Getting Started

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HUAWEI

HUAWEI CLOUD COMPUTING TECHNOLOGIES CO., LTD.

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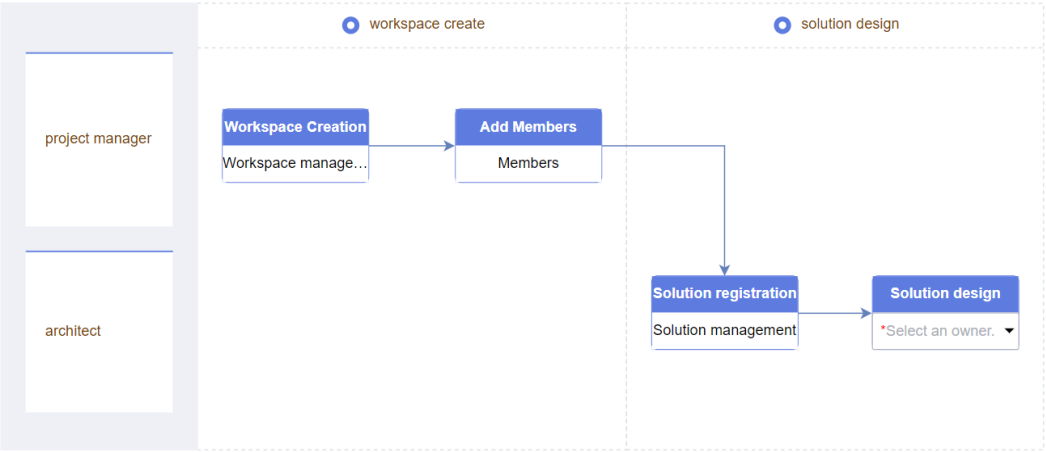
1 Building a Solution on HaydnCSF

Overview

This section describes how architects can quickly register and design solutions on HaydnCSF. **Figure 1-1** shows the fast solution process. The fast solution process is recommended for referencing architectures and designing solutions.

Figure 1-1 Fast solution process



Prerequisites

You are a HaydnCSF user and have been assigned the architect role. For details about how to become a Haydn user, see **Accessing HaydnCSF**. For details about user roles, see **HaydnCSF User Access Permissions**.

Registering a Solution

1. Log in to HaydnCSF. In the upper right corner, select **Solution design** for **Current workbench**.

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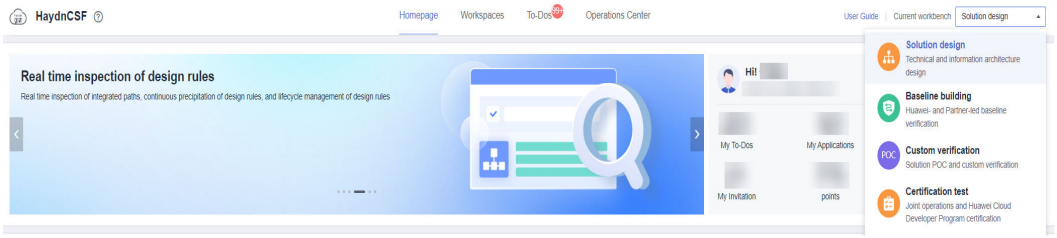
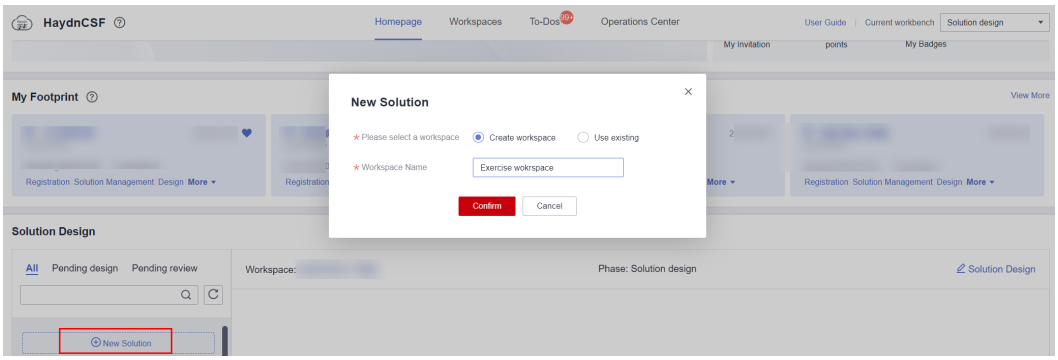
Figure 1-2 Scenario selection



2. Click **New Solution**. On the displayed page, select **Create workspace**, specify the workspace name. Click **Confirm**.

Figure 1-3 Creating a solution



3. Specify information required. For details, see **Table 1-1**.

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Table 1-1 Solution registration parameters

Parameter	Description
Solution Type	Select a solution type. • **Reference architectures**: include PPT solutions, 0-1 incubation, and product portfolios that cannot be replicated. Replicability or deliverability is not promised. Problem handling suggestions are provided based on reference architectures. Only product technical support is provided. Delivery verification is required in customer projects (Huawei and partners are responsible for delivery separately). • **Huawei Lead**: As the solution owner, Huawei takes the lead in industry scenario and partner selection, initiates a solution, designs and verifies the solution jointly with partners, outputs solution offerings, and specifies the GTM path, customer development strategy, contract signing path, delivery strategy, and O&M strategy. Huawei is responsible for solution competitiveness and business success. • **Partner Lead**: A partner who meets the partner-led solution review requirements is the solution owner. The partner takes the lead in solution initiation, designs and verifies the solution jointly with Huawei, outputs solution offerings, and specifies the GTM path, customer development strategy, contract signing path, delivery strategy, and O&M strategy. Huawei PDM and PSA assist partners in ensuring the competitiveness and business success of the solution. • **Joint operations products**: products that are jointly operated by Huawei Cloud and partners. There are preset reliability requirements and reliability checks for joint products. • **Developer application building**: a joint solution building program for technical partners. It strengthens technical enablement and support for partners during solution and service construction and migration, provides technical capability certification, and provides marketing and business support for certified solutions and services. • **Advanced cloud software**: The advanced cloud software certification used to verify that partners' products and software have been reconstructed and optimized using Huawei Cloud technologies and can create value for customers. • **POC**: the design and verification before project implementation. • **Development & Migration incentives**: competitive software products and solutions in the industry. This

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Parameter	Description
	product or solution is critical to enhancing Huawei Cloud capabilities or entering the corresponding industry and acquiring customers. After strict process evaluation, the PDM applies for this product or solution for partners. • **Custom verification**: The entire process pipeline of solution building and solution verification supports customized skipping of certain phases. • **Other**: solutions beyond the above categories.
Select Process	Select **Fast Solution Process** and specify yourself as the solution design owner. • The **Common Solution Process** consists of three phases: solution registration, solution design, and solution review. • The **Fast Solution Process** includes solution registration and solution design.
Associate CSBI	Optional. You can associate the solution with CSBI if the solution has been initiated on Huawei Cloud. It is recommended that Huawei/Partner-led baseline solutions be associated. If the project initiation is not complete, the association can be done through a solution change after the initiation is completed.
Solution Name	Specify the solution name.
Applicable Industries	Select an industry based on your actual situation. You can select multiple industries and sub-industries.
Deployment Environment	Set this parameter based on the base type used in the solution. Multiple base types can be selected.
Solution Version	(Optional) Specify the solution version.
Display Cover	(Optional) The cover resolution cannot exceed 1280 x 960, and the image size cannot exceed 10 MB.
Solution Description	Describe the solution from the following aspects: business pain points, application scenarios, and solution advantages and benefits.
Solution Attachment	(Optional) Upload solution attachments.

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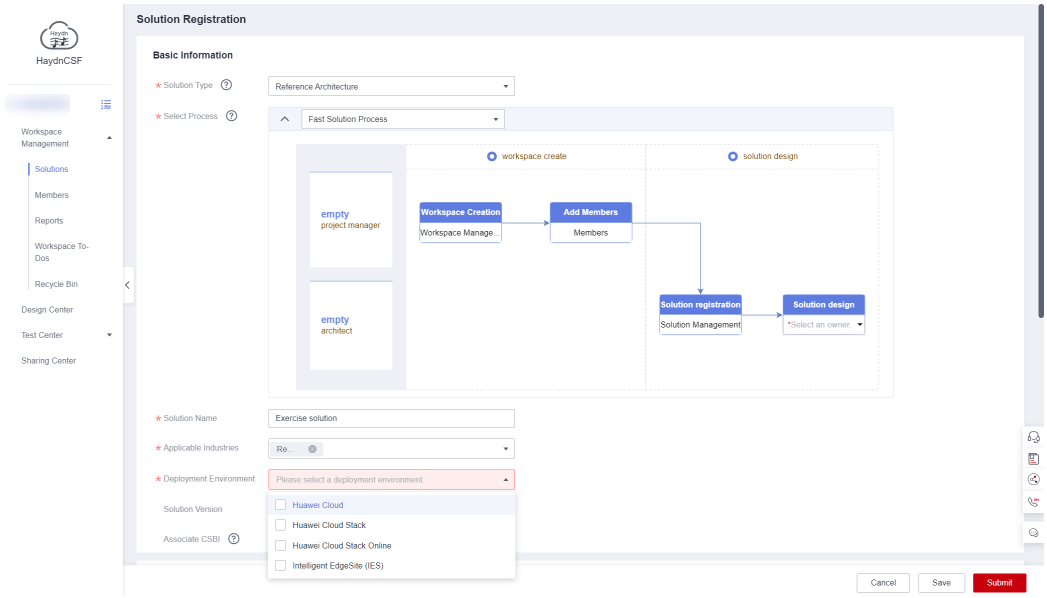
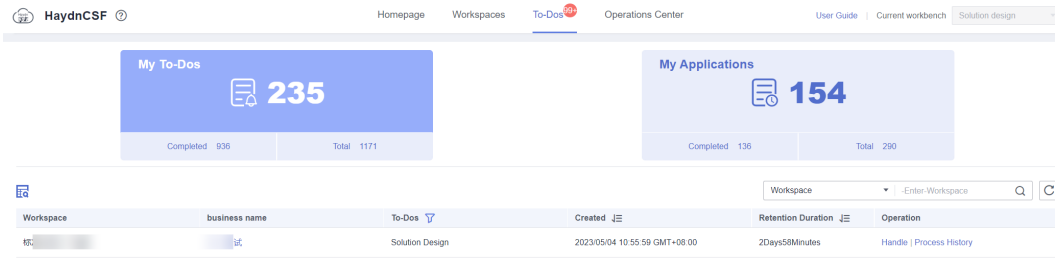
Figure 1-4 Creating a solution



4. Click **Submit**.

   The process enters the solution design phase. The system generates a solution design to-do task for the solution design owner. If the owner has subscribed the email notification on HaydnCSF, the owner will receive an email notification.

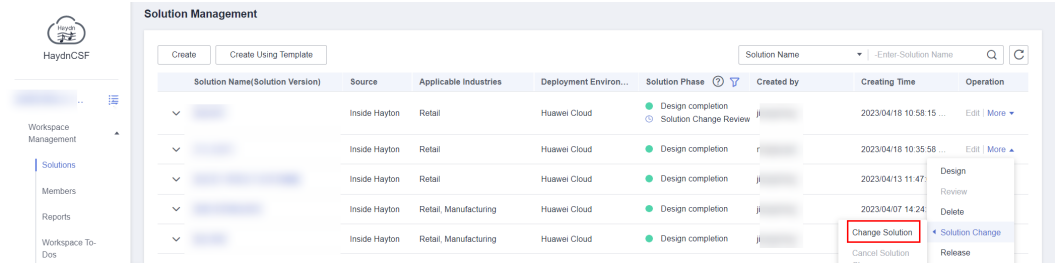
Figure 1-5 Solution design to-dos



NOTE

- The solution can be edited in the solution registration and solution design phases. If you want to edit the solution after it is completed, you need to change the solution. See **Figure 1-6**.

Figure 1-6 Change Solution



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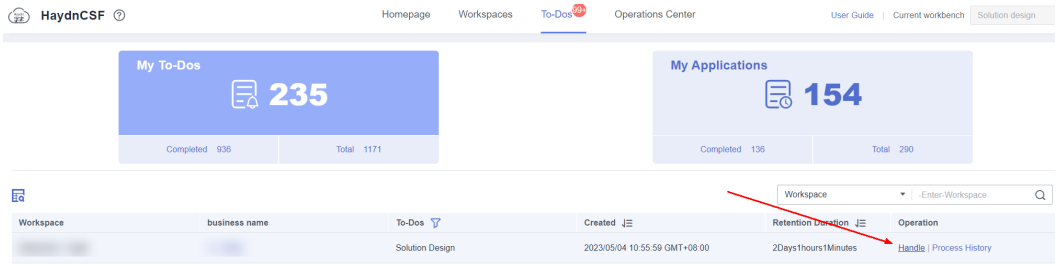
Designing Solution Architectures

1. Click the **To-Dos** tab. On the page displayed, locate the row that contains this **Solution design** and click **Handle** in the **Operation** column. See **Figure 1-7**.

Figure 1-7 To-Dos - solution design



2. Create an integration architecture.

   In the left area of the page, click the plus sign (+) on the right of the solution name.

Table 1-2 Parameters of creating an integration architecture

Parameter	Description
Architecture Name	Specify an architecture name.
Architecture Template	• **No template** The canvas is empty. You need to drag and pull diagram elements from the diagram element library on the left to design the architecture. • **Architecture template from solution acceleration field** You can search for acceleration field architecture templates by template ID, solution name, applicable industry, and scenario and reference them for secondary editing. • **Existing architecture** You can locate the integration architecture of workspaces you created or joined based on the workspace name, solution name, or integration architecture name. You can then copy the integration architecture to the current workspace for secondary editing.
Architecture Description	This parameter describes the service flow and data flow of the entire architecture.

Take Solution Acceleration Architecture Template as an example. To reference an architecture template from the Solution Acceleration Field, enter a keyword to search for the architecture template. Click **Details** to view the template details. Select an architecture template from the search results and click **OK**. See **Figure 1-8**. To reference a template on a new canvas, click the

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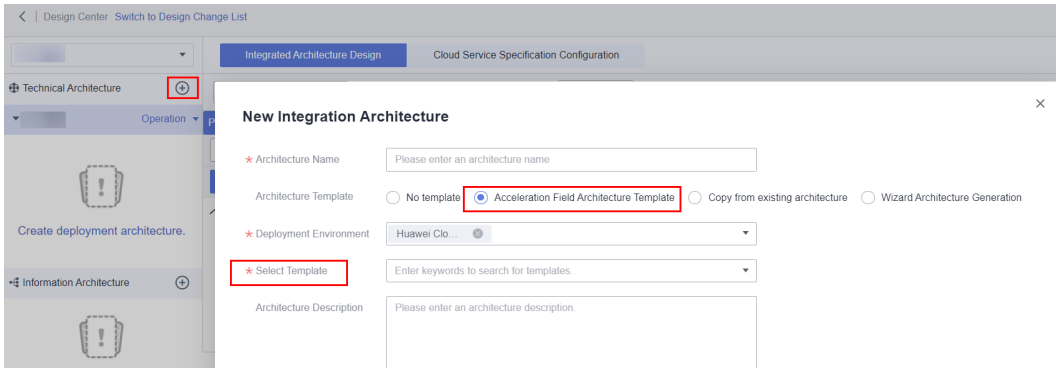
Recommended Architecture button in the lower right corner of the canvas to search for and reference the template.

Figure 1-8 Creating an integration architecture



3. Design the integration architecture.

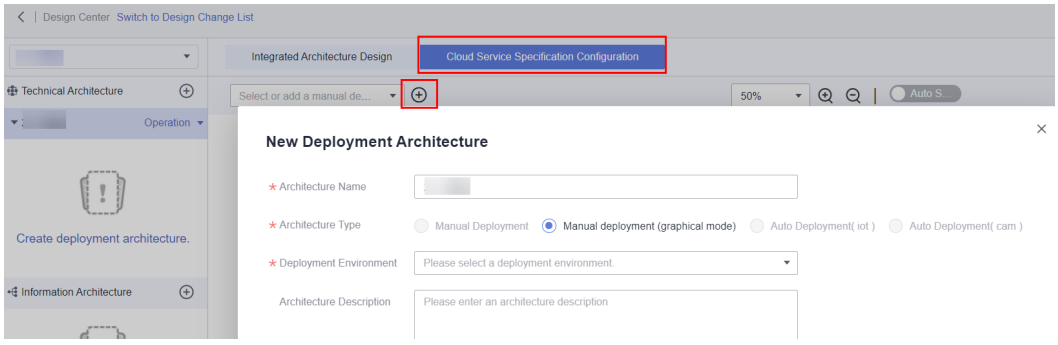
   Design the architecture diagram using the diagram element panel on the left and the toolbar panel on the top. Click the save button in the upper right corner. By default, automatic saving is enabled, and your edits are saved every 5 minutes.

4. Create a manual deployment architecture.

   a. Switch to the **Cloud Service Specification Configuration** tab page and then click the plus sign.

      The deployment environment is related to the base to which the solution applies. A solution can have deployment architectures of different bases.

      Figure 1-9 Creating a deployment architecture (graphic mode)

   b. Configure the cloud service specifications.

      In graphic mode, click **Cloud Service Specification Configuration** and double-click the diagram element to be configured.

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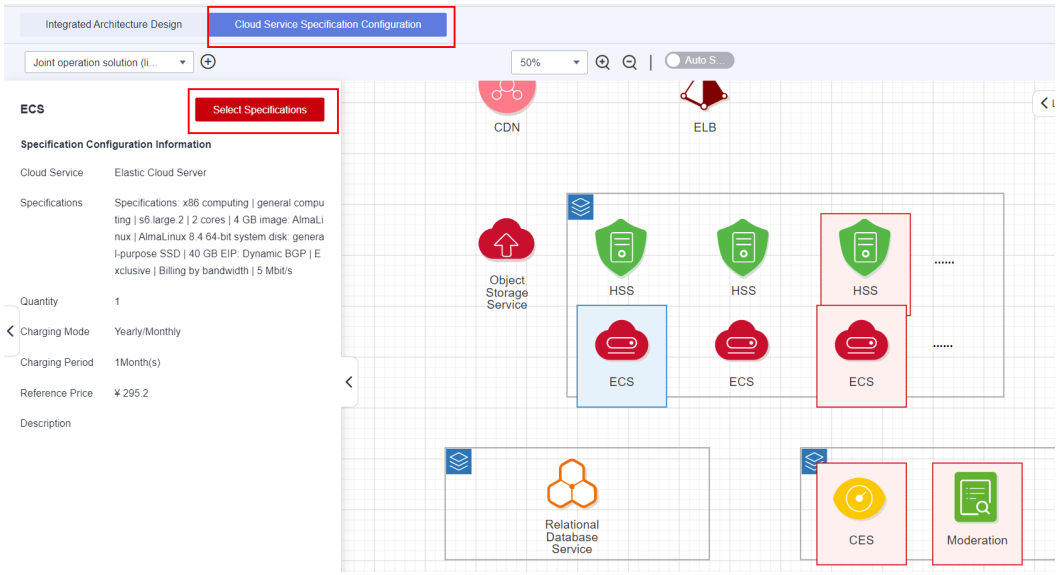
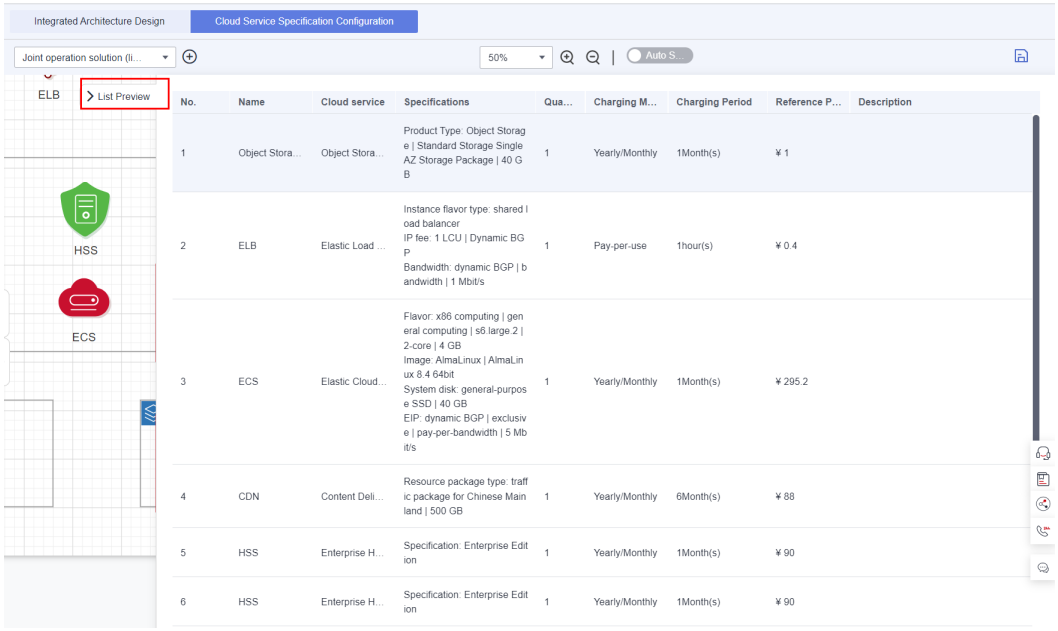
Figure 1-10 Cloud service specifications configuration



c. Preview the configuration list.

