

First-time 2FA Setup via a Personal Computer

Preliminary Actions

You need to install a *program* on your personal computer which will

- store the **secret key** that the IL authentication system will share with you
- calculate TOTP passcodes using the **secret key** as a seed

We advise Free Softwares such as [KeePassXC](#) (multiplatform with GUI) or the [OATH Toolkit](#) (GNU/Linux terminal), but you are free to choose any programs that implement the open OTP standards.

Setup

Step 1

Navigate to any of the Lorentz Institute SSO web applications, such [Account Services](#), [Remote Workspace](#), etc.

You will be redirected automatically to the Lorentz Institute Identity Provider login page as in **Figure 1**.



Figure 1: Identity Provider login page

Step 2

Enter your IL credentials to sign in. Upon successful login, you will be redirected to a page containing a QR code. Click on "Unable to Scan?" to display your shared **secret key** and the other parameters to input in your OTP program to set it up (Figure 2).

Note the secret key, the algorithm, the number of digits, and the time interval. You will need them in Step 3.

The figure consists of two screenshots of the Lorentz Institute Intranet TOTP Setup Page. The top screenshot shows the initial setup steps: 1. Install one of the following applications on your mobile (FreeOTP or Google Authenticator). 2. Open the application and scan the barcode. A QR code is displayed. The bottom screenshot shows the next steps: 3. Use the following configuration values if the application allows setting them: Type: Time-based, Algorithm: SHA1, Digits: 5, Interval: 30. 4. Enter the one-time code provided by the application and click Submit to finish the setup. A blurred secret key is shown. Both screenshots include input fields for 'One-time code' and 'Device Name', and a 'Submit' button.

Figure 2: TOTP Setup Page (QR code and other sensitive information deliberately blurred)

Step 3

Open KeePassXC (installed on all IL workstations), create a new passwords database if you do not want to use an existing one and click on *Entries* → *TOTP* → *Set Up TOTP*. Insert your private key, algorithm, time interval and number of digits from Step 2 and confirm by clicking on `OK`.

