

Together, a New Chapter of Storage

Dr. Peter Zhou

President of Huawei IT Product Line

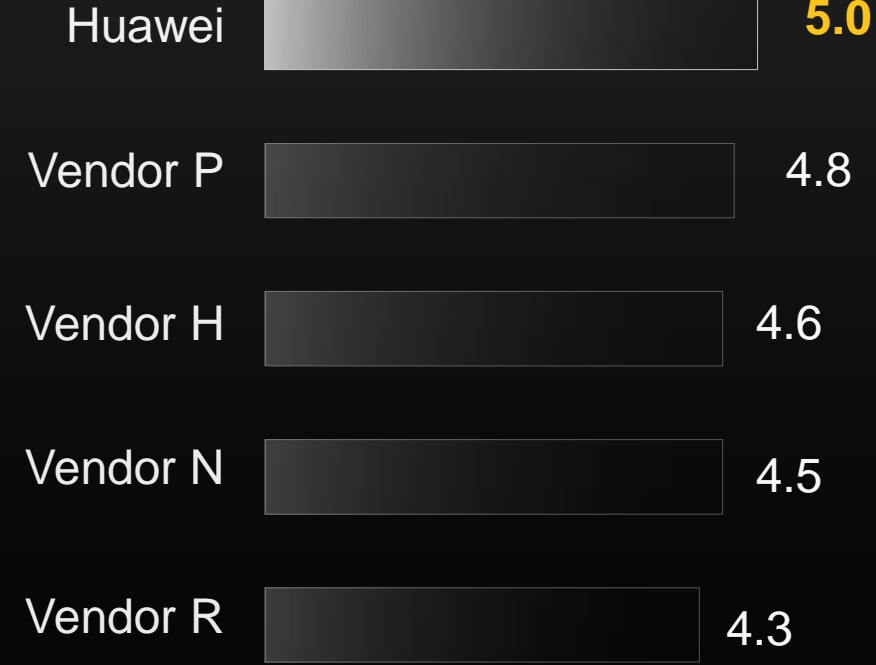


Much Appreciated for Your Trust and Support

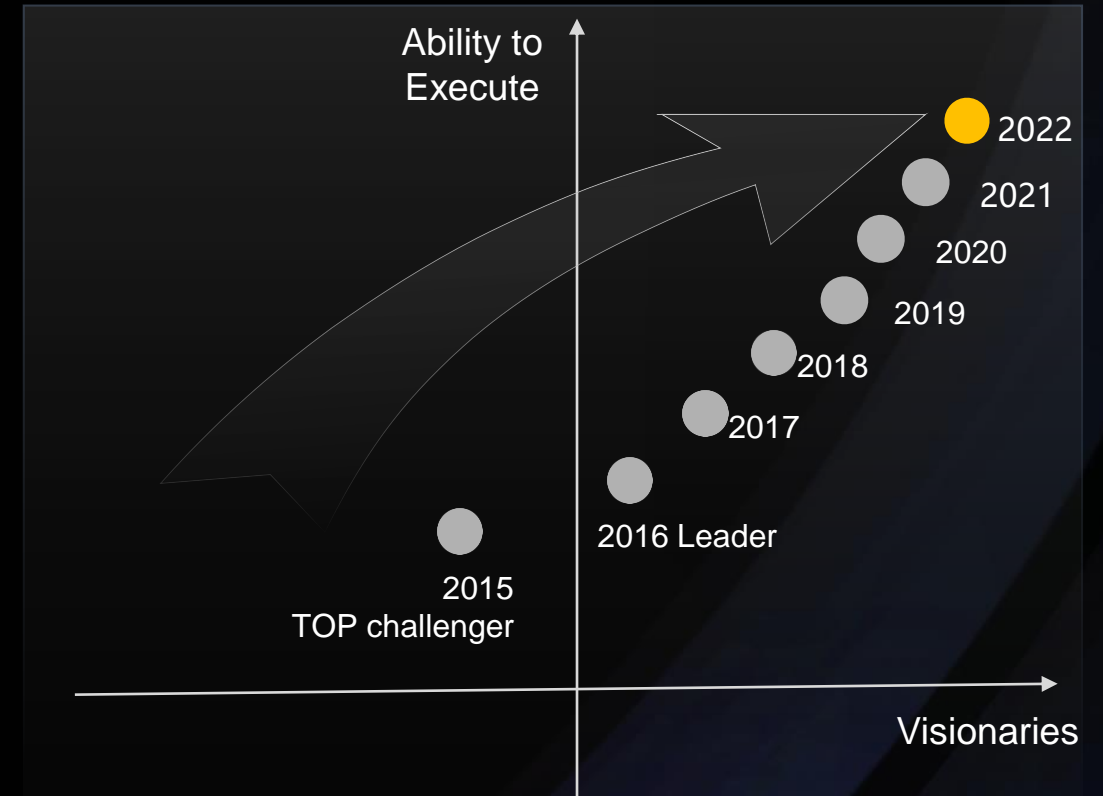
Primary Storage: No.1 Gartner Customer's Choice



Scale-out Storage: No.1 Gartner Customer's Choice

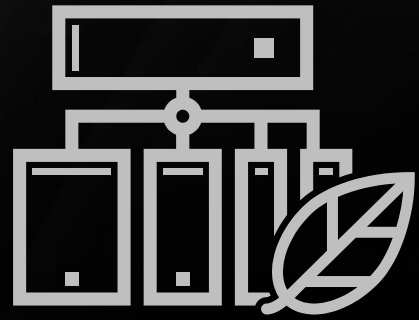


Primary Storage: 7 years Gartner Magic Quadrant



Industry Changes Created Four New Opportunities

Green



Singapore carbon tax adjustment,
16 times increment within 8 years.
(SGD 5/tonne → SGD 80/tonne)

**"AFA Redesign"
Opportunity**

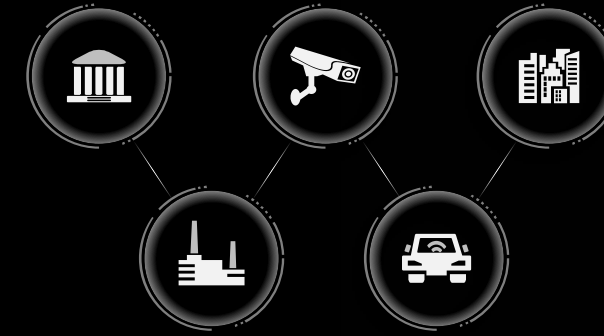
Reliability



HKAB published **STDB guidelines.**
Singapore FSI and government strengthened
security requirements.

