

# Technical Specification

## Organization API



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## 1 Introduction

The Organization API provides services that make it possible to get the organization for a specified school type. The services in the Organization API are accessed via URIs. Each of the 12 supported school types has a unique URI. The organization information that you can get and set via the API follows the standard IMS Enterprise 1.1.

This document describes following:

- Which organization information that can be fetched. (This is described by specifying which attributes that is used for the different IMS entities.)
- How Tieto Education entities are mapped to IMS entities
- How the IMS entities, in the organization, are structured

Note:

IMS Enterprise 1.1 provides a number of attributes. These attributes are not sufficient for Organization API and therefore new attributes has been added as IMS extensions. Some IMS Enterprise 1.1 enumerations have also been extended to support Nordic school requirements, laws and regulations. These extensions are in line with the IMS standard.

### 1.1 Prerequisites

Before you can get access to the Organization API you must request a license key from Tieto. You should have basic knowledge about the IMS Enterprise standard and W3C XML before you start using the API.

## 2 Supported school types

The table below describes the supported school types.

School types	Description	Code
Pedagogical care	Childcare groups for children between 1-12 years	PC
Preschool	Childcare for children between 1-6 years	FS
Leisure time centre	Childcare for school-aged children over 6 years	F
Preschool class	Preschool class for children 6 years of age	FK
Compulsory School	Primary school for younger students	GR
Compulsory School For Learning Disabilities	Compulsory school for learning disabilities	S
Upper Secondary School	Secondary school, 3-4 years education	GY
Upper Secondary School For Learning Disabilities	Secondary school for learning disabilities	GS
Swedish For Immigrants School	School for Swedish immigrants	SF
Adult School For Learning Disabilities	Adult school for learning disabilities	SV
Municipal Adult School	Municipality school for adults	KV
Higher Vocational Education	School for Higher Vocational Education	YH

### 3 Structure and mapping

All entities in the organization for specified school type are mapped into the IMS entities person, group and membership.

The memberships describe relations between persons and groups and groups and other groups.

#### 3.1 Mapping

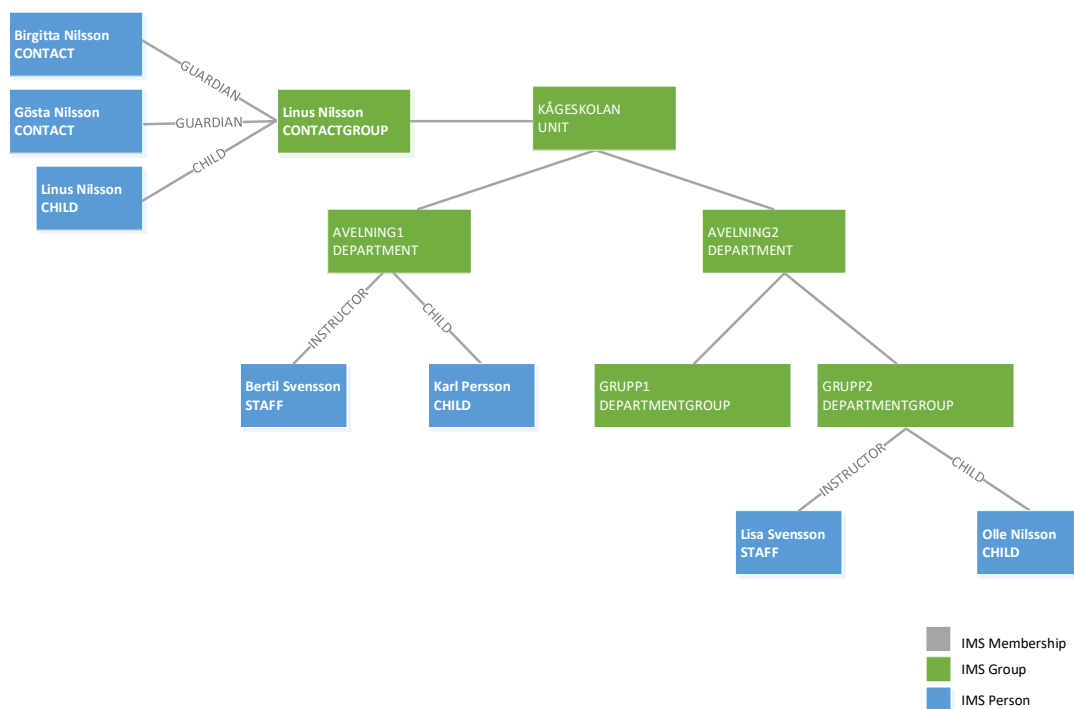
This table describes how childcare and school entities in Tieto Education are mapped to IMS entities.

Type	IMS Type	Description
Class	Group	School class in education.
Unit	Group	Preschool and school units
EducationGroup	Group	Education group
ScheduleGroup	Group	Schedule group
ExamGroup	Group	Examination group, used in Norway
OtherGroup	Group	Other group without any connection to education courses or subjects.
ContactGroup	Group	Contact group for each child and student containing contacts, guardians and mentors
MentorGroup	Group	Group with a mentor and the students the mentor is responsible for
Department	Group	Preschool unit.
DepartmentGroup	Group	Preschool group
Area	Group	Geografic area
Organization	Group	Organization containing Units
Contact	Person	Contact persons for student and child, including guardians for children below 18 year.
Student	Person	School students from preschool class to adult education.
Child	Person	Child 1-12 year in preschool, leisure time centre and pedagogical care.
Staff	Person	School administrative personnel, pedagogical personnel and principals.

## 3.2 Examples of structures and mappings

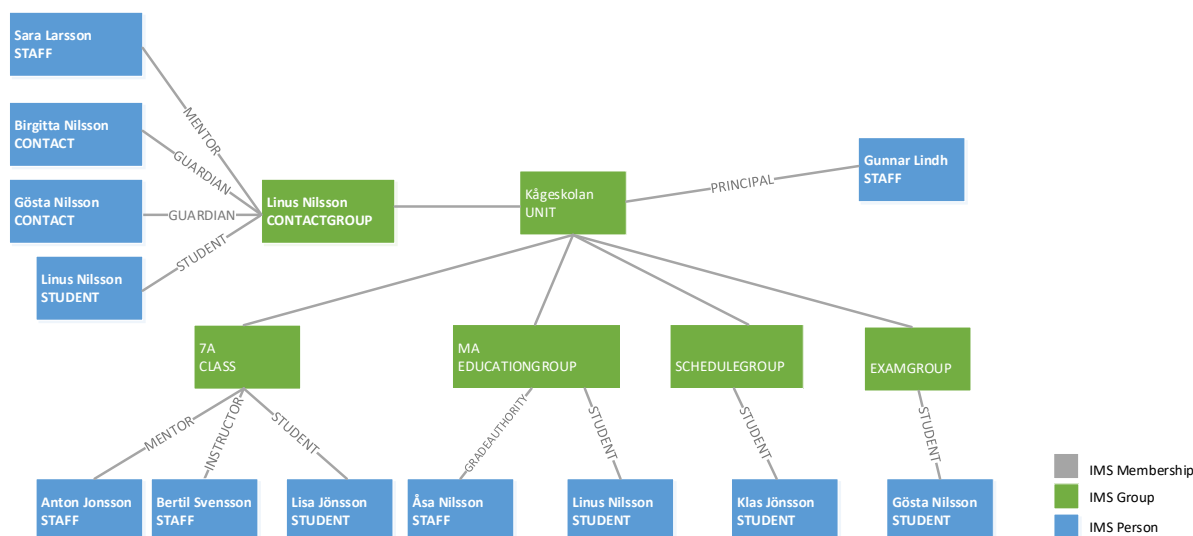
### 3.2.1 Preschool organization example

