

# Sangfor HCI

Make Your IT Future-proof



**SANGFOR**

# Challenges for Traditional Networking

## Traditional Data center

router switch

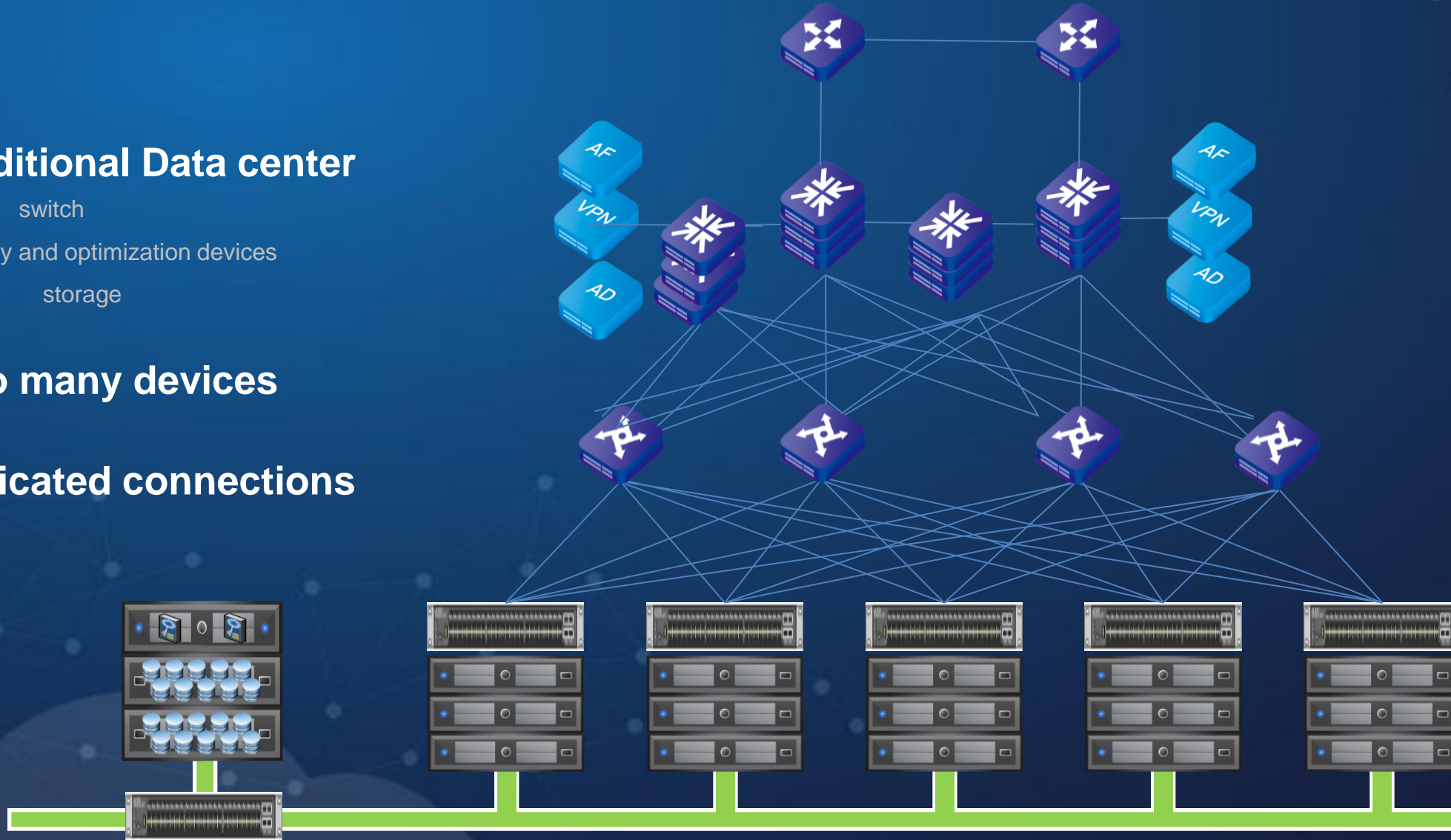
security and optimization devices

server storage

... ..

**Too many devices**

**Complicated connections**



This is what's helping ~~it~~ instead it's dragging you down.



Server Specialist



Network Specialist



Storage Specialist



Security Specialist

# IT Generalists

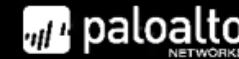
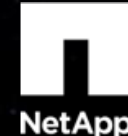
Compute

Network

Storage

Security

One unified resource pool including compute, networking, storage and security.



# Next Generation Converged Data Center



## Legacy Architecture

Server, switches, SAN, NAS  
multi-vendor, cluttered, multiple management



## Converged Datacenter

GFS, commodity servers  
single-vendor, uniformed, single pane

# Is this what you need?



Software Defined Data Center in the "Magical Box"

# Easy to Use



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Sangfor SDDC Control Panel



Licensing

Upgrade license to gain access to additional Sangfor SDDC capabilities



Date and Time

Set date and time, and sync time with NTP server



Administrators

Manage administrator accounts



Alarm Options

Specify alarm-triggering events, threshold and delivery method



Logs and Alarms

Operational logs and system alarms, references for later troubleshooting



VM Backup and Recovery

Set virtual machine backup policy for quick recovery during node or storage failure



System Backup and Restore

Back up logs and system configuration, and restore system to factory defaults



Upgrade

Keep your Sangfor SDDC software up to date to gain better virtualization experience



