



Sangfor NGAF

SSL VPN 2FA Configuration Guide

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Change Log

Date	Change Description
Aug. 29, 2021	This is the first release of this document.

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1 Scenario

TOTP, an abbreviation for Time-based One-Time Password, indicates a one-time password based on a timestamp algorithm. Based on the comparison between the client's dynamic password and the clock of the dynamic token authentication server, a new password is usually generated every 30 or 60 seconds.

The client and server are required to maintain the correct clock very precisely to keep the one-time password generated to be consistent on both sides.

NGAF SSLVPN can combine with dynamic tokens based on TOTP protocol to achieve two-factor authentication for account security.

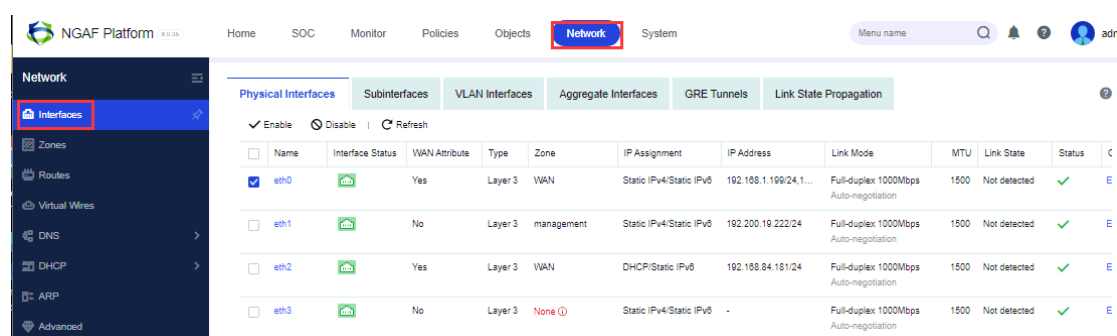
The commonly used TOTP dynamic tokens client are Google Authenticator, Microsoft Authenticator, M token, etc. This configuration guide uses Google Authenticator as an example.

2 Configuration Steps

2.1 Install SSL VPN 2FA patch on NGAF

Step 1. Request SSL VPN 2FA patch from Sangfor Personnel

Step 2. Login to the NGAF web console and enable system upgrade setting on the interfaces that you connected. **Network > Interfaces > Physical Interface.**



Edit Physical Interface

Basics

Name: eth0

Status: ☒ Enabled ☐ Disabled

Description: Manage interface

Type: Layer 3

Zone: WAN

Basic Attributes: ☒ WAN attribute

System Upgrade: ☒ Temporarily use this interface for system upgrade

IPv4

IPv6

Link State Detection

Advanced

IP Assignment:

☒ Static
 ☐ DHCP
 ☐ PPPoE

Static IP:

192.168.1.199/24
10.251.251.251/24

Next-Hop IP:

192.168.1.1

Link Bandwidth:

Outbound

8

Mbps

Inbound

8

Mbps

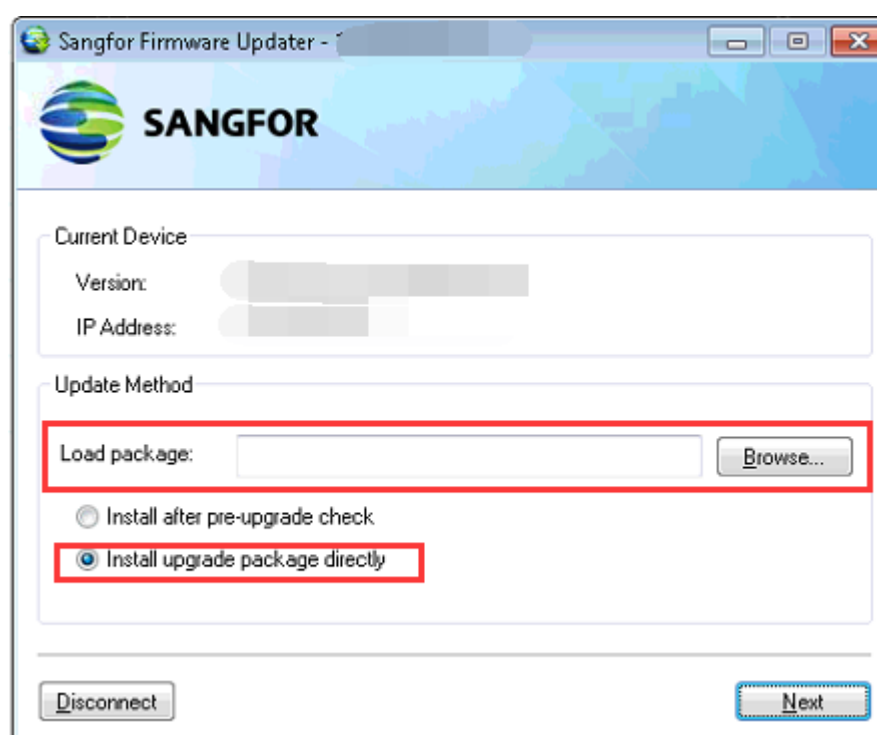
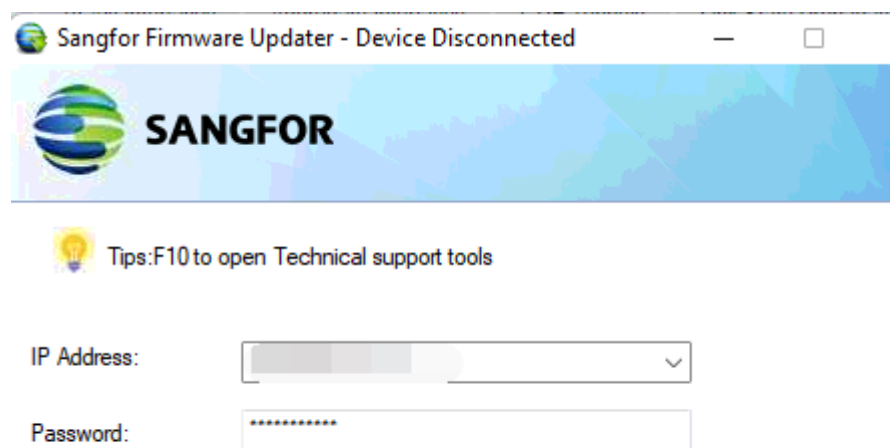
Management Service

Allow: ☒ WEBUI ☒ PING ☐ SNMP ☒ SSH

Save

Cancel

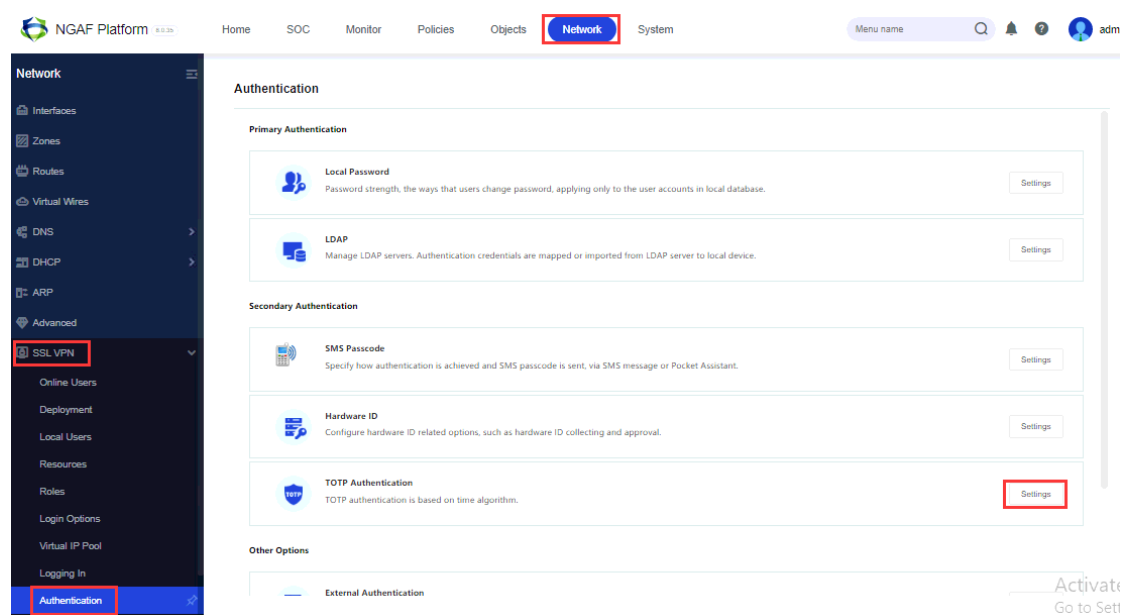
Step 3. Run Sangfor Updater software and log in with the **admin** account credential. After that, click on browse and select SSL VPN 2FA patch package. Then select **Install upgrade package directly**.



