

# Calendar API Guide

For Synology Calendar 2.5 and above



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# Introduction

This Synology Calendar Official API Developer's Guide provides instructions on how to extend your applications using Synology Calendar APIs, enabling interaction with DSM files via HTTP/HTTPS requests and responses.

The guide details the structure and specifications of various Synology Calendar APIs. "Chapter 2: Get Started" outlines the basic guidelines for using these APIs, which should be read thoroughly before diving into the API specifications. "Chapter 3: Base API" and "Chapter 4: Calendar API" lists all available APIs and their relevant details.

**Notes:**

- This guide is only compatible with Synology Calendar 2.5.0 and later.

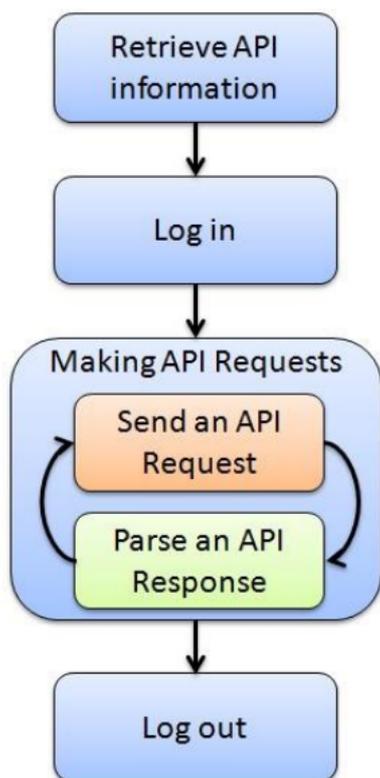
# Get Started

Before using Synology Calendar APIs to develop your own applications, you should have a basic understanding of API concepts and procedures. This chapter explains how to execute and complete API processes in the following five sections:

- **API Workflow:** Introduces how to work with Calendar APIs
- **Making Requests:** Elaborated explanation on how to construct API requests
- **Parsing Response:** Describes how to parse response data
- **Common Error Codes:** Lists all common error codes that might be returned from all Calendar APIs
- **Working Example:** Provides an example to request a file operation

## API Workflow

The following five-step, easy-to-follow workflow demonstrates how to make your application interact with Calendar APIs.



### Step 1: Retrieve API information

First, your application needs to retrieve API information from the target Synology NAS to determine which APIs are available. This can be done by sending a request to `/webapi/query.cgi` with the `SYNO.API.Info` API parameters. The response will contain details such

as the available API names, methods, paths, and versions. With this information, your application can make requests to the available APIs.

## Step 2: Sign in

For your application to interact with Synology Calendar, it must first sign in using an account and password. This is done by making a request to the SYNO.API.Auth API with the login method. If the sign in is successful, the API returns an authorized session ID, which you should retain and include in subsequent API requests.

## Step 3: Make API Requests

Once successfully signed in, your application can start making requests to all available Calendar APIs. In the [Making Requests](#) section, you will find instructions on how to form a valid API request and decode response information. Starting from DSM 5.0, all API requests should be issued through entry.cgi, specifying the API version and method. The compound mode allows you to issue multiple API requests within a single entry.cgi request. Some actions listed in Chapter 4: Calendar APIs require calling multiple API methods, necessitating the use of compound API requests.

## Step 4: Sign out

After completing the steps above, your application can end the login session by making another request to SYNO.API.Auth API with the logout method.

# Making Requests

There are five basic elements that are used to construct a valid request to any API.

- **API name:** Name of the API requested
- **version:** Version of the API requested
- **path:** Path of the API. The path information can be retrieved by requesting the SYNO.API.Info
- **method:** Method of the API requested
- **\_sid:** The authorized session ID should be included in each API request. You can pass it as the "\_sid" argument via either HTTP/HTTPS GET/POST methods, which is retrieved from the response of /webapi/auth.cgi. Alternatively, if you include it in the "ID" value of the cookie in the HTTP/HTTPS header, this parameter can be ignored.

The syntax for the request should be as follows:

```
GET
/webapi/<CGI_PATH>?api=<API_NAME>&version=<VERSION>&method=<METHOD>[&
<PARAMS>][&_sid=<SID>]
```

Here, <PARAMS> represents the parameters for the requested method, which are optional. Note that all parameters need to be escaped. Commas "," are replaced by slashes "\", and slashes "/" are replaced by double-slashes "/" because commas are used to separate multiple elements in a parameter. Password-related parameters, such as password or the password parameter, do not need to be escaped.

Please refer to the following example. If you want to make a request to the SYNO.API.Info API version 1 with the query method on your Synology NAS, whose address is `http://myds.com:port` (default port for HTTP is 5000 or 5001 for HTTPS), for the list of all available API methods, the corresponding parameters are:

- **API name:** SYNO.API.Info
- **version:** 1
- **version:** 1
- **path:** query.cgi
- **method:** query
- **params:** query=all

The request will look like this:

```
http://myds.com:port/webapi/query.cgi?
api=SYNO.API.Info&version=1&method=query&query=all
```

Note that the API's path and supported version information can be acquired by sending a request to SYNO.API.Info. The location of SYNO.API.Info is fixed so that you can always request SYNO.API.Info with `/webapi/query.cgi`.

To avoid CSRF issue, remember to carry X-SYNO-TOKEN in the request headers for any request with `entry.cgi`. The X-SYNO-TOKEN value could be acquired by `webman/login.cgi`. For example:

## Sign In

### Request

Parameter	Description	Availability
account	Sign in account name	1 and later
password	Sign in account password	1 and later
session	Sign in session name (refer to <a href="#">Synology Login Web API Guide</a> for more information)	1 and later
enable_syno_token	return synotoken if value is "yes"	3 and later
format	Returned format of session ID. Following are the two possible options and the default value is cookie cookie: The sign in session ID will be set to "id" key in cookie of HTTP/HTTPS header of response sid: The sign in sid will only be returned as response JSON data and "id" key will not be set in cookie	2 and later
otp_code	Reserved key. DSM 4.2 and later support a 2-step verification option with an OTP code. If it's enabled, the user requires a verification code to log into DSM sessions.	3 and later

Example:

GET

/webapi/auth.cgi?api=SYNO.API.Auth&version=3&method=login&account=admin&passwd=12345&session=Calendar&format=cookie

Response:

Object definitions:

Parameter	Description	Availability
sid	Authorized session ID. When the user signs in with format=sid, the cookie will not be set and each API request should provide a request parameter _sid=< sid> along with other parameters.	2 and later
synotoken	If CSRF is enabled in DSM and enable_syno_token is 'yes', pass this value by HTTP argument "SynoToken"	3 and later

Example:

```
{
  "data":{
    "sid":"ZU6dNe8YMIPVo15A0NjN507300",
    "synotoken":"iUahVw8TG.Uhc"
  },
  "success":true
}
```

## Parsing Response

All API responses are encoded in the JSON format, and the JSON response contains the following elements:

Key	Value	Description
success	true/false	<ul style="list-style-type: none"><li>• true: the request was finished successfully</li><li>• false: the request failed with an error.</li></ul>
data	<JSON-Style Object>	The data object contains all response information described in each method.
error	<JSON-Style Object>	The data object contains error when a request has failed. The basic elements are described in the next table.

The following table provides detailed format information about the error value.

Key	Value	Description
-----	-------	-------------

code	Error code	An error code will be returned when a request fails. There are two kinds of error codes: a common error code which is shared between all APIs, and a specific API error code (described under each corresponding API spec).
error	<JSON-Style Object>	The array contains detailed error information of each file. Each element within errors is a JSON-Style Object, which contains an error code and other information, such as a file path or name. When there is no detailed information, there will not be an element description for this error.

### Example 1

This is an example of a request and its failure response when an invalid request was sent to Calendar without a method parameter.

Request:

```
HTTP Method: POST
Path: /webapi/entry.cgi
Request Header:
  Host: 192.168.1.33:5000
  X-SYNO-TOKEN: 7fqkkwKiqGXt6
Params:
  is_evt: true
  api: SYNO.Cal.Cal
  method: list
  version: 2
```

Failure response:

```
{ "success":false,
  "error":{
    "code":114
  }
}
```

### Example 2:

This is an example of a request and its failure response when an invalid request containing an illegal path was sent to Calendar to list all events.

Request:

```
HTTP Method: POST
Path: /webapi/entry.cgi
Request Header:
  Host: 192.168.1.33:5000
  X-SYNO-TOKEN: 7fqkkwKiqGXt6
Params :
  is_evt: true
  api: SYNO.Cal.Cal
  method: list
  version : 2
```

Failure response:

```
{
  "success":false,
  "error":{
    "code":120
  }
}
```

### Example 3:

This is an example of a request and its successful response to list all of the user's current Calendars.

Request:

```
HTTP Method: POST
Path: /webapi/entry.cgi
Request Header:
  Host: 192.168.1.33:5000
  X-SYNO-TOKEN: 7fqkkwKiqGXt6
Params :
  cal_type all
  api SYNO.Cal.Cal
  method list
  version 5
```

Successful response:

```
{
  "data" : {
    "list" : [
      {
        "cal_color" : "#D9AE00",
        "cal_description" : "",
        "cal_displayname" : "My Calendar",
        "cal_id" : "/test2/home/",
        "cal_privilege" : "RW",
        "cal_public_sharing_id" : "",
        "cal_type" : "event",
        "default_calendar" : true,
        "is_hidden_in_cal" : false,
        "is_hidden_in_list" : false,
        "notify_alarm_by_browser" : true,
        "notify_alarm_by_mail" : true,
        "notify_evt_by_browser" : true,
        "notify_evt_by_mail" : false,
        "notify_import_cal_by_browser" : true,
        "notify_import_cal_by_mail" : true,
        "original_cal_id" : "/test2/home/",
        "original_ug_name" : "test2",
        "original_user_no" : 1034
      }
    ]
  }
}
```

```

},
{
  "cal_color": "#679002",
  "cal_description": "",
  "cal_displayname": "Inbox",
  "cal_id": "/test2/home_todo/",
  "cal_privilege": "RW",
  "cal_public_sharing_id": "",
  "cal_type": "todo",
  "default_calendar": true,
  "is_hidden_in_cal": false,
  "is_hidden_in_list": false,
  "notify_alarm_by_browser": true,
  "notify_alarm_by_mail": true,
  "notify_evt_by_browser": true,
  "notify_evt_by_mail": false,
  "notify_import_cal_by_browser": true,
  "notify_import_cal_by_mail": true,
  "original_cal_id": "/test2/home_todo/",
  "original_ug_name": "test2",
  "original_user_no": 1034
}
]
},
"httpd_restart": false,
"success": true
}

```

#### Notes:

- To demonstrate examples with clarity, only the data object is included in the response examples given in the following sections.