The diagram below shows an example of how a preschool organization is structured. It also shows mapping between Tieto Education entities and IMS entities.



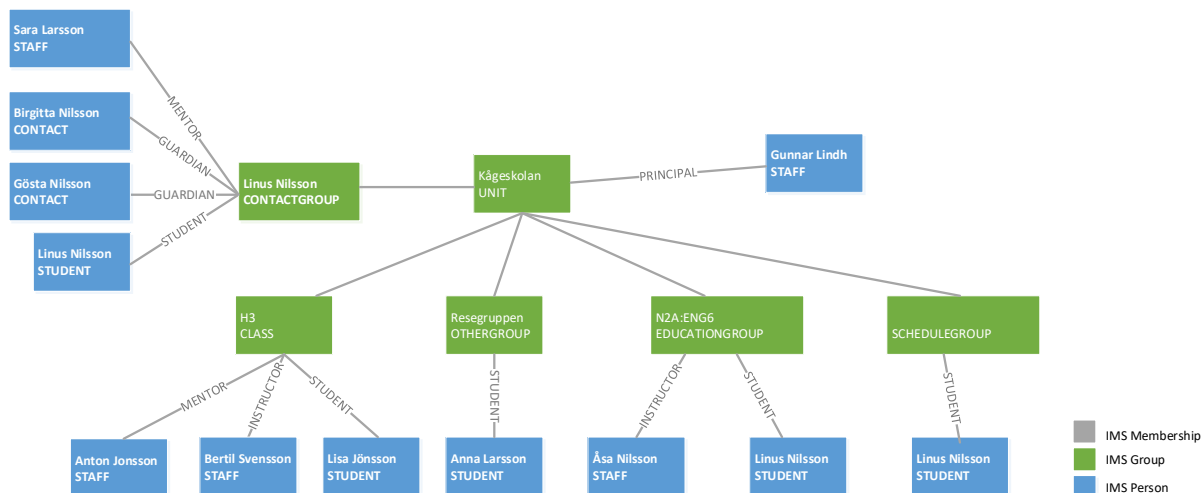
### 3.2.2 Compulsory school organization example

The diagram below shows an example of how a compulsory school organization is structured. It also shows mapping between Tieto Education entities and IMS entities.



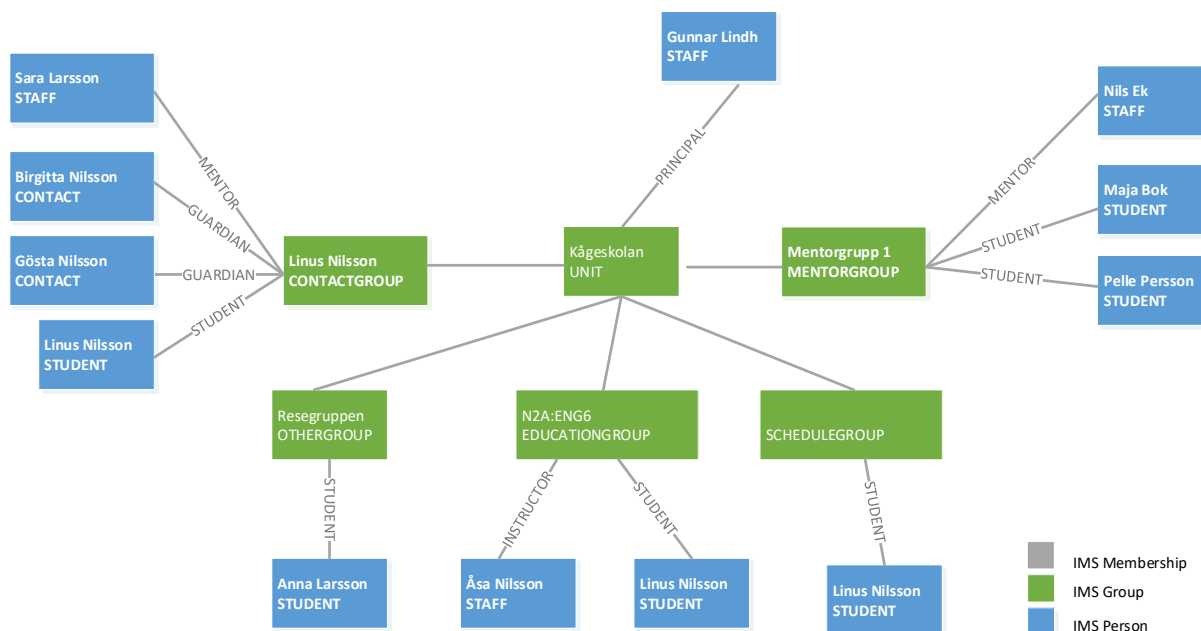
### 3.2.3 Upper secondary school organization example

The diagram below shows an example of how an upper secondary school organization is structured. It also shows mapping between Tieto Education entities and IMS entities.



