impero education pro

Classlink Integration

Impero Education Pro

impero

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Introduction

Impero Education Pro can now integrate with the Classlink Roster Server. This integration allows schools and organisations using Classlink to supply Education Pro with the data required to create groups and add groups members. In addition, it will add all staff users, grant them access to the system and give them access to only the groups assigned to them in the SIS/MIS system.

The following guide is designed to take you through the process of setting up Impero Education Pro to support Classlink Integration.

Requirements

- Impero Education Pro Server running version 7.3.36 or higher
- SFTP Server running on the Impero Education Pro Server
- OneRosterImporter tool for Education Pro provided by Impero
- SIS/MIS system supporting the OneRoster standard
- Classlink Roster Server

Install Impero OneRoster Import Service

Download the Impero OneRoster Import service setup here

Run and install the Impero OneRoster Import service on the Impero Server (Please note Impero Server must be version 7.3 or higher)



Choose the install location for the OneRoster import service

(Please note this location will contain a config file which can be edited to change the import and output folders)

🕼 OneRoster Import Service Setup	-	• X
Select Installation Folder This is the folder where OneRoster Import Service will be installed.		\mathfrak{G}
To install in this folder, click "Next". To install to a different folder, ente "Browse". Eolder:	er it bei	low or click
C:\Program Files (x86)\Impero Solutions Ltd\OneRoster Import Servi		Browse
Advanced Installer 		Cancel

Once the install is completed you will see a new service running called Impero One roster Importer

(Please note this service must be running for Classlink Integration to function)



Configure SFTP Server

In order to facilitate the data transfer between the Classlink Roster Server and the Impero Education Pro Server, an SFTP Server must be configured on the Impero Server. There are many SFTP server packages available and providing the credentials have been setup correctly it should not matter which SFTP service you decide to use.

For the purpose of this guide we will be using Windows Server 2019 which has OpenSSH Server as a built-in optional feature.

Firstly, you will need to install the OpenSSH Server feature in Windows Server 2019. This can be found under **Settings->Apps->Manage optional features**

← Settings		
ය Manage	e optional features	5
Optional featur	es	
See optional feature h	nistory	
Add a feature		
Т		
English (US) h	handwriting	7.21 MB
👳 English (US) d	optical character recognition	228 KB
A		
A ^字 English (US) s	peech recognition	95.8 MB
A字 English (US) t	ext-to-speech	64.6 MB
🚖 English (US) t	yping	40.6 MB
A		
বি Internet Explo	orer 11	1.61 MB
Math Recogn	izer	16.6 MB
OpenSSH Clie	ent	5.05 MB
W		
C Windows Mee	dia Player	46.6 MB
XPS Viewer		15.8 MB

Click Add a feature and scroll down until you find the feature OpenSSH Server and click Install.

÷	Settings	
仚	Add a feature	
ک ک		
¢	Korean Supplemental Fonts	9.29 MB
¢	Lao Supplemental Fonts	198 KB
¢	Malayalam Supplemental Fonts	174 KB
(3	Mopria Cloud Service	3.20 MB
{ }	MSIX Packaging Tool Driver	39.6 KB
{ }	Odia Supplemental Fonts	257 KB
¢	OpenSSH Server	1.23 MB
	OpenSSH-based secure shell (SSH) server, for management and access from remote mach	or secure key ines.
		Install
{ }	Pan-European Supplemental Fonts	4.09 MB
¢	RIP Listener	45.1 KB
{ }	Sinhala Supplemental Fonts	425 KB
¢	Syriac Supplemental Fonts	84.2 KB

Go back to the previous screen and when OpenSSH Server appears in the list of installed components then you have successfully installed the SFTP server.

Math Recognizer	16.6 MB
्र OpenSSH Client	5.05 MB
OpenSSH Server	4.71 MB
र्टु Windows Media Player	46.6 MB
र्टु XPS Viewer	15.8 MB

Now we need to add a local user account to the Impero Server that will be used by the Classlink Roster Server to push data to us.

On the Impero Server, open Run and type **lusrmgr.msc** and press **enter**. This will launch the local users and groups editor.



Right click the Users folder and select New User...

Enter a username and password and set the password to never expire.

