



TestManager

API test management and automation solution

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Features

1. Build API test system
2. API test automation
3. Solutions Integration
(Test Tool , Jira, etc)
4. Provide various reports

The slide features a decorative background. On the left, there are several overlapping geometric shapes in shades of blue and grey, including triangles and polygons. On the right, there is a faint, pixelated city skyline. The main title 'I. Introduction' is written in a large, bold, blue font.

I. Introduction

Part I

Background

1. Challenge
2. Goal
3. Benefits

Increase of API Defect Costs

- ✓ Increased use of Open APIs increases demand for **increased demand of open services**
- ✓ **Impact of API defect is expanded from inside the enterprise to outside**

Expansion of cloud service costs

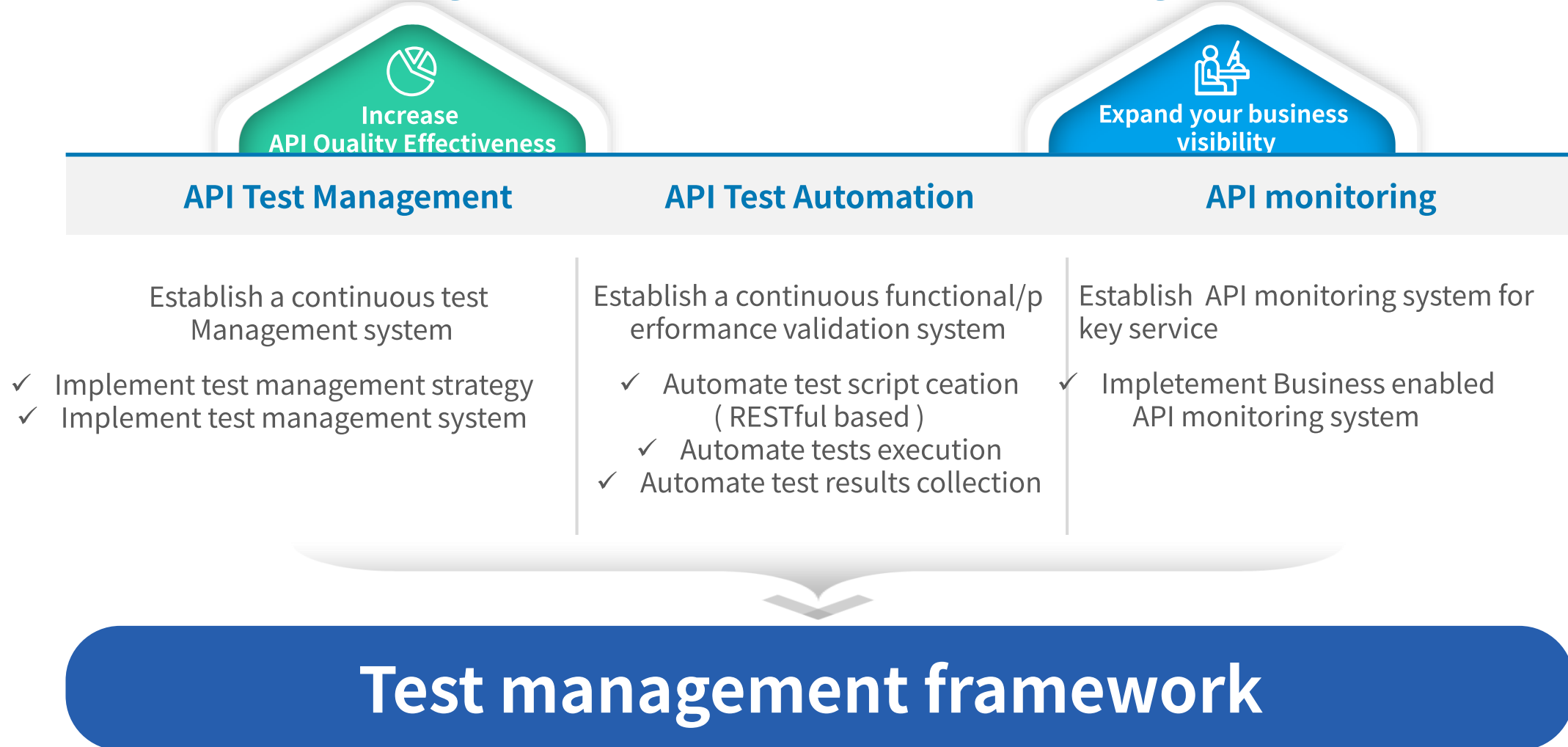
- ✓ **The transformation of your existing On-premise environment to the cloud** is getting bigger.
- ✓ **Unoptimized API performance drives excessive cloud costs**

Inadequate Readiness of MSA architecture

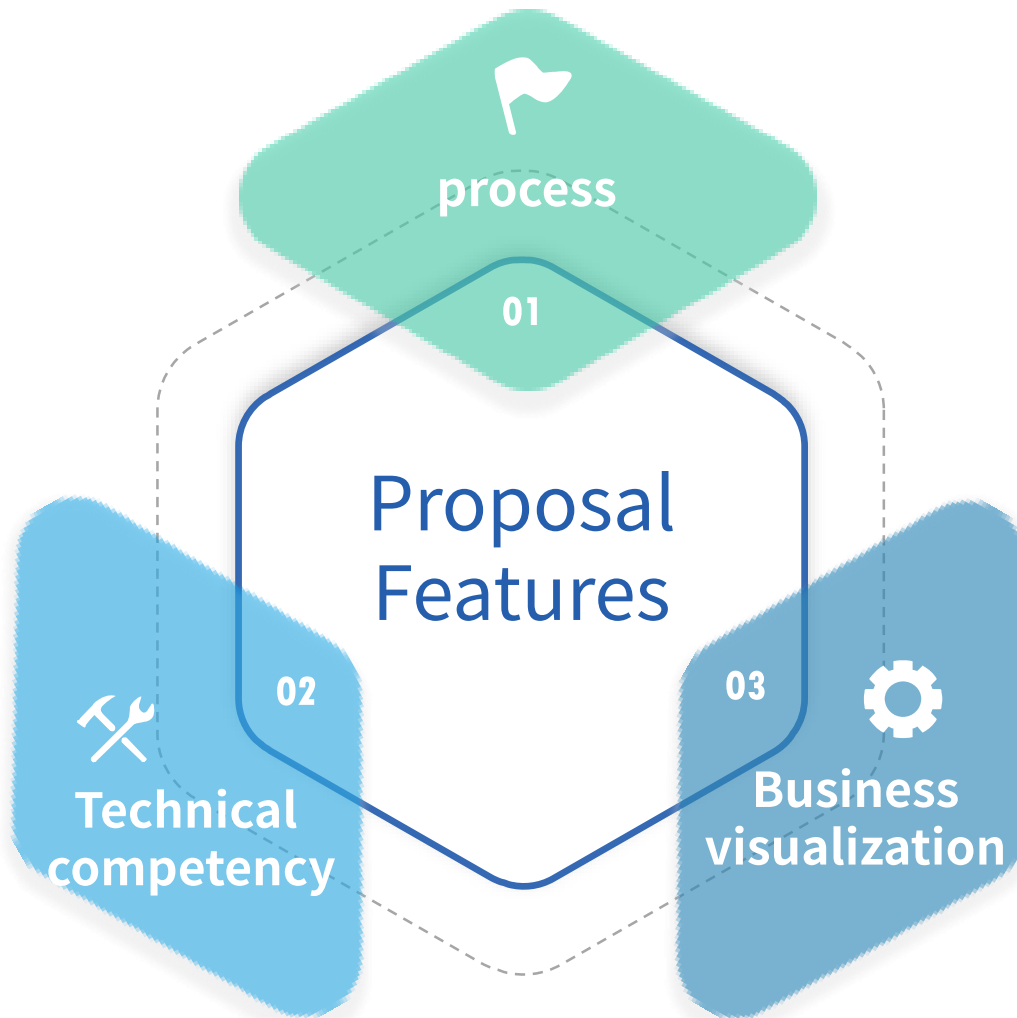
- ✓ MSA architecture implementation **need API test management framework.**
- ✓ **Expansion of CI/CD leads to the need for automation of service tests/performance tests**

“Need to build up an integrated management system for API Testing”

Enhancing corporate competitiveness through improvement of API management



Benefits



Process

- ✓ **Improvement of development productivity** by establishing API test management system
- ✓ **Automate 24x7 functional/performance validation**

Technical competency

- ✓ **Provide test results of the same quality** regardless of test personnel level
- ✓ **Assetization of testing know-how**

Business visualization

- ✓ **Implement business-linked API monitoring**



II. Proposed Solution

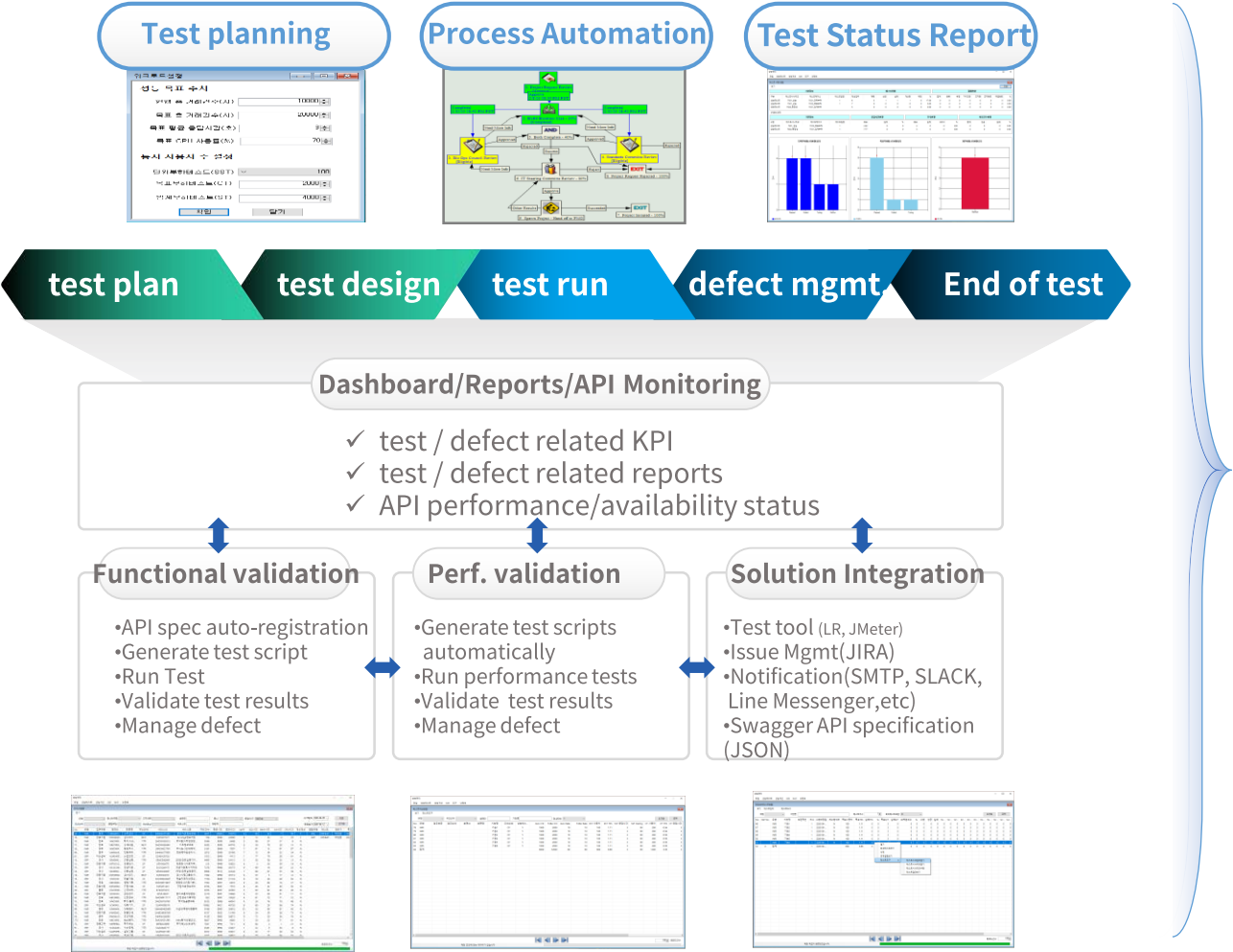
Part II

Proposed Solution

1. Solution Overview
2. Main Features
3. To-Be Image



TestManager is a solution that provides test management and test automation across areas from API test planning to end of test.



