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Haldor Education

Synchronization

Contents

Version	Date	Comment	Author
1.0	2020-06-11		Jarle Skogheim
1.1	2021-04-12	Changes to structure and added details for files.	Jarle Skogheim
1.2	2021-04-28	Clarifying aspects of files	Jarle Skogheim
1.3	2021-05-11	Added possibility to use upn/primary email as ObjectId	Jarle Skogheim
1.4	2021-05-18	Added - Columns for email and AAD GUID in Guardians file - Municipality info in schools-file	Jarle Skogheim
1.5	2021-06-16	Corrected error in description of ObjectId in Users-file. Added description of Default School (2.2) and how to add groups and roles to "defaultschool" (4.3, 4.4) Added two new roles (SCHOOL_LEADER, ~~DISTRICT_LEADER~~)	Jarle Skogheim
1.6	2021-09-17	Added info about runtime for automated synchronization (4.1) 4 – added info about fileformat. 4.4 – added info about only one role per row in users-file. 4.5 – added info about socialnumber formatting.	Jarle Skogheim
1.7	2021-11-02	Corrected Role ID for district/municipality leader. Added character encoding info. Added synchronization info on TeacherValidation.csv	Andreas Skoglund
1.8	2022-01-13	Updated SchoolTypes, UPPER_SECONDARY_EDUCATION	Andreas Skoglund
1.9	2022-02-18	Added column for CourseCode in TeacherValidation.csv	Andreas Skoglund

1. Introduction

This document will describe what data and how it is synchronized to the Haldor platform.

It does not include the basics of the platform since this is covered in a separate document "Haldor Education - Technical structure and impact on customer data".

All references to "Haldor" or "Haldor Education" below references the platform and technical system of Haldor Education. No human is involved in the day-to-day synchronization process.

2. Overview of Architecture

The basic information about users, roles, groups and schools are synchronized from Azure AD (AAD) and SDS (Microsoft School Data Sync).

Haldor is depending on information from basic information from AAD and can get more information if SDS is used. This is described further down in the document.

Membership in groups/teams are not contained in Haldor Education as of today. We depend on information from AAD to know who is owners (teachers/mentors) and members (students) of groups.

We have roles in the system that can have access to information belonging to groups without being a member of that group, and that is school administrators and special pedagogues.

We also have the option to get information by files if a customer needs more information about users, roles or other information. This is described in this document.

Roles that are synced in to the system can also be handled manually in the system by school administrators.

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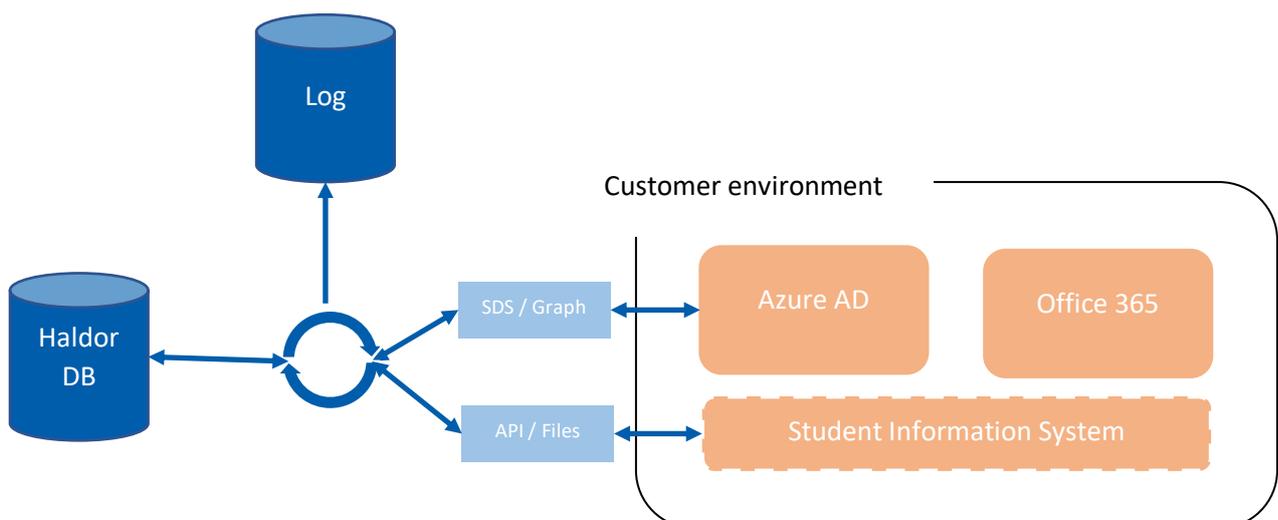
2.1   Microsoft School Data Sync

We do not have any requirements about how information is synced with SDS, but to be able to use all information from AAD with SDS, it is an advantage that users, groups and membership is synchronized to AAD using SDS.

