

# Structure Resource

This page describes resources with which you can [list](#), [create](#), [read](#), [update](#), and [delete](#) structures. Structures contain [general information](#) such as name and permissions, but not the hierarchy itself. Issue hierarchy is accessed through the so-called *forest* resources ([read](#), [modify](#)). This page also documents structure [shape](#) and its [fields](#), and the [error entity](#) that may be returned in case of the REST API user error.

<a href="#">/structure/</a> GET	list structures
<a href="#">/structure/</a> POST	create a structure
<a href="#">/structure/{id}</a> GET	read structure
<a href="#">/structure/{id}/update</a> POST	update one or several structure fields
<a href="#">/structure/{id}</a> DELETE	delete structure

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## Structure Representations

Structure is represented via JSON. All resources are also capable of producing XML.

```
{
  "id": 103,
  "name": "Structure with all fields",
  "description": "Voilà! This structure exhibits all fields.",
  "readOnly": "true",
  "editRequiresParentIssuePermission": true,
  "permissions": [
    {
      "rule": "apply",
      "structureId": 102
    },
    {
      "rule": "set",
      "subject": "group",
      "groupId": "jira-developers",
      "level": "edit"
    },
    {
      "rule": "set",
      "subject": "projectRole",
      "projectId": 10010,
      "roleId": 10020,
      "level": "admin"
    },
    {
      "rule": "set",
      "subject": "anyone",
      "level": "view"
    },
    {
      "rule": "set",
      "subject": "user",
      "username": "agentk",
      "level": "none"
    }
  ],
  "owner": "user:admin"
}
```

## Structure Fields

Structure objects accessible through these resources have the following fields, most of which represent structure details as outlined in the [Structure User's Guide](#):

id	The ID of the structure (integer, $1..2^{63} - 1$ .)
name	The name of the structure. A structure must have a non-empty name, which does not have to be unique.
description	The description on the structure. May be absent.
readOnly	true if the user has only <a href="#">View</a> access level to the structure, otherwise absent.
editRequiresParentIssuePermission	true if the <a href="#">Require Edit Issue Permission on Parent Issue</a> flag is set on this structure, otherwise absent.
permissions	The list of structure <a href="#">permission rules</a> . Present only if the user has <a href="#">Control</a> access level to the structure. Some resources do not include permissions unless requested to do so. List order is as important as the rules themselves.
owner	The <a href="#">owner</a> of the structure. Present only if the user is the owner of this structure or if he has <a href="#">Browse Users</a> permission. A string of the form <code>user:USERNAME</code> , where USERNAME is the JIRA user login name. Example: <code>user:jsmith</code> .

Please note that structure resources described on this page do not include information about issue hierarchies. The so-called *forest* of a structure, i.e. its hierarchy of issues, can be [read](#) or [modified](#) using the dedicated resources.

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## Permission rules

There are two types of permission rules, those that *set* permissions and those that *apply* permissions from another structure. They have different fields depending on the type.

### Set rules

rule	Must be equal to <code>set</code> , case-insensitive.
subject	Identifies the type of the subject to which the rule applies. Must be one of <code>group</code> , <code>projectRole</code> , <code>user</code> , <code>anyone</code> . See below how to identify the subject.
level	Access level to set to the specified subject. Must be equal to one of the names of the <a href="#">Permission Level</a> enum constants, case-insensitive. Please note that Control permission is represented by the <a href="#">ADMIN</a> enumeration constant.

In addition, there are fields to identify the subject.

#### group

The rule applies to all users within the JIRA group.

groupId	The name of the JIRA group. Example: <code>jira-developers</code> .
---------	---

*REST API user can create such rule only for a group he belongs to.*

#### projectRole

The rule applies to all users that have a role in a project.

projectId	The ID of the project. Example: <code>10010</code> .
roleId	The ID of the role. Example: <code>10010</code> .

*REST API user can create such rule only for roles in projects where Structure is enabled, and for which he has [Browse Projects](#) permission.*

#### user

The rule applies to the user.

username	Name of the user. Example: <code>jsmith</code> for user John Smith.
----------	---

*REST API user can create such rule only if he has [Browse Users](#) permission, and if such user exists.*

#### anyone

The rule applies to all users, even anonymous (not authenticated.) The rule shouldn't have any additional fields.

