

# SANGFOR aDesk

## VDI (Virtual Desktop Infrastructure) Solution



- ✓ *A superior Desktop cloud solution for any organization*
- ✓ *Developed with Windows 10 in mind*
- ✓ *Brings you all levels of GPU power with NVIDIA*
- ✓ *Comprehensive security system*



**SANGFOR**





**SANGFOR aDesk**

# VDI (Virtual Desktop Infrastructure) Solution

Sangfor aDesk VDI – A Virtual Desktop Infrastructure Solution that is the latest virtual desktop cloud solution based on hyper-converged infrastructure. Through deeply integrated server virtualization, desktop virtualization and storage virtualization, it only takes an aDesk thin client appliance and a cloud terminal to deliver rapid deployment of cloud platform.

This desktop virtualization solution assures an outstanding user experience, and software/hardware/peripheral comparable to PC. This solution also proves to be more secure and efficient.

## A Superior Desktop Cloud Solution for Any Organization

Sangfor aDesk VDI promises a premium-quality solution with distinguished server virtualization and storage virtualization that is beneficial for a wide range of industries. Utilise Sangfor aDesk VDI as a remarkable solution for your educational facility, enterprise, government or other industry.

Revel in an end-to-end platform with low energy consumption, reduced TCO and an overall advanced infrastructure with greater security and stability.

## Developed with Windows 10 in Mind

With 400 million active Windows 10 users globally, Sangfor aDesk was developed with a focus on making the user experience more reliable, flexible and productive. Windows 10 is often employed in a mixed environment and supports most devices, enhancing flexibility in the workplace. Sangfor aDesk is a desktop cloud solution designed to take Windows 10 to the next level of productivity by :

- ◎ Optimized for Windows 10 2D environment
- ◎ Providing ARM & Intel based thin client
- ◎ Multi-platform support (thin client, PC, iPad, iPhone and Android)
- ◎ Seamless switching and optimized user experience in 2D and 3D environment
- ◎ Expanding various GPU & vGPU solutions (for NVIDIA, M4000, K1, K2, M10, M60 GPU)
- ◎ Virtual slicing technology based on a KVM open source virtualization platform



## What Sangfor VDI Brings to the Table



### Centralized O&M

- ◎ Centralized O&M for both hardware & software
- ◎ Template clone for desktop flash deployment
- ◎ Restore desktop to initial status after restart



### Stability

- ◎ High Availability: Provide uninterrupted desktop services via HA desktop architecture



### Flexibility

- ◎ On-demand deployment of desktops
- ◎ Reducing complexity of software updates and database refresh



### Security

- ◎ Confidential documents and data are stored at back-end server
- ◎ Centralized control of peripherals

