CodeArts Req

User Guide

Issue 01

Date 2024-12-04

HUAWEI CLOUD COMPUTING TECHNOLOGIES CO., LTD.

Huawei Cloud Computing Technologies Co., Ltd.

Address:	Huawei Cloud Data Center Jiaoxinggong Road Qianzhong Avenue Gui'an New District Gui Zhou 550029 People's Republic of China
Website:	https://www.huaweicloud.com/intl/en-us/

Contents

1 CodeArts Req Usage Process

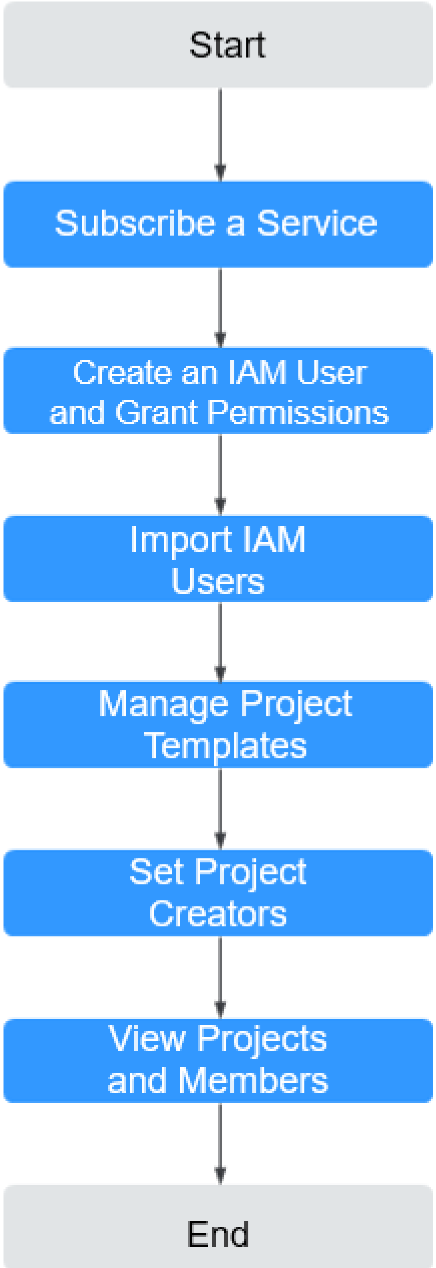
Background

CodeArts Req is a project management and collaboration service for agile software development teams, including multi-project management, agile sprint management, Kanban collaboration, requirement management, defect tracking, document management, online wiki collaboration, and chart customization on dashboards.

Procedure

Before applying a project, the tenant administrator needs to perform the following management settings.

Figure 1-1 Project preparations



2 Purchasing and Authorizing CodeArts Req

Prerequisites

You have **registered a HUAWEI ID and enabled Huawei Cloud services**.

Enabling CodeArts Pipeline

You need to subscribe to a CodeArts package before using CodeArts Pipeline.

Step 1 Access the **CloudPipeline console**.

Step 2 Click **Buy** to purchase a CodeArts package.

Step 3 Purchase a package as needed. For details, see **Purchasing CodeArts**.

----End

3 Accessing the CodeArts Req Homepage

Prerequisites

You have purchased CodeArts Req.

Accessing the CodeArts Req Page

Step 1 **Log in to the Huawei Cloud console**.

Step 2 Click in the upper left corner and choose **Developer Services** > **CodeArts Req** from the service list.

Step 3 Click **Access Service**. The CodeArts homepage is displayed, showing the list of projects that you have joined. Click a project card to go to the CodeArts Req page. Click in the upper left corner of the page and select a region.

----End

4 Creating a CodeArts Project

4.1 Using a Project Template

In CodeArts, **projects** are the basis for using services. Operations such as requirement planning, code management, build, and deployment must be performed in CodeArts projects. CodeArts provides multiple preset project templates for different requirement management processes.

Prerequisites

Before creating a CodeArts project, you must have permission to create a project.

NOTE

If the **Create Project** button is not displayed on the homepage, you do not have permission to create projects. In this case, contact the administrator to obtain the permission. For details about how to grant the project creator permission to users, see **Configuring a CodeArts Project Creator**.

Creating a CodeArts Project Using a Project Template

CodeArts provides multiple out-of-the-box project templates, including Scrum, IPD, and Kanban. You can select a project template based on your service scenario.

Step 1 Click **Create Project** on the service homepage.

Step 2 On the **Select Template** page, select a project template as required. For details about the characteristics and application scenarios of each project template, see **Project template features and application scenarios**.

Table 4-1 Project template features and application scenarios

Project Template	Feature	Application Scenario
Scrum	An incremental, iterative software development method. Sprint planning, daily Scrum, sprint review, and sprint retrospectives are key to efficient project management.	Iterative, incremental software development.
IPD-System Device	Software and hardware adaptation involved, fixed product requirements, industry standards available, long development period (6–9 months), high requirements on product quality and stability, many decisions to make, and mainly waterfall development.	Complex products with embedded software that evolves with hardware. Examples: communications devices, automobiles, home appliances, and consumer electronics.
IPD-Standalone Software	Independent software deployment and sales, frequent requirement changes, quick planning, agile development, agile release, and short delivery period (2–3 months or faster).	IT application and platform software with standardized hardware or independent of dedicated hardware. Examples: ERP software, CRM, databases, and network management software.

Step 3 Select a project template and click **Select**. On the **Create Project** page, set related parameters.

Table 4-2 Creating a project

Parameter	Description
Work Item Template	A work item template contains all configuration items of a Scrum project, except those in **Work Item > Statuses and Transitions > Automation > Change Handler**. You can select a template as required to quickly reuse the work item configuration data of the project. In addition to the default Scrum template of the system, you can customize a work item template. To customize a work item setting template, open a project, go to the **Settings** > **Work Item** page, and save the custom template. **NOTE** **Work Item Template** is available only for Scrum projects.

Parameter	Description
Name	Set this parameter as required. The name of projects under the same tenant must be unique. Enter only letters, digits, and underscores (_) with a maximum of 128 characters.
Code	This parameter is set for third-party services. A project code is set to facilitate service management. The value can contain a maximum of 200 characters, including letters, digits, underscores (_), and hyphens (-).
Associated Enterprise Project (Resource Group)	You can manage your underlying resources such as VMs, containers, and databases in enterprise projects. **NOTE** **Associated Enterprise Project (Resource Group)** is available only for Scrum and Kanban projects.
Description	Enter a brief description of the project. Enter only letters, digits, and underscores (_) with a maximum of 1,024 characters.

Step 4 Click **OK**. The project is created successfully and the project page is displayed.

----End

Related Operations

For a new project, members with the edit permission can choose **Settings > General** and perform the following operations.

NOTE

Only Scrum and Kanban projects can be archived.

Table 4-3 Basic operations on a project

Operation	Procedure	Remarks
Edit basic project information	1. Choose **Basic Information**. 2. Modify the project name, code, description, and enterprise project as required, and click **Save**. The modified information is displayed.	-

Operation	Procedure	Remarks
Transfer the project creator	1. Choose **Basic Information**. 2. Select the member to transfer the project to from the **Creator** drop-down list, and click **Save**. The new creator is displayed.	If the project creator is deleted from IAM, the project ownership is automatically transferred to the project manager. If the project creator is also the project manager, the project ownership is transferred to the administrator account.
Archive a project	1. Choose **Basic Information**. 2. Click **Archive**. Then the button changes to **Unarchive**.	• Archived projects are read-only to all members. The members cannot add, delete, or modify work items. • Archived projects are still counted.
Delete a project	1. Choose **Basic Information**. 2. Click **Delete Project**. In the displayed dialog box, enter the project name and click **Delete**. The deleted project is no longer displayed on the homepage.	• Deleting a project will also delete its code repositories, check tasks, build tasks, and test cases. • Deleted data cannot be recovered. Exercise caution when performing this operation.
Manage the project service menu	1. Choose **Services**. 2. Select the menus to display. 3. Refresh the page. The updated menus are displayed in the navigation pane.	-

Operation	Procedure	Remarks
Manage project members / permissions	1. Click **Permissions**. 2. Refer to Managing CodeArts Project Permissions.	-

4.2 Using a Sample Project

Sample projects use **default templates** that include work items and processes preset in CodeArts Req. After you select a sample project, the corresponding sample template project is automatically generated for your reference. The work items and code preset in the sample project can be directly used.

Prerequisites

Before creating a CodeArts project, you must have permission to create a project.

NOTE

If the **Create Project** button is not displayed on the homepage, you do not have permission to create projects. In this case, contact the administrator to obtain the permission. For details about how to grant the project creator permission to users, see **Configuring a CodeArts Project Creator**.

Creating a CodeArts Project Using a Sample Project

Step 1 Click **Create Project** on the service homepage.

Step 2 On the **Select Template** page, select a sample project to create a project. **Table 4-4** lists the supported sample projects.

Table 4-4 Sample projects

Project Type	Project Name	Application Scenario
Scrum	DevOps Full-Process	Agile development and DevOps continuous delivery through an automated E2E process. The templates have preset mind maps and instantiated Scrum work items (promotion, member, and order management), code repositories, code check tasks, build tasks, and pipeline tasks.
IPD	IPD-System Device	Complex products with embedded software that evolves with hardware. Examples: communications devices, automobiles, home appliances, and consumer electronics.

Project Type	Project Name	Application Scenario
	IPD-Standalone Software	IT application and platform software with standardized hardware or independent of dedicated hardware. Examples: ERP software, CRM, databases, and network management software.
	IPD-Self-Operated Software/Cloud Service	Cloud service development, microservice architecture, and self-operated software scenarios, such as public cloud and Internet application software.

Step 3 Select a sample project. On the **Create Project** page, set related parameters.

Table 4-5 Creating a project

Parameter	Description
Work Item Template	A work item template contains all configuration items of a Scrum project, except those in **Work Item > Statuses and Transitions > Automation > Change Handler**. You can select a template as required to quickly reuse the work item configuration data of the project. In addition to the default Scrum template of the system, you can customize a work item template. To customize a work item setting template, open a project, go to the **Settings** > **Work Item** page, and save the custom template. **NOTE** **Work Item Template** is available only for Scrum projects.
Name	Set this parameter as required. The name of projects under the same tenant must be unique. Enter only letters, digits, and underscores (_) with a maximum of 128 characters.
Code	This parameter is set for third-party services. A project code is set to facilitate service management. The value can contain a maximum of 200 characters, including letters, digits, underscores (_), and hyphens (-).
Associated Enterprise Project (Resource Group)	You can manage your underlying resources such as VMs, containers, and databases in enterprise projects. **NOTE** **Associated Enterprise Project (Resource Group)** is available only for Scrum and Kanban projects.
Description	Enter a brief description of the project. Enter only letters, digits, and underscores (_) with a maximum of 1,024 characters.

Step 4 Click **OK**. The project is created successfully and the project page is displayed.

----End

Related Operations

For a new project, members with the edit permission can choose **Settings > General** and perform the following operations.

NOTE

Only Scrum and Kanban projects can be archived.

Table 4-6 Basic operations on a project

Operation	Procedure	Remarks
Edit basic project information	1. Choose **Basic Information**. 2. Modify the project name, code, description, and enterprise project as required, and click **Save**. The modified information is displayed.	-
Transfer the project creator	1. Choose **Basic Information**. 2. Select the member to transfer the project to from the **Creator** drop-down list, and click **Save**. The new creator is displayed.	If the project creator is deleted from IAM, the project ownership is automatically transferred to the project manager. If the project creator is also the project manager, the project ownership is transferred to the administrator account.
Archive a project	1. Choose **Basic Information**. 2. Click **Archive**. Then the button changes to **Unarchive**.	• Archived projects are read-only to all members. The members cannot add, delete, or modify work items. • Archived projects are still counted.

Operation	Procedure	Remarks
Delete a project	1. Choose **Basic Information**. 2. Click **Delete Project**. In the displayed dialog box, enter the project name and click **Delete**. The deleted project is no longer displayed on the homepage.	● Deleting a project will also delete its code repositories, check tasks, build tasks, and test cases. ● Deleted data cannot be recovered. Exercise caution when performing this operation.
Manage the project service menu	1. Choose **Services**. 2. Select the menus to display. 3. Refresh the page. The updated menus are displayed in the navigation pane.	-
Manage project members / permissions	1. Click **Permissions**. 2. Refer to Managing CodeArts Project Permissions.	-

5 Managing Scrum Project Requirements

5.1 Requirement Management Process

Scrum is an incremental, iterative, and agile software development method. It enables continuous delivery through sprints, which are cycles of closed-loop software development from user requirements management to user feedback implementation.

In Scrum projects, requirements can be managed in the four-layer hierarchy: **Epic** > **Feature** > **Story** > **Task**, as shown in **Figure 5-1**.

Figure 5-1 Scrum project requirement breakdown model

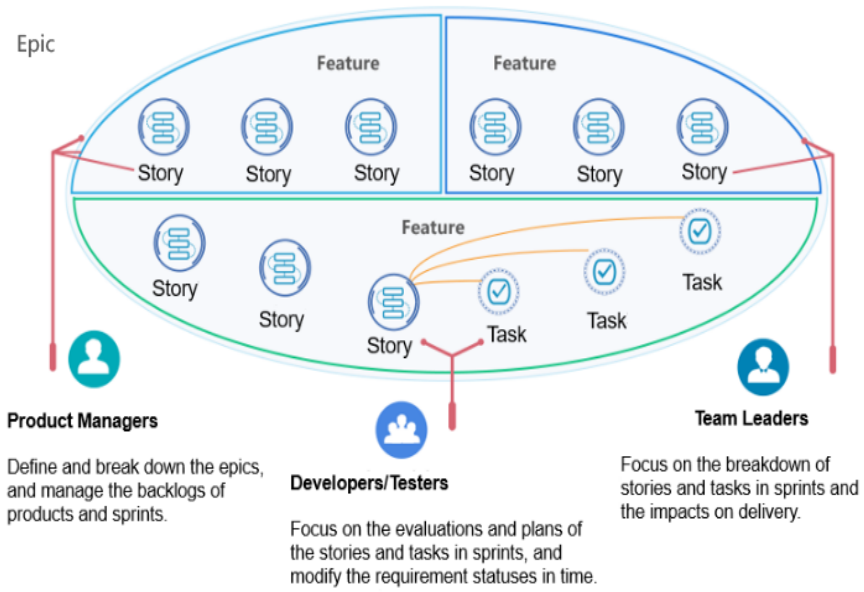


Table 5-1 describes the work item types used by Scrum projects.

Table 5-1 Scrum project work items

Work Item Type	Description	Example
Epic	• An epic is a key strategy of an enterprise, such as the major business direction or technical evolution. By discovering, defining, investing in, managing, and implementing epics, enterprises can realize their strategies and gain market shares and returns. • Since an epic is a high-level description of requirements, it needs to be broken down into features, which are further divided into stories for development and delivery. • It usually takes several months, or multiple sprints to deliver an epic. Epics should be visible to all developers so that they can understand the strategic meaning and values of the to-be-delivered stories in a bigger picture.	An epic is defined based on an enterprise's operations, competitiveness, and market environment. Examples are as follows: • Market differentiation: Deliver better user experience than competitors. • Better solution: Develop a solution for the industrial Internet. • Revenue growth: Increase paid users by 1 million in the next fiscal quarter. • Major technical direction: Deploy all products on containers.

Work Item Type	Description	Example
Feature	● A feature is a product function that delivers benefits to customers. ● Features come from epics and are broken down into stories. Features are more specific and intuitive than epics, and are often included in the release notes distributed to customers during product release. ● It usually takes several weeks, or several sprints to deliver a feature.	The description of a feature should specify its values for customers, product form, and delivery mode. Recommended template: As a <user role> I want <results> So that <purposes> ● User A wants to import and export data, so that they can efficiently organize data in batches. ● User B wants to receive notifications of due tasks, so that they can handle the tasks in time. ● User C wants to have a better drag-and-drop experience, so that they can perform operations more quickly. ● User D wants to create an alias, so that they can be more easily identified and remembered.

<table>
<tr><th>Work Item Type</th><th>Description</th><th>Example</th></tr>
<tr><td>Story</td><td>"Story" is short for user story. Stories are created from features to describe more detailed product requirements from the perspective of users. Stories are listed by priority in a dynamic backlog where the order is continuously adjusted to suit actual requirements. The higher the stories are located in the backlog, the sooner they will be developed and delivered to customers.
A story must comply with the INVEST principle:
Independent: Each story should be independent and can be delivered to customers independently.
Negotiable: A story does not need to describe specific functions. The details should be negotiated and determined by developers and customers during development.
Valuable: A story must deliver values to customers.
Estimable: The workload of a story can be estimated.
Small: A story should be small enough so that it can be completed in a sprint.
Testable: A story should be testable.
A story should be delivered in days within a sprint.
You can estimate the workload of stories by person-hours, person-days, or story points.
Story point estimation is used for agile development. This method estimates the costs for story delivery,</td><td>Examples of stories in compliance with INVEST:
Recommended template: As a <user role> I want <results> So that <purposes>
As a project manager, I want to filter requirements by handler, so that I can quickly locate a specific requirement.
As a developer, I want to collapse some unnecessary information, so that visual distraction can be reduced.
As a tester, I want to associate test cases with requirements, so that I can track the verification progress of requirements.</td></tr>
</table>

Work Item Type	Description	Example
	including the efforts, complexities, and risks. – The Fibonacci series (1, 1, 2, 3, 5, 8...) is commonly used to size a story in a relative manner. For example, the workload of a story with 3 story points is three times as large as that of a story with 1 story point. – Story points are measured by the Fibonacci series by default.	
Task	In a sprint planning meeting, stories scheduled in a sprint are assigned to members and broken down into one or more tasks with estimated workloads.	Tasks focus on series of actions that lead to a goal. Examples are as follows: ● Developer A needs to prepare a production-like environment today. ● Developer B needs to complete the permission settings for the project team this week. ● Developer C needs to review the code.

Work Item Type	Description	Example
Bug	● Bugs are created to track problems of software functions found during testing and verification. Bugs can be prioritized. ● Bugs can be created and tracked separately. You can also create bugs when verifying a story. The bugs are child work items of the story, helping you identify the number of issues. ● The bug description should be as detailed as possible, including but not limited to: – Symptoms: You are advised to describe symptoms from the perspective of users. – Error code: The error code can be used to locate and analyze code problems. – Environment: Including the development, test, or live network environments. – Software stack: Including the operating system and database and their versions. – Whether the bug can be reproduced and how this can be done.	An example template for bug description: [Symptom] [Error Code (Obtained by Pressing F12)] [Environment] [Fault Reproduction Procedure] [Onsite Fault Locating R&D Engineer] [Preliminary Fault Locating] [Packets Captured Using Google Chrome]

5.2 Configuring Common Settings

5.2.1 Configuring Common Work Item Fields

Customize common fields that can be used by any type of work items in your project.

Prerequisites

A Scrum project is available, and you have permission to **customize work items** for the project.

Procedure

Step 1 [Access the CodeArts Req homepage](#).

Step 2 Go to a Scrum project and choose **Settings > Work**.

Step 3 In the navigation pane, choose **Common Fields**.

Click **Add Field**, and set the field information, including the name (for example, **CommonField1**), type, and description.

- The added field is displayed in the field list, including the name, type, option, description, and usage.
- Click **Clone Field** to copy existing common fields of other projects to the current project.
- Common fields can be modified or deleted.

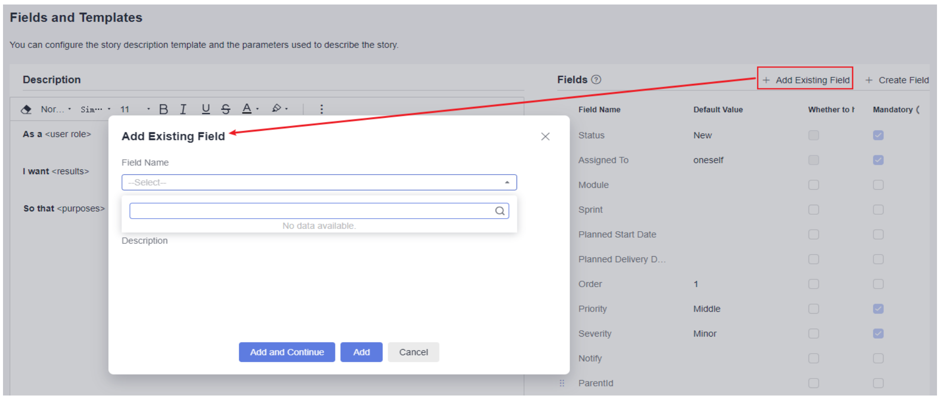
Step 4 Add an existing common field (for example, **CommonField1**) to the work item template.

The following uses the story work item template as an example:

1. In the navigation pane of the project settings page, choose **Stories** > **Fields and Templates**.
2. Click **Edit Template** in the upper right corner to enter the editing state of the story work item template.

   Click **Add Existing Field**, select **CommonField1** from the **Field Name** drop-down list, click **Add**, and save the template.

   Figure 5-2 Adding an existing field to the work item template

3. Check this **CommonField01** field when creating a story on the **Work > Work Items** page.

   NOTE

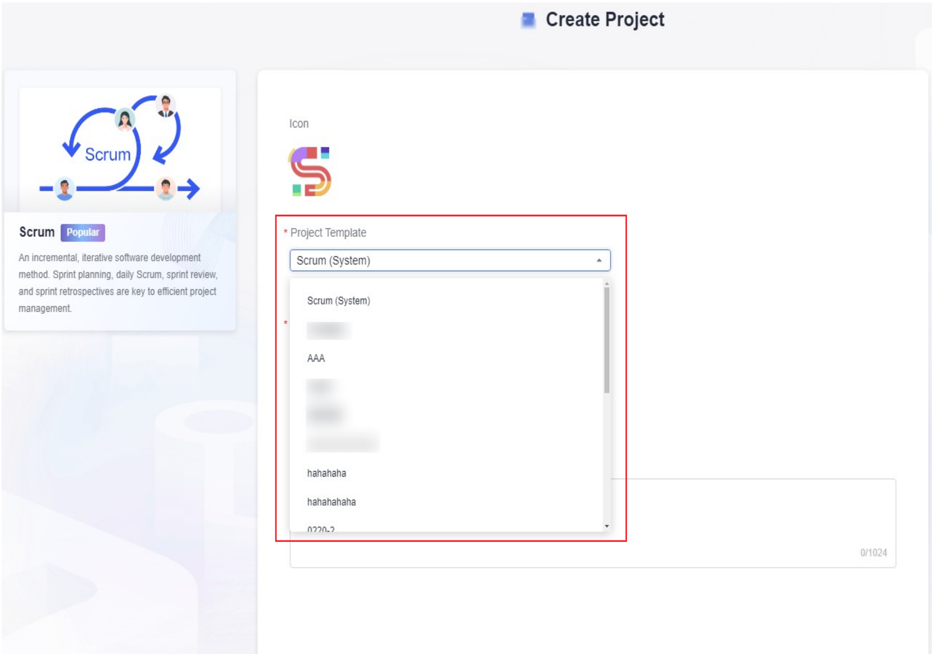
   - Customized common fields can be configured and used for all types of work items of the current project.
   - The story work item template is used as an example. You can add common fields to other work item templates in the same way, and only need to do this once for each of them.
   - A maximum of 25 common fields can be customized.

----End

NOTE

- After the configuration is complete, click **Save as Template** in the upper right corner of the page. In the **Save as Template** dialog box, enter a template name and description, and click **OK**.
- This template can be used to create Scrum projects.

Figure 5-3 Creating a Scrum project



5.2.2 Configuring Common Work Item Statuses

Customize common statuses that can be used by any type of work items in your project.

Prerequisites

A Scrum project is available, and you have permission to **customize work items** for the project.

Procedure

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a Scrum project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Common Statuses**.

Click **Add Status**, and set the status information, including the name (for example, **CommonStatus1**), category, and description.

- The added status is displayed in the status list, including the name, description, category, and usage.
- Common statuses can be deleted.

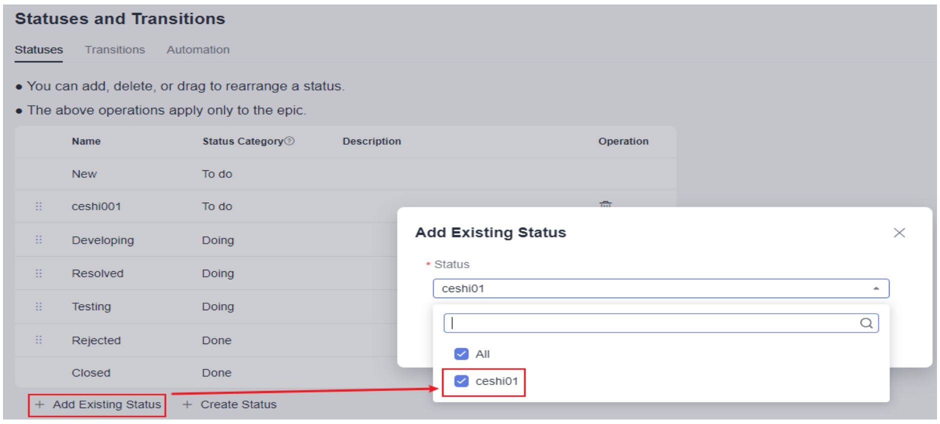
Step 4 Add an existing common status (for example, **CommonStatus1**) for a work item.

The following uses a story status as an example:

1. In the navigation pane, choose **Stories** > **Statuses and Transitions**.

   On the **Statuses** tab page, click **Add Existing Status**. In the **Status** drop-down list, select **CommonStatus1** and click **OK**.

   Figure 5-4 Adding an existing status

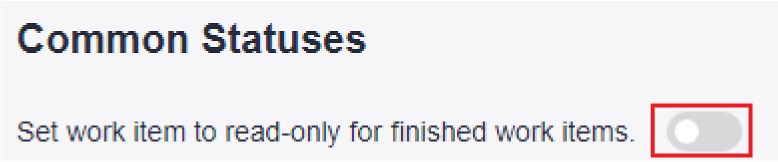
2. Check this **CommonStatus1** field when clicking the status of a story on the **Work** > **Req > Work Items** page.

NOTE

- Customized common statuses can be configured and used for all types of work items of the current project.
- The **New** and **Closed** statuses cannot be deleted.
- A maximum of 50 common statuses can be customized.

Step 5 (Optional) To prevent a closed work item from being edited, toggle on **Set work item to read-only for finished work items.**

Figure 5-5 Common Statuses page

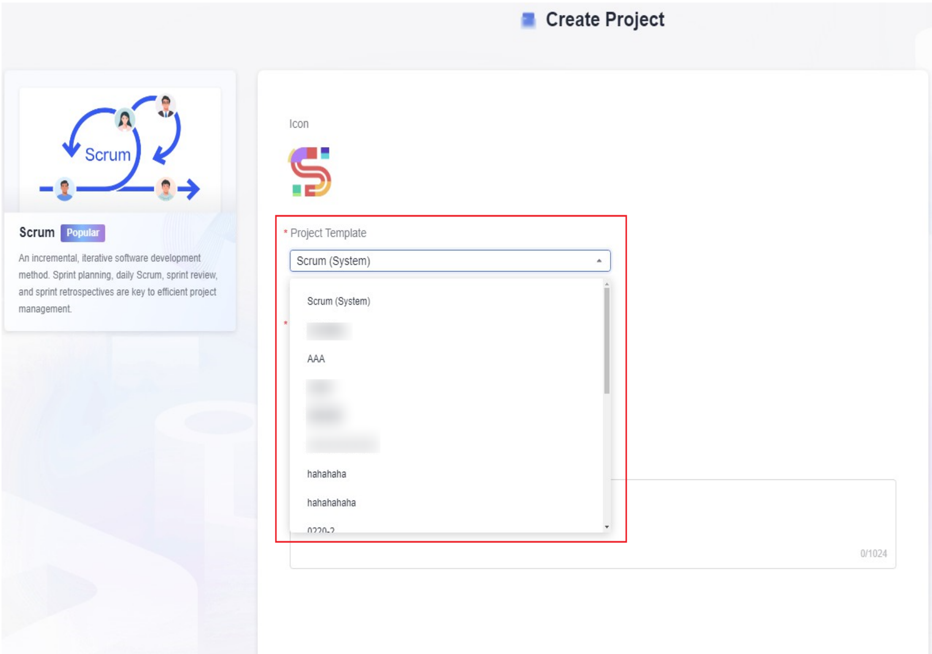


----End

NOTE

- After the configuration is complete, click **Save as Template** in the upper right corner of the page. In the **Save as Template** dialog box, enter a template name and description, and click **OK**.
- This template can be used to create Scrum projects.

Figure 5-6 Creating a Scrum project



5.2.3 Configuring Work Item Fields and Templates

Customize different types of work item templates, and specify whether to display each field on work item creation pages, whether these fields are mandatory, and what they are default to. These templates are used by default when you create work items.

Prerequisites

A Scrum project is available, and you have permission to **customize work items** for the project.

Configuring Epic Fields and Templates

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a Scrum project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Epics** > **Fields and Templates**. The epic template page is displayed.

Step 4 Click **Edit Template**.

- Set **Description** based on project requirements.
- Set **Default Value** for system or custom fields.

- Set **Whether to hide** for preset or custom fields.
- Set **Mandatory** for preset or custom fields.
- Click **Add Existing Field** or **Create Field** to add a field.

Step 5 Click on the left of each field to adjust their sequence.

Step 6 Click **Save**.

----End

Configuring Feature Fields and Templates

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a Scrum project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Features** > **Fields and Templates**. The feature template page is displayed.

Step 4 Click **Edit Template**.

- Set **Description** based on project requirements.
- Set **Default Value** for system or custom fields.
- Set **Whether to hide** for preset or custom fields.
- Set **Mandatory** for preset or custom fields.
- Click **Add Existing Field** or **Create Field** to add a field.

Step 5 Click on the left of each field to adjust their sequence.

Step 6 Click **Save**.

----End

Configuring Story Fields and Templates

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a Scrum project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Stories** > **Fields and Templates**. The story template page is displayed.

Step 4 Click **Edit Template**.

- Set **Description** based on project requirements.
- Set **Default Value** for system or custom fields.
- Set **Whether to hide** for preset or custom fields.
- Set **Mandatory** for preset or custom fields.
- Click **Add Existing Field** or **Create Field** to add a field.

Step 5 Click on the left of each field to adjust their sequence.

Step 6 Click **Save**.

----End

Configuring Task Fields and Templates

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a Scrum project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Tasks** > **Fields and Templates**. The task template page is displayed.

Step 4 Click **Edit Template**.

- Set **Description** based on project requirements.
- Set **Default Value** for system or custom fields.
- Set **Whether to hide** for preset or custom fields.
- Set **Mandatory** for preset or custom fields.
- Click **Add Existing Field** or **Create Field** to add a field.

Step 5 Click ⠿ on the left of each field to adjust their sequence.

Step 6 Click **Save**.

----End

Configuring Bug Fields and Templates

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a Scrum project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Bugs** > **Fields and Templates**. The bug template page is displayed.

Step 4 Click **Edit Template**.

- Set **Description** based on project requirements.
- Set **Default Value** for system or custom fields.
- Set **Whether to hide** for preset or custom fields.
- Set **Mandatory** for preset or custom fields.
- Click **Add Existing Field** or **Create Field** to add a field.

Step 5 Click ⠿ on the left of each field to adjust their sequence.

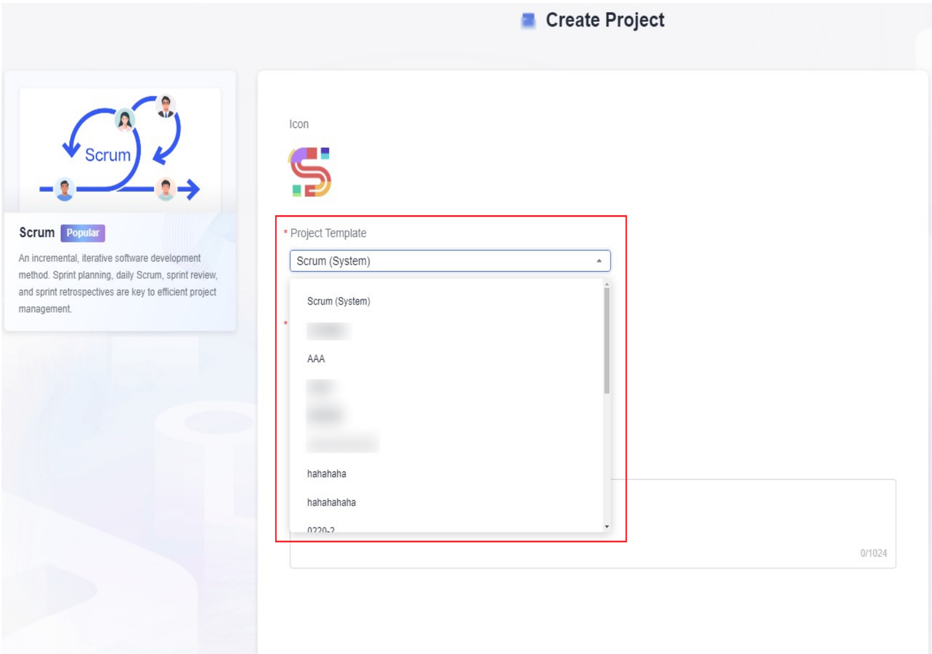
Step 6 Click **Save**.

----End

NOTE

- After the configuration is complete, click **Save as Template** in the upper right corner of the page. In the **Save as Template** dialog box, enter a template name and description, and click **OK**.
- This template can be used to create Scrum projects.

Figure 5-7 Creating a Scrum project



5.2.4 Managing Work Item Statuses and Transitions

Customize the statuses of different work item types, adjust their sequence, configure transitions, and set automated transition rules.

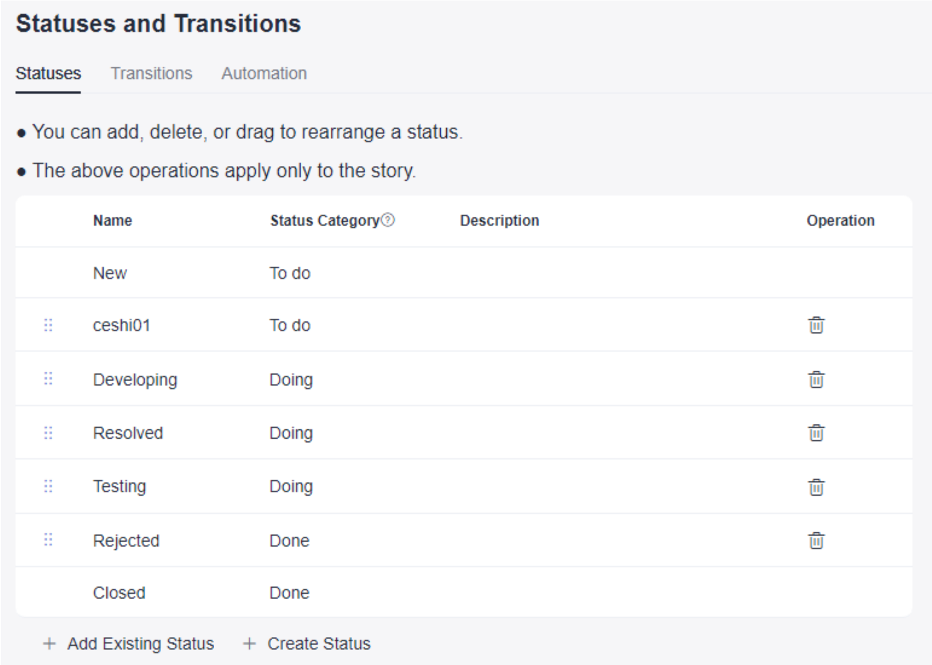
Prerequisites

A Scrum project is available, and you have permission to **customize work items** for the project.

Managing Epic Statuses and Transitions

- Configuring work item statuses
  a. Access the CodeArts Req homepage.
  b. Go to a Scrum project and choose **Settings** > **Work**.
  c. In the navigation pane, choose **Epics** > **Statuses and Transitions**. The **Statuses** tab page is displayed by default.

Figure 5-8 Managing epic statuses



d. Add, create, or delete statuses.

- Click **Add Existing Status**, select a status from the drop-down list, and click **OK**.
- Click **Create Status**. In the dialog box that is displayed, set the status name (for example, **CustomStatus1**), category (for example, **Doing**), and description, and click **Add**.

  The new status is displayed in the current work item status list and on the **Transitions** tab page.

  You can delete the added status as required.

e. Press and hold on the left of a status name to rearrange the work item status by drag-and-drop.

- Configuring work item transitions

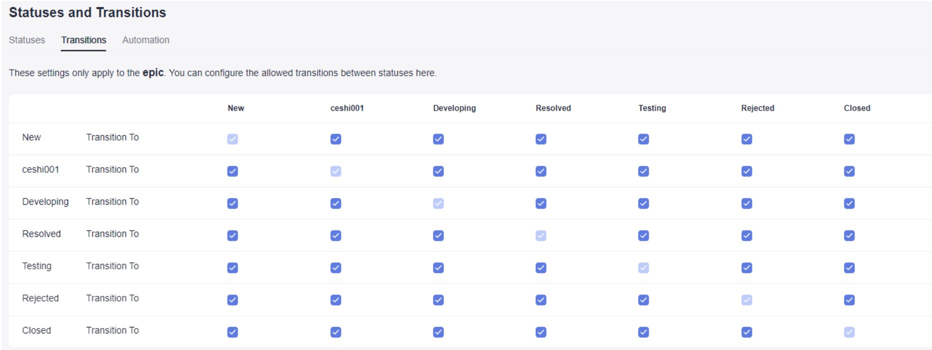
  Configure the transitions between work item statuses. Then click the status of a work item on the work item list page to check the transition.

  a. **Access the CodeArts Req homepage**.

  b. Go to a Scrum project and choose **Settings > Work**.

  c. In the navigation pane, choose **Epics > Statuses and Transitions**. Then click the **Transitions** tab.

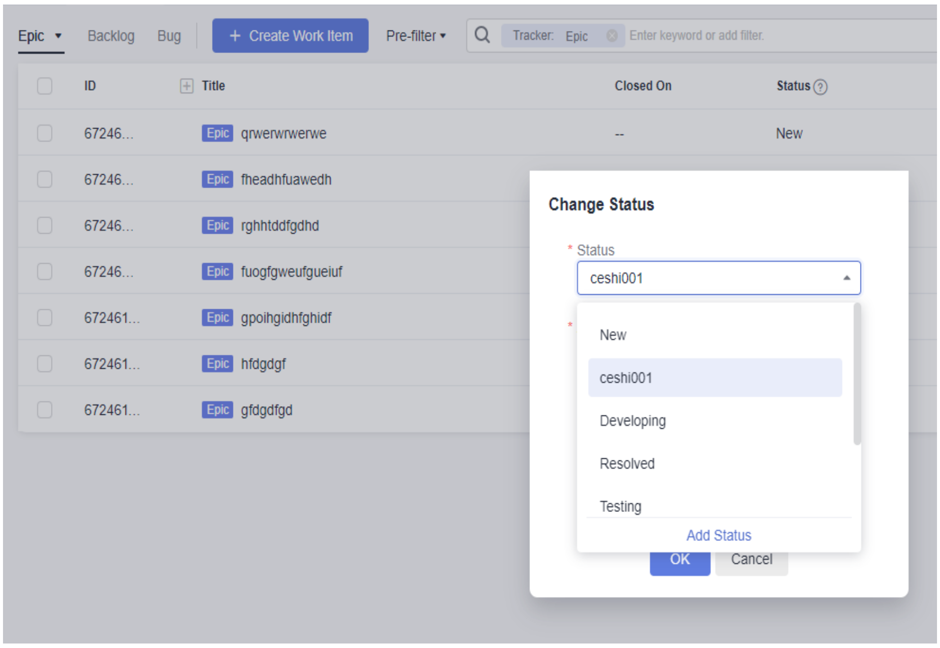
Figure 5-9 Epic status transitions



d. Select the allowed statuses and click **Save**.

e. (Optional) After the configuration is complete, check the status of **ceshi01** in the work item list.

Figure 5-10 Epic status transition



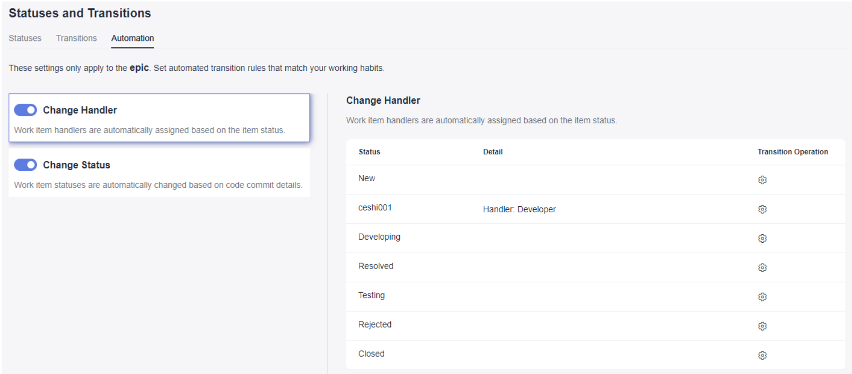
- Configuring automated status transition rules

  Configure the handler options, default handler option, default comments, and whether comments are mandatory for work items transitioning to a specific status. In addition, specify the target status work items will transition to when a specific code message is committed. This configuration can improve your project efficiency.

  a. Specify a handler for work items in a specified status.

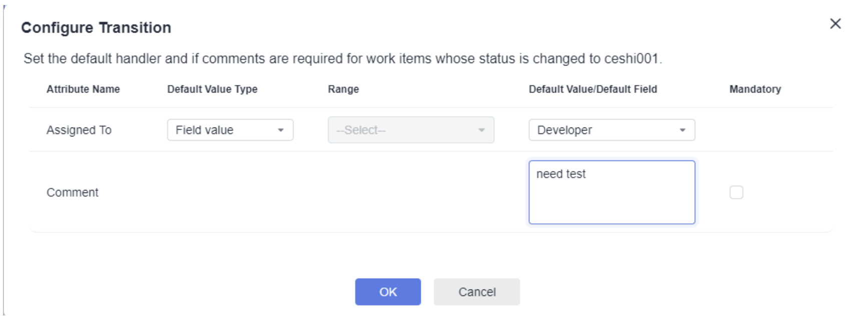
     - Access the CodeArts Req homepage.
     - Go to a Scrum project and choose **Settings** > **Work**.
     - In the navigation pane, choose **Epics** > **Statuses and Transitions**. Click the **Automation** tab. By default, **Change Handler** is selected.

Figure 5-11 Specifying handlers for epic statuses



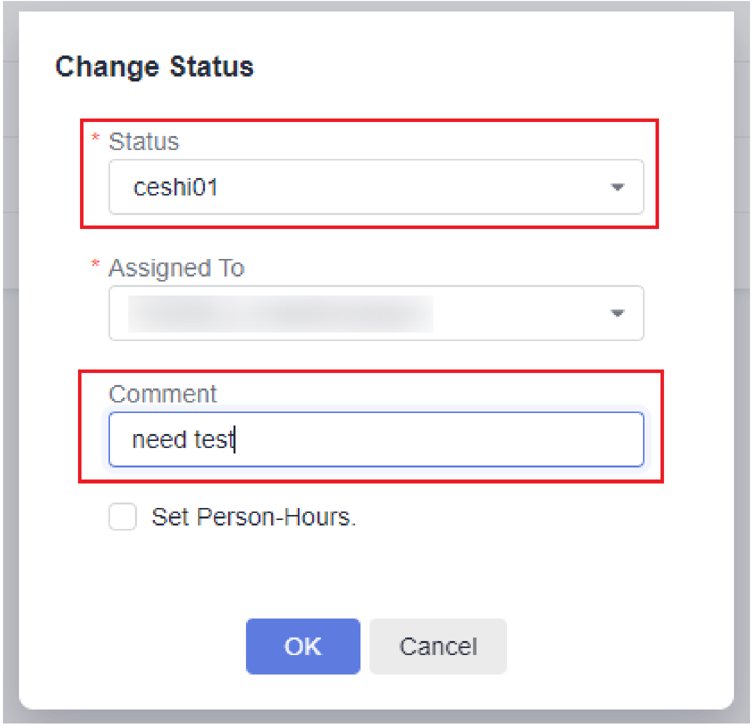
- Click ⚙ in the row of a target status (for example, **ceshi01**). Then configure the handler options, default handler option, default comments, and whether comments are mandatory for work items that transition to the **cehsi01** status.

Figure 5-12 Configuring a status transition rule



- Click **OK**. The rule applies when work items transition to this status.

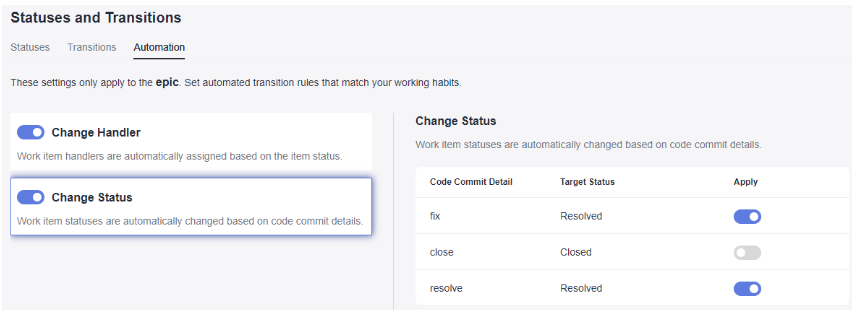
Figure 5-13 Epic status transition



b. Specify a transition status for a code commit message

- Access the CodeArts Req homepage.
- Go to a Scrum project and choose **Settings** > **Work**.
- In the navigation pane, choose **Epics** > **Statuses and Transitions**. Click the **Automation** tab, and select **Change Status**.

Figure 5-14 Specifying transition statuses for different code commit messages



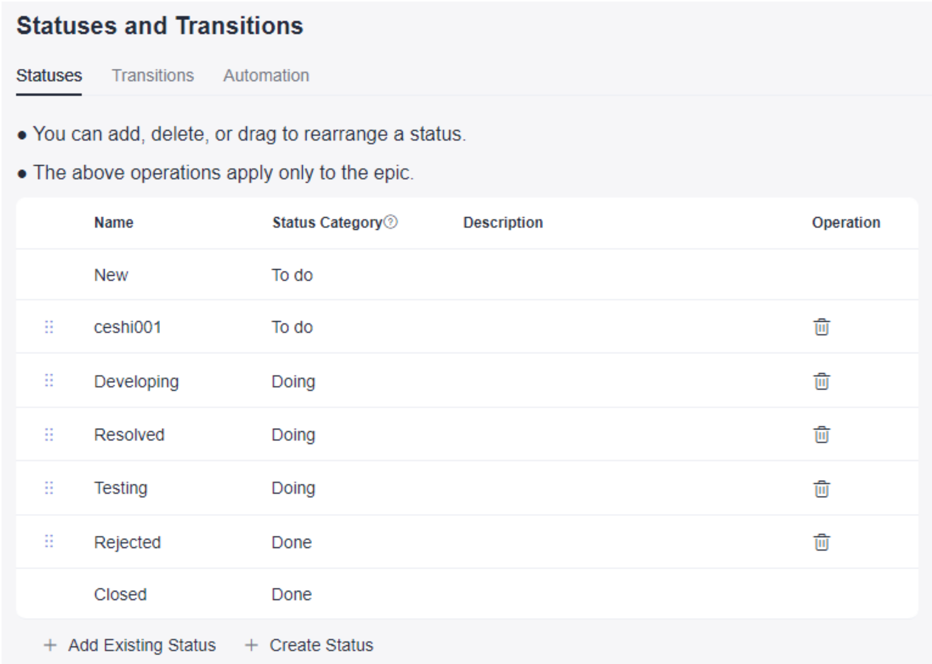
- Toggle on or off the switch in the **Apply** column. Once the switch is toggled on, work items whose associated code commits contain the corresponding keyword in the commit message will automatically transition to the target status.

Managing Feature Statuses and Transitions

- Configuring work item statuses

a. [Access the CodeArts Req homepage](#).
b. Go to a Scrum project and choose **Settings** > **Work**.
c. In the navigation pane, choose **Features** > **Statuses and Transitions**. The **Statuses** tab page is displayed by default.

Figure 5-15 Managing feature statuses



d. Add, create, or delete statuses.
   - Click **Add Existing Status**, select a status from the drop-down list, and click **OK**.
   - Click **Create Status**. In the dialog box that is displayed, set the status name (for example, **CustomStatus1**), category (for example, **Doing**), and description, and click **Add**.

     The new status is displayed in the current work item status list and on the **Transitions** tab page.

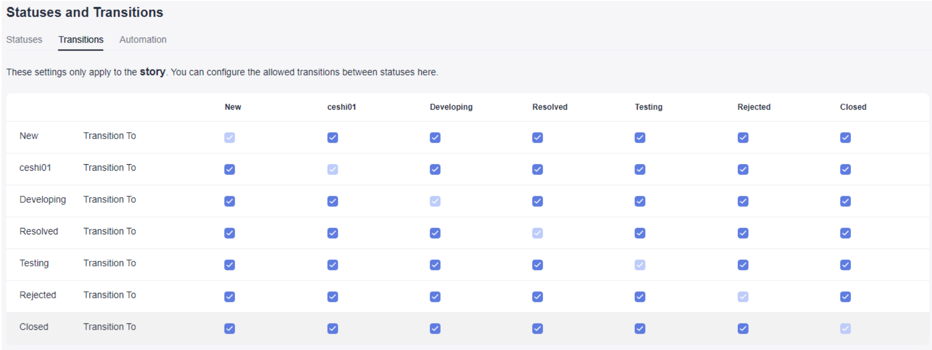
     You can delete the added status as required.
e. Press and hold ⠿ on the left of a status name to rearrange the work item status by drag-and-drop.

- Configuring work item transitions

  Configure the transitions between work item statuses. Then click the status of a work item on the work item list page to check the transition.

  a. [Access the CodeArts Req homepage](#).
  b. Go to a Scrum project and choose **Settings** > **Work**.
  c. In the navigation pane, choose **Features** > **Statuses and Transitions**. Then click the **Transitions** tab.

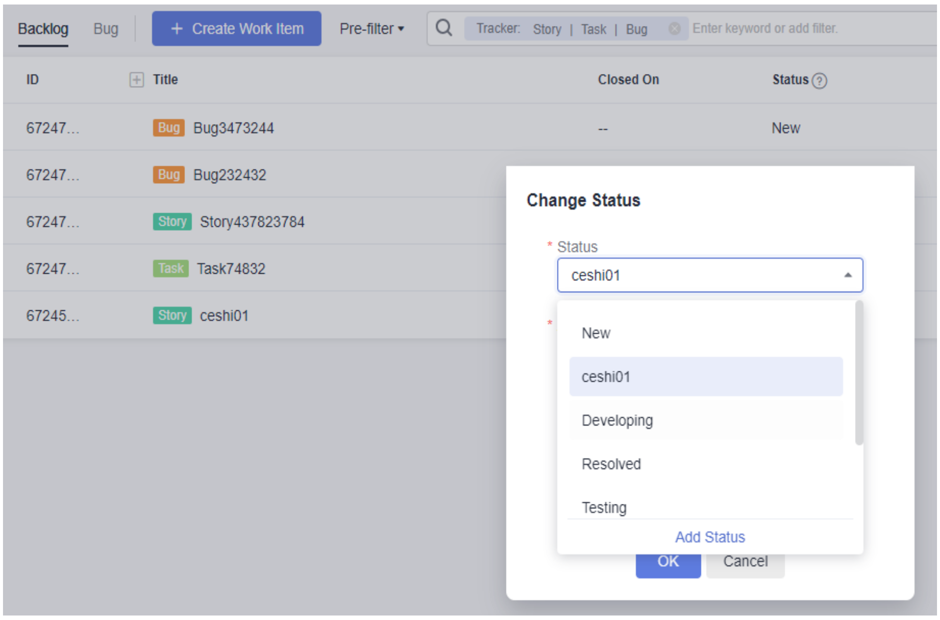
Figure 5-16 Feature status transitions



d. Select the allowed statuses and click **Save**.

e. (Optional) After the configuration is complete, check the status of **ceshi01** in the work item list.

Figure 5-17 Feature status transition



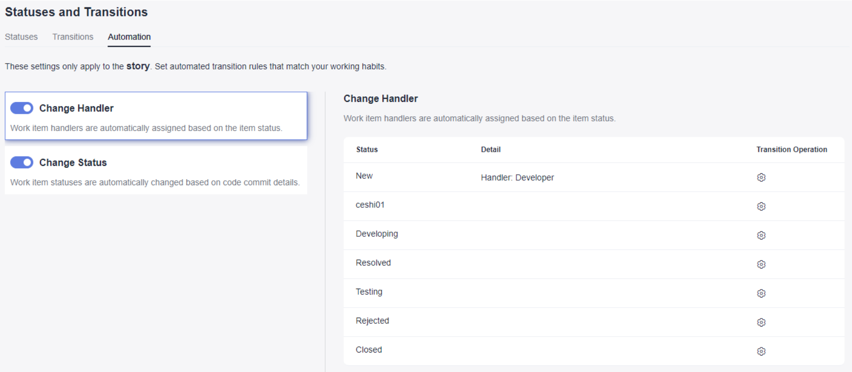
- Configuring automated status transition rules

  Configure the handler options, default handler option, default comments, and whether comments are mandatory for work items transitioning to a specific status. In addition, specify the target status work items will transition to when a specific code message is committed. This configuration can improve your project efficiency.

  a. Specify a handler for work items in a specified status.

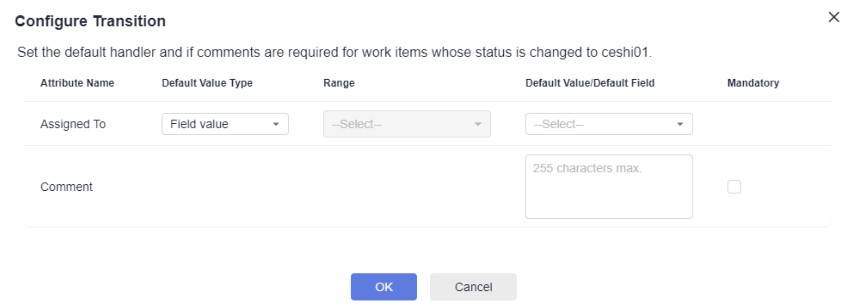
     - Access the CodeArts Req homepage.
     - Go to a Scrum project and choose **Settings** > **Work**.
     - In the navigation pane, choose **Features** > **Statuses and Transitions**. Click the **Automation** tab. By default, **Change Handler** is selected.

Figure 5-18 Specifying handlers for feature statuses



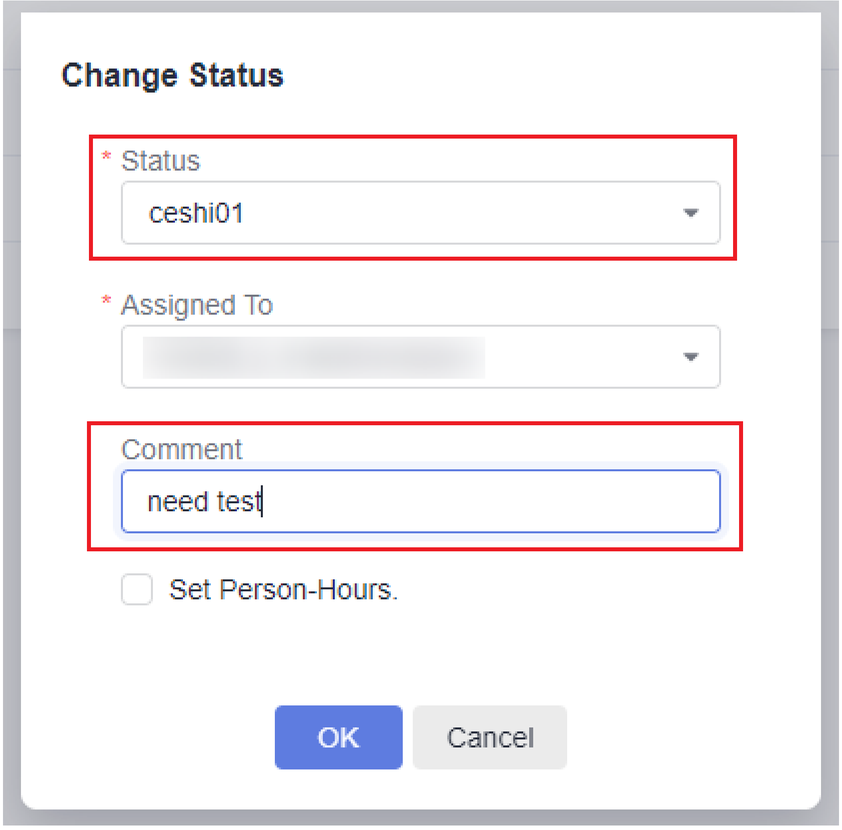
- Click in the row of a target status (for example, **ceshi01**). Then configure the handler options, default handler option, default comments, and whether comments are mandatory for work items that transition to the **cehsi01** status.

Figure 5-19 Configuring a status transition rule



- Click **OK**. The rule applies when work items transition to this status.

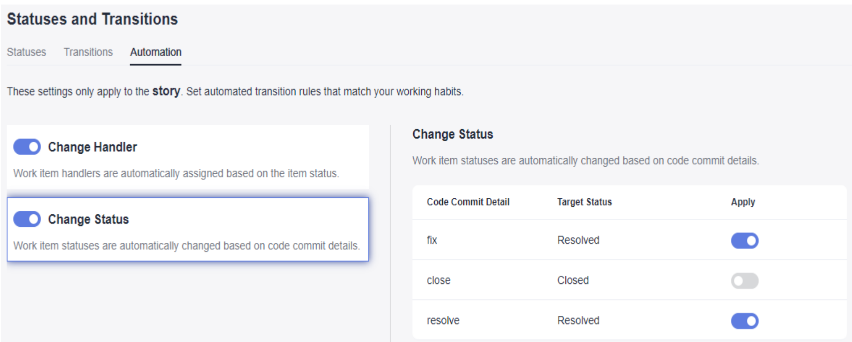
Figure 5-20 Feature status transition



b. Specify a transition status for a code commit message

- Access the CodeArts Req homepage.
- Go to a Scrum project and choose **Settings** > **Work**.
- In the navigation pane, choose **Features** > **Statuses and Transitions**. Click the **Automation** tab, and select **Change Status**.

Figure 5-21 Specifying transition statuses for different code commit messages

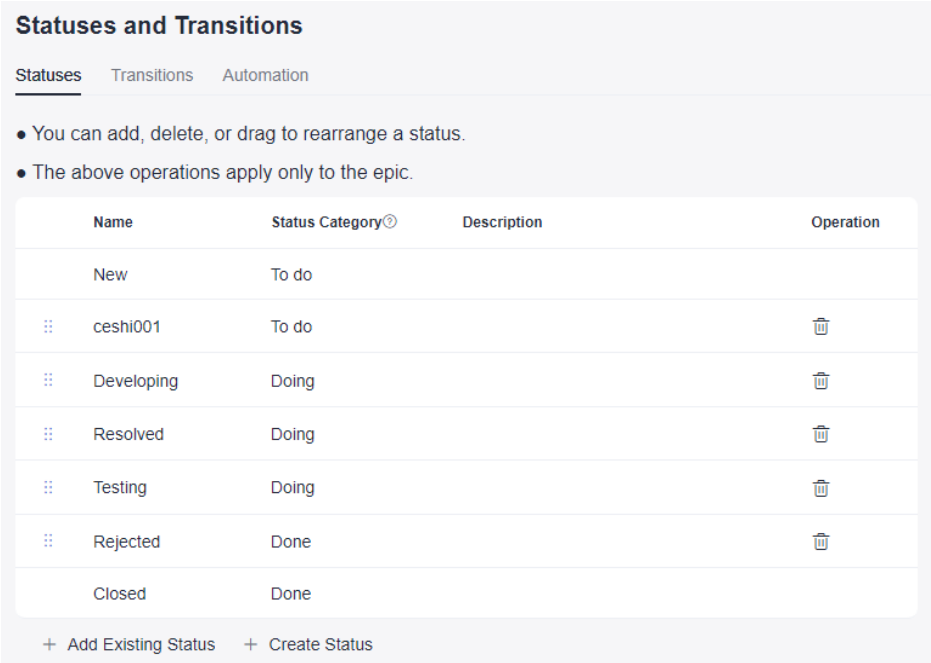


- Toggle on or off the switch in the **Apply** column. Once the switch is toggled on, work items whose associated code commits contain the corresponding keyword in the commit message will automatically transition to the target status.

Managing Story Statuses and Transitions

- Configuring work item statuses
  a. **Access the CodeArts Req homepage**.
  b. Go to a Scrum project and choose **Settings** > **Work**.
  c. In the navigation pane, choose **Stories** > **Statuses and Transitions**. The **Statuses** tab page is displayed by default.

  Figure 5-22 Managing story statuses



  d. Add, create, or delete statuses.
     - Click **Add Existing Status**, select a status from the drop-down list, and click **OK**.
     - Click **Create Status**. In the dialog box that is displayed, set the status name (for example, **CustomStatus1**), category (for example, **Doing**), and description, and click **Add**.

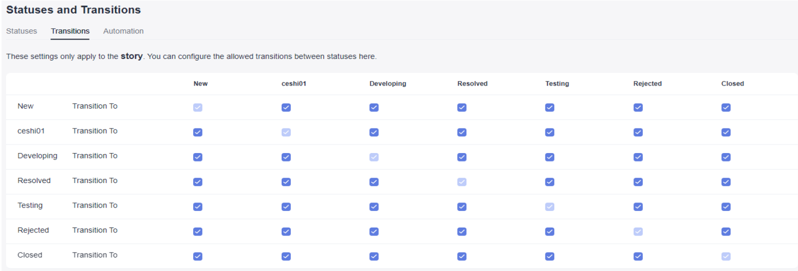
       The new status is displayed in the current work item status list and on the **Transitions** tab page.

       You can delete the added status as required.
  e. Press and hold on the left of a status name to rearrange the work item status by drag-and-drop.
- Configuring work item transitions

  Configure the transitions between work item statuses. Then click the status of a work item on the work item list page to check the transition.

  a. **Access the CodeArts Req homepage**.
  b. Go to a Scrum project and choose **Settings** > **Work**.
  c. In the navigation pane, choose **Stories** > **Statuses and Transitions**. Then click the **Transitions** tab.

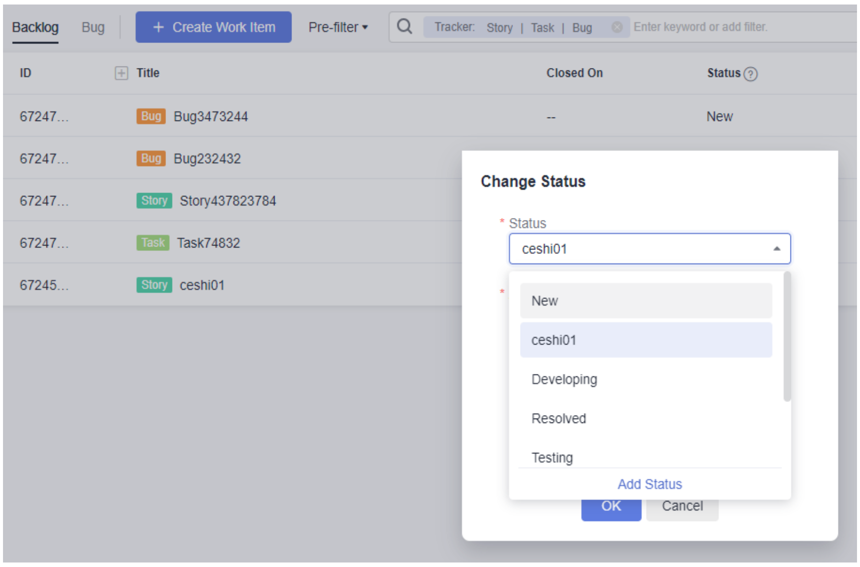
Figure 5-23 Story status transitions



d. Select the allowed statuses and click **Save**.

e. (Optional) After the configuration is complete, check the status of **ceshi01** in the work item list.

Figure 5-24 Story status transition



- Configuring automated status transition rules

  Configure the handler options, default handler option, default comments, and whether comments are mandatory for work items transitioning to a specific status. In addition, specify the target status work items will transition to when a specific code message is committed. This configuration can improve your project efficiency.

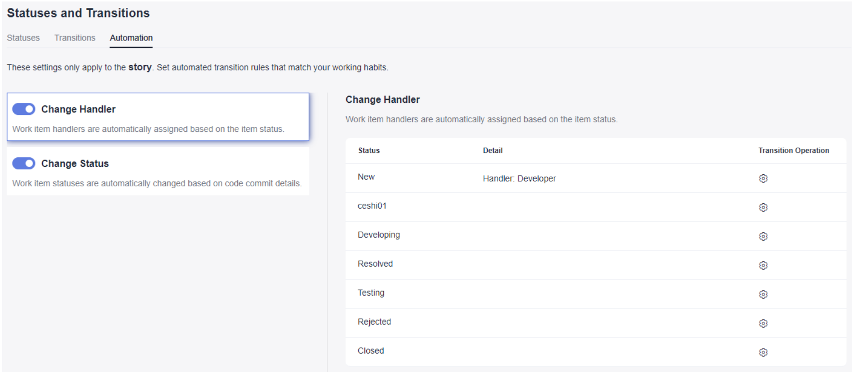
  a. Specify a handler for work items in a specified status.

     ▪ **Access the CodeArts Req homepage**.

     ▪ Go to a Scrum project and choose **Settings** > **Work**.

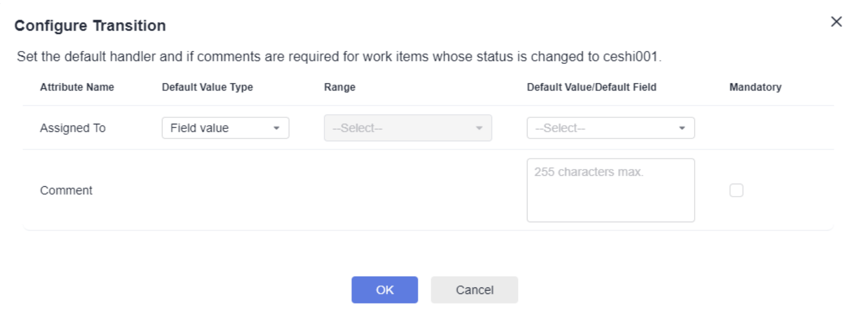
     ▪ In the navigation pane, choose **Stories** > **Statuses and Transitions**. Click the **Automation** tab. By default, **Change Handler** is selected.

Figure 5-25 Specifying handlers for story statuses



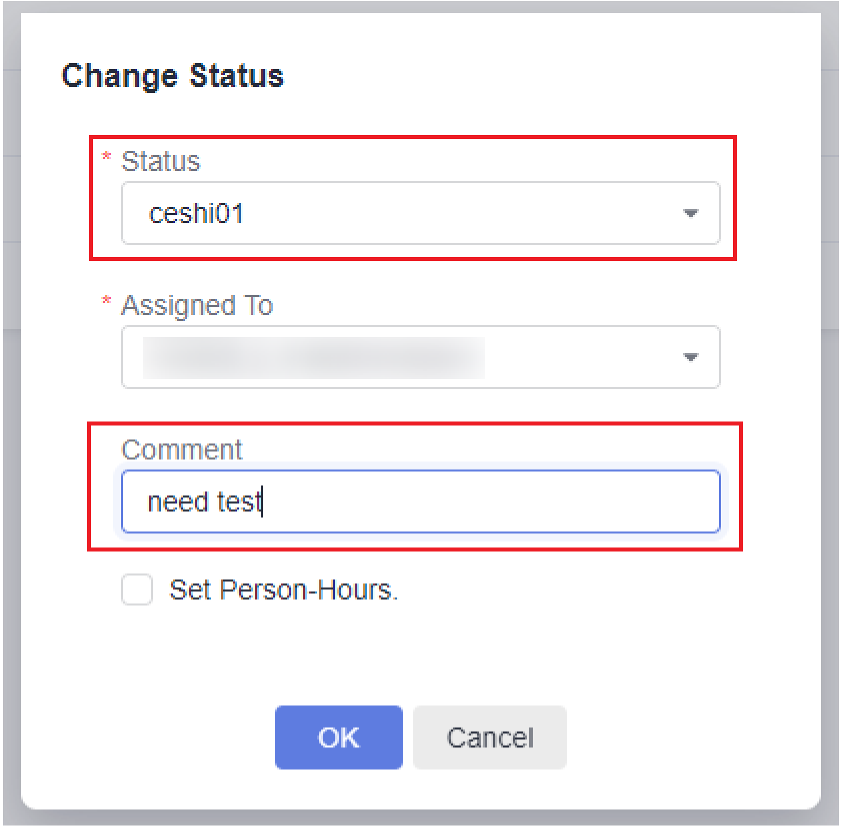
- Click  in the row of a target status (for example, **ceshi01**). Then configure the handler options, default handler option, default comments, and whether comments are mandatory for work items that transition to the **cehsi01** status.

Figure 5-26 Configuring a status transition rule



- Click **OK**. The rule applies when work items transition to this status.

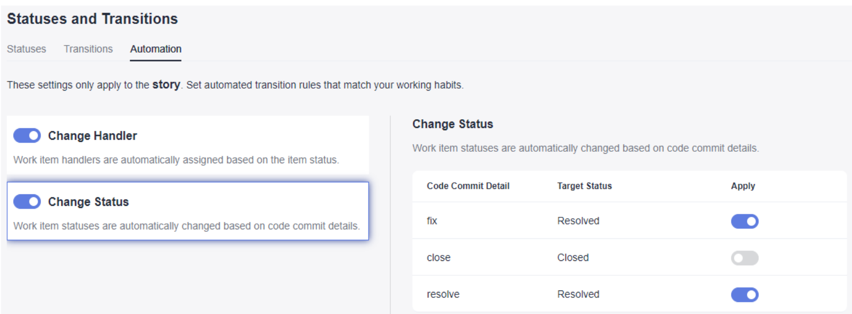
Figure 5-27 Story status transition



b. Specify a transition status for a code commit message

- Access the CodeArts Req homepage.
- Go to a Scrum project and choose **Settings** > **Work**.
- In the navigation pane, choose **Stories** > **Statuses and Transitions**. Click the **Automation** tab, and select **Change Status**.

Figure 5-28 Specifying transition statuses for different code commit messages

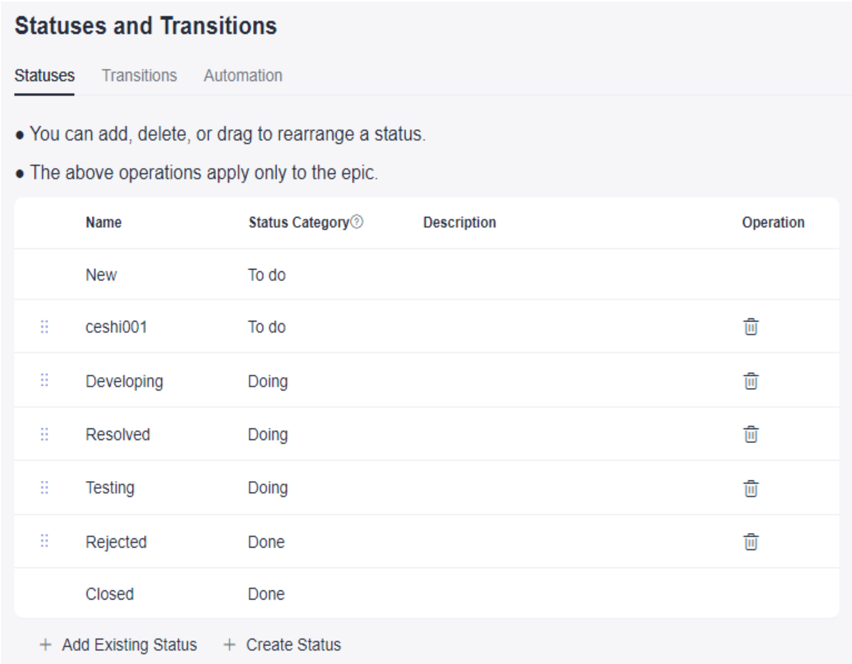


- Toggle on or off the switch in the **Apply** column. Once the switch is toggled on, work items whose associated code commits contain the corresponding keyword in the commit message will automatically transition to the target status.

Managing Task Statuses and Transitions

- Configuring work item statuses
  a. **Access the CodeArts Req homepage**.
  b. Go to a Scrum project and choose **Settings** > **Work**.
  c. In the navigation pane, choose **Tasks > Statuses and Transitions**. The **Statuses** tab page is displayed by default.

  Figure 5-29 Managing task statuses

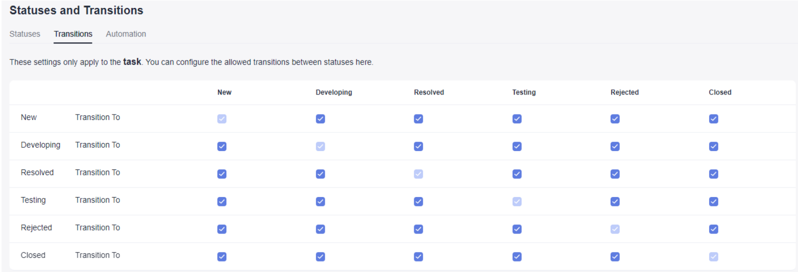
  d. Add, create, or delete statuses.
     - Click **Add Existing Status**, select a status from the drop-down list, and click **OK**.
     - Click **Create Status**. In the dialog box that is displayed, set the status name (for example, **CustomStatus1**), category (for example, **Doing**), and description, and click **Add**.

       The new status is displayed in the current work item status list and on the **Transitions** tab page.

       You can delete the added status as required.
  e. Press and hold ⠿ on the left of a status name to rearrange the work item status by drag-and-drop.
- Configuring work item transitions

  Configure the transitions between work item statuses. Then click the status of a work item on the work item list page to check the transition.
  a. **Access the CodeArts Req homepage**.
  b. Go to a Scrum project and choose **Settings** > **Work**.
  c. In the navigation pane, choose **Tasks > Statuses and Transitions**. Then click the **Transitions** tab.

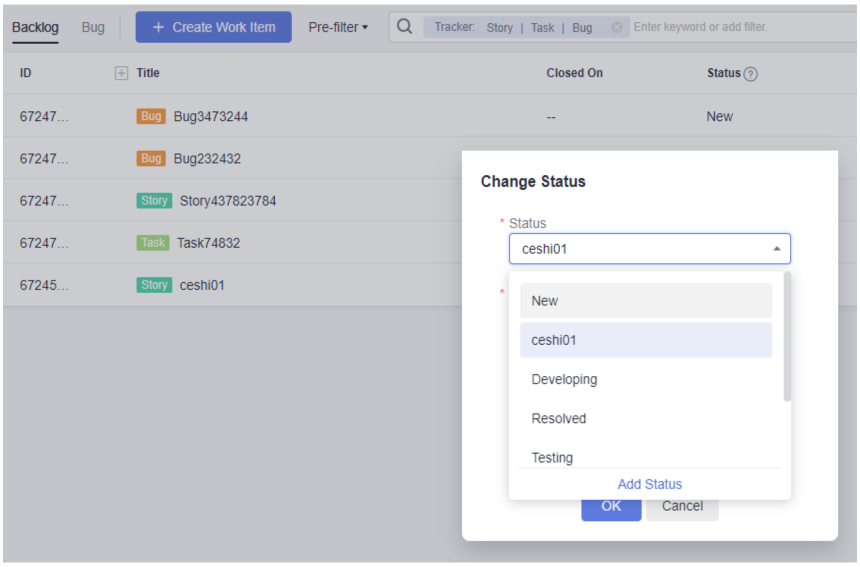
Figure 5-30 Task status transitions



d. Select the allowed statuses and click **Save**.

e. (Optional) After the configuration is complete, check the status of **ceshi01** in the work item list.

Figure 5-31 Task status transition



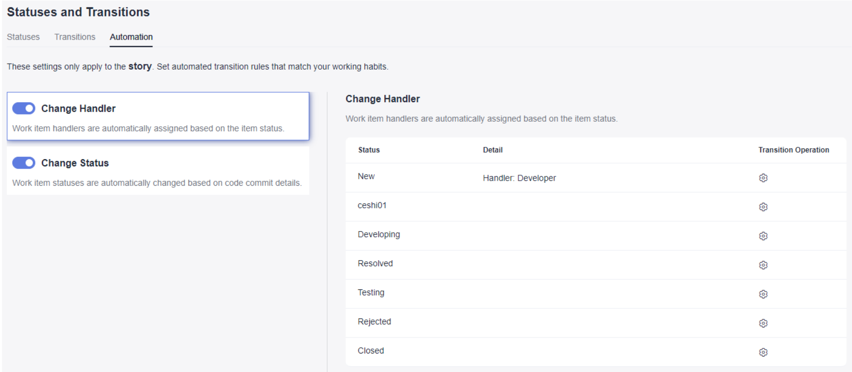
- Configuring automated status transition rules

  Configure the handler options, default handler option, default comments, and whether comments are mandatory for work items transitioning to a specific status. In addition, specify the target status work items will transition to when a specific code message is committed. This configuration can improve your project efficiency.

  a. Specify a handler for work items in a specified status.

