A one-stop VDI solution to evolve to digital workspace the effortless way
End-to-end security mechanisms provide maximum data security
Integrated architecture ensures simple operations and maintenance
Seamless and authentic user experience, just like a PC or laptop

Seamless Experience, Secure, and Efficient!
What is Sangfor aDesk VDI

Sangfor aDesk is a virtual desktop infrastructure (VDI) solution that uses virtualization technology to migrate the operating systems, applications, and data from traditional PCs to the data center for centralized hosting and management. An all-in-one aDesk VDI appliance (server, hypervisor, thin client, controller, endpoint protection) is deployed in the data center and uses hyper-converged technology to integrate the server's CPU, memory, and storage resources into virtual machines. The virtual desktop is then transmitted to the user's access device in the form of an image, providing users with the same desktop environment as PCs.

Why Switch from Traditional PCs to VDI

Decentralized Management & Heavy O&M Workload
The installation, upgrading, and patching of operating systems and software for traditional PCs must be completed one by one. Moreover, traditional PCs have a high failure rate, requiring on-site maintenance, which places a heavy burden on IT operations and maintenance personnel and leads to low efficiency.

Does Not Support Remote Work
Desktop PCs can only be used in fixed locations and laptops come with a data leakage risk. As a result, traditional PCs are unable to meet both the portability and security requirements needed for remote work.

Data Loss and Leakage Risks
The data is stored locally on traditional PCs without backup. Once a disk is damaged or deleted by mistake, the data will be permanently lost. In addition, there is a high risk of data leakage due to difficulties in managing and controlling peripherals, applications, and the network.

High Operating Costs
According to Gartner, the operating costs of a PC account for 80% of its total cost, including management, energy consumption, maintenance, and more. The life cycle of traditional PC hardware is about 5 years. After reaching the end of the life cycle, it needs to be replaced.
Benefits of VDI

Since the data of virtual desktops is unified and stored in back-end servers, VDI provides the following major benefits over traditional PCs.

1. Zero data is stored on endpoints, providing a higher level of data security.

2. The virtual desktops run uniformly at the back end and can be maintained through a unified interface, thus improving management and maintenance efficiency.

3. As long as there is a network connection, users can use various devices to log in to a virtual desktop for office work anytime and anywhere.

Sangfor VDI Architecture
Sangfor aDesk - VDI (Virtual Desktop Infrastructure) Solution

What Sangfor VDI Brings to the Table

Flexible

• Supports different types of working environments, be it remote or centralized
• Access from a thin client, PC, tablet, or mobile phone
• Deployed on demand and supports elastic expansion

Smooth

• Patented HEDC and SRAP transmission protocols
• Outstanding peripheral device compatibility
• Powerful vGPU solution developed with Nvidia

Secure

• Better protection for Malware, Ransomware and APT, integrate with Sangfor Endpoint Secure
• Provides sensitive data leakage protection
• Creates multiple VM copies to protect against disk

Simple

• A one-stop solution with simple and seamless architecture
• User self-service, easy to use and deploy
• Centralized desktop, application, and virtualization management

Key Values

End-to-end security mechanisms ensure data security and compliance
Reduce IT human resources, hardware, software licenses, and electricity costs
Improve operations, maintenance, and business efficiency
Safely remote work or mobile work
End-to-End Security Design

**Security for Behavior**
- Screen Watermark
- Anti-Screenshot
- Export Document Audit
- Clipboard Control
- USB Whitelist
- Application Whitelist
- Screen Recording (3rd-party solution)

**Access Security**
- Endpoint Environment Check
- Multi-Factor Authentication
- Anti-Brute Force Attack
- Single Sign-On (SSO)

**Network Security**
- HTTPS Transmission
- Anti-Man-in-the-Middle Attack
- Anti-SWEET32 Birthday Attack
- Distributed Firewall

