# Technical Specification

## ABSENCE API

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# 1 Introduction

The Absence API provides services that make it possible to get absence and presence for students. The services in the Absence API are accessed via URIs.

This document describes following:

- Which absence and presence information that a user can get via the Absence API.

- How the absence and presence information is divided into entities and how these entities are structured.

## 1.1 Prerequisites

Before you can get access to the Absence API you must request a license key from Tieto. You should have basic knowledge on Swedish school system and W3C XML before you start using the API.

## 2 Supported school types

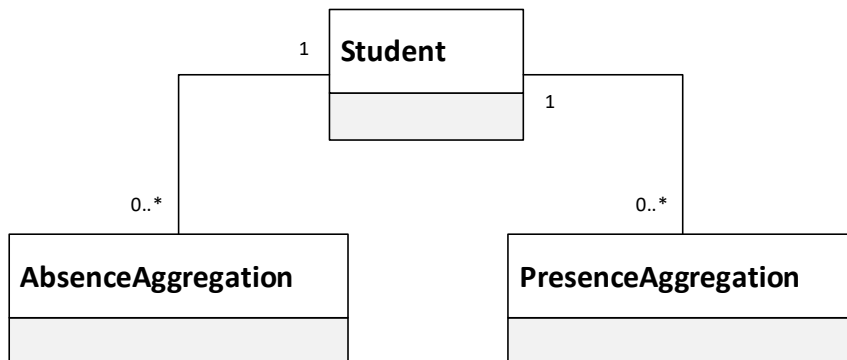The table below describes the supported types of school.

| School type | Description | Code |
|---|---|---|
| Preschool class | Preschool class for children 6 years of age | FK |
| Compulsory School | Primary school organization for younger students | GR |
| Compulsory School for Learning Disabilities | Organization for compulsory school for learning disabilities | S |
| Upper Secondary School | Upper secondary school organization 3-4 years education | GY |
| Upper Secondary School For Learning Disabilities | Organization for upper secondary school for learning disabilities | GS |
| Swedish For Immigrants School | Organization for Swedish immigrants | SF |
| Adult School For Learning Disabilities | Organization for adult school for learning disabilities | SV |
| Municipal Adult School | Municipality school organization for adults | KV |
| Higher Vocational Education | Organizations for Higher Vocational Education | YH |

# 3 Absence and presence

## 3.1 Description

This chapter describes absence and presence entities and their attributes.

## 3.2 Domain model



## 3.3 Entities for retrieval of information

### 3.3.1 Properties

The delivery information of the absence and presence data that is used to manage the exchange of data between source and target system.

| Name | Description |
|------|-------------|
| datetime | The date and time the XML information were generated. The format is as [YYYY-MM-DDTHH:MM:SS] |
| datasource | This is the source identifier of data source |
| comments | Input values for the service, in free text format. |
| schooltype | The schooltype of which the data is encompassing |
| timeframe | Time frame for the data |

### 3.3.2 Absence

| Name | Description | Read-only |
|------|-------------|-----------|
| personid | Unique identifier for student | Yes |
| minutes | Absence time in minutes | Yes |
| lessonminutes | Lesson time in minutes | Yes |
| start | Date and time of the lesson start | Yes |
| stop | Date and time of the lesson stop | Yes |
| courseorsubjectid | Course or subject id. | Yes |

| Name | Description | | Read-only |
|---|---|---|---|
| courseorsubjectcode | Course or subject code. | | Yes |
| courseorsubjectname | Course or subject name. | | Yes |
| lessonid | Lesson id | | Yes |
| registeredby | Id of teacher that registered the absence | | Yes |
| grouporclassid | Id of the group or class the student is a part of | | Yes |
| grouporclassname | Name of the group or class the student is a part of | | Yes |
| comment | Free text comment by the teacher | | Yes |
| unitid | Id of the unit the event is registered on | | Yes |
| unitname | Name of the unit the event is registered on | | Yes |
| reason | Reason for an absence. *Valid* *Invalid* *LateArrival* *Present* | Indicates that the absence is valid / Indicates that the absence is invalid / Indicates that the student arrived late / Indicates that the student was present | Yes |

