Diving into Huawei Cloud

Foreword

- This chapter covers the basic concepts of cloud computing and then provides an in-depth introduction to Huawei Cloud.

HUAWEI

Objectives

- Upon completion of this lesson, you will learn about:

  - Basic concepts of cloud

  - Advantages of cloud

  - Infrastructure of Huawei Cloud

  - Ecosystem policies of Huawei Cloud

  - Log in to Huawei Cloud

Contents

1. Basic Concepts and Values of Cloud Computing

2. Huawei Cloud Infrastructure Architecture

3. Core Services on Huawei Cloud

4. Huawei Cloud Ecosystem

5. Log in to Huawei Cloud

ICT Developments

PCs
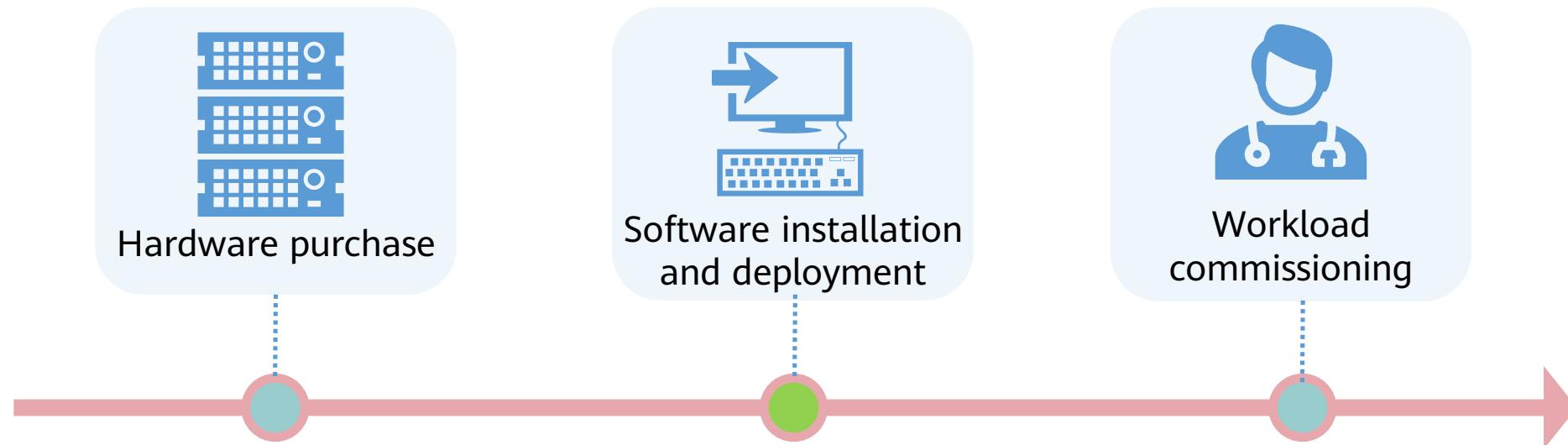
Mobile Internet

Cloud

HUAWEI

# Headaches Caused by Traditional IT Infrastructure

Slow service rollout

Hardware purchase

Software installation
and deployment

Workload
commissioning
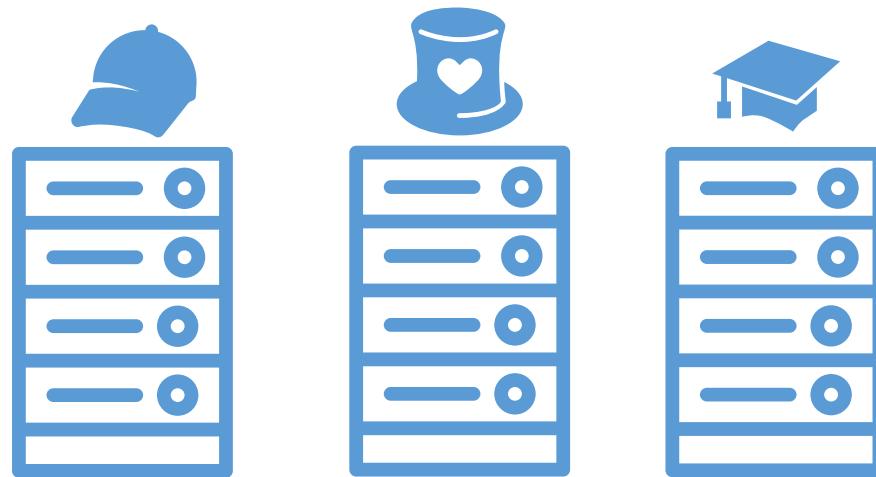
Requires weeks or even months