### 3.2.4 Adult education organization example

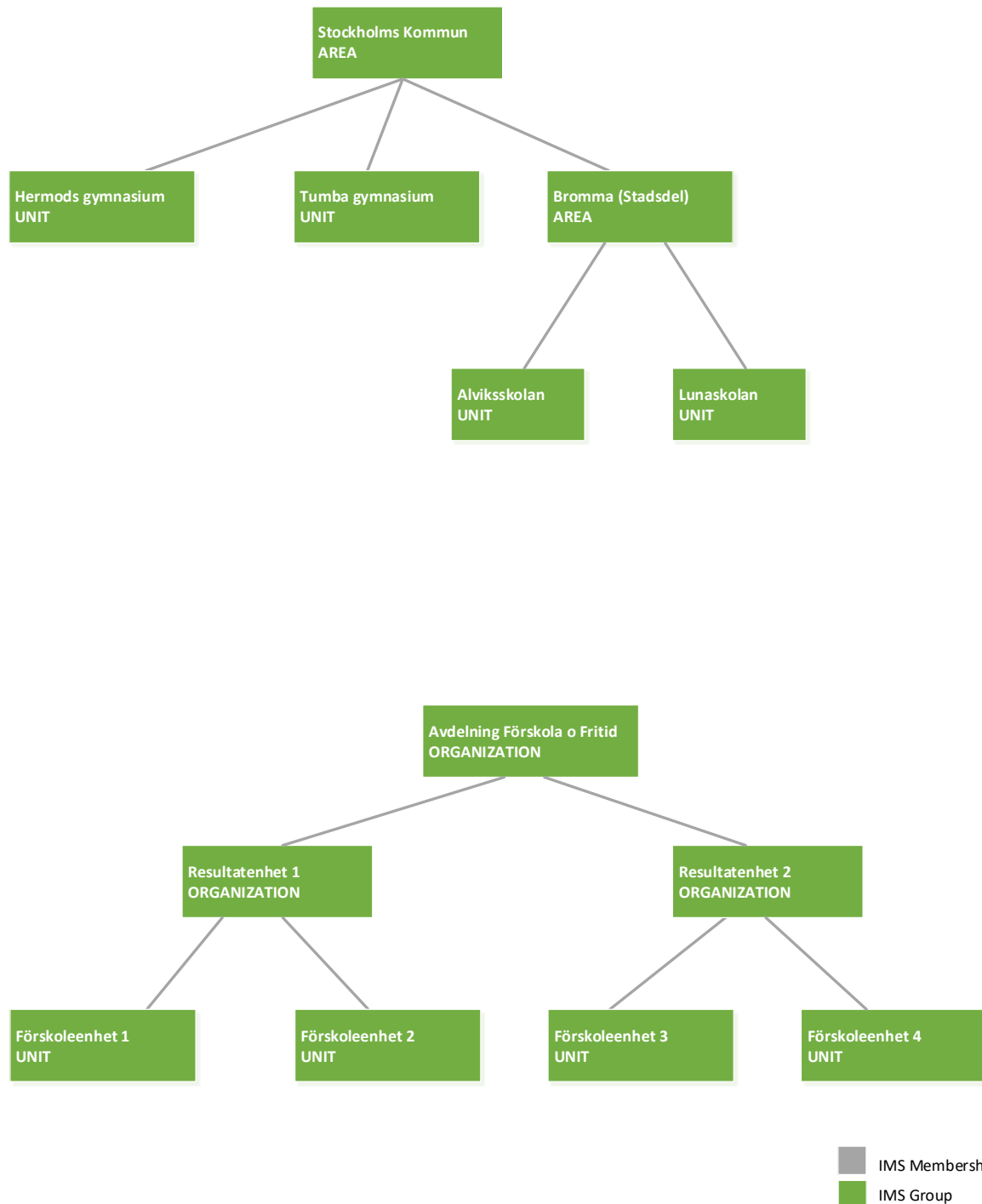
The diagram below shows an example of how an adult education organization is structured. It also shows mapping between Tieto Education entities and IMS entities.





### 3.2.5 Municipal organization example

The diagram below shows an example of how municipal organization is structured. It also shows mapping between Tieto Education entities and IMS entities.



## 4 School organization entities

### 4.1 Properties

The delivery information of the IMS Enterprise packaging that is used to manage the exchange of data between source and target system.

Name	Description
datasource	This is the source identifier of data source, for export the source contains customer domain and school type.
comments	Input values for the service.
type	Enumerated as CompleteOrganization, DeltaOrganization
datetime	The date and time the XML information were generated. The format is as [YYYY-MM-DDTHH:MM:SS]
schooltype	Exported schooltype
timeframe	Timeframe for the organization data

### 4.2 IMS Person

The person object contains information about child, students, professionals and contact persons in Tieto Education Student management system. All persons are identified with a personal identity and Globally Unique Identifier (GUID). The personal identity could be temporary or generated from Skatteverket, for more information see [www.skatteverket](http://www.skatteverket)

#### 4.2.1 Person attributes

Name	Description	Read-only
sourcedid.id	The persistent unique identity of the person	Yes
userid.value	Alternative unique identifiers of the person	Yes
userid.useridtype	Enumerated as PID, GUID	Yes
name.fn	Formatted name ([middle name] [lastname], [firstname])	Yes
name.n.given	The given name and not necessarily the first name	Yes
name.n.partname.partnametype	The type of partname. "Middle" is used for middle name.	Yes
name.n.partname.Value	Middle name	Yes
name.n.family	This is the family name and not necessarily the last name	Yes
emailhome	Email home address	No
emailworkschool	Work email for staff, school email for students	No
emailworkschool2	Alternative work email for staff, school email for students	No
tel	Phone numbers	No

tel.teltype	Identifies the type of telephone number. Enumerated as Voice, Mobile and Work where Voice is home phone.	No
adr.pcode	The post identity number	Yes
adr.street	The actual street address	Yes
adr.locality	The locality component of the address e.g., the City	Yes
adr.extadd	C/O address	Yes
demographics.bday	The birth date of the Person. The format is [YYYY-MM-DD]	Yes
demographics.gender	The gender of the Person. This is enumerated as Unknown, Female and Male	Yes
institutionrole.institutionroletype	The role of the Person within the institution. This is enumerated as Student, Staff, Contact, Child	Yes
institutionrole.primaryrole	Identifies if the associated role is the primary one for the Person in the institution. Enumerated as Yes, No	Yes
systemrole.systemroletype	The role of the person within the software environment. The value is always None	Yes
datasource	Source for address information. SKV "Skatteverket"	Yes
recstatus	Indicator whether the person is added(1), updated(2) or deleted(3). This attribute is only valid in delta services.	Yes

## 4.2.2 Person extensions

Common extended properties for all persons

Name	Description	Read-only
privacy	The person has restrictions. This is enumerated as None, Level1. Level1 means privacy highlighted by the "Skatteverket".	Yes
geographickeycode	Geographic key code	Yes
municipalitycode	Municipality code, formatted [NNNN], for more information see <a href="http://www.skl.se">www.skl.se</a>	Yes
municipalityname	Municipality name	Yes
timestamp	Date and time when person was created updated or deleted.	Yes
status	Status Normal      The person is alive and lives in Sweden Deceased    The person has deceased Emigrated    The person has emigrated	Yes
residentstatus	AsylumSeeker      Asylum seeker EuEssSwitzerlandCitizen      Citizen within EU, ESS, Schweiz NordicCitizen      Nordic citizen ExchangeStudent      Exchange student SwedishForeign      Swedes that live abroad	Yes

Name	Description	Read-only
	OtherForeignCitizen Other foreign citizen	
	DiplomatChildrenWithinEu Diplomatic children within EU, ESS, Schweiz	
	DiplomatChildrenOutsideEuEssSwitzerland Diplomatic children outside EU, ESS, Schweiz	
	PermitApplicationSeeker Permit application seeker	
	Unknown Unknown Resident status	

### 4.2.3 Person extension for students

Extended properties for students

Name	Description	Read-only
nativelanguage	Native language, formatted as longer a form of language name	Yes
altadr.pcode	The post identity number for alternative address	Yes
altadr.street	The actual street address for alternative address	Yes
altadr.locality	The locality component of the address, e.g., the City, for alternative address	Yes
altadr.extadd	C/O address for alternative address	Yes

### 4.3 IMS Group

Group is used for school units, classes, programs, courses, subjects, education groups and other groups. Depending on school type, some groups exist only for a particular school type.