### 3.3.3 Presence

| Name | Description | | Read-only |
|---|---|---|---|
| personid | Unique identifier for student | | Yes |
| minutes | Presence time in minutes | | Yes |
| lessonminutes | Lesson time in minutes | | Yes |
| start | Date and time of the lesson start | | Yes |
| stop | Date and time of the lesson stop | | Yes |
| courseorsubjectid | Course or subject id. | | Yes |
| courseorsubjectcode | Course or subject code. | | Yes |
| courseorsubjectname | Course or subject name. | | Yes |
| lessonid | Lesson id | | Yes |
| registeredby | Id of teacher that registered the presence | | Yes |
| grouporclassid | Id of the group or class the student is a part of | | Yes |
| grouporclassname | Name of the group or class the student is a part of | | Yes |
| comment | Free text comment by the teacher | | Yes |
| unitid | Id of the unit the event is registered on | | Yes |
| unitname | Name of the unit the event is registered on | | Yes |
| reason | Reason for an absence. *Valid* *Invalid* *LateArrival* | Indicates that the absence is valid / Indicates that the absence is invalid / Indicates that the student arrived late | Yes |

| Name | Description | | Read-only |
|------|-------------|---|-----------|
| | *Present* | Indicates that the student was present | |

### 3.3.4 AbsenceAggregation

| Name | Description | | Read-only |
|------|-------------|---|-----------|
| personid | Unique identifier for student | | Yes |
| minutes | Total amount of minutes of absence | | Yes |
| offeredminutes | Total amount of scheduled lection time during the period | | Yes |
| start | The start date for the aggregation period | | Yes |
| stop | The end date for the aggregation period | | Yes |
| courseorsubjectid | Course or subject id. | | Yes |
| courseorsubjectcode | Course or subject code. | | Yes |
| courseorsubjectname | Course or subject name. | | Yes |
| reason | Reason for an absence. | | Yes |
| | *Valid* | Indicates that the absence is valid | |
| | *Invalid* | Indicates that the absence is invalid | |
| | *LateArrival* | Indicates that the student arrived late | |
| | *Present* | Indicates that the student was present | |

### 3.3.5 PresenceAggregation

| Name | Description | | Read-only |
|------|-------------|---|-----------|
| personid | Unique identifier for student | | Yes |
| minutes | Total amount of minutes of absence | | Yes |
| offeredminutes | Total amount of scheduled lection time during the period | | Yes |
| start | The start date for the aggregation period | | Yes |
| stop | The end date for the aggregation period | | Yes |
| courseorsubjectid | Course or subject id. | | Yes |
| courseorsubjectcode | Course or subject code. | | Yes |
| courseorsubjectname | Course or subject name. | | Yes |
| reason | Reason for an absence. | | Yes |
| | *Valid* | Indicates that the absence is valid | |
| | *Invalid* | Indicates that the absence is invalid | |
| | *LateArrival* | Indicates that the student arrived late | |

| Name | Description | | Read-only |
|------|-------------|---|-----------|
| | *Present* | Indicates that the student was present | |

## 3.4 Entities for updating information

### 3.4.1 Properties

The delivery information of the absence and presence data that is used to manage the exchange of data between source and target system.

| Name | Description |
|------|-------------|
| datetime | The date and time the XML information were generated. The format is as [YYYY-MM-DDTHH:MM:SS] |
| datasource | This is the source identifier of data source |
| comments | Input values for the service, in free text format. |

### 3.4.2 Reporting Absence

| Name | Description | Read-only |
|------|-------------|-----------|
| studentid | Unique identifier for student | Yes |
| guardianid | Unique identifier for guardian | Yes |
| start | The start date and time for the absence | Yes |
| stop | The end date and time for the absence | Yes |

# 4 Services

All network services are based on HTTP REST technology and organized in school types to match each school structure. Export is using the method HTTP GET. Import is using the method HTTP POST.

## 4.1 Parameters and limits

All export methods take 3 parameters that are mandatory

| Name | Description | Required |
|------|-------------|----------|
| Id | Unique identifier for student (GUID or PID) | Yes |
| StartDate | The start date for the aggregation period | Yes |
| EndDate | The end date for the aggregation period | Yes |

Import methods do not take parameters.

Absence and presence events are limited to a span of one year per call. Aggregated data is limited to a span of 5 years.

## 4.2 Absence

The services below export absence events.

