| titleId | ID of the title requested for checkout operation.  This should be the itemId of a format record.  Type: String | 0010376056 | Yes | |
| format | Format of the title requested for checkout operation.  Type: String | ePub | Yes | |
| patronId | Request parameter provides the identification for the given patron with in the Axis360.  Type: String | NYtest2 | No | Yes |
| patronSessionID | If the patron has been authorized with PatronAuth (see below), the session ID may be passed instead of the patronID. If the session ID has expired, it is ignored.  Type: String (GUID) | 1E3F7192-1477-E211-9D13-0050569E1C51 | No |
| drmAccountId | Request parameter provides the e-reader account id for the checkout process.  Type: String | test@baker-taylor.com | Yes | |
| drmAccountPassword | Request parameter provides the e-reader account password for the checkout process.  Type: String | Password1 | Yes | |
| loanPeriod | Request parameter duration of the title loan period.  Type: Integer | 1 | No | |

### Response Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** |
| expirationDate | Expiration date for the title’s loan period  Format: MM/DD/YYYY HH:mm:ss  Type: DateTime | 4/19/2013 4:51:20 PM +00:00 | No |
| downloadUrl | A URL from which the title may be directly downloaded by a patron. This would be shown only if the format supports downloading (e.g., PDF or ePub)  Type: String | [See sample](#_Sample_Response_1) | No |
| Status | Status that provides the success failure of request. The [children elements](#_Child_elements_of_4) are provided above.  Type: String |  | Yes |

### Errors

|  |  |  |
| --- | --- | --- |
| **Error**  **Code** | **Description** | **HTTP Status Code** |
| 1000 | Authorization token is missing. | 401 |
| 1001 | Authorization token is invalid. | 401 |
| 1002 | Authorization token is expired. | 401 |
| 1003 | Authorization token is invalid for the given library. | 401 |
| 2008 | Library ID header contained an invalid library ID. | 403 |
| 2000 | Missing Vendor API Authorization header. | 400 |
| 2001 | Missing Vendor API Library ID header. | 400 |
| 3100 | No Title ID provided. | 400 |
| 3101 | No Patron ID provided. | 400 |
| 3103 | Invalid Title ID. | 403 |
| 3105 | Invalid Account Credentials. | 403 |
| 3106 | Loan Period is out of bounds. | 403 |
| 3108 | DRM Credentials Required | 403 |
| 3110 | Title ID is already checked out | 403 |
| 3112 | Unable to retrieve download URL | 403 |
| 3113 | Title ID is not available for checkout | 403 |
| 3114 | The patron reached maximum ({maxLibraryCheckoutLimit}) checkouts | 403 |
| 3126 | Invalid checkout format | 403 |
| 3135 | Title is not available in this format | 403 |
| 3136 | No Format provided | 403 |
| 5000 | An internal server error prevented this request from being fulfilled. | 500 |

### Examples

### Sample Request

* + - * 1. POST – Positional-Value (preferred)

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/checkout/v2

Request Method Type: POST

Request parameters: https://axis360api.baker-taylor.com/Services/VendorAPI/checkout/v2/0010376056/someuser@abc.com/Password123/NYtest2/1E3F7192-1477-E211-9D13-0050569E1C51/ePub/2

Library: {Prefix}

Authorization: {Token}

* + - * 1. POST – Key-Value

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/checkout/v2

Request Method Type: POST

Request parameters: https://axis360api.baker-taylor.com/Services/VendorAPI/checkout/v2?drmAccountId=someuser@abc.com&titleId=0010376056& drmAccountPassword=Password123&patronId=NYtest2& patronSessionId= 1E3F7192-1477-E211-9D13-0050569E1C51 &format=ePub&loadPeriod=2

