

R&D Process Management-DMS

一.Introduction

DMS (Development Management System) 隶属于Shopee Supply Chain Product Line，旨在建设一站式的研发管理系统，标准化和系统化我们SSC的研发流程和规范，集成研发过程各个环节的工具链，减少我们的学习和沟通成本，提升我们研发的工作效率。

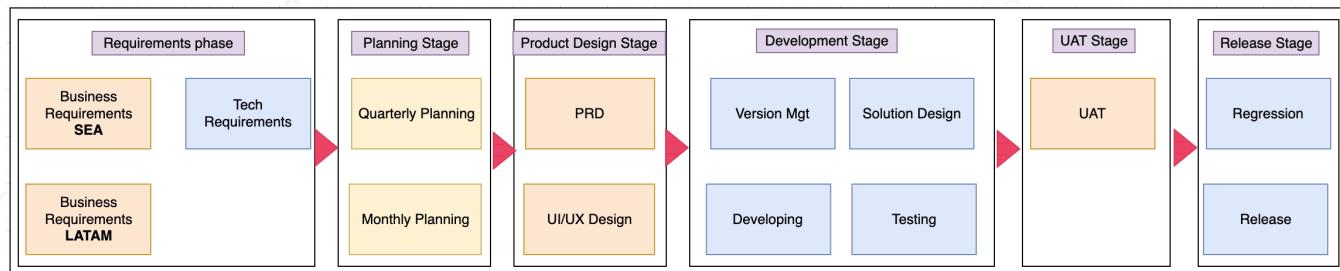
DMS (Development Management System) belongs to Shopee Supply Chain Product Line, which aims to build a one-stop R&D management system, standardize and systematize our SSC's R&D processes and specifications, integrate the tool chain of the R&D process, reduce our learning and communication costs, and improve our R&D efficiency.

System website: <https://dms.ssc.shopee.io/>

二.Overview of the Whole R&D process

目前研发流程可以大致归结为以下几个阶段

The current R&D process can be generally summarized as shown in the following stages



1) 需求阶段:

业务需求：由BPM收集各个Local业务的需求、汇总、分析、拆解到我们研发团队。

技术需求：由技术侧发起的系统优化、架构改进，需求来源于Live 故障或者bug、技术演进等。

2) 规划阶段:

需求一般会有两种形式落到项目组，季度规划和月度规划。季度规划一般是团队季度开始设定，以OKR的形式跟进，由业务线技术负责人和产品负责人牵头。月度规划是在除了季度规划外BPM提出的需求。

3) 产品设计阶段:

主要是PM进行PRD的输出和Design团队进行交互设计的输出

4) 研发阶段:

主要是研发团队的工作，PM输出的需求后，进行排版管理，方案设计（开发、测试），开发和测试工作。

5) UAT阶段:

当需求开发测试完成后，交由业务方（一般是BPM和Local 业务）进行用户接受测试（UAT），如果UAT通过后，需求会被sign off，后续就可以发布

6) 发布阶段:

所有sign off的需求可以进行发布版本的规划，回归测试通过后进行发布

注意：大多数情况下，我们是按照feature进行开发测试的，包括上UAT，到了发布阶段才有版本的概念，将已经sign off的需求（包括不需要UAT但已经测试通过的）集成一个版本，然后进行回归测试和发布

1) Requirements phase.

Business requirements: requirements of each Local business are collected by BPM, aggregated, analyzed and disassembled to our R&D team.

Technical requirements: system optimization and architecture improvement initiated by the technical side, requirements from Live failures or bugs, technical evolution, etc.

2) Planning stage.

Requirements will generally be assigned to the project team in two forms, quarterly planning and monthly planning. Quarterly planning is generally set by the team quarterly, in the form of OKR follow-up, led by the business line technical leader and product leader. Monthly planning is in addition to the quarterly planning BPM proposed requirements.

3) Product design phase.

PM carries out the output of PRD and the Design team carries out the output of interaction design

4) R&D phase.

Mainly the work of the R & D team, after the PM output of the requirements, the R & D team for layout management, program design (development, testing), development and testing work.

5) UAT phase.

When the development and testing of requirements is completed, it is handed over to the business side (usually BPM and Local business) for user acceptance testing (UAT), and if the UAT is passed, the requirements will be signed off and can be released subsequently

6) Release phase.