Figure 1-11 Cloud service configuration list



5. Submit the architecture for review.

   Click **Submit for Review**. In the dialog box that is displayed, specify the solution review owner and enter the remarks (optional), and click **Submit**. You can select more than one review owners.

   For fast solution process, the system reviews the solution architecture by default. You do not need to select a review owner.

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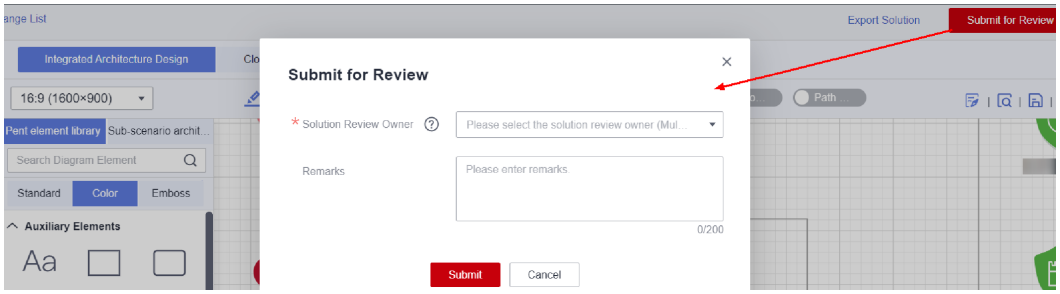
Figure 1-12 Solution design - submit for review



6. Review the solution. (Skip this step in a fast solution process.)

   In a fast solution process, the system reviews the solution architecture by default. You can skip this step.

Figure 1-13 Solution design completed

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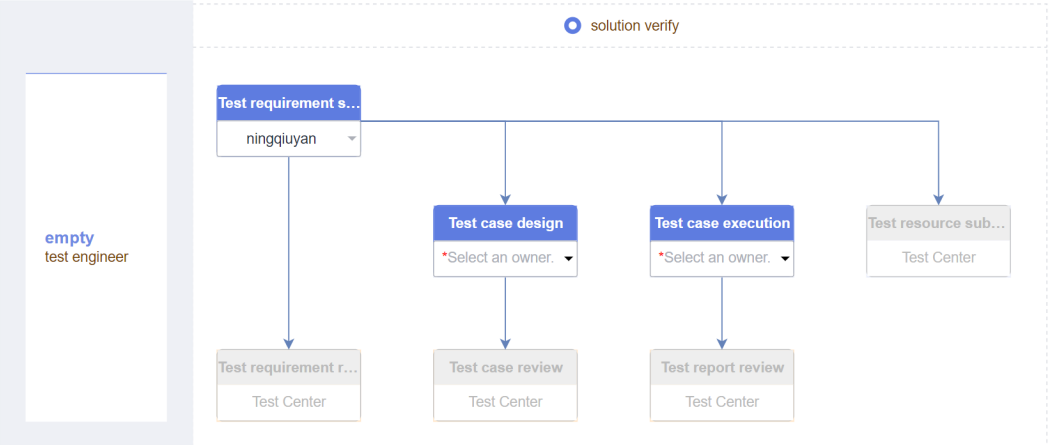
2 Verifying a Solution on HaydnCSF

This section describes how to verify solutions on HaydnCSF.

Figure 2-1 Solution verification



Prerequisites

1. You are a HaydnCSF user, and your role is an architect role or a test engineer. A HaydnCSF user can have multiple roles. For details about how to become a HaydnCSF user, see **Accessing HaydnCSF**. For details about user roles, see **HaydnCSF User Access Permissions**.
2. You have **created a workspace** and invited related members to the workspace. For details, see **Member Management**.
3. You have **built a solution** on HaydnCSF.

NOTE

The corresponding requirement review owner or test case design owner of each step will receive to-do notifications and handle them through the **To-Dos** page, quick link, or menu bar.

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Submitting a Test Requirement

You need to specify your test requirements before verifying your solution. To create a test requirement on HaydnCSF, your role in the workspace should be an architect or test engineer.

1. Create a test requirement.
   a. Log in to HaydnCSF and enter the workspace that has been created during the **solution building**.
   b. In the navigation pane on the left, choose **Verification Center** > **Requirements** and click **Create**.
   c. On the page displayed, select the solution displayed in the **Workspace To-Dos** and configure the verification requirements.

Table 2-1 Test requirement parameters

Parameter	Description
Solution Name	Select a solution built during the **solution building**. Before creating a test requirement, ensure that a solution has been built. You can create more than one requirement for a solution.
Verification Process	This section takes **Fast Solution Process** as an example. • **Fast Solution Process**: Build a solution quickly on HaydnCSF. By default, all key steps of this process do not need to be reviewed. • **Common Solution Process**: Build a solution using the common solution process on HaydnCSF. All key steps of this process need to be reviewed. • **Customize Flowcharts**: Customize the steps you want to skip. Default handlers are specified for all steps of these processes. They can be changed by either the corresponding handlers or the workspace administrator in **Workspace To-Dos**.
Deployment Environment	Select the type of the Huawei Cloud deployment environment of the application to be verified.
Verification Policy	**Independent Verification** indicates that the solution is verified in an independent deployment environment. Select the corresponding deployment environments and solutions.
Deployment Account	Huawei Cloud account for deploying resources and applications
Test Requirement Name	Specify the test requirement name, for example, "xx Solution Verification Requirement".

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Parameter	Description
Requirement Start and End Date	Expected start and end dates of verification
Test Requirement Type	Select a test requirement type based on your service requirements. Subsequent test cases will be classified based on the requirement type. Each test requirement type can have multiple test requirements. You can use templates for a quick experience. You can also select and modify the requirements and test cases in these templates based on your needs.
Test Plan	Make a test plan that includes the plan name, start and end dates, and testing steps.

Figure 2-2 Creating a test requirement-1

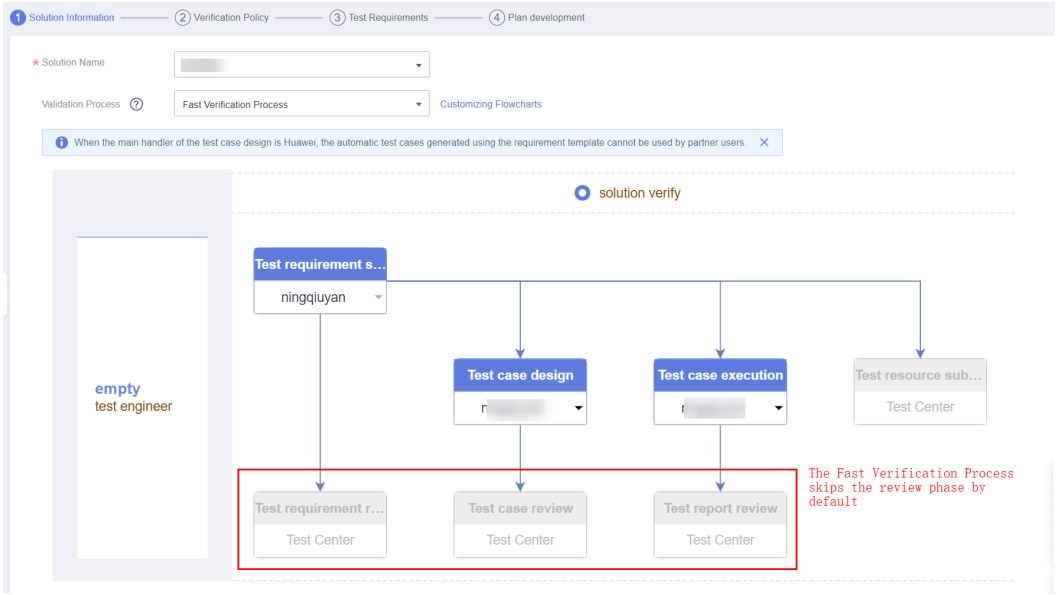

Figure 2-3 Creating a test requirement-2

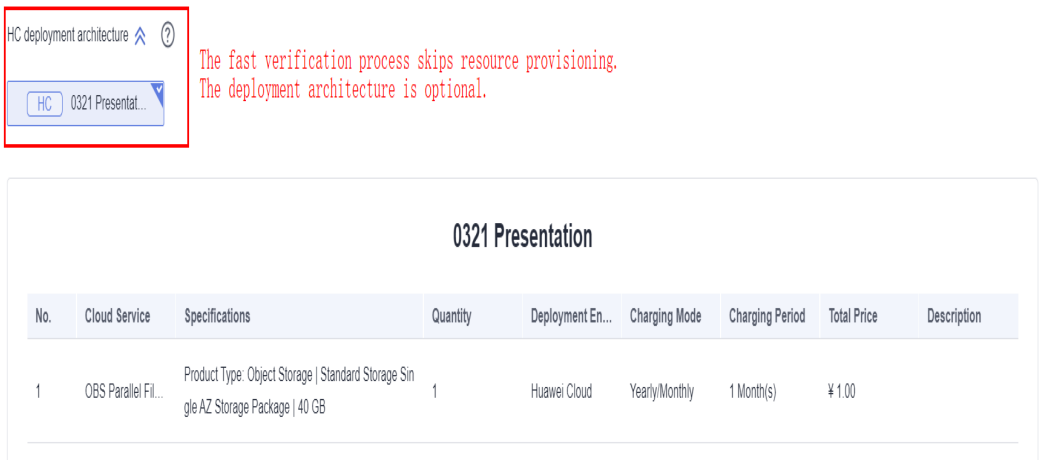

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Figure 2-4 Creating a test requirement-3

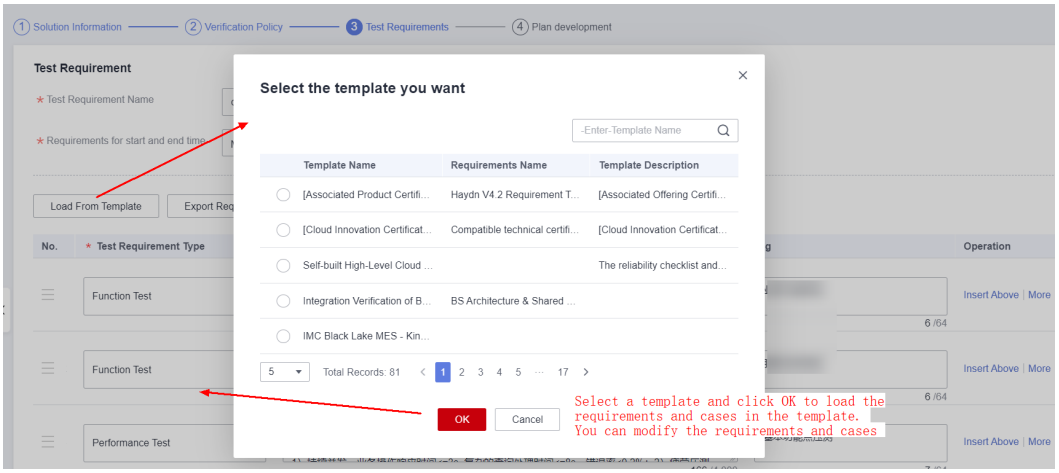
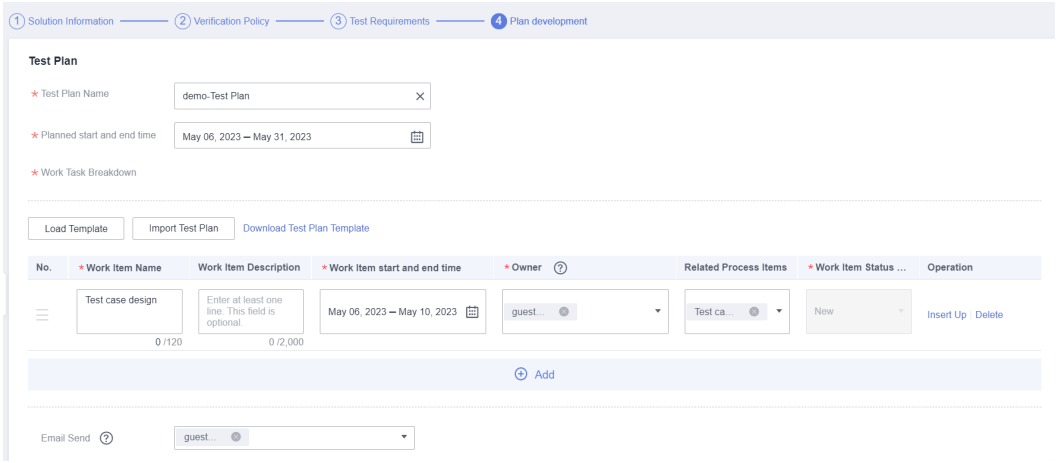


Figure 2-5 Creating a test requirement-4



2. Save the test requirement.

   The status of the saved requirements can be modified by the architect or the test engineer in the workspace.

3. Submit the test requirement.

   The creator of the requirement can change the requirement after it is submitted.

Designing a Test Case

Only the test engineer role can create test cases on HaydnCSF.

Log in to HaydnCSF as the test case design owner specified during the requirement creation. Enter the workspace created during the **solution building**. In the navigation pane on the left, choose **Verification Center** > **Cases**.

1. Create a test case.

   If you select **Load Template** when you create your test requirement, the test cases in the template will be automatically displayed in the **Case Management** page. You can edit or delete these cases based on your needs.

   – Manually add a test case.

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In the **Test Requirements** pane, select the requirement and click **Create**.

Figure 2-6 Managing test cases

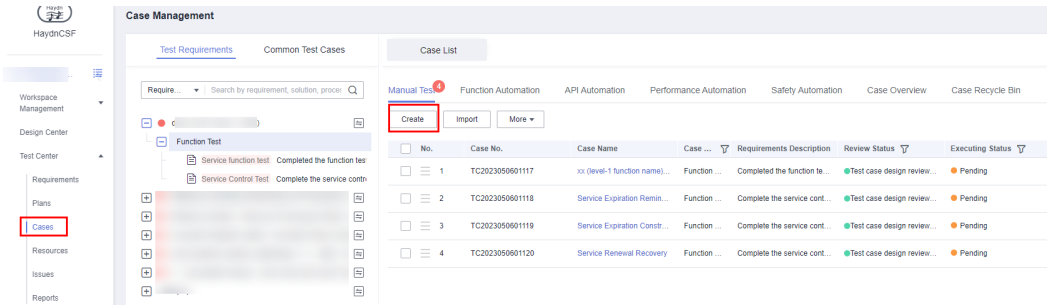
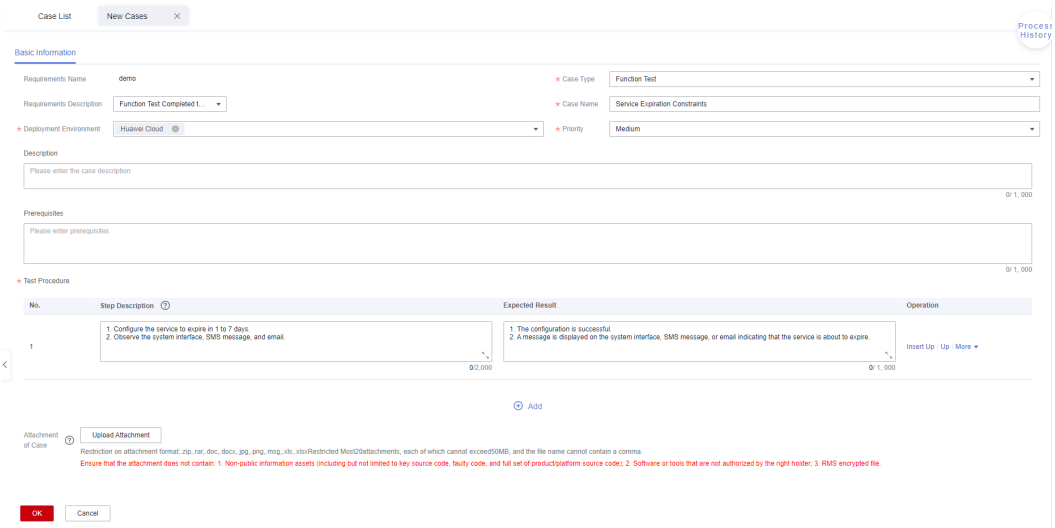


Figure 2-7 Manually creating a test case



- **Requirement Description**: Select the requirement that the test case belongs to from the drop-down list.
- **Case Name**: Specify the test case name. It is recommended that you standardize the test case name so that the function can be reflected in the test case name.
- **Deployment Environment**: Select the development environment of the test case to be deployed from the drop-down list.
- **Priority**: Select the importance level of the test case from the drop-down list.
- **Description**: Describe the test case.
- **Prerequisites**: Customize the prerequisites for executing the test case.
- **Step Description**: Specify the steps involved in the test case.
- **Expected Result**: Enter the expected result of each step.

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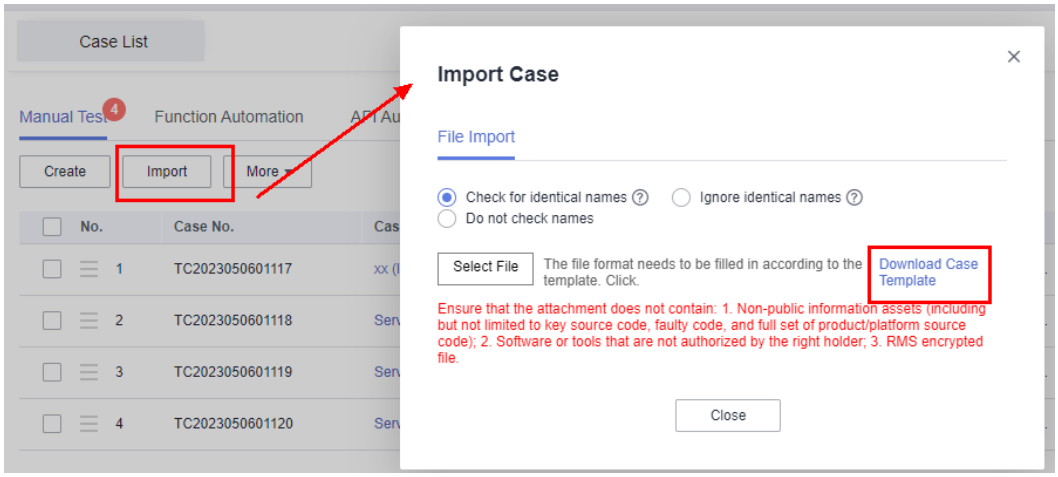
- **Attachments**: Upload the associated files required by the test case.

– Import a test case.

In the **Test Requirements** pane, select the test requirement and click **Import**. In the displayed dialogue box, click **Download Case Template**. Fill in the template and then upload it to HaydnCSF.

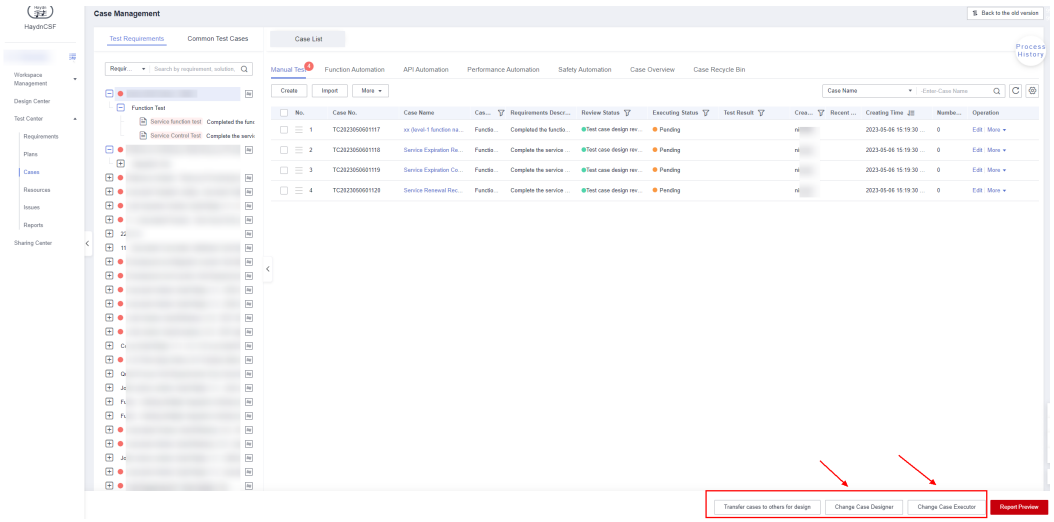
Figure 2-8 Importing a test case



NOTE

1. HaydnCSF supports automatic testing. You can create an automatic test case on the **Function Automation**, **API Automation** or other automation tab pages. For details, see **Case Management**.
2. Only the test case design owner specified in **Submitting a Test Requirement** can create a test case. More than one owner can be specified. Other roles in the workspace can view the test cases but cannot create or change them.
3. To change the test case designer when you design or execute a test case, click **Change Case Designer** on the **Case Management** page.

