



SANGFOR

SANGFOR_vSSL Deployment Guide FOR VMware V2.0



SANGFOR Technologies Inc.

Date: 19/03/2020

Your Future-Proof IT Enabler

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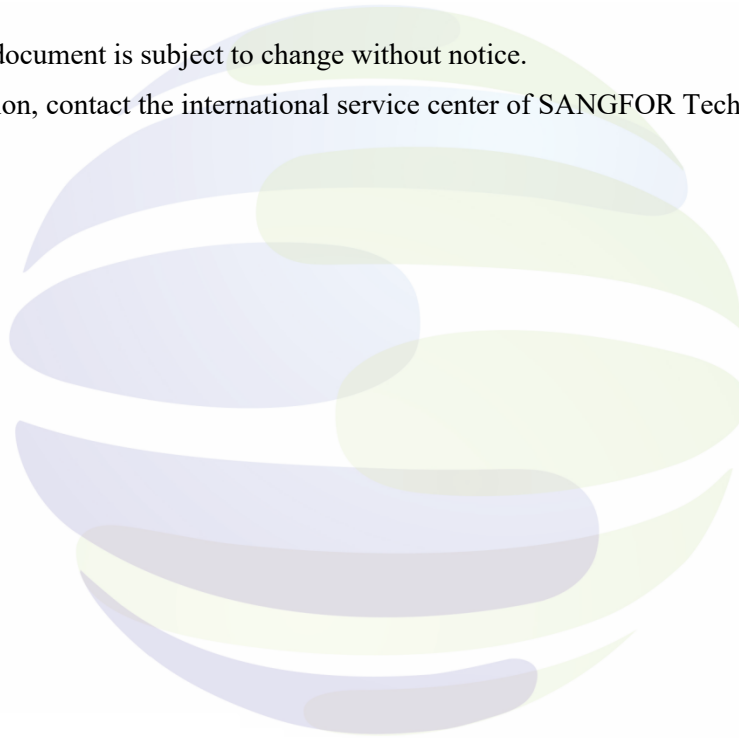
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1 About Sangfor SSL VPN

The Sangfor SSL VPN Solution provides support for remote user access to the enterprise network from anywhere Internet enabled location. Remote access is provided through a Secure Socket Layer (SSL) enabled by an SSL VPN gateway. The SSL VPN gateway allows remote users to establish a secure Virtual Private Network (VPN) tunnel using a web browser. This comprehensive solution allows easy access to a broad range of web resources and web-enabled applications (e.g. Easy Connect) using native HTTP over SSL (HTTPS) browser support.

Sangfor SSL Enterprise VPN provides remote-access connectivity from almost any Internet-enabled location using a web browser or an APP that natively supports SSL encryption. This feature allows your business to expand access to its secure enterprise network to any authorized user by providing remote-access connectivity to corporate resources.

2 Sangfor vSSL VPN Requirement

2.1 Resource Requirements:

vSSL mode	Concurrent users	vCPU	RAM	HDD	Platform
vSSL -100	Up to 500	2cpu	2G	32G	VMware ESXi 5+

2.2 Sangfor vSSL VPN v7.6.8R2 System and Browser Support List

Sangfor SSL VPN v7.6.8 System and Browser Support List			
Windows System	Browser	SSL VPN Version	Functions Detail
Windows XPsp2/Windows XPsp3	IE8.0	M7.6.8R2	All
	Chrome58 above	M7.6.8R2	Don't support SSO and Smart TCP Resource
	Firefox58 above	M7.6.8R2	
windows 7Professional/Ultimate 32bit	IE8.0	M7.6.8R2	All
	IE9.0	M7.6.8R2	All
	IE11	M7.6.8R2	All
	Chrome58 above	M7.6.8R2	Don't support SSO and Smart TCP Resource
	Firefox58 above	M7.6.8R2	
Windows 7Professional/Ultimate 64bit	IE8.0	M7.6.8R2	All
	IE9.0	M7.6.8R2	
	IE11	M7.6.8R2	
	Chrome58 above	M7.6.8R2	Don't support SSO and Smart TCP Resource
	Firefox58 above	M7.6.8R2	

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Windows 8 (Windows8.1) 32bit&64bit	IE10	M7.6.8R2	All
	IE11	M7.6.8R2	All
	Chrome58 above	M7.6.8R2	Don't support SSO and Smart TCP Resource
	Firefox58 above	M7.6.8R2	
Windows 10 32bit&64bit	IE11、 Edge	M7.6.8R2	All
	Chrome58 above	M7.6.8R2	Don't support SSO and Smart TCP Resource
	Firefox58 above	M7.6.8R2	
Don't support Windows server system and Win8/Win10 ARM Pad			
MAC System	Browser	Version	Function Detail
MacOS 10.9	Safari/Chrome	7.6.8R2	1. Don't support enforce intranet DNS 2. Don't support IPv6 3. Don't support Easyconnect client 4. Don't support USB Key 5. Don't support SSO 6. Don't support smart TCP resource 7. Don't support auto login 8. Don't support HTP acceleration and byte cache
MacOS 10.10	Safari/Chrome	7.6.8R2	
MacOS 10.11	Safari/Chrome	7.6.8R2	
MacOS 10.12	Safari/Chrome	7.6.8R2	
MacOS 10.13	Safari/Chrome	7.6.8R2	
MacOS 10.14	Safari/Chrome	7.6.8R2	
MacOS 10.15	Safari/Chrome	7.6.8R2	
Phone System	System	Version	
Android	Android4.x	M7.6.8R2	Only support web resource, L3VPN resource, Remote application delivery resource
	Android5.x	M7.6.8R2	
	Android6.x	M7.6.8R2	
	Android7.x	M7.6.8R2	
	Android8.x	M7.6.8R2	
	Android9.x	M7.6.8R2	
	Android10.x	M7.6.8R2	
iPhone	IOS8.x	M7.6.8R2	Only support web resource, L3VPN resource, Remote application delivery resource
	IOS9.x	M7.6.8R2	
	IOS10.x	M7.6.8R2	
	IOS11.x	M7.6.8R2	
	IOS12.x	M7.6.8R2	
	IOS13.x	M7.6.8R2	

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3 Apply Sangfor vSSL VPN License

3.1 Please Deal Registration for Apply the vSSL VPN License

You can use <03_Apply Sangfor vSSL VPN License(Deal Registration Form).xlsx>

Deal Registration Form		
To:	SANGFOR TECHNOLOGIES (HONG KONG) LIMITED	
Attn:		
Contact:		
* Customer Name		Register Date:
* End User Name (First, Last Name):		
* End User Contact No. :		
* End User Email:		
* End User Address:		
* Existing Sangfor Customer?		
* Partner Name:		
* Partner Contact (First, Last Name):		
* Partner Contact number:		
* Partner Email:		
* Distributor:		
Expected Project Date:		
Industry:		
Product line(s)	Special Requirement/Settings	Qty
vSSL VPN	50 SSL VPN User	1
(1) * are mandatory fields, and should be submitted fully before POC session starts.		
(2) It is highly recommend that our channel partner register their prospects with us during the		
(3) Each registration for a prospect would be valid for 3 months , partner should update the		
(4) During this valid registration period, the channel partner would be authorized to be the		
(5) When the period is expired AND the sales cannot be completed, this prospect would be		
(6) For those sales deals without registration, we will reserve the right to sell the products in		

3.2 License Application method

Please fill the form <03_Apply Sangfor vSSL VPN License(Deal Registration Form).xlsx> and contact your Sangfor sales manager for apply the vSSL VPN license, You would get the vSSL VPN license within one day. The license would include authorization ID and the authorization serial number.

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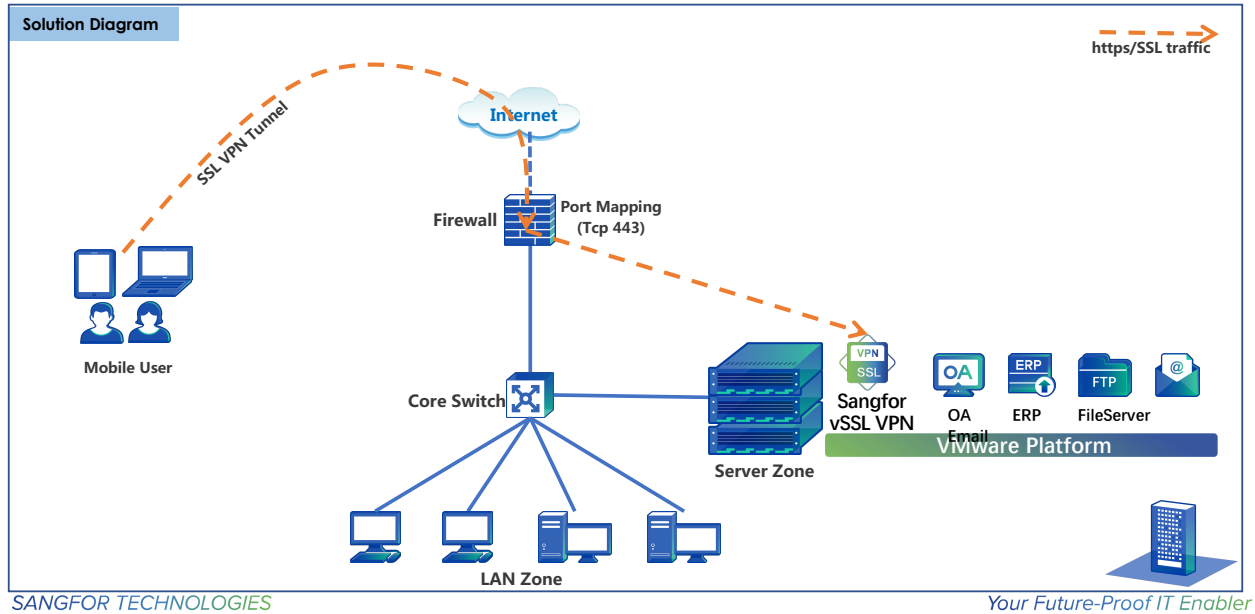
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4 vSSLDeployment

4.1 Solution Diagram

SANGFOR vSSL VPN Remote Work Solution Diagram



4.2 Resource Requirements

Type	File Name	Size	MD5	Download Link
Image	Sangfor vSSL ova Image vSSL7.6.1_for_VMware	1.56 GB	6FEC476F535D427E0 DA6E3EF523A4608	https://www.dropbox.com/s/zdt5fui94yvqul/vSSL7.6.1_for_VMware.ova?dl=0 https://drive.google.com/drive/folders/1mmTbGGGmwOLVsFDVSfGNN7V7v23CBBx?usp=sharing
Tools	Sangfor Firmware Updater Tools	3.08 MB	19E64BF5121E2D4E7 C49FF9908818513	https://www.dropbox.com/s/7evfcykdlr6g8he/SANGFOR_Updater6.1.zip?dl=0 http://download.sangfor.com.cn/download/product/tools/SANGFOR_Updater6.1.zip
Firmware	From vSSL7.6.1 to vSSL 7.6.8R2	372.60 MB	76d76cc5e9f9318f4ac9f bd1ffec551	https://www.dropbox.com/s/q19erxru7tp95gi/SSLM7.6.8R2%2820200224%29_built-up_DLAN6.0.0%2820191226%29.cssu?dl=0 http://download.sangfor.com.cn/download/product/sslvpn/SSLM7.6.8R2(20200224)_built-up_DLAN6.0.0(20191226).cssu

