

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 starts 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

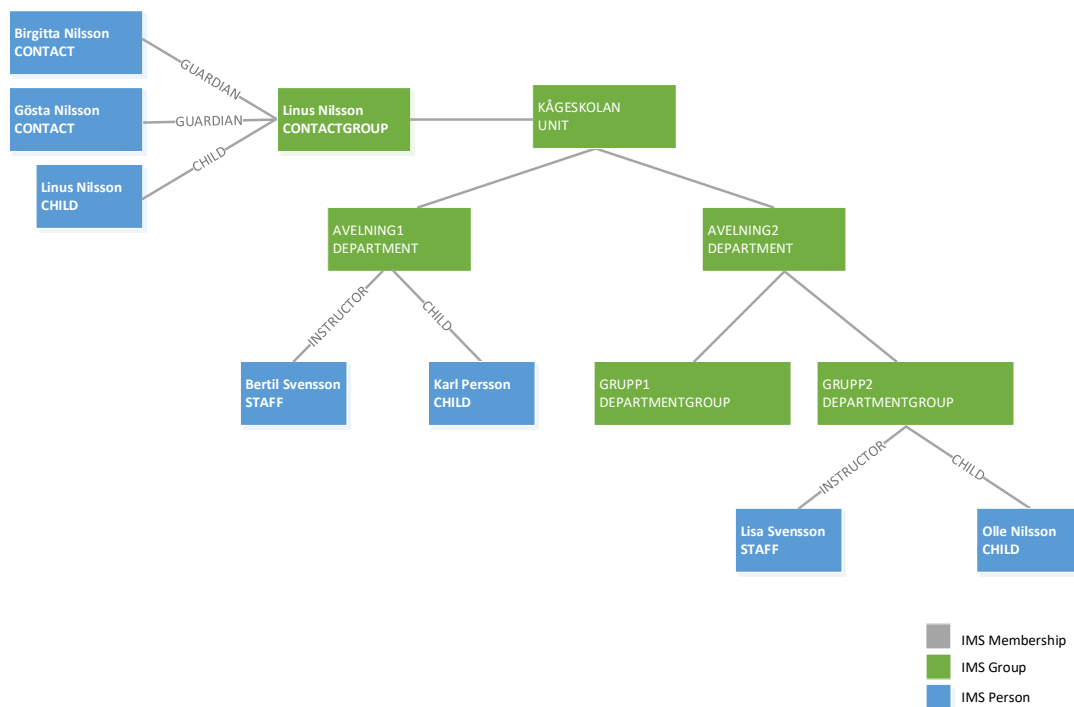
This table describes how childcare and school entities in Tieto Education are mapped to IMS entities.

| Type | IMS Type | Description |
|-----------------|----------|--|
| Class | Group | School class in education. |
| Unit | Group | Preschool and school units |
| EducationGroup | Group | Education group |
| ScheduleGroup | Group | Schedule group |
| 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