This implementation does not attribute relationship for group relations to other groups. All group and person relations are described by memberships.

Groups can have extensions depending on group type.

Name	Description	Read-only
sourcedid.id	The persistent unique identity of the group	Yes
description.short	Group code or name.	Yes
group.type.typevalue	The container for the type classification being assigned to the group. This is enumerated as Unit, Class, OtherGroup, EducationGroup, ScheduleGroup, ContactGroup, MentorGroup, ExamGroup, Department and DepartmentGroup	Yes
group.type.typevalue.level	The parameter is always set to "1"	Yes

Name	Description	Read-only
timeframe.begin	Defines when a group is intended to be available. Formatted as [YYYY-MM-DD]. The parameter is used for Unit, Department, DepartmentGroup, Class, EducationGroup, ScheduleGroup and ExamGroup. The parameter is not used for Subject, Course, ContactGroup and MentorGroup. The begin date is included in the timeframe.	Yes
timeframe.end	Defines when group is intended to end. Formatted as [YYYY-MM-DD]. The end date is included in the timeframe.	Yes
recstatus	Indicator whether the group is added(1), updated(2) or deleted(3). This attribute is only valid in delta services.	Yes

#### 4.3.1 Group extensions

Common extended properties for all groups

Name	Description	Read-only
notes	A list of notes connected to the group	Yes
timestamp	Date and time when group was created updated or deleted.	Yes

#### 4.3.2 Group extensions for class

Extended properties for school classes

Name	Description	Read-only
schoolyear	School year. In case of a mixed class (with more than one school year) the value of this attribute is a range in the format "<startyear>-<endyear>".	Yes

#### 4.3.3 Group extensions for education groups

Extended properties for education groups

Name	Description	Read-only
notes	A list of notes associated with the education group	Yes

Actual mapping from Tieto Education:

- For UpperSecondary and Adult school types, education groups have three note fields which are written here
- For Compulsory school types, education groups has one note field – called Information – which is written here.

#### 4.3.4 Group extensions for exam groups

Extended properties for exam groups

Name	Description	Read-only
subgroupstype	Sub group type for ExamGroup	Yes

#### 4.3.5 Group extensions for other groups

Extended properties for non-education groups

Name	Description	Read-only
groupusage	The group usage, e.g. group for bus tickets	Yes

#### 4.3.6 Group extension for units

Extended properties for units from preschool to higher vocational education

Name	Description	Read-only
schooltype	School types at the unit, for more information see defined school types in this documentation.	Yes
csncode	CSN code for schools in Sweden, for more information see <a href="http://www.csn.se">www.csn.se</a>	Yes
governedby	Owns and manages the business for this group. This is enumerated as Private, Municipal and State	Yes
phone	Phone number to school office	No
pcode	The post identity number	No
street	The actual street address	No
locality	The locality component of the address e.g., the City	No
web	The school web address	No
municipalitycode	Municipality code, formatted [NNNN], for more information see <a href="http://www.skl.se">www.skl.se</a>	Yes
municipalityname	Municipality name	Yes
period	Periods defined on the unit	Yes
period.id	Unique identifier for period	Yes
period.type	Type of period.	Yes
period.start	Start date for period	Yes
period.end	End date for period	Yes

Name	Description	Read-only
geographickeycode	Geographic key code. This is only used for preschool, leisure time centre, preschool class, compulsory school and compulsory school for learning disabilities.	Yes
id	Unit id	Yes
email	E-mail address to the unit administrator office	Yes
officialunitname	Official name for the unit	Yes
visitingaddress	Visiting address for the unit	Yes
organizernumber	The organization number for the Organizer of the Unit	Yes

#### 4.3.7 Group extension for departments

There are no other extensions for departments than what is mentioned in chapter 4.3.1.

#### 4.3.8 Group extension for department groups

There are no other extensions for department groups than what is mentioned in chapter 4.3.1.

### 4.4 IMS Membership

The membership structure is used to define the members of a group or personal relations. A member can be a person or another group.

Members can have extensions depending on type of relation.

Name	Description	Read-only
complete	This is a Boolean flag	Yes
sourcedid.id	This is the persistent unique identifier assigned to the group structure for which the memberships are being defined.	Yes
member.sourcedid.id	This is the unique identifier assigned to the group structure which is the member of the host group	Yes
member.idtype	Indicates if the Member is a person or another group. Enumerated as Person or Group.	Yes
member.role.status	Indicates if a member is active or inactive in the group. The value is always set to "Active".	Yes

Name	Description	Read-only
member.role.roletype	The member's function within a group. The content is enumerated as: Instructor, Mentor, Administrator, Guardian, Contact, OtherResponsible, Child, Student, Principal, GradeAuthority, Unit, Class, OtherGroup, EducationGroup, ScheduleGroup, ContactGroup, MentorGroup, Department and DepartmentGroup	Yes
member.role.timeframe.begin	Defines when a group is intended to be available for a person or a group. Formatted as [YYYY-MM-DD]. The time frame is within the timeframe for the group that owns the membership.	Yes
member.role.timeframe.end	Defines when group participation for a person or a group is intended to end. Formatted as [YYYY-MM-DD]. The time frame is within the timeframe for the group that owns the membership.	Yes
member.role.recstatus	Indicator whether the role is added(1), updated(2) or deleted(3). This attribute is only valid in delta services.	Yes

#### 4.4.1 Membership extensions

Common extended properties for all members in memberships.

Name	Description	Read-only
timestamp	Date and time when member in membership is created updated or deleted.	Yes

#### 4.4.2 Membership extensions for responsibilities

Extended properties for relationships between units and principals.

Name	Description	Read-only
responsibility	Contains information for all school units the principal is responsible for	Yes
responsibility.schoolunitcode	School unit code	Yes
responsibility.begin	Start date for responsibility	Yes
responsibility.end	End date for responsibility	Yes
responsibility.timestamp	Date and time responsibility was created updated or deleted.	Yes



#### 4.4.3 Membership extensions for placement

Extended properties for relationships between classes and students.

