

Integration with NeoLoad

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Overview

[NeoLoad](#) is an enterprise tool for performance and load testing, covering both API and end-to-end application testing.

Besides support for web-based applications, it also supports a broader set of applications and protocols, including SAP, Oracle Forms, Adobe Flex, etc.

Users may define SLA's based on performance metrics, giving them insights about performance that can be crucial for business.

Performance tests can be triggered manually (e.g. from within NeoLoad GUI or NeoLoad web) or from a CI/CD pipeline.

Main features

This integration provides the ability to track performance & load testing results in Xray, thus making it the single source of truth for tracking different testing efforts.

It provides:

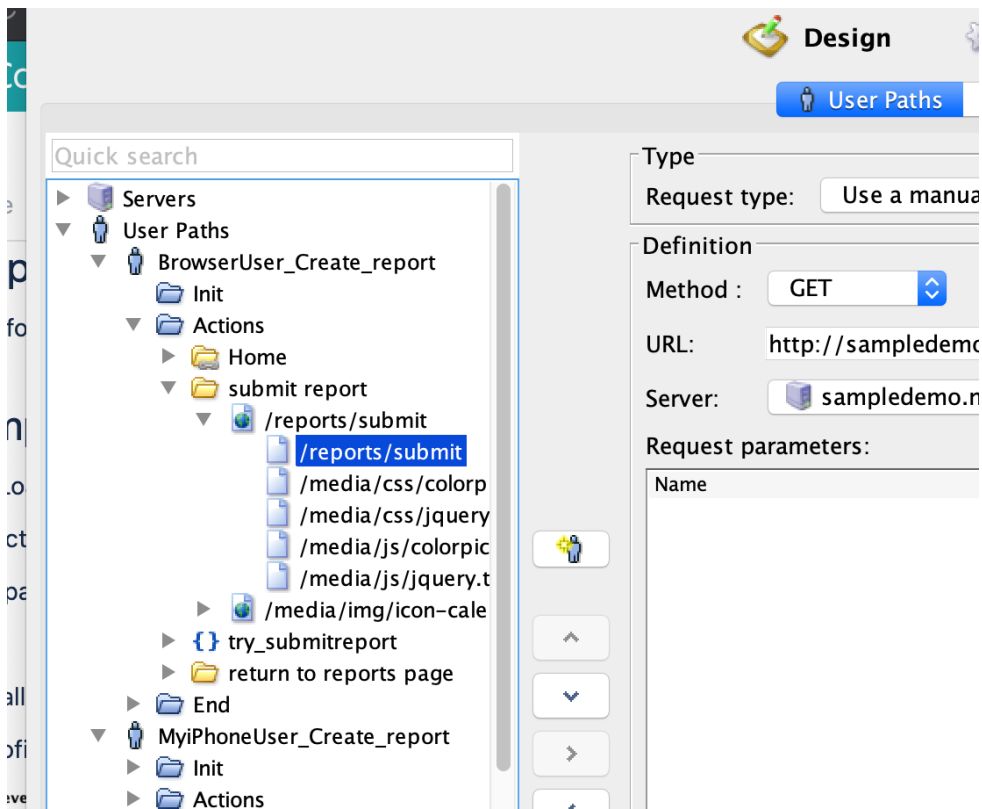
- integration with both Xray on Jira server/DC or cloud
- chart with an overview of the testing session
- global statistics of the test
- link to NeoLoad web, for more in-depth results about the testing session
- automatic provisioning of the test scenario
- overall test result and per SLA result
- from NeoLoad side, the ability to:
 - identify the project, its version and the revision of the SUT
 - link scenario to an existing "requirement" in Jira/Xray
 - add labels to Test entity that is used to abstract the scenario
 - identify the target environment (i.e. Test Environment)
 - link results back to an existing Test Plan in Xray

NeoLoad quick overview and core concepts

In NeoLoad, all happens in the context of a working project, which may be created/modified using NeoLoad GUI.

