



Huawei Career Certification Brochure

A Brighter Future with Huawei Certification

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HUAWEI TECHNOLOGIES CO., LTD.





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Huawei Certification

1 Who is Huawei

Founded in 1987, Huawei is a leading global provider of information and communications technology (ICT) infrastructure and smart devices. We have approximately 195,000 employees and we operate in over 170 countries and regions, serving more than three billion people around the world.

Huawei’s mission is to bring digital to every person, home and organization for a fully connected, intelligent world. To this end, we will: drive ubiquitous connectivity and promote equal access to networks to lay the foundation for the intelligent world; provide the ultimate computing power to deliver ubiquitous cloud and intelligence; build powerful digital platforms to help all industries and organizations become more agile, efficient, and dynamic; redefine user experience with AI, offering consumers more personalized and intelligent experiences across all scenarios, including home, travel, office, entertainment, and fitness & health.

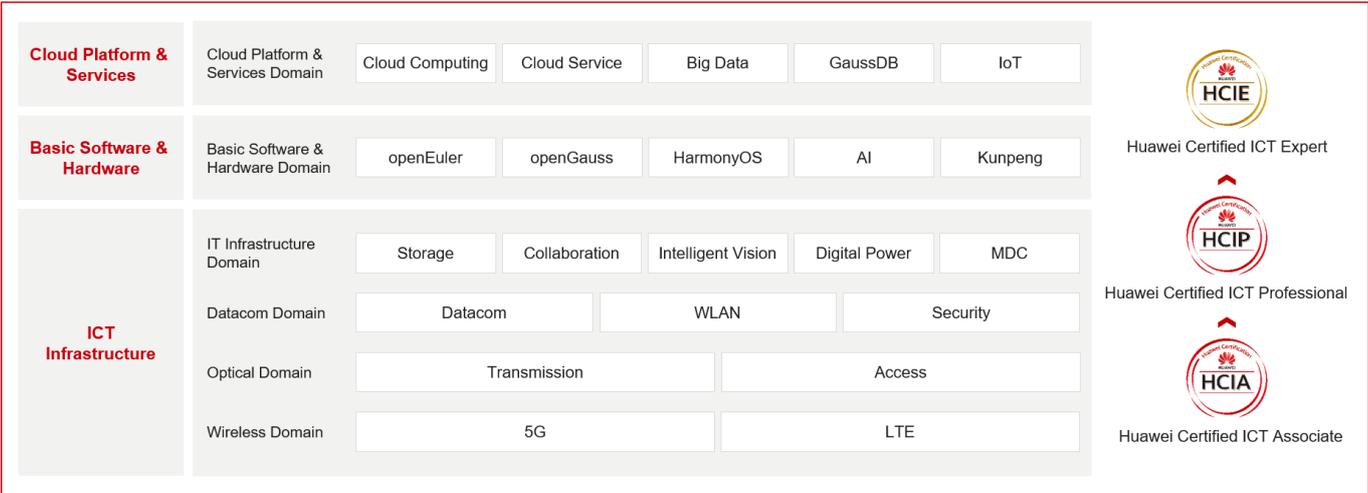
2 About Huawei Certification Service

Huawei Certification is an integral part of the company's "Platform + Ecosystem" strategy, and it supports the ICT infrastructure featuring "Cloud-Pipe-Device". It evolves to reflect the latest trends of ICT development. Huawei Certification consists of three categories: ICT Infrastructure Certification, Basic Software & Hardware Certification, and Cloud Platform & Services Certification, making it the most extensive technical certification program in the industry.

Huawei offers three levels of certification: Huawei Certified ICT Associate (HCIA), Huawei Certified ICT Professional (HCIP), and Huawei Certified ICT Expert (HCIE).

Huawei Certification covers all ICT fields and adapts to the industry trend of ICT convergence. With its leading talent development system and certification standards, it is committed to fostering new ICT talent in the digital era, and building a sound ICT talent ecosystem.

Huawei Career Certification





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About Huawei Certification



- **Huawei Certified ICT Expert (HCIE)**, Huawei's highest level of ICT technical certification, is awarded to people who demonstrate especially strong expertise in ICT and rich experience in practice.
- **Huawei Certified ICT Professional (HCIP)**, is awarded to senior engineers with rich ICT knowledge and strong experience in an ICT technical field.
- **Huawei Certified ICT Associate (HCIA)** is awarded to engineers who can install, configure, and run ICT devices, and rectify faults in a technical field.

ICT Infrastructure focuses on the hardware components of ICT infrastructure and provides certifications in 4 technology domains: Wireless Domain, Optical Domain, Datacom Domain, and IT Infrastructure Domain. Those successful in attaining ICT Infrastructure certification will be able to demonstrate knowledge of ICT infrastructure planning, construction, and maintenance.

Basic Software & Hardware focuses on both the hardware and software components and provides certifications in 5 technology tracks: Kunpeng, AI, HarmonyOS, openGauss, and openEuler.

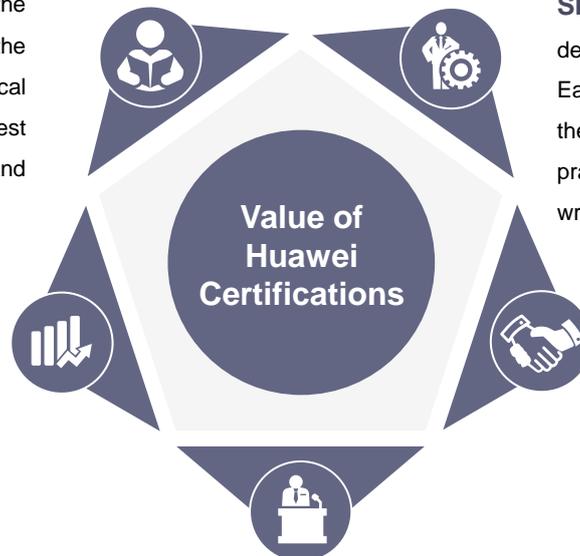
Cloud Platform & Cloud Services focuses on new ICT and provides certifications in 5 technology tracks: IoT, GaussDB, Big Data, Cloud Service, and Cloud Computing. Achieving the Platform and Service Certification signifies that the certificate holder is capable of integrating business, technologies, and applications. Furthermore, they will be able to build and operate cloud platforms and architectures in addition to developing new technical applications based on cloud platforms.

4

Why Participate in the Huawei Certification Program

Knowledge: Huawei provides the only certification system in the industry that covers all ICT technical fields. Trainees will learn the latest technology development trends and gain the latest technical knowledge.

Opportunities: Trainees will have technical knowledge and practical skills in interrelated domains, which will lead to more opportunities in career choice and advancement.



Skills: Huawei certifications are designed around different roles. Each certification includes both theoretical knowledge and practical skills, and is verified by written tests and experiments.

Trust: Certifications are proof that you have the necessary knowledge and skills, and help earn the trust of employers, customers, and colleagues.

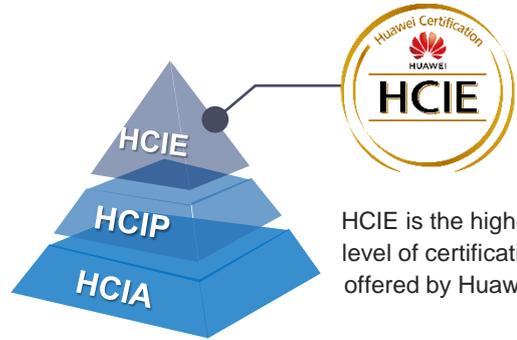
Self-confidence: Trainees will gain confidence in their capabilities when passing certifications, and more confidence increases the likelihood of future success.



5 About HCIE (Huawei Certified ICT Expert)

5.1 HCIE—Huawei Certified ICT Expert

HCIE-Transmission	Released
HCIE-Data Center Network	Released
HCIE-Datacom	Released
HCIE-WLAN	Released
HCIE-Kunpeng Computing	Released
HCIE-Big Data-Data Mining	Released
HCIE-Cloud Service Solutions Architect	Released
HCIE-Cloud Computing	Released
HCIE-Data Center Facility Design	Released
HCIE-Collaboration	Released
HCIE-Storage	Released
HCIE-Datacom-Carrier	Released
HCIE-5G-Radio	Released



HCIE is the highest level of certification offered by Huawei.

5.2 Benefits of HCIE Certification



Business Organization

- Talent development standards
- Enhanced solution ability
- Better customer service quality
- Higher operating efficiency



ICT Professional

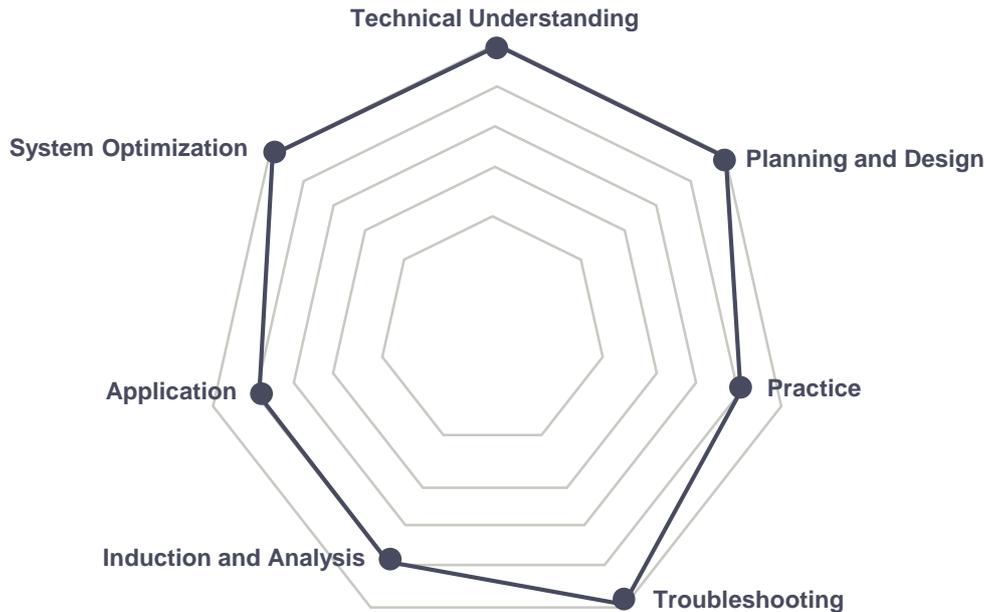
- Personal ability enhancement
- Enhanced expert image
- Better career development
- Returns for efforts

5.3 Abilities That Make an HCIE

Theoretic Knowledge	Hands-on Ability	Overall Quality
<ul style="list-style-type: none"> • Master general technologies • Learn advanced ICT knowledge • Possess systematic knowledge that matches the growth of enterprises. 	<ul style="list-style-type: none"> • Apply ICT skills to construct, operate, and maintain enterprise networks and IT systems to support the business growth of enterprises. 	<ul style="list-style-type: none"> • Possess well-developed overall quality that consists of rich work experience and skills, logical thinking, communication skills, and risk handling abilities.



5.4 Capability Assessment for the HCIE Certification



HCIE Capability	Assessment Method Description
Technical understanding	Have an in-depth and systematic understanding of ICT theoretical knowledge. Have a good command of key technical principles of mainstream products in the industry. Know what problems that technologies can solve and how to solve the problems using technologies. Have a full-stack theoretical and technical understanding of one or more domains.
Planning and design	Based on the understanding of requirements and scenario analysis, plan and design the network or applications, establish data models, and design network topologies and system layers. Design the optimal solution based on ICT project experience and various system constraints.
Practice	<ol style="list-style-type: none"> ① Based on the understanding of requirements and scenario analysis, select methods to configure and optimize networks or applications. ② Check the installation, deployment, configuration, and O&M management capabilities such as script development and automatic programming.
Fault diagnosis	<ol style="list-style-type: none"> ① Select possible causes based on the fault scenario and the diagnosis information. ② Analyze logs, common management commands of the operating system, service system commissioning commands, and various development and commissioning methods to comprehensively examine candidates' reverse thinking capabilities, fault diagnosis capabilities, and proficiency in routine O&M commands and tools.
Induction and analysis	<p>Focus on the capability of reasoning, i.e. the ability to derive general conclusions from specific knowledge. It is often used for data analysis and algorithm/model selection.</p> <ol style="list-style-type: none"> ① By analyzing scenarios, select algorithms and models that match scenarios and appropriate data analysis methods. ② By analyzing actual cases, examine the capabilities regarding the data analysis and mining process, model training and inference process, and the flexible use of common tools of service systems to select optimal solutions.
Application	<p>This examines the application development by developers.</p> <ol style="list-style-type: none"> ① Based on scenario analysis, select a solution that meets the scenario requirements. ② Based on the analysis of actual cases, comprehensively utilize system/module design and programming skills to develop applications for complex scenarios.
System optimization	Optimize the system performance and software performance based on the KPIs in a given scenario.



6 Benefits of Huawei Certification

Consolidate your technical foundation	Keep up with the trends	Improve employment competitiveness
Huawei certification combines theory with practice. It provides a solid technical foundation and comprehensively assesses the ICT specialists' relevant knowledge base.	Huawei certification incorporates cutting-edge ICT trends, keeping you up-to-date on emerging areas like Artificial Intelligence (AI) and Internet of Things (IoT).	Receiving Huawei Certification means you have the ICT expertise the industry needs. It will improve your employment competitiveness and advance your value within Huawei's ecosystem.

7 Obtaining Huawei Certificates

To obtain an HCIA certificate, you need to	<ul style="list-style-type: none"> • Pass the HCIA exams. • Exam Location: Pearson VUE exam center • The validity of the certificate: 3 years
To obtain an HCIP certificate, you need to	<ul style="list-style-type: none"> • Pass the HCIP exams. • Exam Location: Pearson VUE exam center • The validity of the certificate: 3 years
To obtain an HCIE certificate, you need to	<ul style="list-style-type: none"> • Pass HCIE two exams within 18 months • The validity of the Results: 3 years • Exam Location: Pearson VUE exam center (Written) & HCIE test center (Lab)

Written	Lab	HCIE Certificate
Pass HCIE Written exams. The validity of the Results: 18 Months Exam Location: Pearson VUE Exam Center	Take the Lab exam in 18 months. Exam Location: HCIE Test Center	The validity of the certificate: 3 years

Certificate Application Process



Download Certificate, Click [here](#)



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About Pearson VUE

Huawei cooperates with Pearson VUE, the world's largest third-party test institution, to provide professional, fair, and global exam services.

About Pearson VUE

- Pearson VUE, a global leader in computer-based tests, has provided test services for over 450 organizations and deployed test networks covering more than 5000 test centers in 180 countries.
- As a part of Huawei's certification program, an online exam assesses your knowledge, capabilities, and skills related to actual ICT applications.

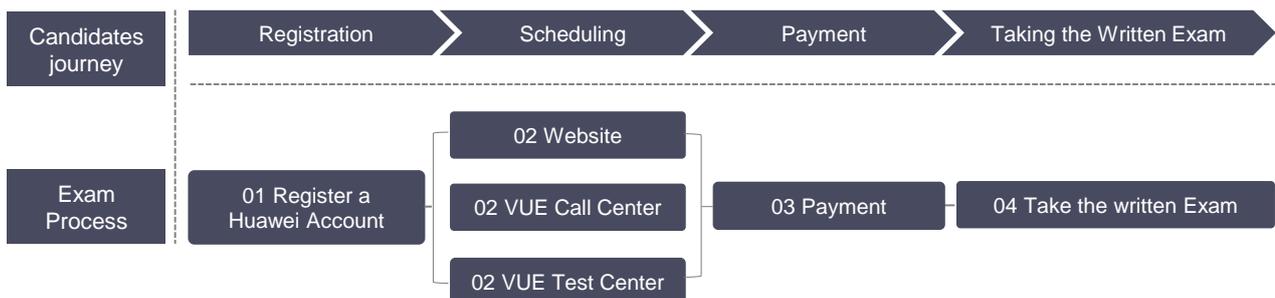
Execute the highest international standards

Standard	Service Type	Description
ISO 22301:2012	The International Standard for Business Continuity Management	This certification provides customers and stakeholders with the confidence that the continuity of service delivery is taken very seriously and that Pearson VUE has robust plans in place should the unexpected occur.
ISO 9001	The International Standard for Quality Management	Certification to ISO 9001 provides Pearson VUE's customers with the assurance that their needs are at the center of the organization's business processes and that their feedback will be sought in order to continually improve service delivery.
ISO 27001	The International Standard for Information Security Management	Certification to ISO 27001 shows Pearson VUE's customers that this responsibility is taken very seriously and that the mechanisms are in place to protect the confidentiality, integrity and availability of such information.
PCI-DSS	The security standard for payment card data security	The PCI Security Standards is a robust and comprehensive standard to enhance payment card data security. It provides a framework of specifications, tools, measurements and support resources that has helped Pearson VUE to ensure the safe handling of cardholder information at every step through the organization's corporate security strategy and IT infrastructure.

9

Huawei Certification Exam Guide in Pearson VUE

9.1 Overview of Huawei Certification Written Exam Guide





9.2 Taking Huawei Certification Exams

9.2.1 / Register and Schedule Exams

You must use your verified Huawei account to schedule an exam. This can be done three ways.

- **Pearson VUE website:** Click [Login](#) on this main page.
- **Pearson VUE Customer Service Center:** [Contact customer service](#).
- **Test Centers:** Visit your nearest [Pearson VUE test center](#).



Pearson VUE exam Guide

[Note]

When scheduling a Huawei certification exam through Pearson VUE for the first time, you must log in to the Pearson VUE website with your Huawei account and provide the required personal information.

For further details about registration and scheduling, please visit the [Huawei Certification Written Test Guide](#).

9.2.2 / Pay Exam Fee

You can pay exam fees in the following ways:

- **By exam voucher** (for Website, Customer Service Center, and Test Center Scheduling)
- **By credit card** (for Website and Customer Service Center Scheduling)
- **By cash** (for Test Center scheduling)

9.2.3 / Review Testing Policies

Exam rescheduling/cancellation: Exams must be rescheduled or canceled at least 24 hours before the scheduled start time. Exam fees cannot be refunded if you fail to reschedule or cancel less than 24 hours in advance, or if you fail to appear for the exam by the scheduled start time. You can reschedule or cancel an appointment by:

- **Visiting the Pearson VUE website:** Click [Login](#) on this main page.
- **Contacting the Pearson VUE Customer Service Center.**
- **Visiting your nearest Pearson VUE test center.**

Retake Policy: Retake exams can only be scheduled at least 7 calendar days after a failed exam, or 30 calendar days after a passed exam.

For more details about our exam policies, visit [Huawei Certification Written Test Guide](#).

9.2.4 / Take Exam in a Test Center

To take an exam, please comply with the rules and process.

- Arrive at your designated test center at least 15 minutes before your scheduled appointment time. This time is needed to complete the necessary sign-in procedures. If you are more than 15 minutes late to an exam, you may be refused admission and your exams fees will not be refunded.
- Bring two valid photo identity documents (photocopies are not accepted). For more information, click [Pearson VUE Identity Documents Policy](#).
- Personal items are not allowed in the testing rooms. This includes but is not limited to all bags, books not authorized by the sponsor, notes, phones, pagers, watches, and wallets.

For more information about the exam process and specifications, please visit [Pearson VUE Exam Process](#).

For any questions or difficulties regarding the examination service, please contact [Pearson VUE Customer Service Center](#).



10 Taking HCIE Lab Exams at Huawei Test Centers

HCIE candidates need to take lab exam at specified Huawei HCIE Test Centers.

10.1 Global Distribution of Huawei HCIE Lab Test Centers



Country	China					
City	Beijing	Shenzhen	Chengdu	Hangzhou	Anshun	
Country	India	Pakistan	UAE	Saudi Arabia	Thailand	Malaysia
City	New Delhi	Islamabad	Dubai	Riyadh	Bangkok	Kuala Lumpur
Country	South Africa	Australia	Mexico	Brazil		Netherlands
City	Johannesburg	Sydney	Mexico City	Brasilia		Amsterdam

10.2 HCIE Lab Exam Processes



Schedule HCIE Lab Exam: click [here](#)

Apply for HCIE certificate: click [here](#)



11

Getting Prepared for Huawei Certification

Obtain the materials



Huawei talent online platform offers a wealth of resources for all candidates, Click [here](#).

Related learning resources for Huawei certifications include: electronic learning materials, experimental manuals, online learning videos, simulated test questions, etc.

