SANGFOR
SSL VPN

VPN
SSL

Rapid, Secure & Simple

With the development of cloud computing and mobile devices, modern workforces have become increasingly mobilized and distributed. This trend requires business organizations to prepare its IT infrastructure to facilitate a secure and efficient remote access to business resources with full efforts.

SANGFOR understands those business challenges and is committed to provide solutions for those increasing demands of modern enterprises. Compared with other existing SSL VPN solutions, SANGFOR SSL VPN offers the best level business driven solution with extraordinary access speed and security technologies.

www.sangfor.com
sales@sangfor.com

SANGFOR SSL VPN Solution

By using the exclusive acceleration technology of SANGFOR SSL VPN, enterprises are able to provide users with a satisfied and efficient remote access experience, which improves the work productivity of remote workforces.

Rapid

Less Bandwidth Required
Compression is commonly used in other solutions but not enough to offer a high-speed SSL VPN connection. SANGFOR SSL VPN innovate by adopting the Byte Cache technology into SSL VPN sessions, which effectively eliminates 30-90% of redundant traffics on SSL VPN links and improves the access speed of remote users.
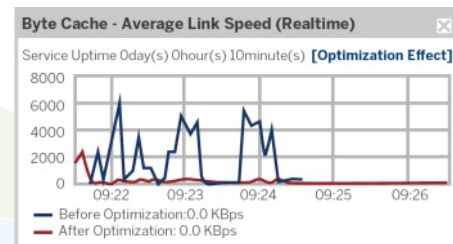
Smooth Performance under Harsh Network Environments
Under harsh network environments such as cross-border and cross-operator with high packet loss rate or high latency, the access speed would be significantly lower than one had expected.

SANGFOR SSL VPN employs HTP (High-speed Transfer Protocol) to smooth the transfer environment and minimize the negative impact of packet loss and latency. End users are able to consistently enjoy a favorable access experience.
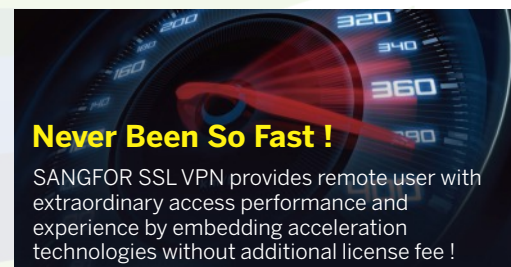
Access Optimization on Tablets and Mobile Devices
In order to solve the display and slow connection problems that tablets and mobile devices users might encounter when accessing browser-based applications, SANGFOR SSL VPN not only optimizes the page display and mobile access, but also provides various image optimization policies such as image filtering and compression to prevent the problems mentioned above.

Full Utilization of Resources
Considering real-life deployment, SANGFOR SSL VPN is also equipped with Intelligent Link Selector. The Intelligent Link Selector can automatically select the optimal link for remote access when there are multiple links.

Never Been So Fast !
SANGFOR SSL VPN provides remote user with extraordinary access performance and experience by embedding acceleration technologies without additional license fee !

Secure

Identity Authentication

Authentication
- Support up to 8 types of authentication methods.

- User name/password, LDAP, RADIUS, CA (Certification Authority).

- Certificate/USB key based authentication, Dynamic token, Hardware ID, SMS.

Host Checker
Endpoint detection and scanning of operating system, registry files, personal firewall, anti-virus files, user-customized security rules and other security policies prior to user login as well as during SSL VPN session.

Account Binding
Binds SSL VPN user accounts to authorized applications accounts for account compliance and management.

Transmission Security

Tunnel Encryption
SSL session encryption.

Dedicated SSL VPN Tunnel
Provides the flexibility of disconnecting all other Internet connections but SSL VPN session to prevent intrusions and attacks from Internet.

Man-in-the-middle Attack Detection
Detects and alerts if the endpoint is suffering from Man-in-the-middle" Attack before it is connected to the Intranet.

Simple

Cache Cleanup
Wipes off any cached data when the SSL VPN session terminates, which avoids data leakage if any remote users are accessing SSL VPN with a public endpoint.

Resources Authorization Policy

"User-Role-Resource" Assignment
Accurately and meticulously assigns resources to specifically defined users or roles, which avoids unauthorized usage of published applications.

SANGFOR SSL VPN has built-in all-round security protection polices including identity authentication, endpoint security, transmitting security and resources authorization polices to achieve a secure remote connection.