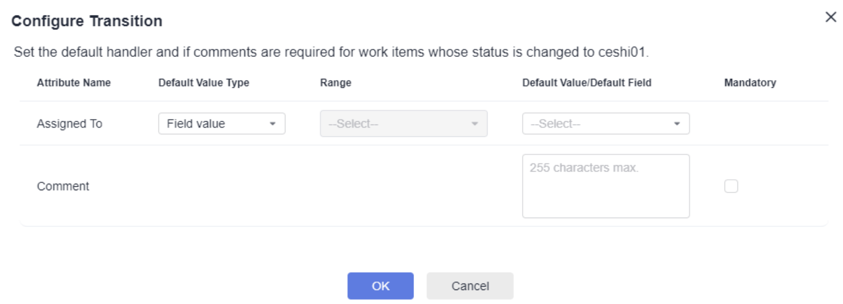
  - Access the CodeArts Req homepage.
  - Go to a Scrum project and choose **Settings** > **Work**.
  - In the navigation pane, choose **Tasks** > **Statuses and Transitions**. Click the **Automation** tab. By default, **Change Handler** is selected.

Figure 5-32 Specifying handlers for task statuses



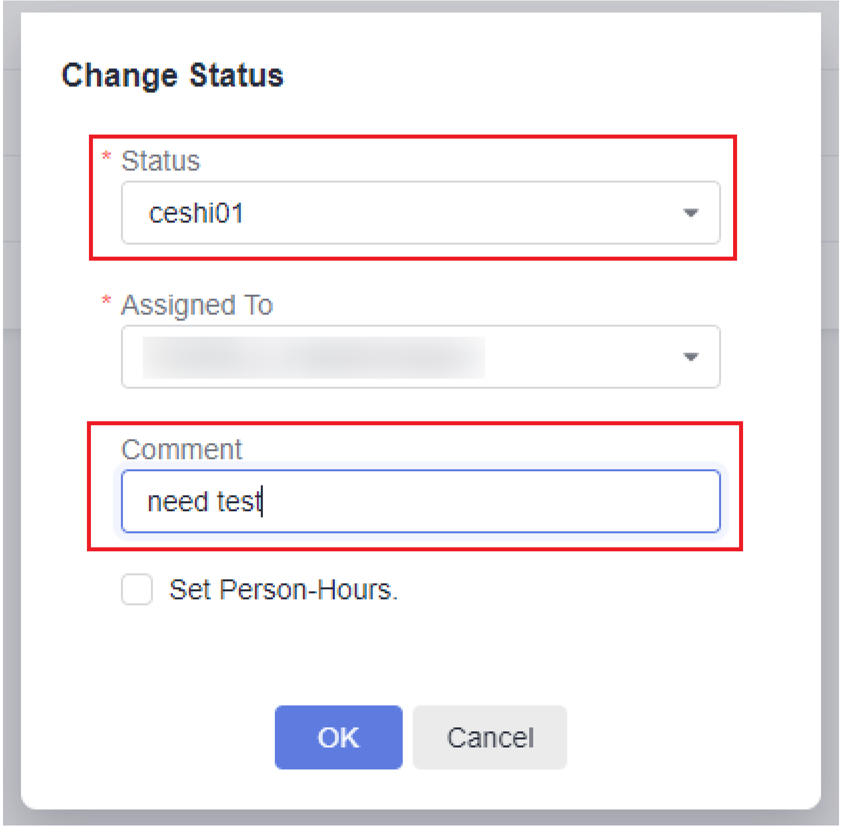
- Click in the row of a target status (for example, **ceshi01**). Then configure the handler options, default handler option, default comments, and whether comments are mandatory for work items that transition to the **cehsi01** status.

Figure 5-33 Configuring a status transition rule



- Click **OK**. The rule applies when work items transition to this status.

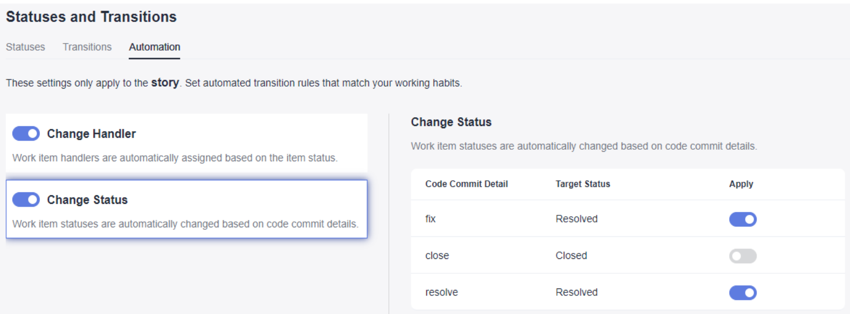
Figure 5-34 Task status transition



b. Specify a transition status for a code commit message

- [Access the CodeArts Req homepage](#).
- Go to a Scrum project and choose **Settings** > **Work**.
- In the navigation pane, choose **Tasks** > **Statuses and Transitions**. Click the **Automation** tab, and select **Change Status**.

Figure 5-35 Specifying transition statuses for different code commit messages

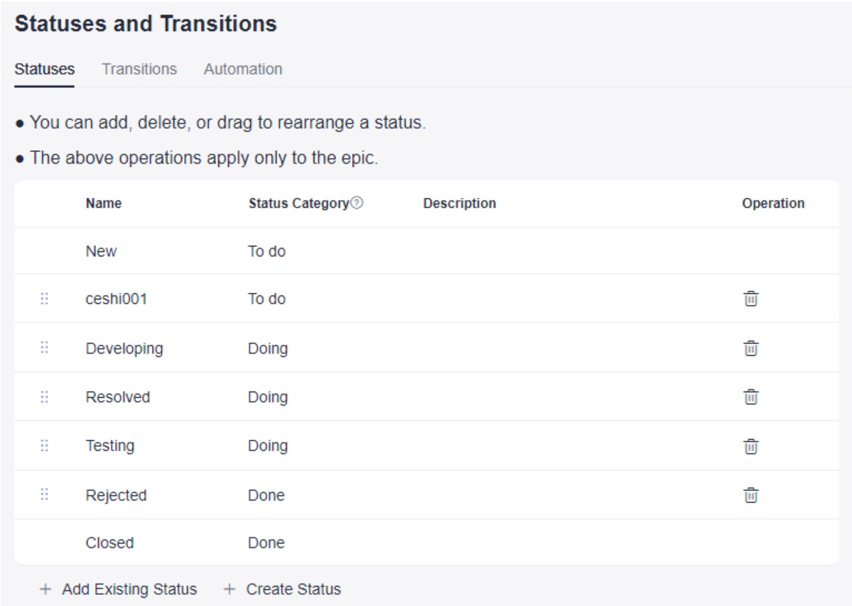


- Toggle on or off the switch in the **Apply** column. Once the switch is toggled on, work items whose associated code commits contain the corresponding keyword in the commit message will automatically transition to the target status.

Managing Bug Statuses and Transitions

- Configuring work item statuses
  a. Access the CodeArts Req homepage.
  b. Go to a Scrum project and choose **Settings** > **Work**.
  c. In the navigation pane, choose **Bugs** > **Statuses and Transitions**. The **Statuses** tab page is displayed by default.

Figure 5-36 Managing bug statuses



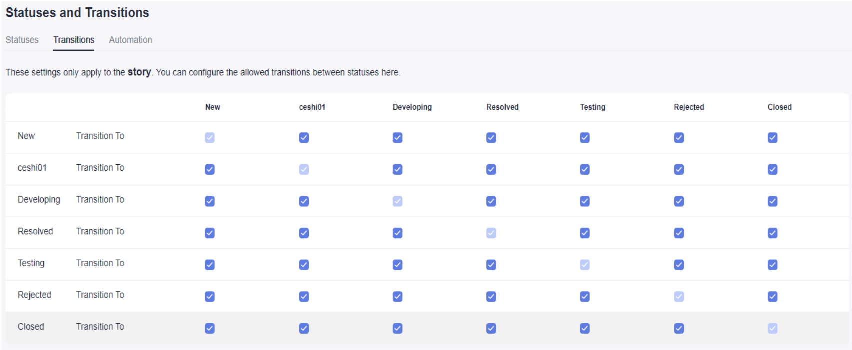
  d. Add, create, or delete statuses.
     - Click **Add Existing Status**, select a status from the drop-down list, and click **OK**.
     - Click **Create Status**. In the dialog box that is displayed, set the status name (for example, **CustomStatus1**), category (for example, **Doing**), and description, and click **Add**.

       The new status is displayed in the current work item status list and on the **Transitions** tab page.

       You can delete the added status as required.
  e. Press and hold on the left of a status name to rearrange the work item status by drag-and-drop.
- Configuring work item transitions

  Configure the transitions between work item statuses. Then click the status of a work item on the work item list page to check the transition.
  a. Access the CodeArts Req homepage.
  b. Go to a Scrum project and choose **Settings** > **Work**.
  c. In the navigation pane, choose **Bugs** > **Statuses and Transitions**. Then click the **Transitions** tab.

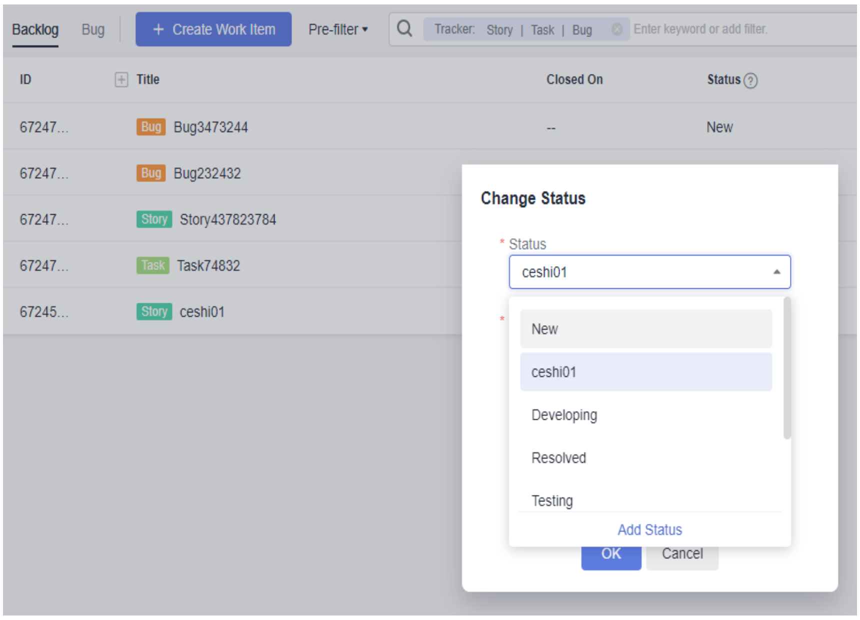
Figure 5-37 Bug status transitions



d. Select the allowed statuses and click **Save**.

e. (Optional) After the configuration is complete, check the status of **ceshi01** in the work item list.

Figure 5-38 Bug status transition



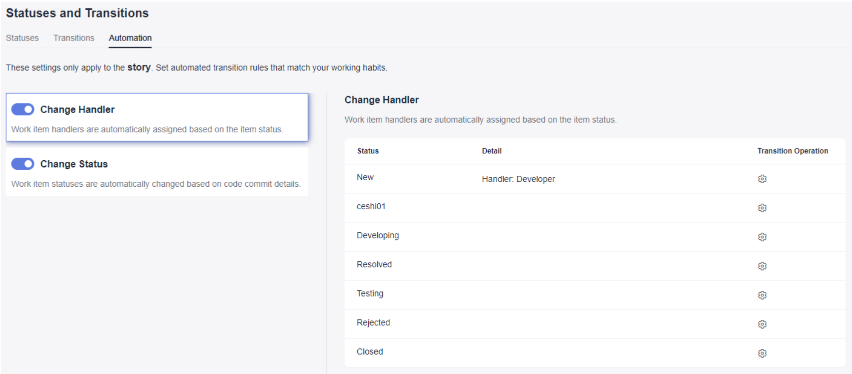
- Configuring automated status transition rules

  Configure the handler options, default handler option, default comments, and whether comments are mandatory for work items transitioning to a specific status. In addition, specify the target status work items will transition to when a specific code message is committed. This configuration can improve your project efficiency.

  a. Specify a handler for work items in a specified status.

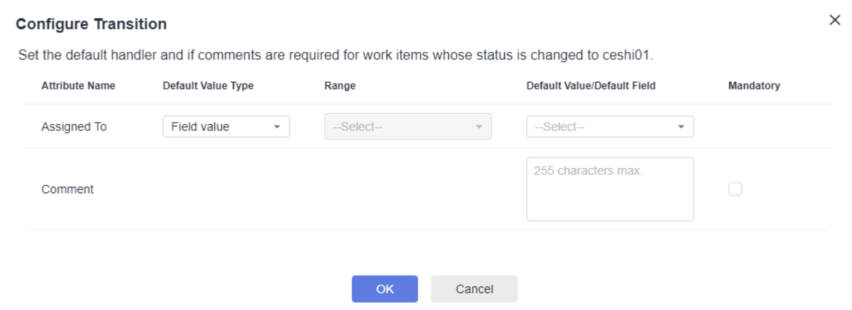
     - Access the CodeArts Req homepage.
     - Go to a Scrum project and choose **Settings** > **Work**.
     - In the navigation pane, choose **Bugs** > **Statuses and Transitions**. Click the **Automation** tab. By default, **Change Handler** is selected.

Figure 5-39 Specifying handlers for bug statuses



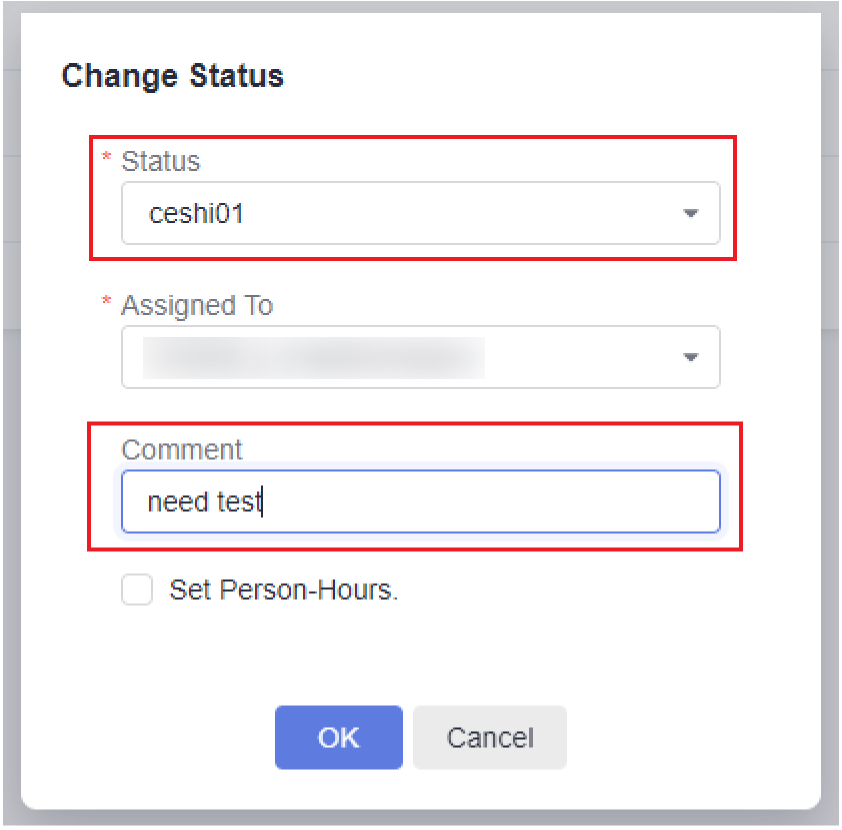
- Click in the row of a target status (for example, **ceshi01**). Then configure the handler options, default handler option, default comments, and whether comments are mandatory for work items that transition to the **cehsi01** status.

Figure 5-40 Configuring a status transition rule



- Click **OK**. The rule applies when work items transition to this status.

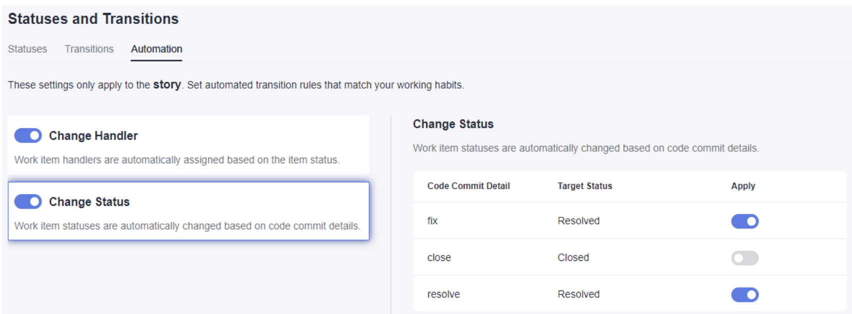
Figure 5-41 Bug status transition



b. Specify a transition status for a code commit message

- Access the CodeArts Req homepage.
- Go to a Scrum project and choose **Settings** > **Work**.
- In the navigation pane, choose **Bugs** > **Statuses and Transitions**. Click the **Automation** tab, and select **Change Status**.

Figure 5-42 Specifying transition statuses for different code commit messages

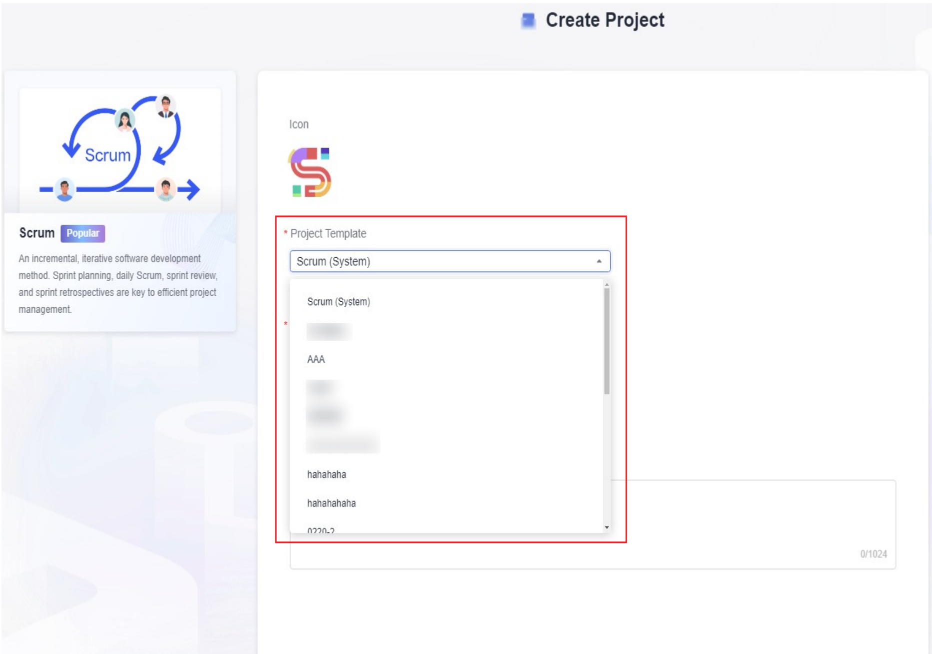


- Toggle on or off the switch in the **Apply** column. Once the switch is toggled on, work items whose associated code commits contain the corresponding keyword in the commit message will automatically transition to the target status.

NOTE

- After the configuration is complete, click **Save as Template** in the upper right corner of the page. In the **Save as Template** dialog box, enter a template name and description, and click **OK**.
- This template can be used to create Scrum projects.

Figure 5-43 Creating a Scrum project



5.2.5 Configuring Work Item Status Rollup Rules

Configure automation rules for your project to specify how a parent work item transitions to a specific status based on its child work item status. Once an automation rule is enabled, it can be triggered by all user operations that meet the conditions in the project.

Prerequisites

A Scrum project is available, and you have permission to **set automation rules** for the project.

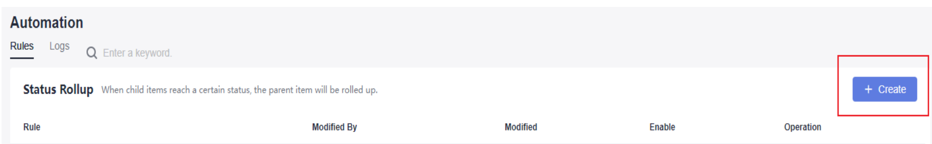
Procedure

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a Scrum project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Automation**. Then click **Create** to create an automation rule.

Figure 5-44 Automation

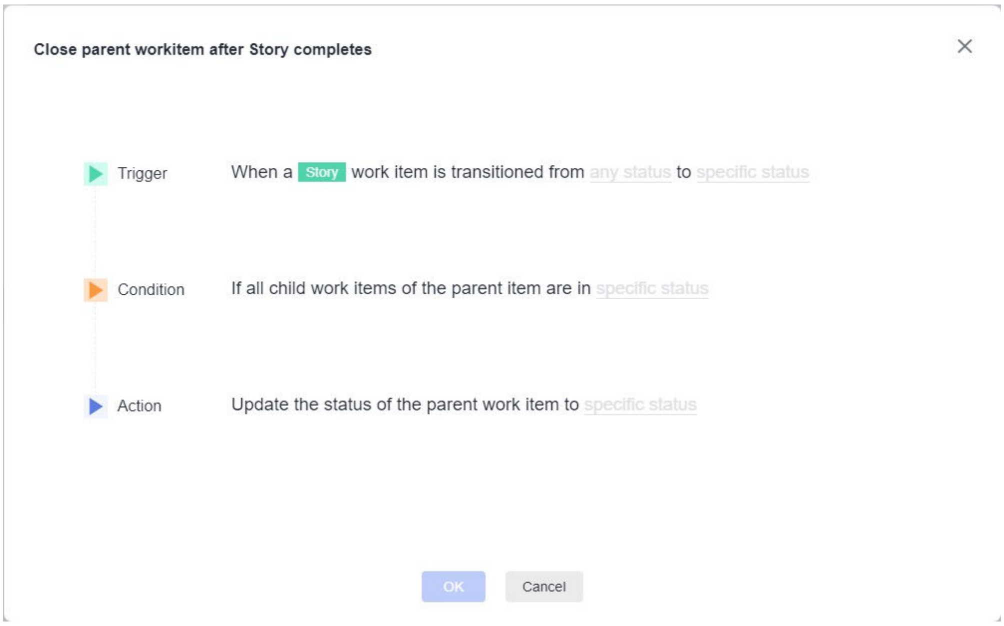


NOTE

You can configure a rule to close the parent after a feature, story, task, or bug is completed. The configuration is the same for all these work item types. For details, see the configuration process for stories.

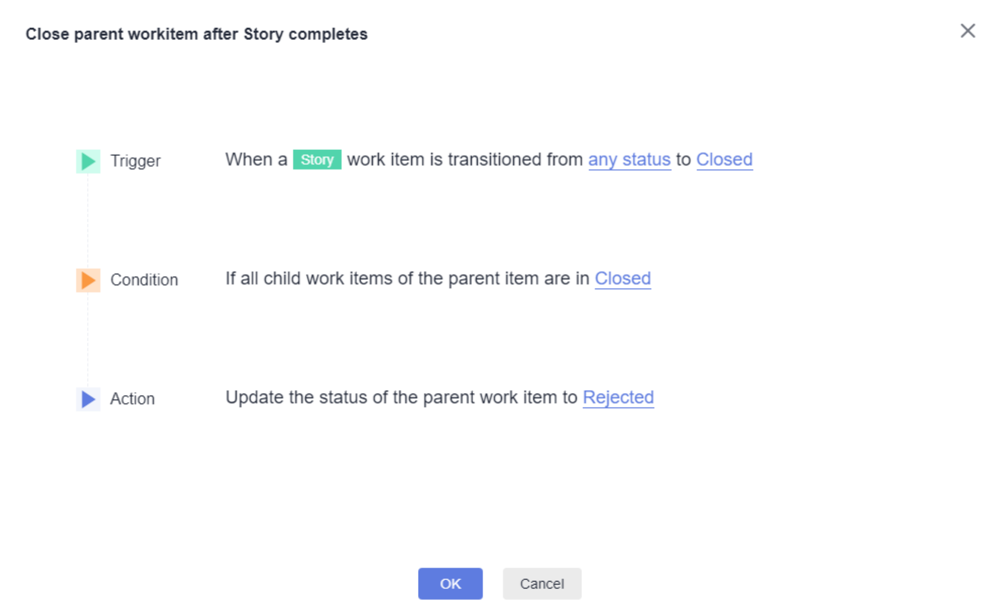
Step 4 In the **Select Rule Template** dialog box, select **Close parent workitem after Story completes** and click **Yes**.

Figure 5-45 Rule configuration dialog box 01



Step 5 Configure the trigger, condition, and action by referring to the following figure, and click **OK**.

Figure 5-46 Rule configuration dialog box 02



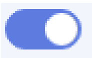
Step 6 Click  to enable the configured rule.

Step 7 Go to the **Work** > **Work Items** page, select an unclosed feature and its child work items, and change the status of all child work items to **Closed**.

NOTE

- If all child work items of the parent item meet the rule condition and the target status of the parent item supports transition, the rule is applied.
- If the parent item has any child work items that do not meet the rule condition, when the rule is triggered, a record indicating no operation performed is generated and the parent item status is not transitioned.
- If there is no parent item, when the rule is triggered, a record indicating that no operation performed is generated and the parent item status is not transitioned.
- If the parent item transition status configured in the rule does not support transition, when the rule is triggered, a record indicating an execution error is generated and the parent item status is not transitioned.

Step 8 Go to the work item list. The feature status is automatically updated to **Rejected**, and an automation rule operation record is added to the **Operation History** page on the work item details page.

Step 9 Go to **Step 3** and click  (enabled) on the right of **Close parent workitem after Story completes** to disable the configured rule.

Step 10 Go to **Step 7** and then access the work item list again.

- The status of features is not automatically updated.
- No operation records related to the automation rule appear on the operation history tab of the work item details page.

----End

5.2.6 Adding Work Item Modules

- You can add, modify, and delete work item modules in a project.
- You can add submodules to a module.
- When creating or editing a work item, you can specify the module to which the work item belongs.

Prerequisites

A Scrum project is available, and you have permission to **set modules** for the project.

Procedure

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a Scrum project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Modules**.

Step 4 Click **Add Module** to add a work item module by referring to the following table. A maximum of 1,024 modules can be added.

Table 5-2 Adding a module

Parameter	Description
Name	Module name. Enter a maximum of 30 characters.
Description	Module description. Enter a maximum of 255 characters.
Owner	Module owner. Select from all members of the current project.

Step 5 Click **Clone Module** to replace the module settings of the target project with those of the current project.

Step 6 Edit or delete a module, or add a submodule.

Table 5-3 Module operations

Operation	Description
Edit	Click to modify a module.
Add submodule	Click to add a submodule. A maximum of three levels are supported.
Delete	Click to delete a module. **NOTE** Modules that are currently in use by work items cannot be deleted.

Step 7 On the page for creating or editing a work item, select a module in the **Module** field.

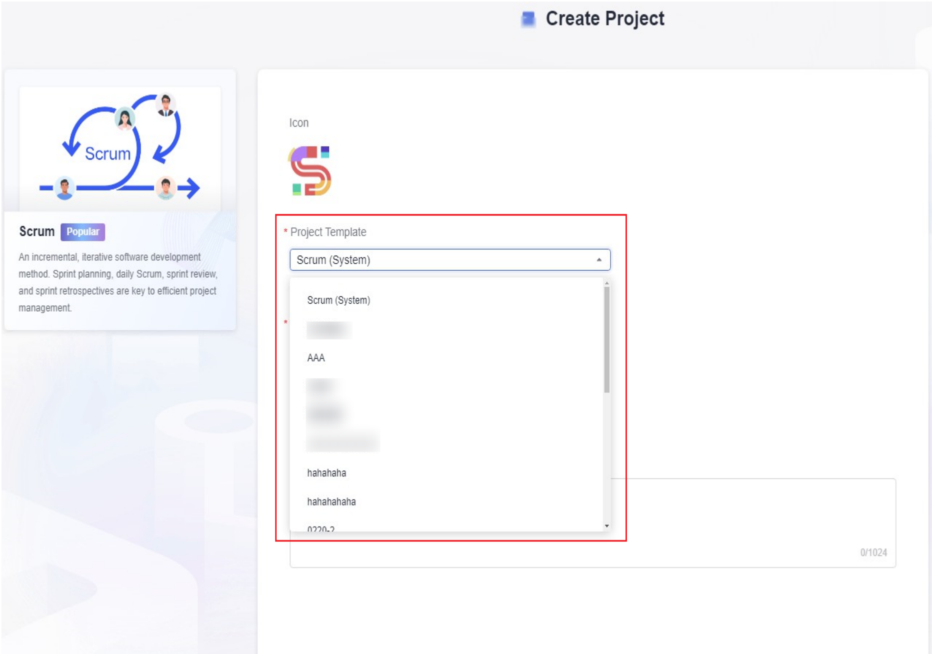
If there is no module, click to add one.

----End

NOTE

- After the configuration is complete, click **Save as Template** in the upper right corner of the page. In the **Save as Template** dialog box, enter a template name and description, and click **OK**.
- This template can be used to create Scrum projects.

Figure 5-47 Creating a Scrum project



5.2.7 Adding Work Item Domains

- You can add, edit, and delete work item domains in a project.
- When creating or editing a work item, you can specify the domain to which the work item belongs.

  The default domains include performance, function, reliability, network security, maintainability, other DFX, and usability. You can add more domains as required.

Prerequisites

A Scrum project is available, and you have permission to **set domains** for the project.

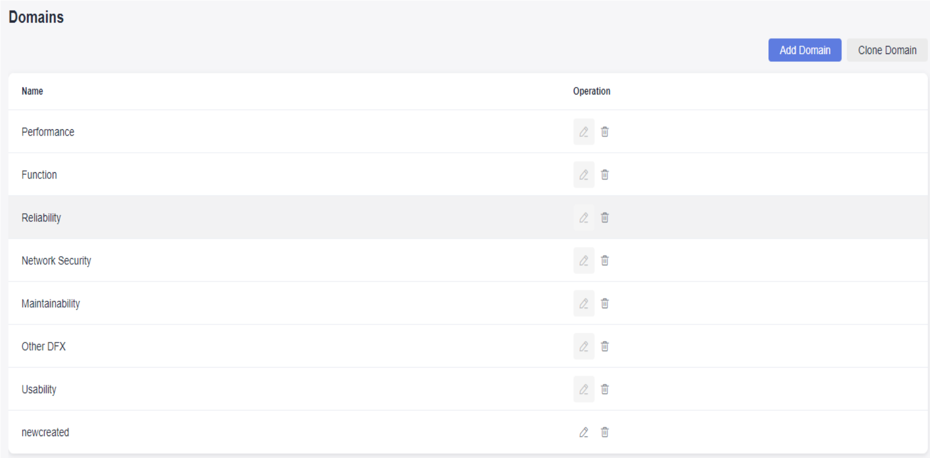
Procedure

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a Scrum project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Domains**.

Figure 5-48 Domains page



Step 4 Click **Add Domain** to add a work item domain by referring to the following table. A maximum of 25 domains can be added.

Table 5-4 Adding a domain

Parameter	Description
Name	Domain name. Enter a maximum of 30 characters.

Step 5 Click **Clone Domain** to replace the domain settings of the target project with those of the current project.

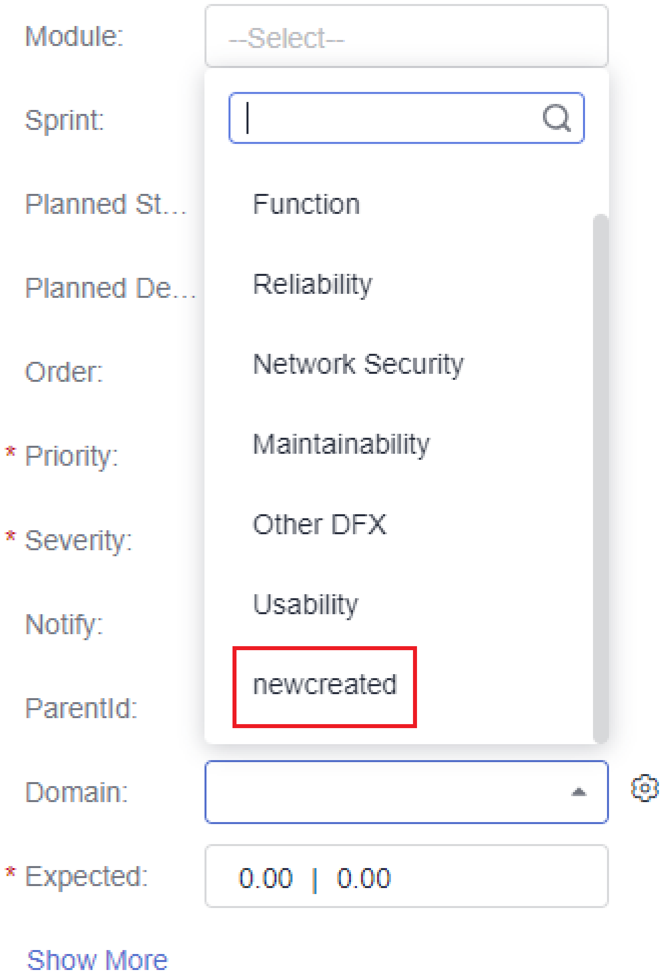
Step 6 Edit or delete a domain if needed.

Table 5-5 Domain operations

Operation	Description
Edit	Click to modify a domain. **NOTE** Default domains cannot be edited.
Delete	Click to delete a domain. **NOTE** • Domains that are currently in use by work items cannot be deleted. • Default domains cannot be deleted.

Step 7 On the page for creating or editing a work item, select an added domain in the **Domain** field.

Figure 5-49 Work item details page

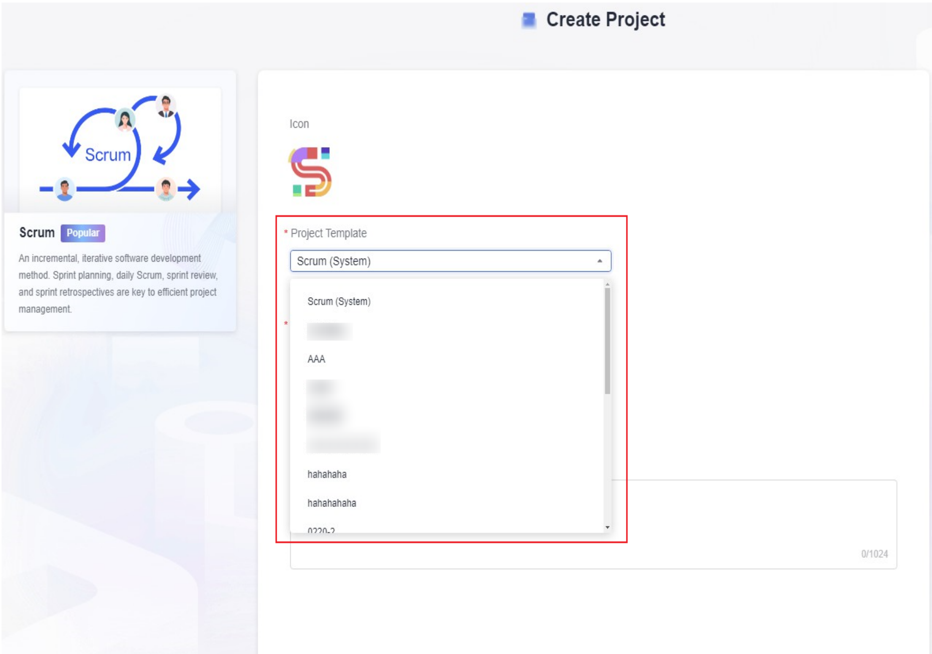


----End

NOTE

- After the configuration is complete, click **Save as Template** in the upper right corner of the page. In the **Save as Template** dialog box, enter a template name and description, and click **OK**.
- This template can be used to create Scrum projects.

Figure 5-50 Creating a Scrum project



5.2.8 Adding Work Types

- You can add, edit, and delete work types in a project.
- On the **Person-Hour Details** tab of the work item details page, you can set the person-hours required for a specific work type.

  The default work types are as follows: R&D design, backend development, frontend development (web), frontend development (applet), frontend development (app), test and verification, defect rectification, UI design, meeting, public affairs, training, study, reassignment and leave, and other. You can add more work types as required.

Prerequisites

A Scrum project is available, and you have permission to **set work types** for the project.

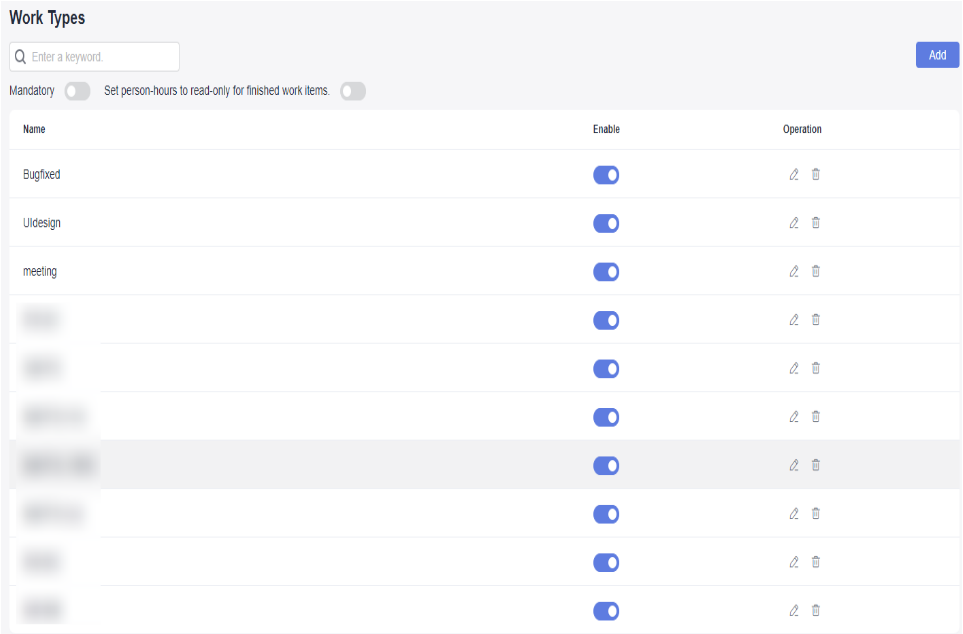
Procedure

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a Scrum project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Work Types**.

Figure 5-51 Work Types page



Step 4 Click **Add** to add a work type by referring to the following table. A maximum of 500 work types can be added.

Table 5-6 Adding a work type

Parameter	Description
Name	Work type name. Enter a maximum of 30 characters.

Step 5 Edit or delete a work type if needed.

Table 5-7 Work type operations

Operation	Description
Edit	Click to modify a work type.
Delete	Click to delete a work type. **NOTE** Work types that are currently in use by work items cannot be deleted.

Step 6 Configure the following work type settings as required.

Table 5-8 Configuring work type settings

Operation	Description
Mandatory	Click next to **Mandatory** to make work type required for person-hour settings. By default, the work type is not required.

Operation	Description
Set person-hours to read-only for finished work items.	Click next to **Set person-hours to read-only for finished work items.** to make person-hour settings read-only for work items in a **Done** state. By default, person-hour settings are also available for such work items.

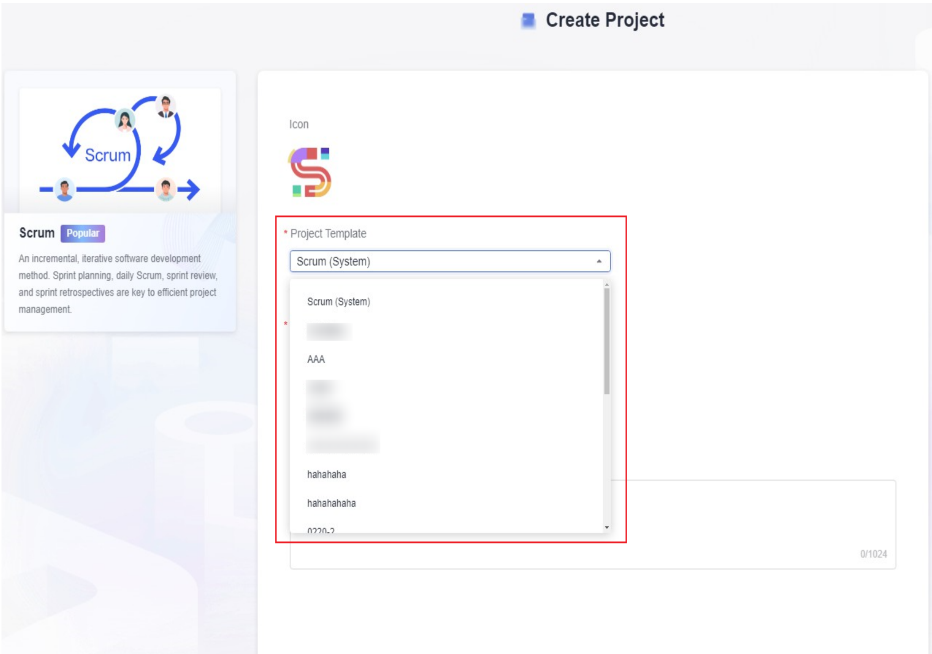
Step 7 On the page for editing a work item, set the person-hours required for a specific work type.

----End

NOTE

- After the configuration is complete, click **Save as Template** in the upper right corner of the page. In the **Save as Template** dialog box, enter a template name and description, and click **OK**.
- This template can be used to create Scrum projects.

Figure 5-52 Creating a Scrum project



5.2.9 Configuring Notification Rules

- Configure notification rules for your project, so that project members can receive notifications when any work items are changed.
- Project notifications can be sent via direct messages or emails.

Prerequisites

A Scrum project is available, and you have permission to **set notifications** for the project.

Procedure

Step 1 [Access the CodeArts Req homepage](#).

Step 2 Go to a Scrum project and choose **Settings** > **Work**.

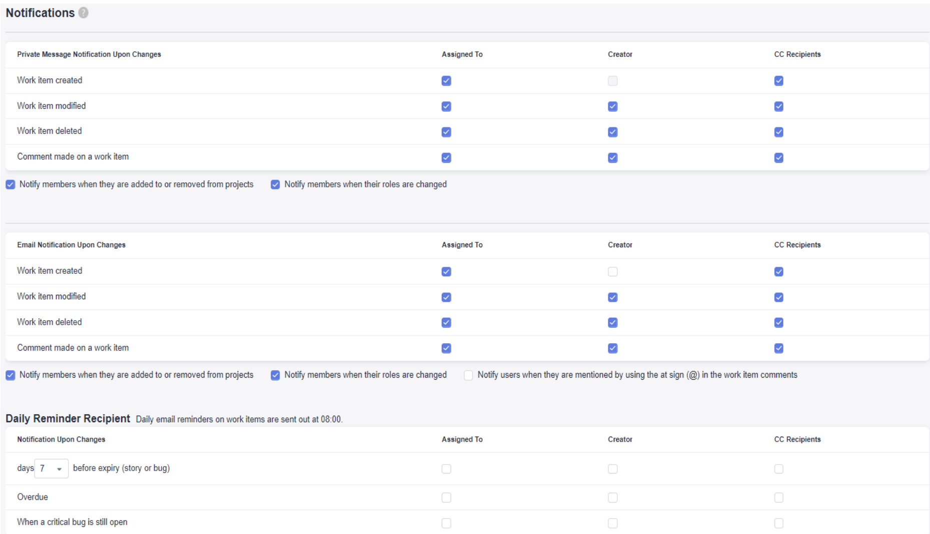
Step 3 In the navigation pane, choose **Notifications**.

Step 4 Select or deselect member check boxes in the row of each work item change type. The selected members will be informed of any such work item changes.

Select work item change types that will trigger notifications. Notifications can be sent to members when work items are created, modified, deleted, or commented on. Members can also be notified when they are added or removed from projects, or their roles are changed.

The notification methods of work item changes include internal message and email.

Figure 5-53 Configuring notifications



Step 5 When such work item change is made, the specified project members can check notifications by clicking in the upper right corner.

NOTE

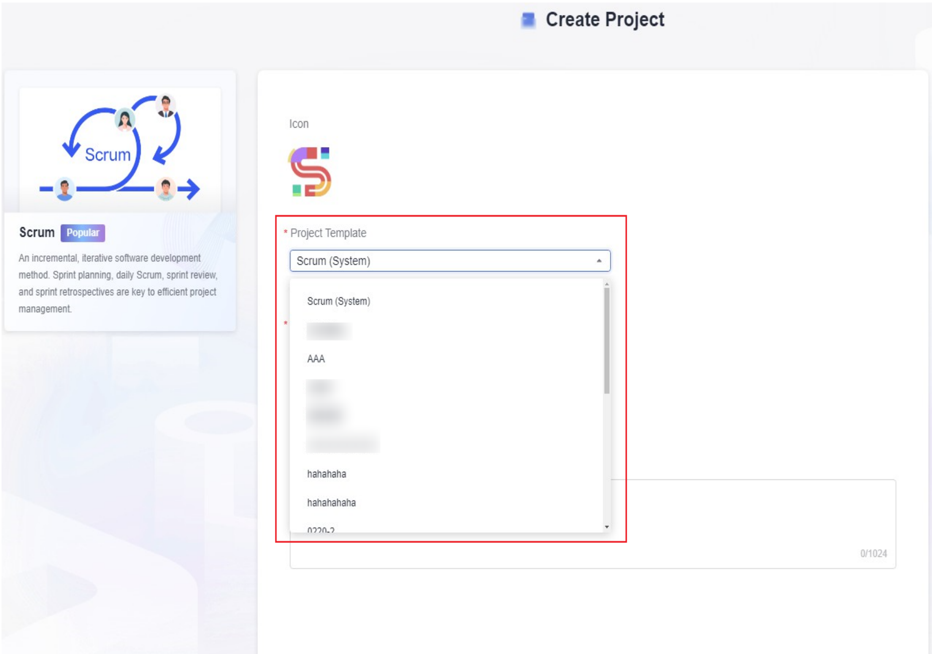
A project member will also be notified if they have enabled **Email Notifications**. The administrator can set email addresses for members using **IAM**.

----End

NOTE

- After the configuration is complete, click **Save as Template** in the upper right corner of the page. In the **Save as Template** dialog box, enter a template name and description, and click **OK**.
- This template can be used to create Scrum projects.

Figure 5-54 Creating a Scrum project



5.3 Creating and Managing Work Items

5.3.1 Creating Work Items

After a project is created, you need to create a work item. In a Scrum project, work items are organized in the descending hierarchy: **Epic** > **Feature** > **Story** > **Task** or **Bug**.

Prerequisites

There is a Scrum project, in which you have permission to **create and duplicate** work items.

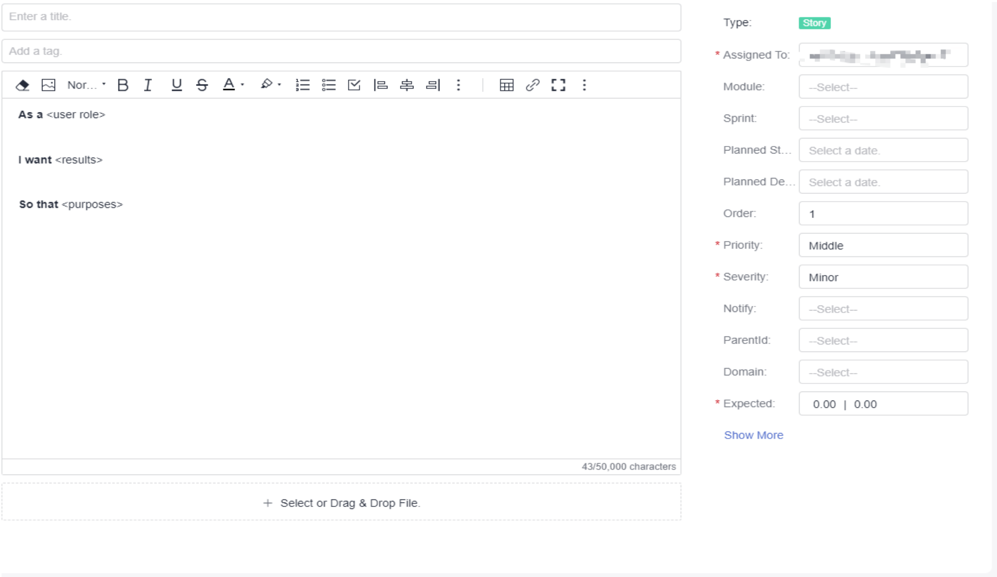
Creating a Work Item in a Scrum Project

Step 1 Access the CodeArts Req homepage.

Step 2 Go to the project homepage and choose **Work > Work Items**.

Step 3 Click **Create Work Item** and select a work item type. For example, **Story**.

Figure 5-55 Creating a Story



Step 4 Set fields for the work item.

For details, see **Configuring Work Item Fields and Templates**. **Table 5-9** describes some default basic fields.

Table 5-9 Creating a work item

Parameter	Description
Title	Work item name. The value can contain a maximum of 512 characters, including letters, digits, periods (.), and underscores (_).
Tag	Tag of a work item, for example, **document update**. **NOTE** Tags can be used only in a project that the work item belongs to.
Description	Enter a description based on the template.
Status	Status of a work item. Status options can be customized. The default statuses are as follows: • New • Developing • Resolved • Testing • Rejected • Closed When you create a work item, its status is **New** by default and cannot be changed.
Assigned To	Handler of a work item. The value range is all members of the project. If a handler has a nickname, the nickname is displayed by default.

Parameter	Description
Module	Module that a work item belongs to. **NOTE** Only project administrators can configure modules. For details, see **Adding Work Item Modules**.
Sprint	Sprint of a work item. Set this parameter to an existing sprint. **NOTE** You can choose whether to use the start and end dates of the selected sprint for this work item.
Planned Start Date	Planned start time of a work item. Select a date from the time control.
Planned Delivery Date	Planned end time of a work item. Select a date from the time control.
Order	Order of a work item. Value range: 1–100
Priority	Priority of a work item. The options are as follows: ● Low ● Middle ● High
Severity	Severity of a work item. The options are as follows: ● Critical ● Major ● Minor ● Trivial
Notify	People who will receive messages about this work item.
ParentId	Parent work item to which a work item belongs. Only one parent work item can be selected. **NOTE** ● The parent work item of a bug or task is a story. ● The parent work item of a story is a feature. ● The parent work item of a feature is an epic. ● No parent work item can be set for an epic.
Domain	Domain that a work item belongs to. **NOTE** Only project administrators can configure domains. For details, see **Adding Work Item Domains**.
Release Version	Version of a release.

Parameter	Description
Developer	Person responsible for developing the work item. Each work item should be assigned to a fixed developer. The handler of a work item changes as the work item develops. These two fields can be used together.
Expected	Estimated person-hours or person-days required to complete a work item.
Actual	Actual person-hours or person-days required to complete a work item.
Find Release Version	Product version where a bug is found. **NOTE** This parameter is available only for work items of the bug type.
Done Ratio	Progress of the work item. The value ranges from **0%** to **100%**. **NOTE** **Done Ratio** of a parent work item is updated automatically based on the completion rate of its child work items.
Story Point	Estimated workload of the story.
Attachment	Upload required files for the work item. Click + Select or Drag & Drop File. to associate files from **Documentation** of the project cloud, or upload local files. **NOTE** The maximum size of attachments for a single work item is 50 MB.

Step 5 After setting the fields, click **Save**.

The created work item is displayed in the work item list.

----End

Related Operations

You can perform the following operations on a new work item.

Table 5-10 Basic operations on work items

Operation	Description
Check work item details	In the work item list, click the title or ID of a work item to check its details.
Edit work item title	In the work item list, click in the row that contains the target work item to edit its title.

Operation	Description
Fast create child work item	In the work item list, click and enter a child work item title to quickly create a child work item. **NOTE** You can create child work items under epics, features, and stories, but cannot create child work items under tasks or bugs.
Favorite work item	In the work item list, click in the **Operation** column of the target work item. After the work item is favorited, the icon changes to . You can click the icon again to unfavorite it.
Copy work item	Click **Clone** under on the right of the target work item to copy the work item to a Scrum or Kanban project. **NOTE** • When copied from a Scrum project to a Kanban project, epics, features, and stories are changed to requirements, while tasks and bugs remain unchanged. • You can copy basic work item information, custom fields, and attachments within a project. Only basic work item information can be copied across projects.
Archive work item	Click **Archive** under on the right of the target work item to archive it. Only work items in the **Closed** state can be archived.
Edit work item	• In the work item list, click the field value in the row of the target work item to edit the corresponding field. • On the work item details page, click the parameter value of the work item to be edited and save the changes.
Delete work item	In the work item list, click in the **Operation** column of the target work item, and select **Delete** to delete the work item and its subtasks. Click **Delete** under in the upper right corner to delete a work item and its subtasks. **NOTE** If you delete work items of a Scrum project, they are permanently deleted and cannot be restored.
Batch operation	Select multiple work items and perform the following operations: • Batch cloning • Batch editing • Batch archiving • Batch deletion • Batch export

5.3.2 Creating Work Items Using Mind Maps

In a Scrum project, you can use a mind map to cohesively plan Scrum requirements. This approach allows for a more intuitive display of the hierarchical structure of work items. Additionally, work items created within the mind map will automatically synchronize with the work item list.

You can create multiple mind maps for a Scrum project.

Prerequisites

There is a Scrum project, in which you have permission to **create** plans.

Creating a Mind Map

Step 1 Access the CodeArts Req homepage.

Step 2 Go to the project homepage and choose **Work > Plans**.

Step 3 Switch to the **Mind Maps** page. Click **Create** > **Mind Maps** and set related parameters in the displayed dialog box.

Table 5-11 Creating a mind map

Parameter	Description
Name	Work item name. It can contain up to 30 characters, including letters, digits, periods (.), and underscores (_).

Step 4 Click **OK**. The mind map is created successfully and is now displayed.

Table 5-12 describes the operations on the mind map page.

Table 5-12 Operations on the mind map page

Operation	Description
Edit mind map name	Click the mind map name to edit it. Press **Enter** or click in the blank area on the page to save the changes.
Add epic	Add all epic work items that are not in the current mind map of the project.
	Description of mind map shortcut keys. • **Insert**: quickly creates a subnode. • **Enter**: quickly creates a sibling node. • **Delete**: quickly deletes a node. • ←, →, ↑, and ↓: controls the selected node. • Double-click: edits the node.

Operation	Description
	Export all work items in a mind map to an Excel or PNG file.
/	Expand or collapse all the child work items of a work item.
Check work item details	Click the title of a work item to view or modify its details.
	Delete a work item and all its child work items.
	Remove a work item and all its child work items. Only epic work items can be removed.
	Insert a sibling node. Create a work item of the same type as the current one. Click the work item name to go to the details page and edit other information. **NOTE** By default, the newly added work items are **Assigned To** the **Creator**. You can reassign them on the work item details page.
	Insert a child node. Enter a name to create a child work item. To add more information, click its name and edit the information on the details page. **NOTE** By default, the newly added work items are **Assigned To** the **Creator**. You can reassign them on the work item details page.

Step 5 Return to the plan list to view the created plan. The items in the list are described as follows.

Table 5-13 Plan list

Parameter	Description
Plan Title	Plan name. Move your cursor to the **Plan Title** column and click to sort plans by title.
Creator	Plan creator. Move your cursor to the **Creator** column and click to sort plans by creator. Click to select a target creator to filter plans.
Created	Time when a plan is created. Move your cursor to the **Created** column and click to sort plans by creation time.
Last Modifier	Name of the user who last modified the plan.
Last Modified	Time when the plan is last modified. Move the cursor to the **Last Modified** column and click to sort plans by last modification time.

Parameter	Description
Operation	Click to edit the plan name. Press **Enter** or click in the blank area of the page to save the changes. Click to delete the plan. **NOTE** If you delete plans in a Scrum project, they are permanently deleted and cannot be restored.
Batch operation	Select the check boxes on the left of plans and click Delete to delete the selected plans in batches. **NOTE** If you delete plans in a Scrum project, they are permanently deleted and cannot be restored.

Step 6 Click in the upper right corner to switch to the card mode.

Table 5-14 Operations in the card mode

Operation	Description
Change plan title	Hover your cursor over the plan title and click to edit the name. Press **Enter** or click in the blank area of the page to save the changes.
Delete plan	Click ··· in the upper right corner of a plan card and select **Delete**. **NOTE** If you delete plans in a Scrum project, they are permanently deleted and cannot be restored.
Sort plans	Move your cursor over Sort in the upper right corner and choose **Plan Title** or **Last Modified**.

- The **Plans** tab page displays all plans of a project, including mind map plans and Gantt chart plans.
- You can switch between different plan views by selecting **All**, **Gantt Charts**, or **Mind Maps** in the upper left corner.
- The default filters include **All** or **Created by me**. You can select a filter to quickly display the desired plans.
- You can enter a plan name in the search box to search for it.

----End

Creating a Work Item in a Mind Map

Step 1 Access the CodeArts Req homepage.

Step 2 Go to the project homepage and choose **Work > Plans**.

Step 3 Click a mind map name. The mind map details page is displayed. **Table 5-12** describes the operations on the details page.

Step 4 Add one or more epic work items, set the names (for example, **Epic1**), and press **Enter**.

Add epic work items in any of the following ways:

- Click for the first addition.
- Click **Adding to Existing Epic** to add existing epics in the project to the mind map.
- Select an epic work item (for example, **Epic1**) and press **Enter**.
- Hover the cursor over **Requirements** and click .

Step 5 Add one or more feature work items to an epic work item, set the names (for example, **Feature1**), and press **Enter**.

Add feature work items in any of the following ways:

- Select an epic work item (for example, **Epic1**) and press **Insert**.
- Select a feature work item (for example, **Feature1**) and press **Enter**.
- Hover the cursor over a feature work item (for example, **Feature1**) and click .
- Hover the cursor over an epic work item (for example **Epic1**) and click .

Step 6 Add one or more story work items to a feature work item, set the names (for example, **Story1**), and press **Enter**.

Add story work items in any of the following ways:

- Select a feature work item (for example, **Feature1**) and press **Insert**.
- Select a story work item (for example, **Story1**) and press **Enter**.
- Hover the cursor over a story work item (for example, **Story1**) and click .
- Hover the cursor over a feature work item (for example, **Feature1**) and click .

Step 7 Add one or more task work items to a story work item, set the names (for example, **Task1**), and press **Enter**.

- Select a story work item (for example, **Story1**) and press **Insert**.
- Select a task work item (for example, **Task1**) and press **Enter**.
- Hover the cursor over a task work item (for example **Task1**) and click .

----End

Sorting Work Items in a Mind Map

Step 1 Access the CodeArts Req homepage.

Step 2 Go to the project homepage and choose **Work** > **Plans**.

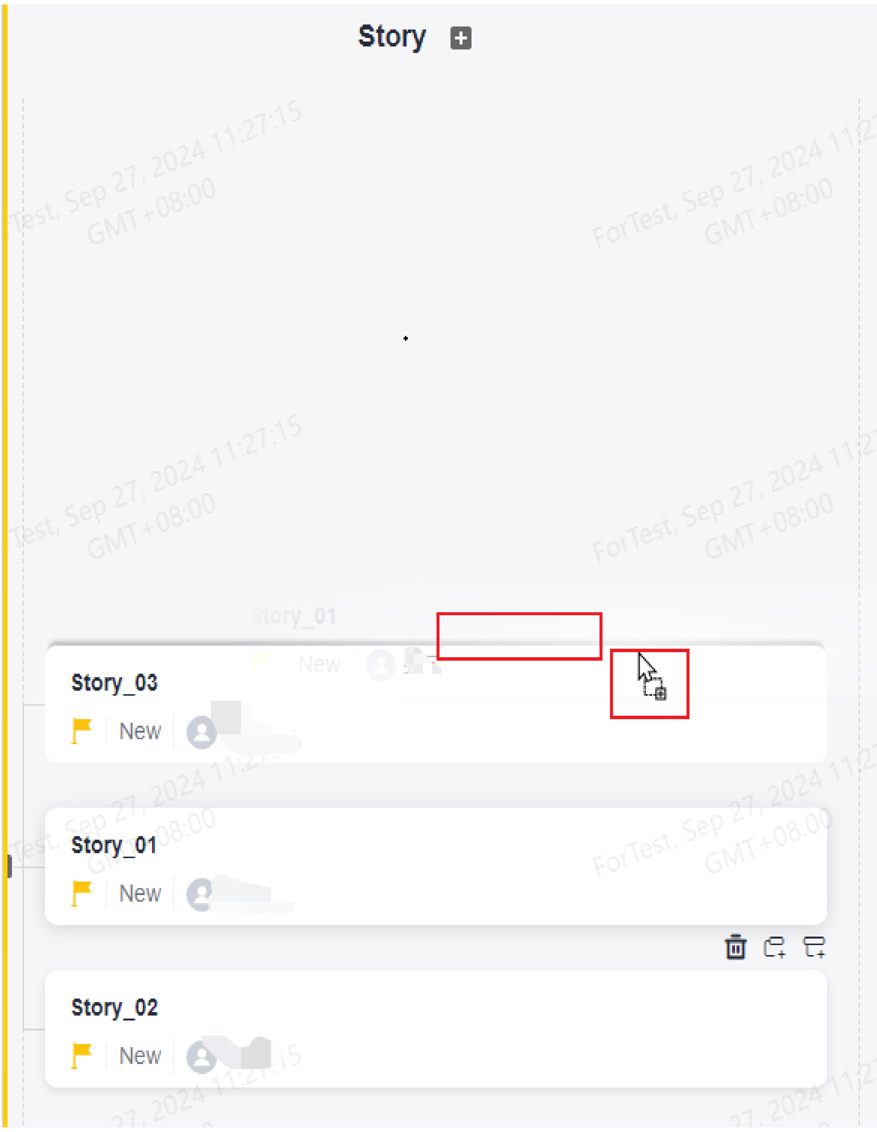
Step 3 Click a mind map name. The mind map details page is displayed.

Step 4 Sort work items at the same level:

Select a work item in the mind map. Hold down the left click button and drag it up or down to change its order.

For example, drag **Story_04** to the top of **Story_02**. When a gray board is displayed above **Story_02** with a plus sign (**+**), release the mouse.

Figure 5-56 Sorting work items in drag-and-drop mode

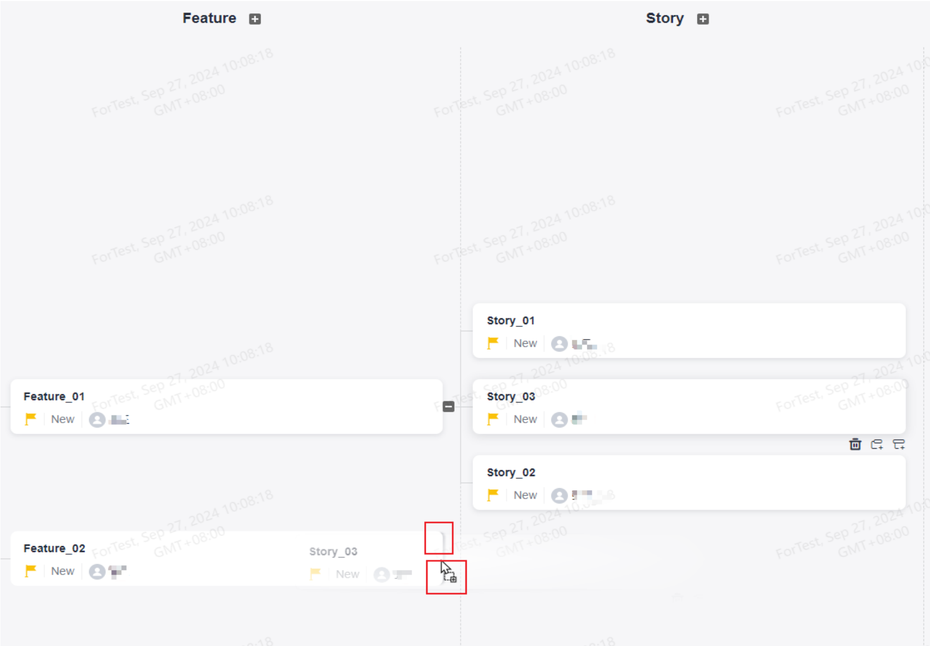


Step 5 Adjust the hierarchical relationship of work items:

Select a work item in the mind map. Hold down the left click button and drag it leftwards or rightwards to adjust its hierarchical level.

For example, drag **Story_01** to the back of **Feature_03**. When a gray boarder appears to the right of **Feature_03** with a plus sign (**+**), release the mouse.

Figure 5-57 Adjust the hierarchical relationship of work items in drag-and-drop mode



NOTE

- Adjusting the work item level will automatically change the type of the involved work items.
- Work items with child work items cannot be adjusted to the task level.
- A work item (including its child work items) can be adjusted upwards or downwards in the hierarchy. If the adjusted work item level exceeds the task level, the work item cannot be adjusted.
- The planned work items will be displayed on the **Work Item** > **Req** > **Work Items** page.
- You can filter work items by epic, feature, and story.

----End

5.3.3 Creating Work Items Using Gantt Charts

You can create a Gantt chart to display the sequence and duration of a specific project through the activity list and time scale.

Gantt chart visualizes the project schedule and progress for a better evaluation of the remaining tasks and project progress. In the Gantt chart, the **X axis** represents the time (milestones), the **Y axis** is the activities (work items) to be scheduled, and the line shows the project progress.

In a Scrum project, you can create multiple Gantt charts. In each chart, you can create milestones and work items, or add existing work items.

Prerequisites

There is a Scrum project, in which you have permission to **create** plans.

Creating a Gantt Chart

Step 1 [Access the CodeArts Req homepage](#).

Step 2 Go to the project homepage and choose **Work** > **Plans**.

Step 3 Switch to the **Gantt Charts** page. Click **Create**, select **Gantt Charts**, and set related parameters in the displayed dialog box.

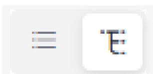
Table 5-15 Creating a Gantt chart

Parameter	Description
Name	Gantt chart name. It can contain up to 30 characters, including letters, digits, periods (.), and underscores (_).

Step 4 Click **OK**. The Gantt chart is created successfully and is now displayed.

Table 5-16 describes the operations on the Gantt chart page.

Table 5-16 Operations on the Gantt chart page

Operation	Description
Edit Gantt chart name	Click the Gantt chart name to edit it. Press **Enter** or click in the blank area on the page to save the changes.
Add existing work items	Click **Add to Existing Work Item** to add the current plan to an existing work item.
Create	Click the button to create a work item or milestone.
	Click the button to set the fields to be displayed in a Gantt chart and their sequence. A maximum of five fields can be displayed.
	Click the button to switch the view mode of work items in a Gantt chart. List and tree view modes are supported.
Configure displayed time scale	Click  in a Gantt chart to switch the time axis scale. The date can be displayed by day, week, or month.
Zoom in and out Gantt chart	Click  to zoom in and out a Gantt chart.

Step 5 Return to the plan list to view the created plan. The items in the list are described as follows.

Table 5-17 Plan list

Parameter	Description
Plan Title	Plan name. Move your cursor to the **Plan Title** column and click to sort plans by title.
Creator	Plan creator. Move your cursor to the **Creator** column and click to sort plans by creator. Click to select a target creator to filter plans.
Created	Time when a plan is created. Move your cursor to the **Created** column and click to sort plans by creation time.
Last Modifier	Name of the user who last modified the plan.
Last Modified	Time when the plan is last modified. Move the cursor to the **Last Modified** column and click to sort plans by last modification time.
Operation	Click to edit the plan name. Press **Enter** or click in the blank area of the page to save the changes. Click to delete the plan. **NOTE** If you delete plans in a Scrum project, they are permanently deleted and cannot be restored.
Batch operation	Select the check boxes on the left of plans and click Delete to delete the selected plans in batches. **NOTE** If you delete plans in a Scrum project, they are permanently deleted and cannot be restored.

Step 6 Click in the upper right corner to switch to the card mode.

Table 5-18 Operations in the card mode

Operation	Description
Change plan title	Hover your cursor over the plan title and click to edit the name. Press **Enter** or click in the blank area of the page to save the changes.

Operation	Description
Delete plan	Click ··· in the upper right corner of a plan card and select **Delete**. **NOTE** If you delete plans in a Scrum project, they are permanently deleted and cannot be restored.
Sort plans	Move your cursor over Sort in the upper right corner and choose **Plan Title** or **Last Modified**.

- The **Plans** tab page displays all plans of a project, including mind map plans and Gantt chart plans.
- You can switch between different plan views by selecting **All**, **Gantt Charts**, or **Mind Maps** in the upper left corner.
- The default filters include **All** or **Created by me**. You can select a filter to quickly display the desired plans.
- You can enter a plan name in the search box to search for it.

----End

Creating a Work Item in a Gantt Chart

Step 1 Access the CodeArts Req homepage.

Step 2 Go to the project homepage and choose **Work** > **Plans**.

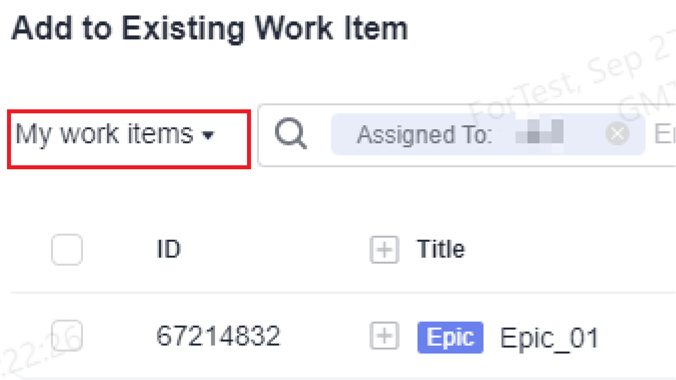
Step 3 Click a Gantt chart name. The Gantt chart details page is displayed. **Table 5-16** describes the operations on the details page.

Step 4 Add work items to a Gantt chart and set the planned time for the work items.

Add work items in any of the following ways:

- Add existing work items
  a. Click **Add to Existing Work Item**.
     By default, all work items are displayed.
  b. Click **All work items** to display the work items to be added, for example, **My work items**.

Figure 5-58 Add existing work items



c. Select the target work items and click **OK**.

Now the added work items are displayed in the Gantt chart.

- Creating a work item

  Click the create button, select a work item type, configure basic information, and click **OK**. To create multiple work items, repeat this operation.

- Quickly creating a work item

  Click the fast create button, select a work item type, configure basic information, and click **OK**. To create multiple work items, repeat this operation.

  NOTE

  Work items created in the Gantt chart are displayed on the **Work > Work Items** page.

The following table describes the basic operations on work items in a Gantt chart.

Table 5-19 Basic operations on work items

Operation	Description
Check work item details	Click the ID or title of the target work item to go to its details page.
Edit work item title	Click on the right of the target work item, edit the title, and press **Enter** or click in the blank area of the page to save the changes.
Fast create child work item	Click on the right of the target work item to create a child work item under it. Enter a work item name and click **OK**. **NOTE** You can create child work items under epics, features, and stories, but cannot create child work items under tasks or bugs.
Copy work item	Click **Clone** under on the right of the target work item to copy it to a Scrum or Kanban project. **NOTE** – When copied from a Scrum project to a Kanban project, epics, features, and stories are changed to requirements, while tasks and bugs remain unchanged. – Only basic information, custom fields, and attachments of work items can be copied within a project. Only basic information of work items can be copied across projects.
Remove work item	Click **Remove** under on the right of the target work item to remove it and its child work items from the Gantt chart.

Operation	Description
Delete work item	Click **Delete** under on the right of the target work item to delete it and its child work items. **NOTE** If you delete work items of a Scrum project, they are permanently deleted and cannot be restored.
Adjust planned time of work item	In the time axis area on the right of a Gantt chart, move your cursor to the timeline of the target work item and drag the timeline to adjust the start and end time of the work item. You can also drag the timeline itself to make these adjustments.
Adjust work item completion rate	In the time axis area on the right of a Gantt chart, move the cursor to the timeline of the target work item and drag on the time axis to adjust the completion rate of the work item. **NOTE** You can adjust the completion rate only for work items at the bottom-layer leaf nodes. The completion rate of work items with child work items cannot be adjusted.
Perform batch operations on work items	Select a work item and perform the following operations on it as required: – Clone: Clone the selected work item. – Edit: Edit the selected work item. – Remove: Remove the selected work item from the Gantt chart, but not from the **Work Item > Req > Work Items** page. – Archive: Archive a work item. Only work items in the **Closed** state can be archived. – Delete: Delete the selected work item from both the Gantt chart and the **Work Item > Req > Work Items** page.

Step 5 Create a milestone and set the milestone date.

1. Click **Create Work Item** and select **Milestone**. On the **Create Milestone** page, set related parameters.

Table 5-20 Creating a milestone

Parameter	Description
Milestone Name	Milestone name can contain up to 128 characters, including letters, digits, periods (.), and underscores (_).
Milestone Owner	Milestone owner. You can select any member of the project.

Parameter	Description
Milestone Date	Milestone completion date.

2. Click **OK**.

   Click **Continue to Create** to create more milestones.

   The following table lists the basic operations on a milestone in the Gantt chart.

Table 5-21 Basic operations on a milestone

Operation	Description
Edit milestone title	Click on the right of the target milestone to edit the title, and press **Enter** or click in the blank area of the page to save the changes.
Edit milestone	Click **Edit** under on the right of the target milestone to edit its name, owner, and date, and click **OK**.
Delete milestone	Click **Delete** under on the right of the target milestone to delete it. **NOTE** If you delete milestones in a Scrum project, they are permanently deleted and cannot be restored.

----End

5.3.4 Managing Work Items

After creating a work item (see **Creating Work Items**), you can perform the operations described in this section on it.

Prerequisites

You have created a work item in the Scrum project and have permissions on the work item in the project.

On the Work Item List Page

Access a Scrum project, choose **Work > Work Items**, and perform the following operations.

Figure 5-59 Work item list page

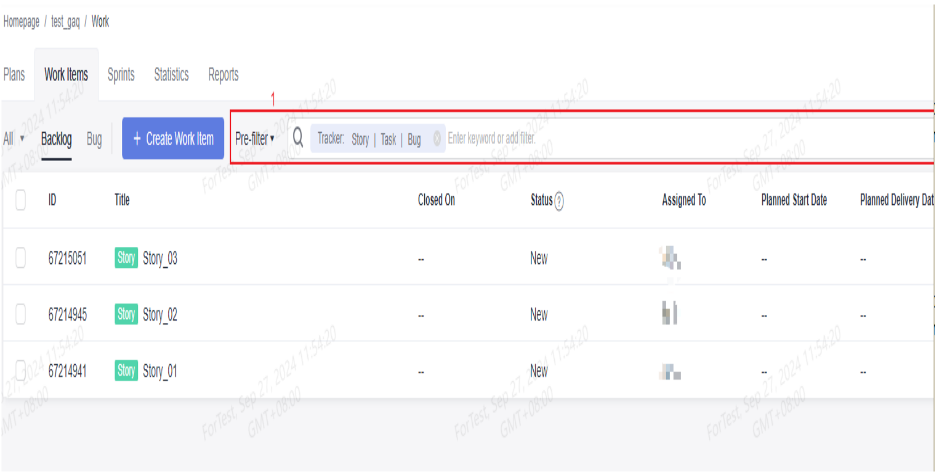
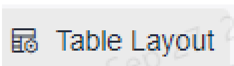
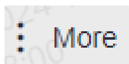


Table 5-22 Managing work items in the work item list

Operation	Procedure
Filter and query work items	1. Click  to view all existing filters and select a filter as required. 2. Click the search box to add multiple work item fields as filter criteria. 3. View the matched work items. **NOTE** For work items filtered by **Assigned To**, if the parent work item and its child work items are not assigned to the same person, only the matched parent work item or child work items can be displayed. Click a work item name to view its parent-child relationship. 4. (Optional) Click  on the right of the search box to save the current filter criteria.
Configure fields to display	Click  in the upper right corner and select parameters to be displayed.
Set table display mode	Click  in the upper right corner and select **Compact**, **Standard**, or **Loose** as required.
Check archived work item	1. Click **Archived Work Items** under  in the upper right corner to check archived work items. 2. Archived work items can be unarchived and deleted in batches.

Operation	Procedure
Import work items	1. Click **Import** under ⋮ More in the upper right corner. The **Import Work Item** dialog box is displayed. 2. Click **Download Template**. 3. Fill in the template based on the instructions. 4. In the **Import Work Item** dialog box, upload a file and click **Import**.
Export work items	1. Click **Export** under ⋮ More in the upper right corner. The **Set Fields to Export** dialog box is displayed. 2. Select fields to be exported and click **OK** to export the work items to the local PC in an Excel file. **NOTE** A maximum of 2,000 work items can be exported.
Check work item	In the work item list, work items can be checked in list mode ( ), tree mode ( ), or card mode ( ). 1. List view This view lists all work items that meet the conditions regardless of their parent-child relationships. 2. Tree view This view shows the parent-child relationships between work items that meet the conditions. By default, only parent work items are displayed. You can view the hidden child work items by expanding the parent work items. Note: When work items are filtered by type, only the data of the corresponding work item type is displayed in the tree view, and the data of child work items is not displayed in the tree view. 3. Card view All work items are represented by cards and grouped by status. You can change the status of a work item by drag-and-drop.

On the Work Item Details Page

On the work item details page, you can modify the handler and status, view associated work items, code commit records, work item operation history, and add attachments to the work items.

Access a Scrum project, choose **Work > Work Items**, and click the work item title. On the details page, perform the following operations.