Step 4. Click **Next** to proceed to install the SSL VPN 2FA patch to NGAF.

2.2 Enable TOTP authentication

Step 1. After installed SSL VPN 2FA patch on NGAF, proceed to enable TOTP authentication settings. **Network > SSLVPN > Authentication > TOTP authentication.**



Authentication

◆ Time-based One-Time Password (TOTP)

Authentication

TOTP Authentication: ☒ Enable ☐ Disable

Dynamic Token Valid Period: 120 seconds

OK Cancel

Step 2. Enable TOTP authentication on specific users. Select the user and click on edit under **Network > SSLVPN > Local User**. Next, select **Dynamic Token Authentication > TOTP authentication**.

Local Users

Add | Delete | Edit | Select | Hardware ID | TOTP Dynamic Token | Import | Move | More | Associated Resources | Unfold All | Search by Name | Search

Group: /
Path: /
Members: Immediate subgroups: 1, Total subgroups: 1, Immediate users: 1, Total users: 1
[View/Edit Attributes](#)

Name	Type	Description	Public/Private	Status
Default Group	Group	System protected, unable to be deleted	Public	✓
jianhow	User		Private	✓

Local Users

Basic Attributes

Name:

Description:

Password:

Confirm:

Mobile Number:

Added To:

☐ Inherit authentication settings from parent group

Authentication Options

User Type: ☐ Public user ☒ Private user

Primary Authentication:

Secondary Authentication:

☐ Hardware ID

☐ SMS Passcode

☒ Dynamic Token Authentication

Assigned Roles

Roles: [Create + Associate](#)

Step 3. Check the TOTP authentication database to view which user is bind with TOTP authentication **SSL VPN > Local Users > TOTP Dynamic Token**. You can see the **User Type** and **Binding Time**. Administrators can delete the user from the TOTP authentication database manually if the user lost their TOTP software.

Local Users

Add | Delete | Edit | Select | Hardware ID | TOTP Dynamic Token | Import | Move | More | Associated Resources | Unfold All | Search by Name | Search

Group: /
Path: /
Members: Immediate subgroups: 1, Total subgroups: 1, Immediate users: 1, Total users: 1
[View/Edit Attributes](#)

Name	Type	Description	Public/Private	Status
Default Group	Group	System protected, unable to be deleted	Public	✓
jianhow	User		Private	✓

