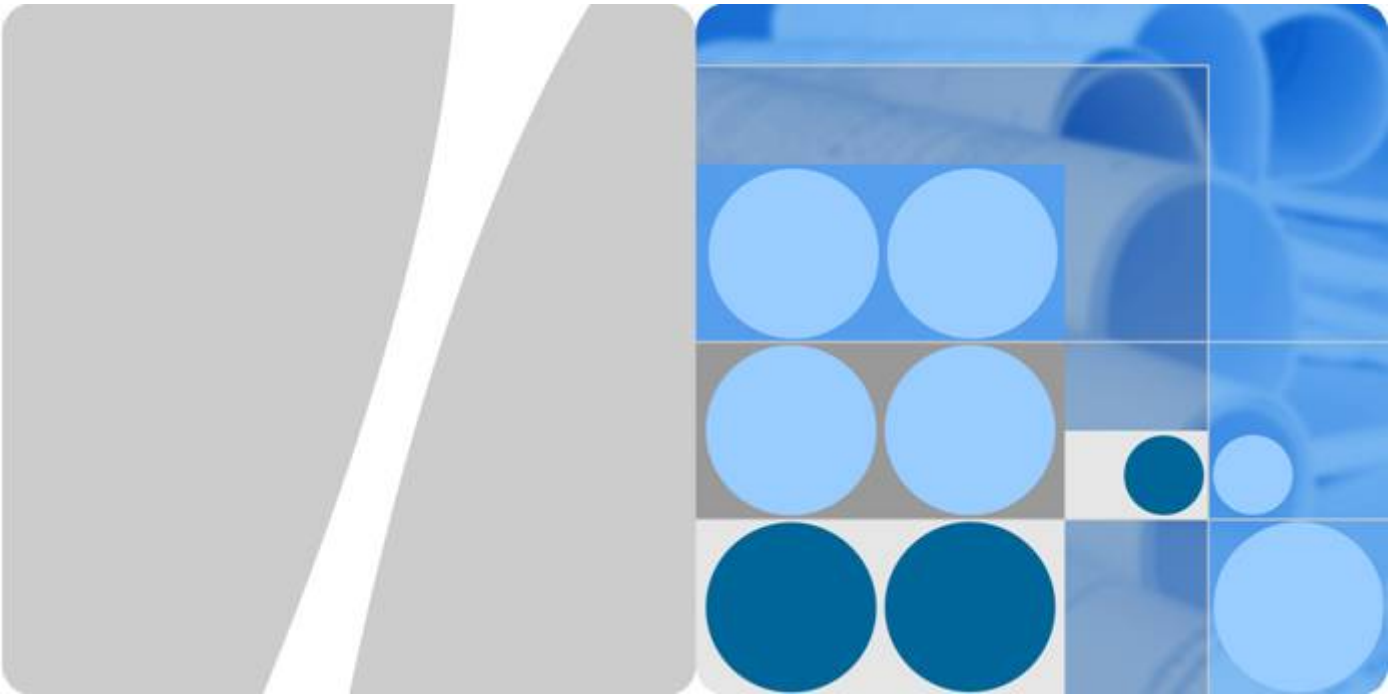

ModelArts Pro

FAQs

Issue 01

Date 2020-10-20

HUAWEI TECHNOLOGIES CO., LTD.

HUAWEI

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Contents

1 What Are Application Scenarios and Target Customers of ModelArts Pro?..... 1
2 How Is ModelArts Pro Billed?..... 3
3 Differences Between ModelArts and ModelArts Pro..... 6
4 How Do I Purchase ModelArts Pro?..... 7
5 How Do I Upload Data to OBS?..... 9

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1 What Are Application Scenarios and Target Customers of ModelArts Pro?

ModelArts Pro provides built-in workflows and models by leveraging the power of advanced algorithms and quick training capabilities of HUAWEI CLOUD. You can use the built-in workflows in ModelArts Pro suites to quickly customize applications.

ModelArts Pro consists of Optical Character Recognition (OCR) Suite, Natural Language Processing (NLP) Suite, and Vision Suite.