**"Data Safe-Copy"
Opportunity**

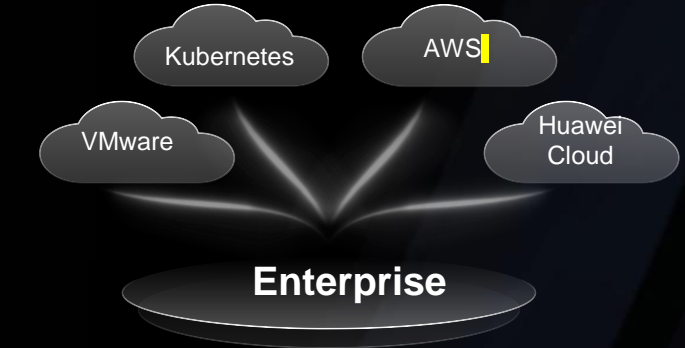
Unstructured Data



Oil & gas exploration: raw data 700GB/KM²
requires 10 times storage capacity.

**"Professional Storage"
Opportunity**

Multi cloud



96% of enterprises are using/evaluating the use of
**containers, which becoming mainstream
technology and choice.**

**"Container Storage"
Opportunity**

Five Dimensions for Partnership Support



Product & Solutions



Service Tools



Information Platform

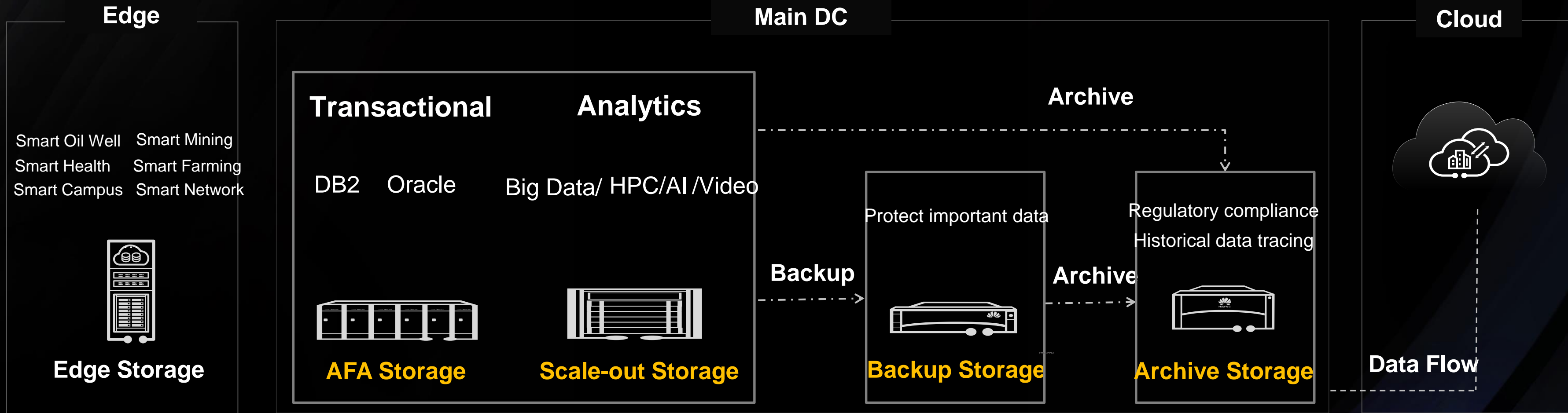


Compatibility Certification



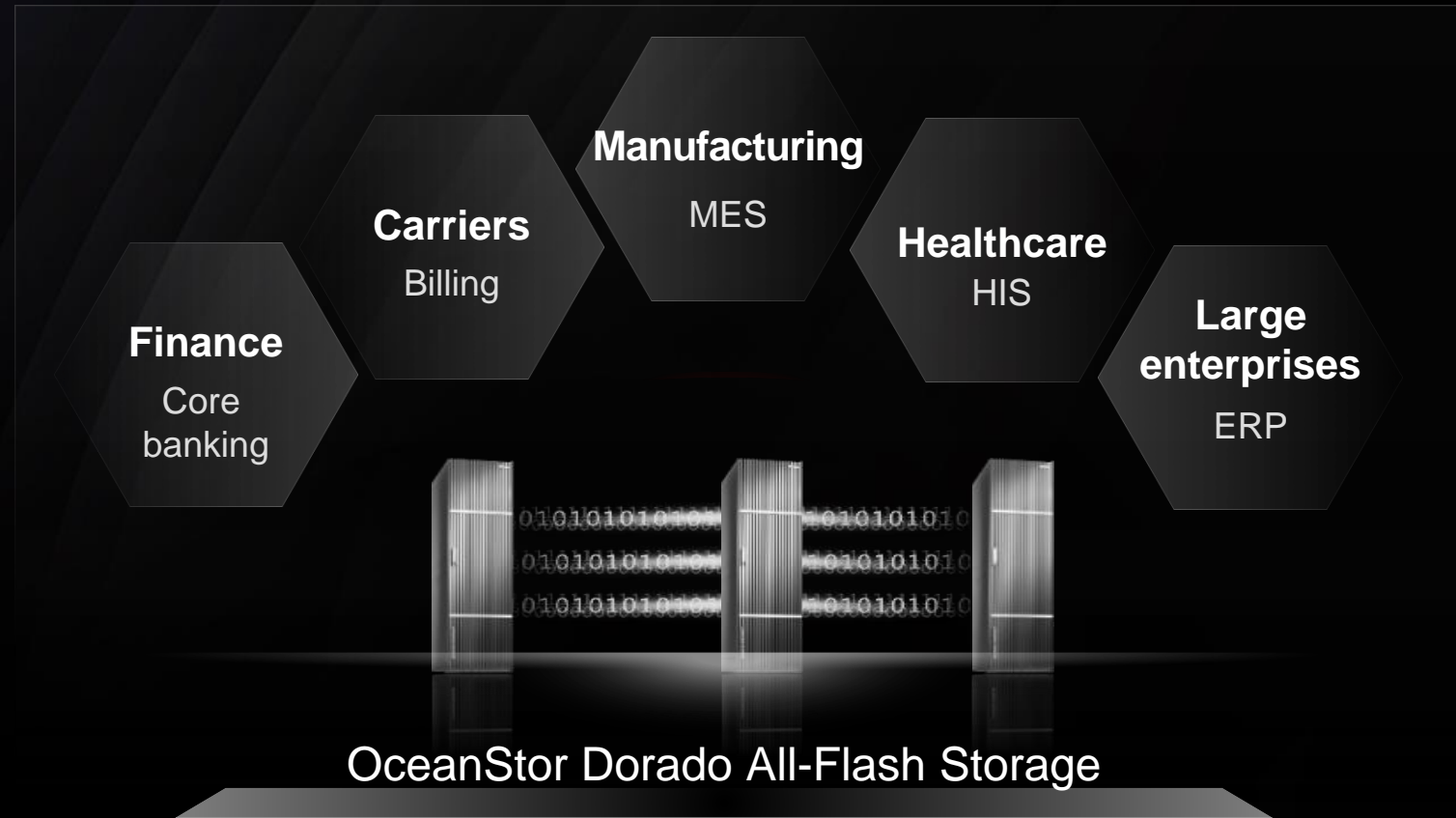
Capability Development

Provision of Comprehensive Storage Products and Solutions to Support Partners' Solution Sales Needs



Supporting free-flow of data in between applications deployed in multi-cloud environment

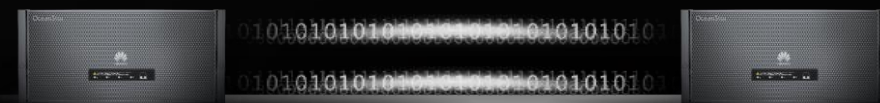
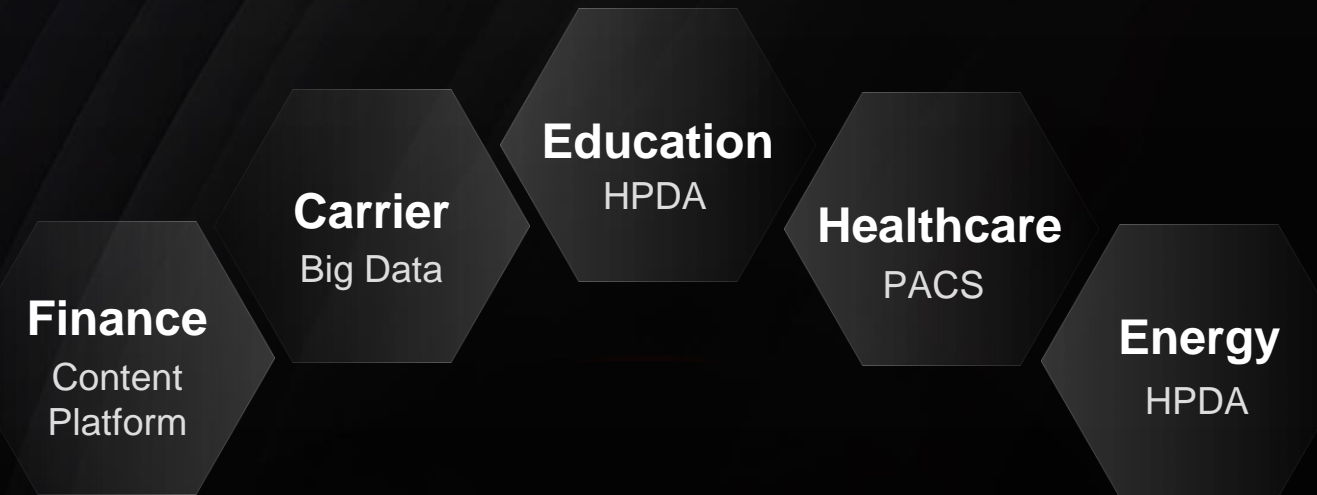
Production and Transactions: OceanStor Dorado with High Performance and Reliability



X Bank in Singapore
Performance 4x↑
Vendor H → Huawei

X manufacturing enterprise in Korea
Small files, performance 28%↑
Vendor N → Huawei

Data Analytics: OceanStor Pacific for High Efficiency and Hybrid Workloads



OceanStor Pacific Scale-out Storage



- Seamless multi-protocol interworking
- 20% higher performance

- Storage capacity per U increased by 20%

- 3 to 12 active DCs
- Fast node switchover in seconds

X DNA research institute in Japan

Performance 15%↑
69GB/s → 80GB/s

X university in Singapore

Performance 3.5x↑
7GB/s → 25GB/s

Backup: OceanProtect with Faster Backup Speed, Higher Data Reduction

From Disk to Flash



Disk



Disk



Tape

Backup performance

3–5x higher bandwidth

Backup costs

Only 10% increase in backup budget

Recovery performance

Data recovery time: ≤ 30 min



Flash



Flash



Anything (tapes, disks, etc.)