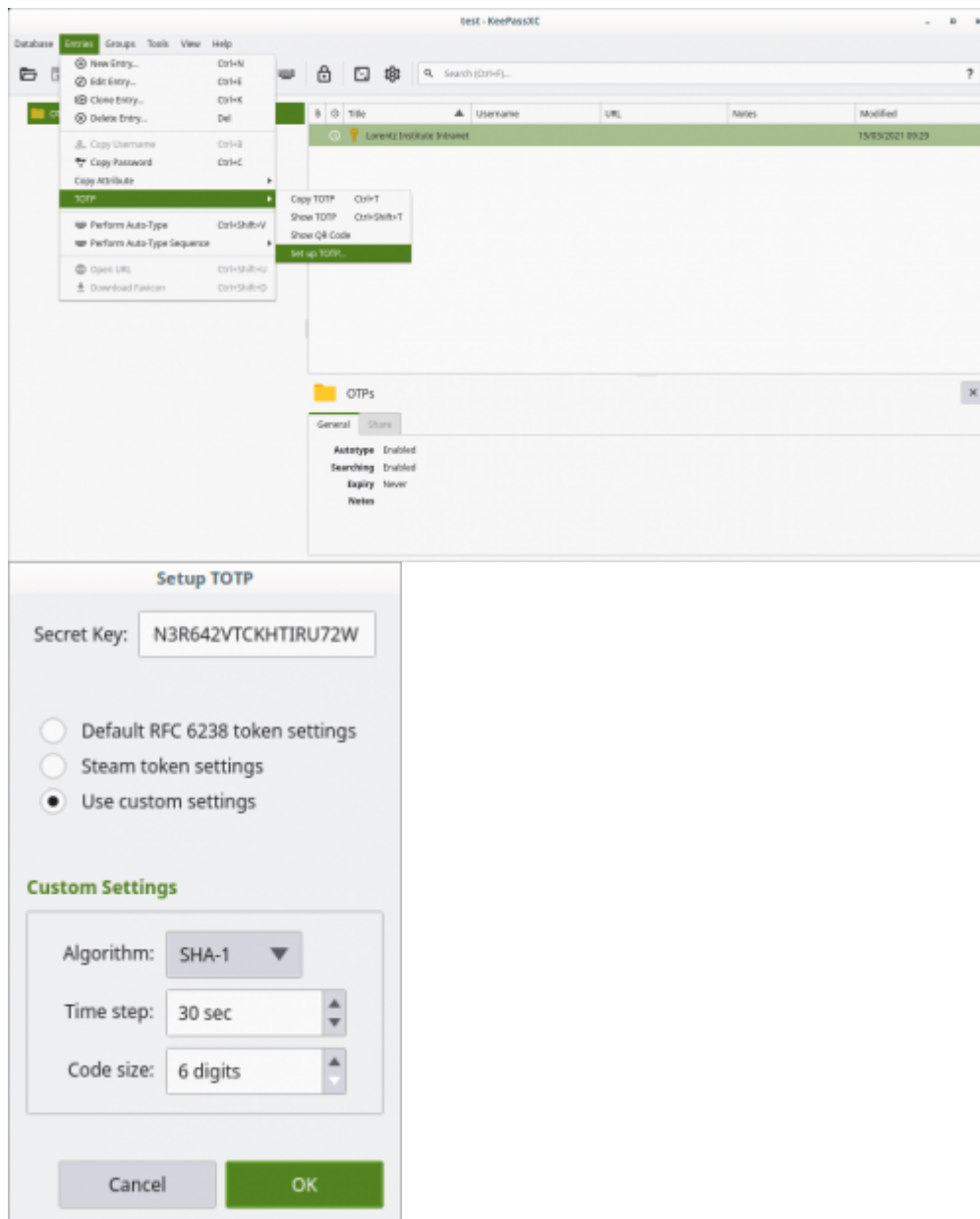


Figure 3: TOTP Setup with KeePassXC. Use the TOTP settings described in Step 2.

Generate a OTP by clicking on *Entries* → *TOTP* → *Show TOTP*. Insert this TOTP in the *One-time code* form input and, if you wish, a label in the form input called *Device Name*. This label is meant to help you keep track with which device the **secret key** has been shared. Click on *Submit*.