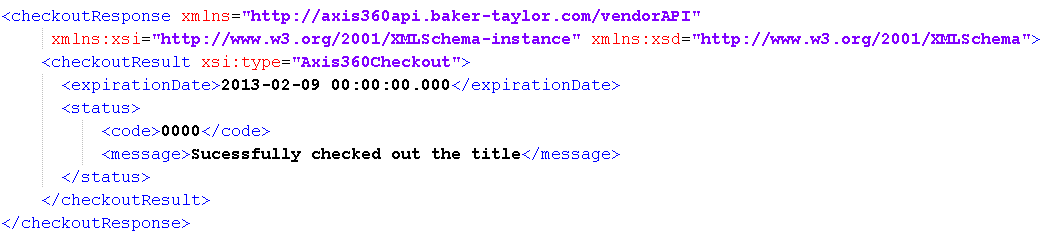
Library: {Prefix}

Authorization: {Token}

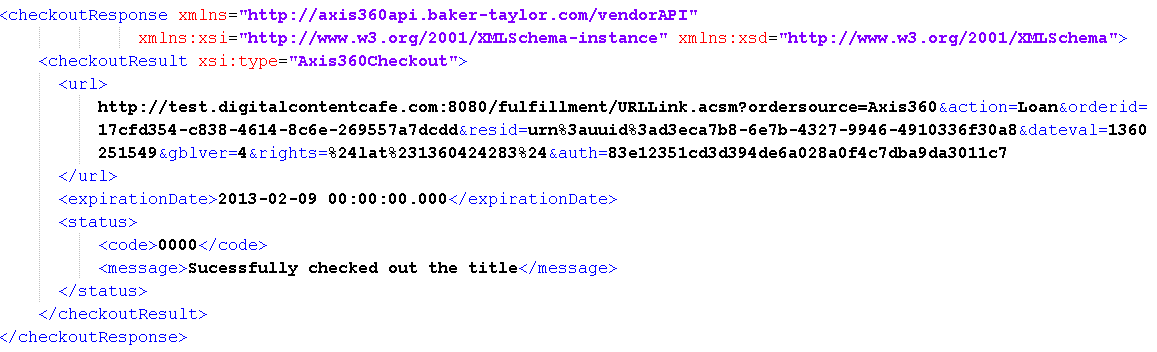
### Sample Response

* + - * 1. Success Response

**CHECKOUT Response**

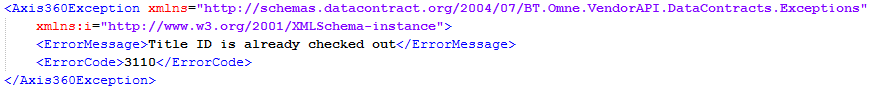


**DOWNLOAD Response**



* + - * 1. Error Response

**HTTP STATUS CODE:** 403 Forbidden.



## Add to Hold

### Description

Add to Hold is the API request method which will allow the patron to add a title to his or her hold queue if it is not available for checkout. The hold process will based on the data retrieved from the available quantity and will provide the option of adding the given title to hold queue. The AddtoHold Web request should include an Authorization Header for the access token, and a Custom Header named Library for the libraryId.

This web service request supports GET requests with the parameters included in the query. The request type supports key-value and positional-value requests, with positional-value being preferred.

### Request Parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** | |
| titleId | Request parameter provides the identification for the given title that needs to be added to hold queue of patron.  Type: String | 0012384547 | Yes | |
| format | Format of the title requested for hold operation.  Type: String | ePub | Obsolete | |
| patronId | This request parameter provides the identification for the given patron with in the Axis360 system  Type: String | NYtest2 | No | Yes |
| patronSessionID | If the patron has been authorized with PatronAuth (see below), the session ID may be passed instead of the patronID  Type: String (GUID) | 1E3F7192-1477-E211-9D13-0050569E1C51 | No |
| email | Email Address associated to the patron, to send an alert when the item becomes available.  Type: string (email address format) | user123@abc.com | Yes | |

### Response Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Description** | **Example** | **Required** |
| holdsQueuePosition | Hold queue position of the patron for the requested title.  Type: Integer | 2 | No |
| Status | Status that provides the success /failure description of request. The [children elements](#_Child_elements_of_4) are provided above. |  | Yes |