Take the training



You can either take online training programs or receive onsite training delivered by Huawei Authorized Learning Partners(HALP).

Search HALP, click [here](#)

Perform a self-assessment



Mock Exams

Huawei provides mock exam for Huawei certifications, including written and lab exams to help you assess your skills.



12

Using Huawei Training Tools and Platforms

**eLab**

eLab is an online platform that provides related laboratory environments for Huawei products and solutions, as well as career and professional certification. Users can reserve and access eLab service over the Internet and perform hands-on exercises and drilling in laboratory environments to practice the skills they have learnt.

**e-Learning**

e-Learning is a scenario- and role-oriented self-service learning platform for enterprise customers, Huawei partners, and ICT professionals. The e-Learning platform provides rich functions, including online courses and online exams that allow access to interactive and personalized learning services anytime anywhere.

**Storage Product
Networking
Assistant**

Networking Assistant helps engineers perform tasks such as basic network planning and system capacity expansion using unified storage and Big Data devices. It can also provide personalized recommendations to meet special requirements. Supported products include the OceanStor V3 series, OceanStor 8500, OceanStor 9000, and OceanStor N18000.

**Storage Demo**

Storage Demo is a Huawei proprietary tool that helps Huawei channel partners, Authorized Service Partners (ASPs), and engineers learn how to operate and manage Huawei storage devices, including the OceanStor V3 series, OceanStor 18000 series, OceanStor 9000, and OceanStor Replication Director.

**Dorado V3**

Dorado V3 storage simulator helps ICT practitioners master Huawei flash storage. Supports advanced features such as IPSAN data read/write function, snapshot, remote replication, HyperMetro disaster recovery, data migration, and deduplication and compression.



13

More About the Huawei Certification Program

A

Huawei Talent Online Website

Huawei Talent Online website offers ICT practitioners access to information about Huawei Certification news, activities, and markets based on specific business scenarios and roles. On the website, trainees can also query training and course availability, search for authorized training institutions, register for training and exams, obtain Learning Materials, complete online coursework and exams, fill out applications, query certificates, and make online reservation for experiments.

Visit Huawei talent online website, click [here](#)

B

Submit the Case

If you have any questions or inquiries about Huawei certification, you can submit case through Huawei Talent Online.

Bill of lading address: <https://e.huawei.com/en/talent/#/issue/add>

C

Huawei Certification Forum

The Huawei Certification forum is a platform for technical exchanges for people interested in Huawei certification services, such as technical experts, field engineers, students, and examinees. Huawei will also periodically release HCIE updates and Learning Materials on the forum to aid HCIE certification applicants with their studies.

Huawei certification forum, click [here](#)



Huawei
Certification Forum

D

Huawei Certification on Facebook

Huawei Certification on Facebook gives ICT practitioners Huawei Certification updates, access to Learning Materials, and an easy way to share exam preparation and learning experiences.



Facebook



Huawei Certification Roadmap and Information on Certification Subjects

There is no mandatory requirement for the certificate.
It is recommended that you follow the roadmap for learning and certification.



Cloud Platform & Cloud Services

Cloud Computing	HCIA-Cloud Computing H13-511 exam	HCIP-Cloud Computing H13-527 exam	HCIE-Cloud Computing H13-531(Written) & H13-536(Lab)
Cloud Service	HCIA-Cloud Service H13-811 exam	HCIP-Cloud Service Solutions Architect H13-821 exam	HCIE-Cloud Service Solutions Architect H13-831(Written) & H13-836(Lab)
Big Data	HCIA-Big Data H13-711 exam	HCIP-Big Data Developer H13-723 exam	HCIE-Big Data-Data Mining H13-731(Written) & H13-736(Lab)
GaussDB	--	--	--
IoT	HCIA-IoT H12-111 exam	HCIP-IoT Developer H52-111	--

Basic Software & Hardware

openEuler	HCIA-openEuler H12-611 exam	--	--
openGauss	HCIA-openGauss H14-311 exam	--	--
HarmonyOS	--	--	--
AI	HCIA-AI H13-311 exam	HCIP-AI-EI Developer H13-321 exam	--
Kunpeng	HCIA-Kunpeng Computing H13-211 exam	HCIP-Kunpeng Computing H13-221 exam	HCIE-Kunpeng Computing H13-231(Written) & H13-236(Lab)



ICT Infrastructure

Storage	HCIA-Storage H13-611 exam	HCIP-Storage H13-624 exam	HCIE-Storage H13-629(Written) & H13-636(Lab)
Collaboration	HCIA-Collaboration H11-851 exam	HCIP-Collaboration H11-861 exam	HCIE-Collaboration H11-879(Written) & H11-886(Lab)
Intelligent Vision	HCIA-Intelligent Vision H12-511 exam	HCIP-Intelligent Vision H12-521 exam	--
Digital Power	HCIA-Data Center Facility H12-411 exam	HCIP-Data Center Facility Deployment H12-425 exam	HCIE-Data Center Facility Design H12-461(Written) & H12-466(Lab)
MDC	--	--	--
Datacom	HCIA-Datacom H12-811 exam	HCIP-Datacom-Advanced Routing & Switching Technology H12-821 exam & H12-831 exam HCIP-Datacom-Network Automation Developer H12-821 exam & H12-881 exam HCIP-Datacom-Campus Network Planning and Deployment H12-821 exam & H12-841 exam HCIP-Datacom-SD-WAN Planning and Deployment H12-821 exam & H12-871 exam HCIP-Datacom-Enterprise Network Solution Design H12-821 exam & H12-851 exam HCIP-Datacom-WAN Planning and Deployment H12-821 exam & H12-861 exam HCIP-Datacom-Carrier IP Bearer H35-821 exam & H35-822 exam HCIP-Datacom-Carrier Cloud Bearer H35-821 exam & H35-823 exam	HCIE-Datacom H12-891(Written) & H12-892(Lab) HCIE-Data Center Network H12-921(Written) & H12-922(Lab) HCIE-Datacom-Carrier H35-831(Written) & H35-832(Lab)
WLAN	HCIA-WLAN H12-311 exam	HCIP-WLAN H12-323 exam	HCIE-WLAN H12-351(Written) & H12-352(Lab)
Security	HCIA-Security H12-711 exam	HCIP-Security H12-725 exam	--
Transmission	HCIA-Transmission H31-311 exam	HCIP-Transmission H31-341 exam	HCIE-Transmission H12-931(Written) & H12-936(Lab)
Access	HCIA-Access H35-210 exam	HCIP-Access H35-211 exam	--
5G	HCIA-5G H35-660 exam HCIA-5G-Bearer H35-670 exam HCIA-5G-RNP&RNO H35-580 exam HCIA-5G-RAN H35-480 exam HCIA-5G-Core H35-650 exam	HCIP-5G-RNP&RNO H35-581 exam HCIP-5G-RAN H35-481 exam HCIP-5G-Core H35-651 exam	HCIE-5G-Radio H35-582(Written) & H35-585(Lab)
LTE	HCIA-LTE H31-411 exam HCIA-LTE-RNP&RNO H35-560 exam	HCIP-LTE H31-421 exam HCIP-LTE-RNP&RNO H35-561 exam	--



HCIA-Cloud Computing

To train and certify engineers who are capable of using virtualization and virtual desktop technologies for cloud computing deployment and O&M

■ Capabilities to be Certified

Have a good command of cloud computing basics, virtualization, and virtual desktops. Be able to use virtualization and virtual desktop technologies for cloud computing deployment and O&M

■ Knowledge to Learn

Server, storage, network, and operating system technologies and planning, design, and management of virtualization platforms and virtual desktops

■ Target Audience

People who are interested in cloud computing

■ Content

The HCIA-Cloud Computing V5.0 exam includes four modules: cloud computing basics, virtualization (FusionCompute), virtual desktop (FusionAccess), and cloud computing trends, covering cloud computing basics (server basics, storage, network, and operating system), introduction to virtualization, Huawei virtualization platform, Huawei virtualization platform management and usage, introduction to Huawei FusionAccess, FusionAccess planning and deployment, features and management, and emerging cloud computing technologies.

Cloud Computing Basics(5%), Server Basics(2%), Storage Technology Basics(5%), Network Technology Basics(10%), Operating System Basics(4%), Virtualization(4%), Huawei Virtualization Platform(6%), Huawei Virtualization Platform Management and Usage(25%), Overview of FusionAccess(5%), FusionAccess: Planning and Deployment(8%), FusionAccess: Service Provisioning(17%), FusionAccess: Features and Management(5%), Cloud Computing Trends(4%).

■ Certification Exam

Prerequisites: None

Exam Code	Name	Expense	Duration	Language
H13-511	HCIA-Cloud Computing	US\$200	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIA-Cloud Computing	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-Cloud Computing V5.0 Exam Outline
- **Training Material:** HCIA-Cloud Computing V5.0 Training Material and Lab Guide
- **Mock Exam:** HCIA-Cloud Computing V5.0 Mock Exam



HCIP-Cloud Computing

The HCIP-Cloud Computing V5.0 course aims to cultivate senior cloud computing operations engineers who are capable of using clouds and senior cloud computing O&M engineers who are capable of managing clouds

■ Capabilities to be Certified

Upon completion of this course, trainees will have learned the knowledge of open source OpenStack and basic IaaS services of HUAWEI CLOUD Stack, and been able to perform operations and O&M on open source OpenStack and HUAWEI CLOUD Stack

■ Knowledge to Learn

1. Open source OpenStack architecture 2. Working principles and invoking relationships of key components 3. HUAWEI CLOUD Stack architecture, relationships and differences between HUAWEI CLOUD Stack and open source OpenStack 4. Working principles and usage of basic IaaS services, such as HUAWEI CLOUD Stack compute, storage, and network services 5. Concepts and methods of HUAWEI CLOUD Stack operations and O&M

■ Target Audience

Those who want to become senior O&M engineers of Huawei cloud computing

■ Content

The HCIP-Cloud Computing V5.0 exam covers knowledge points of open source OpenStack and HUAWEI CLOUD Stack, including the open source OpenStack architecture, working principles and invoking relationships of key components, and HUAWEI CLOUD Stack architecture, product components, and common components, working principles and usage of basic IaaS services such as HUAWEI CLOUD Stack compute, storage, and network services, HUAWEI CLOUD Stack operations and O&M.

Open source OpenStack architecture, working principles and invoking relationships of key components (30%), Introduction to the HUAWEI CLOUD Stack architecture, product components, and common components (20%), Working principles and usage of basic IaaS services, such as HUAWEI CLOUD Stack compute, storage, and network services (20%), HUAWEI CLOUD Stack operations (10%), HUAWEI CLOUD Stack O&M (20%).

■ Certification Exam

Prerequisites: Trainees should have taken the HCIA-Cloud Computing certification course

Exam Code	Name	Expense	Duration	Language
H13-527	HCIP-Cloud Computing	US\$300	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIP-Cloud Computing	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-Cloud Computing V5.0 Exam Outline
- **Training Material:** HCIP-Cloud Computing V5.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-Cloud Computing V5.0 Mock Exam



HCIE-Cloud Computing

Cloud Computing V3.0 is designed to cultivate and certify cloud infrastructure experts capable of cloud construction, use, and management, and cloud software architecture experts capable of planning service cloud migration, designing cloud native, and ensuring high reliability

■ Capabilities to be Certified

Passing the certification means that you are capable of planning and designing cloud computing architectures, deploying and migrating services to the cloud. The certificate is also proof of your qualification for positions such as cloud infrastructure expert and cloud software architecture expert

■ Knowledge to Learn

HCIP-Cloud Computing knowledge; Have basic network knowledge; Basic storage knowledge; Basic knowledge of virtualization
Basic knowledge of Linux

■ Target Audience

Personnel who want to become cloud computing experts; Personnel who want to obtain HCIE-Cloud Computing certification; Personnel who want to have HUAWEI CLOUD Stack planning and designing capabilities; Personnel who want to have HUAWEI CLOUD Stack installation and deployment capabilities

■ Content

The HCIE-Cloud Computing V3.0 exam base on the knowledge about the overall architecture of cloud computing and high-level services, includ HUAWEI CLOUD Stack designing and planning, HUAWEI CLOUD Stack deployment and installation, HUAWEI CLOUD Stack operation and maintenant, Service migration to HUAWEI CLOUD Stack, Container Orchestration and Container Service, HUAWEI CLOUD Stack DR&Backup service and Security Service.

■ Certification Exam

Prerequisites: None

Exam Code	Name	Expense	Duration	Language
H13-531	HCIE-Cloud Computing (Written)	US\$300	90 minutes	English/Chinese
H13-536	HCIE-Cloud Computing (Lab)	US\$1200	480 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIE-Cloud Computing	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIE-Cloud Computing V3.0 Exam Outline
- **Training Material:** HCIE-Cloud Computing V3.0 Training
- **Mock Exam:** HCIE-Cloud Computing Written V3.0 Mock Exam



HCIA-Cloud Service

Huawei certified HCIA-Cloud Service V2.2 aims to cultivate engineers who have mastered cutting-edge knowledge and skills of public cloud and are proficient in using HUAWEI CLOUD service products.

■ Capabilities to be Certified

Have a good command of cloud service concepts and values, Huawei cloud service architecture and ecosystem, and management and application of Huawei cloud computing services, storage services, network services, security services, management and monitoring services, relational databases, CDN&cloud video services, and innovative application services.

■ Knowledge to Learn

Cloud service concepts and values, Huawei cloud service architecture and ecosystem, management and application of Huawei cloud computing services, storage services, network services, security services, management and monitoring services, relational databases, CDN&cloud video services, and innovative application services.

■ Target Audience

People who are interested in cloud technologies and want to become cloud service engineers.

■ Content

The HCIA-Cloud Service V3.0 exam covers cloud computing basics, HUAWEI CLOUD overview, compute cloud services, network cloud services, storage cloud services, HUAWEI CLOUD O&M basics, databases, EI, CDN, and security services.

Cloud Computing Basics (14%), HUAWEI CLOUD Overview (7%), Compute Cloud Services (21%), Network Cloud Services (21%), Storage Cloud Services (18%), Database, Security, CDN, and EI Services (10%), HUAWEI CLOUD O&M Basics (9%).

■ Certification Exam

Prerequisites: None.

Exam Code	Name	Expense	Duration	Language
H13-811	HCIA-Cloud Service	US\$200	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIA-Cloud Service	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-Cloud Service V3.0 Exam Outline
- **Training Material:** HCIA-Cloud Service V3.0 Training Material and Lab Guide
- **Mock Exam:** HCIA-Cloud Service V3.0 Mock Exam
- **Online Course:** HCIA-Cloud Service V3.0 Online Course



HCIP-Cloud Service Solutions Architect

Cultivate and certify solution architects who are capable of cloud architecture design and cloud O&M of HUAWEI CLOUD services, and have the capability of migrating traditional enterprise application architectures and cloud-native architectures to the cloud

■ Capabilities to be Certified

Ability to migrate traditional enterprise application architectures and cloud-native architectures to the cloud

■ Knowledge to Learn

Basic knowledge of IT-related technologies; Have basic knowledge of public cloud services. Have basic knowledge of computing, network, storage, and database, and have basic knowledge of the Linux operating system

■ Target Audience

Expected to learn more about HUAWEI CLOUD. People who want to become cloud services architects

■ Content

HCIP-Cloud Service Solutions Architect V3.0 aims to cultivate certified solution architects who are capable of performing cloud-based architecture design and O&M using Huawei Cloud services. Passing the HCIP-Cloud Service Solutions Architect V3.0 certification means that you have fostered an in-depth understanding of enterprise application architectures and cloud technologies, cloud-based architecture design of traditional applications (such as computing, network, storage, database, and security), cloud native application architecture design (such as microservices), Huawei Cloud O&M solution, and Huawei Cloud innovations and solutions. Having gained expertise on these topics will qualify you to migrate traditional enterprise application architectures and cloud-native architectures to the cloud.

The HCIP-Cloud Service Solutions Architect exam includes Enterprise Application Architectures and Cloud Technologies (5%), Cloud-based Architecture Design of Conventional Applications(50%), Cloud Native Application Architecture Design(30%), Huawei Cloud O&M Solution(10%), Huawei Cloud Innovations and Solutions(5%).

■ Certification Exam

Prerequisites: You are advised to learn HCIA-Cloud Service certification first

Exam Code	Name	Expense	Duration	Language
H13-821	HCIP-Cloud Service Solutions Architect	US\$300	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIP-Cloud Service Solutions Architect	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-Cloud Service Solutions Architect V3.0 Exam Outline
- **Training Material:** HCIP-Cloud Service Solutions Architect V3.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-Cloud Service Solutions Architect V3.0 Mock Exam



HCIE-Cloud Service Solutions Architect

Huawei Certified ICT Expert (HCIE), Huawei's highest level of ICT technical certification, is awarded to people who demonstrate especially strong expertise in ICT and rich experience in practice. This certification validates the cloud experts with the ability to design, deploy, maintain and optimize applications on Huawei Cloud within diverse, complex requirements.

■ Capabilities to be Certified

Ability to describe both cloud-based architecture design methodologies and key underlying technologies of Huawei Cloud. Master the basic principles for cloud solution architecture design from aspects of scalability, availability, performance, security, and cost. Possess the capabilities of cloud migration, cloud O&M, and optimization. Qualified as a cloud solution architect, cloud system architect, cloud migration expert, and other cloud-related positions

■ Knowledge to Learn

Cloud-based architecture design, key underlying technologies of Huawei Cloud, Cloud migration implementation, Cloud O&M and optimization, Cloud enablement, and best practices of cloud in different industries

■ Target Audience

Personnel who want to advance their career as a Cloud Solutions Architect / Personnel who wish to obtain HCIE-Cloud Service Solutions Architect V2.0 Certificate

■ Prerequisites

Acquisition of Basic IT and network knowledge; Familiarity with cloud computing technologies; Hands-on experience designing and deploying cloud architecture on Cloud; Basic Linux, database, and programming skills

■ Content

The HCIE-Cloud Service Solutions Architect V2.0 exam covers the top-level design principles of enterprise migration to the cloud, underlying cloud technology knowledge, application migration to the cloud overview concepts, on-cloud scalability, availability, performance, security, and cost design knowledge, and on-cloud migration technologies of Huawei. Knowledge and skills of networks, hosts, storage data, data migration, containerized reconstruction, cloud O&M and optimization, cloud service enablement, pan-government solutions, pan-enterprise best practices, and best practices of cloud migration in the game industry.

■ Certification Exam

Exam Policy: You can directly pass the written exam and lab exam to obtain certificate.

Prerequisites: none

Exam Code	Name	Expense	Duration	Language
H13-831	HCIE-Cloud Service Solutions Architect(Written)	US\$300	90 minutes	English/Chinese
H13-836	HCIE-Cloud Service Solutions Architect(Lab)	US\$1200	480 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Validity of Recertification	Recertification Rule	Start Date of Validity
HCIE-Cloud Service Solutions Architect	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIE-Cloud Service Solutions Architect V2.0 Exam Outline
- **Training Material:** HCIE-Cloud Service Solutions Architect V2.0 Training Material and Lab Guide
- **Mock Exam:** HCIE-Cloud Service Solutions Architect V2.0 Mock Exam



HCIA-Big Data

Training and certifying engineers who are capable of using Huawei MRS big data development platform

■ Capabilities to be Certified

(1) Master the technical principles and architectures of common and important big data components, including HDFS, HBase, Hive, ClickHouse, MapReduce, YARN, Spark, Flink, Flume, Kafka, ElasticSearch and ZooKeeper, and capable of using Huawei big data platform MRS; (2) Able to operate and develop services based on Huawei MRS; (3) Competent for positions related to big data development engineers

■ Knowledge to Learn

Technical principles and architecture of common and important big data components. Knowledge and skills required for big data pre-sales, big data project management, and big data development

■ Target Audience

1. Those who desire to become big data engineers 2. Those who desire to obtain the HCIA-Big Data certification Junior big data engineers

■ Content

The HCIA-Big Data V3.5 exam covers: 1. Development trend of the big data industry, big data features, and Huawei Kunpeng big data; 2. Basic technical principles of common and important big data components (including HDFS, HBase, Hive, ClickHouse, MapReduce, YARN, Spark, Flink, Flume, Kafka, ElasticSearch, ZooKeeper); 3. MRS Huawei's Big Data Platform, Huawei DataArts Studio, and success stories in the big data industry.