HUAWEI

Headaches Caused by Traditional IT Infrastructure

Low resource utilization and high TCO
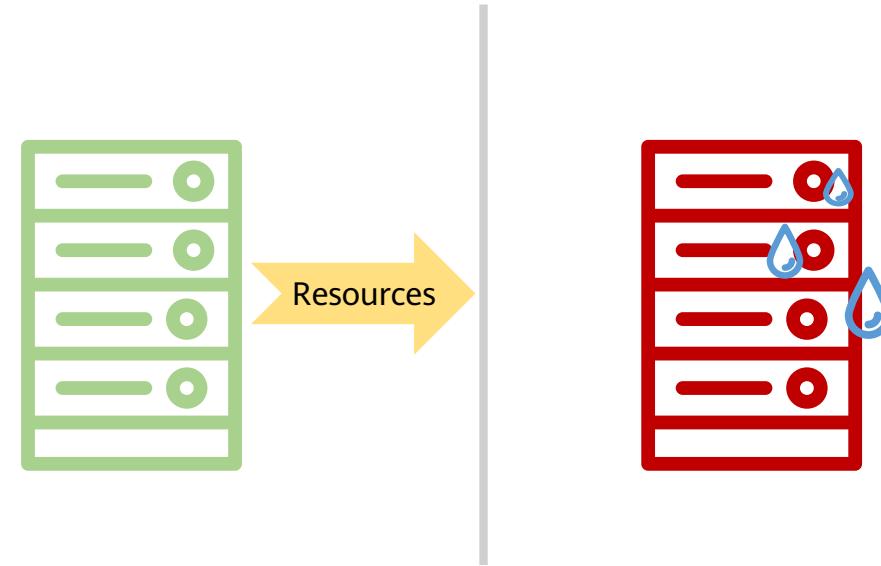
SAP servers   Oracle servers   Web servers
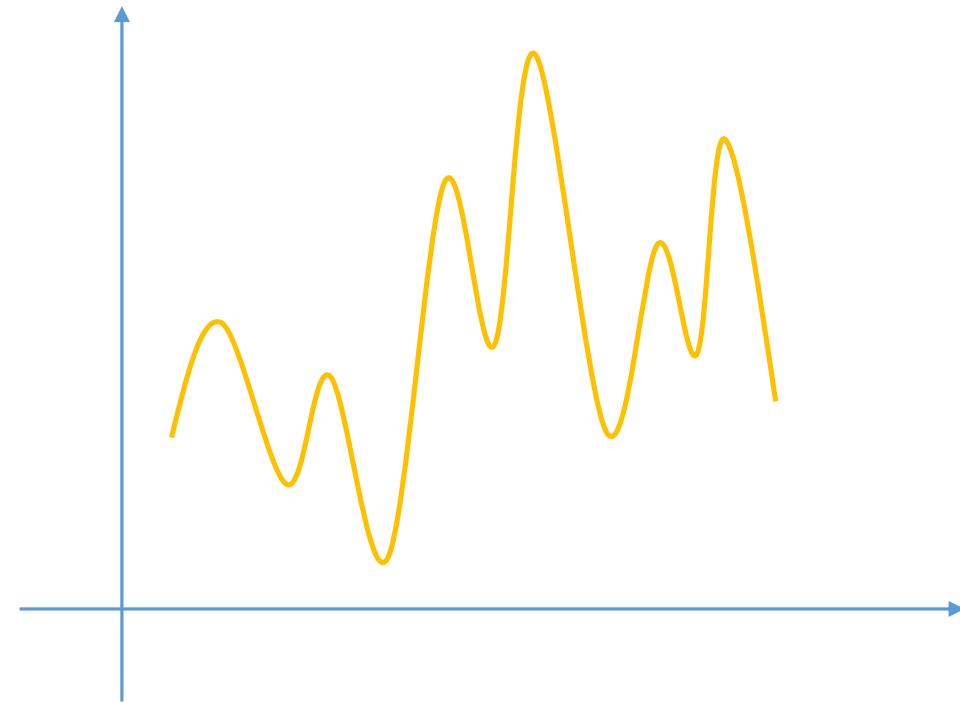
Resources

Hardware resources are used by specific service software, meaning tight hardware-software coupling.
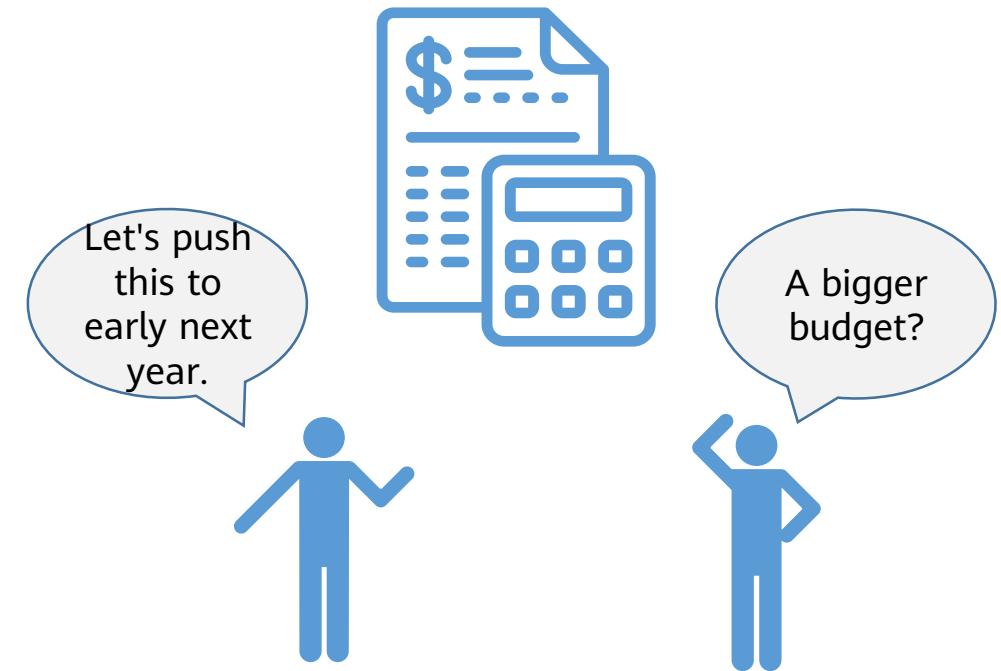
Inflexible resource allocation

HUAWEI

Headaches Caused by Traditional IT Infrastructure

Complex scaling
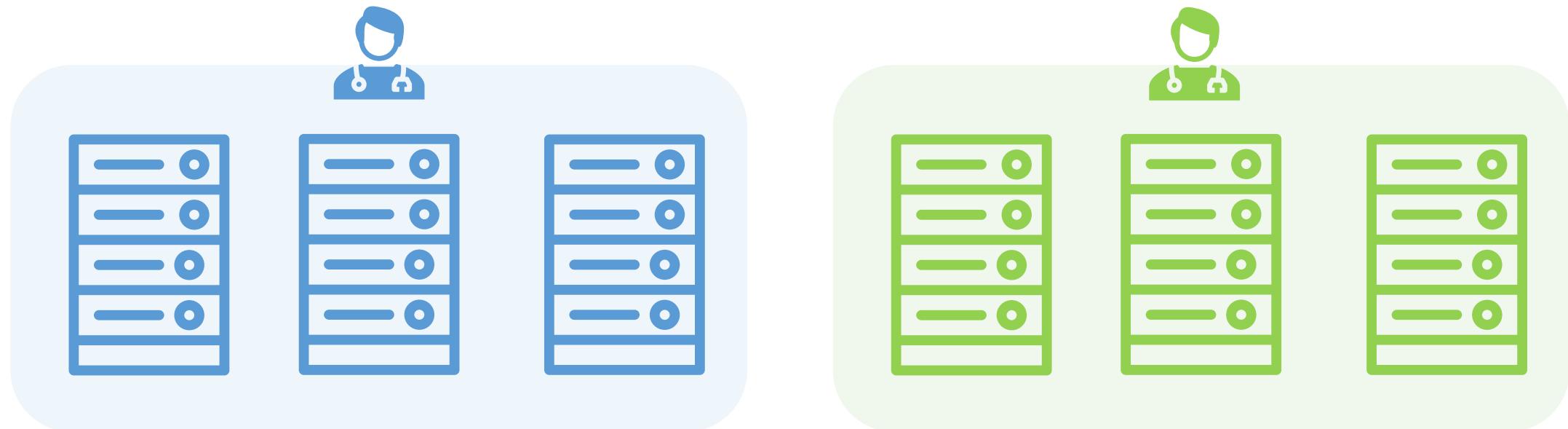
Unpredictable business changes

Let's push this to early next year.