All signed off requirements can be planned for release version, and released after regression testing is passed

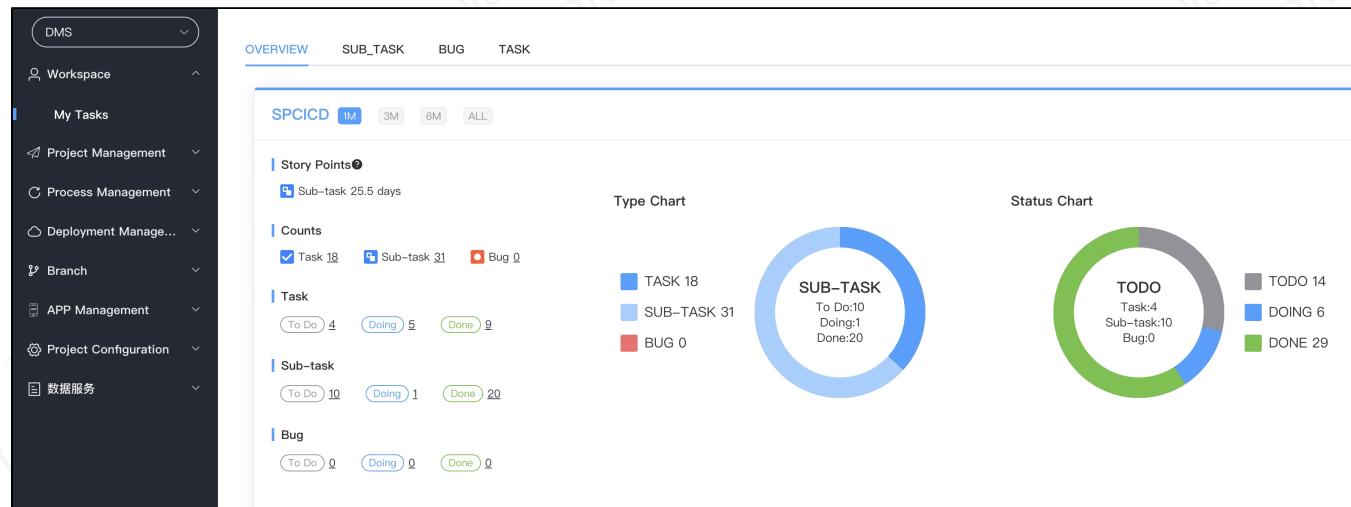
Note: In most cases, we are in accordance with the feature for development and testing, including on the UAT, to the release phase before the concept of version, the requirements that have been signed off (including those that do not need UAT but have passed the test) to integrate a version, and then regression testing and release

三.DMS for R&D Process Management

1.Personal Workbench

DMS在“Workspace” → "My Task"进行管理个人的工作任务

DMS manages individual tasks in "Workspace" -> "My Task".



2.Project Management

2.1.Plan Management

DMS在“Project Management” → "Task Schedule"进行管理，展示不同阶段 (Table或者Board的形式) 的视图，也可以进行管理操作。

DMS is managed in "Project Management" -> "Task Schedule", which shows the view of different phases (in the form of Table or Board) and allows you to perform management operations.

Jira Key	Status	Priority	Assignee	Reporter	Fix Version	Type	Parent	Actions
SPSERP-2080 / [FE] Entry task for Harris	Waiting	-	harris.sibuea@shopee.com	bin.ke@shopee.com		日常		<button>Edit</button> <button>More</button>
SPSERP-2078 / Service Point System Monitor Improvement	Waiting	-	ming.han@shopee.com	huan.chen@shopee.com		日常		<button>Edit</button> <button>More</button>
SPSERP-2068 / [QA] 驻站QA-会议记录	Waiting	-	xianwei.yao@shopee.com	xianwei.yao@shopee.com		日常		<button>Edit</button> <button>More</button>
SPSERP-2067 / [TW] APP-PDA to Improve Find Parcel Process	Waiting	-		ruiying.wang@shopee.com		日常		<button>Edit</button> <button>More</button>
SPSERP-2064 / [FE] joint test -test use	Waiting	-	zhen.wang@shopee.com	zhen.wang@shopee.com		日常		<button>Edit</button> <button>More</button>
SPSERP-2049 / [TW] SP queueing system	Waiting	-	ruiying.wang@shopee.com	ruiying.wang@shopee.com		日常		<button>Edit</button> <button>More</button>

整体流程

Overall Process



- 1) DMS会自动从Jira同步数据
 - 2) 需求 (Jira Task) 已经评审通过，那么需求就会进入待排期阶段，评审过程的动作我们称为 “PRD sign off”
- 1) The DMS automatically synchronizes data from Jira
- 2) Once the requirements (Jira Task) have been reviewed, they will enter the scheduling phase, and the review process is called "PRD sign off".

