

User manual



www.3dgence.com

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I INTRODUCTION

1. PREFACE

3DGence CLOUD is software designed to remotely operate sets of printers that are part of equipment resources. The software was developed to meet industry 4.0 requirements for 3DGence devices and supports remote communication with the 3DGence INDUSTRY F420 printer. The communication in the system is encrypted. User .stl files are divided into many components and encrypted as .3dg files. 3DGence does not have access to files sent to the system by Customers. 3DGence CLOUD allows full control of the 3D printing process, including starting and queuing print jobs, collecting statistics and accessing maintenance service functions. It is a solution that improves workflow and enables remote control over printing. Main system functionalities:

- remote support of 3D printers,
- queuing prints,
- monitoring of printed models, using a camera located in the printer,
- report a problem technical service support,
- management of the printer fleet: adding and removing machines in the system, granting access to machines to appropriate users with specific permissions,
- giving different permissions to individual users,
- access to files made available by the Manufacturer,
- collecting statistics.

2. SETTING UP ACCOUNT

An account set up by 3DGence is a platform administrator account in a company. The administrator from the level of his account invites other users inside his organization to create an account in the system. The only requirement to use the system is access to the Internet, reading and accepting the rules of use of the platform and consenting to the processing of personal data.

2.1. Administrator account

An account in the 3DGence CLOUD system is created by 3DGence engineers after purchasing a 3DGence INDUSTRY F420 device. For this purpose, the user who will be the platform administrator in a company provides 3DGence engineers a form prepared by the Manufacturer with the data necessary to create an account. You can set up an account only after reading and accepting the terms of use of the platform and providing consent in writing to provide personal data to set up an account. Data necessary to create an account:

- the name of the printer buyer,
- registered office address of the company,
- full name of the platform administrator in the company,
- e-mail address of the platform administrator in the company,
- telephone number of the platform administrator in the company.

After submitting the above data on the form prepared by 3DGence and accepting the terms and conditions, designated 3DGence engineers create an administrator account. After creating an account, a message with a link is sent to the e-mail address provided in the form, which redirects you to a page where you can complete the registration process and set a password for the account (fig. 1). After completing the registration, only the platform administrator in your company has access to the account. Logging in to the platform is described in point three of this section.



Fig. 1 Completing the registration of the administrator account

2.2. Other users' account

The company platform administrator from the level of his or her account may invites other users inside the organisation to use the system. Simply select the "invite" button in the "permissions" \rightarrow "users" tab. A window will appear where you should enter the e-mail addresses of the invited people and give them permissions (fig. 2). You can also write a brief welcome message here and send the invitation. After an invitation is sent, a message is received at indicated e-mail addresses, which allows the invited user to set up an account in the system. The activation link is valid for 24 hours. After being redirected to create an account, you should read the terms and conditions, consent to data processing and provide the required details (fig. 3). Once an account is created, only the user who created it can access it. The company platform administrator is the only entity that manages the accounts of the subsequent users invited by the administrator.

3DGENCE	Permissions Summary Users Groups Printers				
home Home			- Institution		
Printers			invite user	Save	
In Statistics	First name Sur	Service	Operator [Designer Supervisor	
🗋 Files	IIIvite usei				
√₽ Support	E-mail				
Ĉ Permissions	Permissions (role) E-mail invite				
🚺 Adam					
44					

Fig. 2 Window for inviting new users



Fig. 3 Creating an account by further users in an organisation

3. LOGGING IN

After creating an account for the 3DGence CLOUD platform, you can log in at www.cloud.3dgence.com (Fig. 4). Please enter your e-mail address and password when logging in. The login page is the same for the administrator and other users in the organisation. Additionally, you can change the platform language before logging in.





II PROGRAMME INTERFACE

1. HOME

After logging in to the platform, the user is redirected to the home page (Fig. 5).

