

IAM Identity Center

Service Overview

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1 What Is IAM Identity Center?

Introduction

IAM Identity Center helps you centrally manage your workforce identities and their access to multiple accounts through Huawei Cloud Organizations. You can create identities for your entire enterprise at one go and give them single sign-on (SSO) access with managed permissions. The IAM Identity Center administrator creates users, assigns passwords, and manages users by group. A single portal provides users with password-based SSO access to multiple accounts. A user who has passed the security verification in an application can access protected resources in other applications without logging in again.

Access Methods

You can access the IAM Identity Center service through the management console or by calling HTTPS-based APIs.

- Accessing IAM Identity Center through the management console
The management console is a web-based GUI where you can easily perform various operations. Log in to the management console. Click  in the upper left corner of the page and choose **Management & Governance > IAM Identity Center**.
- Accessing IAM Identity Center through APIs
Use this access method if you are required to integrate IAM Identity Center on Huawei Cloud into a third-party system for secondary development. For detailed operations, see the [IAM Identity Center API Reference](#).

Billing

IAM Identity Center is a free service. You will not be billed for using IAM Identity Center. For details about the billing for using resources in your accounts, see the billing description of each service.

2 Application Scenarios

Centralized Identity Management: Enabling Secure Access to Multiple Accounts Through One-Time Configuration

If an enterprise has multiple accounts and their workforce users need to access resources under multiple accounts, they have to log in to those accounts individually or create IAM users under the accounts, causing high maintenance costs and low efficiency. In this scenario, IAM Identity Center has the following advantages:

- Centralized user creation and management
 - The IAM Identity Center administrator creates users, assigns passwords, and manages users by group.
 - A single portal provides users with password-based SSO access to multiple accounts.
- Support for SAML 2.0 identity provider (Azure AD and Okta)
 - IAM Identity Center can connect to external identity provider systems via SAML 2.0.
 - IAM Identity Center automatically provisions users from SCIM-compliant identity providers. The administrator can manage users in external identity providers. User details can be automatically synchronized to IAM Identity Center without manual intervention.
 - IdP users can use their existing accounts and passwords to log in to the portal and then go to Huawei Cloud to access resources of the Huawei Cloud account.
- Multi-factor authentication (MFA)
 - The IAM Identity Center administrator can forcibly enable multi-factor authentication (MFA) for users to reduce the risk of password leakage.
 - MFA devices support Apps that comply with the Time-Based One-Time Passwords (TOTP) protocol and Fast Identity Online (FIDO2) security keys.

Fine-Grained Authorization: Assigning Different Permissions on Member Accounts to Different Identities Easily

Generally, a large enterprise has multiple accounts, which carry different services and are used by different workforce identities. Different workforce identities need

to be configured with fine-grained permissions for access to different member accounts to ensure secure resource access within the enterprise. In this scenario, IAM Identity Center has the following advantages:

- Centralized management of multi-account permissions
 - The IAM Identity Center administrator can create permission sets, each of which contains a maximum of 20 IAM policies. With permission sets, permissions can be batch assigned to accounts.
 - Each account can be associated with permission sets and IAM Identity Center users who are allowed to access resources under the account.
 - IAM Identity Center automatically synchronizes the account permission information to IAM without the complexity of managing individual accounts.
- Attribute-based access control
 - The IAM Identity Center administrator can create permission sets using attribute-supported custom policies. The supported attributes include more than 20 global attributes, such as organizations, tags, request time, and source addresses of users and resources, and other cloud service-level attributes.
 - The IAM Identity Center administrator can create permission sets based on service tags defined by identity providers. IAM Identity Center automatically converts the service tags to the identity tag attributes in IAM during federated login to control access permissions.
 - The IAM Identity Center administrator only needs to configure permissions for all users only once. When attributes are changed, the corresponding condition keys in policies are also changed, and permissions are automatically granted, revoked, or modified accordingly.

3 Functions

Centralized Identity Management

IAM Identity Center allows you to create and manage users and groups and configure the login authentication mode. You can centrally assign permissions to workforce identities and control their access over specific Huawei Cloud accounts from a single user portal.

Fine-Grained Permissions Management

The IAM Identity Center administrator can assign users or groups or attach permission sets with permissions specific to each level of your organization for access to different member accounts. These assigned permissions can be changed or revoked at any time.

Integration with Identity Management Systems

IAM Identity Center allows you to grant your workforce SSO access to SAML 2.0-based identity management systems instead of needing to create new users. This streamlines workforce management while minimizing security risks.

4 Permissions

If you need to grant your enterprise personnel permissions to access your IAM Identity Center resources, use Identity and Access Management (IAM). IAM provides identity authentication, permissions management, and access control, helping you securely access Huawei Cloud resources.

With IAM, you can create IAM users and assign permissions to control their access to specific resources.

You can skip this section if you do not need fine-grained permissions management.

IAM is a free service. You only pay for the resources in your account.