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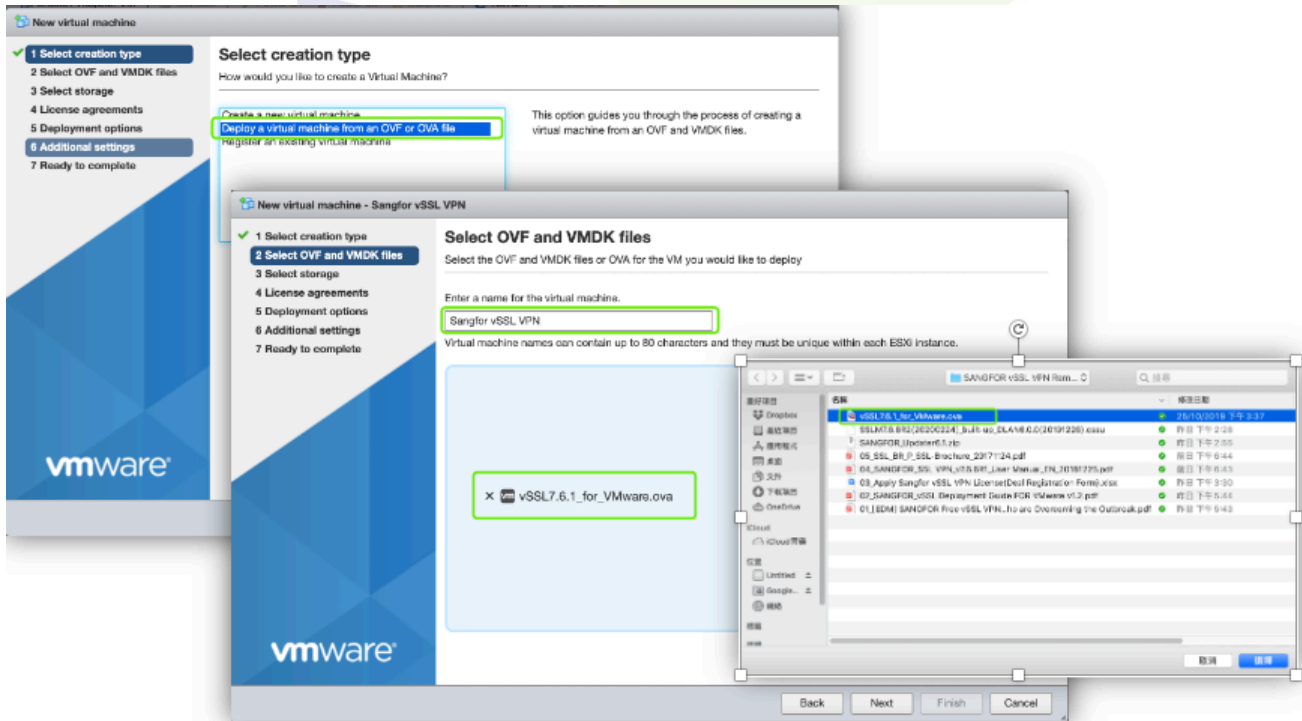
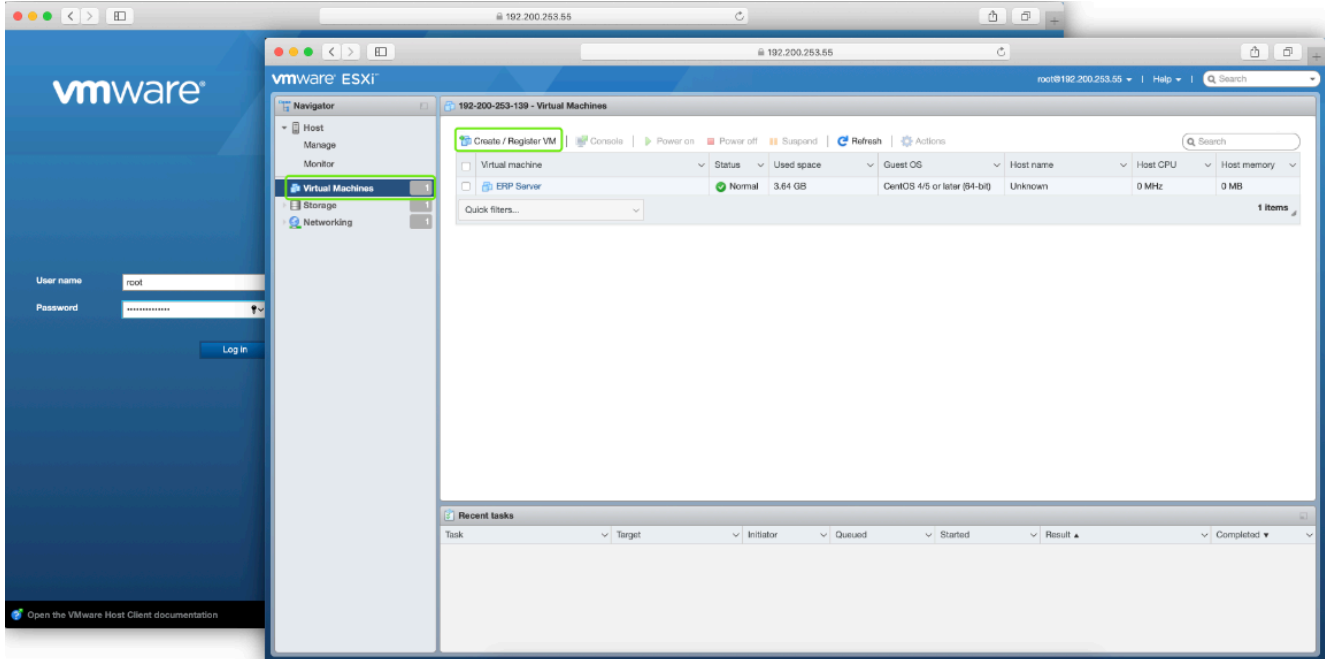
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4.3 Deploy vSSLVPN OVA Image

Please check your VMware ESXi version is higher than 5.0, We use VMware ESXi 6.5 to show the step as below.

Login VMware management console and import the Sangfor vSSL ova Image.



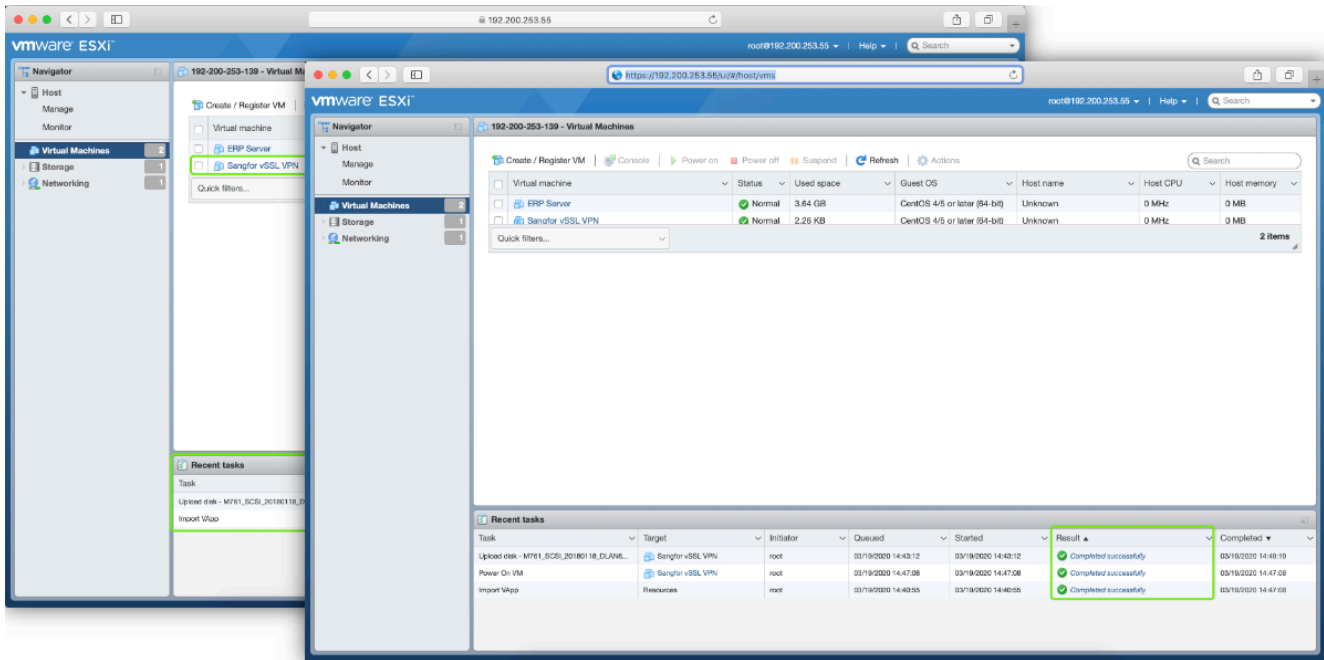
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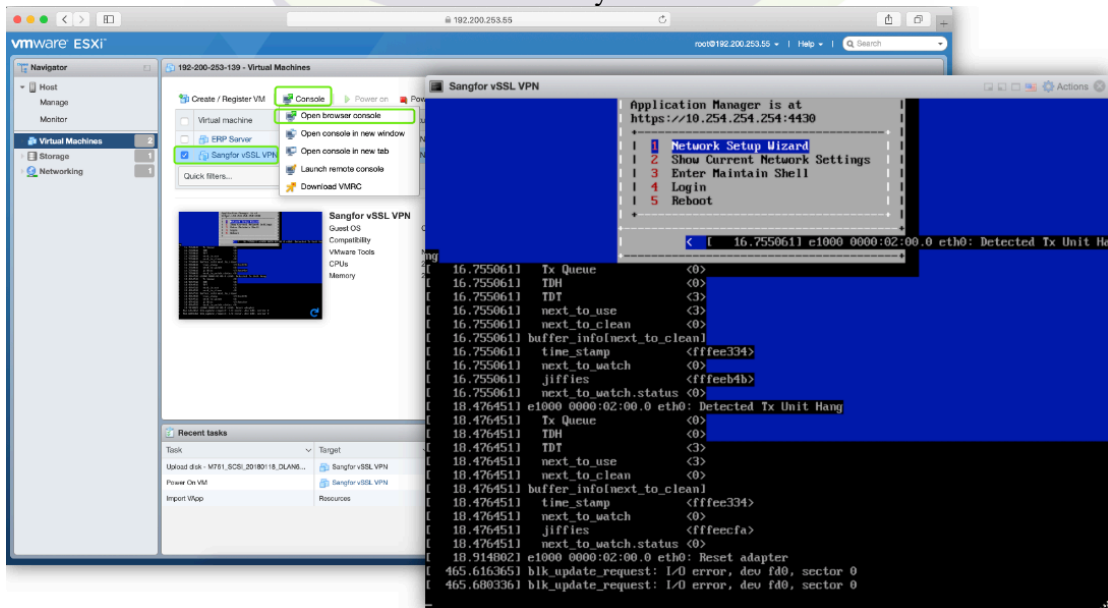
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Need around 5 mins to complete the OVA import process.



