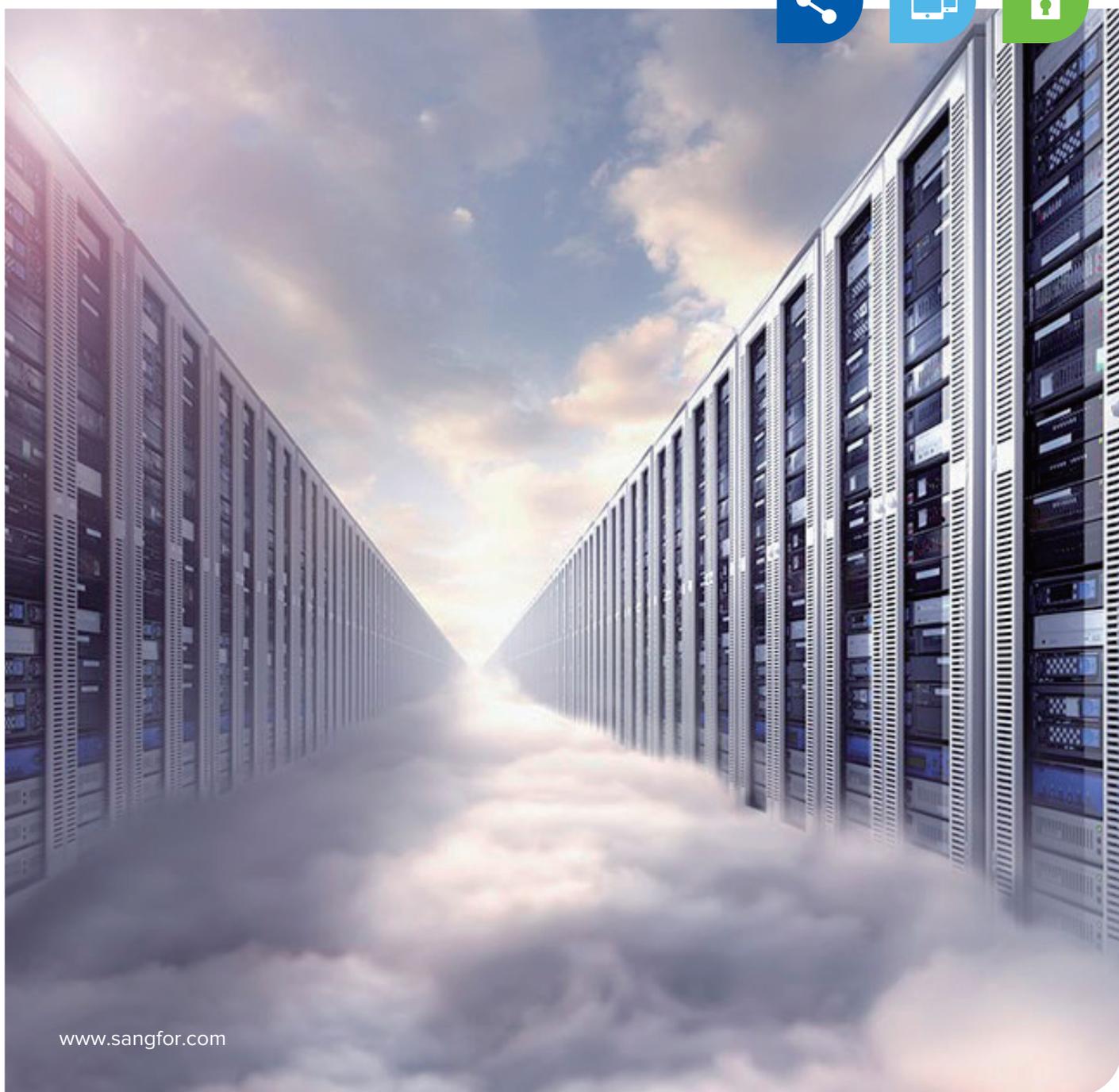


SANGFOR HCI (Hyper-Converged Infrastructure)



Fully Converge Your Data Center



www.sangfor.com



Traditional 3-Tier Data Center — Challenges & Limitations

IT is a fast changing industry. With organizations trying to follow the trend of digitalization and stay agile at all time, IT departments are looking at growing and seemingly endless requests for better and faster services delivery, as well as increased efficiency and robust operating environment. The driving force that ensures your business stays ahead and evolves smoothly, is your data center.

The revolution of x86 server virtualization over a decade ago marked the change of IT service delivery. However, the rest of the IT infrastructure in the data center haven't kept up, namely the virtualization of networking, security and storage.