Figure 2-9 Changing the case designer or executor



2. Submit the test case.

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Submit the test case after finishing the design. This section takes the fast solution process as an example, so the test case will pass the review by default after being submitted.

Provisioning Cloud Service Resources and Deploying Applications

Test resources can be provisioned for the designed test cases. You can enter the resource provisioning page from resource provisioning to-dos or the resource management page of the Verification Center in your workspace.

Figure 2-10 Resource provisioning entry

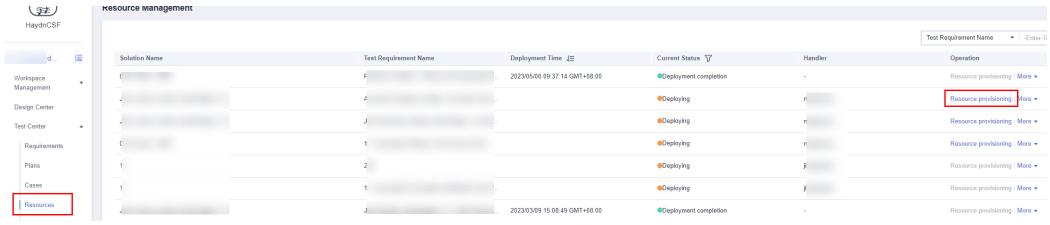
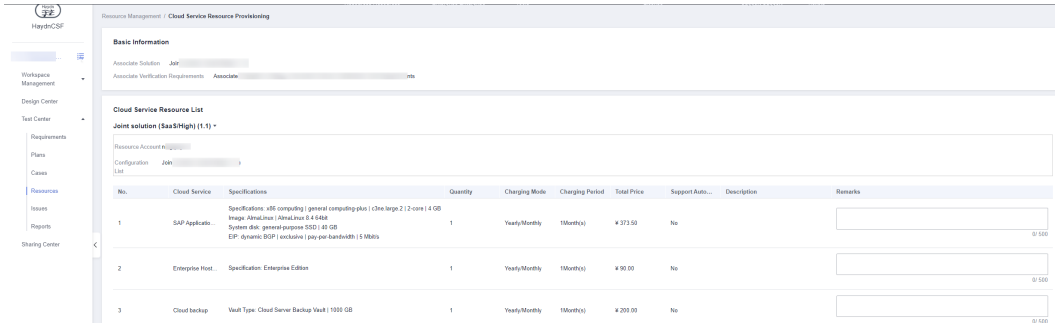


Figure 2-11 Provisioning resources



On the **Cloud Service Resource Provisioning** page, enter the remarks, and application and technology stack information. Then, click **Submit**.

Table 2-2 Resource provisioning parameters

Parameter	Description
Remarks	Enter the remarks for each service in the list.
Application Information/ Technology Stack Information	Information about the applications and technology stack components required in the verification environment, such as WordPress and MySQL installed for website deployment.

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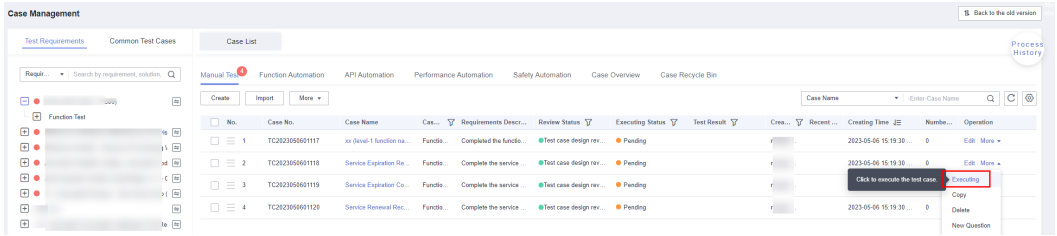
Parameter	Description
Attachments	Files related to resource provisioning in the formats of zip, rar, tar, ppt, pptx, doc, docx, xls, xlsx, or pdf. A maximum of five files can be uploaded, with each no larger than 50 MB. The attachments must not contain non-public information assets (including but not limited to key source codes, compartmentalized codes, and full sets of product or platform source codes), unauthorized software or tools, or encrypted RMS files.

Executing the Test Case

Only the test engineer role can execute test cases on HaydnCSF.

1. Execute the test case.
   a. Log in to HaydnCSF as the test case executor specified during the requirement creation. Enter the workspace created during the **solution building**. In the navigation pane on the left, choose **Verification Center** > **Cases**.
   b. Select the test requirement and locate the test case to be executed. Click **More**, and select **Execute** from the drop-down list.

      Figure 2-12 Case execution entry

   c. On the **Case Execution** page, enter the actual result of each step, and select a case status (**Pending, Executing**, or **Completed**) to complete the execution. You can copy the screenshot of the actual result to the box. You can also upload the attachments of the execution process.

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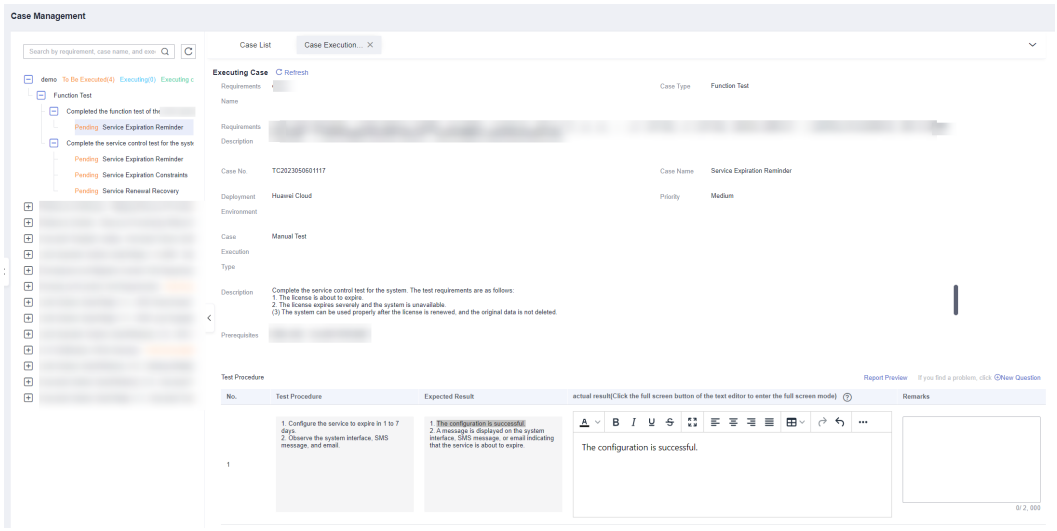
Figure 2-13 Executing the test case



2. Create an issue.

   You can create an issue on the **Case Management**, **Case Execution**, or **Issue Management** page.

Figure 2-14 Creating an issue on the case management page

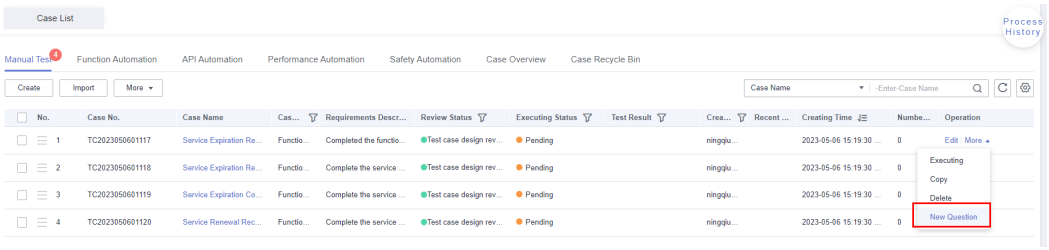


Figure 2-15 Creating an issue on the case execution page

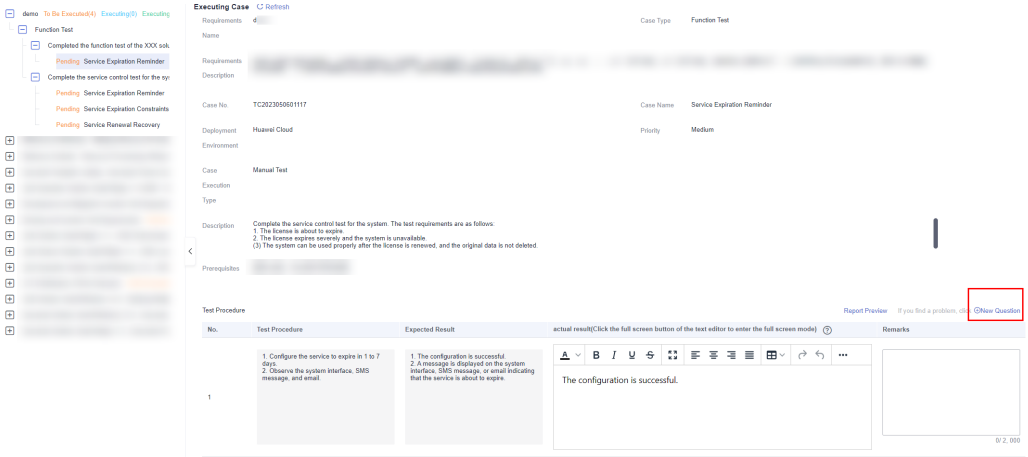


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Figure 2-16 Creating an issue on the issue management page

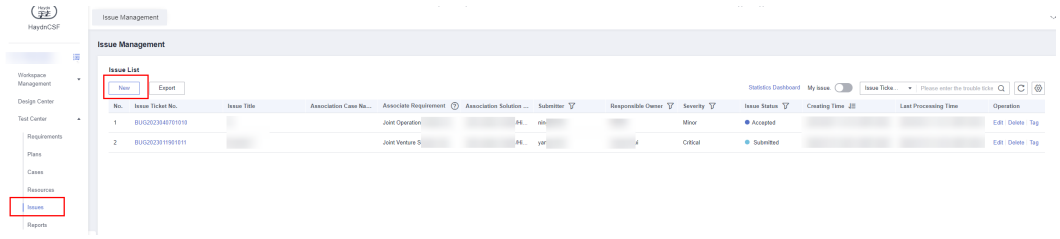

Figure 2-17 Creating an issue

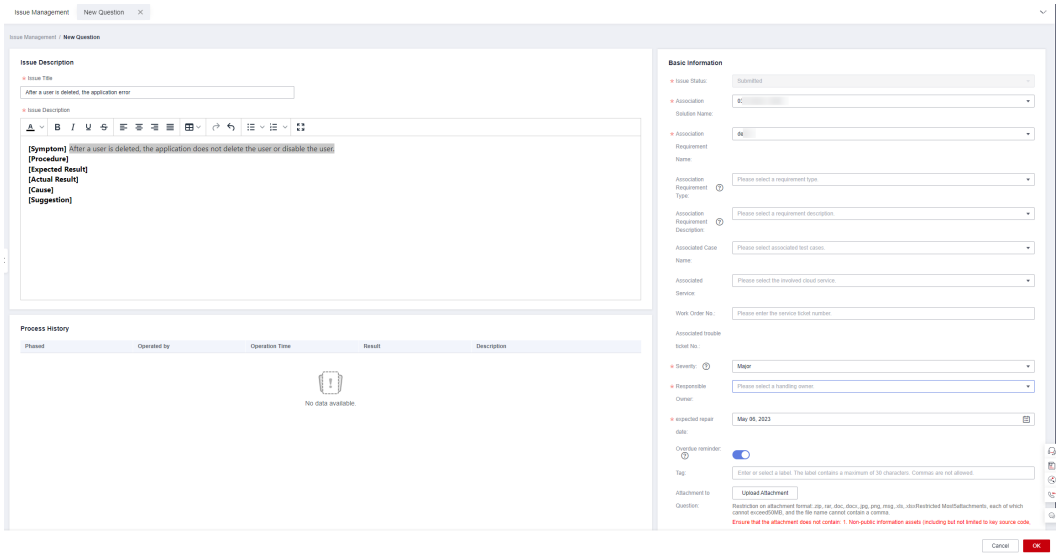

Table 2-3 Parameters required for creating an issue

Parameter	Description
Issue Title	Enter a title for the new issue ticket. The title can contain key information such as the issue proposer, cloud service, or test case name.
Issue Description	Describe the issue in detail.
Associated Solution	Select the solution associated with the issue from the drop-down list.
Associated Requirement	Select the requirement associated with the issue from the drop-down list.
Requirement Type	Select the type of requirement associated with the issue from the drop-down list.
Associated Case	Select the test case where the issue is identified.

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Parameter	Description
Service Ticket No.	If there is no issue ticket, create one as prompted and then enter the ticket ID.
Severity	• **Critical**: Critical issues that paralyze the system, for example, incorrect code, infinite loops, database deadlocks, and abnormal database connection or communication. As a result, the system or application breaks down, the system is suspended, or the data is lost. The key functions also become unavailable, and their modules or related modules are abnormal. • **Major**: Major issues that congest services, for example, major statement errors, API errors, and database tables, service rules, and default values without integrity constraints. As a result, some key functions become unavailable and the data is lost. The auxiliary functions also become unavailable and their modules are abnormal. • **Minor**: Common functional issues, for example, information errors, invalid module functions, incorrect log content, and unsatisfactory user experience and efficiency. As a result, some auxiliary functions are adversely affected, but can be used. • **Information**: Non-functional issues, for example, spelling mistakes, non-standard interfaces, unclear descriptions, test object issues, and other issues proposed by testers. As a result, some software defects cause inconvenience to the operators, but have little impact on function implementation.
Responsible Owner	Select an owner in the workspace who is responsible for handling the issue from the drop-down list.
Expected Rectification Date	Select an expected date when the issue is resolved.
Overdue Reminder	A notification email will be sent if the issue is overdue. This function is enabled by default.
Tag	Add a tag to the issue so that you can search for the issue by tag on the **Issue Management** page.

3. Preview the report.

   You can preview your test report during the case execution on the **Case Management** page in the **Verification Center**.

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Figure 2-18 Report preview entry

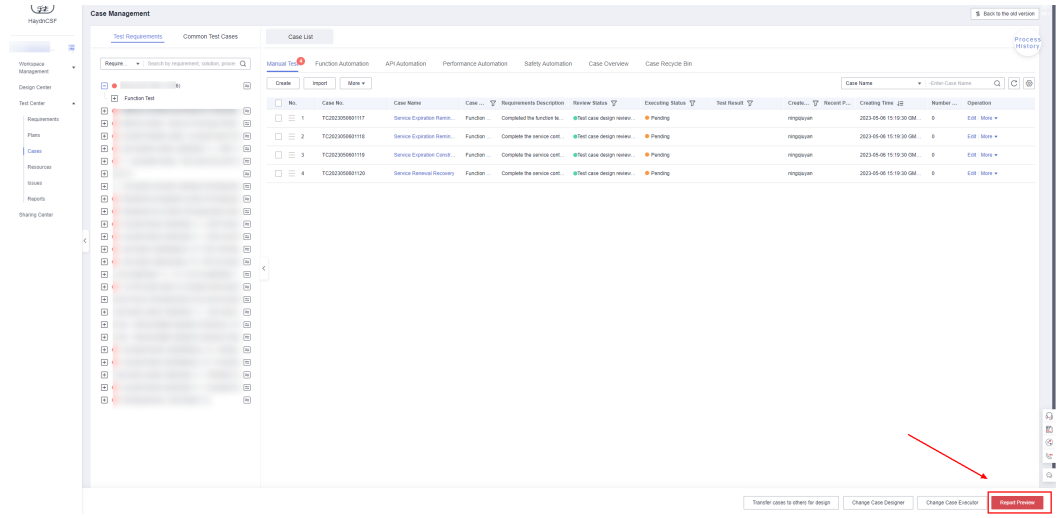
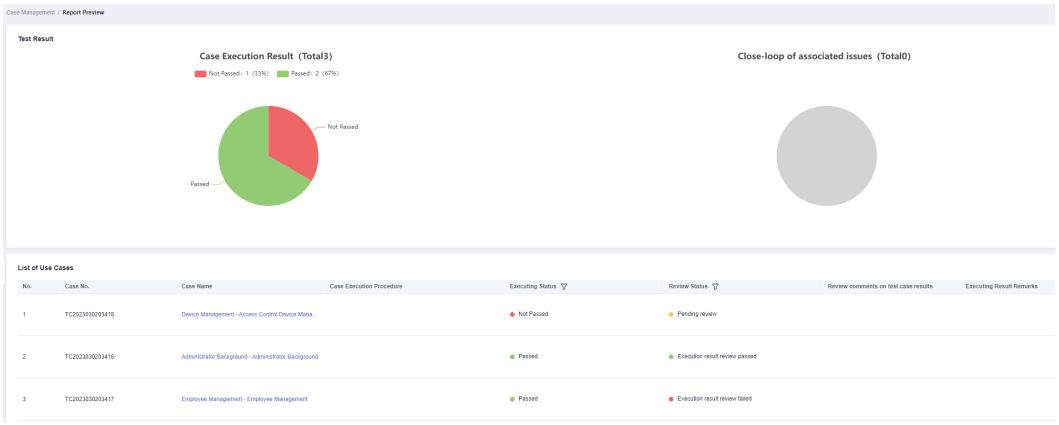


Figure 2-19 Report preview



Generating a Report

On the **Report Preview** page, generate and download a test report.

Table 2-4 Parameters required for generating a report

Parameter	Description
Test Report Name	Specify the name of the test report. By default, the report name is in the format of "solution name-requirement name-test report".
Test Tool	(Optional) Enter the tools used for the test, such as CodeArts PerfTest and JMeter.
Test Summary	(Optional) Enter a test summary, which will be displayed in section 3 "Verification Conclusion" of the report.
Report Generation	Click **Generate Report**. The system will generate a report based on the solutions, requirements, and test cases.

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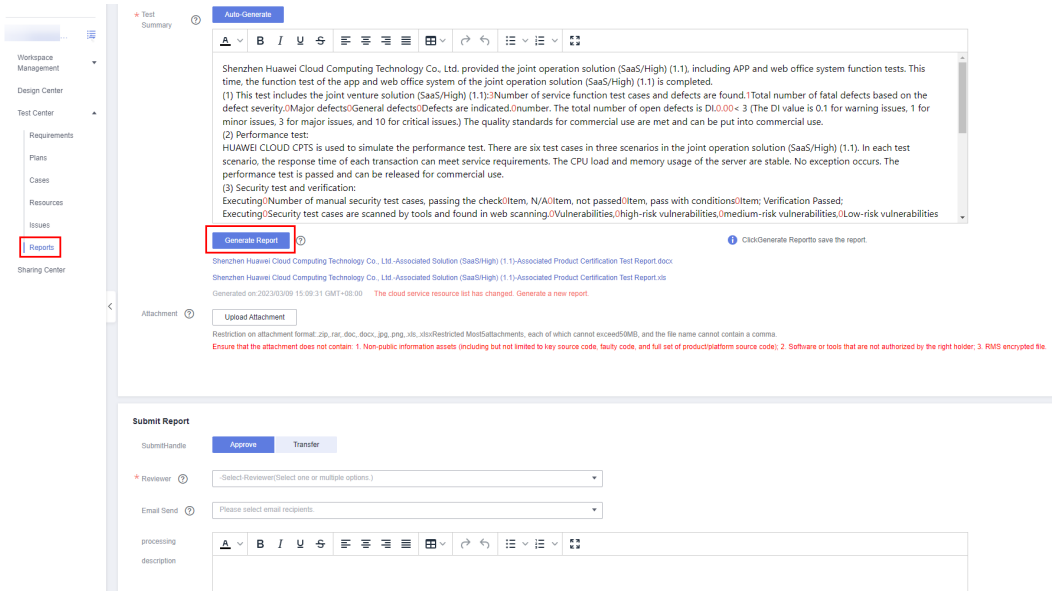
Parameter	Description
Attachments	(Optional) The uploaded attachments will be included in the report.
Report Submission	• **Action**: You can choose **Approve** or **Transfer**. • **Email Send To**: Email the report to the specified recipients. The recipients must be members in the workspace and have their email addresses associated with their accounts. • **Processing Description**: Describe the processing process of the report.