SANGFOR SSL VPN simplifies the account/authentication by allowing administrators to do seamless combination with the LDAP/RADIUS servers and supporting SSO (single-sign-on) with published applications.
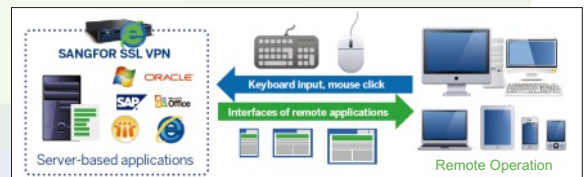
Application Virtualization Delivers Applications as On-demand Service
With new diversity of endpoints and business applications, IT managers have always been looking for a better remote access solution. This way business applications can be securely delivered to remote workforces as an on-demand service via a browser, with no limitation to remote workspaces, application types or available endpoints. SANGFOR SSL VPN Remote Application is the solution.

SANGFOR Remote Application® for Application Virtualization
- Interfaces of published applications are pushed to endpoints screens as virtual access windows, so end users are able to remotely access the applications through a browser.
- Operation and control on applications occur in the server end, no business data will be stored locally.

With SANGFOR Remote Application, business applications are virtualized, centralized and managed in the datacenter and instantly delivered as a service to those users in need. Since everything occurs within the virtual application servers, users are virtually operating in the enterprise network, which prevents any possibility of data leakage.

Smooth Access from Tablets and Smart Phones
As business applications are delivered to remote workforce as on-demand service, remote workforces can now access any published applications freely from any endpoints with a browser including mobile devices, no matter the applications are based on Windows or in the form of B/S and C/S.

Flexible Deployment
Various deployment features are offered for consolidating it into the existing IT infrastructure with typical functions such as the asymmetrical cluster and cloud cluster. Asymmetrical cluster supports robust clustering of different hardware models for scalability. Cloud cluster assigns SSL VPN requests to the fastest and most healthy appliance when SSL VPNs are deployed in multiple data centers that are located in different places.

EasyConnect Remote Access and Mobile Office for Enterprises

With Sangfor EasyConnect APP, you are able to access any business applications (Lotus notes, Exchange, OA, SAP, ERP, CRM, etc.) remotely from your smartphones and tablets!

Remote and mobile connectivity has always been of value to enterprises. With the increasing popularity of smartphones and tablets, there is an ever increasing demand for a convenient and secure approach for remote access to corporate data to perform business activities. However, as the enterprises are expanding the network infrastructure to the remote workforce, IT managers can find it extremely difficult to provide full application availability for tablets and smartphones due to resource compatibility, OS support and security concerns.
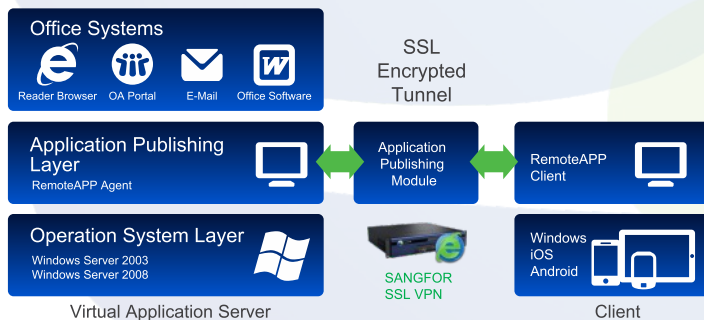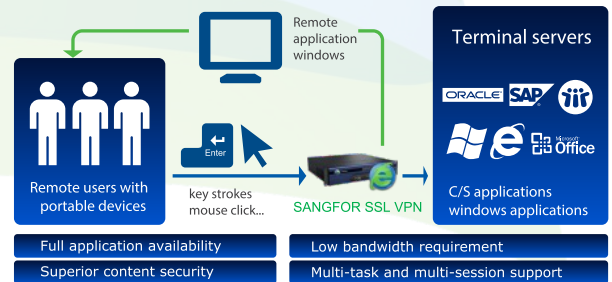
Sangfor EasyConnect

Sangfor EasyConnect, is the tailor-made APP for remote users to access business applications with mobile devices anytime and anywhere, as long as there is a network connection. Remote users are now able to work anywhere !

How does it work ?

EasyConnect is the perfect mobile office solution for business organizations, especially for those that require superior connectivity for remote branches and business travelers. The APP leverage Sangfor's unique remote application technology to simplify mobile and remote access.