### Errors

|  |  |  |
| --- | --- | --- |
| **Error**  **Code** | **Description** | **HTTP Status Code** |
| 2000 | Missing Vendor API Authorization header. | 400 |
| 2001 | Missing Vendor API Library ID header. | 400 |
| 3100 | No Title ID provided. | 400 |
| 3101 | No Patron ID provided. | 400 |
| 3102 | No Email Address provided | 400 |
| 1000 | Authorization token is missing. | 401 |
| 1001 | Authorization token is invalid. | 401 |
| 1002 | Authorization token is expired. | 401 |
| 1003 | Authorization token is invalid for the given library. | 401 |
| 2008 | Library ID header contained an invalid library ID. | 403 |
| 3103 | Invalid Title ID. | 403 |
| 3104 | Invalid Email Address. | 403 |
| 3109 | Title is in Hold List | 403 |
| 3110 | Title ID is already checked out | 403 |
| 3111 | Title ID is available | 403 |
| 3123 | Patron session ID expired | 403 |
| 3137 | Hold Limit reached | 403 |
| 5000 | An internal server error prevented this request from being fulfilled. | 500 |

### Examples

### Sample Request

* + - * 1. Get – Positional-Value (preferred)

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/addtoHold/v2/0012384547/user123@abc.com/NYTest2/1E3F7192-1477-E211-9D13-0050569E1C51/ePub

Request Method Type: GET

Library: {Prefix}

Authorization: {Token}

* + - * 1. Get – Key-Value

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/addtoHold/v2?titleID=0012384547&email=user123@abc.com& patronId=NYtest2&patronsessionId=1E3F7192-1477-E211-9D13-0050569E1C51format=ePub

Request Method Type: GET

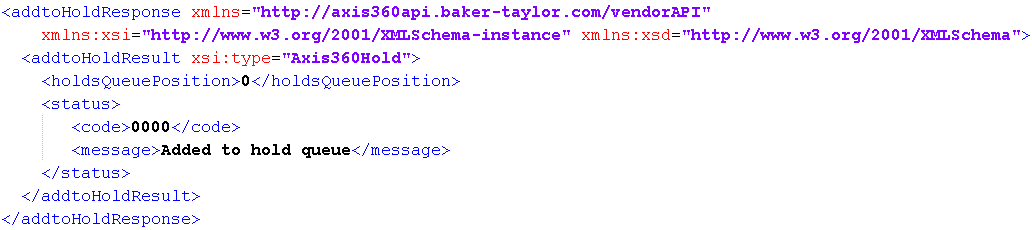
Library: {Prefix}

Authorization: {Token}



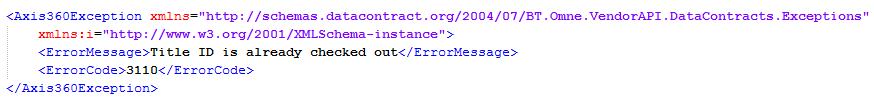
### Sample Response

* + - * 1. Success Response



* + - * 1. Error Response

**HTTP STATUS CODE:** 403 Bad Request



## Remove Hold

### Description

Remove Hold is the API component which handles the request for removing a title from a patron’s hold queue within the library environment. The title removed from the patron hold queue will update the available quantity and reserve queue for the given title. The Remove Hold Web request should include an Authorization Header for the access token, and a Custom Header named Library for the libraryId.

This web service request supports GET requests with the parameters included in the query. The request type supports key-value and positional-value requests, with positional-value being preferred.

### Request Parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** | |
| titleID | Request parameter provides the identification for the given title that needs to be added to hold queue of patron.  Type: String | 0012384547 | Yes | |
| patronID | This request parameter provides the identification for the given patron with in the Axis360 system  Type: String | NYtest2 | No | Yes |
| patronSessionID | If the patron has been authorized with PatronAuth (see below), the session ID may be passed instead of the patronID  Type: String (GUID) | 38ae1879-5ea9-11df-b491-001bfcb38e8d | No |

### Response Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Description** | **Example** | **Required** |
| Status | Status that provides the success /failure description of request. The [children elements](#_Child_elements_of_4) are provided above. |  | Yes |