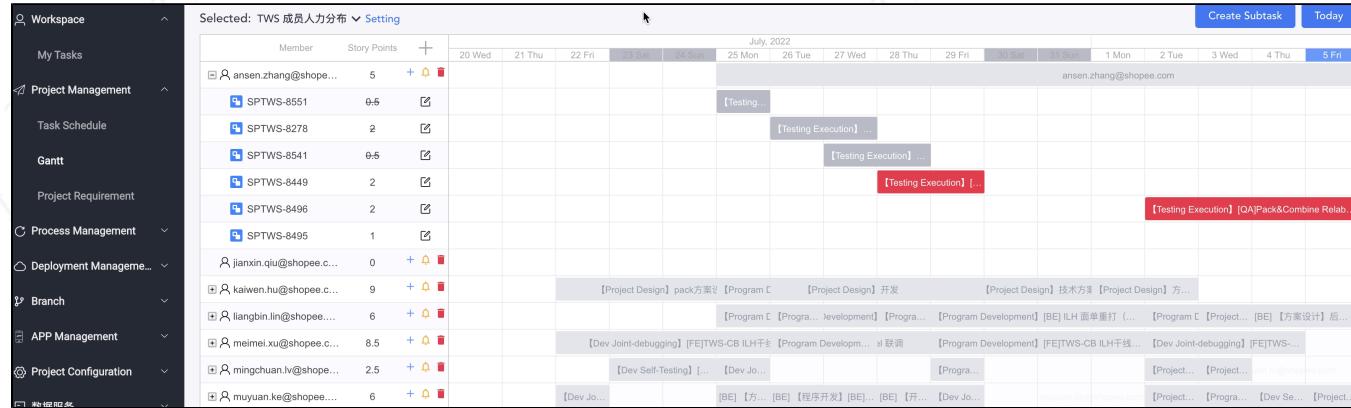
Jira Key	Status	Priority	Assignee	Reporter	Fix Version	Type	Parent	Actions
SPSERP-2078 / Service Point System Monitor Improvement	Waiting	-	ming.han@shopee.com	huan.chen@shopee.com	Please Select	日常		<button>Update</button> <button>Cancel</button>
SPSERP-2068 / [QA] 驻站QA-会议记录	Waiting	-	xianwei.yao@shopee.com	xianwei.yao@shopee.com		日常		<button>Edit</button> <button>More</button>
SPSERP-2067 / [TW] APP-PDA to Improve Find Parcel Process	Scheduled	-		ruiying.wang@shopee.com		日常		<button>Edit</button> <button>More</button>
SPSERP-2064 / [FE] joint test -test use	Developing	-						<button>Edit</button> <button>More</button>
SPSERP-2049 / [TW] SP queueing system	Closed	-						<button>Edit</button> <button>More</button>
	Icebox	-						<button>Edit</button> <button>More</button>
	Waiting	-						<button>Edit</button> <button>More</button>

- 3) 对于已经待排期的需求，研发可以根据需求的优先级安排开发，该需求进入排期阶段，可以是fix version来标记
 - 4) 研发人员在流程管理对单个需求Jira “developing” 操作，需求就会进入Developing阶段
- 3) For the requirements that have been scheduled, R&D can arrange development according to the priority of the requirements, and the requirements will enter the scheduling phase, which can be marked by the fix version
- (4) R&D personnel in the process management of a single requirement Jira "developing" operation, the requirements will enter the developing stage