A bigger budget?
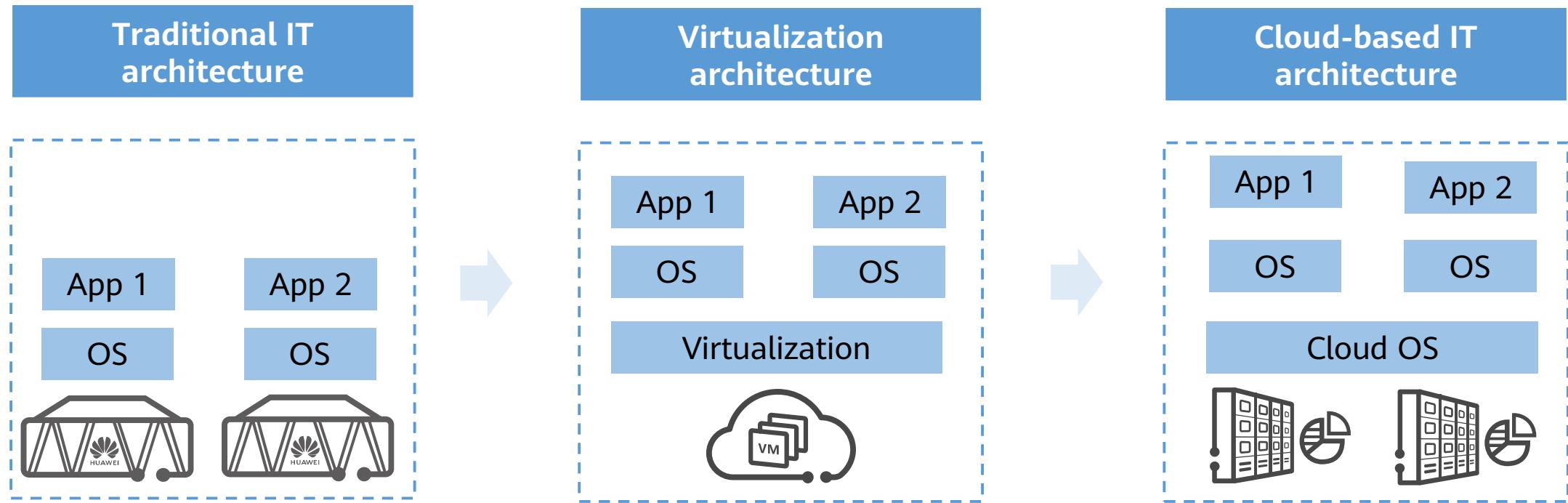
Headaches Caused by Traditional IT Infrastructure

Challenging O&M due to geographically dispersed infrastructure and time-consuming service recovery

Moving IT Architecture to the Cloud

Traditional IT architecture

App 1   App 2

OS   OS

Virtualization architecture

App 1   App 2

OS   OS

Virtualization

VM

Cloud-based IT architecture

App 1   App 2

OS   OS

Cloud OS

HUAWEI
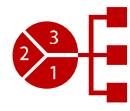
What Is Cloud Computing?

Over the Internet, application programming interfaces (APIs) are used to obtain and schedule resources, making them available to users on an "as needed" basis. Users only pay for the resources they use.