### Errors

|  |  |  |
| --- | --- | --- |
| **Error**  **Code** | **Description** | **HTTP Status Code** |
| 2000 | Missing Vendor API Authorization header. | 400 |
| 2001 | Missing Vendor API Library ID header. | 400 |
| 3100 | No Title ID provided. | 400 |
| 3101 | No Patron ID provided. | 400 |
| 1000 | Authorization token is missing. | 401 |
| 1001 | Authorization token is invalid. | 401 |
| 1002 | Authorization token is expired. | 401 |
| 1003 | Authorization token is invalid for the given library. | 401 |
| 2008 | Library ID header contained an invalid library ID. | 403 |
| 3103 | Invalid Title ID. | 403 |
| 3109 | Title is not in Hold List | 403 |
| 3110 | Title ID is already checked out | 403 |
| 3111 | Title ID is available | 403 |
| 3123 | Patron session ID expired | 403 |
| 3130 | Invalid hold format | 403 |
| 5000 | An internal server error prevented this request from being fulfilled. | 500 |

### Examples

### Sample Request

* + - * 1. GET – Positional-Value (preferred)

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/removeHold/v2/0012384547/NYTest2/38ae1879-5ea9-11df-b491-001bfcb38e8d

Request Method Type: GET

Library: {Prefix}

Authorization: {Token}

* + - * 1. GET – Key-Value

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/removeHold/v2?titleId=0012384547&patronId=NYtest2&patronsessionId=38ae1879-5ea9-11df-b491-001bfcb38e8d

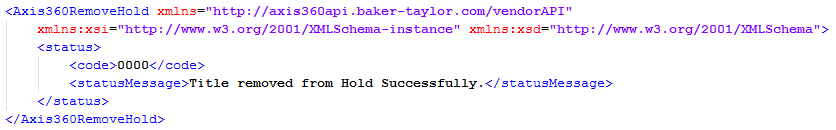
Request Method Type: GET

Library: {Prefix}

Authorization: {Token}

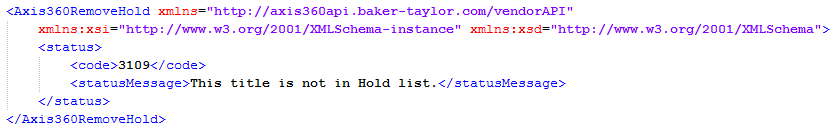
### Sample Response

* + - * 1. Success Response



* + - * 1. Error Response

**HTTP STATUS CODE:** 403 Bad Request



## DRM Setup

### Description

DRM Setup is the API component which handles the request to set up a patron’s existing DRM account within the Axis360 environment. The setup process will allow vendors to process DRM credentials for patrons, which includes validation and storing credentials within the patron’s Axis360 account. The DRM Setup Web request should include an Authorization Header for the access token, and a Custom Header named Library for the libraryId.

This web service request supports POST request with the parameters included in the request body. The request type supports key-value and positional-value requests, with positional-value being preferred.

### Request Parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** | |
| drmAccountID | Request parameter provides the e-reader account for the setup process.  Type: String | test@baker-taylor.com | Yes | |
| drmAccountPassword | Request parameter provides the e-reader account password for the setup process.  Type: String | Password1 | Yes | |
| patronID | This request parameter provides the identification for the given patron with in the Axis360 system  Type: String | NYtest2 | No | Yes |
| patronSessionID | If the patron has been authorized with PatronAuth (see below), the session ID may be passed instead of the patronID  Type: String (GUID) | 38ae1879-5ea9-11df-b491-001bfcb38e8d | No |
| format | Request parameter provides the identification to setup the type of DRM credentials.  Type: String | Blio | Yes | |

### Response Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Description** | **Example** | **Required** |
| Status | Status that provides the success /failure description of request. The [children elements](#_Child_elements_of_4) are provided above. |  | Yes |

### Errors

|  |  |  |
| --- | --- | --- |
| **Error**  **Code** | **Description** | **HTTP Status Code** |
| 2000 | Missing Vendor API Authorization header. | 400 |
| 2001 | Missing Vendor API Library ID header. | 400 |
| 1000 | Authorization token is missing. | 401 |
| 1001 | Authorization token is invalid. | 401 |
| 1002 | Authorization token is expired. | 401 |
| 1003 | Authorization token is invalid for the given library. | 401 |
| 2008 | Library ID header contained an invalid library ID. | 403 |
| 3105 | Invalid Account Credentials. | 403 |
| 3106 | DRM credentials not valid for format | 403 |
| 3108 | DRM Credentials Required | 403 |
| 3117 | Invalid DRM format | 403 |
| 3115 | Missing DRM format | 403 |
| 3123 | Patron session ID expired | 403 |
| 5000 | An internal server error prevented this request from being fulfilled. | 500 |

