

REST API for POST and PUT method calls

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The REST API for POST and PUT feature will be deprecated.

Consider using the [Record APIs](#) feature instead.

Overview

ReadiNow allows third party systems to connect to ReadiNow to Create, Update or Delete records of any object within ReadiNow. This is achieved through configurable API endpoints where the Administrator specifies which object to expose to an API.

Definitions:

- **API:** An application programming interface. Within ReadiNow this is a collection of endpoints that are grouped and secured together in order for third party systems to perform actions on records within ReadiNow
- **API Endpoint:** An endpoint is a web address that the remote system can use to connect to our system. Each endpoint does either a create, update or delete of a particular record of a nominated object. These Endpoints can be created and configured by the ReadiNow Administrator
- **API Key:** The authentication mechanism for calling endpoints in an API.

Process:

- Decide which object needs to be exposed to an API
- Create an API (see below)
- Configure the Endpoint which specifies the object and allowed actions (create, update, delete via API)
- Create API key (see below)

- Use the details generated to configure the third party system (or integration tool) to POST, PUT or DELETE (which corresponds to create, update and delete) action to ReadiNow

Creating an API

To create an API:

1. Select Application Menu. The menu appears with available applications.
2. Select **Administration**. The application displays at the landing page.
3. In the Left Navigation Area, select **Integration**. The Integration expands to display list.
4. Select **APIs**. The existing APIs display.
5. Select **+NEW**. The API form displays.
6. Type the Name in the **Name** field
7. Type the Address in the **Address** field, e.g. the name of application in one word.
Please refer to step 4 of creating endpoint.
8. Select the checkbox for **Enabled**.
9. Select **Save** to save the details.

Creating an Endpoint for any object

To create an Endpoint for any object:

1. On the **Endpoints** tab of the newly created API, select **+NEW**. The menu appears.
2. Select **API Resource Endpoint**. The API Resource Endpoint form displays.
3. In the **Object** field, select the Pencil  icon and select from the list e.g. Student.
4. Type the Address in the **Address** field, e.g. the name of the object in one word.
(<https://yourseveraddress/spapi/api/yourtenant/yourapiaddress/yourendpoint>)
5. Select the checkbox for **Enabled**.

6. Select fields as required.
7. Select **Save** to save the details.

Creating an API Key

To create an API Key:

1. Select Application Menu. The menu appears with available applications.
2. Select **Administration**. The application displays at the landing page.
3. In the Left Navigation Area, select **Integration**. The Integration expands to display list.
4. Select **API Keys**. The existing API Keys display.
5. Select **+NEW**. The API Key form displays.
6. In the **API Key** field, enter a guid. E.g. b9c91534-7cc1-4e09-b22f-2808072e333e, or generate one at <https://www.guidgenerator.com/>.
7. Select the checkbox for **Enabled**, if not ticked.
8. For **Run as user**, select a user account such as Administrator (The user account must have access control permission to do whatever you expect the API to do).
9. Under **APIs Granted** tab, link to the New API (or other API as required).
10. Select **Save** to save the details.

Using a tool that can simulate making web requests

To get a tool that can simulate making web requests:

1. Use a tool that can simulate making web requests e.g. the *Postman Plugin* for Chrome.
2. Alternatively, see getpostman.com, or just navigate in the Chrome app store.

Running a request to create a new data

record

To run a request to create a new account:

1. Use Postman to issue a request like this: (see image below).
2. Use the 'POST' verb.
3. Use key that is generated (e.g.

`https://yourserveraddress/spapi/api/yourtenant/yourapiaddress/yourendpoint?
key=b9c91534-7cc1-4e09-b22f-2808072e333e`).

4. Select the Body tab.
5. Select 'Raw'. The textbox appears.
6. Enter this (case sensitive) query:

```
{ "field1 of string type":"value of field1", "field2 of decimal type":234.0 }
```

7. Set the type to JSON (application/json).
8. Select Send.

Notes

- A **201 Created** response appears.
- Navigate to your report of your object, a new data record with specified field values is created.

Response Codes

When an API call is made, the server will response with a HTTP response code as follows:

HTTP Response Codes

HTTP Response Code	Meaning
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200/201 - OK	(200 or 201 as applicable). Everything worked.
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Something about the request received from the client was invalid.

- | | |
|-------------------|--|
| 400 - Bad Request | <ul style="list-style-type: none">• There was something invalid about the request received from the client.• I.e. not a server problem, configuration problem, or internal error.• Body of a 400 reply should contain a message and an ID (in the E1xxx range). See error codes below. |
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Any of the following:

- | | |
|--------------------|---|
| 401 - Unauthorized | <ul style="list-style-type: none">• An API key was not provided• The API key was an invalid format• The API key was not found in the specified tenant• The specified tenant not exist (to be indistinguishable from the above)• The API key is not attached to a user account• The API key is attached to a user account that is disabled, locked, or expired• There are multiple API key objects with the same key name (which is invalid) |
|--------------------|---|

Any of the following:

- | | |
|-------|--|
| 403 - | <ul style="list-style-type: none">• The API key does not have permission to access the requested |
|-------|--|

Forbidden
HTTP
Response Code

API
Meaning
• The API key is attached to a user account that does not have permission to perform the requested task

405 - Method
not allowed

Caller attempted to use a verb that was not supported or allowed or enabled by that endpoint.

Either of the following:

500 - Server-
side Error

- A platform server error - for example with IIS
- A platform unhandled exception - includes a E0001 message.
Raise a bug ticket if you see these.
- A connector configuration error (such as a misconfigured API mapping) - *not a platform bug*

Ideally all 500 errors will also include an Exxxx error number in their message. See table below.

Error Codes

In addition to the standard HTTP response codes, the body of the response message may contain an error code. Note that error codes do not form part of the HTTP standard.

Errors in the range E0xxx represent platform errors. Errors in the range E1xxx represent request errors. Errors in the range E2xxx represent tenant configuration errors.

Error Code	Message
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E0001	Platform internal error.
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E1001	Property "name" was formatted incorrectly.
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Error Code	Message
E1002	No resource of the correct type matched the GUID 'guid'.

E1003 No resources were found that matched 'value'.

E1004 Multiple resources were found that matched 'value'.

E1005 Identifier list contained nulls.

E1006 Expected an array of identities for 'property'.

E1007 Cardinality violation.

E1008 Field validation rules were not met.

E1009 The message body was empty.

E1010 Mandatory property 'property' was not provided.

E2001 Multiple API keys have the same value.

E2002 Multiple APIs matching "name".

E2003	Multiple APIs endpoint matching "name".
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Error Code	Message
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E2004	Endpoint has no resource mapping.
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E2005	Resource mapping has no resource type.
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E2006	Resource mapping identity field cannot be write-only.
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E2007	Resource mapping identity field was not set.
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E2008	Field mapping "name" did not point to a field.
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E2009	Relationship mapping "name" did not point to a relationship.
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E2010	Field mapping "name" did not have a mapped name.
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