Figure 5-60 Work item details page

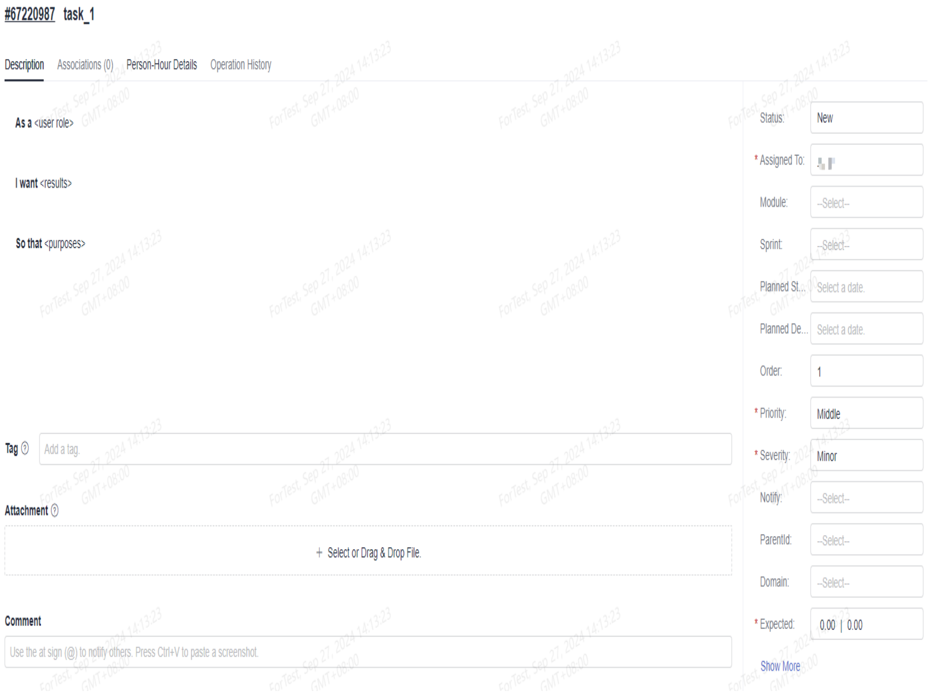
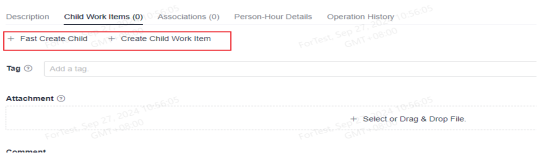


Table 5-23 Managing work items on the details page

Operation	Procedure	Remarks
Edit work item	1. Click the field value to be modified and enter a target value in the text box or select it from the drop-down list. 2. Click **Save** in the upper right corner to save the change.	You must have permission to **edit** work items.
Copy work item link	Click in the upper right corner to copy the work item ID, title, and link to the clipboard.	All members of the project can perform this operation.

Operation	Procedure	Remarks
Add child work item	1. Click the **Child Work Item** tab. **Figure 5-61** Work item details/child work items  2. Click **Fast Create Child** to quickly create a child work item. This mode applies to quick scenario creation. 3. To create a child with complete parameters, click **Create Child Work Item**.	You must have permission to **edit** work items.

Operation	Procedure	Remarks
Add and check related items	1. Click the **Associations** tab. **Figure 5-62** Work item details/association  2. Complete association. • **Associate with Work Item** Expand the **Associate with Work Item** area and click **Associate with Work Item**. Then select the work items you want to associate. The associated work items are displayed below the **Associate with Work Item** button. • **Code Commits** Expand the **Code Commit Records** area, and associate the desired commit records. To associate a work item with code commit records, do as follows: 1. In CodeArts Repo, set additional information about assigned work items that are not closed. 2. After inserting work items, enter a description and click **OK**. 3. After the association, the associated code commit record is displayed under **Code Commits**. • **Associated Code Branches** Expand the **Associated Code Branches** area to display the associated code branches. To associate a work item with code branches, do as follows: 1. Create a branch in CodeArts Repo and associate it with work items. 2. After the branch is created, the associated code branch is displayed under **Associated Code Branches**.	You must have permission to **edit** work items.

Operation	Procedure	Remarks
Add detailed workloads	1. Click the **Person-Hour Details** tab. 2. Click **Add Person-Hour**, set person-hours as required, and click **OK**. 3. View the person-hours of each member. 4. (Optional) Choose **Work Item** > **Req** > **Sprints** and click in the upper right corner to display the list in member mode. Then view the total actual workload in the member column. **NOTE** The total actual workload is the sum of all person-hours from different members. By default, this workload belongs to the current handler.	You must have permission to **edit** work items.
View operation history	1. Go to the work item details page. 2. Click the **Operation History** tab.	All members of the project can perform this operation.
Tag work item	1. Click the **Tag** text box to add a tag to the work item. The added tag is displayed in the **Tag** area. 2. View the existing tags on the work item details page.	You must have permission to **edit** work items.
Add attachment	Perform the following operations to add attachments to a work item. You can upload/drag-and-drop a local file or choose a file in CodeArts Wiki. 1. Access the page for creating or editing a work item. 2. Click + to add attachments to the work item. The maximum size of attachments for a single work item is 50 MB.	You must have permission to upload files for work items.
Comment on work item	In the **Comment** area, you can comment on work items. **NOTE** To notify others of the comment, you can **@** *a user account*, and a notification will be sent using private **Message**. For details, see **Configuring Notification Rules**.	All members of the project can perform this operation.

5.4 Configuring a Sprint Plan

In a Scrum project, sprints can be used to manage and track versions.

Prerequisites

There is a Scrum project, in which you have permission to **create** sprints.

Creating a Sprint

Step 1 Access the CodeArts Req homepage.

Step 2 Go to the project homepage and choose **Work** > **Sprints**.

Step 3 Click + above the sprint list. In the **Create Sprint** dialog box, set related parameters.

Table 5-24 Creating a Sprint

Parameter	Description
Sprint Name	Sprint name, which can contain a maximum of 60 characters, including letters, digits, periods (.), and underscores (_).
Planned Duration	Start time and end time of a sprint plan.
Description	Description of a sprint plan. The value can contain a maximum of 500 characters, including letters, digits, periods (.), and underscores (_).

Step 4 Click **OK**. The sprint is created successfully, and the sprint page is displayed.

By default, the created sprints are displayed on the left in descending order of the creation time. You can click a sprint card on the left to switch to another sprint.

The sprint page displays the sprint name, planned sprint time, sprint description, sprint statistics, and work items in the sprint.

----End

Follow-up Operations

After operations in **Creating a Sprint** are complete, you can perform the following operations.

Table 5-25 Managing a sprint

Operation	Description	Remarks
Edit sprint	Click ⋮ in the upper right corner of a sprint card and click **Edit**.	You must have permission to **edit** sprints.

Operation	Description	Remarks
Change sprint status	● Click in the upper right corner of a sprint card and click **Start** to change the sprint status from **To Do** to **Doing**. **NOTE** You can start a sprint only when there are work items in it. ● For sprints in the **Doing** state: – Click in the upper right corner of the sprint card and click **Set as To Do**. The sprint state is changed from **Doing** to **To Do**. – Click in the upper right corner of the sprint card and click **Close**. The sprint state is changed from **Doing** to **Done**. ● For sprints in the **Done** state, click in the upper right corner of the sprint card and click **Restart**. The sprint state is changed from **Done** to **Doing**.	You must have permission to **set statuses** for sprints.
Delete sprint	Click in the upper right corner of the sprint card and click **Delete**. **NOTE** ● If a Scrum project sprint is deleted, it is permanently deleted and cannot be restored. ● After a sprint is deleted, all work items in the sprint are automatically moved to the category of unplanned work items.	You must have permission to **delete** sprints.
Plan sprint	You can select unplanned work items or work items under other sprints and drag them to the target sprint.	You must have permission to **edit** sprints.

Operation	Description	Remarks
View and manage sprint	Click in the upper right corner of a sprint to switch the display mode of sprint work items. • Click to switch to the **List** mode. • Click to switch to the **Tree** mode. • Click to switch to the **Card** mode. • Click to switch to the **Member** mode. Click Statistics on the top to view more details, including work item statistics, burndown charts, and project member data. Click **Create Work Item** to create a **Story**, **Task**, or **Bug**. Click the handler and status in the row that contains the target work item for a quick modification.	All project members can view sprints. To create a work item in a sprint, you must have permission to **create and duplicate** work items. To modify a work item in the sprint list, you must have permission to **edit** work items.

5.5 Tracking the Project Progress

5.5.1 Tracking the Progress with Statistical Charts

You can use statistical charts to track the progress of work items in a project.

There are two types of charts available: custom and preset. The preset templates include the overview, workloads, work item distribution, sprints, and bug types. Select a template as required.

Prerequisites

- There is a Scrum project, in which you have permission to **create** charts.
- There is a Scrum project, in which you have permission to **create, rename, and delete** chart types.

Creating a Custom Chart

You can use custom charts to analyze the measures from several dimensions, including the **Story point**, **Expected person-hours**, **Actual person-hours**, and **Work item**.

Step 1 [Access the CodeArts Req homepage](#).

Step 2 Access a Scrum project. Choose **Work > Statistics**. Click **Create Report**. In the displayed dialog box, choose **Custom Chart**.

Step 3 On the page for creating a custom chart, configure the following information.

Figure 5-63 Creating a custom chart

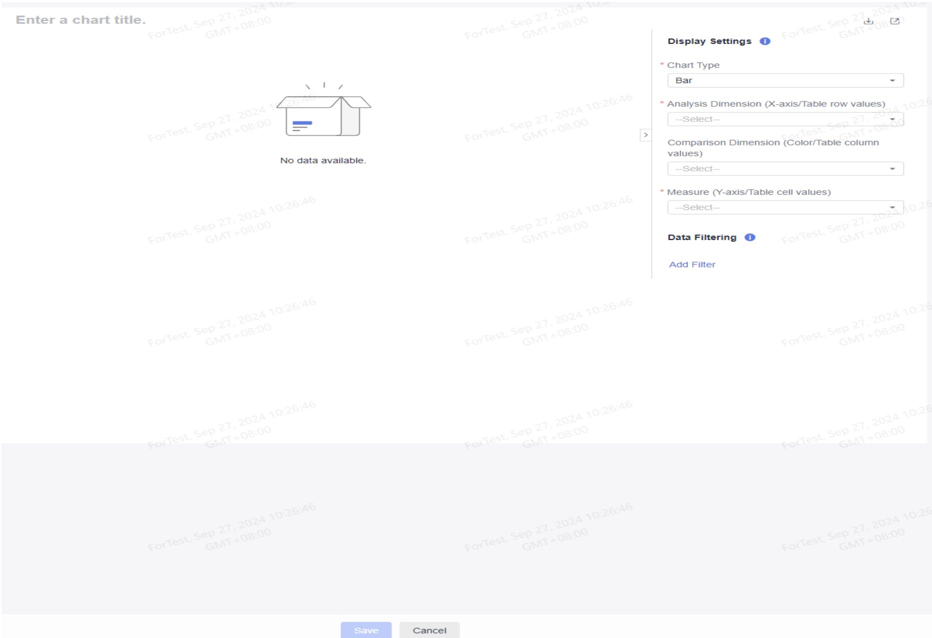


Table 5-26 Creating a custom chart

Parameter	Description
Title	Chart title. The value can contain 3 to 128 characters, including letters, digits, underscores (_), and hyphens (-).
Chart Type	Chart display type. The options include **Bar** or **Pie**.
Analysis Dimension	Data analysis dimension of a chart, that is, data dimension represented by the X axis.
Comparison Dimension	Data comparison dimension of a chart, that is, data dimension represented by the color block on the Y axis.
Measure	Data summary item of a chart, that is, data dimension represented by the Y axis. Statistics on the number of story points and work items, and estimated and actual workloads are supported.
Data Filtering	After clicking **Add Filter**, you can select a system field or customize a field to filter the range of chart statistics.

NOTE

- In brief, statistic charts calculate the **Measure** of each **Analysis Dimension** in each **Comparison Dimension**.

  For example, set **Analysis Dimension** to **Handler**, **Comparison Dimension** to **Sprint**, and **Measure** to **Expected person-hour**. The expected person-hours of each handler in each sprint will be calculated.
- In data filtering, you can add different filter criteria to further filter statistic data. For example, if **Sprint** is selected, only work items in the specified sprint are filtered.

Step 4 Click **Save**. Saved charts are displayed on the **Statistics** homepage for you to easily view and modify.

----End

Using a Preset Chart Template

Select a proper preset chart template based on the service scenario.

- You can use the **Work Item Trend**, , and **Work Item Completion** system charts to analyze work items.
- You can use the **Person-Hours of Project Members** system chart to analyze the person-hours of the project members.
- You can use the **Work Items by Handler**, **Work Items by Priority**, and **Work Items by Historical Status** system charts to analyze the work item distribution.
- You can use the **Sprint Burndown Chart** system chart to analyze the sprints.
- You can use the **Bugs by Handler**, **Bugs by Creator**, **Bugs by Priority**, **Bugs by Work Item Status**, and **Bugs by Handler and Work Item Status** system charts to analyze the work item bugs.

The following describes how to use the preset chart template **Work Item Trend** to create a chart.

Step 1 Access the CodeArts Req homepage.

Step 2 Access a Scrum project. Choose **Work Item > Req > Statistics**. Click **Create Report**. In the displayed dialog box, choose **Work Item Trend**.

Step 3 Go to the chart editing page and configure the following information.

Figure 5-64 Editing the work item trend overview

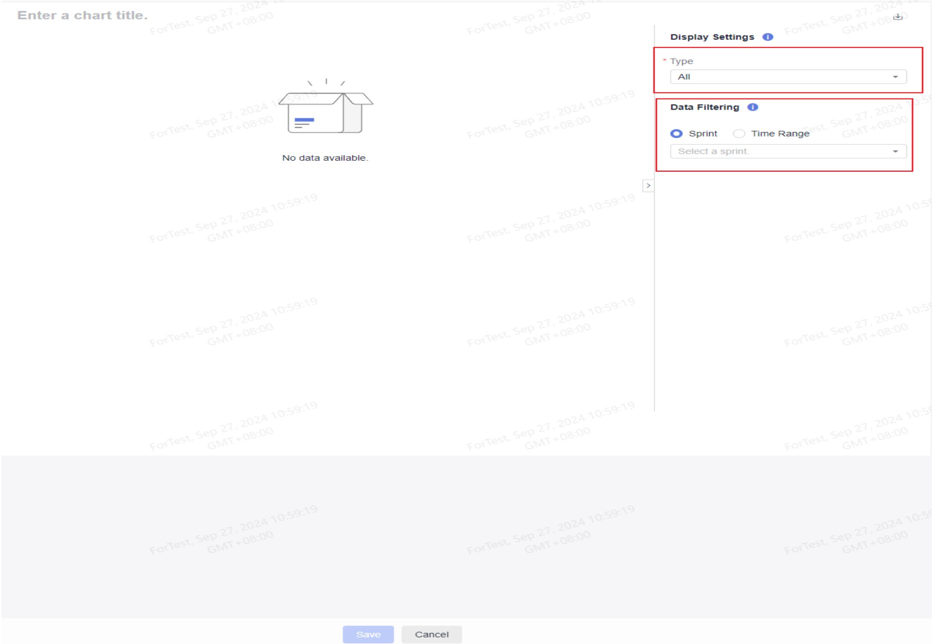


Table 5-27 Creating a chart on work item trend overview

Parameter	Description
Title	Chart title. The value can contain 3 to 128 characters, including letters, digits, underscores (_), and hyphens (-).
Type	Work item type scope. You can select multiple options from all work item types in the project.
Data Filtering	You can select **Sprint** or **Time Range** to filter the data range to be displayed in a chart.

Step 4 Click **Save**. Saved charts are displayed on the **Statistics** homepage for you to easily view and modify.

----End

Follow-up Operations

After operations in **Creating a Custom Chart** or **Using a Preset Chart Template** are complete, users who have permission to **Edit**, **Delete**, **Move**, and **Export** charts can perform the following operations.

You can perform the following operations on created charts.

Table 5-28 Basic chart operations

Operation	Description
Switch chart display mode	Click in the upper right corner of a chart card to switch the chart display mode.
View chart in full screen	Click in the upper right corner of a chart card to view the chart in full screen.
Save chart	Click in the upper right corner of a chart card and click the save chart icon to save the current chart as a PNG image.
Export chart	Click in the upper right corner of a chart card and click **Export Chart** to export the current chart data to an Excel file.
Edit chart	Click in the upper right corner of a chart card and click **Edit Chart** to edit the chart.
Move chart	Click in the upper right corner of a chart card and click **Move Chart** to move the current chart to another chart category.
Delete chart	Click in the upper right corner of a chart card and click **Delete Chart** to delete the current chart. **NOTE** If you delete charts, they are permanently deleted and cannot be restored.

You can manage created charts by category. Multiple chart cards are displayed in one view. By default, **Non-Categorized** charts are displayed. You can create chart categories as required. Each chart category can contain a maximum of 20 chart cards.

Managing Charts by Chart Category

Step 1 Access a Scrum project. Choose **Work > Statistics**, and click in the **Non-Categorized** drop-down list. Enter a name in the **Create Chart Category** dialog box.

Step 2 Click **OK**.

- Chart cards can be placed under chart categories.
- To rename a chart category, click on the right of the chart category name and choose **Rename**.

- To delete a chart category, click ⋮ on the right of the chart category name and choose **Delete**.
- Within a chart category, you can drag the target chart to adjust its display sequence.

NOTE

- After a chart category is deleted, the included charts are automatically moved to **Non-Categorized**.
- If you delete chart categories, they are permanently deleted and cannot be restored.

----End

5.5.2 Tracking the Progress with Dashboards

Supports data visualized management during project management, review each sprint development, and summarizes the improvement direction in the next sprint. The project provides multiple dashboard chart cards, covering progress, quality, efficiency, and work item distribution (by member), so that you can learn about the project progress in real time.

To better experience the data analysis effect, you are advised to use the new dashboard.

NOTE

- It is recommended that all project members enable the default dashboard statistics display and pay attention to the project progress.
- The burndown chart data in the dashboard is updated at 00:00 every day, and the burndown chart data in the sprint is updated in real time.
- The dashboard displays the number of stories whose work items are closed.
- The project administrator, project manager, and test manager can perform operations in **Adding a Custom Chart Card to a Dashboard**. For example, they can view the workload of each person.

Prerequisites

There is a Scrum project, in which you have permission to **createedit** dashboards.

Using the Default Dashboard to Track the Project Progress

The default dashboard displays some common **chart cards**, including story statistics (by importance), bug statistics (by status), work item completion rate, project bug status distribution, and actual workload distribution of project members.

Creating a Custom Dashboard

You can create a custom dashboard as required.

Step 1 **Access the CodeArts Req homepage**.

Step 2 Access a Scrum project, go to the dashboard page, click ··· in the upper right corner, and click **Add Dashboard**. Then configure the following information.

Table 5-29 Creating a dashboard

Parameter	Description
Dashboard Name	Dashboard title. The value can contain 1 to 128 characters, including letters, digits, underscores (_), and hyphens (-).
Description	Description of the dashboard. The value can contain a maximum of 128 characters, including letters, digits, underscores (_), and hyphens (-).

Step 3 Click **OK**.

----End

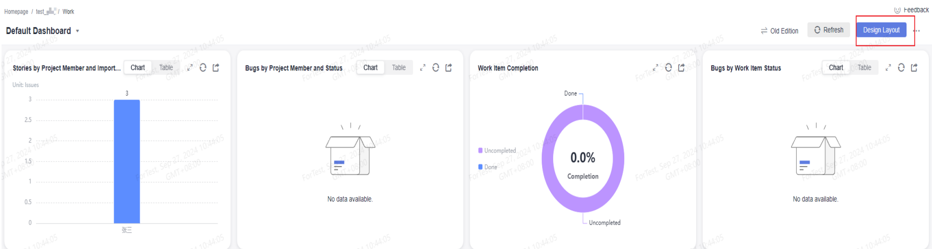
Adding a Custom Chart Card to a Dashboard

You can customize chart cards based as required and drag them to the dashboard to customize chart cards to be collected, including customization, overview, workload, work item distribution, sprint, and bug.

Step 1 Access the CodeArts Req homepage.

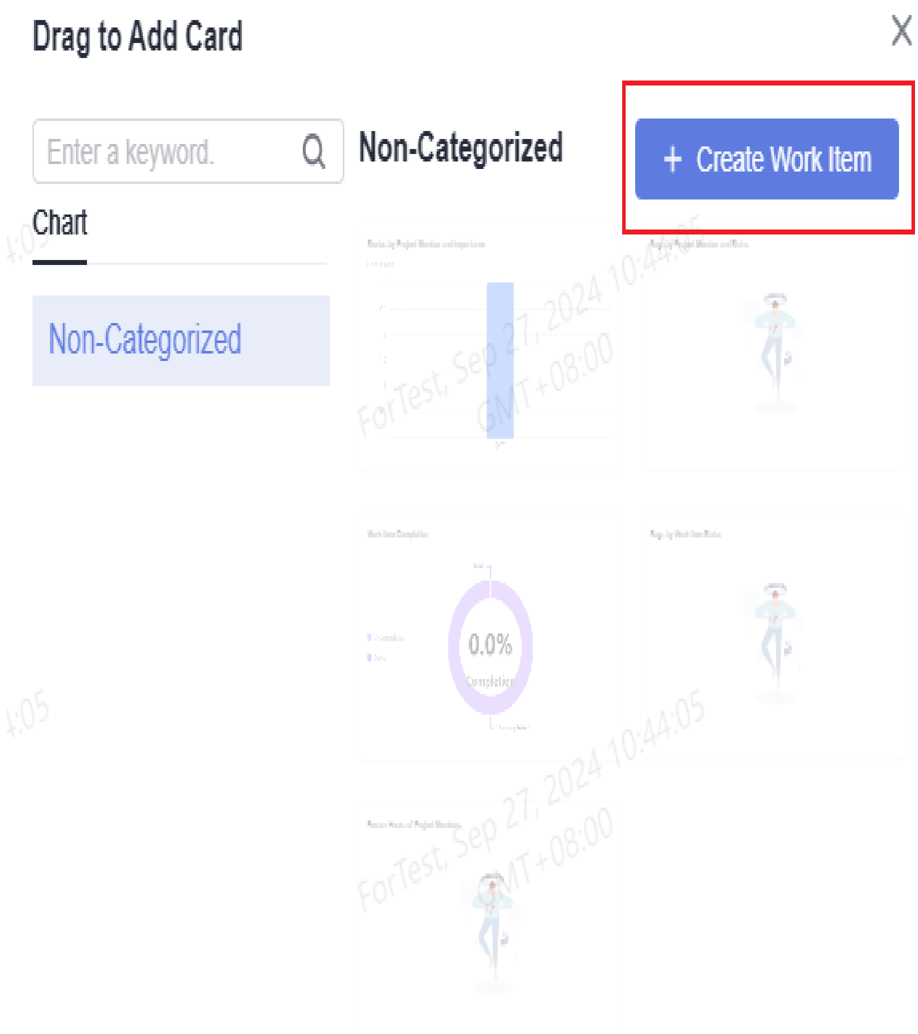
Step 2 Access a Scrum project, go to the dashboard page, and click **Design Layout > Add Card** in the upper right corner. If the current dashboard has no data, click **Add Card**.

Figure 5-65 Dashboard



Step 3 In the **Drag to Add Card** area displayed on the right, you can drag the cards to adjust the dashboard display sequence as required.

Figure 5-66 Drag to add card dialog box



Step 4 (Optional) If the chart card to be added does not meet your requirements, click **Create Work Item** in the upper right corner. In the **Select Chart Type** dialog box, customize a chart card. For details, see **Tracking the Progress with Statistical Charts**.

Step 5 Switch back to the dashboard details page and refresh the current data. Repeat the operations of adding cards and select the created chart card.

Step 6 After the card is set, click **Save**. A message is displayed, indicating that the dashboard is saved successfully.

----End

Related Operations

You can perform the following operations on a new dashboard.

Table 5-30 Operations on a dashboard

Operation	Description
View dashboard	Click the dashboard name and select the target dashboard from the drop-down list.
Export dashboard	Click ··· in the upper right corner of the dashboard homepage and click **Export Dashboard** to export the current dashboard to a PDF file.
Delete dashboard	Click ··· in the upper right corner of the dashboard homepage and click **Delete Dashboard** to delete the current dashboard. **NOTE** The default dashboard cannot be deleted.
Configure dashboard	Click ··· in the upper right corner of the dashboard homepage and click **Overview Configuration**. The following operations are available: • Creating a dashboard: Click **Add Dashboard** in the upper right corner. For details, see **Creating a Custom Dashboard**. • Editing a dashboard: Click the edit icon in the **Operation** column of the desired dashboard. • Deleting a dashboard: Click the delete icon in the row of the desired dashboard. • Setting a dashboard as the homepage: Click the radio icon on the left of a dashboard to set it as the homepage.

5.5.3 Sending a Project Progress Report

You can send project progress reports to the specified recipients.

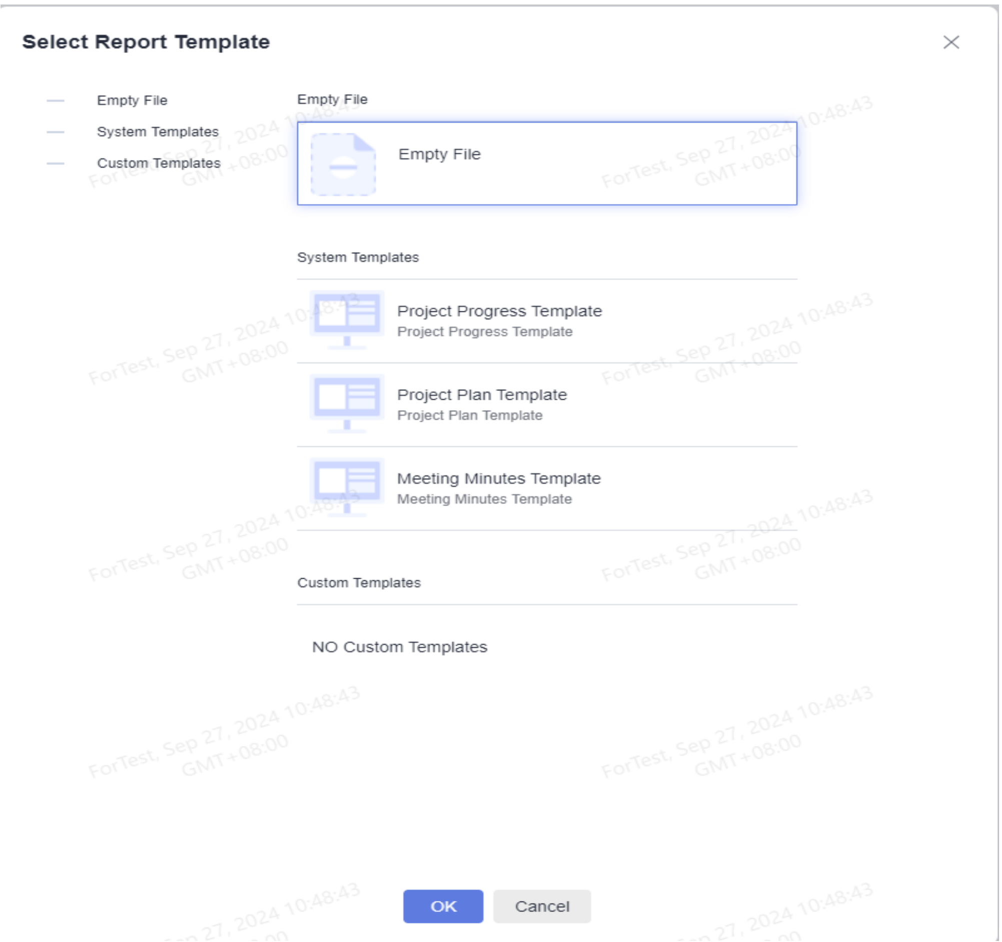
Creating a Project Progress Report

Step 1 **Access the CodeArts Req homepage**.

Step 2 Go to a Scrum project and choose **Work** > **Reports**.

Step 3 Click +. In the **Select Report Template** window, select a report template type, for example, **Empty File**.

Figure 5-67 Selecting a report template

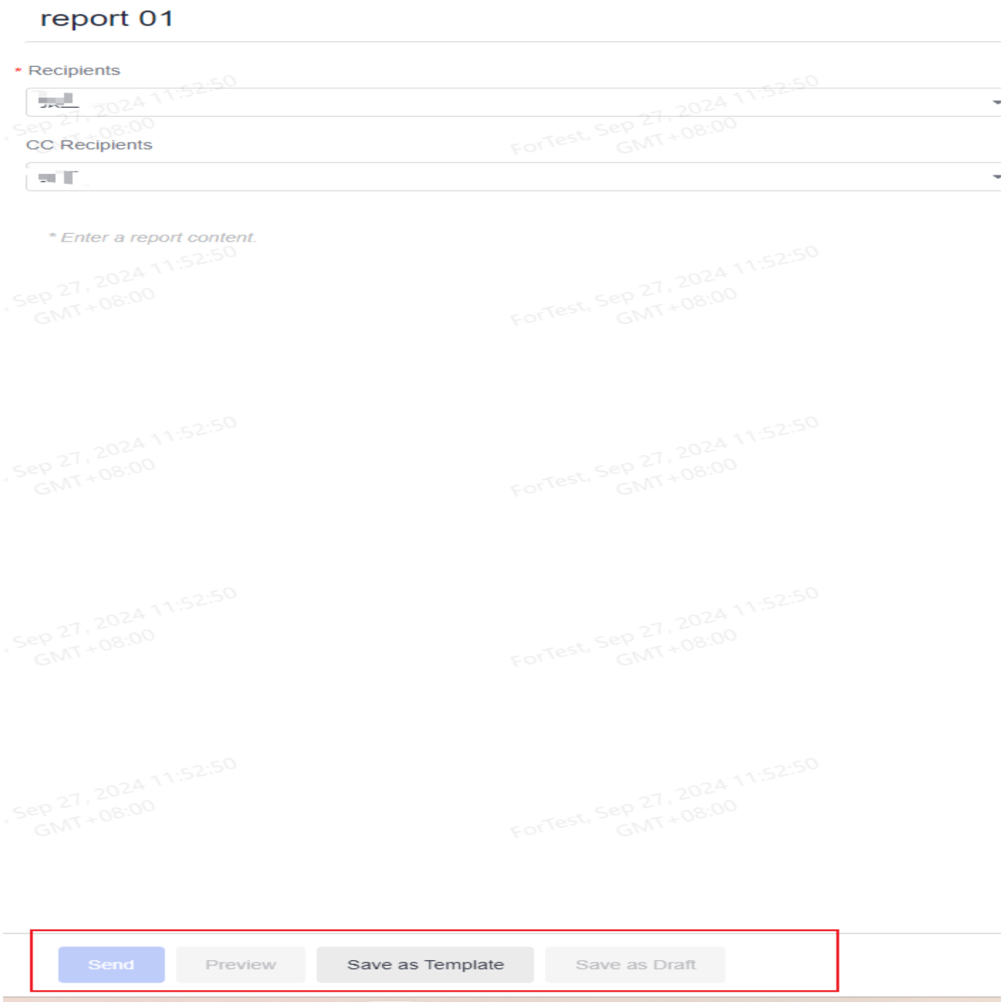


Step 4 Click **OK**.

Step 5 Set the report title, **Recipients**, **CC Recipients**, and report content as required, then click **Send**.

You can also preview the template or save it as a template or draft.

Figure 5-68 Creating a report



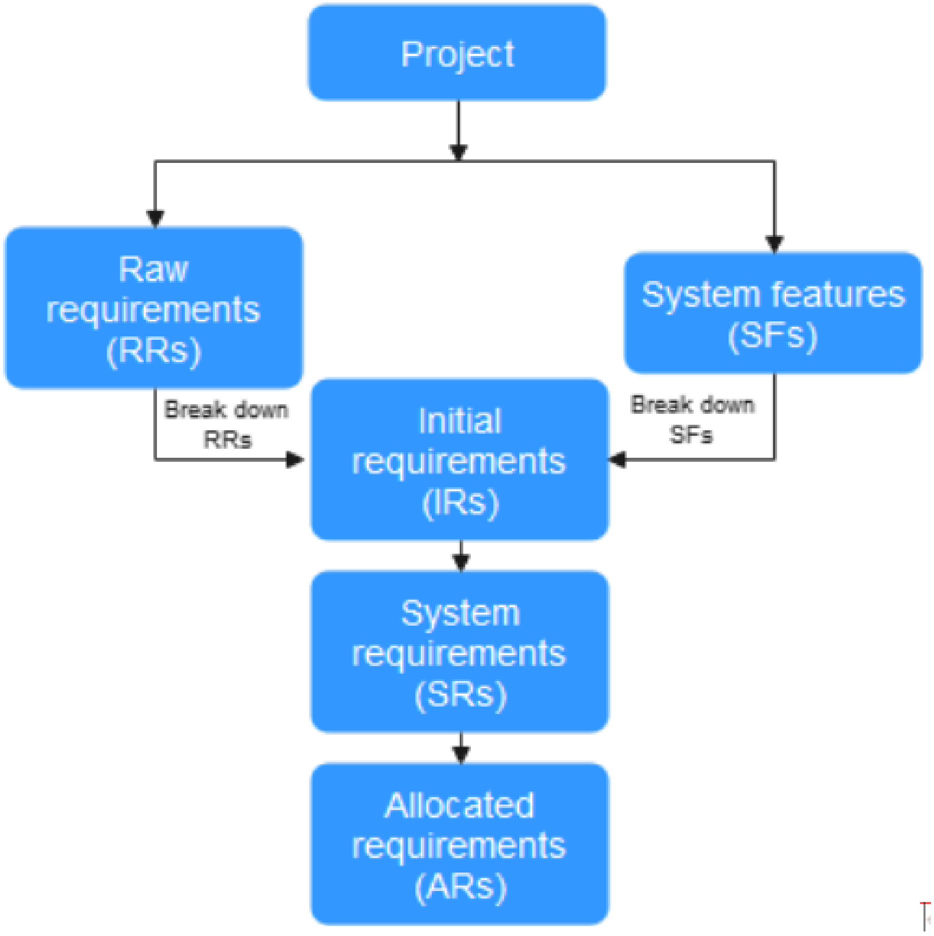
----End

6 Managing IPD-System Device Project Requirements

6.1 Requirement Management Process

IPD-system device projects are oriented for large-scale product development scenarios based on structured processes and powerful cross-project collaboration. They help you manage development with efficiency and quality, covering raw requirements (RRs), system features (SFs), R&D requirements, tasks, and bugs. Tasks and bugs are respectively activities generated and problems found during requirement implementation.

Figure 6-1 IPD-system device projects



IPD-system device project work types describes the work item types used by IPD-system device projects.

Table 6-1 IPD-system device project work types

Work Item Type	Description
Raw requirement (RR)	RRs are raw problems or requirements described from the perspective of customers. Customer requirements are a type of RRs.
Feature tree (FT)	FTs contain feature sets and SFs. ● Feature set: aggregates and manages SFs. Multi-level relationships can be established for the feature set, and the feature tree version snapshot and snapshot comparison functions are provided. ● SF: feature that brings benefits. SFs can have different types of child requirements in this hierarchy: SF > IR > SR > AR.

<table>
<tr><th>Work Item Type</th><th>Description</th></tr>
<tr><td>System feature (SF)</td><td>SFs are major capabilities of offering requirements or services to support problems (PBs).
Offering requirements: a group of complete, consistent, and series of formal requirements planned by product managers/ planning representatives.
In principle, SFs are a set of key selling points (highlights) of an offering. Each SF is an E2E solution that meets customers' specific business value requirements. Some SFs can be sold separately via license control.
PBs: challenges and opportunities faced by customers (customer strategies and pain points), that is, key problems solved by a product or service for customers. Resolving key problems can bring core value to customers.</td></tr>
<tr><td>R&D requirement (IR/SR/AR)</td><td>There are three work item types under R&D requirements:
Initial requirement (IR)
IRs are re-described accurately, with complete background, in standard format, and from the perspective of customers/ markets.
System requirement (SR)
SRs are system functional and non-functional requirements that are presented externally, can be tested, and are described from the perspective of R&D.
Functional requirements are specific scenario-based requirements on functions provided by the system.
Non-functional requirements are specific to costs, global quality attributes (mainly on DFX), and technical restrictions.
Allocated requirement (AR)
ARs are functional and non-functional requirements broken down from SRs and allocated to sub-systems/modules from the perspective of deliverability based on the division of responsibilities of entry-level organizations.</td></tr>
<tr><td>Task</td><td>Tasks are activities with a certain goal.</td></tr>
<tr><td>Bug</td><td>Bugs are problems found in a project.</td></tr>
</table>

6.2 Configuring Common Settings

6.2.1 Configuring Common Work Item Fields

Customize common fields that can be used by any type of work items in your project.

Prerequisites

- An IPD-system device project is available, and you have permission to **configure work item templates** for the project.
- You have the **Tenant Administrator** permission.

Configuring Common Fields in a Project

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Work Items** > **Common Field**.

Step 4 Click **Create Field**. In the dialog box that is displayed, set the required parameters.

Table 6-2 Creating a field

Parameter	Description
Field Name	Enter a maximum of 15 characters, including letters, digits, and hyphens (-).
Field Type	Type of the field. The options include: single-choice list, multi-choice list, single-line text, multi-line text, date, date and time, integer, decimal, single-choice user, multi-choice user, and level field.
Description	Remarks about the field. Enter a maximum of 50 characters, including letters, digits, and hyphens (-).

Step 5 Click **OK**.

The new field is displayed at the end of the list. The parameters in this list are described in the following table.

Table 6-3 Field list

Parameter	Description
Field Name	System or custom field name. Hover over the header and click to sort by field name.
Created/ Added By	The user who creates or adds a field. Hover over the header and click to sort by creator or adding user.
Created/ Added At	Time when a field is created or added. Hover over the header and click to sort by creation or addition time.

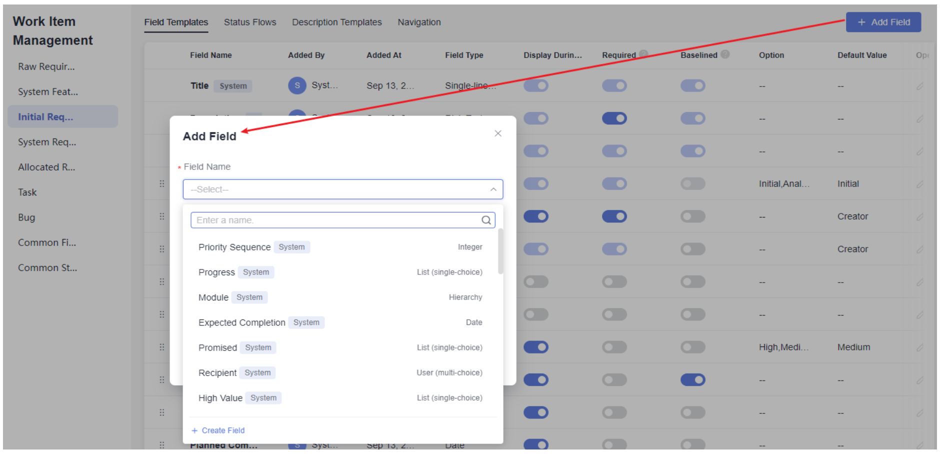
Parameter	Description
Field Type	System or custom field type. The options include: single-choice list, multi-choice list, single-line text, multi-line text, date, date and time, integer, decimal, single-choice user, multi-choice user, and level field. Hover over the header and click to sort by field type. Hover over the header and click to filter fields.
Option	Displayed only for single- and multi-choice list fields.
Description	System or custom field description.
Status	Work item types that are currently using a system or custom field.
Operation	You can edit and delete a field. To edit a field, click in this column. **NOTE** ● System fields cannot be edited. ● Custom fields of your tenant cannot be edited here. To delete a field, click in this column. **NOTE** ● System fields cannot be deleted. ● Deleting a tenant-defined field only removes it from work item templates where it was previously used. It remains in the tenant's field list. ● Deleted fields cannot be recovered.

Step 6 (Optional) Add a common field (for example, **CommonField01**) to a work item template.

The following uses the IR work item template as an example:

1. Choose **Work** > **Work Items > Initial Requirement (IR) > Field Templates**.
2. Click **Add Field**, select **CommonField01** from the **Field Name** drop-down list, and click **Add** to save the template.

Figure 6-2 Add Field dialog box



3. Check this **CommonField01** field when creating or editing an IR on the **Work** > **Req > R&D Requirements** page.

NOTE

– Customized common fields can be configured and used for all types of work items of the current project.
– The IR work item template is used as an example. You can add common fields to other work item templates in the same way, and only need to do this once for each of them.
– A maximum of 100 common fields can be customized in a project.

----End

Configuring Common Fields in Tenant Settings

You can configure tenant-level common fields for work items across all your IPD projects.

Step 1 Log in to the CodeArts homepage, click , and choose **All Account Settings**.

Step 2 Choose **Work** > **Field**. The existing common fields are displayed.

Step 3 Click **Create Field**. In the dialog box that is displayed, enter a field name, select a field type, and click **OK**. The new field is displayed in the list.

----End

You can perform the following operations on a new field:

- Click to modify the field name, type, and description.
- Click . In the dialog box that is displayed, click **Delete** to delete the field.

NOTE

Fields created on the **Work** > **Field** page apply to all IPD projects in your tenant and can be configured for the work items in these projects.

1. Go to an IPD project and choose **Settings > Work**.
2. Click **Work Items** and select a work item type.
3. On the **Field Templates** tab page, click **Add Field**. In the displayed dialog box, select a new field, configure other options, and click **OK**.

6.2.2 Configuring Common Work Item Statuses

Customize common statuses that can be used by any type of work items in your project.

Prerequisites

- An IPD-system device project is available, and you have permission to **configure work item templates** for the project.
- You have the **Tenant Administrator** permission.

Configuring Common Statuses in a Project

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Work Items** > **Common Status**.

Step 4 Click **Create Status** under **Add Status**. In the displayed dialog box, set the required parameters.

Table 6-4 Creating a status

Parameter	Description
Name	Enter a maximum of 30 characters, including letters, digits, and hyphens (-).
Category	Category of the status. The options include **To Do**, **Doing**, and **Done**.
Description	Remarks about the status. Enter a maximum of 50 characters, including letters, digits, and hyphens (-).

Step 5 Click **OK**.

The new status is displayed at the end of the list. The parameters in this list are described in the following table.

Table 6-5 Status list

Parameter	Description
Name	System or custom status name. Hover over the header and click to sort by status name.
Created By	The user who creates a status. Hover over the header and click to sort by creator.
Created	Time when a status is created. Hover over the header and click to sort by creation time.

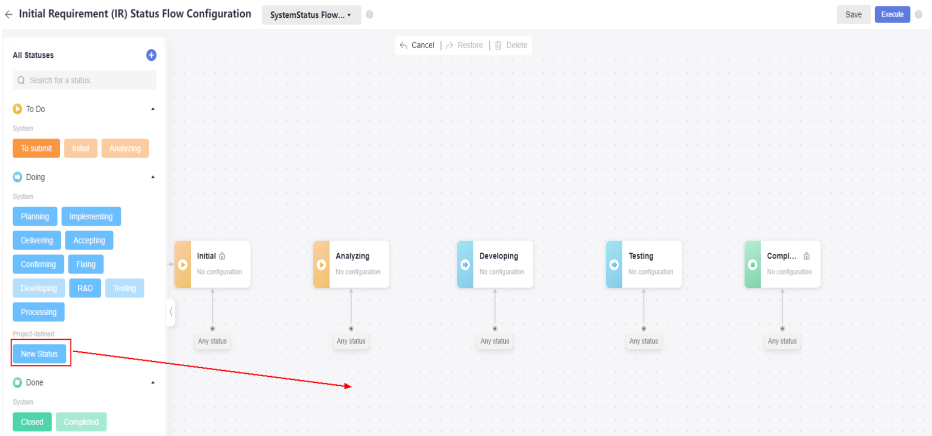
Parameter	Description
Category	System or custom status category. The options include **To Do**, **Doing**, and **Done**. Hover over the header and click to sort by status category. Hover over the header and click to filter statuses.
Status	Work item types that are currently using a system or custom status.
Description	System or custom status description.
Operation	You can edit and delete a status. To edit a status, click in this column. **NOTE** ● System statuses cannot be edited. ● Custom statuses of the tenant cannot be edited here. To delete a status, click in this column. **NOTE** ● System statuses cannot be deleted. ● Custom statuses that are currently in use by work items cannot be deleted. ● Deleted statuses cannot be recovered.

Step 6 (Optional) Add a common status (for example, **CommonStatus01**) to the work item status flow.

The following uses the IR work item status flow as an example:

1. Under **Work Configuration**, choose **Work Items > Initial Requirement (IR) > Status Flows**, and click **Edit**.
2. Click on the left, select **CommonStatus01** on the **All Statuses** panel, and drag it to the status flow canvas. Draw incoming and outgoing transition lines for the status, and click **Update Status Flow**.

Figure 6-3 Expanding all statuses



3. Check this **CommonStatus01** status in IRs' status flows on the **Work** > **Req > R&D Requirements** page.

   NOTE

   – Customized common statuses can be configured and used for all types of work items of the current project.
   – The IR work item status flow is used as an example. You can add common statuses to other work item templates in the same way, and only need to do this once for each of them.
   – The total number of system and common statuses in a project cannot exceed 50.

----End

Configuring Common Statuses in Tenant Settings

You can configure tenant-level common statuses for work items across all your IPD projects.

Step 1 Log in to the CodeArts homepage and click .

Step 2 Choose **All Account Settings**.

Step 3 Choose **Work** > **Status**. The existing common statuses are displayed.

Step 4 Click **Create Status**. In the dialog box that is displayed, enter a status name, select a status category, and click **OK**. The new status is displayed in the list.

You can perform the following operations on a new status:

- Click to modify the status name, category, and description.
- Click . In the dialog box that is displayed, click **OK** to delete the status.

NOTE

Statuses created on the **Work** > **Status** page apply to all IPD projects in your tenant and can be configured for the work items in these projects.

1. Go to an IPD project and choose **Settings** > **Work**.
2. Click **Work Items** and select a work item type.
3. On the **Status Flows** tab, click **Edit**. Click next to the system status flow currently in use to copy it to a custom status flow. On the custom status flow page, select the new status, click **Edit**, configure fields for the status, and click **Save**.

----End

6.2.3 Configuring Work Item Templates

Customize different types of work item templates, and specify whether to display each field on work item creation pages, whether these fields are mandatory, and what they are default to. These templates are used by default when you create work items.

Prerequisites

- An IPD-system device project is available, and you have permission to **configure work item templates** for the project.
- You have the **Tenant Administrator** permission.

Configuring Field and Description Templates for RRs

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Work Items** > **Raw Requirement (RR)** > **Field Templates**.

Step 4 Edit the field template as required.

- Click **Add Field** to add a system or custom field. If needed, click **Create Field** to create one.
- In the **Display During Creation** column, specify whether to show each system or custom field on the work item creation page.
- In the **Required** column, specify whether each system or custom field must be set.
- In the **Default Value** column, set a default value for each system or custom field.

Step 5 Click on the left of each field to adjust their sequence.

Step 6 Choose **Work Items** > **Raw Requirement (RR)** > **Description Templates**. Then click **Edit**.

Customize the RR description template and click **Save**.

----End

Configuring Field and Description Templates for SFs

Step 1 Go to a project and choose **Settings > Work**.

Step 2 In the navigation pane, choose **Work Items > System Feature (SF) > Field Templates**.

Step 3 Edit the field template as required.

- Click **Add Field** to add a system or custom field. If needed, click **Create Field** to create one.
- In the **Display During Creation** column, specify whether to show each system or custom field on the work item creation page.
- In the **Default Value** column, set a default value for each system or custom field.
- Set **Default Value** for system or custom fields.
- In the **Baselined** column, specify whether to lock each system or custom field in the baseline.

Step 4 Click on the left of each field to adjust their sequence.

Step 5 Choose **Work Items > System Feature (SF) > Description Templates**. Then click **Edit**.

Customize the SF description template and click **Save**.

----End

Configuring Field and Description Templates for IRs

Step 1 Go to a project and choose **Settings > Work**.

Step 2 In the navigation pane, choose **Work Items > Initial Requirement (IR) > Field Templates**.

Step 3 Edit the field template as required.

- Click **Add Field** to add a system or custom field. If needed, click **Create Field** to create one.
- In the **Display During Creation** column, specify whether to show each system or custom field on the work item creation page.
- In the **Default Value** column, set a default value for each system or custom field.
- Set **Default Value** for system or custom fields.
- In the **Baselined** column, specify whether to lock each system or custom field in the baseline.

Step 4 Click on the left of each field to adjust their sequence.

Step 5 Choose **Work Items > Initial Requirement (IR) > Description Templates**. Then click **Edit**.

Customize the IR description template and click **Save**.

----End

Configuring Field and Description Templates for SRs

Step 1 Go to a project and choose **Settings > Work**.

Step 2 In the navigation pane, choose **Work Items > System Requirement (SR) > Field Templates**.

Step 3 Edit the field template as required.

- Click **Add Field** to add a system or custom field. If needed, click **Create Field** to create one.
- In the **Display During Creation** column, specify whether to show each system or custom field on the work item creation page.
- In the **Default Value** column, set a default value for each system or custom field.
- Set **Default Value** for system or custom fields.
- In the **Baselined** column, specify whether to lock each system or custom field in the baseline.

Step 4 Click on the left of each field to adjust their sequence.

Step 5 Choose **Work Items > System Requirement (SR) > Description Templates**. Then click **Edit**.

Customize the SR description template and click **Save**.

----End

Configuring Field and Description Templates for ARs

Step 1 Go to a project and choose **Settings > Work**.

Step 2 In the navigation pane, choose **Work Items > Allocated Requirement (AR) > Field Templates**.

Step 3 Edit the field template as required.

- Click **Add Field** to add a system or custom field. If needed, click **Create Field** to create one.
- In the **Display During Creation** column, specify whether to show each system or custom field on the work item creation page.
- In the **Default Value** column, set a default value for each system or custom field.
- Set **Default Value** for system or custom fields.
- In the **Baselined** column, specify whether to lock each system or custom field in the baseline.

Step 4 Click on the left of each field to adjust their sequence.

Step 5 Choose **Work Items > Allocated Requirement (AR) > Description Templates**. Then click **Edit**.

Customize the AR description template and click **Save**.

----End

Configuring Field and Description Templates for Tasks

Step 1 Go to a project and choose **Settings > Work**.

Step 2 In the navigation pane, choose **Work Items > Task > Field Templates**.

Step 3 Edit the field template as required.

- Click **Add Field** to add a system or custom field. If needed, click **Create Field** to create one.
- In the **Display During Creation** column, specify whether to show each system or custom field on the work item creation page.
- In the **Required** column, specify whether each system or custom field must be set.
- In the **Default Value** column, set a default value for each system or custom field.

Step 4 Click on the left of each field to adjust their sequence.

Step 5 Choose **Work Items > Task > Description Templates**. Then click **Edit**.

Customize the task description template and click **Save**.

----End

Configuring Field and Description Templates for Bugs

Step 1 Go to a project and choose **Settings** > **Work**.

Step 2 In the navigation pane, choose **Work Items** > **Bug** > **Field Templates**.

Step 3 Edit the field template as required.

- Click **Add Field** to add a system or custom field. If needed, click **Create Field** to create one.
- In the **Display During Creation** column, specify whether to show each system or custom field on the work item creation page.
- In the **Required** column, specify whether each system or custom field must be set.
- In the **Default Value** column, set a default value for each system or custom field.

Step 4 Click on the left of each field to adjust their sequence.

Step 5 Choose **Work Items > Bug > Description Templates**. Then click **Edit**.

Customize the bug description template and click **Save**.

----End

6.2.4 Configuring Work Item Status Flows

Prerequisites

An IPD-system device project is available, and you have permission to **configure status flows** for the project.

Procedure

You can customize the status sequence as required.

NOTE

- This function is currently available for R&D requirements, system features, tasks, and bugs. The following describes how to customize a bug status flow.
- System status flows can only be viewed. You can copy them to customize a new one. Custom status flows can be edited and executed to meet your service requirements.
- If an R&D requirement is switched to a custom status flow, the rollup rule will automatically become invalid. Only when all types of work items of the R&D requirement are executed in the system status flow, the rollup rule will apply.

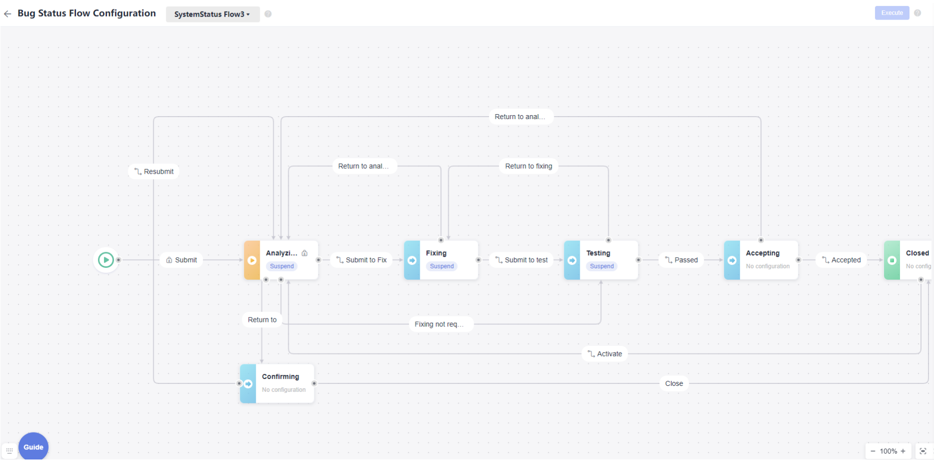
Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Work Items** > **Bug** > **Status Flows**.

Step 4 Click **Edit**. The **Bug Status Flow Configuration** canvas page is displayed with the default system status flow.

Figure 6-4 Bug status flow



Step 5 Copy a system status flow to customize a new one.

Figure 6-5 Copying to create a status flow

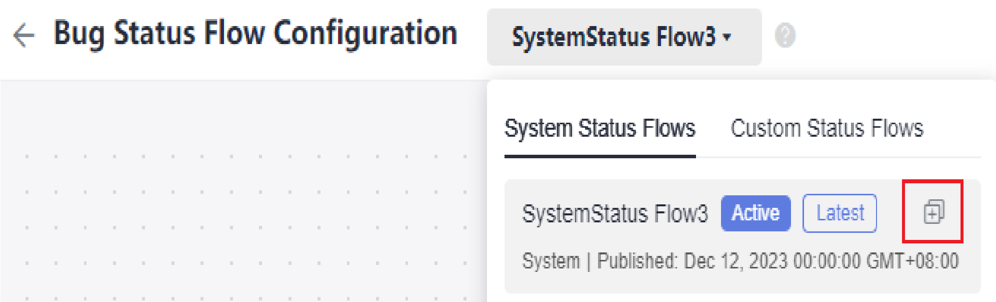
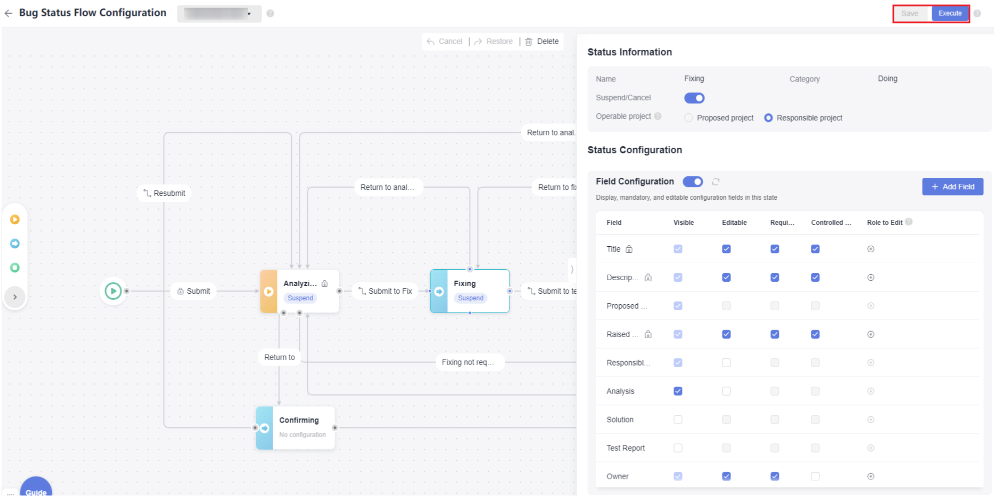


Figure 6-6 Customizing a status flow



Step 6 Click **Edit**, then double-click any status or transition line to display their rules.

Figure 6-7 Configuring status nodes

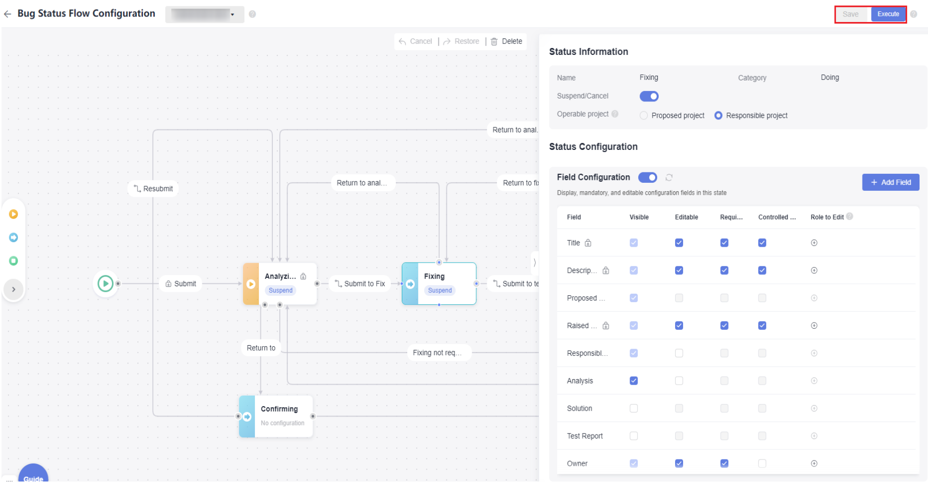
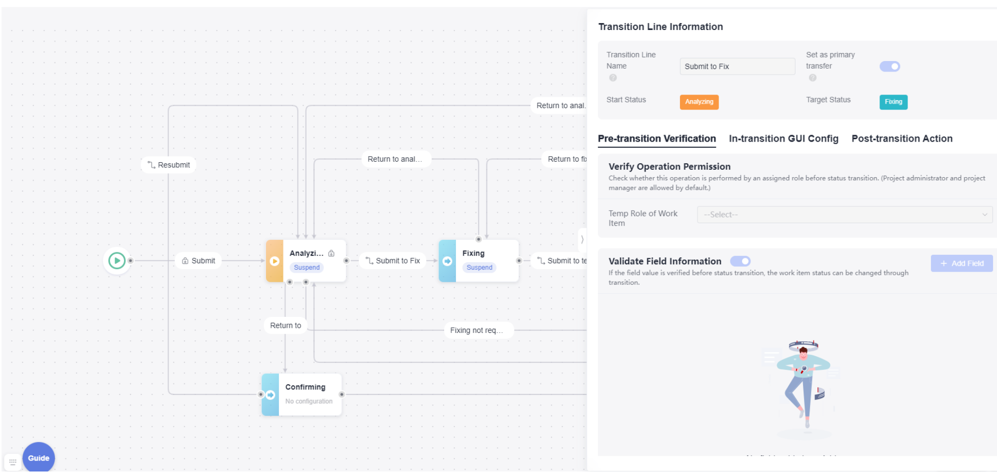


Figure 6-8 Configuring transition lines



Step 7 Click **Edit**, and add a status.

1. Expand the status drawer. Drag any available status to the canvas or click to add one.

Figure 6-9 Expanding the status drawer

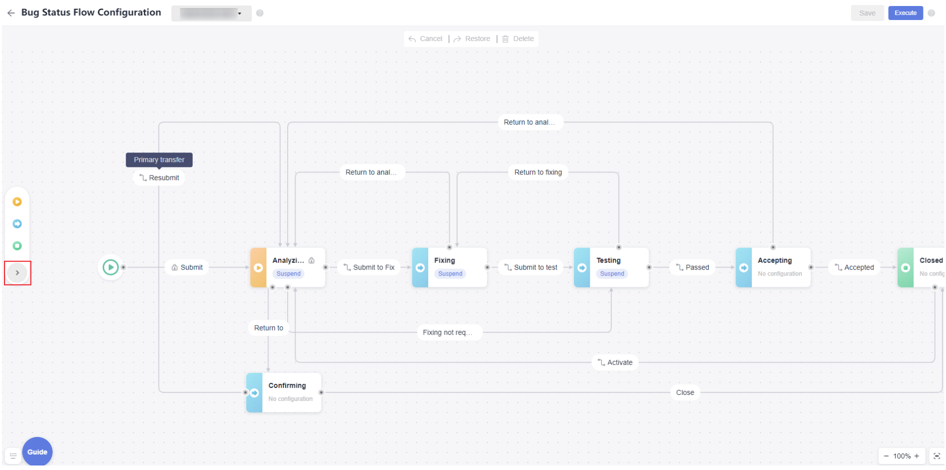


Figure 6-10 Expanded status drawer

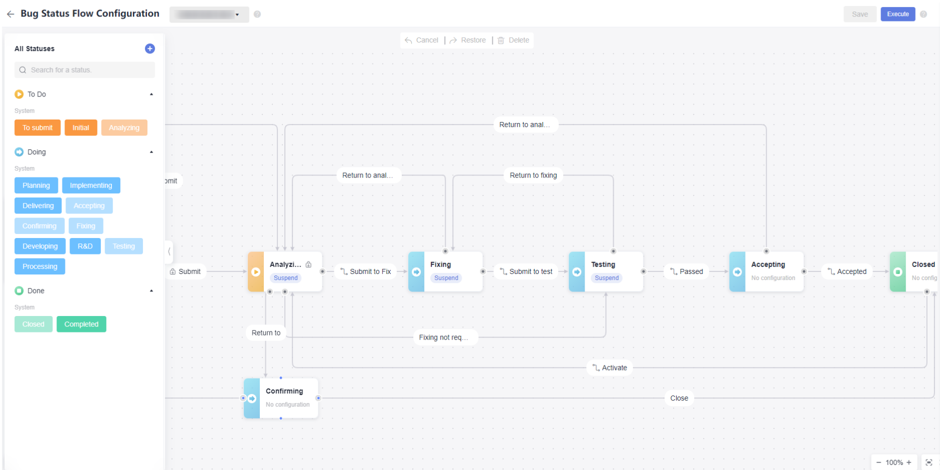
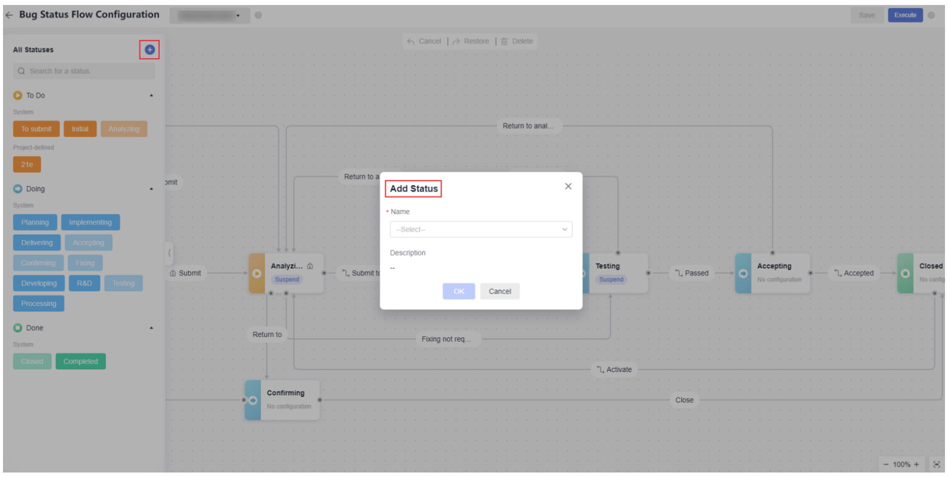


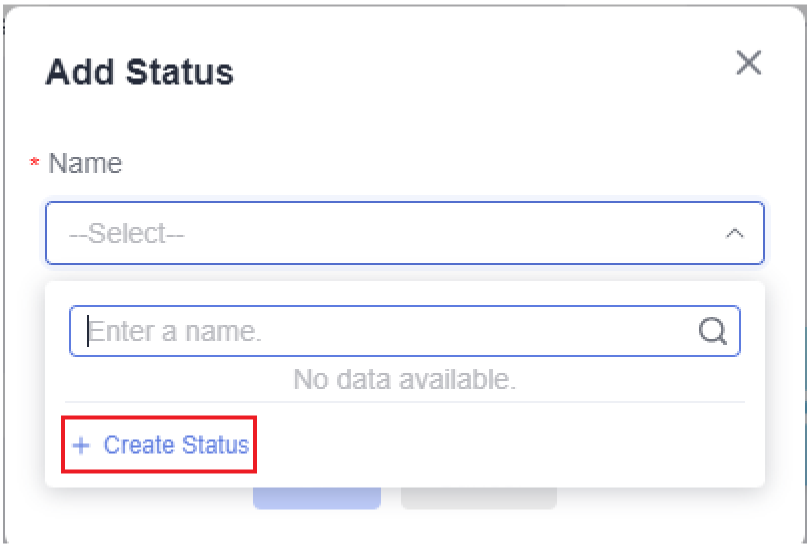
Figure 6-11 Adding a status



2. Click the **Name** drop-down list, and then click **Create Status**.

   You can also select an existing tenant-level custom status.

   Figure 6-12 Creating a status

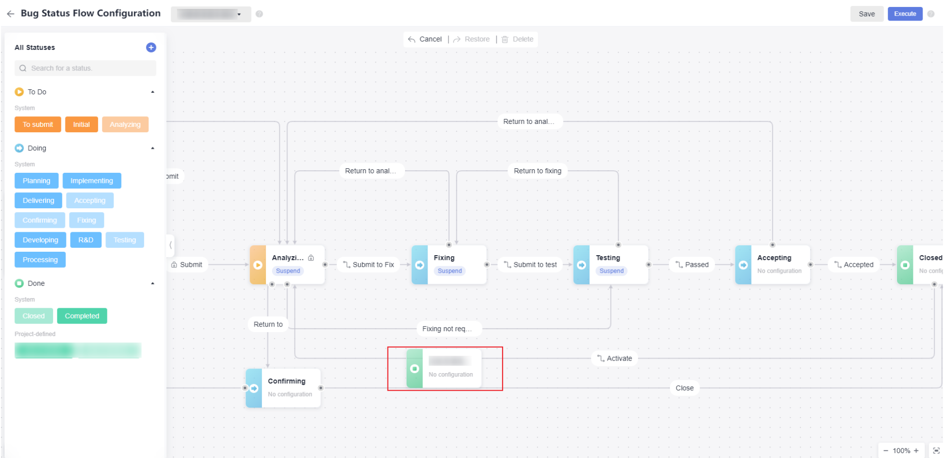
3. Set **Name** and **Category**.

   The options include **To Do**, **Doing**, and **Done**.

4. Click **OK**.

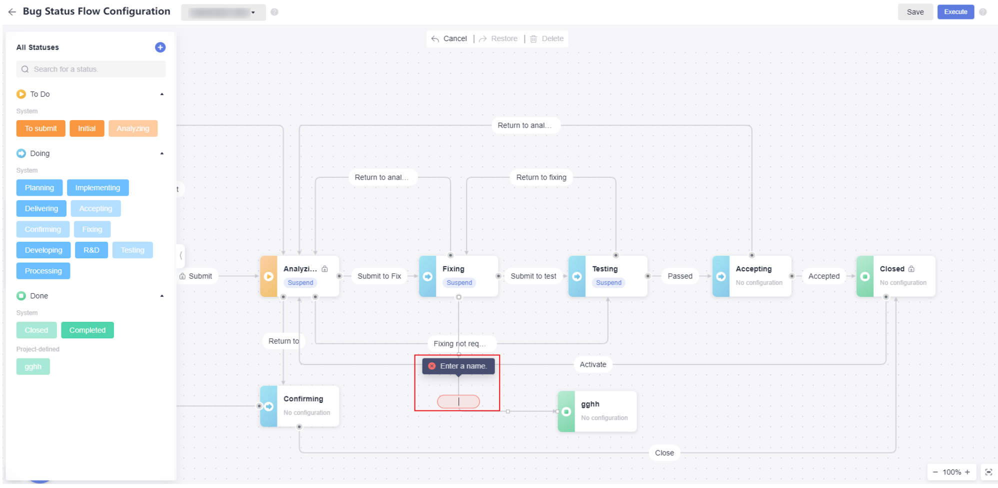
   The new status is displayed on the bug status flow canvas.

   Figure 6-13 Adding a status to a bug status flow

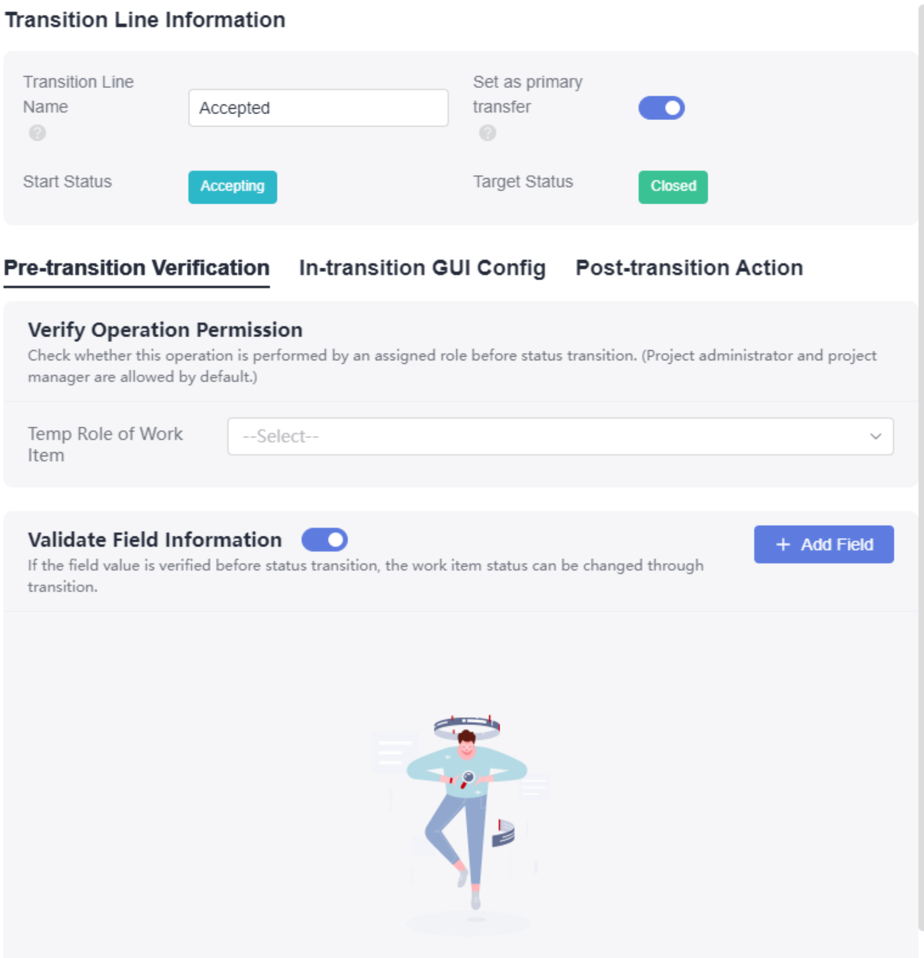
Step 8 Drag the new status to a proper position, draw a transition line with your mouse, and enter a name.

Figure 6-14 Adding a transition line for a new status



Step 9 Double-click the new transition line.

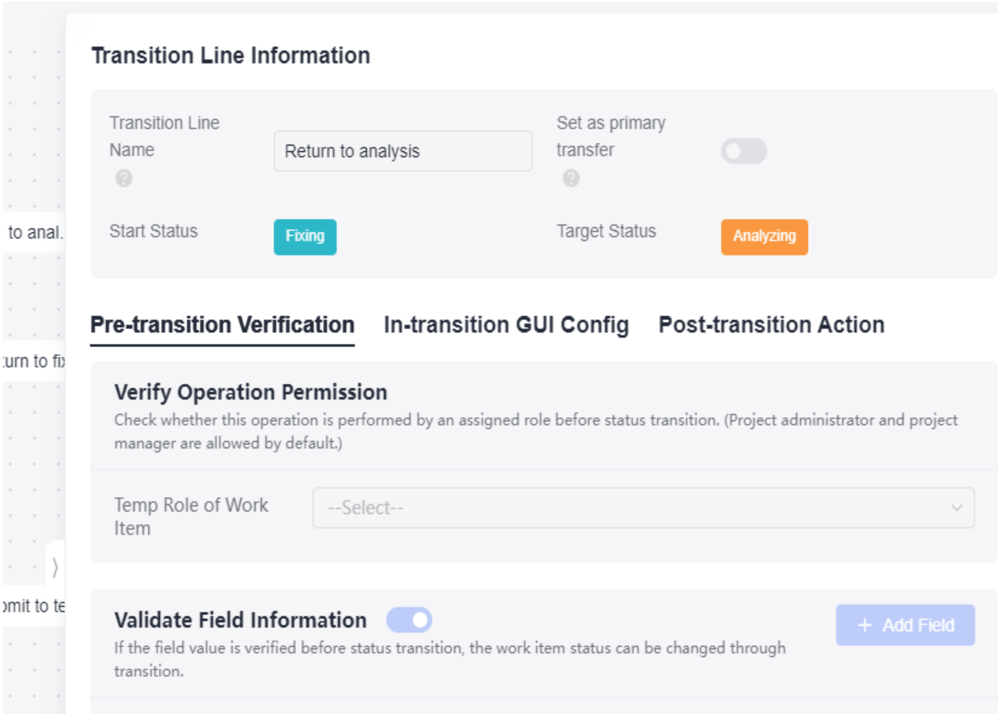
Figure 6-15 Transition line configuration panel



Step 10 Set **Transition Line Name** and other information.

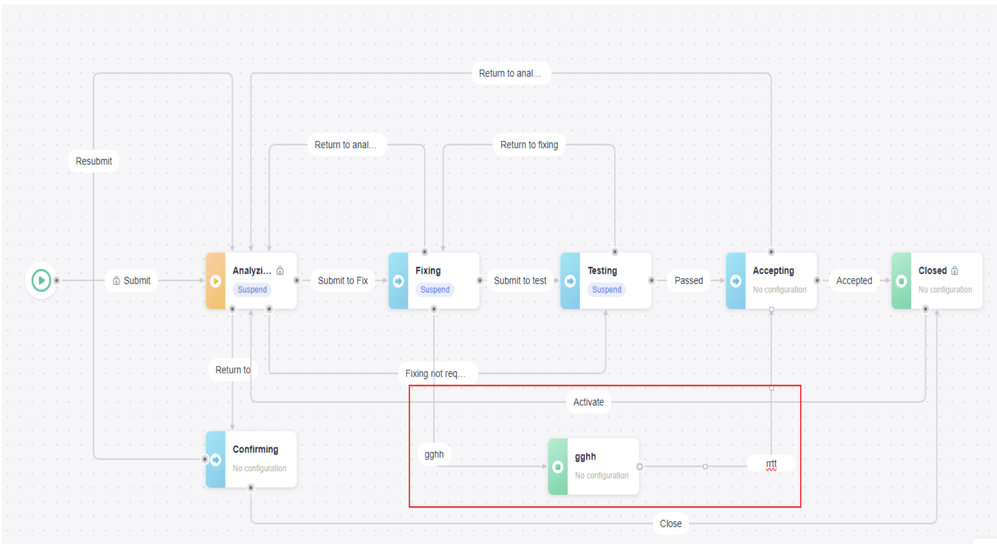
Step 11 After the configuration is complete, click  to collapse the panel.

Figure 6-16 Collapsing the transition line configuration panel



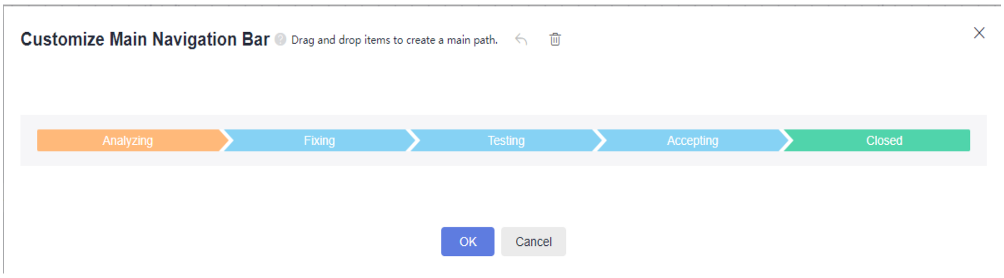
The new status must have at least one incoming and one outgoing transition lines. To add a transition line, repeat steps 5 to 8.

Figure 6-17 Adding incoming and outgoing transition lines



Step 12 Click **Execute** in the upper right corner, and customize the main navigation bar.

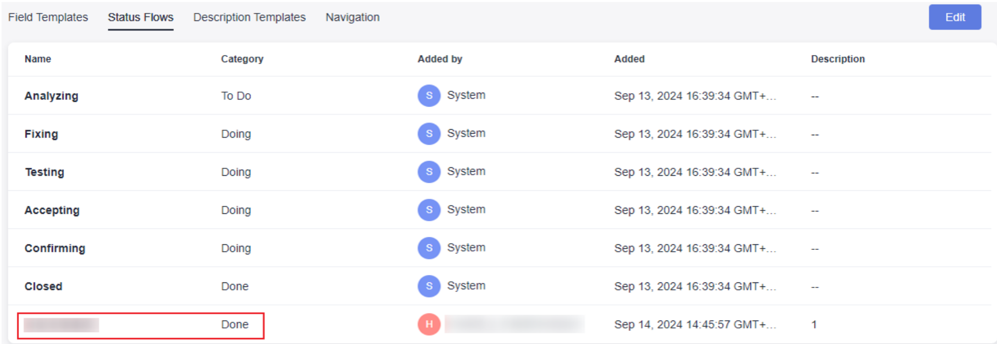
Figure 6-18 Setting the main navigation bar



Step 13 Click **OK**.

The new bug status flow is displayed on the **Status Flows** tab page.