To work properly, remote application service needs the following components:

Remote application windows

Terminal servers

ORACLE SAP

Remote users with portable devices — key strokes mouse click... — **SANGFOR SSL VPN** — C/S applications windows applications

| Full application availability | Low bandwidth requirement |
| Superior content security | Multi-task and multi-session support |

Office Systems
Reader Browser | OA Portal | E-Mail | Office Software

SSL Encrypted Tunnel

Application Publishing Layer
RemoteAPP Agent

Application Publishing Module

RemoteAPP Client

Operation System Layer
Windows Server 2003
Windows Server 2008

SANGFOR SSL VPN

Windows iOS Android

Virtual Application Server

Client

With the remote application enabled, published application interfaces are available on the mobile screens. Thus, users will operate on the virtualized graphical interfaces.

Furthermore, since all processes are conducted in the virtual application servers, by all means users are virtually operating within the corporate network only, avoiding any possibility of information leakage.

Remote Application Module
The core of remote application service that is embedded in SSL VPN device, in charge of identity authentication, obtaining resource information from remote servers, data processing and so on.

RemoteApp Agent
One ActiveX control that should be installed on remote application server and plays the role of providing remote application service and monitoring server status. By default, auto-start is enabled.

Application Client Program
Application client should be installed on the remote application server before publishing the application (such as MS Office, WordPad).

RemoteApp Client
A SSL VPN client that should be installed on client end and provides service of connecting to remote server.

Benefits

Workforce Mobility Drives Business Productivity and Continuity
Business travelers are now able to access the business application systems, to work effectively without limitation of location, time or available endpoints, boosting mobile workforce productivity while guarding the business continuity.

Full Application Availability to Smart Devices

Secure Mobile Office without Leakage Risk

Higher IT Productivity by Maximizing Value of IT Resource

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SANGFOR SSL VPN

Rapid, Secure, Simple

SANGFOR SSL VPN solution can be a convenient and effective way of landing a large number of security mechanisms and end-user groups in achieving safe and efficient remote access to enterprise applications, ensuring application system availability for remote workforce while preventing business data exposed to direct risks of internet attacks.

Product Family

Model	M5100-S-I	M5400-S-I	M5600-S-I
Profile	1U	1U	2U
RAM	1G	2G	4G
HD Capacity	500G	500G	500G
Concurrent Users	300	1200	3800

Network Interfaces

Model	M5100-S-I	M5400-S-I	M5600-S-I
10/ 100/ 1000 Base -T (WAN)	2	4	4
10/ 100/ 1000 Base -T (LAN)	1	1	1
10/ 100/ 1000 Base -T (DMZ)	1	1	1
SFP	N/ A	N/ A	4

Power and Physical Specifications

Model	M5100-S-I	M5400-S-I	M5600-S-I
Dual Power Supplies	N/ A	N/ A	Y
Power [Watt] (Typical)	40W	180W	212W
Temperature	-10~ 50°C	-10~ 50°C	-10~ 50°C
Relative Humidity	5% ~95% non-condensing	5% ~95% non-condensing	5% ~95% non-condensing
System Dimensions (W$_x$L$_x$H$_x$mm^3)	430x300x 44.5	430x430x 44.5	440x500x 89
System Weight	4.0 Kg	6.65 Kg	15.3 Kg

Compliance and Certifications

Model	M5100-S-I	M5400-S-I	M5600-S-I
Compliance	CE, FCC	CE, FCC	CE, FCC

All performance values are "up to" and vary depending on the system configuration.

SANGFOR SSL VPN : Product Features

User Authentication

Authentication	Support authentication with combination of AD, local password, LDAP/RADIUS, Certificate/USB key, dynamic token, hardware ID and SMS.
Import of User Accounts	- Import user accounts information using CSV file, LDAP Server. - Synchronize user with LDAP, Database and H3C CAMS Server.
Import of SSL Accounts	Support import of user accounts via CSV file.
CA Authentication	Allow import of local/external CA authenticated certificate.
Account Attribution Options	- Private account for single user. - Public account that allow access for multiple users.
Account Decurity Enhancement Policies	On-screen keyboard, CAPTCHA, password security options, etc.

