Two-factor Authentication

Table of contents

- Overview
- Requirements
- Activate your license
- Enable two-factor authentication
- Add users and groups
- Edit users
- Remove users and groups
- Reset configuration for users
- Enroll User for two-factor authentication
- Receive codes with an authenticator app
- Configure SMS to receive authentication codes
- Login using two-factor authentication
- Time synchronization
- Settings

Overview

Two-factor authentication adds an extra layer of security and **prevents access to your users' session even if someone knows their password**.

A combination of two different factors is used to achieve a greater level of security:

1) something they know, **a password**.
2) something they have, a **device - such as a smartphone - with an authentication app installed.**.

You can use one of the following authenticator apps to proceed. These apps are available across a wide range of platforms:
- Authy
- Google Authenticator
- Microsoft Authenticator

Each time a user sign in to its remote session it will need its password and a verification code available from its mobile phone. Once configured, the authenticator app will display a verification code to allow him or her to log in any time. It works even if its device is offline.

OR you can decide to receive verification codes by **SMS**. In this case, you will have to create a free account on Twilio.

The **2FA codes generated are TOTP** (time-based one time password), and therefore are for single use.

Therefore, it is not possible to reuse a 2FA code that has already been used. This prevents the theft and then the use of a 2FA code by observing the user while he enters his code.

Requirements

Two-factor authentication requires TSplus Remote Access **Mobile Web** or **Enterprise** Editions.

Two-factor authentication is supported by:
- TSplus Remote Access **Web portal**, for both HTML5 and Remoteapp connections
- TSplus Connection Client, for clients generated since version 15.30.3.15, with 2FA support explicitely enabled. See Portable Client Generator Support for Two-factor Authentication
- 2FA is related to Windows Users and not Web credentials

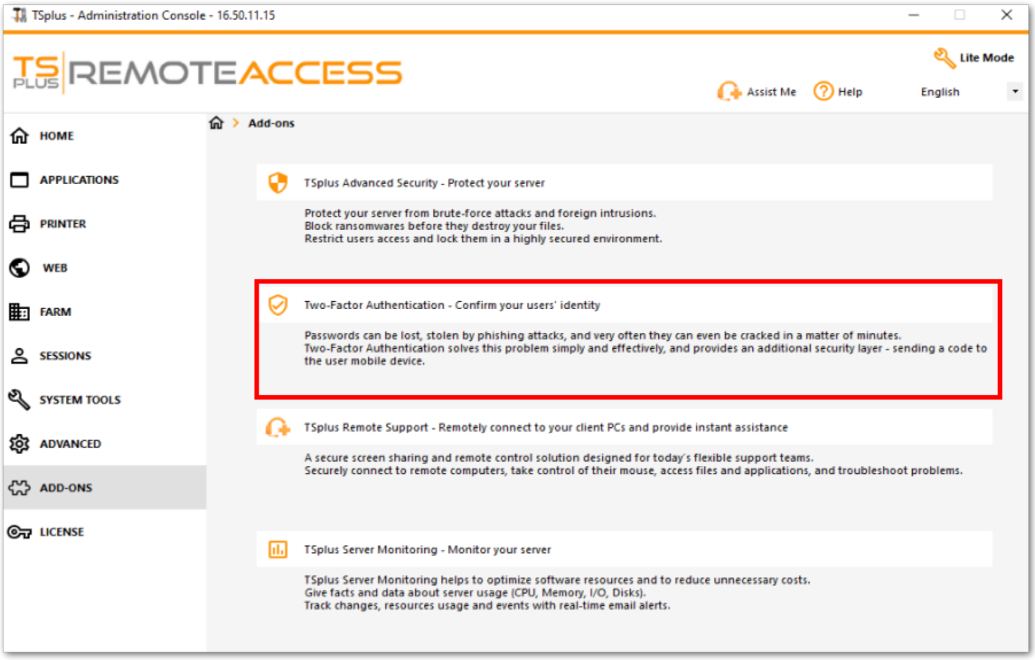
This authentication mode does not support login through standard Microsoft Remote Desktop client (mstsc.exe).

In order to provide an even safer solution, RDP connections are denied for 2FA enabled users.

As a prerequisite, TSplus server and Devices must be on time. See the Time Synchronization and Settings sections for more configuration information.

Activating Two-factor Authentication Add-On License

The Two-Factor Authentication feature can be found on the Add-On tab of the AdminTool:



TSplus Advanced Security - Protect your server

Protect your server from brute-force attacks and foreign intrusions.
Block ransomwares before they destroy your files.
Restrict users access and lock them in a highly secured environment.

Two-Factor Authentication - Confirm your users' identity

Passwords can be lost, stolen by phishing attacks, and very often they can even be cracked in a matter of minutes.
Two-Factor Authentication solves this problem simply and effectively, and provides an additional security layer - sending a code to the user mobile device.

TSplus Remote Support - Remotely connect to your client PCs and provide instant assistance

A secure screen sharing and remote control solution designed for today's flexible support teams.
Securely connect to remote computers, take control of their mouse, access files and applications, and troubleshoot problems.

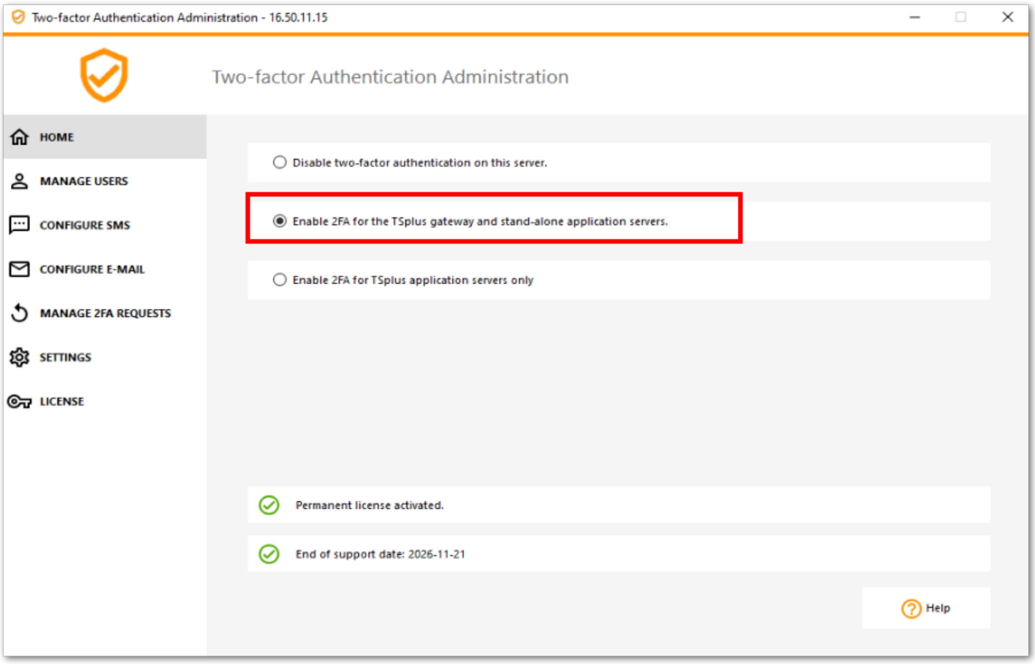
TSplus Server Monitoring - Monitor your server

TSplus Server Monitoring helps to optimize software resources and to reduce unnecessary costs.
Give facts and data about server usage (CPU, Memory, I/O, Disks).
Track changes, resources usage and events with real-time email alerts.

Enable Two-factor Authentication

Perform the following steps to enable two-factor authentication for your TSplus server or deployment. If your TSplus deployment is configured to use multiple servers, perform this task on the TSplus server exposed as the single point of entry for users or having the reverse proxy role.

1) Open the two-factor authentication administration application. The two-factor authentication status and the license status are displayed:


Two-factor Authentication Administration - 16.50.11.15
Two-factor Authentication Administration
HOME
MANAGE USERS
CONFIGURE SMS
CONFIGURE E-MAIL
MANAGE 2FA REQUESTS
SETTINGS
LICENSE
Help

○ Disable two-factor authentication on this server.

● Enable 2FA for the TSplus gateway and stand-alone application servers.

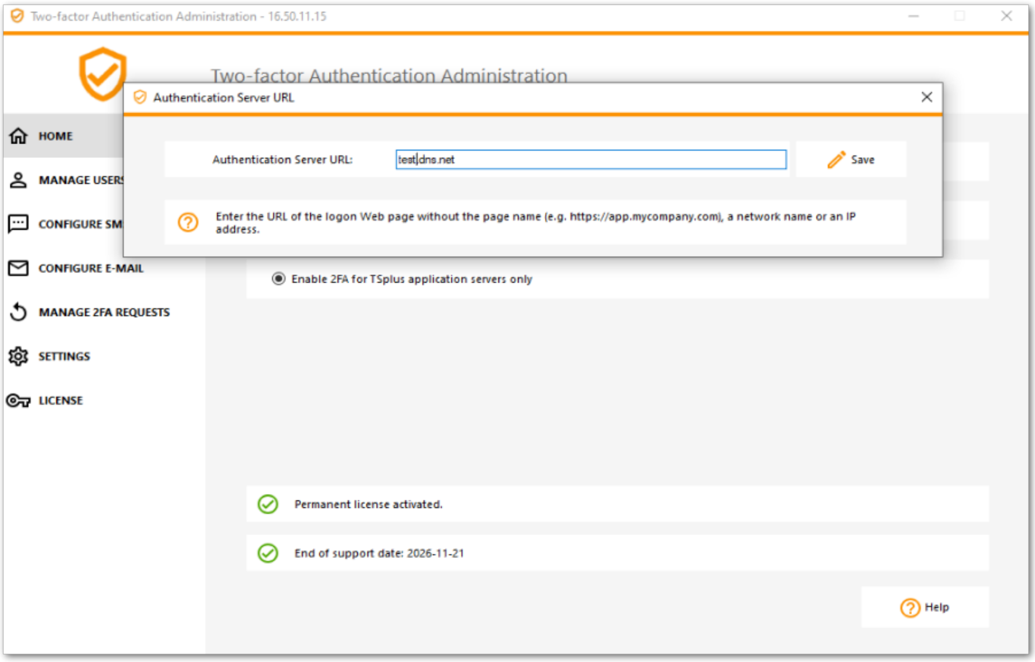
○ Enable 2FA for TSplus application servers only

✓ Permanent license activated.