Values of Cloud Computing

Less investment in fixed assets

Abundant resources

Quick resource acquisition

New O&M methods
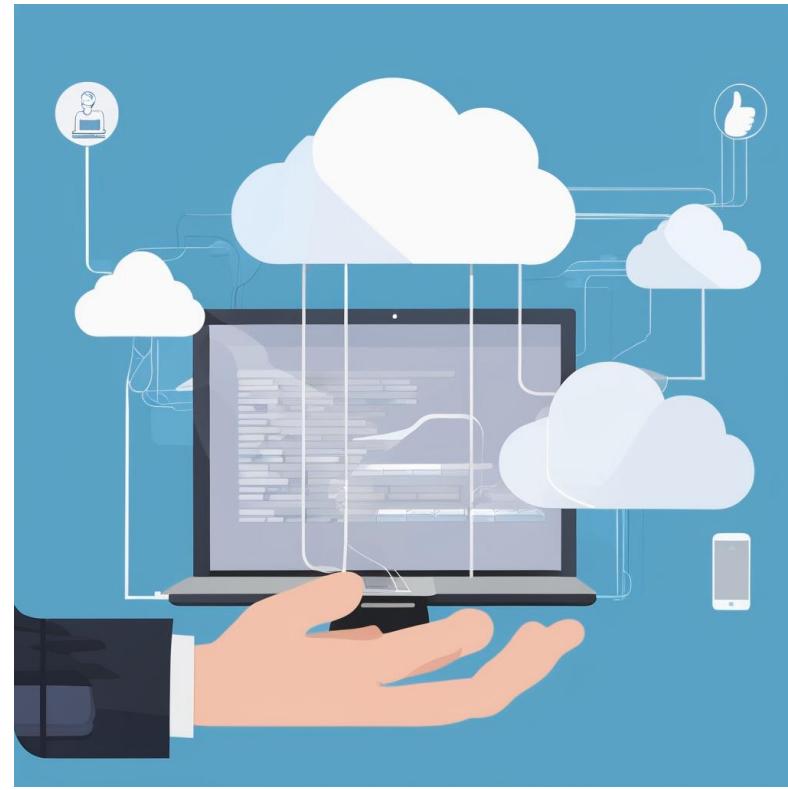
No guessing of required capacity
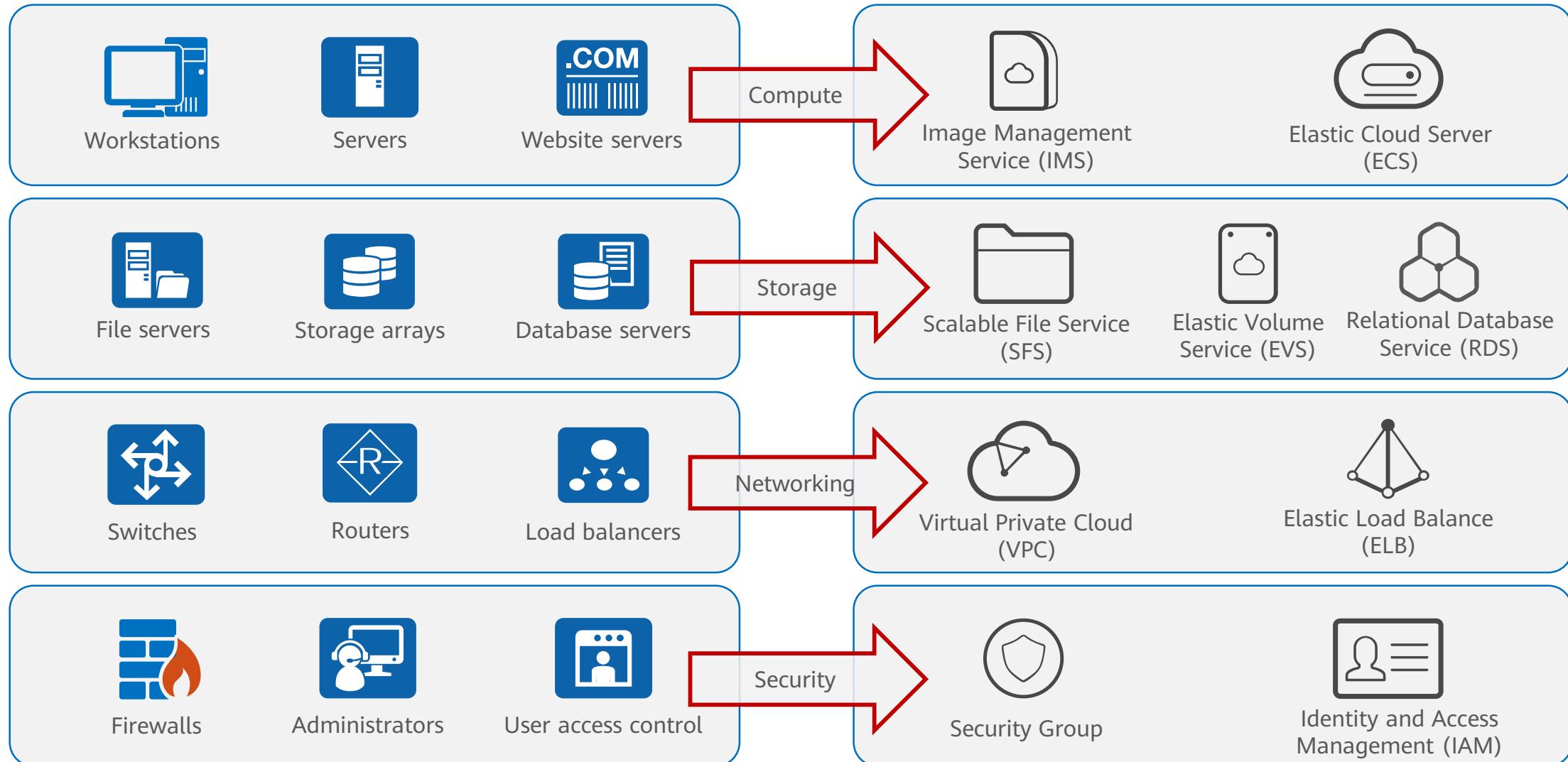
Operations across geographical locations

HUAWEI

What Are Cloud Services?
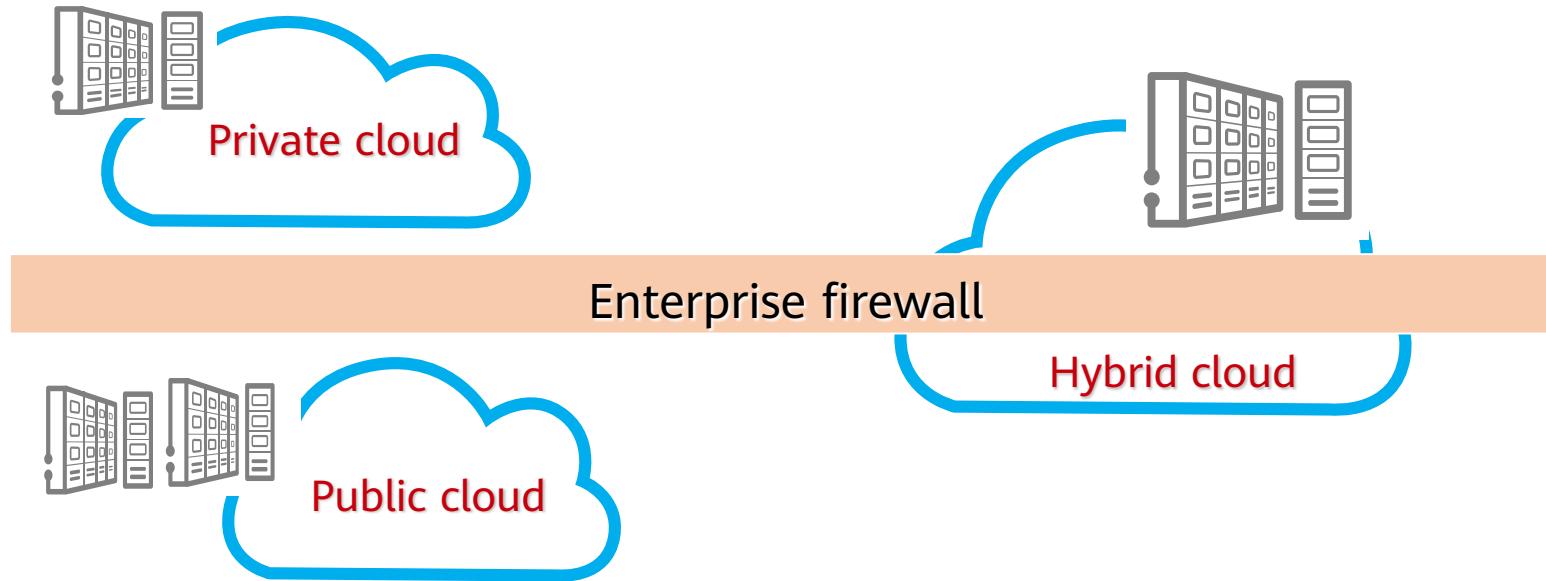
- Cloud services are an on-demand and measurable IT service model underpinned by cloud computing architecture.