Cluster

Configure cluster



Service & Tech Support

Contact technical support for Standard and Enterprise editions



Recycle Bin

Restore deleted items in 7 days after deletion

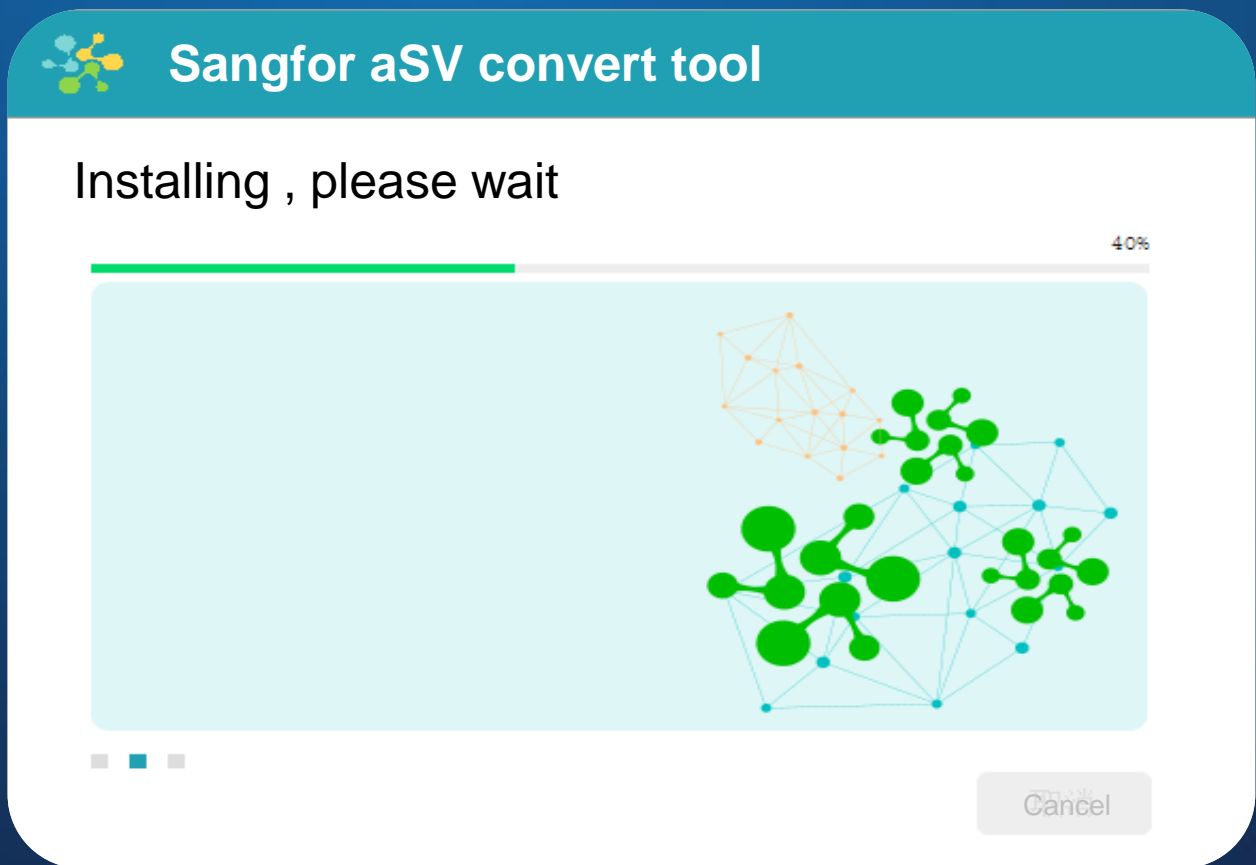


HA & Resource Scheduling

Configure HA, resource scheduling and automated hot add to achieve optimal cluster performance.

CPU Us  
Memory  
IO

# Easy Migration



## VM to VM V2V



Supporting VMware, Xen, Hyper-V, KVM from other vendors

## Physical to VM P2V



Mainstream OS supported, conversion rate 70 MB/S



# Build Data Center from What You Draw

**SANGFOR SDDC 4.2**  
Software-Defined Data Center

Home Compute **Networking** Nodes System

admin !  
Super Admin

This is **Standard Edition**, supporting edge, 2 virtual switch(es) and 1 virtual router(s). To virtualize more switches and routers, [Upgrade License](#). [Learn More About Sangfor SDDC](#) or [Try Enterprise Edition Online](#)

Exit Refresh Test Connectivity Devices Recycle Bin How To ?

Edge  
Switch  
Router  
ADC  
NGFW  
VM

Summary - Network Devices

Edges	1
Switches	0
Routers	0
VMs	0 / 2
Running	1
Stopped	2
Alarms	2
Failed	0
Not Applied	0
Applying	0

The screenshot displays the Sangfor SDDC 4.2 Networking interface. The main workspace shows a network diagram with a central router connected to three edge devices (ADC, NGFW, and another Router). Each edge device is connected to a set of VMs. The interface includes a top navigation bar, a toolbar with various actions like Exit, Refresh, Test Connectivity, Devices, and Recycle Bin, and a summary table on the right. The summary table provides a quick overview of the network devices and their status.

