

Technical Specification

Personnel API



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1 Introduction

The Personnel API provides services that make it possible to import and export personnel. The services in the Personnel API are accessed via URIs.

This document describes following:

- Which information that a user can import and export via the Personnel API.
- How the personnel information is divided into entities and how these entities are structured.

1.1 Prerequisites

Before you can get access to the Personnel 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.

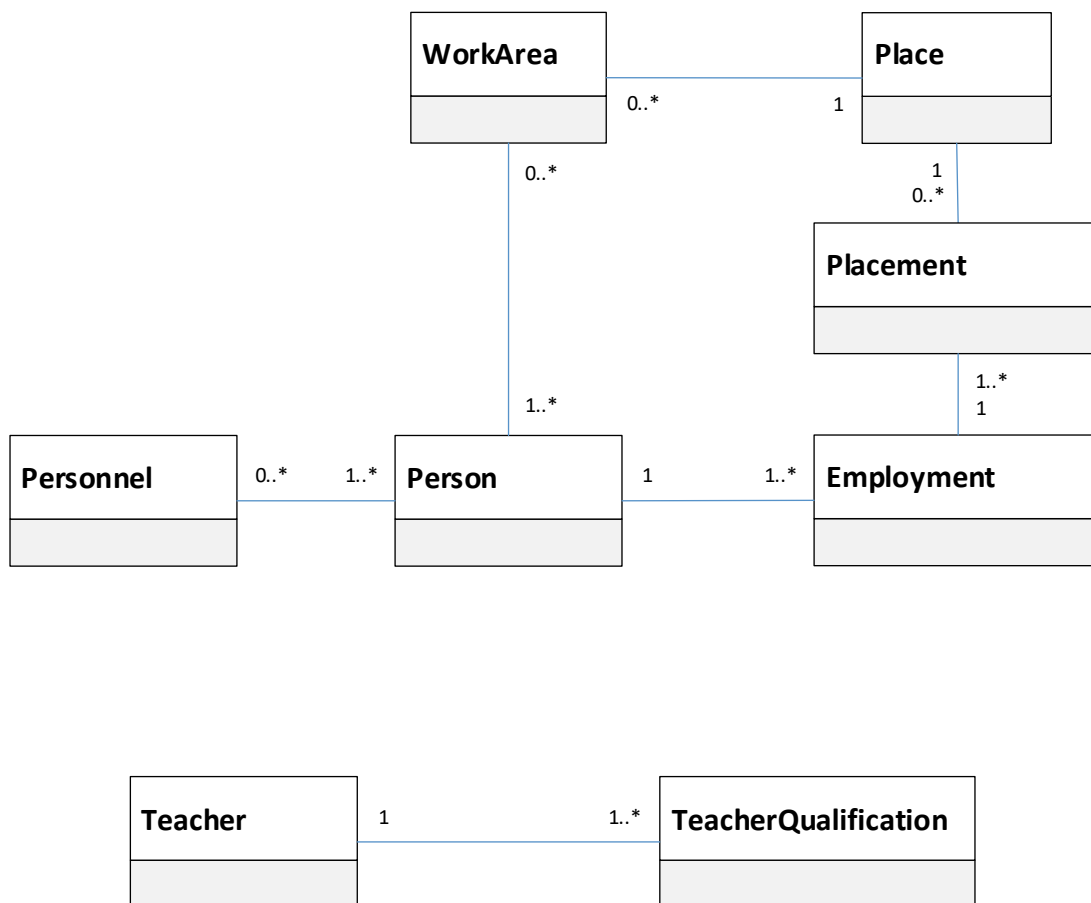
School type	Description	Code
Pedagogical care*	Childcare groups for children between 1-12 years	PC
Preschool*	Childcare for children between 1-6 years	FS
Leisure time centre*	Childcare for school-aged children over 6 years	F
Preschool class*	Preschool class for children 6 years of age	FK
Compulsory School*	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	Swedish for immigrants school	SF
Adult School For Learning Disabilities	School for adults with learning disabilities	SV
Municipal Adult School	Municipality school for adults	KV
Higher Vocational Education	Higher vocational education	YH

* School type considered as “primary” (as in Primary school), other school types are considered “secondary”.