Name	Description	Read-only
placement	Contains information about a student's placement in a class	Yes
placement.schoolyear	School year	Yes
placement.schoolunitcode	School unit code	Yes
placement.programcode	Program code	Yes
placement.programprofile	Profile	Yes
placement.programvariant	Variant	Yes
placement.begin	Start date for placement	Yes
placement.end	End date for placement	Yes
placement.timestamp	Date and time placement was created updated or deleted.	Yes
placement.integrateschooltype	Type of schoolform	Yes

#### 4.4.4 Membership extensions for activity

Extended properties for relationships between classes/education groups and students/teachers.

Name	Description	Read-only
activity	Contains information about a student/teacher activities in a class or education group	Yes
activity.coursecode	Course code	Yes
activity.courseid	This is the persistent unique identifier assigned to the activity.coursecode.	Yes
activity.subjectcode	Subject code	Yes
activity.subjectid	This is the persistent unique identifier assigned to the activity.subjectcode.	Yes
activity.recommendedsubjectcode	Generated scbcode for subject	Yes
activity.hours	Number of hours for the activity	Yes
activity.cancelled	Indicates if the activity is cancelled	Yes
activity.begin	Start date for activity	Yes
activity.end	End date for activity	Yes
activity.timestamp	Date and time placement was created updated or deleted.	Yes

#### 4.4.5 Membership extensions for mentor

Extended properties for relationships between mentors and classes or education groups.

Name	Description	Read-only
mentor	Contains information about the length of a mentorship	Yes
mentor.begin	Start date for the mentorship	Yes
mentor.end	End date for the mentorship	Yes
mentor.timestamp	Date and time when mentor in membership is created updated or deleted.	Yes

## 5 Municipal organization entities

### 5.1 Properties

The delivery information of the IMS Enterprise packaging that is used to manage the exchange of data between source and target system.

Name	Description
datasource	This is the source identifier of data source, for export the source contains customer domain and school type.
comments	Input values for the service.
type	Enumerated as MunicipalOrganization
datetime	The date and time the XML information were generated. The format is as [YYYY-MM-DDTHH:MM:SS]
schooltype	Exported schooltype
timeframe	Timeframe for the organization data

### 5.2 IMS Group

Group is used for the organization (profit centers, etc), municipal and units (schools) within the municipal. If the municipal has been divided into smaller parts, these parts can also be represented by a Group.

Groups can have extensions depending on group type.

Name	Description	Read-only
sourcedid.id	The persistent unique identity of the group	Yes
description.short	Group name.	Yes
group.type.typevalue	The container for the type classification being assigned to the group. This is enumerated as Organization, Area and Unit	Yes
timeframe.begin	Defines when a group is intended to be available. Formatted as [YYYY-MM-DD]. The begin date is included in the timeframe.	Yes
timeframe.end	Defines when group is intended to end. Formatted as [YYYY-MM-DD]. The end date is included in the timeframe.	Yes
organization.typecode	Code for the organization type	Yes
organization.type.name	Name for the organization type	Yes

## 5.3 IMS Membership

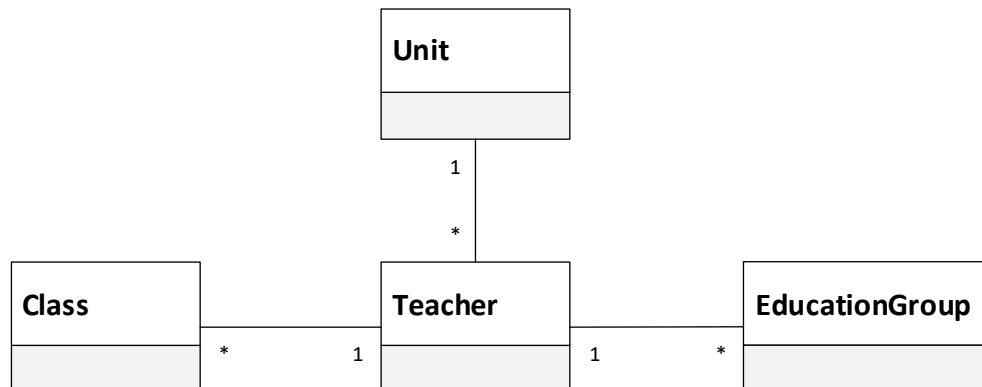
The membership structure is used to define the members of a group. A member can be another group.

Name	Description	Read-only
sourcedid.id	This is the persistent unique identifier assigned to the group structure for which the memberships are being defined.	Yes
member.sourcedid.id	This is the unique identifier assigned to the group structure which is the member of the host group	Yes
member.idtype	The value is always set to Group.	Yes
member.role.status	Indicates if a member is active or inactive in the group. The value is always set to Active.	Yes
member.role.roletype	The member's function within a group. The value is Area, Organization or Unit	Yes
member.role.timeframe.begin	Defines when a group is intended to be available for a person or a group. Formatted as [YYYY-MM-DD]. The time frame is within the timeframe for the group that owns the membership.	Yes
member.role.timeframe.end	Defines when group participation for a person or a group is intended to end. Formatted as [YYYY-MM-DD]. The time frame is within the timeframe for the group that owns the membership.	Yes

## 6 Teacher organization entities

### 6.1 Domain model

The model for Teacher Organization does not use the IMS entities described in the other models in this API. This diagram describes the model used:



### 6.2 Properties

The delivery information of the IMS Enterprise packaging that is used to manage the exchange of data between source and target system.

Name	Description
datasource	This is the source identifier of data source, for export the source contains customer domain and school type.
comments	Input values for the service.
type	Enumerated as TeacherOrganization
datetime	The date and time the XML information were generated. The format is as [YYYY-MM-DDTHH:MM:SS]
schooltype	Exported schooltype
timeframe	Timeframe for the organization data

### 6.3 Unit

Unit is used for information related to teachers and their classes and education group with school unit codes associated.

Name	Description	Read-only
id	Unique identifier for unit	Yes
name	Unit name.	Yes
teacher	Teacher information.	Yes

## 6.4 Teacher

This is used for the information about teacher along with classes and education groups for which person has teaching activity.

Name	Description	Read-only
id	Unique identifier for teacher	Yes
personid	Person number for teacher	Yes
name	Name of teacher	Yes
class	Class with teaching activity for teacher	Yes
educationgroup	Education group with teaching activity for teacher	Yes

## 6.5 Class

This structure is used to define class information along with school unit codes for the school units associated with class.