4.4 Login Sangfor vSSL VPN

After import the Sangfor vSSL VPN ova image, power on the Sangfor vSSL VPN, Change the IP to your server zone VPN subnet IP address/ subnet mask/ Default Gateway.

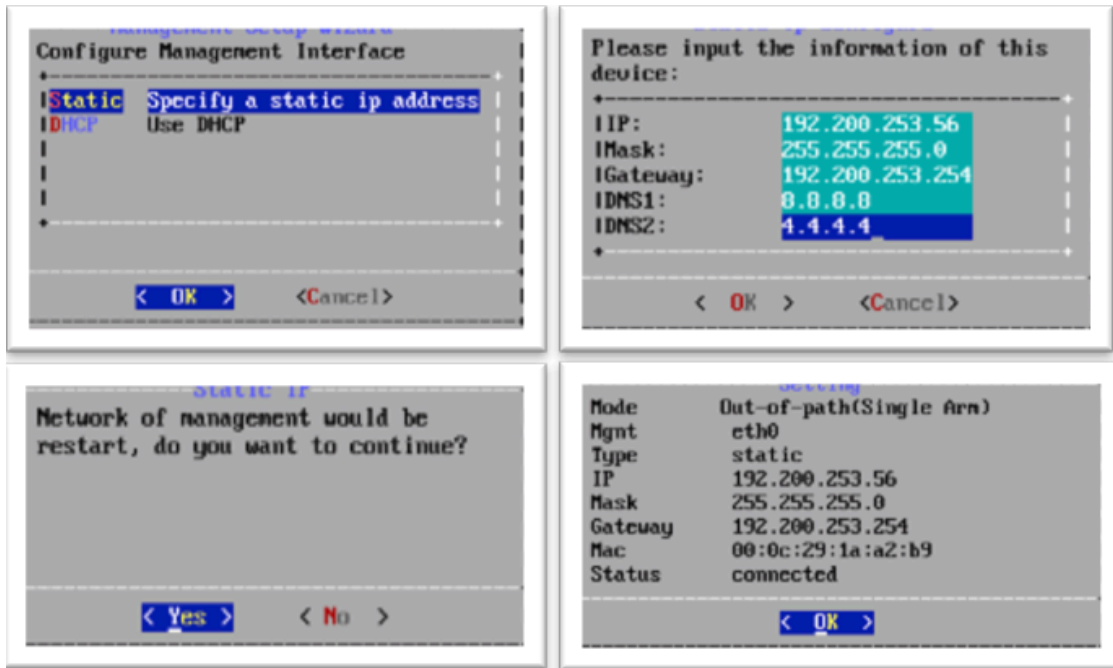


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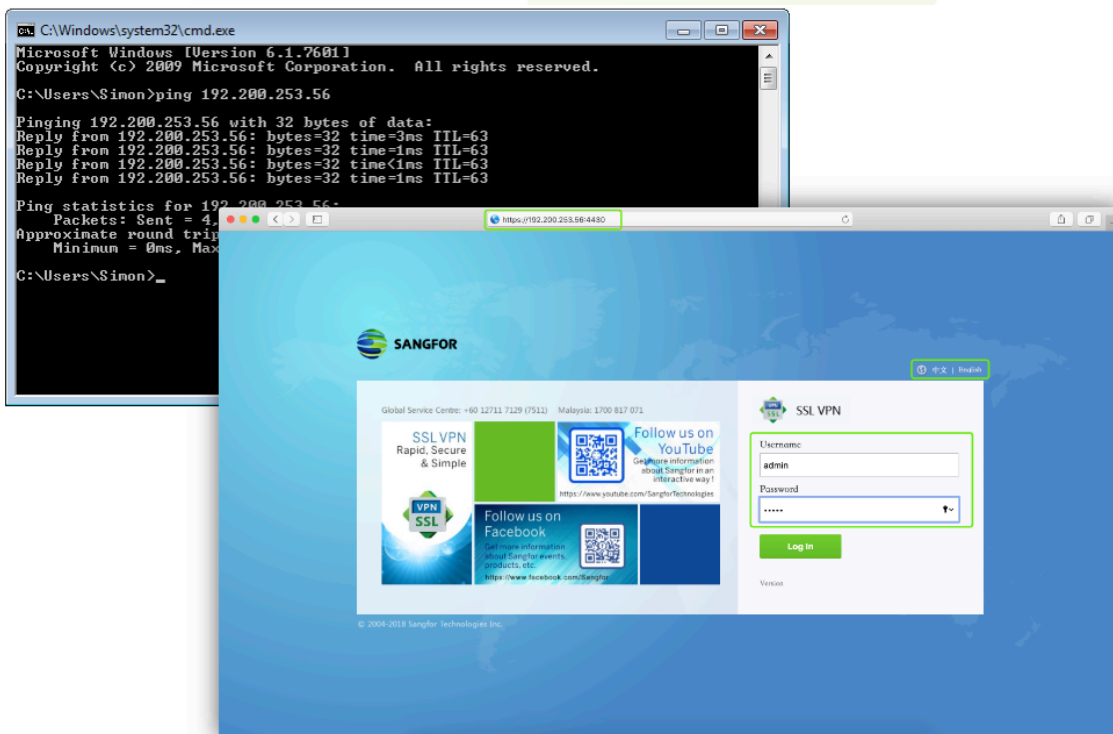
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After config the IP info, test the vSSL VPN network connection, you can ping the vSSL VPN IP.

Open browser and login SSL VPN admin web console through [https://IP:4430](https://192.200.253.56:4430), you can change the UI language [中文 | English], the default user name and password is admin/ admin.



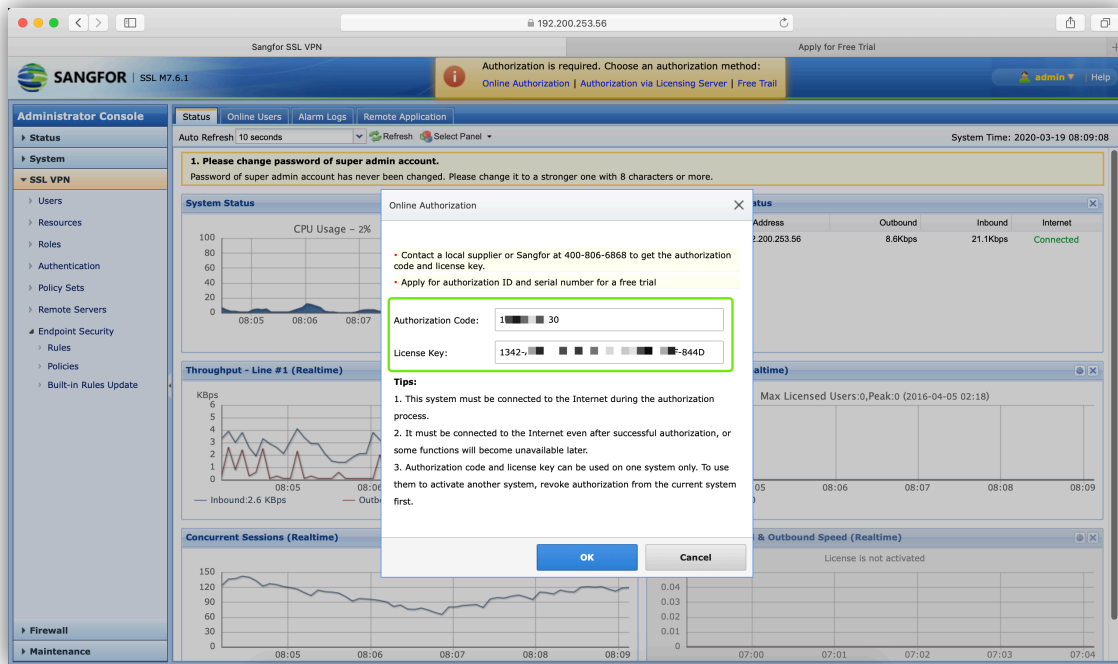
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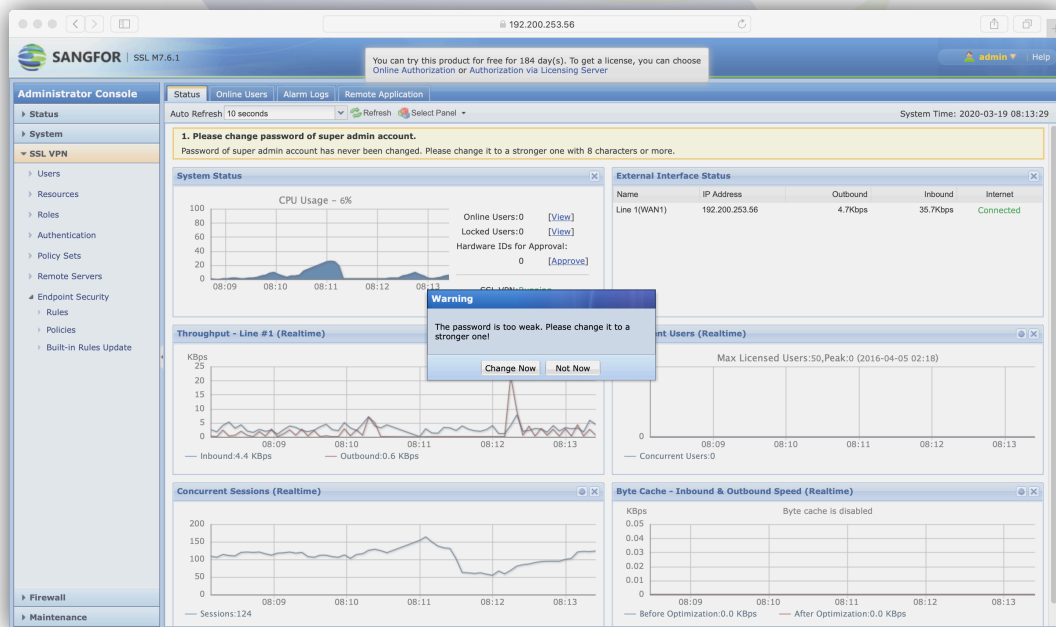
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Click [Online Authorization] to input the trial license which you get from Sangfor sales manager.



The vSSL VPN may ask you to change your admin password.