Figure 2-20 Generating a report



NOTE

- Only one report can be generated within 5 minutes. Click **Generate Report** to obtain the latest report before download.
- If the report content is modified after report generation, you need to re-generate a report.
- In the fast solution process, the solution is verified upon report generation. In the common solution process, the report should be submitted to the specified owner for review.

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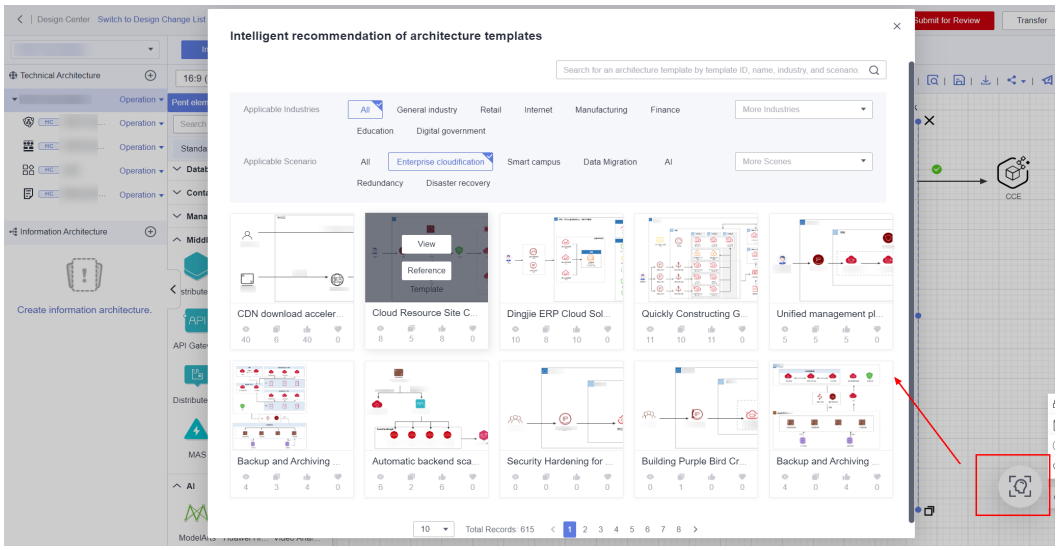
3 Designing an Integrated Architecture on HaydnCSF

This section describes how to use the HaydnCSF Design Center to meet architects' architecture design requirements. The following figure is used as an example to describe how to complete the integrated architecture design using the HaydnCSF Design Center.

Figure 3-1 Designing an integrated architecture



Registering a Solution

HaydnCSF provides solution process management based on the Business Process Management (BPM) process engine. You can start solution design based on the process.

1. Log in to HaydnCSF and select the **Solution design** scenario.

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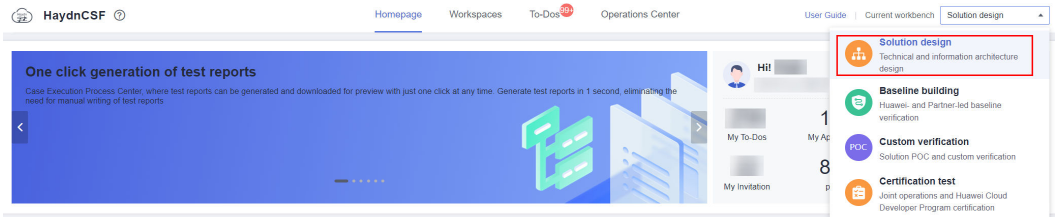
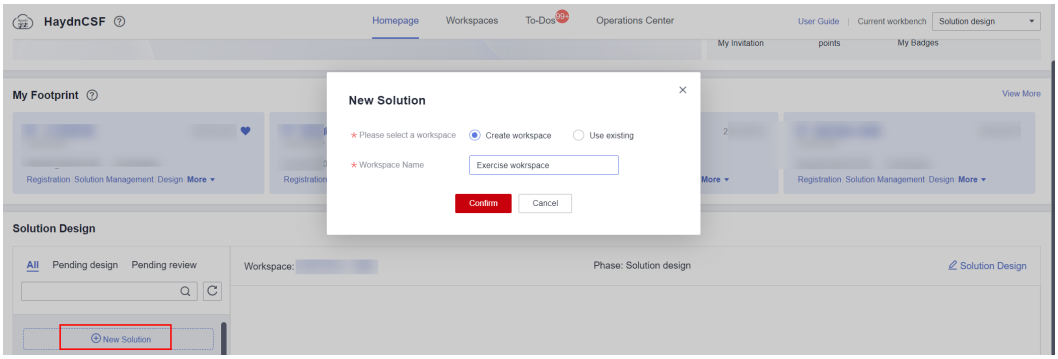
Figure 3-2 Scenario selection



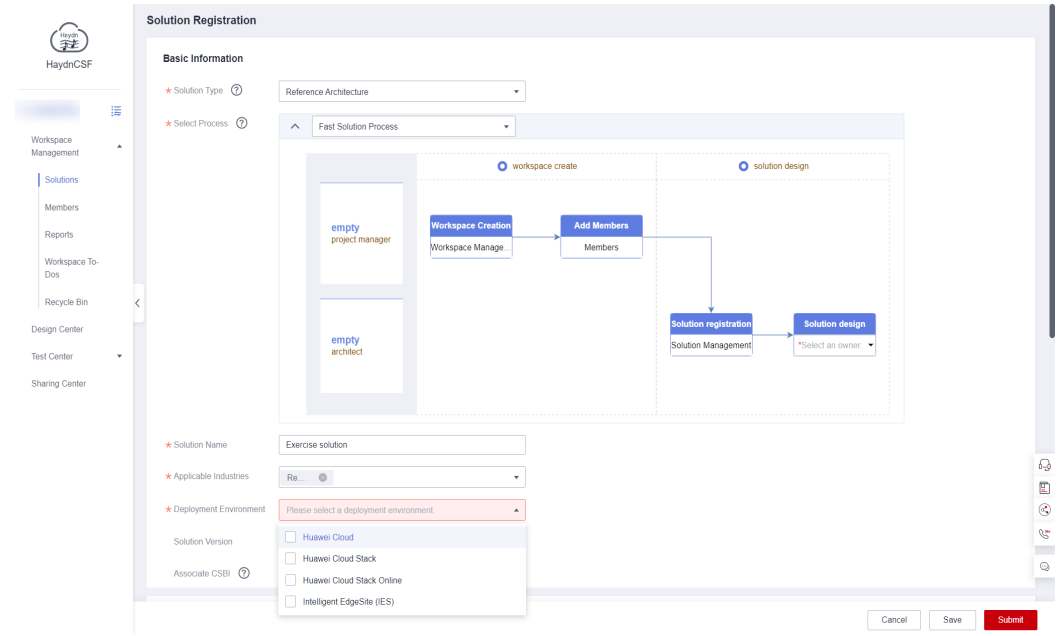
2. Click **New Solution**. On the displayed page, select **Create workspace**, specify the workspace name, and click **Confirm**.

Figure 3-3 Creating a solution



3. Enter information about the solution to be registered. You can specify yourself as the solution design owner.

Figure 3-4 Registering a solution



4. After the solution is registered, locate it, choose **More** > **Design** in the **Operation** column to go to the solution design page.

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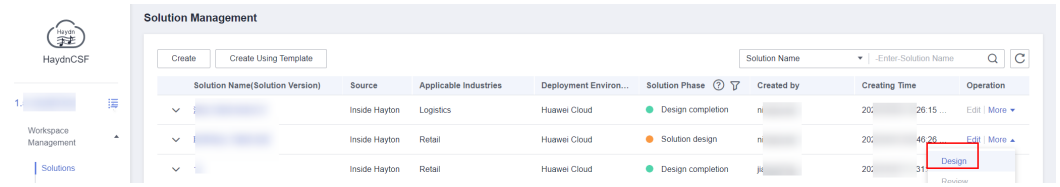
Figure 3-5 Going to the solution design page



5. Create an integrated architecture.

Figure 3-6 New Integration Architecture

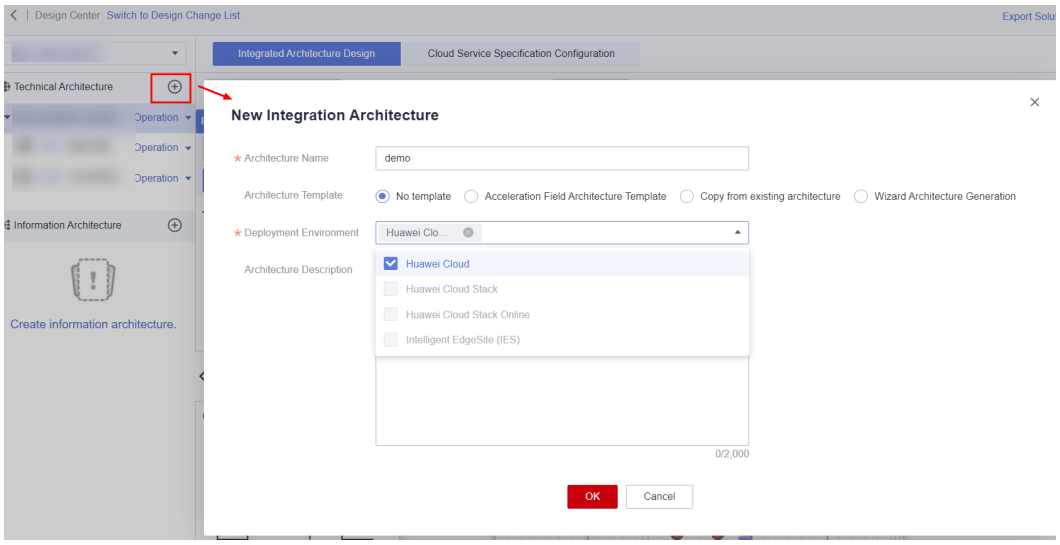
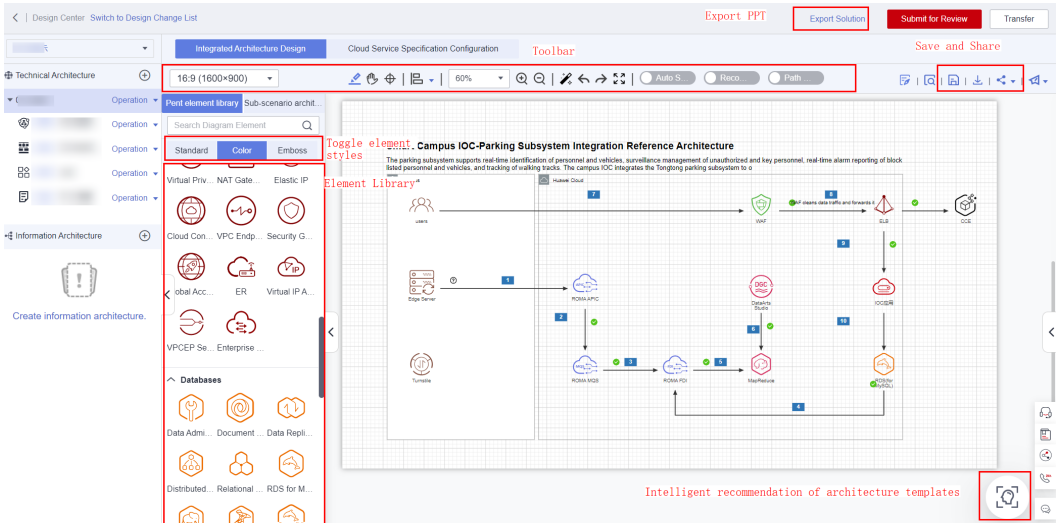


Figure 3-7 Layout of the integrated architecture design



Intelligent Architecture Recommendation

The HaydnCSF Design Center can recommend the most suitable solution architecture to you based on the language you entered. You can reference the recommended architecture quickly. In the HaydnCSF Design Center, HaydnCSF intelligently recommends solutions or architectures based on your solution or architecture information. You can also enter keywords to search for and view the most matched architecture for secondary editing.

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After entering the Design Center, you can use intelligent architecture recommendation to search for the architecture to be referenced. If you want to delete an architecture that is referenced, right-click the architecture and choose **Clear canvas** from the shortcut menu.

Figure 3-8 Intelligent recommendation of architecture templates

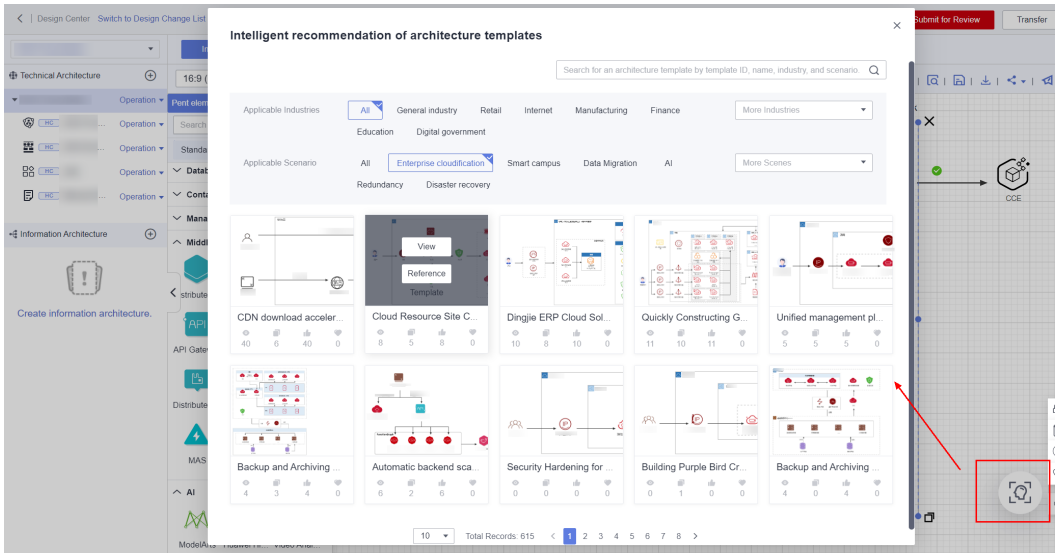
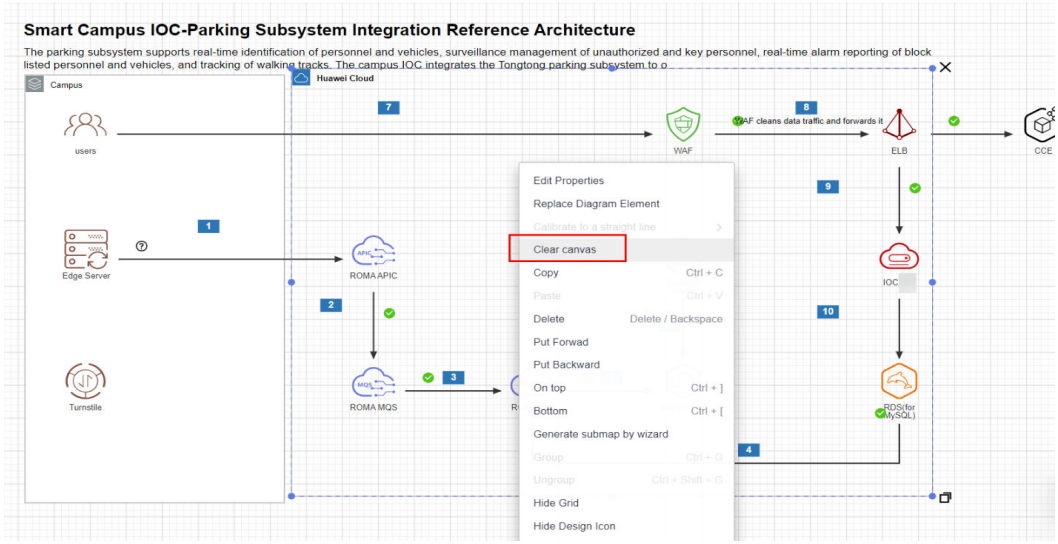


Figure 3-9 Clear canvas



Adding Diagram Elements

The HaydnCSF Design Center provides three types of diagram elements: standard, color, and emboss diagram elements. There are standard black and white diagram elements for Huawei cloud services, third-party applications and components, and auxiliary diagram elements, to meet architects' technical architecture and information architecture design requirements. Different types of services have different colors, making the architecture more beautiful and hierarchical. You can select diagram elements as needed. There are also panel and sequence number diagram elements under the preceding three types of diagram elements, and they

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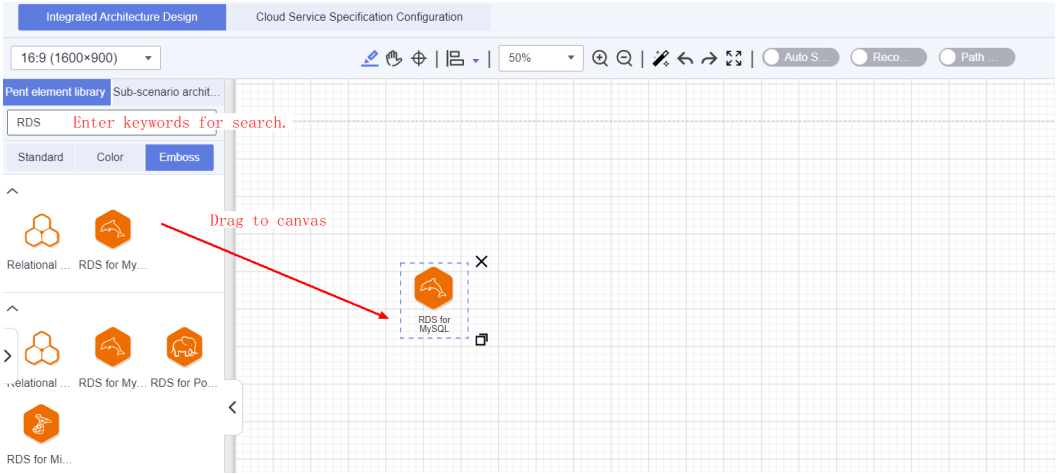
are used to mark the service classification, network attribute, and service flow sequence number of the architecture respectively.

- Adding a standard diagram element: Under **Pent element library**, select **Standard** and filter required icons, or enter keywords in the search box to search for required icons. Move the cursor to the diagram element to be selected and hold down the left mouse button to drag the diagram element to the canvas.
- Adding a color diagram element: The method of adding a color diagram element is the same as that of adding a standard diagram element, except selecting **Color** under **Pent element library**.
- Adding an emboss diagram element: The method of adding an emboss diagram element is the same as that of adding a standard diagram element, except selecting **Emboss** under **Pent element library**.

Figure 3-10 Adding a diagram element



NOTE

HaydnCSF identifies deployment environment attributes for Huawei Cloud diagram elements. If you cannot find a diagram element, the possible cause is that the diagram element does not match the selected deployment environment. For example, DMS has only the Huawei public cloud attributes. If your current architecture uses Huawei Cloud Stack Online (HCS Online), you cannot find DMS in the diagram element list.

Adding Panel Diagram Elements

Panel diagram elements have been released in the standard and color diagram element modules. There are panel diagram elements for Huawei Cloud, region, AZ, Virtual Private Cloud (VPC), subnet, cluster, DMZ, service layer, account, Dedicated Computing Cluster (DCC), Dedicated Cloud (DeC), and Dedicated Host (DeH). In this example, a turnstile and edge server are deployed in the on-premises data center, and ROMA and DataArts Studio are deployed on Huawei Cloud.

You can also double-click a panel diagram element and modify the badge icon of the panel diagram element on the page that is displayed.

