



Synology Calendar

Official API Guide

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Chapter 1: Introduction

This Synology Calendar Official API developer's guide explains how to expand your applications based on Synology Calendar APIs, allowing your applications to interact with files in DSM via HTTP/HTTPS requests and responses.

This document explains the structure and detailed specifications of various Synology Calendar APIs. Chapter 2: Get Started describes the basic guidelines on how to use these APIs, which should be read fully and carefully before jumping into the API specifications. Chapter 3: Base API and Chapter 4: Calendar API list all available APIs and related details.

Chapter 2: Get Started

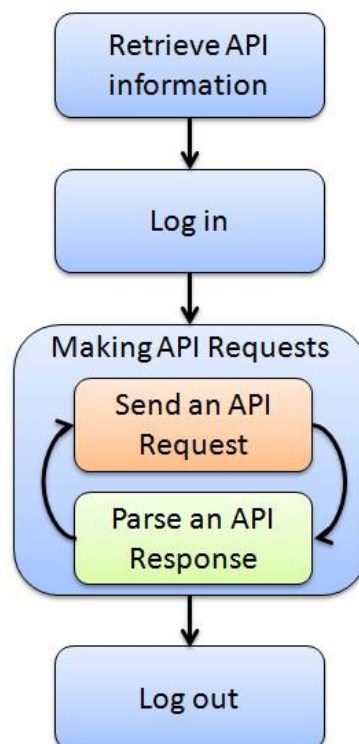
Before making use of Synology Calendar APIs to develop your own applications, you should have the basic understanding of API concepts and API procedures.

This chapter explains how to execute and complete API processes in the following five sections:

- **API Workflow:** A brief introduction on 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 Code:** 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 and easy-to-follow workflow shows 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 know which APIs are available for use on the target Synology NAS. This information can be accessed simply through a request to `/webapi/query.cgi` with `SYNO.API.Info` API parameters. The information provided in the response contains available API name, API method, API path, and API version. Once you have all the information at hand, your application can make further requests to all available APIs.

Step 2: Log in

In order to make your application interact with Synology Calendar, your application needs to log in with an account and password first. The login process is simply making a request to SYNO.API.Auth API with the `login` method. If successful, the API returns an authorized session ID. You should keep it and pass it in making other API requests.

Step 3: Making API Requests

Once successfully logged in, your application can start to make requests to all available Calendar APIs. In the next section "Making Requests," instructions on how to form a valid API request and how to decode response information will be given. Starting from DSM 5.0, all API requests should be issued by `entry.cgi`, with specific API version and method. It also provides compound mode, which means you can issue multiple API requests within one single `entry.cgi` request. Some of the actions in Chapter 4: Calendar APIs must be executed by calling multiple API methods, therefore it is required to use compound API requests.

Step 4: Log 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 SYNO.API.Info
- **method:** Method of the API requested
- **_sid:** Authorized session ID. Each API request should pass it, which is retrieved from the response of `/webapi/auth.cgi`, via either HTTP/HTTPS GET/POST method with "`_sid`" argument. Otherwise, if you pass it within "id" value of cookie of HTTP/HTTPS header, this parameter can be ignored.

The syntax for the request is as follows:

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

Here `<PARAMS>` represents the parameters for the requested method which is optional. Note 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, including password or password parameter, do not need to be escaped.

Please refer to the example below. 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
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 an 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:

Login

Request:

Parameter	Description	Availability
account	Login account name.	1 and later
passwd	Login account password.	1 and later
session	Login session name.	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 <code>cookie</code> . <code>cookie</code> : The login session ID will be set to "id" key in cookie of HTTP/HTTPS header of response. <code>sid</code> : The login 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. However, WebAPI doesn't support it yet.	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:

<data> object definitions:

Parameter	Description	Availability
sid	Authorized session ID. When the user log in with <code>format=sid</code> , cookie will not be set and each API request should provide a request parameter <code>_sid=< sid></code> along with other parameters.	2 and later
synotoken	If CSRF is enabled in DSM and <code>enable_syno_token</code> 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 elements as follows:

Key	Value	Description
success	true/false	"true": the request was finished successfully; "false": the request failed with error.
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 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).
errors	<JSON-Style Array>	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. Note: 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 failed 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
```


Failed Response:

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

Example 2

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

Request:

```
HTTP Method: POST
Path: /webapi/entry.cgi
Request Header:
  Host: 192.168.1.33:5000
  X-SYNO-TOKEN: 7fqkkwKiqGXt6
Params :
  start 1561219200
  end   1561823999
  list_repeat true
  cal_id_list ["/admin/nosuchfolder/"]
  api      SYNO.Cal.Event
  method   list
  version  1
```

Failed 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 :
  is_todo   false
  is_evt    true
  api      SYNO.Cal.Cal
  method   list
  version  2
```

Success Response:

```
{
  "data": [
    {
      "cal_color": "#FB0055FF",
      "cal_description": "",
      "cal_displayname": "My Calendar",
      "cal_id": "/admin/home/",
      "cal_order": "1",
      "cal_privilege": "RW",
      "create_time": 1473070714.34871,
      "default_calendar": true,
      "is_evt": true,
      "is_hidden_in_cal": false,
      "is_hidden_in_list": false,
      "modify_time": 1561720485.77791,
      "notify_alarm_by_browser": true,
      "notify_alarm_by_mail": true,
      "notify_daily_agenda": "",
      "notify_evt_by_browser": true,
      "notify_evt_by_mail": false,
      "notify_evt_create": "",
      "notify_evt_delete": "",
      "notify_evt_rsvp": "",
      "notify_evt_set": "",
      "notify_import_cal_by_browser": true,
      "notify_import_cal_by_mail": true,
      "original_cal_id": "/admin/home/",
      "ug_name": "admin",
      "user_no": 1024
    }
  ],
  "success": true
}
```

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

Common Error Codes

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

Code	Description
400	Invalid parameter of file operation
401	Unknown error of file operation
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 demonstrates a working example for requesting information about an event from Synology Calendar. To implement this example, simply replace the Synology NAS address used in the example (myds.com:port) with your Synology NAS address and paste the URL into a browser. The JSON response will show up in a response page.

Step 1: Retrieve API Information

All Calendar API could only be issued with entry.cgi. If you try to retrieve API information, you will get the entry.cgi path.