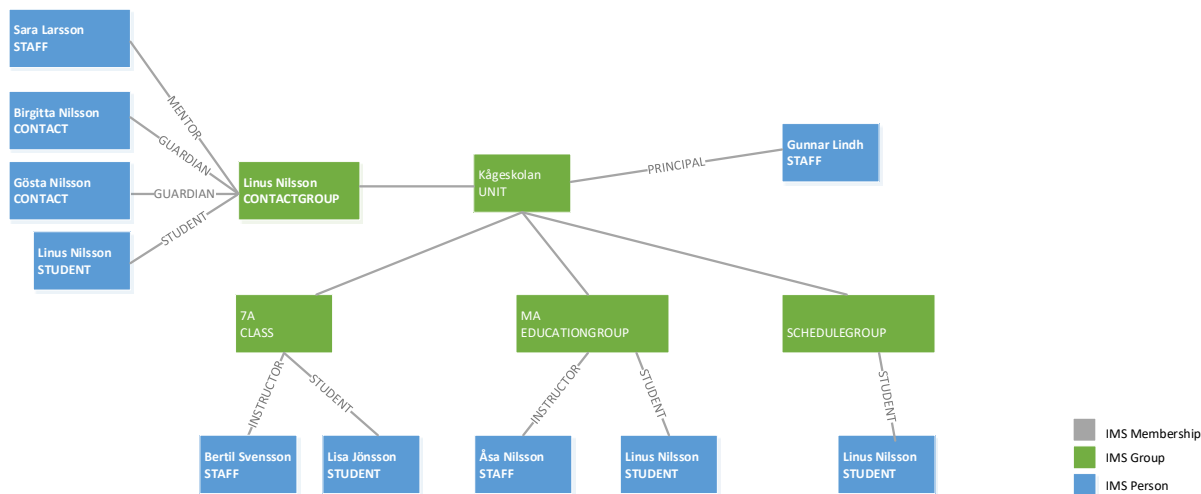
3.2.1 Preschool organization example

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



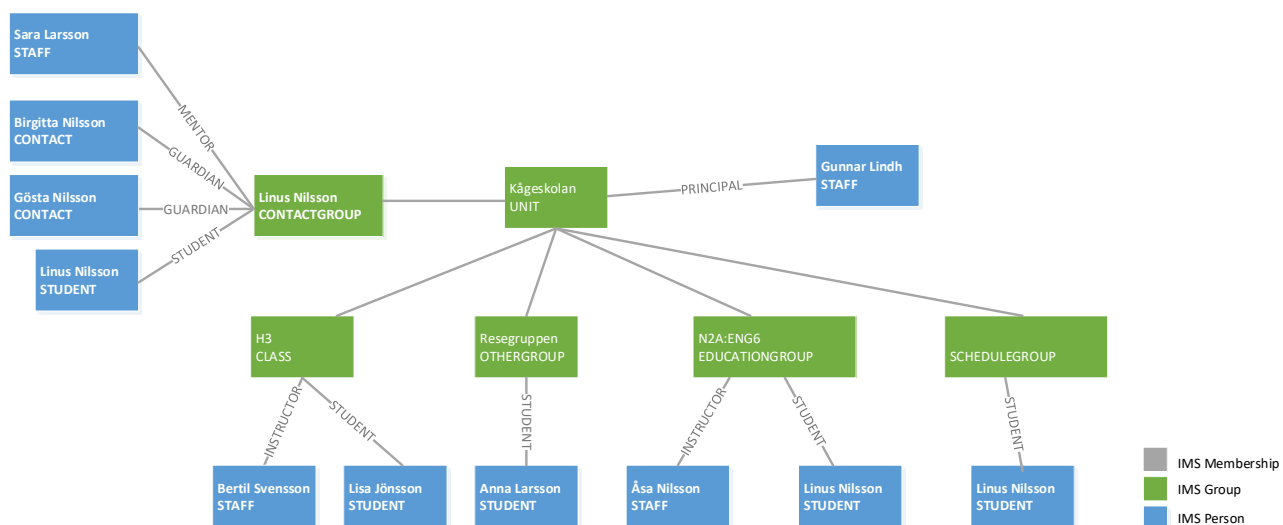
3.2.2 Compulsory school organization example

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.



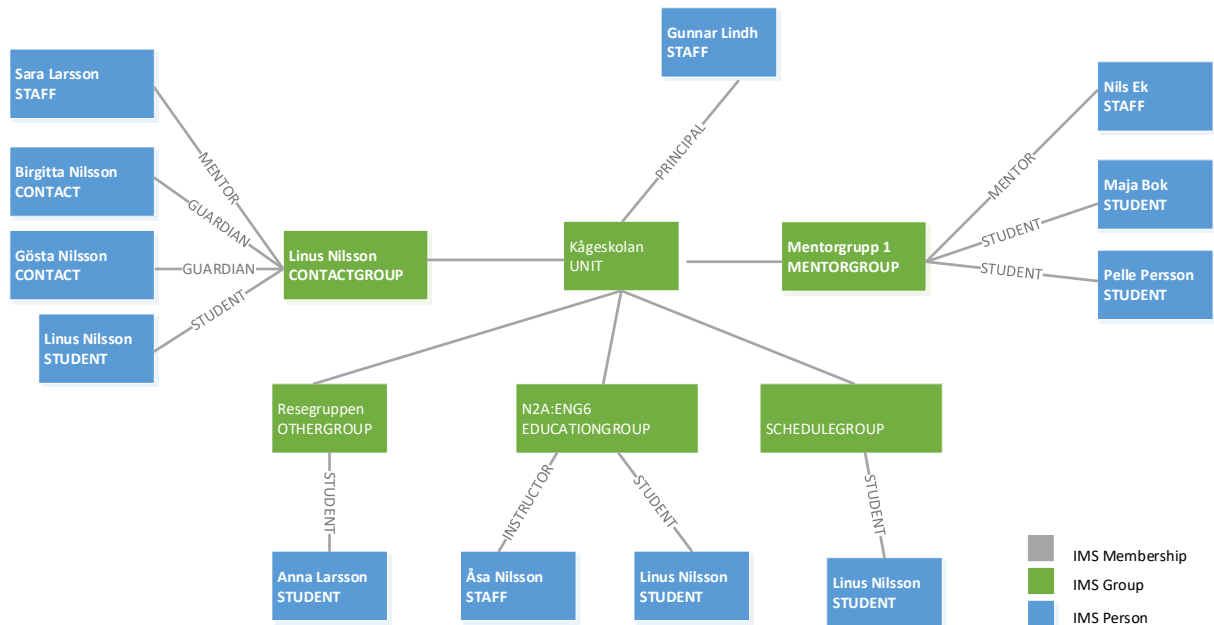
3.2.3 Upper secondary school organization example