## Common Error Codes

The following codes are common error codes for incorrect parameters or failed login for all WebAPIs

Code	Description
100	Unknown error
101	No parameter of API, method, or version
102	The requested API does not exist
103	The requested method does not exist
104	The requested version does not support the functionality

105	The logged in session does not have permission
106	Session timeout
107	Session interrupted by duplicate login
114	Missing required parameters
117	Unknown internal error
120	Invalid parameter
160	Insufficient application privilege

The following codes are common error codes for file operations for all Calendar APIs.

Code	Description
400	Invalid file operation parameter
401	Unknown file operation error
402	System is too busy
403	This user does not have permission to execute this operation
404	This group does not have permission to execute this operation
405	This user/group does not have permission to execute this operation
406	Cannot obtain user/group information from the account server
407	Operation not permitted
408	No such file or directory
409	File system not supported
410	Failed to connect internet-based file system (ex: CIFS)
411	Read-only file system
412	Filename too long in the non-encrypted file system
413	Filename too long in the encrypted file system
414	File already exists
415	Disk quota exceeded
416	No space left on device
417	Input/output error
418	Illegal name or path
419	Illegal file name
420	Illegal file name on FAT file system

421	Device or resource busy
599	No such task of the file operation

## Working Example

The following example demonstrates how to request information about an event from Synology Calendar. To use this example, replace the Synology NAS address in the example (myds.com) with your own Synology NAS address, and then paste the URL into your browser. The JSON response will appear on the response page.

### Step 1: Retrieve API information

All Calendar API requests must be issued via entry.cgi. When retrieving API information, the path provided will be for entry.cgi.

Request:

```
http://myds.com:port/webapi/query.cgi?
api=SYNO.API.Info&version=1&method=query&query=SYNO.Cal.Event
```

Response:

```
{
  "data":{
    "SYNO.Cal.Event":{
      "maxVersion":3,
      "minVersion":1,
      "path":"entry.cgi",
      "requestFormat":"JSON"
    }
  },
  "success":true
}
```

### Step 2: Sign in

After receiving the SYNO.API.Auth path and supported version information, you can sign in to a FileStation session by requesting SYNO.API.Auth API version 3 at /webapi/auth.cgi.

Request:

```
http://myds.com:port/webapi/auth.cgi?
api=SYNO.API.Auth&method=login&version=3&account=admin&passwd=a&format=sid&enable_syno_token=y
```

Response:

```
{
  "data":{
    "sid":"ZU6dNe8YMIPVo15A0NjN507300",
    "synotoken":"iUahVw8TG.Uhc"
  },
  "success":true
}
```

### Step 3: Request a Calendar API

After signing in to a session, you can call the method to list all calendars associated with the account. The CGI path and version are provided in the response of Step 1. You can request the list of all tasks by excluding the offset and limit parameters.

Request:

```
HTTP Method: POST
Path: /webapi/entry.cgi
Request Header:
  Host: 192.168.1.33:5000
  X-SYNO-TOKEN: iUahVw8TG.Uhc<
Cookies:
  Id: ZU6dNe8YMIPVo15A0NjN507300
Params:
```

```
cal_type all
method list
version 2
```

Response:

```
{
  "data": {
    "list": [{
      "cal_color": "#FF8000",
      "cal_description": "",
      "cal_displayname": "cal2",
      "cal_id": "/admin/aqagwjss/",
      "cal_privilege": "RW",
      "cal_public_sharing_id": "leYeoSp6D",
      "cal_type": "event",
      "default_calendar": false,
      "is_hidden_in_cal": false,
      "is_hidden_in_list": false,
      "notify_alarm_by_browser": true,
      "notify_alarm_by_mail": true,
      "notify_evt_by_browser": true,
      "notify_evt_by_mail": false,
      "notify_import_cal_by_browser": true,
      "notify_import_cal_by_mail": true,
      "original_cal_id": "/admin/aqagwjss/",
      "original_ug_name": "admin",
      "original_user_no": 1024
    }]
  }
  "success": true
}
```

The response list shows that there is one calendar named "cal2" with the calendar ID "/admin/home". You can use this ID to perform additional operations, such as renaming the calendar or creating an event in it.

#### Step 4: Sign out

When finished with the procedure, you should sign out of the current session by calling the logout method in SYNO.API.Auth. If you want to sign out of a specific session, you can pass the `_sid` parameter.

Example:

```
http://myds.com:5000/webapi/auth.cgi?api=SYNO.API.Auth&version=1&method=logout
```

# Base APIs

## SYNO.API.Info

### Overview

Availability: Starting from DSM 4.0

Version 1

### Method

#### Query

Request:

Parameter	Description	Availability
query	API names, separated by a comma ";" or use "all" to get all supported APIs	1 and later

Example:

```
GET /webapi/query.cgi?api=SYNO.API.Info&version=1&method=query&query=all
```

Response: Contains API description objects.

Parameter	Description	Availability
key	API name	1 and later
path	API path	1 and later
minVersion	Minimum supported API version	1 and later
maxVersion	Maximum supported API version	1 and later

Example:

```
{
  "data":{
    "SYNO.API.Auth": {
      "path": "auth.cgi",
      "minVersion": 1,
      "maxVersion": 3
    },
    "SYNO.FileStation.List": {
      "path": "FileStation/file_share.cgi",
      "minVersion": 1,
      "maxVersion": 1
    }
  }
}
```

```
},  
"success": true
```

API Error Code: N/A

## SYNO.API.Auth

### Overview

Availability: Starting from DSM 4.0

Version: 3 (Starting from DSM 4.2), 2 (Starting from DSM 4.1)

### Method

#### Login

Parameter	Description	Availability
account	Sign in account name	1 and later
passwd	Sign in account password	1 and later
session	Sign in session name (refer to <a href="#">Synology Login Web API Guide</a> for more information)	1 and later
enable_syno_token	Return synotoken if value is "yes"	3 and later
format	Returned format of session ID. Following are the two possible options and the default value is cookie cookie: The sign in session ID will be set to "id" key in cookie of HTTP/HTTPS header of response sid: The sign in sid will only be returned as response JSON data and "id" key will not be set in cookie	2 and later
otp_code	Reserved key. DSM 4.2 and later versions support a 2-step verification option with an OTP code. If it is enabled, the user is required to enter a verification code to log in to DSM sessions.	3 and later

Example:

```
GET /webapi/auth.cgi?  
api=SYNO.API.Auth&version=3&method=login&account=admin&passwd=  
12345&session=FileStation&format=cookie
```

Response:

Object definitions:

Parameter	Description	Availability
-----------	-------------	--------------

sid	Authorized session ID. When the user signs in with format=sid, the cookie will not be set and each API request should provide a request parameter _sid=< sid> along with other parameters.	2 and later
synotoken	If CSRF is enabled in DSM and enable_syno_token is 'yes', pass this value by HTTP argument "SynoToken"	3 and later

Example:

```
{
  "data":{
    "sid":"ZU6dNe8YMIPVo15A0NjN507300",
    "synotoken":"iUahVw8TG.Uhc"
  },
  "success":true
}
```

### Sign out

Request:

Parameter	Description	Availability
session	Session name to be signed out	1 and later

Example:

```
GET /webapi/auth.cgi?api=SYNO.API.Auth&version=1&method=logout&session=Calendar
```

Response: No specific response. It will return an empty success response if completed without error.

API Error Codes:

code	Description
400	No such account or the password is incorrect
401	Account disabled
402	Permission denied
403	2-step verification code required
404	Failed to authenticate 2-step verification code

# Calendar API

## SYNO.Cal.Cal

### Description

Use this API to do operations on calendars and task lists, including adding, deleting, modifying, and listing.

### Overview

Available: Starting from Calendar 2.5.0

### Method

#### Method create

Description: Create a calendar or task

Available: Starting from version 5

Request:

Parameter	Type	Description	Required
cal_type	string	Specify calendar or task list. Values: "event" and "todo"	Yes
cal_displayname	string	Calendar display name	Yes
cal_description	string	Calendar description	Yes
cal_color	string	Calendar color Value: RGB color code, e.g., #112233	Yes
is_hidden_in_cal	boolean	Display events for this calendar	Yes
is_hidden_in_list	boolean	Display this calendar in the calendar list	Yes
notify_alarm_by_browser	boolean	Send browser reminders	Yes
notify_alarm_by_mail	boolean	Send email reminders	Yes
notify_evt_by_browser	boolean	Send browser notifications for event changes	Yes
notify_evt_by_mail	boolean	Send email notifications for event changes	Yes
notify_import_cal_by_browser	boolean	Send calendar import results to the browser	Yes
notify_import_cal_by_mail	boolean	Send calendar import results to email	Yes

Response:

Parameter	Type	Description	Availability
cal_type	string	Specify calendar or task list. Values: "event" and "todo"	5 and later
original_ug_name	string	Calendar owner's name	5 and later
original_user_no	unsigned long long	Calendar owner's ID	5 and later
cal_id	string	Calendar ID, includes information about which user or group this calendar was shared with Value: Possible formats can be "/admin/home/" or shared calendar "/admin/test1--xxxxx/"	5 and later
original_cal_id	string	Calendar's original ID, includes information about original sharer of the calendar Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	5 and later
cal_public_sharing_id	string	Publicly share only the calendar number for use by SYNO.Core.Sharing.	5 and later
cal_privilege	string	Calendar read access Value: "RO" or "RW"	5 and later
cal_displayname	string	Calendar display name	5 and later
cal_description	string	Calendar description	5 and later
cal_color	string	Calendar color Value: RGB color code, e.g., #112233	5 and later
default_calendar	boolean	Whether this is the default calendar or task list	5 and later
is_hidden_in_cal	boolean	Whether to display this calendar's events	5 and later
is_hidden_in_list	boolean	Whether to display this calendar in the calendar list	5 and later
notify_alarm_by_browser	boolean	Send browser reminders	5 and later
notify_alarm_by_mail	boolean	Send email reminders	5 and later

notify_evt_by_browser	boolean	Send browser notifications for event changes	5 and later
notify_evt_by_mail	boolean	Send email notifications for event changes	5 and later
notify_import_cal_by_browser	boolean	Send browser notifications for calendar import results	5 and later
notify_import_cal_by_mail	boolean	Send email notifications for calendar import results	5 and later