For more information about IAM, see [What Is IAM?](#).

IAM Identity Center Permissions

New IAM users do not have any permissions assigned by default. You need to first add them to one or more groups and attach policies or roles to these groups. The users then inherit permissions from the groups and can perform specified operations on cloud services based on the permissions they have been assigned.

IAM Identity Center is a global service deployed for all regions. When you set the authorization scope to **Global services**, users have permission to access IAM Identity Center in all regions.

You can grant permissions by using roles and policies.

- **Roles:** A coarse-grained authorization strategy provided by IAM to assign permissions based on users' job responsibilities. Only a limited number of service-level roles are available for authorization. Huawei Cloud services depend on each other. When you grant permissions using roles, you may need to attach any existing role dependencies. Roles are not ideal for fine-grained authorization and least privilege access.
- **Policies:** A fine-grained authorization strategy that defines permissions required to perform operations on specific cloud resources under certain conditions. This type of authorization is more flexible and is ideal for least privilege access. For example, you can grant users only permission to manage ECSs of a certain type. A majority of fine-grained policies contain permissions for specific APIs, and permissions are defined using API actions.

Table 1 lists all the system-defined permissions for IAM Identity Center.

Table 4-1 System-defined permissions for IAM Identity Center

Role/Policy Name	Description	Type	Dependency
IdentityCenter FullAccess	Administrator permissions for IAM Identity Center. Users with these permissions can perform all operations on IAM Identity Center.	System-defined policy	None
IdentityCenter ReadOnlyAccess	Read-only permissions for viewing data on IAM Identity Center.	System-defined policy	None

Table 2 lists the common operations supported by system-defined permissions for IAM Identity Center.

Table 4-2 Common operations supported by system-defined permissions

Operation	IdentityCenter FullAccess	IdentityCenter ReadOnlyAccess
Creating a user	√	x
Viewing details about a user	√	√
Modifying user details	√	x
Creating a group	√	x
Adding a user to or removing a user from a group	√	x
Deleting a group	√	x
Viewing details about a group	√	√
Creating a permission set	√	x
Modifying a permission set	√	x
Deleting a permission set	√	x
Viewing details about a permission set	√	√

Helpful Links

- [IAM Service Overview](#)
- Creating a User and Granting IAM Identity Center Permissions

5 Notes and Constraints

Notes

- IAM Identity Center obtains member account information from organizations defined in the Organizations service. Before using IAM Identity Center, you must enable the Organizations service and create an organization. Then, you can log in to IAM Identity Center using the organization's management account.

Constraints

The following table describes quotas for IAM Identity Center. To increase the quota, see "How Do I Increase My Quota?" in the *IAM Identity Center User Guide*.

Table 5-1 Quotas for IAM Identity Center

Item	Default Quota	Adjustable
Number of users that can be created in IAM Identity Center	100,000	Yes
Number of groups that can be created in IAM Identity Center	100,000	Yes
Number of users in a group	Unlimited	-
Number of groups to which a user can be added	1,000	No
Number of multi-factor authentication (MFA) devices that can be added to a user	2	No
Number of permission sets that can be created in IAM Identity Center	2,000	Yes
Number of policies in a permission set	20 (including custom policies)	No

Item	Default Quota	Adjustable
Number of permission sets that can be associated with an account	50	Yes
Number of characters in a custom policy	6,144	No
Number of external identity providers (IdPs) that can be connected	1	No
Number of access control attributes that can be added	20	No

6 Concepts

User

A user created in IAM Identity Center. You can associate an IAM Identity Center user with multiple accounts in your organization and configure permissions for the user. Then, you can log in to the system as the IAM Identity Center user to access resources of those accounts without repeated login.

Group

A logical combination of IAM Identity Center users. You can centrally authorize multiple users using groups for unified permissions management. Users added to a group automatically obtain the permissions granted to the group. If a user is added to multiple groups, the user inherits the permissions from all these groups.

Permission Sets

A permission set is a template created and maintained by an administrator. It defines one or more IAM policies. Permission sets simplify the assignment of account access for users and groups in IAM Identity Center. With permission sets, you do not need to configure permissions for accounts individually.

Management Account

The account (also known as the administrator) used to enable and create the IAM Identity Center instance, and manage all IAM Identity Center users and their access permissions in an organization.

Delegated Administrator

By default, only the Organizations management account can use and manage IAM Identity Center. The management account can delegate administration of IAM Identity Center to a member account in your organization to extend the ability to manage IAM Identity Center.

This operation will delegate IAM Identity Center administrative access permissions to users in this member account. All users who have sufficient permissions for the delegated administrator account can perform all IAM Identity Center administrative tasks from this account, except for:

- Deleting IAM Identity Center
- Registering other member accounts as delegated administrators
- Managing assignments to the management account
- Enabling or disabling access permissions of a user
- Managing permission sets provisioned to the management account

User Portal

A single user portal URL for all of your IAM Identity Center users to log in to the management console and access assigned resources.