



TRAINING AND DEMO

Jama REST API Basics

Introduction

JAMA API BASICS

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Jama REST API Availability

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- Jama REST API is available
 - For all cloud-based customers
 - For on-premise customers using Jama Connect 8.0 or higher

API Authentication Methods

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- Definition
 - The process of verifying the identity of a user or system that is attempting to access an API
- API Authentication methods
 - Basic (Username & Password combination)
 - OAuth (Client ID & Client Secret combination)
 - *Can be used if basic authentication method is not offered*

Example Use Cases

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- Curl via Basic Authentication

```
curl -X GET "https://baseurl/rest/v1/projects" -H "accept: application/json" --user "username:password"
```

- Curl via OAuth Authentication

- Retrieve access token

```
curl -X POST "https://clientId:clientSecret@baseurl/rest/oauth/token" --data grant_type=client_credentials
```

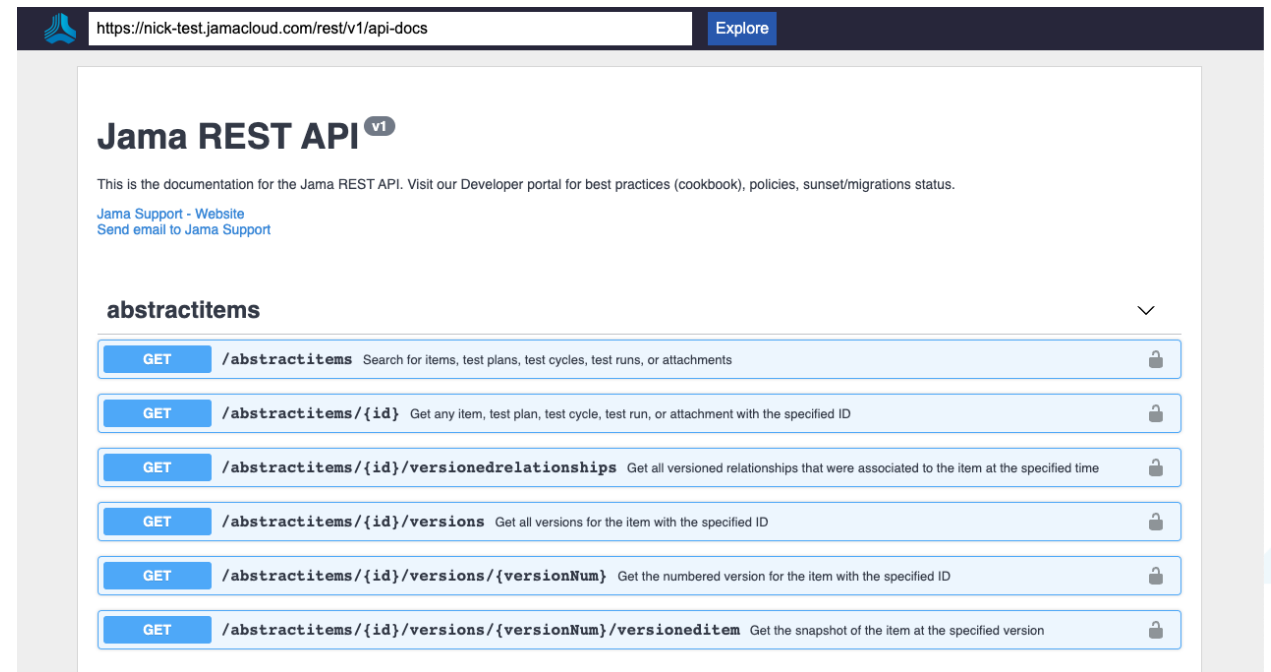
- Use access token in other requests

```
curl -X GET "https://baseurl/rest/v1/projects" -H "accept: application/json" --header "Authorization: Bearer accessToken"
```

Example Use Cases

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- Swagger UI
 - Good solution for testing API endpoints directly with live data from Jama Connect
 - Can be used with any Jama Instance URL
 - `https://{baseURL}/api-docs#`



Jama REST API Response Format

JAMA API BASICS

- Meta Section
- Links Section
- Data Section
- Resources Section* (/abstractitems, etc.)
- Location Section* (/items, etc.)
- Lock* (/items, /testruns, etc.)