**Built-in Security**
- Multiple Backup Copies
- Built-In WAF
- Disk Signature
- BIOS Protection

**Integrated Security**
- Sangfor Endpoint Secure

Data is stored centrally in back-end servers in multiple copies

Advanced Transmission Protocols Guarantees a Seamless User Experience

Virtual desktops need to be delivered to front-end devices through the network. Therefore, the protocol used to deliver the desktop image is especially important. To achieve efficient and stable delivery of virtual desktops, Sangfor developed the SRAP protocol specifically for virtual desktops and remote applications. Sangfor's SRAP protocol adopts multiple optimization technologies, such as efficient data compression, intelligent data caching, and dynamic image optimization. Transmission efficiency is 6 times higher than the RDP protocol, guaranteeing a seamless virtual desktop experience for users.
For desktop users with WAN access, Sangfor has developed the HEDC (High-Efficiency Desktop Coding) Protocol. Through fine-grained transmission channels, HEDC adapts to network conditions based on the user’s experience. Even when the network is unstable or the bandwidth is low, users can still enjoy a smooth and stable desktop experience. At the same time, the protocol has built-in SSL encryption technology, which improves the security of desktop access and protects critical data.
Flexible Solutions Boost 2D/3D Design

- vGPU Solution
- Pass-Through Solution
- Unified Physical 3D Workspace Management

Sangfor aDesk - VDI (Virtual Desktop Infrastructure) Solution
## Scenarios

### SANGFOR aDESK
**For the Daily or Secure Office**

- Rapid deployment and efficient desktop operation
- Endpoint data protection
- Reduce the costs of IT human resources, hardware replacements, and electricity

### SANGFOR aDESK
**For Mobile Work or Remote Work from Anywhere**

- Access virtual desktops using PC, tablet, or mobile phone
- Smooth WAN user experience (Latency < 200ms, Packet loss rate < 5%, Bandwidth ≥ 100 Kb)
- Multi-factor authentication for added security
- Data leakage protection (DLP)

### SANGFOR aDESK
**For Call Centers/Service Halls**

- Perfect compatibility with peripheral devices
- Client information Protection
- Multiple users can work from one seat with their own VMs
- Low hardware failure rate

### SANGFOR aDESK
**For Student Computer Labs**

- Unified computer lab environment
- Reduce the operations and maintenance workload for PCs
- Learn from home with specified resources
- Professional software license savings
**SANGFOR aDESK**

**For Production Lines**

- Reduce business downtime and improve production efficiency
- Production environment management
- Data protection (Data leakage, Ransomware, Disk error)
- Up to 3 times the life cycle of traditional PCs

**SANGFOR aDESK**

**For 2D/3D Design**

- vGPU solution/GPU pass-through solution collaborated with Nvidia
- Design software license savings
- Design data protection
- Unified management of 3D workspaces

**Real-Life Case Study: Sangfor Group**

[Diagram of Sangfor Group's infrastructure setup]

- Sangfor Users 10,000+
- Partner Users 20,000+
- 7 R&D Centers
- 70+ Chinese Branches
- 10+ Global Branches
- 60+ HCI Clusters
- 3500+ Virtual Servers
- 50+ VDI Clusters
- 6500+ Thin Clients

- FC Leased Line
- SD-WAN/VPN
- MPLS + VPN
Challenges

- Staff numbers are exploding; annual increase of 1,000+ staff in recent years.
- High rate of hardware damage caused low work efficiency and high maintenance costs.
- High IT staffing costs.
- Users need to work from home or outside, especially during the pandemic.
- R&D code data leakage risks.
- User security risks.

VDI Solutions & Benefits

- Hardware resource pooling decreases hardware wastage. Supports linear expansion, hardware usage rate increased 10X.
- Set up a virtual desktop for new employees or R&D test environment in 1 minute.
- Self-application for space and self-maintenance of personal information decreased the number of IT issues.
- Desktop IT manager: Desktop user = 1: 1800.
- Network isolation and desktop isolation for R&D and office usage.
- USB control, watermark, anti-screenshot, and file export audit prevent R&D data leakage.
- Multiple copies to prevent data loss in the event of disk failure; security events decreased by 60%.
- Saved 60% in electricity.