- 1. Home screen.
- 2. Printer tab.
- 3. Statistics tab.
- 4. Files tab.
- 5. Help tab.
- 6. Permissions tab.
- 7. User account. Once you select your name, a list is displayed where you can go through your account settings and log out of the platform.
- 8. The button to collapse the left-side navigation menu. After collapsing the left-side menu, only icons without category names are visible.
- 9. Welcome message with user data.
- 10. The list of organisation's added printers and their status. Select a printer to access printer details.
- 11. Printer search engine.
- 12. Multifunctional information window can display information about permissions or one of the two types of abbreviated statistics. Fig. 5 below shows the permissions of the logged in user.
- 13. Selection of information window functions.



Fig. 5 3DGence CLOUD platform home screen

2. PRINTERS

The "printers" category can be used to preview all printers added within an organisation (fig. 6). When you log in for the first time, if no one in your organisation has added a printer - the tab is empty, and you must select the "add printer" button to add a device.

- 1. A list of all printers within the organisation. Clicking on a record to open the details of a selected printer. The list is empty before a printer is added to the platform.
- 2. Add a new printer.
- 3. Search engine.
- 4. Device status.
- 5. User-defined printer name.
- 6. The name of the file currently being printed.
- 7. Percentage progress of the currently printed file.
- 8. Estimated remaining time to print completion.
- 9. Preview of the currently printed .3dg file or the first .3dg file in the queue.



Fig. 6 Printer category

2.1. Adding a new printer

You can add a new printer by selecting the "add printer" button in the "printers" category (Fig. 6). A printer can only be assigned to one user at a time. All added printers will be visible by all users in your organization, unless otherwise specified in the permissions by the company platform administrator. After selecting "add printer" button, enter printer's serial number and pin and then select "add" (Fig. 7). This information is available on the printer display when you select on the home screen: network settings icons \rightarrow 3DGence CLOUD. A new added printer will be visible in the list of printers (Fig. 8). You can change the name of the device for quick identification. The name will also be visible to other platform users.

3DGENCE	Printer	ſS				+ Add printer
						Search
	Status	Printer name	Printing file	Print progress	Estimated time	Preview
			No. oslotos		Lostification ciffic	
			NO PEINTER	s available.		
		Add p	rinter			
		Note: You can Serial number Pin	ind these information in network	menu on printer's display.		
		Not	Cancel			
O Adam						

Fig. 7 Adding a new printer

Search
time It Braview

Fig. 8 List of printers with the added device

2.2. Printer details

In the "printers" category, after selecting a device from the list you access the details of the selected printer (Fig. 9, 10, 11).

- 1. Printer name.
- 2. Printer information status, serial number, description, number of prints in the queue, estimated queue time.
- 3. Camera preview.
- 4. The print progress of the currently printed file and the estimated remaining time.
- 5. You can edit printer details here.

- 6. Use it to delete a printer.
- 7. Use it to add a print to the queue.
- 8. List of prints in the queue with a thumbnail of the file, the name, the estimated time, a possibility to check additional information about the material profile for the file.
- 9. List of the last printer status (maintenance information).
- 10. Information about upcoming maintenance on the unit.
- 11. Information about materials loaded in the printer. The name and manufacturer of the material loaded and the remaining percentage of material on the spool are shown here.

슈 Home Printers		<u>↓</u> Kalibra	cja 101 • 🚽		5	Ø Edt	Delete
Statistics		Status Serial number	Printing E420 10101	Prints currently	in queue		+ Add printout
ු Files ුරි Support	2	Description Total number of prints in queue	3	No. Preview	Name	Estimated print time	More
		Estimated queue time	1 d 6 h 37 m	s	sample.3dg	13:06:45	~
	3—			Printer last stat	us		•-•
		Statement of the		Status	Start		
				Printing	2020-01-13 10:14:4		• •
		Current print: sample.3dg	11:4012 [cft				

Fig. 9 Printer information screen – part 1

	Printers/Kalibracja 104	
A Home	Upcoming Maintenance	
Printers	Name Upcoming in	
Statistics	Printer calibration 231 h	
🗋 Files	Printer melintenance 4g2 h	•
🖑 Support		
Permissions	Printer service 731 h	
	Module calibration 992 h	
	Module service 2731 h	
	Module tool change 2592 h	
	Materials	
	Material bay Material bay Material bay Material bay Material bay er of the number type name material Remaining material quantity	
Monika		