Huawei Cloud Services for Common Components

Workstations | Servers | Website servers → **Compute** → Image Management Service (IMS) | Elastic Cloud Server (ECS)

File servers | Storage arrays | Database servers → **Storage** → Scalable File Service (SFS) | Elastic Volume Service (EVS) | Relational Database Service (RDS)

Switches | Routers | Load balancers → **Networking** → Virtual Private Cloud (VPC) | Elastic Load Balance (ELB)

Firewalls | Administrators | User access control → **Security** → Security Group | Identity and Access Management (IAM)

HUAWEI

Cloud Deployment Models

Private cloud

Enterprise firewall

Hybrid cloud

Public cloud

Private cloud: Owned and managed for exclusive use by a single organization
Public cloud: Owned and managed by a third-party cloud service provider and shared with multiple organizations over the Internet
Hybrid cloud: A combination of public and private clouds, viewed as a single cloud externally
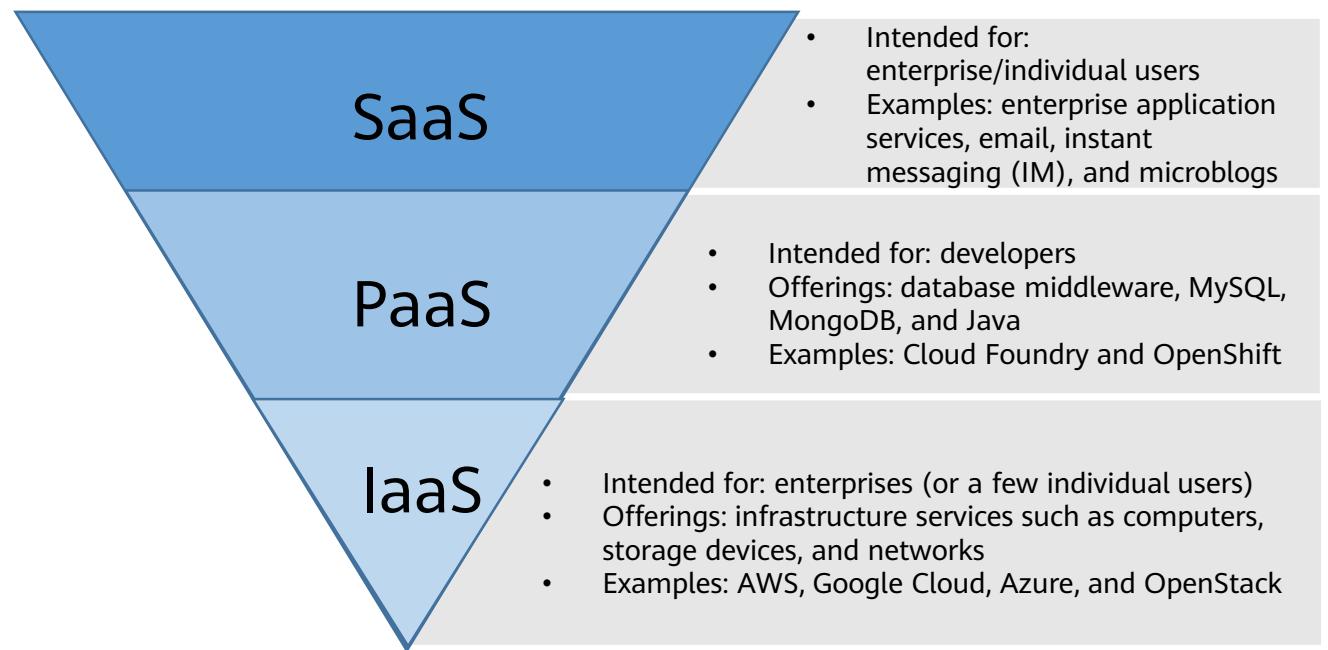
HUAWEI

Cloud Service Models

Cloud service models are ever-evolving. Generally there are three types:

- Infrastructure as a service (IaaS)

- Platform as a service (PaaS)

- Software as a service (SaaS)
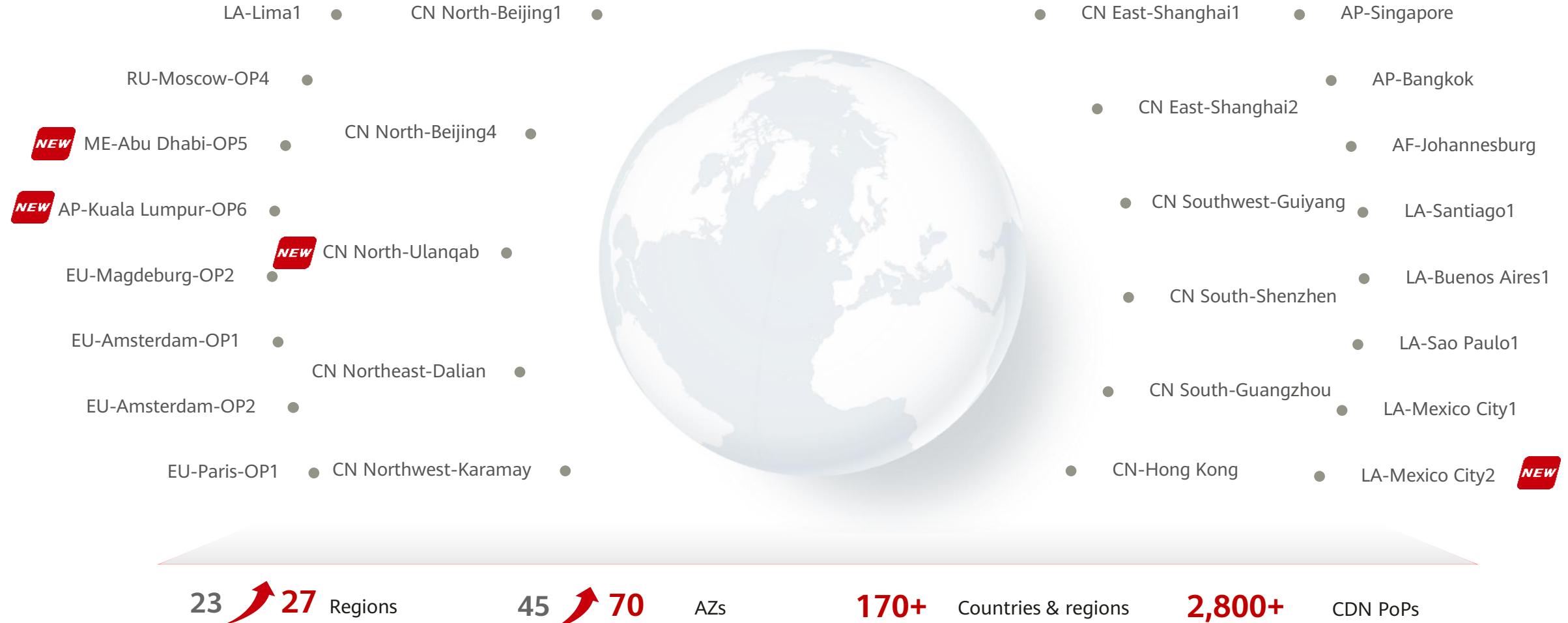
| SaaS	• Intended for: enterprise/individual users • Examples: enterprise application services, email, instant messaging (IM), and microblogs
PaaS	• Intended for: developers • Offerings: database middleware, MySQL, MongoDB, and Java • Examples: Cloud Foundry and OpenShift
IaaS	• Intended for: enterprises (or a few individual users) • Offerings: infrastructure services such as computers, storage devices, and networks • Examples: AWS, Google Cloud, Azure, and OpenStack