✓ End of support date: 2026-11-21

By default, 2FA is enabled for the TSplus gateway and stand-alone application servers.

You can enable it for TSplus application servers only, by entering the authentication server URL:


Two-factor Authentication Administration - 16.50.11.15
Two-factor Authentication Administration
Authentication Server URL
HOME
MANAGE USERS
CONFIGURE SMS
CONFIGURE E-MAIL
MANAGE 2FA REQUESTS
SETTINGS
LICENSE
Save
Help

Authentication Server URL: test.dns.net

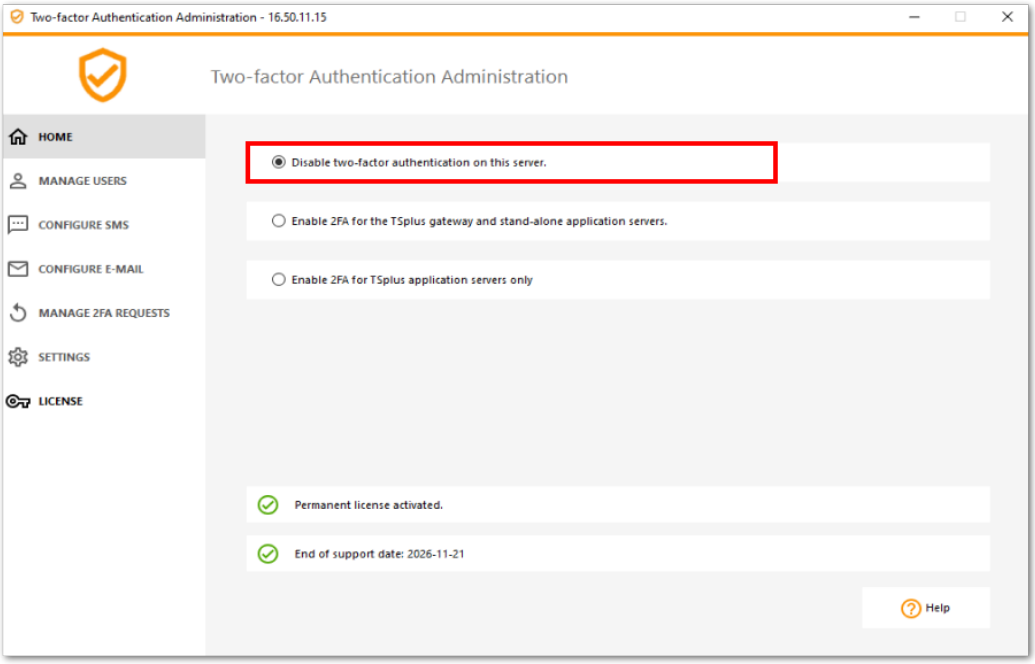
Enter the URL of the logon Web page without the page name (e.g. https://app.mycompany.com), a network name or an IP address.

● Enable 2FA for TSplus application servers only

✓ Permanent license activated.

✓ End of support date: 2026-11-21

Or disable it:



Two-factor Authentication Administration - 16.50.11.15

Two-factor Authentication Administration

● Disable two-factor authentication on this server.

○ Enable 2FA for the TSplus gateway and stand-alone application servers.

○ Enable 2FA for TSplus application servers only

✓ Permanent license activated.

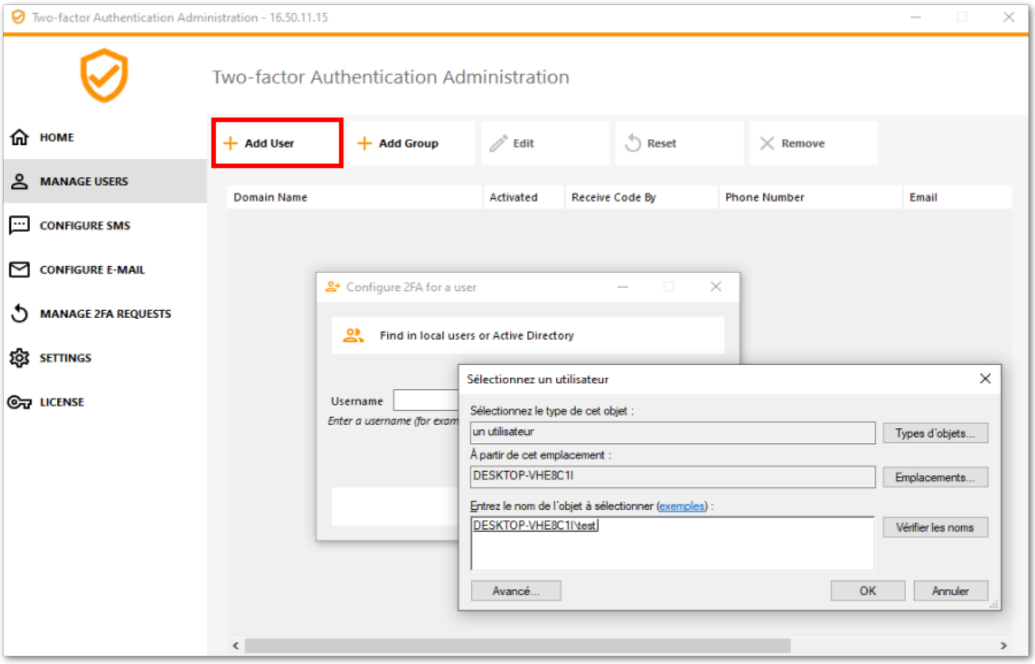
✓ End of support date: 2026-11-21

Add Users and Groups

Once two-factor authentication is enabled, you can configure users for two-factor authentication.

1) From the two-factor authentication administration application, click on the *Manage Users* tab.

2) Then, click on *Add* to select users and/or groups of users. The *Select Users or Groups* box opens.



Two-factor Authentication Administration - 16.50.11.15

Two-factor Authentication Administration

Domain Name	Activated	Receive Code By	Phone Number	Email

Configure 2FA for a user

Find in local users or Active Directory

Username

Enter a username (for exam

Sélectionnez un utilisateur

Sélectionnez le type de cet objet : un utilisateur

À partir de cet emplacement : DESKTOP-VHE8C1I

Entrez le nom de l'objet à sélectionner (exemples) : DESKTOP-VHE8C1I\test

3) Add as many users and groups as required and then click *OK*. The users and groups are added to the list and enabled for two-factor authentication.

Here are commands to add users/groups
3 types of possible arguments:

just the domainName
TwoFactor.Admin.exe /addusers domainName1 - adds the user with the default values (reception method = app, email and telephone fields not entered)

the domainName and the reception method
TwoFactor.Admin.exe /addusers domainName1;SMS - adds the user with the desired receive method, but does not attempt to activate it

the domainName, the reception method, the Phone field (even if empty), the Email field (even if empty)
TwoFactor.Admin.exe /addusers domainName1;SMS;+33606060606;username1@truc.net domainName2;Email;; username2@truc.net domainName3;SMS;+33606060607; domainName4

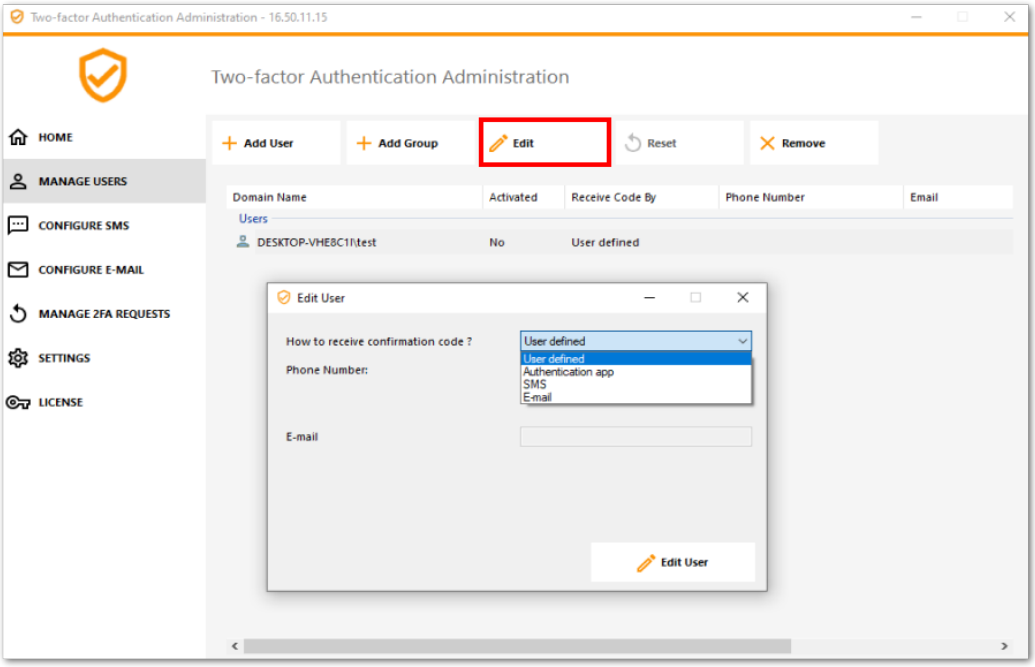
- Same behavior as in the HMI, when we add a user, then edit it with correct information: we try to activate the user