Security Protection

Host Checker	Endpoint detection and scanning of operating system, registry files, personal firewall, anti-virus files, user-customized security rules and other security policies prior to user login, and during the SSL VPN session.
Man-in-the-Middle Attack Detection	Detects if the endpoint is suffering from a Man-in-the-middle attack before it is connected to the internal network and send out alert if any attack is detected.
Dedicated SSL VPN Tunnel	Possibility to disconnect other internet connections when the SSL VPN tunnel is created.
Virtual Secure Portal	Support for creating up to 253 independent secure portals, by which different user groups are able to enjoy different SSL VPN access addresses, authentication methods, application resource, administrators, etc.
Resource Path Hiding	Support for hiding, masquerading of SSL VPN resource path to protect resource security.
Cache Cleanup	Secure and safe deletion of sensitive data after session termination.
Account Binding	Bind user's application account and his/her SSL VPN account together for unified authorization and simplified account administration.
SMS Password Reset	Sangfor SSL VPN supports password retrieval via SMS

Rapidity and Access Performance

Byte Cache	Cache data at byte level to ensure the SSL VPN data traffic is de-duplicated, greatly reduces the demanded bandwidth of remote access.
Streaming Compression	Conduct LZO, GZIP/ZLIB compression to TCP and Web applications to decrease the data transmission volume.
Web Cache	Especially optimize accesses to web resource by adopting web cache.
High-speed Transfer Protocol (HTP)	Streamline data packets under high packet loss and network latency network environment such as wireless and cross-border.
Webpage Access Optimization	Dynamic reduction of web pages and images sizes displayed on mobile devices resulting in faster performance and better user experience.
Intelligent Link Selection	Automatically choose the healthy and quickest link for remote access when a network has multiple operators lines.

Application Virtualization

Remote application (application virtualization)	Delivers the virtual graphical interface of applications to remote users so that users can operate on the applications simply via a browser, while all the calculations/operations take place in server end.
Remote application features	- Enable BYOD: Smart phone and tablet users can access all kinds of applications freely. PC users do not need to pre-install application clients before accessing C/S based applications. *BYOD : Bring Your Own Device
Remote application features	- Options to enable/disable network drivers, clipboard, printers of endpoints.
Remote application features	- Support virtual printer mapping. - Support local resource invocation. - Various operation optimization policies to mobile devices including local input methods mapping, virtual mouse, magnifier, scrolling tool, tab card, etc. - Support access private resources and public resource on storage servers. - Built-in load balancer for remote application servers on basis of number of sessions , CPU, memory , I / O, integrated performance, etc. Provides secure virtual desktop workspace where all data and I/O traffic are encrypted, monitored and controlled. Under secure desktop environment, applications, data and peripherals activities are restricted according to security policies. - Controlled activites include USB key, printer, file save, file copy, file share, etc.

Endpoint Usability

SSL VPN System Tray	Allow personal SSL VPN setups and activities history check through the system tray.
Single-Sign-On	Allow user to access the SSL VPN resource without entering in the username(s)/password(s) when the user get authenticated by SSL VPN.

Appliance management

Cross Platform Support	- Windows, Linux, Mac OS, iOS, and Android OS. - IE, Opera, Firefox, Safari, Google Chrome and other browsers that support https.
Resource Compatibility	Web app, TCP app, L3VPN, Full support to all kinds of B/S, C/S applications.
Sign-in Page Customization	Fully customizable sign-in page.
Bandwidth Control	- Support for setting TCP session limitation based on user - Support for setting inbound and outbound bandwidth limitation based on user.
Logging & Reporting	- Display real-time status including CPU, link traffic, network throughput, concurrent sessions, byte cache status, etc. connected SSL VPN users. - Online user information: access time, authentication methods, concurrent sessions, traffic flow, IP address, etc. - Alarm, error, debugging, system management logs, back up logs can dump and save externally. - Syslog support.

Stability

Web Browser & OS Compatibility	- EasyConnect client supports Windows browsers and mobile OS such as Android and iOS. - Comprehensive web browsers support in primary OS.
Link Stability	Enable tunnel auto switch when used with multiple Internet link deployments.
Asymmetrical Cluster	Supports robust clustering of different hardware models with the capability of up to 20 nodes.
Cluster Cloud	Enabling of multiple Sangfor SSL VPN devices clustered in cloud or multi-datacenter environment.
HA Deployment	Support HA and the session synchronization.
Bypass	Hardware bypass.

Please do not hesitate to contact us by email or by phone if you need more information about our SSL VPN features.

SANGFOR

SANGFOR TECHNOLOGIES

SANGFOR is the leading vendor of Application Security, Optimization and Internet Access Management in Asia. Founded in 2000, SANGFOR set a clear goal to build high performance, reliable and secure network devices that increase the business growth of our clients and at the same time decrease their Total Cost of Ownership (TCO).

