

WebUntis JSON-RPC API

an API for accessing WebUntis functionality.

based on JSON-RPC 2.0

(<http://www.jsonrpc.org/specification>)

Service-URL: `http(s)://<SERVER>/WebUntis/jsonrpc.do`

requests must use POST

Content-Type should be set to `text/plain` or `application/json`

An API request has the general format

```
{"id": "ID", "method": "METHOD NAME", "params": {PARAMS}, "jsonrpc": "2.0"}
```

with

ID	identifies the request, is repeated in the response
METHOD NAME	name of the method
PARAMS	method parameters as described in the section of the method for simple functions PARAMS can be empty

A response has the general format

```
{"jsonrpc": "2.0", "id": "ID", "result": RESULT}
```

with

ID	request identifier
RESULT	result of the method as described in the section of the method

remarks:

- character set: utf-8
- date format: YYYYMMDD
- time format: HHMM
- color format: RRGGBB
- fields in the result may be omitted if empty (e.g. `foreColor` and `backColor` will be omitted if not set)

Each section defines a method (function) of the API and describes

purpose

method name

needed right for the user

parameters

result

Additionally there are often given examples and sometimes special remarks.

1) Authentication

Authenticate the given user and start a session

method name	authenticate
right	-

mandatory parameter: ?school=SCHULNAME

```
{"id":"ID","method":"authenticate","params":{"user":"ANDROID",  
"password":"PASSWORD", "client":"CLIENT"},"jsonrpc":"2.0"}
```

The parameter CLIENT is a unique identifier for the client app. The parameter client will be mandatory in the future.

```
result:  
{ "jsonrpc": "2.0", "id": "ID", "result":  
  { "sessionId": "644AFBF2C1B592B68C6B04938BD26965", "personType": 2, "personId": 17 }
```

personType	type of person 2 = teacher, 5 = student
personId	ID of person

All other methods require the result from authentication (= sessionId), either per pathparameter

; jsessionid=644AFBF2C1B592B68C6B04938BD26965

or per cookie (RequestHeader)

JSESSIONID=644AFBF2C1B592B68C6B04938BD26965

2) Logout

End the session

method name	logout
right	-

```
{"id":"ID","method":"logout","params":{},"jsonrpc":"2.0"}
```

An application should always logout as soon as possible to free system resources on the server.

3) *Request teachers*

Get list of teachers

method name	getTeachers
right	-
parameters	none

```
{"id":"ID","method":"getTeachers","params":{},"jsonrpc":"2.0"}

{"jsonrpc":"2.0","id":"ID","result":[
{"id":1,"name":"Bach","foreName":"Ingeborg","longName":"Bachmann","foreColor":"000000","backColor":"000000"},
{"id":2,"name":"Foss","foreName":"Dian","longName":"Fossey","foreColor":"000000","backColor":"000000"},
...]}
```

4) *Request students*

Get list of students

method name	getStudents
right	-
parameters	none

```
{"id":"ID","method":"getStudents","params":{},"jsonrpc":"2.0"}

{"jsonrpc":"2.0","id":"1","result":[
{"id":1,"key":"1234567","name":"MüllerAle","foreName":"Alexander","longName":"Müller","gender":"male"},
{"id":2,"key":"7654321","name":"SchmidAme","foreName":"Amelie","longName":"Schmidt","gender":"female"},
...]}
```

5) *Request base classes*

Get list of Klassen (base class) for schoolyear

method name	getKlassen
right	-
parameters:	

- schoolyearId optional, default: current schoolyear

e.g.

```
{"id":"ID","method":"getKlassen","params":
{"schoolyearId":"SCHOOLYEARID"},"jsonrpc":"2.0"}
```

```
{
  "jsonrpc": "2.0",
  "id": "ID",
  "result": [
    {
      "id": 71,
      "name": "1A",
      "longName": "Klasse 1A",
      "foreColor": "000000",
      "backColor": "000000",
      "did": 2
    },
    {
      "id": 72,
      "name": "1B",
      "longName": "Klasse 1B",
      "foreColor": "000000",
      "backColor": "000000"
    },
    ...
  ]
}
```

6) Request subjects

Get list of subjects

method name	getSubjects
right	-
parameters	none

```
{
  "jsonrpc": "2.0",
  "id": "ID",
  "result": [
    {
      "id": 1,
      "name": "RK",
      "longName": "Kath. Religion",
      "foreColor": "000000",
      "backColor": "000000"
    },
    {
      "id": 2,
      "name": "RE",
      "longName": "Evang. Religion",
      "foreColor": "000000",
      "backColor": "000000"
    },
    ...
  ]
}
```