What was the Time Spent On?

The traditional data center is very delicate in many ways, the work it takes to keep it running properly is complex and tedious – deployment, expansion, resource scheduling, upgrade, maintenance, troubleshooting, fault tolerance and release of new versions – these have occupied the majority of time of IT department's daily work.



What was the Money Invested in?

With traditional data center, the provision of new services usually starts with planning and scaling of networking, and hardware selection. Organizations also take into account their overall planning for the next 3-5 years. As a result, the actual quantity of device purchased and model selected shall exceed the current business needs to a great extent, thus leading to a considerable amount of investment in advance. Not to mention the speed data center technology is evolving and the follow-up investment that comes with it.



Is Current Architecture Scalable?

Whenever new business needs to go online or data center needs expansion, it requires supplementary storage and massive data migration; and the IT department have to go over the entire hardware planning/selecting process again. Not to mention the manpower it takes to set it up and keep in running.



Is Your Data Center Cloud Era Compatible?

With the emergence of "The Era of Cloud", increasingly people are resorting to Cloud to deal with the hurdles physical data center brings – namely expensiveness, inefficiency and difficulty to manage – in business transitions. However, it's not the case that you could enjoy the full breadth of benefits that go with cloud at a snap of finger. Easily put your IT architecture needs to be simplified and automated.

Sangfor HCI Solution



Sangfor HCI Solution

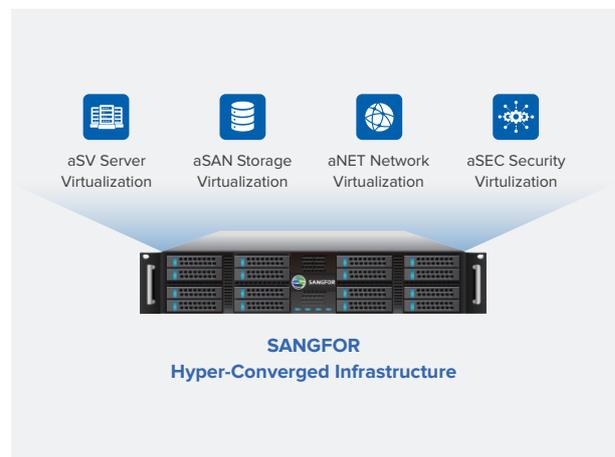
Why Choose Sangfor as Your HCI Solution Provider?

Sangfor has over 20 years' experience in network security and optimization and it has been the only Asian vendor with 6 products (HCI, NGAF, WANO, IAG, AD and SSL VPN) in the Gartner Magic Quadrant. Sangfor HCI was also previously listed in the Gartner Magic Quadrant for Hyperconverged Infrastructure for 3 consecutive years.

Sangfor HCI at a Glance

5-Tier Architecture Consolidated into 1 Single User Interface Managing All IT Resources

Sangfor Hyper-Converged Infrastructure (HCI) provides innovative 3rd-gen cloud computing architecture that reduces at least 70% of the TCO, simplifies operations, and multiplies network security. It converges compute, storage, networking and security on a single software stack. The foundation of all these are Server Virtualization (aSV), Storage Virtualization (aSAN) and Network Virtualization (aNET), on top of that we have Security Virtualization (aSEC) integration including all our network applications such as NGAF/IAG/WANO.



Highlights of Sangfor HCI

aSAN (Storage Virtualization)

Built with multi-copies and data is written synchronously to ensure data consistency. Multiple innovative features enable Sangfor HCI to reach 1 million IOPS with just three nodes, including SSD caching and patented I/O localization technology - aSAN detects where a VM's data is stored and makes it a priority to run the VM on that physical host, which dramatically increases IOPS in a clustered environment.

aSV (Hypervisor)

Distributed resource scheduling, non-uniform memory access (NUMA), and memory overcommitment bring you the ultimate virtualization performance.

Ultra Simple Deployment & Operation

Deploy the infrastructure with “what you draw is what you get” topology to get your business online in minutes. Manage your infrastructure through a unified dashboard and get AI-driven insights with a virtualized data center that displays the real-time flow.

Disaster Recovery Management (DRM)

Sangfor provides a choice of disaster recovery solutions, including active-active stretched cluster and active-passive DR for Sangfor HCI customers and active-passive DR for third-party hypervisors and servers.

More Secure Than Ever

Brand-new aSecurity cloud security center integrates all the security products you need to protect your entire architecture, including built-in web application firewall, next-generation firewall, EDR, and more.