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: Login

After the SYNO.API.Auth path and supported version information are returned, you can log in a FileStation session by requesting SYNO.API.Auth API version 3 located 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=yes
```

Response:

```
{
  "data": {
    "sid": "ZU6dNe8YMIPVo15A0NJN507300",
    "synotoken": "iUahVw8TG.Uhc"
  },
  "success": true
}
```

Step 3: Request a Calendar API

After a session is logged in, you can continue to call the method of listing all the calendar of this account. The cgi path and version are provided in the response of Step 1, and the list of all tasks can be requested 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 :
  is_todo    false
  is_evt     true
  api        SYNO.Cal.Cal
  method     list
  version    2
```

Response:

```
{
  "data": [
    {
      "cal_color": "#FB0055FF",
      "cal_description": "",
      "cal_displayname": "My Calendar",
      "cal_id": "/admin/home/"
    }
  ]
}
```

```

    "cal_order": "1",
    "cal_privilege": "RW",
    "create_time": 1473070714.34871,
    "default_calendar": true,
    "is_evt": true,
    "is_hidden_in_cal": false,
    "is_hidden_in_list": false,
    "modify_time": 1561720485.77791,
    "notify_alarm_by_browser": true,
    "notify_alarm_by_mail": true,
    "notify_daily_agenda": "",
    "notify_evt_by_browser": true,
    "notify_evt_by_mail": false,
    "notify_evt_create": "",
    "notify_evt_delete": "",
    "notify_evt_rsvp": "",
    "notify_evt_set": "",
    "notify_import_cal_by_browser": true,
    "notify_import_cal_by_mail": true,
    "original_cal_id": "/admin/home/",
    "ug_name": "admin",
    "user_no": 1024
  }
],
"success": true
}

```

The response list shows that there is one calendar named "My Calendar", and its calendar ID is "/admin/home". You can use this ID to perform additional calendar operations, such as rename it, or create an event in it.

Step 4: Log out

When finished with the procedure, you should log out of the current session. The session will be ended by calling the `logout` method in `SYNO.API.Auth`. If you want to log out 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
```

Chapter 3: Base APIs

The following table is an overview of two fundamental APIs defined in this chapter:

API Name	Description
SYNO.API.Info	Provide available API info
SYNO.API.Auth	Perform log in and log out

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:

No specific API error codes.

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

Request:

Parameter	Description	Availability
account	Login account name	1 and later
passwd	Login account password	1 and later
session	Login session name	1 and later
enable_syno_token	Return synotoken if value is "yes"	3 and later
format	Returned format of session ID. The following are two possible options and the default value is <code>cookie</code> . <code>cookie</code> : The login session ID will be set to "id" key in cookie of HTTP/HTTPS header of response <code>sid</code> : The login 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. However, WebAPI does not support it yet.	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:

<data> object definitions:

Parameter	Description	Availability
sid	Authorized session ID. When the user logs in with <code>format=sid</code> , cookie will not be set and each API request should provide a request parameter <code>_sid=< sid></code> 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":"ZU6dNe8YMIPVø15A0NjN507300",
    "synotoken":"iUahVw8TG.Uhc"
  },
  "success":true
}
```

Logout

Request:

Parameter	Description	Availability
session	Session name to be logged 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 Code:

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

Chapter 4: Calendar API

API List

The following table is an overview of all Calendar APIs defined in this chapter. All Calendar APIs are required to log in with SYNO.API.Auth.

API Name	Description
SYNO.Cal.Cal	A webapi set to manipulate calendar
SYNO.Cal.Event	Provide methods to manipulate events in the specific calendar
SYNO.Cal.Sharing	Get/set sharing setting of calendar
SYNO.Cal.TODO	Provide methods to manipulate events in the specific calendar

SYNO.Cal.Cal

Description

A webapi set to manipulate calendar.

Overview

Availability: Starting from Calendar 2.0
Version: 2

Method

Method create

Description:

Create a new calendar

Availability:

Starting from version 2

Request:

Parameter	Type	Description	Availability
cal_displayname	string	Display name of this calendar	2 and later
cal_description	string	Description of this calendar	2 and later
cal_color	string	Color of calendar, use format like #FFFFFF	2 and later
is_hidden_in_cal	boolean	Are the events in this calendar hidden from calendar view	2 and later
is_hidden_in_list	boolean	Is this calendar hidden from the calendar list	2 and later
is_evt	boolean	Does this calendar contain events	2 and later

is_todo	boolean	Does this calendar contain tasks	2 and later
---------	---------	----------------------------------	-------------

Example:

```

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_description      ""
cal_displayname     "Untitled"
cal_color           "#F94B4B"
is_hidden_in_list   false
is_hidden_in_cal    false
is_todo             false
is_evt              true
api                 SYNO.Cal.Cal
method              create
version             2

```

Response:

<data> object definitions:

Parameter	Type	Description	Availability
cal_color	string	Color of calendar, use format like #FFFFFF	2 and later
cal_description	string	Description of this calendar	2 and later
cal_displayname	string	Display name of this calendar	2 and later
cal_extra_info	string		2 and later
cal_id	string	ID of this calendar	2 and later
privilege	string	Privilege of this calendar to the user, which can be "RW" or "RO"	2 and later
cal_public_sharing_id	string	Public sharing ID of this calendar	2 and later
create_time	string	Time this calendar was created	2 and later
is_evt	boolean	Does this calendar contain events	2 and later
is_hidden_in_cal	boolean	Are the events in this calendar hidden from calendar view	2 and later
is_hidden_in_list	boolean	Is this calendar hidden from the calendar list	2 and later
modify_time	string	Last modify time of this calendar	2 and later
notify_alarm_by_browser	boolean		2 and later
notify_alarm_by_mail	boolean		2 and later
notify_daily_agenda	string		2 and later
notify_evt_by_browser	boolean		2 and later
notify_evt_by_mail	boolean		2 and later
notify_evt_create	string		2 and later
notify_evt_delete	string		2 and later
notify_evt_rsvp	string		2 and later
notify_evt_set	string		2 and later
notify_import_cal_by_browser	boolean		2 and later
notify_import_cal_by_mail	boolean		2 and later
original_cal_id	string	ID of this calendar to its owner, which the same as cal_id if the calendar is not shared with others	2 and later

ug_name	string	User (group) account of the owner	2 and later
user_no	unsigned long long	UID of the owner	2 and later