HUAWEI

Contents

1. Basic Concepts and Values of Cloud Computing

2. **Huawei Cloud Infrastructure Architecture**

3. Core Services on Huawei Cloud
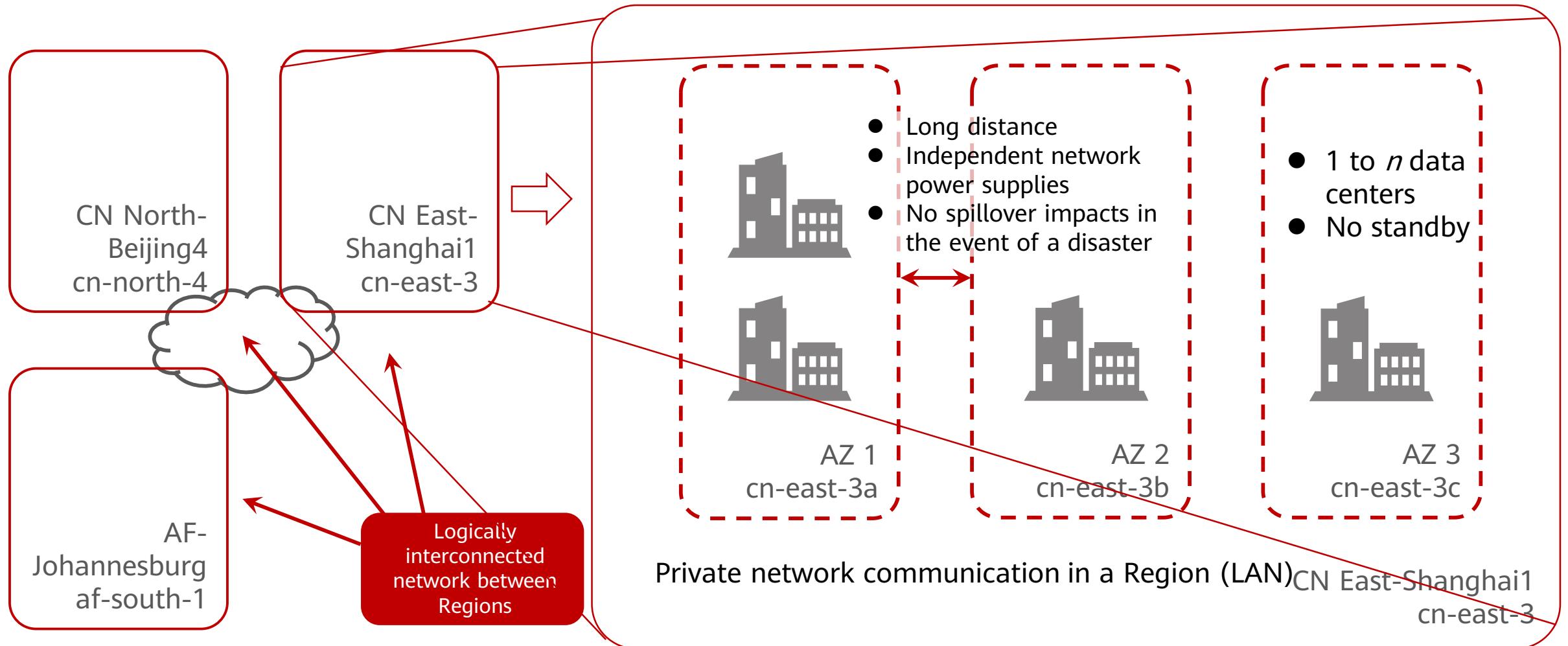
4. Huawei Cloud Ecosystem

5. Log in to Huawei Cloud
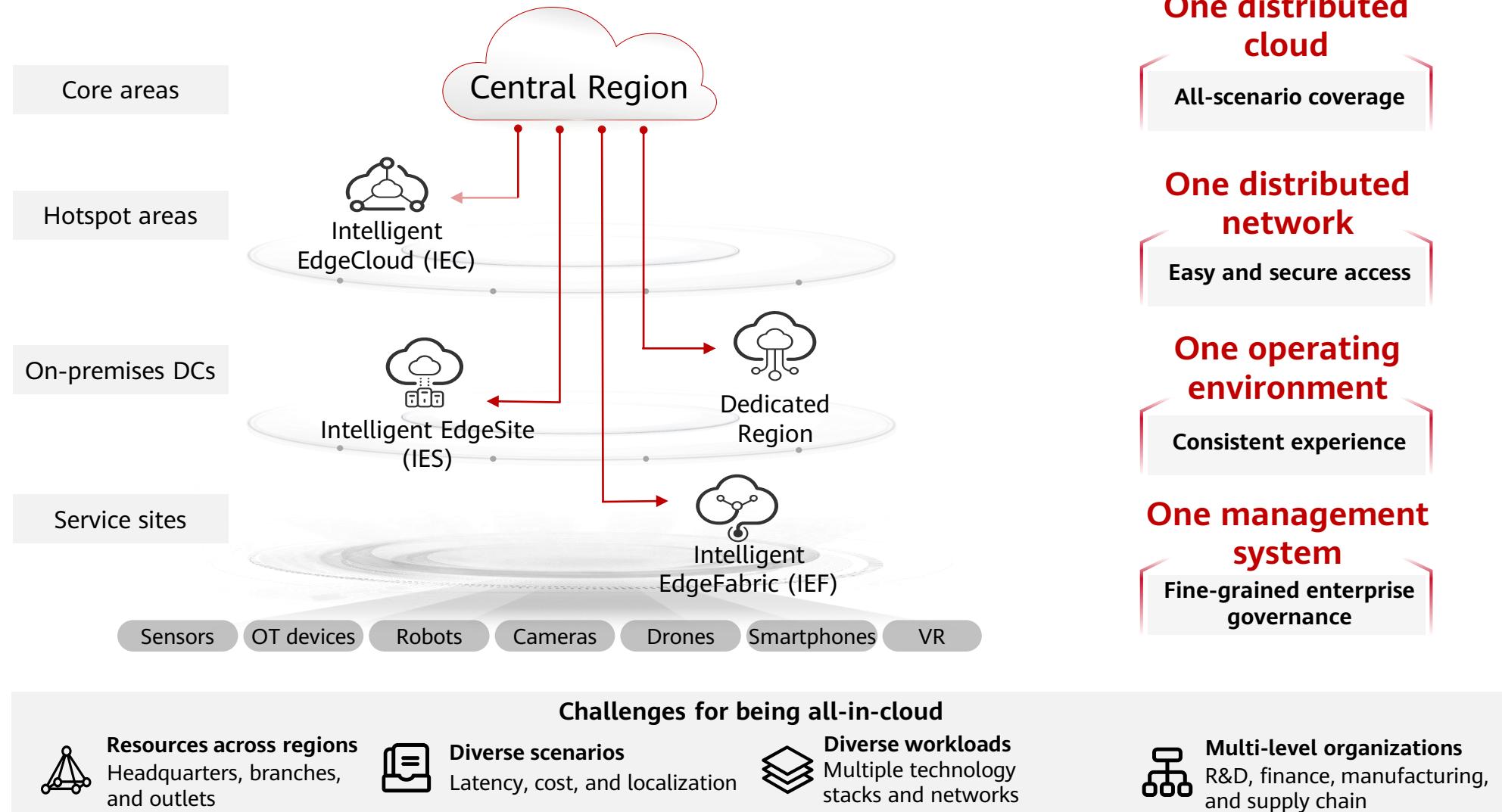
Huawei Cloud's Global Presence for One-Stop Services

LA-Lima1
CN North-Beijing1
CN East-Shanghai1
AP-Singapore

RU-Moscow-OP4
AP-Bangkok
CN East-Shanghai2

NEW ME-Abu Dhabi-OP5
CN North-Beijing4
AF-Johannesburg

NEW AP-Kuala Lumpur-OP6
CN Southwest-Guiyang
LA-Santiago1

NEW CN North-Ulanqab
EU-Magdeburg-OP2
LA-Buenos Aires1

CN South-Shenzhen

EU-Amsterdam-OP1
LA-Sao Paulo1

CN Northeast-Dalian

EU-Amsterdam-OP2
CN South-Guangzhou
LA-Mexico City1

EU-Paris-OP1
CN Northwest-Karamay
CN-Hong Kong
LA-Mexico City2 **NEW**

23 ➚ **27** Regions   45 ➚ **70** AZs   **170+** Countries & regions   **2,800+** CDN PoPs

HUAWEI

Huawei Cloud Infrastructure Architecture

CN North-Beijing4
cn-north-4

CN East-Shanghai1
cn-east-3

AF-Johannesburg
af-south-1

Logically interconnected network between Regions

- Long distance
- Independent network power supplies
- No spillover impacts in the event of a disaster

- 1 to n data centers
- No standby

AZ 1
cn-east-3a

AZ 2
cn-east-3b

AZ 3
cn-east-3c

Private network communication in a Region (LAN)

CN East-Shanghai1
cn-east-3

HUAWEI

Infrastructure at All Levels Extends to All Scenarios

Core areas

Hotspot areas

On-premises DCs

Service sites

Central Region

Intelligent EdgeCloud (IEC)

Intelligent EdgeSite (IES)

Dedicated Region

Intelligent EdgeFabric (IEF)

Sensors | OT devices | Robots | Cameras | Drones | Smartphones | VR

One distributed cloud

All-scenario coverage

One distributed network

Easy and secure access

One operating environment

Consistent experience

One management system