3 Domain model

The diagram below describes how the information is divided into entities and how these entities are structured. Both WorkArea and Placement refer to a Place. The domain object Place describes either a Unit, a Department, an Area, or an Organization. These are all domain objects described in the Organization API v5 or later, and – with the exception of Department – are retrievable using the GetMunicipalOrganization service. The Departments can be found in the full extract of the PreSchool and LeisureTimeCentre school types.



4 Entities

4.1 Properties

The delivery information of the Personnel 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, for export the datasource contains customer domain.
comments	Input values for the service, in free text format.
type	States the performed operation at export: <ul style="list-style-type: none"> Complete personnel Delta personnel Must be set as Delta personnel at import
schooltype	The schooltype of which the data is encompassing
timeframe	Time frame for the personnel data

4.2 Person

Name	Description	Status on Import Update	Status on Import Create
id	GUID for the personnel	Ignored	Ignored
personid	Person id for the personnel	Mandatory	Mandatory
uniqueid	Alternative unique id, always in uuid format	Ignored	Ignored
firstname	First name	Ignored	Used in Finland
middlename	Middle name	Ignored	Ignored
lastname	Last name	Ignored	Used in Finland
emailhome	Private email of personnel	Ignored	Used in Finland
tel	Telephone numbers. Possible types to use: Voice Home Mobile Cell phone	Ignored	Used in Finland
adr.street	Street address	Ignored	Used in Finland
adr.locality	The locality component of the address e.g., the City	Ignored	Used in Finland
adr.pcode	The post identity number	Ignored	Used in Finland



Name	Description	Status on Import Update	Status on Import Create
gender	The gender of the Person. Possible values: Unknown, Female and Male	Ignored	Ignored
bday	The birth date of the Person. The format is [YYYY-MM-DD]	Ignored	Ignored
geographickeycode	Geographic key code	Ignored	Used in Finland
municipalitycode	Municipality code, formatted [NNNN], for more information see www.skr.se	Ignored	Used in Finland
municipalityname	Municipality name	Ignored	Ignored
nativelanguage	Native language, formatted as longer a form of language name	Ignored	Ignored
emailworkschool	Work email for staff	Ignored	Used in Finland
emailworkschool2	Alternative email for staff	Ignored	Used in Finland
datasource	Source for address information. SKV "Skatteverket"	Ignored	Ignored
privacy	true, if the personnel has privacy restrictions, false if no restrictions. "level" indicates type of privacy 1 Address information is protected 2 National registration is protected 3 1 and 2	Ignored	Used in Finland
status	Status for the person Normal The person is alive and lives Deceased The person has deceased Emigrated The person has emigrated	Ignored	Ignored
workarea	Work area	Ignored	Ignored
employment	Employment	See 4.3	See 4.3
change	This is only used in delta export of personnel. It indicates the type of change Add The person has been added Update The person has been updated Delete The person has been deleted	Ignored	Ignored
Timestamp	Time when the person was added, updated or deleted.	Ignored	Ignored

4.3 Employment

Name	Description	Status on Import Update	Status on Import Create
Id	Id for the employment	Ignored	Ignored



Name	Description	Status on Import Update	Status on Import Create
EmployeeNumber	Employment number	Ignored	Ignored
Percent	Workload	Used	Mandatory**
Years	Number of years in the current employment	Ignored	Ignored
Start	Start date for the employment	Mandatory*	Mandatory*
End	End date for the employment	Max value if not supplied	Max value if not supplied
Email	Work email	Ignored	Used In Finland
email2	Generated work email	Ignored	Used In Finland
Phone	Work phone number	Ignored	Used In Finland
titlecode	Code for the title	Used	Mandatory**
titlename	Name for the title	Ignored	Ignored
type	Type of employment	Ignored	Mandatory**
placement	Placements	See 4.4	See 4.4

* Start to End interval must encompass all Start to End interval(s) for Place(s).

