

Cloudwork®

Automated Active Directory Provisioning Interface

Technical Reference

Cloudwork® Automated Active Directory Provisioning Interface

Contents

Cloudwork®	1
Cloudwork® Automated Active Directory Provisioning Interface.....	2
Prior to Use.....	3
Where is the interface.....	3
Existing Profiles.....	3
Running a Sync Process.....	4
Editing a Sync Profile.....	6
Base Settings.....	7
Automatic Attribute Formatting.....	9
User Settings.....	11
AD Attributes.....	13
User Deletion.....	16
Reporting.....	18
Advanced Settings.....	18
Contacts & Planning.....	18

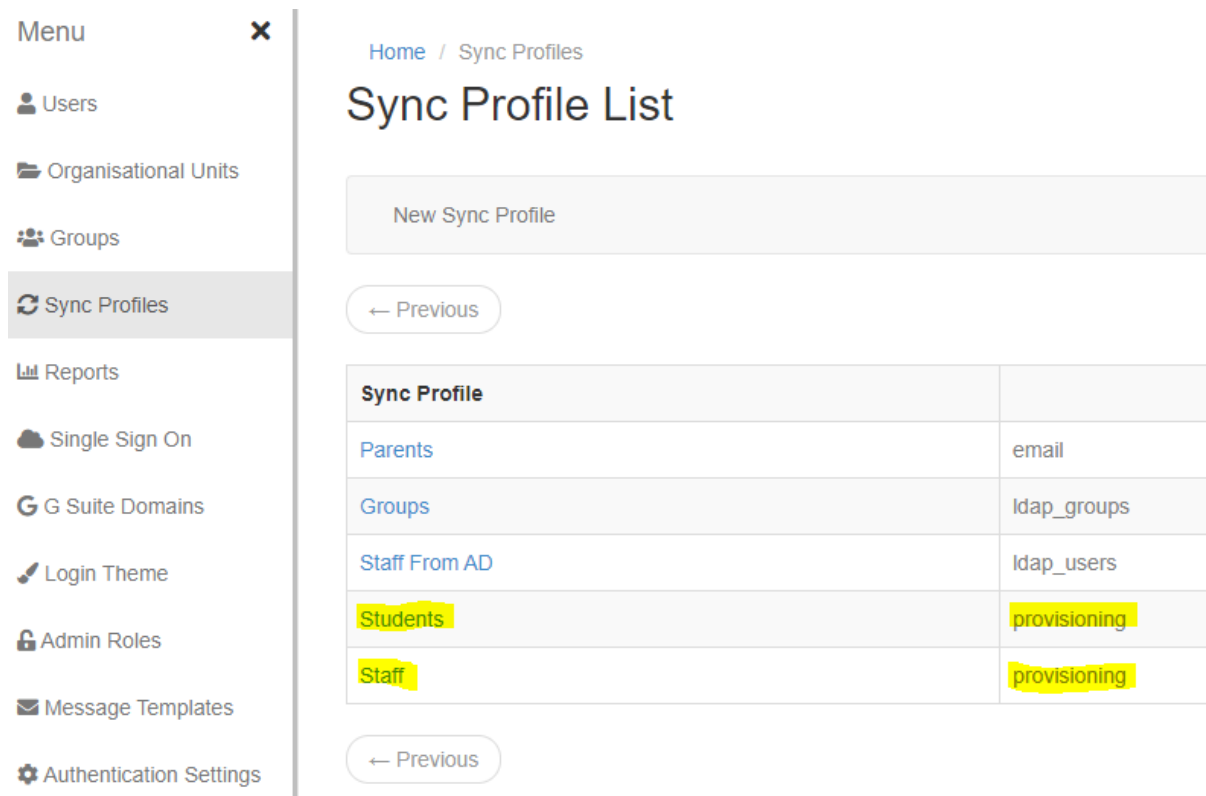
The active Directory provisioning interface is used to configure, monitor and process active directory provisioning.

Prior to Use

Before this can be used an endpoint must be configured inside the school network. This needs to be done by a Studentnet technician. This is installed onto the CWIN machine inside the network.