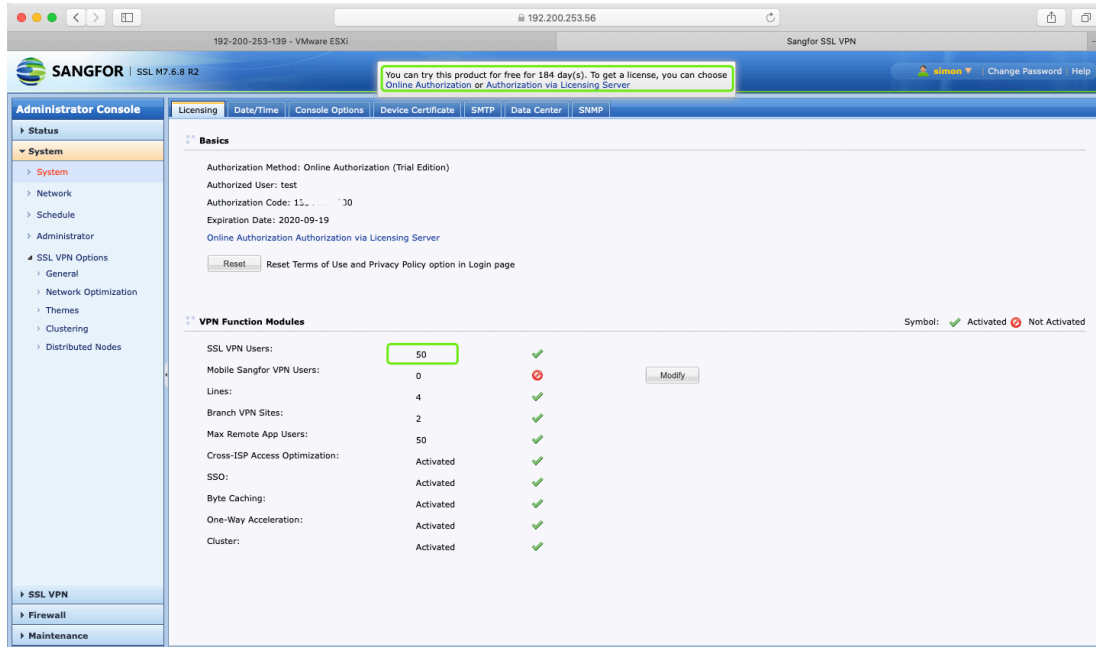
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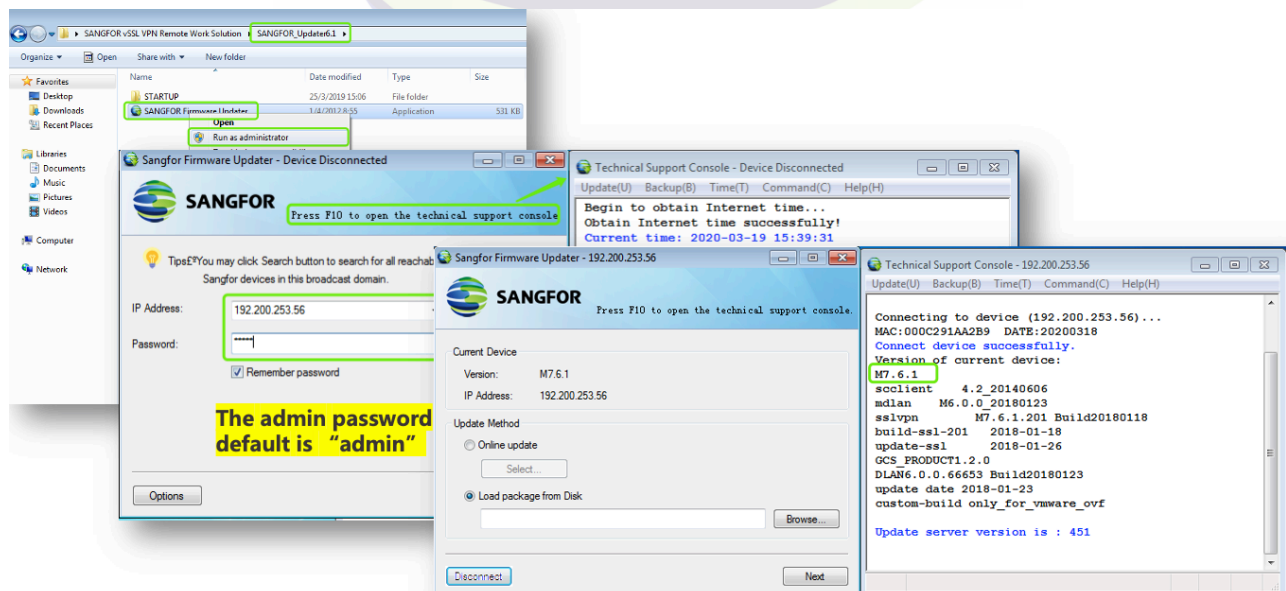
Check the license info: number of SSL VPN user and license expire date.



4.5 Upgrade vSSL VPN from v7.6.1 to v7.6.8R2

Unzip [SANGFOR_Updater6.1.zip], Run [Sangfor Firmware Updater] with windows administrator right, the password is same as web console password(default is admin).

Press F10 to open the updater log console.



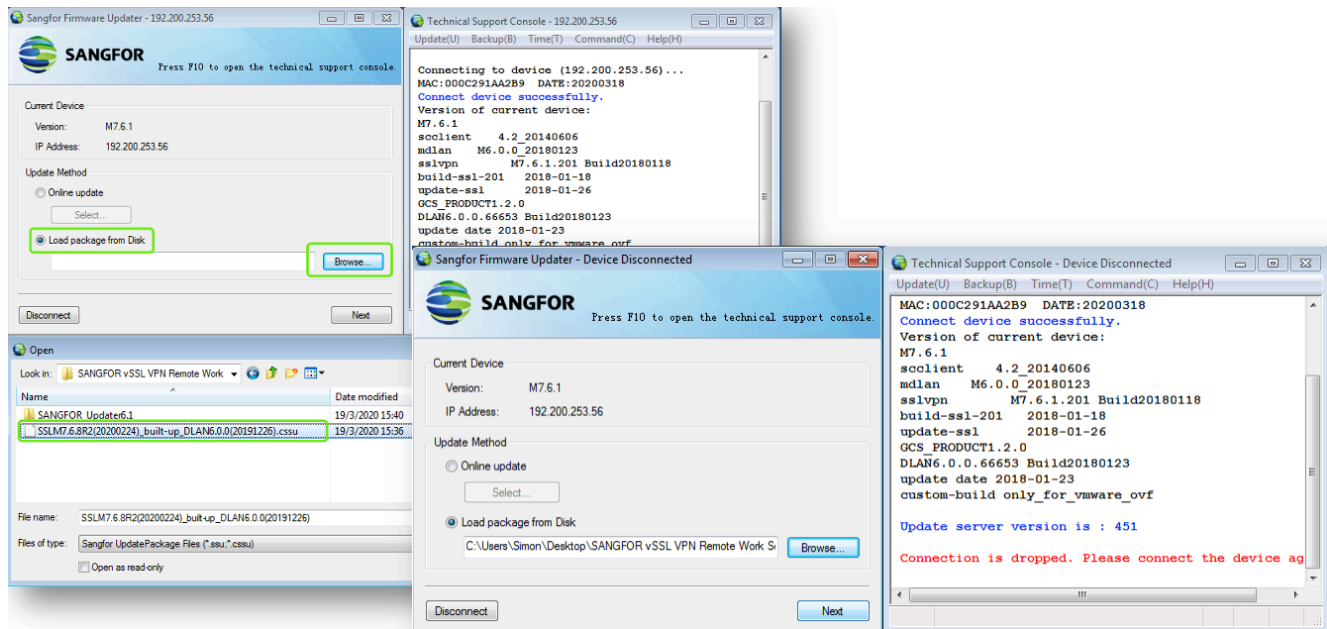
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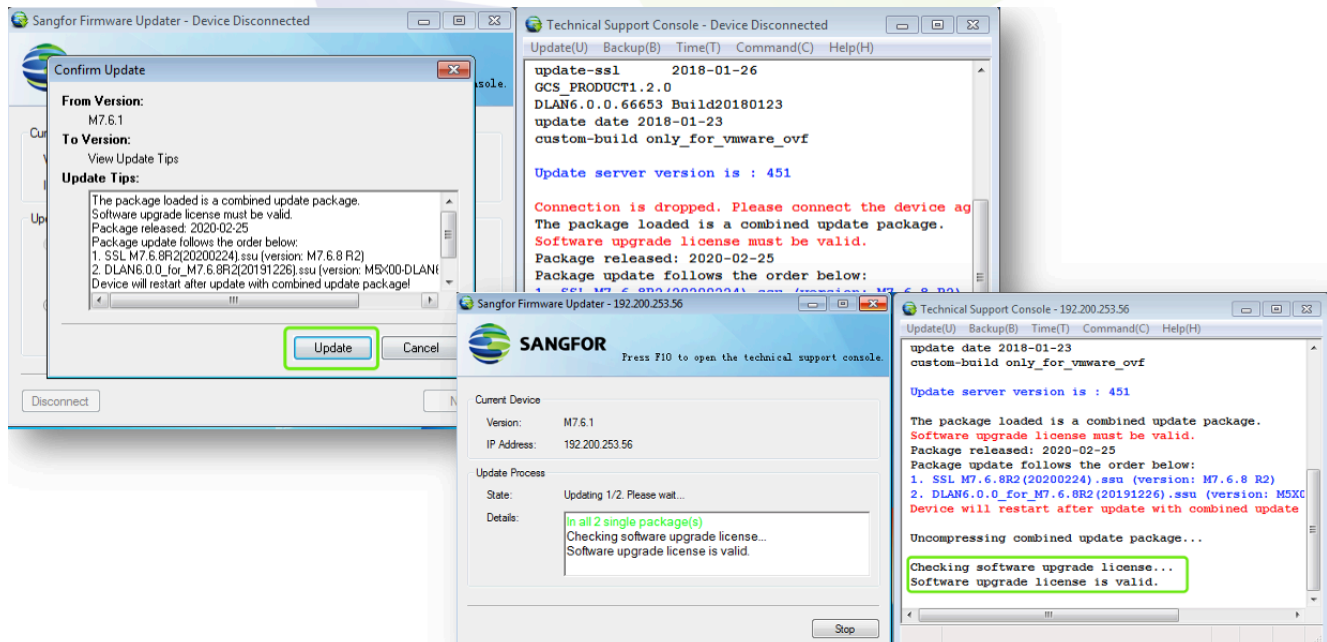
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Select the v7.6.8R2 firmware<SSLM7.6.8R2(20200224)_built-up_DLAN6.0.0(20191226).cssu>, and start to upgrade.



The vSSL VPN appliance automatic restart after successful upgrade firmware.