Example:

```
{
  "data":{
    "cal_color": "#F94B4B",
    "cal_description": "",
    "cal_displayname": "Untitled",
    "cal_extra_info": "{}",
    "cal_id": "/admin/tlvjj/",
    "cal_privilege": "RW",
    "cal_public_sharing_id": "c09KZOHLK",
    "create_time": "2019-06-28 11:59:17.160673+00",
    "is_evt": true,
    "is_hidden_in_cal": false,
    "is_hidden_in_list": false,
    "modify_time": "2019-06-28 11:59:17.160673+00",
    "notify_alarm_by_browser": true,
    "notify_alarm_by_mail": true,
    "notify_daily_agenda": "",
    "notify_evt_by_browser": true,
    "notify_evt_by_mail": false,
    "notify_evt_create": "",
    "notify_evt_delete": "",
    "notify_evt_rsvp": "",
    "notify_evt_set": "",
    "notify_import_cal_by_browser": true,
    "notify_import_cal_by_mail": true,
    "original_cal_id": "/admin/tlvjj/",
    "ug_name": "admin",
    "user_no": 1024
  },
  "success": true
}
```

API Error Code:

No specific API error codes

Method list

Description:

get an array of calendar object

Availability:

Since version 2

Request:

Parameter	Type	Description	Availability
is_evt	boolean	Show calendars which contain events	2 and later
is_todo	boolean	Show calendars which contain tasks	2 and later

Example:

```

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

```

Response:**<data>** object definitions:

Parameter	Type	Description	Availability
	array of object (calendar_object)	Calendar list	

Example:

```

{
  "data": [
    {
      "cal_color": "#FB0055FF",
      "cal_description": "",
      "cal_displayname": "My Calendar",
      "cal_id": "/admin/home/",
      "cal_order": "1",
      "cal_privilege": "RW",
      "create_time": 1473070714.34871,
      "default_calendar": true,
      "is_evt": true,
      "is_hidden_in_cal": false,
      "is_hidden_in_list": false,
      "modify_time": 1561720485.77791,
      "notify_alarm_by_browser": true,
      "notify_alarm_by_mail": true,
      "notify_daily_agenda": "",
      "notify_evt_by_browser": true,
      "notify_evt_by_mail": false,
      "notify_evt_create": "",
      "notify_evt_delete": "",
      "notify_evt_rsvp": "",
      "notify_evt_set": "",
      "notify_import_cal_by_browser": true,
      "notify_import_cal_by_mail": true,
      "original_cal_id": "/admin/home/",
      "ug_name": "admin",
      "user_no": 1024
    }
  ],
  "success": true
}

```

API Error Code:

No specific API error codes

Method `get`

Get information of specific calendar

Attributes:

Name	Description
Sharing	This method allows sharing
SkipSharingAppCheck	This method skips sharing app checking

Parameters:

Name	Type	Description	Default Value	Required	Condition
cal_id	string	ID of this calendar	None	true	

Response:

```
{
  "data": {
    "cal_color": string,
    "cal_description": string,
    "cal_displayname": string,
    "cal_extra_info": string,
    "cal_id": string,
    "privilege": string,
    "cal_public_sharing_id": string,
    "create_time": string,
    "is_evt": boolean,
    "is_hidden_in_cal": boolean,
    "is_hidden_in_list": boolean,
    "modify_time": string,
    "notify_alarm_by_browser": boolean,
    "notify_alarm_by_mail": boolean,
    "notify_daily_agenda": string,
    "notify_evt_by_browser": boolean,
    "notify_evt_by_mail": boolean,
    "notify_evt_create": string,
    "notify_evt_delete": string,
    "notify_evt_rsvp": string,
    "notify_evt_set": string,
    "notify_import_cal_by_browser": boolean,
    "notify_import_cal_by_mail": boolean,
    "original_cal_id": string,
    "ug_name": string,
    "user_no": unsigned long long
  },
  "success": boolean
}
```

Property	Type	Description
cal_color	string	Color of calendar, use format like #FFFFFFF
cal_description	string	Description of this calendar
cal_displayname	string	Display name of this calendar
cal_extra_info	string	
cal_id	string	ID of this calendar

privilege	string	Privilege of this calendar to the user, which can be "RW" or "RO"
cal_public_sharing_id	string	Public sharing ID of this calendar
create_time	string	Time this calendar was created
is_evt	boolean	Does this calendar contain events
is_hidden_in_cal	boolean	Are the events in this calendar hidden from calendar view
is_hidden_in_list	boolean	Is this calendar hidden from the calendar list
modify_time	string	Last modify time of this calendar
notify_alarm_by_browser	boolean	
notify_alarm_by_mail	boolean	
notify_daily_agenda	string	
notify_evt_by_browser	boolean	
notify_evt_by_mail	boolean	
notify_evt_create	string	
notify_evt_delete	string	
notify_evt_rsvp	string	
notify_evt_set	string	
notify_import_cal_by_browser	boolean	
notify_import_cal_by_mail	boolean	
original_cal_id	string	ID of this calendar to its owner, which is the same as cal_id if the calendar is not shared with others
ug_name	string	User (group) account of the owner
user_no	unsigned long long	UID of the owner

Possible Errors:

Error	Description
-------	-------------

Example:

Method set

Parameters:

Name	Type	Description	Default Value	Required	Condition
cal_id	string	ID of this calendar	None	true	
cal_color	string	Color of calendar, use format like #FFFFFF	None	false	
is_hidden_in_list	boolean	Is this calendar hidden from the calendar list	false	false	
is_hidden_in_cal	boolean	Are the events in this calendar hidden from calendar view	false	false	

cal_displayname	string	Display name of this calendar	None	true	
cal_description	string	Description of this calendar	""	false	
cal_extra_info	string		None	false	

Response:

```
{
  "data": {
    "cal_color": string,
    "cal_description": string,
    "cal_displayname": string,
    "cal_extra_info": string,
    "cal_id": string,
    "privilege": string,
    "cal_public_sharing_id": string,
    "create_time": string,
    "is_evt": boolean,
    "is_hidden_in_cal": boolean,
    "is_hidden_in_list": boolean,
    "modify_time": string,
    "notify_alarm_by_browser": boolean,
    "notify_alarm_by_mail": boolean,
    "notify_daily_agenda": string,
    "notify_evt_by_browser": boolean,
    "notify_evt_by_mail": boolean,
    "notify_evt_create": string,
    "notify_evt_delete": string,
    "notify_evt_rsvp": string,
    "notify_evt_set": string,
    "notify_import_cal_by_browser": boolean,
    "notify_import_cal_by_mail": boolean,
    "original_cal_id": string,
    "ug_name": string,
    "user_no": unsigned long long
  },
  "success": boolean
}
```