Where is the interface

The active Directory provisioning interface can be found under the menu item Sync Profiles. Any sync profile with the tag of Provisioning are AD provisioning profiles. See below:



Menu ×

- Users
- Organisational Units
- Groups
- Sync Profiles**
- Reports
- Single Sign On
- G Suite Domains
- Login Theme
- Admin Roles
- Message Templates
- Authentication Settings

Home / Sync Profiles

Sync Profile List

New Sync Profile

← Previous

Sync Profile	
Parents	email
Groups	ldap_groups
Staff From AD	ldap_users
Students	provisioning
Staff	provisioning

← Previous

Existing Profiles

For Schools with provisioning already configured there will be profiles already set up and running. Upon clicking into them you will see an interface something like the below

Provisioning Sync Profile Students

Sync Status	
Last Provisioning sync	Finished at 2020-08-27 16:28:54. Processing Complete 16 records
Next Provisioning sync	Scheduled for 2020-08-27 17:23:06 Run Now

Settings		Edit
Mode	000	
Reporting Address	[drobertson@coherentcloud.com', 'support@studentnet.net']	

You can see the previous results and when the profile will next run. From here you can edit the profile or Run it if you want to run an ad hoc process.

NB The Run now button will not appear if the process is currently running or if it is scheduled to start within 5 mins.

Running a Sync Process

Pressing the “Run Now” button allows you to trigger a sync process to happen immediately. When you do press the button you are given a screen as below

Reschedule Provisioning Sync for Students

This will reschedule the next sync to occur as soon as possible. You can use this form to override some settings for this run.

Report Destination *	<input type="text" value="support@studentnet.net,drobertson@coherentcloud.com"/>
	Email Address to send reports to
Mode *	<input type="text" value="Reporting Only"/>
	Control the operating mode of the Provisioning sync profile
<input type="button" value="Submit"/>	

In this screen you can override the default options of how the process is run. You can choose who the reports are sent to and what “Mode” to run the process under. The modes available are as below

Mode *	<input type="text" value="Reporting Only"/>
	<ul style="list-style-type: none">Reporting OnlyReporting OnlyCreate UsersCreate and Update UsersCreate, Update and Disable Users

Reporting Only: Will only verify the process and send reports but will not change any accounts

Create Users: Will only create users, but will not update or disable users. This can make the process run faster to get users created more quickly.

The other options follow the same pattern.

Once you submit this form, the process will run. You can monitor the progress on the sync profiles home page, see below.

[Home](#) / [Sync Profiles](#) / [Students](#)

Provisioning Sync Profile Students

Sync Status	
Last Provisioning sync	Finished at 2020-08-27 16:28:54. Processing Complete 16 records
This Provisioning sync	Task started at 2020-08-27 16:40:39. Processing 2 of 16 records

Settings		Edit
Mode	000	
Reporting Address	['drobertson@coherentcloud.com', 'support@studentnet.net']	

Editing a Sync Profile

Clicking on the Edit button will give you access to the detailed settings related to the sync profile.

There are 7 categories

- Base settings
- Automatic Attribute Formatting
- User Values
- AD Attributes
- User Deletion
- Reporting
- Advanced

Base Settings

Base Settings

Step One

Provisioning Name *	<input type="text" value="Students"/>
	A unique name for this synchronisation profile.
Usercommit *	<input type="checkbox"/> Create <input type="checkbox"/> Update <input type="checkbox"/> Delete
	Determines the operation that will be committed when synchronisation is performed.
Provisioning OU *	<input type="text" value="OU=CO2024,OU=Students,DC=schooltest,DC=studentnet,DC=edu,DC=au"/>
	Distinguished Name
Child OU	<input type="text"/>
	Value for child OU's to place users into below the base OU.
Mail Domain *	<input type="text" value="@schooltest.studentnet.edu.au"/>
	AT Domain - a domain name starting with an 'at' symbol such as @example.com
UPN domain *	<input type="text" value="@schooltest.studentnet.edu.au"/>
	AT Domain - a domain name starting with an 'at' symbol such as @example.com
AD Anchor Value *	<input type="text" value="samaccountname"/>
	A simple property string
Source Anchor value *	<input type="text" value="username"/>

Provisioning Name: This is a descriptive name for the process

Usercommit: Determines what operations the process will be allowed to do. If nothing is checked then reports will be generated but no changes will be made.

Provisioning OU: This is the base OU for operations to be performed upon.

Child OU: This is the value for designating child OU's to be placing users into. This can be part of the user record. Eg Graduating Year

Mail Domain: This is the domain being used for the users' mail domain. This will populate the users' mail attribute.

UPN Domain: This is the domain being used for the users' userprincipalname domain. This can be the same as the mail domain.