2.2. Team Gantt Chart

DMS在“Project Management”→“Gantt”进行甘特图的管理，跟进团队人力资源分配，也可以快捷管理个人Sub task。

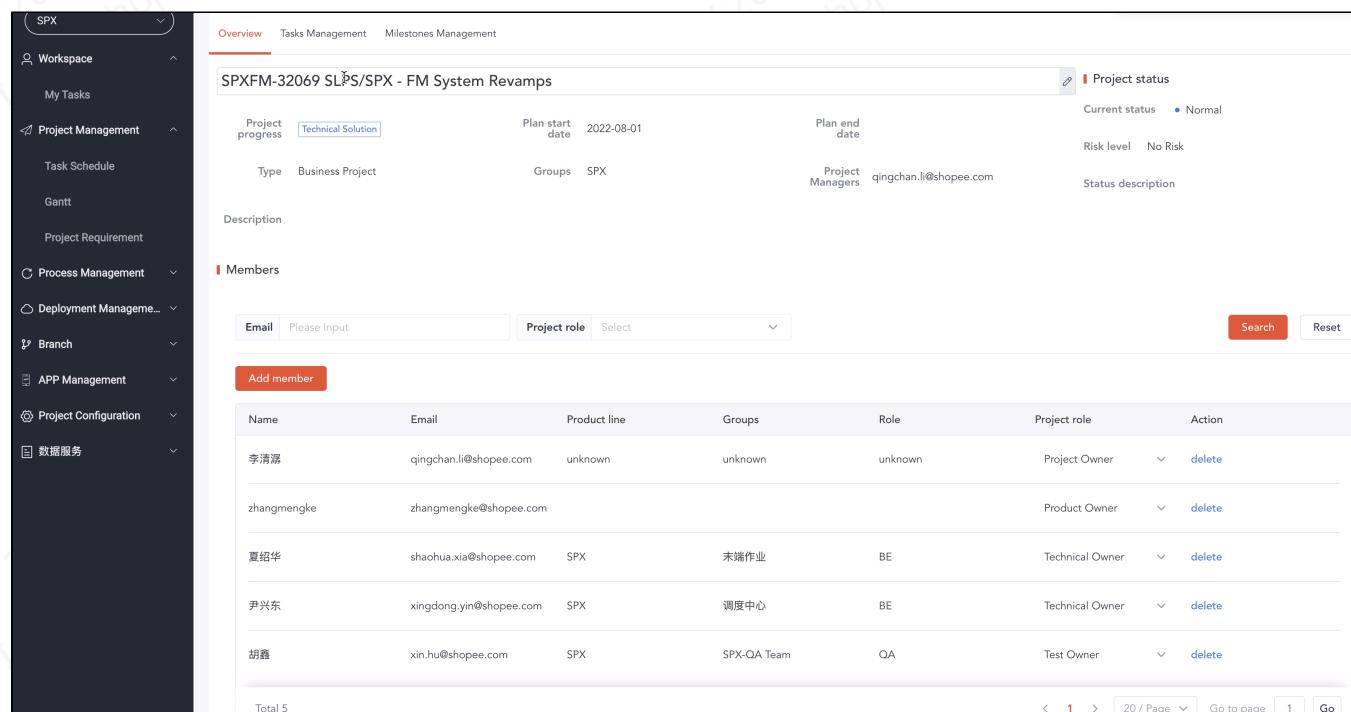
DMS manages Gantt charts in "Project Management" → "Gantt" to follow up on the allocation of human resources to the team, and to quickly manage individual Sub tasks.



2.3. Special Projects

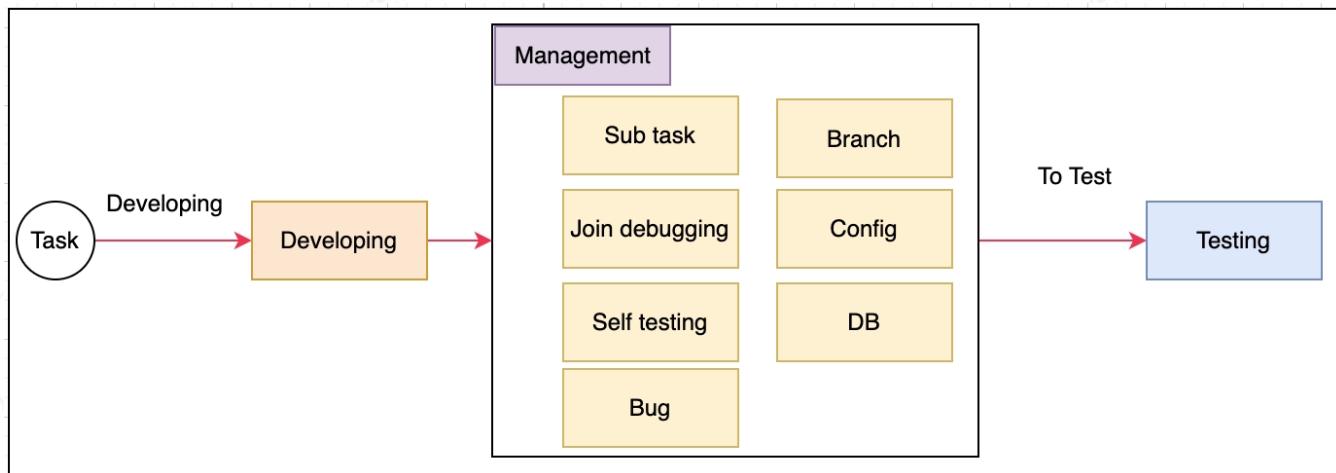
DMS在“Project Management”→“Project Requirement”进行专项项目的管理，设置里程碑，任务分解，进度跟进，风险管理等。