Property	Type	Description
cal_color	string	Color of calendar, use format like #FFFFFF
cal_description	string	Description of this calendar
cal_displayname	string	Display name of this calendar
cal_extra_info	string	
cal_id	string	ID of this calendar
privilege	string	Privilege of this calendar to the user, which can be "RW" or "RO"
cal_public_sharing_id	string	Public sharing ID of this calendar
create_time	string	Time this calendar was created
is_evt	boolean	Does this calendar contain events
is_hidden_in_cal	boolean	Are the events in this calendar hidden from calendar view
is_hidden_in_list	boolean	Is this calendar hidden from the calendar list
modify_time	string	Last modify time of this calendar
notify_alarm_by_browser	boolean	

notify_alarm_by_mail	boolean	
notify_daily_agenda	string	
notify_evt_by_browser	boolean	
notify_evt_by_mail	boolean	
notify_evt_create	string	
notify_evt_delete	string	
notify_evt_rsvp	string	
notify_evt_set	string	
notify_import_cal_by_browser	boolean	
notify_import_cal_by_mail	boolean	
original_cal_id	string	ID of this calendar to its owner, which is the same as cal_id if the calendar is not shared with others
ug_name	string	User (group) account of the owner
user_no	unsigned long long	UID of the owner

Possible Errors:

Error	Description
-------	-------------

Example:

Method *delete*

Parameters:

Name	Type	Description	Default Value	Required	Condition
cal_id	string	ID of this calendar	None	true	

Response:

```
{
  "success": boolean
}
```

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

Possible Errors:

Error	Description
-------	-------------

Example:

Object Definitions

evt_list_resp_obj

```
{
  "evts_all_repeat": array of object(event\_obj),
  "evts_in_interval": array of object(event\_obj),
  "cal_id": string
}
```

Property	Type	Description
evts_all_repeat	array of object(event_obj)	
evts_in_interval	array of object(event_obj)	
cal_id	string	

attendee_obj_v2

```
{
  "ug_name": string,
  "email": string,
  "invite_type": unsigned int,
  "invite_actor": string,
  "invite_status": string
}
```

Property	Type	Description
ug_name	string	Account of user (group)
email	string	Email
invite_type	unsigned int	DSM_USER, ...
invite_actor	string	
invite_status	string	NEEDS-ACTION, ACCEPTED

cal_privilege_obj

```
{
  "DSM_GROUP": array of object(dsm\_ug\_obj),
  "DSM_USER": array of object(dsm\_ug\_obj)
}
```

Property	Type	Description
DSM_GROUP	array of object(dsm_ug_obj)	
DSM_USER	array of object(dsm_ug_obj)	

notification_obj_v2

```
{
  "time_value": unsigned long long,
  "time_format": unsigned long long,
  "alarm_action": unsigned long long,
  "alarm_ical": boolean
}
```

Property	Type	Description
time_value	unsigned long long	-PT5M, ...
time_format	unsigned long long	DURATION, ...
alarm_action	unsigned long long	DISPLAY, ...
alarm_ical	boolean	...

repeat_obj

```
{
  "repeat_count": unsigned int,
  "repeat_until": string,
  "repeat_interval": unsigned int,
  "repeat_unit": string
}
```

Property	Type	Description
repeat_count	unsigned int	
repeat_until	string	
repeat_interval	unsigned int	
repeat_unit	string	

event_obj_v2

```
{
  "class": string,
  "create_time": float,
  "description": string,
  "dtend": string,
  "dtstart": string,
  "evt_color": string,
  "evt_ical": string,
  "evt_id": string,
  "evt_repeat_setting": object(repeat\_obj\_v2),
  "from_syno_app_url": string,
  "gps": string,
  "ical_uid": string,
  "is_all_day": boolean,
  "is_repeat_evt": boolean,
  "location": string,
  "modify_time2": float,
  "original_cal_id": string,
  "owner": unsigned int,
  "percent_complete": unsigned int,
  "priority": unsigned int,
  "priority_order": unsigned int,
  "status": string,
  "summary": string,
  "transp": string,
  "tz_id": string
}
```

Property	Type	Description
class	string	
create_time	float	

description	string	The description of this event
dtend	string	
dtstart	string	
evt_color	string	
evt_ical	string	
evt_id	string	
evt_repeat_setting	object(repeat_obj_v2)	
from_syno_app_url	string	
gps	string	
ical_uid	string	
is_all_day	boolean	
is_repeat_evt	boolean	
location	string	The location of this event
modify_time2	float	
original_cal_id	string	
owner	unsigned int	
percent_complete	unsigned int	
priority	unsigned int	
priority_order	unsigned int	
status	string	
summary	string	
transp	string	
tz_id	string	Time zone such as "Asia/Taipei". If the event is an all-day event, the property should be null

todo_obj

```
{
  "class": string,
  "create_time": float,
  "description": string,
  "dtend": string,
  "dtstart": string,
  "evt_color": string,
  "evt_id": string,
  "evt_repeat_setting": object(repeat\_obj\_v2),
  "from_syno_app_url": string,
  "gps": string,
  "ical_uid": string,
  "is_all_day": boolean,
  "is_repeat_evt": boolean,
  "location": string,
  "modify_time2": float,
  "original_cal_id": string,
  "owner": unsigned int,
  "percent_complete": unsigned int,
  "priority": unsigned int,
  "priority_order": unsigned int,
  "status": string,
  "summary": string,
  "transp": string,
```

```
"tz_id": string
}
```

Property	Type	Description
class	string	
create_time	float	
description	string	The description of this event
dtend	string	
dtstart	string	
evt_color	string	
evt_id	string	
evt_repeat_setting	object(repeat_obj_v2)	
from_syno_app_url	string	
gps	string	
ical_uid	string	
is_all_day	boolean	
is_repeat_evt	boolean	
location	string	The location of this event
modify_time2	float	
original_cal_id	string	
owner	unsigned int	
percent_complete	unsigned int	
priority	unsigned int	
priority_order	unsigned int	
status	string	
summary	string	
transp	string	
tz_id	string	Time zone such as "Asia/Taipei". If the event is an all-day event, the property should be null

event_obj

```
{
  "original_cal_id": string,
  "evt_id": string,
  "evt_ical": string,
  "tz_id": string,
  "evt_privacy": string,
  "evt_repeat_setting": object(repeat\_obj),
  "dtstart": string,
  "dtend": string,
  "evt_summary": string,
  "evt_description": string,
  "evt_location": string,
  "is_busy": boolean,
  "is_all_day": boolean
}
```