Key Points: Big Data Development Trends and the Kunpeng Big Data Solution (3%), HDFS — Hadoop Distributed File System & ZooKeeper (12%), HBase — Distributed Database & Hive — Distributed Data Warehouse (20%), ClickHouse — Online Analytical Processing Database Management System (8%), MapReduce and YARN Technical Principles (12%), Spark — In-memory Distributed Computing Engine & Flink — Stream and Batch Processing in a Single Engine (20%), Flume's Massive Log Aggregation & Kafka's Distributed Messaging System (12%), Elasticsearch — Distributed Search Engine (5%), MRS Huawei's Big Data Platform (4%), Huawei DataArts Studio (4%).

■ Certification Exam

Prerequisites: 1. Has basic knowledge of network technology 2. Be familiar with basic operations on Linux operating systems

Exam Code	Name	Expense	Duration	Language
H13-711	HCIA-Big Data	US\$200	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIA-Big Data	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-Big Data V3.5 Exam Outline
- **Training Material:** HCIA-Big Data V3.5 Training Material and Lab Guide
- **Mock Exam:** HCIA-Big Data V3.5 Mock Exam



HCIP-Big Data Developer

Training and certifying engineers with big data application development capabilities.

Capabilities to be Certified

With HCIP-Big Data Developer V2.0 certification, you will be able to use Huawei MRS or open-source Hadoop platform components to develop applications in different service scenarios, including offline batch processing, real-time retrieval, real-time stream, and converged data warehouse scenarios. In addition, you will have E2E big data solution development capabilities, and are competent for big data application development positions.

Knowledge to Learn

The HCIP-Big Data Developer V2.0 certification courses include the general guide to big data application development, mainstream big data technologies, big data application development process, and big data scenario-based solutions (offline batch processing, real-time retrieval, real-time stream processing, and converged data warehouse). The courses provide rich in-class experiments and scenario-based case practices to improve trainees' practical capabilities and promote the cultivation of senior development engineers in the big data industry. Compared with V1.0, HCIP-Big Data Developer V2.0 adds four scenario-based practical drills, new big data application development technologies, and DWS.

Target Audience

Those who are dedicated to the industry analysis. Those who are interested in big data solution. Those who want to be a big data engineers.

Prerequisites

People who are similar with Java programming. People who are similar with SQL programming.

Content

The HCIP-Big Data Developer V2.0 exam covers: Big Data Application Development Overall Guide(5%), Big Data Offline Batch Processing Scenario-based Solution(20%), Big Data Real-time Retrieval Scenario-based Solution(25%), Big Data Real-time Stream Computing Scenario-based Solution(25%) and Big Data Converged Data Warehouse Scenario-based Solution(25%).

Certification Exam

Prerequisites: It is recommended that you learn HCIA-Big Data in advance..

Exam Code	Name	Expense	Duration	Language
H13-723	HCIP-Big Data Developer	US\$300	90 minutes	English/Chinese

Re-Certification Method

Certification	Period of Validity	Validity of Recertification	Recertification Rule	Start Date of Validity
HCIP-Big Data Developer	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

Learning Materials

- **Exam Outline:** HCIP-Big Data Developer V2.0 Exam Outline
- **Training Material:** HCIP-Big Data Developer V2.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-Big Data Developer V2.0 Mock Exam



HCIE-Big Data-Data Mining

Training and certifying experts who are able to perform end-to-end modeling of big data through Huawei FusionInsight HD or open source technology platforms and solve practical business problems.

Capabilities to be Certified

Passing the HCIE-Big Data-Data Mining V2.0 certification will indicate that you:

1) have basic knowledge about mainstream technology of big data mining and complex data mining methods; 2) are able to perform end-to-end modeling of big data through Huawei FusionInsight HD or open source technology platforms 3) competent for the data mining positions

Knowledge to Learn

1) Data mining description. 2) Preliminary knowledge (mathematics and Python). 3) Data preprocessing. 4) Feature selection and dimension reduction. 5) Supervised learning. 6) Unsupervised learning. 7) Model evaluation and optimization. 8) Comprehensive data mining application. 9) Spark MLlib data mining. 10) Huawei Machine Learning Development Tools. 11) Big data architecture and big data governance. 12) Big data mining.

Target Audience

Those who hope to become big data mining engineers; Those who hope to obtain an HCIE-Big Data-Data Mining certificate Expert of big data mining.

Prerequisites

Be familiar with SQL basics; Be familiar with big data basics; Be familiar with basic operations on Linux operating systems. It is recommended that you learn HCIP-Big Data Operation & Maintenance in advance.

Content

The HCIE-Big Data-Data Mining V2.0 exam covers: 1) Data Mining-4%, 2) Prerequisites (Math and Python Basics)-12%, 3) Data Preprocessing-12%, 4) Feature Selection and Dimension Reduction-7%, 5) Supervised Learning-11%, 6) Unsupervised Learning-5%, 7) Model Evaluation and Optimization-12%, 8) Comprehensive Application of Data Mining-8%, 9) Data Mining Using Spark MLlib-11%, 10) HUAWEI Machine Learning Development Tools-6%, 11) FusionInsight Miner-9%, 12) Big Data Architecture and Governance, Big Data Mining-13%.

Certification Exam

Exam Policy: The training is optional. You can directly pass the written exam and lab exam to obtain certificate.

Prerequisites: It is recommended that you learn HCIP-Big Data Developer in advance. Five years' working experience in related fields is a plus.

Exam Code	Name	Expense	Duration	Language
H13-731	HCIE-Big Data Data Mining(Written)	US\$300	90 minutes	English/Chinese
H13-736	HCIE-Big Data Data Mining(Lab)	US\$1200	480 minutes	English/Chinese

Re-Certification Method

Certification	Period of Validity	Validity of Recertification	Recertification Rule	Start Date of Validity
HCIE-Big Data-Data mining	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

Learning Materials

- **Exam Outline:** HCIE-Big Data-Data Mining V2.0 Exam Outline
- **Training Material:** HCIE-Big Data-Data Mining V2.0 Training Material and Lab Guide
- **Mock Exam:** HCIE-Big Data-Data Mining V2.0 Mock Exam



HCIA-IoT

Training and certifying engineers who are capable of developing end-to-end IoT services based on Huawei IoT solution architecture.

■ Capabilities to be Certified

Have a good command of basic IoT knowledge and Huawei IoT solution architecture, be able to perform O&M and development based on the architecture, and be capable of developing end-to-end services based on the architecture. Be qualified for IoT O&M/development engineers.

■ Knowledge to Learn

Have a good command of basic IoT knowledge, key technologies of common IoT networks, usage of the IoT platform, and basic knowledge of C programming and be able to develop end-to-end services.

■ Target Audience

- ICT professionals or students interested in IoT technologies.

■ Content

HCIA-IoT V2.5 exam covers IoT concepts, IoT architecture, Huawei IoT solutions, common IoT communication technologies and solutions, NB-IoT communication technologies and solutions, 5G communication technologies and solutions, industrial IoT gateways, home IoT gateways, and IoT industry applications and solutions. Basic concepts and architecture of Huawei LiteOS, Huawei LiteOS kernel and framework, HUAWEI CLOUD IoT platform, HUAWEI CLOUD IoT platform secondary development, HUAWEI CLOUD IoT platform service process, and AT commands of communication modules.

IoT Overview and Network Layer Technology Overview(56%), Overview of Platform Layer Technologies(21%), Overview of Sensing Layer Technologies(21%), Device-Cloud Connection Experience and Practices(2%).

■ Certification Exam

Prerequisites: None.

Exam Code	Name	Expense	Duration	Language
H12-111	HCIA-IoT	US\$200	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIA-IoT	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-IoT V2.5 Exam Outline
- **Training Material:** HCIA-IoT V2.5 Training Material and Lab Guide
- **Mock Exam:** HCIA-IoT V2.5 Mock Exam



HCIP-IoT Developer

Training and certifying senior engineers with IoT application development capabilities.

Capabilities to be Certified

- A strong command of key features of the HUAWEI CLOUD IoT solution, product models and codec plug-in, technical principles of LwM2M/MQTT protocols, common IoT AT commands, and Huawei LiteOS.
- The ability to develop product models and codec plug-ins, use Huawei LiteOS to implement device-cloud interworking, flexibly use IoT protocols, and select different communication modes to develop product application capabilities.

Knowledge to Learn

Build data models for the IoT platform on HUAWEI CLOUD, customize codec plug-in, gain a deep understanding of RESTful APIs of the IoT platform and apply them to cloud services, and implement device-cloud interconnection based on the IoT operating system of Huawei LiteOS.

Target Audience

Those who are interested in IoT.

Content

- The HCIP-IoT Developer V2.5 Certification Exam covers:
- HUAWEI CLOUD IoT Solution(3%)
- Key Features of HUAWEI CLOUD IoT Solution(8%)
- HUAWEI CLOUD IoT E2E Development(14%)
- HUAWEI CLOUD Services(3%)
- NB-IoT Standards and Solutions(8%)
- Huawei NB-IoT Chips and Modules(3%)
- Technical Principles of LwM2M(5%)
- Technical Principles of MQTT(8%)
- AT Commands for Common IoT Modules(3%)
- IoT OS(3%)
- Huawei LiteOS Architecture(40%)
- Introduction to Common Sensors(2%)

Certification Exam

Prerequisites: It is recommended that you learn HCIA-IoT in advance.

Exam Code	Name	Expense	Duration	Language
H52-111	HCIP-IoT Developer	US\$300	90 minutes	English/Chinese

Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIP-IoT Developer	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

Learning Materials

- **Exam Outline:** HCIP-IoT Developer V2.5 Exam Outline
- **Training Material:** HCIP-IoT Developer V2.5 Training Material and Lab Guide
- **Mock Exam:** HCIP-IoT Developer V2.5 Mock Exam



HCIA-openEuler

To train and certify engineers who are capable of operating and managing core operating systems in enterprise data centers

■ Capabilities to be Certified

Have basic operation and management capabilities for core operating systems in enterprise data centers and be competent for Linux system O&M engineers

■ Knowledge to Learn

openEuler user management, network management, permission management, storage management, software management, service management, shell basic knowledge, and Samba server setup and use

■ Target Audience

People who are interested in operating system

■ Content

The HCIA-openEuler V1.0 exam focuses on basic operations of openEuler, an open-source operating system in the community, including installing the openEuler OS, basic CLI operations, user and permission management, software management, storage and file system management, system and process management, shell script basics.

■ Certification Exam

Prerequisites: None.

Exam Code	Name	Expense	Duration	Language
H12-611	HCIA-openEuler	US\$200	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIA-openEuler	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-openEuler V1.0 Exam Outline
- **Training Material:** HCIA-openEuler V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIA-openEuler V1.0 Mock Exam



HCIA-openGauss

Cultivate and certify engineers who are capable of developing and managing openGauss

■ Capabilities to be Certified

1. Good command of database basics, basic architecture, ecosystem, and theoretical knowledge of openGauss, and networking, enterprise-level features, application scenarios of GaussDB(for openGauss). 2. Capability to use openGauss to support enterprise businesses, deployment, and O&M. 3. Capability to use and maintain GaussDB(for openGauss) and work as a database engineer.

■ Knowledge to Learn

Computer basics, database basics, and Linux basics

■ Target Audience

Those who want to be database administrators Those who want to be database application development engineers Pre-sales & after-sales engineers/Technical support personnel Those who want to obtain the HCIA-openGauss certification

■ Content

The HCIA-openGauss V1.0 exam covers openGauss overview, database installation and deployment, architecture and key features, database and object management, SQL basics, GaussDB(for openGauss), etc.

The HCIA-openGauss V1.0 exam covers: openGauss overview (12%), Database installation and deployment (11%), Architecture and key features (22%), Database and object management (21%), SQL basics (22%), GaussDB(for openGauss) (12%).

■ Certification Exam

Prerequisites: None.

Exam Code	Name	Expense	Duration	Language
H14-311	HCIA-openGauss	US\$200	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIA-openGauss	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-openGauss V1.0 Exam Outline
- **Training Material:** HCIA-openGauss V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIA-openGauss V1.0 Mock Exam



HCIA-AI

Training and certifying engineers who can use algorithms, such as machine learning and deep learning algorithms, to design and develop AI products and solutions and make improvement through innovation

■ Capabilities to be Certified

Passing the HCIA-AI V3.5 certification will indicate that you: (1) Understand the AI development history, Huawei Ascend AI system, Huawei full-stack all-scenario AI strategy, cutting-edge AI applications, and algorithms related to traditional machine learning and deep learning (2) Be able to build, train, and deploy neural networks by using the MindSpore development framework (3) Be ready to take on AI positions in sales, marketing, product management, project management, technical support, and more

■ Knowledge to Learn

The cutting-edge AI technologies and development trends, the full-stack all-scenario AI strategy, the algorithms and development practices related to traditional machine learning, deep learning, development frameworks

■ Target Audience

1. Personal who hope to become AI engineers 2. Personal who hope to obtain an HCIA-AI certificate 3. Personal who hope to know how to use, manage, and maintain Huawei AI products and AI services

■ Content

The HCIA-AI V3.5 exam covers basic knowledge of AI, machine learning, deep learning, AI application development process, and Huawei full-stack and all-scenario AI solution, etc.

The HCIA-AI V3.5 exam covers: AI Overview (15%), Machine Learning Overview (20%), Deep Learning Overview (25%), AI Development Framework (20%), Introduction to Huawei AI Platforms (14%), Cutting-edge AI applications (6%).

■ Certification Exam

Prerequisites: Possess the basic knowledge of advanced mathematics, and have studied the pre-course of "Math Basics". Familiar with Python language, and have studied the pre-course of "Python Basics"

Exam Code	Name	Expense	Duration	Language
H13-311	HCIA-AI	US\$200	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIA-AI	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-AI V3.5 Exam Outline
- **Training Material:** HCIA-AI V3.5 Training Material and Lab Guide
- **Mock Exam:** HCIA-AI V3.5 Mock Exam



HCIP-AI-EI Developer

Training and certifying senior engineers who are capable of achieving the AI development and innovation with Huawei Cloud EI and the ModelArts platform.

■ Capabilities to be Certified

Passing the HCIP-AI-EI Developer V2.0 certification will indicate that you: 1) have mastered the basic principles, architecture and programming of artificial intelligence technology in the field of image processing. Speech processing and natural language processing; 2) are able to develop AI models using python, TensorFlow and Huawei ModelArts; 3) competent for senior image processing engineers, speech recognition engineers, natural language processing engineers and other positions.

■ Knowledge to Learn

HCIP-AI-EI Developer V2.0 includes the following content: neural network basics, image processing theory and application, speech processing theory and application, natural language processing theory and application, ModelArts overview, image processing experiment, speech processing experiment, natural language processing experiment, and ModelArts platform development experiment. ModelArts is a one-stop development platform for AI developers. It provides services like massive data preprocessing, semi-automatic labeling, large-scale distributed training, automatic model generation, and on-demand model deployment on the device, edge, and cloud.

■ Target Audience

- Those who are interested in AI. Those who want to be an AI engineer.

■ Content

The HCIP-AI-EI Developer V2.0 exam covers:

Neural Network Basics(4%), Image Processing Theory and Applications(26%), Speech Processing Theory and Applications(10%), Natural Language Processing Theory and Applications(10%), Overview of Huawei's AI Development Strategy and Full-Stack(2%), Overview of ModelArts(4%), Image Processing Lab Guide(12%), Speech Processing Lab Guide(12%), Natural Language Processing Lab Guide(10%), ModelArts Lab Guide(10%).

■ Certification Exam

Prerequisites: It is recommended that you learn HCIA-AI in advance.

Exam Code	Name	Expense	Duration	Language
H13-321	HCIP-AI-EI Developer	US\$300	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIP-AI-EI Developer	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-AI-EI Developer V2.0 Exam Outline
- **Training Material:** HCIP-AI-EI Developer V2.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-AI-EI Developer V2.0 Mock Exam



HCIA-Kunpeng Computing

Training and certifying engineers with basic design, deployment and basic O&M capabilities of Kunpeng computing products and solutions.

■ Capabilities to be Certified

Enable engineers with basic knowledge and skills in Kunpeng computing field, including computing industry basis, chip technology, computing system architecture and products etc.

■ Knowledge to Learn

Brief history and development trend of the computing industry, Overview of the computing system architecture, Computing platform and common technologies, Industry solution cases.

■ Target Audience

People who want to become Kunpeng computing engineers People who want to obtain HCIA-Kunpeng Computing certification.

■ Content

The HCIA-Kunpeng Computing exam includes: Brief History and Development Trend of the Computing Industry, Overview of the Computing System Architecture, Introduction to Computing Platform Products, Common Technologies and O&M of the Computing Platform and Industry Solution Cases.

Brief History and Development Trend of the Computing Industry(10%), Overview of the Computing System Architecture(20%), Introduction to Computing Platform Products(30%), Common Technologies and O&M of the Computing Platform(30%), Industry Solution Cases(10%).

■ Certification Exam

Exam policy: The training is optional.

Prerequisites: None

Exam Code	Name	Expense	Duration	Language
H13-211	HCIA-Kunpeng Computing	US\$200	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIA-Kunpeng Computing	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-Kunpeng Computing V1.0 Exam Outline
- **Training Material:** HCIA-Kunpeng Computing V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIA-Kunpeng Computing Mock Exam
- **Online Course:** HCIA-Kunpeng Computing Course



HCIP-Kunpeng Computing

Training and certifying senior engineers with Kunpeng computing system solution planning, software and hardware installation and deployment, Kunpeng O&M and typical fault handling capabilities.

■ Capabilities to be Certified

Help the professionals build the capability of managing and employing the Kunpeng computing products, including product planning and designing, installation and deployment, Kunpeng operation, maintenance and troubleshooting.

■ Knowledge to Learn

Introduction to Kunpeng computing products, Kunpeng computing product planning and design, Kunpeng computing product installation and deployment, Kunpeng O&M and troubleshooting.

■ Target Audience

- People who want to become Huawei's senior Kunpeng computing engineers.

■ Content

The HCIP-Kunpeng Computing exam includes: Introduction to Kunpeng Computing Products, Kunpeng Computing Product Planning and Design, Kunpeng Computing Product Installation and Deployment, Kunpeng O&M and Troubleshooting.

Introduction to Kunpeng Computing Products(20%), Kunpeng Computing Product Planning and Design(20%), Kunpeng Computing Product Installation and Deployment(30%), Kunpeng O&M and Troubleshooting(30%).

■ Certification Exam

Prerequisites: Have a basic understanding of IT technology and network knowledge, Have mastered the content involved in HCIA-Kunpeng Computing. It is recommended that you learn HCIA-Kunpeng Computing in advance.

Exam Code	Name	Expense	Duration	Language
H13-221	HCIP-Kunpeng Computing	US\$300	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIP-Kunpeng Computing	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-Kunpeng Computing V1.0 Exam Outline
- **Training Material:** HCIP-Kunpeng Computing V1.0 Training Material
- **Mock Exam:** HCIP-Kunpeng Computing V1.0 Mock Exam
- **Online Course:** HCIP-Kunpeng Computing V1.0 Course



HCIE-Kunpeng Computing

Training and certifying Kunpeng computing experts with capabilities of computing key technology, Kunpeng computing solution architecture design, deployment and computing system optimization.

Capabilities to be Certified

Passing the HCIE-Kunpeng Computing V1.0 certification will indicate that you: 1) have insights into Kunpeng computing ecosystem and knowledge about key technologies and applications; 2) are able to perform the solution architecture design, deployment and system optimization of typical scenarios in Kunpeng computing field; 3) are competent for Kunpeng computing pre-sales/after-sales technical support, Kunpeng computing solution application expert, data center server architect engineer and other positions.

Knowledge to Learn

1. Describe the current situation and challenges of the computing industry. 2. Understand the industry's countermeasures. 3. Distinguish technologies between general-purpose and heterogeneous computing. 4. Describe the working principles of acceleration components and common computing platforms. 5. Have general knowledge of the basic concepts, application scenarios, software and hardware architectures, and key technologies of the Kunpeng computing solution. 6. Describe the delivery process of typical solutions. 7. Understand basic methods and common tools for system optimization. 8. Have a good command of parameter optimization methods in typical application scenarios.

Target Audience

People who want to become Kunpeng computing experts; People who want to obtain HCIE-Kunpeng Computing certification.