7) Request rooms

Get list of rooms

method name	getRooms
right	-
parameters	none

```
{
  "jsonrpc": "2.0",
  "id": "ID",
  "result": [
    {
      "id": 1,
      "name": "R1A",
      "longName": "1A",
      "foreColor": "000000",
      "backColor": "000000"
    },
    {
      "id": 2,
      "name": "R1B",
      "longName": "1B",
      "foreColor": "000000",
      "backColor": "000000"
    },
    ...
  ]
}
```

8) Request departments

Get list of departments

method name	getDepartments
right	-
parameters	none

```
{
  "jsonrpc": "2.0",
  "id": "ID",
  "result": [
    {
      "id": 1,
      "name": "A1",
      "longName": "AAA1"
    },
    {
      "id": 2,
      "name": "A2",
      "longName": "AAA2"
    },
    ...
  ]
}
```

9) *Request holidays*

Get list of holidays

method name	getHolidays
right	-
parameters	none

```
{"jsonrpc":"2.0","id":"ID","result":[
{"id":44,"name":"Natio","longName":"Nationalfeiertag","startDate":20101026,"endDate":20101026},
{"id":42,"name":"Allerheiligen","longName":"Allerheiligen","startDate":20101101,"endDate":20101101},
...]}
```

10) *Request timegrid*

Get timegrid

method name	getTimegridUnits
right	-
parameters	none

```
{"jsonrpc":"2.0","id":"ID","result":[
{"day":0,"timeUnits":[{"startTime":800,"endTime":850},
{"startTime":855,"endTime":945}, {"startTime":1000,"endTime":1050},
...],
{"day":1,"timeUnits":[{"startTime":800,"endTime":850},
...],
...]}
```

1 = sunday, 2 = monday, ..., 7 = saturday

11) *Request status data*

Information about lesson types and period codes and their colors

method name	getStatusData
right	-
parameters	none

Response

```
{"jsonrpc":"2.0","id":"req-002",
"result":{
"lstypes":[
{"ls":{"foreColor":"000000","backColor":"ee7f00"}},
{"oh":{"foreColor":"e6e3e1","backColor":"250eee"}},
{"sb":{"foreColor":"000000","backColor":"1feee7"}},
{"bs":{"foreColor":"000000","backColor":"c03b6e"}},
```

```
{
  "ex": {
    "foreColor": "000000",
    "backColor": "fdc400"
  }
},
"codes": [
  {
    "cancelled": {
      "foreColor": "000000",
      "backColor": "b1b3b4"
    },
    "irregular": {
      "foreColor": "e3e33b",
      "backColor": "77649a"
    }
  }
]
```

12) Request current schoolyear

Data for the current schoolyear

method name	getCurrentSchoolyear
right	-
parameters	none

Response

```
{
  "jsonrpc": "2.0",
  "id": "req-002",
  "result": [
    {
      "id": 10,
      "name": "2010/2011",
      "startDate": 20100830,
      "endDate": 20110731
    }
  ]
}
```

13) Request schoolyears

List of all available schoolyears

method name	getSchoolyears
right	-
parameters	none

Response

```
{
  "jsonrpc": "2.0",
  "id": "req-002",
  "result": [
    {
      "id": 10,
      "name": "2010/2011",
      "startDate": 20100830,
      "endDate": 20110731
    },
    {
      "id": 11,
      "name": "2011/2012",
      "startDate": 20110905,
      "endDate": 20120729
    }
  ]
}
```

14) Request timetable for an element (simple)

Get timetable for klasse, teacher, student, room, subject

method name	getTimetable
right	timetable view for the requested element
parameters:	
- id	element id, mandatory
- type	type of element, mandatory 1 = klasse, 2 = teacher, 3 = subject, 4 = room, 5 = student
- startDate	optional, default: actual date
- endDate	optional, default: actual date

Response

„result“: array of period objects

period object:

„id“:	ID of period
„date“:	
„startTime“:	
„endTime“:	
„kl“:	array of klassen ids
„te“:	array of teacher ids
„su“:	array of subject ids
„ro“:	array of room ids
„lstype“:	„ls“ (lesson) „oh“ (office hour) „sb“ (standby) „bs“ (break supervision) „ex“ (examination) omitted if lesson
„code“:	„“ „cancelled“ „irregular“ omitted if empty
„ltext“:	text of the lesson, omitted if empty
„statflags“:	statistical flags of the lesson, omitted if empty

e.g.

```
{"id":"req-002","method":"getTimetable","params":  
{"id":71,"type":1},"jsonrpc":"2.0"}
```

```
{"jsonrpc":"2.0","id":"req-002","result":[  
{"id":125043,"date":20110117,"startTime":800,"endTime":850,  
"kl":[{"id":71}],"te":[{"id":23}],"su":[{"id":13}],"ro":[{"id":1}]},  
{"id":125127,"date":20110117,"startTime":1055,"endTime":1145,  
"kl":[{"id":71}],"te":[{"id":41}],"su":[{"id":19}],"ro":[{"id":31}]},  
...]
```