## Key Values



**Data Security**



**Central Management**



**Easy Maintenance**



## 1 Graphics Card Can be Shared by 32 Virtual GPUs

Each vGPU equals to a VM

### Applications



AUTODESK  
AUTOCAD



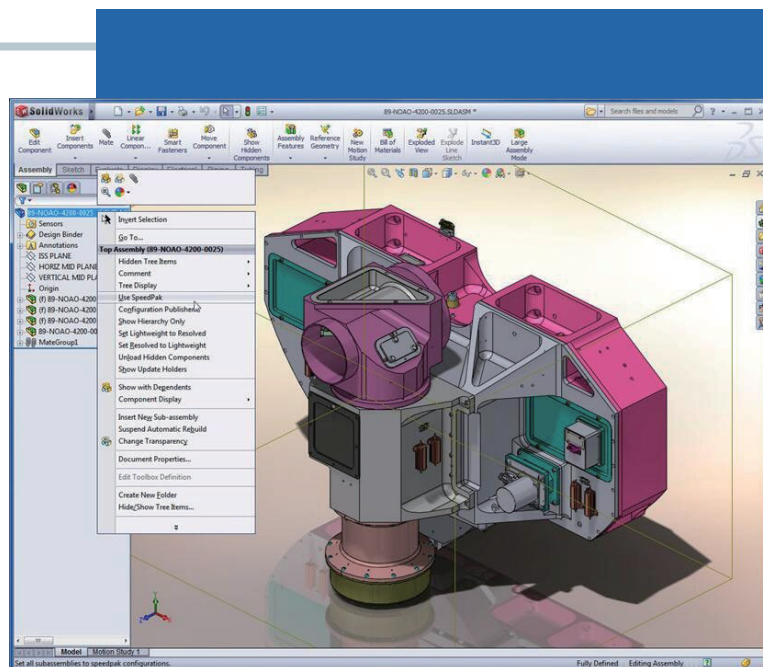
AUTODESK®  
MAYA LT™



AUTODESK®  
REVIT® MEP

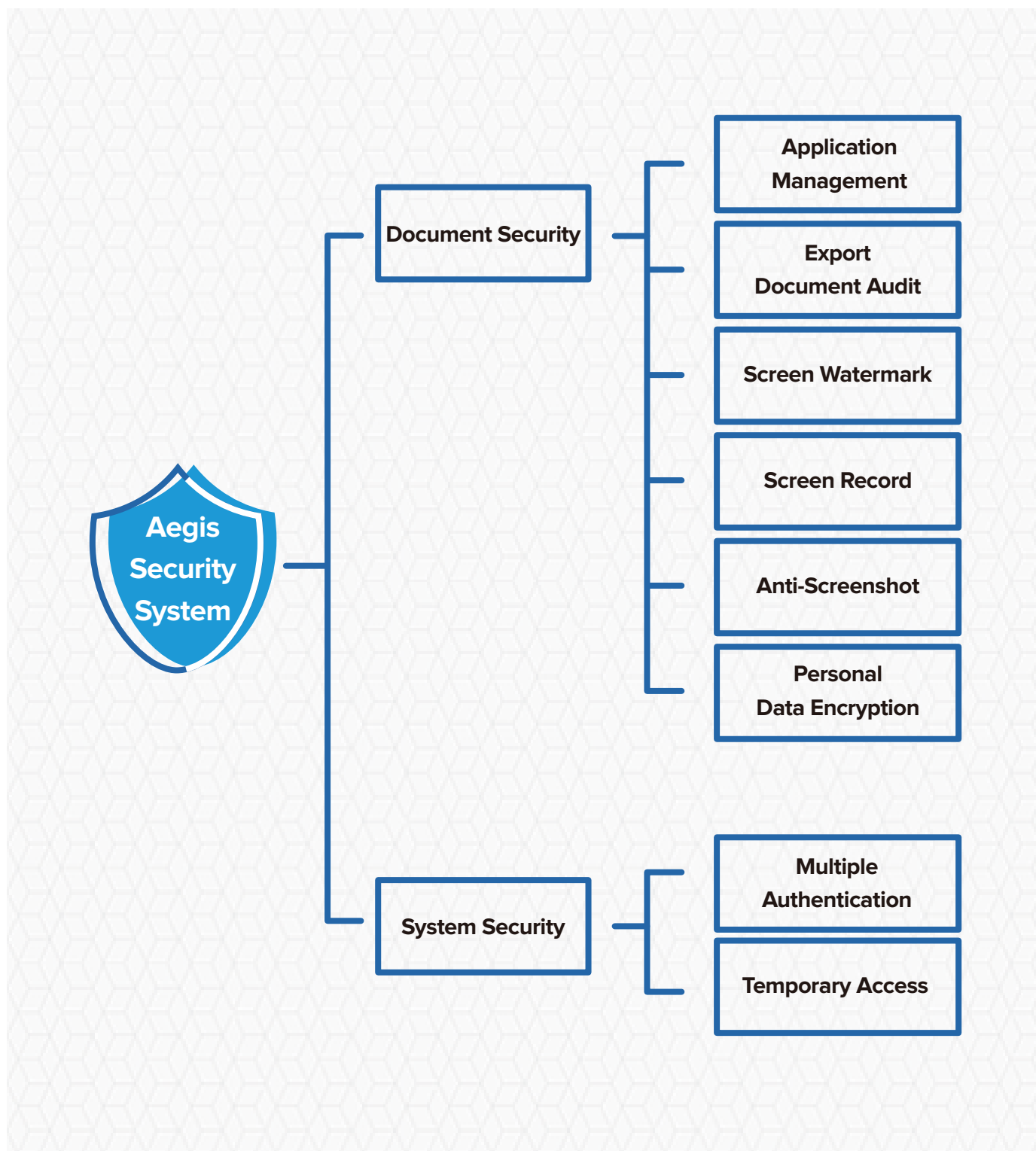


Petrel  
Shared earth—critical insight



# Security is the Core Concept of Sangfor aDesk

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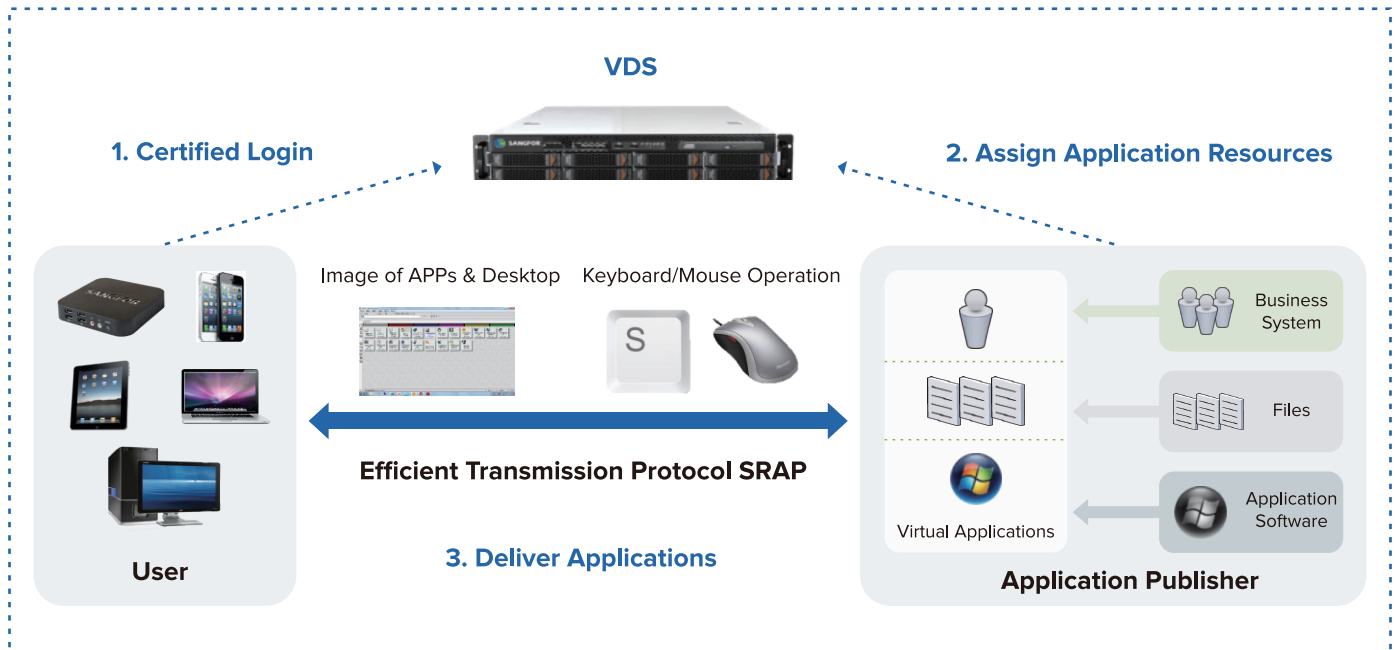




