### **OTAC** auth Client Install Guide



V 1.0.0

swIDch Ltd.

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### Introduction

This document is intended for administrators who will be using the OTAC auth Client app available on the PLCNext Store and the mobile app on Google Play store and Apple Apple store. This mobile app works together with the backend OTAC service that typically protects web applications such as a PLC application. The mobile app generates a One Time Authentication Code (OTAC) which is the world's first one-way dynamic authentication technology that enables users to authenticate to PLC devices via their phone.

This client app is installed on every PLC that you want to protect with OTAC. The client app talks to the server app (installed typically on an edge device) to validate OTAC.

- **App Details**: Experience rapid and secure user/device authentication through OTAC's 8-character code.
- Quick and Easy, No Registration: Streamlined authentication without the hassle of sign-up or login processes. Your privacy is paramount; no personal information required.
- Secure Authentication with OTAC Code: Ensure robust security with time-sensitive OTAC codes. Safely access your accounts using a code that expires after a specific duration.
- **Manage Multiple Accounts Easily**: Effortlessly authenticate multiple accounts using a single OTAC auth app. Register and manage up to 20 accounts securely.



#### Download the App

#### **PLCNext Store**

You can download the OTAC auth client app from the PLCNext Store:



#### Mobile App

You can download the OTAC auth app from the respective Google and Apple app stores:



### Prerequisites

This client app only works with server app: <u>OTAC auth - MFA for PLCnext</u>. Make sure you have installed the server app, gone through the install and design guides and also applied for the licenses for the server, Once you have done that you will have to:

- Install the clients app
- Get the PLC's serial number. This is necessary for generating a license file
- Contact swIDch with the serial number to obtain a license file
- Set the IP address of the server.
- Apply the license file.

#### Installation

• Goto the PLCNext store and search for OTAC auth client.

PLCnext Store Europe	🛓 chasc	
APP     OTAC AUTH CLIENT		
<b>OTAC</b> auth client		
swIDch 😴 Contact 😴 Share App Developer		
Version: 0   Draft		
G INSTALL	Free No license is required	
DESCRIPTION		
LINK TO LATEST VERSION https://www.plcnextstore.com/permalinks/apps/latest/60002172000868 & Share App	🗇 Copy link	
VERSION HISTORY Version What's new Release date Changelog	SHA-256 checksum	(?) Support

- Click on Download to download the app file.
- Logon to WBM of the PLC

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- TATPHOENIX						Project Name:		HW: 03 FW: 2023.0.6 LTS
EPC 1502 1185416	Administr PLCnext Apps	ration						MAC: A8:74:1D:4B:D1:F5
	System Message							
=1==*	Information	The App contai	iner is being transferred to	the Controller: 1%				
	Warning	Apps managem	nent can adversely affect t	he real-time behavior of t	he system. Therefore, do r	not manage any apps during	productive oper	ation1
Overview	Installed PLCnext A	pps						
General Data	App Name	App ID	Version	Min FW Version	Manufacturer	License Status	App Status	
Cockpit	Install App							
<ul> <li>Diagnostics</li> </ul>								
Profinet								
<ul> <li>Configuration</li> </ul>								
Network								
PLCnext Store								
Proficioud Services								
Date and Time								
System Services								
Web Services								
<ul> <li>Security</li> </ul>								
Certificate Authentication								

- Navigate to Administration > PLCnext Apps and click on install app. Browse for the app file you downloaded from the store.
- The app will take a few minutes to transfer, after which click on start

EPC 1502 1185416	Administra PLCnext Apps	ation						
	System Message							
=1==*	Information							
	Warning	Apps management of	an adversely affect t	he real-time behavior of	the system. Therefore, do r	not manage any apps during j	productive operation	1
Overview	Installed PLCnext Ap	ps						
neral Data	App Name	App ID	Version	Min FW Version	Manufacturer	License Status	App Status	
skpit	OTACauthClient	60002172000868	1.0	23.0.6	Swidch	License free	RUN	Stop
finet								
Configuration								
Configuration								
work Store								
work inext Store ficloud Services								
configuration     work     inext Store     ficloud Services     e and Time								
Configuration work cnext Store ficloud Services se and Time tem Services								
Configuration work inext Store ficloud Services e and Time tem Services o Services								

• Once the app is installed, the PLC will reboot.