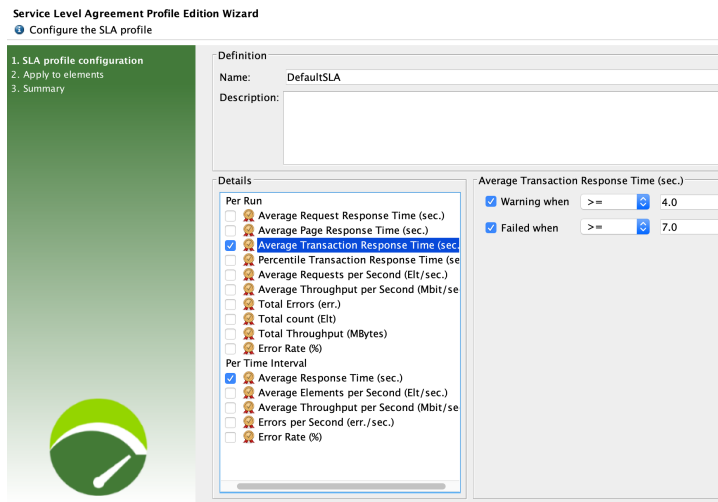
A project contains one or more (test) scenarios. Each scenario has a set of user paths (i.e. flows) to be exercised along with the running conditions (e.g. duration, load policy, VUs).

A user path corresponds to the definition of a browsing sequence in the target application; it contains, for example, the HTTP requests to be performed.



Optionally, users can define one or more SLA (Service Level Agreement) profiles as a means to evaluate if the application meets scaling/performance needs.

SLA profiles are defined as a combination of one or more SLAs; in turn, a given individual SLA is based on a metric and some target/reference value.



SLA profiles can be applied at the whole user path level or at individual elements within the user path flow.

From a testing perspective, each time that you apply an SLA to a certain context (e.g. user path, request) you are defining a goal to that context.

This way, at the end of your test session you may evaluate if those goals were met or not (individually and as a whole).

Mapping of concepts

NeoLoad	Xray	Observations/examples
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(test)
scenario

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Note:
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Projects / Calculator / CALC-35

WANImpact Local



Description

This Test corresponds to the XRAYintegration scenario WANImpact Local

Test Details

Generic

Definition

neoloadXRAYintegration.WANImpact Local

To Do

Assignee

Unassigned

Reporter

Sérgio Freire

Labels

neoload performance

Revision

None

(scenario)
test results

Test
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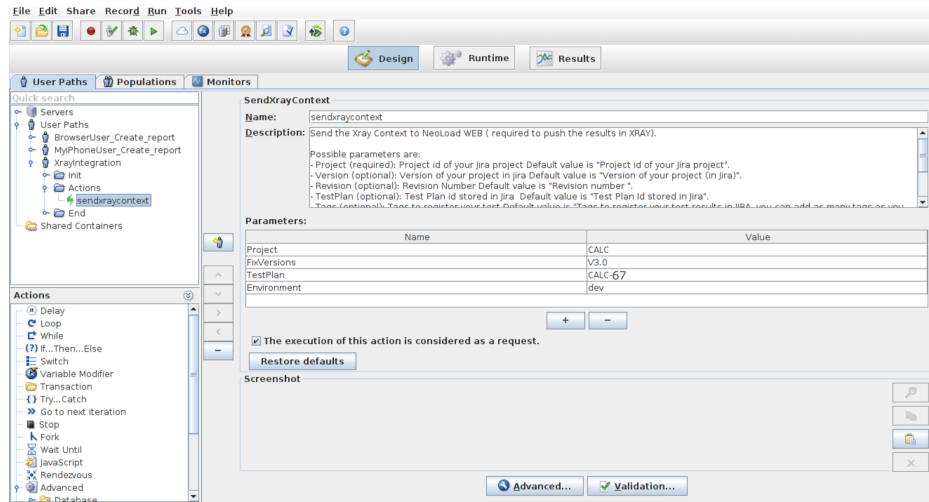
	<ul style="list-style-type: none">• a Test Run contains the details for a specific scenario																					
SLA's	multiple entries in the Test Run details	<table><tr><th>Context</th><th>Output</th><th>Duration</th><th>Status</th></tr><tr><td>PerRun.BrowserUser_Create_report.return_to_reports_page.TRANSACTION</td><td>TRANSACTION with the name return to reports page SLA equal to 0.30571523 - the FAILED Threshold is value >= to 7.0</td><td>5 mins</td><td>PASSED</td></tr><tr><td>PerRun.BrowserUser_Create_report.Home.TRANSACTION</td><td>TRANSACTION with the name Home SLA equal to 1.1568713 - the FAILED Threshold is value >= to 7.0</td><td>5 mins</td><td>PASSED</td></tr><tr><td>PerRun.BrowserUser_Create_report.submit.TRANSACTION</td><td>TRANSACTION with the name submit SLA equal to 1.2041494 - the FAILED Threshold is value >= to 7.0</td><td>5 mins</td><td>PASSED</td></tr><tr><td>PerRun.MyiPhoneUser_Create_report.Submit_report.TRANSACTION</td><td>TRANSACTION with the name Submit report SLA equal to 0.23942222 - the FAILED Threshold is value >= to 7.0</td><td>5 mins</td><td>PASSED</td></tr></table>	Context	Output	Duration	Status	PerRun.BrowserUser_Create_report.return_to_reports_page.TRANSACTION	TRANSACTION with the name return to reports page SLA equal to 0.30571523 - the FAILED Threshold is value >= to 7.0	5 mins	PASSED	PerRun.BrowserUser_Create_report.Home.TRANSACTION	TRANSACTION with the name Home SLA equal to 1.1568713 - the FAILED Threshold is value >= to 7.0	5 mins	PASSED	PerRun.BrowserUser_Create_report.submit.TRANSACTION	TRANSACTION with the name submit SLA equal to 1.2041494 - the FAILED Threshold is value >= to 7.0	5 mins	PASSED	PerRun.MyiPhoneUser_Create_report.Submit_report.TRANSACTION	TRANSACTION with the name Submit report SLA equal to 0.23942222 - the FAILED Threshold is value >= to 7.0	5 mins	PASSED
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status of test results	status of the Test Run	based on the status of each SLA																				