**SANGFOR aDesk**

## Seamless, Safe & Affordable Desktop & Application Virtualization

### Overview of Sangfor aDesk Structure

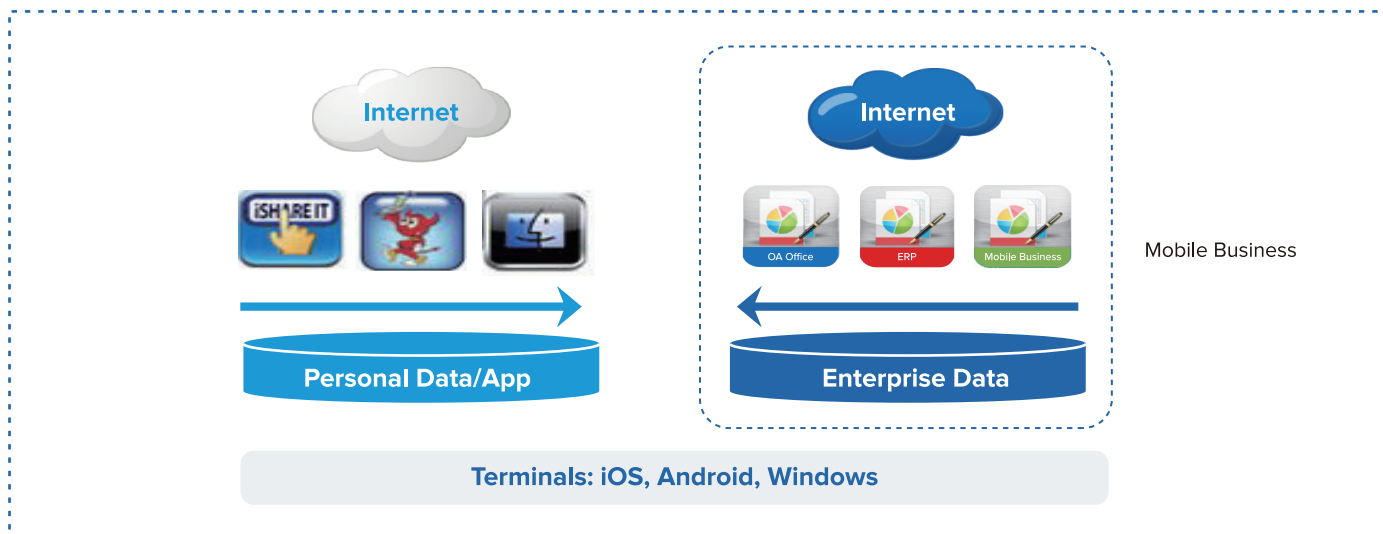


### Back-End Storage of Core Data: Simple Cross-Platform Access for Authorized Users





## Separate Business and Personal Data: Ensuring End-to-End Security



## Cost-Effective



## Main Target Scenarios



### Mobile Office

- Access Business Systems Remotely
- Convenient, Flexible & Secure Access to Company Information Systems
- Flexible 24/7 Access to Key Data