- ① enforce efficiency
API Test Management System
- ② enforce productivity
API Test Automation
- ③ enforce scalability
Solution Integration
- ④ enforce visibility
Dashboard / Report



TestManager provides various features for key areas of API testing and can be customized to meet customer requirements .

API test management

- Test design
- Test Run
- Defect Management

Provide high-quality services through the establishment of an API test management system

Solutions Integration

- Test Tool(LoadRunner/Jmeter)
- Issue Mgmt.(JIRA)
- Notification(SMTP, SLACK, Line,etc)
- Swagger API Specification

Improve test productivity through organic integration with test tools

Reduce quality validation time with test automation

API test automation

- Test Script Auto Generation
- Performance Test Script Auto Generation
- Periodic API monitoring

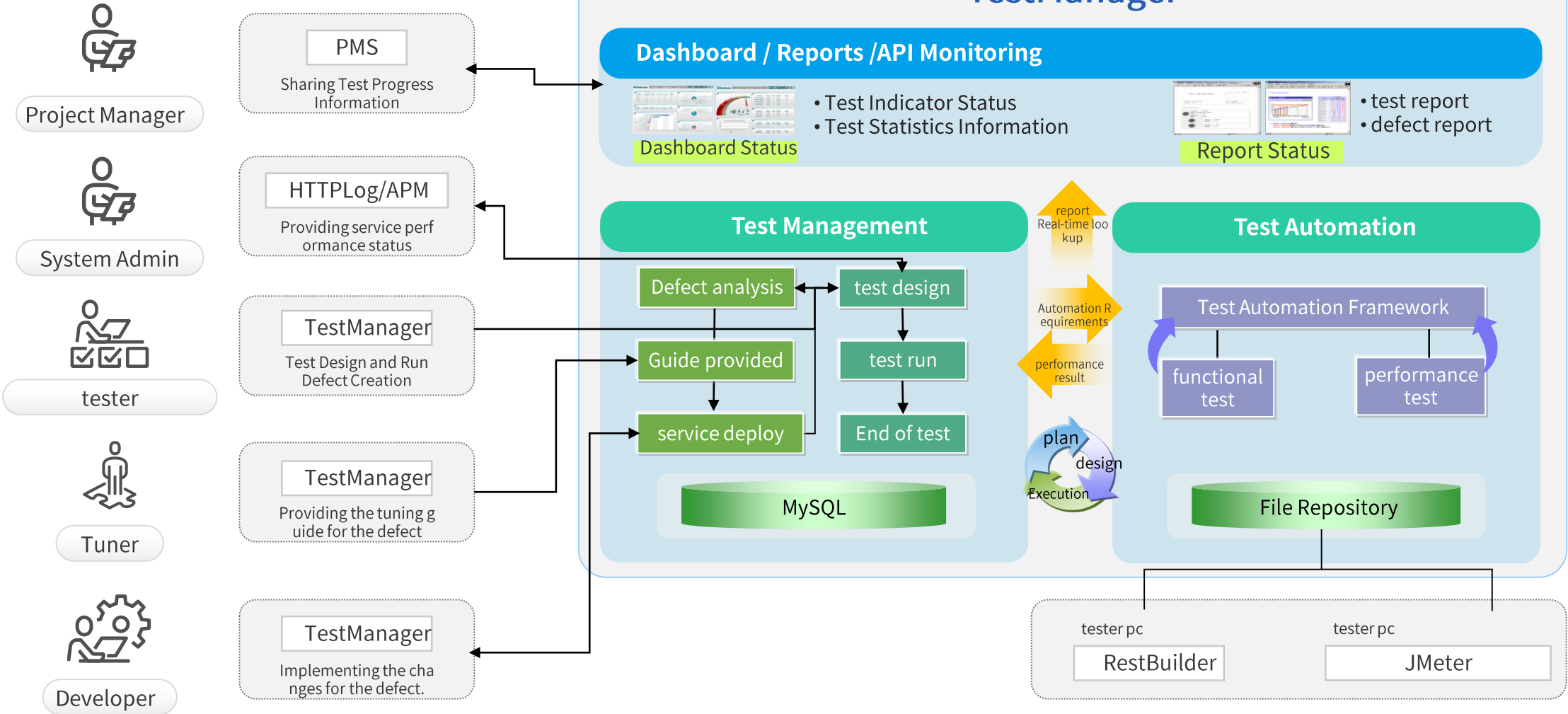
Automatically generate a set of reports related to API service quality assessments

Dashboard / Report

- API function check status
- API performance check status
- API Availability Check Status
- Defect management status
- Performance test report
- Defect Management Report



Maximize API quality visibility and business enabled monitoring with the introduction of TestManager.





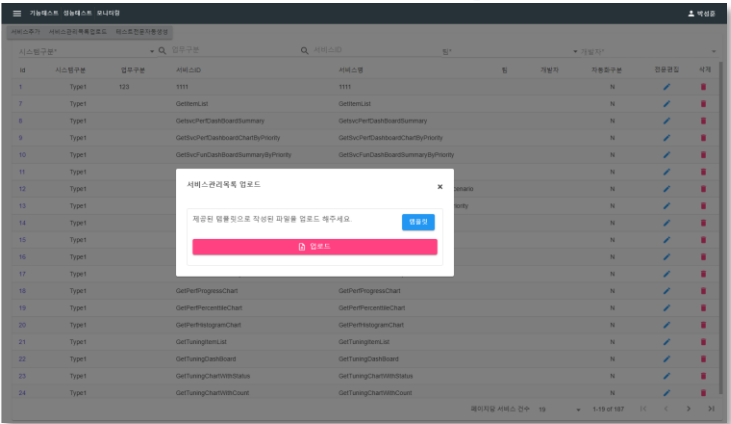
III. Features

Part III Solution Features

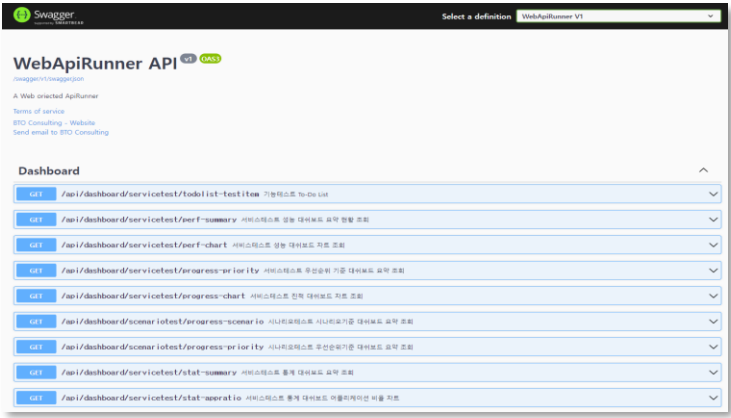
1. Build API ServiceTest management system
2. Build API ScenarioTest management system
3. Build API PerformanceTest management system



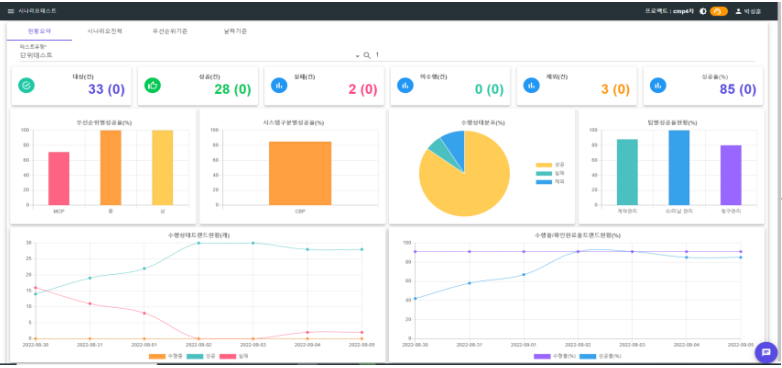
In addition to API management information, API specification-based test case management and automatic switching of performance test scripts supports overall testing activities, from functional validation to performance validation.



Upload API management sheet file (Excel)



Automatic creation of test script based on Swagger



Run tests and validate the results



Edit test script and pre-validation

❖ Main Features

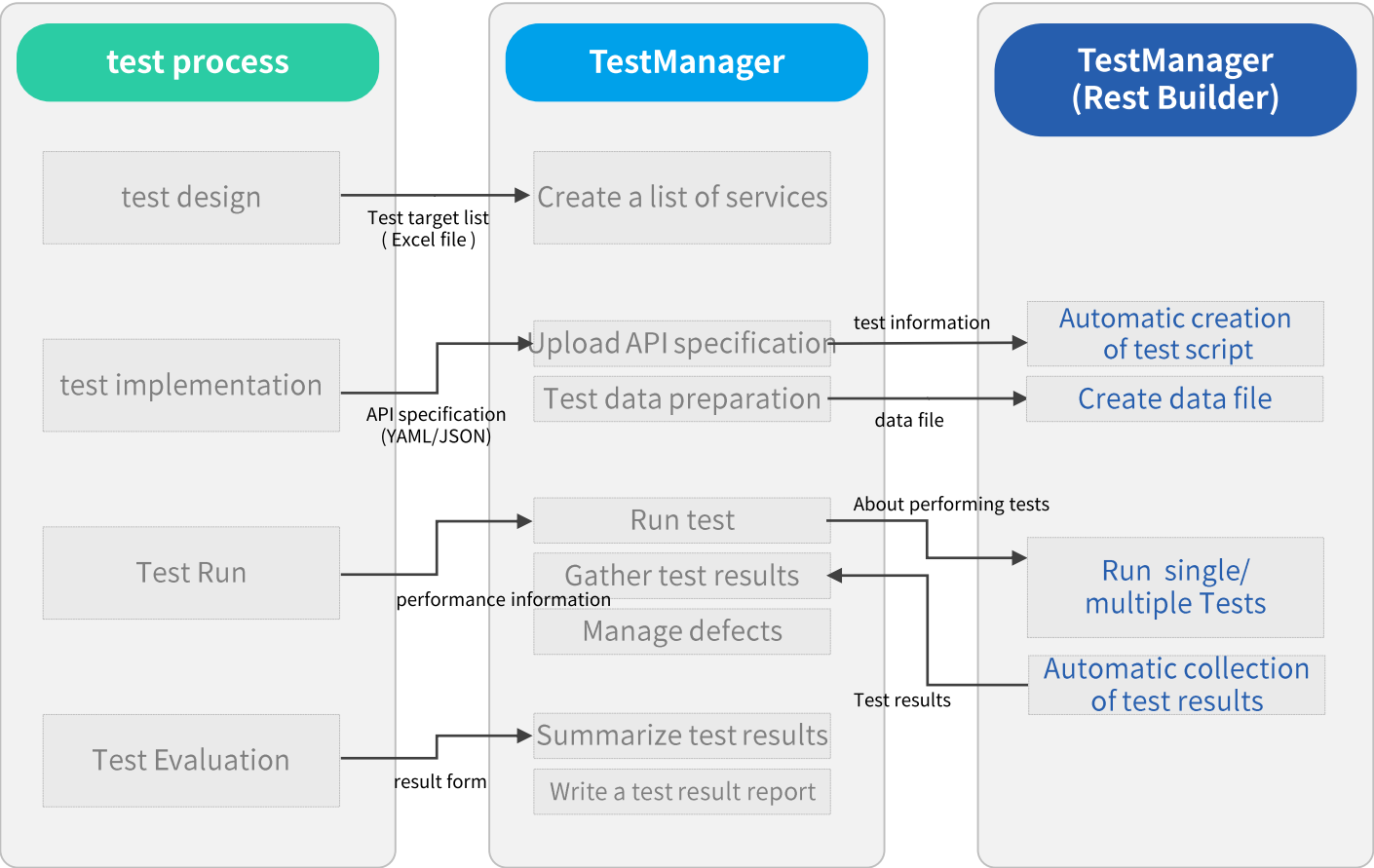
- ✓ API Management
- ✓ Automatic creation of spec-based test text
- ✓ Write test cases and perform tests
- ✓ Automatic tracking of test results and History management

❖ Benefit

- ✓ understand API test status
- ✓ Build up API test management system



The test script is automatically generated through the **Swagger-based API specification**, and **functional validations are automated through the built-in RestBuilder**.