OceanProtect Backup Storage

Rapid backup

155
TB/hour

Rapid Recovery

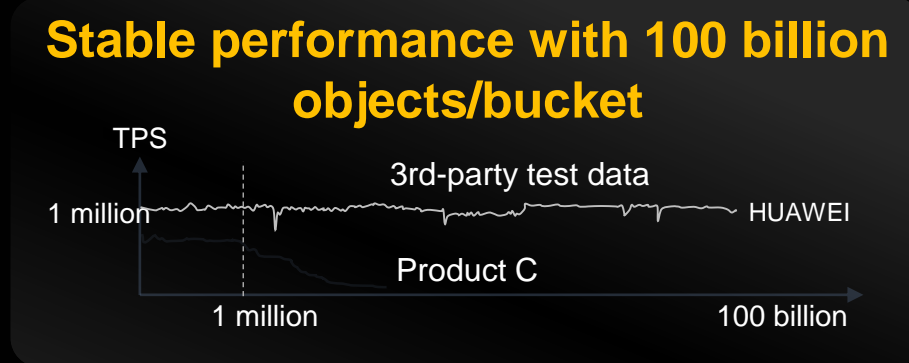
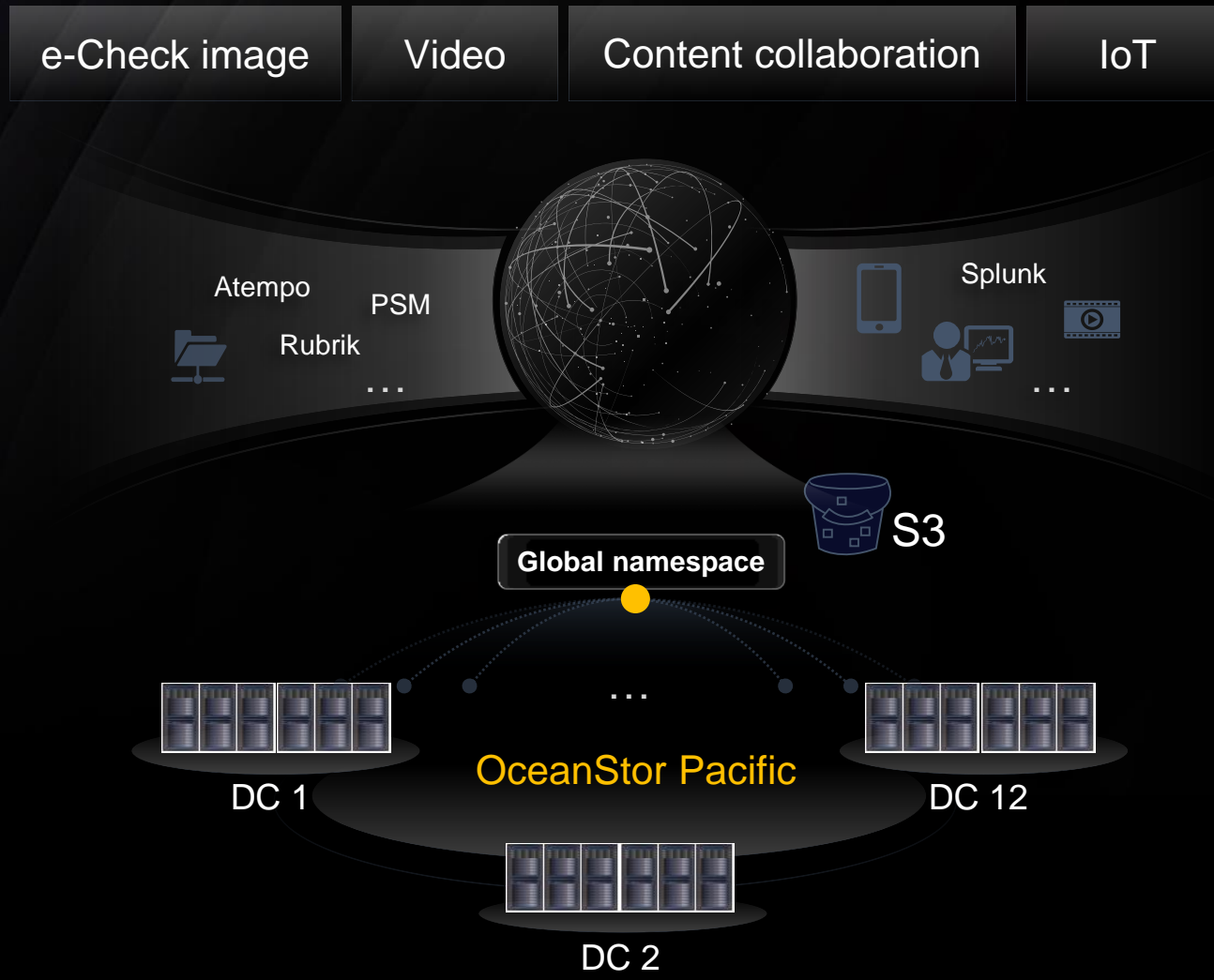
172
TB/hour

Efficient reduction

72:1
data reduction

X bank in Singapore, Vendor I → Huawei, **performance 14x ↑**

Archive: OceanStor Pacific Object Storage with High Reliability and Stable Performance