	Printers/ Ka	libracja 104								
				Finter service	-		7.54 0			
☆ Home				Module calibr	ration		gg2 h			
Printers										
Statistics				Module servic	Ce		2731 h			
🗋 Files				Module tool o	hange		2 <u>00</u> 2 h			
ුව Support										
Permissions										
			1	Materials						
				Material bay number	Material bay type	Material name	Manufactur er of the material	Remaining material qu	antity	
				1	Model	ABS	3DGence		60%	Ы
				2	Model				0%	Щ
				3	Support	ESM-10	3DGence	_	30%	Ш
				4	Support				0%	
O Adam										

Fig. 11 Printer information screen – part 3

3. STATISTICS

The "statistics" category allows you to view the statistics generated by the printer (Fig. 12

- 1. Select the printer for which the statistics will be generated.
- 2. Select the time interval for which the statics will be generated.
- 3. Select the printer name for which the statistics are generated.
- 4. A graph generated for a given time interval.
- 5. Scroll bar for the graph area.
- 6. Display / hide the number of finished prints.
- 7. Display / hide the number of prints in the queue.
- 8. Display / hide print time information.
- 9. Display / hide printer errors.
- 10. Pie chart showing the consumption of individual materials by the printer.
- 11. The legend to the chart is available when expanded.
- 12. Pie chart showing printer statuses.
- 13. The legend to the chart is available when expanded.
- 14. Information on printer runtime, power consumption, and number of prints made.



Fig. 12 Statistics screen

4. FILES

In the "files" category, the files selected by 3DGence technical support are available for all users. All files added here can be downloaded and saved to disk.

- 1. Example models for printing (Fig. 13).
- 2. Material sheets (Fig. 14).
- 3. Software (Fig. 15).
- 4. Instructions (Fig. 16).

	Files			
	Sample Models	Material Datasheets Software	e Manuals	
fu) Home Printers				
Statistics	Sample preview	Name		Download file
🗋 Files	100			
🖉 Support		Sample 1		
Permissions	M	Sample z		L
	6	Sample 3		
Adam				



	Sample Mode	ls Material Datasheets Software Manuals	
ne			
ters			
istics	Material	Material name Description	Download file
s	6	ASA [Fillamentum] MSDS	
port nissions	0	HIPS-X [Spectrum] TDS	↓ ↓
	0	HIPS-X [Spectrum] MSDS	
	6	PolyMax PC [Polymaker] TDS	
	6	PEI-9085 [Kimya] TDS	
	6	ASA [Fillamentum] TDS	
	6	PolyMax PC [Polymaker] MSDS	
	(6)	PEI-9085 [Kimva] MSDS	

Fig. 14 Files category – material data sheets

3DGENCE	Files	
A	Sample Models Material Datasheets Software Manuals	
규 Home Printers		
∏ Statistics	Name	Download file
🗅 Files	3DGence SLICER 4 0 (version 21.0) - system macOS	$\mathbf{\underline{\downarrow}}$
SupportPermissions	3DGence SLICER 4 0 (version 2.1.1) - system Windows	↓
	3DGence SLICER 4.0 (version 2.1.1) - system macOS	
	3DGence SLICER 4.0 (version 2.1.0) - system Windows	
Adam		

Fig. 15 Files category – software

3DGENCE	Files	
🏠 Home	Sample Models Material Datasheets Software Manuals	
Printers		
In Statistics	3DGence INDUSTRY F420	Download file
🗅 Files	3DGence Slicer 4 0 User manual	Ţ
🖉 Support	3DGence INDUSTRY Fazo User manual	لي) ا
Permissions		
Adam		

Fig. 16 Files category – instructions

5. HELP

The list of all printers added in the organization can be accessed from the "help" tab (Fig. 17). For each of the printers you can fill out a problem report form, which will be sent to 3DGence technical support. The user may also send a request concerning software or material. After receiving your request, 3DGence Technical Support will immediately contact you to help and resolve the problem.

- 1. Use to access the general problem report form.
- 2. Use to access the files tab for instructions.
- 3. Search engine.
- 4. List of printers.
- 5. Printer status.
- 6. Printer name.
- 7. Upcoming maintenance activity on the unit.
- 8. Drop down for more information about reported problems.
- 9. Use to access the printer problem report form and does not require selecting the printer category and name.