## Apply rules

rule	Must be equal to apply, case-insensitive.
structureId	The ID of the structure which permissions should be applied. Example: 112

*Apply rule creates a dependency on another structure. Circular dependencies are not allowed. Also, a REST API user can create such rule only if he has [Control](#) access level to the referenced structure.*

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## Error entity

```
{
  "code": 4005,
  "error": "STRUCTURE_NOT_EXISTS_OR_NOT_ACCESSIBLE[4005]",
  "structureId": 160,
  "message": "Referenced structure [160] does not exist or you don't have Control permissions on it.",
  "localizedMessage": "Das Struktur [160] existiert nicht oder sie haben keine Kontrolle Berechtigungen."
}
```

In some cases, requests to structure resources result in an error response containing an error entity. Any of its fields may be absent.

code	Integer code of the error
error	Brief technical description of the error. Contains a name of the corresponding <a href="#">StructureError</a> enum constant.
structureId	The ID of the structure involved.
issueId	The ID of the JIRA issue involved.
message	More detailed message, may contain technical details.
localizedMessage	User-displayable message in the REST API user locale or JIRA default locale if the user is not authenticated.

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# Structure Resources

## GET /structure

```
GET $baseUrl/rest/structure/1.0/structure
GET $baseUrl/rest/structure/1.0/structure?
name=$name&permission=$permission&issueId=$issueId&withPermission=$withPermission&withOwner=$withOwner
```

A list of all structures visible to the REST API user. Optionally, the result can be filtered by name, REST API user's access level, or issue contained within the structure. By default, permission rules and owners are not included, you should use query parameters if you want them to be included.



### Who can access this resource

All users who have [access to the Structure Plugin](#). The returned list contains only structures to which the REST API user has at least [View](#) access level.

## Request

Query parameters:

name	If present, the returned list will contain only structures which names equal the specified name (case-insensitive.)
permission	If present, the returned list will contain only structures to which the REST API user has the specified <a href="#">access level</a> . Must be equal to one of the names of the <a href="#">Permission Level</a> enum constants, case-insensitive. <a href="#">NONE</a> is treated in the same way as <a href="#">VIEW</a> . Please note that Control permission is represented by the <a href="#">ADMIN</a> enumeration constant.
issueId	If present, the returned list will contain only structures to which the specified issue belongs. Must be an integer. Example: 12147. <i>REST API user must have permissions to access the specified issue.</i>

withPermission	If true, permission rules will be included in the response. Default is false.
withOwner	If true, owner will be included in the response. Default is false.

Each of the filter parameters name, permission, or issueId can be specified only once, otherwise the first is used. Different parameters are combined with AND.

HTTP headers:

Content-Type	Should be one of application/json, application/xml.
Accept	Should be one of application/json, application/xml.

## Response

### Success

200 OK	Response entity contains the only field, structures, which contains the list of the structure objects.	application/json, application/xml
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Example 1: all structures

```
GET $baseUrl/rest/structure/1.0/structure
```

```
{
  "structures": [
    {
      "id": 1,
      "name": "Global Structure",
      "description": "Initial general-purpose structure.",
      "editRequiresParentIssuePermission": true
    },
    {
      "id": 102,
      "name": "Test plan",
      "description": "Test plan #3",
      "readOnly": true
    },
    {
      "id": 100,
      "name": "Test plan",
      "description": "Test plan #1"
    },
    {
      "id": 101,
      "name": "Test plan",
      "description": "Test plan #2"
    }
  ]
}
```

Example 2: only "Test plan"

```
GET $baseUrl/rest/structure/1.0/structure?name=test+plan
```

```
{
  "structures": [
    {
      "id": 102,
      "name": "Test plan",
      "description": "Test plan #3",
      "readOnly": true
    },
    {
      "id": 100,
      "name": "Test plan",
      "description": "Test plan #1"
    },
    {
      "id": 101,
      "name": "Test plan",
      "description": "Test plan #2"
    }
  ]
}
```

Example 3: only with a specific issue

```
GET $baseUrl/rest/structure/1.0/structure?issueId=12147
```

```
{
  "structures": [
    {
      "id": 1,
      "name": "Global Structure",
      "description": "Initial general-purpose structure.",
      "editRequiresParentIssuePermission": true
    },
    {
      "id": 100,
      "name": "Test plan",
      "description": "Test plan #1"
    }
  ]
}
```