AD Anchor Value: This is the value in AD for linking users to the SIS. This is normally set to the ID inside the SIS. But it can take the form of other values, depending on what is available

Source Anchor Value: This is the value that will be coming out of the SIS to act as the ID of the user. It will link to the AD Anchor Value

Automatic Attribute Formatting

This section deals with how to format the default values of required attributes. These formulae will only be used if a value is not provided. This is as below:

Automatic Attribute Formatting

Step Two

Username format *

first initial firstname.lastname then otherwise keep adding firstname until unique

User Name Format. Determines the strategy used to create the username. 1 - firstname.lastname then unique 2 - first initial firstname.lastname then otherwise keep adding firstname until unique 3 - Firstname of Lastname 4 of firstname classof(yy) 6 - first initial firstname lastname.graduatingyear then otherwise

Mail format *

[username]@[domain]

Email Format 1 - "username@domain" 2 - "SIS_ID@domain"

Force mail *

Force a constructed email even if an email is provided.

UPN format *

[username]@[UPN Domain]

UPN Format 1 - "username@domain" 2 - "SIS_ID@domain"

Display format *

[last name],[first name]

Display Name Format. Determines the strategy used for the creation of a user's display name. 1 = Firstname

CN format *

[adusername]

Canonical Name Format 1 - AD User Name (adusername) 2 - AD Display Name (addisplayname)

Username format: There are currently 5 options for formatting a username

1. firstname.lastname then add an incrementing number until unique
2. first initial of firstname.lastname then otherwise keep adding firstname until unique
3. Firstname.first initial of lastname classof(yy)
4. 3 of Lastname 4 of firstname classof(yy)
5. first initial of firstname lastname.graduatingyear then otherwise keep adding firstname until unique

More options may be added in the future as requirements are presented.

Mail Format: Currently only 2 options exist for this

1. username@domain
2. sis_ID@ domain

Force Email: This forces the constructed email onto the user even if the SIS provides a different email address. This is normally most useful for dealing with users that have transitioned roles inside the SIS that might have a different email format eg Student -> Staff, Staff -> Parent etc

UPN Format: Format for the UPN, same options as mail format.

Display Format: Formatting for the display name. Formats supported are:

1. Firstname Lastname
2. Lastname, Firstname

CN Format: Canonical Name Format. Two formats are available. Username is highly recommended for uniqueness, as CN must be unique inside each OU.

1. AD Username
2. AD Display Name

User Settings

User settings relate to the values that we pull out of the SIS and how they need to be cleaned and filtered to be used in AD.

User Settings

Step Three

adfirstname *
User's first name attribute.
 Static Value ⓘ
Sanitise ⓘ

adpreferredname
User's preferred name attribute.
 Static Value ⓘ
Sanitise ⓘ

adlastname *
 Static Value ⓘ
Sanitise ⓘ

admail
This is an additional attribute.

This will require that you know what values are coming out of the SIS, as they will need to be referenced specifically in this section.

We will also be introducing a few hard set values that you can assign values to. These will always map to the same attribute in AD. These are:

Cloudwork Attribute Name	Compulsory	AD Attribute Name	AD Compulsory
adusername	No	samaccountname	Yes
adfirstname / adpreferredname **	Yes	givenName	Yes
adlastname	Yes	sn	Yes
admail	No	mail	Yes
adupn	No	userprincipalname	Yes ***
addisplayname	No	displayname	No

NB Items that are Compulsory must be provided or the user will not be created.

Items that are AD Compulsory will be written to AD with a constructed value depending on rules defined earlier

** If adpreferred name is present it is used, if no adfirstname is used. This can differ from user to user depending on what values are present.

*** UPN will only be written for a new user if it is not defined

Sanitise

The Sanitise refers to the amount of string cleaning that needs to occur. This is especially pertinent with regard to email addresses as they cannot contain a lot of special characters. For any values that need to be used as an email address it is important to use "Strip UTF-8".

Simple sanitisation means that it will make sure the string only contains alphanumeric characters. I.e letters and numbers.

User Settings example

We receive a user as below from the SIS

Username:

Firstname: Renée

Lastname: Smith

EMail:

We would create a username/mail/UPN based on the rules earlier.

Values to write to AD

Samaccountname: renee.smith

Givenname: Renée

Sn: Smith

Mail: renee.smith@school.edu.au

UPN: renee.smith@school.edu.au










Display Name: Renée Smith

You can see the UTF-8 Characters are kept where appropriate, and stripped when not.

Static Values

You can also introduce static values here. This is usually for School names, addresses, country codes etc. Values that will remain the same for all users regardless.