Prerequisites

It is recommended that you learn HCIP-Kunpeng Computing in advance.

Content

The HCIE-Kunpeng Computing exam includes: Insight into computing industry ecosystem, Key technologies and applications, Kunpeng computing solution design and practice, Kunpeng computing system optimization.

HCIE-Kunpeng Computing(Written): Insight into computing industry ecosystem(5%), Key technologies and applications(10%), Kunpeng computing solution design and practice(70%), Kunpeng computing system optimization(15%).

HCIE-Kunpeng Computing(Lab): Kunpeng computing solution design and practice(80%), Kunpeng computing system optimization(20%).

Certification Exam

Exam Policy: The training is optional. You can directly pass the written exam and lab exam to obtain certificate.

Prerequisites: It is recommended that you learn HCIP-Kunpeng Computing in advance. Five years' working experience in related fields is a plus.

Exam Code	Name	Expense	Duration	Language
H13-231	HCIE-Kunpeng Computing(Written)	US\$300	90 minutes	English/Chinese
H13-236	HCIE-Kunpeng Computing(Lab)	US\$1200	480 minutes	English/Chinese

Re-Certification Method

Certification	Period of Validity	Validity of Recertification	Recertification Rule	Start Date of Validity
HCIE-Kunpeng Computing	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

Learning Materials

- **Exam Outline:** HCIE-Kunpeng Computing V1.0 Exam Outline
- **Training Material:** HCIE-Kunpeng Computing V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIE-Kunpeng Computing Mock Exam
- **Online Course:** HCIE-Kunpeng Computing V1.0 Course



HCIA-Storage

Positioned as training and certification for engineers who have basic knowledge about storage technologies and basic product O&M management capabilities

■ Capabilities to be Certified

Engineers have knowledge and skills in storage technology trends, basic storage technologies, Huawei intelligent storage products and features, and storage system O&M management, are capable of performing basic deployment, O&M, and management on storage systems, and have skills essential for positions such as enterprise storage engineers and IT technical support

■ Knowledge to Learn

Storage technology trends, basic storage technologies, Huawei intelligent storage products and features, and storage system O&M management

■ Target Audience

Huawei engineers, Huawei channel engineers, college students, and ICT practitioners

■ Content

The HCIA-Storage V5.0 exam covers basic knowledge about the data storage field, including the storage technology trends, RAID technologies, intelligent data storage components, common storage protocols, storage system architecture, storage network architecture, storage resource tuning technologies, and storage data protection technologies.

The HCIA-Storage V5.0 exam covers: Storage Technology Trends (5%), Basic Storage Technologies (50%), Huawei Intelligent Storage Products and Features (35%), Storage System O&M Management (10%).

■ Certification Exam

Prerequisites: Have basic knowledge about networks, computer components, and Windows/Linux OSs

Exam Code	Name	Expense	Duration	Language
H13-611	HCIA-Storage	US\$200	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIA-Storage	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-Storage V5.0 Exam Outline
- **Training Material:** HCIA-Storage V5.0 Training Material and Lab Guide
- **Mock Exam:** HCIA-Storage V5.0 Mock Exam



HCIP-Storage

Train and certificate senior engineers with capability of planning and design, deployment and implementation, management and O&M, as well as troubleshooting of storage systems.

■ Capabilities to be Certified

With HCIP-Storage V5.0 certification, you will understand and master the knowledge about storage product technologies, principles and application scenarios of storage advanced features, and skills about planning and design, deployment and implementation, management and O&M, as well as troubleshooting of storage systems; which enables you to be competent for enterprise storage system administrator, senior engineer, IT senior technical support and other positions.

■ Knowledge to Learn

The HCIP-Storage V5.0 certification courses include knowledge about system introduction, flash storage technology and application, distributed storage technology and application, storage design and implementation and storage maintenance and troubleshooting.

■ Target Audience

Those who want to be storage engineer, Those who want to achieve HCIP-Storage certification, Administrator of storage array.

■ Content

The HCIP-Storage V5.0 exam covers: Storage System Introduction(30%), Flash Storage Technology and Application(30%), Distributed Storage Technology and Application(20%), Storage Design and Implementation(10%), Storage Maintenance and Troubleshooting(10%).

■ Certification Exam

Prerequisites: It is recommended that you learn HCIA-Storage in advance. Understand basic network knowledge. Understand computer components. Understand the basic knowledge of the Windows and Linux operating systems. Have a good command of HCIA-Storage

Exam Code	Name	Expense	Duration	Language
H13-624	HCIP-Storage	US\$300	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIP-Storage	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-Storage V5.0 Exam Outline
- **Training Material:** HCIP-Storage V5.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-Storage V5.0 Mock Exam



HCIE-Storage

Training and certifying storage experts with capability of requirement analysis, planning and design, deployment and implementation, performance tuning, advanced O&M management, and troubleshooting at the Huawei storage solution layer.

■ Capabilities to be Certified

With HCIE-Storage V2.5 certification, you will have a good command of key technical principles, planning and design processes, deployment implementation methods and tools, performance tuning principles, advanced O&M management, and troubleshooting of typical storage solutions, such as storage backup, active-passive DR, active-active DR, and storage data migration; are able to design, manage, build and develop high availability storage solutions; which makes you competent to be a storage solution expert, storage architect and other positions.

■ Knowledge to Learn

The HCIE-Storage V2.5 certification courses include knowledge about Key Points of Storage, Storage Design and Tuning, Storage Solutions, Storage Maintenance and Troubleshooting.

■ Target Audience

People who want to become experts in the storage industry and people who want to obtain the HCIE-Storage certification, such as data center storage system architects, ICT professionals, and Huawei channel engineers, etc.

■ Content

The HCIE-Storage V2.5 exam covers: Key Points of Storage, Storage Design and Tuning, Storage Solutions, Storage Maintenance and Troubleshooting.

Written Exam: Key Points of Storage(30%), Storage Design and Tuning(20%), Storage Solutions(40%), Storage Maintenance and Troubleshooting(10%).

Lab Exam: Scenario-based Practice of Storage Data Migration Solution(10%), Scenario-based Practice of Storage Backup Solution(10%), Scenario-based Practice of Storage A-P Solution(30%), Scenario-based Practice of Storage A-A Solution(30%), Scenario-based Practice of Distributed Storage Solution(10%), Scenario-based Practice of Storage Performance Tuning(5%).

■ Certification Exam

Exam Policy: You can directly pass the written exam and lab exam to obtain certificate.

Prerequisites: At least 3 years of hands-on experience in storage is recommended. At least 5 years of storage data analysis experience is recommended. Experience and expertise in Huawei storage service designing, storage solution building, maintaining and tuning are recommended.

Exam Code	Name	Expense	Duration	Language
H13-629	HCIE-Storage (Written)	US\$300	120 minutes	English/Chinese/Spanish/French
H13-636	HCIE-Storage (Lab)	US\$1200	480 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIE-Storage	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIE-Storage V2.5 Exam Outline
- **Training Material:** HCIE-Storage V2.5 Training
- **Mock Exam:** HCIE-Storage V2.5 Mock Exam



HCIA-Collaboration

Training and certifying engineers with capability of basic operation and product O&M skills in video conferencing field.

■ Capabilities to be Certified

After passing the HCIA-Collaboration V3.0 certification, you will have a good command of understanding and mastering the video conferencing technologies, video conferencing protocols, video conferencing endpoint features and O&M, IdeaHub product features and O&M, MCU product features, SMC product features, recording product features, and basic O&M management of the video conferencing system, be able to operate, maintain and manage video conferencing system. You will be qualified for video conferencing engineers.

■ Knowledge to Learn

Video conferencing technologies, video conferencing protocols, video conferencing endpoint features and O&M, IdeaHub product features and O&M, MCU product features, SMC product features, recording product features, and basic O&M management of the video conferencing system.

■ Target Audience

Personnel who want to become video conferencing engineers, Personnel who want to obtain HCIA-Collaboration V3.0 certification.

■ Content

HCIA-Collaboration V3.0 exam covers basic knowledge about configuration and operations of the video conferencing system, including the video conferencing technologies(13%), video conferencing protocols(18%), video conferencing endpoint features and O&M(14%), IdeaHub product features and O&M(20%), MCU product features(12%), SMC product features(18%), recording product features, and basic O&M management of the video conferencing system(5%).

■ Certification Exam

Prerequisites: None.

Exam Code	Name	Expense	Duration	Language
H11-851	HCIA-Collaboration	US\$200	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Rule	Start Date of Validity
HCIA-Collaboration	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-Collaboration V3.0 Exam Outline
- **Training Material:** HCIA-Collaboration V3.0 Training Material and Lab Guide
- **Mock Exam:** HCIA-Collaboration V3.0 Mock Exam
- **Online Course:** HCIA-Collaboration V3.0 Course



HCIP-Collaboration

The HCIP-Collaboration V3.0 certification aims to train and certificate experts who are capable of network design, deployment, and O&M of medium-sized video conferencing systems in the collaboration field

■ Capabilities to be Certified

Passing the HCIP-Collaboration V3.0 certification proves that you have systematically understood and mastered the technologies of audio and video, H.323 and SIP protocols, system networking design and implementation, system O&M, and troubleshooting in the collaboration field, and are capable of network design, O&M, and troubleshooting of Huawei video conferencing systems. With the HCIP-Collaboration V3.0 certification, you are qualified for positions such as technical engineers, O&M engineers in the collaboration field

■ Knowledge to Learn

Advanced knowledge of audio and video technologies, H.323 and SIP protocols, system networking design and implementation, system O&M, and troubleshooting

■ Target Audience

People who want to become engineers in the field of collaboration/Those who hope to obtain HCIP-Collaboration certificate

■ Content

HCIP-Collaboration V3.0 exam covers technologies in the collaboration field, including the technologies of audio and video, H.323 and SIP protocols, system networking design and implementation, system O&M, and troubleshooting.

Intelligent Collaboration Solution Overview (14%), IdeaHub Product Features, Industry Applications, and Basic Operations (6%), Audio Technology (Advanced Training) (7%), Video Technology (Advanced Training) (8%), SIP Protocol (Advanced Training) (14%), H.323 Protocol (Advanced Training) (15%), Networking Design and Implementation of the Video Conferencing System (15%), Video Conferencing System O&M and Troubleshooting (21%).

■ Certification Exam

Prerequisites: Basic understanding of video conferencing, networking, and security/Have mastered the contents involved in HCIA-Collaboration

Exam Code	Name	Expense	Duration	Language
H11-861	HCIP-Collaboration	US\$300	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIP-Collaboration	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-Collaboration V3.0 Exam Outline
- **Training Material:** HCIP-Collaboration V3.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-Collaboration V3.0 Mock Exam



HCIE-Collaboration

Training and certifying experts who are capable of network planning, design, deployment, and O&M of large-scale integrated videoconferencing systems in the collaboration field

■ Capabilities to be Certified

Passing the HCIE-Collaboration V2.0 certification proves that you have systematically understood and mastered the technical principles of audio and video technologies, H.323 and SIP protocols, high reliability solution, public-private network traversal solution, convergence solution, system networking planning and design, system O&M, and troubleshooting in the collaboration field, and are capable of network planning, design, O&M, and troubleshooting of Huawei video conferencing systems

■ Knowledge to Learn

Basics of audio and video technologies, SIP, H.323, principles of traversal between public and private networks, high reliability solution, system networking planning and design, system O&M, and troubleshooting

■ Target Audience

People who want to become experts in the field of collaboration and those who hope to obtain HCIE-Collaboration certificate

■ Content

HCIE-Collaboration V2.0 exam covers advanced technologies in the collaboration field, including audio and video technical principles, H.323 and SIP principles, high reliability solution, public-private network traversal solution, convergence solution, system networking planning and design, system O&M, and troubleshooting.

■ Certification Exam

Prerequisites: 1. Basic understanding of video conferencing, networking, and security; 2. Have mastered the contents involved in HCIP-Collaboration.

Exam Code	Name	Expense	Duration	Language
H11-879	HCIE-Collaboration (Written)	US\$300	90 minutes	English/Chinese
H11-886	HCIE-Collaboration (Lab)	US\$1200	480 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIE-Collaboration	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIE-Collaboration V2.0 Exam Outline
- **Training Material:** HCIE-Collaboration V2.0 Training Material and Lab Guide
- **Mock Exam:** HCIE-Collaboration V2.0 Mock Exam



HCIA-Intelligent Vision

Training and certification engineers with intelligent vision knowledge, know Huawei intelligent vision solutions, and the ability of technical support and solution implementation.

■ Capabilities to be Certified

Complete the operation of Huawei intelligent vision camera and platform.

■ Knowledge to Learn

Know the typical application of video surveillance network and security, get product knowledge and installation skills about Huawei camera, understand technical principle and application of Huawei video surveillance platform.

■ Target Audience

Those who hope to become a IVS engineer; Those who hope to obtain HCIA-Intelligent Vision.

■ Content

HCIA-Intelligent Vision V1.0 exam covers the basic knowledge about video security technologies (including video security technologies, camera technologies, video security platform technologies, and new industry technologies), video network and security, cameras and sites, and intelligent vision systems.

Basic Knowledge about Video Security Technologies (45%), Video Network and Security Principles and Applications (7%), Huawei Camera Introduction and Application (24%), Huawei Intelligent Vision Platform Technologies and Application (24%).

■ Certification Exam

Prerequisites: None.

Exam Code	Name	Expense	Duration	Language
H12-511	HCIA-Intelligent Vision	US\$200	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Rule	Start Date of Validity
HCIA-Intelligent Vision	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-Intelligent Vision V1.0 Exam Outline
- **Training Material:** HCIA-Intelligent Vision V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIA-Intelligent Vision V1.0 Mock Exam



HCIP-Intelligent Vision

Training and certifying senior engineers with related knowledge of Intelligent Vision, knows Huawei Intelligent Vision products and solutions, and can apply video management, video analysis and other technologies to achieve business sales and solution implementation..

■ Capabilities to be Certified

People who already have the theoretical knowledge about intelligent camera and video algorithm, know technical principle and application of video cloud, video big data and video interconnection; 2) are able to complete low level design, installation and implementation of intelligent vision platform; 3) competent for senior solution engineer and senior pre-sales solution engineer of Intelligent Vision.

■ Knowledge to Learn

Theoretical knowledge about intelligent camera and video algorithm, technical principle and application of video cloud, video big data and video interconnection, intelligent vision platform low level design, installation and implementation.

■ Target Audience

Theoretical knowledge about intelligent camera and video algorithm, technical principle and application of video cloud, video big data and video interconnection, intelligent vision platform low level design, installation and implementation.

■ Content

The HCIP-Intelligent Vision V1.0 exam covers: Principles and applications of intelligent cameras (5%), Principles and management of intelligent algorithm (3%), Principles and applications of video cloud (5%), Principles and applications of video big data (4%), Video interconnection technology standard and application (3%), Planning and design of video site (10%), Video site installation and configuration (18%), Video site service commissioning (5%), Video site maintenance and troubleshooting (5%), Intelligent vision system planning and design (10%), Intelligent vision system installation and configuration (12%), Intelligent vision system service commissioning (10%), Intelligent vision system maintenance and troubleshooting (10%).

■ Certification Exam

Prerequisites: It is recommended that you learn HCIA-Intelligent Vision in advance.

Exam Code	Name	Expense	Duration	Language
H12-521	HCIP-Intelligent Vision	US\$300	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Rule	Start Date of Validity
HCIP-Intelligent Vision	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-Intelligent Vision V1.0 Exam Outline
- **Training Material:** HCIP-Intelligent Vision V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-Intelligent Vision V1.0 Mock Exam



HCIA-Data Center Facility

Training and certifying junior engineers with basic deployment and O&M capabilities in the data center facility field.

Capabilities to be Certified

Have basic deployment and O&M capabilities of the data center facility and be competent for positions such as junior implementation engineers and junior O&M engineers.

Knowledge to Learn

EHS safety knowledge, Development History and Trend of Data Center, Working principles and main product categories of the 8 Subsystems of the Data Center Facility. The 8 subsystems of the data center facility are as follows: power distribution system, cooling system, integrated cabling system, monitoring system, fire extinguishing system, lightning protection and grounding system, cabinet system, and interior decoration system.

Target Audience

Those who are interested in Data Center Facility technologies.

Content

The HCIA-Data Center Facility V2.0 Certification Exam covers:

- I EHS Introduction
- I Data Center Facility Knowledge
- I Basic Knowledge of Power Distribution
- I Basic Knowledge of UPS
- I Basic Knowledge of Huawei DC Power Systems
- I Basic Knowledge of Batteries
- I Air Conditioning System Introduction
- I Basic Knowledge of Precision Air Conditioners in Data Centers
- I Basic Knowledge of Monitoring Systems
- I Functions and Features of Monitoring Systems
- I Introduction to Other Systems of Data Center Facility

Certification Exam

Exam policy: The training is optional. **Prerequisites:** None.

Exam Code	Name	Expense	Duration	Language
H12-411	HCIA-Data Center Facility	US\$200	90 minutes	English/Chinese

Recertification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIA-Data Center Facility	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

Learning Materials

- **Exam Outline:** HCIA-Data Center Facility V2.0 Exam Outline
- **Training Material:** HCIA-Data Center Facility V2.0 Training Material
- **Mock Exam:** HCIA-Data Center Facility V2.0 Mock Exam



HCIP-Data Center Facility Deployment

Training and certifying senior engineers who need to perform deployment and system commissioning for Huawei data center infrastructure products.

Capabilities to be Certified

You will be able to have a basic command of Huawei modular data center solution, power distribution system solution, cooling system solution, and monitoring system solution, and be able to work as a pre-sales engineer, deployment and commissioning engineer, and solution engineer for data center infrastructure.

Knowledge to Learn

Huawei modular data center Fusion Module series products, Huawei UPS and precision PDC series products, Huawei data center energy storage products, Huawei data center smart cooling products, and Huawei data center DCIM system products.

Target Audience

Pre-sales engineer, Deployment and commissioning engineer, Solution engineer for data center infrastructure, Personnel who want to obtain HCIP-DCF Deployment certification.

Content

HCIP-Data Center Facility Deployment V2.0 mainly focuses on product technical features, installation and deployment, and parameter configuration, the product series includes the following products: Huawei modular data center Fusion Module series products, Huawei UPS and precision PDC series products, Huawei data center energy storage products, Huawei data center smart cooling products, and Huawei data center DCIM system products. Candidates need to be familiar with Huawei modular data center solution, power distribution system solution, cooling system solution, and monitoring system solution.

Knowledge Content:

Introduction to Huawei Data Center Infrastructure(2%), Introduction to Modular Data Center Solution FusionModule2000 and 5000(5%), Introduction to Prefabricated All-in-One Data Center Solution FusionDC1000(3%), Introduction to Smart Mini and Small Data Center Solution FusionModule500 and 800(3%), Integrated UPS Introduction(3%), FusionModule2000 Installation(5%), Application of VRLA Batteries(3%), Huawei SmartLi Introduction, Installation, and Commissioning(3%), UPS2000 Product Introduction(3%), UPS2000 Installation(2%), UPS2000 LCD Operations and Commissioning(3%), UPS5000 Product Introduction(7%), UPS5000 Installation(2%), UPS5000 LCD Operations and Commissioning(8%), PDU8000 Modular PDF Introduction(3%), Introduction to Data Center Cooling Solutions(3%), Introduction to Huawei Air-Cooled Precision Air Conditioner(3%), Introduction to Huawei Chilled Water Precision Air Conditioners(3%), Introduction to the Huawei Modular Indirect Evaporative Cooling System(2%), NetCol5000-A042 Installation and Commissioning(9%), NetCol8000-C (070-260) Installation and Commissioning(3%), NetCol8000-E220 Installation and Commissioning(2%), ECC800-Pro Introduction(6%), Huawei DCIM Management Tool Introduction(6%), Huawei DCIM Product Introduction(8%).

Certification Exam

Prerequisites: It is recommended that you learn HCIA-Data Center Facility in advance.

Exam Code	Name	Expense	Duration	Language
H12-425	HCIP-Data Center Facility Deployment	US\$160	90 minutes	English/Chinese

Recertification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIP-Data Center Facility Deployment	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

Learning Materials

- **Exam Outline:** HCIP-Data Center Facility Deployment V2.0 Exam Outline
- **Training Material:** HCIP-Data Center Facility Deployment V2.0 Training Material
- **Mock Exam:** HCIP-Data Center Facility Deployment V2.0 Mock Exam



HCIE-Data Center Facility Design

Training and certifying of architects and experts who are capable of independently planning and designing in the field of data center facility.