### Application Acceleration for SMB & Cross-Border Organizations

- No Need to Upgrade Broadband
- No Need to Buy Dedicated Line
- No Network Optimization Required



### Data Security & Leak Prevention

- Use Tunnel Encryption Technology to Display Business/Application
- Terminal Security Comparable to Physical Isolation



**SANGFOR aDesk**

# Virtual Desktop Infrastructure for Education

## Challenges Analysis of Traditional PC in Student PC Room



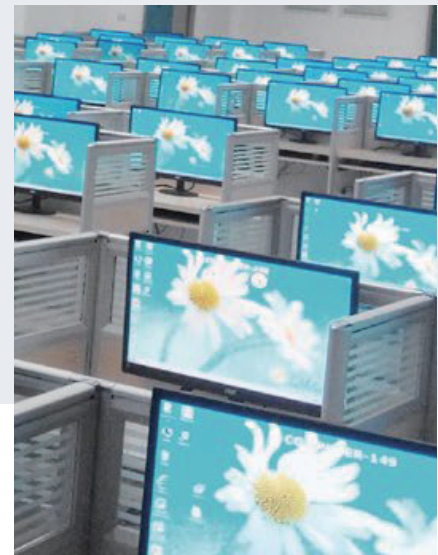
The life cycle of a classroom PC can be dramatically shortened by irresponsible students.



Lecture materials can be copied using USB stick, which easily cause data leakage.

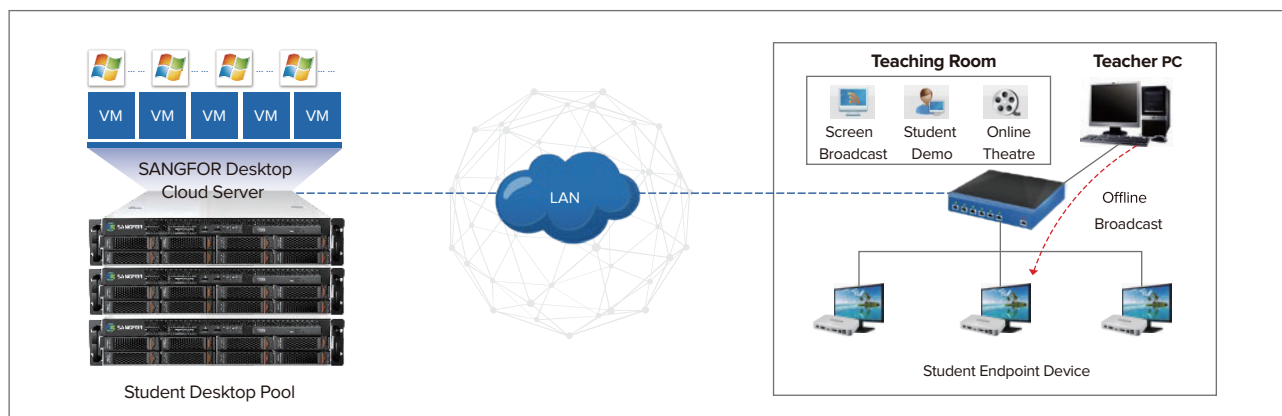


Hard to switch between teaching & examination.



## aDesk - Virtual Desktop Infrastructure for Student PC Room

Combining Sangfor Desktop Cloud solution with third-party teaching management software, an e-managable, cost-effective & energy-saving cloud classroom can then be constructed.



	<b>Template Deployment</b>	Design OS templates for teaching, experiment & exam and derive hundreds of new desktop in 10 mins.
	<b>Desktop Recovery</b>	All VDI desktop will be restored as original after restart for next user. Teachers don't need to spend lots of time in failure recovery.
	<b>Scheduled Power- On/Off</b>	Scheduled setting of power-on/ off when classes start and finish.
	<b>E-Class Integration</b>	Integrate with e-class system software. Reduce server network pressure, and effectiveness & experience of teaching can be guaranteed.
	<b>Offline Teaching</b>	Teachers use physical PC, when network or server is down, teaching screen and video still can be pushed to student desktop by physical PC. No influence on class.

## Advantages

SANGFOR aDesk solution provides a desktop cloud infrastructure with deeply converged front-end/back-end hardware & software for Student PC Room, making desktop user experience smooth, stable, secured & efficient.



### Promote Teaching

- Lecture materials can be prepared anytime.
- Easy control of students PC behavior in class



### Efficient Management

- Single sign-on and correlating turn-off.
- One-click desktop deployment & quick system update.



### Cost-Saving

- Low failure rate of desktop cloud & server, saving O&M cost.
- Scale out easily as capacity extension is required.



### Energy-Saving

- Low power consumption with desktop cloud.
- Longer product life-cycle.