Example 4: "Test plan" containing specific issue

```
GET $baseUrl/rest/structure/1.0/structure?name=test+plan&issueId=12147
```

```
{
  "structures": [
    {
      "id": 100,
      "name": "Test plan",
      "description": "Test plan #1"
    }
  ]
}
```

Example 5: structures that the user can edit with permissions and owners shown

```
GET $baseUrl/rest/structure/1.0/structure?permission=edit&withPermissions=true&withOwner=true
```

```

{
  "structures": [
    {
      "id": 1,
      "name": "Global Structure",
      "description": "Initial general-purpose structure.",
      "editRequiresParentIssuePermission": true
    },
    {
      "id": 100,
      "name": "Test plan",
      "description": "Test plan #1",
      "permissions": [
        {
          "rule": "set",
          "subject": "group",
          "groupId": "jira-users",
          "level": "edit"
        },
        {
          "rule": "set",
          "subject": "projectRole",
          "projectId": 10010,
          "roleId": 10010,
          "level": "none"
        },
        {
          "rule": "apply",
          "structureId": 101
        }
      ],
      "owner": "user:jsmith"
    },
    {
      "id": 101,
      "name": "Test plan",
      "description": "Test plan #2",
      "owner": "user:admin"
    }
  ]
}

```

#### Example 6: require XML representation

Note that the same can be achieved by specifying `application/xml` in the Accept HTTP header.

```
GET $baseUrl/rest/structure/1.0/structure.xml?name=test+plan&issueId=12147
```

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<structureList>
  <structures>
    <structure>
      <id>100</id>
      <name>Test plan</name>
      <description>Test plan #1</description>
    </structure>
  </structures>
</structureList>

```

#### Error

400 Bad Request	permission parameter is set to an unknown value, or request is invalid for other reasons. In the first case, response contains error entity, in the second it is empty.	application/json, application/xml
403 Forbidden	If Structure Plugin is not accessible to the REST API user, or if issue with ID <code>issueId</code> does not exist or the REST API user does not have enough permissions to access it. Response contains error entity.	application/json, application/xml

404 Not Found	If <code>issueId</code> is not an integer. Response entity contains a standard JIRA error HTML page.	text/html
500 Internal Server Error	If an internal error has occurred while processing this request.	
503 Service Unavailable	If Structure Plugin is stopped at the time of request. For example, the <a href="#">Restore</a> operation may be in progress.	

Other return codes are possible under the normal rules of HTTP communication.

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## POST /structure

```
POST $baseUrl/rest/structure/1.0/structure
```

[Create](#) a structure by POSTing to this resource.



### Who can access this resource

Only logged in users who have [access to the Structure Plugin](#) and a [permission to create structures](#).

## Request

Request entity should contain the new [structure](#). Structure name, `name`, must be present and non-empty. Fields `id`, `readOnly`, and `owner` are ignored. All rules in `permissions` are validated according to their respective [rule types](#).

Please note that this resource accepts only JSON structure representation.

HTTP headers:

Content-Type	Must be <code>application/json</code> .
Accept	Should be one of <code>application/json</code> , <code>application/xml</code> .

## Response

### Success

201 Created	Response entity contains the created structure with fields, including <code>permissions</code> and <code>owner</code> .	<code>application/json</code> , <code>application/xml</code>
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Example 1: minimal structure

```
POST $baseUrl/rest/structure/1.0/structure
```

Request entity	Response entity
<pre>{   "name": "Test plan" }</pre>	<pre>{   "id": 104,   "name": "Test plan",   "description": "",   "permissions": [],   "owner": "user:admin" }</pre>

Example 2: structure with some permissions