Settings - Router (router1) ×

▶ Interface Interface VLAN Subinterface




Settings - Switch (switch1) ×

▶ Device

Settings - Edge (DefaultEdge) ×

▶ Physical Interface

Port Group

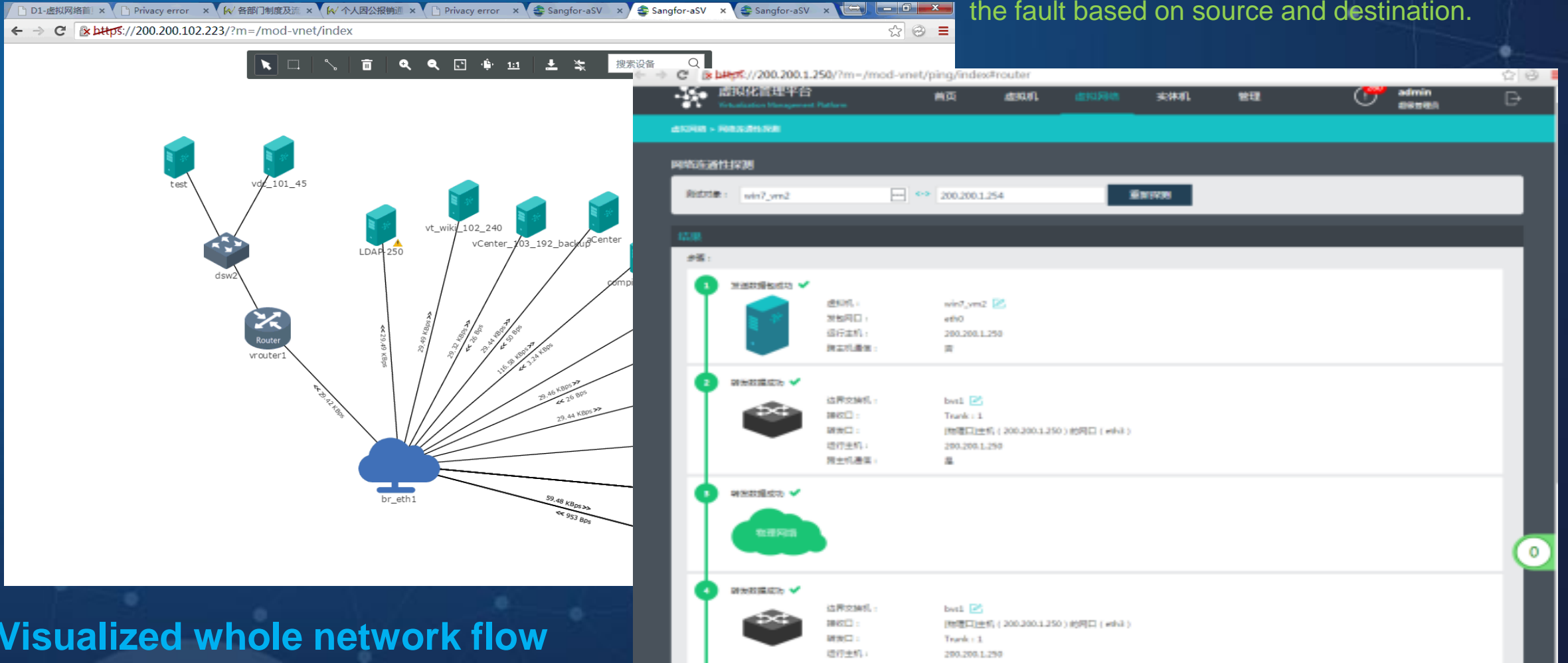
<input type="checkbox"/>	No.	Node	Interface
<input type="checkbox"/>	1	100.100.164.101	 eth0(100.100.164.101)
<input type="checkbox"/>	2	100.100.164.102	 eth0(100.100.164.102)
<input type="checkbox"/>	3	100.100.164.103	 eth0(100.100.164.103)

Make configurations on the browser directly

# Visualized DC

## Connectivity detection tool

Achieve connectivity detection and locate the fault based on source and destination.



## Visualized whole network flow

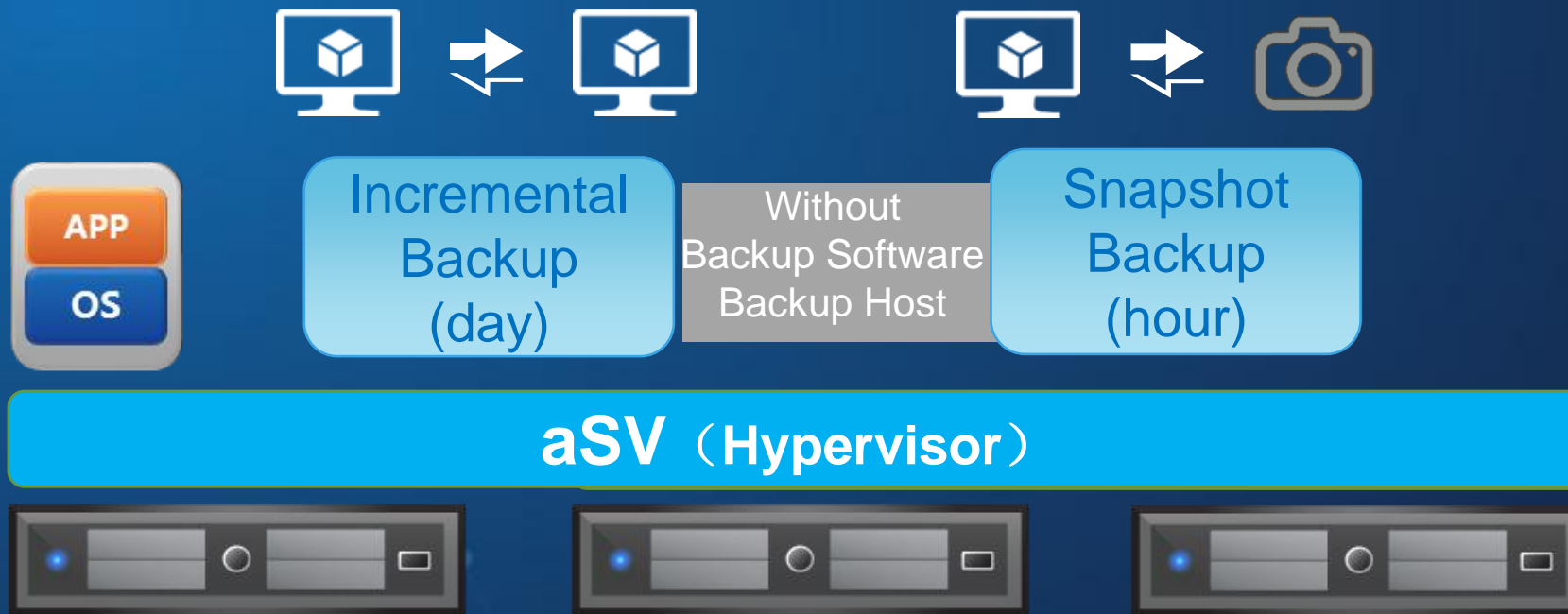
Display real-time flow based on ports, uplink, and downlink of virtual machine