❖ Main Features

- ✓ API Management Document-Based Service Definitions
- ✓ Ceate test script based on API sp ecifications
- ✓ Automating test execution and collection of test results

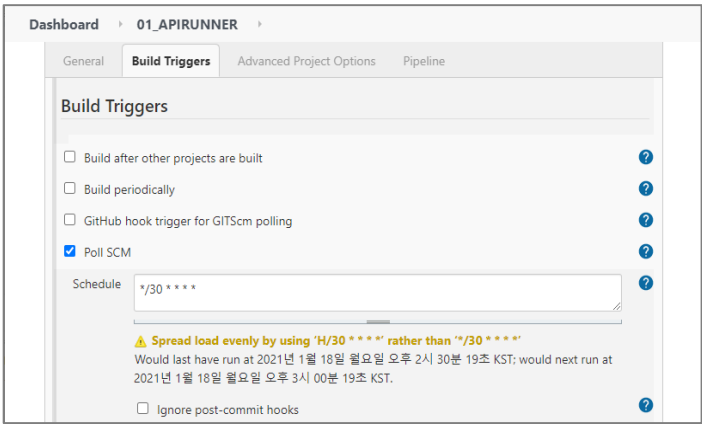
❖ Benefit

- ✓ Establish an efficient API test management scheme

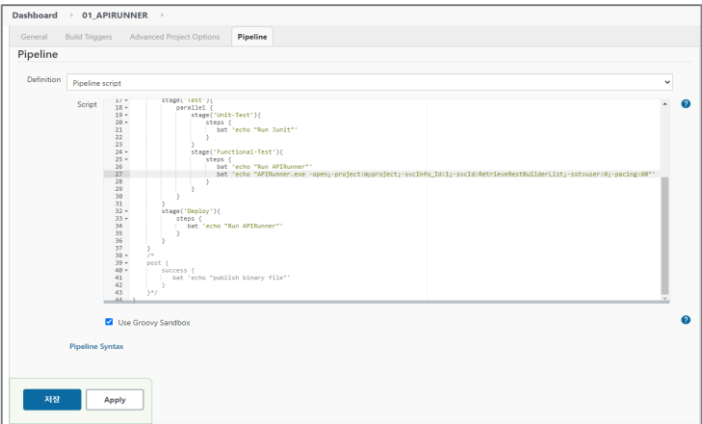


Auto-generated test script can also be used for CI/CD integration through Jenkins or its own scheduler.

✓ TestManager / Jenkins Pipeline Integration configuration

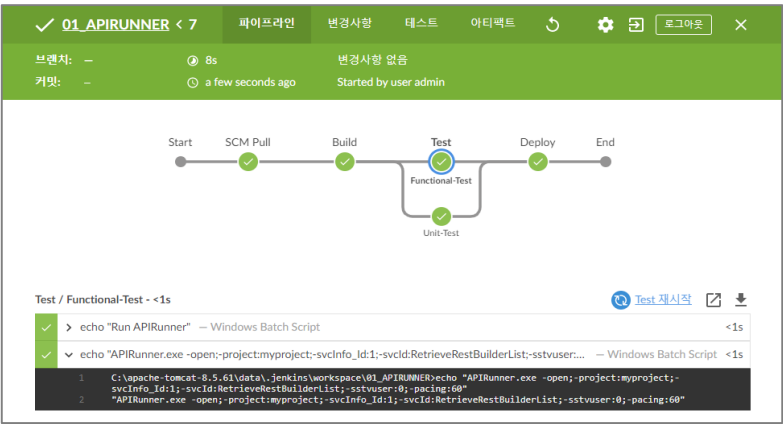


Jenkins existing job configuration



TestManager configuration to Test stage in Pipeline
(API target list and test environment setting)

CI/CD Task
Pipeline execution



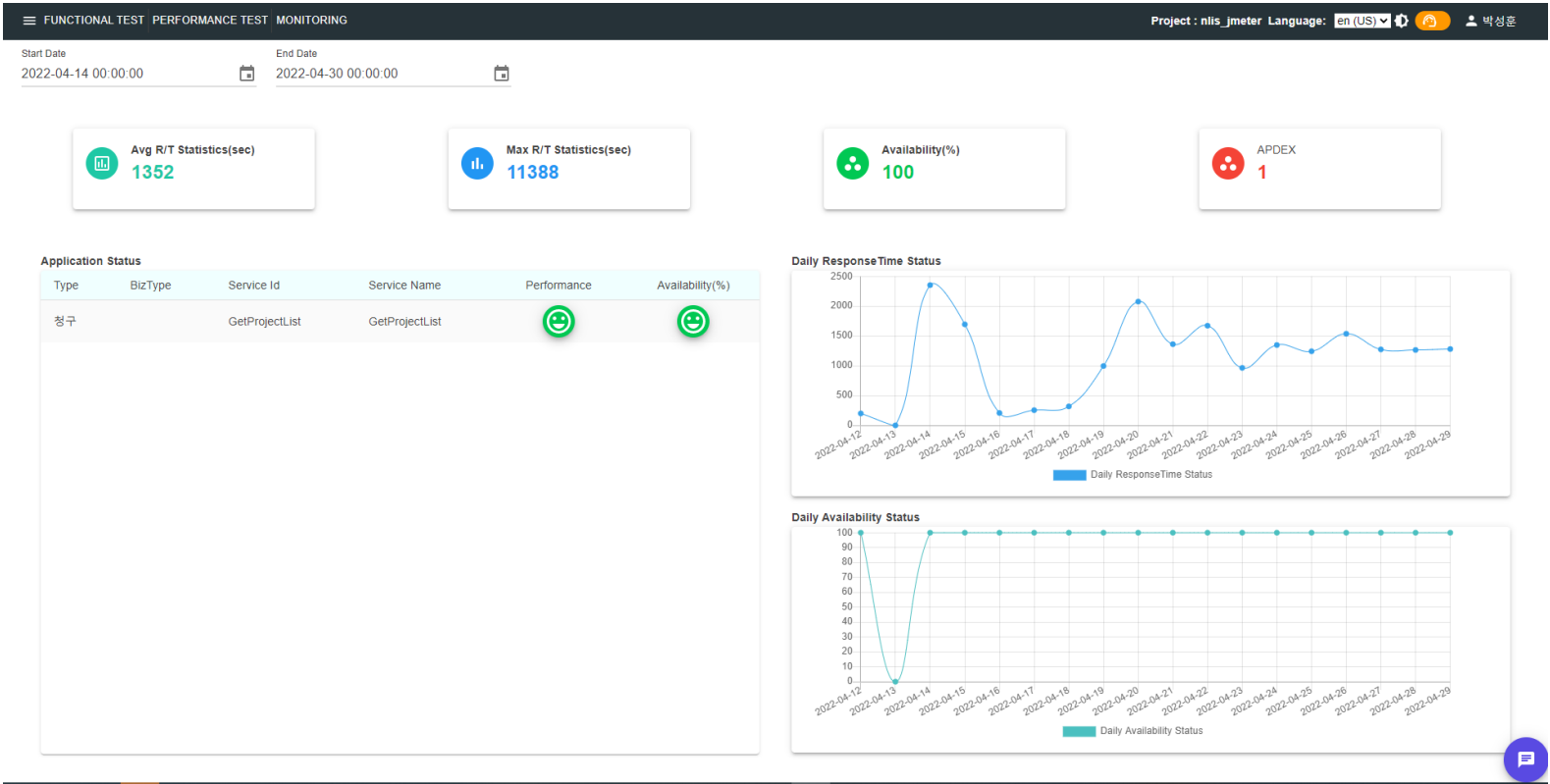
Pipeline Execution Result



test status based on build information



Key APIs are performed periodically through their own scheduler to provide business visibility information (performance/availability).



❖ Main Features

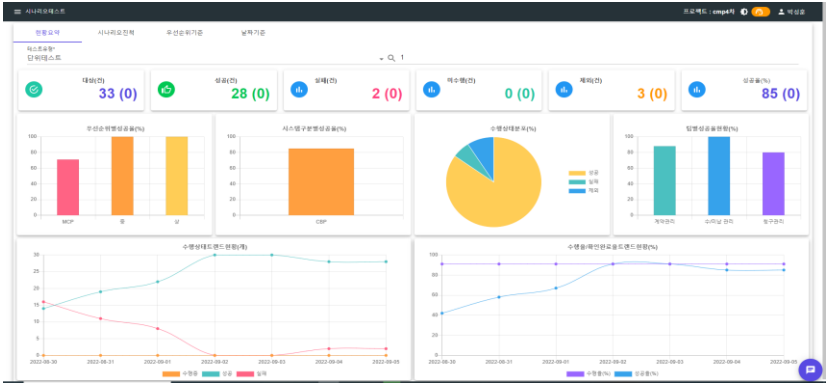
✓ weekly / daily status of

❖ Benefit

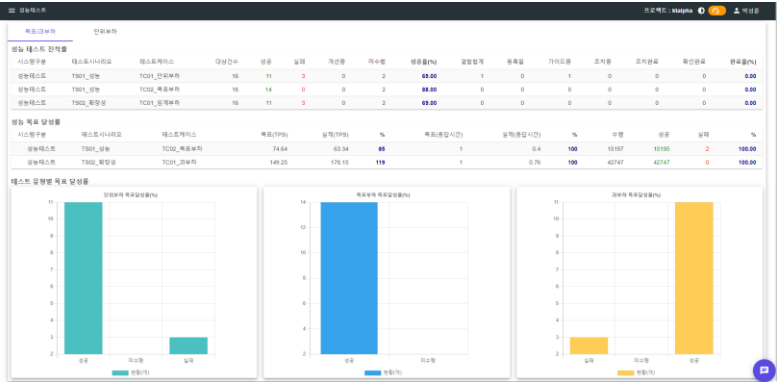
✓ Provide business availab
ility



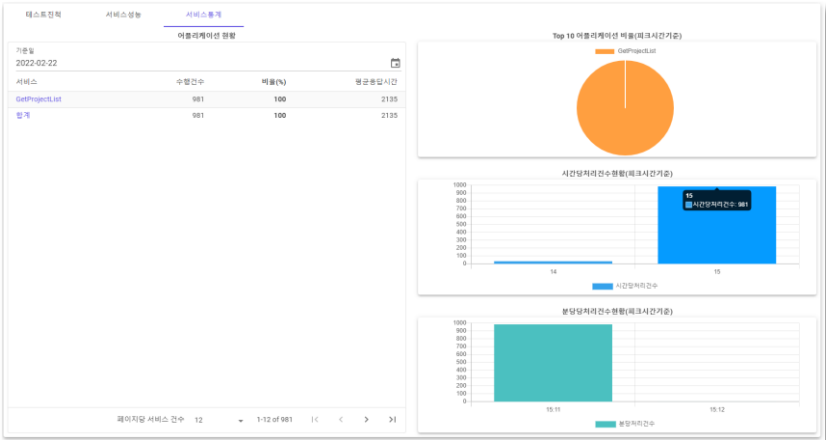
Provides real-time dashboards based on key statuses related to testing.



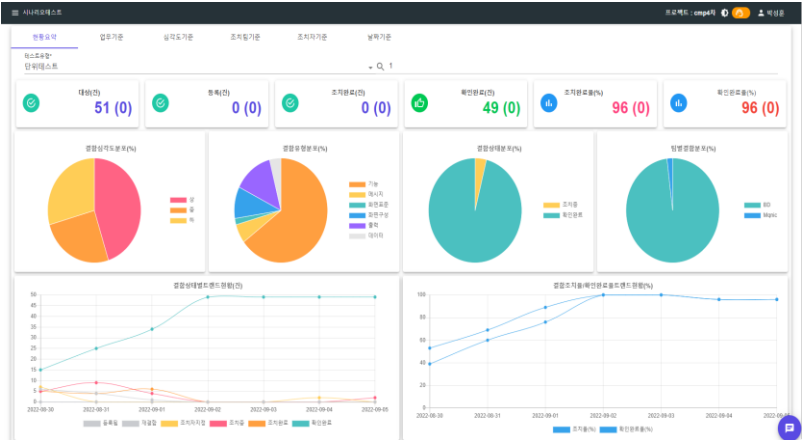
Functional Test Status



Performance Test Status



Service Status



Defect Status

Main Features

✓ Provide information on the status of various tests

Benefit

✓ Establish a real-time test evaluation system



Provides real-time reports based on key statuses related to testing.

✓ The report can be customized to meet the customer's requirements .