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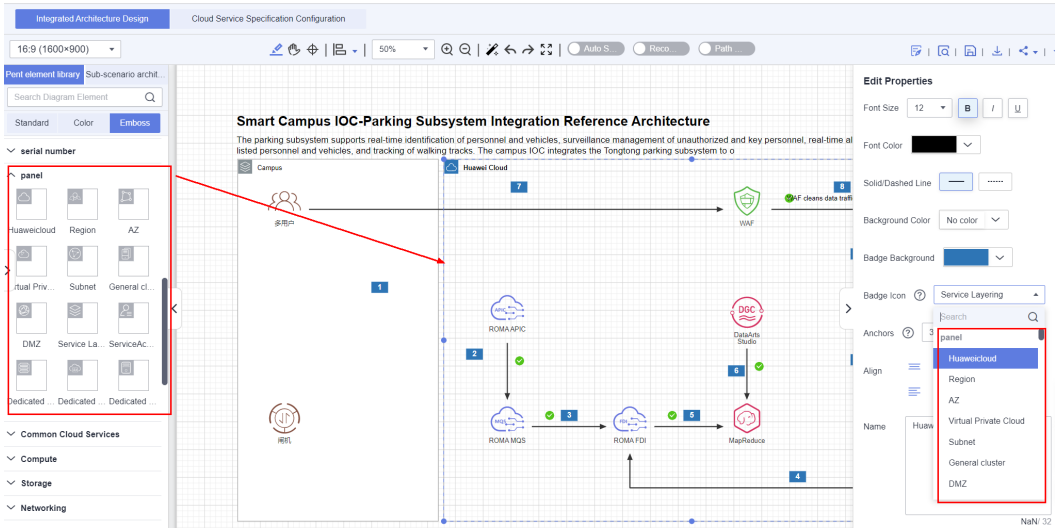
Figure 3-11 Adding a panel diagram element



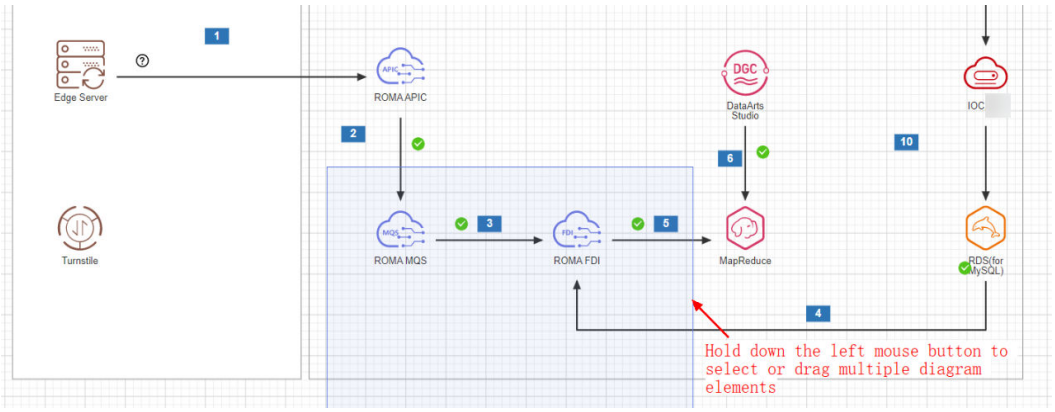
After adding diagram elements, you can adjust them, including selecting diagram elements, moving diagram elements, aligning diagram elements, connecting diagram elements, beautifying diagram elements by one click (adjusting connection lines to straight lines), modifying diagram element attributes such as names and colors, replacing diagram elements, adding service flow description to a diagram element, and copy diagram elements across spaces.

Adjusting Diagram Elements

Quickly selecting and moving diagram elements

You can click a diagram element to select it. After selecting a diagram element, you can press **Crtl** and click the left mouse button to select other diagram elements. After selecting diagram elements, you can hold down the left mouse button to move the diagram elements. Or you can hold down the left mouse button and drag the mouse to quickly select diagram elements. As shown in the following figure, drag the mouse to select the area where the diagram elements are located. Release the mouse to select the diagram elements in this area. After that, hold down the left mouse button to drag the selected diagram elements.

Figure 3-12 Selecting and moving diagram elements



Aligning diagram elements

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Diagram elements can be aligned left, right, top, bottom, center, and middle. They can also be distributed vertically or horizontally. Press **Ctrl** and left mouse button to select diagram elements and select an alignment mode. Diagram elements and wireframes can also be aligned.

- **Align Left**: The selected diagram elements are aligned to the left. This mode is applicable to the scenario where diagram elements are vertically distributed.
- **Align Right**: The selected diagram elements are aligned to the right. This mode is applicable to the scenario where diagram elements are vertically distributed.
- **Align Top**: The selected diagram elements are aligned to the top. This mode is applicable to the scenario where diagram elements are horizontally distributed.
- **Align Bottom**: The selected diagram elements are aligned to the bottom. This mode is applicable to the scenario where diagram elements are horizontally distributed.
- **Align Center**: The middle lines of selected diagram elements are aligned vertically. This mode is applicable to the scenario where diagram elements are distributed vertically and the sizes of diagram elements are different. For example, the cloud service diagram element is aligned with the wireframe, and the cloud service diagram element is aligned with the panel diagram element.
- **Align Middle**: The middle lines of selected diagram elements are aligned horizontally. This mode is applicable to the scenario where diagram elements are distributed horizontally and the sizes of diagram elements are different. For example, the cloud service diagram element is aligned with the wireframe, and the cloud service diagram element is aligned with the panel diagram element.
- **Distribute Vertically**: The selected diagram elements are evenly divided in the vertical direction. The spacing between the diagram elements in the vertical direction is the same.
- **Distribute Horizontally**: The selected diagram elements are evenly divided in the horizontal direction. The spacing between the diagram elements in the horizontal direction is the same.

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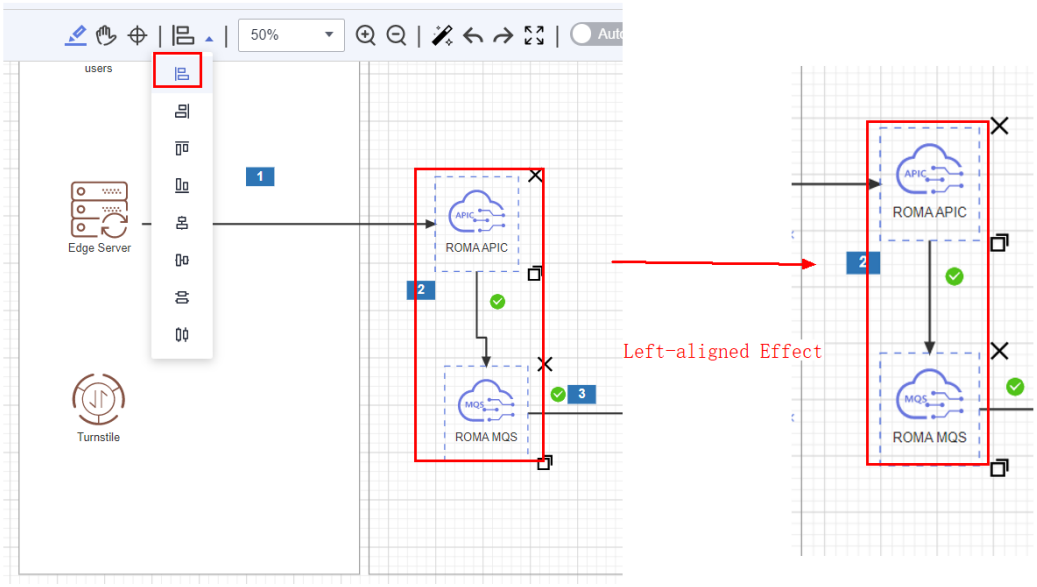
Figure 3-13 Aligning diagram elements



Modifying properties of a diagram element

- The name of a common diagram element, for example, the cloud service (ECS) diagram element, and other diagram elements (Wi-Fi), can be changed. You can double-click a diagram element to display the editing page and enter a new diagram element name.
- Auxiliary diagram elements (such as text boxes, wireframes, and circles) and panel diagram elements support the modification of the font (font size, bold, italic, and underline), font color, line style (solid or dotted line), background color, align (such as align top and align center), badge, and name.
- The font color, background color, and sequence number of the serial number diagram element can be changed. As shown in the following figure, the left part is the device side, and you can modify the information on the diagram element panel. The right part is Huawei Cloud, and you can modify the subnet information.

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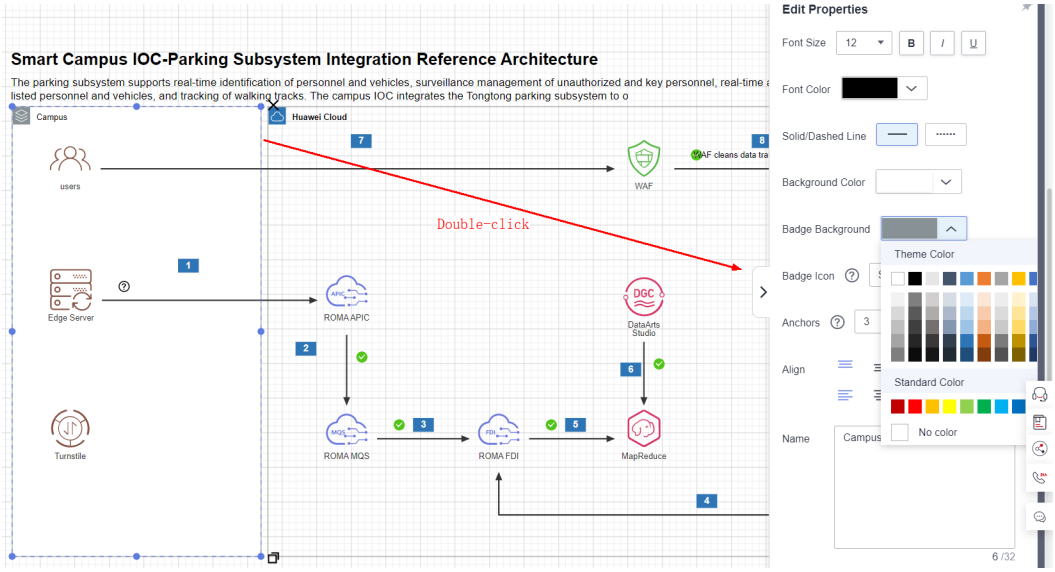
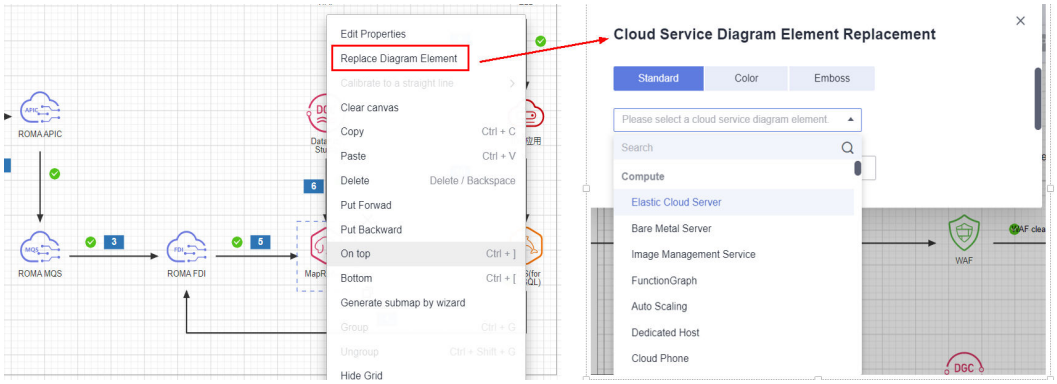
Figure 3-14 Modifying properties of a diagram element



Replacing diagram elements

If a connected diagram element needs to be replaced with another one, for example, the diagram element for RDS needs to be replaced with that for Relational Database Service (RDS) for MySQL, you can use the **Replace Diagram Element** function. After the replacement, the connection lines related to the diagram element remain unchanged. You can right-click a diagram element, choose **Replace Diagram Element** from the shortcut menu, search for the diagram element, and select the diagram element to be replaced.

Figure 3-15 Replacing diagram elements



Connecting Diagram Elements

You can use straight lines or polylines to connect diagram elements that will be integrated. You can select straight lines, arrows, curves, or polylines from auxiliary diagram elements. You can also select a diagram element, drag a polyline from it, and connect it to other diagram elements. As shown in the following figure, select a diagram element. The connection nodes around the diagram element are displayed. Move the mouse pointer to the point to be connected, hold down the left mouse button, and drag the connection line to the diagram element to be connected.

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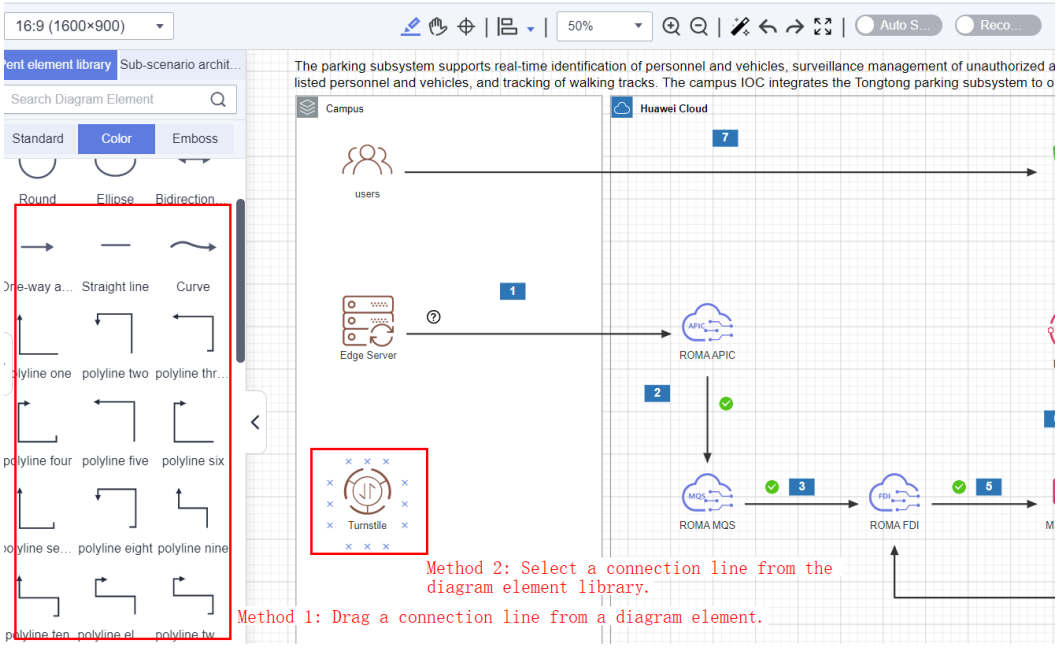
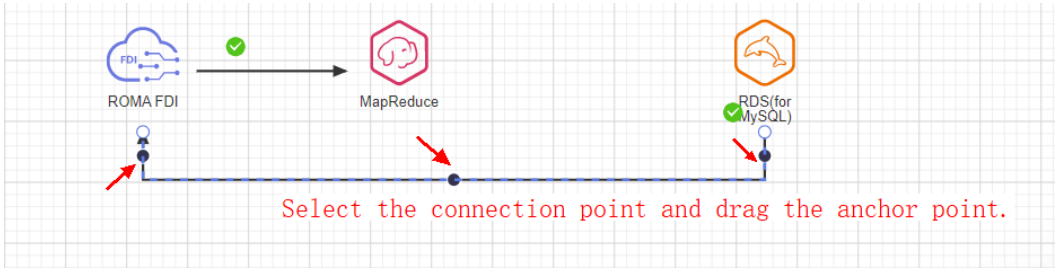
Figure 3-16 Connecting diagram elements



If the bending of the connected polyline does not meet the expectation, move the cursor to the polyline and drag it.

Figure 3-17 Changing the connection line



One-Click Optimization (Adjusting Connection Lines to Straight Lines)

If the connection line between two diagram elements is not easy on the eyes, you can use **Optimize** to beautify the architecture diagram. The **Optimize** function will adjust connection lines that have not been aligned to straight lines.

It is applicable to scenarios where diagram elements on the canvas are not aligned.

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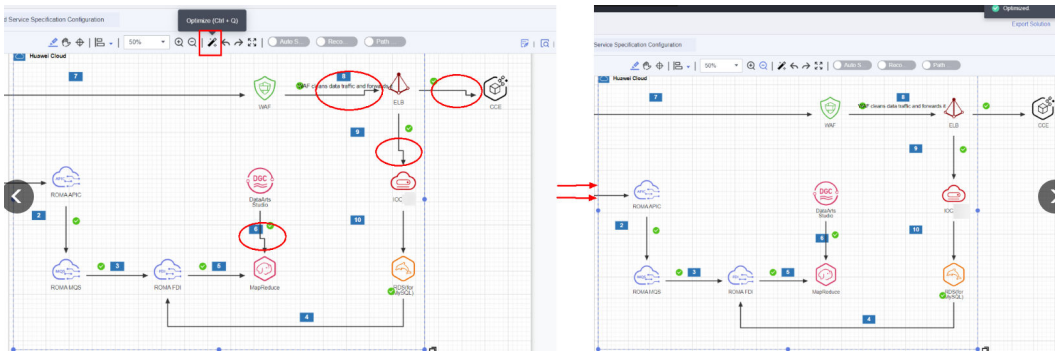
Figure 3-18 Optimize

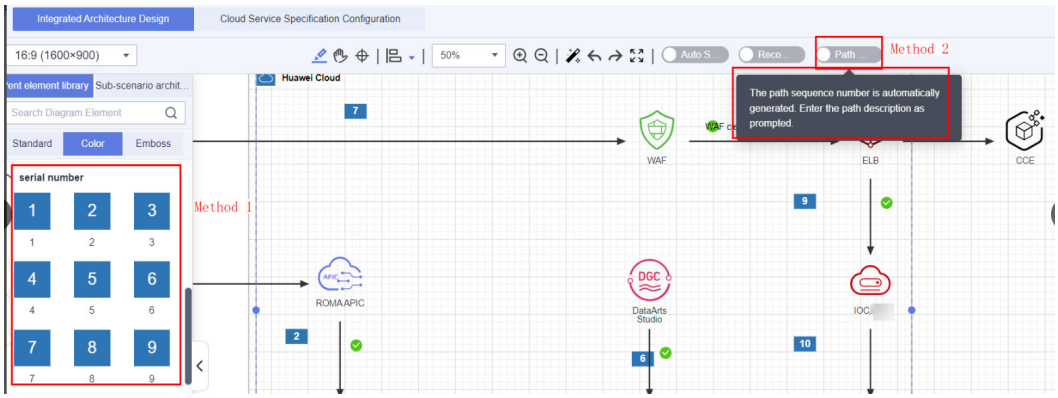


Adding Service Flow Descriptions

After adding, modifying, and connecting diagram elements, you can add service flow descriptions for the architecture. The descriptions help clearly identify the relationships between diagram elements and the service flow direction on the architecture.

- You can double-click a connection line to add a description for it. You can move the left mouse button to adjust the position of the description on the connection line. You can also drag a text box from the diagram element library to the corresponding position to add a description.
- If you enable **Path Description** when connecting diagram elements, the designer automatically adds sequence numbers.

Figure 3-19 Adding the description of a service flow



Copying Diagram Elements Across Spaces

You can copy one or more diagram elements and paste them to the architecture design canvas in the current workspace or other workspaces.

1. Select a diagram element. To copy multiple diagram elements, hold down **Ctrl** and click the diagram elements.
2. Press **Ctrl+C** to copy the diagram elements. You can also right-click and choose **Copy** from the shortcut menu.
3. Open the target canvas and press **Ctrl+V**. You can also right-click and choose **Paste** from the shortcut menu.

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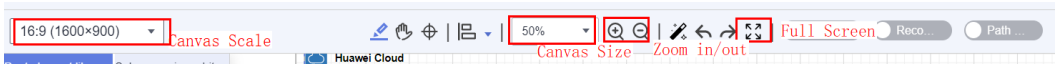
NOTE

HaydnCSF identifies deployment environment attributes for Huawei Cloud diagram elements. If the deployment environment attributes of a copied diagram element are inconsistent with those of your architecture, the diagram element fails to be saved after being pasted. In this case, delete diagram elements that do not have the deployment environment attributes of your architectures. For example, DMS has only the Huawei public cloud attributes. If you copy the DMS diagram element from the architecture in another space to your current architecture whose deployment environment is HCS Online, the current architecture cannot be saved after the DMS diagram element is pasted. In this case, delete the DMS diagram element.

Adjusting a Canvas

- On the toolbar of the canvas in the Design Center, click the zoom-in or zoom-out buttons to zoom in or zoom out the canvas. You can also press **Ctrl** and scroll the mouse wheel to zoom in or zoom out the canvas.
- The canvas scale and size can be adjusted.
- You can enter the full-screen mode to focus on design.