```
POST $baseUrl/rest/structure/1.0/structure
```

Request entity	Response entity
----------------	-----------------

<pre>{   "name": "Structure with some permissions",   "editRequiresParentIssuePermission": "true",   "permissions": [     {       "rule": "apply",       "structureId": 102     }   ] }</pre>	<pre>{   "id": 105,   "name": "Structure with some permissions",   "description": "",   "editRequiresParentIssuePermission": true,   "permissions": [     {       "rule": "apply",       "structureId": 102     }   ],   "owner": "user:admin" }</pre>
---	--

### Error

400 Bad Request	Structure data is not well-formed (syntax error) or invalid (semantic error.) Not well-formed structure data examples: request JSON is syntactically incorrect; JSON contains unknown field; name is not present or empty; permissions list contains a <i>ser</i> rule with level set to an invalid value. Invalid structure example: permissions list contains a rule that fails validation. Response entity contains error. Problems with <i>apply</i> rule usually have structureId to indicate the invalid reference.	application/json, application/xml
403 Forbidden	If REST API user is not logged in or does not have permissions to access Structure Plugin or to create structures. Response contains error entity.	application/json, application/xml
500 Internal Server Error	If an internal error has occurred while processing this request.	
503 Service Unavailable	If Structure Plugin is stopped at the time of request. For example, the <a href="#">Restore</a> operation may be in progress.	


Other return codes are possible under the normal rules of HTTP communication.

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### GET /structure/{id}

GET \$baseUrl/rest/structure/1.0/structure/\$id
GET \$baseUrl/rest/structure/1.0/structure/\$id?withPermissions=\$withPermissions&withOwner=\$withOwner

This resource allows to obtain [structure details](#) for the particular structure. By default, permissions and owner are not included, use query parameters to include them.


**Who can access this resource**

All users who have [access to the Structure Plugin](#). To access the particular structure, the user has to have at least [View](#) access level.

### Request

Path parameter:

id	the ID of the structure
----	-------------------------

Query parameters:

withPermission	If true, permission rules will be included in the response. Default is false.
withOwner	If true, owner will be included in the response. Default is false.

HTTP headers:

Content-Type	Should be one of application/json, application/xml.
Accept	Should be one of application/json, application/xml.



# Response

## Success

200 OK	Response entity contains the created structure along with all of its fields. Field <code>permissions</code> is included if the REST API user has <a href="#">Control</a> permission on this structure. Field <code>owner</code> is included if the REST API user is either the owner of this structure or has <a href="#">Browse Users</a> permission.	<code>application/json, application/xml</code>
--------	--	--

Example 1: retrieve structure with ID 100 without permissions and owner

```
GET $baseUrl/rest/structure/1.0/structure/100

{
  "id": 100,
  "name": "Test plan",
  "description": "Test plan #1"
}
```

Example 2: permissions and owner are requested to be included, but only owner is shown, because the user has only View access as indicated by `readOnly`

```
GET $baseUrl/rest/structure/1.0/structure/102?withOwner=true&withPermissions=true

{
  "id":102,
  "name":"Test plan",
  "description":"Test plan #3",
  "readOnly":true,
  "owner":"user:admin"
}
```

Example 3: XML representation may be requested in the request URL instead of the `Content-Type` HTTP header

```
GET $baseUrl/rest/structure/1.0/structure/102.xml

<structure>
  <id>102</id>
  <name>Test plan</name>
  <description>Test plan #3</description>
  <readOnly>true</readOnly>
</structure>
```

## Error

400 Bad Request	One of the query parameters is too long.	
403 Forbidden	If REST API user does not have permissions to access Structure Plugin or does not have at least <a href="#">View</a> permission on this structure. Response contains error entity.	<code>application/json, application/xml</code>
404 Not Found	If <code>id</code> is not an integer in $1..2^{63}-1$ . Response entity contains a standard JIRA error HTML page.	<code>text/html</code>
500 Internal Server Error	If an internal error has occurred while processing this request.	
503 Service Unavailable	If Structure Plugin is stopped at the time of request. For example, the <a href="#">Restore</a> operation may be in progress.	

[Other return codes](#) are possible under the normal rules of HTTP communication.

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## POST /structure/{id}/update

```
POST $baseUrl/rest/structure/1.0/structure/$id/update
```

Update one or several fields of a structure by POSTing to this resource.



#### Who can access this resource

Only logged in users who have [access to the Structure Plugin](#) and [Control](#) permission on this structure.

## Request

Request entity should contain those [structure fields](#) that need to be changed. Non-present fields will not be changed (for this user; `readOnly` may change for other users as a result of changing permissions.) Fields `id`, `readOnly`, and `owner` are ignored.

Please note that `permissions` field is modified as a whole, so to add a rule, you have to provide the new list of rules in the proper order.

If `permissions` field is present, all rules are validated according to their respective [rule types](#).

Please note that this resource accepts only JSON structure representation.

HTTP headers:

Content-Type	Must be <code>application/json</code> .
Accept	Should be one of <code>application/json</code> , <code>application/xml</code> .

## Response

### Success

200 OK	Response entity contains the updated structure with all fields, including <code>permissions</code> and <code>owner</code> .	<code>application/json</code> , <code>application/xml</code>
--------	---	--

Example 1: change description of the Global Structure