Fine-grained enterprise governance

Challenges for being all-in-cloud

Resources across regions
Headquarters, branches, and outlets

Diverse scenarios
Latency, cost, and localization

Diverse workloads
Multiple technology stacks and networks

Multi-level organizations
R&D, finance, manufacturing, and supply chain

HUAWEI

Contents

Core Service: Computing Cloud Service

Elastic Cloud Server
ECS

Image Management Service
IMS
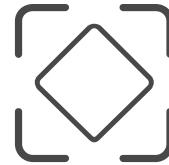
Auto Scaling
AS
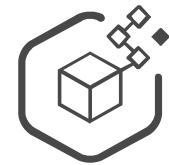
Core Service: Container Service

SoftWare Repository for
Container
SWR

Cloud Container Engine
CCE

Cloud Container Instance
CCI

HUAWEI

Core Service: Storage Service

Object Storage Service
OBS
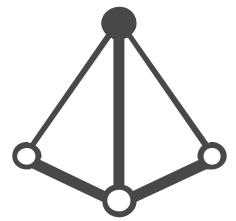
Elastic Volume Service
EVS
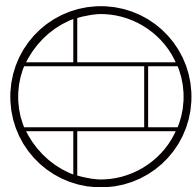
Scalable File Service
SFS

Core Service: Network Service

Elastic Load
Balance
ELB
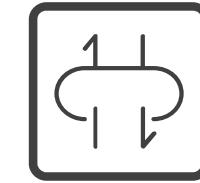
Network ACL

Elastic IP
Address
EIP

Virtual Private Cloud
VPC

Network
Address
Translation
Gateway
NAT Gateway
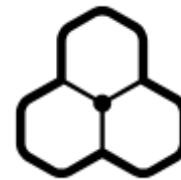
VPC Peering

Core Service: Database Service

Cloud Database
GaussDB

Relational Database Service
RDS
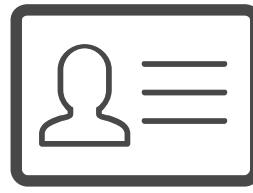
Cloud-native multi-model database
GeminiDB

Core Service: Security and Management Service

Data encryption
Workshop
DEW

Identity & Access
Management
IAM

Cloud Trace Service
CTS

HUAWEI

Contents

1. Basic Concepts and Values of Cloud Computing

2. Huawei Cloud Infrastructure Architecture

3. Core Services on Huawei Cloud

4. **Huawei Cloud Ecosystem**

5. Log in to Huawei Cloud

Huawei Cloud Ecosystem Framework

Build the optimal service flow and platform for ecosystem enablement and value monetization to maximize the value of every dollar spent by Huawei Cloud.