Name	Description	Read-only
id	Unique identifier for class	Yes
name	Name of class	Yes
schoolunitcode	Code for school unit associated with class	Yes

## 6.6 Education Group

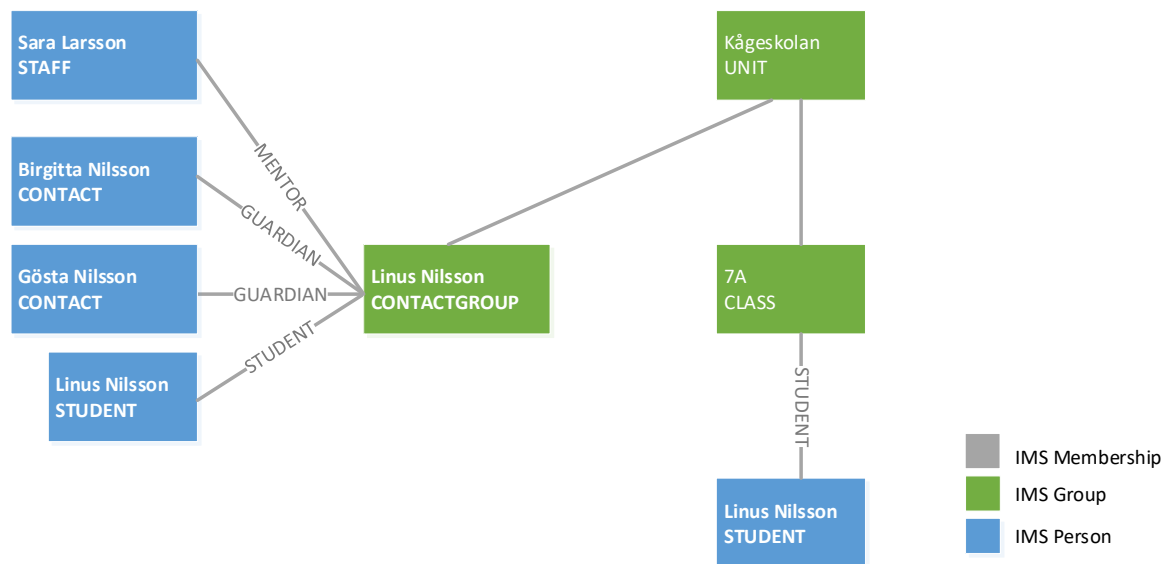
This structure is used to define education group information along with school unit codes for the school units associated with education group.

Name	Description	Read-only
id	Unique identifier for education group	Yes
name	Name of education group	Yes
schoolunitcode	Code for school unit associated with education group	Yes

## 7 Student organization entities

### 7.1 Domain model

The domain model used is a subset of the complete IMS model used in the other services:



See chapter 4: School organization entities for description of the used entities.

## 8 Services

All services are based on HTTP REST technology and organized in school types to match each school structure. “Update services” are using the method HTTP POST and “Get services” are using the method HTTP GET.

### 8.1 Complete export of organization

These services return the complete organization at a specific time. All services are using current time as default value for search date identified. By using search date, you can get the organization from past or future.

Parameters – Alternative 1:

Parameter	Mandatory	Description
SearchDate	No	The search date. Current date will be used if SearchDate is not specified. The oldest search date that can be used is current date minus ten years.
MunicipalityCode	No	If supplied, only data for school units with same value for municipality code are returned.
GovernedBy	No	If supplied, the allowed values are: municipal, private, state, or other. If supplied, only data for school units with supplied GovernedBy will be returned.

Parameters – Alternative 2:

Parameter	Mandatory	Description
UnitId	Yes	Id for the school unit. Organization for the specified school unit will be returned.
SearchDate	No	The search date. Current date will be used if SearchDate is not specified. The oldest search date that can be used is current date minus ten years.

Services:

Service	Description
GetPedagogicalCareOrganization	Organization for pedagogical care.
GetPreSchoolOrganization	Organization for preschool.
GetLeisureTimeCentreOrganization	Organization for leisure time centre.
GetPreSchoolClassOrganization	Organization for preschool class
GetCompulsorySchoolOrganization	Organization for compulsory schools.



Service	Description
GetCompulsorySchoolForLearningDisabilitiesOrganization	Organization for compulsory school with learning disabilities.
GetUpperSecondarySchoolOrganization	Organization for upper secondary school.
GetUpperSecondarySchoolForLearningDisabilitiesOrganization	Organization for upper secondary school with learning disabilities.
GetSwedishForImmigrantsSchoolOrganization	Organization for Swedish for immigrants.
GetMunicipalAdultSchoolOrganization	Organization for municipal adult school.
GetAdultSchoolForLearningDisabilitiesOrganization	Organization for adult school with learning disabilities.
GetHigherVocationalEducationOrganization	Organization for higher vocational education.

## 8.2 Delta export of organization

These services give the organizational changes done within a specified timeframe. The output is XML information with changed organization entities. For each changed entity the attribute "recstatus" is used to indicate the type of change. The attribute "recstatus" is enumerated as 1=Add, 2=Update and 3=Delete. If no value is given for a "recstatus", it is assumed to have the value 1=Add or 2=Update. When deleting a group or person only the deleted entity is indicated as deleted, no cascading deletes for memberships are reported. All changed entities have a timestamp stored in the extension attribute "timestamp" for all entities to secure information quality.

When person is updated the institution role type may be empty.

By examining the attribute "complete" (which is false by default) on the memberships, the client can determine whether the members are the complete set of members within the membership (complete = true), or just the differences due to events occurring during the specified timeframe (complete = false),

Parameters:

Parameter	Mandatory	Description
StartDate	Yes	Start date&time
EndDate	Yes	End date&time
MunicipalityCode	No	If supplied, only data for school units with same value for municipality code are returned.
GovernedBy	No	If supplied, the allowed values are: municipal, private, state, or other. If supplied, only data for school units with supplied GovernedBy will be returned.

Parameter value limitations:

- EndDate – StartDate >= 5 minutes
- EndDate – StartDate <= 24 hours

- Current time – EndDate >= 5 minutes
- Current time – StartDate <= 30 days

Services:

Service	Description
GetUpperSecondarySchoolOrganizationDelta	Organization delta for upper secondary school.
GetUpperSecondarySchoolForLearningDisabilitiesOrganizationDelta	Organization delta for upper secondary school with learning disabilities.
GetSwedishForImmigrantsSchoolOrganizationDelta	Organization delta for Swedish for immigrants school.
GetMunicipalAdultSchoolOrganizationDelta	Organization delta for municipal adult school.
GetAdultSchoolForLearningDisabilitiesOrganizationDelta	Organization delta for adult school with learning disabilities.
GetHigherVocationalEducationOrganizationDelta	Organization delta for higher vocational education.
GetCompulsorySchoolOrganizationDelta	Organization delta for compulsory schools.
GetCompulsorySchoolForLearningDisabilitiesOrganizationDelta	Organization delta for compulsory school with learning disabilities.
GetLeisureTimeCentreOrganizationDelta	Organization delta for leisure time centre.
GetPreSchoolClassOrganizationDelta	Organization delta for preschool class
GetPreSchoolOrganizationDelta	Organization delta for preschool

### 8.2.1 Use cases

Some use cases for delta export:

Organization change	Indicated with
New school unit and unit domain	- IMS group for the school unit (recstatus = 1)
Updated school unit or unit domain	- IMS group with new unit information (recstatus = 2)
New class	- IMS group for the class (recstatus = 1) - IMS membership for unit with the class as member
Update class	- IMS group for the class (recstatus = 2) - IMS membership for the class with the teachers, students as members
Delete class	- IMS group for the class (recstatus = 3)
New education group	- IMS group for the education group (recstatus = 1)

	<ul style="list-style-type: none"> <li>- IMS membership for unit with the education group as member</li> </ul>
Update education group	<ul style="list-style-type: none"> <li>- IMS group for the education group (recstatus = 2)</li> <li>- IMS membership for the group with the teachers, students as members</li> </ul>
Delete education group	<ul style="list-style-type: none"> <li>- IMS group for the education group (recstatus = 3)</li> </ul>
New other group	<ul style="list-style-type: none"> <li>- IMS group for the other group (recstatus = 1)</li> <li>- IMS membership for unit with the other group as member</li> </ul>
Update other group	<ul style="list-style-type: none"> <li>- IMS group for the other group (recstatus = 2)</li> <li>- IMS membership for the other group with the teachers, students as members</li> </ul>
Delete other group	<ul style="list-style-type: none"> <li>- IMS group for the other group (recstatus = 3)</li> </ul>
New contact for student	<ul style="list-style-type: none"> <li>- IMS membership for the student's contact group (complete = true)</li> <li>- IMS persons for all contact persons</li> <li>- IMS group for contact group</li> <li>- IMS membership for unit with contact group as member</li> </ul>
Update information on contact person	<ul style="list-style-type: none"> <li>- IMS person for student with updated contact person</li> <li>- IMS persons for all contact persons</li> <li>- IMS group for contact group</li> <li>- IMS membership for unit with contact group as member</li> <li>- IMS membership for the contact group (complete = true)</li> </ul>
Remove contact for student	<ul style="list-style-type: none"> <li>- Complete IMS membership for the students contact group (complete = true)</li> <li>- IMS persons for all contact persons</li> <li>- IMS group for contact group</li> <li>- IMS membership for unit with contact group as member</li> </ul>
New student in class	<ul style="list-style-type: none"> <li>- IMS person for student</li> <li>- IMS membership for the class with the student as member</li> <li>- IMS persons for all contact persons</li> <li>- IMS group for contact group</li> <li>- IMS membership for unit with contact group as member</li> <li>- IMS membership for the contact group (complete = true)</li> </ul>
Updated student in class	<ul style="list-style-type: none"> <li>- IMS person for student</li> <li>- IMS membership for the class with the student as member</li> <li>- IMS persons for all contact persons</li> <li>- IMS group for contact group</li> <li>- IMS membership for unit with contact group as member</li> <li>- IMS membership for the contact group (complete = true)</li> </ul>
Remove student from class	<ul style="list-style-type: none"> <li>- IMS person for student</li> <li>- IMS membership for the class with the student as member (recstatus = 3)</li> <li>- IMS persons for all contact persons</li> <li>- IMS group for contact group</li> <li>- IMS membership for unit with contact group as member</li> <li>- IMS membership for the contact group (complete = true)</li> </ul>
New student in education group	<ul style="list-style-type: none"> <li>- IMS person for student</li> </ul>

	<ul style="list-style-type: none"> <li>- IMS membership for the education group with the student as member</li> <li>- IMS persons for all contact persons</li> <li>- IMS group for contact group</li> <li>- IMS membership for unit with contact group as member</li> <li>- IMS membership for the contact group (complete = true)</li> </ul>
Updated student in education group	<ul style="list-style-type: none"> <li>- IMS person for student</li> <li>- IMS membership for the education group with the student as member</li> <li>- IMS persons for all contact persons</li> <li>- IMS group for contact group</li> <li>- IMS membership for unit with contact group as member</li> <li>- IMS membership for the contact group (complete = true)</li> </ul>
Remove student in education group	<ul style="list-style-type: none"> <li>- IMS membership for the education group with the student as member (recstatus = 3)</li> </ul>
New teacher in class	<ul style="list-style-type: none"> <li>- IMS person for teacher</li> <li>- IMS membership for the class with the teacher as member</li> </ul>
Updated teacher in class	<ul style="list-style-type: none"> <li>- IMS person for teacher</li> <li>- IMS membership for the class with the teacher as member</li> </ul>
Remove teacher from class	<ul style="list-style-type: none"> <li>- IMS membership for the class with the teacher as member (recstatus = 3)</li> </ul>
New teacher in educations group	<ul style="list-style-type: none"> <li>- IMS person for teacher</li> <li>- IMS membership for the education group with the teacher as member</li> </ul>
Update teacher in education group	<ul style="list-style-type: none"> <li>- IMS person for teacher</li> <li>- IMS membership for the education group with the teacher as member</li> </ul>
Remove teacher from education group	<ul style="list-style-type: none"> <li>- IMS membership for the education group with the teacher as member (recstatus = 3)</li> </ul>
Change principal for unit	<ul style="list-style-type: none"> <li>- IMS person for the new principal</li> <li>- IMS membership for the unit with one member for the resigning principle (recstatus = 3) and another for the new principal</li> </ul>
New department	<ul style="list-style-type: none"> <li>- IMS group for the department (recstatus = 1)</li> <li>- IMS membership for unit with the department as member</li> </ul>
Update department	<ul style="list-style-type: none"> <li>- IMS group for the department (recstatus = 2)</li> </ul>
Delete department	<ul style="list-style-type: none"> <li>- IMS group for the department (recstatus = 3)</li> </ul>
New department group	<ul style="list-style-type: none"> <li>- IMS group for the department group (recstatus = 1)</li> <li>- IMS membership for department with the department group as member</li> </ul>
Update department group	<ul style="list-style-type: none"> <li>- IMS group for the department group (recstatus = 2)</li> </ul>
Delete department group	<ul style="list-style-type: none"> <li>- IMS group for the department group (recstatus = 3)</li> </ul>

## 8.3 Get units

These services return the units for a specific school type.

Parameters:

Parameter	Mandatory	Description
SearchDate	No	The search date. Current date will be used if SearchDate is not specified. The oldest search date that can be used is current date minus ten years.

Services:

Service	Description
GetPedagogicalCareUnits	Units for pedagogical care.
GetPreSchoolUnits	Units for preschool.
GetLeisureTimeCentreUnits	Units for leisure time centre.
GetPreSchoolClassUnits	Organization for preschool class
GetCompulsorySchoolUnits	Organization for compulsory schools.
GetCompulsorySchoolForLearningDisabilitiesUnits	Organization for compulsory school with learning disabilities.
GetUpperSecondarySchoolUnits	Organization for upper secondary school.
GetUpperSecondarySchoolForLearningDisabilitiesUnits	Organization for upper secondary school with learning disabilities.
GetSwedishForImmigrantsSchoolUnits	Organization for Swedish for immigrants.
GetMunicipalAdultSchoolUnits	Organization for municipal adult school.
GetAdultSchoolForLearningDisabilitiesUnits	Organization for adult school with learning disabilities.
GetHigherVocationalEducationUnits	Organization for higher vocational education.