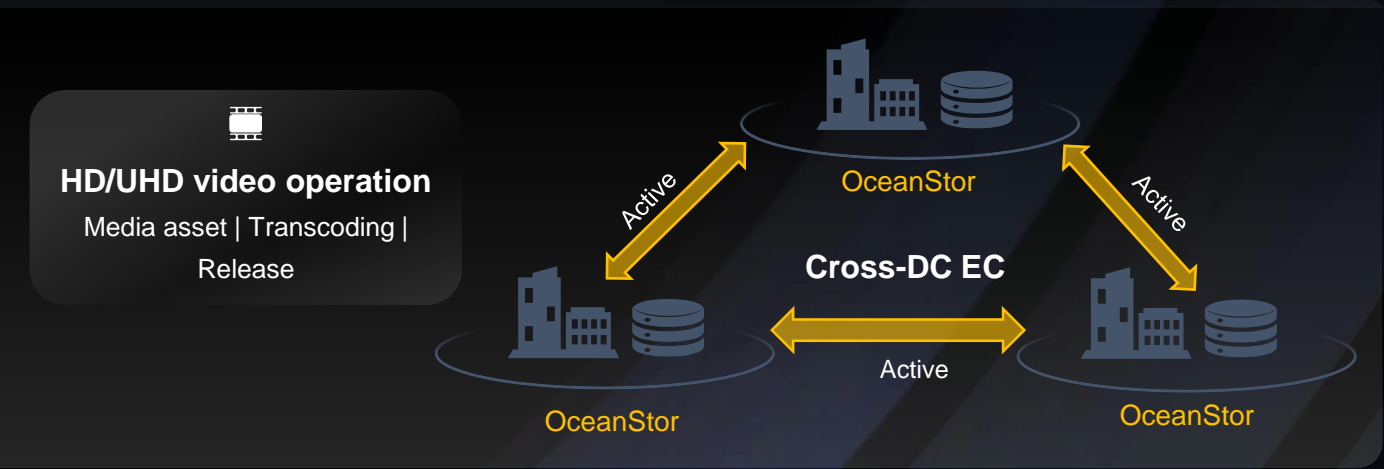


Index searching in seconds

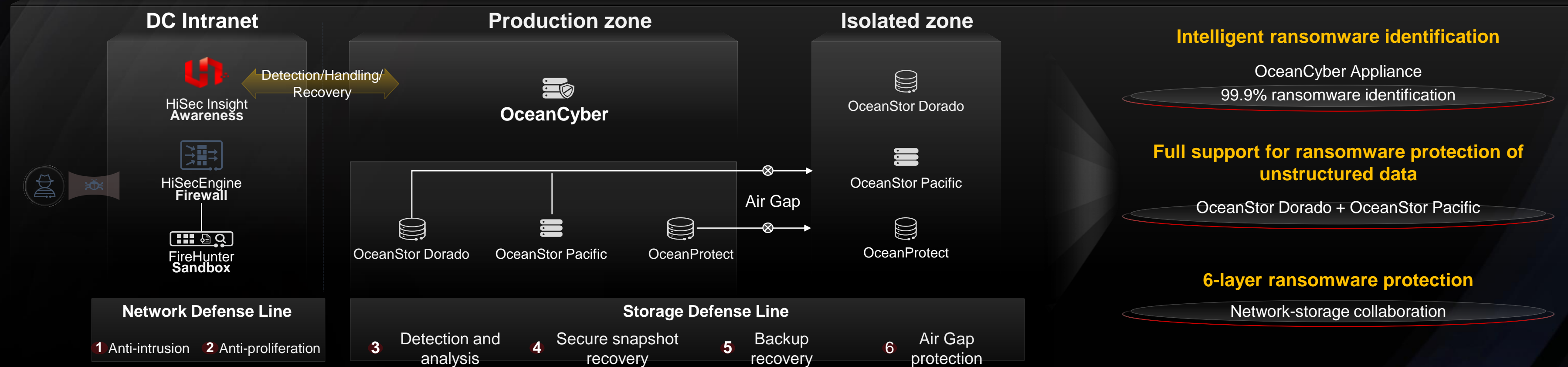
Multiple active DCs for DR

3 active DCs **56%** resource utilization

A large online video carrier with 242 million monthly active users

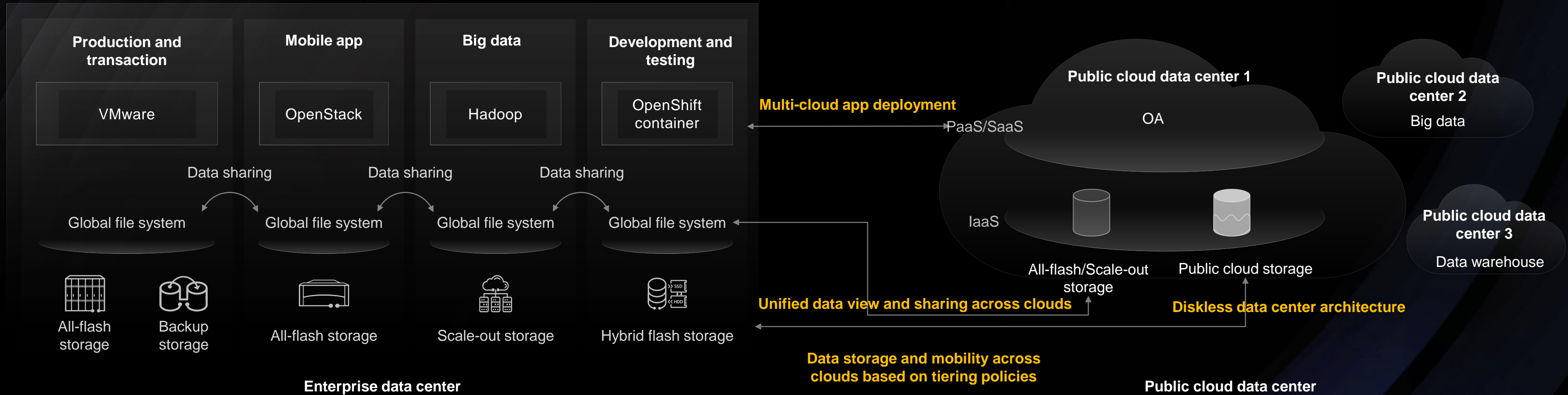


Anti-Ransomware: “Network + Storage” for Multilayer Comprehensive Data Protection



An exclusive anti-ransomware system deployed independently to specifically protect high value data in a Singapore bank