Property	Type	Description
original_cal_id	string	
evt_id	string	
evt_ical	string	
tz_id	string	Time zone such as "Asia/Taipei". If the event is an all-day event, the property should be null
evt_privacy	string	
evt_repeat_setting	object(repeat_obj)	
dtstart	string	
dtend	string	
evt_summary	string	
evt_description	string	The description of this event
evt_location	string	The location of this event
is_busy	boolean	
is_all_day	boolean	

dsm_ug_obj

```
{
  "cal_privilege": string,
  "ug_name": string
}
```

Property	Type	Description
cal_privilege	string	
ug_name	string	

calendar_object

```
{
  "cal_color": string,
  "cal_description": string,
  "cal_displayname": string,
  "cal_extra_info": string,
  "cal_id": string,
  "privilege": string,
  "cal_public_sharing_id": string,
  "create_time": string,
  "is_evt": boolean,
  "is_hidden_in_cal": boolean,
  "is_hidden_in_list": boolean,
  "modify_time": string,
  "notify_alarm_by_browser": boolean,
  "notify_alarm_by_mail": boolean,
  "notify_daily_agenda": string,
  "notify_evt_by_browser": boolean,
  "notify_evt_by_mail": boolean,
  "notify_evt_create": string,
  "notify_evt_delete": string,
  "notify_evt_rsvp": string,
  "notify_evt_set": string,
  "notify_import_cal_by_browser": boolean,
  "notify_import_cal_by_mail": boolean,
}
```

```

"original_cal_id": string,
"ug_name": string,
"user_no": unsigned long long
}

```

Property	Type	Description
cal_color	string	Color of calendar, use format like #FFFFFF
cal_description	string	Description of this calendar
cal_displayname	string	Display name of this calendar
cal_extra_info	string	
cal_id	string	ID of this calendar
privilege	string	Privilege of this calendar to the user, which can be "RW" or "RO"
cal_public_sharing_id	string	Public sharing ID of this calendar
create_time	string	Time this calendar was created
is_evt	boolean	Does this calendar contain events
is_hidden_in_cal	boolean	Are the events in this calendar hidden from calendar view
is_hidden_in_list	boolean	Is this calendar hidden from the calendar list
modify_time	string	Last modify time of this calendar
notify_alarm_by_browser	boolean	
notify_alarm_by_mail	boolean	
notify_daily_agenda	string	
notify_evt_by_browser	boolean	
notify_evt_by_mail	boolean	
notify_evt_create	string	
notify_evt_delete	string	
notify_evt_rsvp	string	
notify_evt_set	string	
notify_import_cal_by_browser	boolean	
notify_import_cal_by_mail	boolean	
original_cal_id	string	ID of this calendar to its owner, which is the same as cal_id if the calendar is not shared with others
ug_name	string	User (group) account of the owner
user_no	unsigned long long	UID of the owner

repeat_obj_v2

```

{
  "repeat_rule": string
}

```

Property	Type	Description
repeat_rule	string	

SYNO.Cal.Event

Description

Manipulate tasks in calendar

Overview

Availability: Starting from Calendar 2.0

Version: 1

Method

Method create

Create an event in a specific calendar

Parameters:

Name	Type	Description	Default Value	Required	Condition
cal_id	string	ID of the calendar which this event belongs to	None	true	
description	string	Event description	None	false	
dtend	unsigned long long	End time of this event, e.g. "20190607", "TZID=Asia/Tokyo:20190628T100000"	None	true	
dtstart	unsigned long long	Start time of this event, e.g. "20190606", "TZID=Asia/Tokyo:20190628T090000"	None	true	
evt_attendee	array of object(attendee_obj_v2)	All attendees, including the organizer	None	false	
evt_notify_setting	array of object(notification_obj_v2)	Notification settings	None	false	
is_all_day	boolean	Is this an all-day event	None	true	
is_repeat_event	boolean	Is this a repeat event	false	false	
evt_location	string	Location where this event takes place	None	false	
original_cal_id	string	ID of the calendar to its owner which this event belongs to	None	true	
summary	string	Event title	None	true	
transp	string	Is transparent, use "TRANSPARENT" or "OPAQUE", ...	None	false	
tzid	string	Time zone of this event, such as "Asia/Taipei". If the event is an all-day event, the property should be null	None	false	

Response:

```

{
  "data": {
    "class": string,
    "create_time": float,
    "description": string,
    "dtend": string,
    "dtstart": string,
    "evt_color": string,
    "evt_ical": string,
    "evt_id": string,
    "evt_repeat_setting": object(repeat\_obj\_v2),
    "from_syno_app_url": string,
    "gps": string,
    "ical_uid": string,
    "is_all_day": boolean,
    "is_repeat_evt": boolean,
    "location": string,
    "modify_time2": float,
    "original_cal_id": string,
    "owner": unsigned int,
    "percent_complete": unsigned int,
    "priority": unsigned int,
    "priority_order": unsigned int,
    "status": string,
    "summary": string,
    "transp": string,
    "tz_id": string
  },
  "success": boolean
}

```

Property	Type	Description
class	string	
create_time	float	
description	string	The description of this event
dtend	string	
dtstart	string	
evt_color	string	
evt_ical	string	
evt_id	string	
evt_repeat_setting	object(repeat_obj_v2)	
from_syno_app_url	string	
gps	string	
ical_uid	string	
is_all_day	boolean	
is_repeat_evt	boolean	
location	string	The location of this event
modify_time2	float	
original_cal_id	string	
owner	unsigned int	
percent_complete	unsigned int	

priority	unsigned int	
priority_order	unsigned int	
status	string	
summary	string	
transp	string	
tz_id	string	Time zone such as "Asia/Taipei". If the event is an all-day event, the property should be null

Possible Errors:

Error	Description
-------	-------------

Example:

Method set

Parameters:

Name	Type	Description	Default Value	Required	Condition
cal_id	string	ID of the calendar which this event belongs to	None	false	
description	string	Event description	None	false	
dtend	unsigned long long	End time of this event, e.g. "20190607", "TZID=Asia/Tokyo:20190628T100000"	None	false	
dtstart	unsigned long long	Start time of this event, e.g. "20190606", "TZID=Asia/Tokyo:20190628T090000"	None	false	
evt_attendee	array of object(attende e_obj_v2)	All attendees, including the organizer	None	false	
evt_id	string	Event ID	None	true	
evt_notify_setting	array of object(notificat ion_obj_v2)	Notification settings	None	false	
is_all_day	boolean	Is this an all-day event	None	false	
is_repeat_evt	boolean	Is this a repeat event	false	false	
evt_location	string	Location where this event takes place	None	false	
original_calendar_id	string	ID of the calendar to its owner which this event belongs to	None	false	
summary	string	Event title	None	false	
transp	string	Is transparent, use "TRANSPARENT" or "OPAQUE", ...	None	false	
tzid	string	Time zone of this event, such	None	false	

		as "Asia/Taipei". If the event is an all-day event, the property should be null			
--	--	---	--	--	--