Figure 3-20 Adjusting a canvas

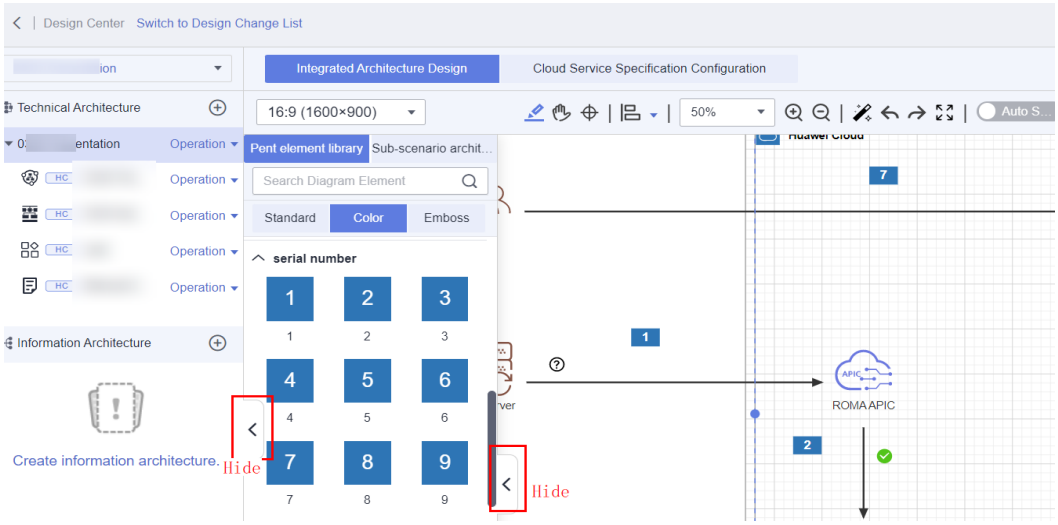


Quickly Moving a Canvas

On the canvas page of the Design Center, press the space bar and click the left mouse button to quickly move the canvas.

Hiding the Menu or Diagram Element Library

Figure 3-21 Hiding the menu or diagram element library



Checking the Design Quality in Real Time

Design rules are preset in the Design Center. The integration path connectivity is checked in real time to ensure the optimal solution design.

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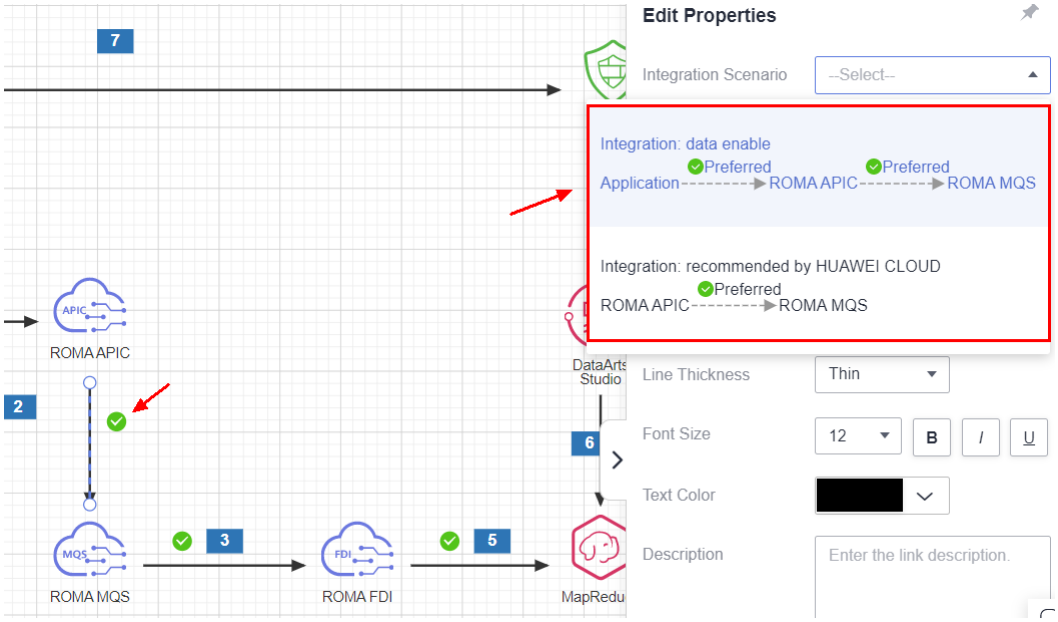
- Real-time check of integration paths: Integration paths can be checked in real time based on preset design rules, and check results can be provided.
- Accumulation of design rules: The Huawei Cloud solution team and service product departments will keep accumulating design rules.
- Life cycle management of design rules: The operations team updates the latest design rules and removes expired rules in a timely manner.

As shown in the following figure, after two diagram elements are connected, if there is a design rule between the two diagram elements, an icon is displayed. You can click the icon to view the detailed prompt information.

Figure 3-22 Design rules



NOTE

Only accounts that have completed real-name authentication can use design rules. For details, see **Individual Real-Name Authentication**.

Diagram Element Recommendation

You can enable diagram element recommendation. As shown in the following figure, after **Recommendation** is enabled, HaydnCSF recommends paths for diagram elements with preset design rules.

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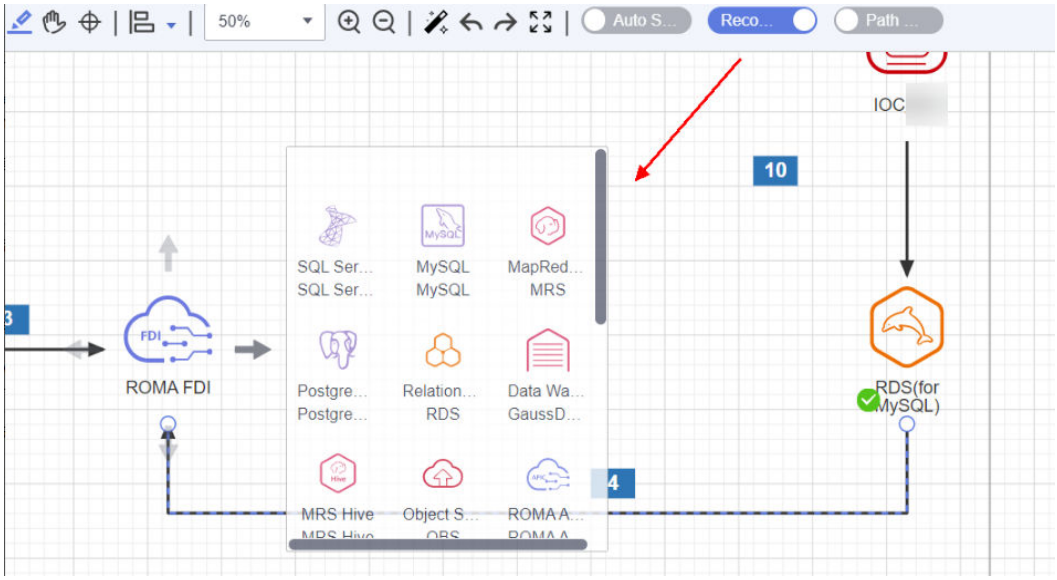
Figure 3-23 Diagram element recommendation

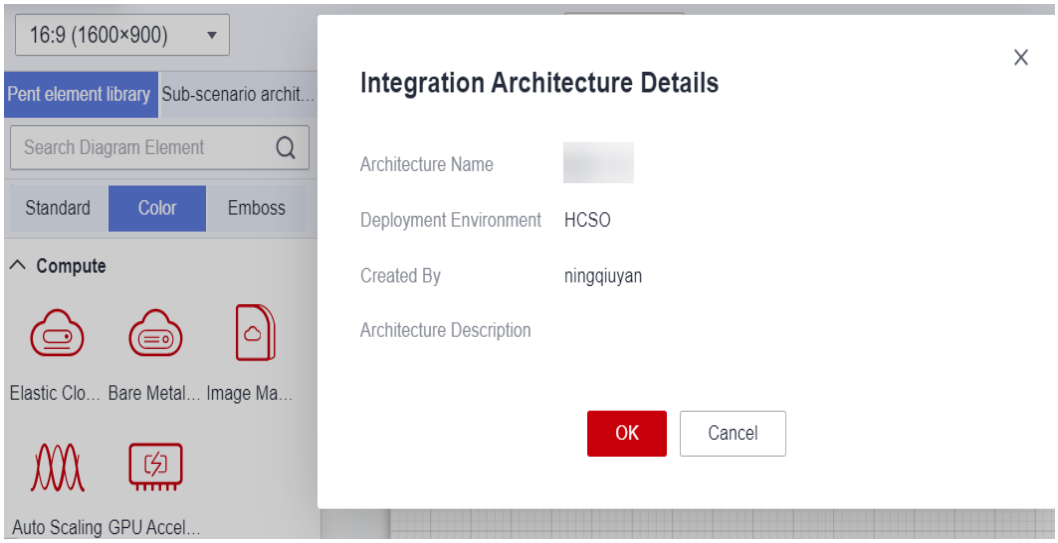


Identifying Different Deployment Environments

The HaydnCSF platform allows you to select more than one deployment environment and use diagram elements of different deployment environments to design the architectures. If you select multiple deployment environments, services are filtered based on the deployment environments that match the created solution and architecture, and differences between deployment environments are identified during automatic deployment.

As shown in the following figure, diagram elements have deployment environment attributes. Only diagram elements of the corresponding deployment environment can be selected during HCS Online architecture design.

Figure 3-24 Identifying different deployment environments



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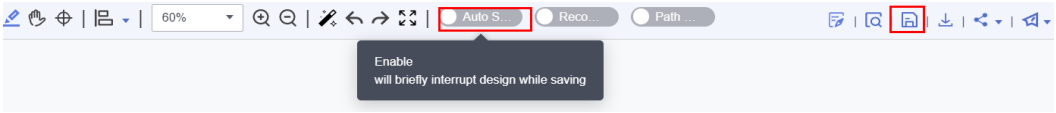
Auto Save

Integrated architectures are automatically saved every five minutes. During the saving, the architecture design is interrupted for a short time. You can also disable **Auto Save**.

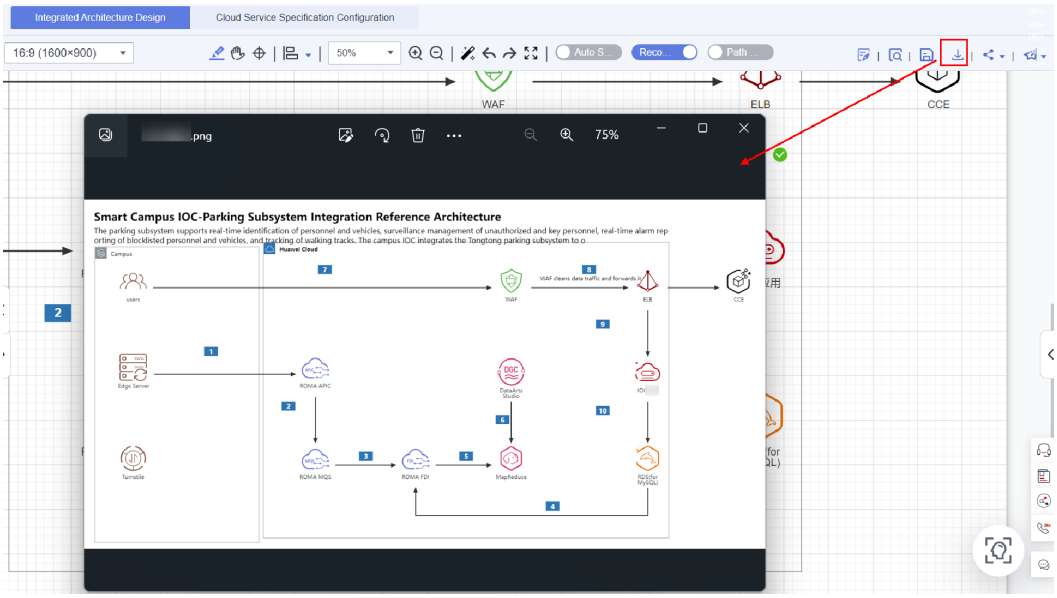
Figure 3-25 Auto Save



Exporting PNG Images

You can export the designed architecture as a PNG image. On the menu bar of the canvas in the Design Center, click **Export Image**.

Figure 3-26 Exporting an image



Exporting a Solution

You can export the integrated architecture and deployment architecture as a .pptx file for demonstration.

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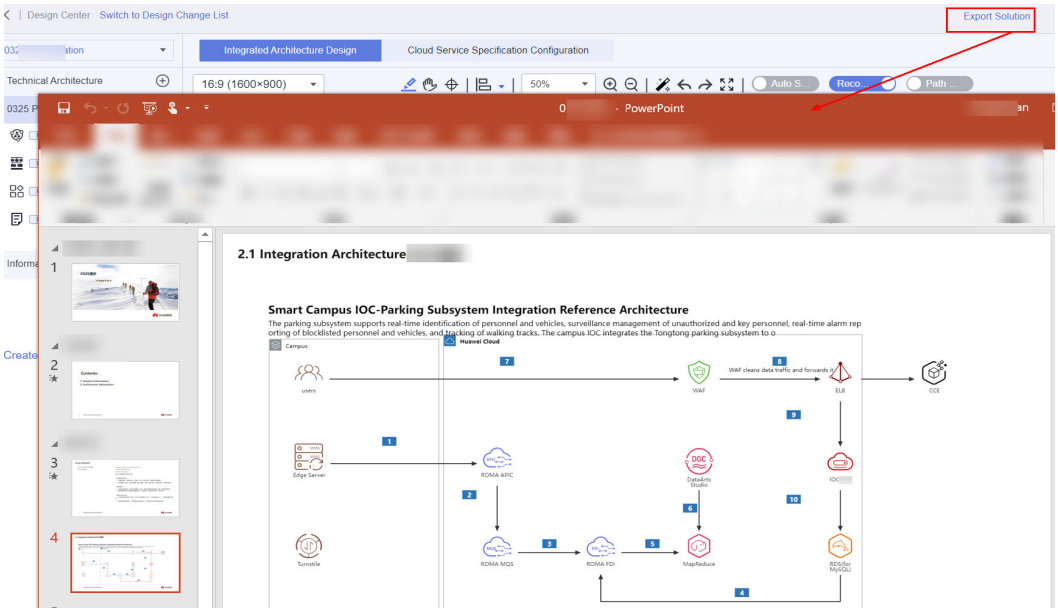
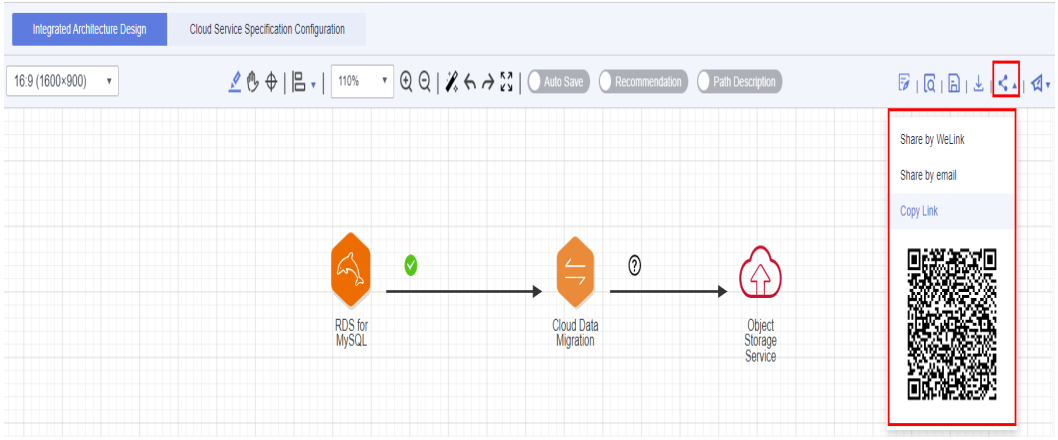
Figure 3-27 Exporting architecture design as a .pptx file



Sharing Architecture

The HaydnCSF platform allows you to share architecture design through WeLink, WeChat, and email. You can view the shared architecture without login.

Figure 3-28 Sharing architecture



Sharing architectures through WeLink

You can scan the QR code in WeLink to share designed architectures with WeLink contacts and groups or to share with WeChat contacts and groups.

Sharing architectures through email

Select **Share by email** from the architecture sharing options and enter the user's email address to share architectures with the specified email recipient.

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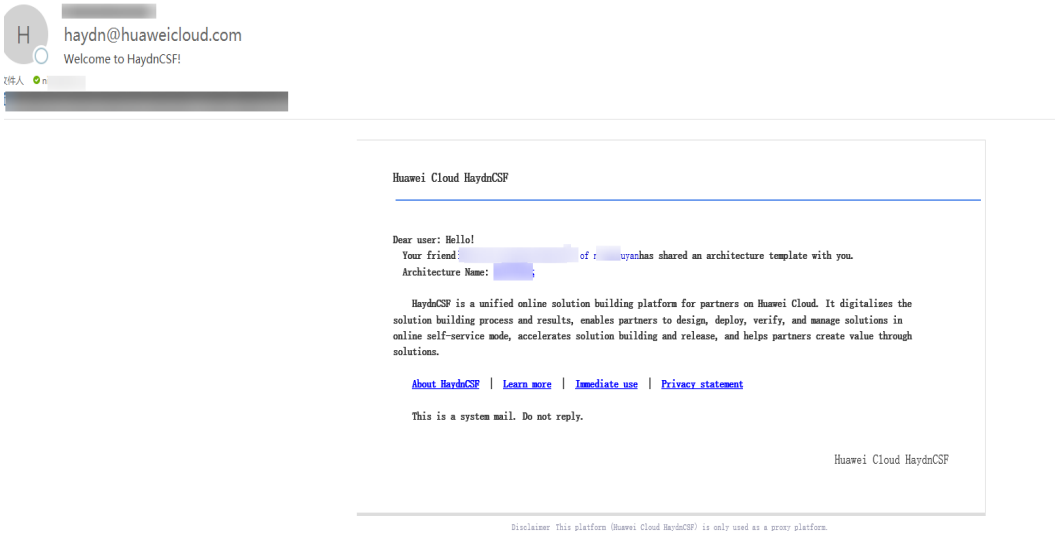
Figure 3-29 Email notification



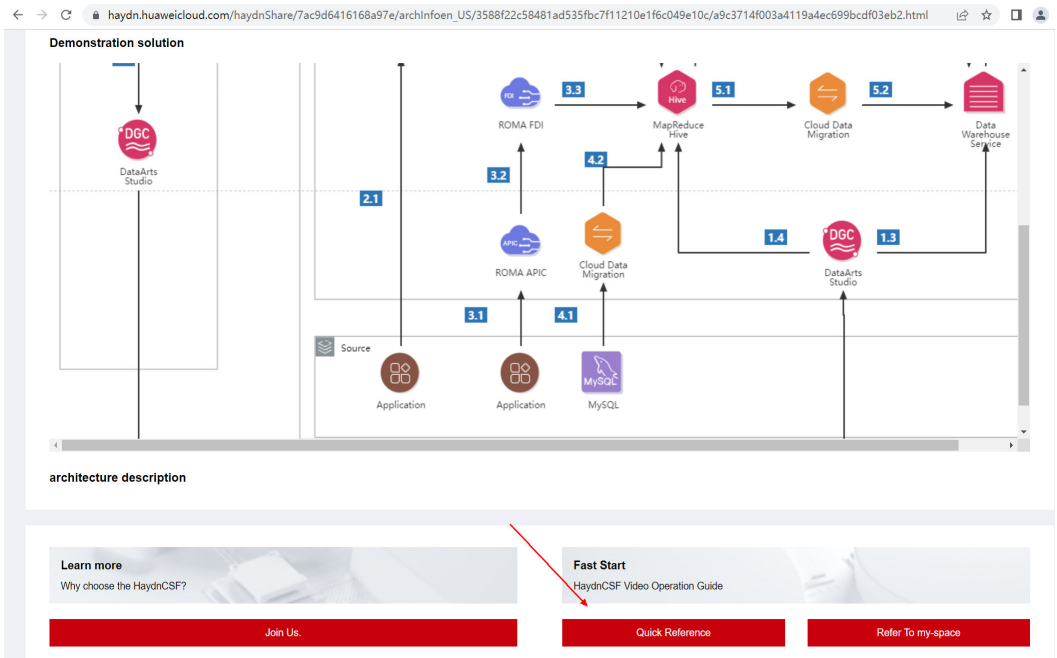
Sharing architectures through WeChat

You can scan the QR code with WeChat to share designed architectures with WeChat contacts and groups.

Referencing a Shared Architecture with One Click

You can view the shared architectures without logging in to HaydnCSF. To reference the shared integrated architecture, you can click **Quick Reference**, which allows you to quickly design the architecture without creating a workspace or solution. You can also click **Refer to my-space**, select the specified workspace and solution, and change the architecture name to reference to the specified workspace and solution.

Figure 3-30 Referencing a shared architecture with one click



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Releasing an Integrated Architecture

You can release the designed architectures to the Solution Acceleration Field so that other HaydnCSF users can view or reference your architectures to quickly complete their architecture design. For details about the release process, see **Releasing Architecture Template in Accelerator Field**.

Figure 3-31 Releasing an integrated architecture

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4 Performing One-Stop O&M on HaydnCSF

This section describes the full process of HaydnCSF O&M Event Center, including creating a workspace, receiving alarms, and automatically triggering and transferring events.