Diverse flexible business models, abundant categories, enhanced branding for user attraction, and B2B and B2D one-stop services
Perform joint operations and share profits to increase the overall Gross Merchandise Volume (GMV) of cloud services to enhance reputation and build success in B2B and B2D markets.

3 Industry's best marketplace

Developers

1

Developer platform: **gathering an enormous number of developers and building abundant applications**

Huawei Cloud Developer Institute: abundant learning resources and talent pools for universities and industries

Build the best-in-class development platform for tens of millions of developers and massive applications, as well as talent pools for universities and industries.

Partners

2

Guide partners' transformation based on the partner competencies defined by Huawei Cloud, and **cultivate and attract even more competent partners**.

Establish a process mechanism to **help partners build diverse solutions with Huawei Cloud** and accelerate monetization for partners.

GoCloud: identifying and upskilling partners

Sharpen the edge of joint solutions to accelerate monetization for partners

HUAWEI

Upskilling Developers on the Cloud with Comprehensive Services and Diverse Enablement

Expertise → **Learning** → **Usage** → **Innovation** → **Commercialization**

Expertise

- Developer events
- Developer contests
- Enablement activities

Technology promotion

- Executives — 鲁班会
- Experts — HCDE (Huawei Cloud Developer Experts)
- Cities — HCDG (Huawei Cloud Developer Group)
- Universities — HCSD (Huawei Cloud Student Developers)

Developer circles

Learning

Comprehensive knowledge center

Popular technical fields:
- Cloud architecture
- AI
- Big data
- Cloud native
- IoT
- Cloud migration
- GaussDB
- OS

KooLabs · OJ · Huawei Cloud Developer Institute · KooEdx · CDP

Trustworthy certification system

- Associate
- Professional
- Expert

Huawei Cloud Developer Certification

Usage

DataArts Studio — Data governance pipeline

ModelArts — AI development pipeline

MetaStudio — Digital content production pipeline

CodeArts — Software development pipeline

"3C" experience
- Content Docs and tutorials
- Community Technical support
- Code Tools

Innovation

Huawei Cloud Developer Program
Play a part in the Huawei Cloud ecosystem

- Enterprises
- Universities
- Individual developers

Developer innovation center
Real-world innovation + Industry upgrade

Developer technical support engineers (DTSEs)
Safeguarding software development

- Technical selection
- Software design
- Software R&D
- Software release and commercialization

Commercialization

Faster monetization in multiple ways
Streamlining the last mile of business success

1. Release on Huawei Cloud KooGallery
2. Release on Huawei Cloud cross-border e-commerce platform
3. Integration with Huawei foundation solutions

HUAWEI

Huawei Cloud Partner System: Helping Partners Build Capabilities and Solutions to Make Customers Happier

Huawei Cloud partner network

A unified partner identity

GoCloud

Offering creation

Partner support platforms

Cash coupons

PSA

Training and certification

Huawei Cloud certification

Product capabilities

Industry competencies

Scorecard

Capabilities

Success stories

Assessment

GrowCloud

Partner programs

Partner programs

Transaction roles

Cloud solution provider

Distributor

Incentives

Commercial incentive policies

System Integrator (SI)

Software Partner

Service Partner

Device Partner

Learning Partner

Distributor

1 identity

2 collaboration frameworks

6 roles

HUAWEI

Huawei Cloud KooGallery: Accelerating Digital Transformation and Building an Innovative Application Ecosystem

Connecting sellers across industries to offer high-quality products and services

Connecting customers to help them meet their application requirements during digital transformation

Huawei Cloud KooGallery

| Abundant applications | Enhanced reliability | Premium services | Global reach |

Partner success

One-stop operations for sellers

Build a prosperous application ecosystem and help partners achieve success

One-stop shop for customers

Enable industries and accelerate digital transformation of organizations

Customer satisfaction

11 delivery methods

SaaS	License	API
AI asset	Data asset	Application orchestration	Container
Image	Professional service	Hardware cloud service	Application asset

14 horizontal domains

ERP	Office software	OA	Video management	Big data
AI	Customer acquisition	DR and backup	WAF	Digital twins
Open-source images	Identity authentication	Finance	Education	

Our presence

Smart manufacturing	Smart city	Transportation & logistics	Gaming
Education	Healthcare	Smart campus	Media & entertainment
Government cloud	Retail & e-commerce	More	

Connect partners and customers, provide high-quality cloud products, and work with partners to facilitate the digital journeys of organizations

HUAWEI

Contents

1. Basic Concepts and Values of Cloud Computing

2. Huawei Cloud Infrastructure Architecture

3. Core Services on Huawei Cloud

4. Huawei Cloud Ecosystem

5. **Log in to Huawei Cloud**

HUAWEI

Registering a Huawei Cloud Account
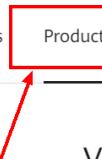
Huawei Cloud Official Website: https://www.huaweicloud.com/intl/en-us/

Huawei Cloud Product Catalog

Huawei Cloud Console

Section Summary

- Basic concepts of cloud computing

- Values of cloud computing

- Infrastructure of Huawei Cloud

- Ecosystem policies of Huawei Cloud

- Log in to Huawei Cloud

Quiz

What are the deployment models of cloud computing? (   )

    A. Public cloud

    B. Private cloud

    C. Hybrid cloud

    D. Community/Industry cloud

Acronyms and Abbreviations

- AZ: availability zone

- IaaS: infrastructure as a service

- PaaS: platform as a service

- SaaS: software as a service

Recommendations

- Huawei Cloud websites

    - Huawei Cloud: https://www.huaweicloud.com/intl/en-us/

    - Huawei Cloud Developer Institute: https://edu.huaweicloud.com/intl/en-us/

Huawei Cloud
Developer Institute

Thank You.

HUAWEI CLOUD
EVERYTHING AS A SERVICE

www.huaweicloud.com