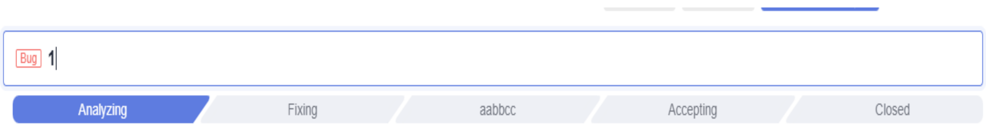
Figure 6-19 Bug status flows



Name	Category	Added by	Added	Description
Analyzing	To Do	System	Sep 13, 2024 16:39:34 GMT+...	--
Fixing	Doing	System	Sep 13, 2024 16:39:34 GMT+...	--
Testing	Doing	System	Sep 13, 2024 16:39:34 GMT+...	--
Accepting	Doing	System	Sep 13, 2024 16:39:34 GMT+...	--
Confirming	Doing	System	Sep 13, 2024 16:39:34 GMT+...	--
Closed	Done	System	Sep 13, 2024 16:39:34 GMT+...	--
	Done		Sep 14, 2024 14:45:57 GMT+...	1

This status flow will be applied to the bug management process.

Figure 6-20 Status flow on the bug details page



----End

6.2.5 Configuring Work Item Tags

Tags can be created, edited, and deleted for different types of requirements and work items in a project.

Prerequisites

An IPD-system device project is available, and you have permission to **manage tags** for the project.

Adding a Tag

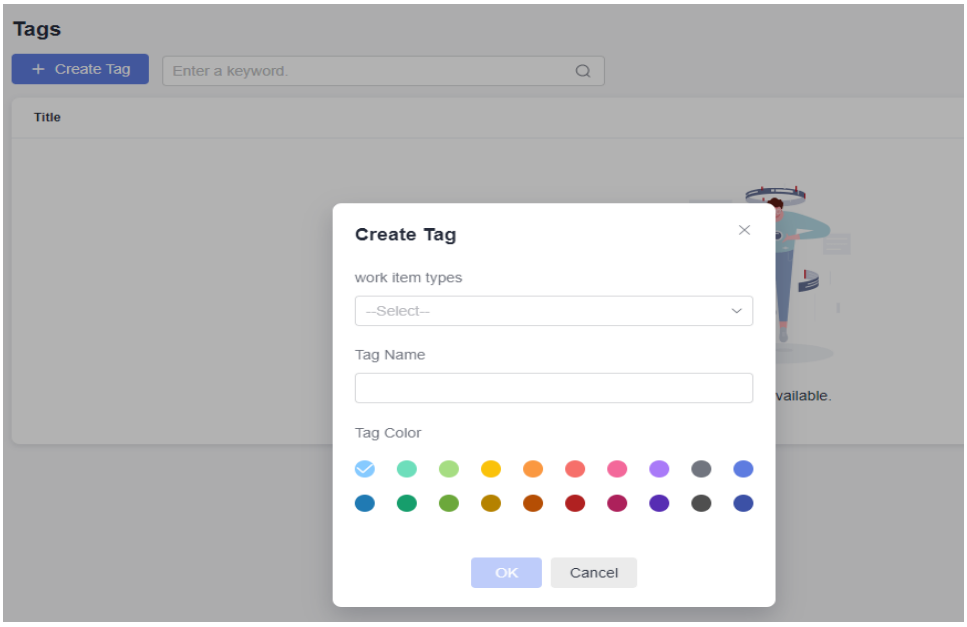
Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work** > **Tag Management**.

All work item tags are displayed here.

Step 3 Click **Create Tag**.

Figure 6-21 Creating a tag

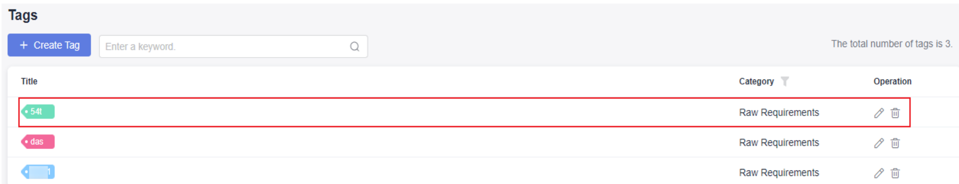


Step 4 Select a work item type and tag color, and enter a tag name.

Step 5 Click **OK**.

The new tag is displayed in the list.

Figure 6-22 Tags page



NOTE

- Click to change the tag name and color. The change is synchronized where the tag is referenced.
- Click to delete a tag. The tag is deleted from where it is referenced.

The tag also displays on the details page of each work item type (such as RR).

----End

6.2.6 Creating Work Item Modules

- You can add, modify, and delete work item modules in a project.
- You can add submodules to a module.
- When creating or editing a work item, you can specify the module to which the work item belongs.

Prerequisites

An IPD-system device project is available, and you have permission to **set modules** for the project.

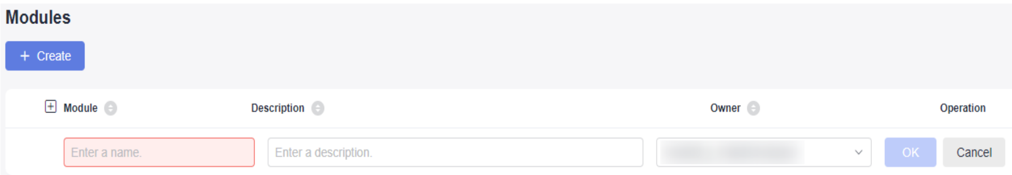
Creating a Module

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work** > **Modules**.

Step 3 Click **Create**.

Figure 6-23 Creating a module



Step 4 Set **Module**, **Description**, and **Owner**.

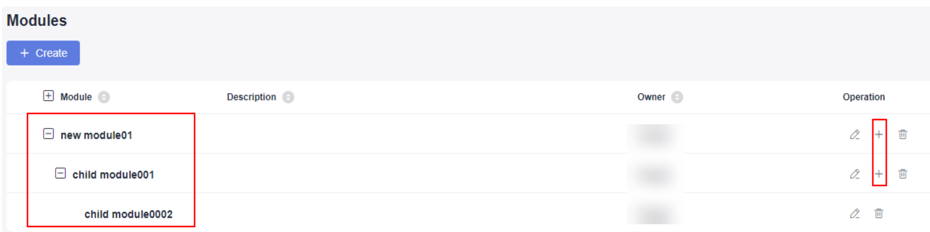
The module name must be unique in the system.

Step 5 Click **OK**.

Step 6 (Optional) Edit or delete a module, or add a submodule.

- Click to edit the module.
- Click to delete the module.
- Click to add a submodule. Each module can have a maximum of three levels, for example, **Module1** > **Submodule01** > **Submodule001**.

Figure 6-24 Adding a submodule



----End

6.2.7 Creating Work Types

Work types include R&D design, backend development, frontend development, and more. You can customize your own work types and specify whether they are mandatory for work items.

Prerequisites

An IPD-system device project is available, and you have permission to **set work types** for the project.

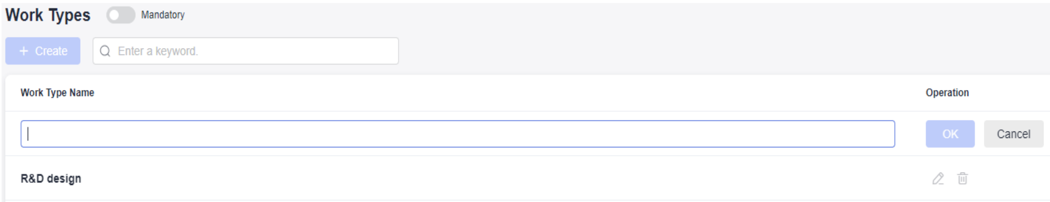
Creating a Work Type

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work** > **Work Types**.

Step 3 Click **Create**.

Figure 6-25 Creating a work type



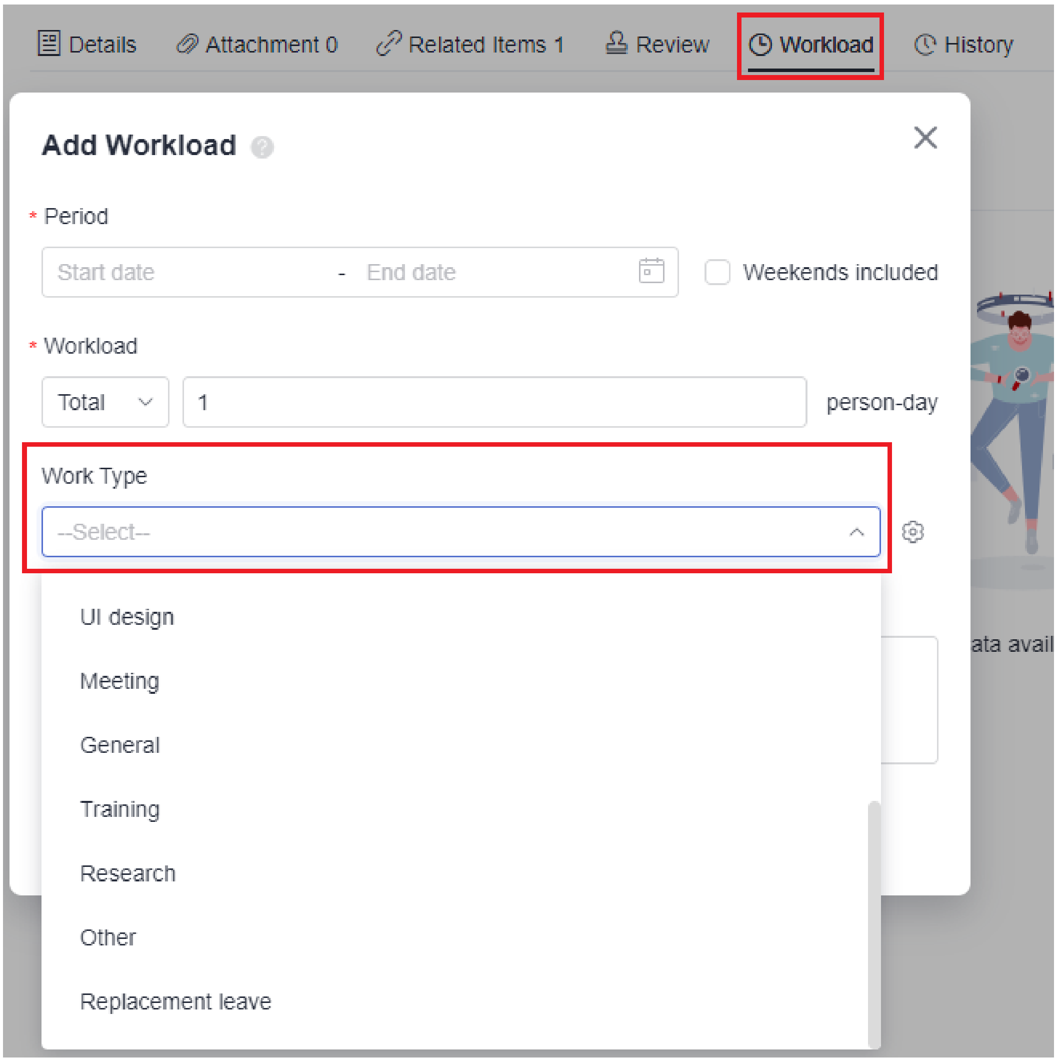
Step 4 Enter a work type name.

The name must be unique in the system.

Step 5 Click **OK**.

You can select this work type when configuring workloads for work items.

Figure 6-26 Adding a workload



----End

Configuring Whether Work Types Are Mandatory

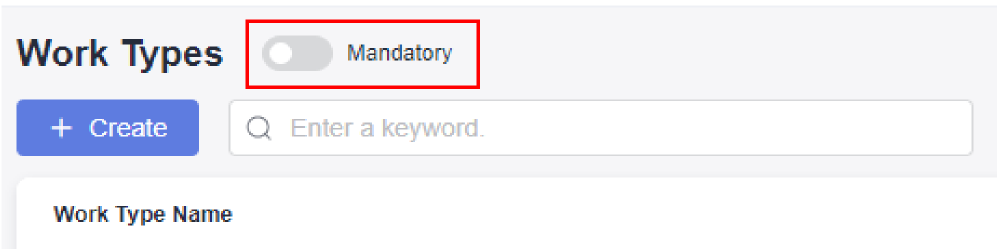
Step 1 [Access the CodeArts Req homepage](#).

Step 2 Go to a project and choose **Settings** > **Work** > **Work Types**.

Step 3 Toggle on **Mandatory**.

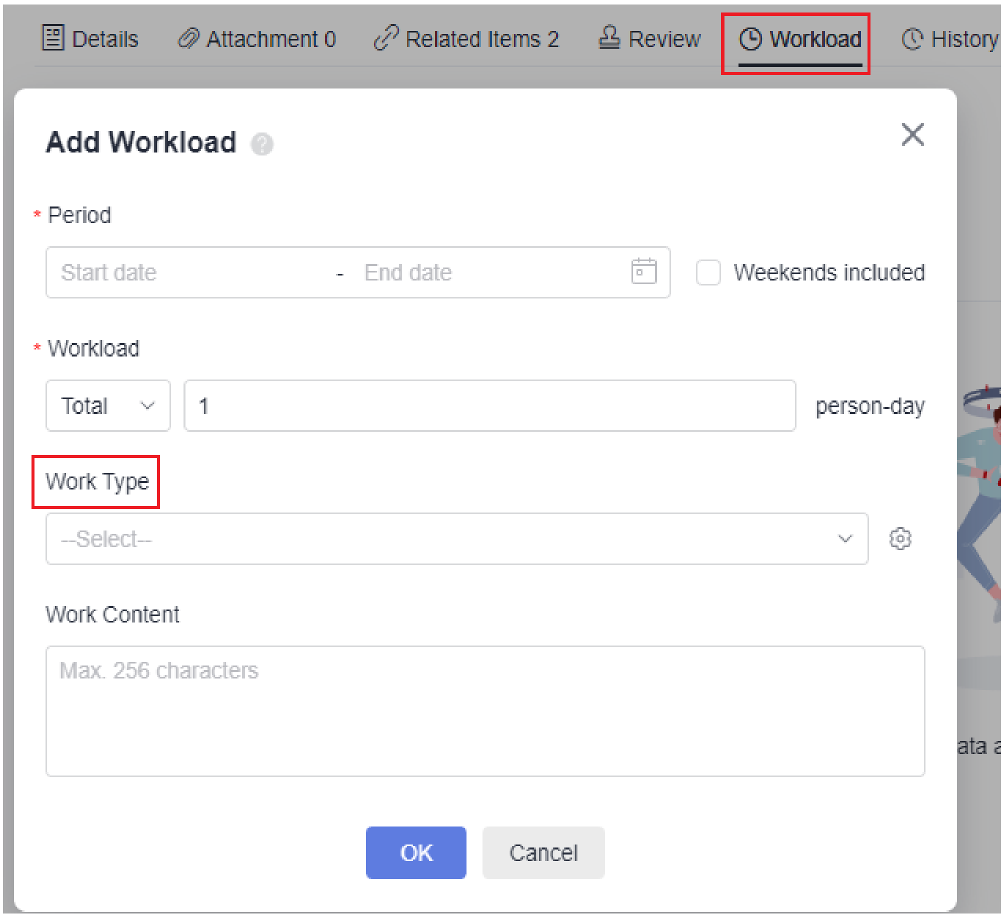
By default, this option is toggled off.

Figure 6-27 Configuring work types



A red asterisk (*) will be displayed next to **Work Type** on the **Add Workload** page, indicating that the work type is mandatory.

Figure 6-28 Adding a workload



----End

6.2.8 Configuring Work Item Status Roll-up Rules

Project creators or roles with the automation configuration permission can enable or disable automation rules as required to implement automatic parent-child status roll-up or status transfer. Once a rule is enabled, all work items and users in the project can trigger the rule.

Prerequisites

An IPD-system device project is available, in which you have the **Automation** permission.

Procedure

Step 1 Access the CodeArts Req homepage.

Step 2 Access the project details page and choose **Settings** > **Work Item** > **Automation**. The **Automation** page is displayed.

Step 3 Click **Automation Rules**.

Step 4 Set **Enable** to enable or disable the configured rule.

For example, if the status rollup of SF work items is enabled, when you change the status of all child work items of an unfinished SF work item in the **Work Item** > **Req** > **Feature Tree** list to **Completed**, the status of the SF work item is automatically rolled up to **Completed**.

NOTE

- If all child work items of the parent item meet the rule condition and the target status of the parent item supports transition, the rule is applied.
- If the parent item has any child work items that do not meet the rule condition, when the rule is triggered, a record indicating no operation performed is generated and the parent item status is not transitioned.
- If there is no parent item, when the rule is triggered, a record indicating that no operation performed is generated and the parent item status is not transitioned.
- If the parent item transition status configured in the rule does not support transition, when the rule is triggered, a record indicating an execution error is generated and the parent item status is not transitioned.

Step 5 Go to the work item list. The SF status is automatically updated to **Completed**, and an automation rule operation record is added to the **History** tab page.

----End

6.2.9 Configuring Notification Rules

- You can determine whether to inform project members about various operations.

  For example, a member is informed of an assigned work item.
- Notifications can be sent via direct messages or emails.

Prerequisites

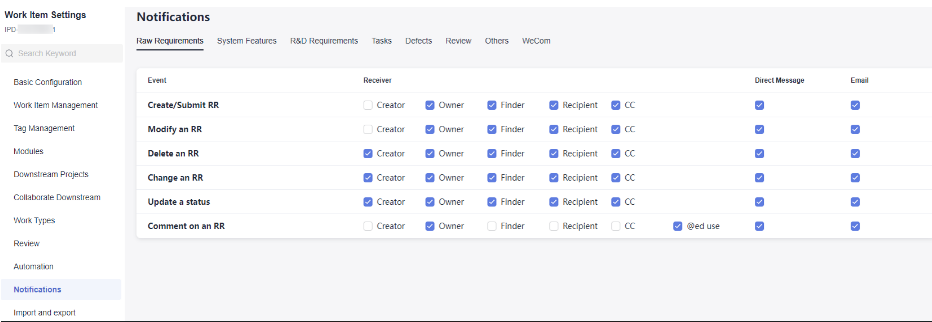
An IPD-system device project is available, and you have permission to **set notifications** for the project.

Procedure

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work** > **Notifications**.

Figure 6-29 Notifications page



Step 3 Select a work item type to configure notifications.

Step 4 Select or deselect desired notification recipients and types.

After the setting is complete, the selected recipients will be notified when a corresponding event (for example, RR modification) occurs.

- **Direct Message**: When a member logs in to the homepage, they will see a number displayed next to in the upper right corner. They can click the icon to view notifications.
- **Email**: Project members who have an email address configured for their user and have enabled **Email Notifications** on the **This Account Settings** page will receive notification emails from the service.

----End

6.2.10 Viewing Work Item Import/Export Records

You can download the imported and exported work item files.

Prerequisites

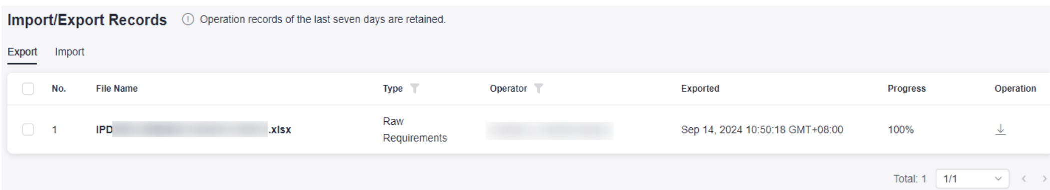
Some work items have been imported or exported in a project.

Viewing Export Records

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work** > **Import/Export**.

Figure 6-30 Import and export records



Step 3 Download the desired work items. All project members' export records of any types of work items will be displayed on this page.

----End

NOTE

- Only the export records of the last seven days are retained.
- The project administrator can view the export records of all members in the current project.

Viewing Import Records

Step 1 Access the CodeArts Req homepage.

Step 2 Go to an IPD-system device project and choose **Settings** > **Work** > **Import/Export**.

Step 3 Download the desired work items. All project members' import records of any types of work items will be displayed on this page.

----End

NOTE

- Only the import records of the last month are retained.
- The project administrator can view the import records of all members in the current project.

6.3 Creating and Managing RRs

6.3.1 RR Status Transition Process

By default, the life cycle of an RR consists of the **Analyzing**, **Confirm**, **Planning**, **Implementing**, **Delivering**, **Accepting**, and **Closed** states. **Figure 6-31** shows the complete status transition process.

Figure 6-31 RR status transition flowchart

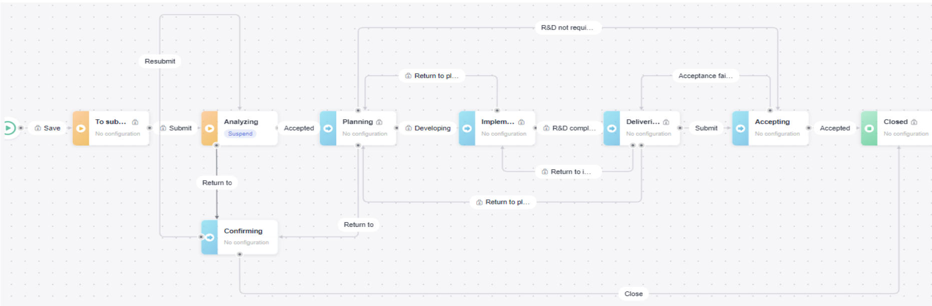


Table 6-6 lists the default operations in each RR state.

Table 6-6 Operation description

State	Description
--	When you create an RR, the status is **--** by default after you save it as a draft. The requirement proposer is by default the person who creates the requirement.
Analyzing	After the RR is submitted, the state changes to **Analyzing**. The requirement recipient can analyze whether to accept the requirement based on the requirement content. If not, the requirement can be returned or suspended. After the requirement is returned, the state changes to **Confirming**. The requirement proposer can directly cancel the requirement or submit the requirement again.

State	Description
Planning	After the RR is accepted, the state changes to **Planning**. The requirement recipient makes development plan on the requirement. If the requirement does not involve R&D, select **R&D not required**, and the state of the requirement changes to **Accepting**.
Implementing	After the R&D of the RR starts, the state changes to **Implementing**. If there is any problem with the implementation solution, the requirement recipient can return the requirement to the planning phase.
Delivering	After the R&D of the RR is completed, the state changes to **Delivering**. If the delivery cannot meet the expectation, the requirement recipient can return the requirement to the planning or implementing phase.
Accepting	After the RR is submitted for acceptance, the state changes to **Accepting**. The requirement proposer checks whether the content of the requirement meets acceptance conditions. If not, select **Acceptance failed** and the state of the requirement goes back to **Delivering**.
Closed	After the RR is accepted, the state changes to **Closed**.

6.3.2 Creating RRs

Original problems or requirements described from the perspective of customers can be managed as RRs. By creating an RR, you can set the background, value, details, and priority of the requirement.

Prerequisites

There is an IPD-system device project, in which you have permission to **create and duplicate** RRs.

Creating RRs

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, click **Raw Requirements**.

Step 3 Click **RR**. On the **RR** page, set related parameters.

Table 6-7 Creating an RR

Parameter	Description
Title	Name of an RR.
Description	Enter the background, value, and details of the RR based on actual conditions. Use text, images, or links.
Attachment	The maximum number of attachments for a raw requirement is 100, and the total size of them should be no more than 50 MB.
Proposed Project	By default, it is the project to which the RR belongs and cannot be changed.
Raised By	By default, it is the creator of the RR. Multiple creators can be selected.
Responsible Project	Project to which the RR belongs. ● If the current project is selected, this requirement is internal. ● If another project of the tenant is selected, the requirement is submitted to external parties. The current project is selected by default.
Recipient	Owner who undertakes the RR. If multiple recipients are selected, data will be synchronized based on the recipients' processing speed.
Expected Completion	Expected completion time of the RR.
Priority	Priority of an RR, including **Low**, **Medium**, and **High**. The default value is **Medium**.
Copy To	Other members of the project team.

Step 4 Click **Submit**. The **Raw Requirements** page is displayed and "Request submitted successfully" is displayed in the upper right corner.

- If you click **Save Draft**, the RR list is displayed. The requirement status is **To submit**.
- If you click **Cancel**, the creation of the RR is cancelled.

The new requirement is displayed in the RR list, and the requirement state is **Analyzing**. If another project of the tenant is selected for **Responsible Project**, choose **Other Projects** to view the new RR.

NOTE

After an RR is created, the people selected for **Raised By**, **Recipient**, and **Copy To** will receive email notifications and internal message notifications. If not, set notifications or modify notification settings. For details, see **Configuring Notification Rules**.

----End

Related Operations

You can perform the following operations on a new RR.

Table 6-8 Basic operations on an RR

Operation	Description
Modify RR title	Click next to an RR title to modify it.
Modify RR field	Click the target field value in the row of an RR to modify the value.
Create child requirement	Click in the **Operation** column of an RR to break it down into child requirements. ● In the **Break Down Subrequirements** dialog box, click **Add Subrequirement** to create a child requirement. A maximum of 10 child requirements can be created at a time. ● The project to which a child requirement belongs can be the current project or other projects of the tenant. To configure the project scope, choose **Settings > Work > RR Downstream Projects**.
Associate with child requirement	Click in the **Operation** column of an RR to associate it with child requirements.
Duplicate RR	Choose ··· > **Duplicate** in the **Operation** column of an RR. The procedure for duplicating an RR is the same as that for creating an RR.
View RR association map	Choose ··· > **Association Map** in the **Operation** column of an RR to view all data of its related items.
Copy RR link	Choose ··· > **Copy Link** in the **Operation** column of an RR to copy its title, ID, owner, status, and link to the clipboard.

Operation	Description
Migrate RR	Choose ··· > **Migrate** in the **Operation** column of an RR to migrate it to other projects. **NOTE** ● RRs in draft state cannot be migrated. ● After the requirement is migrated to another project, the system automatically removes the tag of the RR and disassociates the RR from the associated work item. ● After the migration, the RR will be re-executed. The system will automatically clear the actual workloads, retain only the fields of the same type as the original work item, and remove redundant fields.
Delete RR	Choose ··· > **Delete** in the **Operation** column of an RR to delete it. **NOTE** ● RRs that are being reviewed or in progress cannot be deleted. ● If a drafted RR is deleted, it is permanently deleted. ● RRs in the **To Do** state can be deleted only in the proposing project. RRs in the **Done** state can be deleted in both the proposing project and the responsible project. ● If an RR of a proposing project is deleted, it is permanently deleted. If an RR of a responsible project is deleted, it is moved to the project's recycle bin. ● RRs in the recycle bin can be restored or permanently deleted. After being restored, RRs restore to their original status. Data in the recycle bin will be permanently deleted in 30 days.

6.3.3 Managing RRs

After creating an RR (see **Creating RRs**), you can perform the operations described in this section on it.

Prerequisites

You have created an RR in an IPD-system device project, and have RR permissions for the project.

On the RR List Page

Go to the project homepage, choose **Work > Req > Raw Requirements**, and perform the following operations.

Figure 6-32 RR list

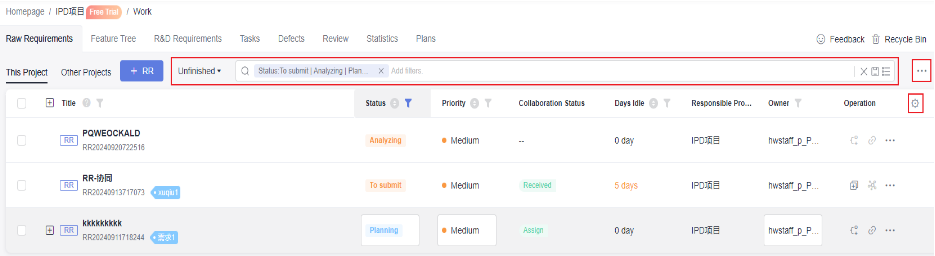


Table 6-9 Management operations in the RR list

Operation	Procedure
Query RR	● By adding filters 1. Click the search box in the RR list and select one or more filters to search for RRs. 2. To clear all filters and display all data, click on the right of the search bar. ● By using a saved view 1. Click the search box in the RR list and select one or more filters. 2. Click on the rightmost of the search bar, and enter a view name. 3. Click **OK**. The created view is displayed next to **RR**. 4. You can select the name of the created view to query the RRs that meet the search criteria. Views can be shared with others, modified, and deleted.

<table>
<tr><th>Operation</th><th>Procedure</th></tr>
<tr><td>Import work items</td><td>Use the provided template to import requirements in batches.
1. In the RR list, click ··· on the right of the search bar and select Import.
2. In the displayed dialog box, click Download Template.
The import template file is displayed in the lower part of the page. Save the file to the local PC and fill in data. The template file should be named in the following format: Project name + "-" + Module name (for example, RR) + Template.
3. Fill in the fields on the RR - Requirements sheet.
For details about how to set parameters, see the RR - Import Rules sheet in the template file.
4. Drag or click to select a file to be imported.
5. Click Import. The import progress dialog box is displayed.
● After the import is successful, you can view the imported requirement information in the RR list.
● If the import fails, a message is displayed in the upper right corner of the page. Click View Failure Details in the message to view the failure details. You can modify the requirement information based on the details and import the template again.
NOTE
For details about operations on import records, see Viewing Work Item Import/Export Records.</td></tr>
<tr><td>Export work items</td><td>Export requirements in batches to an Excel file.
1. Export some or all RRs.
● Export all: On the Raw Requirements page, click ··· on the right of the search bar and choose Export. The Select Fields to Export dialog box is displayed.
● Export some: In the RR list, select one or more RRs to be exported and click Export at the bottom of the page. The Select Fields to Export dialog box is displayed.
2. Select the fields to be exported and determine whether to export child requirements.
3. Click Export. A dialog box is displayed, indicating the export progress.
After the RRs are exported, the RR file will be automatically downloaded to the local PC. The file format is .xlsx.
NOTE
For details about operations on export records, see Viewing Work Item Import/Export Records.</td></tr>
</table>

Operation	Procedure
Configure fields to display	Click next to the **Operation** field. ● On the left of the pop-up box, select the fields to be displayed in **Available**. ● On the right of the pop-up box, drag the fields in **Selected** to adjust the display sequence.

On the RR Details Page

On the details page of an RR, you can modify the description, priority, and owner, add tags and attachments, associate work items, check review records, add workloads, and view the operation history.

Figure 6-33 RR details page

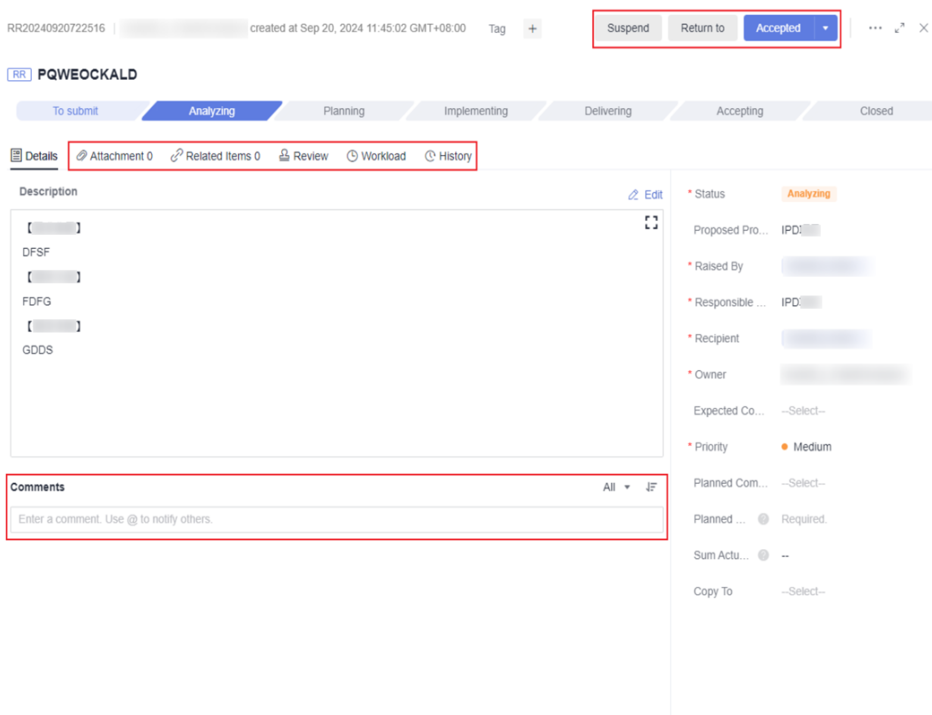
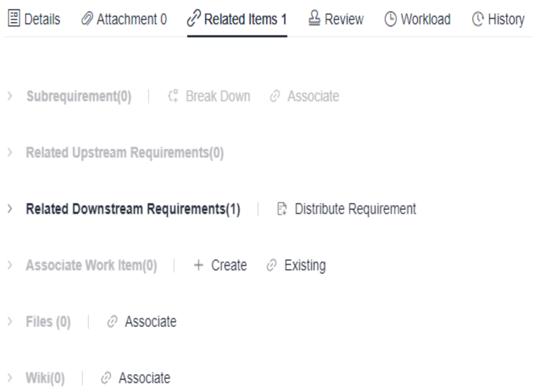
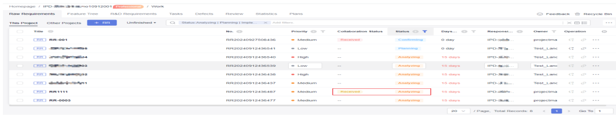


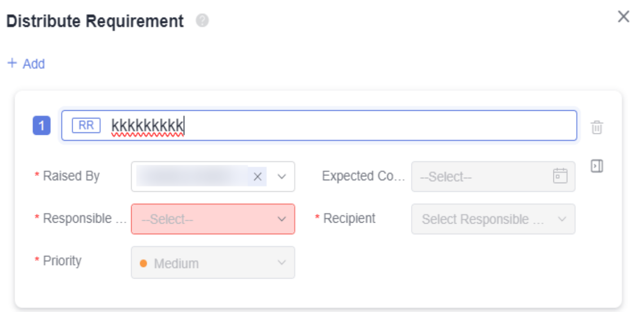
Table 6-10 Management operations on the details page

Operation	Procedure	Remarks
Edit work item	On the RR details page, click the value box of the field to be modified, and enter a target value in the text box or select one from the drop-down list. The modification is saved immediately.	You must have permission to **edit** RRs.

Operation	Procedure	Remarks
Change work item status	Go to the work item details page. Click the transition button in the upper right corner to transition the work item to the target status. For details about status transition, see **Table 6-6**.	You must have permission to **set statuses** for RRs.
Upload attachment	Attachments can be pictures, workbooks, manuscripts, and text files. A maximum of 100 attachments can be added to each work item, and their total size cannot exceed 50 MB. 1. Go to the work item details page, and click the **Attachment** tab. 2. Click the box to select a local file or drag the file here to upload it as an attachment for the work item. Local files can be directly dragged to the text box. When the upload progress reaches 100%, the system displays a message indicating that the attachment is uploaded successfully. Move the cursor to the file that is successfully uploaded. The operations that can be performed are displayed. ● Click to download the file. ● Click to delete the uploaded file.	You must have permission to **upload attachments** for RRs.

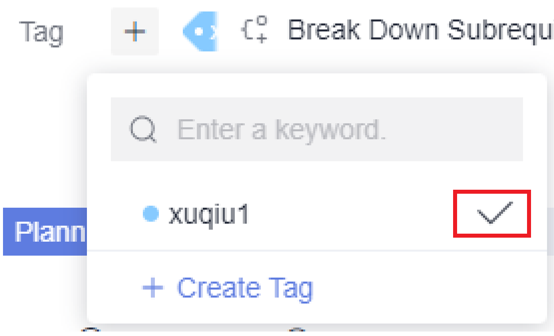
Operation	Procedure	Remarks
Add and check related items	A work item can be associated with other types of work items in a project. 1. Go to the work item details page and click the **Related Items** tab. **Figure 6-34** Related items  2. Complete association. ● **Related Upstream Requirements**: requirements coordinated from upstream projects. The upstream requirement information is displayed in the current project only when this project is selected as the responsible project for the created **Related Downstream Requirements** in the RR of another project. Assume that the name of the current project is "IPD Project" and that of another project is "IPD Project 2". The method of synchronizing upstream requirement information is as follows: 1. Create a project named "IPD Project 2". 2. Create an RR named "RR-IPD2" in **IPD Project 2**. 3. After the RR is created, enter its details page. 4. Choose **Related Items** > **Related Downstream Requirements** and click **Distribute Requirement**. 5. Set **Responsible Project** to **IPD-Project** and the raw requirement name to **RR-Synergy**. 6. After the assignment, click the requirement title "RR-Synergy" to access "IPD Project" where this requirement is located. On the RR-Synergy details page, choose **Related Items** > **Related Upstream Requirements** to view the corresponding requirement information.	You must have permission to **deliver assignment**, **break down/associate/dissociate child requirements**, **create/associate/dissociate work items**, **associate/dissociate files**, and **associate/dissociate wikis** for RRs.

Operation	Procedure	Remarks
	In the RR list, **Collaboration Status** of the RR-Synergy requirement is **Received** in orange, and **Status** is **Analyzing**. **Figure 6-35** RR list  **NOTE** Different colors of **Received** indicate different meanings. : Before a requirement is accepted, the color of **Received** is orange. : After a requirement is accepted, the color of **Received** turns green. : After a requirement is rejected, the color of **Received** turns red. • **Related Downstream Requirements**: requirements assigned to downstream projects. A maximum of 10 requirements can be assigned at a time. One requirement is displayed by default and cannot be deleted. 1. Click **Distribute Requirement**. The **Distribute Requirement** dialog box is displayed. 2. Configure the information about requirement assignment. The current project cannot be selected for **Responsible Project**. If only the current project exists in the system and no value is available for this parameter, requirement assignment cannot be performed.	

Operation	Procedure	Remarks
	Figure 6-36 Requirement assignment  3. After configuring the requirement assignment information, click **OK**. Click the requirement title "RR-test" to access "IPD Project 2" where this requirement is located. In the RR list, **Collaboration Status** of the requirement is **Delivered** in orange. **NOTE** Different colors of **Assign** indicate different meanings. Assign : If the current requirement has unprocessed downstream collaboration requirements, the color of **Assign** is orange. Assign : After all downstream collaboration requirements under the current requirement are accepted, the color of **Assign** turns green. Assign : If the current requirement has returned downstream collaboration requirements, the color of **Assign** is red. • **Subrequirement**: child work items broken down from the current work item. The operations vary according to the state. Perform operations based on the functions displayed on the page and the actual project situation. Click **Break Down** to add a child requirement. Each requirement can be broken down into a maximum of 10 child requirements at a time. One child requirement is displayed by default and cannot be deleted. Click ▯ to expand and configure more information. After the child requirements are created, you can check and edit them on the **R&D Requirements** tab.	

Operation	Procedure	Remarks
	● **Associate Work Item**: associated work items of other types in the project. The operations vary according to the state. Perform operations based on the functions displayed on the page and the actual project situation. Features, tasks, and bugs can be associated. ● **Files**: raw requirement files. Select a file associated with the current requirement. You can upload a local file. ● **Wiki**: raw requirement wikis. Select a wiki associated with the current requirement. You can create a wiki.	
Check review record	You can check the review records related to requirements only in the following situations: ● When you modify the controlled content of an RR, a change process is automatically triggered. Only then will you be able to view the review record in **Review** of the corresponding requirement details page. When you click an RR in the **Confirm**, **Planning**, or **Implementing** state and modify controlled fields with on the details page, a dialog box is displayed, indicating that the change approval process is required. ● You can view the review records in **Review** of the corresponding requirement details page only when the requirement has general review records.	You must have permission to **view** RRs.

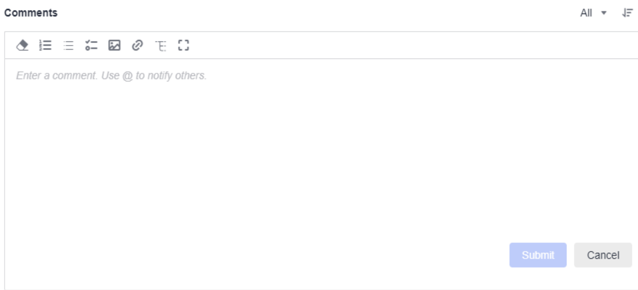
Operation	Procedure	Remarks
Add workload	1. Go to the details page of a work item and click **Workload**. 2. Click **Add Workload**. The **Add Workload** dialog box is displayed. 3. Enter the workload information. ● The end date cannot be earlier than the start date. ● Decide whether to select **Weekends included**. If not, weekend workload records will not be generated. ● You can select **Total** or **Daily** for **Workload**. ● **Work Type** options include backend development, frontend development, UI design, replacement leave, debugging, and general. You can also customize the value by referring to **Creating Work Types**. 4. Click **OK**. The system automatically generates corresponding records based on the entered dates and days. The workload can be edited and deleted.	You must have permission to **add person-hours** for RRs. Workloads can be edited and deleted by the creator. By default, the project administrator can edit and delete all workloads.
View operation history	**History** displays all operation logs of users, including creation, status transition, review initiation, work item association, and workload adding. 1. Go to the work item details page. 2. Click the **History** tab. ● Click or to check historical records in the ascending or descending order of operation time. ● You can set search criteria to query historical records that meet the search criteria.	You must have permission to **view** RRs.

Operation	Procedure	Remarks
Tag work item	1. Go to the work item details page. Click + next to **Tag** at the top of the page, and select **Create Tag**. The added tag is displayed in the **Tag** area. 2. In the **Create Tag** dialog box, set **Tag Name** and select **Tag Color**. 3. Click **OK**. The new tag is displayed next to the requirement ID in the RR list. 4. (Optional) Hide a tag. ● Click + next to **Tag**. In the displayed dialog box, deselect √ to hide the tag. **Figure 6-37** Hiding a tag - 01  ● Move the cursor to the tag name and click to hide the tag. **Figure 6-38** Hiding a tag - 02  **NOTE** If you need to add tags for multiple RRs, you can select the desired RRs in the RR list, click **Batch Edit** in the lower part of the page, and select **Tag**.	You must have permission to **edit** RRs.

<table>
<tr><th>Operation</th><th>Procedure</th><th>Remarks</th></tr>
<tr><td>Add comment</td><td>

1. Go to the work item details page.
2. On the **Details** tab page, click the **Comments** text box.

Figure 6-39 Adding a comment



3. Enter a comment.
You can upload images, enter links, associate work items, and use @ to notify project members in comments.
4. Click **Submit**.
Submitted comments can be replied, edited, pinned to the top, and deleted.

</td><td>You must have permission to view RRs.</td></tr>
</table>

6.4 Creating and Managing Feature Tree and System Features

6.4.1 Creating a Feature Tree

The system provides multiple methods for creating a feature tree, including inheriting the feature tree from another project, directly creating a feature tree, and importing an Excel file.

You can create a feature tree by inheriting or importing one only when there is no feature tree in the current project.

Prerequisites

An IPD-system device project is available, and you have permission to **create, inherit, and import feature sets** for the project.

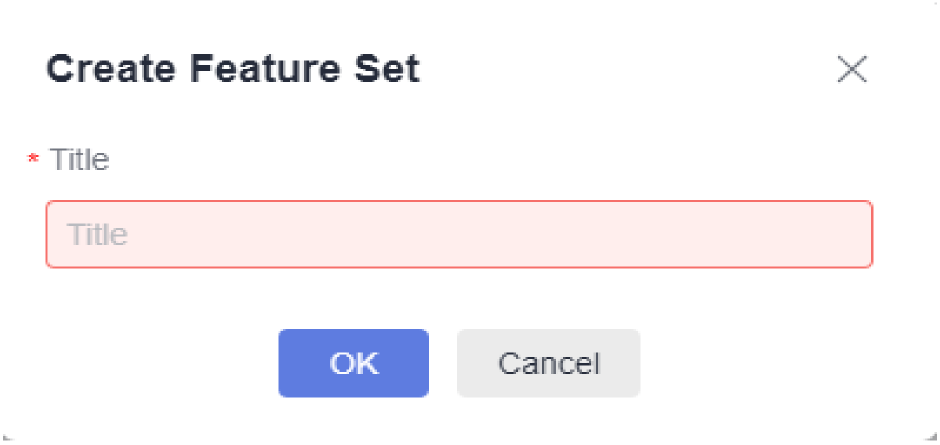
Creating a Feature Set

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Feature Tree**.

Step 3 Click . The **Create Feature Set** dialog box is displayed.

Figure 6-40 Creating a feature set



Step 4 Set **Title**.

Step 5 Click **OK**.

You can view the new feature set in the feature tree list.

----End

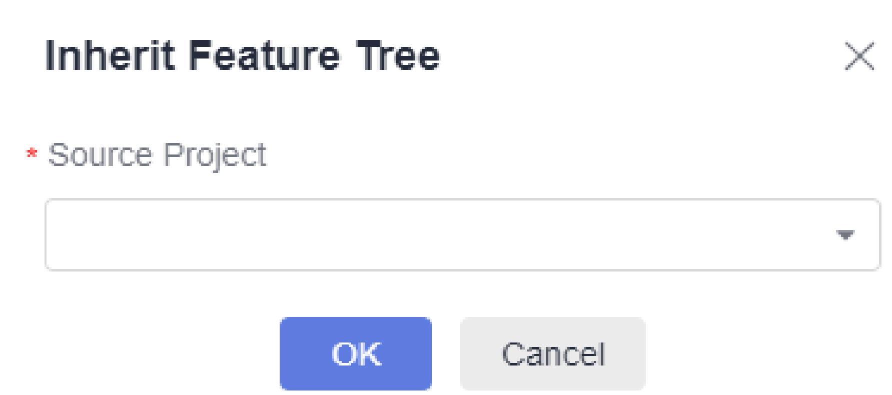
Inheriting a Feature Tree

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Feature Tree**.

Step 3 Click **Inherit Feature Tree**. The **Inherit Feature Tree** dialog box is displayed.

Figure 6-41 Inheriting a feature tree



Step 4 Select a project for which a feature tree has been configured. The feature tree and all included system features of the selected project can be inherited to the current project.

Step 5 Click **OK**.

In the feature tree list, you can view the feature tree inherited from another project.

----End

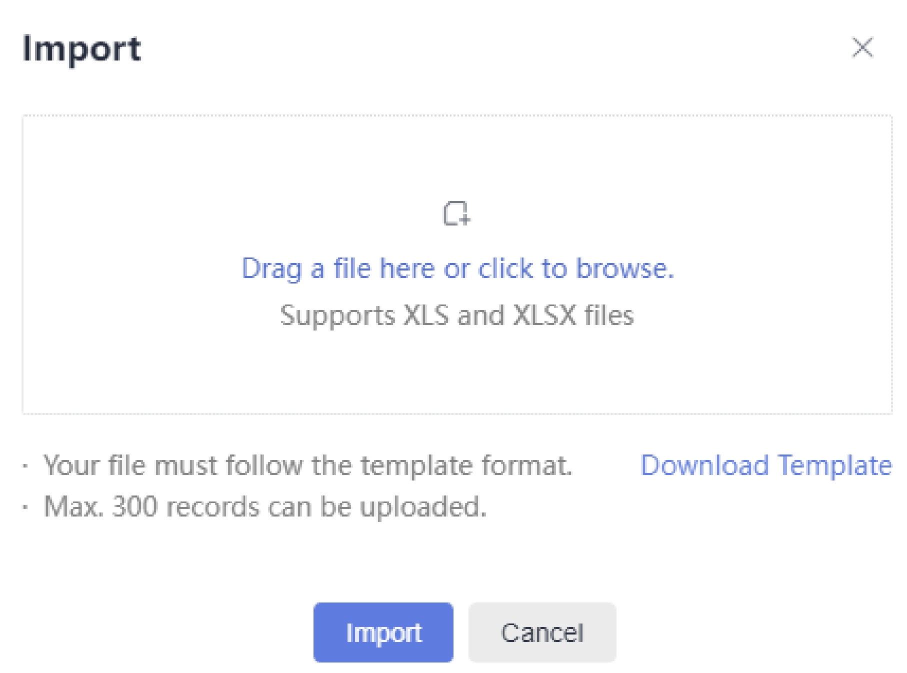
Importing a Feature Tree

Step 1 **Access the CodeArts Req homepage**.

Step 2 On the project homepage, choose **Feature Tree**.

Step 3 Click **Import Feature Tree**. The **Import** dialog box is displayed.

Figure 6-42 Importing a feature tree



Step 4 Click **Download Template**. The import template file is displayed in the upper right corner of the page. Save the file to the local PC and fill in data. The template file should be named in the following format: *Project name* + "-" + *Module name* (for example, **Feature**) + **Template**.

Step 5 Set the fields in the **SF - List** sheet of the template. For details about how to set parameters, see the **SF - Import Rules** sheet in the template.

Step 6 Drag or click to select a file to be imported.

Step 7 Click **Import**.

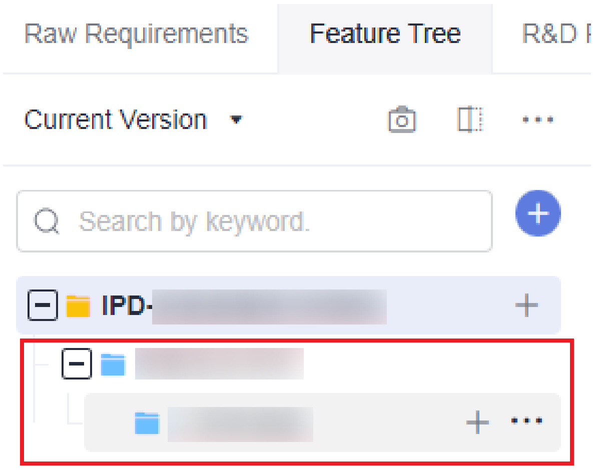
You can view the imported feature sets in the feature tree list.

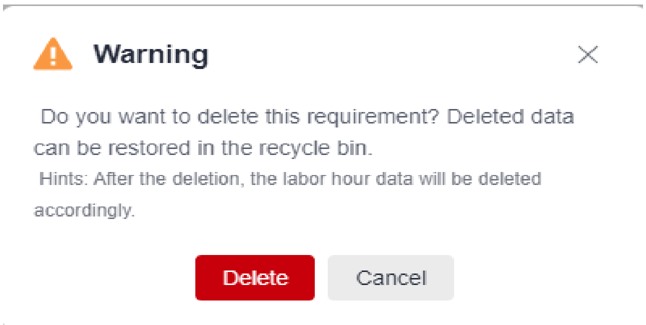
----End

Related Operations

You can perform the following operations on a new feature set.

Table 6-11 Basic operations on a feature set

Operation	Description
Create child feature set	1. Click next to the target feature set. The **Create Feature Set** dialog box is displayed. 2. Set **Title**. 3. Click **OK**. You can view the new second-level feature set in the corresponding feature set. **Figure 6-43** Child feature sets  You can create third-level feature sets for a second-level one. A maximum of 10 levels of feature sets are supported. The child feature sets can be edited and deleted.
Edit feature set	Click on the right of the target feature set, and click **Edit** to edit the title.

Operation	Description
Delete feature set	1. Click ••• on the right of the target feature set, and click **Delete**. **Figure 6-44** Deleting a feature set  2. Click **Delete**. The deleted feature set and its child feature sets will not be display on the page. **NOTE** Deleted feature sets can be restored or permanently deleted from the recycle bin.

6.4.2 Managing a Feature Tree

After creating a feature tree (see **Creating a Feature Tree**), you can perform the operations described in this section on it.

Prerequisites

You have created a feature set in an IPD-system device project, and have feature set permissions for the project.

Procedure

On the project homepage, choose **Work > Req > Feature Tree**, and perform the following operations.

Figure 6-45 Feature tree list

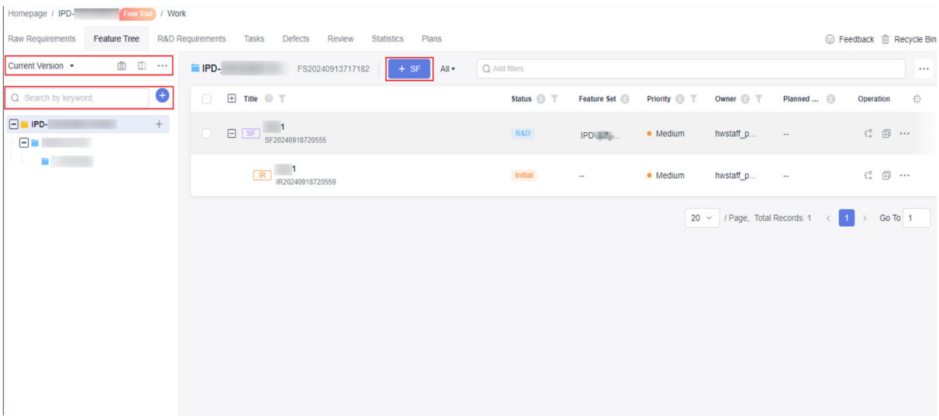
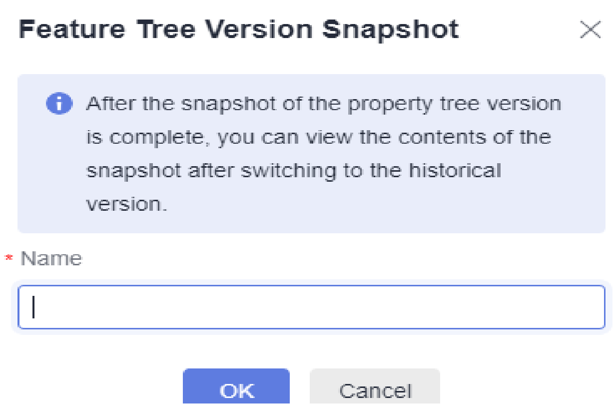


Table 6-12 Managing a feature tree

Operation	Procedure
Search for feature set	1. On the project homepage, choose **Feature Tree**. 2. Enter a keyword in the search box to search for the target feature set.
Associate system feature with feature set	You can create system features or associate existing ones with a feature tree. System features of the same type can be put in the same feature set for easy management. ● Creating a system feature 1. Click the name of the feature set to associate a system feature. 2. Click **SF**. 3. Enter system feature information. For details, see **Procedure**. 4. Click **OK**. The new system feature is displayed under the corresponding feature set.

<table>
<tr><th>Operation</th><th>Procedure</th></tr>
<tr><td>Create feature tree baseline snapshot</td><td>You can create a baseline based on the current feature tree version.

On the project homepage, choose Feature Tree.
Click . The Feature Tree Version Snapshot dialog box is displayed.

Figure 6-46 Creating a feature tree snapshot


Enter a snapshot name.
Click OK.
By default, the current version is displayed. To the snapshot record of the feature tree version, click on the right and select the version to be viewed. The snapshot of the corresponding version is displayed.

Figure 6-47 Viewing feature tree version snapshots


</td></tr>
</table>

Operation	Procedure
Compare feature tree version snapshots	You can compare feature tree snapshots of different versions. 1. On the project homepage, choose **Feature Tree**. 2. Click . The snapshot comparison page is displayed. 3. Select the baseline snapshot version to be compared. 4. Click the name of the system feature to be compared. The system feature comparison page is displayed. If a system feature is snapshotted for multiple times based on the feature tree, multiple versions will be generated. You can select and compare different versions. To compare system feature versions, check historical versions on the **Feature Tree** page. 1. On the project homepage, choose **Feature Tree**. 2. Click the names of the system features to be compared. The version comparison page is displayed. ● If a system feature is snapshotted for multiple times on the **Feature Tree** page, multiple versions will be generated. You can select and compare different versions.
Import feature tree	Use the provided template to import a feature tree. 1. On the project homepage, choose **Feature Tree**. 2. Click on the right of **Current Version**, and select **Import Feature Tree**. 3. In the displayed dialog box, click **Download Template**. 4. Set the fields in the template. For details, see the import description in the template file. 5. Select the file to be imported. 6. Click **Import** and complete the import as prompted.
Export feature tree	Export a feature tree with desired fields to an Excel file. 1. On the project homepage, choose **Feature Tree**. 2. Click on the right of **Current Version**, and select **Export Feature Tree**. 3. In the displayed dialog box, select fields to be exported. 4. Click **Export**. After the feature tree is exported, the file will be automatically downloaded to the local PC. The file format is **.xlsx**.

6.4.3 System Feature Status Transition Process

The entire lifecycle of a system feature consists of the **Initial**, **R&D**, and **Completed** states. **Figure 6-48** shows the complete status transition process.

Figure 6-48 System feature status transition process

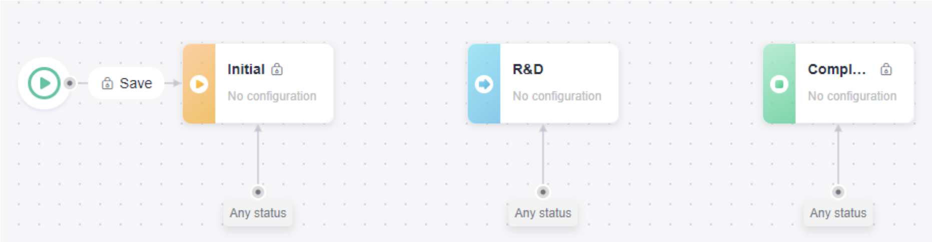


Table 6-13 describes the operations in each status.

Table 6-13 Operation description

Status	Description
Initial	When a system feature is created, the state is **Initial** by default.
R&D	After the system feature in the **Initial** state is handled, the state changes to **R&D**.
Completed	After the system feature is developed, the state changes to **Completed**.

6.4.4 Creating System Features

Major capabilities of offering requirements or services to support a problem (PB) can be managed in system features. When creating a system feature, you can set its background, value, details, and priority.

Prerequisites

An IPD-system device project is available, and you have permission to **create and duplicate features** for the project.

Procedure

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Feature Tree**.

Step 3 Click **SF**. On the **SF** page, set the required parameters.

Table 6-14 System feature parameters

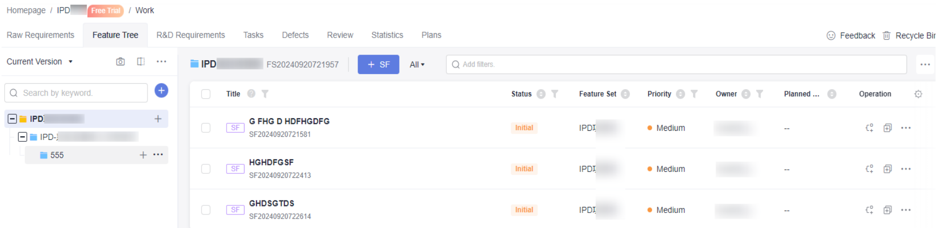
Parameter	Description
Tag	When creating or editing a work item, you can add a customized tag. Tag names can be marked in different colors.

Parameter	Description
Title	Name of a system feature.
Description	Enter the background, value, and details of the feature. The description can include text, images, or links.
Attachment	A maximum of 100 attachments can be added to a system feature, and the total capacity is 50 MB.
Responsible Project	Project that the system feature belongs to. The value cannot be changed.
Owner	Owner of the system feature. Only one owner can be selected. The default owner is the creator.
Feature Set	The feature set to which the system feature belongs is a home structure of the feature tree. This parameter has a value only after the operations in **Creating a Feature Set** are completed. The parameter value can be empty. You can associate the parameter with the corresponding system feature after creating a feature tree.
Priority	Priority of the system feature, including **Low**, **Medium**, and **High**. The default value is **Medium**.
Planned Start	Planned start time.
Planned Completion	The planned completion time cannot be earlier than the planned start time.
Planned Workload	Estimated workload that will be required.
High Value	Whether the system feature is a key feature. The value can be **Yes** or **No**.
Used For	Scenario with a maximum of 512 characters.
Domain	Domain to which the system feature belongs. The options include software and hardware, hardware, performance, operations, and user experience. Select one based on the system feature.
Copy To	Person to whom the system feature is copied.

Step 4 Click **OK**. The feature tree page is displayed. A message indicating system feature created is displayed in the upper right corner.

The new system feature is displayed in the feature tree, and the system feature state is **Initial**.

Figure 6-49 Feature tree



NOTE

After a system feature is created, the people selected for **Owner** and **Copy To** will receive email notifications and direct message notifications. If not, configure or modify notification settings. For details, see **Configuring Notification Rules**.

----End

Related Operations

You can perform the following operations on a new system feature.

Table 6-15 Basic system feature operations

Operation	Description
Modify system feature title	Click next to a system feature title to modify it.
Modify system feature field	Click the target field value in the row of a system feature to modify the value.
Create child requirement	Click in the **Operation** column of a system feature to break it down into child requirements. ● In the **Break Down Subrequirements** dialog box, click **Add Subrequirement** to create a child requirement. A maximum of 10 child requirements can be created at a time.
Duplicate system feature	Choose > **Duplicate** in the **Operation** column. This process is the same as that of creating a feature.
View system feature association map	Choose > **Association Map** in the **Operation** column of a system feature to view all data of its related items.
Copy system feature link	Choose > **Copy Link** in the **Operation** column of a system feature to copy its title, ID, owner, status, and link to the clipboard.

Operation	Description
Delete system feature	Choose ··· > **Delete** in the **Operation** column of a system feature to delete it. **NOTE** • System features in change or baseline review cannot be deleted. • Once deleted, a system feature is moved to the recycle bin. System features in the recycle bin can be restored or permanently deleted. After a system feature is restored from the recycle bin, it restores to the original status.
Batch operations	Select multiple system features and perform the following operations: • Baseline • Cancel baseline • Change • Baseline review • Edit • Suspend • Cancel suspension • Export • Delete

6.4.5 Managing System Features

After creating a system feature (see **Procedure**), you can perform the operations described in this section on it.

Prerequisites

You have created a system feature in an IPD-system device project, and have system feature permissions for the project.

Managing System Features on the System Feature List Page

Go to the project homepage, choose **Work > Req > Feature Tree**, and perform the following operations.

Figure 6-50 System feature list page

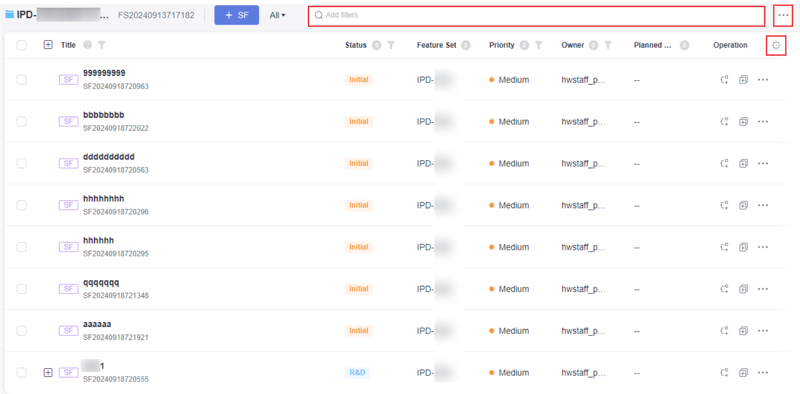


Table 6-16 Management operations in the system feature list

Operation	Procedure	Remarks
Search for system feature	• By adding filters 1. Click the search box in the feature list and select one or more filters to search for system features. 2. To clear all filters and display all data, click on the right of the search bar. • By using a saved view 1. Click the search box in the system feature list and select one or more filters. 2. Click on the rightmost of the search bar, and enter a view name. 3. Click **Confirm**. The created view is displayed next to the **SF** button. 4. Select the created view to query the system features that meet the search criteria. Views can be shared with others, modified, and deleted.	You must have permission to **view** features.

<table>
<tr><th>Operation</th><th>Procedure</th><th>Remarks</th></tr>
<tr><td>Import work items</td><td>Use the provided template to import system features.
In the system feature list, click ··· on the right of the search bar, and select Import SF.
In the displayed dialog box, click Download Template.
The import template file is displayed in the lower part of the page. Save the file to the local PC and fill in data. The template file should be named in the following format: Project name + "-" + Module name (for example, Feature) + Template.
Set the fields in the SF - List sheet of the template. For details about how to set parameters, see the SF - Import Rules sheet in the template.
Drag or click to select a file to be imported.
Click Import. The import progress dialog box is displayed.
After the import is successful, you can view the imported requirement information in the system feature list.
If the import fails, a message is displayed in the upper right corner of the page. Click View Failure Details in the message to view the failure details. You can modify the requirement information based on the details and import the template again.
NOTE
For details about operations on import records, see Viewing Work Item Import/Export Records.</td><td>You must have permission to import features.</td></tr>
</table>

Operation	Procedure	Remarks
Export work items	Export system features in batches to an Excel file. 1. Export some or all system features. • Export all: On the **Feature Tree** page, click ··· on the right of the search bar and choose **Export All**. The **Select Fields to Export** dialog box is displayed. • Export some: In the feature list, select one or more system features to be exported and click **Export** at the bottom of the page. The **Select Fields to Export** dialog box is displayed. 2. Select the fields to be exported. 3. Click **Export**. A dialog box is displayed, indicating the export progress. After the system features are exported, the feature file will be automatically downloaded to the local PC. The file format is **.xlsx**. **NOTE** For details about operations on export records, see **Viewing Work Item Import/Export Records**.	You must have permission to **export** features.
Configure fields to display	Click ⚙ next to the **Operation** field. • On the left of the pop-up box, select the fields to be displayed. • On the right of the pop-up box, drag the fields in the **Selected** area to adjust the display sequence.	You must have permission to **view** features.

Managing System Features on Their Details Pages

On the details page of a system feature, you can modify the description, priority, and owner, add tags and attachments, associate work items, check review records, add workloads, and view the operation history.

Figure 6-51 System feature details page

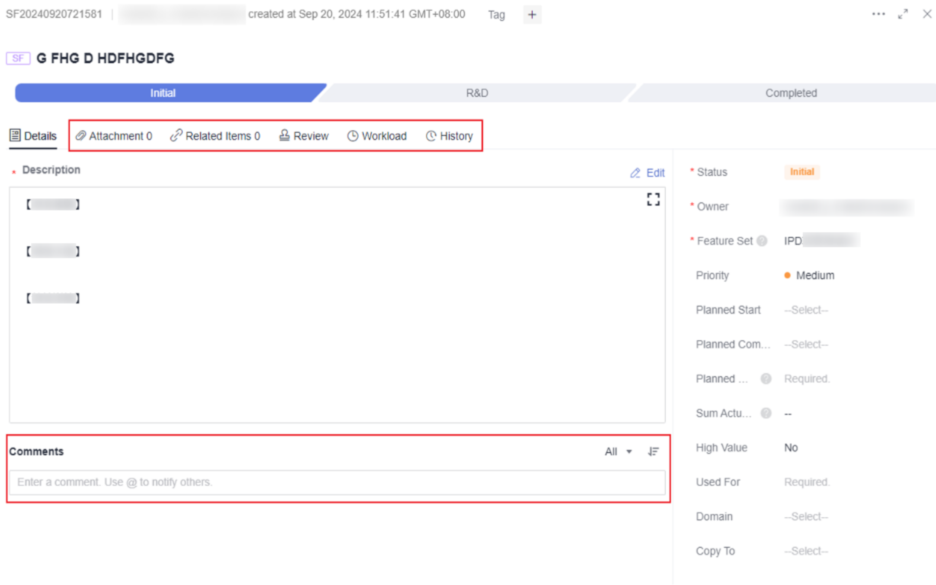
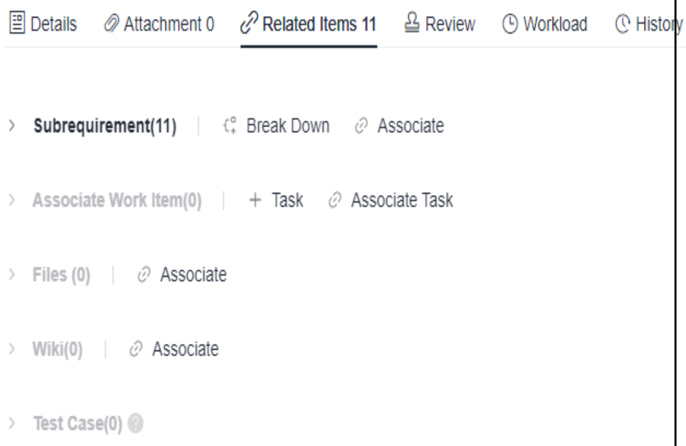


Table 6-17 Management operations on the details page

Operation	Procedure	Remarks
Edit work item	On the system feature details page, click the value box of the field to be modified, and enter a target value in the text box or select one from the drop-down list. The changes are saved automatically.	You must have permission to **edit** features.
Change work item status	Go to the work item details page, click the **Status** field, and transition the work item to the target status. For details about status transition, see **Table 6-13**.	You must have permission to **set statuses** for features.
Baseline feature	1. Go to the work item details page, and choose ··· > **Baseline**. The **Baseline** dialog box is displayed. 2. Click **OK**. The SF icon is displayed on the left of the system feature title. **NOTE** The baseline of a system feature can be canceled.	You must have permission to **baseline** features.

Operation	Procedure	Remarks
Initiate baseline review	1. Go to the work item details page, and choose > **Baseline Review**. The **BR** page is displayed. 2. Enter BR information. By default, the **Baseline Object** is the system feature for which the baseline review is initiated. 3. Click **Submit**. The **Review** page is displayed. Choose **Review** > **Baseline Review** to check the new baseline review. 4. Switch to the **Feature Tree** page. The icon of the system feature that is under baseline review is displayed as . **NOTE** Track the progress of the baseline review. The system feature can be baselined only when the baseline review status changes to **Approved**.	You must have permission to **view** features.
Initiate change review	The change process can be initiated only for baselined system features. 1. Go to the details page of a baselined work item, and choose > **Change Review**. The **CR** page is displayed. 2. Enter CR information. ● **Change Object**: By default, it is the system feature to be changed. ● **Collaborative Parent Item Change**: Only existing CRs can be added. 3. Click **Submit**. The **Review** page is displayed. Choose **Review** > **Change Review** to check the new CR in the change process. The CR state is **Pending review** by default. **NOTE** Track the progress of the change review. Only when the state is **Approved**, which means that the change review has been processed, will the changed content display in the corresponding system feature.	You must have permission to **view** features.

Operation	Procedure	Remarks
Upload attachment	Attachments can be pictures, workbooks, manuscripts, and text files. A maximum of 100 attachments can be added to each work item, and their total size cannot exceed 50 MB. 1. Go to the work item details page, and click the **Attachment** tab. 2. Click the box to select a local file or drag the file here to upload it as an attachment for the work item. Local files can be directly dragged to the text box. When the upload progress reaches 100%, the system displays a message indicating that the attachment is uploaded successfully. Move the cursor to the file that is successfully uploaded. The operations that can be performed are displayed. • Click  to download the file. • Click  to delete the uploaded file.	You must have permission to **upload attachments** for features.

Operation	Procedure	Remarks
Add and view related item	A work item can be associated with other types of work items in a project. 1. Go to the work item details page and click the **Related Items** tab.  2. Complete association. ● **Subrequirement**: Child requirements of the current feature. Click **Break Down** to add child requirements. A maximum of 10 child requirements can be created at a time. One child requirement is displayed by default and cannot be deleted. Click to expand and configure more information. After the child requirements are created, you can check and edit them on the **R&D Requirements** tab. Click **Associate** to add existing requirements as child requirements. You can add multiple ones at a time. ● **Associate Work Item**: associated work items of other types in the project. Tasks can be associated. ● **Files**: files corresponding to the feature. Select a file associated with the current feature. You can upload a local file. ● **Wiki**: wikis corresponding to the feature. Select a wiki associated with the feature. You can also create a wiki. ● **Test Case**: test cases corresponding to the system feature. You can associate system features with test cases in CodeArts TestPlan. The associated cases will be displayed here.	You must have permission to **create/ associate/ dissociate child features**, **create/ associate/ dissociate child requirements**, **create/ associate/ dissociate work items**, **associate/ dissociate files**, and **associate/ dissociate wikis** for features.

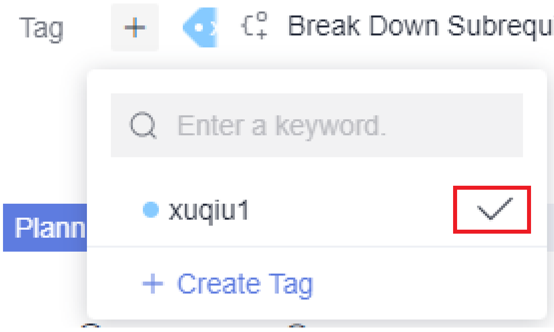
Operation	Procedure	Remarks
Check review record	You can check the review records related to system features only in the following situations: ● When a system feature is added to a baseline review, the baseline review process is triggered. Then you can check the review record on the **Review** tab of the system feature details page. ● When a locked field of a baselined system feature is modified, the change process is automatically triggered. Then you can check the review record on the **Review** tab of the system feature details page. ● When a system feature has a general review record, you can check the record on the **Review** tab of the system feature details page.	You must have permission to **view** features.

Add workload	1. Go to the work item details page, and click the **Workload** tab.
	2. Click **Add Workload**. The **Add Workload** dialog box is displayed.
	3. Enter the workload information.
	  ● The end date cannot be earlier than the start date.
	  ● Decide whether to select **Weekends included**. If not, weekend workload records will not be generated.
	  ● You can select **Total** or **Daily** for **Workload**.
	  ● **Work Type** options include backend development, frontend development, UI design, replacement leave, debugging, and general. You can also customize the value by referring to **Creating Work Types**.
	4. Click **OK**.
	The system automatically generates corresponding records based on the entered dates and days.
	The workload can be edited and deleted.
		You must have permission to **add person-hours** for features.
		Workloads can be edited and deleted by the creator. By default, the project administrator can edit and delete all workloads.

View operation history	**History** displays all operation logs of users, including creation, status transition, review initiation, work item association, and workload addition.
	1. Go to the work item details page.
	2. Click the **History** tab.
	  ● Click or to check historical records in the ascending or descending order of operation time.
	  ● You can set search criteria to query matching historical records.
		You must have permission to **view** features.

<table>
<tr><th>Operation</th><th>Procedure</th><th>Remarks</th></tr>
<tr><td>Tag work item</td><td>

1. Go to the work item details page. Click + next to **Tag** at the top of the page, and select **Create Tag**. The added tag is displayed in the **Tag** area.
2. In the **Create Tag** dialog box, set **Tag Name** and select **Tag Color**.
3. Click **OK**.
The new tag is displayed next to the requirement ID in the feature list.
4. (Optional) Hide a tag.
   - Click + next to **Tag**. In the displayed dialog box, deselect √ to hide the tag.

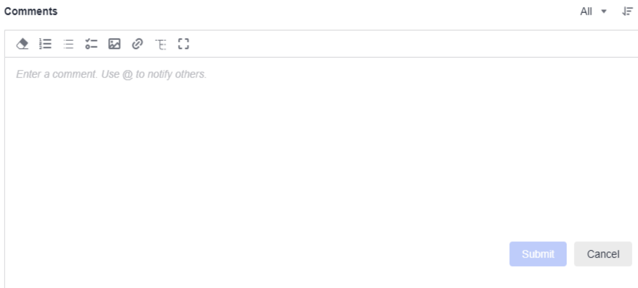


   - Move the cursor to the tag name and click ☒ to hide the tag.

NOTE

If you need to add tags for multiple system features, select the desired system features, click **Batch Edit** in the lower part of the page, and select **Tag**.

</td><td>You must have permission to edit features.</td></tr>
</table>

Operation	Procedure	Remarks
Add comment	1. Go to the work item details page. 2. On the **Details** tab page, click the **Comments** text box.  3. Enter a comment. You can upload images, enter links, associate work items, and use @ to notify project members in comments. 4. Click **Submit**. Submitted comments can be replied, edited, pinned to the top, and deleted.	You must have permission to **view** features.

6.5 Configuring Project Plans

Generally, multiple milestones and release versions are set in project management based on the delivery plan. Each release version can be completed through multiple sprints to deliver project achievements better. R&D requirements, tasks, and bugs of a project can be planned in the release and sprint plans to deliver achievements in an orderly and timely manner, which keeps the project progress under control and manages the allocation of project members.

NOTE

- Type M (M): Milestone.
- Type R (R): Release plan.
- Type S (S): Sprint plan.

Prerequisites

An IPD-system device project is available, and you have permission to **create plans** for the project.

Creating Milestones

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, select **Plans**.

Step 3 Click **Plan** and select **Milestone**. In the **Create Milestone** dialog box, set the required parameters.

Table 6-18 Creating a milestone

Parameter	Description
Name	Name of a milestone. The value can contain a maximum of 30 characters. Names of milestones under the same project must be unique.
Completes	Planned completion time of a milestone, which can be selected based on the actual project situation.
Owner	Current owner of a milestone.

Step 4 Click **OK**.

The new milestone is displayed in the plan management list.

----End

Creating Release and Sprint Plans

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, select **Plans**.

Step 3 Click **Plan**, select **Release Plan**, and set the parameters.

Table 6-19 Creating a release plan

Parameter	Description
Release Name	Name of a release plan. The value can contain a maximum of 30 characters. Names of release plans under the same project must be unique.
Owner	Owner of a release plan.
Start/End Time	Start time and end time of a release plan. The end time cannot be earlier than the planned start time.
Planned Capacity (person-day)	Estimated plan workload within the release plan time range. The value can be accurate to one decimal place.
Description	Enter release information based on actual conditions. A maximum of 1,000 characters can be entered.

Step 4 Click **OK**.

The new release is displayed in the plan management list.

By default, a new release plan is in the **Planned** state. You can manually update the release plan status:

- **Planned**: Click **Start Release** to change the state to **Going**.
- **Going**: Click **Set to not yet started** to change the state to **Planned**, or click **Complete** to change the state to **Ended**.
- **Ended**: Click **Restart** to change the state to **Going**.

NOTE

New sprint plans cannot be added for completed release plans.

Step 5 Click + in the row where the release for which you want to add a sprint is located. The **Create Sprint** window is displayed.

Step 6 Set the sprint plan information.

- The names of sprint plans under the same release should be unique.
- The **Start/End Time** of a sprint plan can be selected only from the **Start/End Time** of the release to which the sprint plan belongs.