■ Capabilities to be Certified

Have the data center facility design consulting and planning capabilities, and the planning and design capabilities of each subsystem of the data center facility.

■ Knowledge to Learn

Deep learning data center planning consulting business process, the evaluation model tools, site selection report, feasibility study report, power supply system planning and design, refrigeration system planning and design, DCIM system planning and design.

■ Target Audience

Data Center infrastructure design engineer, Data Center infrastructure design engineer, Project manager of the Data Center construction unit, Personnel who want to obtain HCIE-Data Center Facility Design certification.

■ Content

HCIE-Data Center Facility Design V1.0 exam covers: Data Center Infrastructure Consulting and Planning, Power Distribution System Planning, UPS System Planning, Case Analysis and Optimization of Data Center Power Supply and Distribution Architecture, Data Center Cooling System Planning, Data Center Air Conditioner Terminal System Configuration and Load Calculation, Chilled Water Air Conditioner System Configuration, and Data Center Cooling System Energy Saving Solution and DCIM system planning, etc.

■ Certification Exam

Prerequisites: It is recommended that you learn HCIP-Data Center Facility Deployment in advance. Five years relevant work experience is suggested.

Exam Code	Name	Expense	Duration	Language
H12-461	HCIE-Data Center Facility Design(Written)	US\$300	90 minutes	English/Chinese
H12-466	HCIE-Data Center Facility Design(Lab)	US\$1200	480 minutes	English/Chinese

■ Recertification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIE-Data Center Facility Design	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIE-Data Center Facility Design V1.0 Exam Outline
- **Training Material:** HCIE-Data Center Facility Design V1.0 Training Material
- **Mock Exam:** HCIE-Data Center Facility Design V1.0 Mock Exam



HCIA-Datacom

Training and certifying engineers who acquires basic knowledge and skills commonly used in datacom field.

■ Capabilities to be Certified

HCIA-Datacom certified engineers have a basic knowledge in the general technologies involved in small-sized enterprise networks and possess the basic network design, implementation, O&M and network automation abilities.

■ Knowledge to Learn

Routing and switching principles, WLAN basic principles, network security basic knowledge, network O&M basic knowledge, SDN and network automation basic knowledge.

■ Target Audience

Those who want to achieve HCIA-Datacom certification.
Those who are interested in datacom.

■ Prerequisites

None

■ Content

The HCIE-Intelligent Computing exam includes: Routing and switching principles, WLAN basic principles, network security basic knowledge, network O&M basic knowledge, SDN and network automation basic knowledge.

■ Certification Exam

Exam Code	Name	Expense	Duration	Language
H12-811	HCIA-Datacom	US\$200	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Validity of Recertification	Recertification Rule	Start Date of Validity
HCIA-Datacom	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-Datacom V1.0 Exam Outline
- **Training Material:** HCIA-Datacom V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIA-Datacom V1.0 Mock Exam



HCIP-Datacom-Advanced Routing & Switching Technology

Training and certifying senior engineers who possess advanced routing and switching knowledge and advanced skills in the datacom field.

■ Capabilities to be Certified

Passing HCIP-Datacom-Advanced Routing & Switching Technology V1.0 certificate indicates that you are competent for the position of network engineer in a medium-or large-sized enterprise, be capable of planning and designing, deploying and maintaining, and locating faults on a medium-or large-sized enterprise network by using Huawei datacom devices, and design solutions with high security, availability, and reliability for network applications.

■ Knowledge to Learn

Routing basics, OSPF, IS-IS, BGP, routing and traffic control, Ethernet switching technology, multicast, IPv6, network security, network reliability, network service and management, WLAN, and network solutions. Advanced IGP features, advanced BGP features, IPv6 routing, advanced Ethernet technologies, MPLS technologies, Network O&M, Network Troubleshooting, and Network Cutover.

■ Target Audience

Those who want to achieve HCIP-Datacom-Advanced Routing & Switching Technology. Those who want to be datacom senior engineer.

■ Prerequisites

It is recommended that you learn HCIA-Datacom in advance.

■ Content

The HCIP-Datacom-Core Technology V1.0 exam covers the general core knowledge of all scenarios in the Data communication field, routing basics(3%), OSPF(16%), IS-IS(8%), BGP(17%), routing and traffic control(10%), Ethernet switching technology(7%), multicast(9%), IPv6(3%), network security(9%), network reliability(8%), network service and management(2%), WLAN(6%), and network solutions(2%).

The HCIP-Datacom-Advanced Routing & Switching Technology V1.0 exam covers advanced routing and switching knowledge in the data communication field, including advanced IGP features(17%), advanced BGP features(10%), IPv6 routing(20%), advanced Ethernet technologies(10%), MPLS technologies(19%), Network O&M(7%), Network Troubleshooting(10%), and Network Cutover(7%).

■ Certification Exam

Exam Policy: You need to pass the two exams to obtain certificate.

Prerequisites: It is recommended that you learn HCIA-Datacom in advance.

Exam Code	Name	Expense	Duration	Language
H12-821	HCIP-Datacom-Core Technology	US\$300	90 minutes	English/Chinese
H12-831	HCIP-Datacom-Advanced Routing & Switching Technology	US\$180	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Validity of Recertification	Recertification Rule	Start Date of Validity
HCIP-Datacom-Advanced Routing & Switching Technology	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-Datacom-Advanced Routing & Switching Technology V1.0 Exam Outline
- **Training Material:** HCIP-Datacom-Advanced Routing & Switching Technology V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-Datacom-Advanced Routing & Switching Technology V1.0 Mock Exam



HCIP-Datacom-Campus Network Planning and Deployment

Training and certifying senior engineers with planning, deployment, O&M, and optimization capabilities in large-, medium-, and small-sized enterprise campus network scenarios.

Capabilities to be Certified

Passing the HCIP-Datacom-Campus Network Planning and Deployment certification will indicate that you: 1) understand and master traditional campus network technologies, Huawei CloudCampus solution, network admission control, free mobility, VXLAN, BGP EVPN, campus network virtualization, and Campus WLAN planning and design and CampusInsight intelligent O&M. 2) are qualified for the positions of enterprise campus network scenarios (account manager, project manager, pre-sales engineer, post-sales engineer, and O&M engineer) and be able to use Huawei datacom devices to independently plan, design, deploy, and maintain enterprise campus networks.

Knowledge to Learn

Traditional campus network technologies, Huawei CloudCampus solution, network admission control, free mobility, VXLAN, BGP EVPN, campus network virtualization, and Campus WLAN planning and design and CampusInsight intelligent O&M.

Target Audience

Those who want to be datacom campus network senior engineer, Those who want to achieve HCIP-Datacom-Campus Network Planning and Deployment certification.

Prerequisites

It is recommended that you learn HCIA-Datacom in advance.

Content

The HCIP-Datacom-Core Technology V1.0 exam covers the general core knowledge of all scenarios in the Data communication field, routing basics(3%), OSPF(16%), IS-IS(8%), BGP(17%), routing and traffic control(10%), Ethernet switching technology(7%), multicast(9%), IPv6(3%), network security(9%), network reliability(8%), network service and management(2%), WLAN(6%), and network solutions(2%).

The HCIP-Datacom-Campus Network Planning and Deployment V1.0 Certification Exam covers:

Campus Network and Common Technologies(10%), Campus Network Technology Details(40%), Huawei Campus Network Solution Overview(5%), Campus Network Planning, Design, and Deployment(40%), Intelligent Campus Network O&M(5%)

Certification Exam

Exam Policy: You need to pass the two exams to obtain certificate.

Prerequisites: It is recommended that you learn HCIA-Datacom in advance.

Exam Code	Name	Expense	Duration	Language
H12-821	HCIP-Datacom-Core Technology	US\$300	90 minutes	English/Chinese
H12-841	HCIP-Datacom-Campus Network Planning and Deployment	US\$180	90 minutes	English/Chinese

Re-Certification Method

Certification	Period of Validity	Validity of Recertification	Recertification Rule	Start Date of Validity
HCIP-Datacom-Campus Network Planning and Deployment	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

Learning Materials

- **Exam Outline:** HCIP-Datacom-Campus Network Planning and Deployment V1.0 Exam Outline
- **Training Material:** HCIP-Datacom-Campus Network Planning and Deployment V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-Datacom-Campus Network Planning and Deployment V1.0 Mock Exam



HCIP-Datacom-Enterprise Network Solution Design

Training and certifying senior engineers with capability of professional knowledge and skills in enterprise network solution design scenarios in the datacom network field.

Capabilities to be Certified

Passing the HCIP-Datacom-Enterprise Network Solution Design certification will indicate that you are qualified for the positions of senior solution engineers (account manager, project manager, and pre-sales engineer) for enterprise campus, WAN, and data center network scenarios in the datacom network field and are capable of using Huawei datacom products to perform end-to-end planning and design for campus, WAN, and data center network scenarios, and design solutions with high security, availability, and reliability based on application requirements.

Knowledge to Learn

Enterprise network and solution, campus network architecture and key technology applications, large- and medium-sized virtualized campus network design methods, small- and medium-sized cloud-managed campus network design methods, key technologies for enterprise WAN interconnection and their applications, enterprise WAN interconnection design methods, data center network architecture and key technology applications, data center network design methods, bearer WAN architecture and key technologies, enterprise bearer WAN design methods.

Target Audience

Those who want to be enterprise network solution design senior engineer. Those who want to achieve HCIP-Datacom-Enterprise Network Solution Design certification.

Prerequisites

Suggest to acquire HCIP-Datacom-Core Technology abilities.

Content

The HCIP-Datacom-Core Technology V1.0 exam covers the general core knowledge of all scenarios in the Data communication field, routing basics(3%), OSPF(16%), IS-IS(8%), BGP(17%), routing and traffic control(10%), Ethernet switching technology(7%), multicast(9%), IPv6(3%), network security(9%), network reliability(8%), network service and management(2%), WLAN(6%), and network solutions(2%).

The HCIP-Datacom-Enterprise Network Solution Design V1.0 Certification Exam covers advanced knowledge of network design in various scenarios of enterprise networks in the data communication field, including Enterprise Network Overview(7%), Campus Network Planning and Design(30%), WAN Interconnection Planning and Design(22%), Data Center Network Planning and Design(20%), Bearer WAN Planning and Design(21%).

Certification Exam

Exam Policy: You need to pass the two exams to obtain certificate.

Prerequisites: It is recommended that you learn HCIA-Datacom in advance.

Exam Code	Name	Expense	Duration	Language
H12-821	HCIP-Datacom-Core Technology	US\$300	90 minutes	English/Chinese
H12-851	HCIP-Datacom-Enterprise Network Solution Design	US\$180	90 minutes	English/Chinese

Re-Certification Method

Certification	Period of Validity	Validity of Recertification	Recertification Rule	Start Date of Validity
HCIP-Datacom-Enterprise Network Solution Design	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

Learning Materials

- **Exam Outline:** HCIP-Datacom-Enterprise Network Solution Design V1.0 Exam Outline
- **Training Material:** HCIP-Datacom-Enterprise Network Solution Design V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-Datacom-Enterprise Network Solution Design V1.0 Mock Exam



HCIP-Datacom-WAN Planning and Deployment

Training and certifying senior engineers with professional knowledge and skills in bearer WAN scenarios in the datacom network field.

■ Capabilities to be Certified

Passing the HCIP-Datacom-WAN Planning and Deployment certification will indicate that you are qualified for the position of enterprise bearer WAN engineer (account manager, project manager, pre-sales engineer, post-sales engineer, and O&M engineer) and are capable of using Huawei datacom devices to design, deploy, and O&M of enterprise bearer WAN.

■ Knowledge to Learn

Enterprise bearer WAN solution, Enterprise bearer WAN architecture and key technologies, WAN VPN technologies, MPLS TE fundamentals and configuration, Segment Routing, SRv6, Huawei CloudWAN solution architecture and fundamentals, Huawei CloudWAN solution O&M and troubleshooting, and Huawei CloudWAN solution design practice(Financial Scenario).

■ Target Audience

Those who wants to be datacom bearer WAN senior engineer. Those who wants to achieve HCIP-Datacom-WAN Planning and Deployment certification.

■ Prerequisites

Suggest to acquire HCIP-Datacom-Core Technology abilities.

■ Content

The HCIP-Datacom-Core Technology V1.0 exam covers the general core knowledge of all scenarios in the Data communication field, routing basics(3%), OSPF(16%), IS-IS(8%), BGP(17%), routing and traffic control(10%), Ethernet switching technology(7%), multicast(9%), IPv6(3%), network security(9%), network reliability(8%), network service and management(2%), WLAN(6%), and network solutions(2%).

The HCIP-Datacom-WAN Planning and Deployment V1.0 exam covers advanced knowledge of enterprise bearer WAN scenarios in the data communications field, including Enterprise bearer WAN network solution(5%), enterprise bearer WAN architecture and key technologies(12%), WAN VPN technologies(10%), MPLS TE fundamentals and configuration(15%), segment routing(20%), SRv6 Overview(10%), Huawei CloudWAN solution architecture and fundamentals(15%), Huawei CloudWAN solution O&M and troubleshooting(3%), and Huawei CloudWAN solution design practice (financial scenario)(10%).

■ Certification Exam

Exam Policy: You need to pass the two exams to obtain certificate.

Prerequisites: It is recommended that you learn HCIA-Datacom in advance.

Exam Code	Name	Expense	Duration	Language
H12-821	HCIP-Datacom-Core Technology	US\$300	90 minutes	English/Chinese
H12-861	HCIP-Datacom-WAN Planning and Deployment	US\$180	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Validity of Recertification	Recertification Rule	Start Date of Validity
HCIP-Datacom-WAN Planning and Deployment	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-Datacom-WAN Planning and Deployment V1.0 Exam Outline
- **Training Material:** HCIP-Datacom-WAN Planning and Deployment V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-Datacom-WAN Planning and Deployment V1.0 Mock Exam



HCIP-Datacom-SD-WAN Planning and Deployment

Training and certifying senior engineers with planning, deployment, O&M, and optimization capabilities in SD-WAN scenarios.

■ Capabilities to be Certified

Passing the HCIP-Datacom-SD-WAN Planning and Deployment V1.0 certification will indicate that you: 1) understand and master Enterprise WAN interconnection scenario, GRE technology, IPsec VPN technology, QoS basic principles, HA technology, SD-WAN deployment, SD-WAN management and O&M, SD-WAN networking principles and planning, SD-WAN application experience, SD-WAN security, SD-WAN intelligent O&M, and SD-WAN Practice 2) are qualified for the positions of SD-WAN (account manager, project manager, pre-sales engineer, post-sales engineer, and O&M engineer). You are capable of using Huawei datacom devices to design, deploy, and O&M of SD-WAN networks.

■ Knowledge to Learn

Enterprise SD-WAN scenario, GRE technology, IPsec VPN technology, QoS basic principles, HA technology, SD-WAN deployment, SD-WAN management and O&M, SD-WAN networking principles and planning, SD-WAN application experience, SD-WAN security, SD-WAN intelligent O&M.

■ Target Audience

Those who wants to be datacom SD-WAN senior engineers, Those who wants to achieve the HCIP-Datacom-SD-WAN Planning and Deployment Certification.

■ Prerequisites

It is recommended that you learn HCIA-Datacom in advance.

■ Content

The HCIP-Datacom-Core Technology V1.0 exam covers the general core knowledge of all scenarios in the Data communication field, routing basics(3%), OSPF(16%), IS-IS(8%), BGP(17%), routing and traffic control(10%), Ethernet switching technology(7%), multicast(9%), IPv6(3%), network security(9%), network reliability(8%), network service and management(2%), WLAN(6%), and network solutions(2%).

The HCIP-Datacom-SD-WAN Planning and Deployment V1.0 exam covers high-level knowledge about enterprise WAN interconnection scenarios in the data communications field, enterprise WAN interconnection scenarios, GRE technologies, IPsec VPN technologies, basic QoS principles, HA technologies, SD-WAN deployment, SD-WAN management and O&M, SD-WAN networking principles and planning, SD-WAN application experience, SD-WAN security, SD-WAN intelligent O&M, and SD-WAN design practices.

■ Certification Exam

Exam Policy: You need to pass the two exams to obtain certificate.

Prerequisites: It is recommended that you learn HCIA-Datacom in advance.

Exam Code	Name	Expense	Duration	Language
H12-821	HCIP-Datacom-Core Technology	US\$300	90 minutes	English/Chinese
H12-871	HCIP-Datacom-SD-WAN Planning and Deployment	US\$180	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Validity of Recertification	Recertification Rule	Start Date of Validity
HCIP-Datacom-SD-WAN Planning and Deployment	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-Datacom-SD-WAN Planning and Deployment V1.0 Exam Outline
- **Training Material:** HCIP-Datacom-SD-WAN Planning and Deployment V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-Datacom-SD-WAN Planning and Deployment V1.0 Mock Exam



HCIP-Datacom-Network Automation Developer

Training and certifying senior engineers with network automation development knowledge and skills in datacom field.

Capabilities to be Certified

HCIP-Datacom-Network Automation Developer certified engineers have a basic knowledge in the general technologies related to network automation development and are able to proceed enterprise network automatic implementation, development, O&M by using Huawei datacom equipment.

Knowledge to Learn

Routing basics, OSPF, IS-IS, BGP, routing and traffic control, Ethernet switching technology, multicast, IPv6, network security, network reliability, network service and management, WLAN, and network solutions. Python Programming Basics, Git, Network Devices' Open Programmability (SSH, SNMP, NETCONF, YANG, Telemetry etc.), iMaster NCE Northbound Openness Principles (RESTful, HTTP, HTTPS etc.).

Target Audience

Those who want to achieve HCIP-Datacom-Network Automation Developer certification. Those who want to be network automation developer.

Prerequisites

It is recommended that you learn HCIA-Datacom in advance.

Content

The HCIP-Datacom-Core Technology V1.0 exam covers the general core knowledge of all scenarios in the Data communication field, routing basics(3%), OSPF(16%), IS-IS(8%), BGP(17%), routing and traffic control(10%), Ethernet switching technology(7%), multicast(9%), IPv6(3%), network security(9%), network reliability(8%), network service and management(2%), WLAN(6%), and network solutions(2%).

The HCIP-Datacom-Network Automation Developer V1.0 exam covers Programming basics(20%), Huawei device openness and programmability(50%), iMaster NCE northbound openness(25%) and iMaster NCE service openness and programmability(5%).

Certification Exam

Exam Policy: You need to pass the two exams to obtain certificate.

Prerequisites: It is recommended that you learn HCIA-Datacom in advance.

Exam Code	Name	Expense	Duration	Language
H12-821	HCIP-Datacom-Core Technology	US\$300	90 minutes	English/Chinese
H12-881	HCIP-Datacom-Network Automation Developer	US\$180	90 minutes	English/Chinese

Re-Certification Method

Certification	Period of Validity	Validity of Recertification	Recertification Rule	Start Date of Validity
HCIP-Datacom-Network Automation Developer	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

Learning Materials

- **Exam Outline:** HCIP-Datacom-Network Automation Developer V1.0 Exam Outline
- **Training Material:** HCIP-Datacom-Network Automation Developer V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-Datacom-Network Automation Developer V1.0 Mock Exam



HCIE-Datacom

Training and certifying experts with professional knowledge and skills of multi-scenario convergence solutions in the datacom network field.

Capabilities to be Certified

Passing the HCIE-Datacom certification will indicate that you have a solid theoretical knowledge of multi-scenario convergence solutions for enterprise networks, and be able to use Huawei Datacom products and solutions to plan, deploy, maintain, and optimize enterprise campus networks, WAN interconnection, and bearer WAN. You will be competent for the expert positions of full-scenario enterprise networks (including account managers, project managers, pre-sales experts, post-sales experts, network architects, etc.).

Knowledge to Learn

Routing and switching advanced technologies, panoramic view of enterprise network architecture, typical architecture and technologies of campus network, planning and deployment of Huawei CloudCampus solution, typical architecture and technologies of WAN interconnection, planning and deployment of Huawei SD-WAN solution, typical architecture and technologies of bearer WAN, planning and deployment of Huawei CloudWAN solution, network automation technologies and practice.

Target Audience

Those who wants to be datacom network expert, Those who wants to achieve HCIE-Datacom certification.