Fig. 17 Help category

5.1. Service request

Select the "report problem" button in the "help" tab access the problem report form (fig. 18). Selecting a button next to the printer allows you to report a printer problem and does not require you to select a printer category or name. Select the button at the top of the tab to access the general form, where you can choose the category of the reported problem, e.g. printer, print module, material, 3DGence SLICER 4.0, 3DGence CLOUD or other.

- 1. Reported problem category.
- 2. Printer for which the problem is reported.
- 3. Use to generate a printer report.
- 4. Title of the reported problem.
- 5. Description of the reported problem.
- 6. Use to add a file to the request.
- 7. Use this button to send a request to 3DGence.
- 8. Cancel request.
- 9. Use to save the prepared request to a device.

After sending the request the user will receive a confirmation e-mail. The request will be sent to 3DGence Technical Support, who will respond immediately and help to solve the problem.

A 3DGENCE		
	P Support FORM	Manuals Support FORM
Ĥ Home	Choose Problem Printer	Search
Printers	2 Printer	upport
🗋 Files	Printer report Cet report	
ුව Support	Problem	
(*) Parmissions	5 Description	
	6 Upload file Upload files here (max 6MB)	
Adem		

Fig. 18 Request submission form

6. PERMISSIONS

Permissions allow the organisation's system administrator to restrict access to certain functionalities to selected users. The administrator can grant different permissions to each user. One user may have several permissions. In the first tab you can find information about the permissions granted to a logged-in user (Fig. 19).

	Permissions
	Summary Users Groups Printers
🞧 Home	
Printers	Adam Kowalski
Statistics	Your Permissions
🗋 Files	✓ You are an admin
Support	 ✓ You can modify printers list
	✓ You can adjust permissions
	✓ You can edit printing queue
	✓ You can send support requests
	✓ You can see statistics
Q Adam	
	Fig. 19 Permission category – information

In the second tab you can see a list of users added by the administrator (Fig. 20, 21). In this tab the administrator can grant and change permissions to all users. After changing permissions, remember to save them.

- 1. Use this button to invite new users to use the platform.
- 2. Save changes.
- 3. First name of the user added.
- 4. Last name of the user added.
- 5. Last activity.
- 6. E-mail of the user added.
- 7. Status of the account of the added user. If the added user does not complete the registration, his/her account status will be inactive. After the registration is completed, the status changes to active.
- 8. Permissions granted. These permissions can be changed but remember to save them.
- 9. Block user visible when you scroll the bottom bar. A blocked user cannot use the platform.
- 10. Use to delete the user preceded by a message visible after scrolling the bottom bar.

	Pennis:	SIULIS								
ne	Summary	Users	Groups Prin	iters			_			
ters							0-	- Invite us	ur)	Save
istics	First name	Surname	Last login	E-mail	Status	Full Access	Service	Operator	Designer	Supervisor
5	Jan	Kowalski		jan.kowalski@3dgence.com	Active	\checkmark				\Box
port	1	1	1	1	1					
nissions	3	4	5	6	7					
								8		
								-		
								•		
								•		
								•		
								•		
								•		
								•		
								•		

Fig. 20 Permission category – users (part 1)

	Permiss	sions								
	Summary	Users Groups Pri	nters							
☆ Home						(Invite us	er 🖉	Save		
🖁 Printers	Last login	E-mail	Status	Full Access	Service	Operator	Designer	Supervisor	Blocked	Deletion
∏ Statistics		ian kowalski@ddoonco.com	Active							
🖿 Files		โต เพิ่มพัฒธารณีเวิสสิรา เรื่องเรา	Activ						U	Delete
🥏 Support										
Permissions										
Adam										

Fig. 21 Permission category – users (part 2)

In the third tab of the permission category there is a list of added groups (Fig. 22). Each user is assigned to at least one group by the administrator. The administrator can edit permissions for each group. All users assigned to a group have the same permissions. One user can be assigned to several groups simultaneously.