기능테스트 성능테스트 모니터링 Project : nlls_jmeter 언어: KR (KR) 박성훈

리포트유형* 서비스테스트대상목록 리포트생성

1 / 27

페이지 너비

서비스테스트대상목록 (2022-11-09 오전 10:46:29기준)

유형	업무구분	업무상세	화면id	화면명	서비스 I D	설명	우선순위	자동화대상	수행일	테스터	수행상태
오더					GetItemList	GetItemList	CP	N			미수행
오더					GetSvcPerfDashBoardSummary	GetSvcPerfDashBoardSummary	CP	N	2022-05-10 오후 4:11:21		실패
오더					GetSvcPerfDashboardChartByPriority	GetSvcPerfDashboardChartByPriority	CP	N			미수행
오더					GetSvcFunDashBoardSummaryByPriority	GetSvcFunDashBoardSummaryByPriority	CP	N			미수행
오더					GetSvcFunDashboardChart	GetSvcFunDashboardChart	CP	N			미수행
오더					GetScenarioFunDashBoardSummaryByScenario	GetScenarioFunDashBoardSummaryByScenario	CP	N			미수행
오더					GetScenarioFunDashBoardSummaryByPriority	GetScenarioFunDashBoardSummaryByPriority	CP	N			미수행
오더					GetSvcStatDashBoardSummary	GetSvcStatDashBoardSummary	CP	N			미수행
오더					GetSvcStatDashBoardChartWithRatio	GetSvcStatDashBoardChartWithRatio	CP	N			미수행
오더					GetSvcStatDashBoardChartWithTph	GetSvcStatDashBoardChartWithTph	CP	N			미수행
오더					GetSvcStatChartWithTpm	GetSvcStatChartWithTpm	CP	N			미수행
오더					GetPerfProgressChart	GetPerfProgressChart	CP	N			미수행
오더					GetPerfPercentileChart	GetPerfPercentileChart	CP	N			미수행

❖ Main Features

✓ Provide information on the status of various tests

❖ Benefit

✓ Establish a real-time test evaluation system

[illegible][illegible]

Defect management

- ✓ Scenario-based test case (unit / integration / system / acquisition) management
- ✓ Defect management
- ✓ Provide test status dashboard
- ✓ Provide test status report

- ✓ Improved feature quality and visibility



You can configure test scenarios by uploading a list of test scenarios created based on a pre-prepared Excel template..

SCENARIOTEST Project : nlls Language: en (US) 박성훈

UPLOAD TESTSCENARIOLIST ADD SCENARIO PASSALL ADD CYCLE DELETE CYCLE VIEW CYCLE HISTORY

Type* BizType TestScenario TestType* 통합테스트 Tester Status*

Type	Id	Type	BizType	TestType	Cycle	TestScenario	Status	TestCase	Status	Delete
<input type="checkbox"/>	1780	복합	LM팀	IntegrationTest	2	IT-CF-F2-S001 거래처 속성관리	PASSED	IT-CF-F2-S001-C001 거래처 속성관리	PASSED	
<input type="checkbox"/>	1781	복합	LM팀	IntegrationTest	2	IT-CF-F2-S002 I/F 서비스 조회 및 재처리	PASSED	IT-CF-F2-S002-C001 I/F 의뢰 서비스 조회 및 재처리	PASSED	
<input type="checkbox"/>	1782	복합	LM팀	IntegrationTest	2	IT-CF-F2-S003 I/F 서비스 조회 및 재처리	PASSED	IT-CF-F2-S003-C001 I/F 결과 서비스 조회 및 재처리	PASSED	
<input type="checkbox"/>	1783	복합	LM팀	IntegrationTest	2	IT-CF-F2-S004 이력조회	FAILED	IT-CF-F2-S004-C001 file 조회	FAILED	
<input type="checkbox"/>	1784	복합	LM팀	IntegrationTest	2			IT-CF-F2-S005-C001 api 조회	FAILED	
<input type="checkbox"/>	1786	복합	LM팀	IntegrationTest	2			IT-CF-F2-S007-C001 외주병리 API	PASSED	
<input type="checkbox"/>	1787	복합	LM팀	IntegrationTest	2			IT-CF-F2-S008-C001 Genome API	PASSED	
<input type="checkbox"/>	1803	복합	LM팀	IntegrationTest	2			IT-CF-F2-S024-C001 유비케어 의뢰 API	PASSED	
<input type="checkbox"/>	1804	복합	LM팀	IntegrationTest	2			IT-CF-F2-S025-C001 웹 의뢰 속성	FAILED	
<input type="checkbox"/>	1805	복합	LM팀	IntegrationTest	2			IT-CF-F2-S026-C001 웹 결과 속성	FAILED	
<input type="checkbox"/>	1806	복합	LM팀	IntegrationTest	2	IT-CF-F2-S027	PASSED	IT-CF-F2-S027-C001 Labcell APP API	PASSED	
<input type="checkbox"/>	1807	단일	LM팀	IntegrationTest	2	IT-CM-F2-S001	PASSED	IT-CM-F2-S001-C001 국내 거래처	PASSED	
<input type="checkbox"/>	1808	단일	LM팀	IntegrationTest	2	IT-CM-F2-S002	PASSED	IT-CM-F2-S002-C001 해외 거래처	PASSED	
<input type="checkbox"/>	1809	단일	LM팀	IntegrationTest	2	IT-CM-F2-S003	PASSED	IT-CM-F2-S003-C001 공지등록	PASSED	

Upload TestScenarioList

Upload a file created with the provided template.

	업무구분	업무상세	테스트시나리오 ID	테스트시나리오명	시나리오결과	테스트케이스 ID	테스트케이스명	결과상태	화면 ID	화면명	우선순위	테스트유형	차수	비고
18	1	업무상세	CBP-TE100-P100	계약 공통	성공	CBP-TE100-P100-C001	Input 값 Validation	성공	계약 관리 모션화면		상	단위테스트	1	(1) 날짜
18	2	계약관리	P1	계약 공통	성공	CBP-TE100-P100-C002	메뉴 구성 및 권한관리	성공	계약 > 계약관리		중	단위테스트	1	(1) 계약(1depth) -> 계약
	3	계약관리	P1	계약 목록	실패	CBP-TE100-P101-C003	계약 목록 기본	실패	계약 > 계약관리 > 목록		중	단위테스트	1	(1) 계약 > 계약관리 > 목록
	4	계약관리	P1	계약 목록	실패	CBP-TE100-P101-C004	계약 상세검색 설정	실패	계약 > 계약관리 > 상세검색		중	단위테스트	1	(1) 좌측 목록 상단 상세
	5	계약관리	P1	계약 목록	실패	CBP-TE100-P101-C005	계약 정보-계약 기본	실패	계약 > 계약관리 > 목록		상	단위테스트	1	(1) 계약 > 계약관리 > 목록



The test scenario coverage analysis provides an intuitive view of the associated test case status and fault status.

시나리오테스트

Project : cmp4차 언어: kr (KR)

테스트 커버리지

수행정보

실패

테스트 현황

결합현황

Id	테스트시나리오	테스트시나리오명
290	CBP-TE100-P102	계약 등록
291	CBP-TE100-P102	계약 등록
292	CBP-TE100-P102	계약 등록
293	CBP-TE100-P102	계약 등록
294	CBP-TE100-P102	계약 등록
295	CBP-TE100-P102	계약 등록
296	CBP-TE100-P102	계약 등록
297	CBP-TE100-P102	계약 등록

시나리오테스트

Project : cmp4차 언어: kr (KR)

테스트 커버리지

수행정보

실패

대상(개) 8

성공(개) 7

실패(개) 1

테스트 현황

결합현황

Id	테스트케이스ID	테스트케이스명	심각도	결합유형	수행상태	reviewer	조치예정완료일	조치팀	조치자
290	CBP-TE100-P102-C006	고객 정보 입력	상	기능	확인완료	우성미	2022-08-31	BD	고경진
322	CBP-TE100-P102-C006	고객 정보 입력	중	기능	확인완료	서형철	2022-08-31	BD	고경진
296	CBP-TE100-P102-C012	계약 등록-SSOne 결재완료 품의서 업로드 후 등록완료	중	기능	확인완료	서형철	2022-09-04	BD	최진형
329	CBP-TE100-P102-C006	고객 정보 입력	상	기능	확인완료	우성미	2022-08-29	BD	최진형
295	CBP-TE100-P102-C011	납부 정보 입력-카드 자동 납부	상	기능	확인완료	우성미	2022-08-29	BD	고경진
291	CBP-TE100-P102-C007	계약 상세정보 입력	상	기능	확인완료	우성미	2022-08-30	BD	장용석
331	CBP-TE100-P102-C006	고객 정보 입력	상	기능	확인완료	우성미	2022-09-01	BD	최진형
334	CBP-TE100-P102-C011	납부 정보 입력-카드 자동 납부	하	출력	확인완료	서형철	2022-09-01	BD	장용석
332	CBP-TE100-P102-C006	고객 정보 입력	중	기능	확인완료	서형철	2022-09-01	BD	장용석
297	CBP-TE100-P102-C013	계약 등록-CBP 품의 신청 및 승인 후 등록완료	하	메시지	확인완료	서형철	2022-09-01	BD	고경진
340	CBP-TE100-P102-C011	납부 정보 입력-카드 자동 납부	하	출력	확인완료	우성미	2022-09-01	BD	최진형

페이지당 건수 12 1-12 of 15

페이지당 건수 16 1-16 of 33



Defects related to the test case can be checked on one screen, and you can move it directly through the link.

Details

ADD DEFECT

VIEW DEFECT LIST (6)

Type*
복합

Priority*
High

BizType
LM팀

BizDetail
고객I/F

TestScenario*
IT-CF-F2-S004

TestScenario Description*
이력조회

TestCase*
IT-CF-F2-S004-C001

TestCase Description*
file 조회

Screen Id
CF1010004

Screen Name
인터페이스 출력 로그

TestType*
통합테스트

Cycle
2

Interface Type(Y/N)*
N

Interface Name

Test Step

Test Data
1. web결과조회에서 file up/down (선행)
2. UI에서 up/down file확인 및 이력 확인

Expected Result

TEST RESULT

Planned Date
2021-09-14

Executed Date
2021-12-08-00:54:26

Status*
FAILED

Tester
박성준

Test Result

Save

Related Defect List

DefectNo	Status	Creator	Creation Date	Responsible Team	Responsible	defect_description
6212	확인완료	이치현	2021-09-06 16:38:58	고객I/F	박성재	동일 시간에 성공과 실패가 같이 나오는데 맞는건가요? (첨부파일 참고)
6211	확인완료	이치현	2021-09-06 16:35:49	고객I/F	박성재	1. 파일명은 있는데 다운 받으려고 누르면 원격서버에 파일이 없다고 오류창 뜨고 이후 폴더 검색창도 뜹니다. 2. 성공여부 N 일때도 조건이 있을텐데 조건이 안나옵니다. 첨부파일 참고
6210	확인완료	이치현	2021-09-06 16:34:09	고객I/F	박성재	거래처 정보가 비어있는 로그가 있습니다. (첨부파일 확인)
6017	확인완료	이치현	2021-09-02 21:27:50	고객I/F	박성재	그리드 영업소 필드가 비어있습니다. 그리고 조회조건에 영업소로 조회가 안됩니다.
6018	조치중	이치현	2021-09-02 21:32:19	고객I/F	박성재	오류 내역 상세 표기가 안됩니다. 알수없는 오류발생 및 데이터가 유효하지 않습니다. 라고만 뜹니다.
2057	확인완료	이치현	2021-09-02 21:26:44	고객I/F	박성재	성공여부가 N인 항목은 파일 다운이 안됩니다. (web결과조회에서 는 가능)



Built-in best practice-based defect management workflows enable efficient defect management with little customization.