Multi-cloud: Centralized Data Storage Sharing, App Deployment Across Clouds, and cross-cloud data mobility



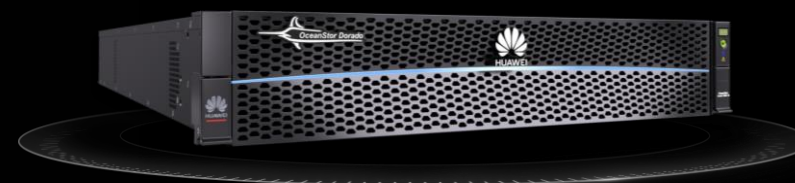
Commercial Market: Cost-effective & Easy-to-use Storage

Industry	Scenario
FSI	SMB Core System
Enterprise	ERP/OA/DB
	File Sharing
Education	OA
	Smart Campus
Medical	HIS
	PACS

All-flash

OceanStor Dorado 2000

Capacity: **10-50TB**



Simple

Service Provisioning
in 3 Steps

Green

30% Lower than
Industry Average

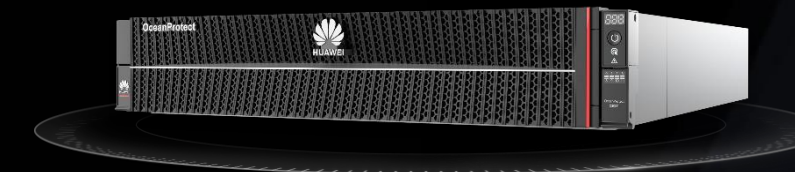
Reliable

99.9999% Reliability
with 4 Reliability Layers

Backup Storage

OceanProtect X3000

Capacity : **16-80TB**



Easy

Proactively Predict
Capacity & Performance

Efficient

Industry-Leading Data
Reduction

Reliable

Industry Only A-A Arch,
Failover in Seconds

“Leads → Relocation → O&M” Tools to Improve Partners' Engagement Efficiently

Explore new opportunity

SmartIDC

IT infra assessment tool

100+

Scoring indicators

Data migration

MigrationDirector

Data migration tool

0 interruption

Heterogeneous SAN migration

Minutes

Heterogeneous NAS migration downtime

Unified and centralized management

Data Management Engine (DME)