Local Users

Back | Delete | Select | User Type: All users | Search by Username | Search

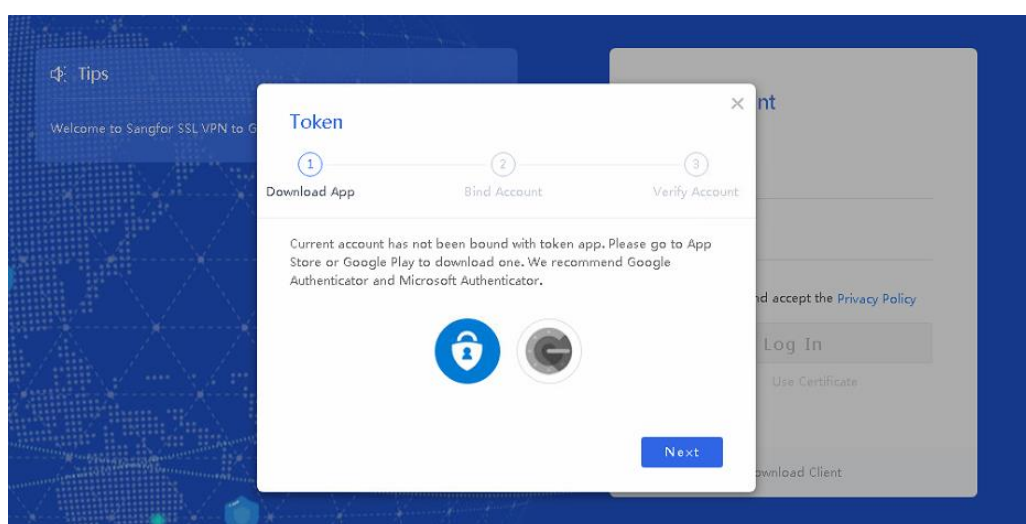
Username	User Type	Auth Server	Binding Time
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3 Test Result

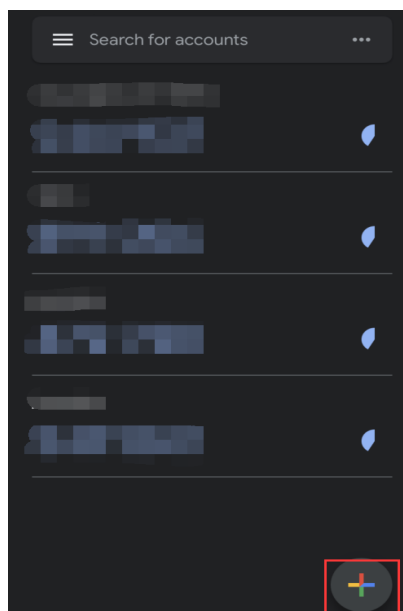
3.1 First Login to SSLVPN after enabling TOTP authentication

3.1.1 Token binding by scanning QR code

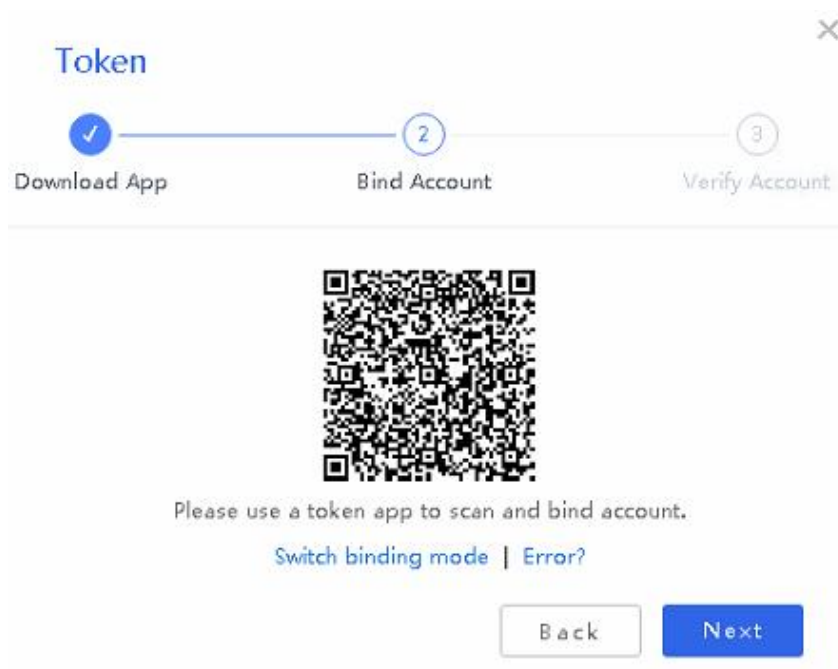
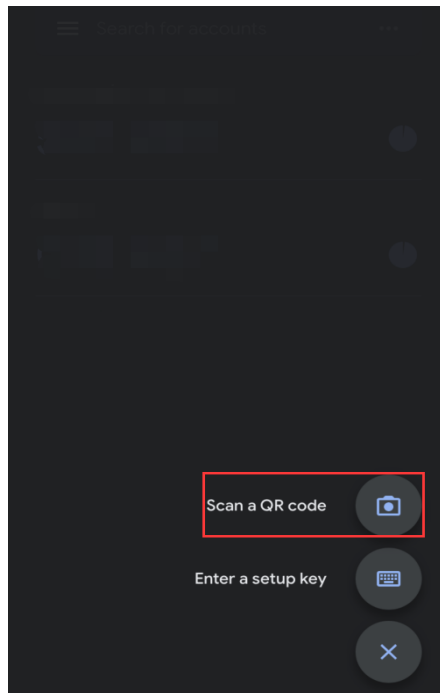
Step 1. Once enter login credentials and click **Log in**, a message that requires the user to do the token binding with authenticator apps will prompt. Download Google Authenticator on phones (Apple Apps Store or Google Play Store) and click **Next**.