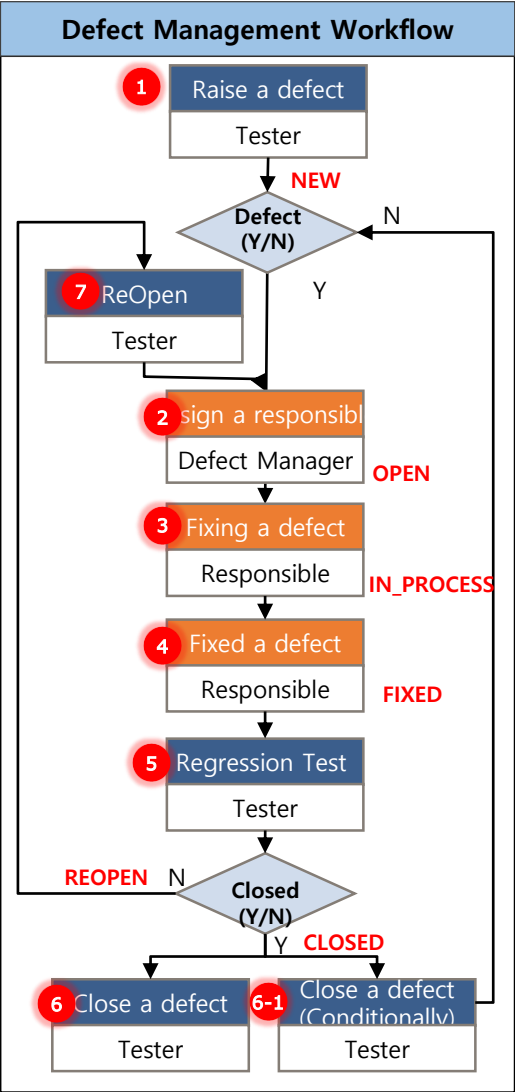
Details

Test Id 1809	Type 단일	BizType LM팀	BizDetail 커뮤니케이션
TestScenario IT-CM-F2-S003	TestScenario Description 웹 결과조회 공지사항 관리	TestCase IT-CM-F2-S003-C001	TestCase Description 공지등록
Screen Id UICOPCO0046UICMWB00018	Screen Name 웹결과조회-공지사항 관리기타 공지		
TestType IntegrationTest	Cycle 2	Executed Date 2021-09-24 11:23:31	Status 성공
Test Result 연계결함 확인완료후 자동 업데이트됨			

DEFECT INFO(DEFECT NO.:2083) ATTACHMENT(3) HISTORY ROOT CAUSE ANALYSIS

Severity* Medium	Defect Type* 출력	Creator 이치현	Creation Date 2021-09-02 17:20:45
Defect Description 첨부파일 클릭시 파일 다운이 안되고 오류창 뜸			
Responsible Team* 고객IF	Responsible 신규석		
Planned Start Date 2021-09-08	Planned End Date 2021-09-09	Fixed Type(Y/N)* N	Fixed Date
Comment 재 테스트 결과 오류 미발생 확인 (중적은 첨부파일 확인) -- 09.09			
Status Closed	Close(Y/N)* Y	Closed Date 2022-11-09 10:29:54	

Save





If integrated with the Jira system, the Jira ticket is automatically issued based on the defect details when assigning the defect responsible, and the changes made on the Jira system are automatically synchronized to the TestManager.

Details

Test Id: 41, Type: 공통, BizType: , BizDetail: , TestScenario: 111, TestScenario Description: 111, TestCase: 11111, TestCase Description: 1111, Screen Id: 11111, Screen Name: 11111, TestType: IntegrationTest, Cycle: 2, Executed Date: 2022-09-08 15:09:36, Status: 실패, Test Result:

DEFECT INFO(DEFECT NO.:545) ATTACHMENT(0) HISTORY ROOT CAUSE ANALYSIS

Severity*: Medium, Defect Type*: 화면표준, Creation Date: 2022-09-23 15:22:47, Defect Description: wwwwww

Responsible Team*: 공통, Responsible: 박성훈

Planned Start Date: 2022-09-25, Planned End Date: 2022-09-25, Fixed Type(Y/N)*: N, Fixed Date: , Comment: [박성훈][2022-09-25 오후 7:44:52] 댓글 하나 추가, [박성훈][2022-09-25 오후 7:45:00] , InProgress, Close: N, Closed Date: , Save

프로젝트 / testmanager / 에픽 추가 / TESTMGR-21

첨부 하위 이슈 추가 이슈 연결 ...

설명
wwwwww

TestManager 결함번호	545
테스트유형	통합테스트
자수	없음
결함유형	화면표준
등록자	박성훈
등록일	2022-09-23 15:22:47

활동
표시: 모두 댓글 기록 최신 항목 먼저

댓글 추가...

프로 팀: 놀리서 댓글 추가

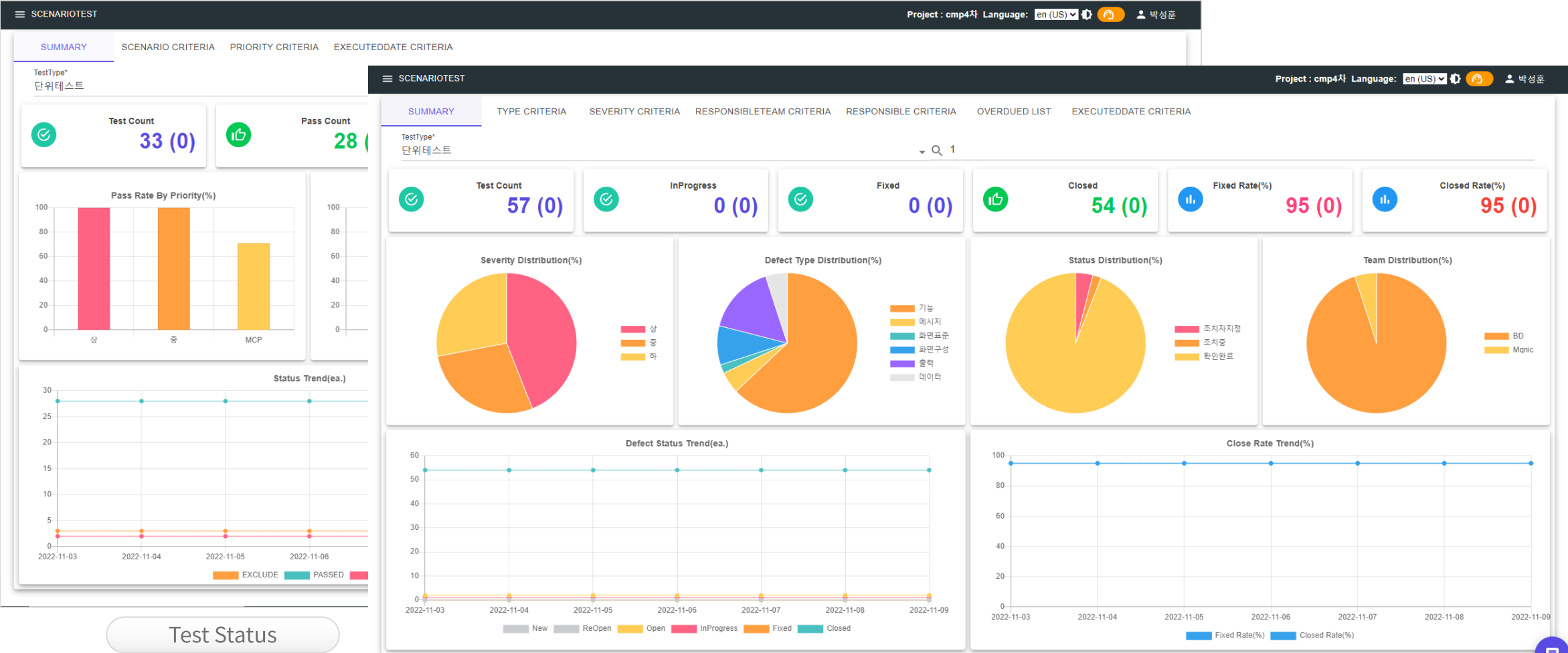
박성훈 2022년 9월 25일 오후 7:45
댓글 두개 추가
편집 · 삭제 ·

박성훈 2022년 9월 25일 오후 7:44
댓글 하나 추가

On defect fixed, the changes are synchronized with the TestManager



Provides real-time dashboards based on key statuses related to testing.





Provides real-time reports based on key statuses related to testing.

✓ The report can be customized to meet the customer's requirements .

SCENARIOTEST Project : nlis Language: en (US) 박성훈

Report Type* 수행팀별시나리오테스트현황 TestType* 통합테스트 Cycle* 2 Planned* false GENERATE

1 / 27
페이지 너비
찾기 | 다음

업무구분별 테스트수행현황 (2022-11-08 오후 9:00:00기준)

[시나리오기능현황]

개요		시나리오								케이스							
시스템구분	업무구분	총계	미수행	수행중	성공	성공율(%)	실패	수행	수행율(%)	소계	미수행	제외	성공	성공율(%)	실패	수행	수행율(%)
E2E	감염유전팀	88	0	4	71	81	13	84	95	88	0	0	75	85	13	88	100
E2E	검체관리팀	161	0	21	101	69	24	125	86	161	0	0	161	100	0	161	100
E2E	결핵진단팀	21	0	6	8	38	7	15	71	21	0	0	14	67	7	21	100
E2E	광주지역검사팀	23	0	0	21	91	2	23	100	23	0	0	21	91	2	23	100
E2E	면역(방사)팀	2	0	0	2	100	0	2	100	2	0	0	2	100	0	2	100
E2E	면역(호소)팀	36	0	9	27	75	0	27	75	36	0	0	36	100	0	36	100
E2E	미생물팀	105	0	17	79	75	9	88	84	105	0	12	84	80	9	93	100
E2E	생물자원제작팀	5	0	0	1	20	4	5	100	5	0	0	1	20	4	5	100
E2E	세포병리팀	9	0	3	4	44	2	6	67	9	1	0	6	67	2	8	89
E2E	세포유전팀	16	0	1	11	69	4	15	94	16	0	0	12	75	4	16	100
E2E	영양소	1249	0	90	466	70	114	580	87	1249	0	20	1229	98	0	1229	100
E2E	외주관리팀	7	0	0	4	57	3	7	100	7	0	0	4	57	3	7	100
E2E	인간유전팀	42	0	4	37	88	1	38	90	42	0	5	36	86	1	37	100
E2E	자동화검사1팀	48	0	0	36	75	12	48	100	48	0	0	36	75	12	48	100
E2E	자동화검사2팀	74	0	11	43	58	20	63	85	74	0	2	52	70	20	72	100
E2E	정책과제팀	22	0	0	17	77	5	22	100	22	0	1	16	73	5	21	100
E2E	제주지역검사팀	16	0	3	9	56	4	13	81	16	0	0	12	75	4	16	100



Incremental validation strategy of performance test enables individual API verification, business verification, and system architecture and capacity acceptance in order.

성능 테스트 진척률															
시스템구분	테스트시나리오	테스트케이스	대상건수	성공	실패	개선중	미수행	성공률(%)	결함합계	등록됨	가이드중	조치중	조치완료	확인완료	완료률(%)
성능테스트	TS01_성능	TC01_단위부하	30	28	1	0	1	93.00	12	0	0	1	0	11	92.00
성능테스트	TS01_성능	TC02_목표부하	25	19	2	0	3	76.00	2	0	0	0	0	2	100.00
성능테스트	TS02_확장성	TC01_임계부하	25	0	0	0	25	0.00	0	0	0	0	0	0	0.00

성능 목표 달성률												
시스템구분	테스트시나리오	테스트케이스	목표(TPS)	실제(TPS)	%	목표(응답시간)	실제(응답시간)	%	수행	성공	실패	%
성능테스트	TS01_성능	TC02_목표부하	86.27	268.03	310.69	2.8	2.49	112.61	52744	52743	1	100.00
성능테스트	TS02_확장성	TC01_과부하	173.5	0	0	2.8	0	280	0	0	0	0.00

❖ Main Features

- ✓ Systematize a strategy for performing performance tests
- ✓ individual API performance validation (Developer)
- ✓ Peak load / overload validation (performance test expert)
- ✓ Real-time identification of performance test status

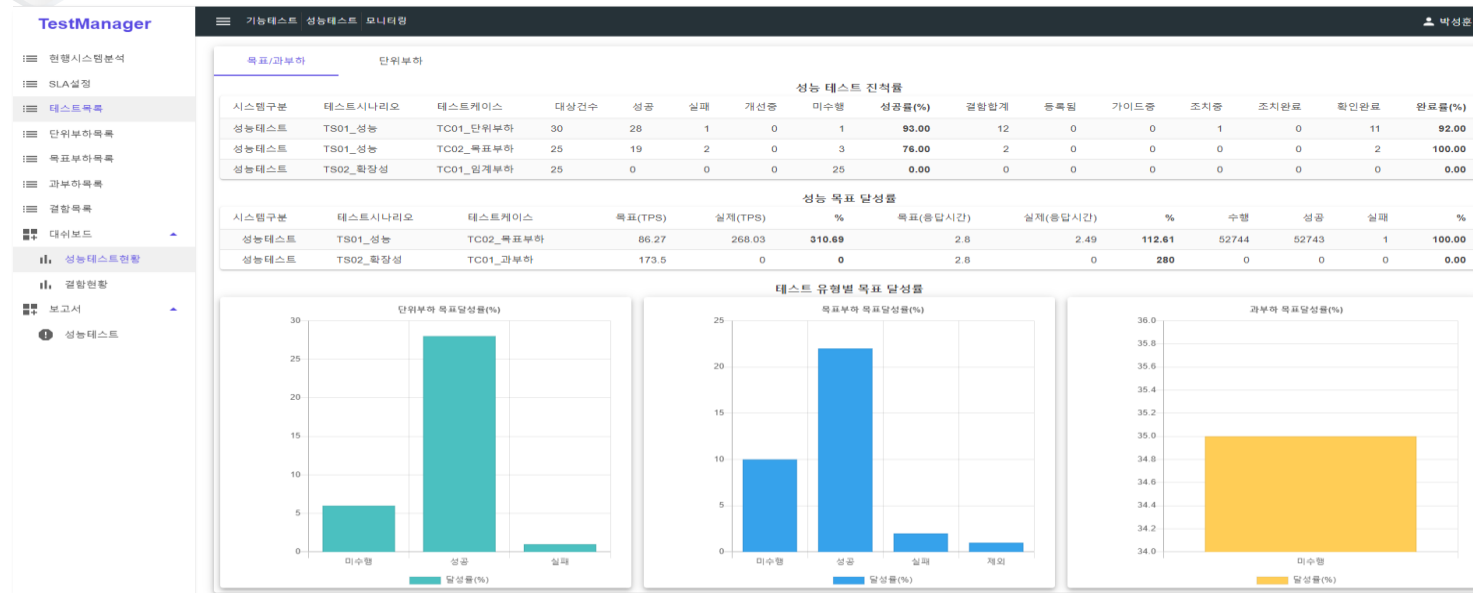
❖ Benefit

- ✓ Individual API performance validation
- ✓ System Architecture Verification
- ✓ Verification of system capacity adequacy