Example:

```
{
  "data": {
    "cal_color": "#FF8000",
    "cal_description": "",
    "cal_displayname": "cal2",
    "cal_id": "/admin/aqagwjss/",
    "cal_privilege": "RW",
    "cal_public_sharing_id": "leYeoSp6D",
    "cal_type": "event",
    "default_calendar": false,
    "is_hidden_in_cal": false,
    "is_hidden_in_list": false,
    "notify_alarm_by_browser": true,
    "notify_alarm_by_mail": true,
    "notify_evt_by_browser": true,
    "notify_evt_by_mail": false,
    "notify_import_cal_by_browser": true,
    "notify_import_cal_by_mail": true,
    "original_cal_id": "/admin/aqagwjss/",
    "original_ug_name": "admin",
    "original_user_no": 1024
  },
  "success": true
}
```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9017	System update in progress

## Method List

Description: Retrieve list of calendar information

Availability: Starting from version 5

Request:

Parameter	Type	Description	Required
cal_type	string	Specify calendar, task list, or both. Values: "event", "todo", or "all"	Yes

Response:

Parameter	Type	Description	Availability
data	Array of objects ( <a href="#">calendar_object</a> )	Calendar list	5 and later

Example:

```
{
  "data": {
    "list": [{
      "cal_color": "#FF8000",
      "cal_description": "",
      "cal_displayname": "cal2",
      "cal_id": "/admin/aqagwjss/",
      "cal_privilege": "RW",
      "cal_public_sharing_id": "leYeoSp6D",
      "cal_type": "event",
      "default_calendar": false,
      "is_hidden_in_cal": false,
      "is_hidden_in_list": false,
      "notify_alarm_by_browser": true,
      "notify_alarm_by_mail": true,
      "notify_evt_by_browser": true,
      "notify_evt_by_mail": false,
      "notify_import_cal_by_browser": true,
      "notify_import_cal_by_mail": true,
      "original_cal_id": "/admin/aqagwjss/",
      "original_ug_name": "admin",
      "original_user_no": 1024
    }]
  },
  "success": true
}
```

API Error Codes:

Code	Description
9009	Parameter error

9006	Database operation error
9007	Permission error
9011	System error
9017	System update in progress

### Method Get

Description: Retrieve specified calendar information

Availability: Starting from version 5

Request:

Parameter	Type	Description	Required
cal_id	string	Calendar ID	Yes

Response:

Parameter	Type	Description	Availability
data	<a href="#">calendar_object</a>	Calendar information	5 and later

Example:

```
{
  "data": {
    "cal_color": "#E3BD00",
    "cal_description": "",
    "cal_displayname": "My Calendar",
    "cal_id": "/admin/home/",
    "cal_privilege": "RW",
    "cal_public_sharing_id": "",
    "cal_type": "event",
    "default_calendar": true,
    "is_hidden_in_cal": false,
    "is_hidden_in_list": false,
    "notify_alarm_by_browser": true,
    "notify_alarm_by_mail": true,
    "notify_evt_by_browser": true,
    "notify_evt_by_mail": false,
    "notify_import_cal_by_browser": true,
    "notify_import_cal_by_mail": true,
    "original_cal_id": "/admin/home/",
    "original_ug_name": "admin",
    "original_user_no": 1024
  },
  "success": true
}
```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9017	System update in progress

### Method set

Description: Edit a calendar's information

Available: Starting from version 5

Request:

Parameter	Type	Description	Required
cal_id	string	Calendar ID Value: Possible formats can be "/admin/home/" or shared calendar "/admin/test1--xxxxx/"	Yes
original_cal_id	string	Calendar's original ID Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	Yes
cal_displayname	string	Calendar display name	Yes
cal_description	string	Calendar description	Yes
cal_color	string	Calendar color Value: RGB color code, e.g., #112233.	Yes
is_hidden_in_cal	boolean	Whether to display events for this calendar	Yes
is_hidden_in_list	boolean	Whether to display this calendar in the calendar list	Yes
notify_alarm_by_browser	boolean	Send browser reminders	Yes
notify_alarm_by_mail	boolean	Send email reminders	Yes
notify_evt_by_browser	boolean	Send browser notifications for event changes	Yes
notify_evt_by_mail	boolean	Send email notifications for event changes	Yes
notify_import_cal_by_browser	boolean	Send browser notifications for calendar import results	Yes

notify_import_cal_by_mail	boolean	Send email notifications for calendar import results	Yes
---------------------------	---------	--	-----

Response:

Parameter	Type	Description	Availability
data	calendar_object	Calendar information	5 and later

Example:

```
{
  "data": {
    "cal_color": "#E3BD00",
    "cal_description": "",
    "cal_displayname": "My Calendar",
    "cal_id": "/admin/home/",
    "cal_privilege": "RW",
    "cal_public_sharing_id": "",
    "cal_type": "event",
    "default_calendar": true,
    "is_hidden_in_cal": false,
    "is_hidden_in_list": false,
    "notify_alarm_by_browser": true,
    "notify_alarm_by_mail": true,
    "notify_evt_by_browser": true,
    "notify_evt_by_mail": false,
    "notify_import_cal_by_browser": true,
    "notify_import_cal_by_mail": true,
    "original_cal_id": "/admin/home/",
    "original_ug_name": "admin",
    "original_user_no": 1024
  },
  "success": true
}
```

API error codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9017	System update in progress

### Method Delete

Description: Delete the calendar

Availability: Starting from version 5

Request:

Parameter	Type	Description	Required
cal_id	string	Calendar ID	Yes

Response:

Parameter	Type	Description	Availability
success	boolean	Success or failure	5 and later

Example:

```
{
  "success": true
}
```

API error codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9017	System update in progress

## SYNO.CAL.Event

### Description

Use this API to perform operations on events, including adding, deleting, editing, and list.

### Overview

Available from: Calendar 2.5.0 and later

Version: 5

### Methods

#### Method create

Description: Create a new event

Availability: Starting from version 5

Request:

Parameter	Type	Description	Required
cal_id	string	Calendar ID Value: Possible formats can be "/admin/home/" or shared calendar "/admin/test1--xxxxx/"	Yes
original_cal_id	string	Calendar's original ID Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	Yes
summary	string	Task title	Yes
is_all_day	boolean	Whether this is an all-day event	Yes
tz_id	string	Partial-day events require time zone information. Value: Run <a href="#">syno.cal.timezone</a> for list of possible values, e.g., "Asia/Taipei"	Yes
dtstart	unsigned long long	Event start time in Epoch seconds	Yes
dtend	unsigned long long	Event end time in Epoch seconds	Yes
is_repeat_evt	boolean	Is this a recurring event	Yes
repeat_setting	object ( <a href="#">repeat_obj</a> )	Recurring rule configuration	No, depends on is_repeat_evt
color	string	Calendar color Value: RGB color code, e.g., #112233T Leave empty to use the calendar's default color	Yes
notify_setting	array of object ( <a href="#">notify_obj</a> )	Notification setting	Yes
description	string	Event description	Yes
participant	array of object ( <a href="#">participant_obj</a> )	Event participants	Yes
location_info	object ( <a href="#">location_obj</a> )	Location information	No
from_syno_app_url	object ( <a href="#">syno_app_obj</a> )	The Synology application the event was created from, e.g., MailPlus	No

Response:

Parameter	Type	Description	Availability
-----------	------	-------------	--------------

evt_id	unsigned long long	Event ID	5 and later
cal_id	string	ID of the calendar where the event is located Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	5 and later
original_cal_id	string	Original ID of the calendar where the event is located Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	5 and later
ical_uid	string	UUID of the event within ICS	5 and later
dav_etag	string	Event time stamp If this value differs from the server's recorded value when modified, it indicates someone else has already changed it.	5 and later
create_time	unsigned long long	Event creation time in Epoch seconds	5 and later
modify_time	unsigned long long	Event modification time in Epoch seconds	5 and later
summary	string	Event title	5 and later
description	string	Event description	5 and later
color	string	Event color Value: RGB color code, e.g., #112233T Leave empty to use the calendar's default color	5 and later
is_all_day	boolean	Whether this is an all-day event	5 and later
tz_id	string	Partial-day events require time zone information. Value: Run <a href="#">syno.cal.timezone</a> for list of possible values, e.g., "Asia/Taipei"	5 and later
dtstart	unsigned long long	Event start time in Epoch seconds	5 and later

dtstart_string	string	Event start time (all-day and partial-day) in ISO 08601.2004 Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>	5 and later
dtend	unsigned long long	Event end time in Epoch seconds	5 and later
dtend_string	string	Event end time (all-day and partial-day) in ISO 08601.2004. Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>	5 and later
evt_ical	string	Full ICS content of the event	5 and later
last_modify_user	string	Last editor of the event	5 and later
owner_id	unsigned long long	Event owner ID	5 and later
owner_name	string	Event owner name	5 and later
from_syno_app_url	object ( <a href="#">syno_app_obj</a> )	The Synology application the event was created from, e.g., MailPlus	5 and later
notify_setting	array of object ( <a href="#">notify_obj</a> )	Reminder setting	5 and later
is_repeat_evt	boolean	Whether this is a recurring event	5 and later
repeat_setting	object ( <a href="#">repeat_obj</a> )	Setting for recurring events	5 and later
location_info	object ( <a href="#">location_obj</a> )	Location information	5 and later
participant	array of object ( <a href="#">participant_obj</a> )	Event participants	5 and later
attachments	array of object ( <a href="#">attach_obj</a> )	Attachment information	5 and later
extra_info	object ( <a href="#">extra_info_obj</a> )	Records the main event information, whether this is a recurring event or a sub-event.	5 and later

Example:

```
{
  "data": {
    "attachments": [],
    "cal_id": "/admin/home/",
    "color": "#00FF00",
    "create_time": 1688110251,
    "dav_etag": "iglisrucuqltyggthqrqzdwjaoffpyf",
    "description": "Modify description",
    "dtend": 1686096000,
    "dtend_string": "20230607",
    "dtstart": 1686009600,
    "dtstart_string": "20230606",
    "evt_ical": "BEGIN:VCALENDAR\r\nVERSION:2.0\r\nPRODID:-//davical.org//NONSGML AWL
Calendar//EN\r\nCALSCALE:GREGORIAN\r\nBEGIN:VEVENT\r\nCREATED:20230630T073051\r\nLAST-
MODIFIED:20230630T073051\r\nDTSTAMP:20230630T073051\r\nUID:20230630T073051-
vdovdcpb@cal.synology.com\r\nSUMMARY:Event1 creat by
commandline\r\nDESCRIPTION:Modify
description\r\nSEQUENCE:1\r\nDTSTART;VALUE=DATE:20230606\r\nDTEND;VALUE=DATE:20230607\r\nTRANSP:1
SYNO-EVT-COLOR:#00FF00\r\nEND:VEVENT\r\nEND:VCALENDAR\r\n",
    "evt_id": 1281,
    "extra_info": {},
    "ical_uid": "20230630T073051-vdovdcpb@cal.synology.com",
    "is_all_day": true,
    "is_repeat_evt": true,
    "last_modify_user": "admin",
    "location_info": {
      "address": "",
      "gps": {
        "lat": -1,
        "lng": -1
      },
      "map_type": "",
      "name": "Chiayi",
      "place_id": ""
    },
    "modify_time": 1688110251,
    "notify_setting": [],
    "original_cal_id": "/admin/home/",
    "owner_id": 1024,
    "owner_name": "admin",
    "participant": [],
    "repeat_setting": {
      "end": {
        "count": 0,
        "date": 1686189600,
        "type": "date"
      }
    },
  },
}
```

```

    "interval": 1,
    "month_option": "",
    "type": "day",
    "week_start_day": "monday",
    "weekday": []
  },
  "summary": "Event1 creat by commandline",
  "tz_id": ""
},
"success": true
}

```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

#### Method set

Description: Modify an event. This method configures main events, and the returned event information upon success pertains to the main event.