# Data Protection



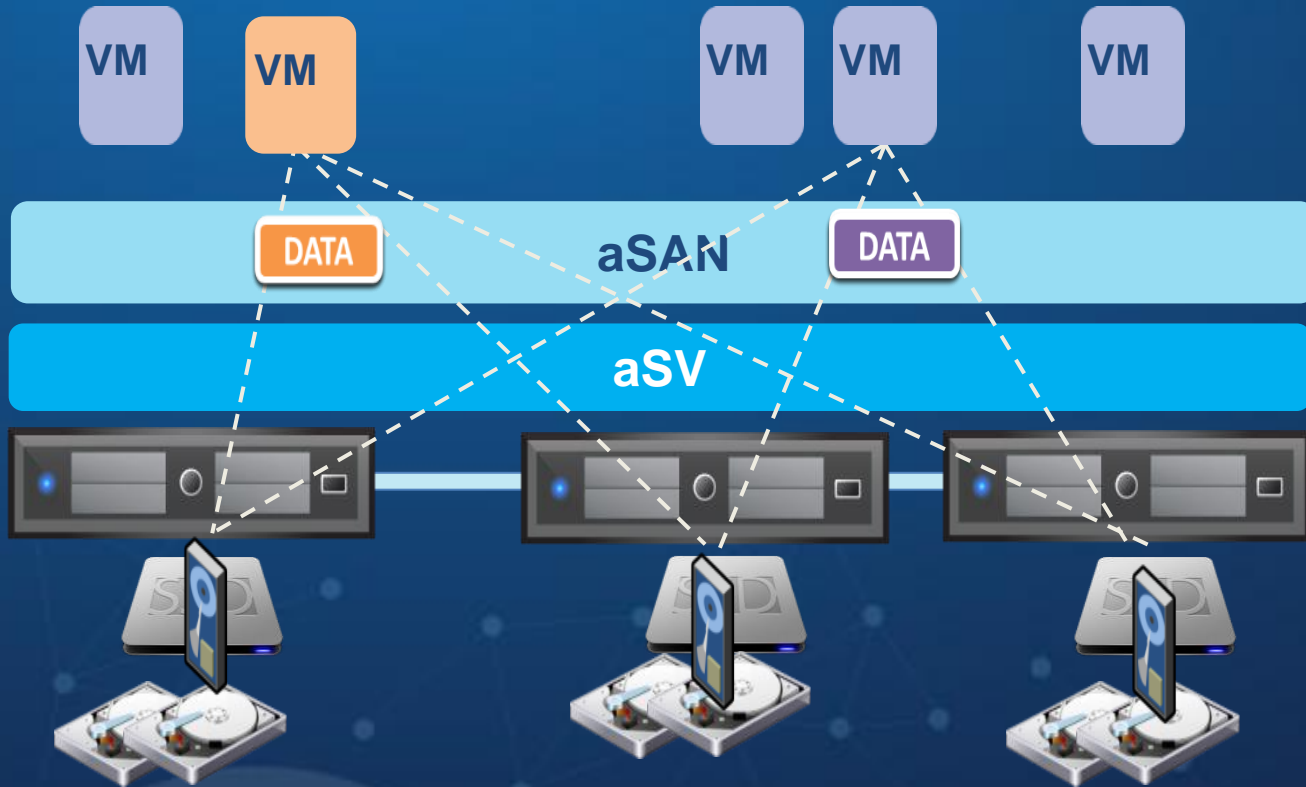
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# Integrated Backup and Recovery



- ✓ Through fast agentless disk backups to protect your data , using incremental backups reduce the space required for backups, reducing backup costs.
- ✓ Without backup software and backup servers to achieve incremental backup
- ✓ Provide snapshot function, do a static snapshot on the running virtual machine ,easy recovery
- ✓ Provide manual backup and scheduled backup to ensure data security