Unified data management tool

1 portal

Converged management

<5 min

Demarcation of performance problems

+ <10 min

Performance problem locating

Cloud-based remote O&M

DME IQ

Remote intelligent O&M tool

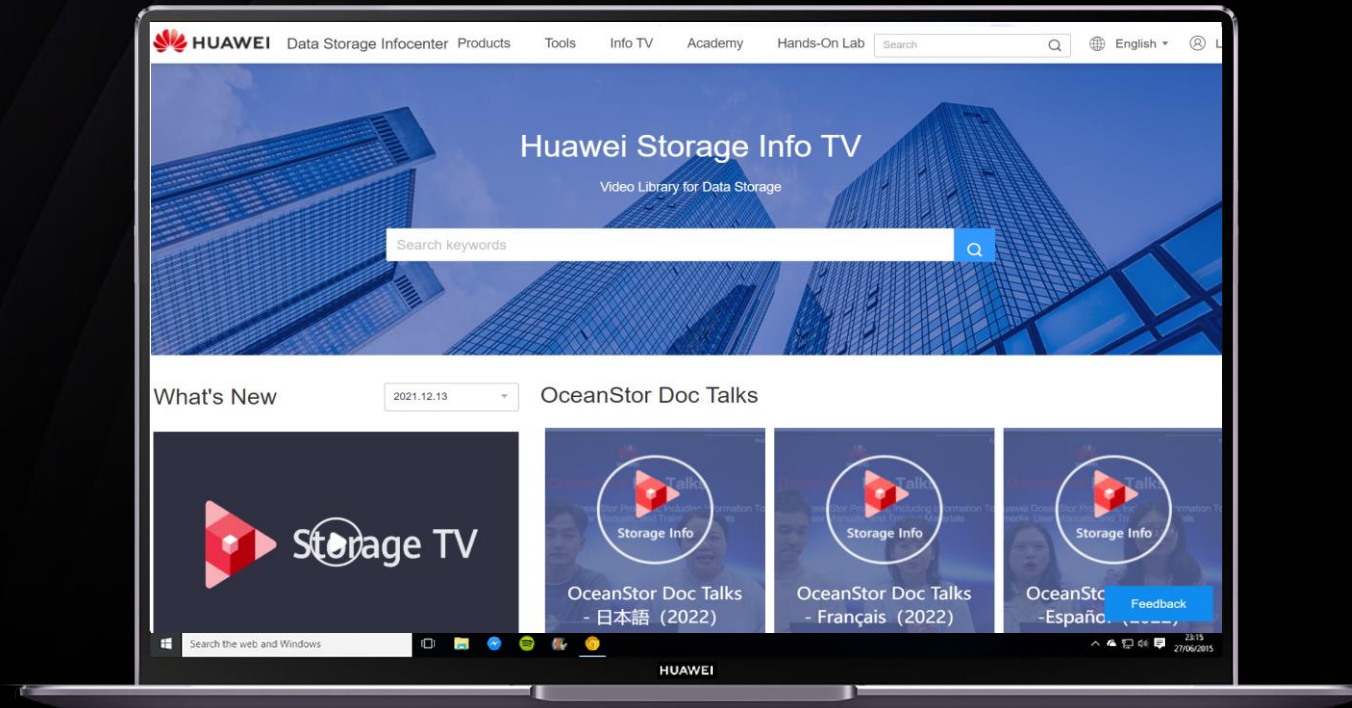
85%

Problems resolved automatically

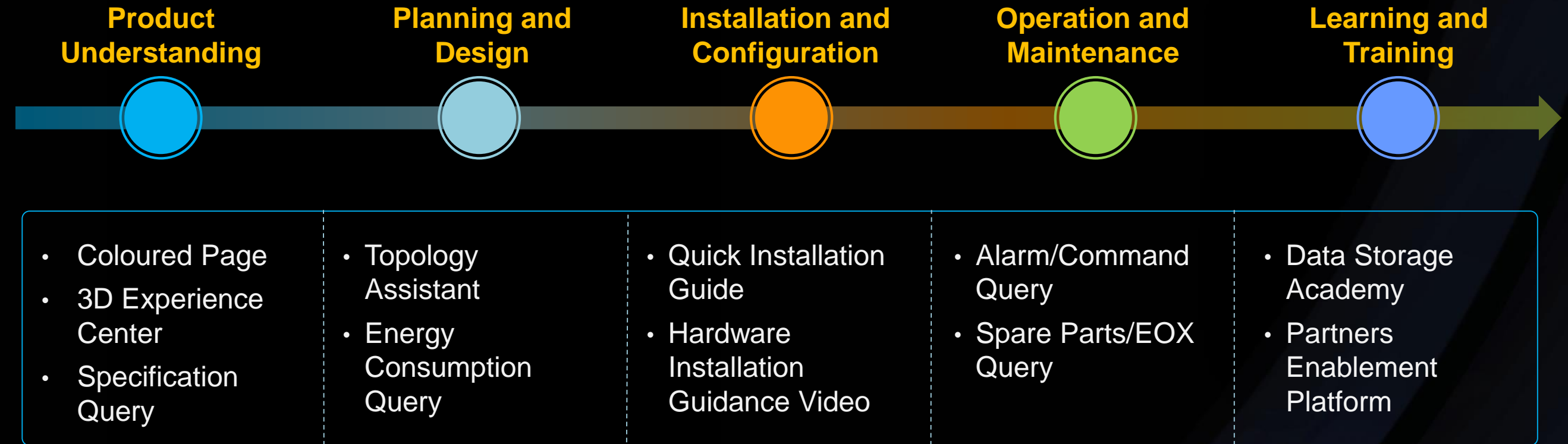
<10 min

Automatic service request creation

Simple and Interactive Documents Platform for Partners



<https://info.support.huawei.com/storage/#/home>



Worry-Free Comprehensive Ecosystem Compatibility

Evaluation organization certification: EANTC, TUV, IT Edge etc

EANTC Test Reports

Oct 2020

Huawei OceanStor V6 All-Flash Storage

Huawei commissioned EANTC to independently verify the interoperability of Huawei OceanStor Dorado V6 All-Flash Storage with EMC's VPLEX block-based storage virtualization solution for the Storage Area Network (SAN). EANTC confirmed key functional interoperability and resiliency aspects, validating that Huawei OceanStor Dorado V6 All-Flash Storage can be provisioned and operated efficiently and reliably through the EMC VPLEX solution.

EANTC Independent Test Report
Huawei OceanStor Interoperability with ZenOSS
November 2020



Zertifikat Certificate

Certificate No. 0 60150215

Best. Since 001

0010--60378391 001

25.06.2020

Geprüftes Produkt (Certificate/Identifikation): Certified Product (Product Identification)

Netzwerk Attached Storage / All-Flash storage system

Type designation: OceanStor Dorado 3000 V6, OceanStor Dorado 5000 V6, OceanStor Dorado 6000 V6, OceanStor Dorado 8000 V6, OceanStor Dorado 18000 V6

IT EDGE PRO
TECHNOLOGY SERVICES

Independent Test Report
Huawei OceanStor Dorado V6
All-Flash Storage interoperability
with ServiceNow

November 2021

Original manufacturer certification: VMware, Microsoft, Commvault, Rubric, EMC Vplex, IBM SVC, Veritas etc

VMware Compatibility

Model: OceanStor Dorado 18000 V6

Manufacturer: Huawei Technologies Co., Ltd

Array Type: FC

Product Id: X901

Vendor Id: HUAWEI

(Storage Virtual Appliance)

Compatible with the following versions of M

- Windows Server 2019 x64
- Windows Server 2016 x64
- Windows Server 2012 R2 x64

COMMVAULT

- HGST ActiveScale
- Hitachi Data Systems Sapphire Lake
- Hitachi Vantara
- Huawei Cloud OBS (Object Storage Service)
- Huawei OceanStor Pacific
- Huawei UDS Massive Storage System
- IBM Cloud Object Storage
- iLand Secure Cloud Object Storage
- Iternity iCAS FS

IBM SVC

Flash System	Dimensions
9200/9100/7200/7000/5100/5030/5010/V9000	8.3 x & 8.4 x
Storage V7000/V5030/V5010	
OceanStor 5300/5500/5600/5800 V5	V500R007
OceanStor Dorado 3000/5000/6000/8000/18000 V6	6.0 x, 6.1 x
OceanStor 5310/5510/5610/6810/18510/18810	6.1 x

Veritas™ Services and Operations Readiness Tools (SORT)

Select a disk array

Manufacturer: Huawei

Device family: OceanStor Dorado V6

Product/Component: InfoScale Availability

Table 4: VPLEX v6.x Arrays (cont.)

Vendor	Model	Firmware
SUN/Oracle	Storage 99xx	Migration only sup
		The arrays are EO

Partner and customer proof: Axians, Hi3G, Chong Hing Bank, etc.

axians Huawei Storage and Veeam Backup and Replication v12 Interoperability Test Report

1 Executive Summary

Axians Global (Axians) assessed the interoperability of Veeam backup and replication version 12 software with Huawei storage solutions including OceanStor Dorado V6, OceanStor Pacific and OceanProtect. The goal of the assessment is to validate that Veeam v12 is interoperable with Huawei storage.