## Successful Cases

### ► Overall Situation

Succesfully  
Delivered  
more than

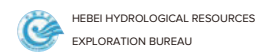
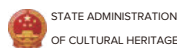
**220K**

Desktop  
Cloud Units

Market  
Performance

More than  
**100** cases

with 1000+  
aDesk Units  
Deployed







**SANGFOR aDesk**

# Virtual Desktop Infrastructure for Office

## Challenges with Traditional PC



Distributed storage of data, easy to lose data and cause catastrophic loss to enterprises



No isolation for office and Internet access, difficult to guarantee data security



It is difficult to control USB & other peripherals, easily causes data leakage



Too many software/ components installed, consuming too many resources

ROI						
	VDI		PC		Quantity	Cost Saving (Per Year)
	Description	COST	Description	COST		
Electricity (0.15USD/kwh)	8*22*12=2112 hrs 10W*2112*1000/1000 =21120KWh 500w*24*365*30/1000 =131400kWh 21120+131400=152520kwh	US\$22,878.00	350W*2112*1000/1000 =739200kwh	US\$110,880.00	1000	US\$88,002.00
Labour Fee	Maximum 2 IT engineers In Shenzhen, average IT engineer annual salary is 22k USD	US\$44,000.00	6 IT engineers In Shenzhen, average IT engineer annual salary is 150k RMB	US\$132,000.00	1000	US\$88,000.00
Depreciation Expense	Life cycle of VDI hardware is longer than PC, at least 2-3 years. Only TC and server have depreciation expense. Take 6 years as example, depreciation cost per desktop is 50USD	US\$50,000.00	PC needs to be replaced by new device in 3-5 years. Take 4 years as example, 1 PC is 4000 RMB. Depreciation cost per PC is 145USD per year	US\$145,000.00	1000	US\$95,000.00
Repair Rate	Thin client uses fanless design, the reliability of TC and server is much higher than PC. The cost of repair rate per desktop is 5.8USD	US\$5,800.00	Average repair rate of PC is 25%, take 5 years as example, the cost of repair rate per PC is 29USD	US\$29,000.00	1000	US\$23,200.00
License cost	MS license cost 100USD per year per user	US\$100,000.00	N/A	US\$0.00	1000	-US\$100,000.00
						US\$194,202.00

## What Sangfor Brings to You in Office Environment



Centralized storage of sensitive data to prevent data leakage



Support financial system or R&D environment dual network



Strick peripheral access security control, such as USB drive, printer, scanner and so on



Personal data encryption



Backup and recovery of VM to protect business security

## Successful Cases

### ► Overall Situation

Succesfully  
Delivered  
more than

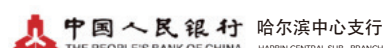
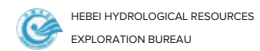
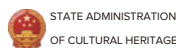
**220K**

Desktop  
Cloud Units

**Market  
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**SANGFOR aDesk**

# Virtual Desktop Infrastructure for Healthcare

## New Hospital Construction Goals



Simplify Desktop Operation & Maintenance Process



Ensure the Safety of Medical Systems



Agile & Efficient Diagnosis & Treatment



Build a Green Hospital

## Solution Advantages

### Ultimate Experience

This solution integrates and optimizes thin terminals, a complete set of VDI components, servers and storage. It is compatible with various medical applications, and provides desktop experience comparable to PC for doctors, nurses, and other functional personnel to meet the real-time response needs of hospital services.

### Ready to Use

Based on hyper-converged infrastructure, the solution utilizes technologies such as server clustering, virtual machine migration, distributed virtual storage and port aggregation to provide a mature and stable desktop cloud platform for hospitals to cope with the impact of faults and improve medical quality.