As shown in the last example, several users can be indicated (separated by a space). The different fields of a user are separated by a semicolon

For single groups:
TwoFactor.Admin.exe /addgroups group1 group2 group3

Edit Users

On the same tile, you can edit the way users receive verification codes by selecting a user and clicking on the "Edit" button:



Domain Name	Activated	Receive Code By	Phone Number	Email
Users				
DESKTOP-VHE8C1I\test	No	User defined		

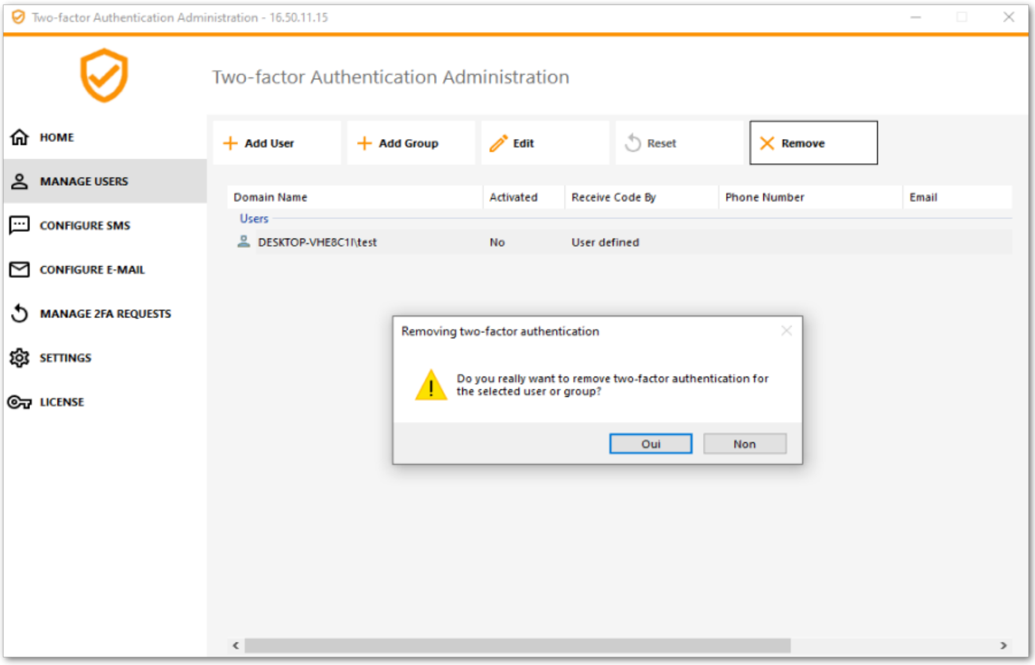
How to receive confirmation code ? User defined
Phone Number:
E-mail

The user receives verification codes on the authentication app by default. You can choose that he/she receives it by SMS or EMAIL by selecting the option.

Selected SMS and added the user's phone number in the field or selected EMAIL and added the user's email.

Remove Users and Groups

In order to remove users or groups, select the user or the group and then click on *Remove*. A confirmation message is displayed.



Domain Name	Activated	Receive Code By	Phone Number	Email
Users				
DESKTOP-VHE8C1I\test	No	User defined		

Removing two-factor authentication

Do you really want to remove two-factor authentication for the selected user or group?

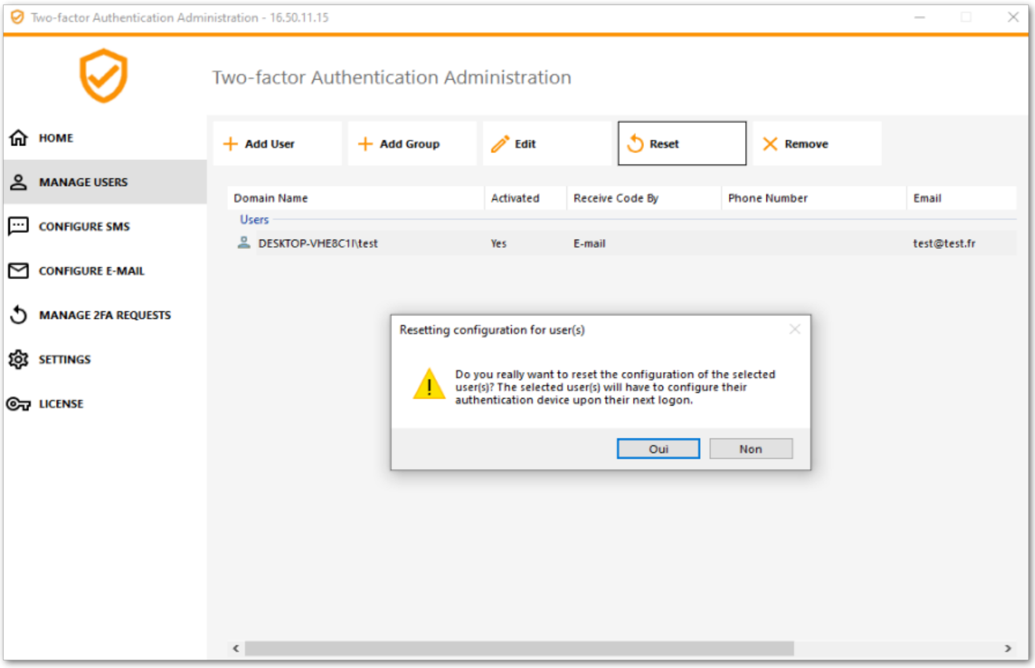
Click *Yes*. The user or the group is removed from its list and won't connect using two-factor authentication anymore.

Reset Configuration for Users

In the event of the loss of the authenticating device for a user, or if the user needs to display the secret QR code again, you must reset the user authentication settings.

1) From the two-factor authentication administration application, click on the *Manage Users* tab.

2) Select one or multiple activated users and then click on *Reset*. A confirmation message is displayed:



Domain Name	Activated	Receive Code By	Phone Number	Email
Users				
DESKTOP-VHE8C1I\test	Yes	E-mail		test@test.fr

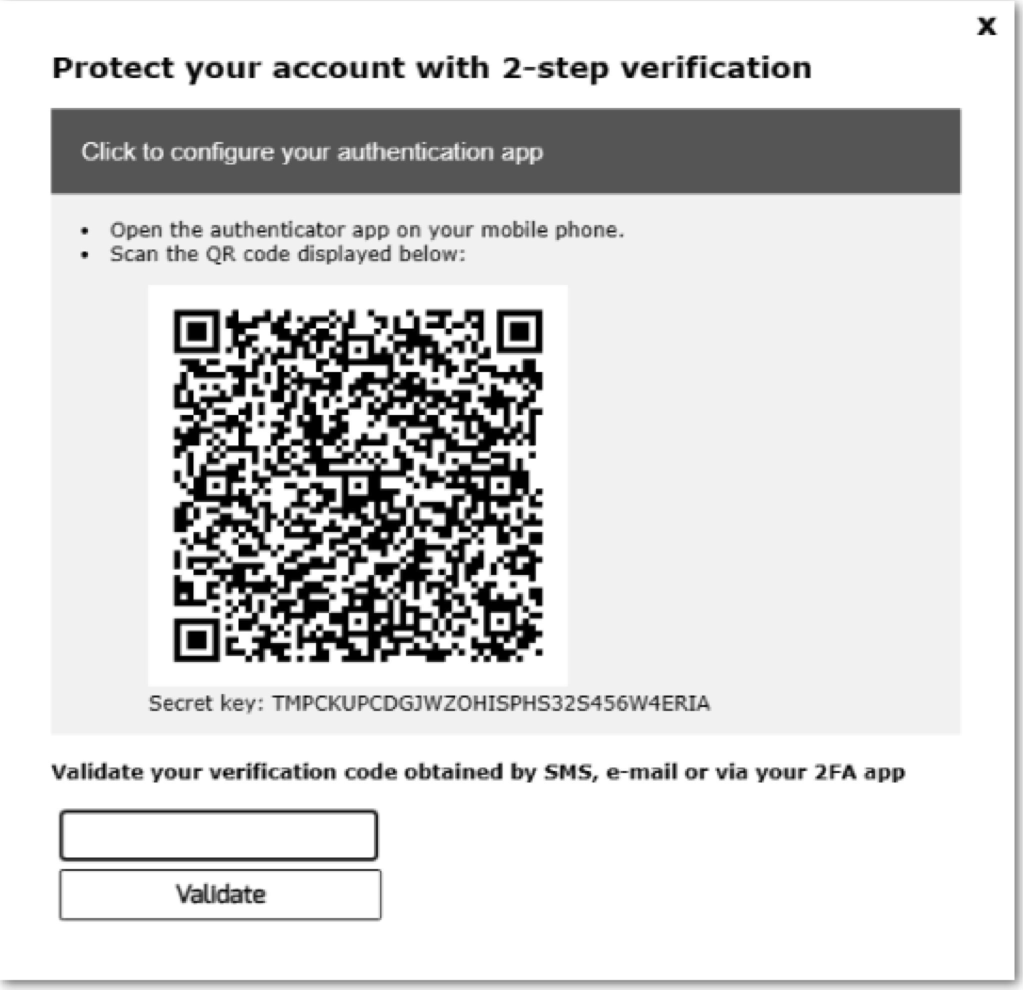
Resetting configuration for user(s)

Do you really want to reset the configuration of the selected user(s)? The selected user(s) will have to configure their authentication device upon their next logon.