Application Scenarios

OCR and NLP suites are suitable for the following scenarios where specific problems need to be resolved:

- **OCR Suite**
  - User authentication and identification

    Recognizes key information on certificates, reducing manual input and real-name authentication costs, while improving efficiency and accuracy.
  - Express waybill filling

    Recognizes contact information in screenshots and generates express waybills automatically, eliminating the need for manual input.
  - Contract upload and review

    Recognizes structured information and extracts signatures and seals for quick review.
- **NLP Suite**

  Suitable for general text classification scenarios:
  - Intelligent Q&A

    Intelligent Q&A, dialog, knowledge mining, and knowledge base building are achieved through calculation of Q&A pair similarity using NLP techniques, such as Chinese word segmentation, short text similarity calculation, and named entity recognition.
  - Content recommendations

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Uses text classification prediction models to precisely match content with similar semantics and quickly construct content recommendation scenarios.

- **Vision Suite**
  - Goods recognition

    Unattended supermarkets use a model for automatic visual recognition of goods without scanning barcodes, achieving AI-based self-checkout.
  - Intelligent weather forecast

    AI-based prediction of meteorological phenomena such as weather forecast is achieved based on videos and images.
- HiLens Suite
  - Smart campus

    License plates and safety helmets can be detected in campuses.
  - Smart home

    Gesture and cry detection are implemented in smart home scenarios.
  - Smart shopping malls and supermarkets

    VIP identification and customer flow statistics are implemented in shopping malls and supermarket.

Target Customers

ModelArts Pro is intended for government and enterprise customers who:

- Understand industry solutions and industry knowledge.
- Have full knowledge of problem scenarios but no or limited knowledge of AI.
- Want to solve problems in specific scenarios but do not want complex development.

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2 How Is ModelArts Pro Billed?

ModelArts Pro is now in the open beta test (OBT) and is free. ModelArts Pro depends on Object Storage Service (OBS), ModelArts, and Huawei HiLens. Therefore, when using ModelArts Pro, you need to pay for usage on OBS, ModelArts, and Huawei HiLens.

ModelArts Pro provides OCR Suite, NLP Suite, and Vision Suite currently. **Table 2-1** lists the functions billed by ModelArts. For details about the prices, see **ModelArts Pricing Details**.

Table 2-1 Functions billed by ModelArts usage

Suite	Function	Relationship with ModelArts
OCR Suite	-	-
NLP Suite	Training text classification models	ModelArts computing resources are used.
	Deploying an application	ModelArts computing resources are used.
Vision Suite	Training goods recognition models	ModelArts computing resources are used.
	Deploying an application	ModelArts computing resources are used.
HiLens Suite	Training safety helmet detection models	ModelArts computing resources are used.

Table 2-2 lists ModelArts Pro functions billed by OBS. For details, see **OBS Pricing Details**.

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Table 2-2 Functions billed by OBS

Suite	Function	Relationship with OBS
OCR Suite	-	-
NLP Suite	Uploading training datasets	Training datasets are stored in OBS.
	Labeling datasets	Labeled datasets are stored in OBS.
	Managing datasets	• Managed datasets are stored in OBS. • Dataset labeling information is stored in OBS. • Datasets can be imported from OBS.
	Training models	• Datasets used by model training are stored in OBS. • Running scripts of model training are stored in OBS. • Models generated by training jobs are stored in the specified OBS paths.
	Deploying an application	ModelArts deploys applications stored in OBS as real-time services.
Vision Suite	Uploading training datasets	Training datasets are stored in OBS.
	Labeling datasets	Labeled datasets are stored in OBS.
	Managing datasets	• Managed datasets are stored in OBS. • Dataset labeling information is stored in OBS. • Datasets can be imported from OBS.

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Suite	Function	Relationship with OBS
	Training models	• Datasets used by model training are stored in OBS. • Running scripts of model training are stored in OBS. • Models generated by training jobs are stored in the specified OBS paths.
	Deploying an application	ModelArts deploys applications stored in OBS as real-time services.
HiLens Suite	Uploading training datasets	Training datasets are stored in OBS.
	Managing datasets	• Managed datasets are stored in OBS. • Dataset labeling information is stored in OBS. • Datasets can be imported from OBS.
	Training models	• Datasets used by model training are stored in OBS. • Running scripts of model training are stored in OBS. • Models generated by training jobs are stored in the specified OBS paths.