Content

The HCIE-Datacom V1.0 Certification Exam covers routing and switching advanced technologies, panoramic view of enterprise network architecture, typical architecture and technologies of campus network, planning and deployment of Huawei CloudCampus solution, typical architecture and technologies of WAN interconnection, planning and deployment of Huawei SD-WAN solution, typical architecture and technologies of bearer WAN, planning and deployment of Huawei CloudWAN solution, network automation technologies and practice.

Advanced Routing and Switching Technology (37%), Campus Network Planning and Deployment (23%), WAN Interconnection Network Planning and Deployment (8%), Bearer WAN Planning and Deployment (15%), Network Automation (17%), QoS(5%).

Certification Exam

Prerequisites: It is recommended that you learn HCIP-Datacom-Core Technology in advance. Five years relevant work experience is suggested.

Exam Code	Name	Expense	Duration	Language
H12-891	HCIE-Datacom (Written)	US\$300	90 minutes	English/Chinese
H12-892	HCIE-Datacom (Lab)	US\$1200	480 minutes	English/Chinese

Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIE-Datacom	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

Learning Materials

- **Exam Outline:** HCIE-Datacom V1.0 Exam Outline
- **Training Material:** HCIE-Datacom V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIE-Datacom V1.0 Mock Exam



HCIE-Data Center Network

HCIE-Data Center Network V1.0 aims to train and certificate experts with professional knowledge and skills of scenario solution in the data center network field

■ Capabilities to be Certified

Passing the HCIE-Data Center Network certification will indicate that you have a solid theoretical knowledge of data center network scenario and are able to use Huawei data center network products and solutions to plan, deploy, maintain, and optimize data center networks. You will be competent for the expert positions of data center network scenario (including account managers, project managers, pre-sales experts, post-sales experts, network architects, etc.)

■ Knowledge to Learn

Passing the HCIE-Data Center Network certification will indicate that you have a solid theoretical knowledge of data center network scenario and are able to use Huawei data center network products and solutions to plan, deploy, maintain, and optimize data center networks. You will be competent for the expert positions of data center network scenario (including account managers, project managers, pre-sales experts, post-sales experts, network architects, etc.)

■ Target Audience

Those who wants to be data center network expert / Those who wants to achieve HCIE-Data Center Network certification

■ Content

The HCIE-Data Center Network V1.0 Certification Exam covers data center network basic knowledge, advanced technologies and applications of data center networks, Huawei CloudFabric solution, data center network planning and design, and data center network O&M.

HCIE-Data Center Network V1.0 (Written): Data Center Network Basic Knowledge (15%), Advanced Technologies and Applications of Data Center Networks (31%), Huawei CloudFabric Solution (30%), Data Center Network Planning and Design (8%), Data Center Network O&M (16%).

HCIE-Data Center Network V1.0 (Lab): Data Center Network Basic Knowledge (15%), Advanced Technologies and Applications of Data Center Networks (20%), Huawei CloudFabric Solution (40%), Data Center Network Planning and Design (15%), Data Center Network O&M (10%).

■ Certification Exam

Prerequisites: Suggest to acquire HCIP-Datacom-Core Technology abilities

Exam Code	Name	Expense	Duration	Language
H12-921	HCIE-Data Center Network (Written)	US\$300	90 minutes	English/Chinese
H12-922	HCIE-Data Center Network (Lab)	US\$1200	480 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIE-Data Center Network	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIE-Data Center Network V1.0 Exam Outline
- **Training Material:** HCIE-Data Center Network V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIE-Data Center Network V1.0 Mock Exam



HCIP-Datacom-Carrier IP Bearer

Training and certifying senior IP bearer network engineers in the Datacom domain.

■ Capabilities to be Certified

Have the advanced knowledge of constructing and maintaining IP bearer networks, MANs, and backbone networks.

■ Knowledge to Learn

The carrier-class metro network and backbone network, be capable of planning and designing, deploying and maintaining, and locating faults on a carrier-class IP bearer network by using Huawei Datacom devices, and design solutions with high security, availability, and reliability for network applications.

■ Target Audience

Engineers engaged in the planning, construction, maintenance and optimization of carriers' Datacom networks.

■ Content

The HCIP-Datacom-Carrier Core Technology V1.0 covers: Carrier network management, Ethernet switching technologies, Advanced IP routing technologies, Key IPv6 technologies, VPN technologies, Tunneling technologies, Reliability technologies, Multicast technologies, QoS technologies, Carrier network scenarios.

Carrier network management (2%), Ethernet switching technologies (7%), Advanced IP routing technologies (27%), Key IPv6 technologies (8%), VPN technologies (25%), Tunneling technologies (3%), Reliability technologies (7%), Multicast technologies (7%), Multicast technologies (7%), Carrier network scenarios (7%).

The HCIP-Datacom-Carrier IP Bearer exam covers: WAN access technologies, Advanced tunneling protocols, Advanced VPN technologies, Advanced multicast technologies, Converged service bearer scenarios, SDN technologies, 5G transport technologies, Service quality measurement, 5G related knowledge.

WAN access technologies (15%), Advanced tunneling protocols (8%), Advanced VPN technologies (4%), Advanced multicast technologies (12%), Converged service bearer scenarios (17%), SDN technologies (13%), 5G transport technologies (10%), Service quality measurement (8%), Service quality measurement (13%).

■ Certification Exam

Exam Policy: You need to pass the two exams to obtain certificate.

Prerequisites: None.

Exam Code	Name	Expense	Duration	Language
H35-821	HCIP-Datacom-Carrier Core Technology	US\$300	90 minutes	English/Chinese
H35-822	HCIP-Datacom-Carrier IP Bearer	US\$180	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Validity of Recertification	Recertification Rule	Start Date of Validity
HCIP-Datacom-Carrier IP Bearer	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-Datacom-Carrier IP Bearer V1.0 Exam Outline
- **Training Material:** HCIP-Datacom-Carrier IP Bearer V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-Datacom-Carrier IP Bearer V1.0 Mock Exam



HCIP-Datacom-Carrier Cloud Bearer

Training and certifying senior engineers of the cloud core bearer network in the Cloud Bearer domain.

■ Capabilities to be Certified

Have the advanced knowledge of constructing and maintaining Cloud bearer networks and guarantee provincial core networks.

■ Knowledge to Learn

Planning, building, maintaining, and optimizing networks in the DCN and DCI domains in the Cloud Bearer network scenario with Huawei Datacom devices. In addition, you are able to design solutions with high security, availability and reliability for provincial core networks.

■ Target Audience

Engineers engaged in the planning, construction, maintenance and optimization of carriers' Datacom networks.

■ Content

The HCIP-Datacom-Carrier Core Technology V1.0 covers: Carrier network management, Ethernet switching technologies, Advanced IP routing technologies, Key IPv6 technologies, VPN technologies, Tunneling technologies, Reliability technologies, Multicast technologies, QoS technologies, Carrier network scenarios.

Carrier network management (2%), Ethernet switching technologies (7%), Advanced IP routing technologies (27%), Key IPv6 technologies (8%), VPN technologies (25%), Tunneling technologies (3%), Reliability technologies (7%), Multicast technologies (7%), Multicast technologies (7%), Carrier network scenarios (7%).

The HCIP-Datacom-Carrier Cloud Bearer exam covers: Introduction to the Telco Cloud Bearer Network, SDN Overview and Protocol Introduction, Introduction to Cloud Platform Technologies, Key Network Technologies, Firewall Technologies.

Introduction to the Telco Cloud Bearer Network (14%), SDN Overview and Protocol Introduction (16%), Introduction to Cloud Platform Technologies (14%), Key Network Technologies (29%), Firewall Technologies (27%).

■ Certification Exam

Exam Policy: You need to pass the two exams to obtain certificate.

Prerequisites: None.

Exam Code	Name	Expense	Duration	Language
H35-821	HCIP-Datacom-Carrier Core Technology	US\$300	90 minutes	English/Chinese
H35-823	HCIP-Datacom-Carrier Cloud Bearer	US\$180	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Validity of Recertification	Recertification Rule	Start Date of Validity
HCIP-Datacom-Carrier Cloud Bearer	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-Datacom-Carrier Cloud Bearer V1.0 Exam Outline
- **Training Material:** HCIP-Datacom-Carrier Cloud Bearer V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-Datacom-Carrier Cloud Bearer V1.0 Mock Exam



HCIE-Datacom-Carrier

Training and certifying experts with the capabilities of IP routing protocol principles of the operation network, advanced VPN features and applications, and WAN access technologies. It also aiming at the capabilities of professionals in planning, maintaining, and troubleshooting large-scale networks of carriers

Capabilities to be Certified

Have a systematic understanding and proficient command of the principles, advanced features, and applications of each protocol. You also have an understanding of the network architecture, services, and network and technology evolution of the carrier network. You can independently complete the maintenance tasks of typical carriers' networks

Knowledge to Learn

Advanced routing protocol features, VPN in-depth analysis, HA high reliability features, HA high reliability features, advanced multicast protocol features, IP mobile backhaul planning and deployment, MAN planning and deployment, and IP MAN, backbone network planning, backbone network planning and deployment, cloud bearer network planning and deployment, IPv6 planning and deployment, application and process orchestration

Target Audience

People intended for those who are to be certified by the HCIE-Datacom-Carrier exam

Content

The HCIE-Datacom-Carrier exam covers: Advanced routing protocol features, VPN in-depth analysis, HA high reliability features, HA high reliability features, advanced multicast protocol features, IP mobile backhaul planning and deployment, MAN planning and deployment, IP MAN, Backbone network planning, Backbone network planning and deployment, Cloud bearer network planning and deployment, IPv6 planning and deployment, application and process orchestration.

Advanced features of routing protocols (15%), Tunnel technology in-depth (15%), VPN in-depth feature (15%), HA high reliability (8%), Advanced multicast protocol (6%), QoS in-depth features (5%), IP mobile backhaul planning and deployment (8%), MAN planning and deployment (8%), Backbone network planning (8%), Cloud bearer network planning and deployment (8%), Overview of network orchestration technologies (2%), Automatic O&M (2%).

Certification Exam

Prerequisites: Have got the HCIP certification or have the equivalent technical knowledge level

Exam Code	Name	Expense	Duration	Language
H35-831	HCIE-Datacom-Carrier (Written)	US\$300	120 minutes	English/Chinese
H35-832	HCIE-Datacom-Carrier (Lab)	US\$1200	480 minutes	English/Chinese

Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIE-Datacom-Carrier	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

Learning Materials

- **Exam Outline:** HCIE-Datacom-Carrier V1.0 Exam Outline
- **Training Material:** HCIE-Datacom-Carrier V1.0 Training Material
- **Mock Exam:** HCIE-Datacom-Carrier V1.0 Mock Exam



HCIA-WLAN

Train and certified engineers who have mastered basic WLAN technologies and are capable of deploying and maintaining WLAN products.

■ Capabilities to be Certified

Master the basics of WLAN technology, have a clear understanding of the WLAN architecture and the functions of each related component, be familiar with WLAN configuration and know how to design, deploy and maintain a WLAN network.

■ Knowledge to Learn

Basics and working principles of WLAN technologies; WLAN product features and networking solutions; WLAN access security and related configurations; WLAN Deployment Overview.

■ Target Audience

ICT professionals or students interested in WLAN technologies.

■ Content

HCIA-WLAN V3.0 covers basic WLAN knowledge, including basic WLAN knowledge, WLAN frequency band, IEEE 802.11 protocol, 802.11 MAC architecture, 802.11 physical layer technology, WLAN networking, CAPWAP basic principles, and data forwarding. Wi-Fi 6 technology, WLAN product introduction, AP initial configuration, WLAN online configuration, and WLAN access authentication. WLAN O&M and troubleshooting, antenna technology, and WLAN project deployment.

WLAN Overview(3%), WLAN Technology Basics(15%), WLAN Networking Model(7%), Introduction to Wi-Fi 6 Technologies and Products(5%), Working Principles of WLAN(25%), WLAN access authentication(5%), WLAN Access Configuration(20%), WLAN Troubleshooting(10%), WLAN Antenna Technology(5%), WLAN Deployment Overview(5%).

■ Certification Exam

Exam Policy: The training is optional. **Prerequisites:** None.

Exam Code	Name	Expense	Duration	Language
H12-311	HCIA-WLAN	US\$200	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIA-WLAN	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-WLAN V3.0 Exam Outline
- **Training Material:** HCIA-WLAN V3.0 Training Material
- **Mock Exam:** HCIA-WLAN V3.0 Mock Exam



HCIP-WLAN

Training and certifying senior engineers who are capable of planning, designing, deploying, operating, and optimizing the WLAN of large- and medium-sized enterprises

■ Capabilities to be Certified

Mastered WLAN technologies and are capable of professional planning, design, deployment, O&M, and optimization of large- and medium-sized enterprise WLANs by using Huawei WLAN devices, ensuring secure, reliable, and stable operation of enterprise WLANs

■ Knowledge to Learn

WLAN networking architecture, WLAN reliability technology, WLAN cloud management solution, user access and authentication technology, roaming technology, radio resource management, WLAN network planning basics, WLAN network planning tools, WLAN network planning process, network planning solutions in different scenarios, WLAN network optimization, WLAN network O&M, and WLAN network troubleshooting

■ Target Audience

ICT professionals or students interested in wireless local area network (WLAN) technologies

■ Content

The HCIP-WLAN V2.0 exam content covers WLAN networking architecture, WLAN reliability technology, WLAN cloud management solution, user access and authentication technology, roaming technology, radio resource management, WLAN network planning basics, WLAN network planning tools, WLAN network planning process, network planning solutions in different scenarios, WLAN network optimization, WLAN network O&M, and WLAN network troubleshooting.

WLAN Networking Technologies (16%), User Access and Authentication (8%), WLAN Roaming (8%), WLAN Radio Resource Management (8%), WLAN Planning Basics (8%), WLAN Planning Tools (6%), WLAN Planning Process (6%), WLAN Planning Scenarios (10%), WLAN Network Optimization Overview and Tools (7%), WLAN Optimization Solution (9%), WLAN O&M (8%), WLAN Troubleshooting (6%).

■ Certification Exam

Prerequisites: It is recommended that you learn HCIA-WLAN in advance

Exam Code	Name	Expense	Duration	Language
H12-323	HCIP-WLAN	US\$300	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIP-WLAN	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-WLAN V2.0 Exam Outline
- **Training Material:** HCIP-WLAN V2.0 Training Material
- **Mock Exam:** HCIP-WLAN V2.0 Mock Exam



HCIE-WLAN

Training and certifying network technical experts who are capable of planning, design, deployment, O&M, and optimization of large- and medium-sized complex networks in the campus WLAN field.

■ Capabilities to be Certified

Solid WLAN theory, WLAN solution planning and design capabilities, large-scale WLAN network deployment, and network O&M optimization capabilities.

■ Knowledge to Learn

Datacom network foundation, WLAN cutting-edge technologies and development trends, Basic WLAN theory, Basic WLAN troubleshooting, WLAN Deployment Solution in Typical Scenarios.

■ Target Audience

- People interested in WLAN.

■ Content

The HCIE-WLAN Certification Exam covers: WLAN networking, WLAN Reliability technology, WLAN radio resource management, WLAN admission control, WLAN security and defense, WLAN and IoT, WLAN location technology, WLAN IPv6 networking technology, CloudCampus solution, WLAN troubleshooting, Intelligent O&M, WLAN network optimization, WLAN network planning.

■ Certification Exam

Exam Policy: You can directly pass the written exam and lab exam to obtain certificate.

Prerequisites: It is recommended that you learn HCIP-WLAN in advance. Five years' working experience in related fields is a plus.

Exam Code	Name	Expense	Duration	Language
H12-351	HCIE-WLAN (Written)	US\$300	90 minutes	English/Chinese
H12-352	HCIE-WLAN (Lab)	US\$1200	480 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIE-WLAN	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIE-WLAN V1.0 Exam Outline
- **Training Material:** HCIE-WLAN V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIE-WLAN V1.0 Mock Exam



HCIA-Security

Training and certifying engineers who are capable of collaborating in the design, deployment, and operation of small and medium-sized enterprise network security architecture

■ Capabilities to be Certified

Engineers master the basic information security knowledge and related technologies for small- and medium-sized networks, and are capable of building small-sized information security networks for enterprises to ensure the security of networks and applications of small- and medium-sized enterprises

■ Knowledge to Learn

Information security concept, information security standards and specifications, common attack methods, firewall security policy, firewall NAT technology, firewall hot standby technology, intrusion prevention technology, cryptography foundation, PKI mechanism, IPSec/SSL VPN technology

■ Target Audience

Information security operation and maintenance engineer. Network security junior engineer who hopes to have information security capabilities

■ Content

The HCIA-Security V4.0 exam content covers network security concepts and specifications, network basic knowledge, common network security threats and prevention, firewall security policy, firewall network address translation technologies, firewall hot standby technologies, firewall intrusion prevention technologies, firewall user management technologies, and encryption and decryption technology principles and applications.

Network security concepts and specifications (5%), Network basics (10%), Common network security threats and threat prevention (5%), Firewall security policy (10%), Firewall NAT technologies (10%), Firewall hot standby technologies (10%), Firewall user management technologies (10%), Firewall intrusion prevention technologies (10%), Fundamentals of encryption technologies (10%), PKI certificate system (5%), Encryption technology applications (15%).

■ Certification Exam

Prerequisites: None.

Exam Code	Name	Expense	Duration	Language
H12-711	HCIA-Security	US\$200	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIA-Security	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-Security V4.0 Exam Outline
- **Training Material:** HCIA-Security V4.0 Training Material and Lab Guide
- **Mock Exam:** HCIA-Security V4.0 Mock Exam



HCIP-Security

Training and certifying senior engineers with architecture design, deployment and O&M capabilities of medium and large enterprise network security

Capabilities to be Certified

Mastered Huawei cyber security technologies, including network architecture security, border security, application security, and terminal security, and have the architecture design, deployment, and O&M capabilities of large- and medium- scale enterprises' cyber security, and to protect enterprise information assets

Knowledge to Learn

Firewall high reliability technologies, firewall traffic management, firewall virtual system, firewall intelligent uplink selection, IPSec VPN technology and application, SSL VPN technology and application, cyber attacks and defense, vulnerability defense and penetration testing, content security filtering technologies, emergency response, network access control

Target Audience

People who want to be senior engineers in network security

Content

The HCIP-Security V4.0 exam content covers firewall high reliability technologies, firewall traffic management, firewall virtual system, firewall intelligent uplink selection, IPSec VPN technology and application, SSL VPN technology and application, cyber attacks and defense, vulnerability defense and penetration testing, content security filtering technologies, emergency response, and network access control.

HCIP-Security exam covers Firewall High Reliability Technologies (7%), Firewall Traffic Management (5%), Firewall Virtual System (6%), Firewall Intelligent Uplink Selection (6%), IPSec VPN Technology and Application (13%), SSL VPN Technology and Application (9%), Cyber Attacks and Defense (12%), Vulnerability Defense and Penetration Testing (10%), Content Security Filtering Technologies (12%), Emergency Response (5%), Network Access Control(15%).

Certification Exam

Prerequisites: None

Exam Code	Name	Expense	Duration	Language
H12-725	HCIP-Security	300USD	90 minutes	English/Chinese

Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIP-Security	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

Learning Materials

- **Exam Outline:** HCIP-Security V4.0 Exam Outline
- **Training Material:** HCIP-Security V4.0 Training Material
- **Mock Exam:** HCIP-Security V4.0 Mock Exam



HCIA-Transmission

Training and certifying junior engineers who are capable of deploying transport network devices, configuring and commissioning basic services, and performing routine operation and maintenance.

■ Capabilities to be Certified

After passing the HCIA-Transmission V2.5 certification, you will master the basic knowledge of transport networks and the network architecture of Huawei transport network solutions. You will be able to perform O&M based on the knowledge, and be qualified as a transport network O&M engineer.

■ Knowledge to Learn

Have a good basic knowledge of transport network principles, transport network products and networking applications, and NMS operations and configurations of transport network products.

■ Target Audience

Junior engineers in the transmission field and ICT talent who want to learn basic transport network knowledge.

■ Content

The HCIA-Transmission V2.5 exam covers basic knowledge of transmission network field, including Transmission Network Overview, WDM Principles, SDH Principles, Transmission Network Products, Introduction to NCE-T, OTN Protocol, NG WDM Equipment Networking and Applications, Transmission Network Protection Principles.