- 1. Use to add a new role / group (Fig. 23). After selecting this option, enter the name of the new group, its description and give the permissions that will be available to the group, and then select "add".
- 2. Name of the role/group.
- 3. Description of the role/group.
- 4. The number of permissions granted to a role / group.
- 5. Number of users with a role (in a group).
- 6. Edit role / group (Fig. 24). When you select this option, you can change the group name, its description and permissions. From this level you can also delete the selected group.

A 3DGENCE					
PRINT YOUR WOELD	Permissions				
	Summary Users	Groups Printers			
		3	4	5	+ Add role
	2 Role	Description	Amount of permissions in the role	Amount of users with this role	Edit • 6
Statistics	Supervisor		2	0	÷
🕒 Files	Designer		5	2	:
P Support	Service		14	2	1
Permissions	Operator		7	1	÷
	Full Access		17	18	*
Adam					
44					

Fig. 22 Permission category – groups

Homo	Permissic Summary	DINS Jsers Groups	Printers		Ada tola
	Role	Add rol	e	of users with this role	Edit
Statistics	Full Access	-		0	
🗋 Files	Designer	Name		O	
P Support	Service	Description		0	
🕆 Permissions	Operator			0	
	Supervisor	User role	 Printers screen Statistics screen Files screen Support screen Permissions screen Slicer connect 	0	
O Adam ⊲⊴					

Fig. 23 Permission category – groups – add role

	Permission	s			
🔿 Home	Summary Use	Edit grou	h		
Printers	Role	Name	Service	of users with this role	+ Add role Edit
Infi Statistics	Full Access	Description		0	
🖹 Files	Designer			0	
D Support	Service			0	
	Operator	User role	- 🕢 Printers screen	0	
Permissions	Operator		Add, delete and edit printers	0	
	Supervisor		Modify queue	U	
			Upcoming Maintenance		
			Statistics screen		
			Files screen		
			- 🕑 Support screen		
			Support requests		
			+ 🗋 Permissions screen		
			- 🕑 Slicer connect		
			Add model to queue		
		Save	Cancel Delete group		
Adam					

Fig. 24 Permission category – groups – edit group

Use the fourth tab of the permissions category to change the permissions for users with a given role (Fig. 25). After the change, remember to select "save".

9	Summary Use	ers Groups Printers			
ers					Save
stics	Kalibracja 104	<u></u>			
	Role	Support permissions	Could connect Slicer	Modify models queue	Add model to queue
ort	Full Access	Auto 🗸	Auto 🖌	Auto 🖌	Auto ~
lissions	Designer	Auto ~	Auto ~	Auto 🛩	Auto ~
	Service	Auto ~	Auto 🗸	Auto ~	Auto ~
	Operator	Auto ~	Auto ~	Auto 🛩	Auto ~
	Supervisor	Auto ~	Auto ~	Auto ~	Auto ~

Fig. 25 Permission category – printers

7. USER ACCOUNT

Once you select the name in the left-side menu bar, a list is displayed where you can go through your account settings (Fig. 26).

1. Use this button to edict your profile details (Fig. 27).

2. Profile photo.

- 3. Use this to add or replace your photo (Fig. 28).
- 4. Username.
- 5. User's e-mail.
- 6. User's telephone number
- 7. Language of the platform.

Account prefe	rences		Edit pro
Picture	● ⊷_2	:3	
Tituto			
Name	Adam Kowalski •4		
			← 2
E-mail	adam.kowalski@3dgence.com	n •5	
Phone numbe	111 222 333 •6		
Language	English •7		

Fig. 26 User account

	Hello Adam Kowalski	
☆ Home Printers	Account preferences	Edit profie
Statistics Files	Name Edit profile	
Permissions	E-mail First name Adam	
	Phone number E-mail adam kowalski@gmail.com	
	Change Cancel	
• Adam		
44		

Fig. 27 Edit user account

	Hello Adam Kowalski	
fra Home	Account preferences	(Edit profile
Printers		
0 Statistics	Picture I i	
🗋 Files	Name	
₀© Support	Add picture	
Permissions	E-mail Add picture	
	Phone number Upload picture here (max 2MB)	
	Language Seve Cancel	
O Adam		

Fig. 28 Add a profile photo



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