Step 7 Click **OK**.

You can view the new sprint plan under the release to which the sprint plan belongs.

By default, a new sprint plan is in the **Planned** state. You can manually update the sprint plan status:

- **Planned**: Click **Start Iteration** to change the state to **Going**.
- **Going**: Click **Reset** to change the state to **Planned**, or click **Complete** to change the state to **Ended**.
- **Ended**: Click **Restart Iteration** to change the state to **Going**.

----End

Related Operations

You can perform the following operations on new milestones, release plans, and sprint plans.

Table 6-20 Operations related to plan management

Operation	Description
Edit release/ sprint plans	Click in the **Operation** column of the release or sprint plan to edit it. **NOTE** Baselined release and sprint plans cannot be edited.

Operation	Description
Baseline release/ sprint plans	Choose ··· > **Baseline** in the **Operation** column of the release or sprint plan. **NOTE** ● After a release plan is baselined, the R&D requirements (IRs) under the release are also baselined. ● After a sprint plan is baselined, the R&D requirements (IPD-system device: SRs and ARs; IPD-standalone software: USs) under the sprint are also baselined.
Cancel baselined release/ sprint plans	Only the baseline of a release or sprint plan can be canceled. Choose ··· > **Unbaseline** in the **Operation** column of a baselined release or sprint plan. **NOTE** ● After the release plan is unbaselined, the R&D requirements (IRs) under the release are also unbaselined. ● After a sprint plan is unbaselined, the R&D requirements (IPD-system device: SRs and ARs; IPD-standalone software: USs) under the sprint are also unbaselined.
View history of release or sprint plans	Choose ··· > **History** in the **Operation** column of a release/ sprint plan. Then view the historical records of the release plan/ sprint plan on the displayed page.
Delete release/ sprint plans	Click **Delete** under ··· in the **Operation** column of the release or sprint plan. In the displayed dialog box, click **OK**. **NOTE** ● Baselined release and sprint plans cannot be deleted. ● Once you delete release and sprint plans, they are permanently deleted and cannot be restored.
Edit milestone	Click in the **Operation** column of a milestone to edit it.
Delete milestone	Click in the **Operation** column of a milestone to delete it. **NOTE** Once you delete milestones, they are permanently deleted and cannot be restored.

Operation	Description
Batch operations	Select the check boxes on the left of the plans to manage the plan data in batches. Baseline: You can baseline multiple release or sprint plans separately. Cancel baseline: You can cancel multiple baselined release or sprint plans separately. Export: You can export selected data in batches. Delete: You can delete selected data in batches. **NOTE** Once you delete plans, they are permanently deleted and cannot be restored.

Arranging Release and Sprint Plans

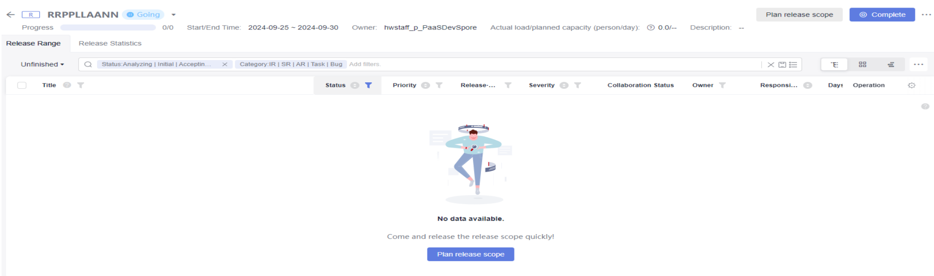
Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, select **Plans**.

Step 3 Click the title of a release or sprint plan to go to the details page.

The plan's basic information, work item scope, and statistics are displayed. You can arrange the plan and change its status.

Figure 6-52 Plan details page



Step 4 Click **Plan release scope**.

NOTE

The release scope of baselined or completed release plans cannot be changed.

Step 5 Select the work items to be added to the current release plan, and click **OK**.

NOTE

This procedure uses a release plan as an example. Sprint plans can be configured in the same way.

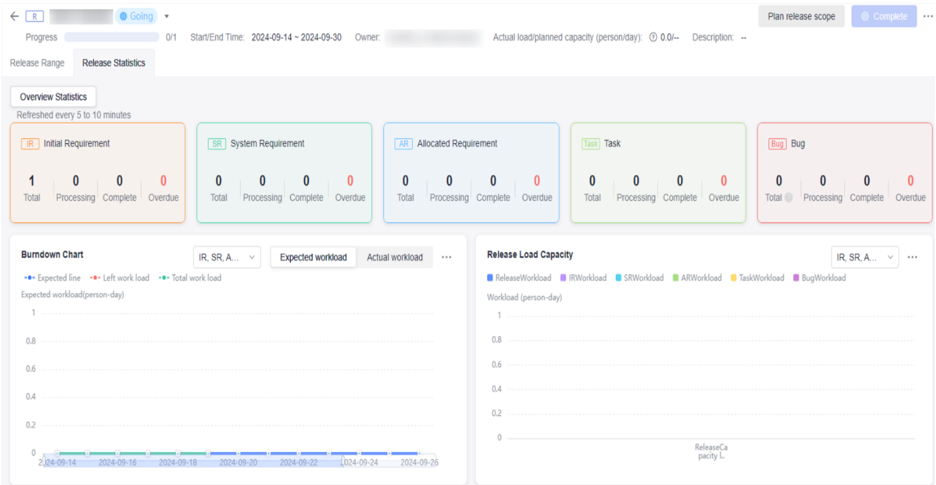
----End

Checking Statistics of Release and Sprint Plans

Step 1 On the project homepage, select **Plans**.

Step 2 Click the title of a release or sprint plan to go to the details page, and click **Statistics**.

Figure 6-53 Plan details page - Statistics



The following types of charts are supported.

Table 6-21 Release charts

Chart Name	Data Description
Work item overview	Counts the total, processing, completed, and overdue work items of each type in the current release.
Burndown chart	Uses a line chart to display the daily trend of changes in the number and planned workloads of all work items in the current release. ● Total workload: The system runs a scheduled task daily to calculate the total workloads (planned workloads and work items) of all work items in the current release. ● Left workload: The system runs a scheduled task daily to calculate the workloads (planned workloads and work items) of all uncompleted work items in the current release. ● Expected line: The line connecting the total workload from the first day to the last day. The total workload of the last day is 0 person-days. This chart helps you identity risks in the release progress.
Release load capacity	Uses a grouped column chart to compare the planned and release workloads of each work item type in the current release. This chart helps you check whether the actual workloads exceed the planned ones.

Chart Name	Data Description
Bug trend	Uses a line chart to display the numbers of daily discovered and resolved bugs as well as the remaining defect index (DI). This chart helps you understand the bug trend in the current release.
Work items by priority	Uses a grouped column chart to display the numbers of different work item types under each member by priority. This chart helps you understand the priorities of work items under each member.
Work item completion	Uses a line chart to display the numbers of completed and total work items of each type in the current release. This chart helps you learn about the release's daily completion status.
Work items by status	Uses a ring chart to display the number and proportion of work items of each type in different statuses under the current release. This chart helps you learn about the release's work items in different statuses.
Work item breakdown	Uses a column chart to display the numbers of broken-down and total work items of each type under the current release. This chart helps you learn about the work item breakdown progress of the current release.
Work item completion rate	Uses a column chart to display the numbers of completed and total work items of each type in the current release. This chart helps you learn about the release's completion status by work item or planned workload.
Work item stay days	Uses a column chart to display the average number of days that work items of each type stay in each status (except for a **Done** status) in the current release. This chart helps you identify the delivery bottlenecks in your team.
Work item statistics for project members (by status)	Uses a grouped column chart to display the numbers of different work item types in different statuses under each member. This chart helps you learn about the work item progress of each member.
Unfinished work items by member	Uses a grouped column chart to display the number of uncompleted work items of each member under the current release. This chart helps you check whether the work item assignment of each member is appropriate.
Requirement TTM	Uses a column chart to display the average time that each requirement type takes to complete since it is created or submitted. This chart helps you understand the delivery rate of each work item type.

NOTE

The description uses a release plan as an example. Sprint plans have the same statistical charts.

----End

6.6 Creating and Managing R&D Requirements

6.6.1 R&D Requirement Status Transition Process

The lifecycle of an R&D requirement consists of the **Initial**, **Analyzing**, **Developing**, **Testing**, and **Completed** states. Figure 6-54 shows the complete status transition process.

Figure 6-54 R&D requirement status transition flowchart

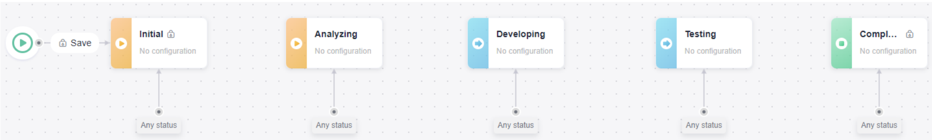


Table 6-22 describes the operations in each status.

Table 6-22 Operation description

Status	Description
Initial	When an R&D requirement is created, the state is **Initial** by default.
Analyzing	After the R&D requirement in the **Initial** state is handled, the state changes to **Analyzing**.
Developing	After the R&D requirement is analyzed, the state changes to **Developing**.
Testing	After the R&D requirement is developed, the state changes to **Testing**.
Completed	After the R&D requirement passes the test, the state changes to **Completed**.

6.6.2 Creating R&D Requirements

R&D requirements are delivered in a project's product iterations (PIs) and sprints. These requirements can be associated with raw requirements and system features.

Prerequisites

An IPD-system device project is available, and you have permission to **create and duplicate R&D requirements** for the project.

Procedure

Step 1 [Access the CodeArts Req homepage](#).

Step 2 On the project homepage, choose **R&D Requirements**.

Step 3 Click **IR**. On the **IR** page, set the required parameters.

Table 6-23 Creating an IR

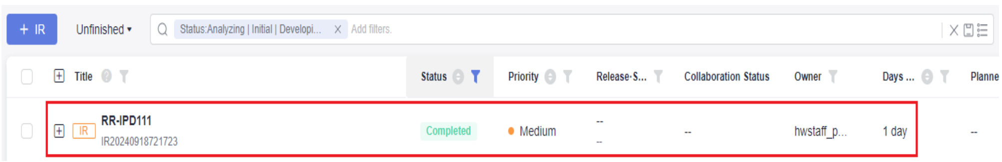
Parameter	Description
Tag	When creating or editing a work item, you can add a customized tag. Tag names can be marked in different colors.
Title	Title of a work item.
Description	Enter the background, value, and details of the R&D requirement based on actual conditions. The description can include texts, images, or links.
Attachment	A maximum of 100 attachments can be added to an R&D requirement, and the total capacity is 50 MB.
Responsible Project	Project that the R&D requirement belongs to. The value cannot be changed.
Raised By	The member who proposes the requirement. Multiple proposers can be specified.
Owner	The member who is responsible for this requirement. Only one person can be specified.
Priority	Priority of an R&D requirement, including **Low**, **Medium**, and **High**. The default value is **Medium**.
Release	Release plan version of the R&D requirement. This parameter has a value only after the operations in **Creating Release and Sprint Plans** are completed. This parameter can be left empty. You can create a release plan and then associate it with the release plan.
Sprint	Next level of the release plan. This parameter has a value only after the operations in **Creating Release and Sprint Plans** are completed. The parameter value can be empty. You can create a sprint and then associate it with the sprint.
Planned Start	Planned start time of a requirement. The date format is **yyyy-mm-dd**.

Parameter	Description
Planned Completion	Planned completion time of a requirement. The date format is **yyyy-mm-dd**. The planned completion time cannot be earlier than the planned start time.
Planned Workload	Estimated workload from the planned start time to the planned completion time for this requirement.
Domain	Includes software, hardware, software and hardware, functions, and performance.
Breakdown Required	Whether it is necessary to break down this requirement into smaller units.
Reason for Non-Breakdown	This parameter is displayed only when **Breakdown Required** is set to **No**. State the true conditions of the project.
Copy To	Project members to whom the IR is copied. After the copy is complete, the people selected for **Copy To** will receive a message.

Step 4 Click **OK**. The R&D requirement page is displayed, and "IR created." is displayed in the upper right corner.

The new requirement is displayed in the R&D requirement list, and the requirement state is **Initial**.

Figure 6-55 R&D requirement list



NOTE

After an R&D requirement is created, the people selected for **Owner**, **Raised By**, and **Copy To** will receive email and direct messages. If not, set notifications or modify notification settings. For details, see **Configuring Notification Rules**.

----End

Related Operations

You can perform the following operations on a new R&D requirement.

Table 6-24 Basic operations on an R&D requirement

Operation	Description
Modify R&D requirement title	Click next to an R&D requirement title to modify it.
Modify R&D requirement field	Click the target field value in the row of an R&D requirement to modify the value.
Create child requirement	Click in the **Operation** column of an R&D requirement to break it down into child requirements. ● In the **Break Down Subrequirements** dialog box, click **Add Subrequirement** to create a child requirement. A maximum of 10 child requirements can be created at a time.
View R&D requirement association map	Click in the **Operation** column of an R&D requirement to view all data of its related items.
Duplicate R&D requirement	Click in the **Operation** column. This process is the same as that of creating an R&D requirement.
Delete R&D requirement	Click in the **Operation** column. **NOTE** ● R&D requirements in change or baseline review cannot be deleted. ● Once deleted, an R&D requirement is moved to the recycle bin. R&D requirements in the recycle bin can be restored or permanently deleted. After an R&D requirement is restored from the recycle bin, it restores to the original status.
Copy R&D requirement link	Choose > **Copy Link** in the **Operation** column of an R&D requirement to copy its title, ID, owner, status, and link to the clipboard.
Migrate R&D requirement	Choose > **Migrate** in the **Operation** column of an R&D requirement to migrate it to other projects. **NOTE** ● R&D requirements that have been baselined, completed, or are currently under baseline review or change review cannot be migrated. ● Batch migration is based on the selected top-level requirement type. IRs are migrated across projects and non-IRs within a project. ● Requirements are migrated together with their child requirements. ● After an R&D requirement is migrated to another project, the system automatically removes its tags, actual workloads, related items (except for collaborative requirements), and PI, and only keeps the fields of the same type as the existing work items. The associated work items are automatically canceled.

6.6.3 Managing R&D Requirements

After creating an R&D requirement (see **Procedure**), you can perform the operations described in this section on it.

On the R&D Requirements List Page

Go to the project homepage, choose **Work > Req > R&D Requirements**, and perform the following operations.

Figure 6-56 R&D requirement list

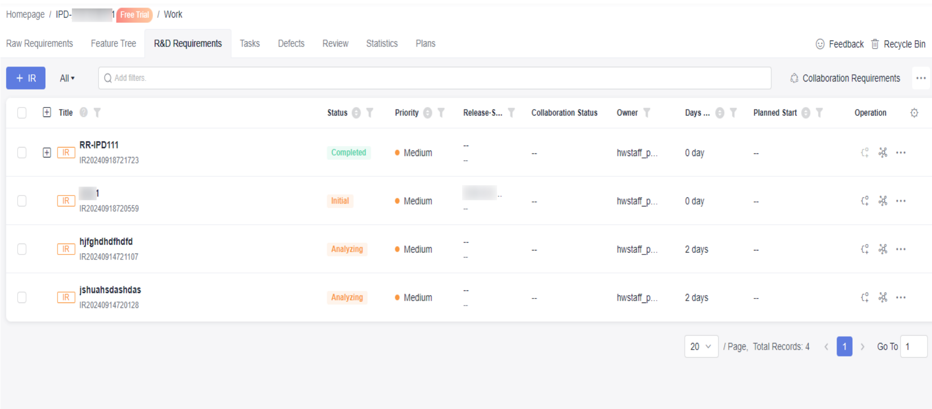


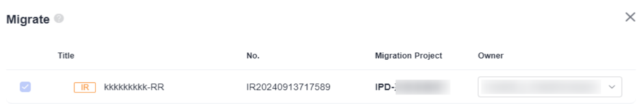
Table 6-25 Management operations in the R&D requirement list

Operation	Procedure
Search for R&D requirement	• By adding filters 1. Click the search box in the R&D requirement list and select one or more filters to search for R&D requirements. 2. To clear all filters and display all data, click on the right of the search bar. • By using a saved view 1. Click the search box in the R&D requirement list and select one or more filters. 2. Click on the rightmost of the search bar, and enter a view name. 3. Click **OK**. The created view is displayed next to the **IR** button. 4. Select the created view to query the R&D requirements that meet the search criteria. Views can be shared with others, modified, and deleted.

Operation	Procedure
Collaborate on R&D requirement	You can assign R&D requirements to other projects for collaborative management. **NOTE** Completed R&D requirements cannot be collaborated. 1. In the R&D requirement list, select the requirements to be collaborated. • Select the check boxes of the requirements to be collaborated and click **Deliver** in the lower part of the page. You can select one or more requirements. • Go to the details page of the requirement to be collaborated, click in the upper right corner, and select **Deliver**. 2. Select a downstream project in the displayed dialog box. If there is no option in the drop-down list box, perform the following operations to add one: a. Choose **Configure downstream project**. The **Downstream Projects** page is displayed. b. Click **Add Downstream Project**. The **Add Downstream Project** window is displayed. c. Select a desired project. d. Click **Add**. 3. Click **Next**. The **Deliver** dialog box is displayed. 4. Set the recipient in **To** and the expected receiving time in **Expected Received**. 5. Click **OK**. In the R&D requirement list, the **Collaboration Status** of the collaborative requirement is **Assign**. **NOTE** Different colors of **Assign** indicate different meanings.  : If the current requirement has some downstream requirements that are pending receival, the color of **Assign** is orange.  : After all downstream requirements under the current requirement are received, the color of **Assign** turns green.  : If the current requirement has some downstream requirements turned back, the color of **Assign** turns red.

Operation	Procedure
Receive collaborative R&D requirement	Perform this operation when another project assigns an R&D requirement to your project. 1. In the R&D requirement list, click **Collaboration Requirements** on the right of the search bar. The **Collaboration Requirements** page is displayed. 2. Click **Received**. The requirements to be received are displayed. 3. Click next to the requirement to be received. The **Receive Collaboration Requirement** dialog box is displayed. - Click and enter the rejection reason to reject the requirement. - Click to transfer the requirement to another person. - Click **Export All** to export the requirement data to an Excel file. 4. Select **Mode** and **Requirement Type** according to the actual situation of the project, and modify **Requirement Title**. When **Mode** is set to **Associate**, you only need to select **Associated Requirement**. The options of **Associated Requirement** include all R&D requirements created in the project. 5. Click **OK**. The state of the received requirement changes to **Received**. **NOTE** - Click to assign the requirement to other projects. - Click to reject the received requirement. After the requirement is rejected, the requirement state changes to **Receiving**. 6. Click in the upper right corner of the page to close the **Collaboration Requirements** page. - When **Mode** is set to **Copy**, the received requirement information is displayed in the R&D requirement list, and the copied requirement information can be viewed in **Related Items** > **Related Upstream Requirements** of the requirement details. - When **Mode** is set to **Associate**, the **Collaboration Status** of the associated requirement is **Received**. You can view the received requirements in **Related Items** > **Related Upstream Requirements** of the requirement details.

Operation	Procedure
Import work items	Use the provided template to import requirements in batches. 1. In the R&D requirement list, click ··· on the right of the search bar and select **Import**. 2. In the displayed dialog box, click **Download Template**. The import template file is displayed in the lower part of the page. Save the file to the local PC and fill in data. The template file should be named in the following format: *Project name* + "-" + *Module name* (for example, **R&D Requirement**) + **Template**. 3. Fill in the fields on the **IR - Requirements** sheet. For details about how to set parameters, see the **IR - Import Rules** sheet in the template file. 4. Drag or click to select a file to be imported. 5. Click **Import**. The import progress dialog box is displayed. ● After the import is successful, you can view the imported requirement information in the R&D requirement list. ● If the import fails, a message is displayed in the upper right corner of the page. Click **View Failure Details** in the message to view the failure details. You can modify the requirement information based on the details and import the template again. **NOTE** For details about operations on import records, see **Viewing Work Item Import/Export Records**.
Export work items	Export requirements in batches to an Excel file. 1. Export some or all R&D requirements. ● Export all: On the **R&D Requirements** page, click ··· on the right of the search bar and choose **Export**. The **Select Fields to Export** dialog box is displayed. ● Export some: In the R&D requirement list, select one or more R&D requirements to be exported and click **Export** at the bottom of the page. The **Select Fields to Export** dialog box is displayed. 2. Select the fields to be exported and determine whether to export child requirements. 3. Click **Export**. A dialog box is displayed, indicating the export progress. After the R&D requirements are exported, the R&D requirement file will be automatically downloaded to the local PC. The file format is **.xlsx**. **NOTE** For details about operations on export records, see **Viewing Work Item Import/Export Records**.

Operation	Procedure
Configure fields to display	Click ⚙ next to the **Operation** field. ● On the left of the pop-up box, select the fields to be displayed. ● On the right of the pop-up box, drag the fields in the **Selected** area to adjust the display sequence.
Migrate R&D requirements in batches	You can migrate R&D requirements to another project. After the migration, the requirements do not need to be processed in the current project. Requirements that have been baselined, are undergoing baseline review, or are being changed cannot be migrated. 1. In the R&D requirement list, select one or more R&D requirements to be migrated and click **Migrate** in the lower part of the page. 2. In the displayed dialog box, select the project to migrate the requirements to. 3. Click **Next**. The migration confirmation dialog box is displayed. **Figure 6-57** Migrating R&D requirements  4. Select **Owner**. 5. Click **OK**. The migration is successful. The migrated requirements no longer appear in the R&D requirements list. The state of these requirements in the target project is **Initial**.

On the R&D Requirement Details Page

On the details page of an R&D requirement, you can modify the description, priority, and owner, add tags and attachments, associate work items, check review records, add workloads, and view the operation history.

Figure 6-58 R&D requirement details page

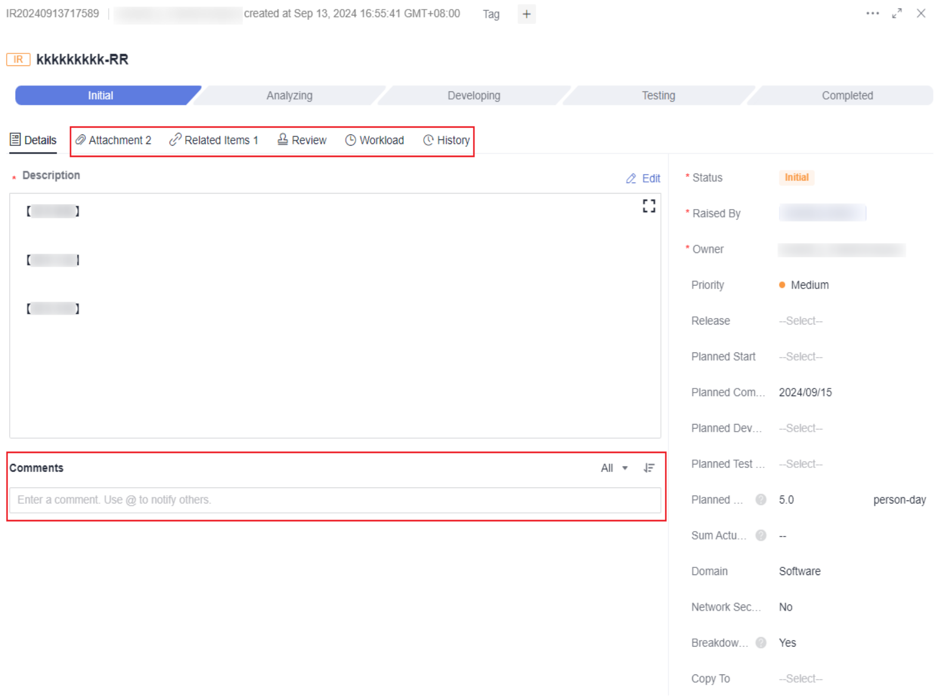
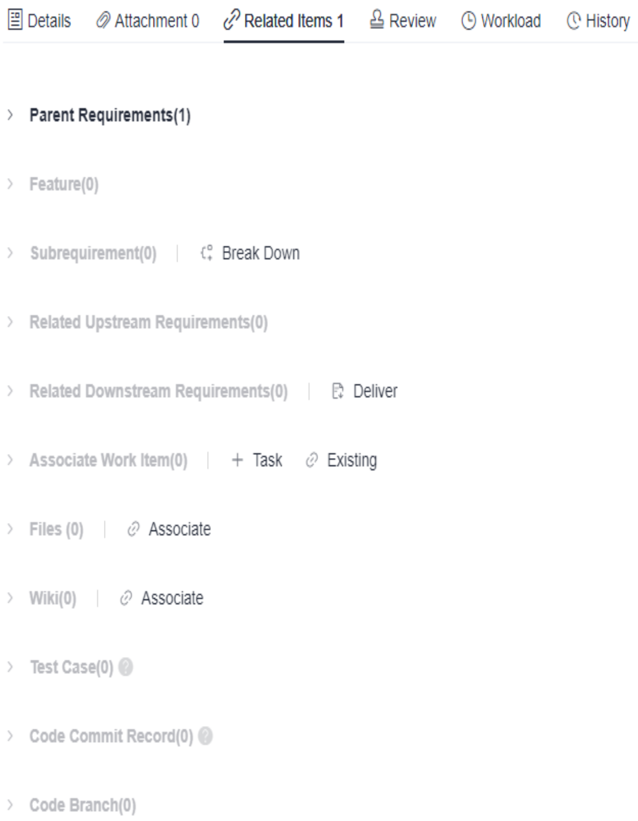


Table 6-26 Management operations on the details page

Operation	Procedure	Remarks
Edit work item	On the R&D requirement details page, click the value box of the field to be modified, and enter a target value in the text box or select one from the drop-down list. The changes are saved automatically.	You must have permission to **edit** R&D requirements.
Change work item status	Go to the work item details page, click the **Status** field, and transition the work item to the target status. For details about status transition, see **Table 6-22**.	You must have permission to **set statuses** for R&D requirements.
Baseline R&D requirement	1. Go to the work item details page, and choose ··· > **Baseline**. The **Baseline** dialog box is displayed. 2. Click **OK**. The IR icon is displayed on the left of the R&D requirement title. **NOTE** The baseline of an R&D requirement can be canceled.	You must have permission to **baseline** R&D requirements.

Operation	Procedure	Remarks
Initiate baseline review	1. Go to the work item details page, and choose > **Baseline Review**. The **BR** page is displayed. 2. Enter BR information. By default, the **Baseline Object** is the R&D requirement for which the baseline review is initiated. 3. Click **Submit**. The **Review** page is displayed. Choose **Review** > **Baseline Review** to check the new baseline review. 4. Switch to the **R&D Requirements** page. The icon of the R&D requirement that is under baseline review is displayed as IR . **NOTE** Track the progress of the baseline review. The R&D requirement can be baselined only when the baseline review status changes to **Approved**.	You must have permission to **view** R&D requirements.
Initiate change review	The change process can be initiated only for baselined and uncompleted R&D requirements. 1. Go to the details page of a baselined work item, and choose > **Change Review**. The **CR** page is displayed. 2. Enter CR information. • **Change Object**: By default, it is the R&D requirement to be changed. • **Collaborative Parent Item Change**: Only existing CRs can be added. 3. Click **Submit**. The **Review** page is displayed. Choose **Review** > **Change Review** to check the new CR in the change process. The CR state is **Pending review** by default. **NOTE** Track the progress of the change review. Only when the state is **Approved**, which means that the change review has been processed, will the changed content display in the corresponding R&D requirement.	You must have permission to **view** R&D requirements.

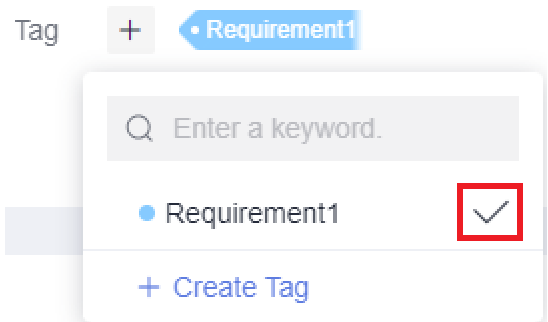
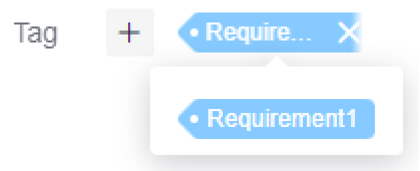
Operation	Procedure	Remarks
Upload attachment	Attachments can be pictures, workbooks, manuscripts, and text files. A maximum of 100 attachments can be added to each work item, and their total size cannot exceed 50 MB. 1. Go to the work item details page, and click the **Attachment** tab. 2. Click the box to select a local file or drag the file here to upload it as an attachment for the work item. Local files can be directly dragged to the text box. When the upload progress reaches 100%, the system displays a message indicating that the attachment is uploaded successfully. Move the cursor to the file that is successfully uploaded. The operations that can be performed are displayed. ● Click to download the file. ● Click to delete the uploaded file.	You must have permission to **upload attachments** for R&D requirements.

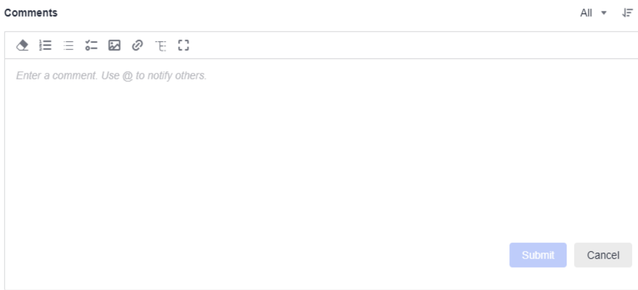
Operation	Procedure	Remarks
Add and view related item	A work item can be associated with other types of work items in a project. 1. Go to the work item details page and click the **Related Items** tab. **Figure 6-59** Related items  2. Complete association. a. **Parent Requirements**: parent requirements to which an R&D requirement belongs. The information about an RR is displayed in the **Parent Requirements** area only when the IR is associated with the RR. b. **Feature**: features to which an R&D requirement belongs. Only when an IR is associated with a feature will the information about the feature be displayed in the **Feature** area. c. **Subrequirement**: SRs of a child requirement in the current R&D requirement. A maximum of 10 child requirements can be created at a time. One child requirement is displayed by default and cannot be deleted.	You must have permission to **deliver/ cancel assignment**, **create/ delete child requirements**, **associate/ dissociate work items**, **associate/ dissociate files**, and **associate/ dissociate wikis** for R&D requirements.

Operation	Procedure	Remarks
	1. Click **Break Down**. The **Break Down Subrequirements** window is displayed. 2. Configure child requirements. Click to expand and configure more information. 3. Click **OK**. The child requirements are automatically displayed under the parent R&D requirement. d. **Related Upstream Requirements**: requirements assigned by other projects to your project. e. **Related Downstream Requirements**: requirements assigned to downstream projects. 1. Click **Deliver**. The **Deliver** window is displayed. 2. In the dialog box that is displayed, set **Select Downstream Project**, **To**, and **Expected Received**. **NOTE** If there is no option in the drop-down list box, perform the following operations to add one: 1. Choose **Configure downstream project**. The **R&D Downstream Projects** page is displayed. 2. Click **Add Downstream Project**. 3. Select a desired project. 4. Click **Add**. 3. Click **OK**. In the R&D requirement list, the **Collaboration Status** of the collaborative requirement is **Assign**. f. **Associate Work Item**: associated work items of other types in the project. Tasks can be associated. g. **Files**: files corresponding to the R&D requirement. Select a file associated with the current requirement. You can upload a local file. h. **Wiki**: wikis corresponding to the R&D requirement. Select a wiki associated with the current requirement. You can create a wiki. i. **Test Case**: test cases corresponding to the R&D requirement. You can associate R&D requirements with test cases in CodeArts TestPlan. The associated cases will be displayed here.	

Operation	Procedure	Remarks
	j. **Code Commit Record**: indicates the code commit records corresponding to the R&D requirement. Related information is displayed only when the current requirement is associated during code commit. k. **Code Branch**: code branches corresponding to the R&D requirement. Related information is displayed only when a code branch is associated with the current requirement.	
Check review record	You can check the review records related to requirements only in the following situations: ● When an R&D requirement is added to a baseline review, the baseline review process is triggered. Then you can check the review record on the **Review** tab of the R&D requirement details page. ● When a locked field of a baselined R&D requirement is modified, the change process is automatically triggered. Then you can check the review record on the **Review** tab of the R&D requirement details page. ● When an R&D requirement has a general review record, you can check the record on the **Review** tab of the R&D requirement details page.	You must have permission to **view** R&D requirements.

Operation	Procedure	Remarks
Add workload	1. Go to the work item details page, and click the **Workload** tab. 2. Click **Add Workload**. The **Add Workload** dialog box is displayed. 3. Enter the workload information. ● The end date cannot be earlier than the start date. ● Decide whether to select **Weekends included**. If not, weekend workload records will not be generated. ● You can select **Total** or **Daily** for **Workload**. ● **Work Type** options include backend development, frontend development, UI design, replacement leave, debugging, and general. You can also customize the value by referring to **Creating Work Types**. 4. Click **OK**. The system automatically generates corresponding records based on the entered dates and days. The workload can be edited and deleted.	You must have permission to **add person-hours** for R&D requirements. Workloads can be edited and deleted by the creator. By default, the project administrator can edit and delete all workloads.
View operation history	**History** displays all operation logs of users, including creation, status transition, review initiation, work item association, and workload addition. 1. Go to the work item details page. 2. Click the **History** tab. ● Click or to check historical records in the ascending or descending order of operation time. ● You can set search criteria to query matching historical records.	You must have permission to **view** R&D requirements.

Operation	Procedure	Remarks
Tag work item	1. Go to the work item details page. Click + next to **Tag** at the top of the page, and select **Create Tag**. The added tag is displayed in the **Tag** area. 2. In the **Create Tag** dialog box, set **Tag Name** and select **Tag Color**. 3. Click **OK**. The new tag is displayed next to the requirement ID in the R&D requirement list. 4. (Optional) Hide a tag. - Click + next to **Tag**. In the displayed dialog box, deselect √ to hide the tag. **Figure 6-60** Hiding a tag - 01  - Move the cursor to the tag name and click to hide the tag. **Figure 6-61** Hiding a tag - 02  **NOTE** If you need to add tags for multiple R&D requirements, select the desired R&D requirements, click **Batch Edit** in the lower part of the page, and select **Tag**.	You must have permission to **edit** R&D requirements.

Operation	Procedure	Remarks
Add comment	1. Go to the work item details page. 2. On the **Details** tab page, click the **Comments** text box. **Figure 6-62** Add comment  3. Enter a comment. You can upload images, enter links, associate work items, and use @ to notify project members in comments. 4. Click **Submit**. Submitted comments can be replied, edited, pinned to the top, and deleted.	You must have permission to **view** R&D requirements.

6.7 Creating and Managing Tasks

6.7.1 Task Status Transition Process

The entire lifecycle of a task consists of the **Initial**, **Processing**, and **Completed** states. **Figure 6-63** shows the complete status transition process.

Figure 6-63 Task status transition flowchart

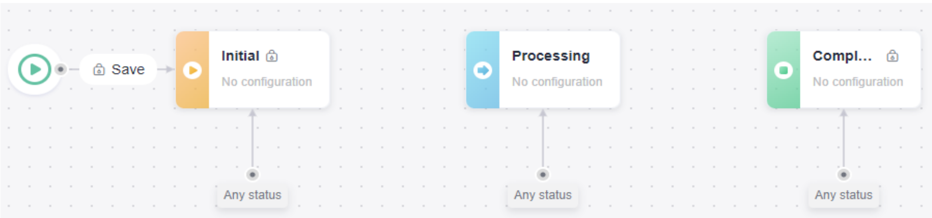


Table 6-27 describes the operations in each status.

Table 6-27 Operation description

Status	Description
Initial	When a task is created, the state is **Initial** by default.
Processing	After the task in the **Initial** state is processed, the state changes to **Processing**.
Completed	After the task is processed, the state changes to **Completed**.

6.7.2 Creating Tasks

Tasks are activities with a certain goal. They can be associated with raw requirements, features, and R&D requirements.

Prerequisites

An IPD-system device project is available, and you have permission to **create and duplicate tasks** for the project.

Creating Tasks

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Tasks**.

Step 3 Click **Create Task**. The **Task** page is displayed.

Step 4 Fill in the basic task information.

Table 6-28 Creating a task

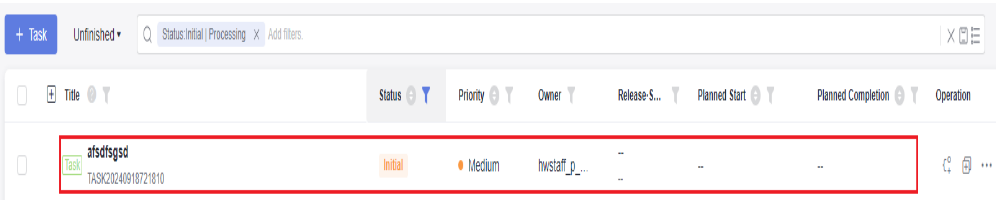
Parameter	Description
Tag	When creating or editing a work item, you can add a customized tag. Tag names can be marked in different colors.
Title	Title of a work item.
Description	Enter the background, value, and details of the task based on project requirements. The description can include texts, images, or links.
Attachment	A maximum of 100 attachments can be added to a task, and the total capacity is 50 MB.
Responsible Project	Project that the task belongs to. The value cannot be changed.

Parameter	Description
Owner	Member who is responsible for this task. Only one person can be specified.
Module	Module to which a task belongs.
Priority	Priority of a task, including **Low**, **Medium**, and **High**. The default value is **Medium**.
Release	Release to which a task belongs. The parameter value can be empty. You can create a PI and then associate it with the PI.
Sprint	The next level of PI. The parameter value can be empty. You can create a sprint and then associate it with the sprint.
Planned Start	Planned start time of a task. The date format is **yyyy-mm-dd**.
Planned Completion	Planned completion time of a task. The date format is **yyyy-mm-dd**. The planned completion time cannot be earlier than the planned start time.
Planned Workload	Estimated workload from the planned start time to the planned completion time for this task.
Copy To	Project members to whom the task is copied. After the copy is complete, the people selected for **Copy To** will receive a message.

Step 5 Click **OK**. The **Tasks** tab page is displayed, and a message is displayed in the upper right corner, indicating that the task is created successfully.

The new task is displayed in the task list, and the task state is **Initial**.

Figure 6-64 Task list



NOTE

After a task is created, the people selected for **Owner** and **Copy To** will receive email and direct messages. If not, set notifications or modify notification settings. For details, see **Configuring Notification Rules**.

----End

Related Operations

You can perform the following operations on a new task.

Table 6-29 Basic operations on a task

Operation	Description
Modify task title	Click next to a task title to modify it.
Modify task field	Click the target field value in the row of a task to modify the value.
Create child task	Click in the **Operation** column of a task to break it down into child tasks. ● In the **Break Down Child Tasks** dialog box, click **Add child tasks** to create a child task. A maximum of 10 child tasks can be created at a time.
View task association map	Choose > **Association Map** in the **Operation** column of a task to view all data of its related items.
Clone task	Click in the **Operation** column. This process is the same as that of creating a task.
Delete task	Choose > **Delete** in the **Operation** column of a task to delete it. **NOTE** Once deleted, a task is moved to the recycle bin. Tasks in the recycle bin can be restored or permanently deleted. After a task is restored from the recycle bin, it restores to the original status.

6.7.3 Managing Tasks

After creating a task (see **Creating Tasks**), you can perform the operations described in this section on it.

On the Task List Page

On the project homepage, choose **Work** > **Req** > **Tasks**, and perform the following operations.

Figure 6-65 Task list

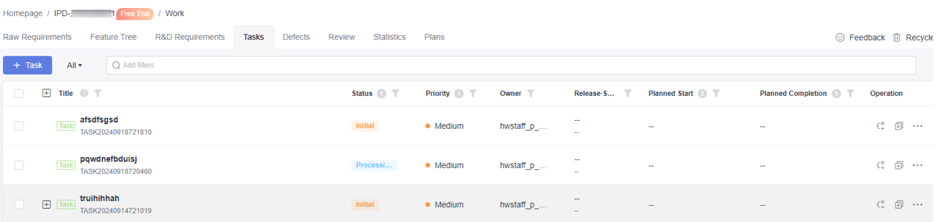


Table 6-30 Operations in the task list

Operation	Procedure
Search for task	● By adding filters 1. Click the search box in the task list and select one or more filters to search for tasks. 2. To clear all filters and display all data, click × on the right of the search bar. ● By using a saved view 1. Click the search box in the task list and select one or more filters. 2. Click on the rightmost of the search bar, and enter a view name. 3. Click **OK**. The created view is displayed next to the **Task** button. 4. Select the created view to query the tasks that meet the search criteria. Views can be shared with others, modified, and deleted.
Import work items	Use the provided template to import tasks in batches. 1. In the task list, click ··· on the right of the search bar and select **Import**. 2. In the displayed dialog box, click **Download Template**. The import template file is displayed in the lower part of the page. Save the file to the local PC and fill in data. The template file should be named in the following format: *Project name* + "-" + *Module name* (for example, **Task**) + **Template**. 3. Fill in the fields on the **Task - List** sheet. For details about how to set parameters, see the **Task - Import Rules** sheet in the template file. 4. Drag or click to select a file to be imported. 5. Click **Import**. The import progress dialog box is displayed. ● After the import is successful, you can view the imported tasks in the list. ● If the import fails, a message is displayed in the upper right corner of the page. Click **View Failure Details** in the message to view the failure details. You can modify the requirement information based on the details and import the template again. **NOTE** For details about operations on import records, see **Viewing Work Item Import/Export Records**.

Operation	Procedure
Export work items	Export requirements in batches to an Excel file. 1. Export some or all tasks. • Export all: On the **Tasks** page, click ⋯ on the right of the search bar and choose **Export**. The **Select Fields to Export** dialog box is displayed. • Export some: In the task list, select one or more tasks to be exported and click **Export** at the bottom of the page. The **Select Fields to Export** dialog box is displayed. 2. Select the fields to be exported and determine whether to export child tasks. 3. Click **Export**. A dialog box is displayed, indicating the export progress. After the tasks are exported, the task file will be automatically downloaded to the local PC. The file format is **.xlsx**. **NOTE** For details about operations on export records, see **Viewing Work Item Import/Export Records**.
Configure fields to display	Click ⚙ next to the **Operation** field. • On the left of the pop-up box, select the fields to be displayed. • On the right of the pop-up box, drag the fields in the **Selected** area to adjust the display sequence.

On the Task Details Page

On the details page of a task, you can modify the description, priority, and owner, add tags and attachments, associate work items, check review records, add workloads, and view the operation history.

Figure 6-66 Task details page

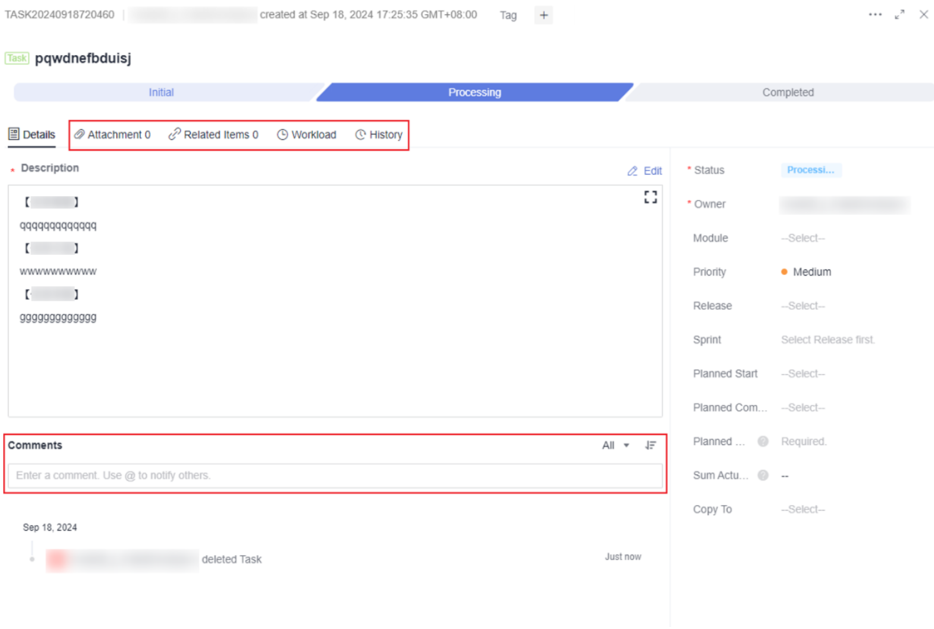
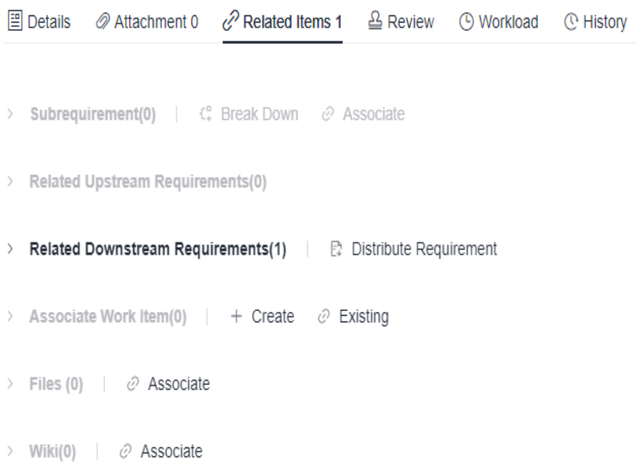


Table 6-31 Management operations on the details page

Operation	Procedure	Remarks
Edit work item	On the task details page, click the value box of the field to be modified, and enter a target value in the text box or select one from the drop-down list. The changes are saved automatically.	You must have permission to **edit** tasks.
Change work item status	Go to the work item details page, click the **Status** field, and transition the work item to the target status. For details about status transition, see **Table 6-27**.	You must have permission to **set statuses** for tasks.

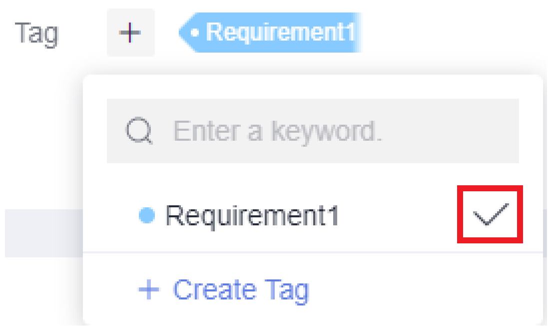
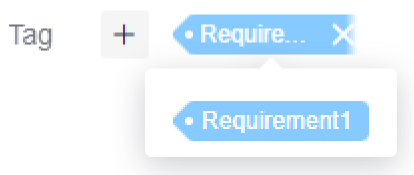
Operation	Procedure	Remarks
Upload attachment	Attachments can be pictures, workbooks, manuscripts, and text files. A maximum of 100 attachments can be added to each work item, and their total size cannot exceed 50 MB. 1. Go to the work item details page, and click the **Attachment** tab. 2. Click the box to select a local file or drag the file here to upload it as an attachment for the work item. Local files can be directly dragged to the text box. When the upload progress reaches 100%, the system displays a message indicating that the attachment is uploaded successfully. Move the cursor to the file that is successfully uploaded. The operations that can be performed are displayed. ● Click to download the file. ● Click to delete the uploaded file.	You must have permission to **upload attachments** for tasks.

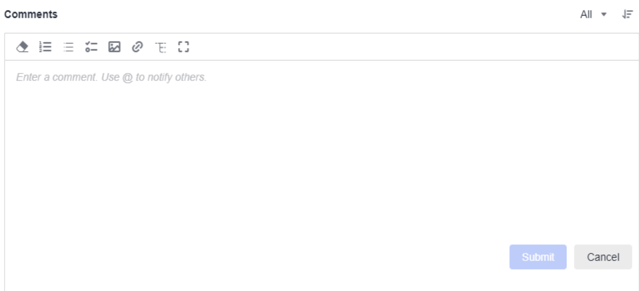
<table>
<tr><th>Operation</th><th>Procedure</th><th>Remarks</th></tr>
<tr><td>Add and view related item</td><td>A work item can be associated with other types of work items in a project.
1. Go to the work item details page and click the Related Items tab.

Figure 6-67 Related items


2. Complete association.
• Parent Task: parent task to which a task belongs.
You can choose Associated Items > Parent Task of a child task to view the task only when the task contains child tasks.
• Child Task: tasks included in the current task.
A maximum of 10 child requirements can be created at a time. One child requirement is displayed by default and cannot be deleted.
1. Click Break Down. The Break Down Child Tasks window is displayed.
2. Configure the information about the child task. Click to expand and configure more information.
3. Click OK. The child task is created successfully. The child task is automatically displayed under the parent task in the task list.
• Associate Work Item: associated work items of other types in the project.
Work items of the RR, FE, IR, SR, AR, and bug types can be associated.
• Files: files corresponding to the task.
Select a file associated with the current task. You can upload a local file.</td><td>You must have permission to associate/ dissociate parent task, create/ delete child requirements, associate/ dissociate work items, associate/ dissociate files, and associate/ dissociate wikis for tasks.</td></tr>
</table>

Operation	Procedure	Remarks
	● **Wiki**: wikis corresponding to the task. Select a wiki associated with the current task. You can create a wiki.	
Add workload	1. Go to the work item details page, and click the **Workload** tab. 2. Click **Add Workload**. The **Add Workload** dialog box is displayed. 3. Enter the workload information. ● The end date cannot be earlier than the start date. ● Decide whether to select **Weekends included**. If not, weekend workload records will not be generated. ● You can select **Total** or **Daily** for **Workload**. ● **Work Type** options include backend development, frontend development, UI design, replacement leave, debugging, and general. You can also customize the value by referring to **Creating Work Types**. 4. Click **OK**. The system automatically generates corresponding records based on the entered dates and days. The workload can be edited and deleted.	You must have permission to **add person-hours** for tasks. Workloads can be edited and deleted by the creator. By default, the project administrator can edit and delete all workloads.
View operation history	**History** displays all operation logs of users, including creation, status transition, review initiation, work item association, and workload addition. 1. Go to the work item details page. 2. Click the **History** tab. ● Click or to check historical records in the ascending or descending order of operation time. ● You can set search criteria to query matching historical records.	You must have permission to **view** tasks.

Operation	Procedure	Remarks
Tag work item	1. Go to the work item details page. Click + next to **Tag** at the top of the page, and select **Create Tag**. The added tag is displayed in the **Tag** area. 2. In the **Create Tag** dialog box, set **Tag Name** and select **Tag Color**. 3. Click **OK**. The new tag is displayed next to the task ID in the task list. 4. (Optional) Hide a tag. ● Click + next to **Tag**. In the displayed dialog box, deselect √ to hide the tag. **Figure 6-68** Hiding a tag - 01  ● Move the cursor to the tag name and click to hide the tag. **Figure 6-69** Hiding a tag - 02  **NOTE** If you need to add tags for multiple work items, select the desired work items, click **Batch Edit** in the lower part of the page, and select **Tag**.	You must have permission to **edit** tasks.

Operation	Procedure	Remarks
Add attachment	Perform the following operations to add attachments to a work item. You can upload/drag-and-drop a local file or choose a file in CodeArts Wiki. 1. Access the page for creating or editing a work item. 2. Click + to add attachments to the work item. The maximum size of attachments for a single work item is 50 MB.	You must have permission to **upload attachments** for tasks.
Add comment	1. Go to the work item details page. 2. On the **Details** tab page, click the **Comments** text box. **Figure 6-70** Add comment  3. Enter a comment. You can upload images, enter links, associate work items, and use @ to notify project members in comments. 4. Click **Submit**. Submitted comments can be replied, edited, pinned to the top, and deleted.	You must have permission to **view** tasks.

6.8 Creating and Managing Bugs

6.8.1 Bug Status Transition Process

The entire lifecycle of a bug has five states: **Analyzing**, **Fixing**, **Testing**, **Accepting**, and **Closed**. **Figure 6-71** shows the complete status transition process.

Figure 6-71 Bug status transition flowchart

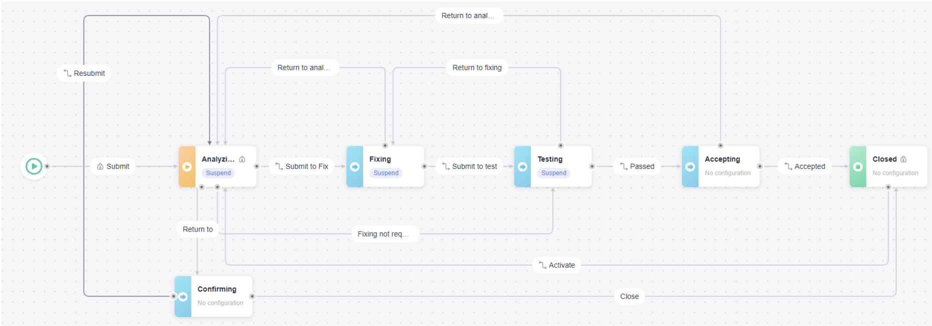


Table 6-32 describes the operations in each status.

Table 6-32 Operation description

Status	Description
--	Creating bugs By default, the bug proposer is the person who finds the bug.
Analyzing	After the bug is submitted, the state changes to **Analyzing**. The current owner analyzes the bug as follows: ● If the analysis result shows that the bug is not a problem, click **Fixing not required** to transfer the bug to the proposer. ● If the description is incorrect, click **Return To** to transfer the bug to the current owner for modification. After the analysis is complete, click **Submit to Fix**.
Fixing	After the bug is analyzed, the state changes to **Fixing**. The current owner fixes the bug based on the problem.
Testing	After the bug is fixed, the state changes to **Testing**. The current test owner verifies whether the problem is fixed based on the rectification result. If the result does not meet the expectation, the test owner can return it for fixing or analysis.
Accepting	After the bug is tested, the state changes to **Accepting**. The current acceptance owner tracks the result of the acceptance test.
Closed	After the acceptance is passed, the state changes to **Closed**. A closed bug can be activated. After a bug being activated, its state will change to **Analyzing**.

6.8.2 Creating Bugs

You can create a bug to trace the problems found in the test and verification phase of software features and functions.

Prerequisites

An IPD-system device project is available, and you have permission to **create and duplicate bugs** for the project.

Creating Bugs

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Defects**.

Step 3 Click **Bug**. On the **Bug** page, set the required parameters.

Table 6-33 Creating a bug

Parameter	Description
Title	Title of a work item.
Description	Enter the fault symptom description, environment information, onsite fault locating R&D personnel, and the preliminary cause located by the R&D personnel based on the site requirements. The description can include texts, images, or links.
Attachment	A maximum of 100 attachments can be added to a bug, and the total capacity is 50 MB.
Proposed Project	Project to which the bug creator belongs, which cannot be changed.
Responsible Project	Project to which a bug belongs.
Raised By	Test personnel who find the bug.
Owner	Owner of the bug. Select one or more members of the responsible project.
Module	Module to which a bug belongs. The module value can be customized as follows: 1. Click . The **Modules** dialog box is displayed. 2. Click **Create**. 3. Set **Module**, **Description**, and **Owner**. The value of **Module** must be unique. 4. Click **OK**. The module is created. After a module is created, you can edit and delete the module, and add submodules.

Parameter	Description
Severity	Severity of a bug. The options are **Info**, **Minor**, **Major**, and **Critical**.
Responsible Release	Release plan where a bug is found. This parameter has a value only after the operations in **Creating Release and Sprint Plans** are completed. The parameter value can be empty. You can create a release and then associate it with the release.
Responsible Sprint	Next level of the release plan. This parameter has a value only after the operations in **Creating Release and Sprint Plans** are completed. The parameter value can be empty. You can create a sprint and then associate it with the sprint.
Environment	Environment where a bug is found. The options are development, test, and production environments.
Copy To	Other members in the project. The selected members will receive a system notification.
Expected Rectification	Expected time for fixing a bug.

Step 4 Click **Submit**. The **Bugs** tab page is displayed, and a message is displayed in the upper right corner, indicating that the bug is created successfully.

The new bug is displayed in the bug list, and the state is **Analyzing**.

NOTE

After a bug is created, the people selected for **Owner**, **Raised By**, and **Copy To** will receive email and direct messages. If not, set notifications or modify notification settings. For details, see **Configuring Notification Rules**.

----End

Related Operations

You can perform the following operations on a new bug.

Table 6-34 Basic operations on a bug

Operation	Description
Modify bug title	Click next to a bug title to modify it.
Modify bug field	Click the target field value in the row of a bug to modify the value.

Operation	Description
Duplicate bug	Click in the **Operation** column. This process is the same as that of creating a bug.

Migrate bug	Click in the **Operation** column of a bug to migrate it to other projects.
	NOTE
	● Bugs in a **Done** state cannot be migrated.
	● After migration,
	  ● The bug will be handled again.
	  ● The actual workload, related items, tags, discovering PI, and fixing PI of the bug will be cleared.
	  ● Only the custom bug fields of the target project will be displayed.

Collaborate on bug	Click in the **Operation** column of a bug to assign it to other projects under your tenant.
Delete bug	Choose > **Delete** in the **Operation** column of a bug to delete it. **NOTE** ● Bugs that are being reviewed or in a **Doing** state cannot be deleted. ● If you delete drafted bugs, they are permanently deleted. ● Bugs in a **To Do** state can be deleted only in the proposing project. Bugs in a **Done** state can be deleted in both the proposing project and the responsible project. ● If you delete bugs of the proposing project, they are permanently deleted. If you delete bugs in the responsible project, they are moved to the project's recycle bin. ● Bugs in the recycle bin can be restored or permanently deleted. After being restored, bugs restore to their original status.

6.8.3 Managing Bugs

After creating a bug (see **Creating Bugs**), you can perform the operations described in this section on it.

On the Bug List Page

On the project homepage, choose **Work > Req > Defects**, and perform the following operations.

Figure 6-72 Bug list

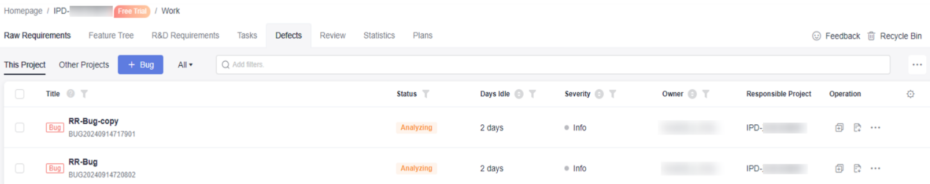


Table 6-35 Operations in the bug list

Operation	Procedure
Search for bug	● By adding filters 1. Click the search box in the bug list and select one or more filters to search for bugs. 2. To clear all filters and display all data, click on the right of the search bar. ● By using a saved view 1. Click the search box in the bug list and select one or more filters. 2. Click on the rightmost of the search bar, and enter a view name. 3. Click **OK**. The created view is displayed next to the **Bug** button. 4. Select the created view to query the bugs that meet the search criteria. Views can be shared with others, modified, and deleted.
Import work items	Use a template to import bugs in batches. 1. In the bug list, click on the right of the search bar and select **Import**. 2. In the displayed dialog box, click **Download Template**. The import template file is displayed in the lower part of the page. Save the file to the local PC and fill in data. The template file should be named in the following format: *Project name* + "-" + *Module name* (for example, **Bug**) + **Template**. 3. Fill in the fields on the **Bug - List** sheet. For details about how to set parameters, see the **Bug - Import Rules** sheet in the template file. 4. Drag or click to select a file to be imported. 5. Click **Import**. The import progress dialog box is displayed. ● After the import is successful, you can view the imported bug information in the bug list. ● If the import fails, a message is displayed in the upper right corner of the page. Click **View Failure Details** in the message to view the failure details. You can modify the requirement information based on the details and import the template again. **NOTE** For details about operations on import records, see **Viewing Work Item Import/Export Records**.

<table>
<tr><th>Operation</th><th>Procedure</th></tr>
<tr><td>Export work items</td><td>Export bugs in batches to an Excel file.
1. Export some or all bugs.
● Export all: On the Defects page, click ··· on the right of the search bar and choose Export. The Select Fields to Export dialog box is displayed.
● Export some: In the bug list, select one or more bugs to be exported and click Export at the bottom of the page. The Select Fields to Export dialog box is displayed.
2. Select the fields to be exported.
3. Click Export. A dialog box is displayed, indicating the export progress.
After the bugs are exported, the bug file will be automatically downloaded to the local PC. The file format is .xlsx.
NOTE
For details about operations on export records, see Viewing Work Item Import/Export Records.</td></tr>
<tr><td>Configure fields to display</td><td>Click ⚙ next to the Operation field.
● On the left of the pop-up box, select the fields to be displayed.
● On the right of the pop-up box, drag the fields in the Selected area to adjust the display sequence.</td></tr>
</table>

On the Bug Details Page

On the details page of a bug, you can modify the description, priority, and owner, add tags and attachments, associate work items, check review records, add workloads, and view the operation history.

Figure 6-73 Bug details page

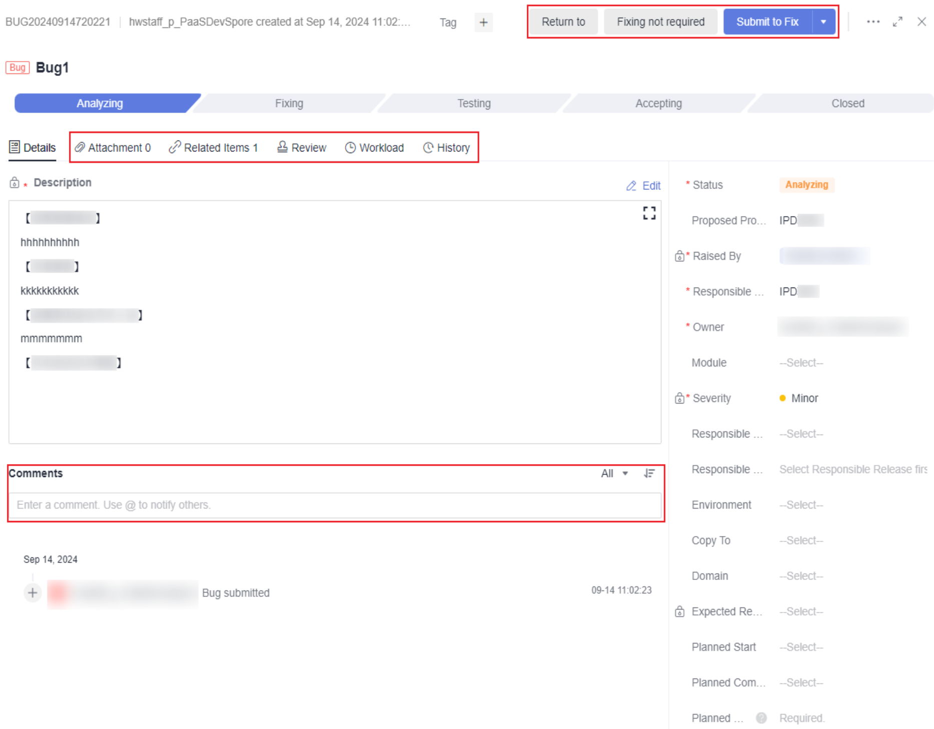
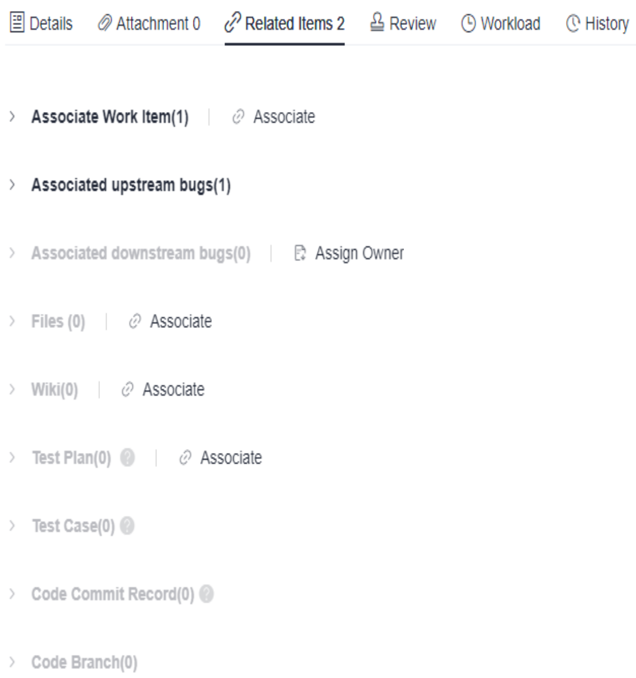


Table 6-36 Management operations on the details page

Operation	Procedure	Remarks
Edit work item	On the bug details page, click the value box of the field to be modified, and enter a target value in the text box or select one from the drop-down list. The changes are saved automatically.	You must have permission to **edit** bugs.
Change work item status	Go to the work item details page, click the **Status** field, and transition the work item to the target status. For details about status transition, see **Table 6-32**.	You must have permission to **update statuses** for bugs.

Operation	Procedure	Remarks
Upload attachment	Attachments can be pictures, workbooks, manuscripts, and text files. A maximum of 100 attachments can be added to each work item, and their total size cannot exceed 50 MB. 1. Go to the work item details page, and click the **Attachment** tab. 2. Click the box to select a local file or drag the file here to upload it as an attachment for the work item. Local files can be directly dragged to the text box. When the upload progress reaches 100%, the system displays a message indicating that the attachment is uploaded successfully. Move the cursor to the file that is successfully uploaded. The operations that can be performed are displayed. ● Click to download the file. ● Click to delete the uploaded file.	You must have permission to **upload attachments** for bugs.

<table>
<tr><th>Operation</th><th>Procedure</th><th>Remarks</th></tr>
<tr>
<td>Add and view related item</td>
<td>
A work item can be associated with other types of work items in a project.
1. Go to the work item details page and click the Related Items tab.
Figure 6-74 Related items


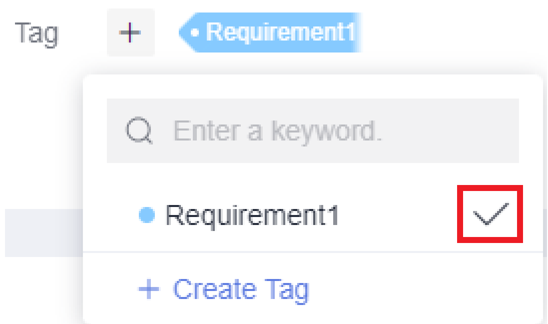
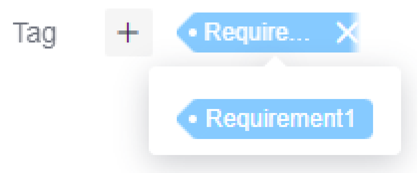
2. Complete association.

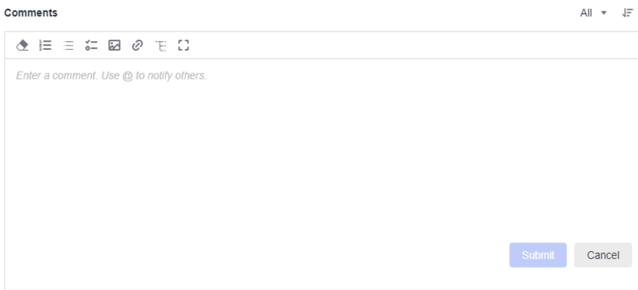
Associate Work Item: associated work items of other types in the project.
Associate existing RRs.
Associate existing IRs, SRs, and ARs.
Associate existing tasks. To cancel the association, click .
Associated upstream bugs: bugs coordinated from upstream projects.
The upstream bug information is displayed only when their responsible project is set to the current project on their downstream bug association page.
Associated downstream bugs: bugs assigned to other projects for collaboration.
A maximum of 10 child bugs can be created at a time. One child bug is displayed by default and cannot be deleted.

</td>
<td>You must have permission to associate/ dissociate work items, assign bugs, associate/ dissociate files, and associate/ dissociate wikis for bugs.</td>
</tr>
</table>

Operation	Procedure	Remarks
	1. Click **Assign Owner**. 2. Configure the information about bug assignment. Click to expand and configure more information. 3. Click **OK**. The bug is assigned. The bug can only be viewed and handled in the responsible project. **NOTE** After a bug is assigned for collaboration, its attachments will not be synchronized to the downstream bugs. The current owners of these downstream bugs can contact the bug creator to obtain attachments. ● **Files**: files corresponding to the bug. Select a file associated with the current bug. You can upload a local file. ● **Wiki**: wikis corresponding to the bug. Select a wiki associated with the current bug. You can create a wiki. ● **Test Plan**: test plans related to the current bug. You can associate test plans with the current bug. ● **Test Case**: test cases related to the current bug. You can associate bugs with test cases in CodeArts TestPlan. The associated cases will be displayed here. ● **Code Commit Record**: code submission records related to the current bug. Related information is displayed only when the current bug is associated during code commit. ● **Code Branch**: code branches related to the current bug. Related information is displayed only when code branches are associated with the current bug.	

Operation	Procedure	Remarks
Add workload	1. Go to the work item details page, and click the **Workload** tab. 2. Click **Add Workload**. The **Add Workload** dialog box is displayed. 3. Enter the workload information. ● The end date cannot be earlier than the start date. ● Decide whether to select **Weekends included**. If not, weekend workload records will not be generated. ● You can select **Total** or **Daily** for **Workload**. ● **Work Type** options include backend development, frontend development, UI design, replacement leave, debugging, and general. You can also customize the value by referring to **Creating Work Types**. 4. Click **OK**. The system automatically generates corresponding records based on the entered dates and days. The workload can be edited and deleted.	You must have permission to **add person-hours** for bugs. Workloads can be edited and deleted by the creator. By default, the project administrator can edit and delete all workloads.
View operation history	**History** displays all operation logs of users, including creation, status transition, review initiation, work item association, and workload addition. 1. Go to the work item details page. 2. Click the **History** tab. ● Click or to check historical records in the ascending or descending order of operation time. ● You can set search criteria to query matching historical records.	You must have permission to **view** bugs.

Operation	Procedure	Remarks
Tag work item	1. Go to the work item details page. Click + next to **Tag** at the top of the page, and select **Create Tag**. The added tag is displayed in the **Tag** area. 2. In the **Create Tag** dialog box, set **Tag Name** and select **Tag Color**. 3. Click **OK**. The new tag is displayed next to the bug ID in the bug list. 4. (Optional) Hide a tag. ● Click + next to **Tag**. In the displayed dialog box, deselect √ to hide the tag. **Figure 6-75** Hiding a tag - 01  ● Move the cursor to the tag name and click × to hide the tag. **Figure 6-76** Hiding a tag - 02  **NOTE** If you need to add tags for multiple work items, select the desired work items, click **Batch Edit** in the lower part of the page, and select **Tag**.	You must have permission to **edit** bugs.

Operation	Procedure	Remarks
Add comment	1. Go to the work item details page. 2. On the **Details** tab page, click the **Comments** text box. **Figure 6-77** Add comment  3. Enter a comment. You can upload images, enter links, associate work items, and use @ to notify project members in comments. 4. Click **Submit**. Submitted comments can be replied, edited, pinned to the top, and deleted.	You must have permission to **view** bugs.

6.9 Reviewing Work Items

6.9.1 IPD-System Device Project Reviews

IPD-system device projects have three review types: change review (CR), baseline review (BR), and general review (GR). They are described in **Table 6-37**.

Table 6-37 Review types

Review Type	Description	Review Object
Change review (CR)	• Changing the controlled fields of a raw requirement or bug will initiate a change review. The change will be synchronized to the requirement and bug only after the review is approved. **NOTE** The control status of a raw requirement and bug is determined by whether any controlled fields are configured for specific status. A field is deemed under control when a raw requirement or bug is in the specified status. • Changing the baselined fields of a system feature or R&D requirement will initiate a change review. The change will be synchronized to the feature and requirement only after the review is approved.	Raw requirements, system features, R&D requirements, and bugs
Baseline review (BR)	To baseline a system feature or R&D requirement, you need to initiate a baseline review. The feature and requirement will be baselined only after the review is approved.	Systems features and R&D requirements
General review (GR)	To review a work item, you can initiate a general review. The work item takes effect only after the review is approved.	Raw requirements, system features, R&D requirements, and bugs

6.9.2 Creating and Completing Work Item Reviews

6.9.2.1 Creating and Completing CRs

When a raw requirement, system feature, R&D requirement, or bug is under control or baselined, you can perform the following steps to modify their controlled or baselined fields.

Creating a CR

Step 1 Access the CodeArts Req homepage.

Step 2 Create a CR in either of the following ways:

- On the project homepage, go to the raw requirement, feature tree, R&D requirement, or bug list page, select a controlled raw requirement or bug, or a baselined system feature or R&D requirement, and modify a parameter marked with the icon. In the displayed dialog box, click **OK**.

- On the project homepage, choose **Review** > **Change Review**. Then click **CR**.

Step 3 On the **CR** page, set the required parameters.

Table 6-38 Creating a CR

Parameter	Description
CR Title	Title of the review. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 256 characters.
Description	Enter the background, value, and details of the review. ● Use text, images, or links. ● Include 1 to 50,000 characters.
Start time	The time when you want the review to start.
Completes	The time when you want the review to complete.
Require Decision-Making	This parameter is available only when **Require Decision-Making** is enabled on the **Settings > Work > Review** page. **NOTE** If **Require Decision-Making** is set to **No**, no approver needs to be specified. The review will skip the decision-making phase.
Copy To	Select the project members you want to inform about this review.

Parameter	Description
Change Object	Add the objects to be changed, including raw requirements, system features, R&D requirements, and bugs. ● Raw requirements can be selected only when they are in the **Confirming**, **Planning**, or **Implementing** state. After adding change objects, modify controlled fields (marked with), and set **Approver** and **Reviewer**. ● System features and R&D requirements can be selected only when they are baselined. After adding change objects, modify controlled fields (marked with), and set **Approver** and **Reviewer**. ● Bugs can be selected only when they are in a status in which a controlled field is editable. After adding change objects, modify controlled fields (marked with), and set **Reviewer** and **Review Expert**. **NOTE** If **Review Expert** is not set, the review phase will be skipped. The options of **Review Expert** are project members. You can select multiple ones. For systems features and R&D requirements: The options of **Reviewer** can be configured on the **Settings > Work > Review** page. The default options are project administrator and project manager. You can select only one option. For raw requirements: ● If the proposing project initiates a change review, the options of **Reviewer** include the project administrator, project manager, and requirement owner of the responsible project. You can select only one option. ● If the responsible project initiates a change review, the options of **Reviewer** include the project administrator, project manager, and requirement submitter of the proposing project. You can select only one option. For bugs: ● If the proposing project initiates a change review, the options of **Reviewer** include the project administrator, project manager, test manager, and bug owner of the responsible project. You can select only one option. ● If the responsible project initiates a change review, the options of **Reviewer** include the project administrator, project manager, test manager, and bug creator of the proposing project. You can select only one option.
Associated Files	Attachments, wikis, and documents related to the review. **NOTE** If the change objects include a raw requirement and bug, files can be associated only when the proposing and responsible projects are the same.
Collaborative Parent Item Change	Existing change reviews you wish to collaboratively complete with the current review.

Step 4 Click **Submit**.

You can view the new CR in the change review list.

----End

Completing a CR

This operation is performed by the specified review experts and reviewer of a CR.

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Review** > **Change Review**.

Step 3 Click the title of a CR in the **To Be Reviewed** state. The CR details page is displayed on the right.

Step 4 Click the icon in the row that contains the target change object, and set the required parameters.

Figure 6-78 Review by review experts

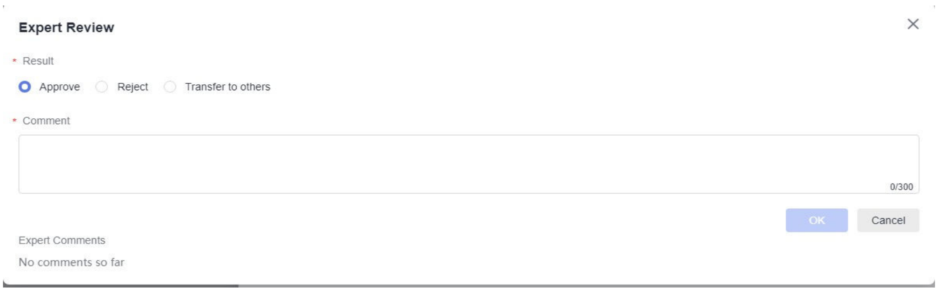


Table 6-39 Review by review experts

Parameter	Description
Result	Select your review result. ● **Approve**: You agree with the change. ● **Reject**: You do not agree with the change. ● **Transfer to others**: Transfer the review to another review expert.
Comment	Your comments on the change. This parameter is required when **Result** is **Approve** or **Reject**. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 300 characters.
Expert Comments	Comments of other review experts.

Step 5 Select a review result (**Approve** or **Reject**) and click **OK**.

NOTE

After the expert review is completed, the final review result can be determined using the selected method on the **Settings** > **Work** > **Review** page.

- **By single reviewer**: A CR is complete when one review expert approves or rejects it.
- **By all reviewers**: A CR is complete when all review experts approve it or one review expert rejects it.
- **By pass rate**: A CR is complete when "Number of review experts who approve the review/Total number of review experts × 100% ≥ Pass rate", or "Number of review experts who reject the review/Total number of review experts × 100% > 1 – Pass rate".

If a CR's result in the review phase is **Rejected**, the CR skips the decision-making phase and its final result is **Rejected**.

After the review phase of all change objects in the CR is complete, the CR status changes to **Decisioning**.

Step 6 Click the title of a CR in the **To Be Approved** state. The CR details page is displayed on the right.

Step 7 Click the icon in the row that contains the target change object, and set the required parameters.