3) Click *Yes*. The selected users will be presented a new QR code at the next login and will have to scan it in their device's authentication app.
You can also modifiy the user's phone number, so that he can receive a verification code on his new device.

Enroll User for Two-factor Authentication

Once a user has been enabled for using two-factor authentication, an activation message will be displayed at his next successful logon from the TSplus Web portal.



Protect your account with 2-step verification

Click to configure your authentication app

- Open the authenticator app on your mobile phone.
- Scan the QR code displayed below:

Secret key: TMPCKUPCDGJWZOHISPHS32S456W4ERIA

Validate your verification code obtained by SMS, e-mail or via your 2FA app

In order to complete the required steps, you have two choices: either generate codes via an authenticator app, either make the user receive codes by SMS.

Receive codes with an Authenticator Application

The user must install an authenticator app on a portable device, such as his smartphone.

You can use one of the following authenticator apps to proceed. These apps are available across a wide range of platforms:
- Authy
- Google Authenticator
- Microsoft Authenticator

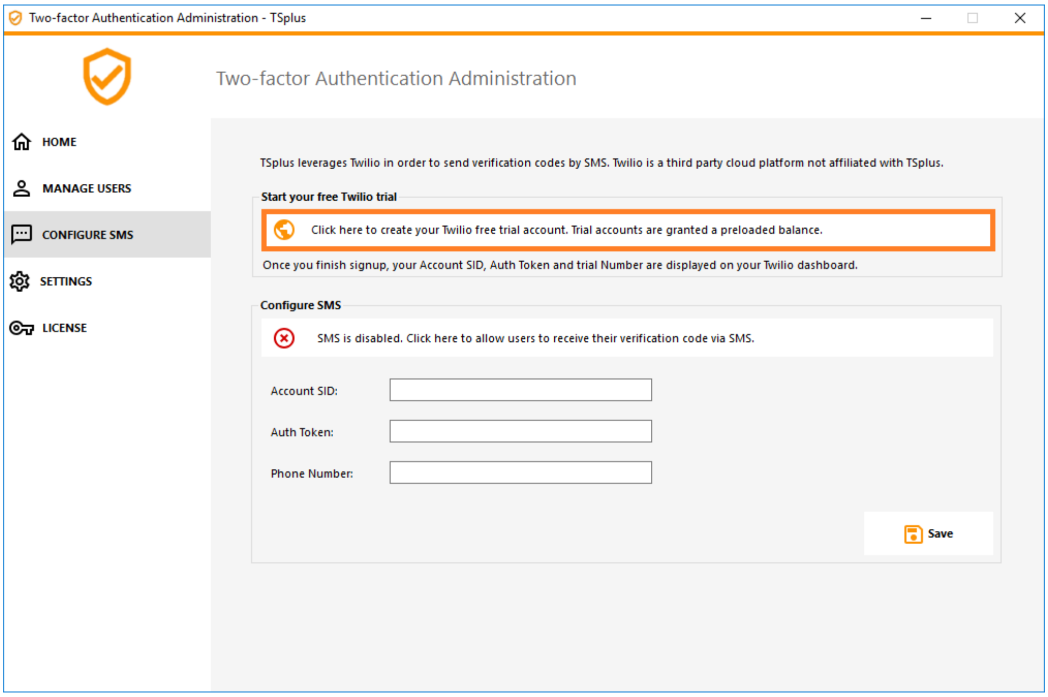
Please use each app documentation for more details on how to proceed to add your TSplus account.

Configure SMS

In order for the user to receive verification codes by SMS, you must first enable it. Click on the *Configure SMS* tab:

TSplus leverages Twilio in order to send verification codes by SMS. Twilio is a third-party cloud platform, not affiliated with TSplus.

1) Just create a free account on Twilio by clicking on the button below "Start your free trial with Twilio":



Two-factor Authentication Administration - TSplus

Two-factor Authentication Administration

TSplus leverages Twilio in order to send verification codes by SMS. Twilio is a third party cloud platform not affiliated with TSplus.

Start your free Twilio trial

Click here to create your Twilio free trial account. Trial accounts are granted a preloaded balance.

Once you finish signup, your Account SID, Auth Token and trial Number are displayed on your Twilio dashboard.

Configure SMS

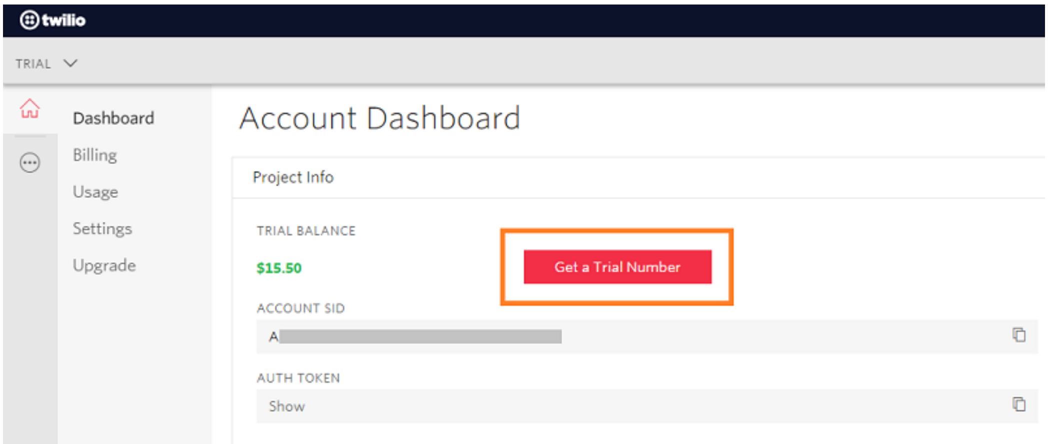
SMS is disabled. Click here to allow users to receive their verification code via SMS.

Account SID:

Auth Token:

Phone Number:

2) On your Twilio account dashboard, you will need to activate your Trial Number:



Account Dashboard

Project Info

TRIAL BALANCE

$15.50

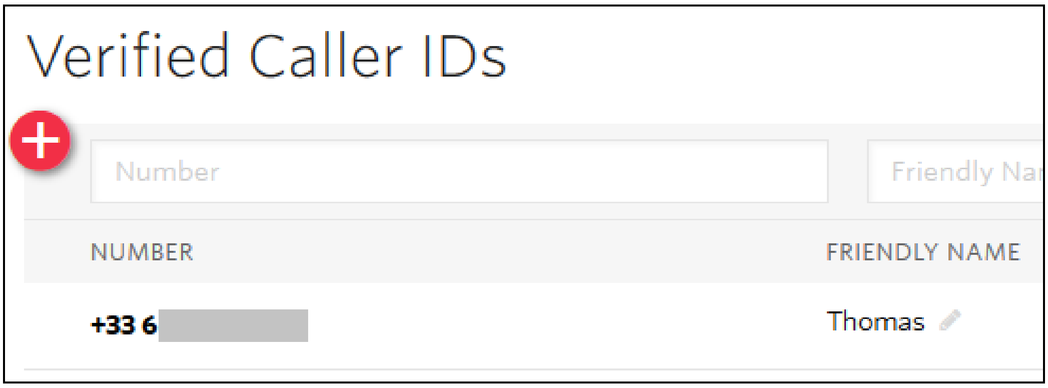
ACCOUNT SID

A[redacted]

AUTH TOKEN

Show

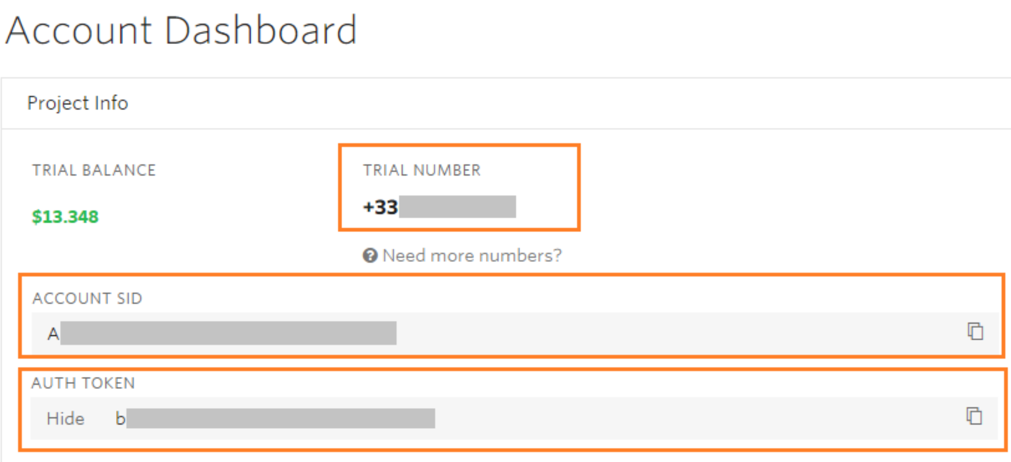
3) The next step is only necessary for Trial versions. It allows Twilio to verify the actual phone number on which SMS will be sent.
Enter this number under the "Phone Numbers" menu - "Verified Caller IDs" tab :



Verified Caller IDs

NUMBER	FRIENDLY NAME
+33 6[redacted]	Thomas

4) You will then be able to enter your account SID, Authentication Token and **Trial Number** as the Phone Number on the *Configure SMS* tab of TSplus:



Account Dashboard

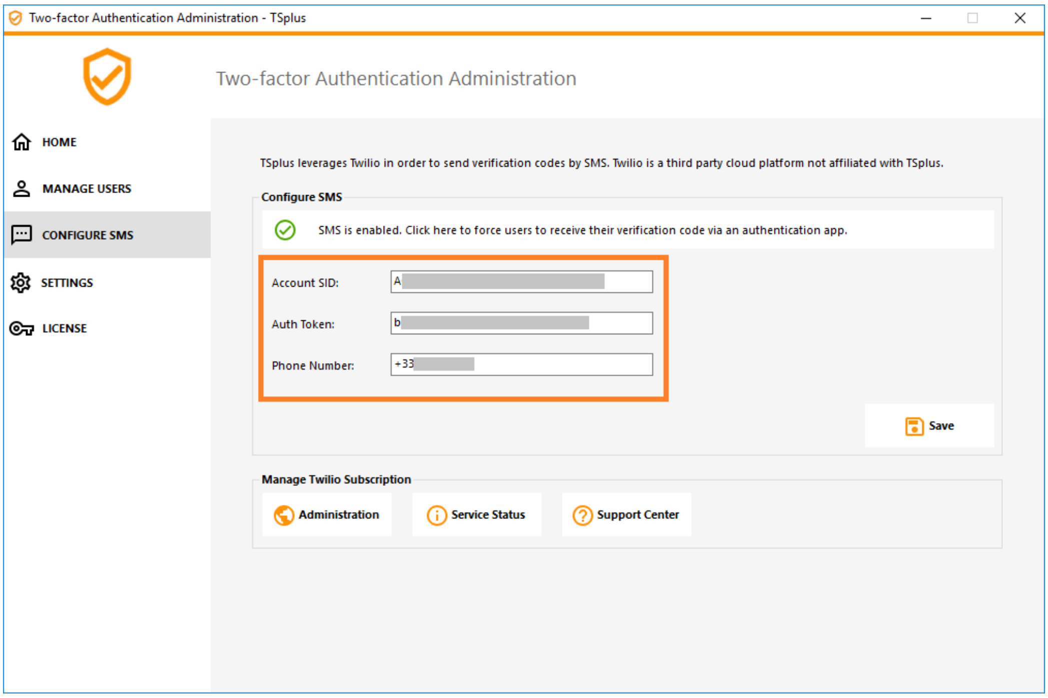
Project Info

TRIAL BALANCE: $13.348

TRIAL NUMBER: +33[redacted]

ACCOUNT SID: A[redacted]

AUTH TOKEN: b[redacted]



Two-factor Authentication Administration - TSplus
Two-factor Authentication Administration
HOME
MANAGE USERS
CONFIGURE SMS
SETTINGS
LICENSE

TSplus leverages Twilio in order to send verification codes by SMS. Twilio is a third party cloud platform not affiliated with TSplus.

Configure SMS

SMS is enabled. Click here to force users to receive their verification code via an authentication app.

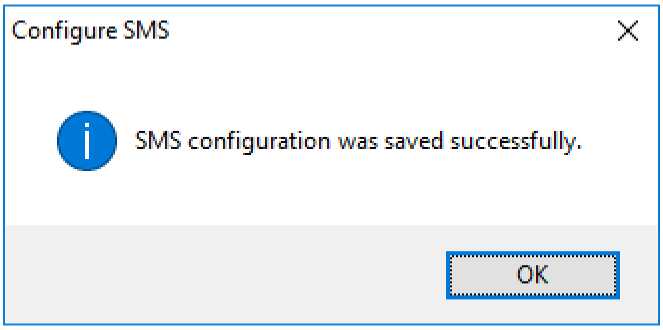
Account SID: A[redacted]

Auth Token: b[redacted]

Phone Number: +33[redacted]

Save
Manage Twilio Subscription
Administration
Service Status
Support Center

Then, click on Save. The following message will be displayed:



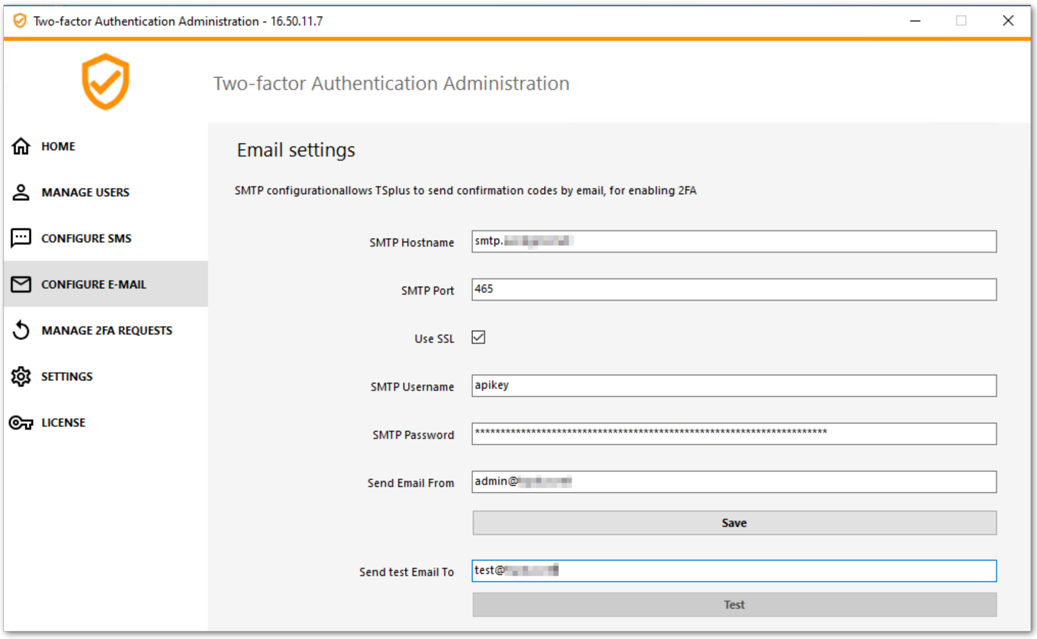
Configure SMS

SMS configuration was saved successfully.

You can manage your Twilio subscription on the *Manage Twilio subscription* section, at the bottom of the *Configure SMS* tab. Administrate your account, see the Service Status or reach Twilio Support Center just by clicking on the corresponding buttons.

Configure EMAIL

For the user to receive verification codes by EMAIL, you must first configure your SMTP email.


Two-factor Authentication Administration - 16.50.11.7
Two-factor Authentication Administration
HOME
MANAGE USERS
CONFIGURE SMS
CONFIGURE E-MAIL
MANAGE 2FA REQUESTS
SETTINGS
LICENSE
Save
Test

Email settings

SMTP configurationallows TSplus to send confirmation codes by email, for enabling 2FA

SMTP Hostname: smtp.[redacted]

SMTP Port: 465

Use SSL: ☑

SMTP Username: apikey

SMTP Password: **

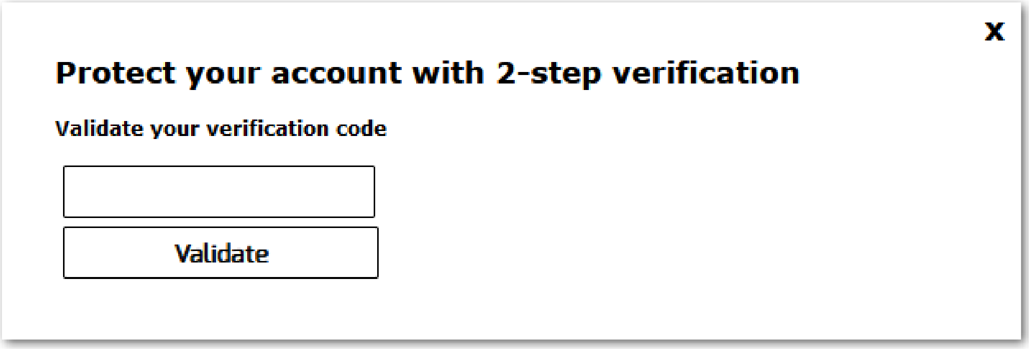
Send Email From: admin@[redacted]

Send test Email To: test@[redacted]

Login using Two-factor Authentication

Once a user has configured his TSplus account in his authenticator app, he or she will be able to connect using its password and the code provided by its authenticator app, by SMS or Email.

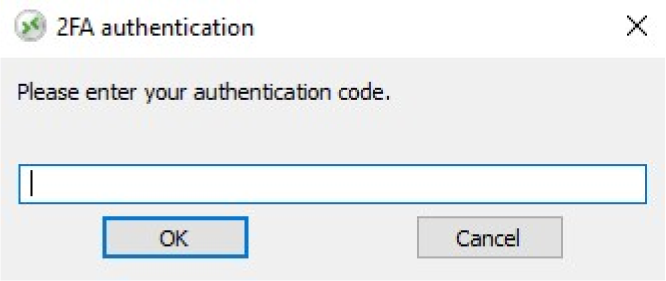
From the TSplus Remote Access Web portal:



Protect your account with 2-step verification

Validate your verification code

From the TSplus generated client:



2FA authentication

Please enter your authentication code.

Time Synchronization

TSplus application servers and client devices must share the same time. This means that the time and date of the server must be synchronized with a time server. Client devices must also have time synchronization, regardless of the time zone on which they are configured.

If an authentication request comes from a Device whose date and time are not synchronized, or if the server's date and time are not synchronized, this request may be rejected.

The validation of information between the Device and the server relates to UTC time.
In the **Settings** section, the Discrepency parameter is used to manage the period of validity of the code, in intervals of 30 seconds.

Example of validation or valid authentication:

- the server is synchronized with a time server, the time zone is UTC + 2, it is 2:30 pm
- the Device is synchronized with a time server, the time zone is UTC + 1, it is 1:30 pm
- the Discrepency parameter is configured at 60, i.e. a code validity period of 30 minutes
- referred to UTC time, the Device time and the server time are identical.