Transmission Network Overview (10%), SDH Principles (15%), Transmission Network Products (10%), Introduction to NCE-T (5%), Introduction to Ethernet Principles and Services (10%), WDM Principles (15%), NG WDM Equipment Networking and Applications (10%), OTN Protocol (10%), Transmission Network Protection Principles (15%).

■ Certification Exam

Prerequisites: None.

Exam Code	Name	Expense	Duration	Language
H31-311	HCIA-Transmission	US\$200	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIA-Transmission	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-Transmission V2.5 Exam Outline
- **Training Material:** HCIA-Transmission V2.5 Training Material and Lab Guide
- **Mock Exam:** HCIA-Transmission V2.5 Mock Exam



HCIP-Transmission

Training and certifying senior engineers who are capable of service configuration, system commissioning, and protection configuration of transmission network devices.

■ Capabilities to be Certified

After passing the HCIP-Transmission V2.5 certification, you will master the principles, scheduling schemes, commissioning methods of transport network devices, service configuration, protection implementation mechanisms, and troubleshooting methods of transport network devices and transport network faults. In addition, you can perform O&M and troubleshooting based on this, and is qualified as a high-level O&M engineer for transport networks.

■ Knowledge to Learn

Principles and scheduling schemes of transport networks, commissioning methods of transport network devices, service configuration, protection implementation mechanisms, and troubleshooting methods of transport network devices and transport network faults.

■ Target Audience

Senior engineers in the transmission field and ICT talent who want to learn in-depth transmission network knowledge.

■ Content

The HCIP-Transmission V2.5 exam covers advanced knowledge of transmission network field, including WDM Principles, Transmission Network Products, NG WDM Equipment Networking and Applications, Optical- and Electrical-Layer Grooming Solutions of NG WDM Equipment, NG WDM Equipment Commissioning, MS-OTN Features, OTN Protocol, MS-OTN Protection Principles, NG WDM Equipment Routine Maintenance, NG WDM Alarm Signal Flow Analysis, NG WDM System Troubleshooting. WDM Principles (10%), Transmission Network Products (5%), NG WDM Equipment Networking and Applications (5%), Optical- and Electrical-Layer Grooming Solutions of NG WDM Equipment (10%), NG WDM Equipment Commissioning (15%), MS-OTN Features (10%), OTN Protocol (10%), MS-OTN Protection Principles (10%), NG WDM Equipment Routine Maintenance (5%), NG WDM Alarm Signal Flow Analysis (10%), NG WDM System Troubleshooting (10%).

■ Certification Exam

Prerequisites: It is recommended that you learn HCIA-Transmission in advance.

Exam Code	Name	Expense	Duration	Language
H31-341	HCIP-Transmission	US\$300	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIP-Transmission	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-Transmission V2.5 Exam Outline
- **Training Material:** HCIP-Transmission V2.5 Training Material
- **Mock Exam:** HCIP-Transmission V2.5 Mock Exam



HCIE-Transmission

Cultivate and certify experts or senior engineers with OTN design, deployment, OAM and troubleshooting skills

■ Capabilities to be Certified

HCIE-Transmission certification covers the development of transmission network as well as solutions. Skills such as independently design and deploy OTN, along with OAM capability will be evaluated. Candidates should be able to design and deploy highly expendable and reliable enterprise transmission network, based on the need of services and future requirements. Multiple capabilities will be testing with HCIE-Transmission V2.0, including technology awareness, planning and design, project implementation, troubleshooting, categorization, understanding and application, and system commissioning. Various testing formats will be applied, to comprehensively evaluate the issue analyzing and solving skills from the candidates

■ Knowledge to Learn

Network Planning and Design, Network Structure Reconstruction, Network Protection Reconstruction, ASON Principles, Optical Doctor System, Fiber Doctor System, Comprehensive Troubleshooting Methods, as well as technology frontiers and solutions

■ Target Audience

Personnel looking to specialize in the field of transmission network

■ Content

HCIE-Transmission V2.0 exam covers advanced knowledge further beyond HCIP, in the field of transmission network, including Network Planning and Design, Network Structure Reconstruction, Network Protection Reconstruction, ASON Principles, Optical Doctor System, Fiber Doctor System, Comprehensive Troubleshooting Methods, as well as technology frontiers and solutions.

■ Certification Exam

Prerequisites: Knowledge and skills from HCIA-Transmission and HCIP-Transmission. 5 years or above of work experience in relevant field is recommended

Exam Code	Name	Expense	Duration	Language
H12-931	HCIE-Transmission (Written)	300USD	90 minutes	English/Chinese
H12-936	HCIE-Transmission (Lab)	1200USD	480 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIE-Transmission	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIE-Transmission V2.0 Exam Outline
- **Training Material:** HCIE-Transmission V2.0 Training Material and Lab Guide
- **Mock Exam:** HCIE-Transmission V2.0 Mock Exam



HCIA-Access

Training and certifying engineers who are capable of using access network devices for deployment, basic service commissioning, and routine O&M.

■ Capabilities to be Certified

Master the basic principles and service configurations of access networks. Have the ability to commission Huawei access network devices and configure basic services, plan ODN networks, and troubleshoot basic faults.

■ Knowledge to Learn

Access network overview, xPON principles, Network communication principles, Data service configuration, ODN engineering implementation and maintenance, and NMS basics.

■ Target Audience

People interested in Access.

■ Content

The HCIA-Access V2.5 exam covers: Access Network Overview(3%), Network Communication Principles(18%), xPON & xDSL Principles(27%), PPPoE&DHCP&VLAN Principles(21%), Data service basics& Data Service Configuration(16%), ODN Engineering Implementation and Maintenance(10%) & Network Management Basics(5%).

■ Certification Exam

Exam Policy: The training is optional. **Prerequisites:** None.

Exam Code	Name	Expense	Duration	Language
H35-210	HCIA-Access	US\$200	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIA-Access	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-Access V2.5 Exam Outline
- **Training Material:** HCIA-Access V2.5 Training Material and Lab Guide
- **Mock Exam:** HCIA-Access V2.5 Mock Exam
- **Online Course:** HCIA-Access V2.5 Course



HCIP-Access

Training and certifying senior engineers with independent access network planning, design, deployment, and O&M capabilities.

■ Capabilities to be Certified

Have the advanced knowledge and service understanding and application skills required for relevant work, and have the advanced knowledge required for the pre-sales and after-sales of Huawei access network products.

■ Knowledge to Learn

SIP&H.248 principles and configuration, Multicast principles and configuration, PON Network protection, PON system security features, QoS features, eSight & NCE-FAN service O&M, POL&FTTx networking planning, and Typical Troubleshooting in Access Network.

■ Target Audience

- People interested in Access.

■ Content

The HCIP-Access V2.5 exam covers: VoIP principles and configuration, PON Multicast principles and configuration, PON QoS Basics, PON Network Protection, PON System Security Protection Features, Service Configuration on eSight & NCE-FAN, POL & FTTx Planning and Design, Typical Troubleshooting in Access Network.

Networking protection(10%), VoIP Principles and Configuration(11%), Multicast Principles and Configuration(12%), QoS Basics(12%), PON Security Basics(12%), NMS service configuration(8%), POL&FTTx Planning and Design(22%), Typical Troubleshooting Cases(13%).

■ Certification Exam

Exam Policy: The training is optional.

Prerequisites: It is recommended that you learn HCIA-Access in advance.

Exam Code	Name	Expense	Duration	Language
H35-211	HCIP-Access	US\$200	90 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIP-Access	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-Access V2.5 Exam Outline
- **Training Material:** HCIP-Access V2.5 Training Material and Lab Guide
- **Mock Exam:** HCIP-Access V2.5 Mock Exam



HCIA-5G

Training and certifying engineers with the 5G industry solution design and 5G industry business marketing capabilities.

■ Capabilities to be Certified

Have a systematic understanding and grasp of knowledge and skills in 5G development and evolution, 5G network architecture and key technologies, 5G new technology convergence and innovative applications, 5G basic service capabilities and applications, and 5G industry application solutions, and have the basic capabilities of 5G industry solution design and service marketing, which are required for positions such as industry solution engineer and pre-sales solution engineer.

■ Knowledge to Learn

The basic knowledge of 5G networks and industry applications, and the basic knowledge and skills required as industry solution engineers and pre-sales solution engineers.

■ Target Audience

It is intended for personnel of relevant industries, colleges and universities, and operators.

■ Content

The HCIA-5G V2.0 exam covers 5G development and evolution, 5G network architecture and key technologies, 5G + new technology innovative application, 5G basic service capabilities and applications, and 5G industrial applications and solutions.

5G Development and Evolution (18%), 5G Network Architecture and Key Technologies (27%), 5G + New Technology Innovative Application (15%), 5G Basic Service Capabilities and Applications (20%), 5G Industrial Applications and Solutions (20%).

■ Certification Exam

Prerequisites: None

Exam Code	Name	Expense	Duration	Language
H35-660	HCIA-5G	US\$200	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIA-5G	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-5G V2.0 Exam Outline
- **Training Material:** HCIA-5G V2.0 Training Material
- **Mock Exam:** HCIA-5G V2.0 Mock Exam



HCIA-5G-Bearer

Training and certifying engineers with the 5G bearer network technologies, and basic knowledge about routing, MPLS, SR, ISIS, FlexE, clock, and active FO related to 5G bearer networks capabilities.

■ Capabilities to be Certified

Demonstrate the understanding of 5G bearer requirements, and the mandatory knowledge about and skills in routing, MPLS, SR, ISIS, FlexE, clock, and active FO technologies related to 5G bearer networks, and the basic knowledge and skills required for positions such as pre-sales technical support, project management, and O&M for 5G bearer networks engineers.

■ Knowledge to Learn

5G bearer network requirement analysis, 5G bearer network evolution solution, IP routing basics, IS-IS routing protocol basics, basic principles of MPLS, EVPN technology basics, segment routing technology basics, FlexEth technology introduction, 5G bearer clock technology, and 5G fronthaul transport solution and key technologies.

■ Target Audience

Those who are interested in 5G

■ Content

HCIA-5G-Bearer V1.0 certification curriculum includes 5G bearer network requirement analysis(10%), 5G bearer network evolution solutions(20%), IP routing basics(5%), IPv6 basics(5%), IS-IS routing protocol basics(10%), basic principles of MPLS and VPN(20%), segment routing technology basics(10%), FlexEth technology introduction(5%), 5G bearer clock technology(5%), and 5G fronthaul transport solution and key technologies(10%).

■ Certification Exam

Prerequisites: None.

Exam Code	Name	Expense	Duration	Language
H35-670	HCIA-5G-Bearer	US\$200	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIA-5G-Bearer	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-5G-Bearer V1.0 Exam Outline
- **Training Material:** HCIA-5G-Bearer V1.0 Training Material
- **Mock Exam:** HCIA-5G-Bearer V1.0 Mock Exam



HCIA-5G-Core

Training and certifying engineers with 5G core network deployment and routine maintenance, 5G core network deployment and basic maintenance capabilities

■ Capabilities to be Certified

Demonstrate the network architecture and basic principles of the 5G core network, understand the basic knowledge of Huawei 5G core network products, master the basic knowledge of Huawei UNC/UDG/UDM/UPCF hardware and software, have the skills for positions on routine maintenance of Huawei 5G core network products and routine maintenance operations on the 5G Core network engineers.

■ Knowledge to Learn

5G core network evolution and key technologies, 5G NSA core network principles, 5G SA core network principles, NFVI and MANO basics, Huawei 5G SA core network product solutions and routine maintenance operations. The involved products include HUAWEI UNC/UDG/UDM/UPCF/U2020.

■ Target Audience

Those who are interested in 5G.

■ Content

HCIA-5G-Core V1.0 Certification includes 5G core network evolution and key technologies, 5G NSA core network principles, 5G SA core network principles, NFVI and MANO basics, Huawei 5G SA core network product solutions and routine maintenance operations. The involved products include HUAWEI UNC/UDG/UDM/UPCF/U2020.

Knowledge Points Percentage: 5G Core Network Evolution and Key Technology(30%), 5G Basic Principle(40%), NFV Solution and O&M Solution(10%), 5G SA Core Network Product Routine Operation and Maintenance(20%).

■ Certification Exam

Prerequisites: None

Exam Code	Name	Expense	Duration	Language
H35-650	HCIA-5G-Core	US\$200	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIA-5G-Core	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-5G-Core V1.0 Exam Outline
- **Training Material:** HCIA-5G-Core V1.0 Training Material
- **Mock Exam:** HCIA-5G-Core V1.0 Mock Exam



HCIA-5G-RAN

Training and certifying engineers with the general knowledge about 5G general knowledge and basic O&M capabilities of 5G radio network based on Huawei products, aiming at cultivating entry-level 5G radio network O&M.

■ Capabilities to be Certified

Have the capability of independently completing the commissioning and deployment of Huawei 5G radio networks, performing routine operations and onsite maintenance for Huawei 5G wireless base stations, and handling Huawei 5G radio network faults under the guidance of others.

■ Knowledge to Learn

Basic 5G concepts, 3GPP-based standard 5G network architecture and key technologies, 5G air interface principles and protocol interface procedures, hardware and specifications of Huawei 5G wireless base station products, basic configurations and operations of Huawei 5G radio network, commissioning and deployment of Huawei 5G radio network equipment, 5G basic features, and network test of 5G.

■ Target Audience

People who plan to participate in the HCIA-5G RAN training, People who intend to learn basic concepts and principles of 5G, and basic, Operations and maintenance for the 5G radio network.

■ Content

The HCIA-5G-RAN V3.0 exam covers: 5G Principle Basics, 5G Base Station Product Basics, Overview of Basic 5G Wireless Network Features, 5G Wireless Network Test and Problem Analysis.

5G Principle Basics (25%), 5G Base Station Product Basics (30%), Overview of Basic 5G Wireless Network Features (20%), 5G Wireless Network Test and Problem Analysis (25%).

■ Certification Exam

Prerequisites: Master the basic knowledge about one type of mobile communication networks (2G/3G/4G).

Exam Code	Name	Expense	Duration	Language
H35-480	HCIA-5G-RAN	US\$200	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIA-5G-RAN	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-5G-RAN V3.0 Exam Outline
- **Training Material:** HCIA-5G-RAN V3.0 Training Material
- **Mock Exam:** HCIA-5G-RAN V3.0 Mock Exam



HCIA-5G-RNP&RNO

Training and certifying engineers with the general knowledge about 5G network, 5G radio product and basic features, the basic capability for survey, basic design, testing, and basic optimization of 5G radio networks. Aiming at standardizing the entry-level skills for 5G radio network planning and optimization (RNP&RNO)

■ Capabilities to be Certified

Have the capability to perform independently completing site survey, simple planning, testing, basic optimization, and performance monitoring for Huawei 5G radio networks

■ Knowledge to Learn

5G air interface principle, 5G protocol and signaling analysis, 5G radio network planning, features related to Huawei 5G radio network optimization, 5G radio network performance management and optimization, 5G radio network problem analysis and handling, and 5G typical industry applications

■ Target Audience

People who plan to participate in the HCIA-5G-RNP&RNO certification / People who intend to learn basic concepts and principles of 5G, and basic 5G radio network planning and optimization technology

■ Content

HCIA-5G-RNP&RNO V2.0 exam covers: 5G radio network basics, 5G base station basic operation, 5G radio network basic feature, 5G network planning basics, 5G network testing and optimization.

Knowledge Points Percentage: 5G radio network basics (20%), 5G base station basic operation(10%), 5G radio network basic feature(20%), 5G network planning basics(20%), 5G network testing and optimization(30%).

■ Certification Exam

Prerequisites: Master basic knowledge about one type of mobile communication networks (2G/3G/4G)

Exam Code	Name	Expense	Duration	Language
H35-580	HCIA-5G-RNP&RNO	US\$200	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIA-5G-RNP&RNO	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-5G-RNP&RNO V2.0 Exam Outline
- **Training Material:** HCIA-5G-RNP&RNO V2.0 Training Material
- **Mock Exam:** HCIA-5G-RNP&RNO V2.0 Mock Exam



HCIP-5G-Core

Training and certifying senior engineers with 5G core network deployment and network O&M, and promote the cultivation of senior 5G core network.

■ Capabilities to be Certified

Have the advanced knowledge of network architecture and basic principles of the 5G core network, understand the basic knowledge of Huawei 5G core network products, master the basic knowledge of Huawei UNC/UDG/UDM/UPCF/SPS hardware and software and 5G network deployment and O&M capabilities.

■ Knowledge to Learn

5G core network evolution and key technologies, 5G NSA core network principles, 5G SA core network principles, NFVI and MANO basics, Huawei 5G SA core network product solutions, routine maintenance operations, and 5G core network basic configuration and commissioning, 5G core network signaling analysis and troubleshooting. The involved products include HUAWEI UNC/UDG/UDM/UPCF/SPS/U2020.

■ Target Audience

Huawei customers, Huawei partner, as well as Huawei engineers who want to master Huawei 5G core network products.

■ Content

The HCIP-5G-Core V1.0 exam covers: 5G Core Network Evolution and Key Technology(5%), 5G Basic Principle(5%), NFV Solution and O&M Solution(5%), 5G SA Core Network Product Routine Operation and Maintenance(5%), 5G SA Core Network Deployment(60%), 5G SA core network advanced O&M(20%).

■ Certification Exam

Prerequisites: It is recommended that you learn HCIA-5G-Core in advance.

Exam Code	Name	Expense	Duration	Language
H35-651	HCIP-5G-Core	US\$300	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIP-5G-Core	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-5G-Core V1.0 Exam Outline
- **Training Material:** HCIP-5G-Core V1.0 Training Material
- **Mock Exam:** HCIP-5G-Core V1.0 Mock Exam



HCIP-5G-RAN

Training and certifying engineers with the capabilities of network configuration management, radio network problem analysis and handling based on Huawei products, aiming at standardizing the professional skills for 5G radio network O&M.

■ Capabilities to be Certified

Have the capability of independently completing parameter planning and configuration of Huawei 5G radio networks, performing routine radio network operations, and analyzing and handling network faults.

■ Knowledge to Learn

Typical 5G industry applications, 5G air interface and protocol principles, Huawei 5G base station hardware specifications and networking principles, 5G base station data planning, MML/CME-based data configuration and reconfiguration, routine operations, and troubleshooting.

■ Target Audience

People who plan to participate in the HCIP-5G-RAN certification. People who intend to learn 5G principles, and configuration, maintenance, and troubleshooting of 5G radio networks.

■ Content

The HCIP-5G-RAN V2.0 exam covers: 5G Industrial Applications and Solutions, 5G principles, 5G Base Station Product Knowledge, Data Configuration of 5G Wireless Network, 5G Wireless Network Maintenance.

5G Industrial Applications and Solutions (5%), 5G principles (20%), 5G Base Station Product Knowledge (10%), Data Configuration of 5G Wireless Network (35%), 5G Wireless Network Maintenance (30%).

■ Certification Exam

Prerequisites: Master the the basic knowledge about one type of mobile communication networks (2G/3G/4G), understand basic concepts of 5G networks.

Exam Code	Name	Expense	Duration	Language
H35-481	HCIP-5G-RAN	US\$300	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIP-5G-RAN	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-5G-RAN V2.0 Exam Outline
- **Training Material:** HCIP-5G-RAN V2.0 Training Material
- **Mock Exam:** HCIP-5G-RAN V2.0 Mock Exam



HCIP-5G-RNP&RNO

Training and certifying senior engineers with the in-depth understanding of 5G network principles and signaling procedures, 5G network planning principles and networking features, 5G network feature deployment and systematic optimization, wireless network performance optimization, complex problem analysis and handling, analysis and processing of wireless network performance optimization of complicated problems, requirement analysis for 5G Industry private network indicators. Aiming to establish the skill standards for 5G radio network planning and optimization professionals

■ Capabilities to be Certified

Have the capability to perform Huawei 5G radio network planning and cell parameter design, evaluating and applying network optimization features, managing radio network performance, analyzing and optimizing performance

■ Knowledge to Learn

5G air interface principle, 5G protocol and signaling analysis, 5G radio network planning, features related to Huawei 5G radio network optimization, 5G radio network performance management and optimization, 5G radio network problem analysis and handling, and 5G typical industry applications

■ Target Audience

People who plan to participate in the HCIP-5G-RNP&RNO training / People who intend to learn advanced 5G principles, detailed network planning, and performance optimization

■ Content

The HCIP-5G-RNP&RNO V2.0 exam covers: 5G Radio Network Indepth Principles, 5G Radio Network Planning, 5G RAN Feature Application, 5G RAN Feature Application, 5G Industry Applications and Solutions.