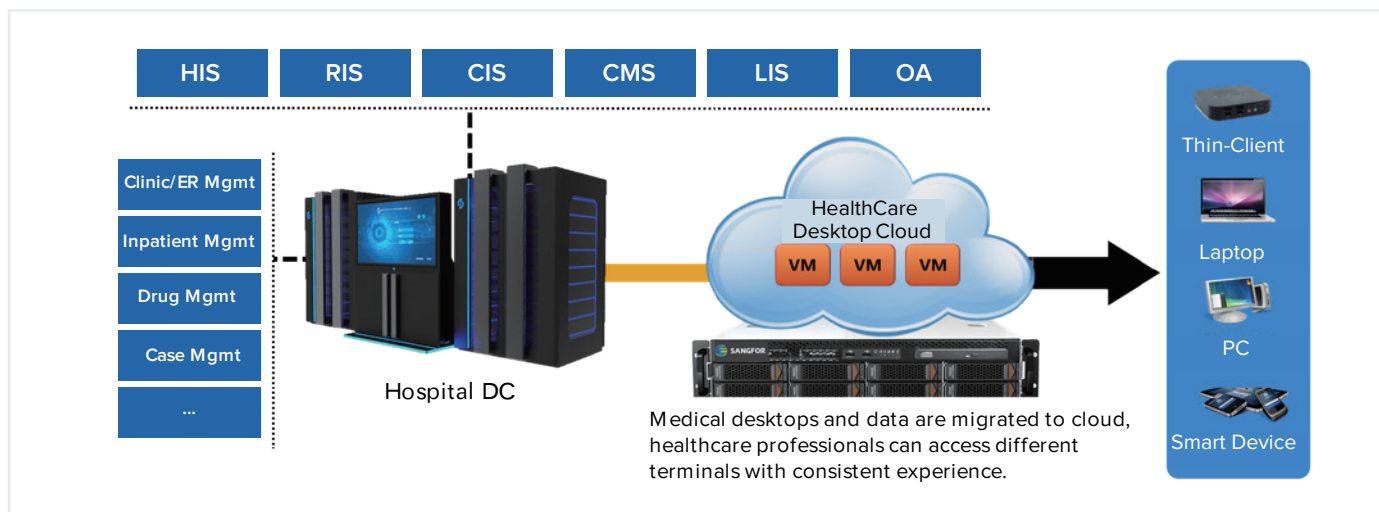
### Agile and Efficient

The solution utilizes technologies such as single sign-on and linkage shutdown to continue the PC usage habits, and medical personnel (especially old doctors) can quickly get started without training. At the same time, the use of hyper-converged deployment architecture and a single web console has improved the efficiency of medical IT.

### Secure and Controllable

The solution fully considers hospital's information security requirements, and adopts multiple security technologies like multiple authentication, terminal access, peripheral management, transmission encryption, anti-middleman-attacks, and personal disk encryption to ensure secure usage of medical system on an end-to-end level.

# Sangfor Virtual Desktop Infrastructure Solution



## Case Study

### Cancer Hospital Chinese Academy of Medical Sciences, Shenzhen Center

#### Challenge

The Cancer Hospital Chinese Academy of Medical Sciences, Shenzhen Center (Shenzhen Cancer Hospital) is a municipal-level third-class public hospital invested by the Shenzhen Municipal Government. Under the background of a new round of medical reform, Shenzhen Cancer Hospital vigorously promotes the construction of medical informationization. However, it's difficult to meet the requirements of medical information construction in



terms of data security and management agility with existing PCs. When doctors and nurses on shift need to share a PC, it is difficult to conduct access control with an effective usage strategy. Therefore, medical data security faces great risk. Medical systems are numerous and require constant development and upgrades, so system deployment and updates consume a lot of time and efforts from hospital IT administrators.

#### Sangfor Solution Values

1. Unified Operation & Maintenance. Medical desktops and related applications are hosted in data center to achieve centralized management to meet the needs for rapid deployment.
2. Mobile Office. Desktop cloud allocates independent virtual desktops for each doctor and nurse. They can log in to their desktops at any time from different locations in the hospital (office, ER and communities) without affecting each other. At the same time, this approach also allows IT staff to configure different security policies to ensure medical information security.

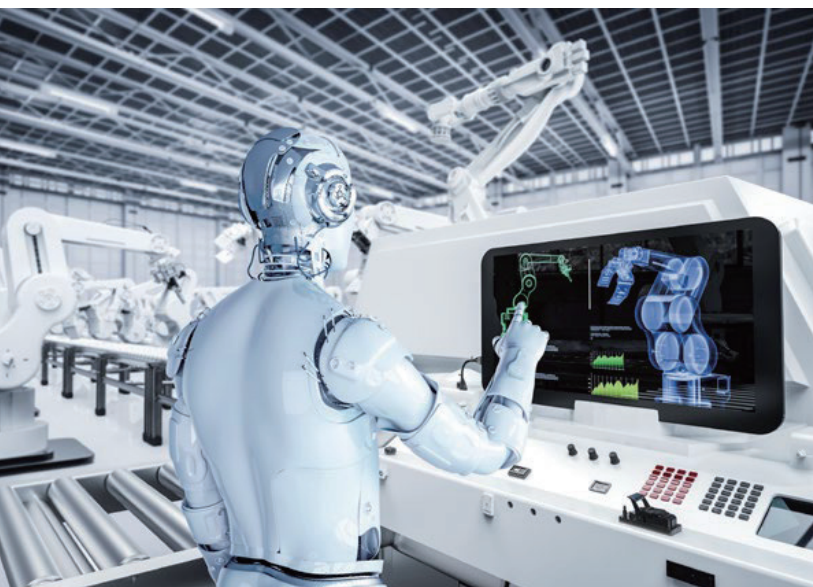


**SANGFOR aDesk**

# Virtual Desktop Infrastructure for Manufacturing

## Challenges for the Manufacturing Industry

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Design and production documents in high risk of data leakage



Non-stop running in dusty environment leads to short PC life-cycle



Difficult to maintain distributed PCs in factory

## What Sangfor Brings to You



### Security

- Centralized storage of confidential documents & data
- Centralized control of peripherals



### Flexibility

- On-demand fast deployment of desktops
- One-stop software upgrade



### Stability

- “Fanless” design suitable for production environment
- Up to 3 times life cycle of traditional PC



## Customer Success Story

### A Top-Tier Electronic Manufacturing Company

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Already deployed over 10,000 desktops to cover both production line and office scenario.