```
POST $baseUrl/rest/structure/1.0/structure/1/update
```

Request entity	Response entity
----------------	-----------------

<pre>{   "description":"Company-wide structure providing the Big Picture." }</pre>	<pre>{   "id":1,   "name":"Global Structure",   "description":"Company-wide structure providing the Big Picture.",   "editRequiresParentIssuePermission":true,   "permissions":[     {       "rule":"set",       "subject":"anyone",       "level":"view"     },     {       "rule":"set",       "subject":"group",       "groupId":"jira-users",       "level":"edit"     },     {       "rule":"set",       "subject":"group",       "groupId":"jira-administrators",       "level":"admin"     }   ] }</pre>
--	---

Example 2: changing permission rules

POST \$baseUrl/rest/structure/1.0/structure

Request entity	Response entity
<pre>{   "permissions":[     {       "rule":"set",       "subject":"group",       "groupId":"jira-users",       "level":"edit"     },     {       "rule":"apply",       "structureId":101     }   ] }</pre>	<pre>{   "id": 105,   "name": "Structure with some permissions",   "description": "",   "editRequiresParentIssuePermission": true,   "permissions": [     {       "rule": "set",       "subject": "group",       "groupId": "jira-users",       "level": "edit"     },     {       "rule": "apply",       "structureId": 101     }   ],   "owner": "user:admin" }</pre>

Error

400 Bad Request	<p>Structure data is not well-formed (syntax error) or invalid (semantic error.)</p> <p>Not well-formed structure data examples: request JSON is syntactically incorrect; JSON contains unknown field; per missions list contains a <i>set</i> rule with level set to an invalid value.</p> <p>Invalid structure example: permissions list contains a rule that fails validation.</p> <p>Response entity contains error. Responses to problems with an <i>apply</i> rule usually have structureId to indicate the invalid reference.</p>	application/json, app lication/xml.
403 Forbidden	<p>If REST API user is not logged in, does not have permissions to access Structure Plugin, or does not have <a href="#">Control</a> access level to this structure. Response contains error entity.</p>	application/json, app lication/xml

500 Internal Server Error	If an internal error has occurred while processing this request.	
503 Service Unavailable	If Structure Plugin is stopped at the time of request. For example, the <a href="#">Restore</a> operation may be in progress.	

Other [return codes](#) are possible under the normal rules of HTTP communication.

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## DELETE /structure/{id}

[Deletes](#) the designated structure.



### Who can access this resource

Only logged in users who have [access to the Structure Plugin](#) and [Control](#) permission on this structure.

## Request

Path parameter:

id	the ID of the structure
----	-------------------------

HTTP headers:

Content-Type	Must be application/json.
Accept	Should be absent or equal to one of application/json, application/xml.

## Response

### Success

200 OK	Contains an object with the only field <code>empty</code> with value <code>true</code> .	application/json, application/xml
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Note: it should have been 204 No content instead, but there were reports of some browsers (Firefox) incorrectly processing such results, so it's as it is.

Example

```
DELETE $baseUrl/rest/structure/1.0/structure/108
```

```
{
  "empty": true
}
```

### Error

403 Forbidden	If REST API user is not logged in, does not have permissions to access Structure Plugin, or does not have <a href="#">Control</a> access level to this structure. Response contains error entity.	application/json, application/xml
404 Not Found	If id is not an integer in $1..2^{63}-1$ . Response entity contains a standard JIRA error HTML page.	text/html
404 Not Found	If id is an integer in $1..2^{63}-1$ , but the structure with the specified id does not exist or the user does not have <a href="#">View</a> access level to it.	application/json, application/xml
500 Internal Server Error	If an internal error has occurred while processing this request.	
503 Service Unavailable	If Structure Plugin is stopped at the time of request. For example, the <a href="#">Restore</a> operation may be in progress.	

Other [return codes](#) are possible under the normal rules of HTTP communication.

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