### Examples

### Sample Request

* + - * 1. POST – Positional-Value (preferred)

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/setupdrm/v2

Request Method Type: POST

Request parameters: https://axis360api.baker-taylor.com/Services/VendorAPI/setupdrm/v2/someuser@abc.com/Password123/Blio/NYtest2/38ae1879-5ea9-11df-b491-001bfcb38e8d

Authorization: {Token}

Library: {Prefix}

* + - * 1. POST – Key-Value

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/setupdrm/v2

Request Method Type: POST

Request parameters: https://axis360api.baker-taylor.com/Services/VendorAPI/setupdrm/v2?

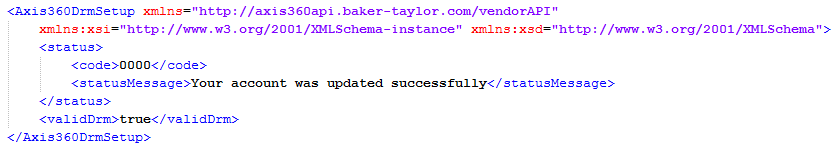
drmAccountId=someuser@abc.com&drmAccountPassword=Password123&format=Blio&patronId=NYtest2&patronSessionId=38ae1879-5ea9-11df-b491-001bfcb38e8d

Authorization: {Token}

Library: {Prefix}

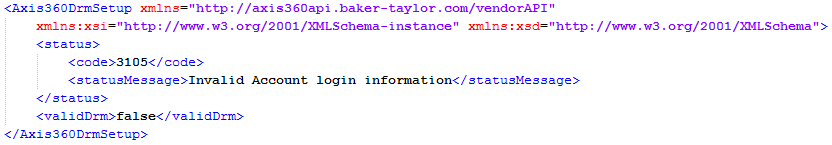
### Sample Response

* + - * 1. Success Response



* + - * 1. Error Response

**HTTP STATUS CODE:** 403 Bad Request



## DRM Request

### Description

DRM Request is the API component which handles the request to retrieve a patron’s DRM account information for a given format within the Axis360 environment. The request process will allow vendors to extract the DRM credentials of patron, which includes the DRM account id and can be used for checkout request. The web request should include an Authorization Header for the access token, and a Custom Header named Library for the libraryId.

This web service request supports GET request with the parameters included in the query. The request type supports key-value and positional-value requests, with positional-value being preferred.

### Request Parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** | |
| format | Request parameter provides the identification to retrieve the type of DRM credentials.  Type: String | Blio | Yes | |
| patronID | This request parameter provides the identification for the given patron with in the Axis360 system  Type: String | NYtest2 | No | Yes |
| patronSessionID | If the patron has been authorized with PatronAuth (see below), the session ID may be passed instead of the patronID  Type: String (GUID) | 38ae1879-5ea9-11df-b491-001bfcb38e8d | No |

### Response Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Description** | **Example** | **Required** |
| Id | DRM id of the requested for patron.  Type: String | Test123@  Btol.com | Yes |
| ValidatedPassword | DRM Password validation status.  Type: bool | true | Yes |
| Status | Status that provides the success /failure description of request. The [children elements](#_Child_elements_of_4) are provided above. |  | Yes |

### Errors

|  |  |  |
| --- | --- | --- |
| **Error**  **Code** | **Description** | **HTTP Status Code** |
| 2000 | Missing Vendor API Authorization header. | 400 |
| 2001 | Missing Vendor API Library ID header. | 400 |
| 1000 | Authorization token is missing. | 401 |
| 1001 | Authorization token is invalid. | 401 |
| 1002 | Authorization token is expired. | 401 |
| 1003 | Authorization token is invalid for the given library. | 401 |
| 2008 | Library ID header contained an invalid library ID. | 403 |
| 3119 | No Blio Account | 403 |
| 3120 | No Acoustik Account | 403 |
| 3123 | Patron session ID expired | 403 |
| 5000 | An internal server error prevented this request from being fulfilled. | 500 |

### Examples

### Sample Request

* + - * 1. GET – Positional-Value (preferred)