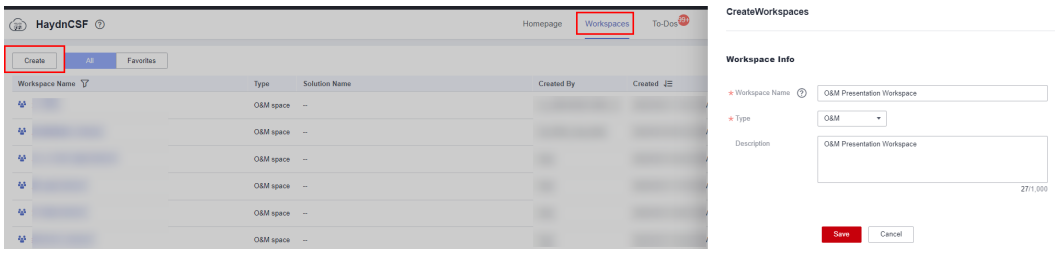
Creating an O&M Workspace

Prerequisites

1. You have a Huawei Cloud account.
2. You are a HaydnCSF user. For details about how to become a HaydnCSF user, see **Accessing HaydnCSF**.

Log in to HaydnCSF. Click the **Workspaces** Tab and click **Create**.

Figure 4-1 Creating an O&M workspace



Creating a Project

1. In the navigation pane, choose **Business Config** > **Projects**.
2. On the **Projects** page, click **Create**. In the displayed dialog box, enter the project name, solution name, and project description, and click **OK**.

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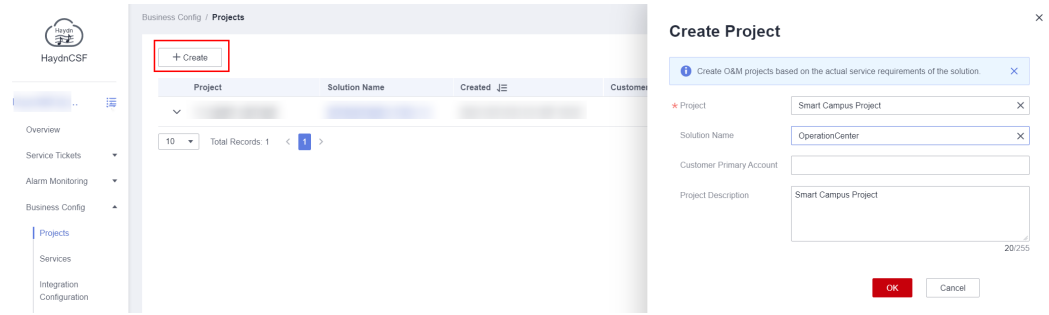
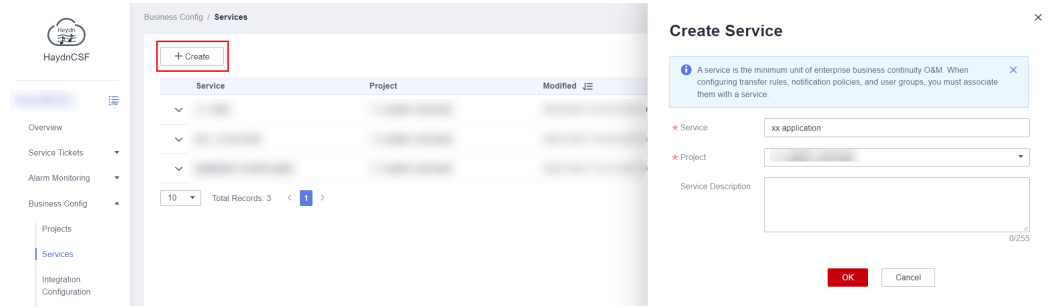
Figure 4-2 Creating a project



Creating a Service

1. In the navigation pane, choose **Business Config** > **Services**.
2. On the **Services** page, click **Create**. In the displayed dialog box, enter the service name, project name, and service description, and click **OK**.

Figure 4-3 Creating a service

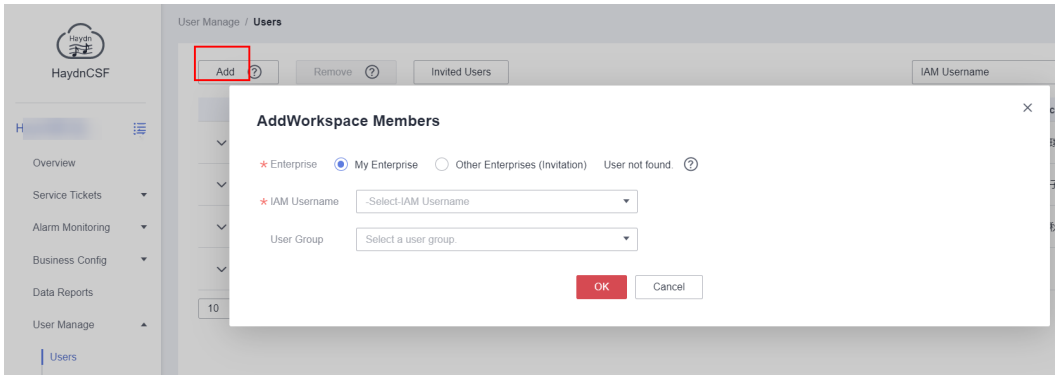


Adding Workspace Members

1. In the navigation pane, choose **User Management** > **Users**.
2. On the **Users** page, click **Add**. In the displayed dialog box, select **My Enterprise** for **Enterprise**. Select an IAM user for **IAM Username** and a user group for **User Group** from the drop-down lists respectively (the user group can be left unselected until it is created). Click **OK**.

Note: To add an IAM user that does not belong to the current Huawei Cloud account, select **Other Enterprises (Invitation)** for **Enterprise**.

Figure 4-4 Adding a workspace member



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3. The added IAM users can associate their mobile numbers and email addresses with their accounts and subscribe to the SMS message for alarm notification.

Adding a User Group

1. In the navigation pane, choose **User Management** > **User Groups**.
2. On the **User Groups** page, click **Add**. In the displayed dialog box, specify the group name, member, notification type (Optional. currently, group notifications can be sent through DingTalk, WeLink, and WeChat), and description. Click **OK**.

Figure 4-5 Adding a user group

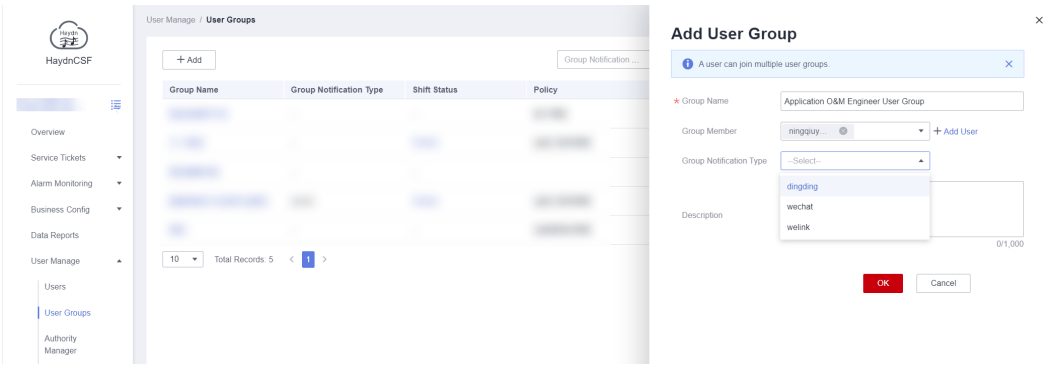
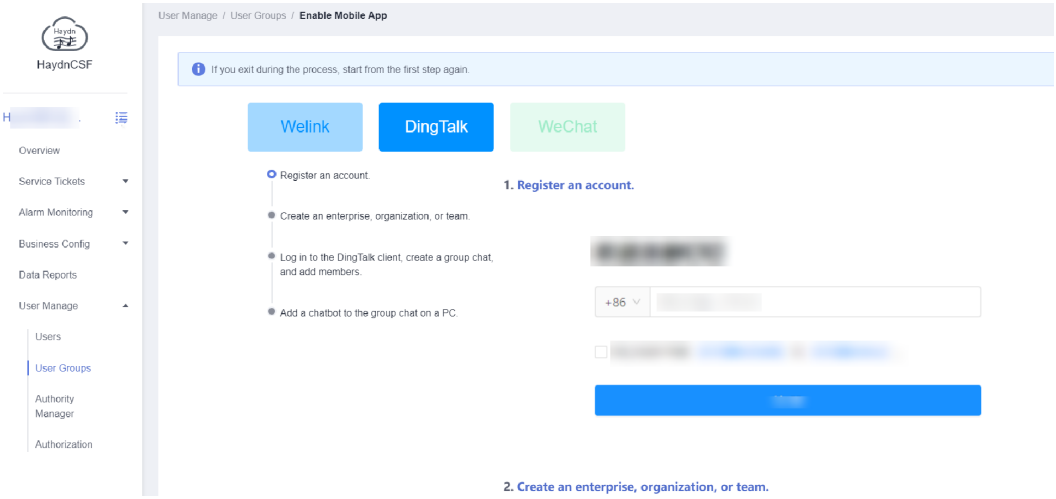


Figure 4-6 Registering a mobile message app



3. On the **User Groups** page, click **Authorize**. Select corresponding permissions. Click **Next**. On the displayed page, select corresponding O&M services or projects.

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Figure 4-7 Authorizing a user group

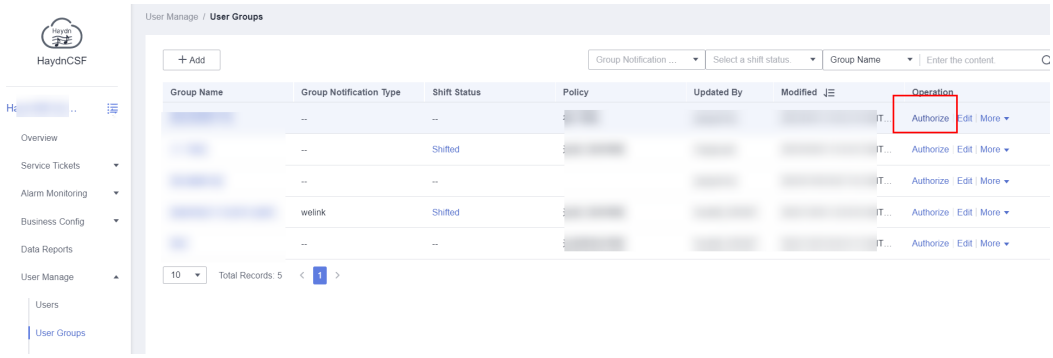


Figure 4-8 Assigning permissions to a user group

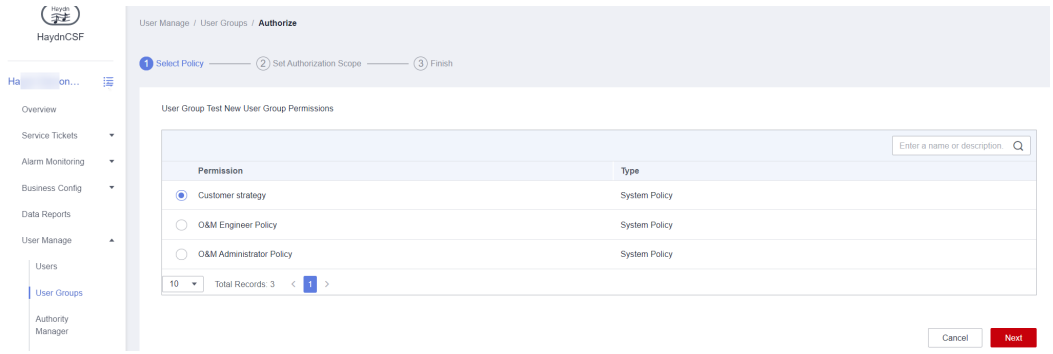
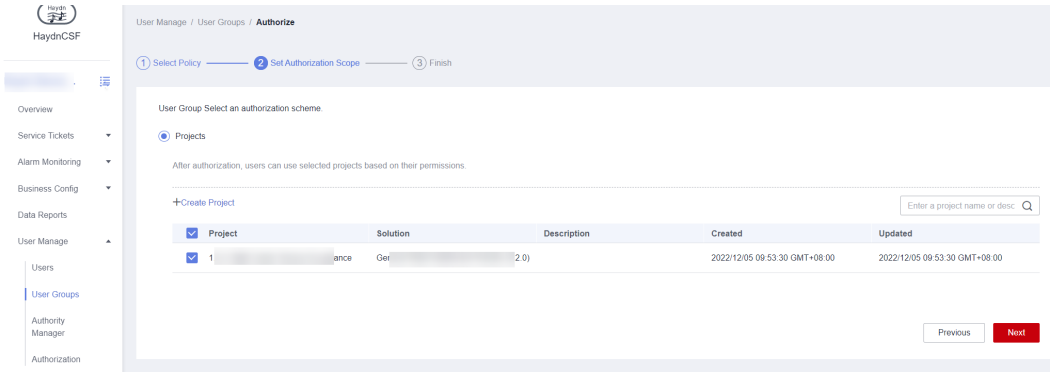


Figure 4-9 Configuring authorized resources



4. (Optional) On the **User Groups** page, choose **More** > **Shift**. On the displayed page, configure shifts for the user group. You can choose **Quick scheduling** or **Refined scheduling** for **Scheduling Mode**. Only on-duty members can receive alarm messages.

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Figure 4-10 Scheduling shifts for the user group

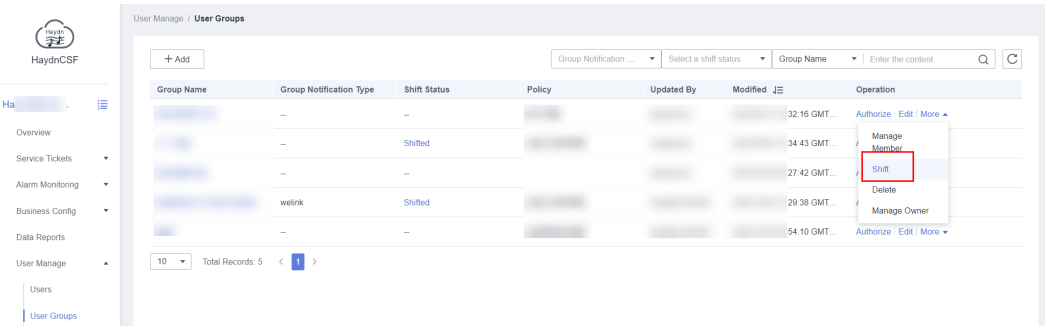
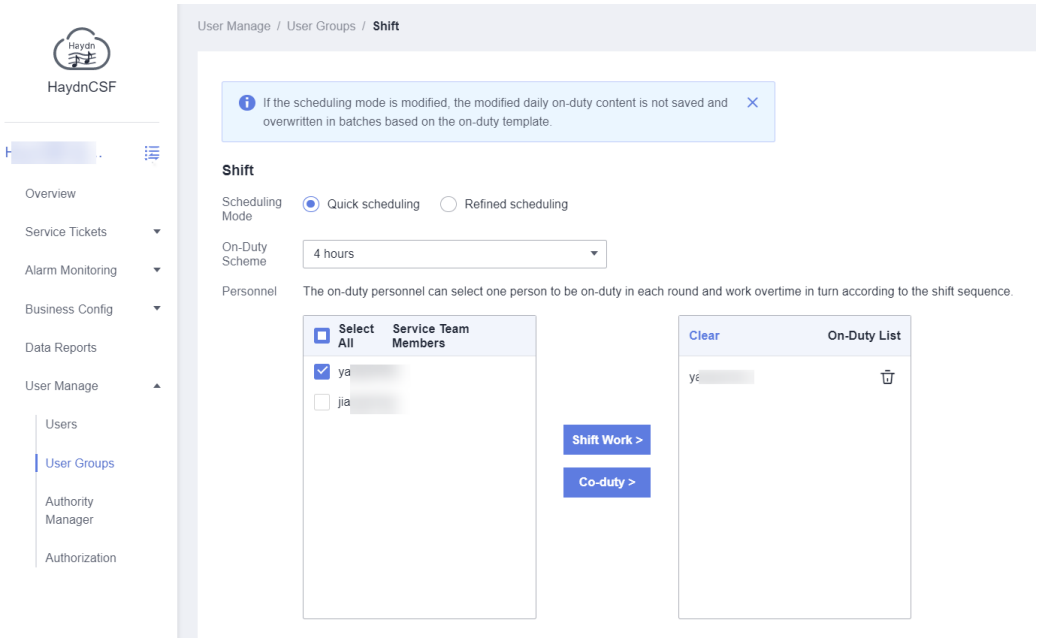


Figure 4-11 Configuring shifts



(Optional) Configuring SLAs

1. In the navigation pane, choose **Business Config** > **SLAs**.
2. On the **SLAs** page, click **Create**. On the displayed page, specify the SLA management name and description, and project and service names. In the **Set SLA Management Policy** area, configure the SLA management rule (event response or handling SLA rules). Click **OK**.

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Figure 4-12 SLA management

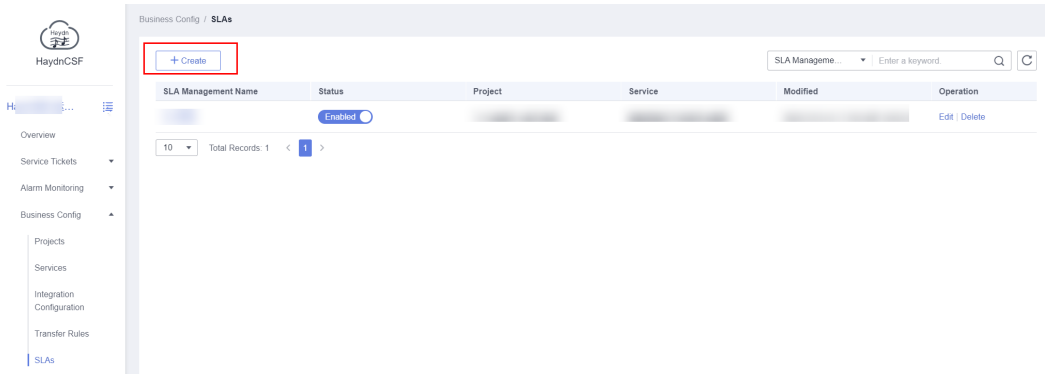
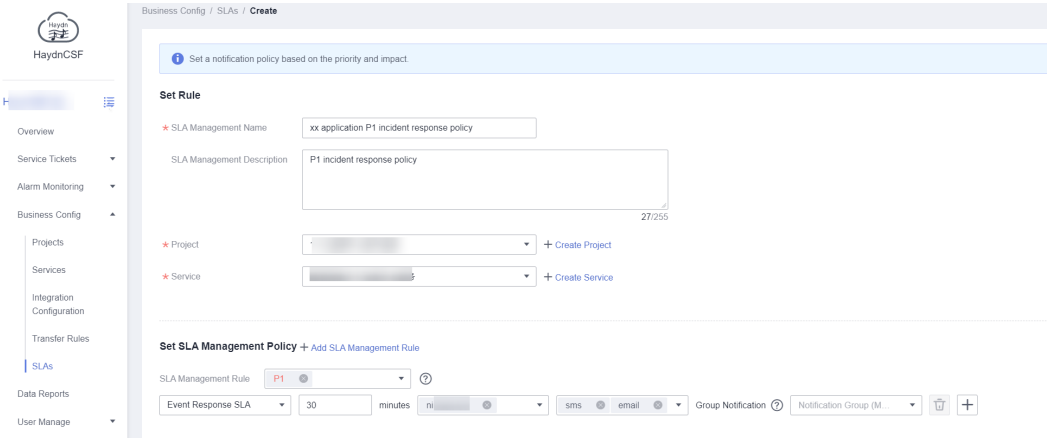


Figure 4-13 SLA policy



Creating an Event Manually

1. In the navigation pane, choose **Service Tickets** > **Events**.
2. On the displayed **Events** page, click **Create Event**. In the displayed dialog box, specify the event name and description, project and service names, and event severity. Click **OK**. After an event is created, the authorized group members will receive an event notification email and respond to and handle the event.