** Mandatory on Employment or on Placement.

type must be mapped to internal employment type, see 5.3.1

titlecode must be mapped to internal titlecode, see 5.3.1

4.4 Placement

Name	Description	Status on Import Update	Status on Import Create
id	Id for the placement	If supplied, this must be an internal reference to existing Employment in Edlevo.	Must be empty
ismaintainedexternally	Flag indicating that the placement is maintained externally	Ignored	Ignored
externalemploymentinfo	Information from external system about the placement	If supplied, this must be a unique value among all Employments in Edlevo	If supplied, this must be a unique value among all Employments in Edlevo.
signature	Signature	Used in Sweden*	Used in Sweden
category	Category	Ignored	Mandatory



Name	Description	Status on Import Update	Status on Import Create
	<i>TeachingPersonnel</i> Teaching personnel <i>OtherPersonnel</i> Other personnel		
start	Start date for the employment	Used. May be omitted to be unchanged	Mandatory
end	End date for the employment	May be omitted to be unchanged	Max value if not supplied
place	The place where the placement is situated	Mandatory. See 4.5	Mandatory. See 4.5
percent	Workload	Used if supplied, see Employment. May be omitted to be unchanged	Used if supplied, see Employment
titlecode	Code for the title	Used if supplied, see Employment. May be omitted to be unchanged	Used if supplied, see Employment
titlename	Name for the title	Ignored	Ignored

* Signature update of same text may change the signature from-tom interval to match that of Placement. Signature update with different text will create new signature with from-tom matching Placement, possibly ending older signature.

4.4.1 Identification of an update or create

To determine if a particular set of data refers to an update of an existing employment or a create of a new employment, the following rules apply and in this order.

- 1) If a value for **id** is supplied that infers that it is an update of the referenced Employment. For a Create this value must be empty.
- 2) If a value for **externalemploymentinfo** is supplied, the Edlevo database is searched for an Employment with that reference. If found, that infers that it is an update of the referenced Employment. If none is found, a Create is assumed.
If more than one Employment is found, that is considered an error.
- 3) If neither **id** nor **externalemploymentinfo** are supplied, a search is made for Employment with the same schooltype, personid, place (unit, department etc) and overlap in time. If one is found that infers that it is an update.



4.5 Place

Name	Description	Status on Import Update	Status on Import Create
id	The place id	If supplied, this must be an internal reference to existing entity in Edlevo*	Must be empty
uniqueid	Alternative unique id on the placement, always in uuid format	Ignored	Ignored
name	Name of the place	Mandatory unless id is supplied	Mandatory
schooltype	School type	Mandatory	Mandatory
placetype	Type of place, is one of Area, Organization, Unit or Department	Mandatory unless id is supplied	Mandatory

name must be mapped to internal place id, see 5.3.1

* If a value for **id** is supplied that must reference an existing entity in Edlevo. The type of entity is determined by **placetype**.

4.6 WorkArea

Name	Description	Read-only
place	The place where the person is working in the area	Yes
start	Start date for the persons work in the work area	Yes
end	End date for the persons work in the work area	Yes
code	Code for the work area	Yes
name	Name for the work area	Yes
note	Note for the persons work in the work area	Yes
hours	Not used	Yes

4.7 Teachers

This structure – and the one in 4.8 Teacher's Qualification below – are identical with the structure defined by Skolverket in their export of teacher qualifications.