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/requestdrm/v2/Blio/NYtest2/38ae1879-5ea9-11df-b491-001bfcb38e8d

Request Method Type: GET

Authorization: {Token}

Library: {Prefix}

* + - * 1. GET – Key-Value

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/requestdrm/v2?format=Blio&patronId=NYtest2&patronsessionId=38ae1879-5ea9-11df-b491-001bfcb38e8d

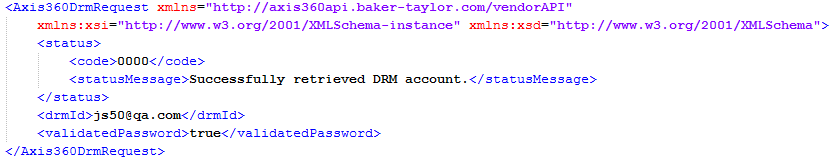
Request Method Type: GET

Authorization: {Token}

Library: {Prefix}

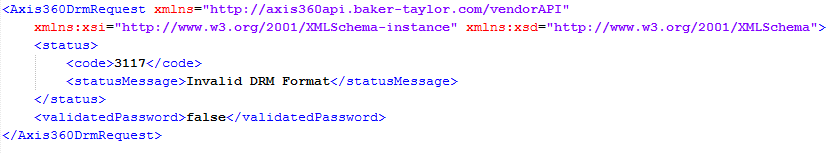
### Sample Response

* + - * 1. Success Response



* + - * 1. Error Response

**HTTP STATUS CODE:** 403 Bad Request



## DRM Create

### Description

DRM Create is the API component which handles the creation of a DRM account for the given format. The create process will allow vendors to create a DRM account for a patron, which can be used for the checkout process. The web request should include an Authorization Header for the access token, and a Custom Header named Library for the libraryId.

If a Patron ID or Patron Session ID is provided, the newly-created account is automatically associated with that patron. If not, the account is created without being associated with a patron, and DRM Setup may be used later to associate the DRM account with a patron.

This web service request supports POST request with the parameters included in the query. The request type supports key-value and positional-value requests, with positional-value being preferred.

### Request Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** |
| drmAccountID | Request parameter provides the e-reader account for the create process.  Type: String | test@baker-taylor.com | Yes |
| drmAccountPassword | Request parameter provides the e-reader account password for the create process.  Type: String | Password1 | Yes |
| patronID | This request parameter provides the identification for the given patron with in the Axis360 system  Type: String | NYtest2 | No |
| patronSessionID | If the patron has been authorized with PatronAuth (see below), the session ID may be passed instead of the patronID  Type: String (GUID) | 38ae1879-5ea9-11df-b491-001bfcb38e8d | No |
| lastName | This request parameter provides the last name for the given patron  Type: String | Wilson | Yes |
| firstName | This request parameter provides the first name for the given patron  Type: String | Randy | Yes |
| format | Request parameter provides the identification to create the type of DRM credentials.  Type: String | Blio | Yes |

### Response Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Description** | **Example** | **Required** |
| Status | Status that provides the success /failure description of request. The [children elements](#_Child_elements_of_4) are provided above. |  | Yes |
| ValidDRM | True if the credentials are valid and the account was able to be created, false otherwise  Type: Boolean | True | Yes |

### Errors

|  |  |  |
| --- | --- | --- |
| **Error**  **Code** | **Description** | **HTTP Status Code** |
| 2000 | Missing Vendor API Authorization header. | 400 |
| 2001 | Missing Vendor API Library ID header. | 400 |
| 3101 | No Patron ID provided. | 400 |
| 1000 | Authorization token is missing. | 401 |
| 1001 | Authorization token is invalid. | 401 |
| 1002 | Authorization token is expired. | 401 |
| 1003 | Authorization token is invalid for the given library. | 401 |
| 2008 | Library ID header contained an invalid library ID. | 403 |
| 3104 | Invalid Email Address. | 403 |
| 3108 | DRM Credentials Required | 403 |
| 3115 | DRM Format required | 403 |
| 3117 | Invalid DRM format | 403 |
| 3123 | Patron session ID expired | 403 |
| 3127 | First name is required | 403 |
| 3128 | Last name is required | 403 |
| 315 | Password must have a minimum of 6 characters and a maximum of 30, including at least 1 upper case, 1 lower case and 1 number. Special characters are not allowed | 403 |
| 316 | Account already exists | 403 |
| 5000 | An internal server error prevented this request from being fulfilled. | 500 |