Figure 4-14 Event management

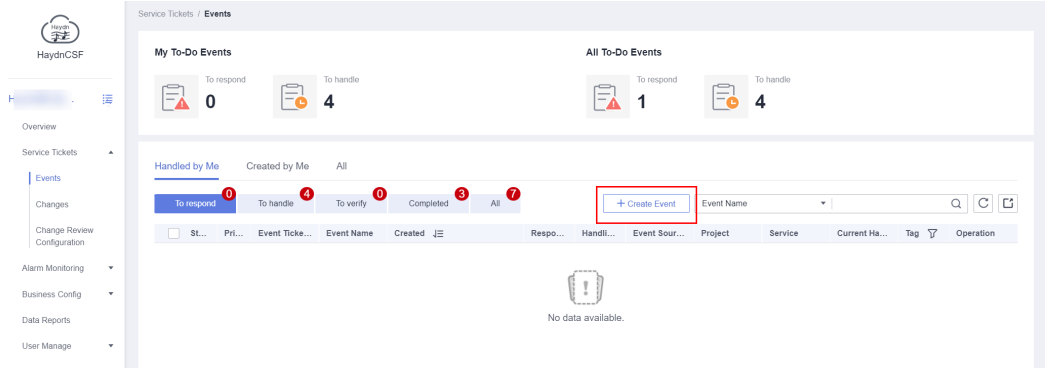


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Figure 4-15 Creating an event manually

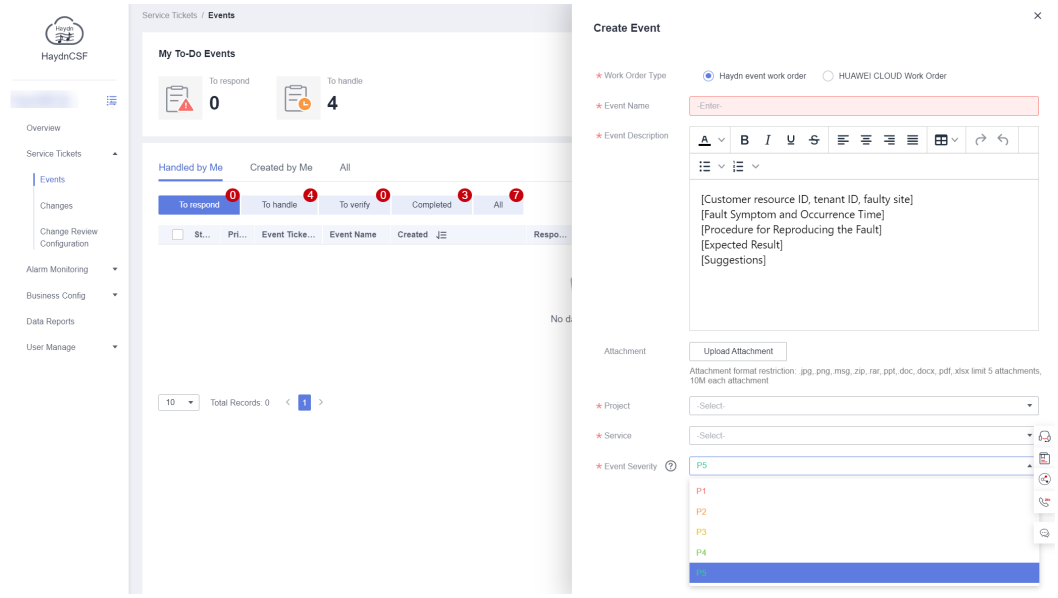
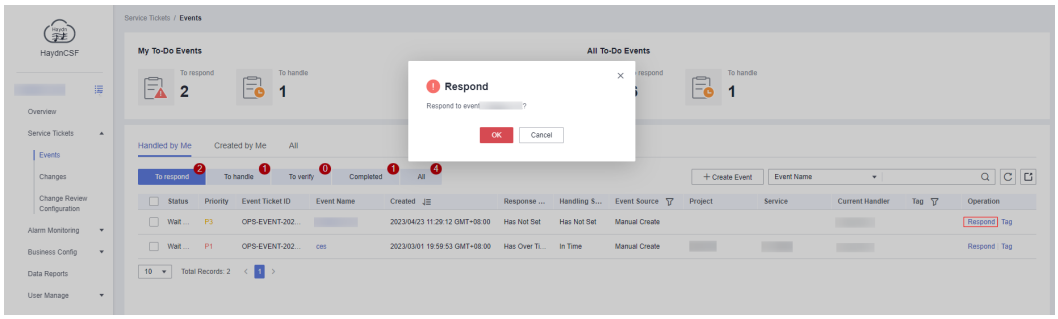


Figure 4-16 Event response



(Optional) Creating Integration Configurations

Prerequisite: Monitoring items of related services have been configured to the monitoring source you want to use.

1. In the navigation pane, choose **Business Config** > **Integration Configurations**.
2. On the **Integration Configurations** page, click **Create**. On the displayed page, specify the configuration name, monitoring source and description, and project and service names. Click **Next**. On the displayed page, complete integration procedures as prompted and click **Confirm Integration**. You can view alarm messages in the **Alarm Center** of **Alarm Monitoring**.

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Figure 4-17 Integration configurations

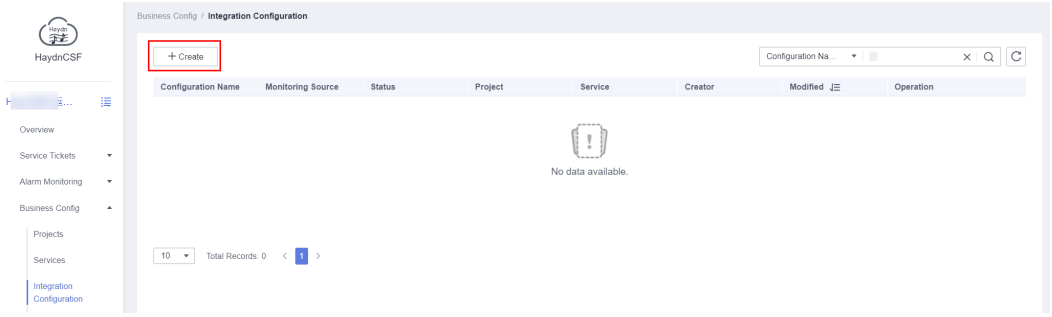

Figure 4-18 Creating integration configurations

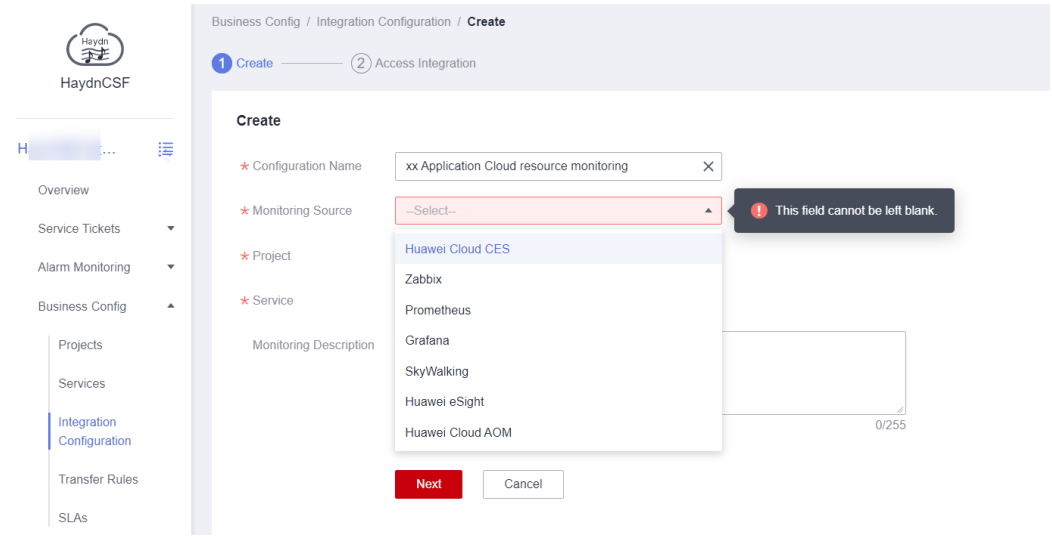

Figure 4-19 Access integration

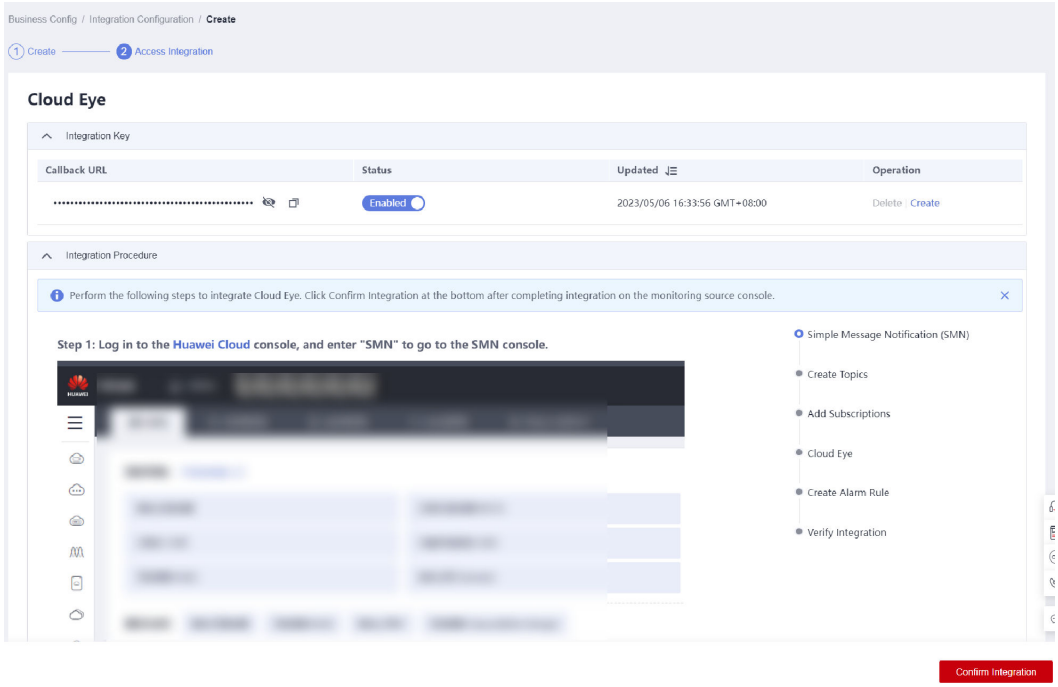

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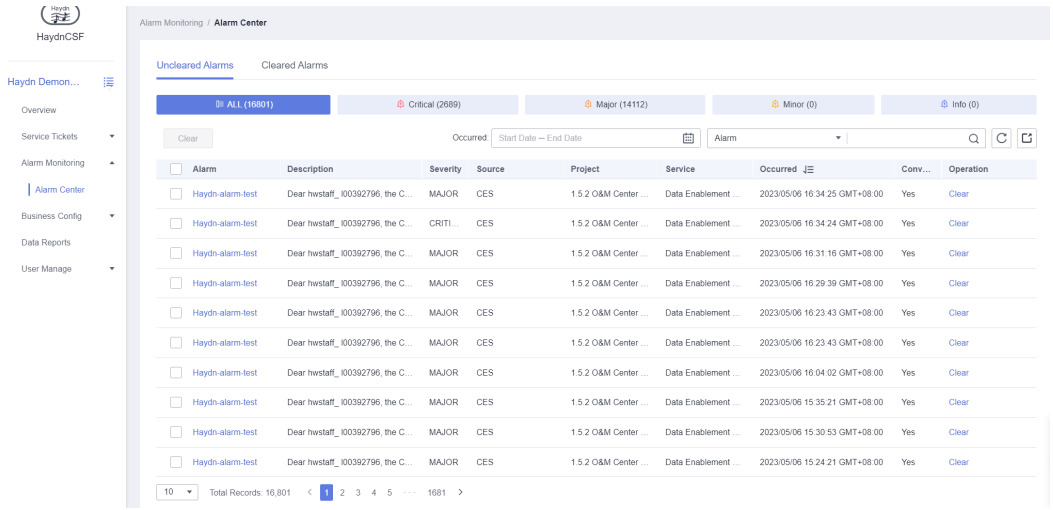
Figure 4-20 Alarm Center



(Optional) Configuring Transfer Rules

1. In the navigation pane, choose **Business Config** > **Transfer Rules**.
2. On the **Transfer Rules** page, click **Create**. In the **Basic Info** area, specify the rule name and description, and project and service names. In the **Trigger Rule** area, configure the alarm rule, event trigger rule, and event severity. Click **OK**. HaydnCSF will automatically transfer events based on transfer rules to corresponding user group members and notify them by email.

Figure 4-21 Creating a transfer rule

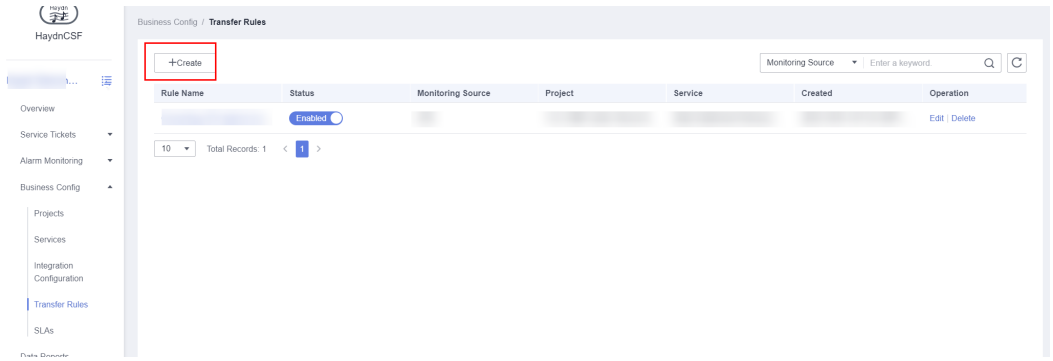


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Figure 4-22 Configuring a transfer rule

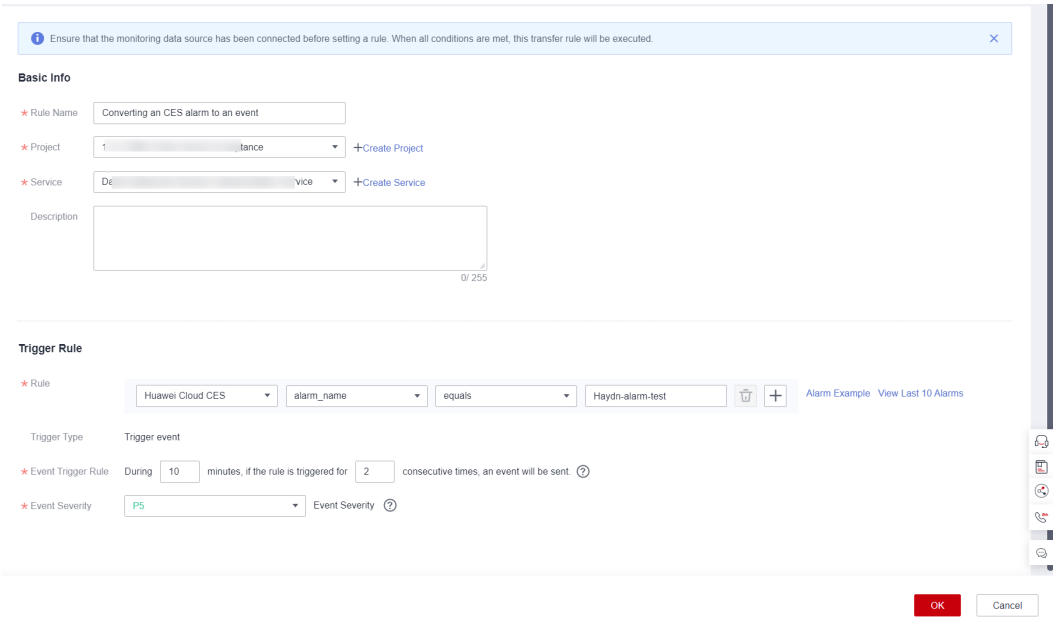
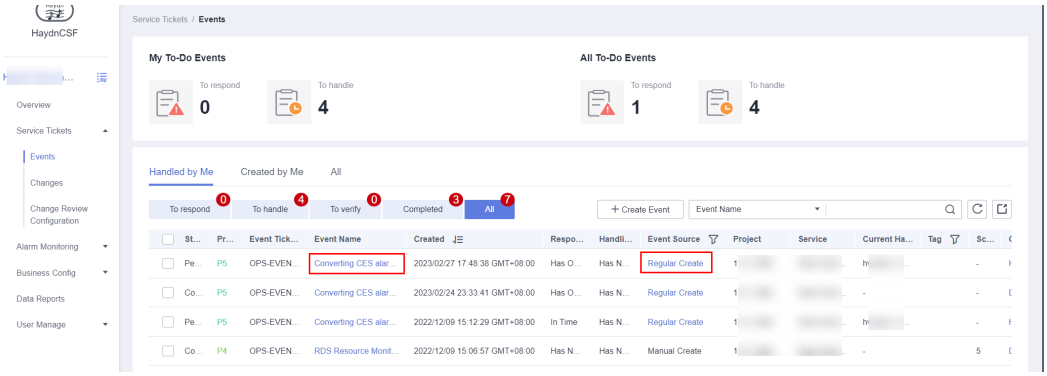


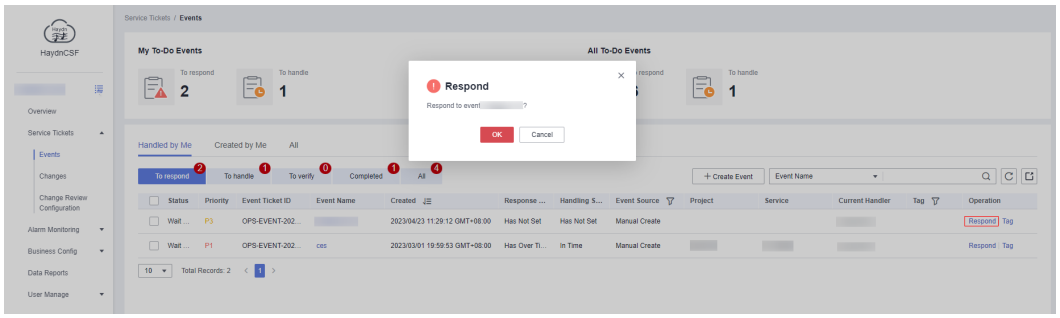
Figure 4-23 Events transferred based on transfer rules



Handling an Event

1. In the navigation pane, choose **Service Tickets** > **Events**.
2. On the **Events** page, locate the event and click **Response** in the **Operation** column.
3. Transfer the event to others: The current handler specified by the transfer rule can go to the event details page and click **Transfer**.

Figure 4-24 Event response



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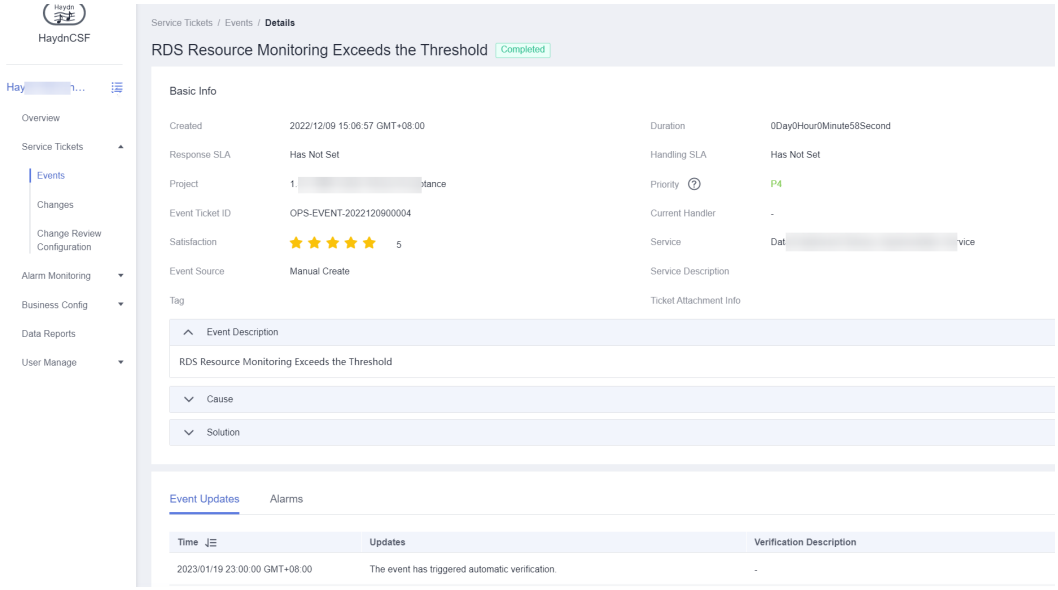
4. Handle: Click **Handle** in the **Operation** column or the event name. In the displayed dialog box, enter the event reasons and solution.
5. Priority: Go to the event details page to change the priority.
6. Major event handling: Initiate a major event handling meeting for P1-P3 level events (P1-P3 level events indicate that services are unavailable).

Figure 4-25 Event handling



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