Reduced TCO & Scale as you Grow

Minimum 70% reduction in overall CapEx & Opex than traditional data center. Up to 90% reduction in power, cooling and space. Start from 2 nodes and scale linearly according to your need without limits. Shift your focus to business. IT could be a revenue generating department instead of a cost center.

Distinguished Performance

Reach 1 Million IOPS with just 3 nodes (NVMe). High stability and reliability ensured by vAD business clustering, HA (High Availability), distributed management platform, distributed virtual networking device, multi-copies, back-up plans etc.

Best Security Integration

More flexible and scalable network and service provisioning. Virtualized network functions can be easily moved to various locations in the network without having to install new equipment. 3D protection inside-out: Kernel built-in WAF to protect aSV from web threats; distributed firewall to protect east-west traffic and vNGAF to safeguard south-north traffic.

Sangfor HCI

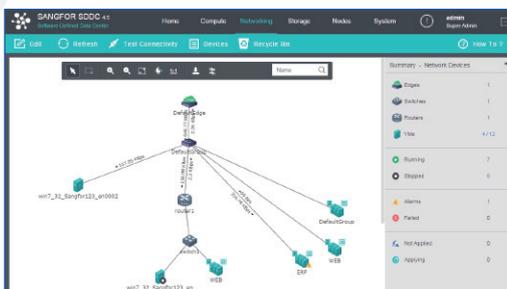


Hybrid Cloud

Multi Cloud

Transit Smoothly into Multicloud Era

Build Data Center by Simple Drawing Your Architecture



Visualized Data Center



Business Use Cases with Sangfor HCI



Data Center Consolidation

Getting rid of legacy architecture and complex costly data centers with Sangfor's software-defined HCI technology.



Cloud Transformation

Deploy the HCI cloud platform engineering for superior and leading virtualization for your enterprise - providing scalability and agility.



Data Protection & Disaster Recovery

Business continuity is prioritized with effortless and secure data recovery and disaster recovery options such as snapshot, CDP and stretched cluster.



Enterprise Applications

Run your company's applications through Sangfor's HCI for elite performance and reliable capabilities.

Sangfor HCI's Awards & Achievements



Gartner Magic Quadrant

Listed in the Gartner Magic Quadrant Reports 2019-2021



Gartner® Hype Cycle™ Reports

Sample Vendor in 2022 Gartner® Hype Cycle™ Reports for Compute and Infrastructure



Gartner® Peer Insights™

Sangfor HCI Customers Speak through Gartner® Peer Insights™



Top 3 HCI Vendors

Named as Top 3 HCI Vendors in China for 6 Consecutive Years



Listed in Forrester Now Tech

Listed in "Now Tech: Hyperconverged Infrastructure, Q2 2020"



SAP Certification

SAP Certified for Cloud and Infrastructure Operations and SAP HANA Operations

COMPANY PROFILE



Make Your Digital Transformation Simpler and Secure. This is Sangfor Technologies' commitment to our customers. Since forming in 2000, Sangfor has been a global leader of IT infrastructure, security solutions and cloud computing. Five business groups deliver industry leading products for Hyper-Converged Infrastructure, Virtual Desktop Infrastructure, Next Generation Firewall, Secure Web Gateway, Endpoint Protection, Ransomware Protection, Incident Response, WAN Optimization, and SD-WAN. Constant innovation and dedication to creating value for our customers are the heart of our corporate strategy.

Sangfor's 9500+ employees take customer's business needs and user experience seriously by servicing and supporting them at over 60 branch offices globally in exciting locations like Hong Kong, Malaysia, Thailand, Indonesia, Singapore, Philippines, Vietnam, Myanmar, Pakistan, UAE, Italy, Türkiye and the USA.

CONTINUOUS INNOVATION & EXCELLENT SERVICE

Sangfor invests at least 20% of annual revenue in R&D to improve products and develop new solutions at our five R&D centers located. With over 2,200+ patents, Sangfor has more patent applications submitted in 2022. This dedication to innovation enables us to release product updates every quarter and launch new products annually.

We pride ourselves on our excellent service. Customers enjoy fast 24x7 online support 365 days a year and personalized on-site service support from over 10,000 certified engineers at our three Customer Service Centers in Malaysia & China.



GARTNER MAGIC QUADRANT



Sangfor HCI Data Sheet – Software Based

Sangfor can also provide a software-only HCI solution compatible with most of the commodity servers commercially available on the market.