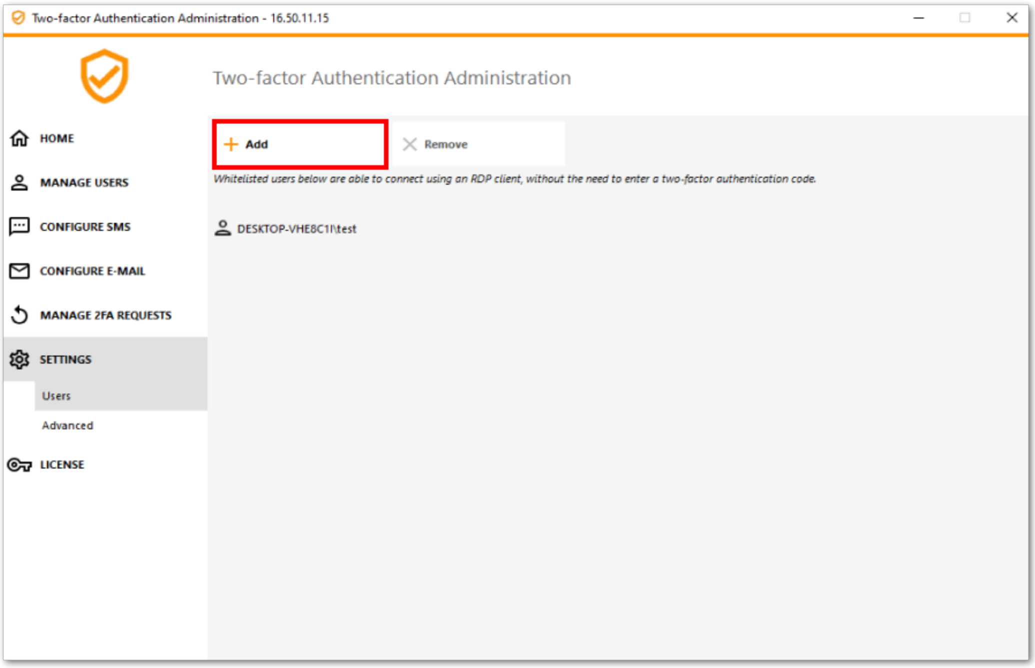
Example of validation or invalid authentication:

- the server is synchronized with a time server, the time zone is UTC + 2, it is 2:30 pm
- the Device is not synchronized with a time server, the time zone is UTC-1, the time is manually set to 1:30 pm
- the Discrepency parameter is configured at 60, i.e. a code validity period of 30 minutes
- the server time referred to UTC time is 12:30 am
- the time communicated by the Device, referred to UTC time is 2:30 pm
- the difference is 120 minutes, the validation code is therefore refused.

Settings

The Settings tab allows you to **whitelist users, in order for them to connect using an RDP client, without the need to enter a two-authentication code.**

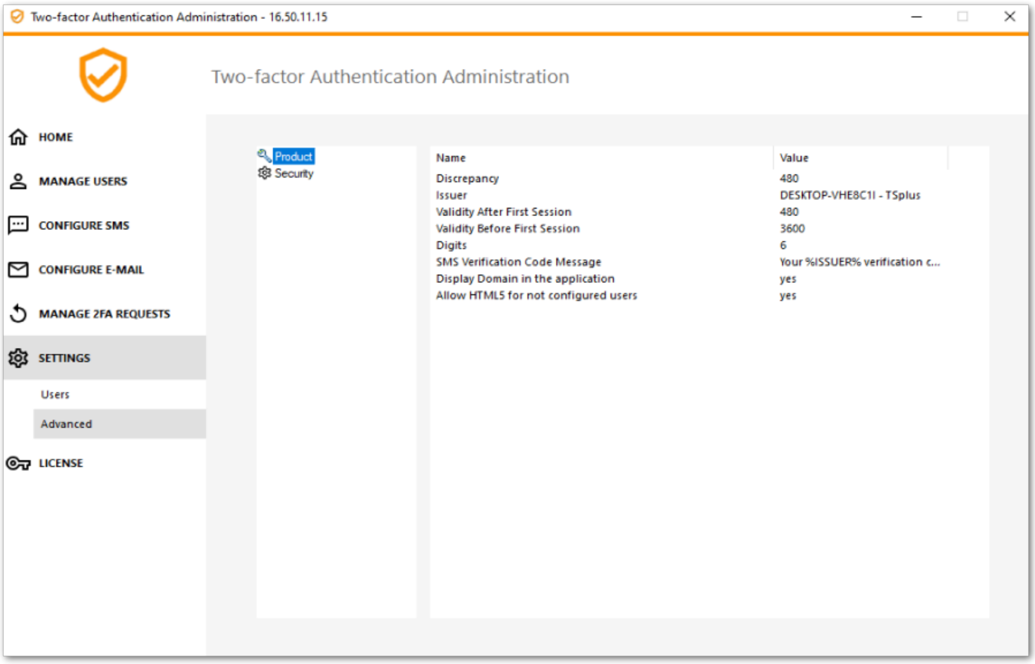
Click on the "Add" button to add a user and remove a user by selecting it and clicking on the "Remove" button.



Whitelisted users below are able to connect using an RDP client, without the need to enter a two-factor authentication code.

DESKTOP-VHE8C1I\test

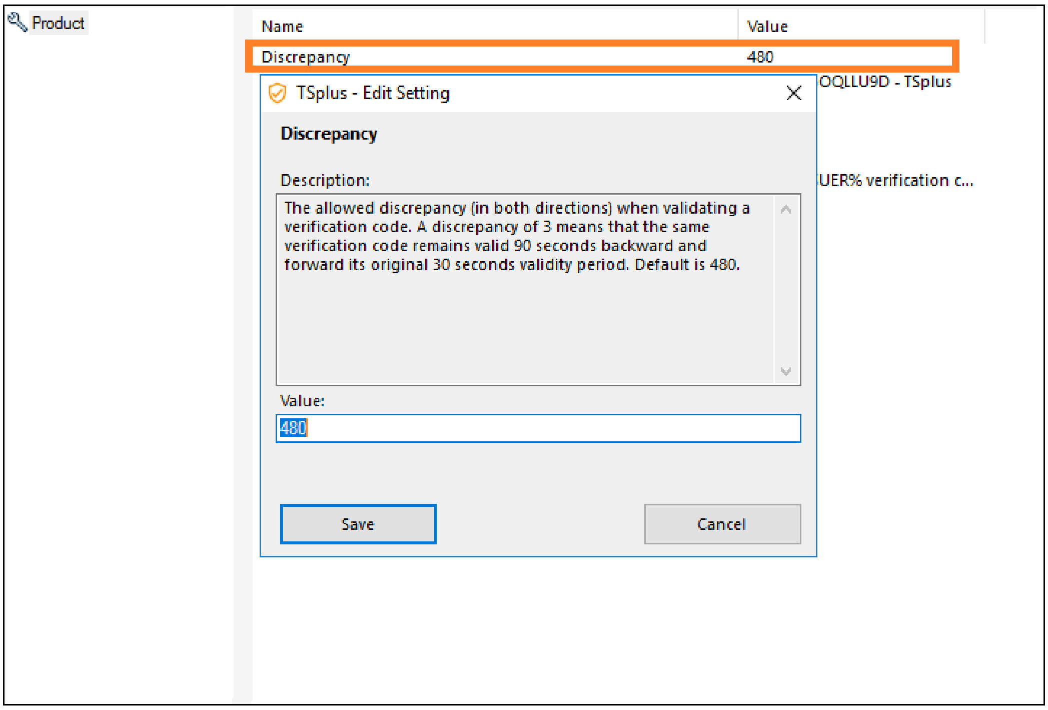
The Advanced tab allows you to configure Two-Factor Authentication in-depth settings.



Name	Value
Discrepancy	480
Issuer	DESKTOP-VHE8C1I - TSplus
Validity After First Session	480
Validity Before First Session	3600
Digits	6
SMS Verification Code Message	Your %ISSUER% verification c...
Display Domain in the application	yes
Allow HTML5 for not configured users	yes

Discrepancy

You can modify the Discrepancy value, which allows you to set the validation time of a verification code.
A discrepancy of 3 means that the same verification code remains valid 90 seconds backward and forward its original 30 seconds validity period. Default is 480, which means 480 x 30 seconds= 4 hours.



Discrepancy

Description:

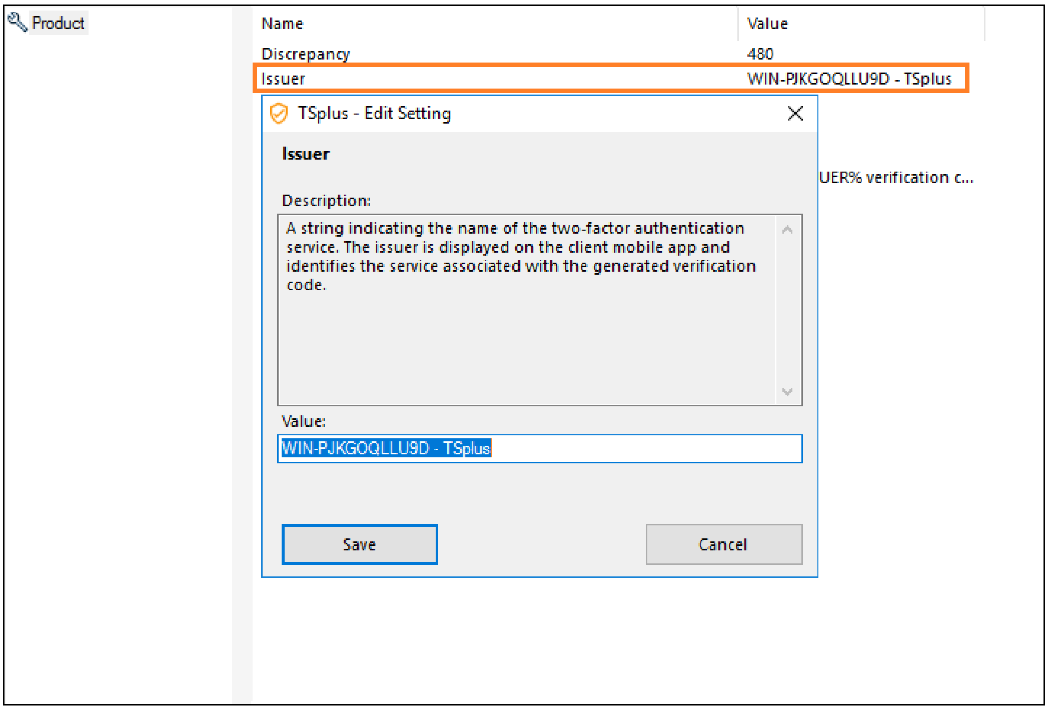
The allowed discrepancy (in both directions) when validating a verification code. A discrepancy of 3 means that the same verification code remains valid 90 seconds backward and forward its original 30 seconds validity period. Default is 480.