#### Getting the PLC's serial number:

The license for the client is tied to the serial number of the PLC. You can obtain the serial number in two ways:

#### Printed on the PLC

On the back of the plc you have SN printed along with a QR code to quickly scan the serial number.



#### Using a script

We provide a folder called userScripts under /opt/plcnext/userScript that provides sh scripts to get the serial number, register a license and configure the server's IP address.

- To get the serial number from within the PLC, SSH into the PLC.
- Navigate to "/opt/plcnext/userScript" folder.



admin@epc1502:~\$ cd userScript/ admin@epc1502:/opt/plcnext/userScript\$

- You will have to run the script GetSerial.sh with root permission.
- In order to run the script as root, you will have to set a password, If you haven't done that already: use the "sudo passwd root" command. You will be prompted for the current password followed by the new password you want to set for the root.

```
admin@epc1502:~$ sudo passwd root
We trust you have received the usual lecture from the local System
Administrator. It usually boils down to these three things:
    #1) Respect the privacy of others.
    #2) Think before you type.
    #3) With great power comes great responsibility.
Password:
New password:
Retype new password:
passwd: password updated successfully
Use the "su" command to switch to root and provide the root password when prompted.
admin@epc1502:/opt/plcnext/userScript$ su
```

No run the "sh GetSerial.sh" command to get the PLCs serial number.

```
root@epc1502:/opt/plcnext/userScript# sh GetSerial.sh
2036
```

Please contact <u>license@swidch.com</u> with the PLC's serial number to obtain a license file.

### Applying the License

Once you have obtained the license file, copy the contents of the file.

• SSH into the PLC

•

- Navigate to the "/opt/plcnext/otac/license\$" folder admin@epc1502:/opt/plcnext\$ cd otac/license/ admin@epc1502:/opt/plcnext/otac/license\$ |
- Use the following command to edit the license file "nano swidchauthclient.lic"
- In the editor pate in the contents of the license file you received



Command Promp	ot-ssh admi 🗙 🗾	Windows PowerShell	×	+ ~				-	o x
GNU nano 6.2 eyJ0eXAiOiJKV1	QiLCJhbGciOiJSl	JzI1NiJ9.eyJhdWQ	iOiJQTE	swidcha NOZXh0I	uthclient.lic wicHJvZHVjdCI6	Ik9UQUNhdXRoIiwi	b2lkTmFtZSI6IlB	0Iiwib2lk	S2V5Ij>
<mark>^G</mark> Help <mark>^X</mark> Exit	<mark>^O</mark> Write Out <mark>^R</mark> Read File	^W Where Is ^\ Replace	^K Cut ^U Pas	[ Read	1 line ] <sup>^T</sup> Execute <sup>^</sup> J Justify	<sup>^</sup> C Location <sup>^</sup> ∕ Go To Line	M–U Undo M–E Redo	M-A Set I M-6 Copy	Mark

- Press ctrl + x and then Y and enter to exit and save the file.
- Reboot the PLC for the license to take effect.

#### Setting the Server IP

- SSH into the PLC
- Navigate to "/opt/plcnext/userScript" folder. admin@epc1502:~\$ cd userScript/ admin@epc1502:/opt/plcnext/userScript\$
- You will have to run the script change-ip.sh with root permission.
- In order to run the script as root, you will have to set a password, If you haven't done that already: use the "sudo passwd root" command. You will be prompted for the current password followed by the new password you want to set for the root.

```
admin@epc1502:~$ sudo passwd root
We trust you have received the usual lecture from the local System
Administrator. It usually boils down to these three things:
    #1) Respect the privacy of others.
    #2) Think before you type.
    #3) With great power comes great responsibility.
Password:
New password:
Retype new password:
passwd: password updated successfully
```

• Use the "su" command to switch to root and provide the root password when prompted.



admin@epc1502:/opt/plcnext/userScript\$ su
Password:

 Set the ip address of the server by typing in the following command "sh change-ip.sh <Server IP>"

root@epc1502:/opt/plcnext/userScript# sh change-ip.sh 192.168.1.100 The ip address you entered: 192.168.1.100 Change success. Please reboot to apply the configuration changes.

Once the IP has been applied, reboot the PLC for changes to take effect.

**Please Note:** The client license is a one-time fee per PLC device, starting at £40 (approx €47) per PLC.

License is valid for the lifetime of the device, regardless of number of registered users or number of authentication requests. License is non-transferrable.

Maintenance is available at 20% per annum - covers software upgrades, patches and technical support.