See Below for an example of additional attributes

Role	<input type="text" value="person.role"/>
	This is an additional attribute.
	<input type="checkbox"/> Static Value 
	Sanitise  <input type="text" value="None"/> 
id	<input type="text" value="person.e1"/>
	This is an additional attribute.
	<input type="checkbox"/> Static Value 
	Sanitise  <input type="text" value="None"/> 
company	<input type="text" value="Example School"/>
	This is an additional attribute.
	<input checked="" type="checkbox"/> Static Value 
	Sanitise  <input type="text" value="None"/> 









AD Attributes

This section will allow us to map the items we have imported in the earlier User Values section into AD. It allows us to create a single User Value that may need to go into multiple AD attributes.

From our setup from earlier we could create a map like the below

Custom Attributes

Step Four

employeeid	<input type="text" value="id"/>
	<input type="checkbox"/> Static Value  
department	<input type="text" value="role"/>
	<input type="checkbox"/> Static Value  
company	<input type="text" value="company"/>
	<input type="checkbox"/> Static Value  
extensionattribute1	<input type="text" value="adusername"/>
	<input type="checkbox"/> Static Value  

If we take our Earlier Example, with some more information from the SIS

Username:

Firstname: Renée

Lastname: Smith

EMail:

Role: Head of Mathematics Y7-9

E1: 31415

We would create a user with the below attributes in AD

Samaccountname: renee.smith

Givenname: Renée

Sn: Smith

Mail: renee.smith@school.edu.au

UPN: renee.smith@school.edu.au

Display Name: Renée Smith

Employeeid: 31415

Department: Head of Mathematics Y7-9

Company: Example School

Extensionattribute1: renee.smith

User Deletion

Here we define the rules for what happens when a user stops appearing in the SIS.

By Default the system will disable a user and move them into the defined OU.

User Deletion

Step Five

Disabled OU	<input type="text" value="OU=Disabled,OU=Students,DC=schooltest,DC=studentnet,DC=edu,DC=au"/>
	Distinguished Name
Delete user OU include	<input type="button" value="Add Item"/>
	OU path or fragment to signify an OU for inclusion in the disable process.
Delete user OU exclude	<input type="text" value="OU=Test"/>
	<input type="text" value="OU=Service"/>
	<input type="button" value="Add Item"/>
	OU path or fragment to signify an OU for exclusion in the disable process.
Delete user attribute exclude	<input type="text" value="extensionattribute3"/>
	A simple property string
Delete user attribute exclude value	<input type="text" value="test"/>
	A simple property string

Disabled OU: This is the OU to move users into once they are disabled

Delete user OU include: This is if you want to process to restrict the OU's that are checked for when looking for users to disable. You can use just a match eg "Year20" as a filter would only look in OU's like Year2022, Year2021 etc, so any other OU's would not be checked.

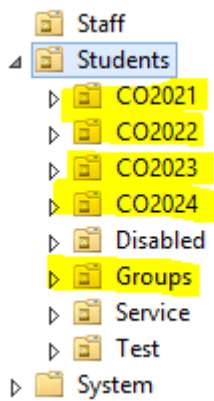
Delete user OU exclude: This is a list of OU's to specifically exclude from the disabling process. The process will not check any users inside OU's that match these values. Both include and exclude can be used together if desired.

Delete user attribute exclude: The attribute you want to use to allow individual users to be exempt from the disabling process. This is most useful when keeping test or service users in the specific OU's that you want them to be in.

Delete user attribute exclude value: The value of the attribute that signifies that the user needs to be exempted.

Example

Let's look at a sample OU structure



For this structure and the settings, we have, everyone that is in yellow highlighted OU's would be eligible for being disabled should they not be in the view from the SIS.

Reporting

This tab will set up the reporting options.

Reporting

Step Six

Send Reports * Enable sending email reports.

Reports Sent To *

support@studentnet.net

admin@school.edu.au

Add Item

List of email addresses to send reports.

Reports sent From *

support@studentnet.net

Email Address

SMTP server *

mail.school.edu.au

The SMTP server used for sending reports.

Send Reports: Whether or not to send reports out via email

Reports Sent To: List of email(s) to send the reports to. You can add as many as you need

Reports Sent From: The Email address to send the Reports from. This may aid in deliver or sorting of the email reports

SMTP Server: SMTP server to use from inside the school's network

Advanced Settings

For the purposes of this document please contact Studentnet support to advise.

Contacts & Planning

For further information and to plan your implementation please contact Studentnet:

w: www.studentnet.net

e: info@studentnet.net

p: +61 2 9281 1626

oOo