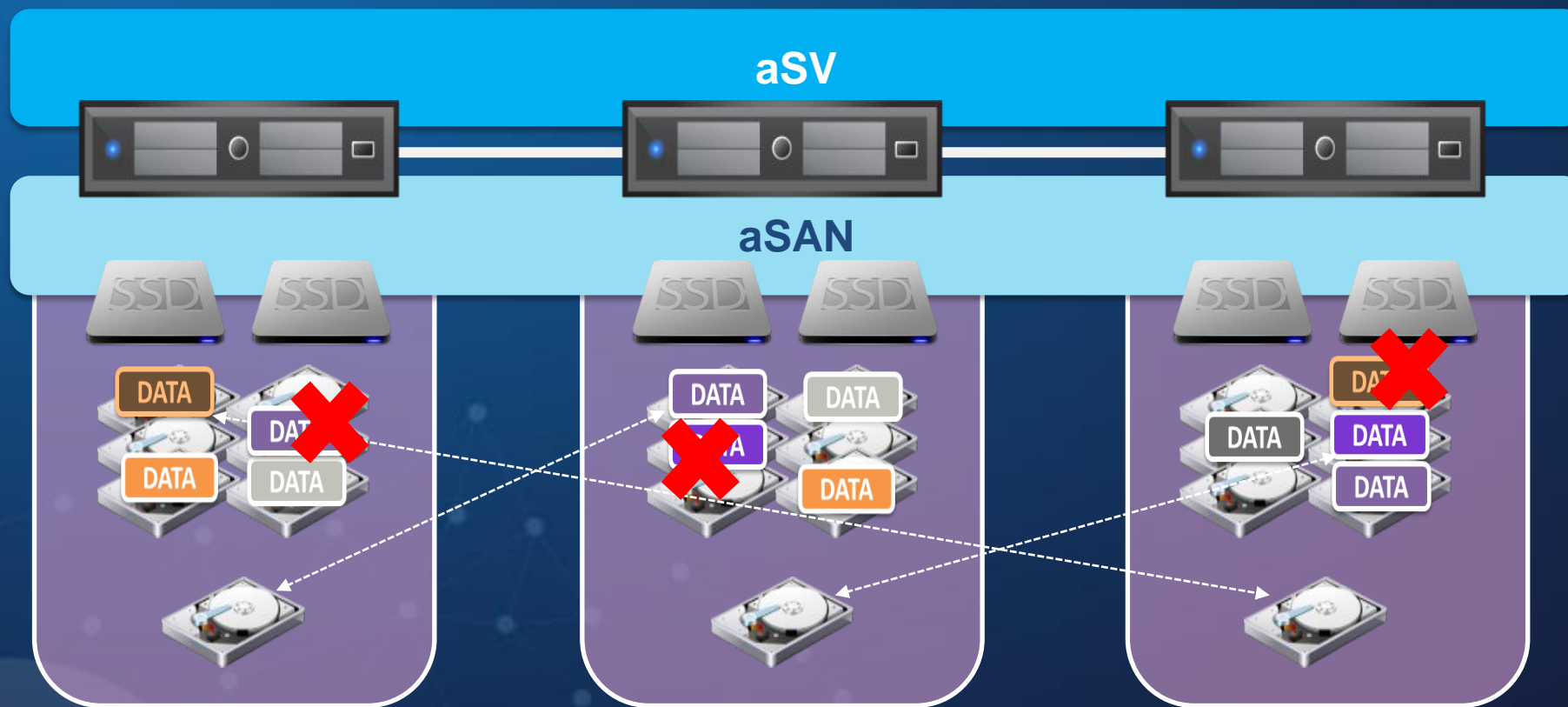
# Data Copy Mechanism



## Features

- 2-3 Copies of each data,
- Write data synchronously
- Ensure data consistency

# Hot Spare Technology



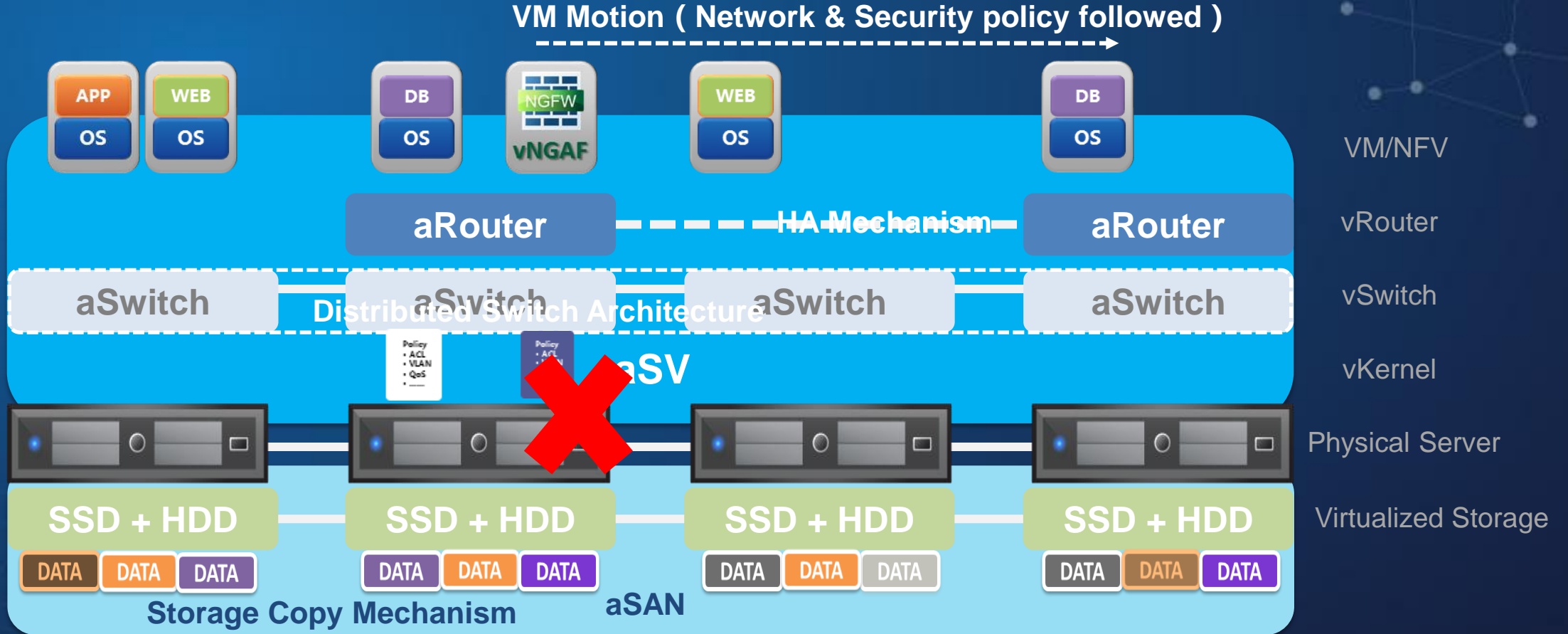
# Business Continuity



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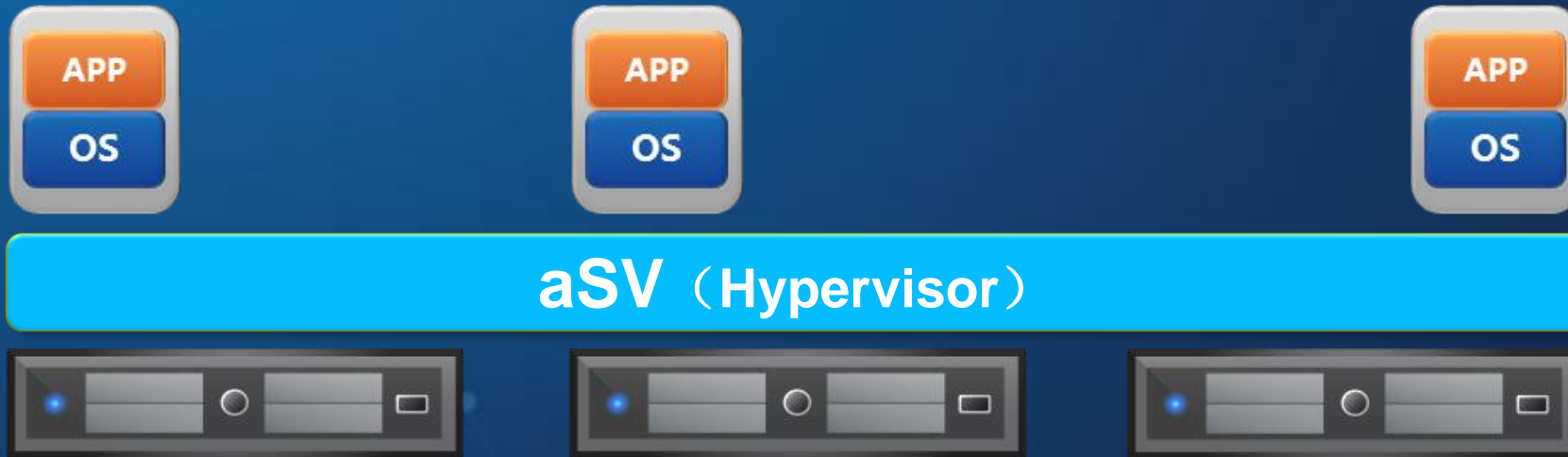
# HA



Applications can be restored from networking, host and storage layer in an extremely short time if physical node failed in the cluster