Test scenario	Test case	Test Purpose	metrics
Performance	Single Scenario Test	Check the maximum performance of each individual API	<ul style="list-style-type: none">Maximum TPSAverage response time at maximum TPS stateAverage CPU utilization at maximum TPS state
	Compound Test	Check the performance of overall APIs under the peak-time load	<ul style="list-style-type: none">Rmaximum TPSAverage response time at target TPS stateAverage CPU utilization at target TPS state
Scalability	Scalability Test	Check maximum performance Under the maximum CPU	<ul style="list-style-type: none">Critical TPS versus



Integration with the performance test tool (Jmeter/LoadRunner) enables systematic management of various activities related to performance test activities.

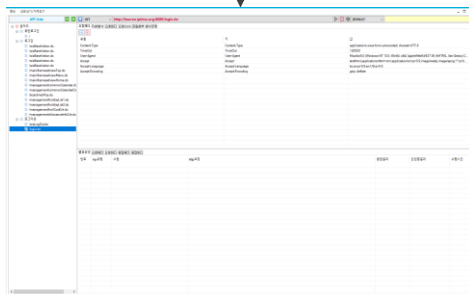


❖ Main Features

- ✓ Provide test script template
- ✓ Automatically create test scripts (with data)
- ✓ Real-time Test Status Monitoring (Back Listener)
- ✓ Automating test execution and saving the execution result DB

❖ Benefit

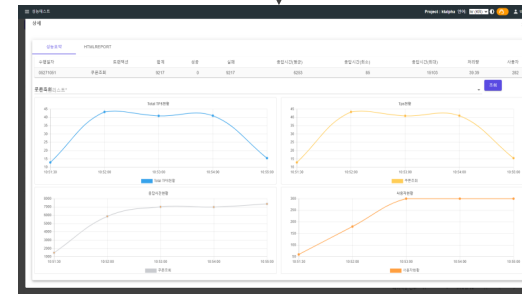
- ✓ Improving performance test quality



Test script Integration



Real-time monitoring



Test results



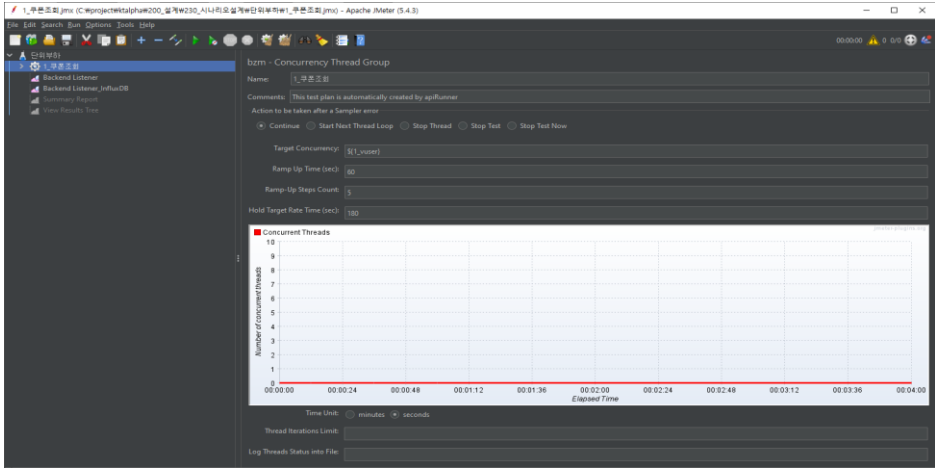
After functional test execution, test script can be used for performance validation purposes by converting into performance test scripts and linking them with performance test tools.



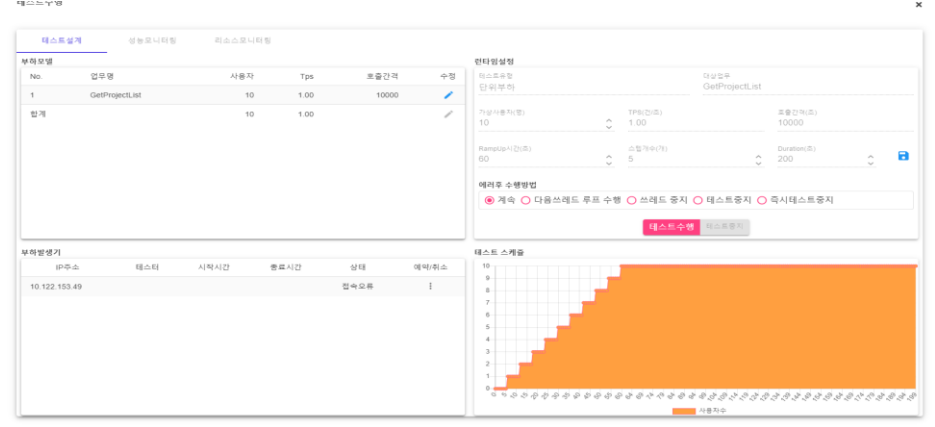
functional testing



test result



performance test script



test run



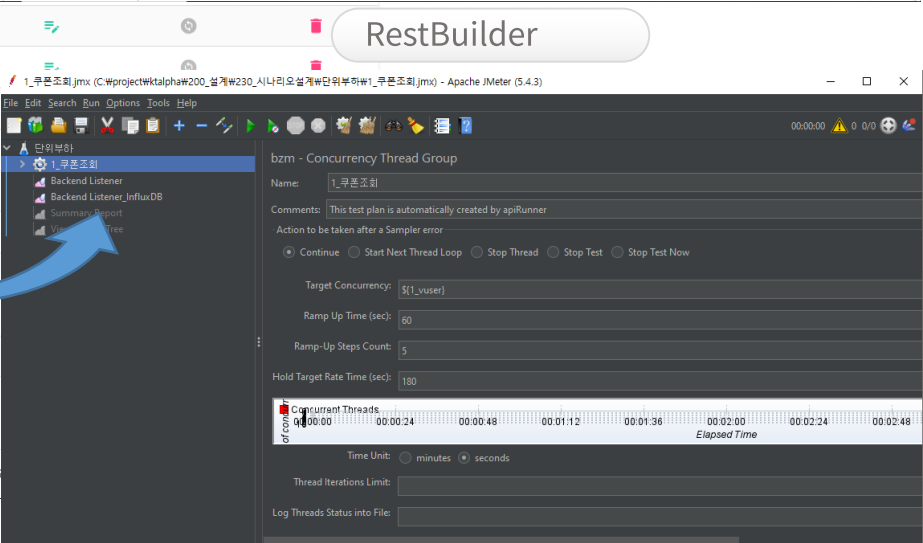
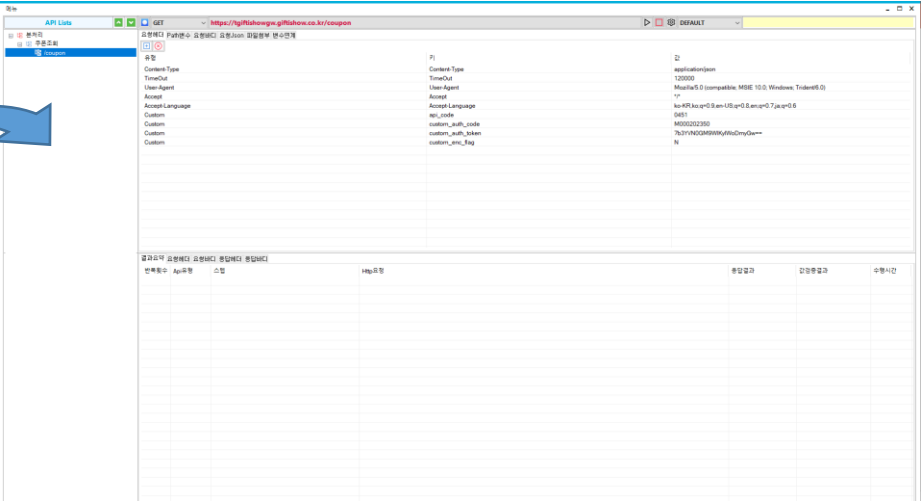
For API tests, the test script is written using the RestBuilder and can also be written directly from Jmeter.

PERFORMANCE TEST

ADD TEST UPLOAD TESTLIST

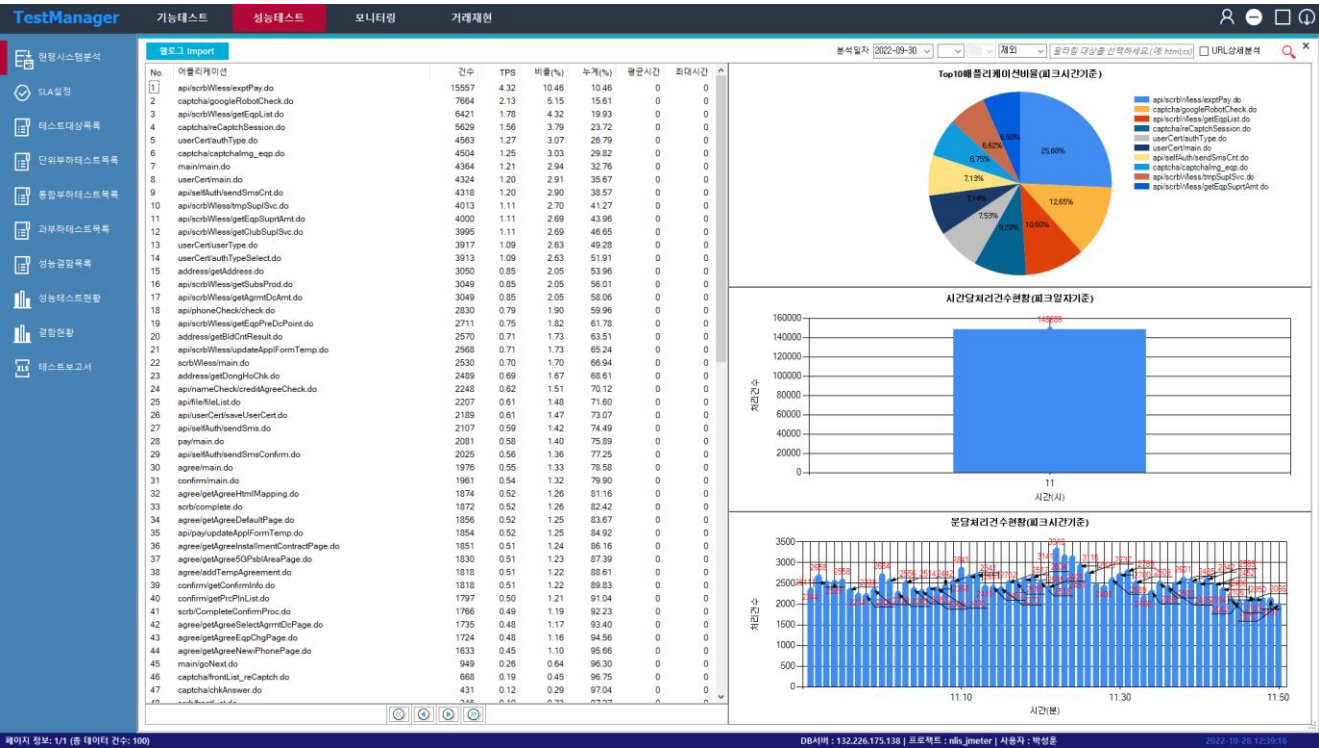
Type*	Type	TestCase	Single Scenario Test TPS	Compound Test TPS	Scalability Test TPS	Automation Type
1	MGW	쿠폰조회	43.58	21.79	43.58	Y
2	MGW	원픽쿠폰조회	38.46	12.82	25.63	N
3	MGW	쿠폰상세조회	17.58	6.86	11.72	Y
5	MGW	상품리리스조회	8.49	2.83	5.65	Y
7	MGW	쿠폰발급	2.85	0.95	1.9	Y
9	MGW	쿠폰교환	0.88	0.44	0.88	Y
10	MGW	쿠폰상태조회	2.37	0.79	1.57	Y
11	MGW	쿠폰상품정보조회	3.42	1.03	2.29	Y
13	POS	쿠폰인증	4.06	1.23	4.06	Y
14	POS	쿠폰교환_POS	4.06	1.23	4.06	Y
15	POS	쿠폰교환취소	4.06	2.03	4.06	Y
16	BIZ	쿠폰조회_BIZ	60.9	20.3	40.59	Y
17	BIZ	비즈머니이력조회	1.56	0.52	1.04	Y
18	BIZ	쿠폰발급_BIZ	1.53	0.51	1.01	Y
19	MGW	쿠폰발급1	1.71	0.57	1.14	Y
20	TOTAL		195.51	74.61	149.18	

RESTBUILDER JMETER CLOSE





It provides the As-Is system workload analysis based on the embedded weblog analysis tool to create a realistic load close to the actual situation.