2.2   Default school

All customers have a default school in Haldor Education.

Users are added to the default school with their basic role (student or teacher) when logging in and Haldor cannot determine that the user is part of any school synced to Haldor or in customer's SDS.

It is possible to add groups and users to the default school using files as well. Users added to that school will have the default school as an option in the school picker in Haldor.

Groups added to the default school will always be visible for users that are part of that group. Even if they have selected another school.

3. User-initiated synchronization

3.1   Basic flows when user logs in

When a user logs in to Haldor Education, this is done with their Office 365 / AAD account. Haldor Education needs consent to get information about users directly from AAD. This is done prior to users logging in.

Because users are logged in with their AAD Accounts, Haldor checks if the user exists in the system. If it does not, the basic information about the user is retrieved and stored in Haldor.

3.1.1 Basic User information

- UserId (AAD ID, GUID)
- Firstname
- Lastname
- Email / UPN

3.1.2 Basic Role

The next thing that is checked is if the user is a student or a teacher. This uses two different mechanism depending on if the customer uses SDS or not.

If SDS is used, Haldor checks an attribute from SDS/AAD:

`extension_fe2174665583431c953114ff7268b7b3_Education_ObjectType`

If SDS is not used, the SKU-ID of the users license in O365 is checked. So all users of Haldor have to have a valid **EDU-license**. All users with Staff license is considered a teacher, and all users with a Student license is considered a student. If both are present, the user is considered to be a student.

3.1.3 Schools and Basic Role

If customer uses SDS, the Basic Role is set on each school that this user is a part of. Schools are synchronized as soon as consent is given to Haldor Education, but if they are not present, they are also synchronized when found as a part of a user sync.

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If customer is not using SDS the user is set to be a part of the default school. This means all users will be part of the default school in this case as long as no files are synchronized to Haldor.

3.2   Groups / Sections / Teams

Groups are connected to Haldor when a group/team owner chooses to add the group to Haldor. This is done if the Haldor Tab is added to the team, or it can be manually connected in the Haldor Edu Dashboard.

When the group is connected, basic information about the group is set in Haldor from AAD:

- ID (AAD, GUID)
- Title
- Description
- URL for SharePoint Site
- URL to Teams Site
- External ID - if synced from SDS
- Archived – says if team/group is archived

4. Batch/System initiated synchronization

Files can be sent to Haldor or Haldor can get files from an FTP to synchronize more data or if the customer does not use SDS. These files are described below.

All files are to be sent in CSV-format, Character encoding UTF-8.
The individual formats are described below.

All files should have ALL columns present, and column titles on the first row.

Comma (,) should be used as delimiter and quotation marks (") should be used around all terms.

4.1   Synchronization run time

Files are synchronized once every day.

First step of file import is done between 1 and 3 AM UTC. This means that files that is sent to your storage/FTP before 1 AM will be imported to Haldor that night.

Next step is started at 3 AM and runs to 6 AM UTC. This means that data imported can be in the system at 6 AM as latest.

The final step is to remove old information that should no longer exist. This process is started at 7 AM UTC and runs until finished.

4.2   schools.csv

Contains information about schools. Can contain title/name if customer does not use SDS.

Default school is NOT synced with these files. It is created by the system when customer consents to Haldor Education.

CSV-file format (Character encoding: UTF-8):

"SISId","SchoolType","Name","MunicipalityCode","Municipality"

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Attribute name	Description	Required
SISId	ID from Student Information System (SIS). Have to be the same ID as External ID/SIS ID in AAD if SDS is used.	Yes
SchoolType	Describes what type of school this is. Expected values are: COMPULSORY_SCHOOL, UPPER_SECONDARY_EDUCATION, ADULT_EDUCATION, PRESCHOOL	Yes
Name	Title/Name of the school – only needed if customer is not using SDS	No
MunicipalityCode	Code for the municipality this school belongs to.	No
Municipality	Name of municipality this school belong to.	No

4.3 groups.csv

Contains information about type of group and what school it is connected to. Can also contain information about curriculums/courses and year of students.