# Hot Migration

Hot Migration Technology



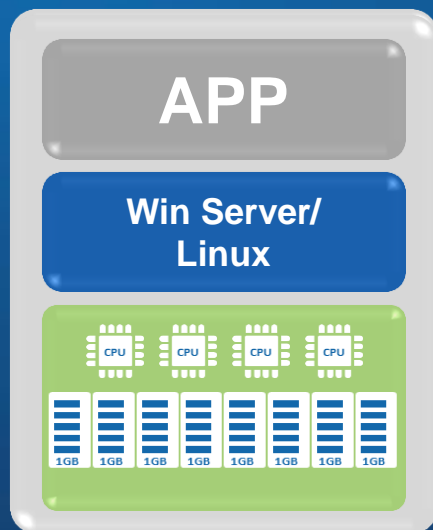
- ✓ Online dynamic migration of VM can be achieved by hot migration to ensure business continuity
- ✓ Zero Downtime: Hardware maintenance and upgrades migrating workloads, without service interruption
- ✓ Support Fiber Channel and iSCSI SAN environment

# Features of aSV Technology: Distributed Resource Scheduler DRS



- ✓ Achieve dynamic resource scheduling functions by aSV, without installing agents
- ✓ Set thresholds, when resource utilization is out of range, the trigger of virtual machine migration will operate
- ✓ Automatic load balancing of cluster business, reduce resource utilization in the high load cluster hosts

# Distributed Resource Extension



Add more resources to support VM

Threshold : 80% Threshold : 85%



CPU RAM

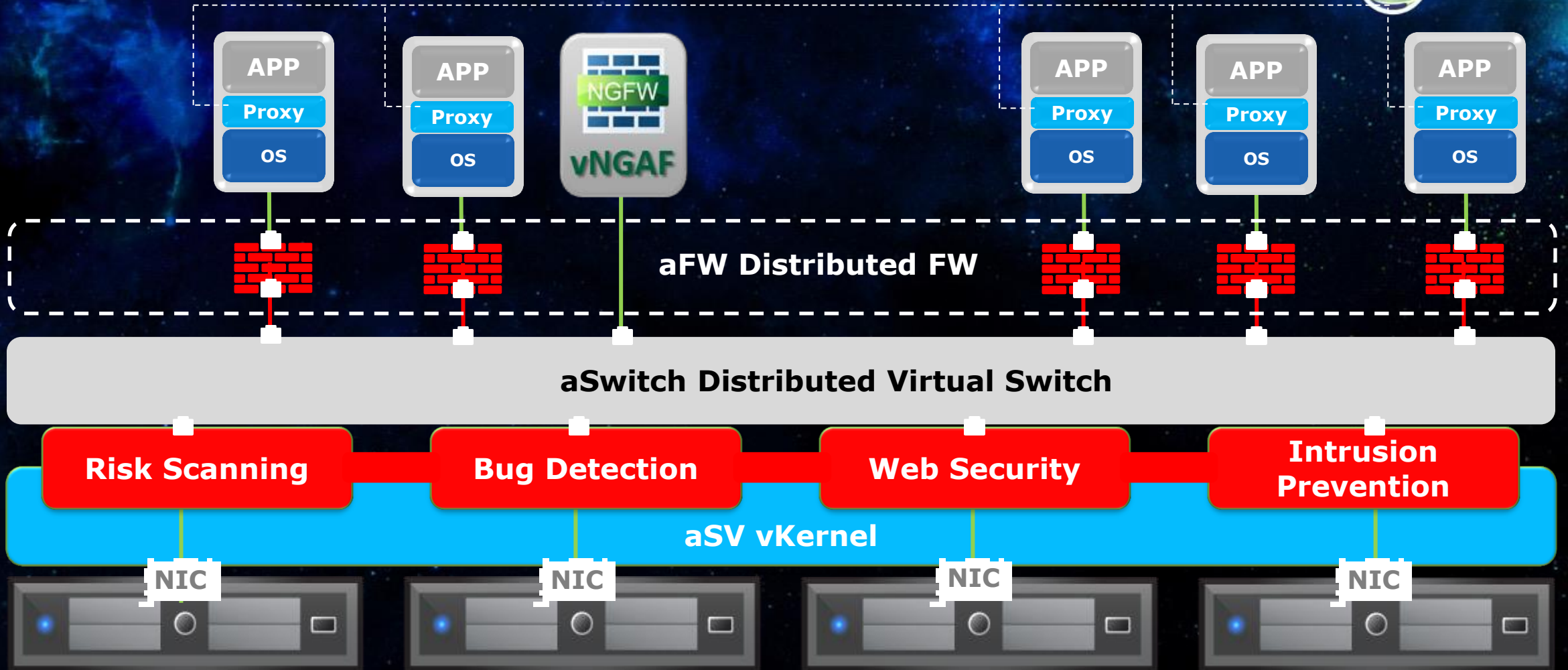
**Dynamic Resource Extension**

Distributed Management Platform aCenter (without independent installation)

**aSV Server Virtualization**



# Security



Inside and outside, providing comprehensive security system

# 1-Click Health Check



SANGFOR HCI 5.3  
Hyper-converged Infrastructure Platform

Home Compute Networking Storage Nodes System **Health Check** ! admin Super Admin

system > Health Check

Time Taken: 00:01:17    Progress: 100%

50

**Task completed. 7 entity(ies) giving alarm, 1 entity(ies) failed** Back Test Again

Warnings should be eliminated to ensure cluster performance and failures must be fixed ASAP to guarantee business continuity.

Configuration

- License
- USB Key** ✖
- License Expiration !

Physical Resources

- 200.200.5.106
  - NICs !
  - Disk Basics !
- 200.200.5.104
  - NICs !
  - Disk Basics !
- 200.200.5.105

### Results

Object	USB Key Status
KEY	✖

### Solution

**USB Key Status:**  
Troubleshoot the issue as follows:

1. Check whether only one authorization USB key is plugged.
2. Check whether the LED on the authorization USB key is on.
3. Re-plug the authorization USB key into any node in the cluster.