DMS can manage special projects in "Project Management" → "Project Requirement", set up milestones, task decomposition, progress follow-up, risk management, etc.



3. Flow Management

3.1. Development Process



1) 在 “Process Management”→” R&D Process “找到要开发的需求，通过 “Developing” 进入开发

1) Find the requirement to be developed in "Process Management" → "R&D Process" and enter the development through "Developing".

Flow Id	Flow Status	Jira Key	Fix version/s	Jira Summary	Dev Due Date	Labels	Developer	QA	Operation
8106559	Waiting	SPSERP-2082 Task	Testing	SPX-Live-220817	TrackingService migrated to EventService				<button>Detail</button> <button>Developing</button>

2) 在 “Detail” 里进行研发过程的管理，包括Sub task管理，Branch管理，Config管理，联调，自测结果等

(2) In the "Detail" page, you can manage the R&D process, including Sub task management, Branch management, Config management, co-location, self-test results, etc.

2.1) Sub task，可以按照任务类型进行创建管理，最常见的Story point，计划时间

2.1) Sub task can be created and managed according to task types, most commonly Story point and schedule time.

SPSERP-1667 Walkin User Midware Refactor [Developing] Comments

Planned Test Date:	None	Planned UAT Date:	None	Planned Release Date:	None																																															
Fix Version/s:	None	Labels:	None	Developer:	None																																															
more ▾																																																				
Branch	Configuration	<u>Sub-task</u>	Bug	Test Report	Joint-debugging																																															
Filter Assignees... Total: 1 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>jira_key</th> <th>Type</th> <th>Summary (fields)</th> <th>Assignee</th> <th>Story Points</th> <th>Start / Due</th> <th>Status</th> <th>Operation</th> </tr> </thead> <tbody> <tr> <td>> SPSERP-1668</td> <td>[BE] walk in refactor</td> <td>Project Design</td> <td>tim.zhao@shopee</td> <td>3</td> <td>CLOSED</td> <td>Edit Copy</td> </tr> <tr> <td></td> <td></td> <td>Enter the title description as comprehensively as possible</td> <td>tim.zhao@shopee</td> <td>0.5</td> <td>Start date - End date</td> <td>TO DO</td> <td>Save Cancel</td> </tr> <tr> <td colspan="8" style="text-align: right;">Save all</td> </tr> <tr> <td colspan="8" style="text-align: center;">+ New Record</td> </tr> <tr> <td colspan="8"> Project Design Program Development Dev Joint-debugging Smoke Testing Design Dev Self-Testing Testing Design Testing Execution Requirements change </td> </tr> </tbody> </table>						jira_key	Type	Summary (fields)	Assignee	Story Points	Start / Due	Status	Operation	> SPSERP-1668	[BE] walk in refactor	Project Design	tim.zhao@shopee	3	CLOSED	Edit Copy			Enter the title description as comprehensively as possible	tim.zhao@shopee	0.5	Start date - End date	TO DO	Save Cancel	Save all								+ New Record								Project Design Program Development Dev Joint-debugging Smoke Testing Design Dev Self-Testing Testing Design Testing Execution Requirements change							
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2.2.) Git branch management