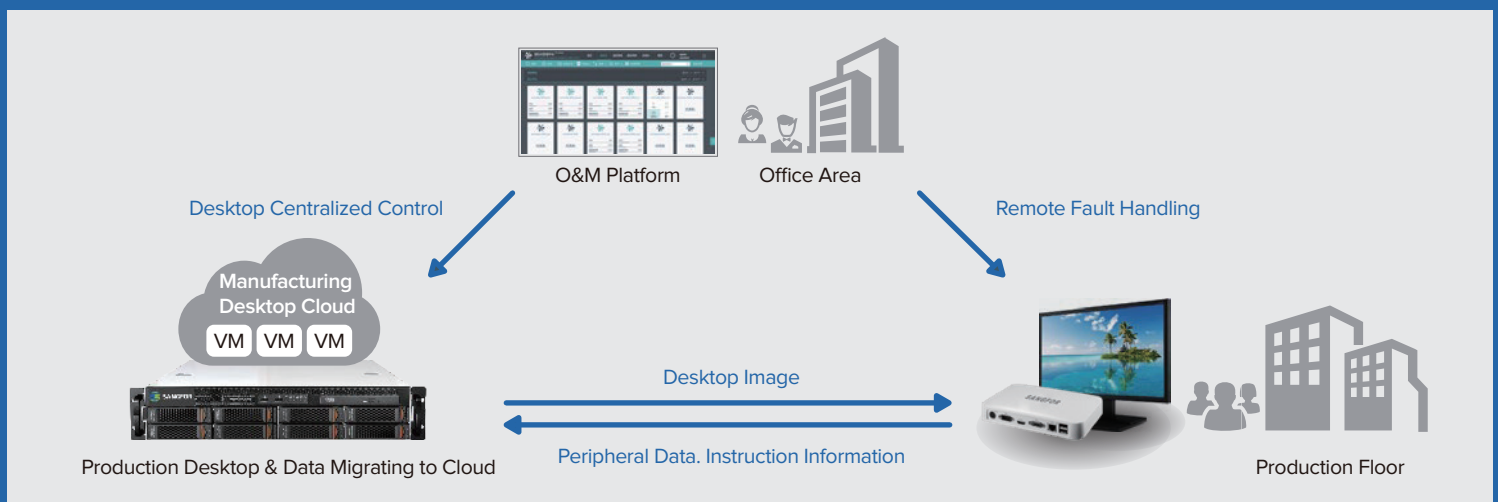
Sangfor aDesk frees F\* Group from problems of traditional PC and help clients complete their transition from manufacturing to “smart manufacturing”.

*\*For confidential reason, the customer's name is hidden.*



## Desktop Cloud Solution for Production Line

Sangfor aDesk desktop cloud is used to migrate working desktop and production data of the production line to data center, and then transfer operation interface image to aDesk cloud terminal on the production line through SRAP protocol to solve issues of production data security, desktop terminal O&M and fault handling.