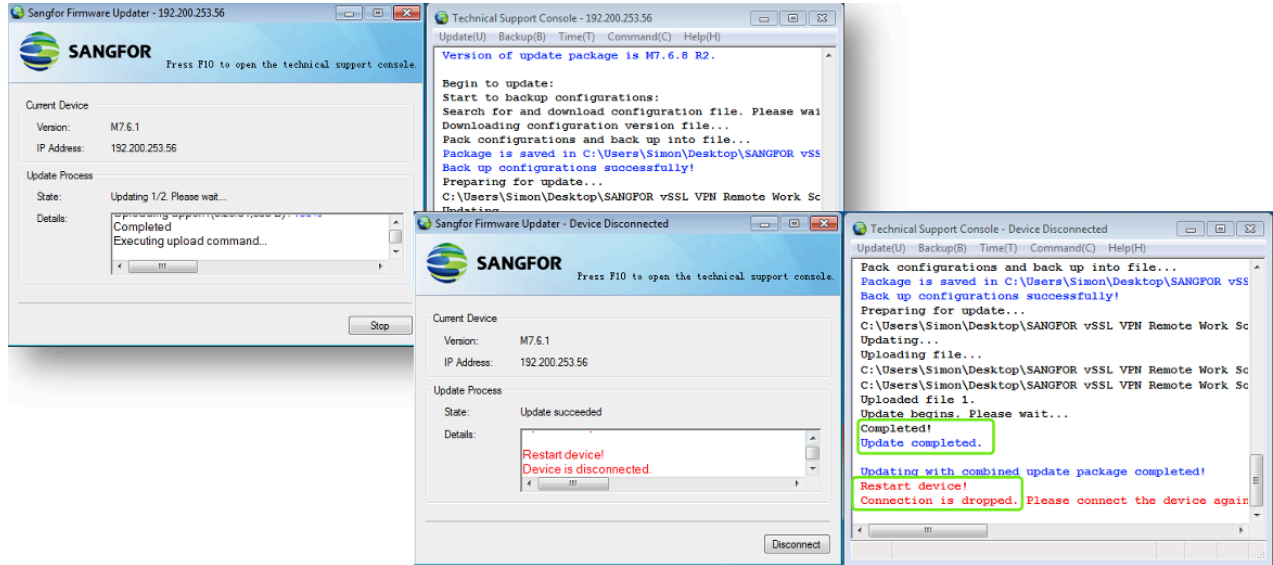


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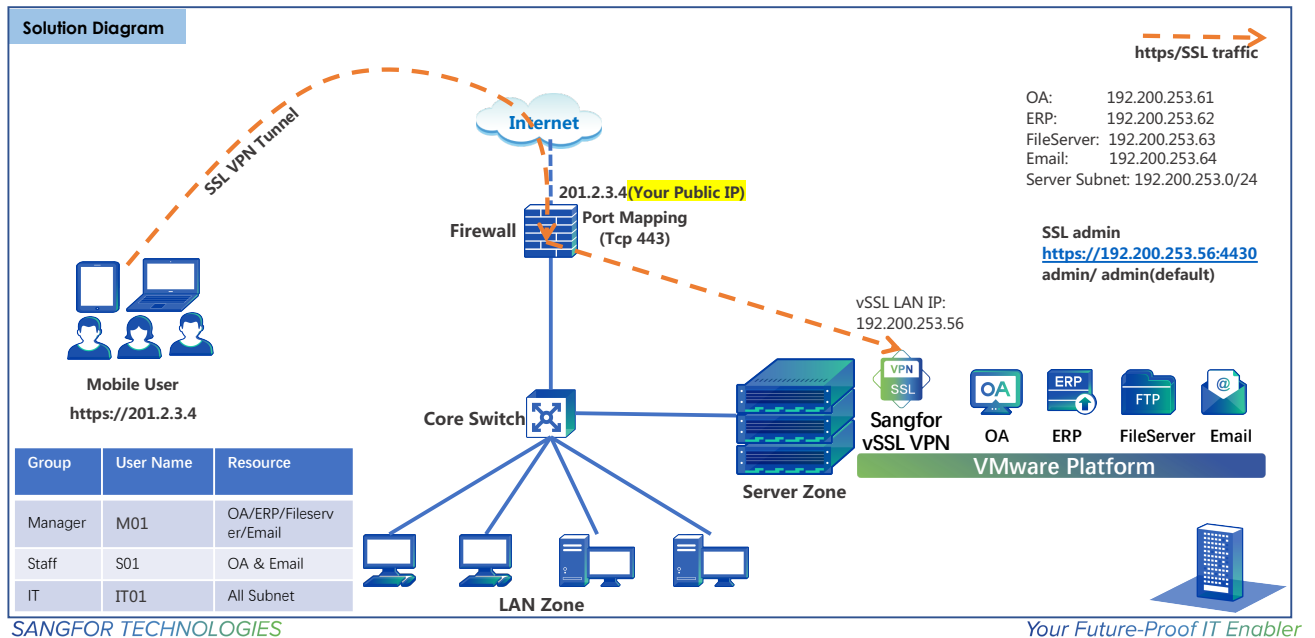
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4.6 vSSL VPN Configuration

Refer to the following diagram for as below configuration demonstration.

SANGFOR vSSL VPN Remote Work Solution Diagram



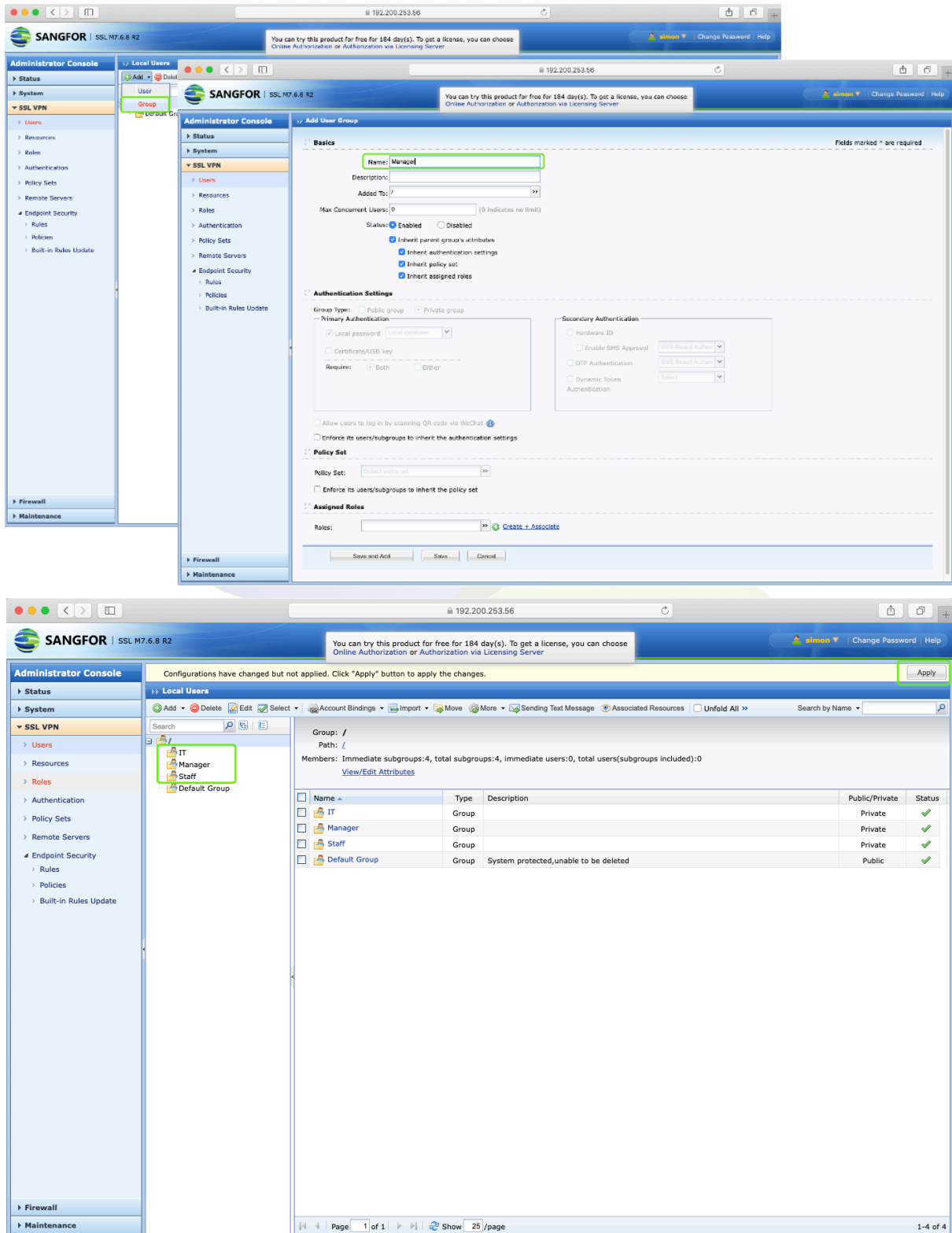
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User Setting, add user group and user for remote user.



The image shows two screenshots of the Sangfor SSL VPN Administrator Console. The top screenshot displays the 'Add User Group' configuration page. The bottom screenshot displays the 'Local Users' list.

Top Screenshot: Add User Group Configuration

Basic Information:

- Name: Manager
- Description:
- Added To:
- Max Concurrent Users: 0 (0 indicates no limit)
- Status: ☒ Enabled ☐ Disabled
- ☒ Inherit parent group's attributes
- ☒ Inherit authentication settings
- ☒ Inherit policy set
- ☒ Inherit assigned roles

Authentication Settings:

- Group Type: ☒ Public group ☐ Private group
- Primary Authentication:
 - ☒ Local password (Local password dropdown)
 - ☐ Certificate/USB key
 - Require: ☐ Both ☐ Either
- Secondary Authentication:
 - ☐ Hardware ID
 - ☐ Enable SMS Approval (SMS Based Auth dropdown)
 - ☐ OTP Authentication (OTP Based Auth dropdown)
 - ☐ Dynamic Token Authentication (Token dropdown)
- ☐ Allow users to log in by scanning QR code via WeChat
- ☐ Enforce its users/subgroups to inherit the authentication settings

Policy Set:

- Policy Set: (Default policy set dropdown)
- ☐ Enforce its users/subgroups to inherit the policy set

Assigned Roles:

- Roles: (Create + Associate button)

Bottom Screenshot: Local Users List

Configurations have changed but not applied. Click "Apply" button to apply the changes.