按照分支管理规范，进行分支创建、合并等操作

Create and merge branches according to Branch Management Specifications

SPSERP-1667 Walkin User Midware Refactor [Developing] Comments

Planned Test Date:	None	Planned UAT Date:	None	Planned Release Date:	None																									
Fix Version/s:	None	Labels:	None	Developer:	None																									
more ▾																														
Branch	Configuration	<u>Sub-task</u>	Bug	Test Report	Joint-debugging																									
<div style="background-color: #f0f0f0; padding: 5px; margin-bottom: 5px;"> 对最近一次提交在三个月内的分支提供了代码合入检测能力。如果已合入但没有具体合入信息，有以下两个原因： 1.有不规范的合入方式(fast forward) 2.当目标分支提交远大于源分支的情况下回合目标分支 </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #0072bc; color: white;">New Branch</th> <th colspan="5"></th> <th style="text-align: right;">↻ Refresh</th> </tr> <tr> <th>Repo</th> <th>Source branch</th> <th>Last Commit</th> <th>Target branch</th> <th>Last MR</th> <th>Operation</th> </tr> </thead> <tbody> <tr> <td>shopee/bg-logistics/spx/service-point</td> <td>feature/SPSERP-1667-walkin-refactor</td> <td>Merge branch 'version/release--220608' into 'release'</td> <td>Merged test</td> <td>2022-06-09 15:49:59</td> <td> New Merge Build Conflict Delete </td> </tr> <tr> <td></td> <td>feature/SPSERP-1667/yongchang.chen</td> <td>Merge branch 'version/release--220608' into 'release'</td> <td>Merged feature/SPSERP-1667-walkin-refactor</td> <td></td> <td> New Merge Build Conflict Delete </td> </tr> </tbody> </table>						New Branch						↻ Refresh	Repo	Source branch	Last Commit	Target branch	Last MR	Operation	shopee/bg-logistics/spx/service-point	feature/SPSERP-1667-walkin-refactor	Merge branch 'version/release--220608' into 'release'	Merged test	2022-06-09 15:49:59	New Merge Build Conflict Delete		feature/SPSERP-1667/yongchang.chen	Merge branch 'version/release--220608' into 'release'	Merged feature/SPSERP-1667-walkin-refactor		New Merge Build Conflict Delete
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2.3).Config management

进行需求配置的集中管理

Centralized management of configurations

2.4).Joining Debugging

用于前后端的联调过程管理

For the management of the front and back-end interfacing process

2.5).Self testing management

在Athena系统执行测试用例，DMS会自动同步测试结果

Test cases are executed in the Athena system and the DMS automatically synchronizes the test results

SCFS-3891 计费平台 – rateTest使用rateTable的basicShippingFeeRule

Comments

Planned Test Date:	None	Planned UAT Date:	None	Planned Release Date:	None
Fix Version/s:	220720.fin	Labels:	no-need-qa	Developer:	yuanying.chen@shopee.com
QA:	yaxuan.shi@shopee.com				

more ▾

Branch Configuration Sub-task Bug [Test Report](#) Joint-debugging

Testing Report(Athena)

QA Developer Refresh

ID Name Process

4581 SCFS-3891 计费平台 – rateTest使用rateTable的basicShippingFeeRule–自测用例 (0 , 6) / 9

Audit Report(Jira)

Refresh

Testing Report Test Results Test Reporter Created Updated

IT Testing Tested by me, result passed yuanying.chen@shopee.com 2022-07-12T10:33:47 2022-07-12T10:33:47

2.6.Bug management

测试过程的bug流程管理，包括创建，修复，验证等

Bug process management for testing process, including creation, fixing, validation, etc.

SPFBS-2398 Nanning warehouse for FBS Phase 2-RTS Testing

Comments

Planned Test Date:	None	Planned UAT Date:	None	Planned Release Date:	None
Fix Version/s:	FBS - 220825 (UAT)	Labels:	None	Developer:	yupei.zhu@shopee.com
QA:	ming.tu@shopee.com				

more ▾

Branch Configuration Sub-task Bug Test Report Joint-debugging

Jira key Summary Assignee Reporter Severity Env Status Operation

SPFBS-8505 [F]RTS 创建单据日期选择组件可选 前一天的时间 longbin.... zhijun.hao... Normal Testing Waiting edit Doing Reviewing

SPFBS-8627 [F]创建RTS时existing状态的seller仍可选中 shihong.... ming.tu@sh... Normal Testing Waiting edit Doing Reviewing