Figure 6-79 Decision-making by reviewer

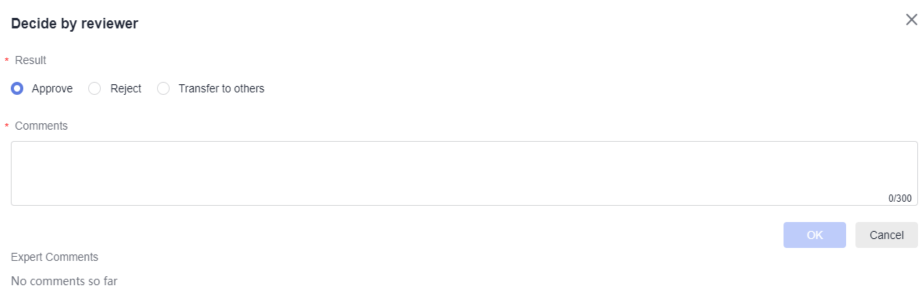


Table 6-40 Decision-making by reviewer

Parameter	Description
Result	Select your decision. ● **Approve**: You agree with the change. ● **Reject**: You do not agree with the change. ● **Transfer to others**: Transfer the review to another reviewer.
Comments	Your comments on the change. This parameter is required when **Result** is **Approve** or **Reject**. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 300 characters.
Review Result	The result of the review phase for your reference.

Parameter	Description
Expert Comments	Results and comments of review experts in the review phase for your reference.

Step 8 Select **Approve** or **Reject** for **Result**, and click **OK**. The CR object's approval result is displayed after its decision-making process is complete.

NOTE

The CR status changes to **End** only after the decision-making process of all change objects is complete.

----End

6.9.2.2 Creating and Completing BRs

When your system features and R&D requirements need to be baselined, perform the following steps to initiate a baseline review.

Creating a BR

Step 1 **Access the CodeArts Req homepage**.

Step 2 Create a BR in either of the following ways:

- On the project homepage, go to the feature tree or R&D requirement list page, select unbaselined system features or R&D requirements, and click **Baseline Review** in the pop-up box.
- On the project homepage, choose **Review** > **Baseline Review**. Then click **BR**.

Step 3 On the **BR** page, set the required parameters.

Table 6-41 Creating a BR

Parameter	Description
BR Title	Title of the review. • Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. • Include 1 to 256 characters.
Description	Enter the background, value, and details of the review. • Use text, images, or links. • Include 1 to 50,000 characters.
Start time	The time when you want the review to start.
Completes	The time when you want the review to complete.

Parameter	Description
Require Decision-Making	This parameter is available only when **Require Decision-Making** is enabled on the **Settings > Work > Review** page. **NOTE** If **Require Decision-Making** is set to **No**, no approver needs to be specified. The review will skip the decision-making phase.
Reviewer	The options of **Reviewer** can be configured on the **Settings > Work > Review** page. The default options are project administrator and project manager. You can select only one option.
Review Expert	If **Review Expert** is not set, the review phase will be skipped. The options of **Review Expert** are project members. You can select multiple ones.
Copy To	Select the project members you want to inform about this review.
Baseline Object	Add the objects to be baselined, including system features and R&D requirements. ● Only system features and R&D requirements that are not baselined can be added.
Associated Files	Attachments, wikis, and documents related to the review.

Step 4 Click **Submit**.

You can view the new BR in the baseline review list.

----End

Completing a BR

This operation is performed by the specified review experts and reviewer of a BR.

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Review** > **Change Review**.

Step 3 Click the title of a BR in the **To Be Reviewed** state. The BR details page is displayed on the right.

Step 4 On the details page, click **Expert Review** in the upper right corner. In the displayed dialog box, set the required parameters.

Figure 6-80 Review by review experts

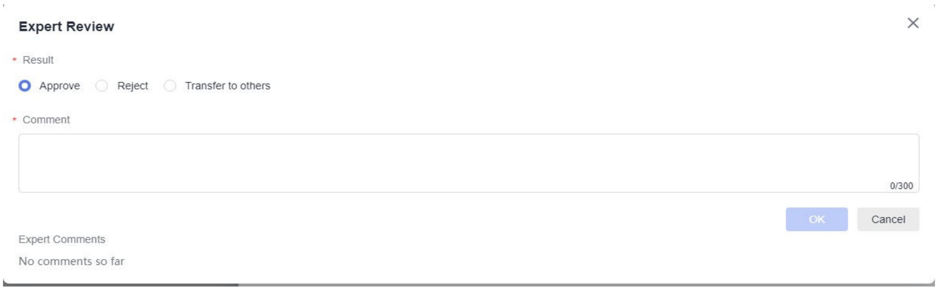


Table 6-42 Review by review experts

Parameter	Description
Result	Select your review result. ● **Approve**: You agree with the change. ● **Reject**: You do not agree with the change. ● **Transfer to others**: Transfer the review to another review expert.
Comment	Your comments on the change. This parameter is required when **Result** is **Approve** or **Reject**. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 300 characters.
Expert Comments	Comments of other review experts.

Step 5 Select a review result (**Approve** or **Reject**) and click **OK**.

NOTE

After the expert review is completed, the final review result can be determined using the selected method on the **Settings > Work > Review** page.

- **By single reviewer**: A BR is complete when one review expert approves or rejects it.
- **By all reviewers**: A BR is complete when all review experts approve it or one review expert rejects it.
- **By pass rate**: A BR is complete when "Number of review experts who approve the review/Total number of review experts × 100% ≥ Pass rate", or "Number of review experts who reject the review/Total number of review experts × 100% > 1 – Pass rate".

If a BR's result in the review phase is **Rejected**, the BR skips the decision-making phase and its final result is **Rejected**.

Step 6 Click the title of a BR in the **To Be Approved** state. The BR details page is displayed on the right.

Step 7 On the details page, click **Decide by reviewer** in the upper right corner. In the displayed dialog box, set the required parameters.

Figure 6-81 Decision-making by reviewer

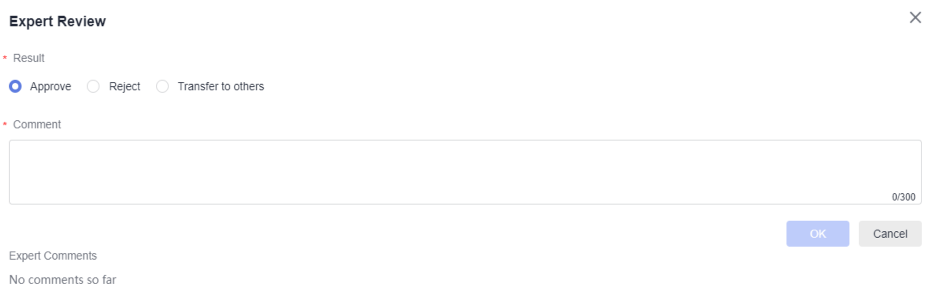


Table 6-43 Decision-making by reviewer

Parameter	Description
Result	Select your decision. ● **Approve**: You agree with the change. ● **Reject**: You do not agree with the change. ● **Transfer to others**: Transfer the review to another reviewer.
Comments	Your comments on the change. This parameter is required when **Result** is **Approve** or **Reject**. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 300 characters.
Review Result	The result of the review phase for your reference.
Expert Comments	Results and comments of review experts in the review phase for your reference.

Step 8 Select **Approve** or **Reject** for **Result**, and click **OK**. The BR status changes to **End**.

----End

6.9.2.3 Creating and Completing GRs

When your work items need to be reviewed, perform the following steps to initiate a general review.

Creating a GR

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Review** > **General Review**. Then click **GR**.

Step 3 On the **GR** page, set the required parameters.

Table 6-44 Creating a GR

Parameter	Description
GR Title	Title of the review. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 256 characters.
Description	Enter the background, value, and details of the review. ● Use text, images, or links. ● Include 1 to 50,000 characters.
Start time	The time when you want the review to start.
Completes	The time when you want the review to complete.
Require Decision-Making	This parameter is available only when **Require Decision-Making** is enabled on the **Settings > Work > Review** page. **NOTE** If **Require Decision-Making** is set to **No**, no approver needs to be specified. The review will skip the decision-making phase.
Reviewer	The options of **Reviewer** can be configured on the **Settings > Work > Review** page. The default options are project administrator and project manager. You can select only one option.
Review Expert	If **Review Expert** is not set, the review phase will be skipped. The options of **Review Expert** are project members. You can select multiple ones.
Copy To	Select the project members you want to inform about this review.
Associated Object	Add the objects to be reviewed, including raw requirements, system features, R&D requirements, and bugs.
Associated Files	Attachments, wikis, and documents related to the review.

Step 4 Click **Submit**.

You can view the new GR in the general review list.

----End

Completing a GR

This operation is performed by the specified review experts and reviewer of a GR.

Step 1 **Access the CodeArts Req homepage**.

Step 2 On the project homepage, choose **Review** > **Change Review**.

Step 3 Click the title of a GR in the **To Be Reviewed** state. The GR details page is displayed on the right.

Step 4 On the details page, click **Expert Review** in the upper right corner. In the displayed dialog box, set the required parameters.

Figure 6-82 Review by review experts

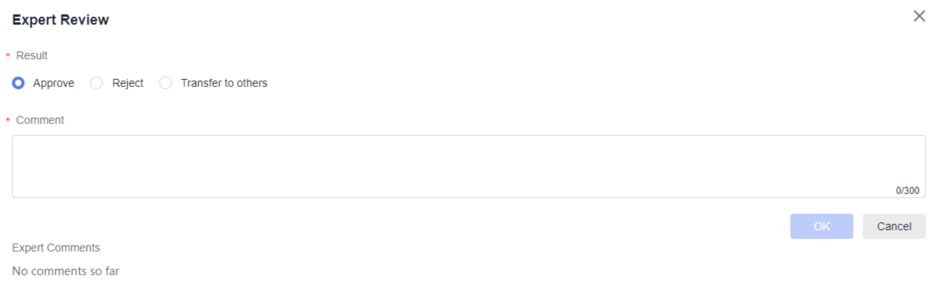


Table 6-45 Review by review experts

Parameter	Description
Result	Select your review result. ● **Approve**: You agree with the change. ● **Reject**: You do not agree with the change. ● **Transfer to others**: Transfer the review to another review expert.
Comment	Your comments on the change. This parameter is required when **Result** is **Approve** or **Reject**. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 300 characters.
Expert Comments	Comments of other review experts.

Step 5 Select a review result (**Approve** or **Reject**) and click **OK**.

NOTE

After the expert review is completed, the final review result can be determined using the selected method on the **Settings > Work > Review** page.

- **By single reviewer**: A GR is complete when one review expert approves or rejects it.
- **By all reviewers**: A GR is complete when all review experts approve it or one review expert rejects it.
- **By pass rate**: A GR is complete when "Number of review experts who approve the review/Total number of review experts × 100% ≥ Pass rate", or "Number of review experts who reject the review/Total number of review experts × 100% > 1 – Pass rate".

If a GR's result in the review phase is **Rejected**, the GR skips the decision-making phase and its final result is **Rejected**.

Step 6 Click the title of a GR in the **To Be Approved** state. The GR details page is displayed on the right.

Step 7 On the details page, click **Decide by reviewer** in the upper right corner. In the displayed dialog box, set the required parameters.

Figure 6-83 Decision-making by reviewer

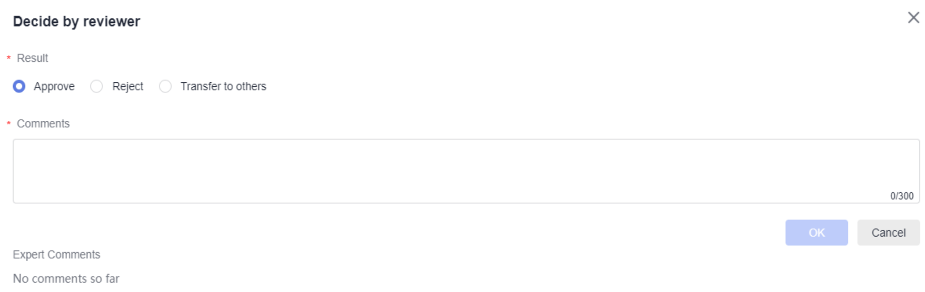


Table 6-46 Decision-making by reviewer

Parameter	Description
Result	Select your decision. ● **Approve**: You agree with the change. ● **Reject**: You do not agree with the change. ● **Transfer to others**: Transfer the review to another reviewer.
Comments	Your comments on the change. This parameter is required when **Result** is **Approve** or **Reject**. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 300 characters.
Review Result	The result of the review phase for your reference.
Expert Comments	Results and comments of review experts in the review phase for your reference.

Step 8 Select **Approve** or **Reject** for **Result**, and click **OK**. The GR status changes to **End**.

----End

6.10 Tracking the Project Progress

6.10.1 Using Project Overview

During a project, you can track the work item progress in the project overview.

Viewing the Project Overview

In the project overview, statistical charts display all project data in two dimensions.

- **By Release**: Select the release and sprint versions to be viewed.
- **By Creation Time**: Select the time segment you want to view, including **All**, **Last 7 Days**, **Last 14 Days**, **Last 30 Days**, **Last 90 Days**, and **Custom**.

The following table lists the statistical charts in the project overview.

Table 6-47 Statistical charts

Statistical Chart	Data Description
Project statistics	Includes the total numbers of IRs, SRs, ARs, tasks, and bugs, and the processing status (processing, completed, or overdue).
Release burndown	Displays only when you view information **By Release**. Includes the remaining workload, total workload, and ideal line. You can select specific work items (IRs, SRs, ARs, tasks, and bugs) to view and download them.
Release capacity load	Displays only when you view information **By Release**. Displays release plans, sprints, and workload of each work item in bar charts.
Bug trend	Displays only when you view information **By Release**. Includes the total number of bugs found, the total number of resolved bugs, and the DI value of outstanding bugs.
Work item statistics for project members (by priority)	Obtains statistics of RRs, SFs, IRs, SRs, ARs, and tasks by priority in bar charts or tables.
Work item completion	Displays only when you view information **By Release**. Completion rate of the selected work items.
Work item statistics for project members (by status)	Obtains statistics of RRs, SFs, IRs, SRs, ARs, tasks, and bugs by work item status in pie charts or tables.
Work item breakdown	Obtains statistics of RRs, IRs, and SRs by required breakdown in bar charts.
Work item completion rate	Obtains statistics and percentages of RRs, SFs, IRs, SRs, ARs, tasks, and bugs by completion in bar charts.

Statistical Chart	Data Description
Requirement TTM	Obtains statistics of RRs, IRs, SRs, and ARs based on the average duration from the development status to the completion status in bar charts.
Work items by status	Obtains statistics of RRs, SFs, IRs, SRs, ARs, tasks, and bugs by work item status in bar charts or tables.
Work item stay days	Obtains statistics of RRs, SFs, IRs, SRs, ARs, tasks, and bugs by work item status duration (days) in bar charts.
Unfinished work items by member	Obtains statistics of uncompleted RRs, SFs, IRs, SRs, ARs, tasks, and bugs by member in bar charts or tables.

6.10.2 Using Bug Measurement

You can use bug measurement to track the defect progress.

Viewing the Bug Measurement

By default, the bug measurement view displays the following statistical charts: bug overview, legacy DI trend, accumulated bugs, bug daily throughput, bug distribution by severity, bug distribution by status, and top 8 owners with legacy bugs.

- Numerical statistical charts: The indicator value represents data for all work items in real time. For example, the total number of bugs in **Bug Overview** is equal to the total number of bugs during statistics collection.
- Trend charts: The indicator value represents the daily data. For example, the total number of legacy bugs on June 7 in **legacy DI Trend** is equal to the total number of legacy bugs on June 7.

The following table lists the statistical charts in bug measurement.

Table 6-48 Statistical charts

Statistical Chart	Data Description
Bug overview statistics	Collects statistics on the number of bugs whose states are processing, completed, and overdue and whose severities are severe at the current time. Click a number to view the corresponding list.

Statistical Chart	Data Description
Legacy DI trend	Collects statistics on the DI trend of legacy bugs in the selected time range. ● DI: indicates the value calculated based on the weight of bugs at each severity level. ● Legacy DI = Number of legacy critical bugs x 10 + Number of legacy major bugs x 3 + Number of legacy minor bugs x 1 + Number of legacy suggestion bugs x 0.1
Accumulated bugs	Shows the trends of accumulated bugs found, resolved bugs, and legacy bugs. Cumulative number of legacy bugs = Cumulative number of found bugs – Cumulative number of resolved bugs.
Bug daily throughput	Collects the number of bugs found and fixed in the selected time period.
Bug distribution by severity	Collects statistics on the number of bugs by severity at the current time.
Bug distribution by status	Collects statistics on the number of bugs by status at the current time.
Top 8 owners with legacy bugs	Collects top 8 owners of legacy bugs at the current time and displays the bug number.

7 Managing IPD-Standalone Software Project Requirements

7.1 Requirement Management Process

IPD-standalone software projects are IPD requirement management methods for independent software development. They manage large-scale software development with high quality and efficiency through structured processes and powerful cross-project collaboration capabilities, including raw requirements, system features, R&D requirements, tasks, and bugs, among which tasks and bugs are activities generated and problems found during requirement implementation, respectively.

Figure 7-1 IPD-standalone software projects

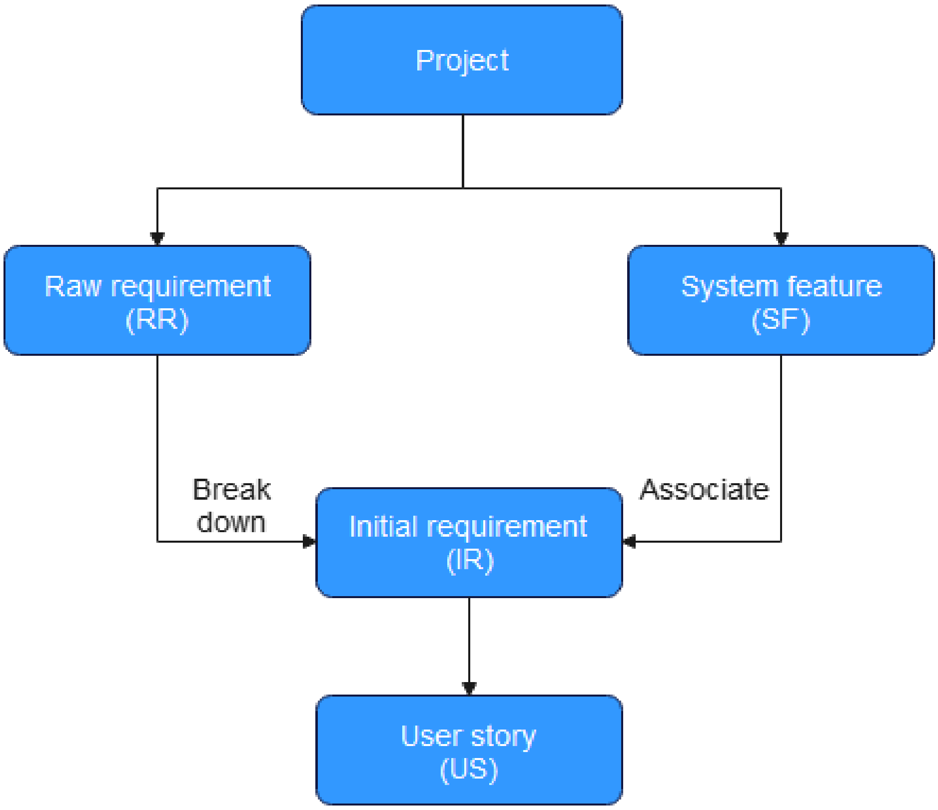


Table 7-1 lists the important operations for IPD-standalone software projects.

Table 7-1 Operation description for IPD-standalone software projects

Function	Description
Raw requirement (RR)	RRs are raw problems or requirements described from the perspective of customers. Customer requirements are a type of RRs, which need to be analyzed and reviewed by the RMT/RAT.
Feature tree (FT)	FTs contain feature sets and SFs. ● Feature set: aggregates and manages SFs. Multi-level relationships can be established for the feature set, and the feature tree version snapshot and snapshot comparison functions are provided. ● SF: feature that brings benefits. SFs can have different types of sub-requirements in this hierarchy: SF > IR > US.

Function	Description
System feature (SF)	SFs are major capabilities of offering requirements or services to support problems (PBs). ● Offering requirements: a group of complete, consistent, and series of formal requirements planned by product managers/planning representatives. In principle, SFs are a set of key selling points (highlights) of an offering. Each SF is an E2E solution that meets customers' specific business value requirements. Some SFs can be sold separately via license control. ● PBs: challenges and opportunities faced by customers (customer strategies and pain points), that is, key problems solved by a product or service for customers. Resolving key problems can bring core value to customers.
R&D requirement (IR/US)	There are two work item types under R&D requirements: ● Initial requirement (IR) IRs are re-described accurately, with complete background, in standard format, and from the perspective of customers/markets. ● User story (US) User stories are brief description of functions that are valuable to users or customers, which comply with the INVEST principles. USs are decoupled and can be delivered independently, which is the basis of agile sprint delivery.
Task	Tasks are activities with a certain goal.
Bug	Bugs are problems found in a project.

7.2 Common Configuration Management

7.2.1 Configuring Common Work Item Fields

Customize common fields that can be used by any type of work items in your project.

Prerequisites

- An IPD-standalone software project is available, in which you have permission to **configure work item templates**.
- You have the tenant administrator permission.

Configuring Common Fields in a Project

Step 1 Access the CodeArts Req homepage.

Step 2 Go to the project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Work Items > Common Field**.

Step 4 Click **Create Field**. In the dialog box that is displayed, set the required parameters.

Table 7-2 Creating a field

Parameter	Description
Field Name	Enter a maximum of 15 characters, including letters, digits, and hyphens (-).
Field Type	Type of the field. The options include: single-choice list, multi-choice list, single-line text, multi-line text, date, date and time, integer, decimal, single-choice user, multi-choice user, and level field.
Description	Remarks about the field. Enter a maximum of 50 characters, including letters, digits, and hyphens (-).

Step 5 Click **OK**.

The new field is displayed at the end of the list. The parameters in this list are described in the following table.

Table 7-3 Field list

Parameter	Description
Field Name	System or custom field name. Hover over the header and click to sort by field name.
Created/Added By	The user who creates or adds a field. Hover over the header and click to sort by creator or adding user.
Created/Added At	Time when a field is created or added. Hover over the header and click to sort by creation or addition time.
Field Type	System or custom field type. The options include: single-choice list, multi-choice list, single-line text, multi-line text, date, date and time, integer, decimal, single-choice user, multi-choice user, and level field. Hover over the header and click to sort by field type. Hover over the header and click to filter fields.
Option	Displayed only for single- and multi-choice list fields.
Description	System or custom field description.
Status	Work item types that are currently using a system or custom field.

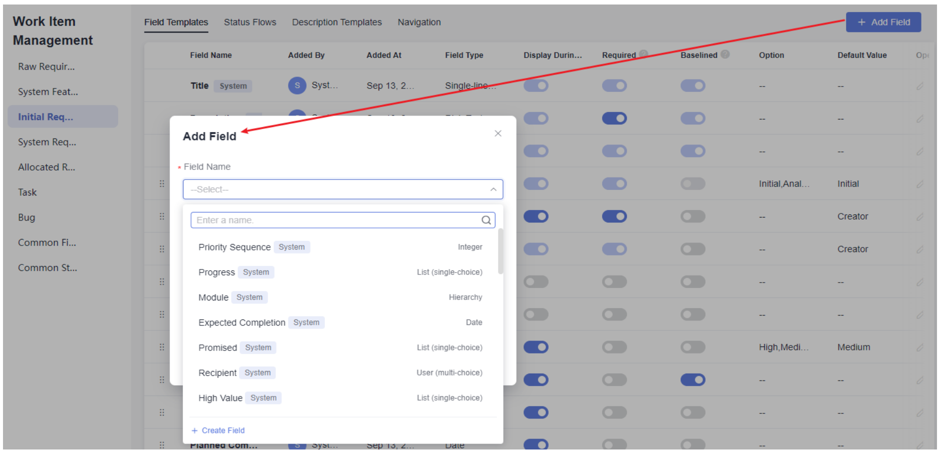
Parameter	Description
Operation	You can edit and delete a field. To edit a field, click ✎ in this column. **NOTE** ● System fields cannot be edited. ● Custom fields of your tenant cannot be edited here. To delete a field, click 🗑 in this column. **NOTE** ● System fields cannot be deleted. ● Deleting a tenant-defined field only removes it from work item templates where it was previously used. It remains in the tenant's field list. ● Deleted fields cannot be recovered.

Step 6 (Optional) Add a common field (for example, **CommonField01**) to a work item template.

The following uses the IR work item template as an example:

1. Choose **Work** > **Work Items > Initial Requirement (IR) > Field Templates**.
2. Click **Add Field**, select **CommonField01** from the **Field Name** drop-down list, and click **Add** to save the template.

Figure 7-2 Add Field dialog box



3. Check this **CommonField01** field when creating or editing an IR on the **Work** > **Req > R&D Requirements** page.

NOTE

- Customized common fields can be configured and used for all types of work items of the current project.
- The IR work item template is used as an example. You can add common fields to other work item templates in the same way, and only need to do this once for each of them.
- A maximum of 100 common fields can be customized in a project.

----End

Configuring Common Fields in Tenant Settings

You can configure tenant-level common fields for work items across all your IPD projects.

Step 1 Log in to the CodeArts homepage, click , and choose **All Account Settings**.

Step 2 Choose **Work** > **Field**. The existing common fields are displayed.

Step 3 Click **Create Field**. In the dialog box that is displayed, enter a field name, select a field type, and click **OK**. The new field is displayed in the list.

----End

You can perform the following operations on a new field:

- Click to modify the field name, type, and description.
- Click . In the dialog box that is displayed, click **Delete** to delete the field.

NOTE

Fields created on the **Work** > **Field** page apply to all IPD projects in your tenant and can be configured for the work items in these projects.

1. Go to an IPD project and choose **Settings > Work**.
2. Click **Work Items** and select a work item type.
3. On the **Field Templates** tab page, click **Add Field**. In the displayed dialog box, select a new field, configure other options, and click **OK**.

7.2.2 Configuring Common Work Item Statuses

Customize common statuses that can be used by any type of work items in your project.

Prerequisites

- An IPD-standalone software project is available, in which you have permission to **configure work item templates**.
- You have the tenant administrator permission.

Configuring Common Statuses in a Project

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings > Work**.

Step 3 In the navigation pane, choose **Work Items > Common Status**.

Step 4 Click **Create Status** under **Add Status**. In the displayed dialog box, set the required parameters.

Table 7-4 Creating a status

Parameter	Description
Name	Enter a maximum of 30 characters, including letters, digits, and hyphens (-).
Category	Category of the status. The options include **To Do**, **Doing**, and **Done**.
Description	Remarks about the status. Enter a maximum of 50 characters, including letters, digits, and hyphens (-).

Step 5 Click **OK**.

The new status is displayed at the end of the list. The parameters in this list are described in the following table.

Table 7-5 Status list

Parameter	Description
Name	System or custom status name. Hover over the header and click to sort by status name.
Created By	The user who creates a status. Hover over the header and click to sort by creator.
Created	Time when a status is created. Hover over the header and click to sort by creation time.
Category	System or custom status category. The options include **To Do**, **Doing**, and **Done**. Hover over the header and click to sort by status category. Hover over the header and click to filter statuses.
Status	Work item types that are currently using a system or custom status.
Description	System or custom status description.

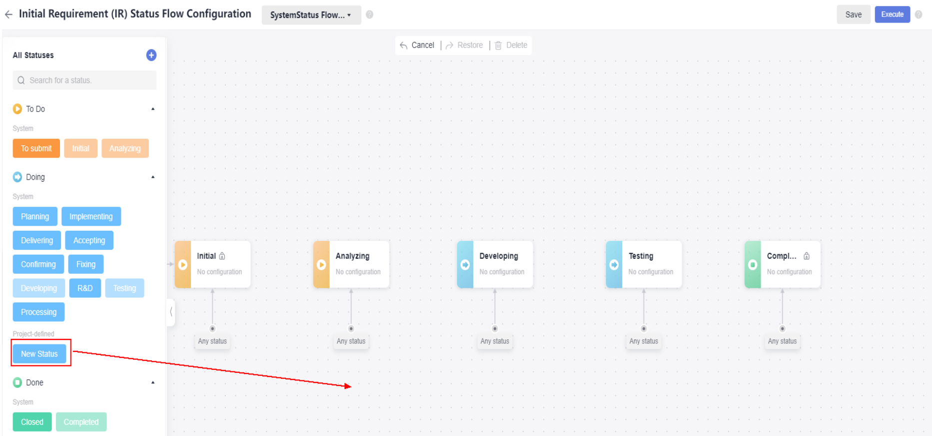
Parameter	Description
Operation	You can edit and delete a status. To edit a status, click in this column. **NOTE** • System statuses cannot be edited. • Custom statuses of the tenant cannot be edited here. To delete a status, click in this column. **NOTE** • System statuses cannot be deleted. • Custom statuses that are currently in use by work items cannot be deleted. • Deleted statuses cannot be recovered.

Step 6 (Optional) Add a common status (for example, **CommonStatus01**) to the work item status flow.

The following uses the IR work item status flow as an example:

1. Under **Work Configuration**, choose **Work Items > Initial Requirement (IR) > Status Flows**, and click **Edit**.
2. Click on the left, select **CommonStatus01** on the **All Statuses** panel, and drag it to the status flow canvas. Draw incoming and outgoing transition lines for the status, and click **Update Status Flow**.

Figure 7-3 Expanding all statuses



3. Check this **CommonStatus01** status in IRs' status flows on the **Work** > **Req > R&D Requirements** page.

NOTE

- Customized common statuses can be configured and used for all types of work items of the current project.
- The IR work item status flow is used as an example. You can add common statuses to other work item templates in the same way, and only need to do this once for each of them.
- The total number of system and common statuses in a project cannot exceed 50.

----End

Configuring Common Statuses in Tenant Settings

You can configure tenant-level common statuses for work items across all your IPD projects.

Step 1 Log in to the CodeArts homepage and click .

Step 2 Choose **All Account Settings**.

Step 3 Choose **Work** > **Status**. The existing common statuses are displayed.

Step 4 Click **Create Status**. In the dialog box that is displayed, enter a status name, select a status category, and click **OK**. The new status is displayed in the list.

You can perform the following operations on a new status:

- Click to modify the status name, category, and description.
- Click . In the dialog box that is displayed, click **OK** to delete the status.

NOTE

Statuses created on the **Work** > **Status** page apply to all IPD projects in your tenant and can be configured for the work items in these projects.

1. Go to an IPD project and choose **Settings > Work**.
2. Click **Work Items** and select a work item type.
3. On the **Status Flows** tab, click **Edit**. Click next to the system status flow currently in use to copy it to a custom status flow. On the custom status flow page, select the new status, click **Edit**, configure fields for the status, and click **Save**.

----End

7.2.3 Configuring Work Item Templates

Customize different types of work item templates, and specify whether to display each field on work item creation pages, whether these fields are mandatory, and what they are default to. These templates are used by default when you create work items.

Prerequisites

- An IPD-standalone software project is available, in which you have permission to **configure work item templates**.
- You have the tenant administrator permission.

Configuring Field and Description Templates for RRs

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Work Items** > **Raw Requirement (RR)** > **Field Templates**.

Step 4 Edit the field template as required.

- Click **Add Field** to add a system or custom field. If needed, click **Create Field** to create one.
- In the **Display During Creation** column, specify whether to show each system or custom field on the work item creation page.
- In the **Required** column, specify whether each system or custom field must be set.
- In the **Default Value** column, set a default value for each system or custom field.

Step 5 Click ⠿ on the left of each field to adjust their sequence.

Step 6 Choose **Work Items** > **Raw Requirement (RR)** > **Description Templates**. Then click **Edit**.

Customize the RR description template and click **Save**.

----End

Configuring Field and Description Templates for SFs

Step 1 Go to a project and choose **Settings** > **Work**.

Step 2 In the navigation pane, choose **Work Items** > **System Feature (SF)** > **Field Templates**.

Step 3 Edit the field template as required.

- Click **Add Field** to add a system or custom field. If needed, click **Create Field** to create one.
- In the **Display During Creation** column, specify whether to show each system or custom field on the work item creation page.
- In the **Default Value** column, set a default value for each system or custom field.
- Set **Default Value** for system or custom fields.
- In the **Baselined** column, specify whether to lock each system or custom field in the baseline.

Step 4 Click ⠿ on the left of each field to adjust their sequence.

Step 5 Choose **Work Items** > **System Feature (SF)** > **Description Templates**. Then click **Edit**.

Customize the SF description template and click **Save**.

----End

Configuring Field and Description Templates for IRs

Step 1 Go to a project and choose **Settings > Work**.

Step 2 In the navigation pane, choose **Work Items > Initial Requirement (IR) > Field Templates**.

Step 3 Edit the field template as required.

- Click **Add Field** to add a system or custom field. If needed, click **Create Field** to create one.
- In the **Display During Creation** column, specify whether to show each system or custom field on the work item creation page.
- In the **Default Value** column, set a default value for each system or custom field.
- Set **Default Value** for system or custom fields.
- In the **Baselined** column, specify whether to lock each system or custom field in the baseline.

Step 4 Click ⠿ on the left of each field to adjust their sequence.

Step 5 Choose **Work Items > Initial Requirement (IR) > Description Templates**. Then click **Edit**.

Customize the IR description template and click **Save**.

----End

Configuring Field and Description Templates for User Stories

Step 1 Go to a project and choose **Settings > Work**.

Step 2 In the navigation pane, choose **Work Items > User Story (US) > Field Templates**.

Step 3 Edit the field template as required.

- Click **Add Field** to add a system or custom field. If needed, click **Create Field** to create one.
- In the **Display During Creation** column, specify whether to show each system or custom field on the work item creation page.
- In the **Default Value** column, set a default value for each system or custom field.
- Set **Default Value** for system or custom fields.
- In the **Baselined** column, specify whether to lock each system or custom field in the baseline.

Step 4 Click ⠿ on the left of each field to adjust their sequence.

Step 5 Choose **Work Items > User Story (US) > Description Templates**. Then click **Edit**.

Customize the US description template and click **Save**.

----End

Configuring Field and Description Templates for Tasks

Step 1 Go to a project and choose **Settings > Work**.

Step 2 In the navigation pane, choose **Work Items > Task > Field Templates**.

Step 3 Edit the field template as required.

- Click **Add Field** to add a system or custom field. If needed, click **Create Field** to create one.
- In the **Display During Creation** column, specify whether to show each system or custom field on the work item creation page.
- In the **Required** column, specify whether each system or custom field must be set.
- In the **Default Value** column, set a default value for each system or custom field.

Step 4 Click ⠿ on the left of each field to adjust their sequence.

Step 5 Choose **Work Items > Task > Description Templates**. Then click **Edit**.

Customize the task description template and click **Save**.

----End

Configuring Field and Description Templates for Bugs

Step 1 Go to a project and choose **Settings** > **Work**.

Step 2 In the navigation pane, choose **Work Items** > **Bug** > **Field Templates**.

Step 3 Edit the field template as required.

- Click **Add Field** to add a system or custom field. If needed, click **Create Field** to create one.
- In the **Display During Creation** column, specify whether to show each system or custom field on the work item creation page.
- In the **Required** column, specify whether each system or custom field must be set.
- In the **Default Value** column, set a default value for each system or custom field.

Step 4 Click ⠿ on the left of each field to adjust their sequence.

Step 5 Choose **Work Items > Bug > Description Templates**. Then click **Edit**.

Customize the bug description template and click **Save**.

----End

7.2.4 Configuring Work Item Status Flows

Prerequisites

An IPD-standalone software project is available, and you have permission to **configure status flows** for the project.

Configuring Work Item Status Flows

You can customize the status sequence as required.

NOTE

- This function is currently available for R&D requirements, system features, tasks, and bugs. The following describes how to customize a bug status flow.
- System status flows can only be viewed. You can copy them to customize a new one. Custom status flows can be edited and executed to meet your service requirements.
- If an R&D requirement is switched to a custom status flow, the rollup rule will automatically become invalid. Only when all types of work items of the R&D requirement are executed in the system status flow, the rollup rule will apply.

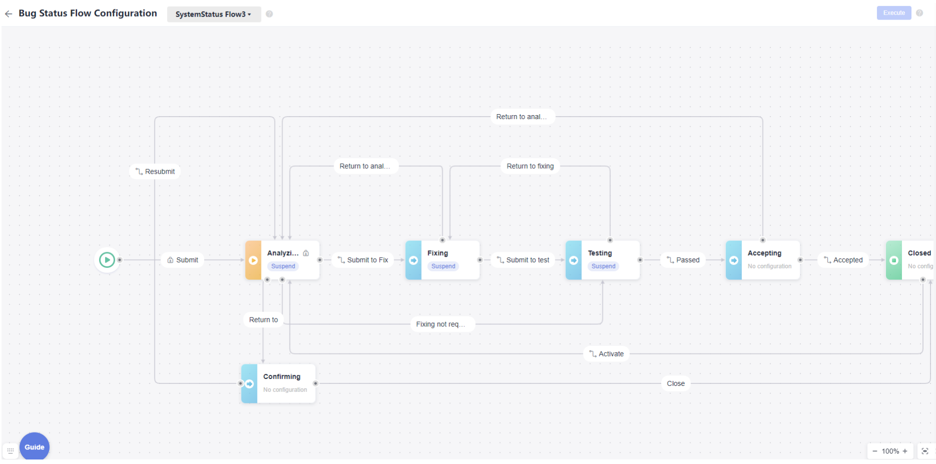
Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work**.

Step 3 In the navigation pane, choose **Work Items** > **Bug** > **Status Flows**.

Step 4 Click **Edit**. The **Bug Status Flow Configuration** canvas page is displayed with the default system status flow.

Figure 7-4 Bug status flow



Step 5 Copy a system status flow to customize a new one.

Figure 7-5 Copying to create a status flow

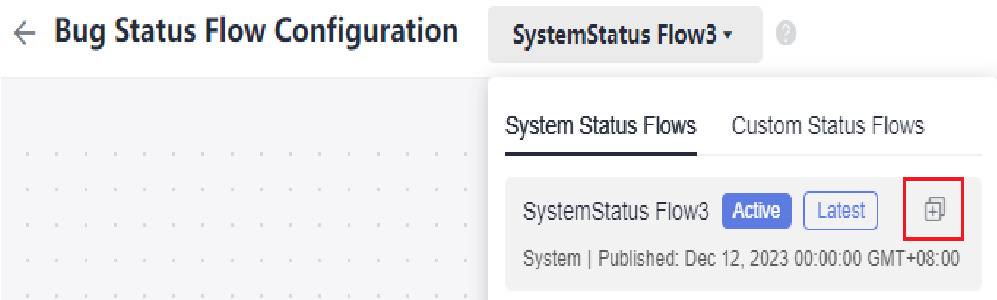
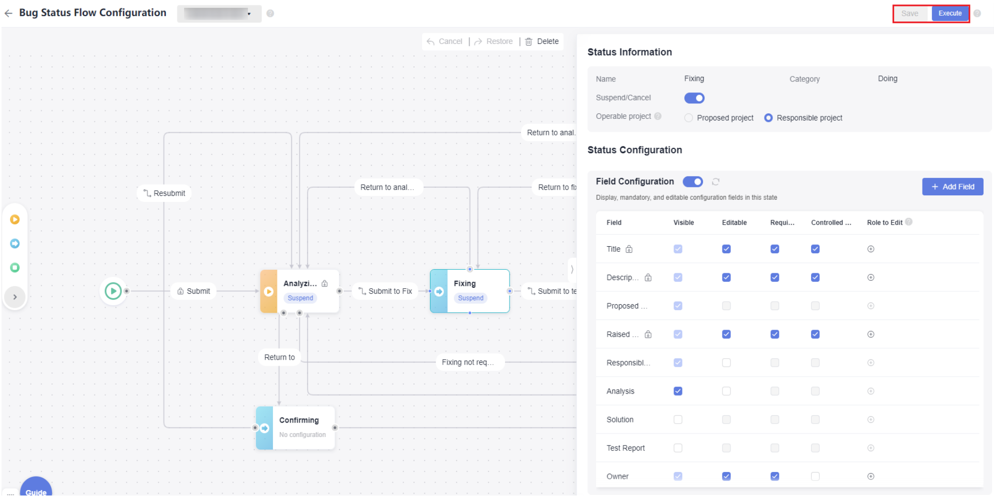


Figure 7-6 Customizing a status flow



Step 6 Click **Edit**, then double-click any status or transition line to display their rules.

Figure 7-7 Configuring status nodes

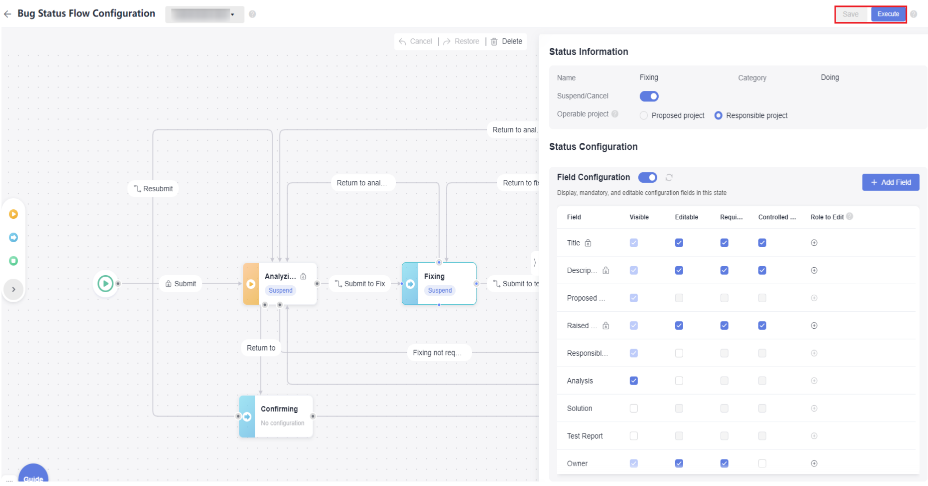
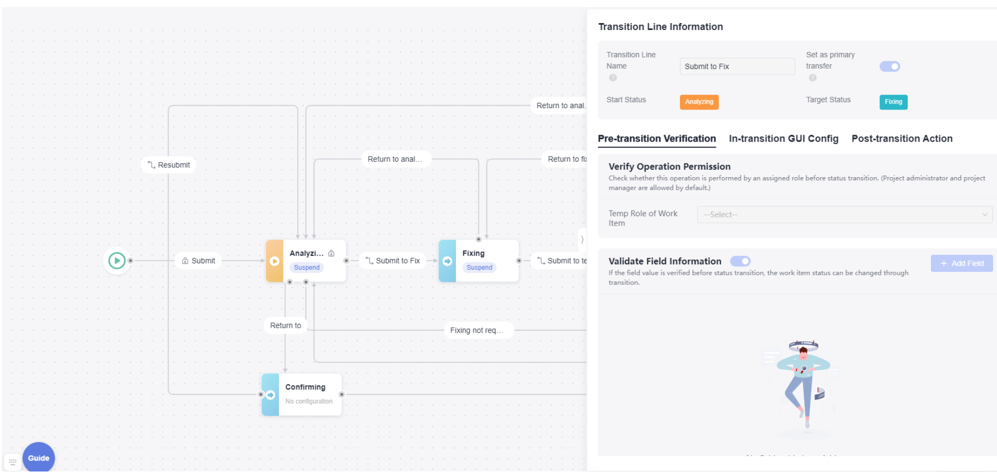


Figure 7-8 Configuring transition lines



Step 7 Click **Edit**, and add a status.

1. Expand the status drawer. Drag any available status to the canvas or click  to add one.

Figure 7-9 Expanding the status drawer

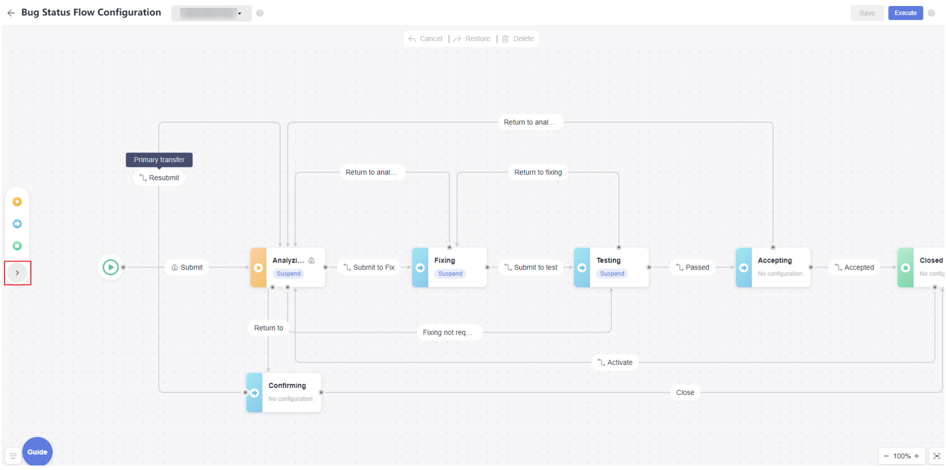


Figure 7-10 Expanded status drawer

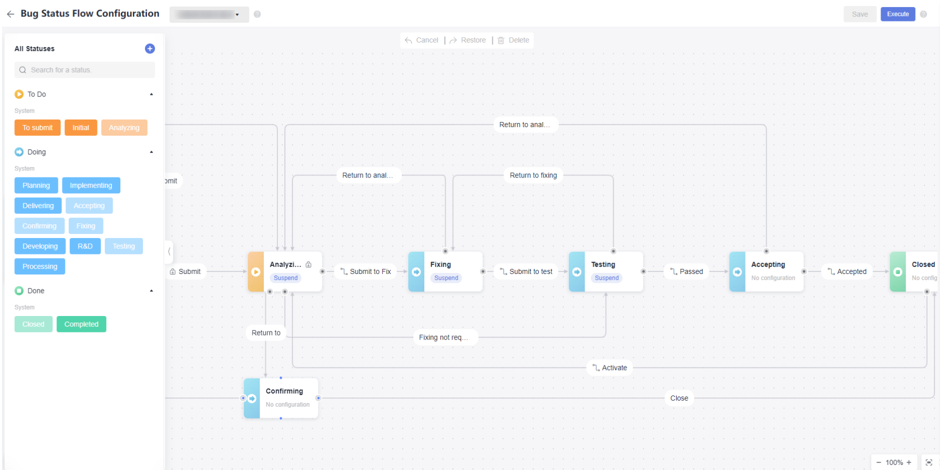
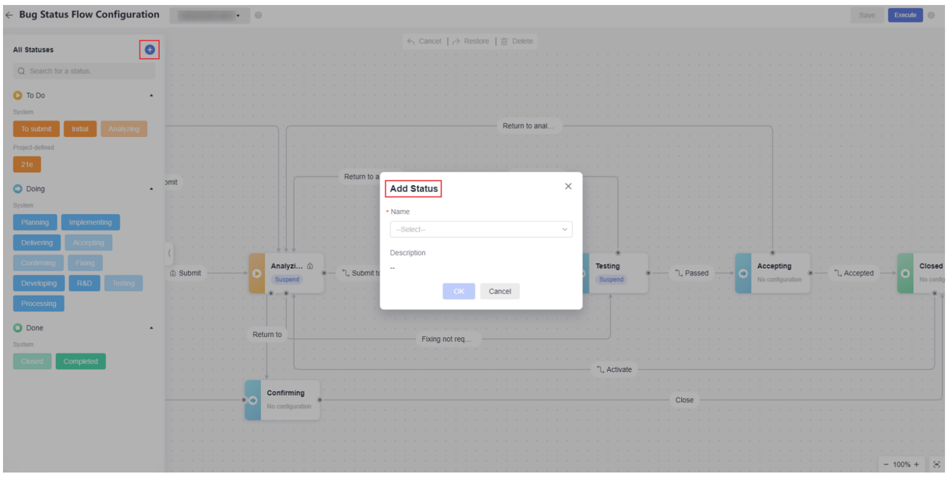


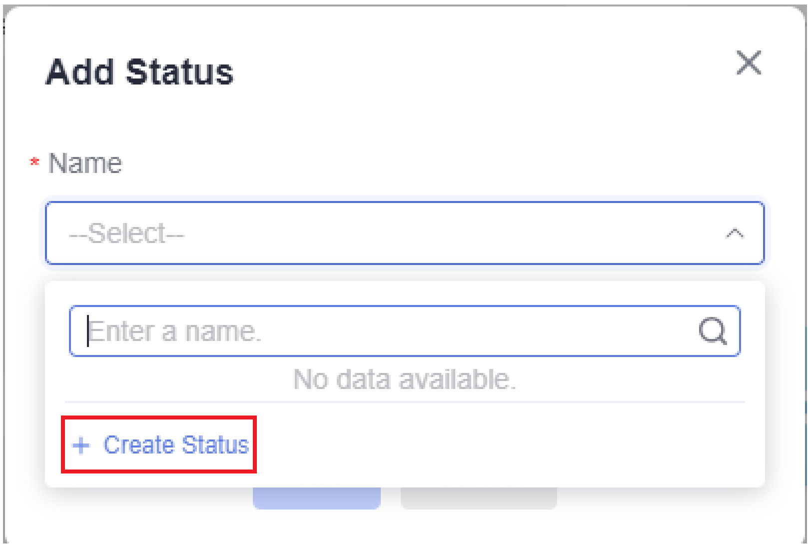
Figure 7-11 Adding a status



2. Click the **Name** drop-down list, and then click **Create Status**.

   You can also select an existing tenant-level custom status.

   Figure 7-12 Creating a status

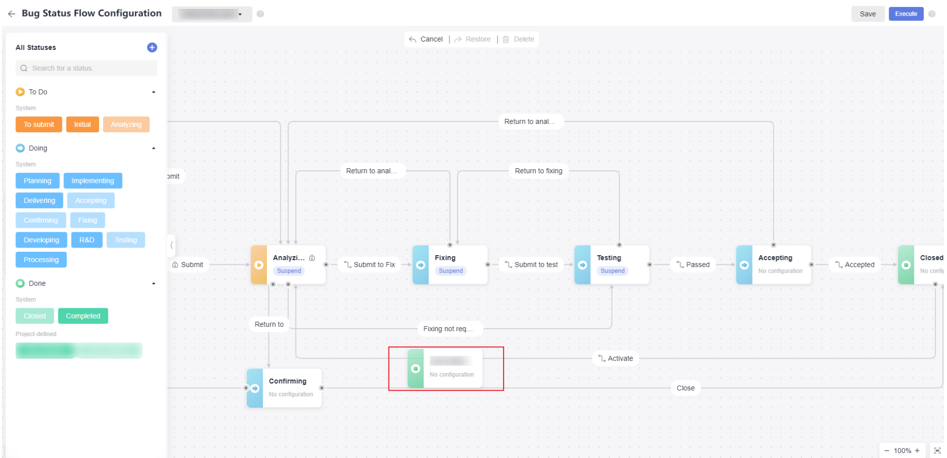
3. Set **Name** and **Category**.

   The options include **To Do**, **Doing**, and **Done**.

4. Click **OK**.

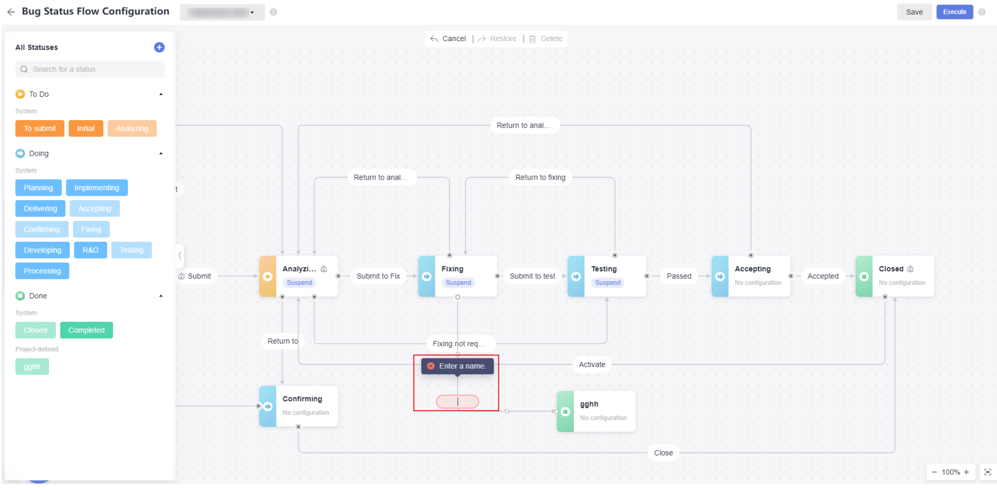
   The new status is displayed on the bug status flow canvas.

   Figure 7-13 Adding a status to a bug status flow

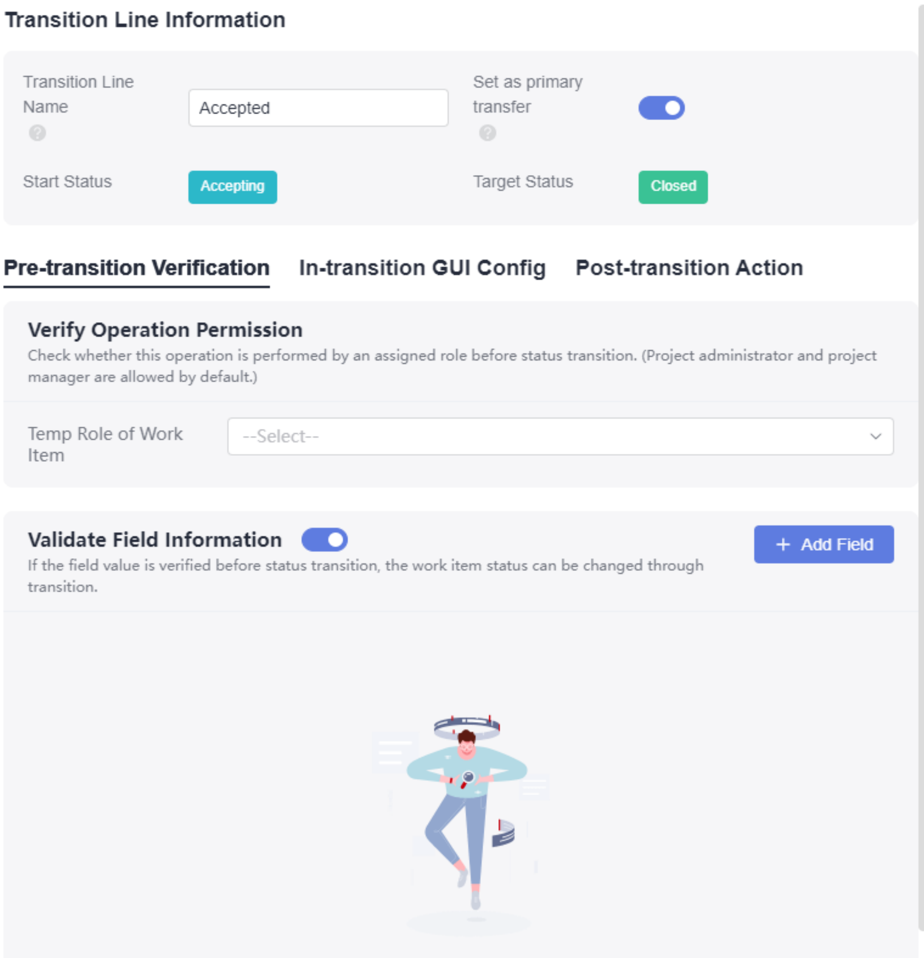
Step 8 Drag the new status to a proper position, draw a transition line with your mouse, and enter a name.

Figure 7-14 Adding a transition line for a new status



Step 9 Double-click the new transition line.

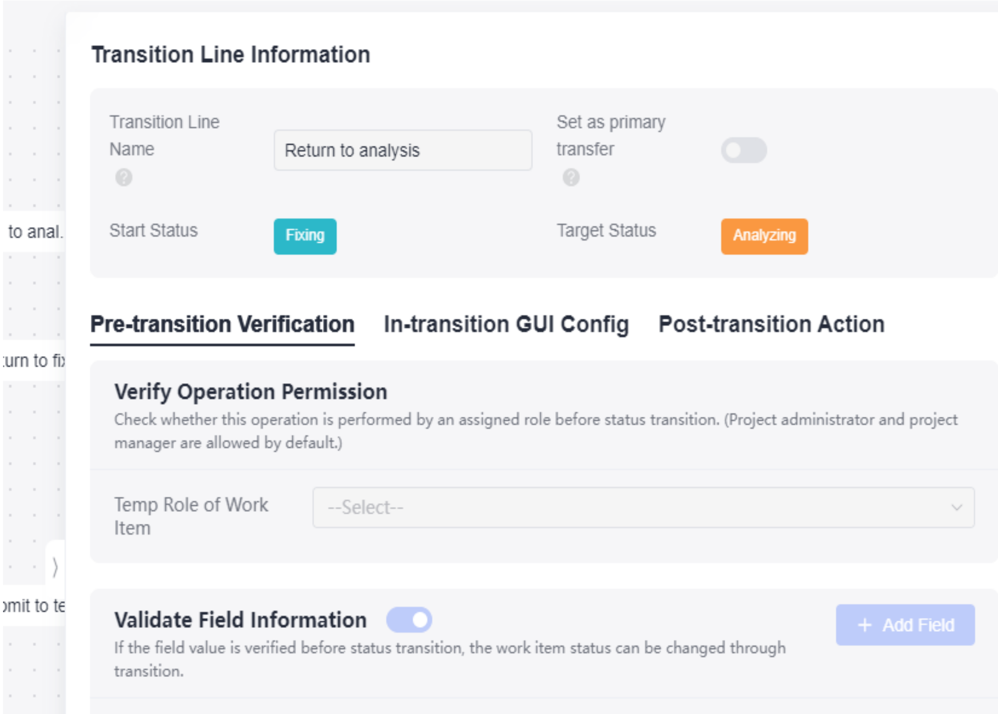
Figure 7-15 Transition line configuration panel



Step 10 Set **Transition Line Name** and other information.

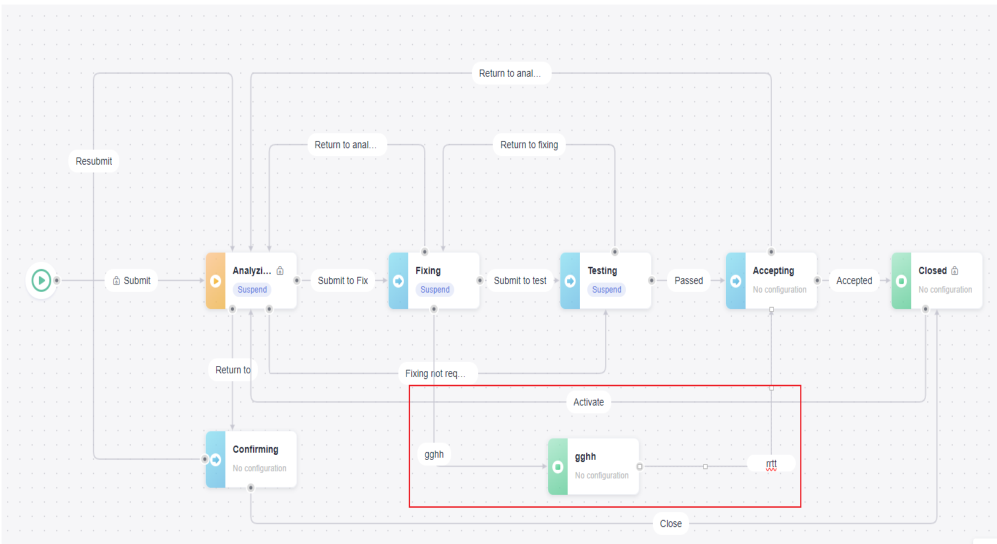
Step 11 After the configuration is complete, click to collapse the panel.

Figure 7-16 Collapsing the transition line configuration panel



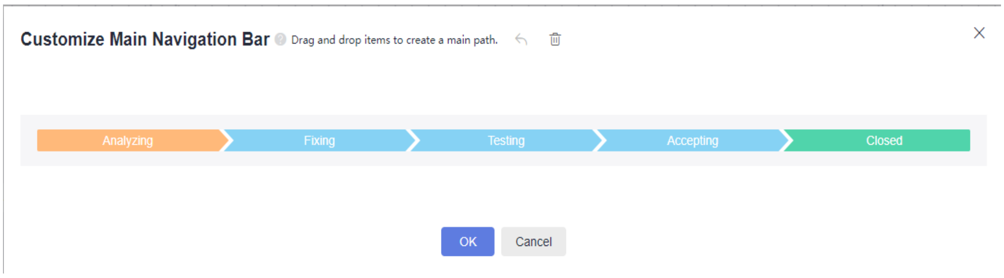
The new status must have at least one incoming and one outgoing transition lines. To add a transition line, repeat steps **5** to **8**.

Figure 7-17 Adding incoming and outgoing transition lines



Step 12 Click **Execute** in the upper right corner, and customize the main navigation bar.

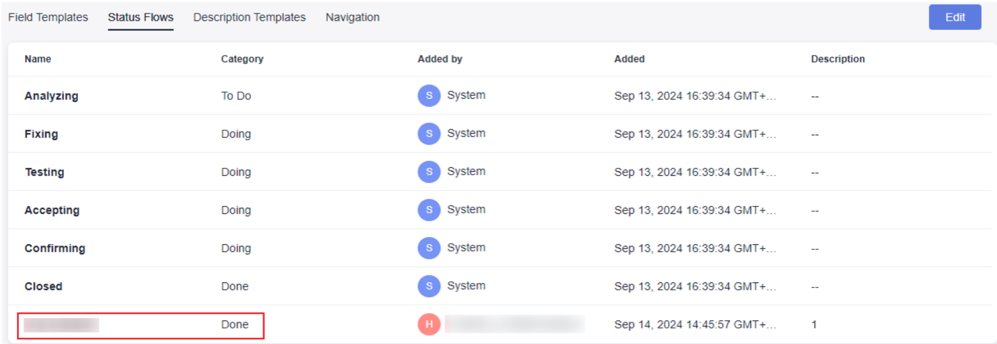
Figure 7-18 Setting the main navigation bar



Step 13 Click **OK**.

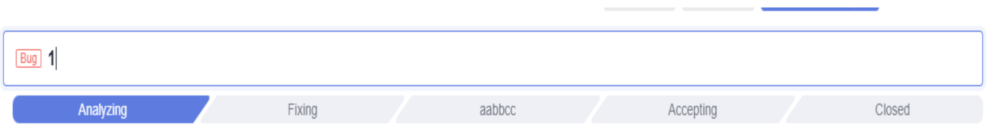
The new bug status flow is displayed on the **Status Flows** tab page.

Figure 7-19 Bug status flows



This status flow will be applied to the bug management process.

Figure 7-20 Status flow on the bug details page



----End

7.2.5 Configuring Work Item Tags

Tags can be created, edited, and deleted for different types of requirements and work items in a project.

Prerequisites

An IPD-standalone software project is available, in which you have permission to **manage tags**.

Adding a Tag

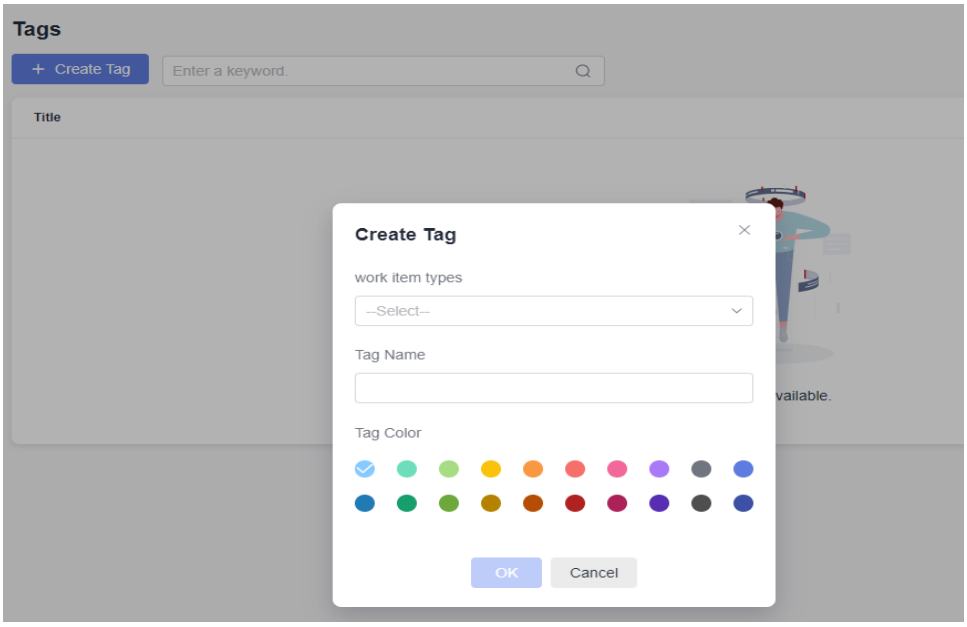
Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work** > **Tag Management**.

All work item tags are displayed here.

Step 3 Click **Create Tag**.

Figure 7-21 Creating a tag

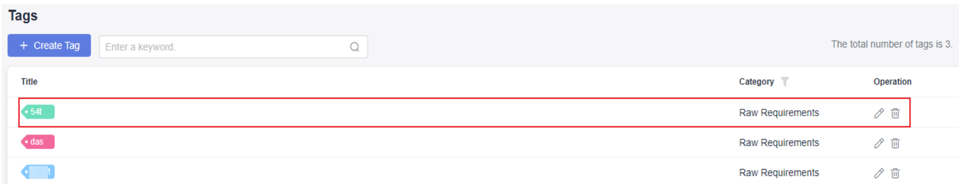


Step 4 Select a work item type and tag color, and enter a tag name.

Step 5 Click **OK**.

The new tag is displayed in the list.

Figure 7-22 Tags page



NOTE

- Click to change the tag name and color. The change is synchronized where the tag is referenced.
- Click to delete a tag. The tag is deleted from where it is referenced.

The tag also displays on the details page of each work item type (such as RR).

----End

7.2.6 Creating Work Item Modules

- You can add, modify, and delete work item modules in a project.
- You can add submodules to a module.
- When creating or editing a work item, you can specify the module to which the work item belongs.

Prerequisites

An IPD-standalone software project is available, in which you have permission to **configure modules**.

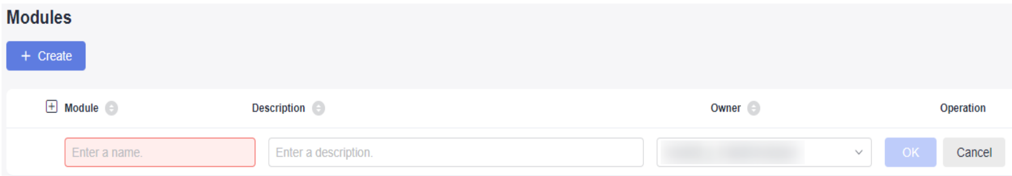
Creating a Module

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work** > **Modules**.

Step 3 Click **Create**.

Figure 7-23 Creating a module



Step 4 Set **Module**, **Description**, and **Owner**.

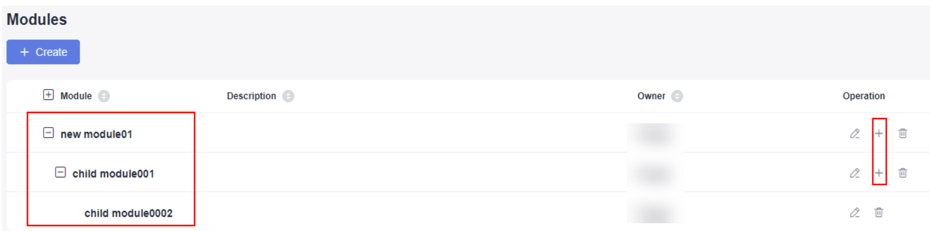
The module name must be unique in the system.

Step 5 Click **OK**.

Step 6 (Optional) Edit or delete a module, or add a submodule.

- Click  to edit the module.
- Click  to delete the module.
- Click  to add a submodule. Each module can have a maximum of three levels, for example, **Module1** > **Submodule01** > **Submodule001**.

Figure 7-24 Adding a submodule



----End

7.2.7 Creating Work Types

Work types include R&D design, backend development, frontend development, and more. You can customize your own work types and specify whether they are mandatory for work items.

Prerequisites

An IPD-standalone software project is available, in which you have permission to **configure work types**.

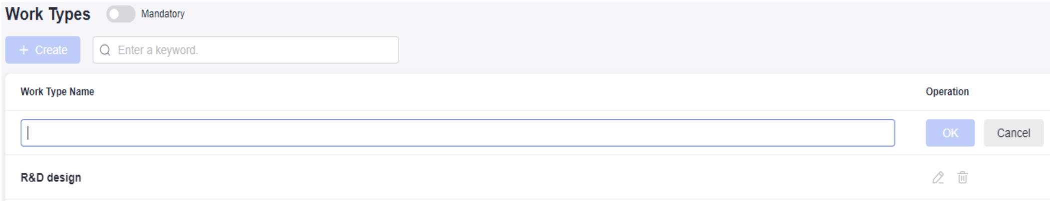
Creating a Work Type

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work** > **Work Types**.

Step 3 Click **Create**.

Figure 7-25 Creating a work type



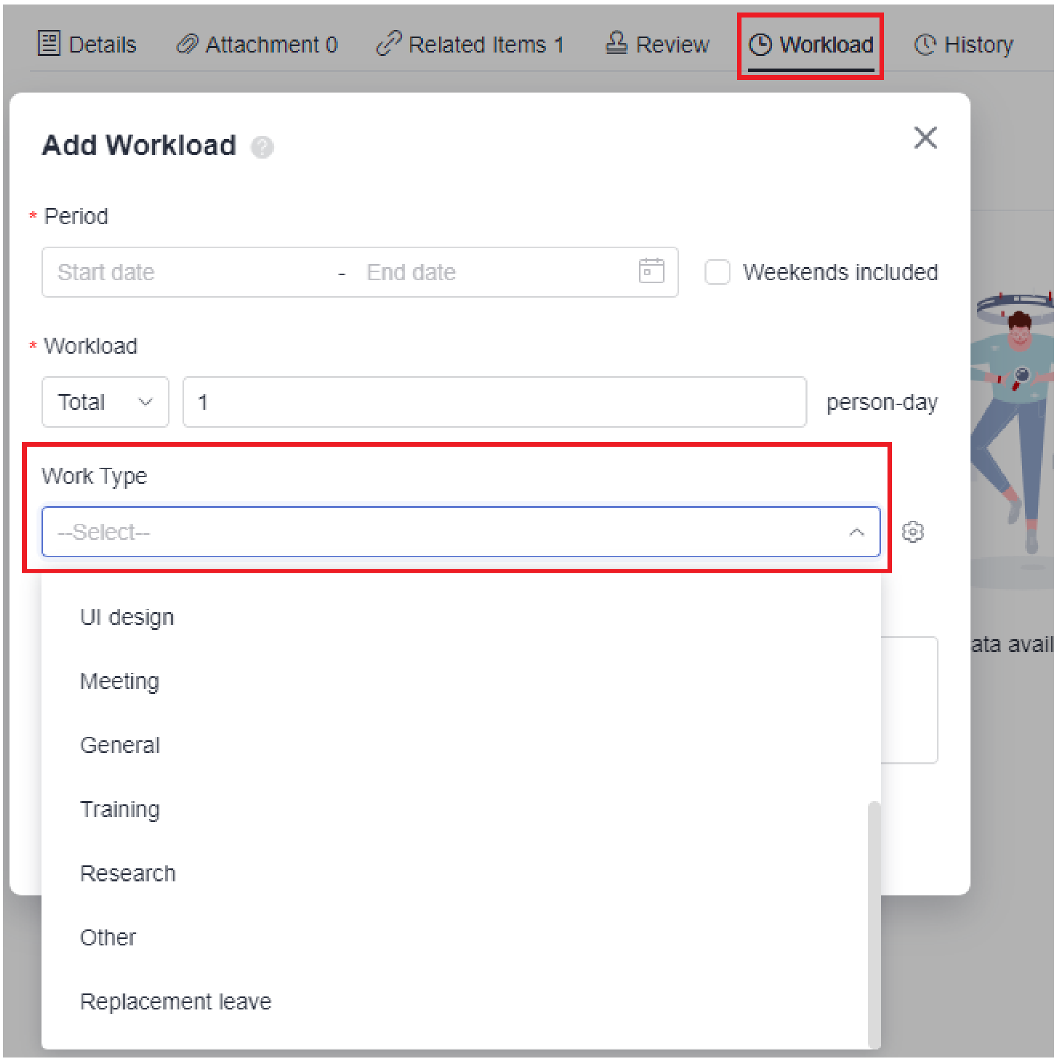
Step 4 Enter a work type name.

The name must be unique in the system.

Step 5 Click **OK**.

You can select this work type when configuring workloads for work items.

Figure 7-26 Adding a workload



----End

Configuring Whether Work Types Are Mandatory

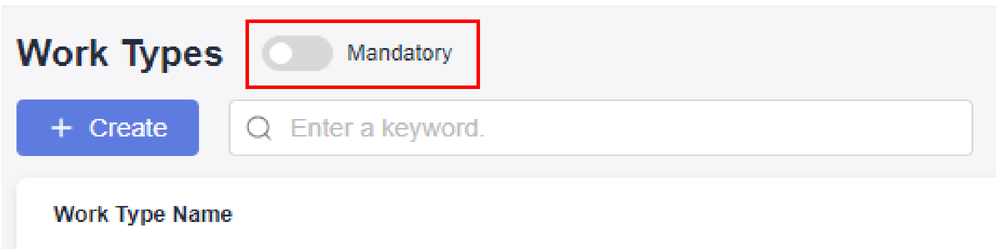
Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work** > **Work Types**.

Step 3 Toggle on **Mandatory**.

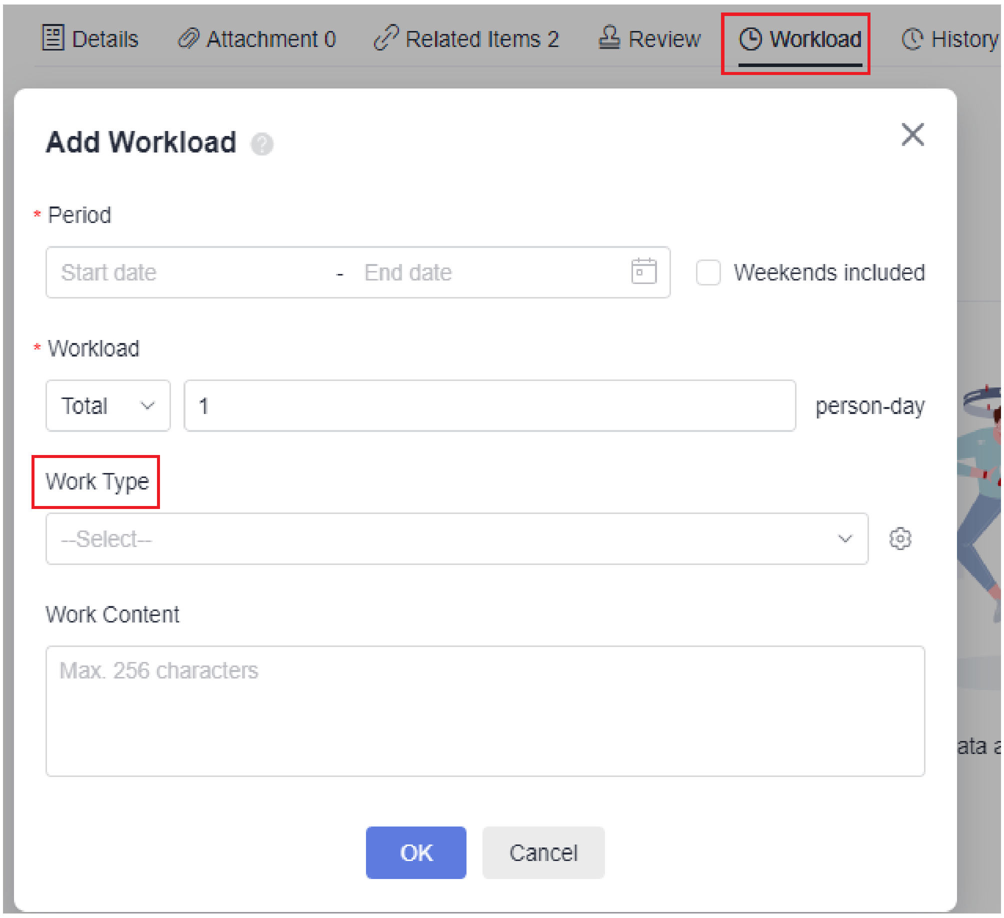
By default, this option is toggled off.

Figure 7-27 Configuring work types



A red asterisk (*) will be displayed next to **Work Type** on the **Add Workload** page, indicating that the work type is mandatory.

Figure 7-28 Adding a workload



----End

7.2.8 Configuring Automatic Roll-up Rules

Project creators or roles with the automation configuration permission can enable or disable automation rules as required to implement automatic parent-child status roll-up or status transfer. Once a rule is enabled, all work items and users in the project can trigger the rule.

Prerequisites

An IPD-standalone software project is available, in which you have the **Automation** permission.

Procedure

Step 1 Access the CodeArts Req homepage.

Step 2 Access the project details page and choose **Settings** > **Work Item** > **Automation**. The **Automation** page is displayed.

Step 3 Click **Automation Rules**.

Step 4 Set **Enable** to enable or disable the configured rule.

For example, if the status rollup of SF work items is enabled, when you change the status of all child work items of an unfinished SF work item in the **Work Item** > **Req** > **Feature Tree** list to **Completed**, the status of the SF work item is automatically rolled up to **Completed**.