Successful Cases

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Successfully Delivered more than 2,200,000 Virtual Desktops

More than 200 Projects with 1,000+ aDesk Units Deployed
SANGFOR aDesk - VDI (Virtual Desktop Infrastructure) Solution

INTERNATIONAL OFFICES

SANGFOR SINGAPORE
10 Ubi Crescent, #04-26 Ubi Techpark (Lobby B), Singapore 408564
Tel: (+65) 6276-9133

SANGFOR HONG KONG (CHINA)
Unit 1612-16, 16/F, The Metropolis Tower, 10 Metropolis Drive, Hung Hom, Kowloon, Hong Kong
Tel: (+852) 3845-5410

SANGFOR INDONESIA
MD Place 3rd Floor, Jl Setiabudi No 7, Jakarta Selatan 12910, Indonesia
Tel: (+62) 21-2966-9283

SANGFOR MALAYSIA
No 45-10 The Boulevard Offices, Mid Valley City, Lingkaran Syed Putra, 59200 Kuala Lumpur, Malaysia
Tel: (+60) 3-2702-3644

SANGFOR THAILAND
141 Major Tower Thonglor (Thonglor10) Floor 11 Sukhumvit Road, Klongtung Nuea Wattana BKK, Thailand 10110
Tel: (+66) 02-002-0118

SANGFOR PHILIPPINES
7A, OPL Building, 100 Don Carlos Palanca, Legazpi, Makati, 122 Metro, Manila, Philippines.
Tel: (+63) 0916-267-7222

SANGFOR VIETNAM
4th Floor, M Building, Street C, Phu My Hung, Tan Phu Ward, District 7, HCMC, Vietnam
Tel: (+84) 287-1005018

SANGFOR SOUTH KOREA
Floor 17, Room 1703, Yuwon bldg. 116, Seosomin-ro, Jung-gu, Seoul, Republic of Korea
Tel: (+82) 2-6261-0999

SANGFOR EMEA
D-81 (D-Wing), Dubai Silicon Oasis HQ Building, Dubai, UAE.
Tel: (+971) 52855-2520

SANGFOR PAKISTAN
D44, Navy Housing Scheme, ZamZamma, Karachi, Pakistan
Tel: (+92) 333-3365967

SANGFOR ITALY
Floor 8, Via Marsala, 36B, 2013 Gallarate VA, Italy
Tel: (+39) 0331-648773

SANGFOR TURKEY
Turgut Ozal Street, Zenta Istanbul, First Floor, Office. 20 Çekmeköy / Istanbul, Postal Code: 34788
Tel: (+90) 546-1615678

AVAILABLE SOLUTIONS

IAG - Internet Access Gateway
Secure User Internet Access Behaviour

NGAF - Next Generation Firewall
Smarter AI-Powered Perimeter Defence

Endpoint Secure - Endpoint Security
The Future of Endpoint Security

Cyber Command - Network Detection and Response
Smart Efficient Detection and Response

TIARA - Threat Identification, Analysis and Risk Assessment
Smart Threat Analysis and Assessment

IR - Incident Response
Sangfor Incident Response – One Call Away

Cyber Guardian - Managed Threat Detection & Response Service
Faster Response Through Human/AI Collaboration

HCl - Hyper-Converged Infrastructure
Fully Converge Your Data Center

MCS - Managed Cloud Services
Your Exclusive Digital Infrastructure

VDI - aDesk Virtual Desktop Infrastructure
Seamless Experience, Secure and Efficient

Access - Secure Access Service Edge
Simple Security for Branches & Remote Users

EDS - Enterprise Distributed Storage
The Only Secured Data Storage You Need

SD-WAN
Boost Your Branch with Sangfor

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https://www.youtube.com/user/SangforTechnologies

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

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