Response:

```
{
  "data": {
    "class": string,
    "create_time": float,
    "description": string,
    "dtend": string,
    "dtstart": string,
    "evt_color": string,
    "evt_ical": string,
    "evt_id": string,
    "evt_repeat_setting": object(repeat\_obj\_v2),
    "from_syno_app_url": string,
    "gps": string,
    "ical_uid": string,
    "is_all_day": boolean,
    "is_repeat_evt": boolean,
    "location": string,
    "modify_time2": float,
    "original_cal_id": string,
    "owner": unsigned int,
    "percent_complete": unsigned int,
    "priority": unsigned int,
    "priority_order": unsigned int,
    "status": string,
    "summary": string,
    "transp": string,
    "tz_id": string
  },
  "success": boolean
}
```

Property	Type	Description
class	string	
create_time	float	
description	string	The description of this event
dtend	string	
dtstart	string	
evt_color	string	
evt_ical	string	
evt_id	string	
evt_repeat_setting	object(repeat_obj_v2)	
from_syno_app_url	string	
gps	string	
ical_uid	string	
is_all_day	boolean	
is_repeat_evt	boolean	
location	string	The location of this event
modify_time2	float	

original_cal_id	string	
owner	unsigned int	
percent_complete	unsigned int	
priority	unsigned int	
priority_order	unsigned int	
status	string	
summary	string	
transp	string	
tz_id	string	Time zone such as "Asia/Taipei". If the event is an all-day event, the property should be null

Possible Errors:

Error	Description
-------	-------------

Example:

Method *list*

Parameters:

Name	Type	Description	Default Value	Required	Condition
cal_id_list	array of string	List events which belong to specific calendars	None	true	
end	unsigned long long	Timestamp of end time	None	false	
start	unsigned long long	Timestamp of start time	None	false	
list_repeat	boolean	Whether or not to list repeat events	None	false	

Response:

```
{
  "data": {
    "{cal_id}": array of object(event\_obj\_v2)
  },
  "success": boolean
}
```

Property	Type	Description
{cal_id}	array of object(event_obj_v2)	

Possible Errors:

Error	Description
-------	-------------

Example:

Method `get`

Get event contents

Parameters:

Name	Type	Description	Default Value	Required	Condition
evt_id	string	Event ID	None	true	

Response:

```
{
  "data": {
    "class": string,
    "create_time": float,
    "description": string,
    "dtend": string,
    "dtstart": string,
    "evt_color": string,
    "evt_ical": string,
    "evt_id": string,
    "evt_repeat_setting": object(repeat\_obj\_v2),
    "from_syno_app_url": string,
    "gps": string,
    "ical_uid": string,
    "is_all_day": boolean,
    "is_repeat_evt": boolean,
    "location": string,
    "modify_time2": float,
    "original_cal_id": string,
    "owner": unsigned int,
    "percent_complete": unsigned int,
    "priority": unsigned int,
    "priority_order": unsigned int,
    "status": string,
    "summary": string,
    "transp": string,
    "tz_id": string
  },
  "success": boolean
}
```

Property	Type	Description
class	string	
create_time	float	
description	string	The description of this event
dtend	string	
dtstart	string	
evt_color	string	
evt_ical	string	
evt_id	string	
evt_repeat_setting	object(repeat_obj_v2)	

from_syno_app_url	string	
gps	string	
ical_uid	string	
is_all_day	boolean	
is_repeat_evt	boolean	
location	string	The location of this event
modify_time2	float	
original_cal_id	string	
owner	unsigned int	
percent_complete	unsigned int	
priority	unsigned int	
priority_order	unsigned int	
status	string	
summary	string	
transp	string	
tz_id	string	Time zone such as "Asia/Taipei". If the event is an all-day event, the property should be null

Possible Errors:

Error	Description
-------	-------------

Method *delete*

Parameters:

Name	Type	Description	Default Value	Required	Condition
evt_id	string	Event id	None	true	

Response:

```
{
  "success": boolean
}
```

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

Possible Errors:

Error	Description
-------	-------------

SYNO.Cal.TODO

Description

Manipulate tasks in calendar

Overview

Availability: Starting from Calendar 2.0

Version: 1

Method

Method set

Update tasks

Attributes:

Name	Description
Sharing	This method allows sharing
SkipSharingAppCheck	This method skips sharing app checking

Parameters:

Name	Type	Description	Default Value	Required	Condition
cal_id	string	ID of the calendar which this task belongs to	None	true	
original_cal_id	string	ID of the calendar to its owner which this task belongs to	None	true	
summary	string	Event title	None	true	
tzid	string	Time zone of this event, such as "Asia/Taipei". If the event is an all-day event, the property should be null	None	false	
evt_notify_setting	array of object(notification_obj_v2)	Notification settings	None	false	
percent_complete	unsigned int	100 if done, 0 otherwise	None	false	

Response:

```
{
  "data": {
    "class": string,
    "create_time": float,
    "description": string,
    "dtend": string,
    "dtstart": string,
    "evt_color": string,
    "evt_id": string,
    "evt_repeat_setting": object(repeat\_obj\_v2),
    "from_syno_app_url": string,
```

```

"gps": string,
"ical_uid": string,
"is_all_day": boolean,
"is_repeat_evt": boolean,
"location": string,
"modify_time2": float,
"original_cal_id": string,
"owner": unsigned int,
"percent_complete": unsigned int,
"priority": unsigned int,
"priority_order": unsigned int,
"status": string,
"summary": string,
"transp": string,
"tz_id": string
},
"success": boolean
}

```

Property	Type	Description
class	string	
create_time	float	
description	string	The description of this event
dtend	string	
dtstart	string	
evt_color	string	
evt_id	string	
evt_repeat_setting	object(repeat_obj_v2)	
from_syno_app_url	string	
gps	string	
ical_uid	string	
is_all_day	boolean	
is_repeat_evt	boolean	
location	string	The location of this event
modify_time2	float	
original_cal_id	string	
owner	unsigned int	
percent_complete	unsigned int	
priority	unsigned int	
priority_order	unsigned int	
status	string	
summary	string	
transp	string	
tz_id	string	Time zone such as "Asia/Taipei". If the event is an all-day event, the property should be null