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.



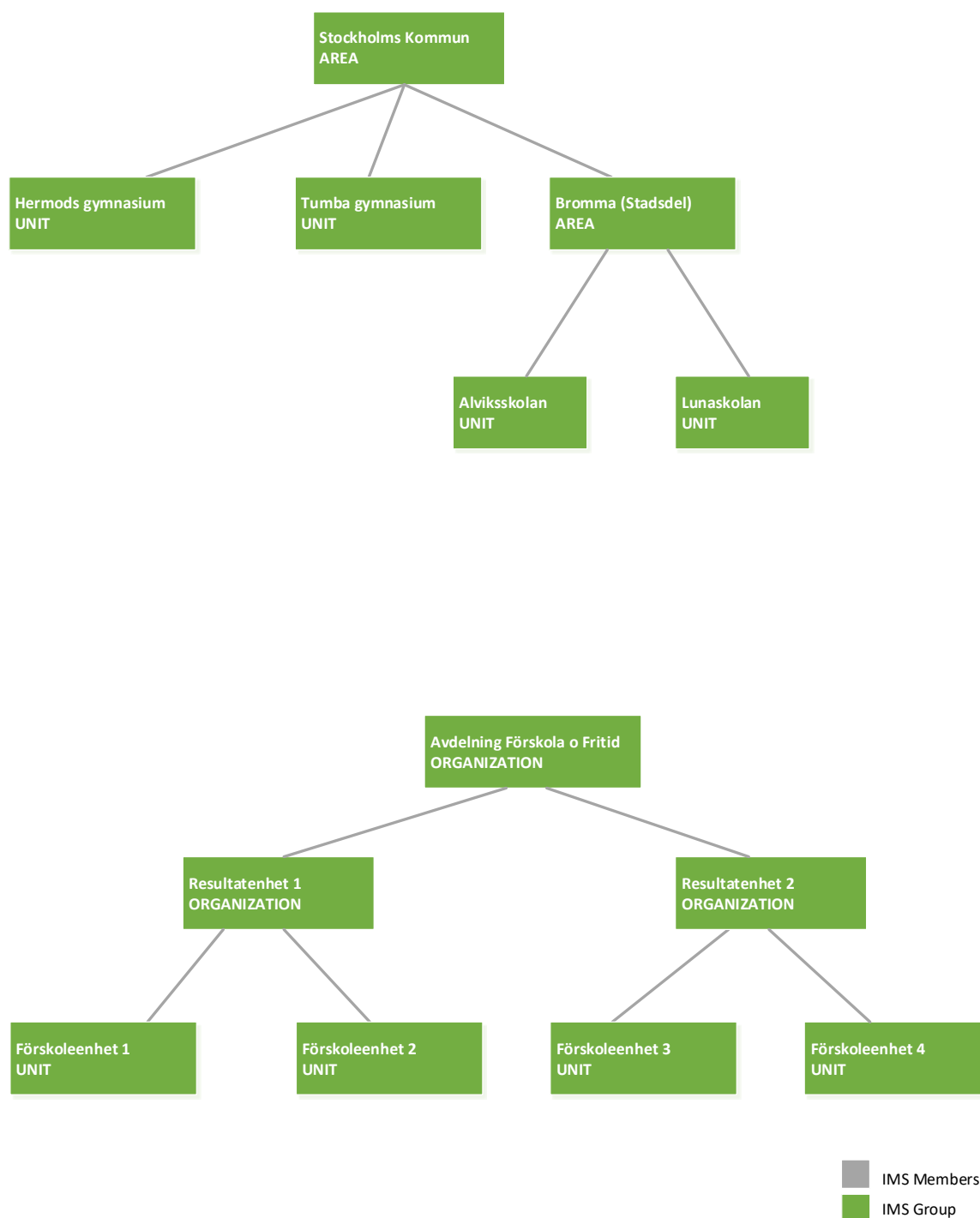
3.2.4 Adult education organization example