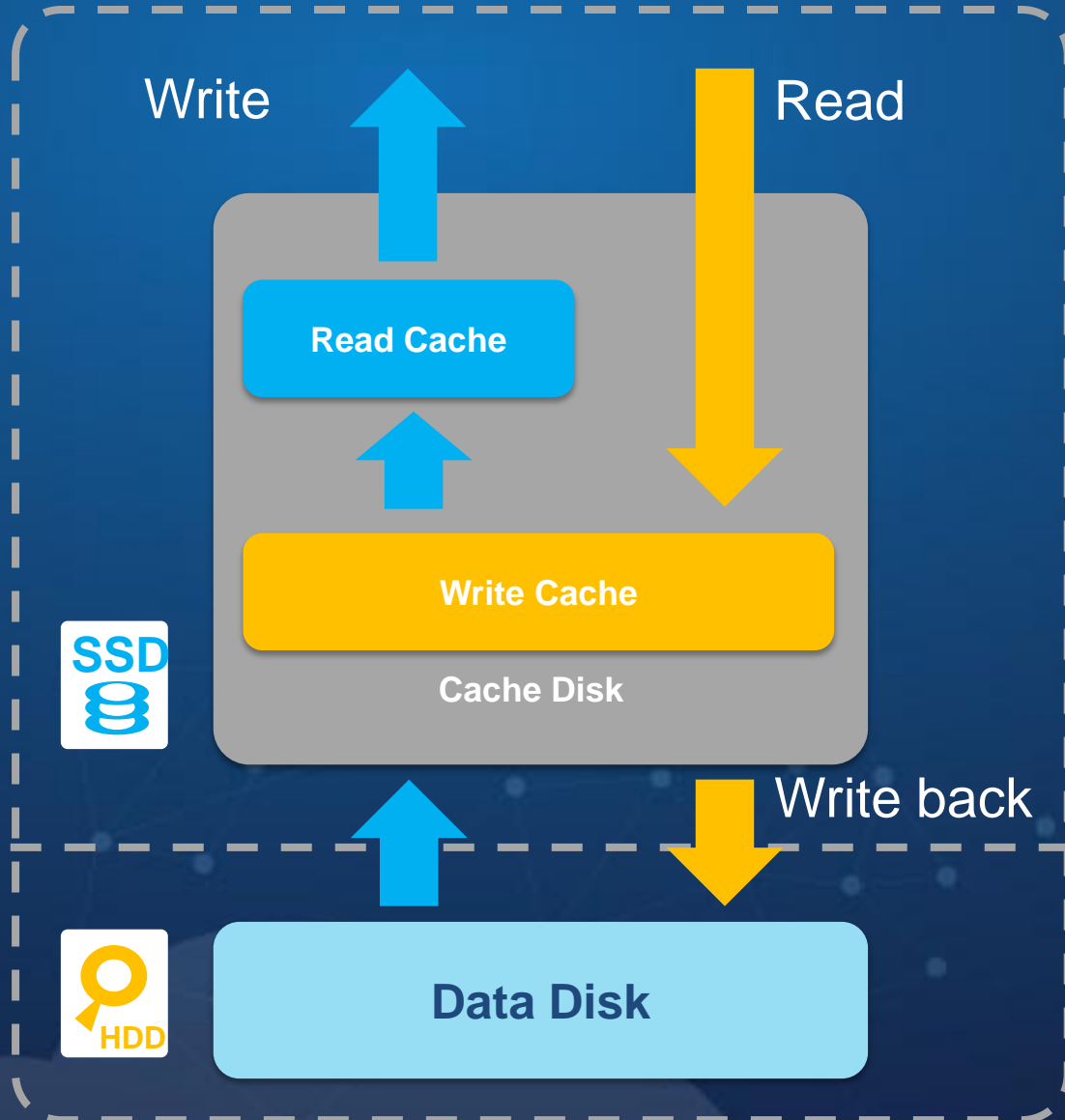
[Entity Description >>](#)

# High Performance



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# Hybrid Disks



## Features

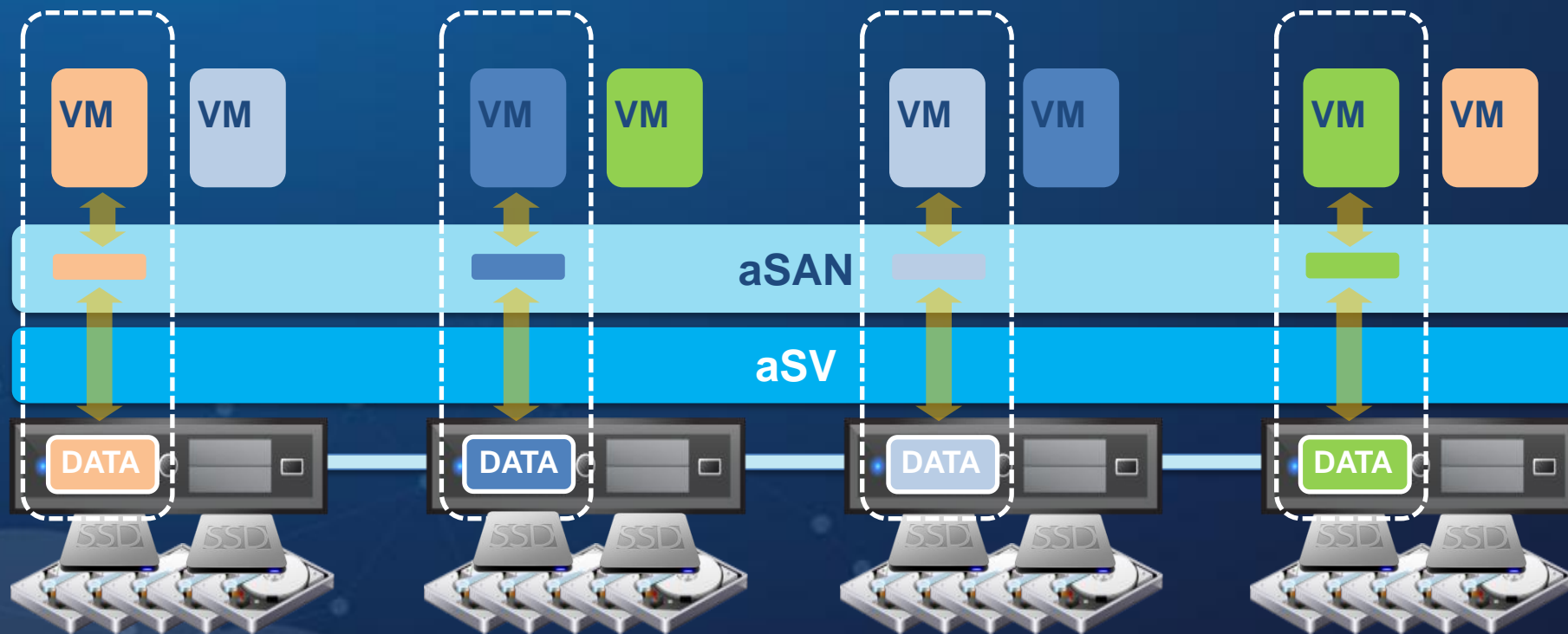
- Cache disks constituted by SSD , Data disks constituted by HDD
- Read cache and write cache share SSD by 7:3
- Read cache is close to users, reducing latency
- Write cache is close to copies , writing to SSD in multiple hosts