Possible Errors:

Error	Description
-------	-------------

Example:

Method *get*

Get information about the task

Attributes:

Name	Description
Sharing	This method allows sharing
SkipSharingAppCheck	This method skips sharing app checking

Parameters:

Name	Type	Description	Default Value	Required	Condition
evt_id	string	Event ID	None	true	

Response:

```
{
  "data": {
    "class": string,
    "create_time": float,
    "description": string,
    "dtend": string,
    "dtstart": string,
    "evt_color": string,
    "evt_id": string,
    "evt_repeat_setting": object(repeat\_obj\_v2),
    "from_syno_app_url": string,
    "gps": string,
    "ical_uid": string,
    "is_all_day": boolean,
    "is_repeat_evt": boolean,
    "location": string,
    "modify_time2": float,
    "original_cal_id": string,
    "owner": unsigned int,
    "percent_complete": unsigned int,
    "priority": unsigned int,
    "priority_order": unsigned int,
    "status": string,
    "summary": string,
    "transp": string,
    "tz_id": string
  },
  "success": boolean
}
```


Property	Type	Description
class	string	
create_time	float	
description	string	The description of this event
dtend	string	
dtstart	string	
evt_color	string	
evt_id	string	
evt_repeat_setting	object(repeat_obj_v2)	
from_syno_app_url	string	
gps	string	
ical_uid	string	
is_all_day	boolean	
is_repeat_evt	boolean	
location	string	The location of this event
modify_time2	float	
original_cal_id	string	
owner	unsigned int	
percent_complete	unsigned int	
priority	unsigned int	
priority_order	unsigned int	
status	string	
summary	string	
transp	string	
tz_id	string	Time zone such as "Asia/Taipei". If the event is an all-day event, the property should be null

Possible Errors:

Error	Description

Example:

Method *create*

Create a task

Attributes:

Name	Description
Sharing	This method allows sharing
SkipSharingAppCheck	This method skips sharing app checking

Parameters:

Name	Type	Description	Default Value	Required	Condition
cal_id	string	ID of the calendar which this task belongs to	None	true	
original_cal_id	string	ID of the calendar to its owner which this task belongs to	None	true	
summary	string	Event title	None	true	
tzid	string	Time zone of this event, such as "Asia/Taipei". If the event is an all-day event, the property should be null	None	false	
evt_notify_setting	array of object (notification_obj_v2)	Notification settings	None	false	

Response:

```
{
  "data": {
    "class": string,
    "create_time": float,
    "description": string,
    "dtend": string,
    "dtstart": string,
    "evt_color": string,
    "evt_id": string,
    "evt_repeat_setting": object(repeat\_obj\_v2),
    "from_syno_app_url": string,
    "gps": string,
    "ical_uid": string,
    "is_all_day": boolean,
    "is_repeat_evt": boolean,
    "location": string,
    "modify_time2": float,
    "original_cal_id": string,
    "owner": unsigned int,
    "percent_complete": unsigned int,
    "priority": unsigned int,
    "priority_order": unsigned int,
    "status": string,
    "summary": string,
    "transp": string,
    "tz_id": string
  },
  "success": boolean
}
```

Property	Type	Description
class	string	
create_time	float	
description	string	The description of this event
dtend	string	
dtstart	string	

evt_color	string	
evt_id	string	
evt_repeat_setting	object(repeat_obj_v2)	
from_syno_app_url	string	
gps	string	
ical_uid	string	
is_all_day	boolean	
is_repeat_evt	boolean	
location	string	The location of this event
modify_time2	float	
original_cal_id	string	
owner	unsigned int	
percent_complete	unsigned int	
priority	unsigned int	
priority_order	unsigned int	
status	string	
summary	string	
transp	string	
tz_id	string	Time zone such as "Asia/Taipei". If the event is an all-day event, the property should be null

Possible Errors:

Error	Description
-------	-------------

Example:

Method list

List tasks of specific calendars

Attributes:

Name	Description
Sharing	This method allows sharing
SkipSharingAppCheck	This method skips sharing app checking

Parameters:

Name	Type	Description	Default Value	Required	Condition
limit	integer	Limit of matched tasks "0" means unlimited	0	false	
offset	integer	Offset of matched tasks	0	false	

filter_due	integer	1: Only show tasks with due time 2: Only show tasks without due time 3: Show both	3	false	
filter_complete	integer	1: Only show completed tasks 2: Only show not completed tasks 3: Show both	3	false	
cal_id_list	array of string	List of calendars which contain tasks	None	true	

Response:

```
{
  "data": {
    "{cal_id}": array of object(todo_obj)
  },
  "success": boolean
}
```

Property	Type	Description
{cal_id}	array of object(todo_obj)	

Possible Errors:

Error	Description

Example:

Method *clean_complete*

Clean completed tasks

Attributes:

Name	Description
Sharing	This method allows sharing
SkipSharingAppCheck	This method skips sharing app checking

Parameters:

Name	Type	Description	Default Value	Required	Condition
cal_id_list	array of string	List of calendars which contain tasks	None	true	

Response:

```
{
  "success": boolean
}
```

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

Possible Errors:

Error	Description
-------	-------------

Example:

Method *delete*

Delete tasks

Attributes:

Name	Description
Sharing	This method allows sharing
SkipSharingAppCheck	This method skips sharing app checking

Parameters:

Name	Type	Description	Default Value	Required	Condition
evt_id	string	Event ID	None	true	

Response:

```
{
  "success": boolean
}
```

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

Possible Errors:

Error	Description
-------	-------------

Example:

Object Definitions

evt_list_resp_obj

```
{
  "evts_all_repeat": array of object(event\_obj),
  "evts_in_interval": array of object(event\_obj),
  "cal_id": string
}
```

Property	Type	Description
evts_all_repeat	array of object(event_obj)	
evts_in_interval	array of object(event_obj)	
cal_id	string	

attendee_obj_v2

```
{
  "ug_name": string,
  "email": string,
  "invite_type": unsigned int,
  "invite_actor": string,
  "invite_status": string
}
```

Property	Type	Description
ug_name	string	Account of user (group)
email	string	Email
invite_type	unsigned int	DSM_USER, ...
invite_actor	string	
invite_status	string	NEEDS-ACTION, ACCEPTED

cal_privilege_obj

```
{
  "DSM_GROUP": array of object(dsm\_ug\_obj),
  "DSM_USER": array of object(dsm\_ug\_obj)
}
```