Value:

480

Issuer

A string indicating the name of the two-factor authentication service. The issuer is displayed on the client mobile app and identifies the service associated with the generated verification code. By default, it is composed of the server's name with TSplus.



Issuer

Description:

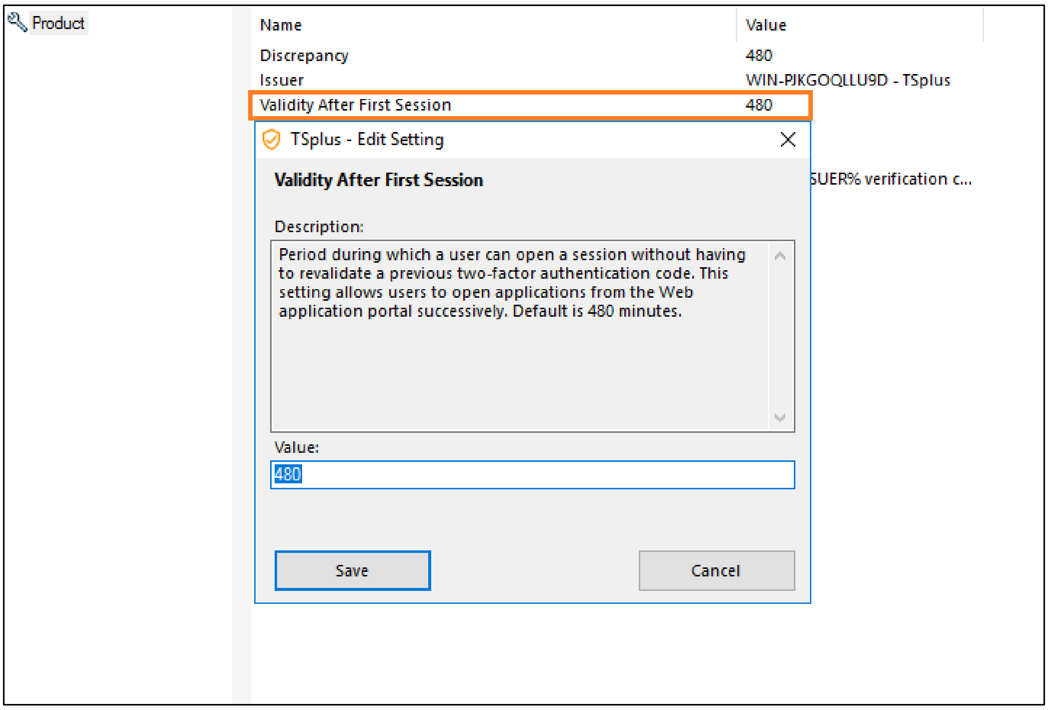
A string indicating the name of the two-factor authentication service. The issuer is displayed on the client mobile app and identifies the service associated with the generated verification code.

Value:

WIN-PJKGOQLLU9D - TSplus

Validity After First Session

Period during which a user can open a session without having to revalidate a previous two-factor authentication code. This setting allows users to open applications from the Web application portal successively. Default is 480 minutes.



Product

Name	Value
Discrepancy	480
Issuer	WIN-PJKGOQLLU9D - TSplus
Validity After First Session	480

TSplus - Edit Setting

Validity After First Session

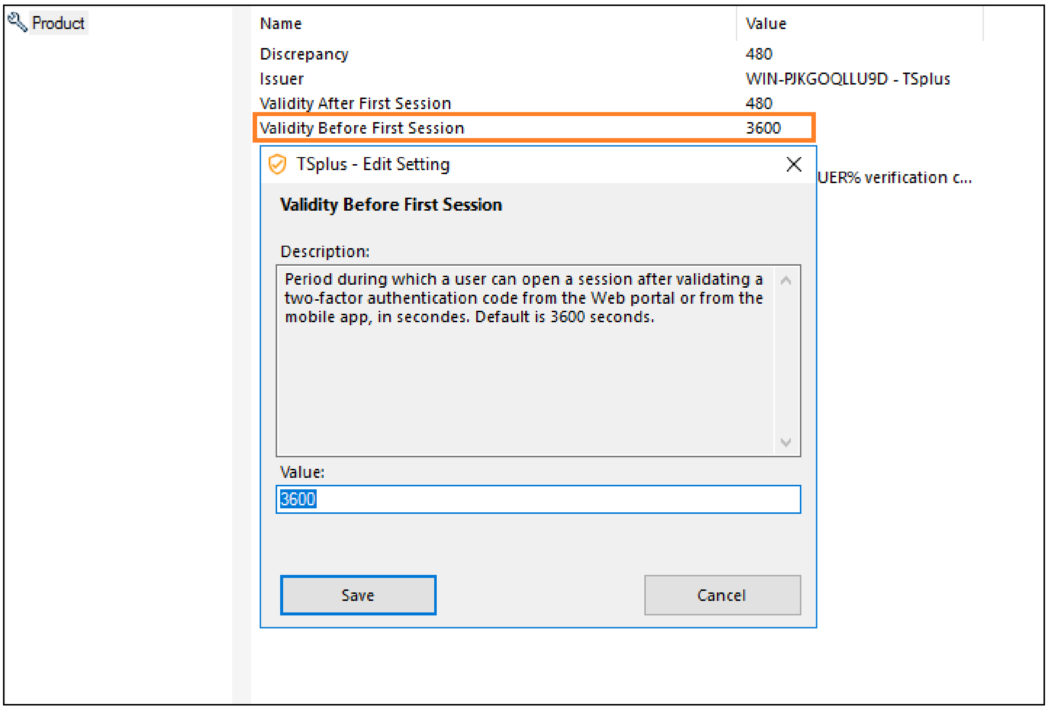
Description:

Period during which a user can open a session without having to revalidate a previous two-factor authentication code. This setting allows users to open applications from the Web application portal successively. Default is 480 minutes.

Value: 480

Validity Before First Session

Period during which a user can open a session after validating a two-factor authentication code from the Web portal or from the mobile app, in secondes. Default is 3600 seconds.



Product

Name	Value
Discrepancy	480
Issuer	WIN-PJKGOQLLU9D - TSplus
Validity After First Session	480
Validity Before First Session	3600

TSplus - Edit Setting

Validity Before First Session

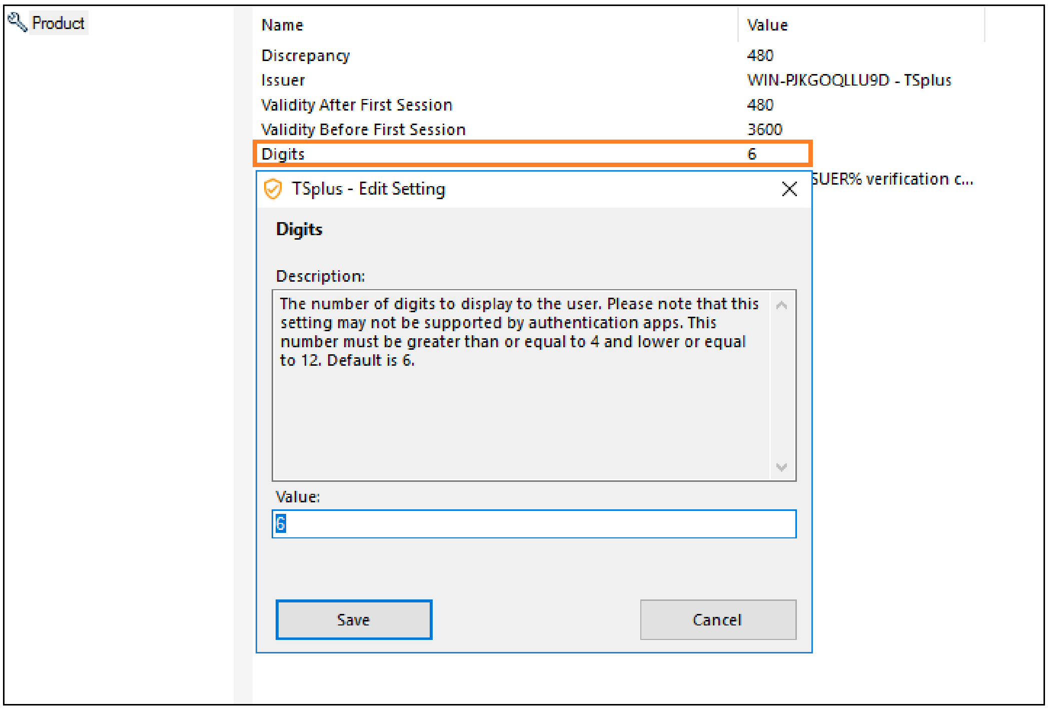
Description:

Period during which a user can open a session after validating a two-factor authentication code from the Web portal or from the mobile app, in secondes. Default is 3600 seconds.