Group: /
Path: /
Members: Immediate subgroups:4, total subgroups:4, immediate users:0, total users(subgroups included):0
[View/Edit Attributes](#)

Name	Type	Description	Public/Private	Status
IT	Group		Private	✓
Manager	Group		Private	✓
Staff	Group		Private	✓
Default Group	Group	System protected,unable to be deleted	Public	✓

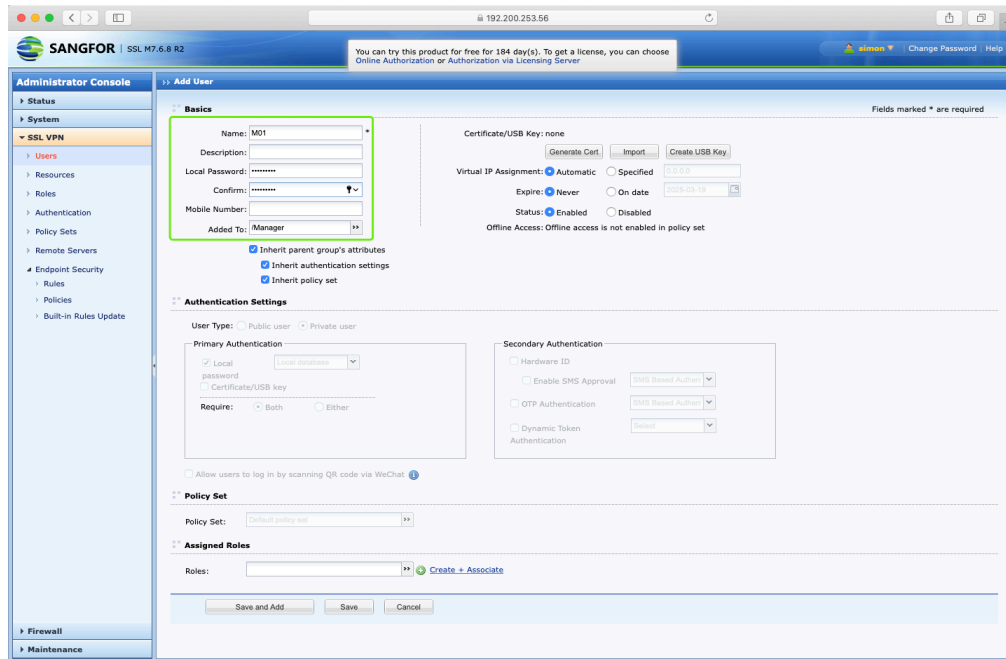
Page: 1 of 1 | Show: 25 /page | 1-4 of 4

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Administrator Console | SSL M7.6.8 R2

You can try this product for free for 184 day(s). To get a license, you can choose Online Authorization or Authorization via Licensing Server

Add User

Basics

Name: M01
 Description:
 Local Password: *****
 Confirm: *****
 Mobile Number:
 Added To: Manager

Certificate/USB Key: none
 Generate Cert. Import Create USB Key

Virtual IP Assignment: Automatic Specified 192.0.0
 Expire: Never On date 2025-01-19
 Status: Enabled Disabled
 Offline Access: Offline access is not enabled in policy set

☒ Inherit parent group's attributes
☒ Inherit authentication settings
☒ Inherit policy set

Authentication Settings

User Type: Public user Private user

Primary Authentication

☒ Local Local database
☐ Certificate/USB key
 Require: Both Either

☐ Allow users to log in by scanning QR code via WeChat

Secondary Authentication

☐ Hardware ID
☐ Enable SMS Approval SMS Based Authn
☐ OTP Authentication SMS Based Authn
☐ Dynamic Token Authentication

Policy Set

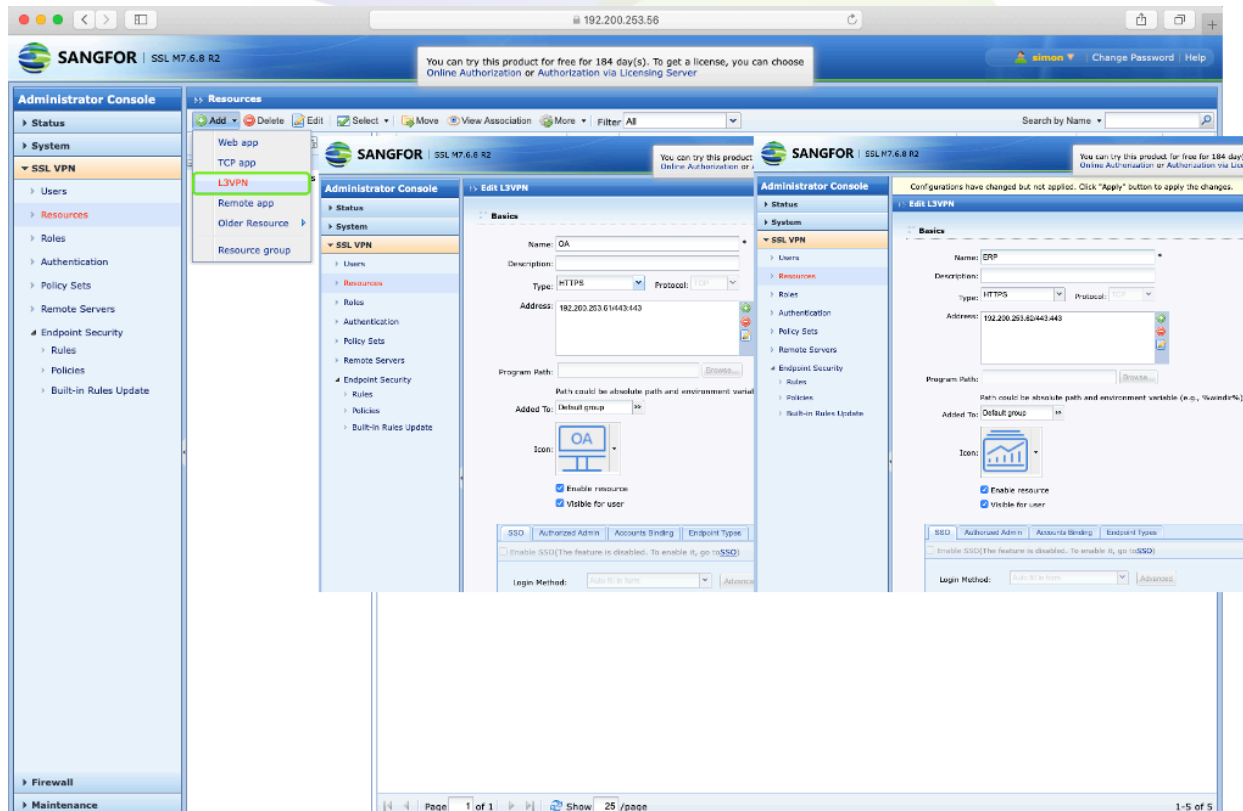
Policy Set: Default policy set

Assigned Roles

Roles: Create + Associate

Save and Add Save Cancel

Resource Setting, the network segment or server IP resources that need to be accessed by the user. You can restrict resource ports to enhance security if need.



Administrator Console | SSL M7.6.8 R2

You can try this product for free for 184 day(s). To get a license, you can choose Online Authorization or Authorization via Licensing Server

Resources

Add Delete Edit Select Move View Association More Filter: All Search by Name

Web app
 TCP app
 L3VPN
 Remote app
 Older Resource
 Resource group

Administrator Console | SSL M7.6.8 R2

Edit L3VPN

Basics

Name: OA
 Description:
 Type: HTTPS Protocol: TCP
 Address: 192.200.253.6/143.443
 Program Path:
 Added To: Default group
 Icon: OA
☒ Enable resource
☒ Visible for user

SSO Authorized Admin Accounts Binding Endpoint Type
☐ Enable SSO (This feature is disabled. To enable it, go to SSO)
 Login Method: Auto ID in form Advance

Administrator Console | SSL M7.6.8 R2

Edit L3VPN

Basics

Name: DTP
 Description:
 Type: HTTPS Protocol: TCP
 Address: 192.200.253.6/143.443
 Program Path:
 Added To: Default group
 Icon: DTP
☒ Enable resource
☒ Visible for user

SSO Authorized Admin Accounts Binding Endpoint Type
☐ Enable SSO (This feature is disabled. To enable it, go to SSO)
 Login Method: Auto ID in form Advance

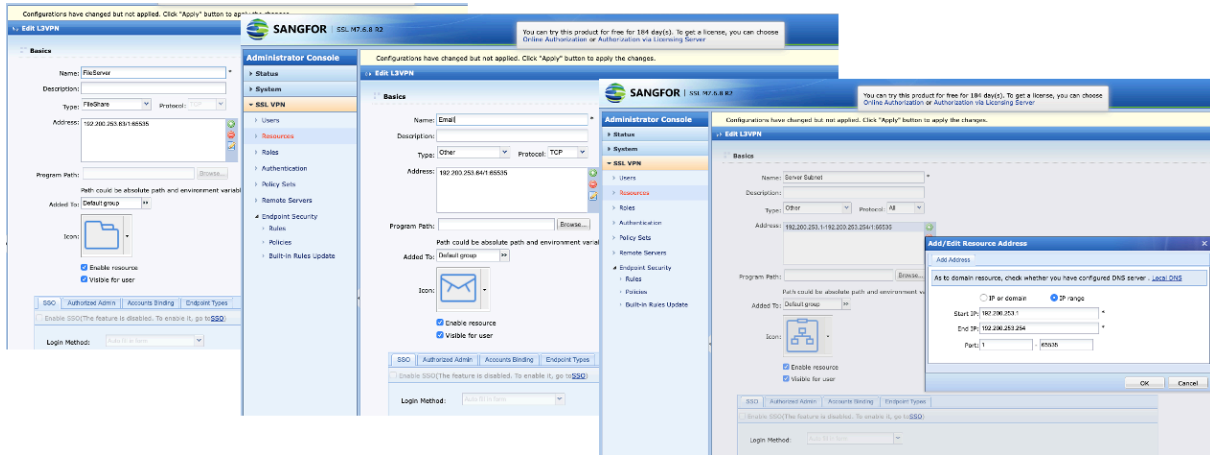
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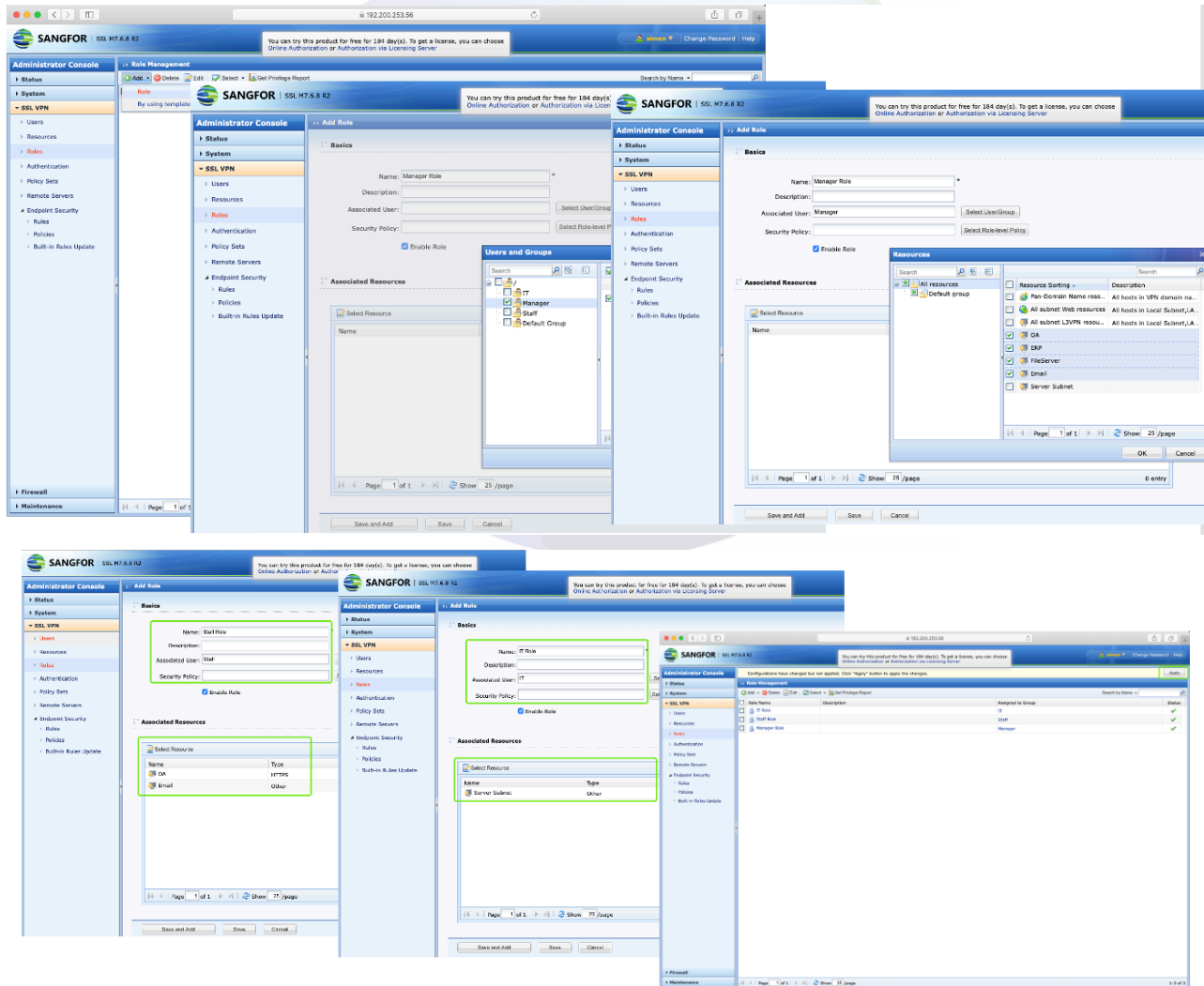
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Role Setting, this is the VPN policy for map the user and resource.