Name	Description	Read-only
socialsecuritynumber	The social security number of the teacher	No



Name	Description	Read-only
firstname	First name	No
middlename	Middle name	No
lastname	Last name	No
givenname	Given name	No
warning	List of warnings for a teacher	No
warning.decisiondate	Date of decision to give the warning to the teacher	No
license	List of licenses for a teacher	No
license.typeoflicense	Type of license: TEACHER or PRESCHOOL_TEACHER	No
license.lecturetitle	Lecturer title	No
foreignexamtitle	List of foreign exam titles for a teacher	No
qualifications	List of qualification for a teacher describing items for which a teacher is qualified to teach	No

4.8 Teacher's Qualification

Name	Description	Read-only
typeofqualification	Type of qualification: SUBJECT, SCHOOL_TYPE or STUDY_PATH	No
typeofschooling	School type according to Skolverket, (see 4.8.1)	No
code	Code identifying subject or study_path	No
subcode	Sub code for generic subjects, like MOD (Modern languages)	No
name	Name of the qualification	No
fromyear	The start year for which this qualification applies	No
toyear	The end year for which this qualification applies	No
specializationcode	Code indicating that a qualification is the result of special pedagogue degree	No
specializationname	Name of specialization	No
studypathcode	Code of studyPath	No
studypathname	Name of studyPath	No

4.8.1 School types according to Skolverket (Sweden)

Name	Description
LEISURE_TIME_CENTER	Fritidshemmet



Name	Description
PRE_SCHOOL	Förskolan
PRE_SCHOOL_CLASS	Förskoleklassen
SWEDISH_FOR_IMMIGRANTS	Utbildning i svenska för invandrare
COMPULSORY_SCHOOL	Grundskolan
EDU_FOR_PUPILS_WITH_LEARNING_DISABILITIES	Grundsärskolan
UPPER_SECONDARY_EDUCATION	Gymnasieskolan
EDU_FOR_ADULTS_WITH_LEARNING_DISABILITIES	Gymnasiesärskolan
BASIC_ADULT_EDUCATION	Kommunal vuxenutbildning på grundläggande nivå
BASIC_ADULT_EDUCATION_FOR_PUPILS_WITH_LEARNING_DISABILITIES	Särskild utbildning för vuxna på grundläggande nivå
ADULT_SECONDARY_EDUCATION	Kommunal vuxenutbildning på gymnasial nivå
ADULT_SECONDARY_EDUCATION_FOR_PUPILS_WITH_LEARNING_DISABILITIES	Särskild utbildning för vuxna på gymnasial nivå
SAMI_SCHOOL	Sameskolan
SPECIAL_SCHOOL_FOR_PUPILS_WITH_IMPAIRED_HEARING	Specialskolan
EDUCATION_FOR_CHILDREN_WITH_SEVERE_LEARNING_DISABILITIES	Träningsskolan



5 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.

5.1 Complete export of personnel

The services below give personnel at a specified date. The output is XML information with personnel.

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:

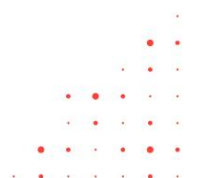
Parameter	Mandatory	Description
UnitId	No	Id for the school unit. Personnel for all school units will be returned if UnitId is not specified.
SearchDate	No	The search date. Current date will be used if SearchDate is not specified. The oldest search date that can be used is current date minus ten years.

Parameters – Alternative 3:

Parameter	Mandatory	Description
PersonId	No	Id for the person. Personnel for all school units will be returned if PersonId is not specified.
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
GetPedagogicalCarePersonnel	Get personnel for pedagogical care.
GetPreSchoolPersonnel	Get personnel for preschool.



Service	Description
GetLeisureTimeCentrePersonnel	Get personnel for leisure time centre.
GetPreSchoolClassPersonnel	Get personnel for preschool class
GetCompulsorySchoolPersonnel	Get personnel for compulsory schools
GetCompulsorySchoolForLearningDisabilitiesPersonnel	Get personnel for compulsory school with learning disabilities
GetUpperSecondarySchoolPersonnel	Get personnel for upper secondary school
GetUpperSecondarySchoolForLearningDisabilitiesPersonnel	Get personnel for upper secondary school with learning disabilities
GetSwedishForImmigrantsSchoolPersonnel	Get personnel for Swedish for immigrants
GetMunicipalAdultSchoolPersonnel	Get personnel for municipal adult school
GetAdultSchoolForLearningDisabilitiesPersonnel	Get personnel for adult school with learning disabilities
GetHigherVocationalEducationPersonnel	Get personnel for higher vocational education

5.1.1 Same data in different school types

In some cases, the same data might occur when requesting data from different school types. This is due to the fact that some employments and work tasks are not bound to a certain school type.