Services:

| Service | Description |
|---------|-------------|
| GetPreSchoolClassAbsence | Get absence for preschool class student |
| GetCompulsorySchoolAbsence | Get absence for compulsory school student |
| GetCompulsorySchoolForLearningDisabilitiesAbsence | Get absence for compulsory school with learning disabilities student |
| GetUpperSecondarySchoolAbsence | Get absence for upper secondary school student |
| GetUpperSecondarySchoolForLearningDisabilitiesAbsence | Get absence for upper secondary school with learning disabilities student |
| GetSwedishForImmigrantsSchoolAbsence | Get absence for Swedish for immigrants student |
| GetMunicipalAdultSchoolAbsence | Get absence for municipal adult school student |

| Service | Description |
|---------|-------------|
| GetAdultSchoolForLearningDisabilitiesAbsence | Get absence for adult school with learning disabilities student |
| GetHigherVocationalEducationAbsence | Get absence for higher vocational education student |

## 4.3 Presence

The services below export presence events.

Services:

| Service | Description |
|---------|-------------|
| GetPreSchoolClassPresence | Get presence for preschool class student |
| GetCompulsorySchoolPresence | Get presence for compulsory school student |
| GetCompulsorySchoolForLearningDisabilitiesPresence | Get presence for compulsory school with learning disabilities student |
| GetUpperSecondarySchoolPresence | Get presence for upper secondary school student |
| GetUpperSecondarySchoolForLearningDisabilitiesPresence | Get presence for upper secondary school with learning disabilities student |
| GetSwedishForImmigrantsSchoolPresence | Get presence for Swedish for immigrants student |
| GetMunicipalAdultSchoolPresence | Get presence for municipal adult school student |
| GetAdultSchoolForLearningDisabilitiesPresence | Get presence for adult school with learning disabilities student |
| GetHigherVocationalEducationPresence | Get presence for higher vocational education student |

## 4.4 AbsenceAggregation

The services below export aggregated absence.

Services:

| Service | Description |
| --- | --- |
| GetPreSchoolClassAbsenceAggregation | Get aggregated absence for preschool class student |
| GetCompulsorySchoolAbsenceAggregation | Get aggregated absence for compulsory school student |
| GetCompulsorySchoolForLearningDisabilitiesAbsenceAggregation | Get aggregated absence for compulsory school with learning disabilities student |
| GetUpperSecondarySchoolAbsenceAggregation | Get aggregated absence for upper secondary school student |
| GetUpperSecondarySchoolForLearningDisabilitiesAbsenceAggregation | Get aggregated absence for upper secondary school with learning disabilities student |
| GetSwedishForImmigrantsSchoolAbsenceAggregation | Get aggregated absence for Swedish for immigrants student |
| GetMunicipalAdultSchoolAbsenceAggregation | Get aggregated absence for municipal adult school student |
| GetAdultSchoolForLearningDisabilitiesAbsenceAggregation | Get aggregated absence for adult school with learning disabilities student |
| GetHigherVocationalEducationAbsenceAggregation | Get aggregated absence for higher vocational education student |

## 4.5 PresenceAggregation

The services exports aggregated presence.

Services:

| Service | Description |
| --- | --- |
| GetPreSchoolClassPresenceAggregation | Get aggregated presence for preschool class student |
| GetCompulsorySchoolPresenceAggregation | Get aggregated presence for compulsory school student |
| GetCompulsorySchoolForLearningDisabilitiesPresenceAggregation | Get aggregated presence for compulsory school with learning disabilities student |
| GetUpperSecondarySchoolPresenceAggregation | Get aggregated presence for upper secondary school student |

| Service | Description |
|---------|-------------|
| GetUpperSecondarySchoolForLearningDisabilitiesPresenceAggregation | Get aggregated presence for upper secondary school with learning disabilities student |
| GetSwedishForImmigrantsSchoolPresenceAggregation | Get aggregated presence for Swedish for immigrants student |
| GetMunicipalAdultSchoolPresenceAggregation | Get aggregated presence for municipal adult school student |
| GetAdultSchoolForLearningDisabilitiesPresenceAggregation | Get aggregated presence for adult school with learning disabilities student |
| GetHigherVocationalEducationPresenceAggregation | Get aggregated presence for higher vocational education student |

## 4.6 Reporting Absence

For reporting planned absence by guardian.

| Service | Description |
|---------|-------------|
| ReportAbsence | Report absence for a student |

## 5 Appendix

### 5.1 References

| Name | Address |
|---|---|
| Absence API XML schemas and examples | https://github.com/ExchangeServices |

### 5.2 Vocabulary

| Word | Description |
|---|---|
| Child | Children below 6 year |
| Student | School student 6 year and older |
| PID | Personal identity, formatted [YYYYMMDD-NNNN] |
| GUID | Global unique identifier |