Some ModelArts Pro preset workflows deploy services on edge devices and manage models and skills on the Huawei HiLens console. For details on Huawei HiLens prices, see **Billing Description**

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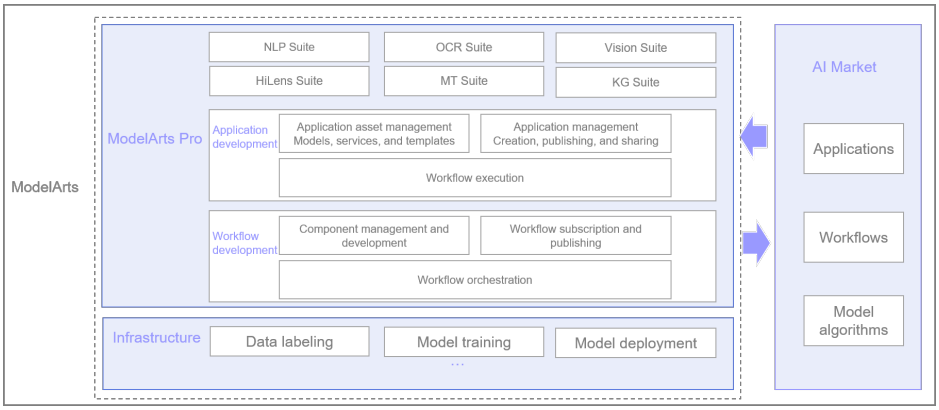
3 Differences Between ModelArts and ModelArts Pro

ModelArts is a one-stop AI development and management platform that provides leading algorithm technologies to ensure efficient AI application development and accurate inference results with less labor. ModelArts is dedicated to professional development of underlying models and parameter tuning.

ModelArts Pro generates a model for a specified scenario based on the built-in workflow. You do not need to explore how to develop the underlying model. Relying on the ModelArts platform at the bottom layer, ModelArts Pro is dedicated to resolving the limitations of general APIs and lowering the threshold of AI algorithm development. It provides custom AI development kits, enabling developers to focus on their own applications.

Figure 3-1 Functional architecture



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4 How Do I Purchase ModelArts Pro?

ModelArts Pro is in the open beta test (OBT) phase and can be used free of charge. You only need to have a HUAWEI CLOUD account, and the OBT permissions and access authorization of ModelArts Pro suites to use them.

NOTE

ModelArts Pro depends on Object Storage Service (OBS) and ModelArts. Therefore, when using ModelArts Pro, you need to pay for OBS and ModelArts. For details, see **billing description**.

1. **Registering a HUAWEI CLOUD Account**
2. **Applying for a Suite**
3. **Authorizing ModelArts Pro to Access ModelArts Resources**

Registering a HUAWEI CLOUD Account

Register a HUAWEI CLOUD account. With this account, you can use all services on HUAWEI CLOUD and only need to pay for the services you use.

Go to the HUAWEI CLOUD official website and **register an account** by following the instructions.

After the registration is successful, you can automatically log in to HUAWEI CLOUD. You can use the service only after completing real-name authentication. For details, see **Real-Name Authentication Overview**.

Applying for a Suite

Log in to the ModelArts Pro console and click **Apply for OBT** on the target suite card. On the page that is displayed, enter the required information as prompted.

When the application is submitted, click **Go to Open Beta Tests**, and the **My Open Beta Tests** page is displayed. If **Audit Status** is **Approved**, you have obtained the OBT permission for the suite.

After obtaining the OBT permission, click **Access** on the target suite card of the ModelArts Pro console to access the suite console.

For example, on the ModelArts Pro console, click **Access** on the NLP Suite card to access the NLP Suite console.

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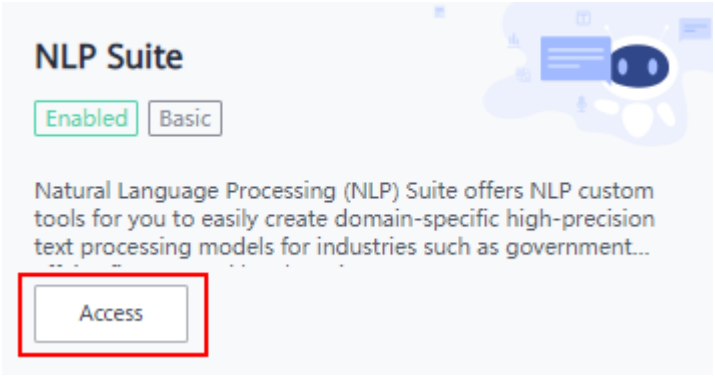
Figure 4-1 Accessing the suite console



Authorizing ModelArts Pro to Access ModelArts Resources

When you use ModelArts Pro, it will access your ModelArts cloud resources. Therefore, before using ModelArts Pro, you need to authorize ModelArts Pro to access ModelArts resources. Without authorization, related functions cannot be used. ModelArts Pro now supports only agency authorization.