Employments on Units in primary school types (GR, S, FK, FS, F, PC) are not registered on a specific school type. Therefor such employments are replicated on all school types present on that particular Unit.

Employments and work tasks on Areas are shown on all six primary school types, since such employments/work tasks have no relation to any school type whatsoever.

5.2 Delta export of personnel

NB: This functionality is not available in this version.

These services give the personnel changes done within a specified timeframe. The output is XML information with changed personnel entities. For each changed entity the attribute "change" is used to indicate the type of change. The attribute "change" is enumerated as Add, Update and Delete. All changed entities have a timestamp stored in the extension attribute "timestamp" for all entities to secure information quality.

Parameters:

Parameter	Mandatory	Description
StartDate	Yes	Start date&time
EndDate	Yes	End date&time



Parameter	Mandatory	Description
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
GetPedagogicalCarePersonnelDelta	Get personnel for pedagogical care.
GetPreSchoolPersonnelDelta	Get personnel for preschool.
GetLeisureTimeCentrePersonnelDelta	Get personnel for leisure time centre.
GetPreSchoolClassPersonnelDelta	Get personnel for preschool class
GetCompulsorySchoolPersonnelDelta	Get personnel for compulsory schools
GetCompulsorySchoolForLearningDisabilitiesPersonnelDelta	Get personnel for compulsory school with learning disabilities
GetUpperSecondarySchoolPersonnelDelta	Get personnel for upper secondary school
GetUpperSecondarySchoolForLearningDisabilitiesPersonnelDelta	Get personnel for upper secondary school with learning disabilities
GetSwedishForImmigrantsSchoolPersonnelDelta	Get personnel for Swedish for immigrants
GetMunicipalAdultSchoolPersonnelDelta	Get personnel for municipal adult school
GetAdultSchoolForLearningDisabilitiesPersonnelDelta	Get personnel for adult school with learning disabilities
GetHigherVocationalEducationPersonnelDelta	Get personnel for higher vocational education

5.2.1 Use Cases

Some use cases for delta export of personnel:



Personnel change	The XML information that is output from the service contains
Add a new person to the personnel (i.e. the person gets his/hers first employment/work task in actual school type)	<ul style="list-style-type: none"> - The new person with the attribute "change" set to "Add"
Remove the last employment/work task (even historical ditto) from personnel in actual school type	<ul style="list-style-type: none"> - The removed person with the attribute "change" set to "Delete" - Only personal information are shown in the person-element
Update of a person in the personnel	<ul style="list-style-type: none"> - The person with the attribute "change" set to "Update" - All actual and future employments/work tasks are shown, together with eventual changed items that are in the past

5.3 Update employments

This service is used for:

- create new persons
 - o for Swedish users, the person must exist in the Swedish Tax Agency to be created
 - o for Finnish users, the person is created from supplied person data. If that data is not sufficient or illegal the person is not created.
- update or create placement (employment) information for primary and secondary personnel.

Placement information containing a place that refers to Unit or, in the case of Primary school type, Department or Area will be handled.

Service:

Service	Description
UpdateEmployments	Creates persons missing, creating employment and placement info. For employment on Primary, Authority is also created/updated.

5.3.1 Mapping of values from HR system

Values for some fields in the XML data have a significance in the HR system, but that is unknown to Edlevo. For these cases there exists mapping in Edlevo. That mapping is described in user documentation ("HRImport Employments").

5.4 Update of teachers' qualifications

This service updates the teachers' qualifications.

The service takes no parameters.



Services:

Service	Description
UpdateTeachersQualifications	Updates the qualifications for the supplied teachers



6 Appendix

6.1 References

Name	Address
Personnel API XML schemas and examples	https://github.com/ExchangeServices/API