Test Scenario	System Involved	Result
OceanStor Dorado All-Flash Storage	Backup Source – SAN (VMware)	Passed
OceanProtect Backup Storage	Backup Target – NAS	Passed
OceanStor Pacific Series	Backup Target – NAS	Passed
OceanStor Pacific Series	Backup Target – S3 Object Store	Passed

Huawei storage product deployment statement

To Yangchao:

We, **Sweden HI3G Access AB**, in the project **_Production storage Active to Active_**, has manufactured and delivered storages as follows until:

- _Dorado18000V6 NVMe_2 system in Active to Active mode**
- _Oceanstor8005500V3V5_NAS and block_multi designs**

These Huawei storage equipment has been deployed and running normal on following Major IT system, such as **VMware virtualization, Windows, Redhat OS, and Cisco DS SAN switch and Oracle Database.**

We confirm that the current business is stable and related products are compatible.

Huawei Storage Product Deployment Usage Statement

To whom it may concern:

We, **Chong Hing Bank**, have purchased and deployed Huawei storages for our business. The system **Database** configuration as follow:

- Storage: **Huawei OceanStor Dorado 5000 V6**
- Server: **Huawei Z2881 V3**
- Operation System: **Redhat Enterprise Linux**
- Database Software: **Oracle 12c**

We confirm that the mentioned business system is running stable and related products are compatible with each other till now.

[Signature]
07-01-2021 (Date)

Golden Seed Program & HCSX Certification For Partners' Capabilities Improvement



Learning Journey, Culture Journey

- 9 days, 3 cities, high-level visit in China
- Visit Huawei campus and explore more about Huawei
- Starting in Chengdu, and end in Shenzhen, Dongguan
- See China and know more about China



HQ Campus tour



Storage exhibition hall



Chengdu

Dongguan

Shenzhen



Storage R&D Center



High-level technical communication



POC Hands-on Lab



Panda Center

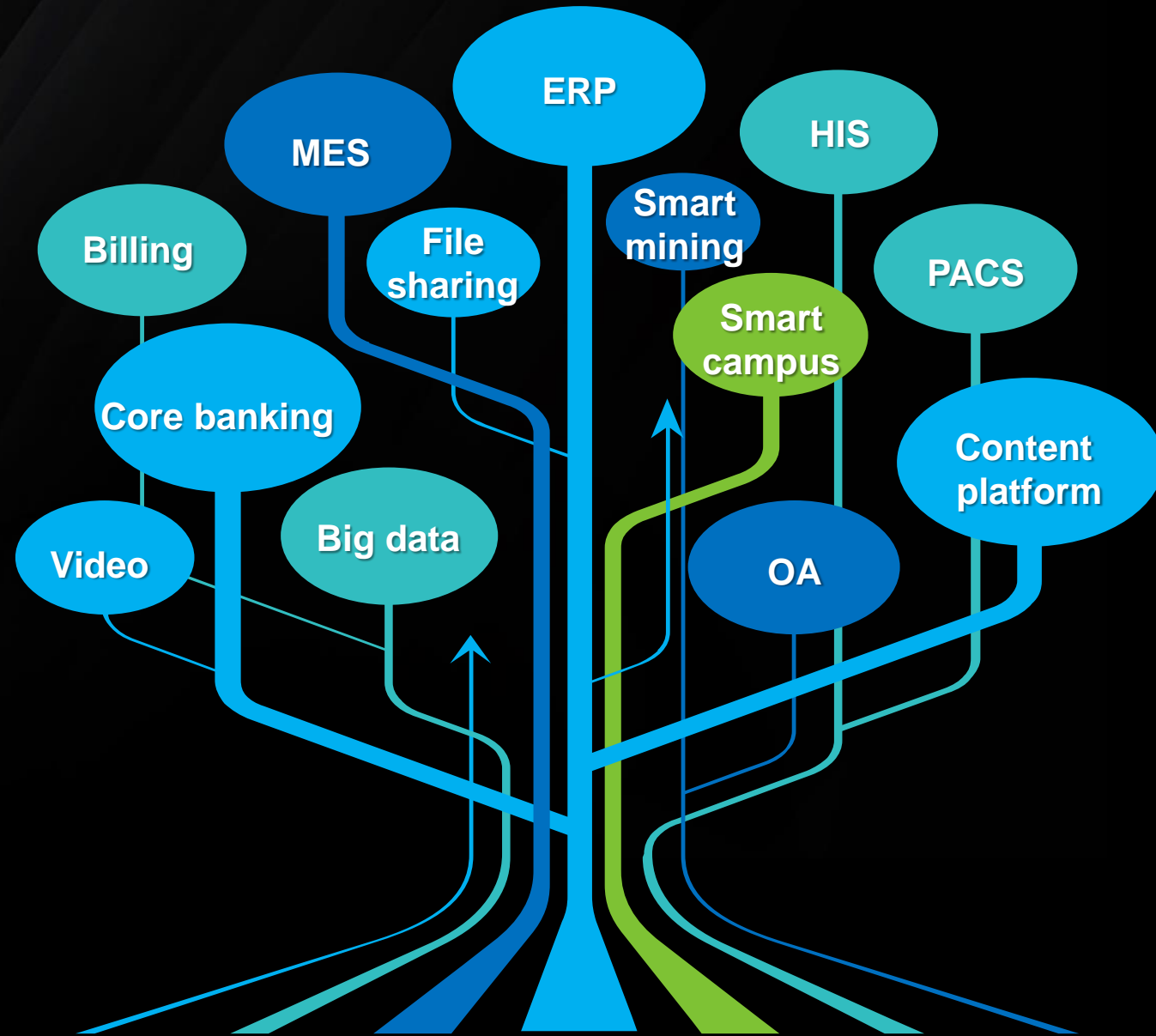


Production line tour

Production Center



Working Together for a New Chapter of Storage



**Diversified
Capability Development**

**Simple and Interactive
Information Platform**

**Worry-Free
Compatibility Certification**

**Comprehensive
Products and Solutions**

**Efficient
Service Tools**

THANK YOU