- If you have obtained the ModelArts agency authorization, you can directly access the ModelArts Pro console to use a suite without configuring the authorization again.
- If you have not obtained the ModelArts agency and AK/SK authorization, the **Access Authorization** dialog box is displayed when you access a suite on the ModelArts Pro console.

  In the displayed dialog box, enter related information and click **Agree**.

  - **Username** indicates the name of the user that needs the authorization. Retain the default value.
  - **Agency**: Select **modelarts_agency**.
  - Select **I have read and agree to the ModelArts Service Statement**.
- If you have not obtained the ModelArts agency authorization but have obtained the AK/SK authorization, a message will be prompted to remind you to delete the AK/SK authorization on the **Access Authorization** dialog box when accessing the suite on the ModelArts Pro console.

  a. In the upper part of the **Access Authorization** dialog box, click **delete** to delete the old authorization.

  After the deletion, the dialog box does not display a message indicating the deletion of AK/SK authorization.

  b. In the **Access Authorization** dialog box, enter the authorization information and click **Agree**.

  - **Username** indicates the name of the user that needs the authorization. Retain the default value.
  - **Agency**: Select **modelarts_agency**.
  - Select **I have read and agree to the ModelArts Service Statement**.

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5 How Do I Upload Data to OBS?

Before using ModelArts Pro to develop applications, upload data to an OBS bucket. You can log in to the **OBS console** to create an OBS bucket. Then create a folder in the OBS bucket and upload data. For details about how to upload data, see the **Object Storage Service Getting Started**.

NOTE

- When creating an OBS bucket, ensure that your OBS bucket and ModelArts Pro are in the same region.
- You are advised to use OBS based on your service requirements and habits.
  - If your data volume is small (less than 100 MB) or the number of data files is small (less than 100), you are advised to upload data using the console. You do not need to download tools or perform unnecessary configurations when uploading data using the console, which is more convenient and efficient when you upload a small amount of data.
  - If your data volume is large or the number of data files is large, you are advised to upload the files using OBS Browser+ or obsutil. OBS Browser+ is a graphical tool that provides complete functions for managing your buckets and objects in OBS. You are advised to use this tool to create buckets or upload objects. obsutil is a command line tool for accessing and managing OBS resources. If you are familiar with command line interface (CLI), obsutil is recommended as an ideal tool for batch processing and automated tasks.
  - If you need to use APIs or SDKs to upload data, or you are accustomed to using APIs and SDKs, you are advised to use OBS APIs or SDKs to create buckets and upload objects.

  The preceding describes only the common usage methods and tools of OBS. For details about more OBS tools, see the **Object Storage Service Tools Guide**.

Creating a Bucket

A bucket is a container for storing objects in OBS. Before uploading an object, you need to create a bucket. You can select different tools to create buckets in OBS according to your habits and service scenarios.

Table 5-1 Creating a bucket using different methods

Method of Access	How to Create a Bucket
OBS Console	**Creating a bucket using OBS Console**

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Method of Access	How to Create a Bucket
OBS Browser+	**Creating a bucket using OBS Browser+**
obsutil	**Creating a bucket using obsutil**
SDK	**Creating a bucket using SDKs**. For details, see the section about bucket creation in the developer guide of each language.
API	**Creating a bucket using APIs**

Uploading an Object

After a bucket is created, you can upload files to the bucket in various ways. Then, OBS stores the files in the bucket as objects.

Table 5-2 Uploading an object using different methods of access

Method of Access	How to Upload an Object
OBS Console	**Uploading an object using OBS Console**
OBS Browser+	**Uploading an object using OBS Browser+**
obsutil	**Uploading an object using obsutil**
SDK	**Uploading an object using SDKs**. For details, see the section about object uploading in the developer guide of each language.
API	**Uploading objects - PUT** and **Uploading objects - POST**

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