15) Request timetable for an element (customizable)

Get a customizable timetable for klasse, teacher, student, room, subject..

method name	getTimetable
right	timetable view for the requested element
parameters	
- options	a parameter object encapsulating the following fields:
- element	id object encapsulating the following fields:
- id	element id, either the internal id, name, or external key of an element (see „keyType“), mandatory
- type	element type, mandatory 1 = klasse, 2 = teacher, 3 = subject, 4 = room, 5 = student
- keyType	„id“, „name“, or „externalkey“, optional (default: „id“)
- startDate	number, format: YYYYMMDD, optional (default: current date)
- endDate	number, format: YYYYMMDD, optional (default: current date)
- showInfo	boolean, returns the period information if available (default: false)
- showSubstText	boolean, returns the Untis substitution text if available (default: false)
- showLsText	boolean, returns the text of the period's lesson (default: false)
- showLsNumber	boolean, returns the number of the period's lesson (default: false)
- showStudentgroup	boolean, returns the name(s) of the studentgroup(s) (default: false)
- klasseFields	array, optional, values: „id“, „name“, „longname“, „externalkey“
- roomFields	array, optional, values: „id“, „name“, „longname“, „externalkey“
- subjectFields	array, optional, values: „id“, „name“, „longname“, „externalkey“
- teacherFields	array, optional, values: „id“, „name“, „longname“, „externalkey“

If a *Fields parameter (e.g. „teacherFields“) is not set explicitly, the return object will contain the internal id („keyType“: „id“) of the references (e.g. the teachers of a period) by default.

Response

„result“: array of period objects

period object

- id	number, ID of the period
- date	date
- startTime	time
- endTime	time
- lstype	„ls“ (lesson) „oh“ (office hour) „sb“ (standby) „bs“ (break supervision) „ex“ (examination), omitted if the type is lesson
- code	„“ „cancelled“ „irregular“, omitted if empty
- info	string, period information
- substText	string, Untis substitution text
- lstext	string, text of the period's lesson
- lsnumber	number, number of the period's lesson
- statflags	string, statistical flags
- sg	string, name of the period's student group

- kl array of klassen, containing the fields specified in „klasseFields“
- te array of teachers, containing the fields specified in „teacherFields“
- su array of subjects, containing the fields specified in „subjectFields“
- ro array of rooms, containing the fields specified in „roomFields“

Ex.

```
{ "id": "1", "method": "getTimetable", "params": { "options":
  {
    "element": { "id": "1a_ext", "type": 1, "keyType": "externalkey"},
    "showStudentgroup": true,
    "showLsText": true,
    "showLsNumber": true,
    "showInfo": true,
    "klasseFields": [ "id", "name", "longname", "externalkey" ],
    "teacherFields": [ "id", "name" ]
  }
}, "jsonrpc": "2.0" }

{ "id" : "1", "jsonrpc" : "2.0", "result" [
  {
    "id": 74,
    "date": 20150515,
    "startTime": 855,
    "endTime": 940,
    "kl": [ { "id": 1, "name": "1a", "longname": "Klasse 1a (Gauss)",
      "externalkey": "1a_ext" } ],
    "te": [ { "id": 7, "name": "Nobel" } ],
    "su": [ { "id": 3 } ],
    "ro": [ { "id": 15 } ],
    "statflags": "@",
    "lsnumber": 700,
    "lstext": "Sample Lesson Text.",
    "info": "Sample Period Info as entered in WebUntis",
    "sg": "Rel_1a"
  },
  ...
]
```

16)

(no longer supported, function will be removed)

17) Request last import time

Import time of the last lesson/timetable or substitution import from Untis

method name	getLatestImportTime
right	none
parameters	none

Response

```
{"jsonrpc":"2.0","id":"ID","result":TIMESTAMP}
```

TIMESTAMP	Unix timestamp
-----------	----------------

18) Search personId

Get Id of the person (teacher or student) from the name

method name	getPersonId
right	none
parameters:	

- type	type of person, mandatory 2 = teacher or 5 = student
- sn	surname, mandatory
- fn	forename, mandatory
- dob	birthdata, mandatory, use 0 if unknown

result:	Id of person or 0 if no fitting person found
---------	--

e.g.