\* **All Flash Strategy**  
Higher IOPS, lower latency

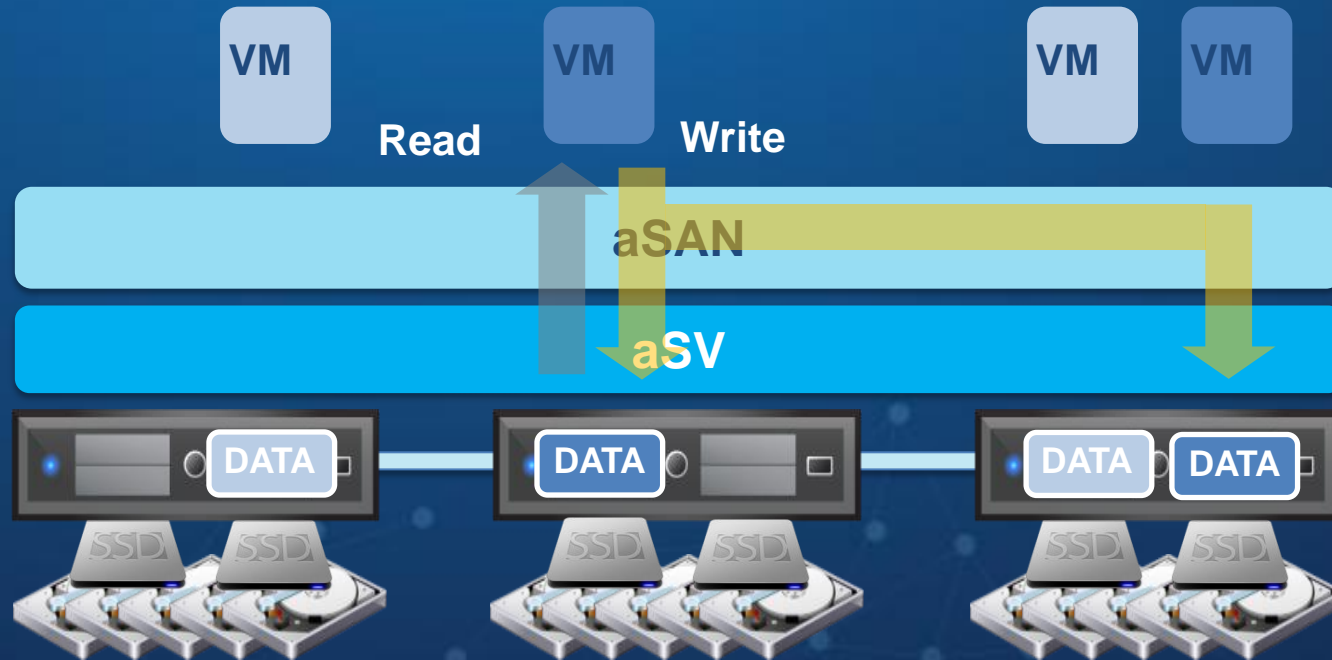


# aSAN: Patent -- I/O Localization Technology

aSAN can sense the location where VM's data is stored,  
and run the VM at the physical host in priority which has the data copy



# Patent -- I/O Localization Technology



## Features

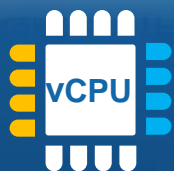
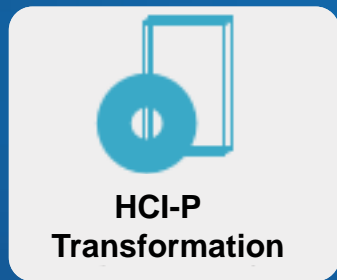
- Read directly from local disks with high performance
- Performance improved and bandwidth saved by 50% by writing one copy to local and the other to remote

# Scale-Out

Performance and capacity increased linearly with more nodes added



# HCI Platform



Intel : CPU supporting VT-x  
(  $\geq$  8-12T , 2.6GHz )



6\* GE or 10GE recommended , minimum 4  
( 4 nets : business, cluster, storage, management )



32GB recommended,  
16GB minimum  
( OS occupation < 4GB )



On-board, supporting JBOD  
( RAID0 if not support JBOD, no disk hot swop )



SSD:HDD=1:3 ( SSD 240GB ) or 1:5 ( SSD 480GB )  
( Minimum : 1\* system disk, 1\* SSD, 1\* HDD )

Integrated web-based management platform

NFV: vAF, vIAM, vAD, vWANO, etc

aNET: Network virtualization with SDN

Software

aSAN: Server SAN based on distributed file system

aSV: KVM-based hypervisor, server virtualization

Hardware



Sangfor aServer



3<sup>rd</sup> Party Server

# Why Sangfor HCI?

- **Cost-effective:** Based on open source virtualization platform, cluster starting from 2 nodes (3 nodes for other vendors), every penny shows its value here.
- **More than HCI:** Real SDDC solution to optimize your compute, network and storage.
- **Flexible:** Appliance or pure software? Your choice!
- **Simple:** What you draw is what you get, draw your DC in 5 mins.
- **Secure:** Over 15 years experience on network security and optimization . Trusted.

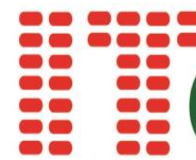
# Thank you

More Information : [www.sangfor.com](http://www.sangfor.com)

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**SANGFOR**



**Green**

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