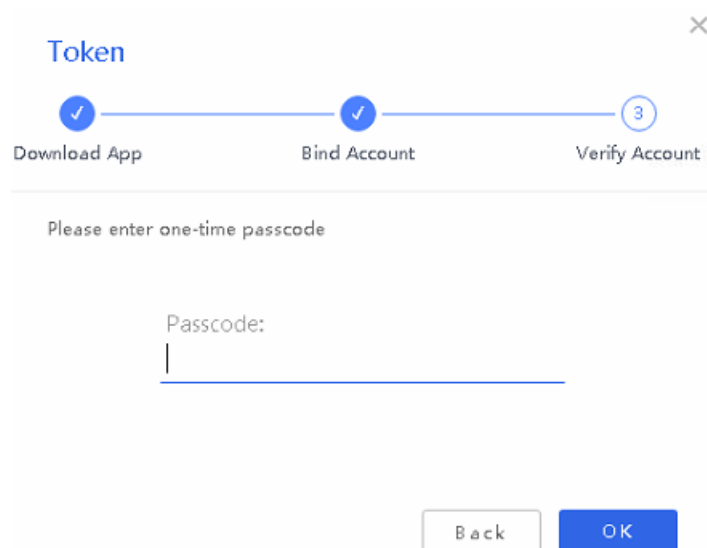
Step 2. Run the authenticator apps and click the **ADD** button at the bottom.



Step 3. Select **Scan a QR code** on the user's phone and scan the QR code displayed on the login page.



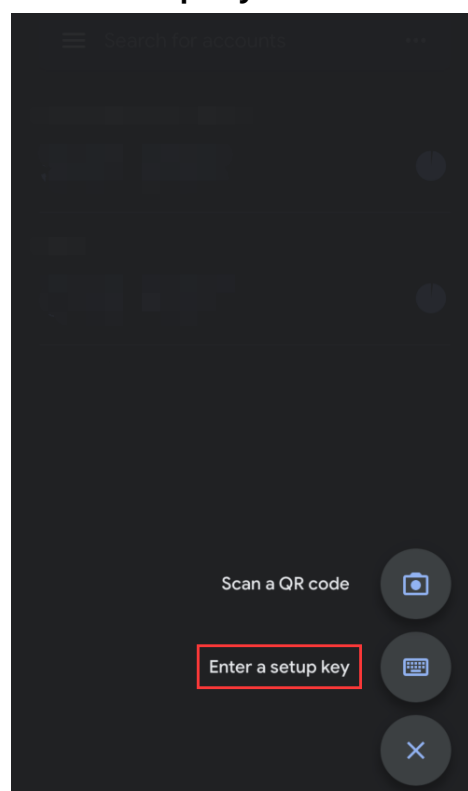
Step 4. Enter the code displayed on the authenticator on the SSLVPN login page to complete the login process.