License (Per physical CPU)	aSV (Server Virtualization)	Server Virtualization, HA, DRS, Automated Hot Add, Backup, Clone, Sub Administrator, etc.
License (Per physical CPU)	aNet (Network Virtualization)	Network virtualization, Distributed Firewall, Drawable Topology, Visualized Network, aSwitch, aRouter, etc.
License (Per physical CPU)	aSAN (Storage Virtualization)	2-3 Copies, SSD Read & Write Acceleration, Storage Tier-ing, Data Locality, etc.

* NFV components on HCI may employ IPSec VPN technologies using encryption algorithms.

- IPSec Protocol: AH, ESP
- D-H Group: MODP768 Group(1), MODP1024 Group(2), MODP1536 Group(5)
- IPSec Authentication Algorithm: MD5, SHA-1, SHA-2, SM3
- IPSec Encryption Algorithm: DES, 3DES, AES-128, AES-256. SANGFOR_DES, SCB2, SM4

Sangfor HCI Data Sheet – Hardware Based

Model	aServer-1600	aServer-1800	aServer-2100	aServer-2105	aServer-2205	aServer-2305	Configuration Remark
Height	2U	2U	2U	2U	2U	2U	CPU is not expandable (C stands for Core and T stands for Thread)
CPU Model	Intel® Xeon® Gold 6226R	Intel® Xeon® Silver 4210R	Intel® Xeon® Silver 4210R	Intel® Xeon® Silver 4210R	Intel® Xeon® Gold 6226R	Intel® Xeon® Gold 5220R	
No. of CPU	1	1	2	2	2	2	
CPU Specs	16C32T 2.9GHZ	10C20T 2.4GHZ	10C20T 2.4GHZ	10C20T 2.4GHZ	16C32T 2.9GHZ	24C48T 2.2GHZ	
Standard Memory	64GB (2*32)	64GB (2*32)	128GB (4*32)	128GB (4*32)	128GB (4*32)	128GB (4*32)	Expandable with 32GB memory stripes
Memory Slot	12	12	24	24	24	24	
Memory Frequency	DDR4 2933MHz	DDR4 2933MHz	DDR4 2933MHz	DDR4 2933MHz	DDR4 2933MHz	DDR4 2933MHz	
Max. Memory	768GB	768GB	1536GB	1536GB	1536GB	1536GB	
Disk Slot	8	8	8	12	12	12	OS disks are installed on the dual-slot on the backplane of the server, all models are configured with RAID 1 except 2100
OS Disk (By default)	1*240GB SSD	1*240GB SSD	1*240GB SSD	2*240GB SSD	2*240GB SSD	2*240GB SSD	
Cache Disk (SSD, mandatory for aSAN cache and tier-ing)	Optional	Options: 240GB SSD Intel S4600 480GB SSD Intel S4600 960GB SSD Intel S4600 1.9TB SSD Intel S4600	Options: 240GB SSD Intel S4600 480GB SSD Intel S4600 960GB SSD Intel S4600 1.9TB SSD Intel S4600		Options: 240GB SSD Intel S4600 480GB SSD Intel S4600 960GB SSD Intel S4600 1.9TB SSD Intel S4600	Options: 240GB SSD Intel S4600 480GB SSD Intel S4600 960GB SSD Intel S4600 1.9TB SSD Intel S4600	