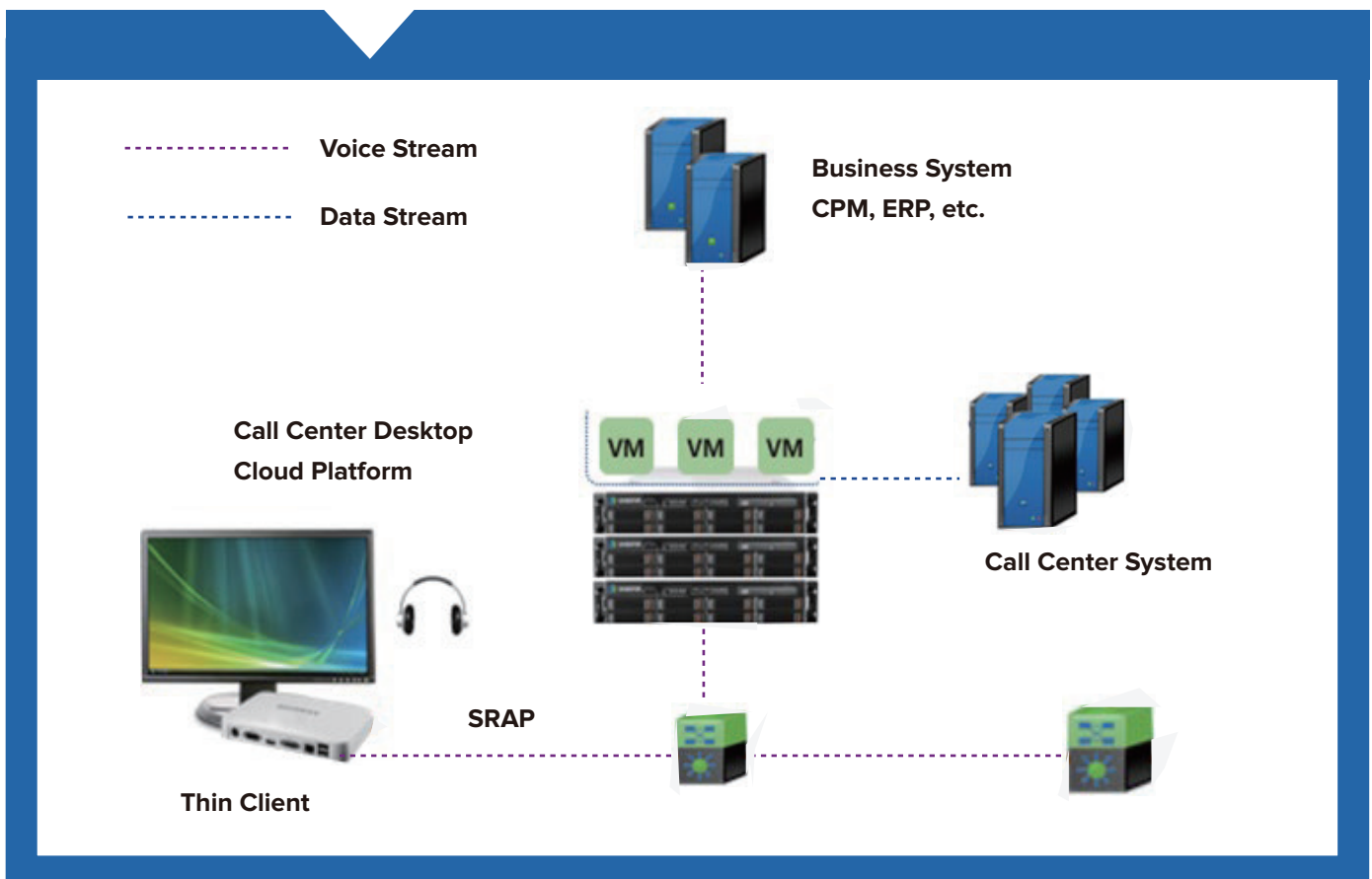


**SANGFOR aDesk**

# Virtual Desktop Infrastructure for Call Center

## Solution Background

With the development of informatization, call center has become a complete integrated information service system that is an indispensable part of modern enterprise operation and also a powerful tool for competition. In addition to being a customer service center of the enterprise, call center needs to assume functions of internal management center and profit center. These have placed a lot more higher requirements on call center. As business expands, the number of call traffic and PCs has increased, resulting in an exponential increase in management difficulty, which seriously affects the efficiency of business development.

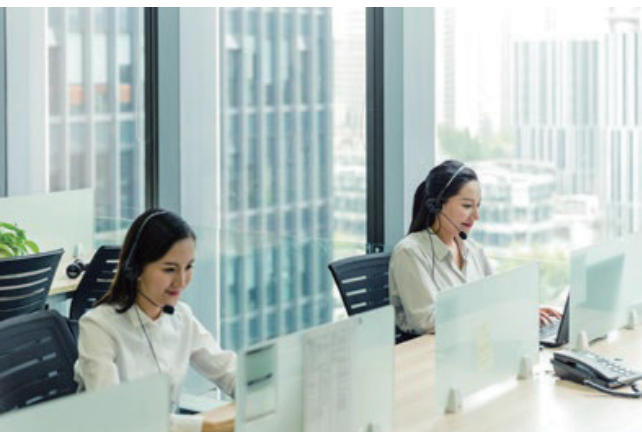




**SANGFOR aDESK**

# Virtual Desktop Infrastructure

## VDI Solution for Call Center



### Challenges

- High Failure Rate of Hardware
- Onerous Operation & Maintenance Workload
- High Risk of Data Leakage and System Breach

## What Sangfor Brings to You



High quality VOIP transmission to bring better user experience



Low hardware failure rate



Provide stable and reliable call center system



Linear system expansion based on flexible architecture



### **CUSTOMER SUCCESS - 12306 CHINESE RAILWAY CUSTOMER SERVICE CENTER**



More efficient & customer-friendly using experience



More obvious advantages in lifespan & MTBF than traditional PC



Reduce 80% of O&M workload



Ensures zero data loss. Avoid virus introduction & data leakage

# SANAGFOR VDI (Virtual Desktop Infrastructure)

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## AVAILABLE SOLUTIONS

<b>IAG</b>	Simplify User & Network Management
<b>NGAF</b>	Smarter Security Powered By AI
<b>Endpoint Secure</b>	The Future of Endpoint Security
<b>Cyber Command</b>	Powerful Intelligent Threat and Detection Platform
<b>HCI</b>	Driving Hyperconvergence to Fully Converged
<b>VDI</b>	Ultimate User Experience that Beats PC
<b>SD-WAN</b>	Boost Your Branch Business With Sangfor
<b>SIER</b>	Simplify & Intelligence Your Branch Network
<b>Access</b>	Cloud-based SASE for Branch Offices & Remote Users
<b>WANO</b>	Enjoy a LAN Speed on your WAN



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