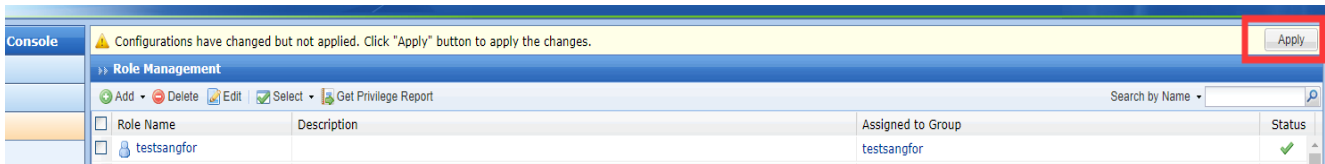
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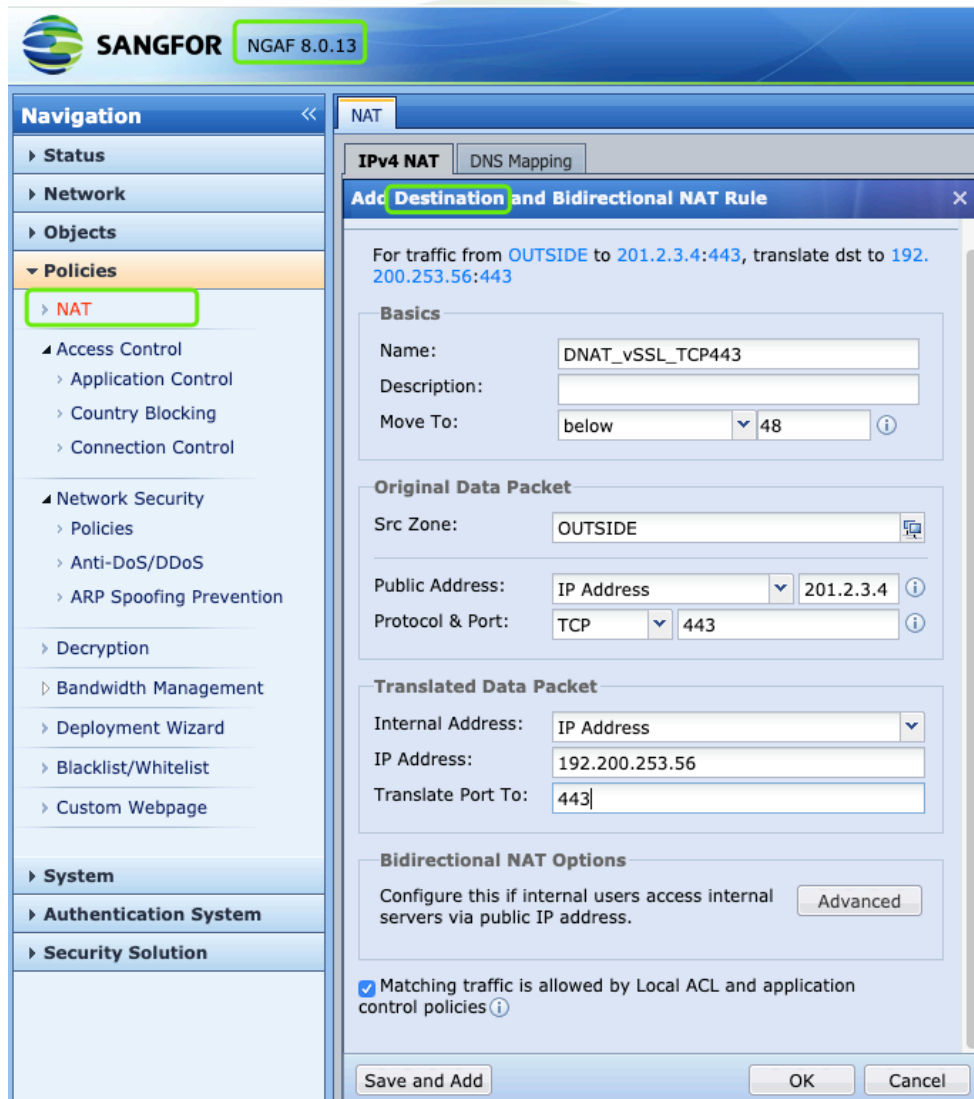
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Please apply the setting to vSSL VPN to effective immediately. (Online users need to log in again to take effect)



Please allow the vSSL VPN IP to access vls.sangfor.com.cn:443 for license authorization. And config the port mapping in your gateway firewall, as below is Sangfor NGAF NAT for your reference.



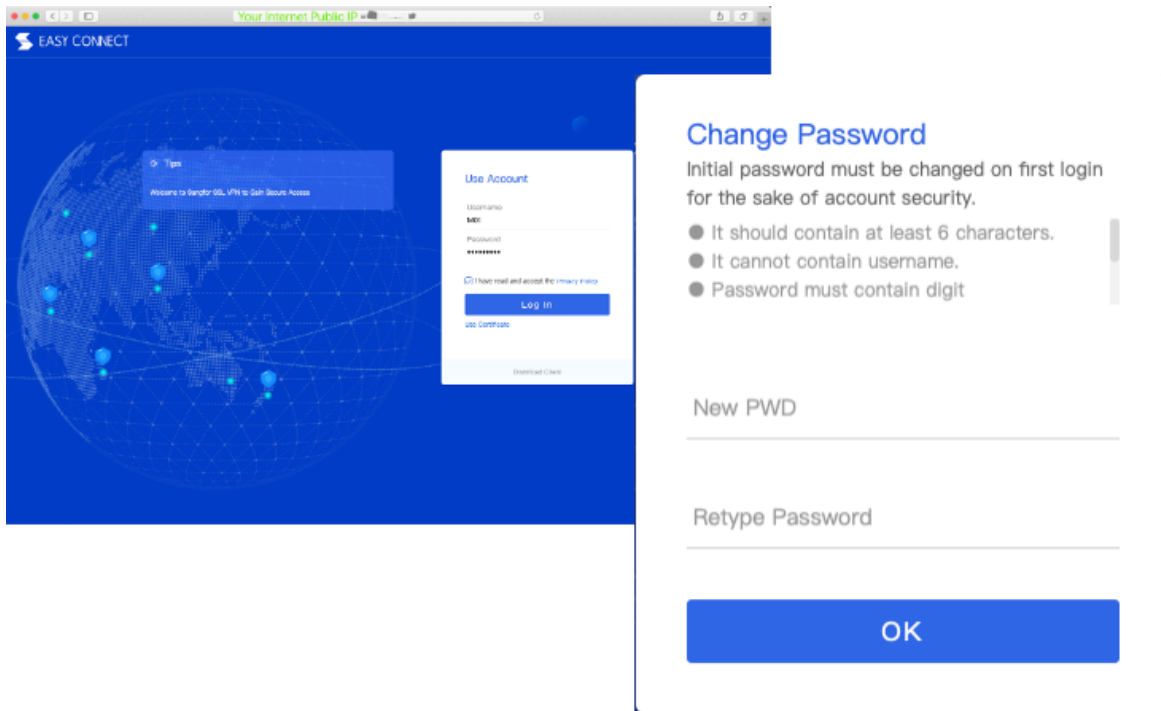
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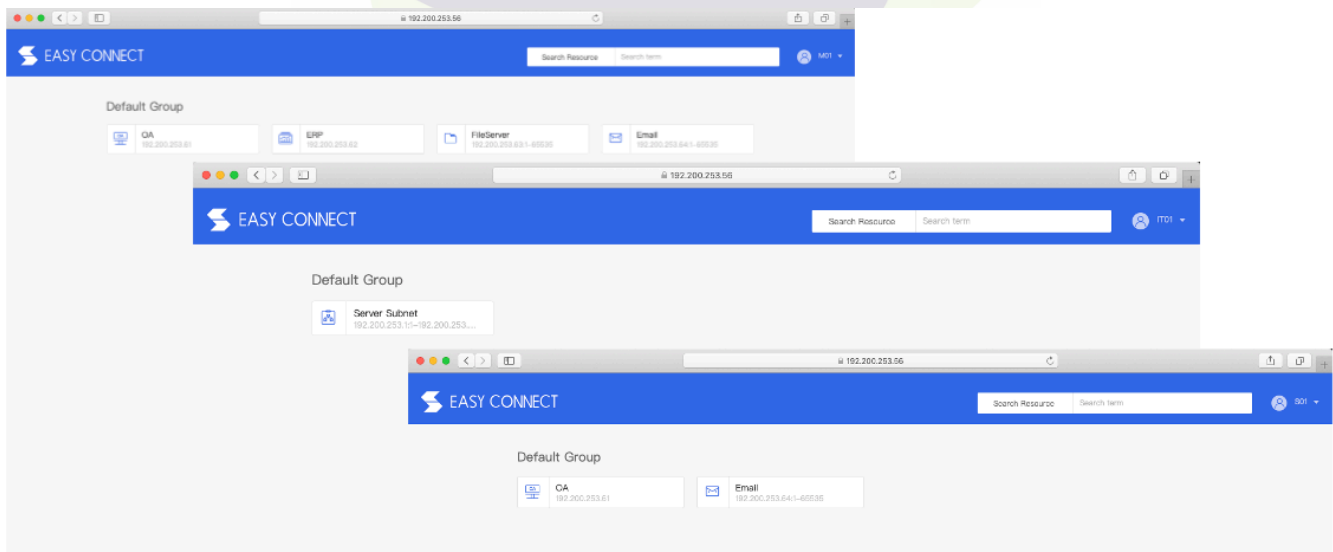
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SSLVPN User Login, [https://\[Your_Public_IP_Address\]](https://[Your_Public_IP_Address]). Request to change user's password when login for the first time.