Knowledge Points Percentage: 5G Radio Network Indepth Principles(30%), 5G Radio Network Planning(10%), 5G RAN Feature Application(35%), 5G RAN Feature Application(20%), 5G Industry Applications and Solutions(5%).

■ Certification Exam

Prerequisites: Master the basic knowledge about one type of mobile communication networks (2G/3G/4G) / Understand basic concepts of 5G, and Huawei's 5G base station products and basic operations / Be able to complete basic operations and service tests on 5G networks

Exam Code	Name	Expense	Duration	Language
H35-581	HCIP-5G-RNP&RNO	US\$300	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIP-5G-RNP&RNO	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-5G-RNP&RNO V2.0 Exam Outline
- **Training Material:** HCIP-5G-RNP&RNO V2.0 Training Material
- **Mock Exam:** HCIP-5G-RNP&RNO V2.0 Mock Exam



HCIE-5G-Radio

Training and certifying experts with the capabilities of E2E principles of 5G networks, 5G network indepth principles and equipment solutions, complete strategy planning for 5G network evolution and deployment independently, 5G radio network planning and the design of the digital indoor distributed systems, analyze 5G service requirements and complete E2E 5G network design and deployment, handle 5G network faults and customer complaints

■ Capabilities to be Certified

Have the capability to plan 5G networks, design and deploy 5G networks based on Huawei equipment solutions, handle complex network faults, and manage service experience and network performance

■ Knowledge to Learn

5G air interface, 5G protocols and signaling, 5G radio network planning, 5G radio network design, Huawei 5G network optimization features, 5GC evolution and key technologies, 5G transport network principles and key technologies, 5G network design and deployment based on services (such as VR and HD video), 5G network troubleshooting, 5G network optimization problem analysis

■ Target Audience

Those who plan to acquire the HCIE-5G-Radio certificate and those who plan to learn 5G network maintenance and optimization skills

■ Content

The HCIE-5G-Radio V1.5 exam covers: 5G air interface, 5G protocols and signaling, 5G radio network planning, 5G radio network design, Huawei 5G network optimization features, 5GC evolution and key technologies, 5G transport network principles and key technologies, 5G network design and deployment based on services (such as VR and HD video), 5G network troubleshooting, 5G network optimization problem analysis.

The HCIE-5G-Radio V1.5 exam covers In-depth Introduction to 5G Radio Network Principles (20%), 5G E2E Networking Solution (20%), 5G NR Network Design (20%), 5G Radio Network Faults Troubleshooting (7%), 5G Radio Network Optimization and Service Problem Handling (13%), 5G Service E2E Integration and Optimization (20%).

■ Certification Exam

Prerequisites: 1. The attendees must have HCIP certificate or equivalent level of competence; 2. The attendees must have general knowledge of 5G principles, Huawei 5G base station products, and common configuration operations; 3. The attendees must know common features of Huawei 5G networks

Exam Code	Name	Expense	Duration	Language
H35-582	HCIE-5G-Radio (Written)	US\$300	90 minutes	English/Chinese
H35-585	HCIE-5G-Radio (Lab)	US\$1200	480 minutes	English/Chinese

■ Re-Certification Method

Certification	Period of Validity	Date of Recertification	Recertification Exam	Start Date of Validity
HCIE-5G-Radio	Three Years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIE-5G-Radio V1.5 Exam Outline
- **Training Material:** HCIE-5G-Radio V1.5 Training Material and Lab Guide
- **Mock Exam:** HCIE-5G-Radio V1.5 Mock Exam



HCIA-LTE

Training and certifying engineers with capability of performing routine basic maintenance on the LTE wireless network.

■ Capabilities to be Certified

Demonstrate the capabilities of independently performing the deployment and commissioning of Huawei LTE radio network, operations and onsite maintenance of eNodeBs, and general troubleshooting for Huawei LTE radio networks.

■ Knowledge to Learn

General knowledge about LTE network and the capability of LTE radio network O&M with Huawei products, aiming at standardizing entry-level skills in LTE radio network O&M.

■ Target Audience

- Intended for users who use Huawei Wireless products, partner engineers, staff engineers, and ICT practitioners.

■ Content

LTE system overview and air interface principles, Huawei LTE eNodeB product hardware and specifications, basic network configuration, operation and troubleshooting as well as equipment commissioning and deployment for LTE radio networks.

LTE System Overview(15%), eNodeB LTE Product Description(5%), MBTS GUL Field Maintenance(10%), MBTS GUL Software Commissioning(15%), LTE eRAN Automatic OMCH Establishment(3%), MBTS GUL Field Operation and Maintenance(10%), eNodeB LTE Data Introduction for Initial Configuration(10%), eNodeB LTE Initial Configuration by CME(5%), eNodeB LTE Troubleshooting(10%), eNodeB LTE TOP Alarm Handling(2%), eNodeB LTE Site Solution(15%).

■ Certification Exam

Exam policy: The training is optional.

Prerequisites: None

Exam Code	Name	Expense	Duration	Language
H31-411	HCIA-LTE	US\$200	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIA-LTE	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-LTE V1.0 Exam Outline
- **Training Material:** HCIA-LTE V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIA-LTE V1.0 Mock Exam



HCIP-LTE

Training and certifying senior engineers with capability of performing routine basic maintenance on the LTE wireless network.

■ Capabilities to be Certified

Demonstrate the capabilities of independently performing parameter planning and configuration, routine operations and troubleshooting for Huawei LTE network.

■ Knowledge to Learn

Network configuration management and problem analysis and handling for Huawei LTE radio networks, aiming at standardizing professional skills in LTE radio network O&M.

■ Target Audience

- Intended for users who use Huawei Wireless products, partner engineers, staff engineers, and ICT practitioners.

■ Content

LTE air interface principles, LTE protocols and procedures, hardware specifications and networking principles, data planning, and data configuration by running MML/CME commands, operations and troubleshooting of Huawei eNodeBs.

LTE Air Interface(30%), LTE Signaling and Protocols(27%), eNodeB Reconfiguration(13%), LTE Advance Troubleshooting(30%).

■ Certification Exam

Exam policy: The training is optional.

Prerequisites: It is recommended that you learn HCIA-LTE in advance.

Exam Code	Name	Expense	Duration	Language
H31-421	HCIP-LTE	US\$300	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIP-LTE	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-LTE V1.0 Exam Outline
- **Training Material:** HCIP-LTE V1.0 Training Material and Lab Guide
- **Mock Exam:** HCIP-LTE V1.0 Mock Exam



HCIA-LTE-RNP&RNO

Training and certifying engineers with capability to perform basic planning and design and network optimization and adjustment for LTE wireless networks.

■ Capabilities to be Certified

Demonstrate the capabilities of completing LTE network site survey and simple planning, network testing and basic deployment optimization, and performance monitoring.

■ Knowledge to Learn

The knowledge about LTE general principles and the capabilities of LTE network site survey and design, radio network testing, optimization and troubleshooting, aiming at standardizing entry-level skills in LTE radio network planning and optimization (RNP&RNO).

■ Target Audience

- Intended for users who use Huawei wireless products, partner network optimization engineers, intranet optimization engineers, and ICT practitioners.

■ Content

LTE basic principles, basic features of Huawei 5G radio networks, LTE site survey and network planning, LTE network testing, and performance management and optimization.

LTE System Overview(8%), LTE Air Interface basic and signaling flow(17%), LTE Radio Network Planning Basics(10%), LTE Radio Network Feature basics(27%), Probe and Assistant Application(3%), LTE Single Site Verification(10%), LTE Radio Network RF Optimization(25%).

■ Certification Exam

Exam policy: The training is optional.

Prerequisites: None

Exam Code	Name	Expense	Duration	Language
H35-560	HCIA-LTE-RNP&RNO	US\$200	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIA-LTE-RNP&RNO	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIA-LTE-RNP&RNO V1.0 Exam Outline
- **Training Material:** HCIA-LTE-RNP&RNO V1.0 Training Material
- **Mock Exam:** HCIA-LTE-RNP&RNO V1.0 Mock Exam



HCIP-LTE-RNP&RNO

Training and certifying senior engineers with capability to perform basic planning and design and network optimization and adjustment for LTE wireless networks.

■ Capabilities to be Certified

Demonstrate the capabilities of independently completing Huawei LTE network planning and cell parameter design, evaluating and applying network optimization features, managing wireless network performance, and analyzing performance problems, and optimizing performance.

■ Knowledge to Learn

In-depth knowledge of LTE network principles, and the capabilities of design, application and optimization of LTE network features based on LTE networking features, radio network performance optimization and complaint analysis and handling, aiming at standardizing professional skills in LTE RNP&RNO.

■ Target Audience

- Intended for users who use Huawei wireless products, partner network optimization engineers, intranet optimization engineers, and ICT practitioners.

■ Content

LTE air interface principles, LTE protocol and signaling analysis, LTE network planning, Huawei LTE network optimization features, radio network performance management and optimization, radio network problem analysis and handling, and LTE and 2G/3G interoperability optimization.

LTE Air Interface(7%), LTE Protocols and E2E Signaling(12%), LTE Radio Network Design and Planning(7%), LTE Radio Network Features(20%), LTE Interoperability(7%), LTE Radio Network Optimize problem analysis(16%), LTE Radio Network Performance management(15%), LTE Voice Solution Overview(8%), LTE-A Pro Key Technology Overview(5%), NB-IoT Overview(3%).

■ Certification Exam

Exam policy: The training is optional.

Prerequisites: It is recommended that you learn HCIA-LTE-RNP&RNO in advance.

Exam Code	Name	Expense	Duration	Language
H31-421	HCIP-LTE-RNP&RNO	US\$300	90 minutes	English/Chinese

■ Recertification Method

Certification	Validity Period	Recertification Date	Recertification Exam	Recertification Validity Period
HCIP-LTE-RNP&RNO	Three years	Within the validity period	Before your certificate expires, you can update its validity period in either of the following ways: (1) Participate and pass any exam of the current certification. (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.	Three years from the date of passing the exam

■ Learning Materials

- **Exam Outline:** HCIP-LTE-RNP&RNO V1.0 Exam Outline
- **Training Material:** HCIP-LTE-RNP&RNO V1.0 Training Material
- **Mock Exam:** HCIP-LTE-RNP&RNO V1.0 Mock Exam



Huawei Recertification Method

Recertification Information

With the advances of ICT technologies, Huawei certification content will be updated and optimized irregularly. Recertification can renew the validity of a certificate, and ensure that certification complies with the latest development trend of ICT technologies. To ensure that the professional capabilities of certified personnel match the latest trends in the ICT field in real time, recertification requirements are implemented. For details about the recertification rules, see the following explanations.

If the certificate holder does not participate in recertification before the certificate expires, the certificate will become invalid. To make the certificate valid again, the certificate holder must participate in the corresponding certification exam.

Certificate Validity Period

Certification Level	Period of Validity	Initial time of validity
HCIA	Three years	Three years from the date of passing the exam
HCIP	Three years	Three years from the date of passing the exam
HCIE	Three years	Three years from the date of passing the lab exam

Recertification Method

Before your certificate expires, you can update its validity period in either of the following ways:

- (1) Participate and pass any exam of the current certification.
- (2) Participate and pass any exam of the same or higher level certification which from the same technology track of the current certification.

Validity Period Extension Rule

If you are successfully recertified before your certificate expires, the validity period will be extended by three years from the date when you pass the exam.



Recertification Project

Technical Domain	Technical Direction	Associate Level	Professional Level	Expert Level
Cloud Platform & Cloud Services	Cloud Computing	HCIA-Cloud Computing	HCIP-Cloud Computing	HCIE-Cloud Computing
	Cloud Service	HCIA-Cloud Service	HCIP-Cloud Service Solutions Architect	HCIE-Cloud Service Solutions Architect
	Big Data	HCIA-Big Data	HCIP-Big Data Developer	HCIE-Big Data-Data Mining
	GaussDB	--	--	--
	IoT	HCIA-IoT	HCIP-IoT Developer	--
Basic Software & Hardware	openEuler	HCIA-openEuler	--	--
	openGauss	HCIA-openGauss	--	--
	HarmonyOS	--	--	--
	AI	HCIA-AI	HCIP-AI-EI Developer	--
	Kunpeng	HCIA-Kunpeng Computing	HCIP-Kunpeng Computing	HCIE-Kunpeng Computing



Technical Domain	Technical Direction	Associate Level	Professional Level	Expert Level
ICT Infrastructure	Storage	HCIA-Storage	HCIP-Storage	HCIE-Storage
	Collaboration	HCIA-Collaboration	HCIP-Collaboration	HCIE-Collaboration
	Intelligent Vision	HCIA-Intelligent Vision	HCIP-Intelligent Vision	--
	Digital Power	HCIA-Data Center Facility	HCIP-Data Center Facility-Deployment	HCIE-Data Center Facility Design
	MDC	--	--	--
	Datacom	HCIA-Datacom	HCIP-Datacom-Advanced Routing & Switching HCIP-Datacom-Network Automation Developer HCIP-Datacom-Campus Network Planning and Deployment HCIP-Datacom-SD-WAN Network Planning and Deployment HCIP-Datacom-Enterprise Network Solution Design HCIP-Datacom-WAN Planning and Deployment HCIP-Datacom-Carrier IP Bearer HCIP-Datacom-Carrier Cloud Bearer	HCIE-Datacom HCIE-Data Center Network HCIE-Datacom-Carrier
	WLAN	HCIA-WLAN	HCIP-WLAN	HCIE-WLAN
	Security	HCIA-Security	HCIP-Security	--
	Transmission	HCIA-Transmission	HCIP-Transmission	HCIE-Transmission
	Access	HCIA-Access	HCIP-Access	--
	5G	HCIA-5G HCIA-5G-Bearer HCIA-5G-RNP&RNO HCIA-5G-RAN HCIA-5G-Core	HCIP-5G-RNP&RNO HCIP-5G-RAN HCIP-5G-Core	HCIE-5G-Radio
	LTE	HCIA-LTE HCIA-LTE-RNP&RNO	HCIP-LTE HCIP-LTE-RNP&RNO	--



A Quick Reference to Huawei Certification Exams

Technical Direction	Certification Program	Exam Code	Expense (USD)	Training project	Duration (Working Days)
Cloud Computing	HCIA-Cloud Computing	H13-511	200	HCIA-Cloud Computing Training	6
	HCIP-Cloud Computing	H13-527	300	HCIP-Cloud Computing Training	9
	HCIE-Cloud Computing(Written)	H13-531	300	HCIE-Cloud Computing Training	14
	HCIE-Cloud Computing(Lab)	H13-536	1200		
Cloud Service	HCIA-Cloud Service	H13-811	200	HCIA-Cloud Service Training	5
	HCIP-Cloud Service Solutions Architect	H13-821	300	HCIP-Cloud Service Solutions Architect Training	7
	HCIE-Cloud Service Solutions Architect(Written)	H13-831	300	HCIE-Cloud Service Solutions Architect Training	10
	HCIE-Cloud Service Solutions Architect(Lab)	H13-836	1200		
Big Data	HCIA-Big Data	H13-711	200	HCIA-Big Data Training	5
	HCIP-Big Data Developer	H13-723	300	HCIP-Big Data Developer Training	8
	HCIE-Big Data-Data Mining(Written)	H13-731	300	HCIE-Big Data-Data Mining Training	12
	HCIE-Big Data-Data Mining(Lab)	H13-736	1200		
IoT	HCIA-IoT	H12-111	200	HCIA-IoT Training	5
	HCIP-IoT Developer	H52-111	300	HCIP-IoT Developer Training	8
openEuler	HCIA-openEuler	H12-611	200	HCIA-openEuler Training	8
openGauss	HCIA-openGauss	H14-311	200	HCIA-openGauss Training	5
AI	HCIA-AI	H13-311	200	HCIA-AI Training	5
	HCIP-AI-EI Developer	H13-321	300	HCIP-AI-EI Developer Training	9
Kunpeng	HCIA-Kunpeng Computing	H13-211	200	HCIA-Kunpeng Computing Training	5
	HCIP-Kunpeng Computing	H13-221	300	HCIP-Kunpeng Computing Training	5
	HCIE-Kunpeng Computing(Written)	H13-231	300	HCIE-Kunpeng Computing Training	8
	HCIE-Kunpeng Computing(Lab)	H13-236	1200		
Storage	HCIA-Storage	H13-611	200	HCIA-Storage Training	5
	HCIP-Storage	H13-624	300	HCIP-Storage Training	5
	HCIE-Storage(Written)	H13-629	300	HCIE-Storage Training	10
	HCIE-Storage(Lab)	H13-636	1200		
Collaboration	HCIA-Collaboration	H11-851	200	HCIA-Collaboration Training	5
	HCIP-Collaboration	H11-861	300	HCIP-Collaboration Training	7
	HCIE-Collaboration(Written)	H11-879	300	HCIE-Collaboration Training	10
	HCIE-Collaboration(Lab)	H11-886	1200		
Intelligent Vision	HCIA-Intelligent Vision	H12-511	200	HCIA-Intelligent Vision Training	5
	HCIP-Intelligent Vision	H12-521	300	HCIP-Intelligent Vision Training	10



Technical Direction	Certification Program	Exam Code	Expense (USD)	Training project	Duration (Working Days)	
Digital Power	HCIA-Data Center Facility	H12-411	200	HCIA-Data Center Facility Training	5	
	HCIP-Data Center Facility Deployment	H12-425	160	HCIP-Data Center Facility Deployment Training	10	
	HCIE-Data Center Facility Design(Written)	H12-461	300	HCIE-Data Center Facility Design Training	7	
	HCIE-Data Center Facility Design(Lab)	H12-466	1200			
Datacom	HCIA-Datacom	H12-811	200	HCIA-Datacom Training	10	
	HCIP-Datacom-Core Technology	H12-821	300	HCIP-Datacom-Core Technology Training	10	
	HCIP-Datacom-Advanced Routing & Switching Technology	H12-831	180	HCIP-Datacom-Advanced Routing & Switching Technology Training	5	
	HCIP-Datacom-Campus Network Planning and Deployment	H12-841	180	HCIP-Datacom-Campus Network Planning and Deployment Training	5	
	HCIP-Datacom-Enterprise Network Solution Design	H12-851	180	HCIP-Datacom-Enterprise Network Solution Design Training	5	
	HCIP-Datacom-WAN Planning and Deployment	H12-861	180	HCIP-Datacom-WAN Planning and Deployment Training	5	
	HCIP-Datacom-SD-WAN Planning and Deployment	H12-871	180	HCIP-Datacom-SD-WAN Planning and Deployment Training	5	
	HCIP-Datacom-Network Automation Developer	H12-881	180	HCIP-Datacom-Network Automation Developer Training	8	
	HCIE-Datacom (Written)	H12-891	300	HCIE-Datacom Training	15	
	HCIE-Datacom (Lab)	H12-892	1200			
		HCIE-Data Center Network (Written)	H12-921	300	HCIE-Data Center Network Training	15
		HCIE-Data Center Network (Lab)	H12-922	1200		
WLAN	HCIA-WLAN	H12-311	200	HCIA-WLAN Training	5	
	HCIP-WLAN	H12-323	300	HCIP-WLAN Training	10	
	HCIE-WLAN(Written)	H12-351	300	HCIE-WLAN Training	10	
	HCIE-WLAN(Lab)	H12-352	1200			
Security	HCIA-Security	H12-711	200	HCIA-Security Training	5	
	HCIP-Security	H12-725	300	HCIP-Security Training	10	
Transmission	HCIA-Transmission	H31-311	200	HCIA-Transmission Training	10	
	HCIP-Transmission	H31-341	300	HCIP-Transmission Training	10	
	HCIE-Transmission(Written)	H12-931	300	HCIE-Transmission Training	15	
	HCIE-Transmission(Lab)	H12-936	1200			
Access	HCIA-Access	H35-210	200	HCIA-Access Training	5	
	HCIP-Access	H35-211	300	HCIP-Access Training	10	
5G	HCIA-5G	H35-660	200	HCIA-5G Training	5	
LTE	HCIA-LTE	H31-411	200	HCIA-LTE Training	10	
	HCIP-LTE	H31-421	300	HCIP-LTE Training	10	

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