

This article provides a **Preliminary Stage** outline for the Huawei ICT Skill Competition.

## 1. Huawei ICT Skill Competition Stage Overview

Competition Stage	Exam type	Duration	Number of Questions	Question Types	Total Score
Preliminary Stage	Written	90 min	60	T/F, Single/Multiple Choice(s)	100

## 2. Preliminary Stage Outline

### Exam Content:

Content	Cloud Computing	Big Data	Storage	AI
Ratio	45%	25%	20 %	10%

The **Preliminary Stage** exam covers four modules: Cloud Computing, Big Data, Storage and AI.

Cloud Computing module covers basic cloud computing technologies, configuration, and maintenance, including cloud computing theory, key cloud computing technologies, Huawei cloud computing hardware and software architecture, and deployment & management. In addition, Huawei Cloud Services are also involved, covering concept and value of Cloud Service, architecture and ecosystem of Huawei Cloud, Operation/Management/Application of Huawei Cloud Computing Service, Storage Service, Network Service, Security Service, Cloud Eye Service, RDS Service, CCE Service and Workspace.

Big Data module covers basic Big Data technologies with the focus on how to assess and certify basic technical principles and operation practices of common and essential big data components, as well as functions and features of the FusionInsight HD solution.

Storage module covers storage basics; RAID technologies; storage protocol basics; backup and DR basics, OceanStor V3 series products technologies.

AI module covers AI overview, Python programming and experimentation, introduction and experimentation of TensorFlow, pre-requisite knowledge and overview of deep learning, Huawei cloud EI overview, experimentation of image recognition, speech recognition, and human-machine communication.

## 2.1 Knowledge Points of each module:

### Cloud Computing Technologies:

- 1) Basic concept and values of cloud computing.
- 2) Basic knowledge and technical theory of cloud computing.
- 3) Principles, features and related applications of virtualization technologies.
- 4) Components, deployment and basic configuration of FusionCloud.
- 5) Functionality and architecture of FusionCompute.
- 6) Functionality and architecture of FusionManager.
- 7) Functionality and architecture of FusionAccess.
- 8) Deployment management and configuration of cloud computing solutions.
- 9) Introduction of Cloud Service
- 10) Huawei Cloud Service - Computing Service
- 11) Huawei Cloud Service - Storage Service
- 12) Huawei Cloud Service - Network Service
- 13) Huawei Cloud Service - Cloud Security Service
- 14) Huawei Cloud Service - Cloud Eye
- 15) Huawei Cloud Service - Relational Database Service
- 16) Huawei Cloud Service - Cloud Container Engine
- 17) Huawei Cloud Service - Workspace

### Big Data Technologies:

- 1) Front trend of Big Data, and Huawei Big Data solution
- 2) FusionInsight HD product features, technical principle
- 3) Application of Common Big Data Components, including:
  - HDFS Distributed File System
  - MapReduce The Distributed Offline Batch Computing Framework and Yarn The Resource Negotiator
  - Spark2x The distributed processing engine based on memory
  - HBase Distributed storage system (NoSQL)
  - Hive Distributed Data Warehouse

- Streaming Distributed Stream Computing Engines
- Flink Stream and Batch Processing
- Loader Data Exchange
- Flume Multiple Logs Collection
- Kafka Distributed Message Subscription system
- ZooKeeper Cluster Distributed Coordination Service

**Storage Technologies:**

- 1) Storage system components, storage media type and features, HDD and SSD basic knowledge, backup and disaster tolerance concept.
- 2) RAID principle and different RAID levels (0, 1, 2,0+, 5, 6, 10) features and typical application scenario.
- 3) DAS, SAN, NAS concepts, features and architectures. SCSI, FC, iSCSI, CIFS, NFS technology.
- 4) Technologies of backup and disaster recovery.
- 5) Background and application scenarios of big data.
- 6) Status quo and key technologies of cloud computing.
- 7) SAN storage: OceanStor V3 products function, hardware, interface and typical network.
- 8) Installation and SAN storage configuration (Storage pool, LUN, hosts, mapping etc.). Using DeviceManager.
- 9) SAN storage connection with Windows, Linux OS platform, Ultrathin installation and configuration.
- 10) Huawei storage products introduction and typical application.
- 11) Introduction to some Huawei Licensed Features.

**AI Technologies:**

- 1) Python programming basics, including lists, tuples, string, dictionary, condition, loop statement, function, Object-Oriented programming, date and time, regular expression, file operation, etc.
- 2) Basic knowledge of mathematics, including linear algebra, probability, information



theory, and numeral Calculations.

3) Introduction to TensorFlow.

4) Deep learning pre-requisite knowledge, such as algorithms of machine learning and Bayesian estimation; deep learning overview, such as basics and application scenarios of deep learning.

5) Huawei Cloud EI overview.

**Note:**

**The content mentioned in this article provides a general exam guide; the exam may contain additional related content that is not included here.**

### 3 Self-learning Resources

Huawei Career Certifications - Associate

Subject	Materials
Cloud Computing	<a href="#">HCNA - Cloud</a>
	<a href="#">HCNA - Cloud Service</a>
Big Data	<a href="#">HCNA - Big Data</a>
Storage	<a href="#">HCNA - Storage</a>

Related products (Optional)

Subject	Materials
Cloud Computing	<a href="#">FusionCloud 6.3.0 Product Documentation</a>
	<a href="#">FusionSphere Product Documentation</a>
	<a href="#">FusionAccess Desktop Solution Product Documentation</a>
Big Data	<a href="#">FusionInsight HD Product Documentation</a>
	<a href="#">FusionInsight LibrA Product Documentation</a>



Storage

[OceanStor 2200 V3 and 2600 V3 Product Documentation](#)