Provide the basic data for the performance target

Performance Target

AsIs Total Count(hour)

268549

ToBe Total Count(hour)

268549

Tobe SubTotal Per Type

MGW:169842:135519;POS:21939:9847;BIZ:76768:74572

Type: Subtotal:Request total; Type: Subtotal:Request total

Target Average ResponseTime(sec)

1

Target Cpu Usage(%)

70

VirtualUser

Single Scenario Test

100

Compound Test

500

Scalability Test

1000

WorkloadModel

SingleScenarioTest CoefficientFactor

2

ScalabilityTest CoefficientFactor

2

RampUp(sec)

60

Step Count(ea.)

5

Duration(sec)

300

Save

As-Is system workload analysis



The load model (virtual user, objective TPS, Pacing Time) required for each test case can be calculated automatically based on the performance target and apply it in the test script.

Details

ID53

Type*검사

BizType검사

BizDetail장비 IF -> LIS 전송

Screen Id

Screen Name

Test Case*장비_IF_전송_API

DUP CHECK

Test Case Description*
-- 결과 처리된 건수를 조회 (결과조회 7/7일)
SELECT count(*) FROM GC_NLIS.LABT_MCH_RST_DC where 1=1
and regno in (select regno from gc_mig.tmp_LABT_MCH_RST_DC_0707)
and RST_TRMS_YN=Y
;

Priority*CP

UseType*Y

Team*

Developer*

Automation Type*Y

SstOnly*Y

Transaction Status

Asls Count50001

ToBe건수50001

Rate(%)2.5

CALCULATION

Single Scenario Test Model

Virtual User50

Target Tps41.67

Target R/T2

Pacing1.2

Coefficient3

Compound Test testModel

Virtual User18

Target Tps13.89

Target R/T2

Pacing1.26

Scalability Test testModel

Virtual User35

Target Tps27.78

Target R/T2

Pacing1.26

Coefficient2

Save

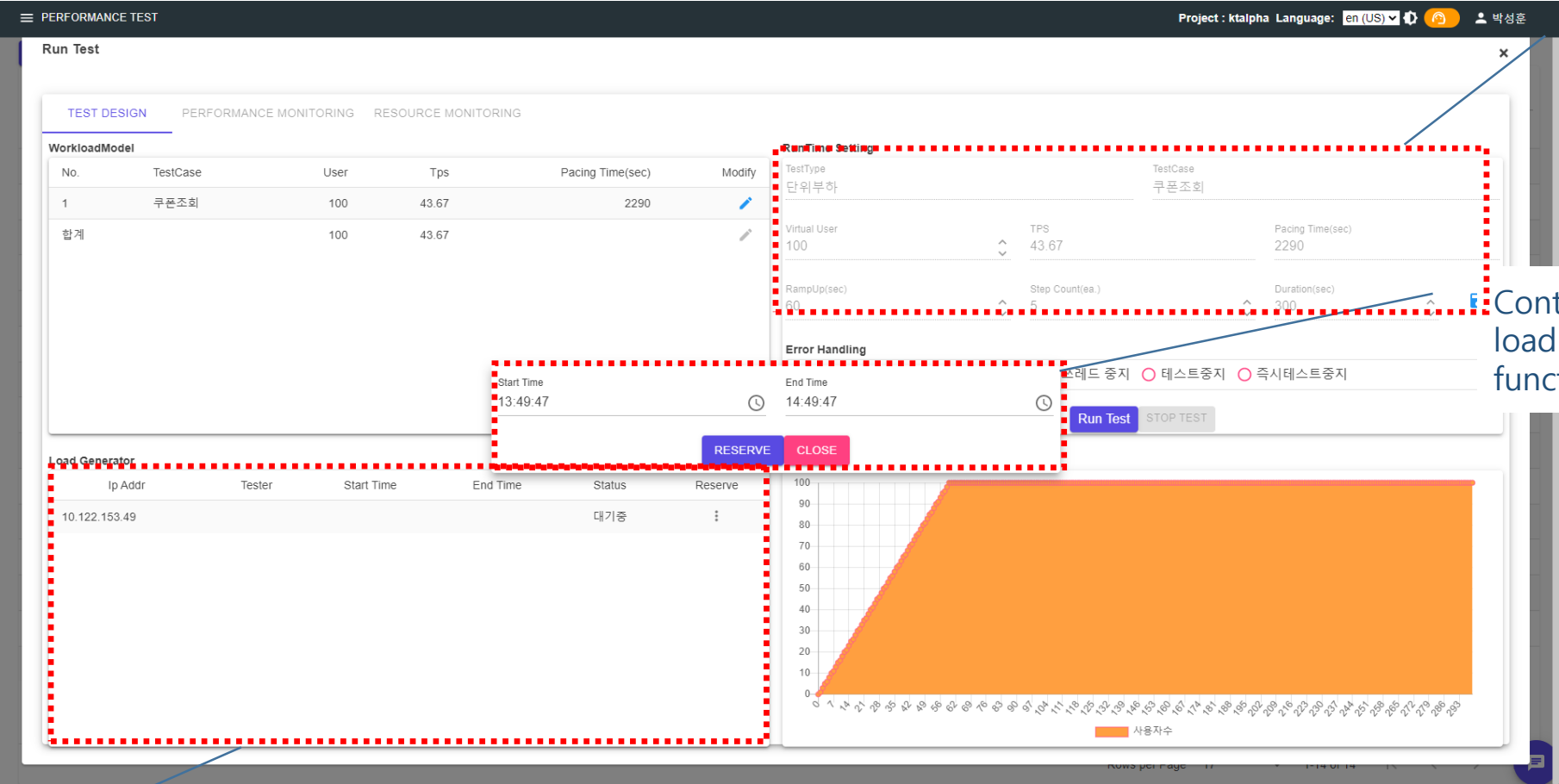
TestCase details

```
<com.blazemeter.jmeter.threads.concurrency.ConcurrencyThreadGroup guiclass="com.blazemeter.jmeter.threads.concurrency.ConcurrencyThreadGroup" testname="1_쿠폰조회">
  <elementProp name="ThreadGroup.main_controller" elementType="com.blazemeter.jmeter.threads.concurrency.ConcurrencyThreadGroup">
    <stringProp name="ThreadGroup.on_sample_error">continue</stringProp>
    <stringProp name="TargetLevel">${1_vuser}</stringProp>
    <stringProp name="RampUp">60</stringProp>
    <stringProp name="Steps">5</stringProp>
    <stringProp name="Hold">180</stringProp>
    <stringProp name="LogFilename"></stringProp>
    <stringProp name="Iterations"></stringProp>
    <stringProp name="Unit">S</stringProp>
    <stringProp name="TestPlan.comments">This test plan is automatically created by apiR<
  </com.blazemeter.jmeter.threads.concurrency.ConcurrencyThreadGroup>
  <hashTree>
    <Arguments guiclass="ArgumentsPanel" testclass="Arguments" testname="User Defined Variables">
      <collectionProp name="Arguments.arguments">
        <elementProp name="1_vuser" elementType="Argument">
          <stringProp name="Argument.name">1_vuser</stringProp>
          <stringProp name="Argument.value">100</stringProp>
          <stringProp name="Argument.metadata">=</stringProp>
        </elementProp>
        <elementProp name="1_pacingTime" elementType="Argument">
          <stringProp name="Argument.name">1_pacingTime</stringProp>
          <stringProp name="Argument.value">2290</stringProp>
          <stringProp name="Argument.metadata">=</stringProp>
        </elementProp>
      </collectionProp>
    </Arguments>
  </hashTree>
</com.blazemeter.jmeter.threads.concurrency.ConcurrencyThreadGroup>
```

Jmeter Script



When performing a test, the pre-registered load generator is available after reservation and automatically reflected in the test script when the load model is modified.



Modify the load model

Control test concurrency with load generators with scheduling functionality

Pre-registered load generator list



After performing the test, the test results are provided in historical form and provide trend analysis information for performance metrics.

Test History

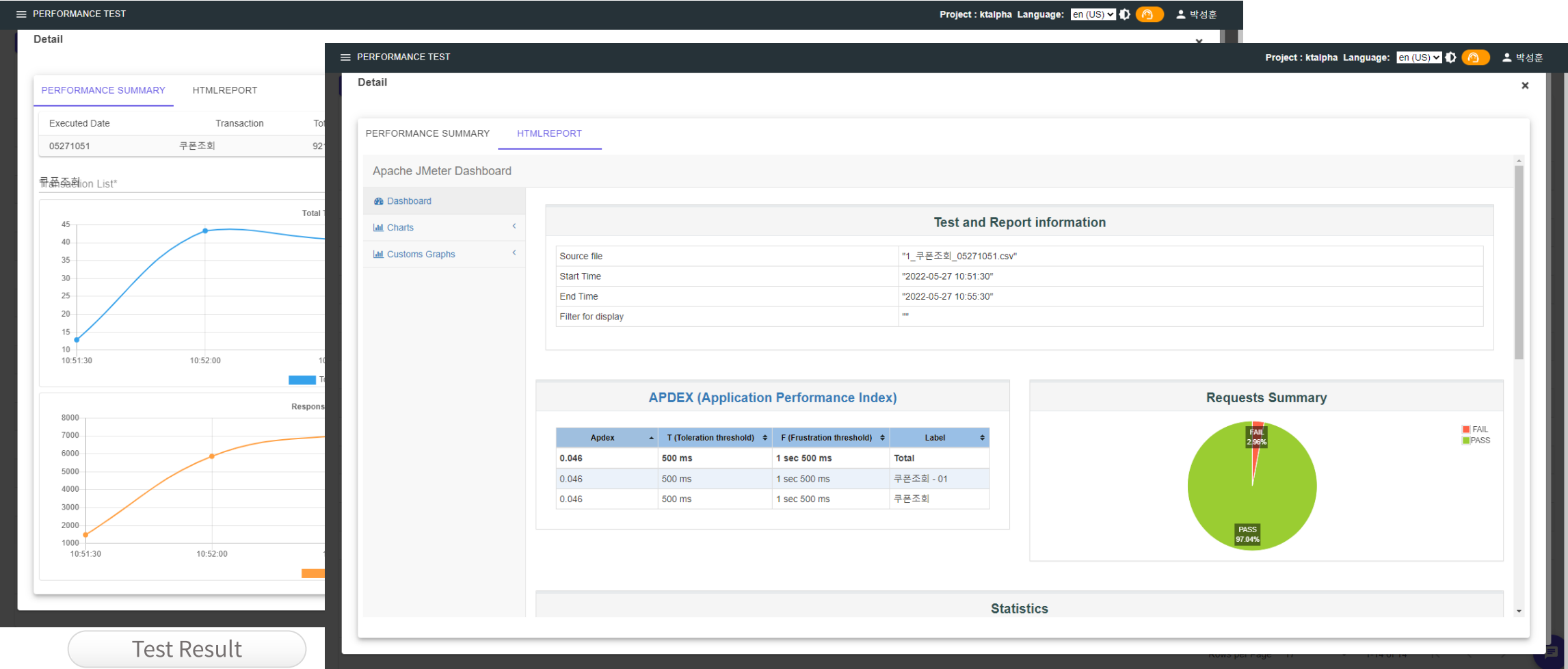
Click the link to go directly to the test results

Executed Date	Transaction	Total	PASSED	FAILED	ResponseTime(avg)	Response Time(min)	Response Time(max)	Throughput	User
05271051	쿠폰조회	9217	9217	0	6253	85	15103	39.39	282
05252029	쿠폰조회	14911	14911	0	87	54	21975	60.13	48
05252002	쿠폰조회	2239	2239	0	74	49	6396	33.42	37
05251148	쿠폰조회	1855	1855	0	1208	107	6922	23.78	72
05251117	쿠폰조회	1939	1939	0	782	101	14903	25.18	74
05251109	쿠폰조회	388	388	0	204	91	1202	5.79	20
05250958	쿠폰조회	6	6	0	364	145	524	0.27	20
05250947	쿠폰조회	941	941	0	177	74	25959	16.22	76
05250932	쿠폰조회	979	979	0	142	60	5701	31.58	68
05241816	쿠폰조회	1837	0	1837	86	45	1713	23.55	75

Rows per Page 10 1-10 of 18



Test results provide key performance metrics (TPS, response time, concurrent users) chart s, as well as HTML report provided by Jmeter.