User can see the resource in the page after login. You can click to access the application if the resource type is web(http or https), direct run the client if the resource type is client application.



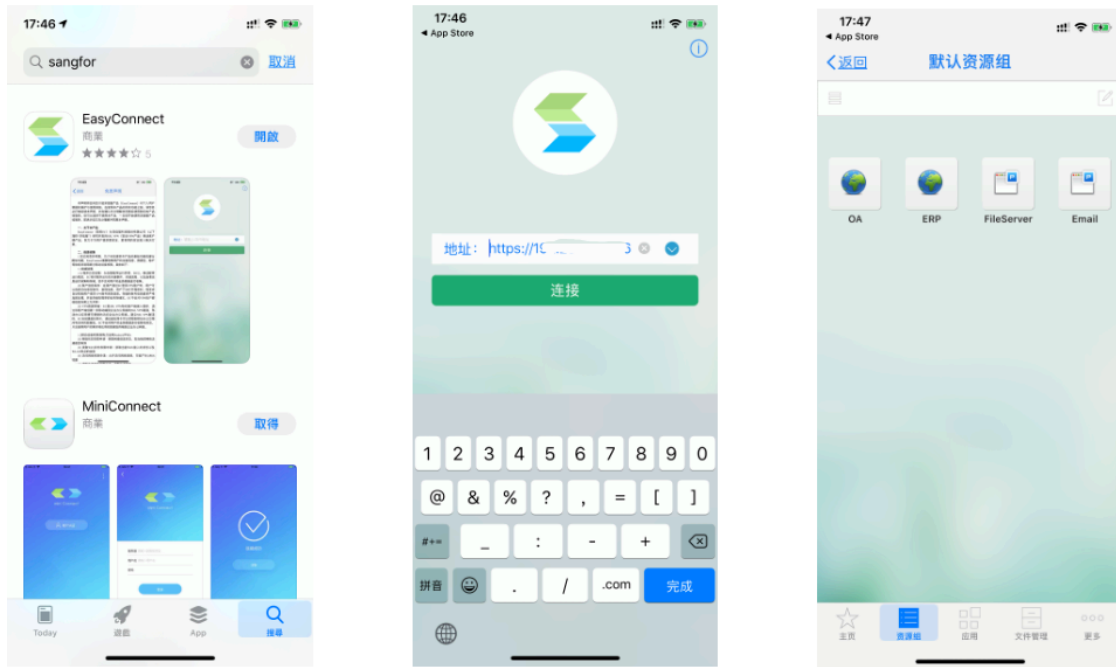
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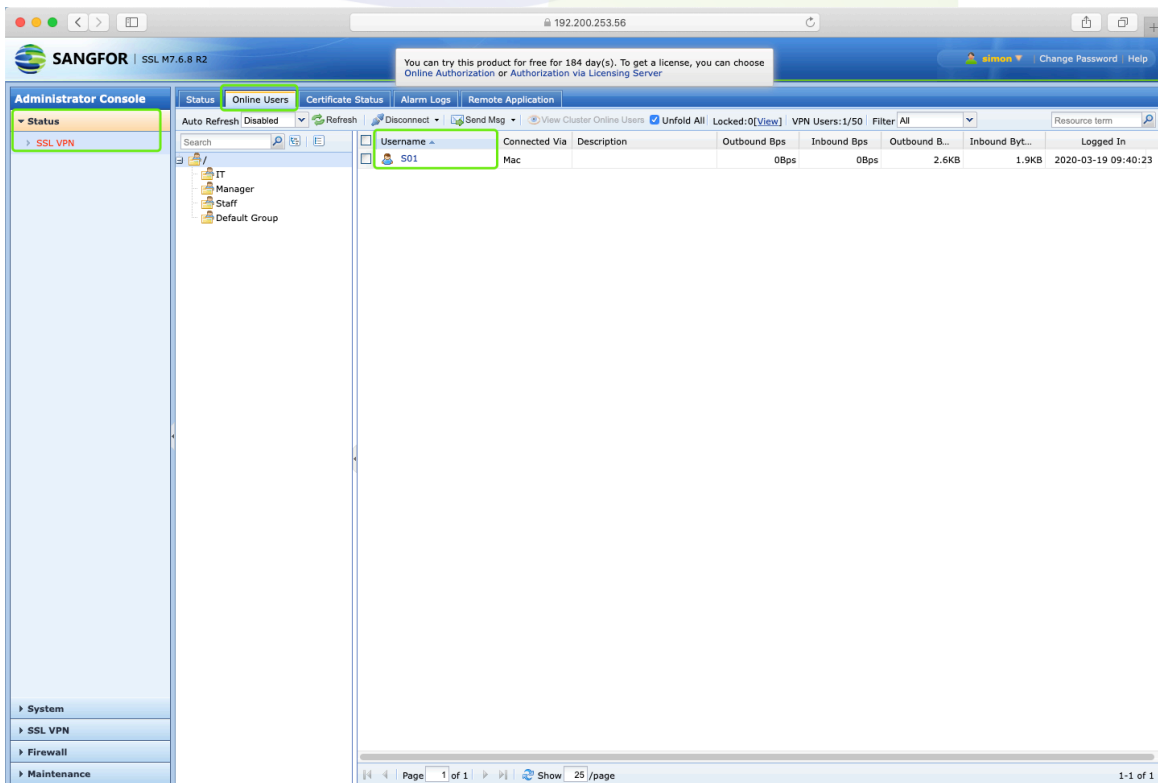
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You can search “sangfor” to download the vpn client(EasyConnect) on APP store or Google play for mobile device.



You can check the online use in the admin web console.



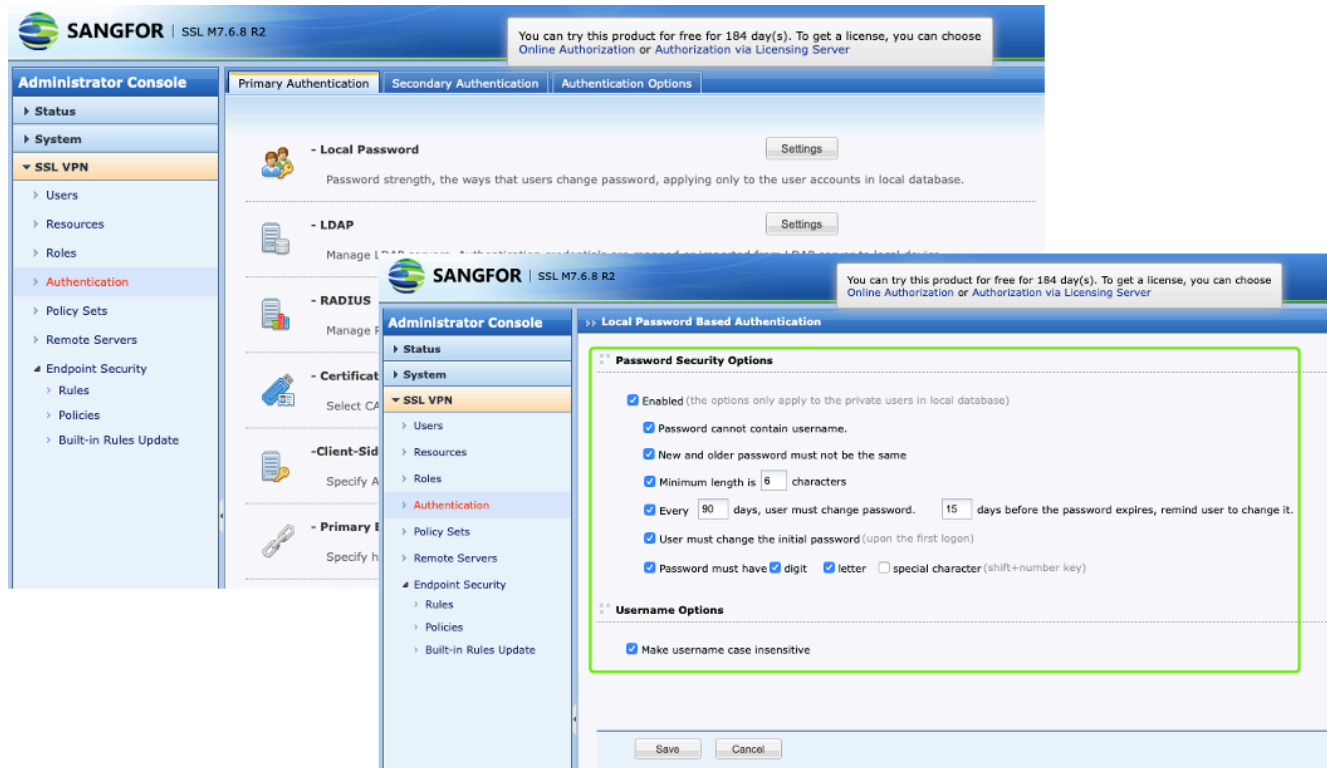
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You can change password policy to enhance password strength.



5 Security Practices for Remote Access

A lot of company are practicing "working from home" policy. Many of them are worried about granting Remote access to their employees, which may potentially elevate the risk of their environment. To address that, you should considerations while implementing remote access solution:

- (1) Mandate multi factor authentication whether it is using Hardware ID, SMS and Digital Certificate
- (2) Can limit of timing of access to VPN, e.g., 9am to 6pm, (this needs to tie to business operations)
- (3) Whitelist the origination IP addresses (this is difficult given most of the home broadband does not have fixed IP addresses). More applicable to business partner scenarios.
- (4) Upon granting VPN access, it needs to implement a good internal segmentation to limit the access from a remote access (this can be difficult if company does not have good network segmentation design)
- (5) Install the endpoint security, such as hard disk encryption, files integrity monitoring, EDR, and others

Your Future-Proof IT Enabler

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