SPFBS-8635 [F]Portal侧, Request Again时切换Warehouse, 没有再次弹框确认提示 shihong.... jingshi.wan... Normal Testing Waiting edit Doing Reviewing

SPFBS-8636 [F]RTS 创建单据 change rts 后弹窗提示不对 shihong.... zhijun.hao... Normal Testing Waiting edit Doing Reviewing

SPFBS-8471 [B]RTS 列表查询页面status列表pending approval状态不显示审批角色 ming.tu... ming.tu@sh... Normal Testing Testing edit Done Waiting

SPFBS-8472 [B]portal侧无法cancel非自己创建的RTS单据 ming.tu... ming.tu@sh... Normal Testing Testing edit Done Waiting

3.2.Submit testing Process

对于完成的需求进行提测，“ToTest”后，进入确认页面，编辑并发送提测邮件后完成提测

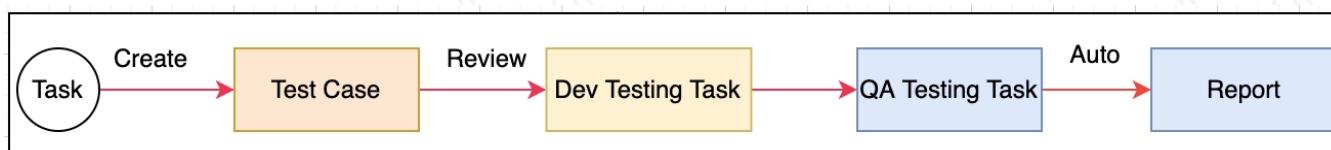
After "ToTest" the completed requirement, enter the confirmation page, edit and send the test email to complete the " submit testing".

The screenshot shows two windows from the Shopee Athena system:

- ToTest Dialog:** A modal window titled "ToTest" with a message: "No test task exists or the test task is not completed". It includes fields for "Assignee" (baozhen.chen@shopee.com), "Send Email" (checkbox checked), and "Edit email" (link). Buttons include "cancel" and "confirm".
- Email Compose Window:** A "Write email" window with the following fields:
 - Theme:** 提测:SPXF-29266 [PH] Add order account for Fresh delivery
 - Recipient:** baozhen.chen@shopee.com
 - c.c:** tim.zhao@shopee.com
 - Content:** Rich text editor with a toolbar. The content area contains:
 - 1、需求简介
 - Jira: [SPXF-29266](#)
 - PRD链接:
 - 技术方案链接:
 - 设计稿链接:
 - Save Button:** A blue "Save" button at the bottom right.

3.3. Testing Process

The main process for completing testing activities in the Athena system are as follows.



根据自己的Jira task设计Test Case, review后可以新建开发自测的任务和QA测试的任务, 系统会自动生成测试进度报告

According to their own Jira task design and review Test Case, the new development of self-testing tasks and QA testing tasks, the system will automatically generate test progress reports

The screenshot shows the Athena interface. On the left is a sidebar with categories like Manual Test, Automated Test, Stress Test, Quality Report, Project Setting, Mock Service, OMS Service, Spx Service, SLS Service, and Top Platform. A tree view under 'Manual Test' shows nodes such as SIP, EP Service, DR改造, and SSCWCS-422 EP 支持 DR. A specific task, 'P0 从LPS下单, LLS推送EP信息...', is selected and detailed on the right. The details include:

- Created by:** sharp.zhou
- Last edited by:** sharp.zhou
- Created time:** 2022-08-04 15:46:57
- Last edited time:** 2022-08-04 16:01:52
- Name:** 从LPS下单, LLS推送EP信息...
- Description:** 从LPS下单, LLS推送EP信息, OMS返回报错-EP重试推送给OMS
- Pre-requisite:** 从LPS端创建一个product_id=90003的订单
- Step:** 1.调用EP服务的ParseAndSaveElectronicProofData接口推送订单的EP信息
- Expectation:** 1.EP信息保存在DB中; 2.从LFS可以拿到订单信息; 3.EP信息给OMS推送失败, EP重试推送给OMS, 按照3秒, 6秒, 10秒, 60秒, 半小时的间隔重试推给OMS
- Priority:** P0 (highlighted in red)
- Jira key:** Select
- Type:** Select
- CID:** Select
- Tag:** Select