Property	Type	Description
DSM_GROUP	array of object(dsm_ug_obj)	
DSM_USER	array of object(dsm_ug_obj)	

notification_obj_v2

```
{
  "time_value": unsigned long long,
  "time_format": unsigned long long,
  "alarm_action": unsigned long long,
  "alarm_ical": boolean
}
```

Property	Type	Description
time_value	unsigned long long	-PT5M, ...
time_format	unsigned long long	DURATION, ...
alarm_action	unsigned long long	DISPLAY, ...
alarm_ical	boolean	...

repeat_obj

```
{
  "repeat_count": unsigned int,
  "repeat_until": string,
  "repeat_interval": unsigned int,
  "repeat_unit": string
}
```

Property	Type	Description
repeat_count	unsigned int	
repeat_until	string	
repeat_interval	unsigned int	
repeat_unit	string	

event_obj_v2

```
{
  "class": string,
  "create_time": float,
  "description": string,
  "dtend": string,
  "dtstart": string,
  "evt_color": string,
  "evt_ical": string,
  "evt_id": string,
  "evt_repeat_setting": object(repeat\_obj\_v2),
  "from_syno_app_url": string,
  "gps": string,
  "ical_uid": string,
  "is_all_day": boolean,
  "is_repeat_evt": boolean,
  "location": string,
  "modify_time2": float,
  "original_cal_id": string,
  "owner": unsigned int,
  "percent_complete": unsigned int,
  "priority": unsigned int,
  "priority_order": unsigned int,
  "status": string,
  "summary": string,
  "transp": string,
  "tz_id": string
}
```

Property	Type	Description
class	string	
create_time	float	
description	string	The description of this event
dtend	string	
dtstart	string	
evt_color	string	
evt_ical	string	
evt_id	string	
evt_repeat_setting	object(repeat_obj_v2)	

from_syno_app_url	string	
gps	string	
ical_uid	string	
is_all_day	boolean	
is_repeat_evt	boolean	
location	string	The location of this event
modify_time2	float	
original_cal_id	string	
owner	unsigned int	
percent_complete	unsigned int	
priority	unsigned int	
priority_order	unsigned int	
status	string	
summary	string	
transp	string	
tz_id	string	Time zone such as "Asia/Taipei". If the event is an all-day event, the property should be null

todo_obj

```

{
  "class": string,
  "create_time": float,
  "description": string,
  "dtend": string,
  "dtstart": string,
  "evt_color": string,
  "evt_id": string,
  "evt_repeat_setting": object(repeat\_obj\_v2),
  "from_syno_app_url": string,
  "gps": string,
  "ical_uid": string,
  "is_all_day": boolean,
  "is_repeat_evt": boolean,
  "location": string,
  "modify_time2": float,
  "original_cal_id": string,
  "owner": unsigned int,
  "percent_complete": unsigned int,
  "priority": unsigned int,
  "priority_order": unsigned int,
  "status": string,
  "summary": string,
  "transp": string,
  "tz_id": string
}

```

Property	Type	Description
class	string	
create_time	float	
description	string	The description of this event
dtend	string	

dtstart	string	
evt_color	string	
evt_id	string	
evt_repeat_setting	object(repeat_obj_v2)	
from_syno_app_url	string	
gps	string	
ical_uid	string	
is_all_day	boolean	
is_repeat_evt	boolean	
location	string	The location of this event
modify_time2	float	
original_cal_id	string	
owner	unsigned int	
percent_complete	unsigned int	
priority	unsigned int	
priority_order	unsigned int	
status	string	
summary	string	
transp	string	
tz_id	string	Time zone such as "Asia/Taipei". If the event is an all-day event, the property should be null

event_obj

```
{
  "original_cal_id": string,
  "evt_id": string,
  "evt_ical": string,
  "tz_id": string,
  "evt_privacy": string,
  "evt_repeat_setting": object(repeat\_obj),
  "dtstart": string,
  "dtend": string,
  "evt_summary": string,
  "evt_description": string,
  "evt_location": string,
  "is_busy": boolean,
  "is_all_day": boolean
}
```

Property	Type	Description
original_cal_id	string	
evt_id	string	
evt_ical	string	
tz_id	string	Time zone such as "Asia/Taipei". If the event is an all-day event, the property should be null
evt_privacy	string	
evt_repeat_setting	object(repeat_obj)	

dtstart	string	
dtend	string	
evt_summary	string	
evt_description	string	The description of this event
evt_location	string	The location of this event
is_busy	boolean	
is_all_day	boolean	

dsm_ug_obj

```
{
  "cal_privilege": string,
  "ug_name": string
}
```

Property	Type	Description
cal_privilege	string	
ug_name	string	

repeat_obj_v2

```
{
  "repeat_rule": string
}
```

Property	Type	Description
repeat_rule	string	

SYNO.Cal.Sharing

Description

Get and set sharing setting of calendar

Overview

Availability: Starting from Calendar 2.0
Version: 1

Method

Method set

Set sharing setting of calendar

Parameters:

Name	Type	Description	Default Value	Required	Condition
cal_id	string	ID of this calendar	None	true	
cal_share_setting	Object (cal_privilege_obj)	Whom to share this calendar with and what permissions are given to them	None	true	

Response:

```
{
  "success": boolean
}
```

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

Possible Errors:

Error	Description
-------	-------------

Example:**Method *get***

Get sharing setting of calendar

Parameters:

Name	Type	Description	Default Value	Required	Condition
cal_id	string	ID of this calendar	None	true	

Response:

```
{
  "data": {
    "{cal_id}": object(cal\_privilege\_obj)
  },
  "success": boolean
}
```

Property	Type	Description
{cal_id}	object(cal_privilege_obj)	

Possible Errors:

Error	Description
-------	-------------

Example:

Object Definitions

cal_privilege_obj

```
{
  "DSM_GROUP": array of object(dsm\_ug\_obj),
  "DSM_USER": array of object(dsm\_ug\_obj)
}
```

Property	Type	Description
DSM_GROUP	array of object(dsm_ug_obj)	
DSM_USER	array of object(dsm_ug_obj)	

dsm_ug_obj

```
{
  "cal_privilege": string,
  "ug_name": string
}
```

Property	Type	Description
cal_privilege	string	
ug_name	string	

Document Revision History

This table describes the changes to the Synology Calendar Official API document.

Date		Note
2019-08-12	Initial release	