NOTE

- If all child work items of the parent item meet the rule condition and the target status of the parent item supports transition, the rule is applied.
- If the parent item has any child work items that do not meet the rule condition, when the rule is triggered, a record indicating no operation performed is generated and the parent item status is not transitioned.
- If there is no parent item, when the rule is triggered, a record indicating that no operation performed is generated and the parent item status is not transitioned.
- If the parent item transition status configured in the rule does not support transition, when the rule is triggered, a record indicating an execution error is generated and the parent item status is not transitioned.

Step 5 Go to the work item list. The SF status is automatically updated to **Completed**, and an automation rule operation record is added to the **History** tab page.

----End

7.2.9 Configuring Notifications

- You can determine whether to inform project members about various operations.

  For example, a member is informed of an assigned work item.
- Notifications can be sent via direct messages or emails.

Prerequisites

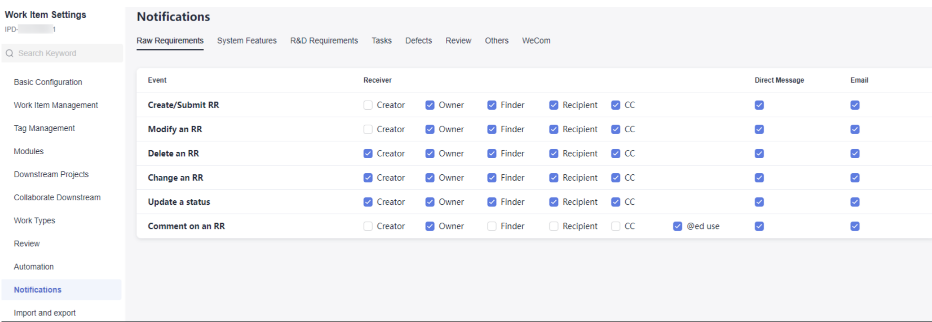
An IPD-standalone software project is available, in which you have permission to **configure notifications**.

Procedure

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work** > **Notifications**.

Figure 7-29 Notifications page



Step 3 Select a work item type to configure notifications.

Step 4 Select or deselect desired notification recipients and types.

After the setting is complete, the selected recipients will be notified when a corresponding event (for example, RR modification) occurs.

- **Direct Message**: When a member logs in to the homepage, they will see a number displayed next to the bell icon in the upper right corner. They can click the icon to view notifications.
- **Email**: Project members who have an email address configured for their user and have enabled **Email Notifications** on the **This Account Settings** page will receive notification emails from the service.

----End

7.2.10 Viewing Work Item Import/Export Records

You can download the imported and exported work item files.

Prerequisites

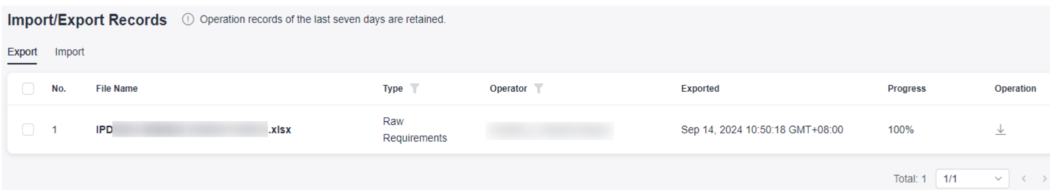
Some work items have been imported or exported in a project.

Viewing Export Records

Step 1 Access the CodeArts Req homepage.

Step 2 Go to a project and choose **Settings** > **Work** > **Import/Export**.

Figure 7-30 Import and export records



Step 3 Download the desired work items. All project members' export records of any types of work items will be displayed on this page.

----End

NOTE

- Only the export records of the last seven days are retained.
- The project administrator can view the export records of all members in the current project.

Viewing Import Records

Step 1 Access the CodeArts Req homepage.

Step 2 Go to an IPD-system device project and choose **Settings** > **Work** > **Import/Export**.

Step 3 Download the desired work items. All project members' import records of any types of work items will be displayed on this page.

----End

NOTE

- Only the import records of the last month are retained.
- The project administrator can view the import records of all members in the current project.

7.3 Creating and Managing RRs

7.3.1 RR Process

By default, the life cycle of an RR consists of the **Analyzing**, **Confirm**, **Planning**, **Implementing**, **Delivering**, **Accepting**, and **Closed** states. **Figure 7-31** shows the complete status transition process.

Figure 7-31 RR status transition flowchart

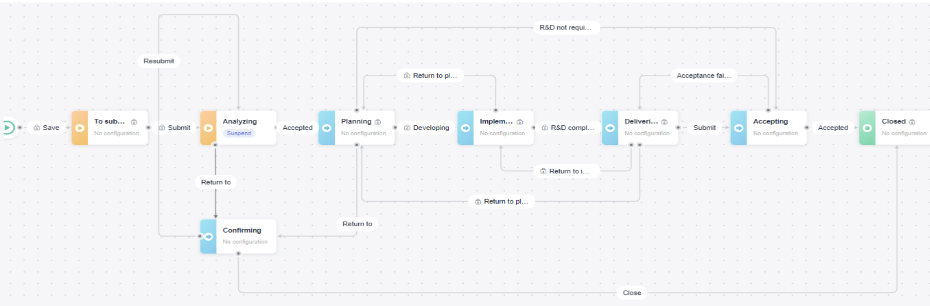


Table 7-6 lists the default operations in each RR state.

Table 7-6 Operation description

State	Description
--	When you create an RR, the status is **--** by default after you save it as a draft. The requirement proposer is by default the person who creates the requirement.
Analyzing	After the RR is submitted, the state changes to **Analyzing**. The requirement recipient can analyze whether to accept the requirement based on the requirement content. If not, the requirement can be returned or suspended. After the requirement is returned, the state changes to **Confirming**. The requirement proposer can directly cancel the requirement or submit the requirement again.

State	Description
Planning	After the RR is accepted, the state changes to **Planning**. The requirement recipient makes development plan on the requirement. If the requirement does not involve R&D, select **R&D not required**, and the state of the requirement changes to **Accepting**.
Implementing	After the R&D of the RR starts, the state changes to **Implementing**. If there is any problem with the implementation solution, the requirement recipient can return the requirement to the planning phase.
Delivering	After the R&D of the RR is completed, the state changes to **Delivering**. If the delivery cannot meet the expectation, the requirement recipient can return the requirement to the planning or implementing phase.
Accepting	After the RR is submitted for acceptance, the state changes to **Accepting**. The requirement proposer checks whether the content of the requirement meets acceptance conditions. If not, select **Acceptance failed** and the state of the requirement goes back to **Delivering**.
Closed	After the RR is accepted, the state changes to **Closed**.

7.3.2 Creating RRs

Original problems or requirements described from the perspective of customers can be managed as RRs. By creating an RR, you can set the background, value, details, and priority of the requirement.

Prerequisites

An IPD-standalone software project is available, in which you have permission to **create and duplicate** RRs.

Creating RRs

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, click **Raw Requirements**.

Step 3 Click **RR**. On the **RR** page, set related parameters.

Table 7-7 Creating an RR

Parameter	Description
Title	Name of an RR.
Description	Enter the background, value, and details of the RR based on actual conditions. Use text, images, or links.
Attachment	The maximum number of attachments for a raw requirement is 100, and the total size of them should be no more than 50 MB.
Proposed Project	By default, it is the project to which the RR belongs and cannot be changed.
Raised By	By default, it is the creator of the RR. Multiple creators can be selected.
Responsible Project	Project to which the RR belongs. ● If the current project is selected, this requirement is internal. ● If another project of the tenant is selected, the requirement is submitted to external parties. The current project is selected by default.
Recipient	Owner who undertakes the RR. If multiple recipients are selected, data will be synchronized based on the recipients' processing speed.
Expected Completion	Expected completion time of the RR.
Priority	Priority of an RR, including **Low**, **Medium**, and **High**. The default value is **Medium**.
Copy To	Other members of the project team.

Step 4 Click **Submit**. The **Raw Requirements** page is displayed and "Request submitted successfully" is displayed in the upper right corner.

- If you click **Save Draft**, the RR list is displayed. The requirement status is **To submit**.
- If you click **Cancel**, the creation of the RR is cancelled.

The new requirement is displayed in the RR list, and the requirement state is **Analyzing**. If another project of the tenant is selected for **Responsible Project**, choose **Other Projects** to view the new RR.

NOTE

After an RR is created, the people selected for **Raised By**, **Recipient**, and **Copy To** will receive email notifications and internal message notifications. If not, set notifications or modify notification settings. For details, see **Configuring Notifications**.

----End

Related Operations

You can perform the following operations on a new RR.

Table 7-8 Basic operations on an RR

Operation	Description
Modify RR title	Click next to an RR title to modify it.
Modify RR field	Click the target field value in the row of an RR to modify the value.
Create child requirement	Click in the **Operation** column of an RR to break it down into child requirements. ● In the **Break Down Subrequirements** dialog box, click **Add Subrequirement** to create a child requirement. A maximum of 10 child requirements can be created at a time. ● The project to which a child requirement belongs can be the current project or other projects of the tenant. To configure the project scope, choose **Settings** > **Work** > **RR Downstream Projects**.
Associate with child requirement	Click in the **Operation** column of an RR to associate it with child requirements.
Duplicate RR	Choose > **Duplicate** in the **Operation** column of an RR. The procedure for duplicating an RR is the same as that for creating an RR.
View RR association map	Choose > **Association Map** in the **Operation** column of an RR to view all data of its related items.
Copy RR link	Choose > **Copy Link** in the **Operation** column of an RR to copy its title, ID, owner, status, and link to the clipboard.

Operation	Description
Migrate RR	Choose ··· > **Migrate** in the **Operation** column of an RR to migrate it to other projects. **NOTE** ● RRs in draft state cannot be migrated. ● After the requirement is migrated to another project, the system automatically removes the tag of the RR and disassociates the RR from the associated work item. ● After the migration, the RR will be re-executed. The system will automatically clear the actual workloads, retain only the fields of the same type as the original work item, and remove redundant fields.
Delete RR	Choose ··· > **Delete** in the **Operation** column of an RR to delete it. **NOTE** ● RRs that are being reviewed or in progress cannot be deleted. ● If a drafted RR is deleted, it is permanently deleted. ● RRs in the **To Do** state can be deleted only in the proposing project. RRs in the **Done** state can be deleted in both the proposing project and the responsible project. ● If an RR of a proposing project is deleted, it is permanently deleted. If an RR of a responsible project is deleted, it is moved to the project's recycle bin. ● RRs in the recycle bin can be restored or permanently deleted. After being restored, RRs restore to their original status. Data in the recycle bin will be permanently deleted in 30 days.

7.3.3 Managing RRs

After creating an RR (see **Creating RRs**), you can perform the operations described in this section on it.

Prerequisites

You have created an RR in an IPD-standalone software project and have permissions on the RR in the project.

On the RR List Page

Go to the project homepage, choose **Work > Req > Raw Requirements**, and perform the following operations.

Figure 7-32 RR list

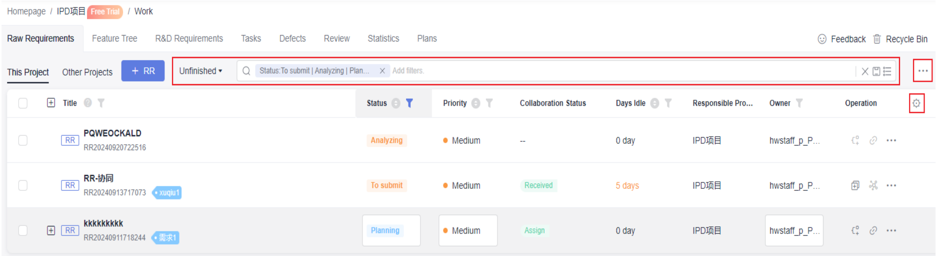


Table 7-9 Management operations in the RR list

Operation	Procedure
Query RR	● By adding filters 1. Click the search box in the RR list and select one or more filters to search for RRs. 2. To clear all filters and display all data, click on the right of the search bar. ● By using a saved view 1. Click the search box in the RR list and select one or more filters. 2. Click on the rightmost of the search bar, and enter a view name. 3. Click **OK**. The created view is displayed next to **RR**. 4. You can select the name of the created view to query the RRs that meet the search criteria. Views can be shared with others, modified, and deleted.

Operation	Procedure
Import work items	Use the provided template to import requirements in batches. 1. In the RR list, click on the right of the search bar and select **Import**. 2. In the displayed dialog box, click **Download Template**. The import template file is displayed in the lower part of the page. Save the file to the local PC and fill in data. The template file should be named in the following format: *Project name* + "-" + *Module name* (for example, **RR**) + **Template**. 3. Fill in the fields on the **RR - Requirements** sheet. For details about how to set parameters, see the **RR - Import Rules** sheet in the template file. 4. Drag or click to select a file to be imported. 5. Click **Import**. The import progress dialog box is displayed. - After the import is successful, you can view the imported requirement information in the RR list. - If the import fails, a message is displayed in the upper right corner of the page. Click **View Failure Details** in the message to view the failure details. You can modify the requirement information based on the details and import the template again. **NOTE** For details about operations on import records, see **Viewing Work Item Import/Export Records**.
Export work items	Export requirements in batches to an Excel file. 1. Export some or all RRs. - Export all: On the **Raw Requirements** page, click on the right of the search bar and choose **Export**. The **Select Fields to Export** dialog box is displayed. - Export some: In the RR list, select one or more RRs to be exported and click **Export** at the bottom of the page. The **Select Fields to Export** dialog box is displayed. 2. Select the fields to be exported and determine whether to export child requirements. 3. Click **Export**. A dialog box is displayed, indicating the export progress. After the RRs are exported, the RR file will be automatically downloaded to the local PC. The file format is **.xlsx**. **NOTE** For details about operations on export records, see **Viewing Work Item Import/Export Records**.

Operation	Procedure
Configure fields to display	Click next to the **Operation** field. ● On the left of the pop-up box, select the fields to be displayed in **Available**. ● On the right of the pop-up box, drag the fields in **Selected** to adjust the display sequence.

On the RR Details Page

On the details page of an RR, you can modify the description, priority, and owner, add tags and attachments, associate work items, check review records, add workloads, and view the operation history.

Figure 7-33 RR details page

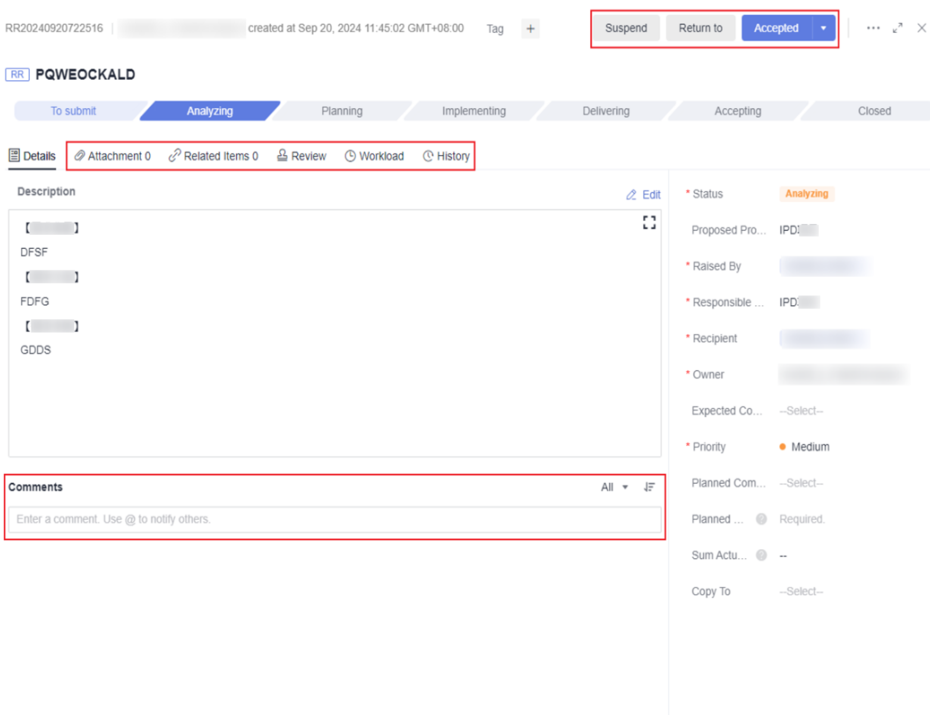
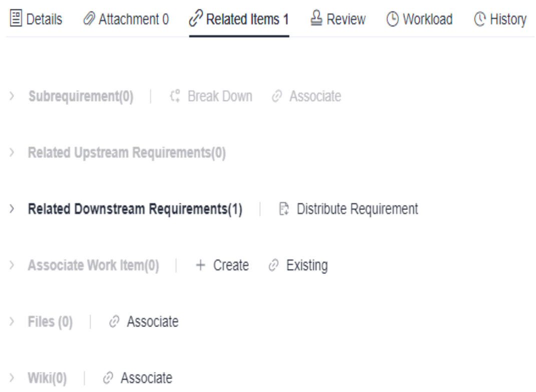


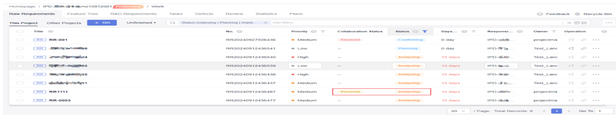
Table 7-10 Management operations on the details page

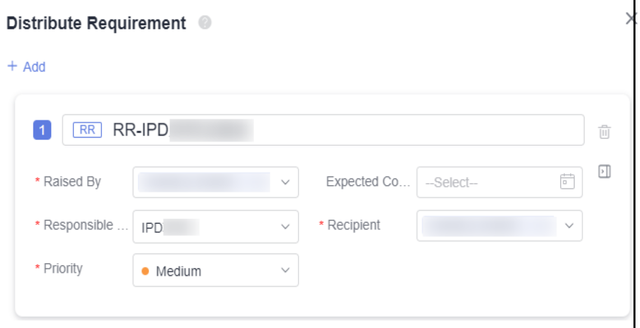
Operation	Procedure	Remarks
Edit work item	On the RR details page, click the value box of the field to be modified, and enter a target value in the text box or select one from the drop-down list. The modification is saved immediately.	You must have permission to **edit** RRs.

Operation	Procedure	Remarks
Change work item status	Go to the work item details page and click the transition button in the upper right corner to transition the work item to the target status. For details about status transition, see **Table 7-6**.	You must have permission to **set statuses** for RRs.
Upload attachment	Attachments can be pictures, workbooks, manuscripts, and text files. A maximum of 100 attachments can be added to each work item, and their total size cannot exceed 50 MB. 1. Go to the work item details page, and click the **Attachment** tab. 2. Click the box to select a local file or drag the file here to upload it as an attachment for the work item. Local files can be directly dragged to the text box. When the upload progress reaches 100%, the system displays a message indicating that the attachment is uploaded successfully. Move the cursor to the file that is successfully uploaded. The operations that can be performed are displayed. • Click to download the file. • Click to delete the uploaded file.	You must have permission to **upload attachments** for RRs.

<table>
<tr><th>Operation</th><th>Procedure</th><th>Remarks</th></tr>
<tr><td>Add and check related items</td><td>A work item can be associated with other types of work items in a project.
1. Go to the work item details page and click the Related Items tab.
Figure 7-34 Related items


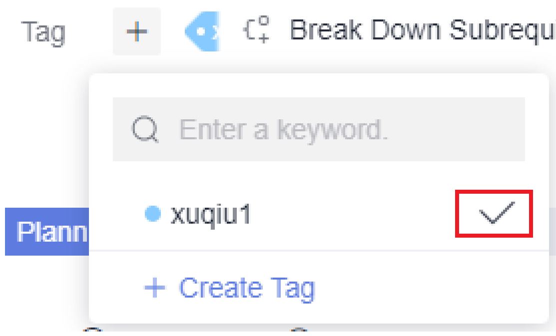
2. Complete association.
● Related Upstream Requirements: requirements coordinated from upstream projects.
The upstream requirement information is displayed in the current project only when this project is selected as the responsible project for the created Related Downstream Requirements in the RR of another project.
Assume that the name of the current project is "IPD Project" and that of another project is "IPD Project 2". The method of synchronizing upstream requirement information is as follows:
1. Create a project named "IPD Project 2".
2. Create an RR named "RR-IPD2" in IPD Project 2.
3. After the RR is created, enter its details page.
4. Choose Related Items > Related Downstream Requirements and click Distribute Requirement.
5. Set Responsible Project to IPD-Project and the raw requirement name to RR-Synergy.
6. After the assignment, click the requirement title "RR-Synergy" to access "IPD Project" where this requirement is located. On the RR-Synergy details page, choose Related Items > Related Upstream Requirements to view the corresponding requirement information.</td><td>You must have permission to deliver assignment, break down/associate/dissociate child requirements, create/associate/dissociate work items, associate/dissociate files, and associate/dissociate wikis for RRs.</td></tr>
</table>

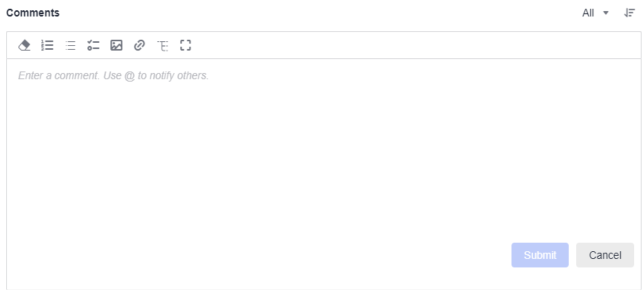
Operation	Procedure	Remarks
	In the RR list, **Collaboration Status** of the RR-Synergy requirement is **Received** in orange, and **Status** is **Analyzing**. **Figure 7-35** RR list  **NOTE** Different colors of **Received** indicate different meanings. : Before a requirement is accepted, the color of **Received** is orange. : After a requirement is accepted, the color of **Received** turns green. : After a requirement is rejected, the color of **Received** turns red. • **Related Downstream Requirements**: requirements assigned to downstream projects. A maximum of 10 requirements can be assigned at a time. One requirement is displayed by default and cannot be deleted. 1. Click **Distribute Requirement**. The **Distribute Requirement** dialog box is displayed. 2. Configure the information about requirement assignment. The current project cannot be selected for **Responsible Project**. If only the current project exists in the system and no value is available for this parameter, requirement assignment cannot be performed.	

Operation	Procedure	Remarks
	Figure 7-36 Requirement assignment  3. After configuring the requirement assignment information, click **OK**. Click the requirement title "RR-test" to access "IPD Project 2" where this requirement is located. In the RR list, **Collaboration Status** of the requirement is **Delivered** in orange. **NOTE** Different colors of **Assign** indicate different meanings.  : If the current requirement has unprocessed downstream collaboration requirements, the color of **Assign** is orange.  : After all downstream collaboration requirements under the current requirement are accepted, the color of **Assign** turns green.  : If the current requirement has returned downstream collaboration requirements, the color of **Assign** is red. • **Subrequirement**: child work items broken down from the current work item. The operations vary according to the state. Perform operations based on the functions displayed on the page and the actual project situation. Click **Break Down** to add a child requirement. Each requirement can be broken down into a maximum of 10 child requirements at a time. One child requirement is displayed by default and cannot be deleted. Click to expand and configure more information. After the child requirements are created, you can check and edit them on the **R&D Requirements** tab.	

Operation	Procedure	Remarks
	● **Associate Work Item**: associated work items of other types in the project. The operations vary according to the state. Perform operations based on the functions displayed on the page and the actual project situation. Features, tasks, and bugs can be associated. ● **Files**: raw requirement files. Select a file associated with the current requirement. You can upload a local file. ● **Wiki**: raw requirement wikis. Select a wiki associated with the current requirement. You can create a wiki.	
Check review record	You can check the review records related to requirements only in the following situations: ● When you modify the controlled content of an RR, a change process is automatically triggered. Only then will you be able to view the review record in **Review** of the corresponding requirement details page. When you click an RR in the **Confirm**, **Planning**, or **Implementing** state and modify controlled fields with  on the details page, a dialog box is displayed, indicating that the change approval process is required. ● You can view the review records in **Review** of the corresponding requirement details page only when the requirement has general review records.	You must have permission to **view** RRs.

Operation	Procedure	Remarks
Add workload	1. Go to the details page of a work item and click **Workload**. 2. Click **Add Workload**. The **Add Workload** dialog box is displayed. 3. Enter the workload information. - The end date cannot be earlier than the start date. - Decide whether to select **Weekends included**. If not, weekend workload records will not be generated. - You can select **Total** or **Daily** for **Workload**. - **Work Type** options include backend development, frontend development, UI design, replacement leave, debugging, and general. You can also customize the value by referring to **Creating Work Types**. 4. Click **OK**. The system automatically generates corresponding records based on the entered dates and days. The workload can be edited and deleted.	You must have permission to **add person-hours** for RRs. Workloads can be edited and deleted by the creator. By default, the project administrator can edit and delete all workloads.
View operation history	**History** displays all operation logs of users, including creation, status transition, review initiation, work item association, and workload adding. 1. Go to the work item details page. 2. Click the **History** tab. - Click  or  to check historical records in the ascending or descending order of operation time. - You can set search criteria to query historical records that meet the search criteria.	You must have permission to **view** RRs.

Operation	Procedure	Remarks
Tag work item	1. Go to the work item details page. Click + next to **Tag** at the top of the page, and select **Create Tag**. The added tag is displayed in the **Tag** area. 2. In the **Create Tag** dialog box, set **Tag Name** and select **Tag Color**. 3. Click **OK**. The new tag is displayed next to the requirement ID in the RR list. 4. (Optional) Hide a tag. • Click + next to **Tag**. In the displayed dialog box, deselect √ to hide the tag. **Figure 7-37** Hiding a tag - 01  • Move the cursor to the tag name and click to hide the tag. **Figure 7-38** Hiding a tag - 02  **NOTE** If you need to add tags for multiple RRs, you can select the desired RRs in the RR list, click **Batch Edit** in the lower part of the page, and select **Tag**.	You must have permission to **edit** RRs.

Operation	Procedure	Remarks
Add comment	1. Go to the work item details page. 2. On the **Details** tab page, click the **Comments** text box. **Figure 7-39** Adding a comment  3. Enter a comment. You can upload images, enter links, associate work items, and use @ to notify project members in comments. 4. Click **Submit**. Submitted comments can be replied, edited, pinned to the top, and deleted.	You must have permission to **view** RRs.

7.4 Creating and Managing Feature Trees and System Features

7.4.1 Creating a Feature Tree

The system provides multiple methods for creating a feature tree, including inheriting the feature tree from another project, directly creating a feature tree, and importing an Excel file.

You can create a feature tree by inheriting or importing one only when there is no feature tree in the current project.

Prerequisites

- An IPD-standalone software project is available, in which you have permission to **create** feature sets.
- An IPD-standalone software project is available, in which you have permission to **inherit** feature sets.
- An IPD-standalone software project is available, in which you have permission to **import** feature sets.

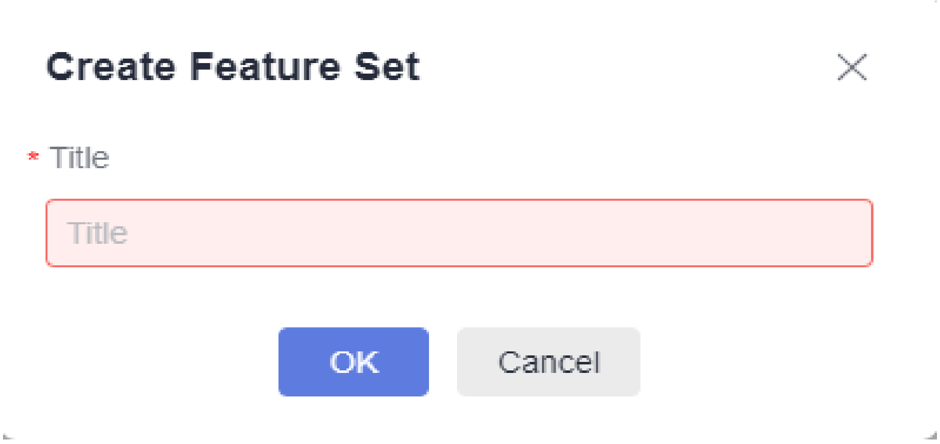
Creating a Feature Set

Step 1 [Access the CodeArts Req homepage](#).

Step 2 On the project homepage, choose **Feature Tree**.

Step 3 Click . The **Create Feature Set** dialog box is displayed.

Figure 7-40 Creating a feature set



Step 4 Set **Title**.

Step 5 Click **OK**.

You can view the new feature set in the feature tree list.

----End

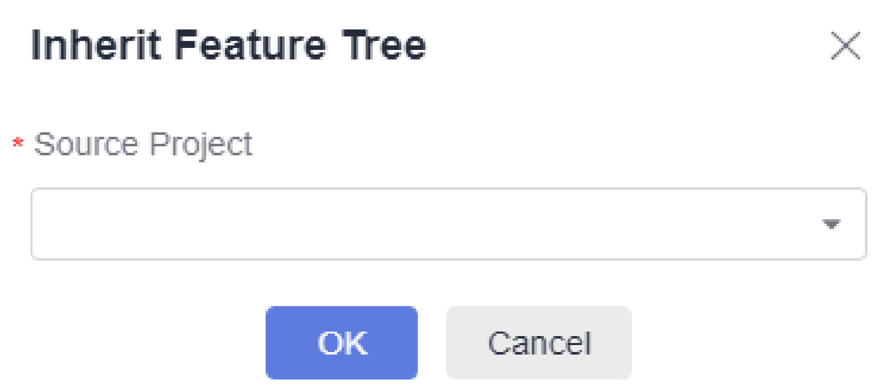
Inheriting a Feature Tree

Step 1 [Access the CodeArts Req homepage](#).

Step 2 On the project homepage, choose **Feature Tree**.

Step 3 Click **Inherit Feature Tree**. The **Inherit Feature Tree** dialog box is displayed.

Figure 7-41 Inheriting a feature tree



Step 4 Select a project for which a feature tree has been configured. The feature tree and all included system features of the selected project can be inherited to the current project.

Step 5 Click **OK**.

In the feature tree list, you can view the feature tree inherited from another project.

----End

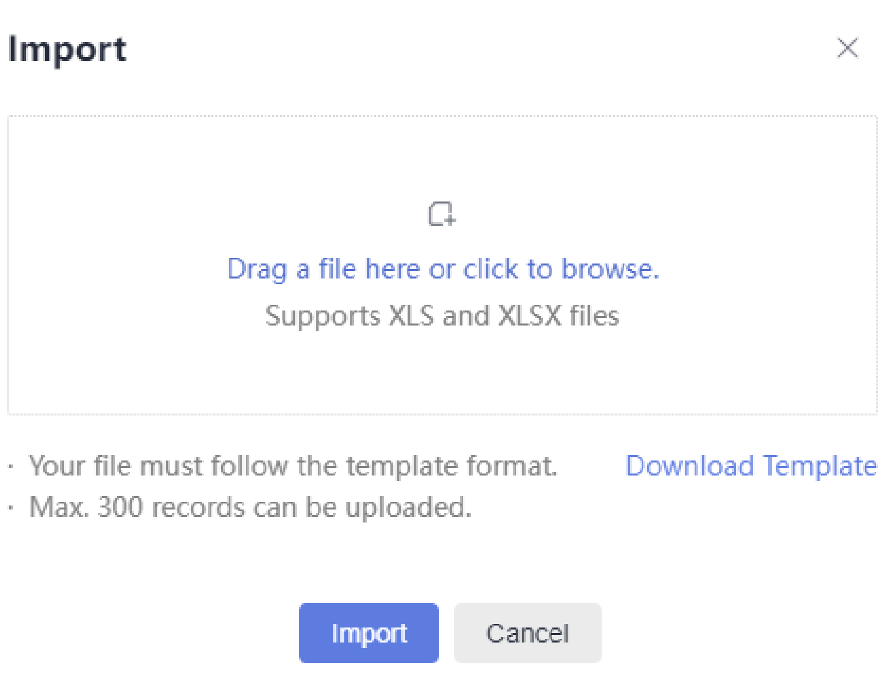
Importing a Feature Tree

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Feature Tree**.

Step 3 Click **Import Feature Tree**. The **Import** dialog box is displayed.

Figure 7-42 Importing a feature tree



Step 4 Click **Download Template**. The import template file is displayed in the upper right corner of the page. Save the file to the local PC and fill in data. The template file should be named in the following format: *Project name* + "-" + *Module name* (for example, **Feature**) + **Template**.

Step 5 Set the fields in the **SF - List** sheet of the template. For details about how to set parameters, see the **SF - Import Rules** sheet in the template.

Step 6 Drag or click to select a file to be imported.

Step 7 Click **Import**.

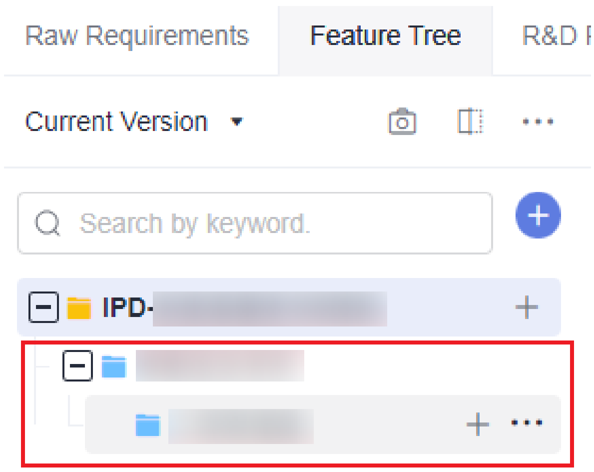
You can view the imported feature sets in the feature tree list.

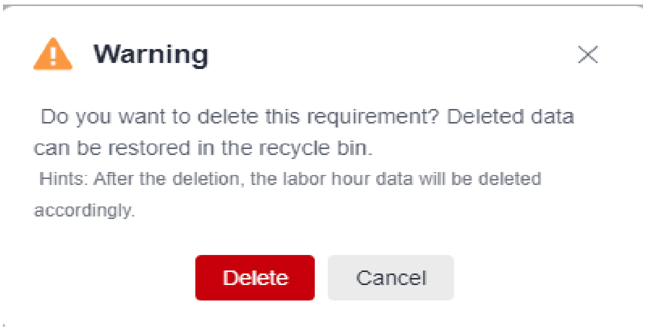
----End

Related Operations

You can perform the following operations on a new feature set.

Table 7-11 Basic operations on a feature set

Operation	Description
Create child feature set	1. Click + next to the target feature set. The **Create Feature Set** dialog box is displayed. 2. Set **Title**. 3. Click **OK**. You can view the new second-level feature set in the corresponding feature set. **Figure 7-43** Child feature sets  You can create third-level feature sets for a second-level one. A maximum of 10 levels of feature sets are supported. The child feature sets can be edited and deleted.
Edit feature set	Click ··· on the right of the target feature set, and click **Edit** to edit the title.

Operation	Description
Delete feature set	1. Click ··· on the right of the target feature set, and click **Delete**. **Figure 7-44** Deleting a feature set  2. Click **Delete**. The deleted feature set and its child feature sets will not be display on the page. **NOTE** Deleted feature sets can be restored or permanently deleted from the recycle bin.

7.4.2 Managing a Feature Tree

After creating a feature tree (see **Creating a Feature Tree**), you can perform the operations described in this section on it.

Prerequisites

You have created a feature set in an IPD-standalone software project, and have feature set permissions for the project.

Procedure

On the project homepage, choose **Work** > **Req** > **Feature Tree**, and perform the following operations.

Figure 7-45 Feature tree list

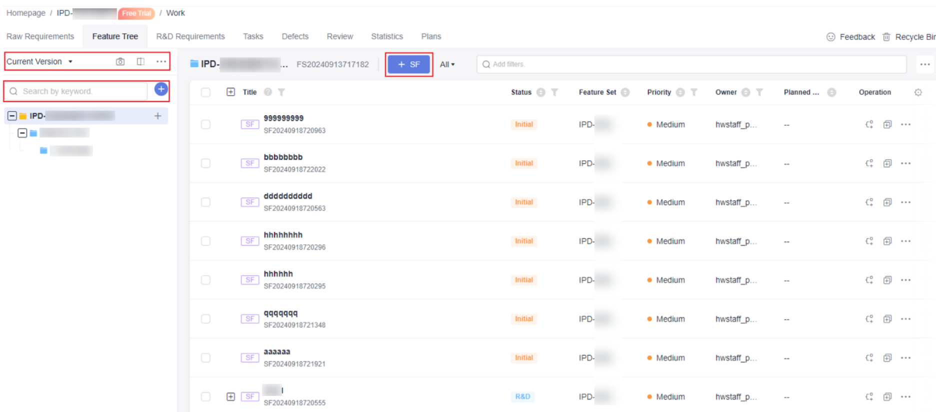
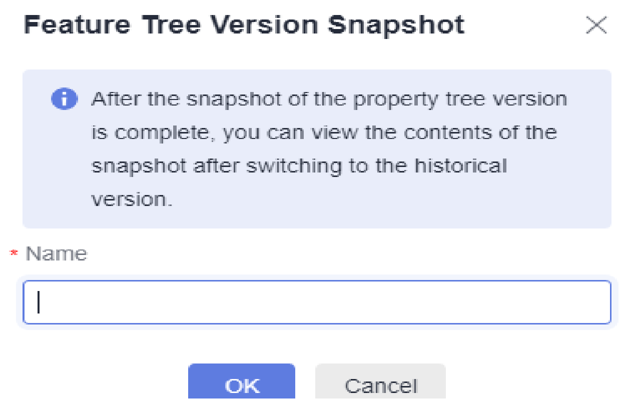


Table 7-12 Managing a feature tree

Operation	Procedure
Search for feature set	1. On the project homepage, choose **Feature Tree**. 2. Enter a keyword in the search box to search for the target feature set.
Associate system feature with feature set	You can create system features or associate existing ones with a feature tree. System features of the same type can be put in the same feature tree for easy management. ● Creating a system feature 1. Click the name of the feature set to associate a system feature. 2. Click **SF**. 3. Enter system feature information. For details, see **Procedure**. 4. Click **OK**. The new system feature is displayed under the corresponding feature set.

Operation	Procedure
Create feature tree baseline snapshot	You can create a baseline based on the current feature tree version. 1. On the project homepage, choose **Feature Tree**. 2. Click . The **Feature Tree Version Snapshot** dialog box is displayed. **Figure 7-46** Creating a feature tree snapshot  3. Enter a snapshot name. 4. Click **OK**. Viewing the snapshot record of the feature tree version: By default, the current version is displayed. Click on the right and select the version to be viewed. The snapshot of the corresponding version is displayed. **Figure 7-47** Viewing feature tree version snapshots 

Operation	Procedure
Compare feature tree version snapshots	You can compare feature tree snapshots of different versions. 1. On the project homepage, choose **Feature Tree**. 2. Click . The snapshot comparison page is displayed. 3. Select the baseline snapshot version to be compared. 4. Click the name of the system feature to be compared. The system feature comparison page is displayed. If a system feature is snapshotted for multiple times based on the feature tree, multiple versions will be generated. You can select and compare different versions. To compare system feature versions, check historical versions on the **Feature Tree** page. 1. On the project homepage, choose **Feature Tree**. 2. Click the names of the system features to be compared. The version comparison page is displayed. ● If a system feature is snapshotted for multiple times on the **Feature Tree** page, multiple versions will be generated. You can select and compare different versions.
Import feature tree	Use the provided template to import a feature tree. 1. On the project homepage, choose **Feature Tree**. 2. Click on the right of **Current Version**, and select **Import Feature Tree**. 3. In the displayed dialog box, click **Download Template**. 4. Set the fields in the template. For details, see the import description in the template file. 5. Select the file to be imported. 6. Click **Import** and complete the import as prompted.
Export feature tree	Export a feature tree with desired fields to an Excel file. 1. On the project homepage, choose **Feature Tree**. 2. Click on the right of **Current Version**, and select **Export Feature Tree**. 3. In the displayed dialog box, select fields to be exported. 4. Click **Export**. After the fields are exported, the file will be automatically downloaded to the local PC. The file format is **.xlsx**.

7.4.3 System Feature Status Transition Process

The entire lifecycle of a system feature consists of the **Initial**, **R&D**, and **Completed** states. **Figure 7-48** shows the complete status transition process.

Figure 7-48 System feature status transition process

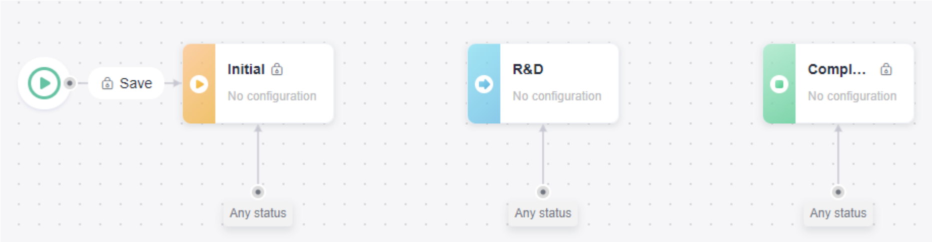


Table 1 describes operations in each state.

Table 7-13 Operation description

Status	Description
Initial	When a system feature is created, the state is **Initial** by default.
R&D	After the system feature in the **Initial** state is handled, the state changes to **R&D**.
Completed	After the system feature is developed, the state changes to **Completed**.

7.4.4 Creating System Features

Major capabilities of offering requirements or services to support a problem (PB) can be managed in system features. When creating a system feature, you can set its background, value, details, and priority.

Prerequisites

An IPD-standalone software project is available, in which you have permission to **create and duplicate** feature sets.

Procedure

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Feature Tree**.

Step 3 Click **SF**. On the **SF** page, set related parameters.

Table 7-14 System feature parameters

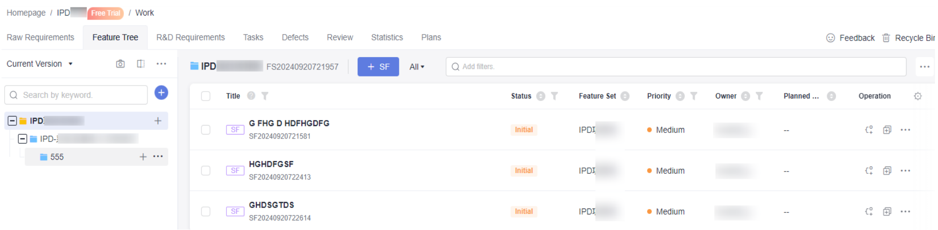
Parameter	Description
Tag	When creating or editing a work item, you can add a customized tag. Tag names can be marked in different colors.

Parameter	Description
Title	Name of a system feature.
Description	Enter the background, value, and details of the feature based on project requirements. The description can include text, images, or links.
Attachment	A maximum of 100 attachments can be added to a system feature, and the total capacity is 50 MB.
Responsible Project	Project that the system feature belongs to. The value cannot be changed.
Owner	Owner of the system feature. Only one owner can be selected. The default owner is the creator.
Feature Set	The feature set to which the system feature belongs is a home structure of the feature tree. This parameter has a value only after the operations in **Creating a Feature Set** are completed. The parameter value can be empty. You can associate the parameter with the corresponding system feature after creating a feature tree.
Priority	Priority of the system feature, including **Low**, **Medium**, and **High**. The default value is **Medium**.
Planned Start	Planned start time.
Planned Completion	Planned completion time. It cannot be earlier than the planned start time.
Planned Workload	Planned workloads.
High Value	Whether the system feature is a key feature. The value can be **Yes** or **No**.
Used For	Scenario with a maximum of 512 characters.
Domain	Domain to which the system feature belongs. The options include software and hardware, hardware, performance, operations, and user experience. Select one based on the system feature.
Copy To	Person to whom the system feature is copied.

Step 4 Click **OK**. The feature tree page is displayed. A message indicating SF created is displayed in the upper right corner.

The new system feature is displayed in the feature tree, and the system feature state is **Initial**.

Figure 7-49 Feature tree



NOTE

After a feature is created, the people selected for **Owner** and **Copy To** will receive email notifications and internal message notifications. If not, set notifications or modify notification settings. For details, see **Configuring Notifications**.

----End

Related Operations

You can perform the following operations on a new system feature.

Table 7-15 Basic system feature operations

Operation	Description
Modify system feature title	Click next to a system feature title to modify it.
Modify system feature field	Click the target field value in the row of a system feature to modify the value.
Create child requirement	Click in the **Operation** column of a system feature to break it down into child requirements. • In the **Break Down Subrequirements** dialog box, click **Add Subrequirement** to create a child requirement. A maximum of 10 child requirements can be created at a time.
Duplicate system feature	Choose > **Duplicate** in the **Operation** column. This process is the same as that of creating a feature.
View system feature association map	Choose > **Association Map** in the **Operation** column of a system feature to view all data of its related items.
Copy system feature link	Choose > **Copy Link** in the **Operation** column of a system feature to copy its title, ID, owner, status, and link to the clipboard.

Operation	Description
Delete system feature	Choose ··· > **Delete** in the **Operation** column of a system feature to delete it. **NOTE** ● System features in change or baseline review cannot be deleted. ● Once deleted, a system feature is moved to the recycle bin. System features in the recycle bin can be restored or permanently deleted. After a system feature is restored from the recycle bin, it restores to the original status.
Batch operations	Select multiple system features and perform the following operations: ● Baseline ● Cancel baseline ● Change ● Baseline review ● Edit ● Suspend ● Cancel suspension ● Export ● Delete

7.4.5 Managing System Features

After creating a system feature (see **Procedure**), you can perform the operations described in this section on it.

Prerequisites

You have created a feature in an IPD-standalone software project, and have feature permissions for the project.

Managing System Features on the System Feature List Page

Go to the project homepage, choose **Work > Req > Feature Tree**, and perform the following operations.

Figure 7-50 System feature list page

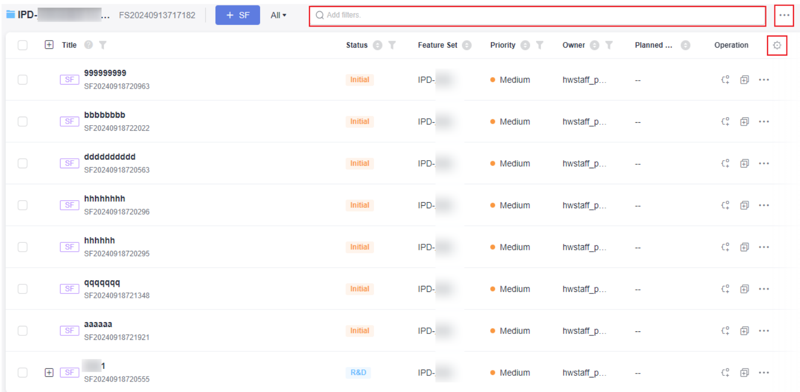


Table 7-16 Management operations in the system feature list

Operation	Procedure	Remarks
Query feature	• By adding filters 1. Click the search box in the feature list and select one or more filters to search for system features. 2. To clear all filters and display all data, click on the right of the search bar. • By using a saved view 1. Click the search box in the system feature list and select one or more filters. 2. Click on the rightmost of the search bar, and enter a view name. 3. Click **OK**. The created view is displayed next to the **SF** button. 4. Select the created view to query the system features that meet the search criteria. Views can be shared with others, modified, and deleted.	You must have permission to **view** features.

Operation	Procedure	Remarks
Import work items	Use the provided template to import system features in batches. 1. In the system feature list, click on the right of the search bar, and select **Import SF**. 2. In the displayed dialog box, click **Download Template**. The import template file is displayed in the lower part of the page. Save the file to the local PC and fill in data. The template file should be named in the following format: *Project name* + "-" + *Module name* (for example, **Feature**) + **Template**. 3. Set the fields in the **SF - List** sheet of the template. For details about how to set parameters, see the **SF - Import Rules** sheet in the template file. 4. Drag or click to select a file to be imported. 5. Click **Import**. The import progress dialog box is displayed. ● After the import is successful, you can view the imported requirement information in the system feature list. ● If the import fails, a message is displayed in the upper right corner of the page. Click **View Failure Details** in the message to view the failure details. You can modify the requirement information based on the details and import the template again. **NOTE** For details about operations on import records, see **Viewing Work Item Import/Export Records**.	You must have permission to **import** features.

Operation	Procedure	Remarks
Export work items	Export system features in batches to an Excel file. 1. Export some or all system features. • Export all: On the **Feature Tree** page, click ··· on the right of the search bar and choose **Export All**. The **Select Fields to Export** dialog box is displayed. • Export some: In the feature list, select one or more system features to be exported and click **Export** at the bottom of the page. The **Select Fields to Export** dialog box is displayed. 2. Select the fields to be exported. 3. Click **Export**. A dialog box is displayed, indicating the export progress. After the system features are exported, the feature file will be automatically downloaded to the local PC. The file format is **.xlsx**. **NOTE** For details about operations on export records, see **Viewing Work Item Import/Export Records**.	You must have permission to **export** features.
Configure fields to display	Click ⚙ next to the **Operation** field. • On the left of the pop-up box, select the fields to be displayed in **Available**. • On the right of the pop-up box, drag the fields in **Selected** to adjust the display sequence.	You must have permission to **view** features.

Managing System Features on Their Details Pages

On the details page of a system feature, you can modify the description, priority, and owner, add tags and attachments, associate work items, check review records, add workloads, and view the operation history.

Figure 7-51 System feature details page

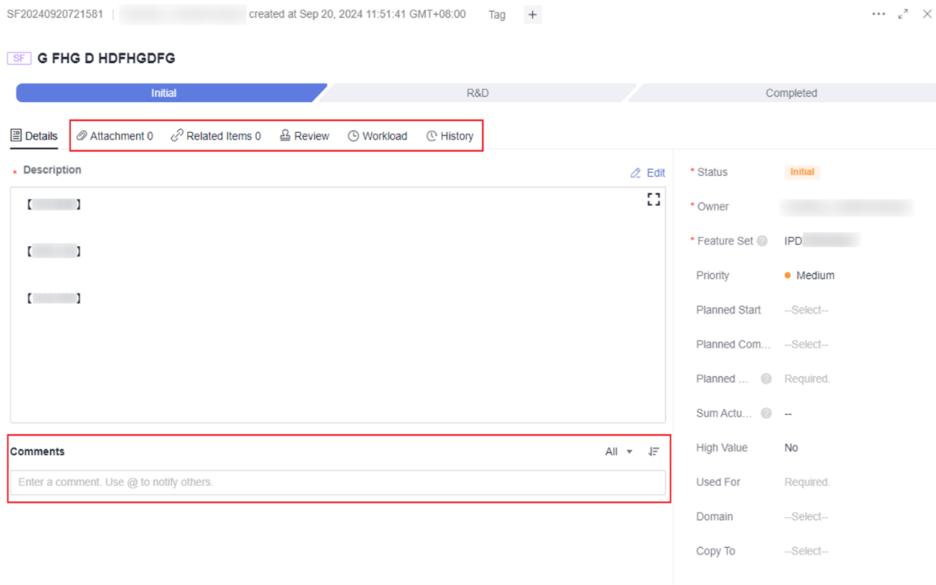
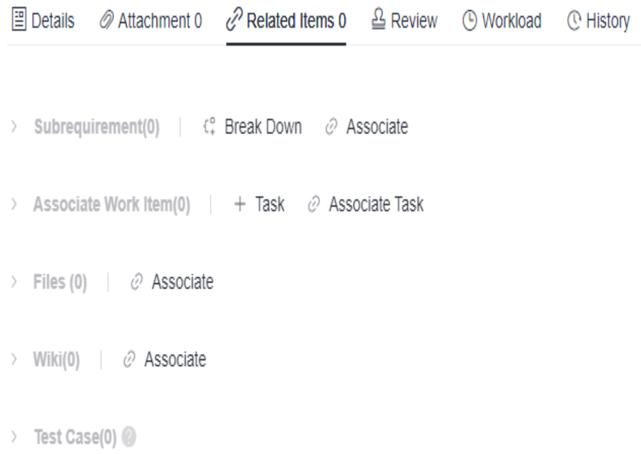


Table 7-17 Management operations on the details page

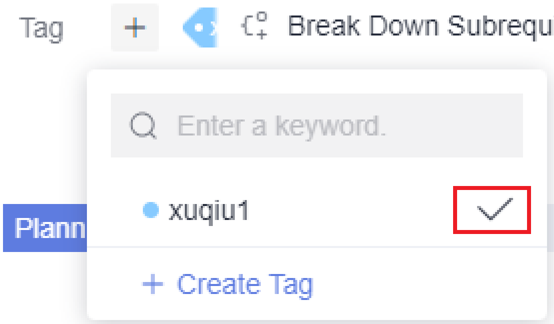
Operation	Procedure	Remarks
Edit work item	On the system feature details page, click the value box of the field to be modified, and enter a target value in the text box or select one from the drop-down list. The modification is saved immediately.	You must have permission to **edit** features.
Change work item status	Go to the work item details page, click the **Status** field, and transition the work item to the target status. For details about status transition, see **Table 7-13**.	You must have permission to **set statuses** for features.
Baseline feature	1. Go to the work item details page, and choose ··· > **Baseline**. The **Baseline** dialog box is displayed. 2. Click **OK**. The baseline icon SF is displayed on the left of the system feature title. **NOTE** The baseline of a system feature can be canceled.	You must have permission to **baseline** features.

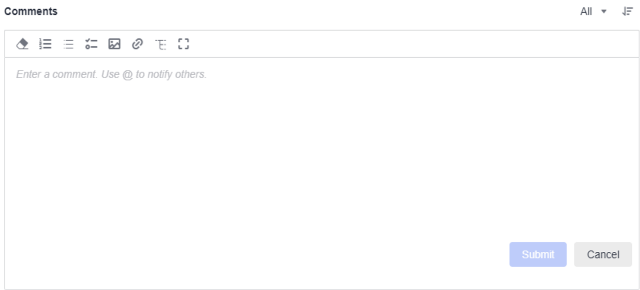
Operation	Procedure	Remarks
Initiate baseline review	1. Go to the work item details page, and choose ··· > **Baseline Review**. The **BR** page is displayed. 2. Enter BR information. By default, the **Baseline Object** is the system feature for which the baseline review is initiated. 3. Click **Submit**. The **Review** page is displayed. Choose **Review** > **Baseline Review** to check the new baseline review. 4. Switch to the **Feature Tree** page. The icon of the system feature that is under baseline review is displayed as SF. **NOTE** Track the review progress of the baseline review. The system feature can be baselined only when the baseline review status changes to **Approved**.	You must have permission to **view** features.
Initiate change review	The change process can be initiated only for baselined and uncompleted FEs. 1. Go to the details page of a baselined work item, and choose ··· > **Change Review**. The **CR** page is displayed. 2. Enter CR information. ● **Change Object**: By default, it is the system feature to be changed. ● **Collaborative Parent Item Change**: Only existing CRs can be added. 3. Click **Submit**. The **Review** page is displayed. Choose **Review** > **Change Review** to check the new CR in the change process. The CR state is **Pending review** by default. **NOTE** Track the review progress of the CR. Only when the state is **Approved**, which means that the CR has been processed, will the changed content display in the corresponding system feature.	You must have permission to **view** features.

Operation	Procedure	Remarks
Upload attachment	Attachments can be pictures, workbooks, manuscripts, and text files. A maximum of 100 attachments can be added to each work item, and their total size cannot exceed 50 MB. 1. Go to the work item details page, and click the **Attachment** tab. 2. Click the box to select a local file or drag the file here to upload it as an attachment for the work item. Local files can be directly dragged to the text box. When the upload progress reaches 100%, the system displays a message indicating that the attachment is uploaded successfully. Move the cursor to the file that is successfully uploaded. The operations that can be performed are displayed. ● Click to download the file. ● Click to delete the uploaded file.	You must have permission to **upload attachments** for features.

Operation	Procedure	Remarks
Add and check related items	A work item can be associated with other types of work items in a project. 1. Go to the work item details page and click the **Related Items** tab.  2. Complete association. • **Subrequirement**: IR of a child requirement in the current FE. Creating a child requirement: Click **Create IR** to add a child requirement. Each requirement can be broken down into a maximum of 10 child requirements at a time. One child requirement is displayed by default and cannot be deleted. Click to expand and configure more information. After the child requirements are created, you can check and edit them on the **R&D Requirements** tab. • **Associate Work Item**: associated work items of other types in the project. Task work items can be associated. • **Files**: files corresponding to the feature. Select a file associated with the current feature. You can upload a local file. • **Wiki**: wikis corresponding to the feature. Select a wiki associated with the feature. You can create a wiki. • **Test Case**: test cases corresponding to the system feature. You can select system features associated with test cases in CodeArts TestPlan.	You must have permission to **create/ associate/ dissociate child features**, **create/ associate/ dissociate child requirements**, **create/ associate/ dissociate work items**, **associate/ dissociate files**, and **associate/ dissociate wikis** for features.

Operation	Procedure	Remarks
Add workload	1. Go to the details page of a work item and click **Workload**. 2. Click **Add Workload**. The **Add Workload** dialog box is displayed. 3. Enter the workload information. ● The end date cannot be earlier than the start date. ● Decide whether to select **Weekends included**. If not, weekend workload records will not be generated. ● You can select **Total** or **Daily** for **Workload**. ● **Work Type** options include backend development, frontend development, UI design, replacement leave, debugging, and general. You can also customize the value by referring to **Creating Work Types**. 4. Click **OK**. The system automatically generates corresponding records based on the entered dates and days. The workload can be edited and deleted.	You must have permission to **add person-hours** for features. Workloads can be edited and deleted by the creator. By default, the project administrator can edit and delete all workloads.
View operation history	**History** displays all operation logs of users, including creation, status transition, review initiation, work item association, and workload adding. 1. Go to the work item details page. 2. Click the **History** tab. ● Click or to check historical records in the ascending or descending order of operation time. ● You can set search criteria to query historical records that meet the search criteria.	You must have permission to **view** features.

Operation	Procedure	Remarks
Tag work item	1. Go to the work item details page. Click + next to **Tag** at the top of the page, and select **Create Tag**. The added tag is displayed in the **Tag** area. 2. In the **Create Tag** dialog box, set **Tag Name** and select **Tag Color**. 3. Click **OK**. The new tag is displayed next to the requirement ID in the feature list. 4. (Optional) Hide a tag. • Click + next to **Tag**. In the displayed dialog box, deselect √ to hide the tag.  • Move the cursor to the tag name and click ☒ to hide the tag.  **NOTE** If you need to add tags for multiple system features, select the desired system features, click **Batch Edit** in the lower part of the page, and select **Tag**.	You must have permission to **edit** features.

Operation	Procedure	Remarks
Add comment	1. Go to the work item details page. 2. On the **Details** tab page, click the **Comments** text box.  3. Enter a comment. You can upload images, enter links, associate work items, and use @ to notify project members in comments. 4. Click **Submit**. Submitted comments can be replied, edited, pinned to the top, and deleted.	You must have permission to **view** features.

7.5 Configuring a Plan

Generally, multiple milestones and release versions are set in project management based on the delivery plan. Each release version can be completed through multiple sprints to deliver project achievements better. R&D requirements, tasks, and bugs of a project can be planned in the release and sprint plans to deliver achievements in an orderly and timely manner, which keeps the project progress under control and manages the allocation of project members.

NOTE

- Type M (M): Milestone.
- Type R (R): Release plan.
- Type S (S): Sprint plan.

Prerequisites

An IPD-standalone software project is available, in which you have permission to **create** plans.

Creating Milestones

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, select **Plans**.

Step 3 Click **Plan** and select **Milestone**. In the **Create Milestone** dialog box, set the required parameters.

Table 7-18 Creating a milestone

Parameter	Description
Name	Name of a milestone. The value can contain a maximum of 30 characters. Names of milestones under the same project must be unique.
Completes	Planned completion time of a milestone, which can be selected based on the actual project situation.
Owner	Current owner of a milestone.

Step 4 Click **OK**.

The new milestone is displayed in the plan management list.

----End

Creating Release and Sprint Plans

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, select **Plans**.

Step 3 Click **Plan**, select **Release Plan**, and set the parameters.

Table 7-19 Creating a release plan

Parameter	Description
Release Name	Name of a release plan. The value can contain a maximum of 30 characters. Names of release plans under the same project must be unique.
Owner	Owner of a release plan.
Start/End Time	Start time and end time of a release plan. The end time cannot be earlier than the planned start time.
Planned Capacity (person-day)	Estimated plan workload within the release plan time range. The value can be accurate to one decimal place.
Description	Enter release information based on actual conditions. A maximum of 1,000 characters can be entered.

Step 4 Click **OK**.

The new release is displayed in the plan management list.

By default, a new release plan is in the **Planned** state. You can manually update the release plan status:

- **Planned**: Click **Start Release** to change the state to **Going**.
- **Going**: Click **Set to not yet started** to change the state to **Planned**, or click **Complete** to change the state to **Ended**.
- **Ended**: Click **Restart** to change the state to **Going**.

NOTE

New sprint plans cannot be added for completed release plans.

Step 5 Click + in the row where the release for which you want to add a sprint is located. The **Create Sprint** window is displayed.

Step 6 Set the sprint plan information.

- The names of sprint plans under the same release should be unique.
- The **Start/End Time** of a sprint plan can be selected only from the **Start/End Time** of the release to which the sprint plan belongs.

Step 7 Click **OK**.

You can view the new sprint plan under the release to which the sprint plan belongs.

By default, a new sprint plan is in the **Planned** state. You can manually update the sprint plan status:

- **Planned**: Click **Start Iteration** to change the state to **Going**.
- **Going**: Click **Reset** to change the state to **Planned**, or click **Complete** to change the state to **Ended**.
- **Ended**: Click **Restart Iteration** to change the state to **Going**.

----End

Related Operations

You can perform the following operations on new milestones, release plans, and sprint plans.

Table 7-20 Operations related to plan management

Operation	Description
Edit release/ sprint plans	Click in the **Operation** column of the release or sprint plan to edit it. **NOTE** Baselined release and sprint plans cannot be edited.

Operation	Description
Baseline release/ sprint plans	Choose ··· > **Baseline** in the **Operation** column of the release or sprint plan. **NOTE** ● After a release plan is baselined, the R&D requirements (IRs) under the release are also baselined. ● After a sprint plan is baselined, the R&D requirements (IPD-system device: SRs and ARs; IPD-standalone software: USs) under the sprint are also baselined.
Cancel baselined release/ sprint plans	Only the baseline of a release or sprint plan can be canceled. Choose ··· > **Unbaseline** in the **Operation** column of a baselined release or sprint plan. **NOTE** ● After the release plan is unbaselined, the R&D requirements (IRs) under the release are also unbaselined. ● After a sprint plan is unbaselined, the R&D requirements (IPD-system device: SRs and ARs; IPD-standalone software: USs) under the sprint are also unbaselined.
View history of release or sprint plans	Choose ··· > **History** in the **Operation** column of a release/ sprint plan. Then view the historical records of the release plan/ sprint plan on the displayed page.
Delete release/ sprint plans	Click **Delete** under ··· in the **Operation** column of the release or sprint plan. In the displayed dialog box, click **OK**. **NOTE** ● Baselined release and sprint plans cannot be deleted. ● Once you delete release and sprint plans, they are permanently deleted and cannot be restored.
Edit milestone	Click in the **Operation** column of a milestone to edit it.
Delete milestone	Click in the **Operation** column of a milestone to delete it. **NOTE** Once you delete milestones, they are permanently deleted and cannot be restored.

Operation	Description
Batch operations	Select the check boxes on the left of the plans to manage the plan data in batches. Baseline: You can baseline multiple release or sprint plans separately. Cancel baseline: You can cancel multiple baselined release or sprint plans separately. Export: You can export selected data in batches. Delete: You can delete selected data in batches. **NOTE** Once you delete plans, they are permanently deleted and cannot be restored.

Arranging Release and Sprint Plans

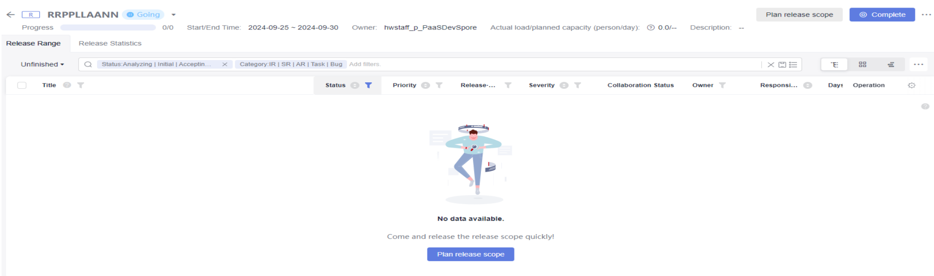
Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, select **Plans**.

Step 3 Click the title of a release or sprint plan to go to the details page.

The plan's basic information, work item scope, and statistics are displayed. You can arrange the plan and change its status.

Figure 7-52 Plan details page



Step 4 Click **Plan release scope**.

> NOTE
>
> The release scope of baselined or completed release plans cannot be changed.

Step 5 Select the work items to be added to the current release plan, and click **OK**.

> NOTE
>
> This procedure uses a release plan as an example. Sprint plans can be configured in the same way.

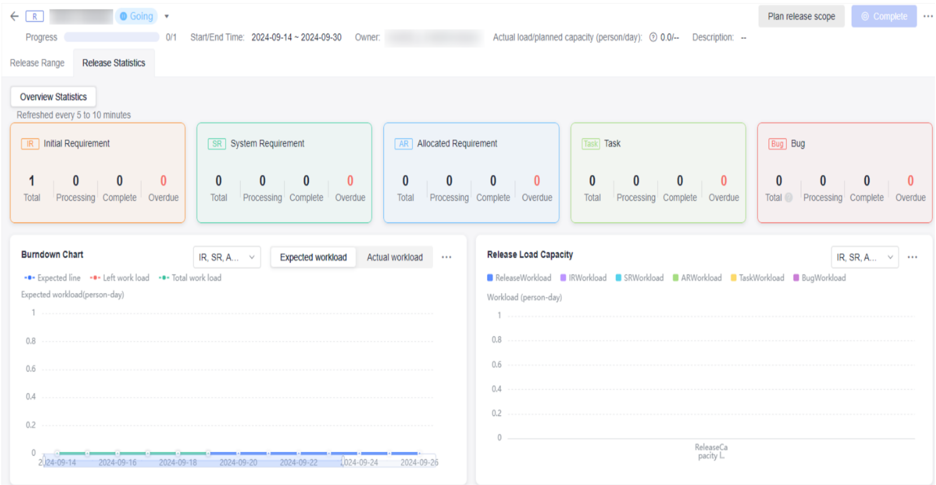
----End

Checking Statistics of Release and Sprint Plans

Step 1 On the project homepage, select **Plans**.

Step 2 Click the title of a release or sprint plan to go to the details page, and click **Statistics**.

Figure 7-53 Plan details page - Statistics



The following types of charts are supported.

Table 7-21 Release charts

Chart Name	Data Description
Work item overview	Counts the total, processing, completed, and overdue work items of each type in the current release.
Burndown chart	Uses a line chart to display the daily trend of changes in the number and planned workloads of all work items in the current release. ● Total workload: The system runs a scheduled task daily to calculate the total workloads (planned workloads and work items) of all work items in the current release. ● Left workload: The system runs a scheduled task daily to calculate the workloads (planned workloads and work items) of all uncompleted work items in the current release. ● Expected line: The line connecting the total workload from the first day to the last day. The total workload of the last day is 0 person-days. This chart helps you identity risks in the release progress.
Release load capacity	Uses a grouped column chart to compare the planned and release workloads of each work item type in the current release. This chart helps you check whether the actual workloads exceed the planned ones.

Chart Name	Data Description
Bug trend	Uses a line chart to display the numbers of daily discovered and resolved bugs as well as the remaining defect index (DI). This chart helps you understand the bug trend in the current release.
Work items by priority	Uses a grouped column chart to display the numbers of different work item types under each member by priority. This chart helps you understand the priorities of work items under each member.
Work item completion	Uses a line chart to display the numbers of completed and total work items of each type in the current release. This chart helps you learn about the release's daily completion status.
Work items by status	Uses a ring chart to display the number and proportion of work items of each type in different statuses under the current release. This chart helps you learn about the release's work items in different statuses.
Work item breakdown	Uses a column chart to display the numbers of broken-down and total work items of each type under the current release. This chart helps you learn about the work item breakdown progress of the current release.
Work item completion rate	Uses a column chart to display the numbers of completed and total work items of each type in the current release. This chart helps you learn about the release's completion status by work item or planned workload.
Work item stay days	Uses a column chart to display the average number of days that work items of each type stay in each status (except for a **Done** status) in the current release. This chart helps you identify the delivery bottlenecks in your team.
Work item statistics for project members (by status)	Uses a grouped column chart to display the numbers of different work item types in different statuses under each member. This chart helps you learn about the work item progress of each member.
Unfinished work items by member	Uses a grouped column chart to display the number of uncompleted work items of each member under the current release. This chart helps you check whether the work item assignment of each member is appropriate.
Requirement TTM	Uses a column chart to display the average time that each requirement type takes to complete since it is created or submitted. This chart helps you understand the delivery rate of each work item type.

NOTE

The description uses a release plan as an example. Sprint plans have the same statistical charts.

----End

7.6 Creating and Managing R&D Requirements

7.6.1 R&D Requirement Status Transition Process

The lifecycle of an R&D requirement consists of the **Initial**, **Analyzing**, **Developing**, **Testing**, and **Completed** states. Figure 7-54 shows the complete status transition process.

Figure 7-54 R&D requirement status transition flowchart

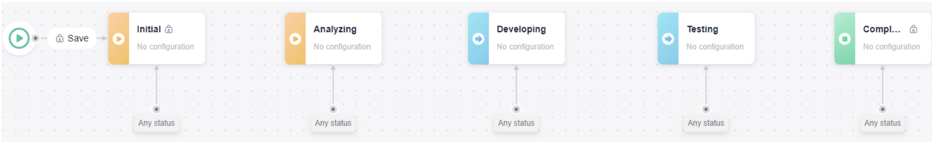


Table 7-22 describes operations in each state.

Table 7-22 Operation description

State	Description
Initial	When an R&D requirement is created, the state is **Initial** by default.
Analyzing	After the R&D requirement in the **Initial** state is handled, the state changes to **Analyzing**.
Developing	After the R&D requirement is analyzed, the state changes to **Developing**.
Testing	After the development personnel complete the R&D requirement development, the state changes to **Testing**.
Completed	After the R&D requirement passes the test, the state changes to **Completed**.

7.6.2 Creating R&D Requirements

R&D requirements are delivered in a project's product iterations (PIs) and sprints. These requirements can be associated with raw requirements and system features.

Prerequisites

An IPD-standalone software project is available, in which you have permission to **create and duplicate** R&D requirements.

Procedure

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **R&D Requirements**.

Step 3 Click **IR**. On the **IR** page, set related parameters.

Table 7-23 Creating an IR

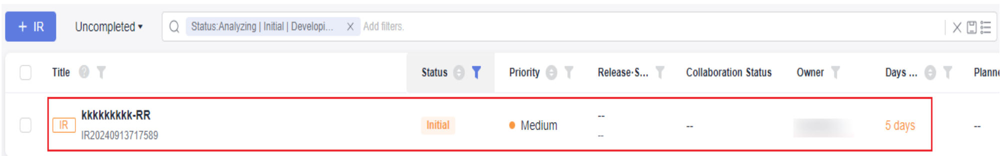
Parameter	Description
Tag	When creating or editing a work item, you can add a customized tag. Tag names can be marked in different colors.
Title	Title of a work item.
Description	Enter the background, value, and details of the R&D requirement based on actual conditions. Use text, images, or links.
Attachment	The maximum number of attachments for an R&D requirement is 100, and the total size of them should be no more than 50 MB.
Responsible Project	Project that the R&D requirement belongs to. The value cannot be changed.
Raised By	Members who propose the requirement. Multiple proposers can be specified.
Owner	Member who is responsible for this requirement. Only one person can be specified.
Priority	Priority of an R&D requirement, including **Low**, **Medium**, and **High**. The default value is **Medium**.
Release	Release plan version of the R&D requirement. This parameter has a value only after the operations in **Creating Release and Sprint Plans** are completed. This parameter can be left empty. You can create a release plan and then associate it with the release plan.
Sprint	Next level of the release plan. This parameter has a value only after the operations in **Creating Release and Sprint Plans** are completed. The parameter value can be empty. You can create a sprint and then associate it with the sprint.
Planned Start	Planned start time of a requirement. The date format is **yyyy-mm-dd**.

Parameter	Description
Planned Completion	Planned completion time of a requirement. The date format is **yyyy-mm-dd**. The planned completion time cannot be earlier than the planned start time.
Planned Workload	Estimated workload from the planned start time to the planned completion time for this requirement.
Domain	Domain. The value includes software, hardware, software and hardware, functions, and performance.
Breakdown Required	Whether it is necessary to break down this requirement into smaller units.
Reason for Non-Breakdown	This parameter is displayed only when **Breakdown Required** is set to **No**. State the true conditions of the project.
Copy To	Project members to whom the task is copied. After the copy is complete, the people selected for **Copy To** will receive a message notification.

Step 4 Click **OK**. The R&D requirement page is displayed, and "IR created." is displayed in the upper right corner.

The new requirement is displayed in the R&D requirement list, and the requirement state is **Initial**.

Figure 7-55 R&D requirement list



NOTE

After an R&D requirement is created, the people selected for **Owner**, **Raised By**, and **Copy To** will receive email notifications and internal message notifications. If not, set notifications or modify notification settings. For details, see **Configuring Notifications**.

----End

Related Operations

You can perform the following operations on a new R&D requirement.

Table 7-24 Basic operations on an R&D requirement

Operation	Description
Modify R&D requirement title	Click next to an R&D requirement title to modify it.
Modify R&D requirement field	Click the target field value in the row of an R&D requirement to modify the value.
Create child requirement	Click in the **Operation** column of an R&D requirement to break it down into child requirements. ● In the **Break Down Subrequirements** dialog box, click **Add Subrequirement** to create a child requirement. A maximum of 10 child requirements can be created at a time.
View R&D requirement association map	Click in the **Operation** column of an R&D requirement to view all data of its related items.
Duplicate R&D requirement	Click in the **Operation** column. This process is the same as that of creating an R&D requirement.
Delete R&D requirement	Click in the **Operation** column. **NOTE** ● R&D requirements in change or baseline review cannot be deleted. ● Once deleted, an R&D requirement is moved to the recycle bin. R&D requirements in the recycle bin can be restored or permanently deleted. After an R&D requirement is restored from the recycle bin, it restores to the original status.
Copy R&D requirement link	Choose ··· > **Copy Link** in the **Operation** column of an R&D requirement to copy its title, ID, owner, status, and link to the clipboard.
Migrate R&D requirement	Choose ··· > **Migrate** in the **Operation** column of an R&D requirement to migrate it to other projects. **NOTE** ● R&D requirements that have been baselined, completed, or are currently under baseline review or change review cannot be migrated. ● Batch migration is based on the selected top-level requirement type. IRs are migrated across projects and non-IRs within a project. ● Requirements are migrated together with their child requirements. ● After an R&D requirement is migrated to another project, the system automatically removes its tags, actual workloads, related items (except for collaborative requirements), and PI, and only keeps the fields of the same type as the existing work items. The associated work items are automatically canceled.

7.6.3 Managing R&D Requirements

After creating an R&D requirement (see **Procedure**), you can perform the operations described in this section on it.

On the R&D Requirements List Page

Go to the project homepage, choose **Work** > **Req** > **R&D Requirements**, and perform the following operations.

Figure 7-56 R&D requirement list

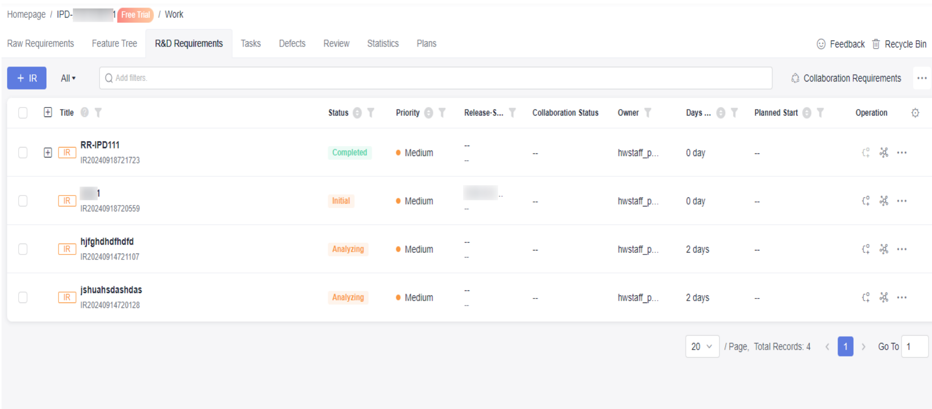


Table 7-25 Management operations in the R&D requirement list

Operation	Procedure
Search for R&D requirement	• By adding filters 1. Click the search box in the R&D requirement list and select one or more filters to search for R&D requirements. 2. To clear all filters and display all data, click on the right of the search bar. • By using a saved view 1. Click the search box in the R&D requirement list and select one or more filters. 2. Click on the rightmost of the search bar, and enter a view name. 3. Click **OK**. The created view is displayed next to **IR**. 4. You can select the name of the created view to query the R&D requirements that meet the search criteria. Views can be shared with others, modified, and deleted.

<table>
<tr><th>Operation</th><th>Procedure</th></tr>
<tr><td>Collaborate on R&D requirement</td><td>
You can deliver R&D requirements to other projects for collaborative management.
NOTE
Completed R&D requirements cannot be collaborated.

In the R&D requirement list, select the requirements to be collaborated.

Select the check boxes of the requirements to be collaborated and click Deliver in the lower part of the page.
You can select one or more requirements.
Go to the details page of the requirement to be assigned, click in the upper right corner, and select Deliver.

Select a downstream project in the displayed dialog box.
If there is no value in the drop-down list box, perform the following operations to add a value:
<ol type="a">
Choose Configure downstream project. The Downstream Projects page is displayed.
Click Add Downstream Project. The Add Downstream Project window is displayed.
Select a desired project.
Click Add.