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

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 | No |
| name.n.partname.partnametype | The type of partname. "Middle" is used for middle name. | No |
| name.n.partname.Value | Middle name | No |
| name.n.family | This is the family name and not necessarily the last name | No |
| emailhome | Email home address | No |
| emailworkschool | 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 | No |
| adr.street | The actual street address | No |
| adr.locality | The locality component of the address e.g., the City | No |
| adr.extadd | C/O address | No |
| 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 | No |
| municipalitycode | Municipality code, formatted [NNNN], for more information see www.skl.se | No |
| municipalityname | Municipality name | Yes |
| timestamp | Date and time when person is 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 | Yes |

| Name | Description | Read-only |
|------|---|-----------|
| | <p>SwedishForeign Swedes that live abroad</p> <p>OtherForeignCitizen Other foreign citizen</p> <p>DiplomatChildrenWithinEuEs Diplomatic children within EU, ESS, Schweiz</p> <p>DiplomatChildrenOutsideEuE Diplomatic children outside EU, ESS, Schweiz</p> <p>PermitApplicationSeeker Permit application seeker</p> <p>Unknown Unknown Resident status</p> | |

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, 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. 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 |
|-----------|---|-----------|
| timestamp | Date and time when group is 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 other groups

Extended properties for non-education groups

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

4.3.4 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 |

| Name | Description | Read-only |
|-------------------|---|-----------|
| csncode | CSN code for schools in Sweden, for more information see www.csn.se | 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 www.skl.se | Yes |
| municipalityname | Municipality name | Yes |
| period | Periods defined on the unit | Yes |
| period.type | Type of period. | Yes |
| period.start | Start date for period | Yes |
| period.end | End date for period | Yes |
| 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 |

4.3.5 Group extension for departments

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

4.3.6 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 |
| 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 is 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 placements 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 responsibility | Yes |
| placement.end | End date for responsibility | Yes |
| placement.timestamp | Date and time responsibility is 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 |

| Name | Description | Read-only |
|---------------------------------|--|-----------|
| 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 | Amount 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 responsibility 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 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.

6.1 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. |

Parameters – Alternative 3:

| Parameter | Mandatory | Description |
|------------|-----------|---|
| PersonId | Yes | The id can be GUID or PID for the student. |
| 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. |
| 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. |

6.2 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 |

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 |

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

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

| | |
|-------------------------|---|
| New department group | <ul style="list-style-type: none"> - IMS group for the department group (recstatus = 1) - IMS membership for department with the department group as member |
| Update department group | <ul style="list-style-type: none"> - IMS group for the department group (recstatus = 2) |
| Delete department group | <ul style="list-style-type: none"> - IMS group for the department group (recstatus = 3) |

6.3 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. |

6.4 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"> - IMS group for the education group (recstatus = 1) - IMS membership for the unit with the education group as member (recstatus = 1) |
| Update education group | <ul style="list-style-type: none"> - IMS group for the education group (recstatus = 2) |
| New schedule group | <ul style="list-style-type: none"> - IMS group for the schedule group (recstatus = 1) - IMS membership for the "parent group" (education group, class or unit) with the schedule group as member (recstatus = 1) |
| Delete schedule group | <ul style="list-style-type: none"> - IMS group for the schedule group (recstatus = 3) - IMS membership for the "parent group" (education group, class or unit) with the schedule group as member (recstatus = 3) |
| Update schedule group | <ul style="list-style-type: none"> - IMS group for the schedule group (recstatus = 2) |
| Update person | <ul style="list-style-type: none"> - IMS person for the person (recstatus = 2) |

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 |

| Service | Description |
|---|--|
| | learning disabilities. |
| UpdateHigherVocationalEducationOrganization | Update organization for higher vocational education. |

6.5 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 – 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. |

Services:

| Service | Description |
|--------------------------|---------------------------------|
| GetMunicipalOrganization | Get the municipal organization. |

7 Appendix

7.1 References

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

7.2 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 |