Model	aServer-1600	aServer-1800	aServer-2100	aServer-2105	aServer-2205	aServer-2305	Configuration Remark
Data Disk	Optional	Options: 2TB SATA HDD (Enterprise) 4TB SATA HDD (Enterprise) 6TB SATA HDD (Enterprise) 8TB SATA HDD (Enterprise)	Options: 2TB SATA HDD (Enterprise) 4TB SATA HDD (Enterprise) 6TB SATA HDD (Enterprise) 8TB SATA HDD (Enterprise)	Options: 2TB SATA HDD (Enterprise) 4TB SATA HDD (Enterprise) 6TB SATA HDD (Enterprise) 8TB SATA HDD (Enterprise)	Options: 2TB SATA HDD (Enterprise) 4TB SATA HDD (Enterprise) 6TB SATA HDD (Enterprise) 8TB SATA HDD (Enterprise)	Options: 2TB SATA HDD (Enterprise) 4TB SATA HDD (Enterprise) 6TB SATA HDD (Enterprise) 8TB SATA HDD (Enterprise)	Optional. Need to purchase separately
Disk Slot Size	3.5/2.5 inch	3.5/2.5 inch	3.5/2.5 inch	3.5/2.5 inch	3.5/2.5 inch	3.5/2.5 inch	Intel X722: 1GE Port Intel X720-F2: 10G SFP+Port
NIC Ports (Customizable)	4*GE electrical + 2*10GE optical	6*GE electrical	6*GE electrical + 2*10GE optical				
Working Power	468W	468W	468W	518W	618W	618W	
Max. Power	800W	800W	800W	800W	800W	800W	
Dimension (mm)	800*448*90	800*448*90	800*448*90	800*448*90	800*448*90	800*448*90	
Gross Weight (kg)	42	42	42	45	45	45	
Net Weight (kg)	35	35	35	37	37	37	
Power supply	1+1 Platnium 800W [100-240VAC] [240VDC]	1+1 Platnium 800W [100-240VAC] [240VDC]	1+1 Platnium 800W [100-240VAC] [240VDC]	1+1 Platnium 800W [100-240VAC] [240VDC]	1+1 Platnium 800W [100-240VAC] [240VDC]	1+1 Platnium 800W [100-240VAC] [240VDC]	
Total PCI-e Slots	3	5	5	5	5	5	
Available PCI-e Slots	1	1	1	1	1	1	PCI-E slot is used to expand NIC, HBA card or PCI-e SSD
Raid Card	LSI SAS 3008-8I Or PM8222	LSI SAS 3008-8I Or PM8222	LSI SAS 3008-8I Or PM8222	LSI SAS 3008-8I Or PM8222	LSI SAS 3008-8I Or PM8222	LSI SAS 3008-8I Or PM8222	
Raid Mode	JBOD/Raid 0/1/10	JBOD/Raid 0/1/10	JBOD/Raid 0/1/10	JBOD/Raid 0/1/10	JBOD/Raid 0/1/10	JBOD/Raid 0/1/10	
Cache on RAID Card	No cache	No cache	No cache	No cache	No cache	No cache	
COM	1	1	1	1	1	1	
USB 2.0	2	2	2	2	2	2	
USB 3.0	2	2	2	2	2	2	
VGA	1	1	1	1	1	1	
Working Temperature Range	10-35°C	10-35°C	10-35°C	10-35°C	10-35°C	10-35°C	
Working Humidity Range	35%-80%RH	35%-80%RH	35%-80%RH	35%-80%RH	35%-80%RH	35%-80%RH	



Model	aServer-3000	aServer-3100	aServer-3205	aServer-3305	aServer-3405
CPU	Intel 4310 12C/24C 2.1GHZ 120W	Intel 6326 2.9G 16C/32T 185W	Intel 4314 16C/32T 2.4Ghz 135W	Intel 6326 2.9G 16C/32T 185W	Intel 5318Y 2.1G 24C/48T 165W
No. of CPU	1	1	2	2	2
RAM	32GB	32GB	32GB	32GB	32GB
No. of RAM	4	4	4	4	4
OS Disk	PM883 240G*1	PM883 240G*1	PM883 240G*2	PM883 240G*2	PM883 240G*2
RAM Slot	16	16	32	32	32
No. of Power Supply	2	2	2	2	2
No. of RAID Card	1	1	1	1	1
Disk Slots	8*	8*	12+2	12+2	12+2
No. of Backplane	1	1	2	2	2
NIC	4*GE+2*10GE	4*GE+2*10GE	4*GE+2*10GE	4*GE+2*10GE	4*GE+2*10GE
USB2.0	0	0	0	0	0
USB3.0	4	4	4	4	4
Dimension	2U 86.1mm(H)*447mm(W) *790mm(L)	2U 86.1mm(H)*447mm(W) *790mm(L)	2U 86.1mm(H)*447mm(W) *790mm(L)	2U 86.1mm(H)*447mm(W) *790mm(L)	2U 86.1mm(H)*447mm(W) *790mm(L)
Gross Weight	28kg	28kg	29kg	29kg	29kg
Net Weight	23kg	23kg	24kg	24kg	24kg
Total PCIE Slots	3	3	3	3	3
Available PCIE Slots	2	2	2	2	2
Working Power	Typical Power: 227W Max Power: 900W				

* 7 Disk slots available.

SANGFOR HYPER-CONVERGED INFRASTRUCTURE

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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

HCI - Hyper-Converged Infrastructure

Fully Converge Your Data Center

MCS - Managed Cloud Services

Your Exclusive Digital Infrastructure

VDI - aDesk Virtual Desktop Infrastructure

The Ultimate User Experience that Beats a PC

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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