Below this is a table of test cases:

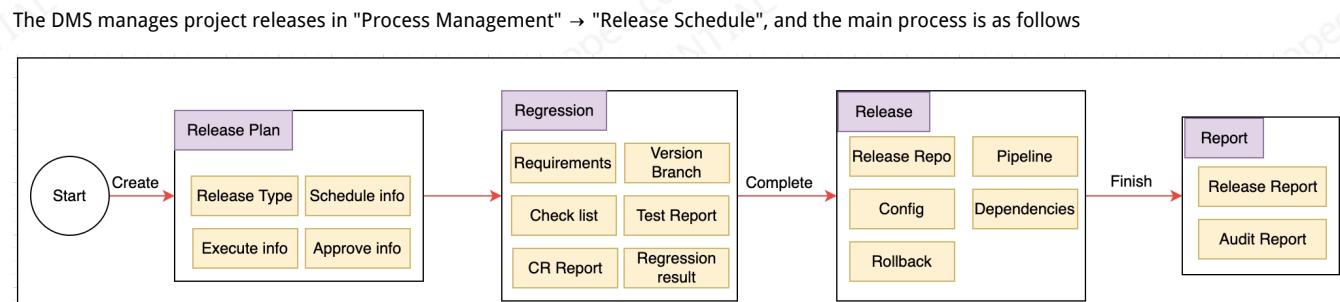
ID	Name	Type	Progress	Version	Jira	Creator	Action
4743	Test2	DEV	(0, 1) / 10	pjm-220721	SPCICD-1000	Manfei Shi	Edit Detail Report Delete
4737	Test	DEV	(0, 1) / 2		SPCICD-2100	Sharp Zhou Jiajun	Edit Detail Report Delete
4736	测试任务	QA	(0, 0) / 150		SPCICD-2100	Sharp Zhou Jiajun	Edit Detail Report Delete
4735	34234	DEV	No cases			Sharp Zhou Jiajun	Edit Detail Report Delete

3.4. Bug Management Process

None

3.5. Project Release Process

DMS in "Process Management" → "Release Schedule" performs management, the main process is as follows



用户创建后的Release Schedule如下所示

The Release Schedule after user creation is shown below

Process Management / Release plan detail

Regression Completed Approval is not required.

Fix version/Jira: spx-live-220803 Deadline for Code Merge: Regression Done Time: 2022-08-03 11:46:20 Plan Release Time: 2022-08-03 11:46:20

Regression Executor: derrick.xiong@shopee.com Executor: derrick.xiong@shopee.com Release Approvers Approve or Not: Needs all approval Send approval e-mail:

Requirements Regression Release Operation Log

Version / Jira

Flow Id	Flow Status	Jira Key	Sign off Time	Labels	Desc	Assign	Dev	QA	Operate
8103932	Wait For Delivering	SPXFM-37734	2022-08-02 23:30:43	is-issue x-spx-reportcenter	[SPX-VN] Cannot filter data in before July at COD Collection Summary and COD Orders Overview Summary	meimei.xu@shopee.com			
8103551	Developing	SPXFM-37714	2022-07-29 15:37:35	Task: Developing	[Sea+tw+latam]修改proof of return tab显示条件	zenghui.li@shopee.com			
8098864	Wait For Delivering	SPXFM-37321	2022-08-02 15:46:58	Task: Delivering	[All] 站点信息同步，支持同步SP的详细地址	yifan.mao@shopee.com			
8095008	Wait For Delivering	SPXFM-37073	2022-08-03 14:10:44	Task: Delivering	[FE] 劳动力拆分~冗余代码remove	haotian.zhang@shopee.com	haotian.zhang@shopee.com		
8094981	Wait For Delivering	SPXFM-37072	2022-08-02 14:10:44	in-station	[BR/MX]拒收动态逻辑调整	long.chen@shopee.com	long.chen@shopee.com		
8094483	Wait For Delivering	SPXFM-36987	2022-08-02		[ID+PH] Enhancement for Workstation Group Through	lihua.zhai@shopee.com	yang.tao@shopee.com	lihua.zhai@shopee.com	

3.6.Datafix Process

None

4.Customer Service and Feedback

用户通过DMS提供的客服入口，可以反馈问题或者需求

The customer service portal of the DMS allows users to give feedback on problems or requirements