Availability: Starting from version 5

Request:

Parameter	Type	Description	Required
evt_id	unsigned long long	Event ID	Yes
cal_id	string	Calendar ID Value: Possible formats can be "/admin/home/" or shared calendar "/admin/test1--xxxxx/"	Yes
original_cal_id	string	Calendar's original ID Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	Yes

dav_etag	string	Event time stamp If this value differs from the server's recorded value when modified, it indicates someone else has already changed it.	Yes
summary	string	Event title	Yes
is_all_day	boolean	Whether this is an all-day event	Yes
tz_id	string	Partial-day events require time zone information. Value: Run <a href="#">syno.cal.timezone</a> for list of possible values, e.g., "Asia/Taipei"	Yes
dtstart	unsigned long long	Event start time in Epoch seconds	Yes
dtend	unsigned long long	Event end time in Epoch seconds	Yes
is_repeat_evt	boolean	Whether this is a recurring event	Yes
repeat_setting	object ( <a href="#">repeat_obj</a> )	Recurring event settings	No, dependent on is_repeat_evt
color	string	Event color Value: RGB color code, e.g., #112233T Leave empty to use the calendar's default color	Yes
notify_setting	array of object ( <a href="#">notify_obj</a> )	Notification setting	Yes
description	string	Event description	Yes
participant	array of object ( <a href="#">participant_obj</a> )	Event participants	Yes
location_info	object ( <a href="#">location_obj</a> )	Location information	Yes
attachments	array of object ( <a href="#">attach_obj</a> )	Attachment information	Yes
exdate	string	Delete a day from recurring events Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>	No

Response:

Parameter	Type	Description	Availability
evt_id	unsigned long long	Evebt ID	5 and later
cal_id	string	Calendar ID Value: Possible formats can be "/admin/home/" or shared calendar "/admin/test1--xxxxx/"	5 and later
original_cal_id	string	Calendar's original ID Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	5 and later
ical_uid	string	UUID of the event within ICS	5 and later
dav_etag	string	Event time stamp If this value differs from the server's recorded value when modified, it indicates someone else has already changed it.	5 and later
create_time	unsigned long long	Event creation time in Epoch seconds	5 and later
modify_time	unsigned long long	Event modification time in Epoch seconds	5 and later
summary	string	Event title	5 and later
description	string	Event description	5 and later
color	string	Event color Value: RGB color code, e.g., #112233T Leave empty to use the calendar's default color	5 and later
is_all_day	boolean	Whether this is an all-day event	5 and later
tz_id	string	Partial-day events require time zone information. Value: Run <a href="#">syno.cal.timezone</a> for list of possible values, e.g., "Asia/Taipei"	5 and later
dtstart	unsigned long long	Event start time in Epoch seconds	5 and later

dtstart_string	string	Event start time (all-day and partial-day) in ISO 08601.2004 format Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>	5 and later
dtend	unsigned long long	Event end time in Epoch seconds	5 and later
dtend_string	string	Event end time (all-day and partial-day) in ISO 08601.2004. Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>	5 and later
evt_ical	string	Full ICS content of the event	5 and later
last_modify_user	string	Last editor of the event	5 and later
owner_id	unsigned long long	Event owner ID	5 and later
owner_name	string	Event owner name	5 and later
from_syno_app_url	object ( <a href="#">syno_app_obj</a> )	Synology application the event was created from, e.g., MailPlus	5 and later
notify_setting	array of object ( <a href="#">notify_obj</a> )	Reminder setting	5 and later
is_repeat_evt	boolean	Whether this is a recurring event	5 and later
repeat_setting	object ( <a href="#">repeat_obj</a> )	Recurring rules setting	5 and later
location_info	object ( <a href="#">location_obj</a> )	Location information	5 and later
participant	array of object ( <a href="#">participant_obj</a> )	Event participants	5 and later
attachments	array of object ( <a href="#">attach_obj</a> )	Attachment information	5 and later
extra_info	object ( <a href="#">extra_info_obj</a> )	Records the main event information, whether this is a recurring event or a sub-event.	5 and later

Example:

```
{
  "data": evt_obj,
  "success": true
}
```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

#### Method `subevent_set`

Description: Modify an sub-event. Returned event information upon success pertains to the sub-event.

Available: Starting from version 5

Request:

Parameter	Type	Description	Required
<code>evt_id</code>	unsigned long long	Event ID	Yes
<code>recurrence_id</code>	string	Sub-event date and time (all-day and partial-day) in ISO 08601.2004. Value: <ul style="list-style-type: none"><li>All-day events: YYYYMMDD, e.g., 20230601</li><li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li></ul>	Yes
<code>cal_id</code>	string	Calendar ID: Value: Possible formats can be <code>/admin/home/</code> or shared calendar <code>/admin/test1--xxxxx/</code>	Yes
<code>original_cal_id</code>	string	Original calendar where the event is located Value: Possible formats can be <code>/admin/home/</code> or shared calendar <code>/test1/xxxxx/</code>	Yes

dav_etag	string	Event time stamp If this value differs from the server's recorded value when modified, it indicates someone else has already changed it.	Yes
summary	string	Event title	Yes
is_all_day	boolean	Whether this is an all-day event	Yes
tz_id	string	Partial-day events require time zone information. Value: Run <a href="#">syno.cal.timezone</a> for list of possible values, e.g., "Asia/Taipei"	Yes
dtstart	unsigned long long	Event start time in Epoch seconds	Yes
dtend	unsigned long long	Event end time in Epoch seconds	Yes
color	string	Event color Value: RGB color code, e.g., #112233T Leave empty to use the calendar's default color	Yes
notify_setting	array of object ( <a href="#">notify_obj</a> )	Notification setting	Yes
description	string	Event description	Yes
location_info	object ( <a href="#">location_obj</a> )	Location information	Yes
attachments	array of object ( <a href="#">attach_obj</a> )	Attachment information	Yes

Response:

Sub-event information

Parameter	Type	Description	Availability
evt_id	unsigned long long	Event ID	5 and later
recurrence_id	string	Sub-event date and time (all-day and partial-day) in ISO 08601.2004 format. Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>	5 and later

cal_id	string	ID of the calendar where the event is located Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	5 and later
original_cal_id	string	Original ID of the calendar where the event is located Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	5 and later
ical_uid	string	UUID of the event within ICS	5 and later
dav_etag	string	Event time stamp If this value differs from the server's recorded value when modified, it indicates someone else has already changed it.	5 and later
create_time	unsigned long long	Event creation time in Epoch seconds	5 and later
modify_time	unsigned long long	Event modification time in Epoch seconds	5 and later
summary	string	Event title	5 and later
description	string	Event description	5 and later
color	string	Event color Value: RGB color code, e.g., #112233T Leave empty to use the calendar's default color	5 and later
is_all_day	boolean	Whether this is an all-day event	5 and later
tz_id	string	Partial-day events require time zone information. Value: Run <a href="#">syno.cal.timezone</a> for list of possible values, e.g., "Asia/Taipei"	5 and later
dtstart	unsigned long long	Event start time in Epoch seconds	5 and later
dtstart_string	string	Event start time (all-day and partial-day) in ISO 08601.2004 Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000.</li> </ul>	5 and later

dtend	unsigned long long	Event end time in Epoch seconds	5 and later
dtend_string	string	Event end time (all-day and partial-day) in ISO 08601.2004. Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>	5 and later
evt_ical	string	Full ICS content of the event	5 and later
last_modify_user	string	Last editor of the event	5 and later
owner_id	unsigned long long	Event owner ID	5 and later
owner_name	string	Event owner name	5 and later
from_syno_app_url	object ( <a href="#">syno_app_obj</a> )	The Synology application the event was created from, e.g., MailPlus	5 and later
notify_setting	array of object ( <a href="#">notify_obj</a> )	Notification setting	5 and later
location_info	object ( <a href="#">location_obj</a> )	Location information	5 and later
participant	array of object ( <a href="#">participant_obj</a> )	Event participants	5 and later
attachments	array of object ( <a href="#">attach_obj</a> )	Attachment information	5 and later
extra_info	object ( <a href="#">extra_info_obj</a> )	When a recurring event or sub-event is used, record the information of the main event.	5 and later

Example:

```
{
  "data": evt_obj,
  "success": true
}
```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error

9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

### Method `invite_event_set`

Description: Modify an event invitation that has been received. As an invitee, you can only modify the notification setting. Returned event information upon success pertains to the event invitation.