SANGFOR currently has 55 representative offices located in major cities of mainland China, Hong Kong, Singapore, Malaysia, Indonesia, Thailand, United Kingdom and United States of America, with over 2000 employees, which 40% of them are dedicated to R&D.

In 2014, SANGFOR has got a record-breaking income and has continuously invested 20% of the revenue into R&D each year. So far, SANGFOR has provided solutions to over 28,000 businesses partners in various industries, among which lists a number of Fortune 500 companies, as well as hundreds of local government departments and famous education institutions.

Awards & Achievements

- "Technology Fast 500 Asia Pacific Region" Award for 8 consecutive years from 2005 to 2012 by Deloitte.
- "Best Companies to Work for in China" Award from 2009 to 2011 by the Fortune Magazine.
- "Best Practice Award in Asia-Pacific Region" in 2010 by Frost & Sullivan.
- "Management Action Award" in 2012 by Harvard Business Review.
- "Business Security Contribution" Award in 2010 by Communication World.
- Sangfor SSL VPN no.1 in Network Security market in Mainland China, Hong Kong & Taiwan according to Frost & Sullivan.
- No.1 for Secure Content Management Hardware and VPN Hardware segment in China according to IDC.
- Sangfor IAM listed for 5 consecutive years in the Gartner Magic Quadrant for Secure Web Gateways (2011-2015).
- Sangfor WANO listed for 3 consecutive years in the Gartner Magic Quadrant for WAN Optimization (2013-2015).
- Sangfor NGFW listed in the Enterprise Network Firewalls Magic Quadrant by Gartner (2015).
- Reviewed by NSS Labs with a "Recommended" rating in 2014 for SANGFOR NGFW (WAF test).

Vision

Become the Global Leading Vendor of Advanced Network Solutions.

Mission

Provide Network Innovation, Focus on Network Security, Optimization and Virtualization.

Values

- Continuous Innovation
- Collective Commitment
- Customer & Result Oriented
- Caring for Employees

Our Notable Clients

SANGFOR

www.sangfor.com

SANGFOR HEADQUARTERS
Block A1, Nanshan iPark, No.1001 Xueyuan Road,
Nanshan District, Shenzhen, Guangdong Province,
P. R. China

SANGFOR HONG KONG
Unit 1109, 11/F, Tower A, Mandarin Plaza, 14 Science
Museum Road, Tsim Sha Tsui East, Kowloon, Hong Kong
Tel: (+852) 3427 9160
Fax: (+852) 3427 9910

SANGFOR SINGAPORE
8 Burn Road # 04-09 , Trivex ,
Singapore (369977)
Tel: (+65) 6276 9133

SANGFOR INDONESIA
World Trade Centre, WTC 5, 6th Floor,
Jl.Jend .Sudirman Kav.29
Jakarta 12920,Indonesia.
Tel: (+62) 21 2933 2643
Fax: (+62) 21 2933 2643

SANGFOR MALAYSIA
No. 47-10 , Boulevard Mid Valley City, Lingkaran Syed Putra,
Kuala Lumpur, Malaysia
Tel: (+60) 3 2201 0192
Fax: (+60) 3 2282 1206

SANGFOR THAILAND
 29 Vanissa Building 4th Floor, Unit 4G, Soi Chidlom,
Ploenchit Road, Lumpini, Patumwan, Bangkok, Thailand
Tel: (+66) 2 254 5884
Fax: (+66) 2 254 5884

SANGFOR USA
2901 Tasman Drive, Suite 107, Santa Clara, California, USA
Tel: (+1) 408 520 7898
Fax: (+1) 408 520 7898

SANGFOR EMEA
Unit 1, The Antler Complex, 1 Bruntcliffe Way, Morley,
Leeds LS27 0JG, United Kingdom
Tel: (+44) 0845 533 2371
Fax: (+44) 0845 533 2059

AVAILABLE SOLUTIONS
- IAM : Internet Access Management
- WANO : LAN Speed on your WAN
- NGFW : Smart Firewall for Smart Protection
- WLAN : Fast, Secure & Value Added
- SSL VPN: Rapid, Secure & Simple

Sales : sales@sangfor.com | Marketing : marketing@sangfor.com
www.sangfor.com
Global Service Center : +60 12711 7129 (or 7511)