Untick the default option User must change password at next logon

New User		?	×					
<u>U</u> ser name:	sftp							
<u>F</u> ull name:	SFTP test account							
Description:	used to test sftp transfers to Impero Se	rver						
Password:	•••••							
Confirm password:								
User <u>m</u> ust cl	nange password at next logon							
User cannot	change password							
✓ Password net	ever expires							
Account is d	isa <u>b</u> led							
<u>H</u> elp	Create	Clo	se					

Click Create

Now navigate to the following directory

C:\ProgramData\ssh

(ProgramData is a hidden system folder by default)

📕 🗹 📑 🖛 I s	sh						-	×
File Home	Share	View						~ 🕐
$\leftarrow \rightarrow \cdot \uparrow$	→ Thi	s PC > Windows (C:) > ProgramData > s	ssh			√ Ō	Search ssh	P
		Name	Date modified	Туре	Size			
📌 Quick access		logs	0/0/2010 1-36 DM	File folder				
E Desktop	*	ssh host dsa key	9/9/2019 1:36 PM	File	1 KB			
👆 Downloads	*	ssh host dsa key.pub	9/9/2019 1:36 PM	PUB File	1 KB			
Documents	*	ssh host ecdsa key	9/9/2019 1:36 PM	File	1 KB			
E Pictures	*	ssh_host_ecdsa_key.pub	9/9/2019 1:36 PM	PUB File	1 KB			
ssh	*	ssh_host_ed25519_key	9/9/2019 1:36 PM	File	1 KB			
		ssh_host_ed25519_key.pub	9/9/2019 1:36 PM	PUB File	1 KB			
This PC		ssh_host_rsa_key	9/9/2019 1:36 PM	File	2 KB			
i Network		ssh_host_rsa_key.pub	9/9/2019 1:36 PM	PUB File	1 KB			
		sshd.pid	9/9/2019 2:18 PM	PID File	1 KB			
		sshd_config	9/9/2019 2:17 PM	File	3 KB			
								_

Open the file called **sshd_config** with a text editor. You may need to open the text editor with administrator privileges to save changes.

Add the following lines to the top of the file and Save

AllowUsers sftp (change sftp to match the user you created previously)

ChrootDirectory C:/OneRosterImport

ForceCommand internal-sftp

```
sshd_config - Notepad
                                                                                   н.
File Edit Format View Help
AllowUsers sftp
ChrootDirectory C:/OneRosterImport
ForceCommand internal-sftp
# This is the sshd server system-wide configuration file. See
# sshd_config(5) for more information.
# The strategy used for options in the default sshd_config shipped with
# OpenSSH is to specify options with their default value where
# possible, but leave them commented. Uncommented options override the
# default value.
#Port 22
#AddressFamily any
#ListenAddress 0.0.0.0
#ListenAddress ::
```

AllowUsers is the user we added to the local users in Windows in the previous step. By adding this line, it prevents any other users from performing the SFTP transfer.

ChrootDirectory prevents users from pushing data to any location on Impero Server and instead forces them to use only the directory used by our Classlink Integration.

ForceCommand prevents users from interacting with the SFTP Server at the command line level, further enhancing the security.

Configure Impero Server for SIS Integration

Open the Impero Server app and navigate to the **SIS Integration** tab (Settings->SIS Integration). In the **Import from** drop down menu select CSV. To the right of the drop-down menu we can see the path Impero Server will output the converted OneRoster files to based on your Impero Server installation location.

C:\Program Files (x86)\Impero Solutions Ltd\Impero Server\Data\CSVImport

Converted files must be found in this location for Classlink Integration to function.

🥱 Automatic Updates 🛛 💓 Room Booking 💭 🕵 Confide 🖉 👸 Favourites 🔪
ccess Rights (Mail Server Settings) (Acceptable Use Policy (Computer Availability (Group Timetable
n Groups SIS Integration Cloud Configuration
C:\Program Files (x86)\Impero Solutions Ltd\Impero
Server\Data\CSVImport\students.csv
C:\Program Files (x86)\Impero Solutions Ltd\Impero
+ Server (Data (CSVIIIIport (teachers.csv
Import
Import Groups
Scheduled daily import
14:05 Import time
g the next import with full
Teacher's access rights for SIS groups applied on import
Ratic Concole Only
Manage Group Members
Manage Group Policies
Manage Room Layout
Manage Group Access Rights
C Manage Group Settings
Manage Group Name
Delete Group
SIS field to map to Console username:
9 9

Before we Import Groups we will take a look at some of the other settings on the SIS Integration page.

These users will be granted access to all SIS groups during the n access rights:	ext import with full
Select user	~ +

This setting allows Admins to grant users access to all Imported groups regardless of the rights specified in the CSV files. The **Select user** drop down is populated with the users already listed in your console access rights



This option allows admins to specify group access rights on import to restrict customisation of imported groups. You can also specify if teachers have access to **Basic Console Only**, a cut down version of the Impero Console with the focus on Classroom Management for teachers (Windows only)

District username	~
District username	
Email	

With the above setting you define whether the import pulls a username or an email address to be added to Impero. If your users are signing into Windows or Mac based devices then use the **District username** option. If users are using ChromeOS devices then select the **Email** option.



Import allows you to begin the import process and add user and create groups. You can schedule the Import to occur at the same time every day. In combination with a scheduled push from the Classlink Roster Server we ensure you groups and membership rules are up to date.