## 8.4 Update organization

The services add or update the organization at a school. Using the services, you can

- add education group
- add and delete schedule group
- update schedule group
- update contact information of persons (email and telephone numbers)

The services take no parameters.

At delta update of organization, the attribute properties the attribute type shall be set to "DeltaOrganization".

As input these services take XML information according to the XML schema for the Organization API. See the table below.

Organization change	The XML information that is input to the service
New education group	<ul style="list-style-type: none"> <li>- IMS group for the education group (recstatus = 1)</li> <li>- IMS membership for the unit with the education group as member (recstatus = 1)</li> </ul>
Update education group	<ul style="list-style-type: none"> <li>- IMS group for the education group (recstatus = 2)</li> </ul>
New schedule group	<ul style="list-style-type: none"> <li>- IMS group for the schedule group (recstatus = 1)</li> <li>- IMS membership for the "parent group" (education group, class or unit) with the schedule group as member (recstatus = 1)</li> </ul>
Delete schedule group	<ul style="list-style-type: none"> <li>- IMS group for the schedule group (recstatus = 3)</li> <li>- IMS membership for the "parent group" (education group, class or unit) with the schedule group as member (recstatus = 3)</li> </ul>
Update schedule group	<ul style="list-style-type: none"> <li>- IMS group for the schedule group (recstatus = 2)</li> </ul>
Update person	<ul style="list-style-type: none"> <li>- IMS person for the person (recstatus = 2)</li> </ul>

Services:

Service	Description
UpdatePreSchoolClassOrganization	Update organization for preschool class.
UpdateCompulsorySchoolOrganization	Update organization for compulsory school
UpdateCompulsorySchoolForLearningDisabilitiesOrganization	Update organization for compulsory school for learning disabilities.
UpdateUpperSecondarySchoolOrganization	Update organization for secondary school.
UpdateUpperSecondarySchoolForLearningDisabilitiesOrganization	Update organization for upper secondary school for learning disabilities.
UpdateSwedishForImmigrantsSchoolOrganization	Update organization for SFI schools
UpdateMunicipalAdultSchoolOrganization	Update organization for municipal adult education
UpdateAdultSchoolForLearningDisabilitiesOrganization	Update organization for adult school for learning disabilities.
UpdateHigherVocationalEducationOrganization	Update organization for higher vocational education.

## 8.5 Export of municipal organization

This service returns the complete municipal organization at a specific time. All services are using current time as default value for search date identified. By using search date, you can get the organization from past or future.

As seen in picture in chapter 3.2.5, the municipal organization can consist of both Areas and Organization trees.

Parameters:

Parameter	Mandatory	Description
SearchDate	No	The search date. Current date will be used if SearchDate is not specified. The oldest search date that can be used is current date minus ten years.

Services:

Service	Description
GetMunicipalOrganization	Get the municipal organization.

## 8.6 Export teacher organization

This service returns the teachers organization at a specific time. All services are using current time as default value for search date identified. By using search date, you can get the organization from past or future.

Parameters:

Parameter	Mandatory	Description
SearchDate	No	The search date. Current date will be used if SearchDate is not specified. The oldest search date that can be used is current date minus ten years.
PersonId	No	Takes person id or guid to get specific teachers organization
UnitId	No	Takes unit guid to get teacher organization within specific unit

Services:

Service	Description
GetCompulsorySchoolTeacherOrganization	Get teacher organization for compulsory schools.
GetCompulsorySchoolForLearningDisabilitiesTeacherOrganization	Get teacher organization for compulsory school with learning disabilities.

Service	Description
GetUpperSecondarySchoolTeacherOrganization	Get teacher organization for upper secondary school.
GetUpperSecondarySchoolForLearningDisabilitiesTeacherOrganization	Get teacher organization for upper secondary school with learning disabilities.
GetMunicipalAdultSchoolTeacherOrganization	Get teacher organization for adult school.
GetAdultSchoolForLearningDisabilitiesTeacherOrganization	Get teacher organization for Adult school with learning disabilities.

## 8.7 Export student organization

This service returns a student's organization at a specific time. All services are using current time as default value for search date identified. By using search date, you can get the organization from past or future.

Parameters:

Parameter	Mandatory	Description
PersonId	Yes	Takes person id or guid to get the specific student's organization
SearchDate	No	The search date. Current date will be used if SearchDate is not specified. The oldest search date that can be used is current date minus ten years.

Services:

Service	Description
GetPreSchoolClassStudentOrganization	Get student organization for preschool class
GetCompulsorySchoolStudentOrganization	Get student organization for compulsory schools.
GetCompulsorySchoolForLearningDisabilitiesStudentOrganization	Get student organization for compulsory school with learning disabilities.
GetUpperSecondarySchoolStudentOrganization	Get student organization for upper secondary school.
GetUpperSecondarySchoolForLearningDisabilitiesStudentOrganization	Get student organization for upper secondary school with learning disabilities.



## 9 Appendix

### 9.1 References

Name	Address
IMS Enterprise Information Model	<a href="http://www.imsglobal.org/enterprise/entv1p1/imsent_infov1p1.html">http://www.imsglobal.org/enterprise/entv1p1/imsent_infov1p1.html</a>
IMS Enterprise XML Binding Specification	<a href="http://www.imsglobal.org/enterprise/entv1p1/imsent_bindv1p1.html">http://www.imsglobal.org/enterprise/entv1p1/imsent_bindv1p1.html</a>
IMS Enterprise Best Practices and Implementation Guide	<a href="http://www.imsglobal.org/enterprise/entv1p1/imsent_bestv1p1.html">http://www.imsglobal.org/enterprise/entv1p1/imsent_bestv1p1.html</a>
Organization API XML schemas and examples	<a href="https://github.com/ExchangeServices">https://github.com/ExchangeServices</a>

### 9.2 Vocabulary

Word	Description
Mentor	School mentor for student
Instructor	Teacher
Guardian	Guardian is the person who has legal custody for a child. It can be either one or both parents or a person designated by the court
Contact	Student contacts
Other responsible	Other responsible to children below 18 years, for example foster parents
Child	Children below 6 year
Student	School student 6 year and older
Administrator	School administrator
PID	Personal identity, formatted [YYYYMMDDNNNN]
GUID	Global unique identifier
Other group	Non education groups
Education group	Student groups related to education course or subject depending on school types
Principal	Director of schools