Available: Starting from version 5

Request:

Parameter	Type	Description	Required
<code>evt_id</code>	unsigned long long	Event ID	Yes
<code>cal_id</code>	string	Calendar ID Value: Possible formats can be <code>"/admin/home/"</code> or shared calendar <code>"/admin/test1--xxxxx/"</code>	Yes
<code>original_cal_id</code>	string	Calendar's original ID Value: Possible formats can be <code>"/admin/home/"</code> or shared calendar <code>"/test1/xxxxx/"</code>	Yes
<code>dav_etag</code>	string	Similar to an event checksum, if this value differs from the server's recorded value when the event is modified, it indicates that it has already been modified.	Yes
<code>notify_setting</code>	array of object ( <a href="#">notify_obj</a> )	Notification setting	Yes

Response:

Parameter	Type	Description	Availability
<code>evt_id</code>	unsigned long long	Event ID	5 and later
<code>need_invite_response</code>	boolean	An event invitation uses this flag to determine whether the invitation status option has been enabled	5 and later

invite_status	string	Current invitation status Possible values: 1. needs_action: No response 2. accepted: Accepted the invitation 3. declined: Rejected the invitation 4. tentative: Response uncertain	5 and later
cal_id	string	Calendar ID Value: Possible formats can be "/admin/home/" or shared calendar "/admin/test1--xxxxx/"	5 and later
original_cal_id	string	Calendar's original ID Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	5 and later
ical_uid	string	UUID of the event within ICS	5 and later
dav_etag	string	Event time stamp If this value differs from the server's recorded value when modified, it indicates someone else has already changed it.	5 and later
create_time	unsigned long long	Event creation time in Epoch seconds	5 and later
modify_time	unsigned long long	Event modification time in Epoch seconds	5 and later
summary	string	Event title	5 and later
description	string	Event description	5 and later
color	string	Event color Value: RGB color code, e.g., #112233T Leave empty to use the calendar's default color	5 and later
is_all_day	boolean	Whether this is an all-day event	5 and later
tz_id	string	Partial-day events require time zone information. Value: Run <a href="#">syno.cal.timezone</a> for list of possible values, e.g., "Asia/Taipei"	5 and later
dtstart	unsigned long long	Event start time in Epoch seconds	5 and later

dtstart_string	string	Event start time (all-day and partial-day) in ISO 08601.2004 Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>	5 and later
dtend	unsigned long long	Event end time in Epoch seconds	5 and later
dtend_string	string	Event end time (all-day and partial-day) in ISO 08601.2004. Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>	5 and later
evt_ical	string	Full ICS content of the event	5 and later
last_modify_user	string	Last editor of the event	5 and later
owner_id	unsigned long long	Event owner ID	5 and later
owner_name	string	Event owner name	5 and later
from_syno_app_url	object ( <a href="#">syno_app_obj</a> )	The Synology application the event was created from, e.g., MailPlus	5 and later
notify_setting	array of object ( <a href="#">notify_obj</a> )	Reminder setting	5 and later
is_repeat_evt	boolean	Whether this is a recurring event	5 and later
repeat_setting	object ( <a href="#">repeat_obj</a> )	Recurring setting	5 and later
location_info	object ( <a href="#">location_obj</a> )	Location information	5 and later
participant	array of object ( <a href="#">participant_obj</a> )	Event participants	5 and later
attachments	array of object ( <a href="#">attach_obj</a> )	Attachment information	5 and later
extra_info	object ( <a href="#">extra_info_obj</a> )	Records the main event information, whether this is a recurring event or a sub-event.	5 and later

Example:

```
{
  "data": evt_obj,
  "success": true
}
```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

#### Method `invite_subevent_set`

Description: Modify an sub-event. As an invitee, you can only modify the notification setting. Modifying reminders for a specific day involves adding an sub-event invitation to the backend. Additional parameters for the new sub-event must be passed to the backend in order to add parameters other than reminder settings. Returned event information upon success pertains to the event invitation.

Available: Starting from version 5

Request:

Parameter	Type	Description	Required
<code>evt_id</code>	unsigned long long	Event ID	Yes
<code>recurrence_id</code>	string	Date and time of sub-event (all-day and partial-day) in ISO 08601.2004 format Value: <ul style="list-style-type: none"><li>All-day events: YYYYMMDD, e.g., 20230601</li><li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li></ul>	Yes
<code>cal_id</code>	string	Calendar ID Value: Possible formats can be <code>"/admin/home/"</code> or shared calendar <code>"/admin/test1--xxxxx/"</code>	Yes
<code>original_cal_id</code>	string	Calendar's original ID Value: Possible formats can be <code>"/admin/home/"</code> or shared calendar <code>"/test1/xxxxx/"</code>	Yes

dav_etag	string	Similar to an event checksum, if this value differs from the server's recorded value when the event is modified, it indicates that it has already been modified.	Yes
is_all_day	boolean	Whether this is an all-day event	Yes
tz_id	string	Partial day events require time zone information. Value: Possible format can be "Asia/Taipei"	Yes
dtstart	unsigned long long	Event start time in Epoch seconds	Yes
dtend	unsigned long long	Event end time in Epoch seconds	Yes
notify_setting	array of object ( <a href="#">notify_obj</a> )	Reminder setting	Yes
attachments	array of object ( <a href="#">attach_obj</a> )	Attachment information	Yes

Response:

Sub-event invitation information

Parameter	Type	Description	Availability
evt_id	unsigned long long	Event ID	5 and later
recurrence_id	string	Sub-event date and time in ISO 08601.2004 Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>	5 and later
need_invite_response	boolean	Use this flag to determine whether invitation status option is enabled	5 and later
invite_status	string	Current invitation status Values: <ol style="list-style-type: none"> <li>needs_action: no response</li> <li>accepted: invitation accepted</li> <li>declined: invitation declined</li> <li>tentative: possible acceptance</li> </ol>	5 and later

cal_id	string	ID of the calendar where the event is located Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	5 and later
original_cal_id	string	Original ID of the calendar where the event is located Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	5 and later
ical_uid	string	UUID of the event within ICS	5 and later
dav_etag	string	Event time stamp If this value differs from the server's recorded value when modified, it indicates someone else has already changed it.	5 and later
create_time	unsigned long long	Event creation time in Epoch seconds	5 and later
modify_time	unsigned long long	Event modification time in Epoch seconds	5 and later
summary	string	Event title	5 and later
description	string	Event description	5 and later
color	string	Event color Value: RGB color code, e.g., #112233T Leave empty to use the calendar's default color	5 and later
is_all_day	boolean	Whether this is an all-day event	5 and later
tz_id	string	Partial-day events require time zone information. Value: Run <a href="#">syno.cal.timezone</a> for list of possible values, e.g., "Asia/Taipei"	5 and later
dtstart	unsigned long long	Event start time in Epoch seconds	5 and later

dtstart_string	string	Event start time (all-day and partial-day) in ISO 08601.2004 Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>	5 and later
dtend	unsigned long long	Event end time in Epoch seconds	5 and later
dtend_string	string	Event end time (all-day and partial-day) in ISO 08601.2004. Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>	5 and later
evt_ical	string	Full ICS content of the event	5 and later
last_modify_user	string	Last editor of the event	5 and later
owner_id	unsigned long long	Event owner ID	5 and later
owner_name	string	Event owner name	5 and later
from_syno_app_url	object ( <a href="#">syno_app_obj</a> )	The Synology application the event was created from, such as MailPlus.	5 and later
notify_setting	array of object ( <a href="#">notify_obj</a> )	Reminder setting	5 and later
location_info	object ( <a href="#">location_obj</a> )	Location information	5 and later
participant	array of object ( <a href="#">participant_obj</a> )	Event participants	5 and later
attachments	array of object ( <a href="#">attach_obj</a> )	Attachment information	5 and later
extra_info	object ( <a href="#">extra_info_obj</a> )	Records the main event information, whether this is a recurring event or a sub-event.	5 and later

Example:

```
{
  "data": evt_obj,
```

```
"success": true
}
```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

**Method list**

Description: List events

Available: Starting from version 5

Request:

Parameter	Type	Description	Required
cal_id_list	array of string	ID of the calendar where the event is located Value: Possible formats can be "/admin/home/" or shared calendar "/admin/test1--xxxxx/"	No
start	unsigned long long	Event start time in Epoch seconds	No
end	unsigned long long	Event end time in Epoch seconds	No
evt_color_list	array of string	Event color to be listed, in RGB color code format. Value: ["#112233", "#445566"]	No
keyword	string	Search string, a list consisting of the event summary, description, and location	No
limit	unsigned long long	Number of events	No
filter_starred	string	Is this event visible Values: <ul style="list-style-type: none"> <li>• yes: is visible</li> <li>• no: not visible</li> <li>• all: all events regardless of visibility</li> </ul>	No

filter_own	string	<p>Did the event owner create this event.</p> <p>Values:</p> <ul style="list-style-type: none"> <li>• yes: This event was created by the event owner</li> <li>• no: This event was not created by the event owner</li> <li>• all: All events whether it was created by the event owner</li> </ul>	No
filter_invited	string	<p>Is this an invitation</p> <p>Values:</p> <ul style="list-style-type: none"> <li>• yes: This was an invitation</li> <li>• no: This was not an invitation</li> <li>• all: All events whether this was an invitation or not</li> </ul>	No

**Notes:**

- Some parameters are required. They required parameters may be: "start, limit", "end, limit", "limit", "start, end", or "start, end, limit".

Response:

```
{
  "data": {
    "list": array of object (evt_obj)
  },
  success: boolean
}
```

Property	Type	Description	Availability
data	array of object ( <a href="#">evt_obj</a> )	List of events in an array	5 and later

Example:

```
{
  "data": {
    "list": [ evt_obj,
              evt_obj,
              ...]
  },
  "success": true
}
```

API Error Codes:

Code	Description
------	-------------

9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling erro
9017	System update in progress

### Method get

Description: Retrieve event or sub-event information

Availability: Starting from version 5

Request:

Parameter	Type	Description	Required
evt_id	unsigned long long	Event ID	No
recurrence_id	string	Dependent on evt_id, the date and time of the sub-event in ISO8061.2004 Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>	No
ical_uid	string	Event UID, mutually exclusive with evt_id	No
cal_id	string	Dependent on ical_uid, it must coexist with ical_uid	No

Response:

```
{
  data: object (evt_obj),
  success: boolean
}
```

Property	Type	Description	Availability
data	object (evt_obj)	Event information	5 and later

Example:

```
{
  "data": evt_obj,
  "success": true
}
```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

**Method delete**

Description: Delete event

Availability: Starting from version 5

Request:

Parameter	Type	Description	Required
evt_id	unsigned long long	Event ID	Yes

Response:

Parameter	Type	Description	Availability
success	boolean	Success or failure	5 and later

Example:

```
{  
  "success" : true  
}
```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

**Method set\_exdate**

Description: Set a deletion date for a recurring event. If the last recurred event is deleted, the entire event will be deleted.