PLEASE NOTE – Impero recommends leaving 10 minutes between the Roster Server push and the Impero Server import to ensure data has been converted before performing an import

Classlink Roster Server

The following section assumes that a Classlink Roster Server has been setup for your school. Classlink Roster Server knowledge base articles can be found <u>here</u>

Adding the Impero Education Pro Application

Access your roster server dashboard found <u>here</u> and select **Applications** and then **Add Applications**

				ს 🔺 🥐
IL DASHBOARD	Applications			
PREVIEW DATA	V Search App			Show Extra Columns
↑↓ IMPORT ROSTERS	Name 1	Enabled Type	Orgs C4	ourses Actions
E LOGS				
AMANUAL RECORDS	REST: Wed 7/18/2018, 1:56 pm	FULL	41 5	i364
		Page: 1 💌	Rows per page: 25 💌 1 -	1 of 1 🔣 🔇 🕹 刘
? HELP				

Here is a list of applications that support the Roster Server. Type **Impero** into the search field to filter the list to show our application and click **Add**

æ	ROSTERSERVER	≡ # APPLICATIONS → ADD				https://sa	ndbax-dem	o-v2.onerost	er.com	U	r 🍥
		Add Applications							sh	ow Deve	opment Apps
*		Q, impero									
۲											
14 	IMPORT ROSTERS	Name 1	Company Name Impero Software								
	MANUAL RECORDS		http://www.imperosoftware.com					+ ADD			
				Page:	1.4	Rows per page:	25 *	1-1 of 1	K	< .	> >
3											

On the permissions page you can define what data sets our application can use. Impero Education Pro needs users and classes only in order to generate a successful Integration



Impero Education Pro is currently limited to a maximum of 5000 users and 1200 classes per Impero Server.

A guide that covers Classlink Roster Server Advanced Permissions in more detail can be found <u>here</u>

Adding the Custom Export application for Multi Server Configurations

If your organisation has multiple Impero Education Pro Servers, then you will need to add the **Custom Export Application** rather that the Impero Education Pro Application. The **Custom Export Application** can be added to your Roster Server multiple times and each instance can be configured to point to a different Impero Server.

To add **Custom Export Applications** simply search for Export under applications.

Sending Classlink Roster Server Data to Impero Education Pro

Classlink Integration in Impero Education Pro is powered exclusively by the SFTP standard. Classlink Roster Server uses SFTP to send your data directly to your Impero Education Pro Server. In order to facilitate this transfer, some credentials and settings must be setup in our applications SFTP Settings to schedule automated exports with the data that is defined by the applications permissions.

Applications ADD APPLICATIONS **Q** Search App Show Extra Columns Name 1 Enabled Actions Type Orgs Courses Impero Education Pro 41 -53 Edit Permissions REST: Wed 7/18/2018, 1:56 pm SFTP: Wed 7/18/2018, 10:30 pm 🔗 🛛 📋 Find 25 🔻 Page Rows per page: Explore In API Run Sanity Check API Key and Secret վիղ SFTP Settings Filter Fields Email Developer Remove

Click the Actions menu -> and choose SFTP Settings.

In the Server Details and Authentication Details sections, enter the Impero Education Pro Server details.

Server Details should contain the **IP address** of your Impero Server and use **port 22**. The protocol is **sftp.** The default upload path should be left blank as the Impero Server will define this location as part of the OpenSSH setup (Chrootdirectory) Authentication Details needs to contain the **username** and **password** you added locally to the Impero Server.

Under File Details, specify the export template that is being sent to the Impero Server. Impero Server supports **OneRoster v1p1** only so this must be selected.

Impero Server does not support processing the CSV's in zipped format so leave the **Zipped** option unselected.

Enter the Schedule Details for when you would like your Roster Server to push data to your Impero Server

Also in Schedule Details, switch the toggle to **Enabled** in order for the transfer to take place.

Click Save.

Click **Send Now** to initiate the transfer.

Server Details			
Protocol IP Address or Hostname sftp		Port 22	
Authentication Details			Use SSH Key
Usemame rosterdata Password			
File Detaile			≡, Test Auth
Finer Template			
OneRoster v1p1	▼ Zipped		
Schedule Details			Enabled
On Deys* Sun, Mon, Tue, Wed, Thu, Fri, Sat ▼ At ③ _ 9 💠 :	03 ‡ AM ¥		

Import Groups on Impero Server

Now that we have sent data to the Impero Server from Classlink, we can head back over to the Impero Server to perform the Import. Remember once configured pushes and imports can be scheduled to happen automatically.

Click the **Import Groups** button to begin the import process. An import in progress is identified by the fetching dialog displayed next to the import status

Last import time	18/06/18 17:08:10
Last import status	Fetching

Once complete the status will display OK and will update the Last import time



To verify the import was succesful, navigate to the Console Access Rights tab. Under Access Rights List you should see all the staff users that have been granted access and in the groups tab you should see the total number of groups that have been created.



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