

## 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 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"},  
...]}
```

### 5) 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"
    }
  ]
}
```

## 6) 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"
    }
  ]
}
```

## 7) 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"
    }
  ]
}
```

## 8) 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
    }
  ]
}
```

## 9) 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

## 10) 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"}}
]}}
```

## 11) 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}]}
```

## 12) 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}]}
```

## 13) Request timetable for an element

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 } ] },
... ] }
```

#### ***14) classregister data for period***

(no longer supported, function will be removed)

#### ***15) 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
```

#### ***17) 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 }
```

## ***18) 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}]}}]
```

## 19) 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"}]}
```

## ***20) 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 } ] }
```