Request

```
{"id":"req-002","method":"getPersonId","params":  
{"sn":"Talisker","dob":0,"type":5,"fn":"James"},"jsonrpc":"2.0"}
```

Response

```
{"jsonrpc":"2.0","id":"req-002","result":0}
```

19) Request substitutions

Request substitutions for the given date range

method name getSubstitutions
right any timetable view
parameters:

- startDate mandatory
- endDate mandatory
- departmentId mandatory, use 0 for all departments or if not applicable

result
array of substitution objects

Substitution object

- type type of substitution
 cancel cancellation
 subst teacher substitution
 add additional period
 shift shifted period
 rmchg room change
- lsid id of the concerned lesson
- date
- startTime
- endTime
- kl array of klassen id objects
- te array of teacher id objects
- su array of subject id objects
- ro array of room id objects
- txt substitution text
- reschedule reschedule object, used with types cancel and shift
 shift: date and time of the original period that was shifted
 cancel: date and time of the new period

id object

- id id of element
- orgid id of original element, used if the current element replaces
 (substitutes) this original element

reschedule object

- date
- startTime
- endTime

e.g.

Request

```
{"id":"req-002","method":"getSubstitutions","params":  
{"startDate":20111107,"endDate":20111116,"departmentId":0},"jsonrpc":"2.0"}
```

Response

```
{"jsonrpc":"2.0","id":"req-002","result":  
[{"type":"cancel","lsid":3029,"date":20111110,"startTime":855,"endTime":945,"kl":  
:[{"id":119}], "te":[{"id":7}], "su":[{"id":5}], "ro":[{"id":2}]},  
{"type":"add","lsid":3064,"date":20111114,"startTime":1800,"endTime":1900,"kl":  
:[{"id":122}], "te":[{"id":28}], "su":[{"id":8}], "ro":[]},  
{"type":"shift","lsid":3087,"date":20111116,"startTime":1440,"endTime":1530},  
{"reschedule":{"date":20111115,"startTime":1155,"endTime":1245}}, {"kl":  
:[{"id":124}], "te":[{"id":3}], "su":[{"id":12}], "ro":[{"id":9}]},  
{"type":"cancel","lsid":3087,"date":20111115,"startTime":1155,"endTime":1245},  
{"reschedule":{"date":20111116,"startTime":1440,"endTime":1530}}, {"kl":  
:[{"id":124}], "te":[{"id":3}], "su":[{"id":12}], "ro":[{"id":9}]},  
{"type":"cancel","lsid":3091,"date":20111115,"startTime":1000,"endTime":1050,"kl":  
:[{"id":124}], "te":[{"id":5}], "su":[{"id":20}], "ro":[{"id":34}]},  
{"type":"subst","lsid":3111,"date":20111115,"startTime":800,"endTime":850,"kl":  
:[{"id":126}], "te":[{"id":36,"orgid":5}], "su":[{"id":20}], "ro":[{"id":34}]},  
{"type":"subst","lsid":3163,"date":20111110,"startTime":1000,"endTime":1050,"kl":  
{"type":"rmchg","lsid":3238,"date":20111115,"startTime":1000,"endTime":1050,"txt  
":"Raumänderung","kl":[{"id":132}, {"id":131}], "te":[{"id":3}], "su":  
[{"id":3}], "ro":[{"id":39,"orgid":26}]}}]
```

20) Request classregevents

Request classregevents for the given date range

method name	getClassregEvents
right	classregevents read for all
parameters:	

- startDate	mandatory
- endDate	mandatory

result

array of classregevent objects

e.g.

Request

```
{"id":"req-002","method":"getClassregEvents","params":  
{"startDate":20121018,"endDate":20121018},"jsonrpc":"2.0"}
```

Response

```
{"jsonrpc":"2.0","id":"req-002","result":  
[{"studentid":"100010","surname":"Oban","forname":"Tom","date":20121018,"subject  
":"","reason":"","text":"eats during lesson"}]}
```

21) Request Exams

Request Exams

Method name getExams
right examinations read for all
parameters:

- examTypeId mandatory
- startDate mandatory
- endDate mandatory

result

Array of Exam Objects

e.g.

Request

```
{ "id": "1", "method": "getExams", "params": { "examTypeId": "1",  
"startDate": "20140101", "endDate": "20141231" }, "jsonrpc": "2.0" }
```

Response

```
{ "jsonrpc": "2.0", "id": "1", "result":  
[  
{ "id": 1, "classes": [ 1 ], "teachers": [ 4 ], "students": [ 15, 23, 7, 8, 24,  
16, 25, 1, 17, 9, 73, 26, 18, 2, 11, 3, 19, 28, 20, 21, 5, 6, 14, 22 ],  
"subject": 14, "date": 20140729, "startTime": 1425, "endTime": 1510 } ] }
```

22) Request ExamTypes

Request ExamTypes

Method name getExamTypes
right examtypes read for all
parameters: none

result

Array of ExamType Objects

e.g.

Request

```
{ "id": "1", "method": "getExamTypes", "params": {}, "jsonrpc": "2.0" }
```