### Examples

### Sample Request

* + - * 1. POST – Positional-Value (preferred)

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/createdrm/v2

Request Method Type: POST

Request parameters: https://axis360api.baker-taylor.com/Services/VendorAPI/createdrm/v2/someuser@abc.com/Password123/Blio/Wilson/Randy/NYtest2/38ae1879-5ea9-11df-b491-001bfcb38e8d

Authorization: {Token}

Library: {Prefix}

* + - * 1. POST – Key-Value

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/createdrm/v2

Request Method Type: POST

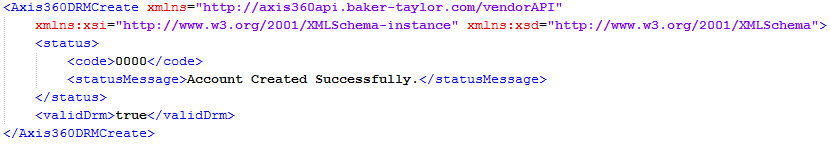
Request parameters: https://axis360api.baker-taylor.com/Services/VendorAPI/createdrm/v2?drmAccountId=someuser@abc.com&drmAccountPassword=Password123&format=Blio&lastName=Wilson&firstName=Randy&patronId=NYtest2&patronsessionId=38ae1879-5ea9-11df-b491-001bfcb38e8d

Authorization: {Token}

Library: {Prefix}

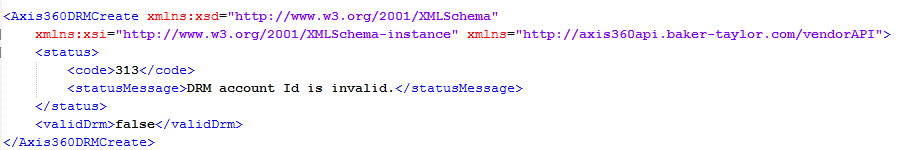
### Sample Response

* + - * 1. Success Response



* + - * 1. Error Response

**HTTP STATUS CODE:** 403 Bad Request



## Patron Auth

### 2.9.1 Description

Patron Auth is the API component which allows patrons to authenticate within Axis360 and will return a session GUID on successful validation. This session GUID should be used in other API request methods. When the vendor’s patron validation flag is enabled, this will validate the authenticity of the associated patron.

This web service request supports POST request with the parameters included in the query. The request type supports key-value and positional-value requests, with positional-value being preferred.

### 2.9.2 Request Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** |
| LibraryID | This parameter is required for the retrieving the information specific to the given library, which is provided in library header.  Type: String | nypl | Yes |
| PatronID | This request parameter is the barcode, which provides the identity of the patron within the Axis360 environment.  Type: String | NYTest1 | Yes |
| Password | This request parameter verifies the identity of the patron within the Axis360 environment.  Type: String | Password123 | No |

### 2.9.3 Response Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Required** |
| patronSessionID | This response parameter provides authenticated session GUID for successful validation of patron credentials and should be included for vendors with patron validation flag enabled.  Type: String | 3F2504E0-4F89-11D3-9A0C-0305E82C3301 | No |
| validPatron | This response parameter indicates whether or not the patron is valid.  Type: String | True | Yes |
| status | Status that provides the success /failure description of request. The [children elements](#_Child_elements_of_4) are provided above.  Note that this might contain a custom error message. |  | Yes |

### 2.9.4 Errors

|  |  |  |
| --- | --- | --- |
| **Error**  **Code** | **Description** | **HTTP Status Code** |
| 2000 | Missing Vendor API Authorization header. | 400 |
| 2001 | Missing Vendor API Library ID header. | 400 |
| 1000 | Authorization token is missing. | 401 |
| 1001 | Authorization token is invalid. | 401 |
| 1002 | Authorization token is expired. | 401 |
| 1003 | Authorization token is invalid for the given library. | 401 |
| 2008 | Library ID header contained an invalid library ID. | 403 |
| 3101 | No Patron ID provided. | 400 |
| 3103 | Invalid Patron ID. | 403 |
| 3118 | Invalid Patron Credentials. | 403 |
| 3131 | Custom error message. | 403 |
| 5000 | An internal server error prevented this request from being fulfilled. | 500 |