PERFORMANCE TEST

Project : ktalpha Language: en (US)

Detail

PERFORMANCE SUMMARY

HTMLREPORT

Apache JMeter Dashboard

Dashboard

Charts

Customs Graphs

Test and Report information

Source file

Start Time

End Time

Filter for display

"1_쿠폰조회_05271051.csv"

"2022-05-27 10:51:30"

"2022-05-27 10:55:30"

""

APDEX (Application Performance Index)

Apdex	T (Toleration threshold)	F (Frustration threshold)	Label
0.046	500 ms	1 sec 500 ms	Total
0.046	500 ms	1 sec 500 ms	쿠폰조회 - 01
0.046	500 ms	1 sec 500 ms	쿠폰조회

Requests Summary

FAIL 2.96%

PASS 97.04%

Statistics

Jmeter HTML Report

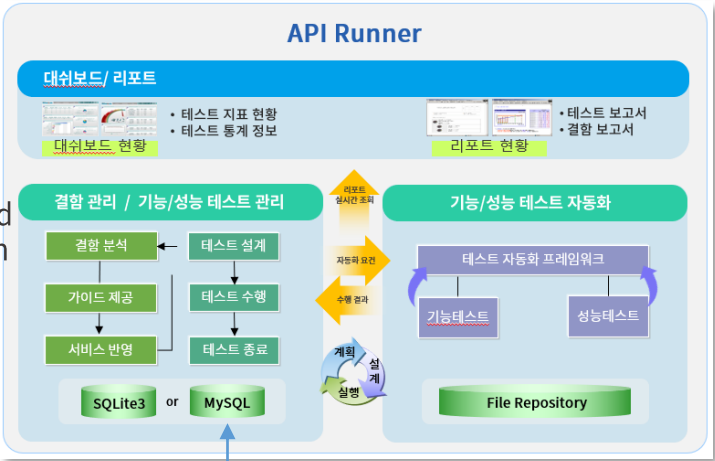


With the integration of visualization tool(Grafana), it provide real-time monitoring/test result analysis data for infrastructure systems associated with performance testing.



System Monitoring Dashboard

dashboard expansion

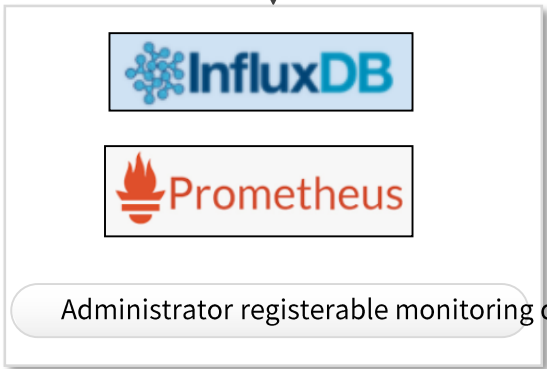


❖ Main Feat

- ✓ Provides system monitoring data
- ✓ Available on various types of data sources

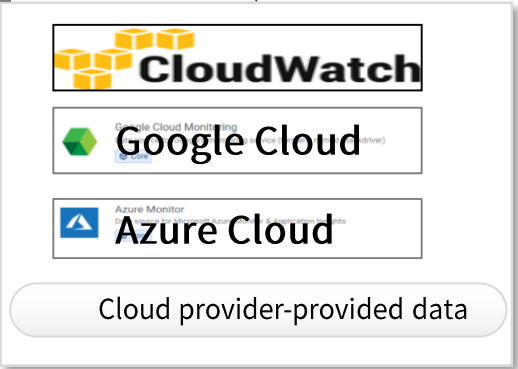
❖ Benefit

- ✓ Improving performance test quality



Administrator registerable monitoring data

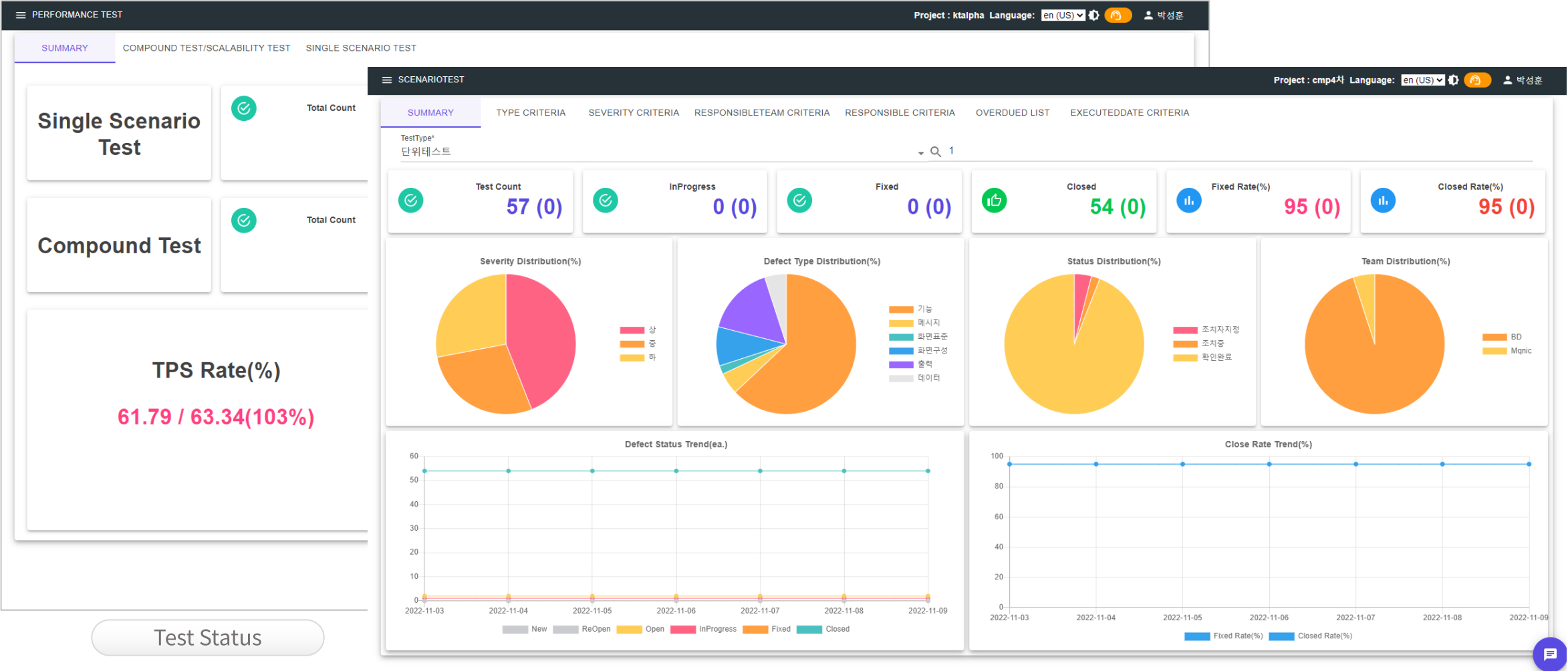
monitoring collection
Java daemon process



Cloud provider-provided data



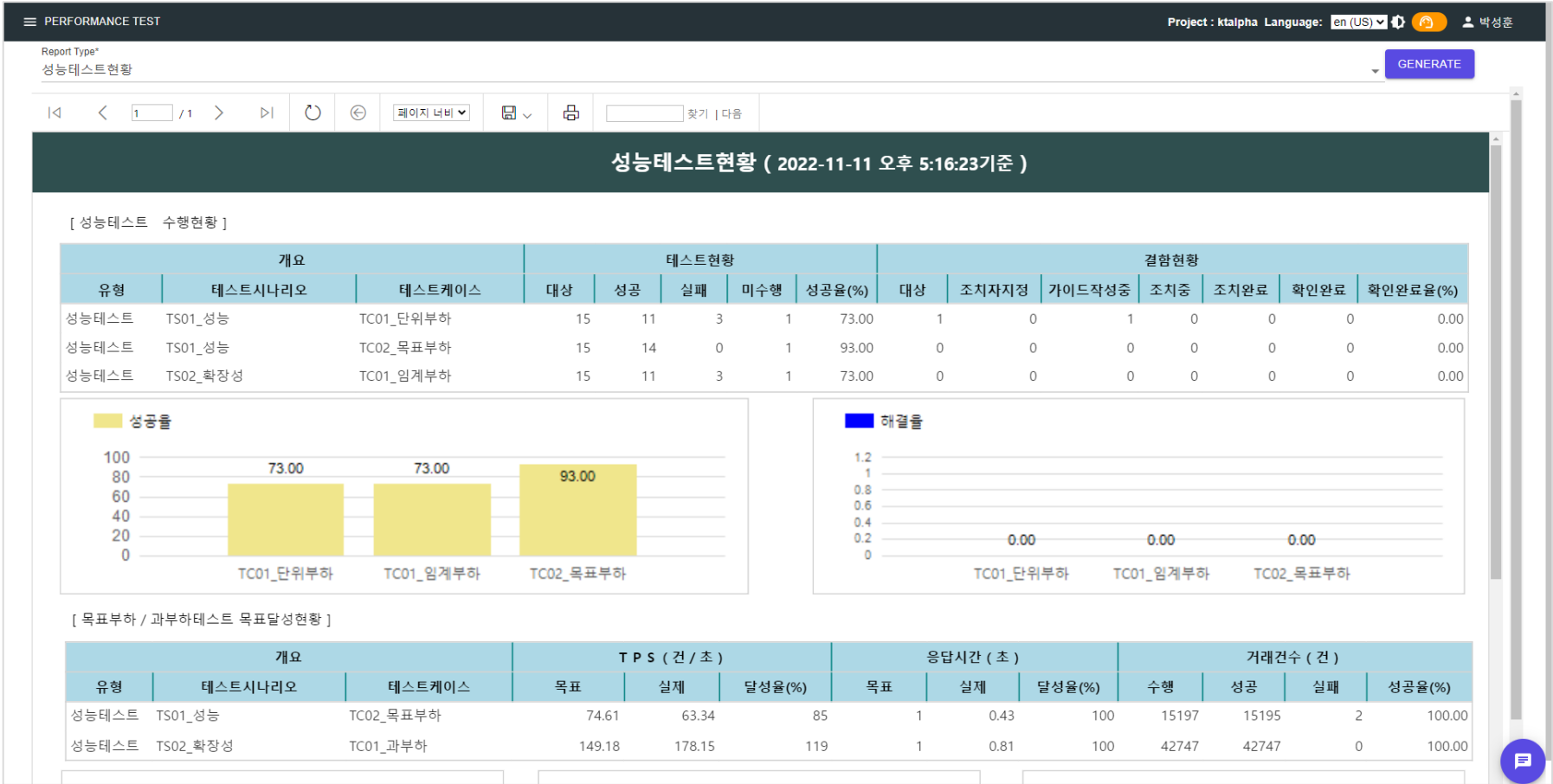
Provides real-time dashboards based on key statuses related to testing.





Provides real-time reports based on key statuses related to testing.

✓ The report can be customized to meet the customer's requirements .





Thank you

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