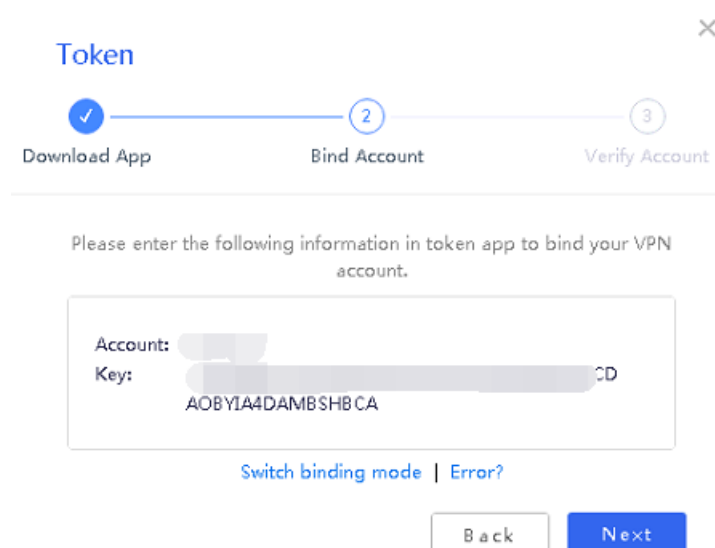
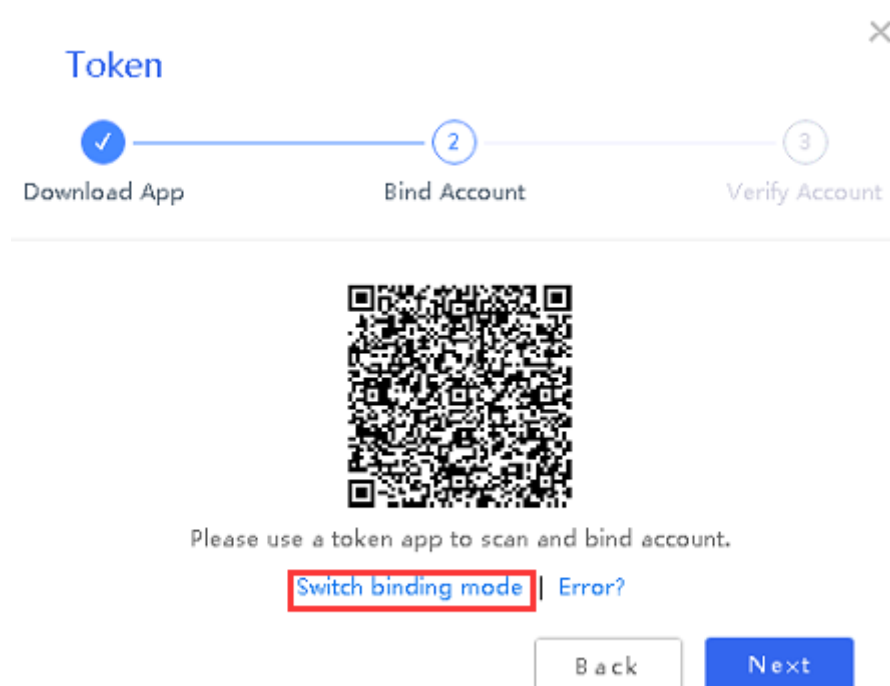
3.1.2 Token binding manually

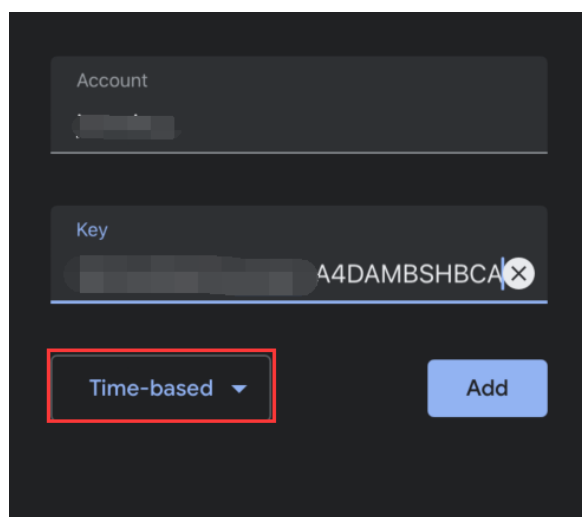
If the user is having an issue using their mobile camera to scan QR code, they may proceed to do binding manually as shown below:

Step 1. Run Google Authenticator and click the **ADD** button. Next, select **Enter a setup key**.



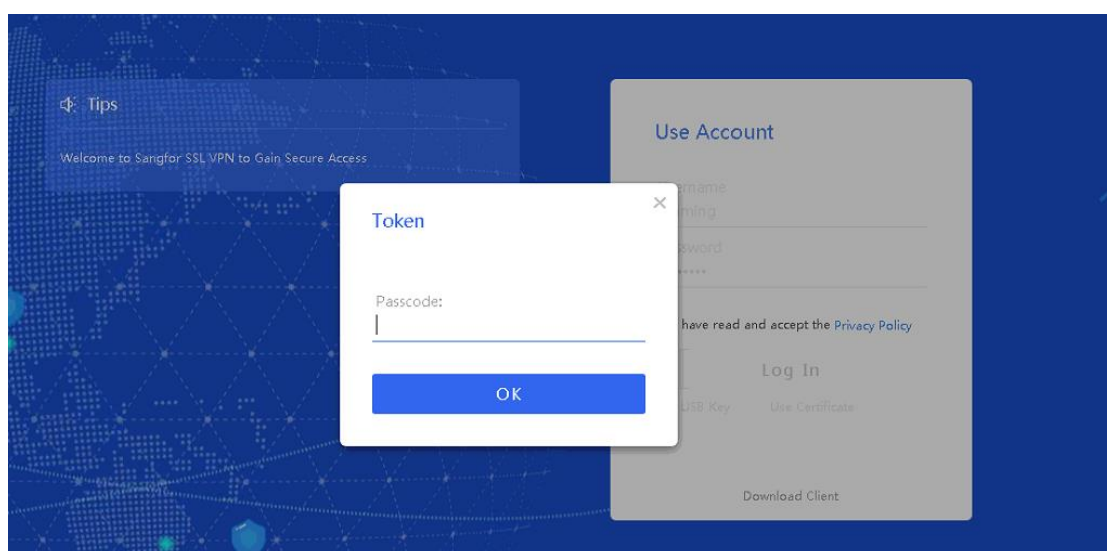
Step 2. Select **Switch binding mode** on the Bind Account setting.
Copy and enter the key shown into Google Authenticator. Then select "**Time-based**" and click **Add**.





3.2 Second login after token binding

After the first login to SSLVPN and complete the token binding, the following login will not request token binding again as long as administrators didn't delete the binding relationship on the TOTP authentication database.



3.3 Verification on the binding relationship

Administrators can check on the user authentication method on the online user list **Network > SSL VPN > Online users**, and also the binding status at **Network > SSL VPN> Local users > TOTP Dynamic Token**.

Online Users

Refresh Disabled | Refresh | Disconnect | Send Msg | Unfold All | Locked: 0 View | VPN Users: 1/500

Search	Username	Description	Logged In	WAN interface IP	Authentication	Group
<input type="checkbox"/>	<input checked="" type="checkbox"/> [User Icon]	Username: [redacted] Description: / Location: / Login IP: 192.200.19.68 Virtual IP: 0.0.0.0 Logged In: 2021-08-28 01:33:37 Duration: 29 second(s) Authentication: Local password/Dynamic token Connected Via: Windows Mobile Number:		192.200.19.68	Local password/Dynamic to...	/

Local Users

Back | Delete | Select | User Type: All users | Search by Username

Username	User Type	Auth Server	Binding Time
[redacted]	Local user	Local database	2021-08-28 01:30:48



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