### 2.9.5 Examples

### 2.9.5.1 Sample Request

2.9.5.1.1 POST – Positional-Value (preferred)

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/patronauth/v2

Request Method Type: POST

Request parameters: https://axis360api.baker-taylor.com/Services/VendorAPI/patronauth/v2/NYTest1/Password123

Authorization: {Token}

Library: {Prefix}

2.9.5.1.2 POST – Key-Value

Request url: https://axis360api.baker-taylor.com/Services/VendorAPI/patronauth/v2

Request Method Type: POST

Request parameters: https://axis360api.baker-taylor.com/Services/VendorAPI/patronauth/v2?

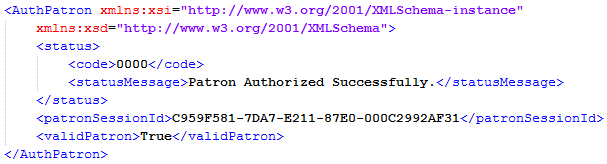
patronBarcode= NYTest1&password=123

Authorization: {Token}

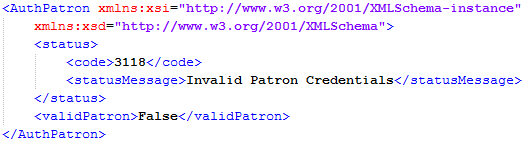
Library: {Prefix}

### 2.9.5.2 Sample Response

2.9.5.2.1 Success Response



2.9.5.2.2 Error Response



# Frequently Asked Questions

1. What is the goal of Vendor API?
   1. The Vendor API allows third party applications to access all the functionality that a patron could access directly from the Axis360 site: logging in, viewing titles, checking them out, placing them on hold, etc.
2. Which methods are available with a POST operation, and which are GET?
   1. POST methods: Availability, Checkout, PatronAuth, SetupDRM, CreateDRM.
   2. GET methods: Availability, AddToHold, RemoveHold, RequestDRM.
3. How do I get a token?
   1. Before any other methods can be called, you must first obtain a token. To do this, you must send an HTTP POST request to <https://axis360api.baker-taylor.com/vendorAPI/accesstoken> with the following settings, where the credentials string is formed as follows: <username>:<password>:<library prefix>, without the <>’s, and then base-64 encoded.
      1. Method: POST
      2. ContentType: application/x-www-form-urlencoded;charset=UTF-8
      3. Headers:
         1. Authorization: Basic <base-64 encoded credentials string>
         2. Library: <library prefix>
      4. KeepAlive: true
      5. Expect: null
      6. CachePolicy: BypassCache
   2. The response is a JSON object with token stored as a string in a member variable called “access\_token”. The string is a 36-character GUID, e.g. 3F2504E0-4F89-11D3-9A0C-0305E82C3301.
   3. Note that in this case, the body of the POST method call is empty; only the Authorization header is used.
4. How do I use the token when calling other methods?
   1. To call the other API methods, set up everything in the HTTP Request as above, but set the Authorization header to:
      1. Bearer <token>
   2. When calling GET methods, the URL string contains the parameters:
      1. [https://axis360api.baker-taylor.com/vendorAPI/methodname?param1=value1&param2=value2](http://axis360api.baker-taylor.com/vendorAPI/methodname?param1=value1&param2=value2)
   3. When calling POST methods, the parameters are included in the body like this:
      1. Param1=value1&param2=value2
5. What format are the responses in?
   1. All responses are in XML, except for accesstoken, which is in JSON.
6. What is DRM, and how does it relate to Axis360?
   1. DRM stands for Digital Rights Management. It allows patrons to check out titles electronically for their personal use for a given period of time, while ensuring they cannot sell, copy, or keep the title for longer than their allowed time.
7. What is the difference between DRM Setup and DRM Create?
   1. DRM Setup associates an existing DRM account (e.g. Blio or Acoustik) with a given patron. DRM Create creates a new DRM account for the given patron.