Availability: Starting from version 5

Request:

Parameter	Type	Description	Required
evt_id	unsigned long long	Event ID	Yes
dav_etag	string	Event time stamp If this value differs from the server's recorded value when modified, it indicates someone else has already changed it.	Yes
exdate	string	Delete a specific occurrence within a recurring event in ISO 08601.2004 Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601.</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000.</li> </ul>	Yes

Response:

Parameter	Type	Description	Availability
success	boolean	Success or failure	5 and later
data	object ( <a href="#">evt_obj</a> )	Event information, if event is deleted this parameter will become empty	5 and later

Example:

```
{
  "success": true,
  "data": evt\_obj or empty object
}
```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

## Method set\_personal\_property

Description: Each user with read permission to a calendar can set their own event properties for events within that calendar.

Availability: Starting from version 5

Request:

Parameter	Type	Description	Required
evt_id	unsigned long long	Event ID	Yes
recurrence_id	string	Dependent on evt_id, the date and time of the sub-event in ISO8061.2004 Value: All-day events: YYYYMMDD, e.g., 20230601 Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000	No
is_visible	boolean	Configure event visibility attribute	Yes

Response:

Parameter	Type	Description	Availability
success	boolean	Success or failure	5 and later

Example:

```
{
  "success": true
}
```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

## SYNO.Cal.TODO

### Description

This API can be used to perform operations on tasks, including creating, deleting, modifying, and listing.

## Overview

Available: Starting from Calendar 2.5.0

Version: 5

## Method

### Method create

Description: Create a task

Available: Starting from version 5

Request:

Parameter	Type	Description	Required
original_cal_id	string	Calendar's original ID Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	Yes
summary	string	Task title	Yes
is_all_day	boolean	Whether this is an all-day event	No, dependent on dtstart and due
tz_id	string	Partial-day events require time zone information. Value: Run <a href="#">syno.cal.timezone</a> for list of possible values, e.g., "Asia/Taipei"	Yes
has_start_time	boolean	Indicate whether there is a start time Start time is not required for tasks	Yes
dtstart	unsigned long long	Event start time in Epoch seconds	No, dependent has_start_time
has_end_time	boolean	Indicate where there is a due date Date dates are not required for tasks	Yes
due	unsigned long long	Event end time in Epoch seconds Note: Usually dtstart and due will have the same value in the task.	No, dependent on has_end_time
notify_setting	array of object ( <a href="#">notify_obj</a> )	Notification setting	No, dependent on dstart and due
description	string	Task description	Yes

percent_complete	unsigned long long	Task completion percentage Value: 0 or 100	Yes
from_syno_app_url	object ( <a href="#">syno_app_obj</a> )	The Synology application the event was created from, such as MailPlus.	No

Response:

<data> object definitions:

Parameter	Type	Description	Availability
evt_id	unsigned long long	Event ID	5 and later
original_cal_id	string	Calendar's original ID of whether the event is located Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	5 and later
ical_uid	string	UUID of the event within ICS	5 and later
dav_etag	string	Event time stamp If this value differs from the server's recorded value when modified, it indicates someone else has already changed it.	5 and later
create_time	unsigned long long	Event creation time in Epoch seconds	5 and later
modify_time	unsigned long long	Event modification time in Epoch seconds	5 and later
summary	string	Event title	5 and later
description	string	Event description	5 and later
is_all_day	boolean	Whether this is an all-day event	5 and later
tz_id	string	Partial-day events require time zone information. Value: Run <a href="#">syno.cal.timezone</a> for list of possible values, e.g., "Asia/Taipei"	5 and later
has_start_time	boolean	Indicate whether there is a start time Start time is not required for tasks	5 and later
dtstart	unsigned long long	Event start time in Epoch seconds.	5 and later

dtstart_string	string	Event start time (all-day and partial-day) in ISO 08601.2004 Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601.</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000.</li> </ul>	5 and later
has_end_time	boolean	Indicate where there is a due date Date dates are not required for tasks.	5 and later
due	unsigned long long	Event end time in Epoch seconds	5 and later
due_string	string	Event end time (all-day and partial-day) in ISO 08601.2004. Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601.</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000.</li> </ul>	5 and later
evt_ical	string	Full ICS content of the event	5 and later
last_modify_user	string	Last editor of the event	5 and later
owner_id	unsigned long long	Event owner ID	5 and later
owner_name	string	Event owner name	5 and later
from_syno_app_url	object ( <a href="#">syno_app_obj</a> )	The Synology application the event was created from, such as MailPlus.	5 and later
notify_setting	array of object ( <a href="#">notify_obj</a> )	Notification setting	5 and later
percent_complete	unsigned long long	Task completion percentage Value: 0 or 100	5 and later
priority_order	unsigned long long	Task priority	5 and later

Example:

```
{
  "data": {
    "create_time": 1685949330,
    "dav_etag": "bjtxxkpbqsgskcsgtbheuwqrgjztybto",
    "description": "",
    "dtstart": 12312321321,
```

```

"dtstart_string": "20230605",
"due": 12312321321,
"due_string": "20230605",
"evt_ical":
"BEGIN:VCALENDAR\r\nPRODID:--//Synology//EN\r\nVERSION:2.0\r\nBEGIN:VTODO\r\nCREATED:20230605T151!
MOD:20230605T151530\r\nUID:20230605T151530-
faf91789@10.17.200.121\r\nDTSTAMP:20230605T151530\r\nSUMMARY:task1\r\nDTSTART;VALUE=DATE:2023060!
COMPLETE:0\r\nSTATUS:NEEDS-
ACTION\r\nDESCRIPTION:\r\nLOCATION:\r\nPERCENT_COMPLETE:0\r\nTRANSP:TRANSPARENT\r\nEND:VTODO\
"evt_id": 1052,
"ical_uid": "20230605T151530-faf91789@10.17.200.121",
"is_all_day": true,
"last_modify_user": "admin",
"modify_time": 1685949330,
"notify_setting": [],
"original_cal_id": "/admin/home_todo/",
"owner_id": 1024,
"owner_name": "admin",
"percent_complete": 0,
"priority_order": 23,
"summary": "task1",
"tz_id": ""
},
"success": true
}

```

#### API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

#### Method set

Description: Modify a task

Available: Starting from version 5

Request:

Parameter	Type	Description	Required
evt_id	unsigned long long	Task ID	Yes

original_cal_id	string	Calendar's original ID Value: Possible formats can be "/admin/home_todo/" or shared calendar "/test1/xxxxx/"	Yes
dav_etag	string	Event time stamp If this value differs from the server's recorded value when modified, it indicates someone else has already changed it.	Yes
summary	string	Task title	Yes
is_all_day	boolean	Whether this is an all-day event	No, dependent on dstart and due
tz_id	string	Partial-day events require time zone information. Value: Run <a href="#">syno.cal.timezone</a> for list of possible values, e.g., "Asia/Taipei"	No, dependent on is_all_day
has_start_time	boolean	Indicate whether there is a start time Start time is not required for tasks	Yes
dtstart	unsigned long long	Event start time in Epoch seconds When value is 0, this indicates this parameter will not be configured	No, dependent on has_start_time
has_end_time	boolean	Indicate where there is a due date Date dates are not required for tasks	Yes
due	unsigned long long	Event end time in Epoch seconds When value is 0, this indicates this parameter will not be configured Note: Usually dtstart and due will have the same value in the task.	No, dependent on has_end_time
notify_setting	array of object ( <a href="#">notify_obj</a> )	Notification setting	No, dependent on dstart and due
description	string	Task description	Yes
percent_complete	unsigned long long	Task completion percentage Value: 0 or 100	Yes
priority_order	unsigned long long	Task priority	Yes

Response:

<data> object definitions:

Parameter	Type	Description	Availability
evt_id	unsigned long long	Event ID	5 and later
original_cal_id	string	Calendar's original ID of where the event is located Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"	5 and later
ical_uid	string	UUID of the event within ICS	5 and later
dav_etag	string	Event time stamp If this value differs from the server's recorded value when modified, it indicates someone else has already changed it.	5 and later
create_time	unsigned long long	Event creation time in Epoch seconds	5 and later
modify_time	unsigned long long	Event modification time in Epoch seconds	5 and later
summary	string	Event title	5 and later
description	string	Event description	5 and later
is_all_day	boolean	Whether this is an all-day event	5 and later
tz_id	string	Partial-day events require time zone information. Value: Run <a href="#">syno.cal.timezone</a> for list of possible values, e.g., "Asia/Taipei"	5 and later
has_start_time	boolean	Indicate whether there is a start time Start time is not required for tasks	5 and later
dtstart	unsigned long long	Event start time in Epoch seconds	5 and later
dtstart_string	string	Event start time (all-day and partial-day) in ISO 08601.2004 Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601.</li> <li>Partial-day events: YYYYMMDDThmmss, e.g., 20230601T080000.</li> </ul>	5 and later
has_end_time	boolean	Indicate where there is a due date Date dates are not required for tasks	5 and later

due	unsigned long long	Event end time in Epoch seconds	5 and later
due_string	string	Event end time (all-day and partial-day) in ISO 08601.2004. Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601.</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000.</li> </ul>	5 and later
evt_ical	string	Full ICS content of the event	5 and later
last_modify_user	string	Last editor of the event	5 and later
owner_id	unsigned long long	Event owner ID	5 and later
owner_name	string	Event owner name	5 and later
from_syno_app_url	object ( <a href="#">syno_app_obj</a> )	The Synology application the event was created from, such as MailPlus.	5 and later
notify_setting	array of object ( <a href="#">notify_obj</a> )	Notification setting	5 and later
percent_complete	unsigned long long	Task completion percentage Value: 0 or 100	5 and later
priority_order	unsigned long long	Task priority	5 and later

Example:

```
{
  "data": task\_obj,
  "success": true
}
```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

## Method list

Description: List tasks

Available: Starting from version 5

Request:

Parameter	Type	Description	Required
cal_id_list	array of string	ID of the calendar where the event is located Value: Possible format can be "/admin/home_todo/"	No
due	unsigned long long	Due date time stamp in Epoch seconds	No
filter_complete	string	Task completion status Values: <ul style="list-style-type: none"><li>• yes: Completed</li><li>• no: Not completed</li><li>• all: Both</li></ul>	No
filter_due	string	Whether there is a task due date Values: <ul style="list-style-type: none"><li>• yes: due value exists</li><li>• no: no due value</li><li>• all: Both</li></ul>	No
limit	unsigned long long	Number of tasks to list	No

Response:

```
{
  "data": {
    "list": array of object (task\_obj)
  },
  success: boolean
}
```

Property	Type	Description	Availability
data	array of object ( <a href="#">task_obj</a> )	List of tasks	5 and later

Example:

```
{
  "data": {
    "list": [
      task\_obj,
      task\_obj,
    ]
  }
}
```

```

    ...
  ]
},
"success": true
}

```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error

### Method get

Description: Retrieve task information

Available: Starting from version 5

Request:

Parameter	Type	Description	Required
evt_id	unsigned long long	Event ID	Yes

Response:

```

{
  data: object (task_obj),
  success: boolean
}

```

Property	Type	Description	Availability
data	object ( <a href="#">task_obj</a> )	Task information	5 and later

Example:

```

{
  "data": task\_obj,
  "success": true
}

```

API Error Codes:

Code	Description
9009	Parameter error

9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

### Method delete

Description: Delete task

Availability: Starting from version 5

Request:

Parameter	Type	Description	Required
evt_id	unsigned long long	Task ID	Yes

Response:

Parameter	Type	Description	Availability
success	boolean	Success or failure	5 and later

Example:

```
{
  "success": true
}
```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

## SYNO.Cal.Setting

### Description

This API can be used to manage user settings, including modifying and retrieving information.