Value: 3600

Digits

The number of digits to display to the user. Please note that this setting may not be supported by authentication apps. This number must be greater than or equal to 4 and lower or equal to 12. Default is 6.



Name	Value
Discrepancy	480
Issuer	WIN-PJKGOQLLU9D - TSplus
Validity After First Session	480
Validity Before First Session	3600
Digits	6

SUER% verification c...

Digits

Description:

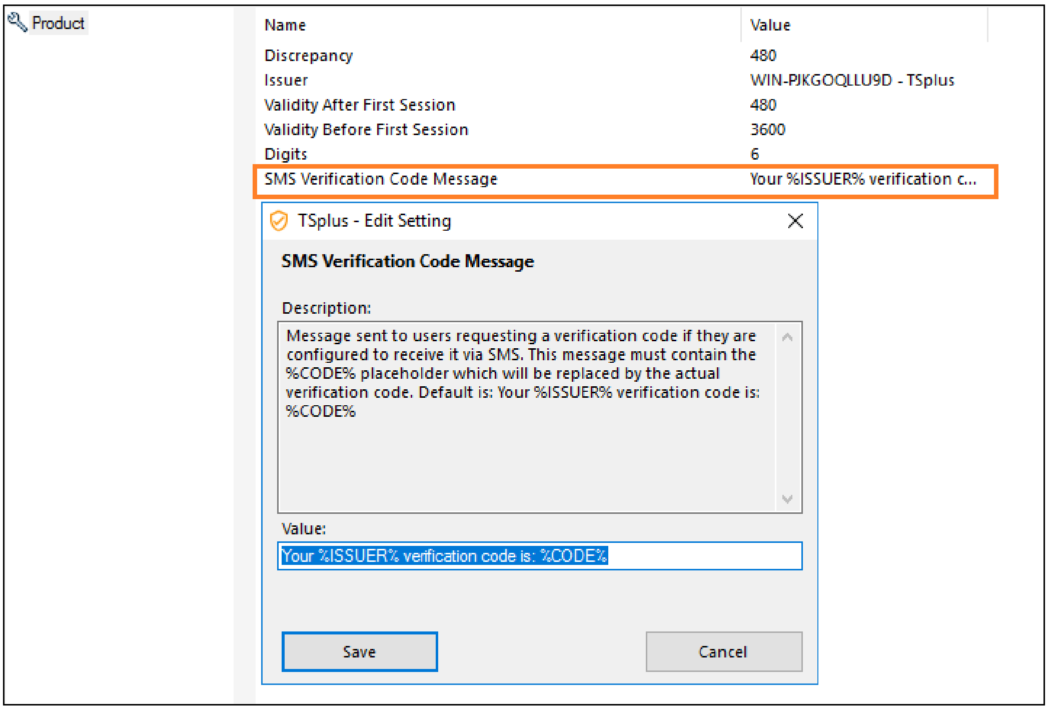
The number of digits to display to the user. Please note that this setting may not be supported by authentication apps. This number must be greater than or equal to 4 and lower or equal to 12. Default is 6.

Value:

6

SMS Verification Code Message

Message sent to users requesting a verification code if they are configured to receive it via SMS. This message must contain the %CODE% placeholder which will be replaced by the actual verification code. Default is: Your %ISSUER% verification code is: %CODE%



Name	Value
Discrepancy	480
Issuer	WIN-PJKGOQLLU9D - TSplus
Validity After First Session	480
Validity Before First Session	3600
Digits	6
SMS Verification Code Message	Your %ISSUER% verification c...

SMS Verification Code Message

Description:

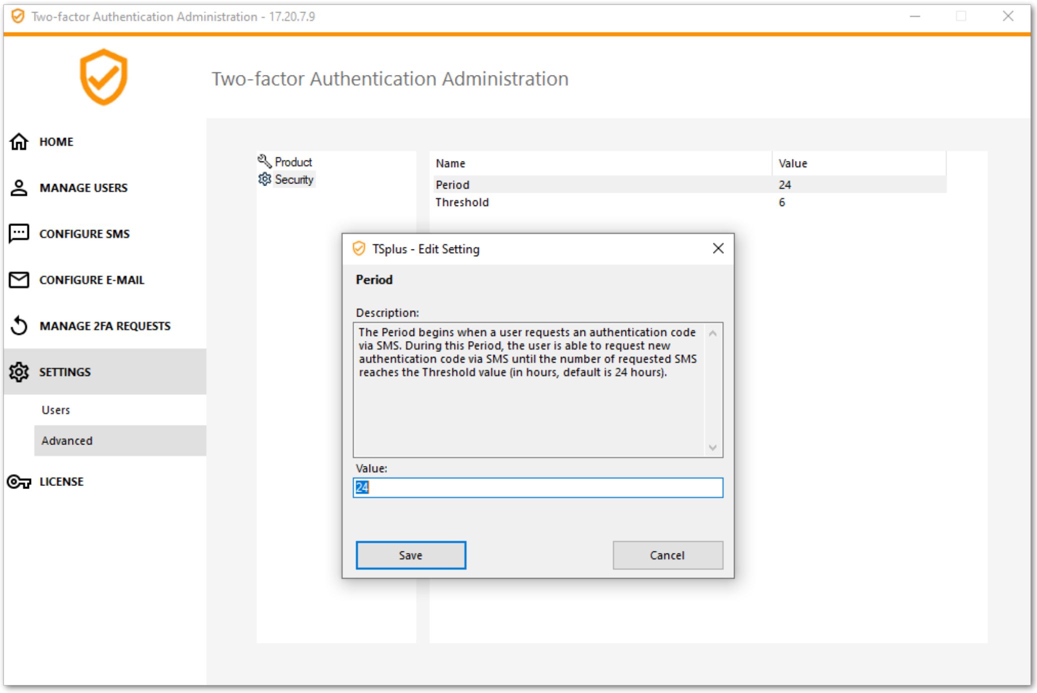
Message sent to users requesting a verification code if they are configured to receive it via SMS. This message must contain the %CODE% placeholder which will be replaced by the actual verification code. Default is: Your %ISSUER% verification code is: %CODE%

Value:

Your %ISSUER% verification code is: %CODE%

SMS Security Period

The Period begins when a user requests an authentication code via SMS. During this Period, the user is able to request new authentication code via SMS until the number of requested SMS reaches the Threshold value (in hours, default is 24 hours).



Name	Value
Period	24
Threshold	6

Period

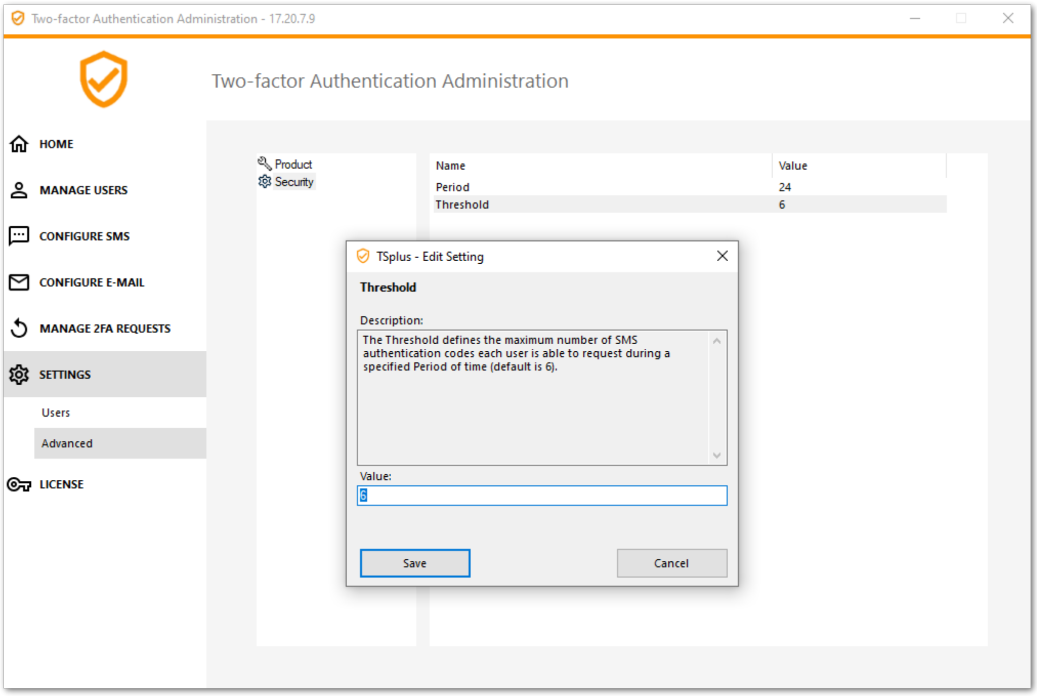
Description:

The Period begins when a user requests an authentication code via SMS. During this Period, the user is able to request new authentication code via SMS until the number of requested SMS reaches the Threshold value (in hours, default is 24 hours).

Value: 24

SMS Security Threshold

The Threshold defines the maximum number of SMS authentication codes each user is able to request during a specified Period of time (default is 6).



Name	Value
Period	24
Threshold	6

Threshold

Description:

The Threshold defines the maximum number of SMS authentication codes each user is able to request during a specified Period of time (default is 6).

Value: 6