* *Endpoint-specific sections*

```
{  
  "meta": { ...  
},  
  "links": { ...  
},  
  "data": [ ...  
]
```

Jama REST API Response Format

JAMA API BASICS

Meta Section

- Status
- Timestamp
- Page Info
 - Start Index
 - Result Count
 - Total Results

```
"meta":  
{  
  "status": "OK",  
  "timestamp": "2023-02-06T22:54:28.224+0000",  
  "pageInfo": {  
    "startIndex": 0,  
    "resultCount": 20,  
    "totalResults": 72  
  }  
},
```

Jama REST API Response Format

JAMA API BASICS

Links Section

- Retrieval of specific data
 - Item Type Descriptions
 - Related Items
 - Users
 - Pick List Values

```
"links": {  
  "data.createdBy": {  
    "type": "users",  
    "href": "https://baseurl/rest/v1/users/{data.createdBy}"  
  },  
  "data.modifiedBy": {  
    "type": "users",  
    "href": "https://baseurl/rest/v1/users/{data.modifiedBy}"  
  },  
  "data.fields.projectGroup": {  
    "type": "picklistoptions",  
    "href": "https://baseurl/rest/v1/picklistoptions/{data.fields.projectGroup}"  
  },  
  "data.parent": {  
    "type": "projects",  
    "href": "https://baseurl/rest/v1/projects/{data.parent}"  
  },  
  "data.fields.statusId": {  
    "type": "picklistoptions",  
    "href": "https://baseurl/rest/v1/picklistoptions/{data.fields.statusId}"  
  }  
},
```

Jama REST API Response Format

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Data Section

- ID
- Document Key
- Global ID
- Dates (Created / Modified)
- Users (Created / Modified)
- Field Section

```
"data": [  
  {  
    "id": 148,  
    "projectKey": "ABC1",  
    "isFolder": false,  
    "createdDate": "2022-10-21T15:36:59.000+0000",  
    "modifiedDate": "2022-11-01T20:34:30.000+0000",  
    "createdBy": 32,  
    "modifiedBy": 32,  
    "fields": {  
      "projectKey": "ABC1",  
      "statusId": 298,  
      "name": "ABC Test Project",  
      "description": "",  
    },  
    "type": "projects"  
  }  
]
```

Jama REST API Response Format

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Resources Section

- Available HTTP methods for current endpoint

```
"resources": {  
  "self": {  
    "allowed": [  
      "GET",  
      "PUT",  
      "PATCH",  
      "DELETE"  
    ]  
  }  
},
```

Jama REST API Response Format

JAMA API BASICS

Location Section

- Sort Order
- Global Sort Order
- Sequence
- Parent

```
"location": {  
  "sortOrder": 0,  
  "globalSortOrder": 69975,  
  "sequence": "5.1.4.1",  
  "parent": {  
    "item": 1002645  
  }  
},
```

Jama REST API Response Format

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Lock Section

- Lock Status
- Last Locked Date (if true)
- Locked By User ID (if true)

```
"lock": {  
  "locked": true,  
  "lastLockedDate": "2024-01-04T15:44:05.000+0000",  
  "lockedBy": 27  
},
```

Support and Documentation

JAMA API BASICS

- Jama REST API documentation – <https://rest.jamasoftware.com>
- Jama Software for Developers – <https://dev.jamasoftware.com>
- GitHub Examples – <https://www.github.com/JamaSoftware-ps/Rest-References>

Frequently Asked Questions

- **Do I need a specific license type to access the APIs?**
 - Yes. As of Jama Connect v9.29, only users with a Named Creator license can access the REST APIs.
- **Do I need a specific permission to use the APIs?**
 - Your permissions can either allow or restrict access based on what you can use with the REST API. For example, organization admins have more access across your Jama Connect instance than project admins. Project admins can only access information regarding one project, whereas organization admins can access the full Jama instance.

Frequently Asked Questions

- **How would I need to handle date types in the REST API?**
 - Jama Connect uses dates based on the ISO 8601 standard. See the “Date Format” section in the API Cookbook of the Developer’s Portal.
- **Are there limits to using the REST API?**
 - Depending on your network traffic and usage across your Jama Connect instance, you could receive throttling limits and errors depending on the speed of usage. Please see the “Jama’s throttling limits” section in the API Cookbook of the Developer’s Portal.

Frequently Asked Questions

- **How would create and execute test plans and test runs with the REST API?**
 - The API Cookbook has a full step-by-step guide on this. Please see the “Executing Tests through the Jama REST API” section and “Creating Test Cases and Test Steps” section of the API Cookbook.