## Overview

Available: Available from Calendar 2.5.0

Version: 5

## Method

### Method set

Description: Modify a user's settings

Available: Starting from version 5

Request:

Parameter	Type	Description	Required
date_format	string	Date format Value: Possible formats using year, month and day <ul style="list-style-type: none"><li>• Y-m-d</li><li>• m/d/Y</li><li>• d/m/Y</li><li>• d.m.Y</li><li>• d-m-Y</li></ul>	No
default_alarm	object ( <a href="#">alarm_setting_obj</a> )	Default reminder for partial-day events	No
default_alarm_ad	object ( <a href="#">alarm_setting_obj</a> )	Default reminder for all-day events	No
default_cal	string	Default calendar for creating events	No
default_plugin_mode	string	Whether the default tab panel in the right sidebar of the Synology Calendar UI is the calendar list. Values: <ul style="list-style-type: none"><li>• nav_panel: Default is the calendar list</li><li>• todo_plugin: Default is the task list</li></ul>	No
default_todo_view	object ( <a href="#">todo_view_obj</a> )	The default task list, containing default lists of "Task List," "Today," and "Upcoming."	No

default_view	string	Default calendar view Values: <ul style="list-style-type: none"> <li>• day: View by day</li> <li>• week: View by week</li> <li>• month: View by month</li> <li>• list: View by agenda</li> </ul>	No
enable_keyboard_shortcut	boolean	Whether to enable keyboard hotkeys	No
last_used_map_type	string	Default map source Values: <ul style="list-style-type: none"> <li>• none: plain text</li> <li>• google: Google map</li> <li>• baidu: Baidu map</li> </ul>	No
show_week_numbers	boolean	Whether to show week number	No
time_format	string	Time display in 12-hour format or 24-hour format Value: 12 or 24	No
time_zone	string	Default event time zone	No
week_start_day	unsigned int	Default day that is considered the start of a week Values <ul style="list-style-type: none"> <li>• 0: Sunday</li> <li>• 1: Monday</li> <li>• 6: Saturday</li> </ul>	No

Response:

<data> object definitions:

Parameter	Type	Description	Availability
data	object ( <a href="#">user_setting_obj</a> )	User configuration information	5 and later

Example:

```
{
  "data": {
    "date_format": "Y-m-d",
    "default_alarm": {
      "is_set": true,
      "minutes": 0
    },
    "default_alarm_ad": {
      "is_set": true,
```

```

    "minutes": 360
  },
  "default_cal": "/admin/bnwrhunj/",
  "default_plugin_mode": "todo_plugin",
  "default_todo_view": {
    "extra": "",
    "type": "selected_date"
  },
  "default_view": "list",
  "enable_keyboard_shortcut": true,
  "last_used_map_type": "baidu",
  "show_week_numbers": false,
  "time_format": "24",
  "time_zone": "Asia/Taipei",
  "tls_default_level": 2,
  "user_no": 1024,
  "week_start_day": 0
},
"success": true
}

```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

### Method get

Description: Retrieve user's configuration

Available: Starting from version 5

Request: Obtain relevant user settings based on the webapi executor's identity.

Response:

<data> object definitions:

Parameter	Type	Description	Availability
data	object ( <a href="#">user_setting_obj</a> )	User configuration information	5 and later

Example:

```

{
  "data": {
    "date_format": "Y-m-d",
    "default_alarm": {
      "is_set": true,
      "minutes": 0
    },
    "default_alarm_ad": {
      "is_set": true,
      "minutes": 360
    },
    "default_cal": "/admin/bnwrhunj/",
    "default_plugin_mode": "todo_plugin",
    "default_todo_view": {
      "extra": "",
      "type": "selected_date"
    },
    "default_view": "list",
    "enable_keyboard_shortcut": true,
    "last_used_map_type": "baidu",
    "show_week_numbers": false,
    "time_format": "24",
    "time_zone": "Asia/Taipei",
    "tls_default_level": 2,
    "user_no": 1024,
    "week_start_day": 0
  },
  "success": true
}

```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9014	ICS handling error
9017	System update in progress

## SYNO.Cal.Timezone

### Description

Use this API to retrieve timezone information

## Overview

Available: Available from Calendar 2.5.0

Version: 5

## Method

### Method list

Description: List currently available timezone information

Available: Starting from version 5

Request: N/A

Response:

<data> object definitions:

Parameter	Type	Description	Availability
data	Array of object ( <a href="#">timezone_obj</a> )	List of time zones	5 and later

Example:

```
{  "data": {
  "list": array of object (timezone_obj)
},
  success: boolean
}
```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error
9017	System update in progress

# Object Definitions

## calendar\_obj

Property	Type	Description
cal_type	string	Specify calendar or task list. Values: "event" and "todo"
original_ug_name	string	Calendar owner's name
original_user_no	unsigned long long	Calendar owner's ID
cal_id	string	Calendar ID Value: Possible formats can be "/admin/home/" or shared calendar "/admin/test1--xxxxx/"
original_cal_id	string	Calendar's original ID Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"
cal_public_sharing_id	string	Publicly share only the calendar number for use by SYNO.Core.Sharing.
cal_privilege	string	Calendar's read/write permission Values: "RO" or "RW"
cal_displayname	string	Calendar's display name
cal_description	string	Calendar's description
cal_color	string	Calendar's color in RGB color code e.g., "#112233"
default_calendar	boolean	Whether this is a default calendar or default task list
is_hidden_in_cal	boolean	Whether to display events for this calendar
is_hidden_in_list	boolean	Whether to display this calendar in the calendar list
notify_alarm_by_browser	boolean	Whether to send notifications to the browser
notify_alarm_by_mail	boolean	Whether to send reminder to email
notify_evt_by_browser	boolean	Whether to send event notifications to the browser
notify_evt_by_mail	boolean	Whether to send event notifications to email

notify_import_cal_by_browser	boolean	Whether to send calendar import results to the browser
notify_import_cal_by_mail	boolean	Whether to send calendar import results to email

## evt\_obj

Property	Type	Description
evt_id	unsigned long long	Event ID
recurrence_id	string	Sub-event date and time in ISO 08601.2004 Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>
need_invite_response	boolean	Use this flag to determine whether the invitation status option has been enabled
invite_status	string	Indicate current invitation status Values: <ul style="list-style-type: none"> <li>needs_action: Not responded yet</li> <li>accepted: Accepted invitation</li> <li>declined: Declined invitation</li> <li>tentative: Might accept invitation</li> </ul>
cal_id	string	Calendar ID of where the event is located Value: Possible formats can be "/admin/home/" or shared calendar "/admin/test1--xxxxx/"
original_cal_id	string	Calendar's original ID of where the event is located Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"
ical_uid	string	UUID of the event within ICS
dav_etag	string	Event time stamp If this value differs from the server's recorded value when modified, it indicates someone else has already changed it.
create_time	unsigned long long	Event creation time in Epoch seconds
modify_time	unsigned long long	Event modification time in Epoch seconds

summary	string	Event title
description	string	Event description
color	string	Event color Value: RGB color Code, e.g., #112233T Leave empty to use the calendar's default color
is_all_day	boolean	Whether this is an all-day event
tz_id	string	Partial-day events require time zone information. Value: Run <a href="#">syno.cal.timezone</a> for list of possible values, e.g., "Asia/Taipei"
dtstart	unsigned long long	Event start time in Epoch seconds.
dtstart_string	string	Event start time (all-day and partial-day) in ISO 08601.2004 Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601.</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000.</li> </ul>
dtend	unsigned long long	Event end time in Epoch seconds
dtend_string	string	Event end time (all-day and partial-day) in ISO 08601.2004. Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601.</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000.</li> </ul>
evt_ical	string	Full ICS content of the event
last_modify_user	string	Last editor of the event
owner_id	unsigned long long	Event owner ID
owner_name	string	Event owner name
from_syno_app_url	object ( <a href="#">syno_app_obj</a> )	The Synology application the event was created from, such as MailPlus.
notify_setting	array of object ( <a href="#">notify_obj</a> )	Notification setting
is_repeat_evt	boolean	Whether this is a recurring event

repeat_setting	object ( <a href="#">repeat_obj</a> )	Recurring event setting
location_info	object ( <a href="#">location_obj</a> )	Location information
participant	array of object ( <a href="#">participant_obj</a> )	Event participants
attachments	array of object ( <a href="#">attach_obj</a> )	Attachment information
extra_info	object ( <a href="#">extra_info_obj</a> )	When a recurring event or sub-event is used, record the information of the main event.
personal_property	object ( <a href="#">personal_property_obj</a> )	Personal attribute settings for this event

### personal\_property\_obj

Property	Type	Description
is_visible	boolean	Indicate the visibility of the event to specific users

### extra\_info\_obj

Property	Type	Description
main_event_dtstart	unsigned long long	Start time of the main event in Epoch seconds
main_event_dtstart_string	string	Start time of the main event
main_event_dtend	unsigned long long	End time of the main event in Epoch seconds
main_event_dtend_string	string	End time of the main event
repeat_index	unsigned int	A virtual index for recurring events, starting from 1.