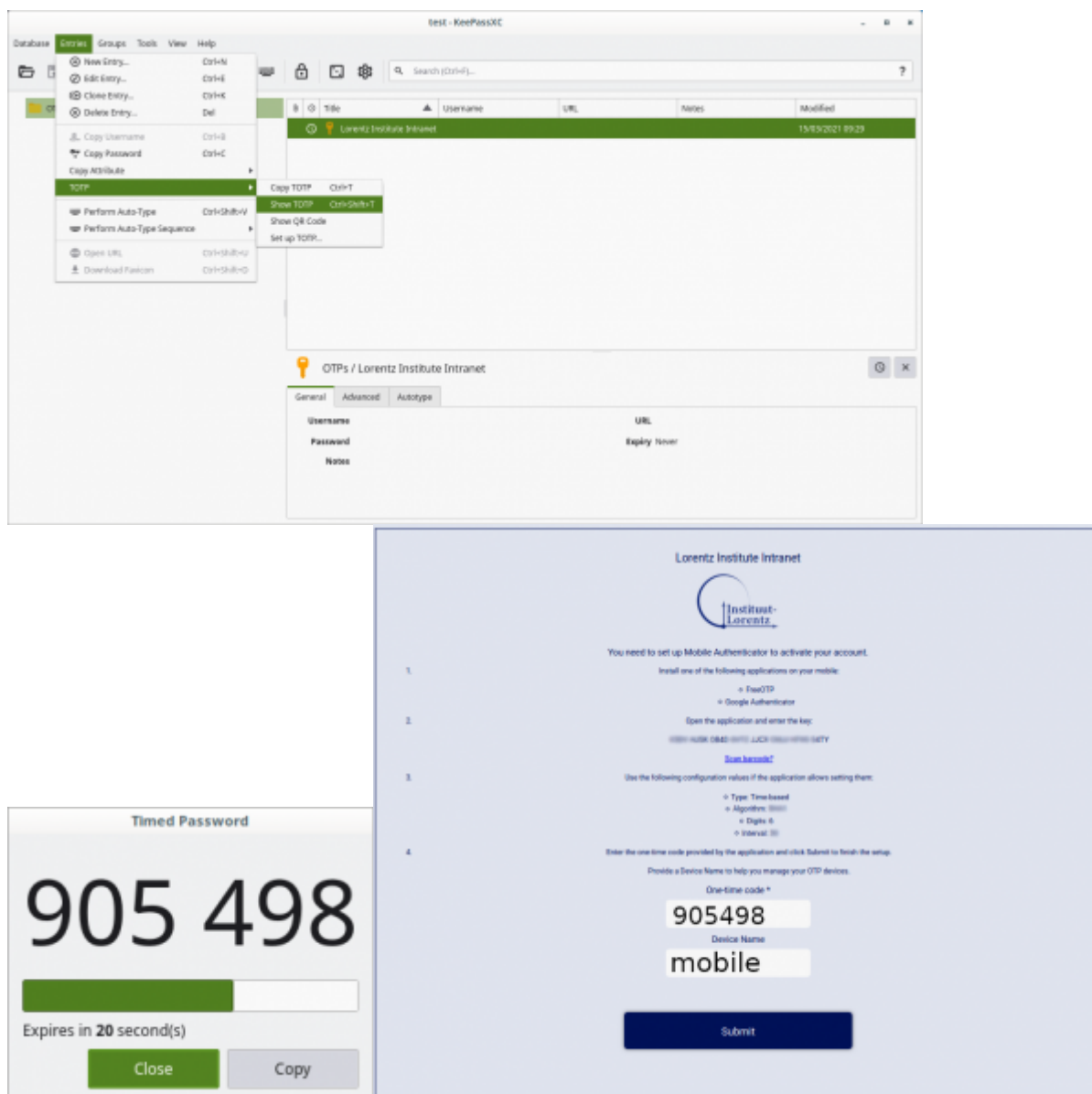


Figure 4: TOTP generation KeePassXC and final 2FA setup on the Lorentz Institute Identity Provider

Step 4

If Step 3 succeeds (errors might occur if there is too much lag time, i.e. the OTP expired), the system will send you an email to your private (not @lorentz) e-mail address with [precise instructions](#) on how to verify your identity. If your identity cannot be validated, you will not be granted access to the system.

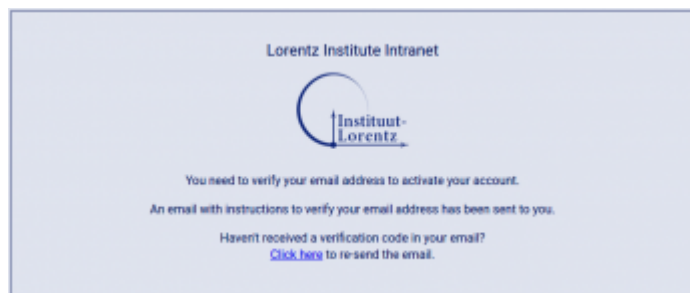


Figure 5: Screenshot of e-mail verification process.

Step 5

Verify your identity by visiting your private email inbox. You should have received an email from the Lorentz Institute Identity Provider ¹⁾. Open that email and copy (for instance using on most platforms Control-C or right-mouse click copy) the secret code in the body of the message. Visit <https://www.lorentz.leidenuniv.nl/idp/> and paste (on most platforms Control-P or right-mouse click paste) the secret code in the white text area. Click on 'Submit'. Your identity is now verified.

The screenshot shows the 'Identity Verification' page of the Lorentz Institute. It features a form for pasting a verification code, instructions on how to use it, and two confirmation screens. The first confirmation screen asks the user to click a link to proceed, while the second confirms the email address has been verified and provides a link back to the application.

Figure 6: Screenshot of e-mail verification process.

Step 6

Click on *Back to application* to redirect your browser to the Lorentz Institute SSO web application from which you started the whole process or close the browser. Your setup is complete.

Problems and Solutions

I cannot setup 2FA/access the system	Make sure we have your private email address on record
I lost my smartphone/PC with my OTP secret	Notify support@lorentz.leidenuniv.nl Change your IL credentials
How do I disable 2FA?	2FA is mandatory on all SSO web services and to access our SSH server
My TOTP is incorrect	Make sure your phone's (PC's) clock is synchronised to the SSH server time and you scanned/copied all TOTP settings correctly
My OTP secret is compromised	Notify support@lorentz.leidenuniv.nl Change your IL credentials

¹⁾

Last update: institute_lorentz:2fa-pc https://helpdesk.physics.leidenuniv.nl/wiki/doku.php?id=institute_lorentz:2fa-pc&rev=1617289101
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