If you would like a group to be part of the Default school, leave SchoolId empty (empty string).

You only need to provide one of ObjectId or GroupId.

Format (Character encoding: UTF-8):

"ObjectId", "GroupId","GroupType","CourseCode","Year","SchoolId","Program"

Attribute name	Description	Required
ObjectId	Id from AAD	Yes (not if GroupId is provided)
GroupId	Id from SIS	Yes (not if ObjectId is provided)
GroupType	Type of group. Valid values are: EDUCATION_GROUP, MENTOR_GROUP	Yes
CourseCode	Only valid for Swedish and Norwegian customers as of today. Have to be valid course codes as provided from government (UDIR, Skolverket). Can for example be "SVESVE01" or "NOR01-06_VG1". Several coursecodes can be supplied separated with comma, for example "SVESVE01,SVESVE02".	No
Year	What year does this group have students for. Should be a number (1-9)	No
SchoolId	Must be same as SISId in Schools-file Empty string if group should belong to "default school"	Yes

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Attribute name	Description	Required
Program	Can be provided if system should have information about what program in the school this group belongs to	No

4.4   users.csv

Basic information about users is always synchronized from AAD but this file can add more information to users.

The extra information that can be sent in files are personal identification (personnummer) and extra roles.

The role of the user can be added to the default school by leaving SchoolUnitId as empty string.

Format (Character encoding: UTF-8):

"ObjectId","Socialnumber","SchoolUnitId","Role","Class","ClassId"

Attribute name	Description	Required
ObjectId	AAD Id for user Or UserPrincipalName/upn or primary email	Yes
Socialnumber	Swedish personnummer in the format yymmdd-xxxx	No
SchoolUnitId	School that this user belongs to for this role. Should be the same as SISId in Schools-file. Empty string if role should be added to "default school".	Yes
Role	What role should be added to this user in this school. ONE role per row, so if the user has several roles, add more rows. Valid values: STUDENT, TEACHER, MENTOR, SCHOOL_ADMINISTRATOR, SPECIAL_PEDAGOGUE, SCHOOL_LEADER, OPERATION_MANAGER SCHOOL_LEADER is meant for Principals and leaders at school level OPERATION_MANAGER is meant for leader at municipality/district level	Yes

Attribute name	Description	Required
Class	Name of student class	No
ClassId	SISId of class. Only needed if classes are in the groups file	No

4.5   parents.csv

Information about parents and guardians that should have access to student information in Haldor. This file is only needed if parents are to log in to Haldor.

Format (Character encoding: UTF-8):

"Socialnumber","DisplayName","EmailAddress","MobilePhone","ChildSocialnumber","ChildEmail","ChildAADGuid"

Attribute name	Description	Required
Socialnumber	Identification of parent. If Swedish Bank ID is to be used for login, this have to be a valid personnummer Swedish personnummer in the format yymmdd-xxxx.	Yes
DisplayName	Name of the person	Yes
EmailAddress	If the user is to log in with email and password, this is required. Also if they are to get information by mail.	No (only if they are to log in with email)
MobilePhone	Needed to send information by SMS about invalid absence and other information	No
ChildSocialNumber	Have to be the same as SocialNumber in Users-file. Used to match a parent/guardian with correct child.	Yes
ChildEmail	Alternative to having ChildSocialNumber. This will be used to lookup account in AAD so it has to be UPN or primary email on user.	No
ChildAADGuid	If used, this will be used to lookup account in AAD.	No

4.6   teachervalidation.csv

Contains information about what subjects a teacher can validate/grade (omdömen) students in. For the time being this file is not automatically synced. Contact support@haldor.se to have this file synchronized.

Format (Character encoding: UTF-8):

"ObjectId","SubjectCode","SchoolUnitId","CourseCode"

Attribute name	Description	Required
ObjectId	AAD Id for user	Yes

Attribute name	Description	Required
	Or UserPrincipalName/upn or primary email	
SubjectCode	Should be a valid subject code from government.	Yes (If not CourseCode is provided)
SchoolUnitId	Have to be the same as SISId from Schools-file	Yes
CourseCode	Should be a valid course code from government.	Yes (If not SubjectCode is provided)