### repeat\_obj

Property	Type	Description
type	string	Recurrence settings Values: <ul style="list-style-type: none"> <li>• day: Recurring daily</li> <li>• week : Recurring weekly</li> <li>• month : Recurring monthly</li> <li>• year : Recurring yearly</li> </ul>

interval	unsigned long long	Recurrence interval Values: e.g., if type is set to day, and interval is set to 3, it means that this event will recur every 3 days.
weekday	array of string	Used when the type is set as week, indicates which day of the week an event should recur on Values: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday
week_start_day	string	Used when the type is set as week, indicates the starting day of the week Values: Empty, "Sunday", "Monday", "Saturday"
month_option	string	Used when the type is set as month, indicates which day of the month an event should recur on Values: <ul style="list-style-type: none"> <li>day_of_month: the day of the month, same day as dtstart</li> <li>day_of_week: the week and day of the month, e.g., 3rd day of the 2nd month</li> </ul>
end	object (end_obj)	End conditions for recurring events

## end\_obj

Property	Type	Description
type	string	Types of end conditions for recurring events Values: <ul style="list-style-type: none"> <li>never: never stop</li> <li>count: stop after a certain number of occurrences</li> <li>date: stop on a specific date</li> </ul>
count	unsigned long long	Number of recurrences
date	unsigned long long	End date and time in Epoch seconds

## notify\_obj

Property	Type	Description
action	string	the VALARM property "ACTION" in ICS
description	string	The VALARM property "DESCRIPTION" in ICS Can be preset as: "This is an event reminder".

type	string	The type used for alarm Values: <ul style="list-style-type: none"> <li>• duration: relative time of the alarm</li> <li>• datetime: absolute time of the alarm</li> </ul>
duration	object ( <a href="#">alarm_duration_obj</a> )	The type used for duration
datetime	object ( <a href="#">alarm_datetime_obj</a> )	The type used for datetime
ical_extra_info	array of object( <a href="#">ical_extra_info_obj</a> )	Extra property for VALAM in ICS Apple iOS typically have additional properties

### alarm\_duration\_obj

Property	Type	Description
related	string	Related to dtstart or dtend Values: <ul style="list-style-type: none"> <li>• start: Related to event start time</li> <li>• end: Related to event end time</li> </ul>
minutes	long long	How many minutes left before reminder time Values: Minutes, can be positive or negative

### alarm\_datetime\_obj

Property	Type	Description
utc_seconds	unsigned long long	Which UTC time to send the reminder Values: UTC seconds

### ical\_extra\_info\_obj

Property	Type	Description
key	string	ICS property key
value	string	ICS property value
parameters	array of object ( <a href="#">ics_parameter_obj</a> )	ICS parameter list for this property

### ics\_parameter\_obj

Property	Type	Description
key	string	Parameter key for a specific property in ICS
value	string	Parameter value for a specific property in ICS

## participant\_obj

Property	Type	Description
type	string	Event participants Values <ul style="list-style-type: none"><li>• dsm: internal DSM user accounts</li><li>• email: external email address</li></ul>
status	string	Event participant's status Values: <ul style="list-style-type: none"><li>• needs_action: No response</li><li>• accepted: Invitation accepted</li><li>• declined: Invitation declined</li><li>• tentative: May accept</li></ul>
role	string	Event participant's role Values: <ul style="list-style-type: none"><li>• organizer: Event organization</li><li>• attendee: Event attendee</li></ul>
user_name	string	Internal participant account name or external email address
email	string	Participant email address
is_real_email	bool	Whether this is a valid email (limited to internal users)

### Notes:

- Only a few parameters are required for Create or Set actions. Required parameters include:
  - type
  - user\_name
  - status
  - role
- Only Get or List actions will return complete parameters.

## location\_obj

Property	Type	Description
----------	------	-------------

map_type	string	location data source Values <ul style="list-style-type: none"> <li>• google: Google map</li> <li>• baidu: Baidu map</li> <li>• Empty string: no source</li> </ul>
name	string	Simple address
address	string	Detailed address from the map
place_id	string	Used by Google Map or Baidu map
gps	object ( <a href="#">gps_obj</a> )	Location latitude and longitude

### gps\_obj

Property	Type	Description
lat	double point	Latitude
lng	double point	Longitude

### syno\_app\_obj

Property	Type	Description
app	string	The Synology application the event was created from
msg_id	string	ID required by the application

### attach\_obj

Property	Type	Description
is_syno	boolean	Whether this is an attachment uploaded by Synology Calendar
property_value	string	Attachment contents

#### If is\_syno is true

file_rel_uri	string	為一個 Share Link 用的相對網址。 Values: Possible format can be "NaN1051/1051/aiaBuJTDm8UJNOoeBTZGSHv91QatYXeR/avatar1.gif" , which is generated by the file when uploaded by the webapi "SYNO.ShareLink.Action"
file_size	unsigned long long	Attachment size

#### If is\_syno is false

filename	string	Parameter "filename" in ICS
----------	--------	-----------------------------

fmttype	string	Parameter "Format type" in ICS
value	string	Parameter "VALUE" in ICS with the default of URI Can be binary, indicating the property value format
encoding	string	Specifies the property's encoding format. If binary, possible value may be BASE64

## task\_obj

Property	Type	Description
evt_id	unsigned long long	Task ID
original_cal_id	string	Calendar's original ID of where the task is located Value: Possible formats can be "/admin/home/" or shared calendar "/test1/xxxxx/"
ical_uid	string	UUID of the task within ICS
dav_etag	string	Task time stamp If this value differs from the server's recorded value when modified, it indicates someone else has already changed it.
create_time	unsigned long long	Task creation time in Epoch seconds
modify_time	unsigned long long	Task modification time in Epoch seconds
summary	string	Task title
description	string	Task description
is_all_day	boolean	Whether this is an all-day task
tz_id	string	Partial-day tasks require time zone information. Value: Possible format can be "Asia/Taipei"
has_start_time	boolean	Indicate whether there is a start time Start time is not required for tasks
dtstart	unsigned long long	Task start time in Epoch seconds
dtstart_string	string	任務的開始時間 有兩種格式，整天任務和非整天任務。 以 ISO8601.2004 的格式為主。 數值：整天任務為 YYYYMMDD，例子：20230601。非整天任務為 YYYYMMDDThhmmss，例子：20230601T080000。

has_end_time	boolean	Indicate where there is a due date Date dates are not required for tasks
due	unsigned long long	Task end time in Epoch seconds
due_string	string	Task start time (all-day and partial-day) in ISO 08601.2004 Value: <ul style="list-style-type: none"> <li>All-day events: YYYYMMDD, e.g., 20230601</li> <li>Partial-day events: YYYYMMDDThhmmss, e.g., 20230601T080000</li> </ul>
evt_ical	string	Complete ICS contents of the task
last_modify_user	string	Task's last modifier
owner_id	unsigned long long	Task owner's ID
owner_name	string	Task owner's name
from_syno_app_url	object ( <a href="#">syno_app_obj</a> )	The Synology application the event was created from, such as MailPlus.
notify_setting	array of object ( <a href="#">notify_obj</a> )	Notification setting
percent_complete	unsigned long long	Task completion percentage Value: 0 or 100
priority_order	unsigned long long	Task priority

## alarm\_setting\_obj

Property	Type	Description
is_set	boolean	Whether there is a reminder notification configured
minutes	int	Default reminder notification time in minutes

## todo\_view\_obj

Property	Type	Description
type	string	Default task list types Values: <ul style="list-style-type: none"> <li>selected_date: By day</li> <li>upcoming: Starting from the current day and working backwards</li> <li>by_list: Based on selected task list</li> </ul>

extra	string	Only applicable when the type is "by_list", refers to the default task list number
-------	--------	--

## user\_setting\_obj

Property	Type	Description
date_format	string	Date format Value: Possible formats using year, month and day <ul style="list-style-type: none"> <li>• Y-m-d</li> <li>• m/d/Y</li> <li>• d/m/Y</li> <li>• d.m.Y</li> <li>• d-m-Y</li> </ul>
default_alarm	object ( <a href="#">alarm_setting_obj</a> )	Default reminder for partial-day events
default_alarm_ad	object ( <a href="#">alarm_setting_obj</a> )	Default reminder for all-day events
default_cal	string	Default calendar for creating events
default_plugin_mode	string	Whether the default tab panel in the right sidebar of the Synology Calendar UI is the calendar list. Values: <ul style="list-style-type: none"> <li>• nav_panel: Default is the calendar list</li> <li>• todo_plugin: Default is the task list</li> </ul>
default_todo_view	object ( <a href="#">todo_view_obj</a> )	The default task list, containing default lists of "Task List," "Today," and "Upcoming."
default_view	string	Default calendar view Values: <ul style="list-style-type: none"> <li>• day: View by day</li> <li>• week: View by week</li> <li>• month: View by month</li> <li>• list: View by agenda</li> </ul>
enable_keyboard_shortcut	boolean	Whether to enable keyboard hotkeys
last_used_map_type	string	Default map source Values: <ul style="list-style-type: none"> <li>• none: plain text</li> <li>• google: Google map</li> <li>• baidu: Baidu map</li> </ul>

show_week_numbers	boolean	Whether to show week number
time_format	string	Time display in 12-hour format or 24-hour format Value: 12 or 24
time_zone	string	Default event time zone
week_start_day	unsigned int	Default day that is considered the start of a week Values <ul style="list-style-type: none"> <li>• 0: Sunday</li> <li>• 1: Monday</li> <li>• 6: Saturday</li> </ul>

## timezone\_obj

Property	Type	Description
active	bool	<ul style="list-style-type: none"> <li>• true: This time zone is the calendar's native time zone, which is predefined by Synology Calendar.</li> <li>• false: Added externally, possibly by adding events utilizing the caldav client</li> </ul>
tzid	string	Timezone name
temp	string	Change the time zone name containing ETC/GMT in tzid to another format E.g., tzid format ETC/GMT-5 to temp format ETC/GMT-005
vtimezone	string	ICS information for this timezone

## SYNO.Cal.Contact

### Description

Use this API to retrieve information about invitees

### Overview

Available: From Calendar 2.5.0 Version: 1

### Methods

#### Method list

Description: Retrieve information about invitees

Available: Starting from version 1

Request:

Parameter	Type	Description	Required
list_dsm_only	bool	Whether to list DSM-only users	No

Response:

<data> object definitions:

Parameter	Type	Description	Availability
display_name	string	Participants display names	1 and later
user_name	string	Internal participants account usernames	1 and later
email	string	Participants email addresses	1 and later
type	string	該事件參與者的型態。 Values: <ul style="list-style-type: none"><li>dsm: DSM user accounts (internal participants)</li><li>email: email addresses (external participants)</li></ul>	1 and later

Example:

```
{ "data": {
  "list": [
    {
      "display_name": "erictest",
      "user_name": "erictest",
      "email": "erictest@synologytest.com",
      "type": "dsm",
      "is_real_email": true,
      "has_set_email": false
    },
    ...
  ]
},
"success": true
}
```

API Error Codes:

Code	Description
9009	Parameter error
9006	Database operation error
9007	Permission error
9011	System error