Click Next. The Deliver dialog box is displayed.
Set the recipient in To and the expected receiving time in Expected Received.
Click OK.
In the R&D requirement list, the Collaboration Status of the collaborative requirement is Assign.
NOTE
Different colors of Assign indicate different meanings.


: If the current requirement has downstream requirements that are pending receival, the color of Assign is orange.


: After all downstream requirements under the current requirement are received, the color of Assign turns green.


: If the current requirement has downstream requirements turned back, the color of Assign is red.

</td></tr>
</table>

<table>
<tr><th>Operation</th><th>Procedure</th></tr>
<tr><td>Receive delivered R&D requirement</td><td>Perform this operation when another project assigns an R&D requirement to your project.

In the R&D requirement list, click Collaboration Requirements on the right of the search bar. The Collaboration Requirements page is displayed.
Click Received. The requirements to be received are displayed.
Click next to the requirement to be received. The Receive Collaboration Requirement dialog box is displayed.

Click and enter the rejection reason to reject the requirement.
Click to transfer the requirement to another person.
Click Export All to export the requirement data to an Excel file.

Select Mode and Requirement Type according to the actual situation of the project, and modify Requirement Title.
When Mode is set to Associate, you only need to select Associated Requirement. The value of Associated Requirement comes from all R&D requirements created in the project.
Click OK.
The state of the received requirement changes to Received.
NOTE

Click to deliver the requirement to other projects.
Click to reject the received requirement. After the requirement is rejected, the requirement state changes to Receiving.

Click in the upper right corner of the page to close the Collaboration Requirements page.

When Mode is set to Copy, the received requirement information is displayed in the R&D requirement list, and the copied requirement information can be viewed in Related Items > Related Upstream Requirements of the requirement details.
When Mode is set to Associate, the Collaboration Status of the associated requirement is Received. You can view the received requirement information in Related Items > Related Upstream Requirements of the requirement details.

</td></tr>
</table>

Operation	Procedure
Import work items	Use the provided template to import requirements in batches. 1. In the R&D requirement list, click ··· on the right of the search bar and select **Import**. 2. In the displayed dialog box, click **Download Template**. The import template file is displayed in the lower part of the page. Save the file to the local PC and fill in data. The template file should be named in the following format: *Project name* + "-" + *Module name* (for example, **R&D Requirement**) + **Template**. 3. Fill in the fields on the **IR - Requirements** sheet. For details about how to set parameters, see the **RR - Import Rules** sheet in the template file. 4. Drag or click to select a file to be imported. 5. Click **Import**. The import progress dialog box is displayed. - After the import is successful, you can view the imported requirement information in the R&D requirement list. - If the import fails, a message is displayed in the upper right corner of the page. Click **View Failure Details** in the message to view the failure details. You can modify the requirement information based on the details and import the template again. **NOTE** For details about operations on import records, see **Viewing Work Item Import/Export Records**.
Export work items	Export requirements in batches to an Excel file. 1. Export some or all R&D requirements. - Export all: On the **R&D Requirements** page, click ··· on the right of the search bar and choose **Export**. The **Select Fields to Export** dialog box is displayed. - Export some: In the R&D requirement list, select one or more R&D requirements to be exported and click **Export** at the bottom of the page. The **Select Fields to Export** dialog box is displayed. 2. Select the fields to be exported and determine whether to export child requirements. 3. Click **Export**. A dialog box is displayed, indicating the export progress. After the R&D requirements are exported, the R&D requirement file will be automatically downloaded to the local PC. The file format is **.xlsx**. **NOTE** For details about operations on export records, see **Viewing Work Item Import/Export Records**.

Operation	Procedure
Configure fields to display	Click next to the **Operation** field. ● On the left of the pop-up box, select the fields to be displayed in **Available**. ● On the right of the pop-up box, drag the fields in **Selected** to adjust the display sequence.

On the R&D Requirement Details Page

On the details page of an R&D requirement, you can modify the description, priority, and owner, add tags and attachments, associate work items, check review records, add workloads, and view the operation history.

Figure 7-57 R&D requirement details page

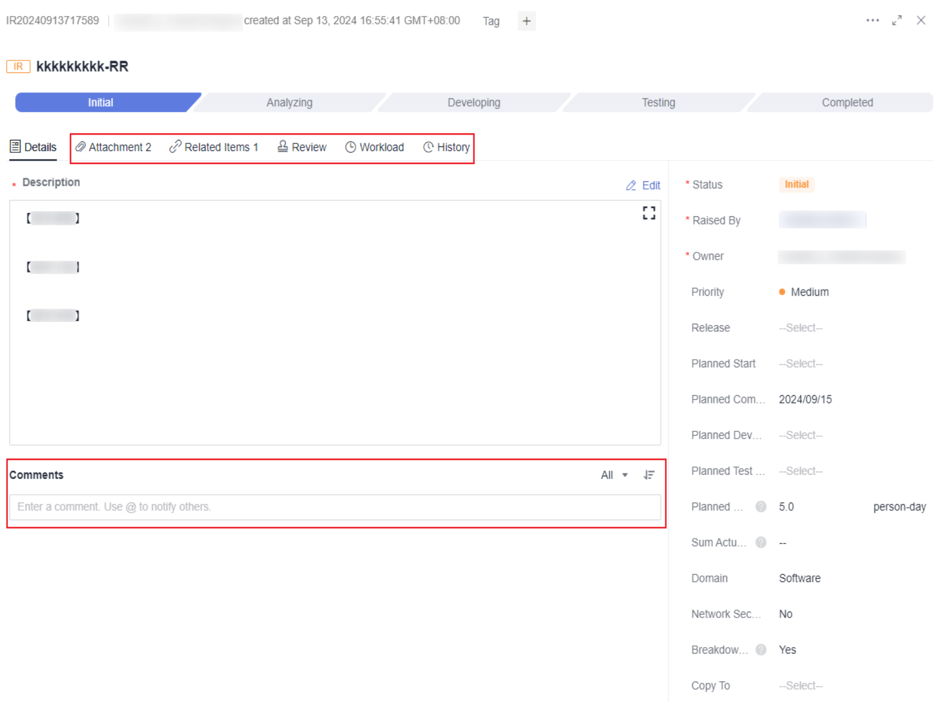
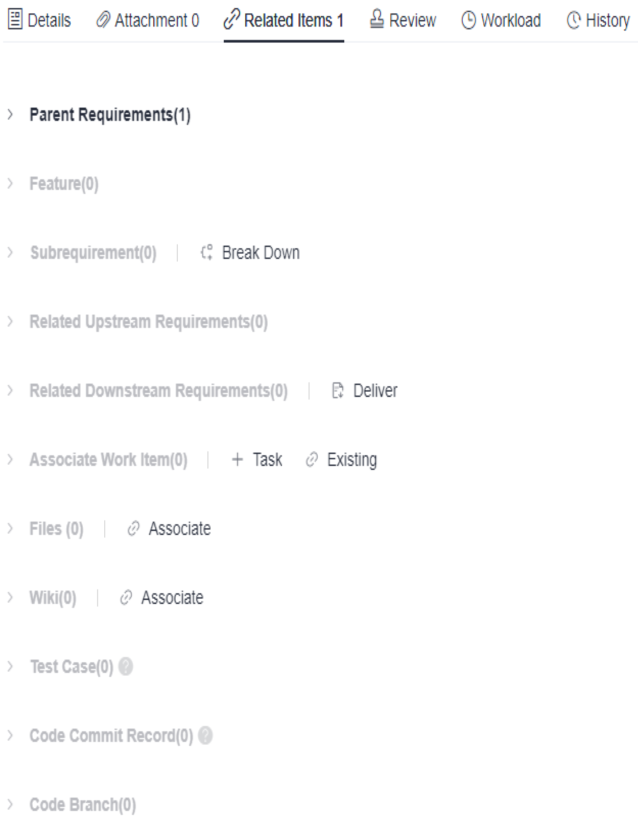


Table 7-26 Management operations on the details page

Operation	Procedure	Remarks
Edit work item	On the R&D requirement details page, click the value box of the field to be modified, and enter a target value in the text box or select one from the drop-down list. The modification is saved immediately.	You must have permission to **edit** R&D requirements.
Change work item status	Go to the work item details page, click the **Status** field, and transition the work item to the target status. For details about status transition, see **Table 7-22**.	You must have permission to **set statuses** for R&D requirements.
Baseline R&D requirement	1. Go to the work item details page, and choose > **Baseline**. The **Baseline** dialog box is displayed. 2. Click **OK**. The baseline icon is displayed on the left of the R&D requirement title. **NOTE** Baselined R&D requirements can be canceled.	You must have permission to **baseline** R&D requirements.
Initiate baseline review	1. Go to the work item details page, and choose > **Baseline Review**. The **BR** page is displayed. 2. Enter BR information. By default, the **Baseline Object** is the R&D requirement for which the baseline review is initiated. 3. Click **Submit**. The **Review** page is displayed. Choose **Review** > **Baseline Review** to check the new baseline review. 4. Switch to the **Features** page. The icon of the R&D requirement that is under baseline review is displayed as . **NOTE** Track the review progress of the baseline review. The R&D requirement can be baselined only when the baseline review status changes to **Approved**.	You must have permission to **view** R&D requirements.

Operation	Procedure	Remarks
Initiate change review	The change process can be initiated only for baselined and uncompleted R&D requirements. 1. Go to the details page of a baselined work item, and choose ··· > **Change Review**. The **CR** page is displayed. 2. Enter CR information. ● **Change Object**: By default, it is the R&D requirement to be changed. ● **Collaborative Parent Item Change**: Only existing CRs can be added. 3. Click **Submit**. The **Review** page is displayed. Choose **Review** > **Change Review** to check the new CR in the change process. The CR state is **Pending review** by default. **NOTE** Track the review progress of the CR. Only when the state is **Approved**, which means that the CR has been processed, will the changed content display in the corresponding R&D requirement.	You must have permission to **view** R&D requirements.
Upload attachment	Attachments can be pictures, workbooks, manuscripts, and text files. A maximum of 100 attachments can be added to each work item, and their total size cannot exceed 50 MB. 1. Go to the work item details page, and click the **Attachment** tab. 2. Click the box to select a local file or drag the file here to upload it as an attachment for the work item. Local files can be directly dragged to the text box. When the upload progress reaches 100%, the system displays a message indicating that the attachment is uploaded successfully. Move the cursor to the file that is successfully uploaded. The operations that can be performed are displayed. ● Click the download icon to download the file. ● Click the delete icon to delete the uploaded file.	You must have permission to **upload attachments** for R&D requirements.

Operation	Procedure	Remarks
Add and check related items	A work item can be associated with other types of work items in a project. 1. Go to the work item details page and click the **Related Items** tab. **Figure 7-58** Related items  2. Complete association. ● **Parent Requirements**: parent requirements to which an R&D requirement belongs. The information about an RR is displayed in the **Parent Requirements** area only when the IR is associated with the RR. ● **Feature**: features to which an R&D requirement belongs. Only when an IR is associated with a feature will the information about the feature be displayed in the **Feature** area. ● **Subrequirement**: SRs of a child requirement in the current R&D requirement. Each requirement can be broken down into a maximum of 10 child requirements at a time.	You must have permission to **deliver/cancel assignment**, **create/delete child requirements**, **associate/dissociate work items**, **associate/dissociate files**, and **associate/dissociate wikis** for R&D requirements.

<table>
<tr><th>Operation</th><th>Procedure</th><th>Remarks</th></tr>
<tr><td></td><td>One child requirement is displayed by default and cannot be deleted.
1. Click Break Down. The Break Down Subrequirements window is displayed.
2. Configure the child requirement. Click to expand and configure more information.
3. Click OK. The child requirement is automatically displayed under the parent feature in the R&D requirement list.
● Related Upstream Requirements: requirements assigned by other projects to your project.
● Related Downstream Requirements: requirements assigned to downstream projects.
1. Click Deliver. The Deliver window is displayed.
2. In the dialog box that is displayed, set Select Downstream Project, To, and Expected Received.
NOTE
If there is no value in the drop-down list box, perform the following operations to add a value:
1. Choose Configure downstream project. The R&D Downstream Projects page is displayed.
2. Click Add Downstream Project.
3. Select a desired project.
4. Click Add.
3. Click OK.
In the R&D requirement list, the Collaboration Status of the collaborative requirement is Assign.
● Associate Work Item: associated work items of other types in the project.
Task work items can be associated.
● Files: files corresponding to the R&D requirement.
Select a file associated with the current requirement. You can upload a local file.
● Wiki: wikis corresponding to the R&D requirement.
Select a wiki associated with the current requirement. You can create a wiki.
● Test Case: test cases corresponding to the R&D requirement. You can select R&D requirements associated with test cases in CodeArts TestPlan.</td><td></td></tr>
</table>

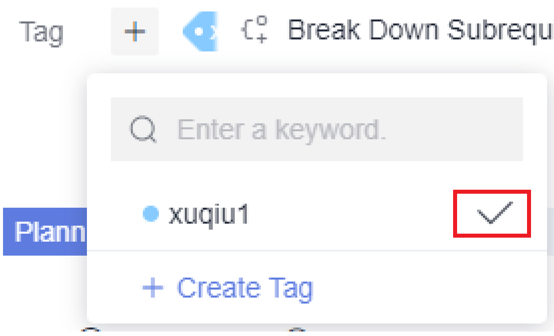
Operation	Procedure	Remarks
	• **Code Commit Record**: indicates the code commit records corresponding to the R&D requirement. Related information is displayed only when the current requirement is associated during code commit. • **Code Branch**: code branches corresponding to the R&D requirement. Related information is displayed only when a code branch is associated with the current requirement.	
Check review record	You can check the review records related to requirements only in the following situations: • When an R&D requirement is added to a baseline review, the baseline review process is triggered. Then you can check the review record on the **Review** tab of the feature details page. • When a locked field of a baselined R&D requirement is modified, the change process is automatically triggered. Then you can check the review record on the **Review** tab of the feature details page. • When an R&D requirement has a general review record, you can check the record on the **Review** tab of the feature details page.	You must have permission to **view** R&D requirements.

Operation	Procedure	Remarks
Add workload	1. Go to the details page of a work item and click **Workload**. 2. Click **Add Workload**. The **Add Workload** dialog box is displayed. 3. Enter the workload information. • The end date cannot be earlier than the start date. • Decide whether to select **Weekends included**. If not, weekend workload records will not be generated. • You can select **Total** or **Daily** for **Workload**. • **Work Type** options include backend development, frontend development, UI design, replacement leave, debugging, and general. You can also customize the value by referring to **Creating Work Types**. 4. Click **OK**. The system automatically generates corresponding records based on the entered dates and days. The workload can be edited and deleted.	You must have permission to **add person-hours** for R&D requirements. Workloads can be edited and deleted by the creator. By default, the project administrator can edit and delete all workloads.
View operation history	**History** displays all operation logs of users, including creation, status transition, review initiation, work item association, and workload adding. 1. Go to the work item details page. 2. Click the **History** tab. • Click or to check historical records in the ascending or descending order of operation time. • You can set search criteria to query historical records that meet the search criteria.	You must have permission to **view** R&D requirements.

<table>
<tr><th>Operation</th><th>Procedure</th><th>Remarks</th></tr>
<tr><td>Tag work item</td><td>

1. Go to the work item details page. Click + next to **Tag** at the top of the page, and select **Create Tag**.
   The added tag is displayed in the **Tag** area.
2. In the **Create Tag** dialog box, set **Tag Name** and select **Tag Color**.
3. Click **OK**.
   The new tag is displayed next to the requirement ID in the RR list.
4. (Optional) Hide a tag.
   - Click + next to **Tag**. In the displayed dialog box, deselect √ to hide the tag.

     Figure 7-59 Hiding a tag - 01

   - Move the cursor to the tag name and click to hide the tag.

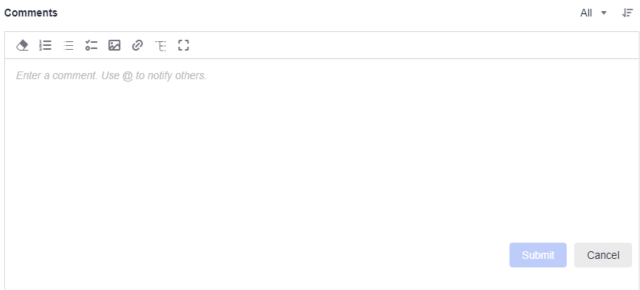
     Figure 7-60 Hiding a tag - 02

NOTE

If you need to add tags for multiple work items, you can select the desired work item, click **Batch Edit** in the lower part of the page, and select **Tag**.

</td><td>You must have permission to edit R&D requirements.</td></tr>
</table>

Operation	Procedure	Remarks
Add comment	1. Go to the work item details page. 2. On the **Details** tab page, click the **Comments** text box. **Figure 7-61** Add comment  3. Enter a comment. You can upload images, enter links, associate work items, and use @ to notify project members in comments. 4. Click **Submit**. Submitted comments can be replied, edited, pinned to the top, and deleted.	You must have permission to **view** R&D requirements.

7.7 Creating and Managing Tasks

7.7.1 Task Status Transition Process

The entire lifecycle of a task consists of the **Initial**, **Processing**, and **Completed** states. **Figure 7-62** shows the complete status transition process.

Figure 7-62 Task status transition flowchart

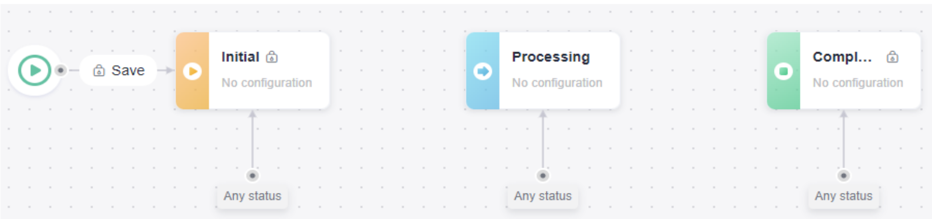


Table 7-27 describes operations in each state.

Table 7-27 Operation description

Status	Description
Initial	When a task is created, the state is **Initial** by default.
Processing	After the task in the **Initial** state is processed, the state changes to **Processing**.
Completed	After the task is processed, the state changes to **Completed**.

7.7.2 Creating Tasks

Tasks are activities with a certain goal. They can be associated with raw requirements, features, and R&D requirements.

Prerequisites

An IPD-standalone software project is available, in which you have permission to **create and duplicate** tasks.

Creating Tasks

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Tasks**.

Step 3 Click **Create Task**. The **Task** page is displayed.

Step 4 Fill in the basic task information.

Table 7-28 Creating a task

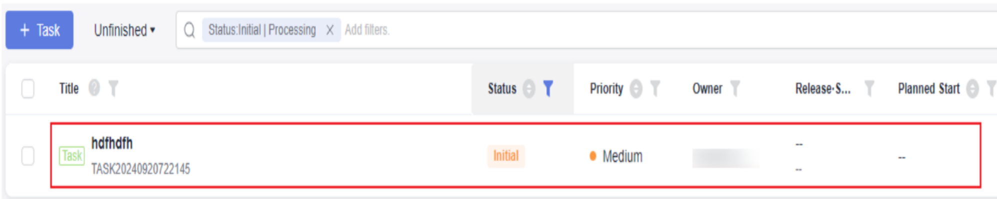
Parameter	Description
Tag	When creating or editing a work item, you can add a customized tag. Tag names can be marked in different colors.
Title	Title of a work item.
Description	Enter the background, value, and details of the task based on project requirements. Use text, images, or links.
Attachment	A maximum of 100 attachments can be added to a task, and the total capacity is 50 MB.
Responsible Project	Project that the task belongs to. The value cannot be changed.
Owner	Member who is responsible for this task. Only one person can be specified.

Parameter	Description
Module	Module to which a task belongs.
Priority	Priority of a task, including **Low**, **Medium**, and **High**. The default value is **Medium**.
Release	Release to which a task belongs. The parameter value can be empty. You can create a PI and then associate it with the PI.
Sprint	The next level of PI. The parameter value can be empty. You can create a sprint and then associate it with the sprint.
Planned Start	Planned start time of a task. The date format is **yyyy-mm-dd**.
Planned Completion	Planned completion time of a task. The date format is **yyyy-mm-dd**. The planned completion time cannot be earlier than the planned start time.
Planned Workload	Estimated workload from the planned start time to the planned completion time for this task.
Copy To	Project members to whom the task is copied. After the copy is complete, the people selected for **Copy To** will receive a message notification.

Step 5 Click **OK**. The task page is displayed, and a message is displayed in the upper right corner, indicating that the task is created successfully.

The new task is displayed in the task list, and the task state is **Initial**.

Figure 7-63 Task list



NOTE

After a task is created, the people selected for **Owner** and **Copy To** will receive email notifications and internal message notifications. If not, set notifications or modify notification settings. For details, see **Configuring Notifications**.

----End

Related Operations

You can perform the following operations on a new task.

Table 7-29 Basic operations on a task

Operation	Description
Modify task title	Click next to a task title to modify it.
Modify task field	Click the target field value in the row of a task to modify the value.
Create child task	Click in the **Operation** column of a task to break it down into child tasks. ● In the **Break Down Child Tasks** dialog box, click **Add child tasks** to create a child task. A maximum of 10 child tasks can be created at a time.
View task association map	Choose ··· > **Association Map** in the **Operation** column of a task to view all data of its related items.
Clone task	Click in the **Operation** column. This process is the same as that of creating a task.
Delete task	Choose ··· > **Delete** in the **Operation** column of a task to delete it. **NOTE** Once deleted, a task is moved to the recycle bin. Tasks in the recycle bin can be restored or permanently deleted. After a task is restored from the recycle bin, it restores to the original status.

7.7.3 Managing Tasks

After creating a task (see **Creating Tasks**), you can perform the operations described in this section on it.

On the Task List Page

On the project homepage, choose **Work > Req > Tasks**, and perform the following operations.

Figure 7-64 Task list

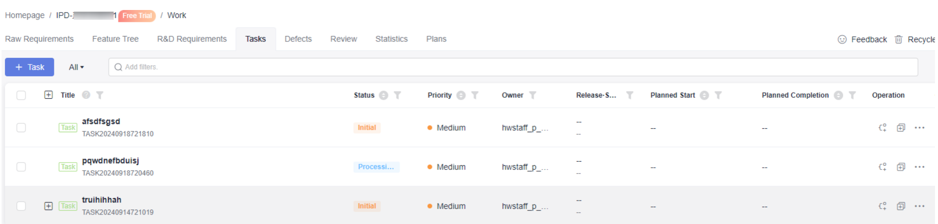


Table 7-30 Operations in the task list

Operation	Procedure
Search for task	● By adding filters 1. Click the search box in the task list and select one or more filters to search for tasks. 2. To clear all filters and display all data, click on the right of the search bar. ● By using a saved view 1. Click the search box in the R&D requirement list and select one or more filters. 2. Click on the rightmost of the search bar, and enter a view name. 3. Click **OK**. The created view is displayed next to the **Task** button. 4. Select the created view to query the tasks that meet the search criteria. Views can be shared with others, modified, and deleted.
Import work items	Use the provided template to import tasks in batches. 1. In the task list, click on the right of the search bar and select **Import**. 2. In the displayed dialog box, click **Download Template**. The import template file is displayed in the lower part of the page. Save the file to the local PC and fill in data. The template file should be named in the following format: *Project name* + "-" + *Module name* (for example, **Task**) + **Template**. 3. Fill in the fields on the **Task - List** sheet. For details about how to set parameters, see the **Task - Import Rules** sheet in the template file. 4. Drag or click to select a file to be imported. 5. Click **Import**. The import progress dialog box is displayed. ● After the import is successful, you can view the imported task information in the task list. ● If the import fails, a message is displayed in the upper right corner of the page. Click **View Failure Details** in the message to view the failure details. You can modify the requirement information based on the details and import the template again. **NOTE** For details about operations on import records, see **Viewing Work Item Import/Export Records**.

Operation	Procedure
Export work items	Export requirements in batches to an Excel file. 1. Export some or all tasks. • Export all: On the **Tasks** page, click ··· on the right of the search bar and choose **Export**. The **Select Fields to Export** dialog box is displayed. • Export some: In the task list, select one or more tasks to be exported and click **Export** at the bottom of the page. The **Select Fields to Export** dialog box is displayed. 2. Select the fields to be exported and determine whether to export child tasks. 3. Click **Export**. A dialog box is displayed, indicating the export progress. After the tasks are exported, the task file will be automatically downloaded to the local PC. The file format is **.xlsx**. **NOTE** For details about operations on export records, see **Viewing Work Item Import/Export Records**.
Configure fields to display	Click ⚙ next to the **Operation** field. • On the left of the pop-up box, select the fields to be displayed in **Available**. • On the right of the pop-up box, drag the fields in **Selected** to adjust the display sequence.

On the Task Details Page

On the details page of a task, you can modify the description, priority, and owner, add tags and attachments, associate work items, check review records, add workloads, and view the operation history.

Figure 7-65 Task details page

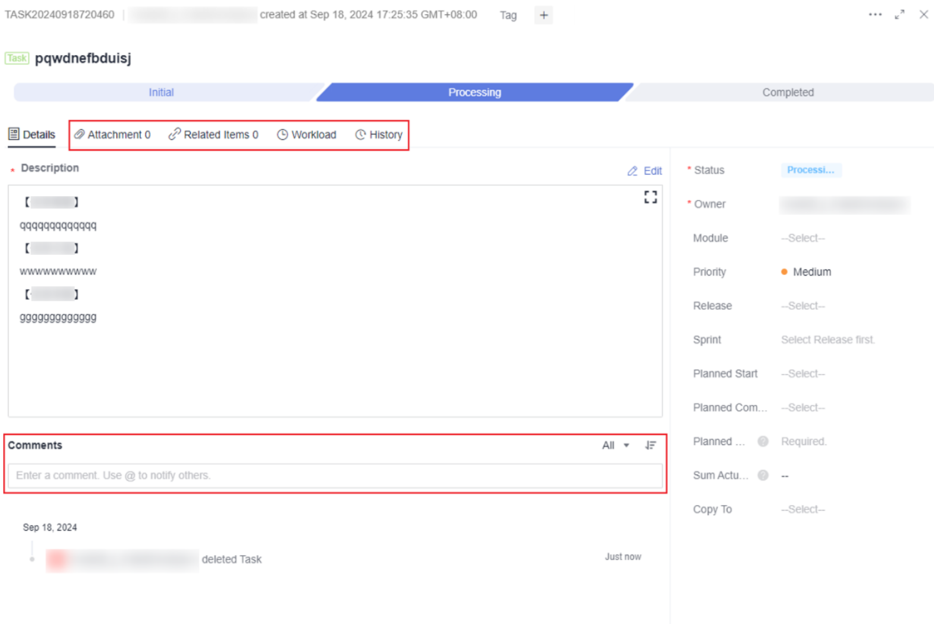


Table 7-31 Management operations on the details page

Operation	Procedure	Remarks
Edit work item	On the task details page, click the value box of the field to be modified, and enter a target value in the text box or select one from the drop-down list. The modification is saved immediately.	You must have permission to **edit** tasks.
Change work item status	Go to the work item details page, click the **Status** field, and transition the work item to the target status. For details about status transition, see **Table 7-27**.	You must have permission to **set statuses** for tasks.

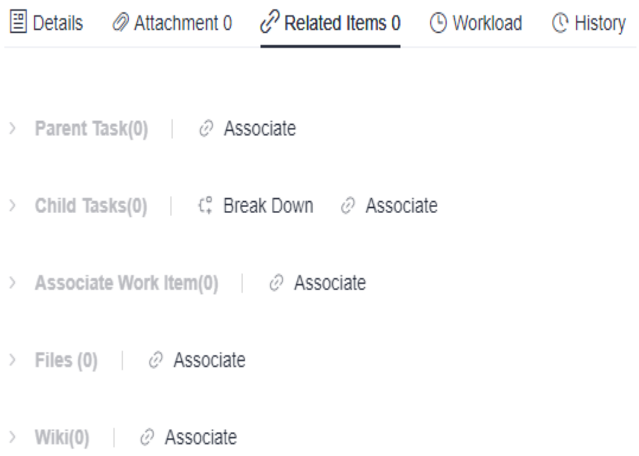
Operation	Procedure	Remarks
Upload attachment	Attachments can be pictures, workbooks, manuscripts, and text files. A maximum of 100 attachments can be added to each work item, and their total size cannot exceed 50 MB. 1. Go to the work item details page, and click the **Attachment** tab. 2. Click the box to select a local file or drag the file here to upload it as an attachment for the work item. Local files can be directly dragged to the text box. When the upload progress reaches 100%, the system displays a message indicating that the attachment is uploaded successfully. Move the cursor to the file that is successfully uploaded. The operations that can be performed are displayed. ● Click  to download the file. ● Click  to delete the uploaded file.	You must have permission to **upload attachments** for tasks.

<table>
<tr><th>Operation</th><th>Procedure</th><th>Remarks</th></tr>
<tr>
<td>Add and check related items</td>
<td>

A work item can be associated with other types of work items in a project.

1. Go to the work item details page and click the **Related Items** tab.

Figure 7-66 Related items



2. Complete association.
   - **Parent Task**: parent task to which a task belongs.
You can choose **Associated Items > Parent Task** of a child task to view the task only when the task contains child tasks.
   - **Child Task**: tasks included in the current task. Each task can be broken down into a maximum of 10 child tasks at a time. One child task is displayed by default and cannot be deleted.

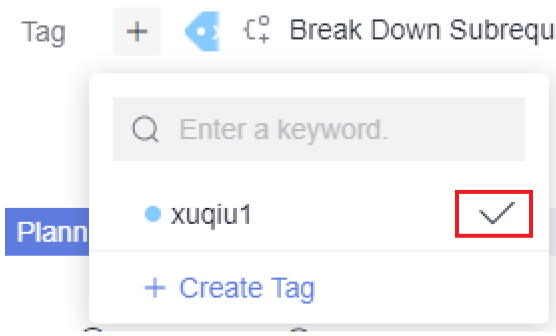
     1. Click **Break Down**. The **Break Down Child Tasks** window is displayed.

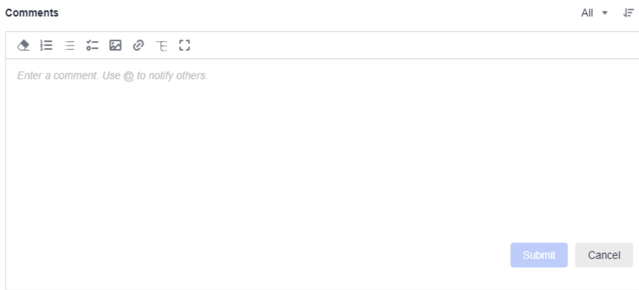
     2. Configure the information about the child task. Click to expand and configure more information.

     3. Click **OK**. The child task is created successfully. The child task is automatically displayed under the parent task in the task list.
   - **Associate Work Item**: associated work items of other types in the project.
Work items of the RR, FE, IR, SR, AR, and bug types can be associated.
   - **Files**: files corresponding to the task.
Select a file associated with the current task. You can upload a local file.

</td>
<td>You must have permission to associate/dissociate parent task, create/delete child requirements, associate/dissociate work items, associate/dissociate files, and associate/dissociate wikis for tasks.</td>
</tr>
</table>

Operation	Procedure	Remarks
	- **Wiki**: wikis corresponding to the task. Select a wiki associated with the current task. You can create a wiki.	
Add workload	1. Go to the details page of a work item and click **Workload**. 2. Click **Add Workload**. The **Add Workload** dialog box is displayed. 3. Enter the workload information. - The end date cannot be earlier than the start date. - Decide whether to select **Weekends included**. If not, weekend workload records will not be generated. - You can select **Total** or **Daily** for **Workload**. - **Work Type** options include backend development, frontend development, UI design, replacement leave, debugging, and general. You can also customize the value by referring to **Creating Work Types**. 4. Click **OK**. The system automatically generates corresponding records based on the entered dates and days. The workload can be edited and deleted.	You must have permission to **add person-hours** for tasks. Workloads can be edited and deleted by the creator. By default, the project administrator can edit and delete all workloads.
View operation history	**History** displays all operation logs of users, including creation, status transition, review initiation, work item association, and workload adding. 1. Go to the work item details page. 2. Click the **History** tab. - Click or to check historical records in the ascending or descending order of operation time. - You can set search criteria to query historical records that meet the search criteria.	You must have permission to **view** tasks.

Operation	Procedure	Remarks
Tag work item	1. Go to the work item details page. Click + next to **Tag** at the top of the page, and select **Create Tag**. The added tag is displayed in the **Tag** area. 2. In the **Create Tag** dialog box, set **Tag Name** and select **Tag Color**. 3. Click **OK**. The new tag is displayed next to the requirement ID in the RR list. 4. (Optional) Hide a tag. • Click + next to **Tag**. In the displayed dialog box, deselect √ to hide the tag. **Figure 7-67** Hiding a tag - 01  • Move the cursor to the tag name and click ✕ to hide the tag. **Figure 7-68** Hiding a tag - 02  **NOTE** If you need to add tags for multiple work items, you can select the desired work item, click **Batch Edit** in the lower part of the page, and select **Tag**.	You must have permission to **edit** tasks.

Operation	Procedure	Remarks
Add comment	1. Go to the work item details page. 2. On the **Details** tab page, click the **Comments** text box. **Figure 7-69** Adding a comment  3. Enter a comment. You can upload images, enter links, associate work items, and use @ to notify project members in comments. 4. Click **Submit**. Submitted comments can be replied, edited, pinned to the top, and deleted.	You must have permission to **view** tasks.

7.8 Creating and Managing Bugs

7.8.1 Bug Status Transition Process

The entire lifecycle of a defect has five states: **Analyzing**, **Fixing**, **Testing**, **Accepting**, and **Closed**. **Figure 7-70** shows the complete status transition process.

Figure 7-70 Bug status transition flowchart

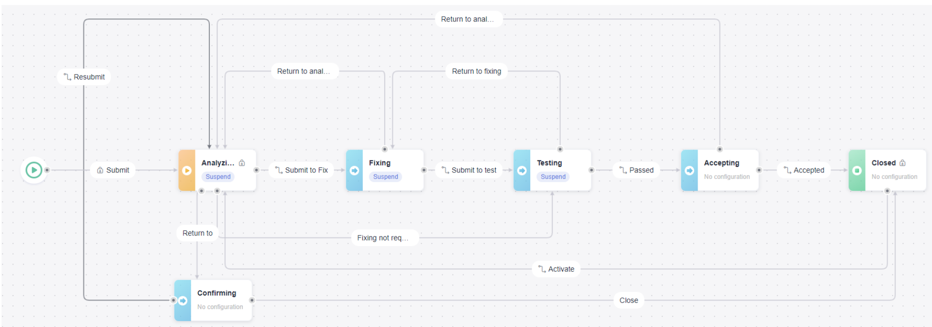


Table 7-32 describes operations in each state.

Table 7-32 Operation description

Status	Description
--	Creating bugs By default, the bug proposer is the person who finds the bug.
Analyzing	After the bug is submitted, the state changes to **Analyzing**. The current owner analyzes the bug as follows: ● If the analysis result shows that the bug is not a problem, click **Fixing not required** to transfer the bug to the proposer. ● If the description is incorrect, click **Return To** to transfer the bug to the current owner for modification. After the analysis is complete, click **Submit to Fix**.
Fixing	After the bug is analyzed, the state changes to **Fixing**. The current owner fixes the bug based on the problem.
Testing	After the bug is fixed, the state changes to **Testing**. The current test owner verifies whether the problem is fixed based on the rectification result. If the result does not meet the expectation, the test owner can return it for fixing or analysis.
Accepting	After the bug is tested, the state changes to **Accepting**. The current acceptance owner tracks the result of the acceptance test.
Closed	After the acceptance is passed, the state changes to **Closed**. A closed bug can be activated. After a bug being activated, its state will change to **Analyzing**.

7.8.2 Creating Bugs

You can create a bug to trace the problems found in the test and verification phase of software features and functions.

Prerequisites

An IPD-standalone software project is available, in which you have permission to **create and duplicate** bugs.

Creating a Bug

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Defects**.

Step 3 Click **Bug**. On the **Bug** page, set related parameters.

Table 7-33 Creating a bug

Parameter	Description
Title	Title of a work item.
Description	Enter the fault symptom description, environment information, onsite fault locating developers, and the preliminary cause determined by developers based on site requirements. Use text, images, or links.
Attachment	A maximum of 100 attachments can be added to a bug, and the total capacity is 50 MB.
Proposed Project	Project to which the bug creator belongs, which cannot be changed.
Responsible Project	Project to which a bug belongs.
Raised By	Test personnel who find the bug.
Owner	Owner of the bug. Select one or more members of the responsible project.
Module	Module to which a bug belongs. The module value can be customized as follows: 1. Click . The **Modules** dialog box is displayed. 2. Click **Create**. 3. Set **Module**, **Description**, and **Owner**. The value of **Module** must be unique. 4. Click **OK**. After a module is created, you can edit and delete the module, and add child modules.
Severity	Severity of a bug. The options are **Info**, **Minor**, **Major**, and **Critical**.
Responsible Release	Release plan where a bug is found. This parameter has a value only after the operations in **Creating Release and Sprint Plans** are completed. The parameter value can be empty. You can create a release and then associate it with the release.
Environment	Environment where a bug is found. The options are development self-test environment, test environment, and production environment.
Copy To	Other members in the project. The selected members will receive a system notification.
Expected Rectification	Planned rectification time.

Step 4 Click **Submit**. The **Bugs** tab page is displayed, and a message is displayed in the upper right corner, indicating that the bug is created successfully.

The new bug is displayed in the bug list, and the state is **Analyzing**.

NOTE

After a bug is created, the people selected for **Owner**, **Raised By**, and **Copy To** will receive email notifications and internal message notifications. If not, set notifications or modify notification settings. For details, see **Configuring Notifications**.

----End

Related Operations

You can perform the following operations on a new bug.

Table 7-34 Basic operations on a bug

Operation	Description
Modify bug title	Click next to a bug title to modify it.
Modify bug field	Click the target field value in the row of a bug to modify the value.
Duplicate bug	Click in the **Operation** column. This process is the same as that of creating a bug.

Migrate bug	Click in the **Operation** column of a bug to migrate it to other projects.
	NOTE
	● Bugs in a **Done** state cannot be migrated.
	● After migration,
	  ● The bug will be handled again.
	  ● The actual workload, related items, tags, discovering PI, and fixing PI of the bug will be cleared.
	  ● Only the custom bug fields of the target project will be displayed.

Collaborate on bug	Click in the **Operation** column of a bug to assign it to other projects under your tenant.

Operation	Description
Delete bug	Choose *** > **Delete** in the **Operation** column of a bug to delete it. **NOTE** • Bugs that are being reviewed or in a **Doing** state cannot be deleted. • If you delete drafted bugs, they are permanently deleted. • Bugs in a **To Do** state can be deleted only in the proposing project. Bugs in a **Done** state can be deleted in both the proposing project and the responsible project. • If you delete bugs of the proposing project, they are permanently deleted. If you delete bugs in the responsible project, they are moved to the project's recycle bin. • Bugs in the recycle bin can be restored or permanently deleted. After being restored, bugs restore to their original status.

7.8.3 Managing Bugs

After creating a bug (see **Creating a Bug**), you can perform the operations described in this section on it.

On the Bug List Page

On the project homepage, choose **Work** > **Defect** > **Defects** and perform the following operations:

Figure 7-71 Bug list

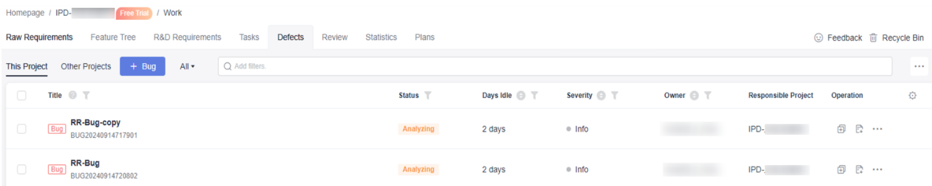


Table 7-35 Operations in the bug list

Operation	Procedure
Search for bug	● By adding filters 1. Click the search box in the bug list and select one or more filters to search for bugs. 2. To clear all filters and display all data, click on the right of the search bar. ● By using a saved view 1. Click the search box in the task list and select one or more filters. 2. Click on the rightmost of the search bar, and enter a view name. 3. Click **Confirm**. The created view is displayed next to the **Bug** button. 4. Select the created view to query the bugs that meet the search criteria. Views can be shared with others, modified, and deleted.
Import work items	Importing bugs: Use a template to import bugs in batches. 1. In the bug list, click on the right of the search bar and select **Import**. 2. In the displayed dialog box, click **Download Template**. The import template file is displayed in the lower part of the page. Save the file to the local PC and fill in data. The template file should be named in the following format: *Project name* + "-" + *Module name* (for example, **Bug**) + **Template**. 3. Fill in the fields on the **Bug - List** sheet. For details about how to set parameters, see the **Bug - Import Rules** sheet in the template file. 4. Drag or click to select a file to be imported. 5. Click **Import**. The import progress dialog box is displayed. ● After the import is successful, you can view the imported bug information in the task list. ● If the import fails, a message is displayed in the upper right corner of the page. Click **View Failure Details** in the message to view the failure details. You can modify the requirement information based on the details and import the template again. **NOTE** For details about operations on import records, see **Viewing Work Item Import/Export Records**.

<table>
<tr><th>Operation</th><th>Procedure</th></tr>
<tr><td>Export work items</td><td>Export bugs in batches to an Excel file.
1. Export some or all bugs.
● Export all: On the Defects page, click ··· on the right of the search bar and choose Export. The Select Fields to Export dialog box is displayed.
● Export some: In the bug list, select one or more bugs to be exported and click Export at the bottom of the page. The Select Fields to Export dialog box is displayed.
2. Select the fields to be exported.
3. Click Export. A dialog box is displayed, indicating the export progress.
After the bugs are exported, the bug file will be automatically downloaded to the local PC. The file format is .xlsx.
NOTE
For details about operations on export records, see Viewing Work Item Import/Export Records.</td></tr>
<tr><td>Configure fields to display</td><td>Click ⚙ next to the Operation field.
● On the left of the pop-up box, select the fields to be displayed in Available.
● On the right of the pop-up box, drag the fields in Selected to adjust the display sequence.</td></tr>
</table>

On the Bug Details Page

On the details page of a bug, you can modify the description, priority, and owner, add tags and attachments, associate work items, check review records, add workloads, and view the operation history.

Figure 7-72 Bug details page

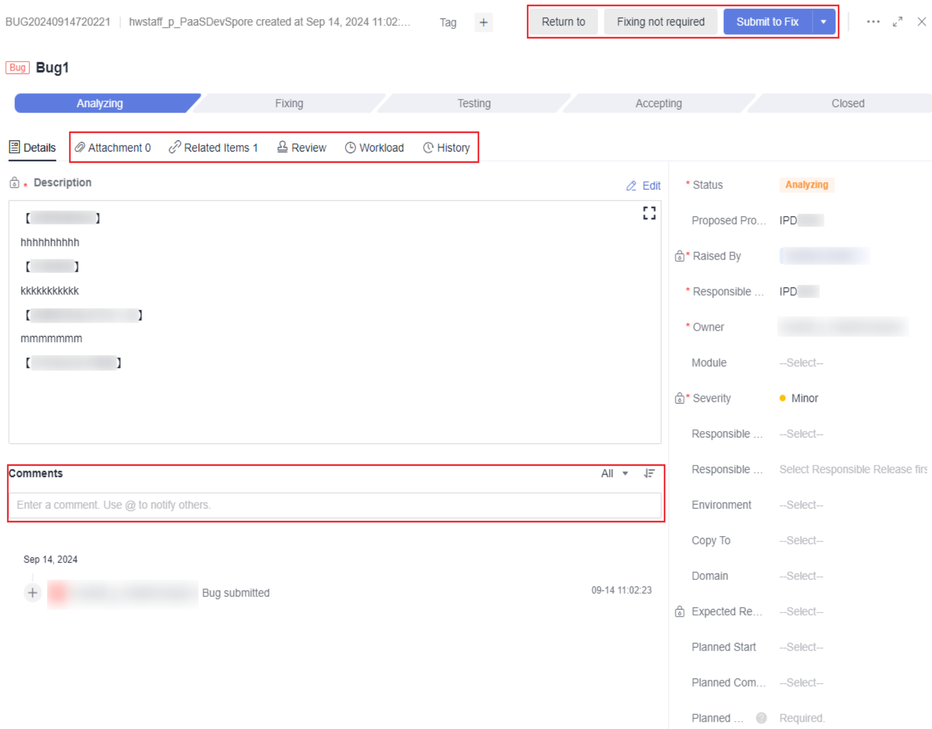
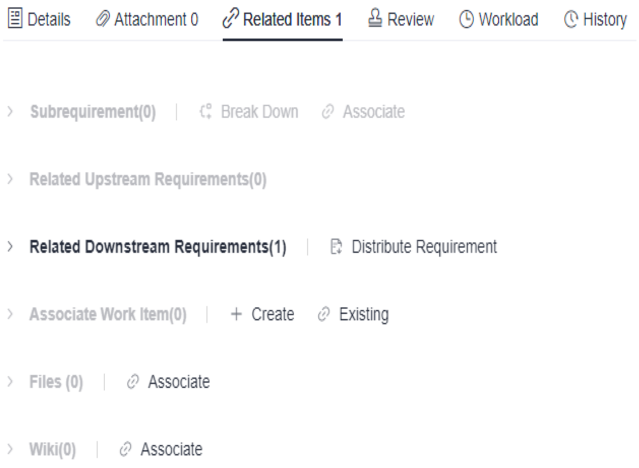


Table 7-36 Management operations on the details page

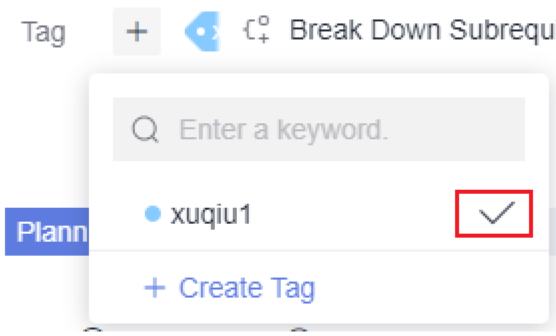
Operation	Procedure	Remarks
Edit work item	On the bug details page, click the value box of the field to be modified, and enter a target value in the text box or select one from the drop-down list. The modification is saved immediately.	You must have permission to **edit** bugs.
Change work item status	Go to the work item details page, click the **Status** field, and transition the work item to the target status. For details about status transition, see **Table 7-32**.	You must have permission to update the status for bugs.

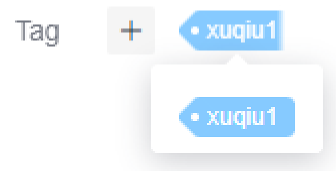
Operation	Procedure	Remarks
Upload attachment	Attachments can be pictures, workbooks, manuscripts, and text files. A maximum of 100 attachments can be added to each work item, and their total size cannot exceed 50 MB. 1. Go to the work item details page, and click the **Attachment** tab. 2. Click the box to select a local file or drag the file here to upload it as an attachment for the work item. Local files can be directly dragged to the text box. When the upload progress reaches 100%, the system displays a message indicating that the attachment is uploaded successfully. Move the cursor to the file that is successfully uploaded. The operations that can be performed are displayed. ● Click to download the file. ● Click to delete the uploaded file.	You must have permission to **upload attachments** for bugs.

Operation	Procedure	Remarks
Add and check related items	A work item can be associated with other types of work items in a project. 1. Go to the work item details page and click the **Related Items** tab. **Figure 7-73** Related items  2. Complete association. ● **Associate Work Item**: associated work items of other types in the project. Associating with existing RRs: You can associate an RR only after it is successfully created. Associating with existing IRs, SRs, and ARs: You can associate IRs, SRs, and ARs only after creating and breaking down R&D requirements. Associating with tasks: You can associate a task only after the task is successfully created. You can click to cancel the association. You can choose **Associated Items > Parent Task** of a child task to view the task only when the task contains child tasks. ● **Synergistic Bug**: bugs assigned to other projects for collaboration. Batch assignment is supported. A maximum of 10 bugs can be assigned at a time. One bug is assigned by default and cannot be deleted. 1. Click **Collaborative delivery**. The **Collaborative delivery** window is displayed. 2. Configure the information about bug assignment. Click to expand and configure more information.	You must have permission to **associate/ dissociate work items**, **associate/ dissociate files**, and **associate/ dissociate wikis** for bugs.

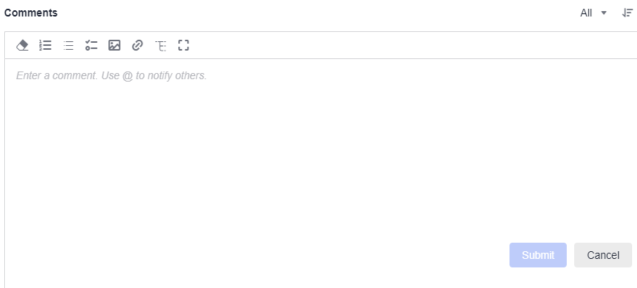
Operation	Procedure	Remarks
	3. Click **OK**. The bug is assigned. The bug can only be viewed and handled in the responsible project. **NOTE** After you assign a bug, its attachment will not be synchronized to the downstream bugs. The owners of these downstream bugs can contact you for the attachment. ● **Files**: files corresponding to the bug. Select a file associated with the current bug. You can upload a local file. ● **Wiki**: wiki corresponding to the bug. Select a wiki associated with the current bug. You can create a wiki. ● **Test Plan**: Test plan related to the current bug. You can associate test plans with the current bug. ● **Test Case**: Test case related to the current bug. You can select bugs associated with test cases in CodeArts TestPlan. ● **Code Commit Record**: Code submission record related to the current bug. Related information is displayed only when the current bug is associated during code commit. ● **Code Branch**: Code branch related to the current bug. Related information is displayed only when the code branch is associated with the current bug.	

Operation	Procedure	Remarks
Add workload	1. Go to the details page of a work item and click **Workload**. 2. Click **Add Workload**. The **Add Workload** dialog box is displayed. 3. Enter the workload information. ● The end date cannot be earlier than the start date. ● Decide whether to select **Weekends included**. If not, weekend workload records will not be generated. ● You can select **Total** or **Daily** for **Workload**. ● **Work Type** options include backend development, frontend development, UI design, replacement leave, debugging, and general. You can also customize the value by referring to **Creating Work Types**. 4. Click **OK**. The system automatically generates corresponding records based on the entered dates and days. The workload can be edited and deleted.	You must have permission to **add person-hours** for bugs. Workloads can be edited and deleted by the creator. By default, the project administrator can edit and delete all workloads.
View operation history	**History** displays all operation logs of users, including creation, status transition, review initiation, work item association, and workload adding. 1. Go to the work item details page. 2. Click the **History** tab. ● Click or to check historical records in the ascending or descending order of operation time. ● You can set search criteria to query historical records that meet the search criteria.	You must have permission to **view** bugs.

<table>
<tr><th>Operation</th><th>Procedure</th><th>Remarks</th></tr>
<tr><td>Tag work item</td><td>1. Go to the work item details page. Click + next to Tag and select Create Tag.
The added tag is displayed in the Tag area.
2. In the Create Tag dialog box, set Tag Name and select Tag Color.
3. Click OK.
The new tag is displayed next to the requirement ID in the RR list.
4. (Optional) Hide a tag.
• Click + next to Tag. In the displayed dialog box, deselect √ to hide the tag.
Figure 7-74 Hiding a tag - 01


• Move the cursor to the tag name and click to hide the tag.
Figure 7-75 Hiding a tag - 02


NOTE
If you need to add tags for multiple work items, you can select the desired work item, click Batch Edit in the lower part of the page, and select Tag.</td><td>You must have permission to edit bugs.</td></tr>
</table>

Operation	Procedure	Remarks
Add comment	1. Go to the work item details page. 2. On the **Details** tab page, click the **Comments** text box. **Figure 7-76** Adding a comment  3. Enter a comment. You can upload images, enter links, associate work items, and use @ to notify project members in comments. 4. Click **Submit**. Submitted comments can be replied, edited, pinned to the top, and deleted.	You must have permission to **view** bugs.

7.9 Reviewing Work Items

7.9.1 IPD-Standalone Software Project Reviews

IPD-standalone software projects have three review types: change review (CR), baseline review (BR), and general review (GR). They are described in **Table 7-37**.

Table 7-37 Review types

Review Type	Description	Review Object
Change review (CR)	• Changing the controlled fields of a raw requirement or bug will initiate a change review. The change will be synchronized to the requirement and bug only after the review is approved. **NOTE** The control status of a raw requirement and bug is determined by whether any controlled fields are configured for specific status. A field is deemed under control when a raw requirement or bug is in the specified status. • Changing the baselined fields of a system feature or R&D requirement will initiate a change review. The change will be synchronized to the feature and requirement only after the review is approved.	Raw requirements, system features, R&D requirements, and bugs
Baseline review (BR)	To baseline a system feature or R&D requirement, you need to initiate a baseline review. The feature and requirement will be baselined only after the review is approved.	Systems features and R&D requirements
General review (GR)	To review a work item, you can initiate a general review. The work item takes effect only after the review is approved.	Raw requirements, system features, R&D requirements, and bugs

7.9.2 Creating and Completing Work Item Reviews

7.9.2.1 Creating and Completing CRs

When a raw requirement, system feature, R&D requirement, or bug is under control or baselined, you can perform the following steps to modify their controlled or baselined fields.

Creating a CR

Step 1 Access the CodeArts Req homepage.

Step 2 Create a CR in either of the following ways:

- On the project homepage, go to the raw requirement, feature tree, R&D requirement, or bug list page, select a controlled raw requirement or bug, or a baselined system feature or R&D requirement, and modify a parameter marked with the icon. In the displayed dialog box, click **OK**.

- On the project homepage, choose **Review** > **Change Review**. Then click **CR**.

Step 3 On the **CR** page, set the required parameters.

Table 7-38 Creating a CR

Parameter	Description
CR Title	Title of the review. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 256 characters.
Description	Enter the background, value, and details of the review. ● Use text, images, or links. ● Include 1 to 50,000 characters.
Start time	The time when you want the review to start.
Completes	The time when you want the review to complete.
Require Decision-Making	This parameter is available only when **Require Decision-Making** is enabled on the **Settings > Work > Review** page. **NOTE** If **Require Decision-Making** is set to **No**, no approver needs to be specified. The review will skip the decision-making phase.
Copy To	Select the project members you want to inform about this review.

Parameter	Description
Change Object	Add the objects to be changed, including raw requirements, system features, R&D requirements, and bugs. ● Raw requirements can be selected only when they are in the **Confirming**, **Planning**, or **Implementing** state. After adding change objects, modify controlled fields (marked with), and set **Approver** and **Reviewer**. ● System features and R&D requirements can be selected only when they are baselined. After adding change objects, modify controlled fields (marked with), and set **Approver** and **Reviewer**. ● Bugs can be selected only when they are in a status in which a controlled field is editable. After adding change objects, modify controlled fields (marked with), and set **Reviewer** and **Review Expert**. **NOTE** If **Review Expert** is not set, the review phase will be skipped. The options of **Review Expert** are project members. You can select multiple ones. For systems features and R&D requirements: The options of **Reviewer** can be configured on the **Settings > Work > Review** page. The default options are project administrator and project manager. You can select only one option. For raw requirements: ● If the proposing project initiates a change review, the options of **Reviewer** include the project administrator, project manager, and requirement owner of the responsible project. You can select only one option. ● If the responsible project initiates a change review, the options of **Reviewer** include the project administrator, project manager, and requirement submitter of the proposing project. You can select only one option. For bugs: ● If the proposing project initiates a change review, the options of **Reviewer** include the project administrator, project manager, test manager, and bug owner of the responsible project. You can select only one option. ● If the responsible project initiates a change review, the options of **Reviewer** include the project administrator, project manager, test manager, and bug creator of the proposing project. You can select only one option.
Associated Files	Attachments, wikis, and documents related to the review. **NOTE** If the change objects include a raw requirement and bug, files can be associated only when the proposing and responsible projects are the same.
Collaborative Parent Item Change	Existing change reviews you wish to collaboratively complete with the current review.

Step 4 Click **Submit**.

You can view the new CR in the change review list.

----End

Completing a CR

This operation is performed by the specified review experts and reviewer of a CR.

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Review** > **Change Review**.

Step 3 Click the title of a CR in the **To Be Reviewed** state. The CR details page is displayed on the right.

Step 4 Click the icon in the row that contains the target change object, and set the required parameters.

Figure 7-77 Review by review experts

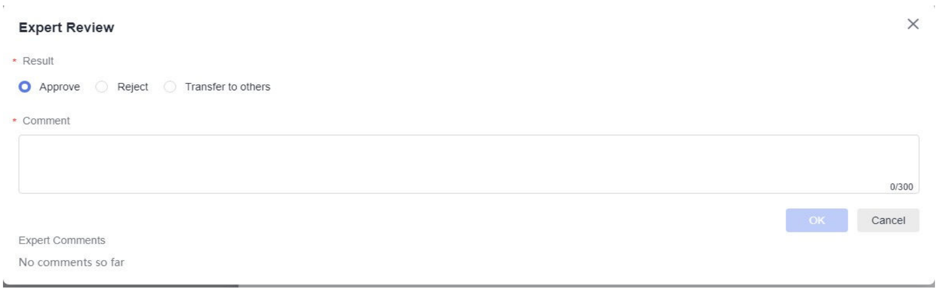


Table 7-39 Review by review experts

Parameter	Description
Result	Select your review result. ● **Approve**: You agree with the change. ● **Reject**: You do not agree with the change. ● **Transfer to others**: Transfer the review to another review expert.
Comment	Your comments on the change. This parameter is required when **Result** is **Approve** or **Reject**. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 300 characters.
Expert Comments	Comments of other review experts.

Step 5 Select a review result (**Approve** or **Reject**) and click **OK**.

> **NOTE**
>
> After the expert review is completed, the final review result can be determined using the selected method on the **Settings** > **Work** > **Review** page.
>
> - **By single reviewer**: A CR is complete when one review expert approves or rejects it.
> - **By all reviewers**: A CR is complete when all review experts approve it or one review expert rejects it.
> - **By pass rate**: A CR is complete when "Number of review experts who approve the review/Total number of review experts × 100% ≥ Pass rate", or "Number of review experts who reject the review/Total number of review experts × 100% > 1 – Pass rate".
>
> If a CR's result in the review phase is **Rejected**, the CR skips the decision-making phase and its final result is **Rejected**.
>
> After the review phase of all change objects in the CR is complete, the CR status changes to **Decisioning**.

Step 6 Click the title of a CR in the **To Be Approved** state. The CR details page is displayed on the right.

Step 7 Click the icon in the row that contains the target change object, and set the required parameters.

Figure 7-78 Decision-making by reviewer

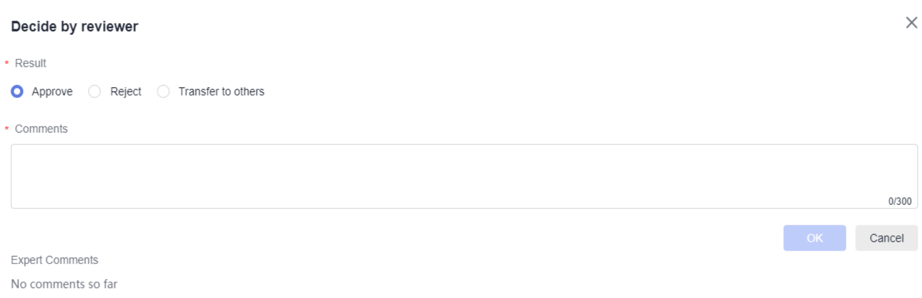


Table 7-40 Decision-making by reviewer

Parameter	Description
Result	Select your decision. ● **Approve**: You agree with the change. ● **Reject**: You do not agree with the change. ● **Transfer to others**: Transfer the review to another reviewer.
Comments	Your comments on the change. This parameter is required when **Result** is **Approve** or **Reject**. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 300 characters.
Review Result	The result of the review phase for your reference.

Parameter	Description
Expert Comments	Results and comments of review experts in the review phase for your reference.

Step 8 Select **Approve** or **Reject** for **Result**, and click **OK**. The CR object's approval result is displayed after its decision-making process is complete.

NOTE

The CR status changes to **End** only after the decision-making process of all change objects is complete.

----End

7.9.2.2 Creating and Completing BRs

When your system features and R&D requirements need to be baselined, perform the following steps to initiate a baseline review.

Creating a BR

Step 1 Access the CodeArts Req homepage.

Step 2 Create a BR in either of the following ways:

- On the project homepage, go to the feature tree or R&D requirement list page, select unbaselined system features or R&D requirements, and click **Baseline Review** in the pop-up box.
- On the project homepage, choose **Review** > **Baseline Review**. Then click **BR**.

Step 3 On the **BR** page, set the required parameters.

Table 7-41 Creating a BR

Parameter	Description
BR Title	Title of the review. • Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. • Include 1 to 256 characters.
Description	Enter the background, value, and details of the review. • Use text, images, or links. • Include 1 to 50,000 characters.
Start time	The time when you want the review to start.
Completes	The time when you want the review to complete.

Parameter	Description
Require Decision-Making	This parameter is available only when **Require Decision-Making** is enabled on the **Settings > Work > Review** page. **NOTE** If **Require Decision-Making** is set to **No**, no approver needs to be specified. The review will skip the decision-making phase.
Reviewer	The options of **Reviewer** can be configured on the **Settings > Work > Review** page. The default options are project administrator and project manager. You can select only one option.
Review Expert	If **Review Expert** is not set, the review phase will be skipped. The options of **Review Expert** are project members. You can select multiple ones.
Copy To	Select the project members you want to inform about this review.
Baseline Object	Add the objects to be baselined, including system features and R&D requirements. ● Only system features and R&D requirements that are not baselined can be added.
Associated Files	Attachments, wikis, and documents related to the review.

Step 4 Click **Submit**.

You can view the new BR in the baseline review list.

----End

Completing a BR

This operation is performed by the specified review experts and reviewer of a BR.

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Review** > **Change Review**.

Step 3 Click the title of a BR in the **To Be Reviewed** state. The BR details page is displayed on the right.

Step 4 On the details page, click **Expert Review** in the upper right corner. In the displayed dialog box, set the required parameters.

Figure 7-79 Review by review experts

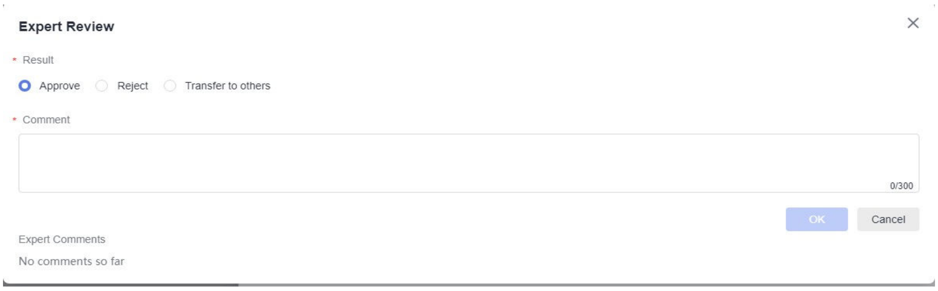


Table 7-42 Review by review experts

Parameter	Description
Result	Select your review result. ● **Approve**: You agree with the change. ● **Reject**: You do not agree with the change. ● **Transfer to others**: Transfer the review to another review expert.
Comment	Your comments on the change. This parameter is required when **Result** is **Approve** or **Reject**. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 300 characters.
Expert Comments	Comments of other review experts.

Step 5 Select a review result (**Approve** or **Reject**) and click **OK**.

NOTE

After the expert review is completed, the final review result can be determined using the selected method on the **Settings > Work > Review** page.

- **By single reviewer**: A BR is complete when one review expert approves or rejects it.
- **By all reviewers**: A BR is complete when all review experts approve it or one review expert rejects it.
- **By pass rate**: A BR is complete when "Number of review experts who approve the review/Total number of review experts × 100% ≥ Pass rate", or "Number of review experts who reject the review/Total number of review experts × 100% > 1 – Pass rate".

If a BR's result in the review phase is **Rejected**, the BR skips the decision-making phase and its final result is **Rejected**.

Step 6 Click the title of a BR in the **To Be Approved** state. The BR details page is displayed on the right.

Step 7 On the details page, click **Decide by reviewer** in the upper right corner. In the displayed dialog box, set the required parameters.

Figure 7-80 Decision-making by reviewer

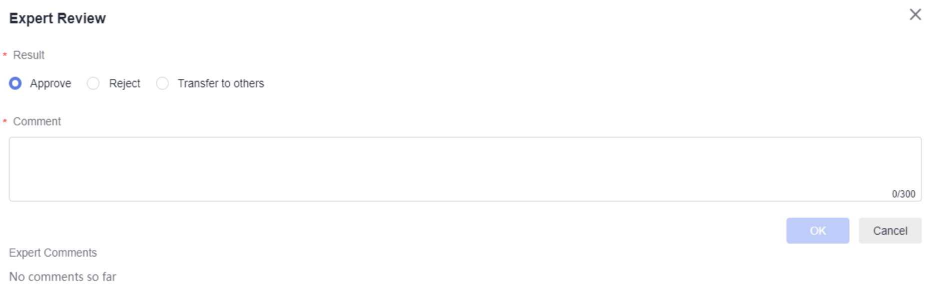


Table 7-43 Decision-making by reviewer

Parameter	Description
Result	Select your decision. ● **Approve**: You agree with the change. ● **Reject**: You do not agree with the change. ● **Transfer to others**: Transfer the review to another reviewer.
Comments	Your comments on the change. This parameter is required when **Result** is **Approve** or **Reject**. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 300 characters.
Review Result	The result of the review phase for your reference.
Expert Comments	Results and comments of review experts in the review phase for your reference.

Step 8 Select **Approve** or **Reject** for **Result**, and click **OK**. The BR status changes to **End**.

----End

7.9.2.3 Creating and Completing GRs

When your work items need to be reviewed, perform the following steps to initiate a general review.

Creating a GR

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Review** > **General Review**. Then click **GR**.

Step 3 On the **GR** page, set the required parameters.

Table 7-44 Creating a GR

Parameter	Description
GR Title	Title of the review. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 256 characters.
Description	Enter the background, value, and details of the review. ● Use text, images, or links. ● Include 1 to 50,000 characters.
Start time	The time when you want the review to start.
Completes	The time when you want the review to complete.
Require Decision-Making	This parameter is available only when **Require Decision-Making** is enabled on the **Settings > Work > Review** page. **NOTE** If **Require Decision-Making** is set to **No**, no approver needs to be specified. The review will skip the decision-making phase.
Reviewer	The options of **Reviewer** can be configured on the **Settings > Work > Review** page. The default options are project administrator and project manager. You can select only one option.
Review Expert	If **Review Expert** is not set, the review phase will be skipped. The options of **Review Expert** are project members. You can select multiple ones.
Copy To	Select the project members you want to inform about this review.
Associated Object	Add the objects to be reviewed, including raw requirements, system features, R&D requirements, and bugs.
Associated Files	Attachments, wikis, and documents related to the review.

Step 4 Click **Submit**.

You can view the new GR in the general review list.

----End

Completing a GR

This operation is performed by the specified review experts and reviewer of a GR.

Step 1 Access the CodeArts Req homepage.

Step 2 On the project homepage, choose **Review** > **Change Review**.

Step 3 Click the title of a GR in the **To Be Reviewed** state. The GR details page is displayed on the right.

Step 4 On the details page, click **Expert Review** in the upper right corner. In the displayed dialog box, set the required parameters.

Figure 7-81 Review by review experts

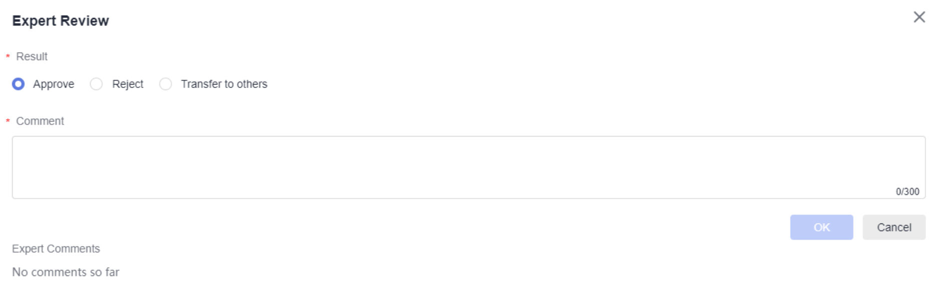


Table 7-45 Review by review experts

Parameter	Description
Result	Select your review result. ● **Approve**: You agree with the change. ● **Reject**: You do not agree with the change. ● **Transfer to others**: Transfer the review to another review expert.
Comment	Your comments on the change. This parameter is required when **Result** is **Approve** or **Reject**. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 300 characters.
Expert Comments	Comments of other review experts.

Step 5 Select a review result (**Approve** or **Reject**) and click **OK**.

NOTE

After the expert review is completed, the final review result can be determined using the selected method on the **Settings > Work > Review** page.

- **By single reviewer**: A GR is complete when one review expert approves or rejects it.
- **By all reviewers**: A GR is complete when all review experts approve it or one review expert rejects it.
- **By pass rate**: A GR is complete when "Number of review experts who approve the review/Total number of review experts × 100% ≥ Pass rate", or "Number of review experts who reject the review/Total number of review experts × 100% > 1 – Pass rate".

If a GR's result in the review phase is **Rejected**, the GR skips the decision-making phase and its final result is **Rejected**.

Step 6 Click the title of a GR in the **To Be Approved** state. The GR details page is displayed on the right.

Step 7 On the details page, click **Decide by reviewer** in the upper right corner. In the displayed dialog box, set the required parameters.

Figure 7-82 Decision-making by reviewer

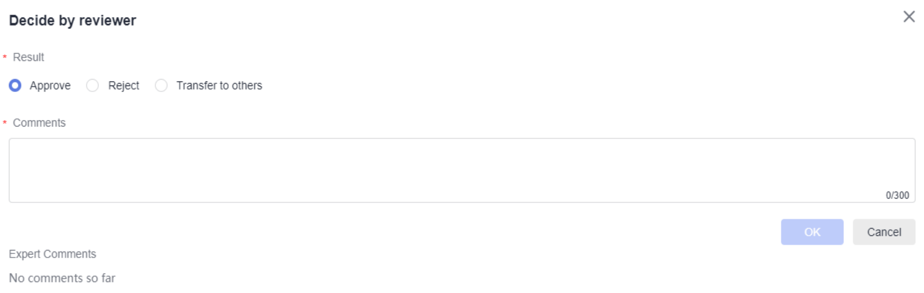


Table 7-46 Decision-making by reviewer

Parameter	Description
Result	Select your decision. ● **Approve**: You agree with the change. ● **Reject**: You do not agree with the change. ● **Transfer to others**: Transfer the review to another reviewer.
Comments	Your comments on the change. This parameter is required when **Result** is **Approve** or **Reject**. ● Use letters, hyphens (-), underscores (_), commas (,), semicolons (;), colons (:), periods (.), slashes (/), parentheses (()), and spaces. ● Include 1 to 300 characters.
Review Result	The result of the review phase for your reference.
Expert Comments	Results and comments of review experts in the review phase for your reference.

Step 8 Select **Approve** or **Reject** for **Result**, and click **OK**. The GR status changes to **End**.

----End

7.10 Tracking the Project Progress

7.10.1 Tracking the Work Item Progress in the Project Overview

During a project, you can track the work item progress in the project overview.

Viewing the Project Overview

In the project overview, statistical charts display all project data in two dimensions.

- **By Release**: Select the release and sprint versions to be viewed.
- **By Creation Time**: Select the time segment you want to view, including **All**, **Last 7 Days**, **Last 14 Days**, **Last 30 Days**, **Last 90 Days**, and **Custom**.

The following table lists the statistical charts in the project overview.

Table 7-47 Statistical charts

Statistical Chart	Data Description
Project statistics	Includes the total number of initial requirements, user stories, tasks, bugs, and the processing status (processing, complete, and overdue).
Release burndown	Displays only when you view information **By Release**. Includes the remaining workload, total workload, and ideal line. You can select specific work items (IRs, USs, tasks, and bugs) to view and download them.
Release capacity load	Displays only when you view information **By Release**. Displays release plans, sprints, and workload of each work item in bar charts.
Bug trend	Displays only when you view information **By Release**. Includes the total number of bugs found, the total number of resolved bugs, and the DI value of outstanding bugs.
Work item statistics for project members (by priority)	Obtains statistics of RRs, SFs, IRs, USs, and tasks by priority in bar charts or tables.
Work item completion	Displays only when you view information **By Release**. Completion rate of the selected work items.
Work items by status	Obtains statistics of RRs, SFs, IRs, USs, tasks, and bugs by work item status in pie charts or tables.
Work item breakdown	Obtains statistics of RRs, IRs, and USs by required breakdown in pie charts.
Work item completion rate	Obtains statistics and percentages of RRs, SFs, IRs, USs, tasks, and bugs by completion in pie charts.
Requirement TTM	Obtains statistics of RRs, IRs, USs based on the average duration from the **developing** status to the **completed** status.
Work item stay days	Obtains statistics of RRs, SFs, IRs, USs, tasks, and bugs by work item status duration (days) in bar charts.

Statistical Chart	Data Description
Unfinished work items by member	Obtains statistics of uncompleted RRs, SFs, IRs, USs, tasks, and bugs by member in bar charts or tables.

7.10.2 Using Bug Measurement

You can use bug measurement to track the defect progress.

Viewing the Bug Measurement

By default, the bug measurement view displays the following statistical charts: bug overview, legacy DI trend, accumulated bugs, bug daily throughput, bug distribution by severity, bug distribution by status, and top 8 owners with legacy bugs.

- Numerical statistical charts: The indicator value represents data for all work items in real time. For example, the total number of bugs in **Bug Overview** is equal to the total number of bugs during statistics collection.
- Trend charts: The indicator value represents the daily data. For example, the total number of legacy bugs on June 7 in **legacy DI Trend** is equal to the total number of legacy bugs on June 7.

The following table lists the statistical charts in bug measurement.

Table 7-48 Statistical charts

Statistical Chart	Data Description
Bug overview statistics	Collects statistics on the number of bugs whose states are processing, completed, and overdue and whose severities are severe at the current time. Click a number to view the corresponding list.
Legacy DI trend	Collects statistics on the DI trend of legacy bugs in the selected time range. ● DI: indicates the value calculated based on the weight of bugs at each severity level. ● Legacy DI = Number of legacy critical bugs x 10 + Number of legacy major bugs x 3 + Number of legacy minor bugs x 1 + Number of legacy suggestion bugs x 0.1
Accumulated bugs	Shows the trends of accumulated bugs found, resolved bugs, and legacy bugs. Cumulative number of legacy bugs = Cumulative number of found bugs – Cumulative number of resolved bugs.
Bug daily throughput	Collects the number of bugs found and fixed in the selected time period.

Statistical Chart	Data Description
Bug distribution by severity	Collects statistics on the number of bugs by severity at the current time.
Bug distribution by status	Collects statistics on the number of bugs by status at the current time.
Top 8 owners with legacy bugs	Collects top 8 owners of legacy bugs at the current time and displays the bug number.

8 (Optional) Checking Audit Logs

Cloud Trace Service (CTS) records operations on CodeArts Req for query, audit, and backtrack.

Operations Supporting Audit Logs

Table 8-1 CodeArts Req operations recorded by CTS

Operation	Resource Type	Event
Create a permission template	privilege_template	addPrivilegeTemplate
Delete a permission template	privilege_template	deletePrivilegeTemplate
Modify the name or description of a permission template	privilege_template	updatePrivilegeTemplateNameOrDescription
Modify the specific permissions in a permission template	privilege_template	updatePrivilegeTemplate
Apply a permission template to a project	privilege_template	applyPrivilegeTemplate
Add a user to a role	role_user	addUsersToRole
Delete a user from a role	role_user	deleteUsersFromRole
Modify role permissions	role_privilege	updatePrivilegeOfRole
Add users in batches to a project	project	batchAddRoleUserRelation
Modify users in batches in a project	project	batchUpdateRoleUserRelation

Operation	Resource Type	Event
Delete users in batches from a project	project	batchDeleteRoleUserRelation
Create a project	project	createProject
Update the project name	project	updateProjectName
Update the project creator	project	updateProjectCreator
Update project description	project	updateProjectDescription
Delete a project	project	deleteProject
Archive a project	project	archiveProject
Cancel archiving a project	project	unArchiveProject
Set member reviewers	member	setAuditSwitchOfInvitateMember
Add a project member	member	addProjectMember
Remove a project member	member	deleteProjectMember
Update a project member role	member	updateProjectMemberRole
Create a custom role	role	createProjectRole
Update a custom role name	role	updateProjectRoleName
Delete a custom role	role	deleteProjectRole
Update permissions of a custom role	role	updateProjectRolePermission
Create a common field	issue	createProjectCommonField
Delete a common field	issue	deleteProjectCommonField
Update a common field	issue	updateProjectCommonField
Create a common status	issue	createProjectCommonState

Operation	Resource Type	Event
Delete a common status	issue	deleteProjectCommon-State
Update a common status	issue	updateProjectCommon-State
Create a module	issue	createProjectModule
Create a submodule	issue	createProjectChildMod-ule
Delete a module	issue	deleteProjectModule
Update a module	issue	updateProjectModule
Create a domain	issue	createProjectDomain
Delete a domain	issue	deleteProjectDomain
Update a domain	issue	updateProjectDomain-Name
Add a custom field to a project	issue	addProjectFieldFor
Create a custom field for a project	issue	createProjectFieldFor
Add a custom status to a project	issue	addProjectStateFor
Delete a work item	issue	deleteProjectIssue

Checking Audit Logs

Query CodeArts Req traces on the CTS console. For details, see **viewing audit events**.