Setup

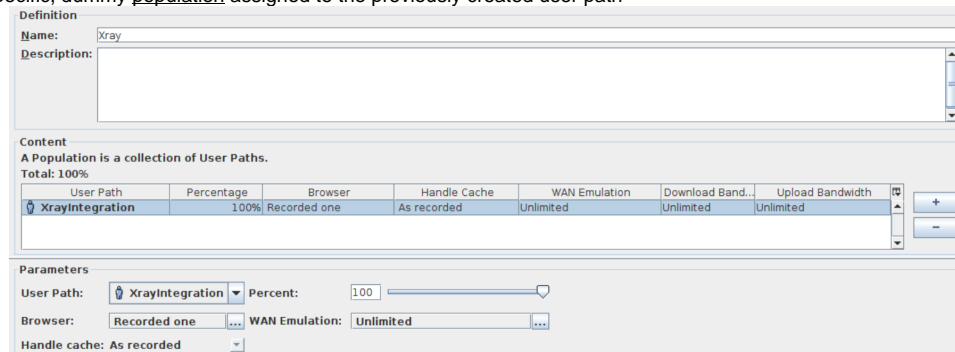
Please follow the instructions detailed by NeoLoad's team [here](#).

Example

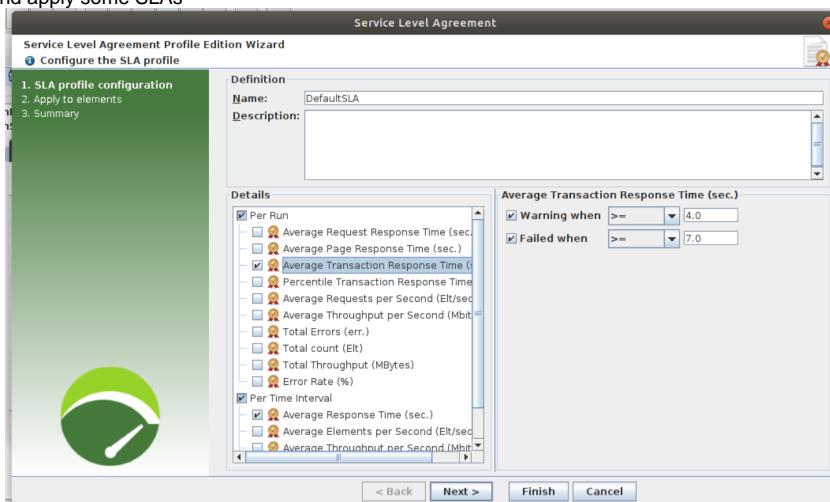
1. Setup
 - a. use a specific, dummy user path for configuration the integration with Xray by including the "SendXrayContext" action in the "Actions" section
 - b. configure the Xray integration parameters



- i. use a specific, dummy population assigned to the previously created user path



2. Create your test scenario (e.g. user paths) in NeoLoad
- Whenever importing the results, a Test issue will usually be auto-provisioned in Xray; the name of the scenario will be mapped to the Test' summary and will be used as the unique identifier for the Test (as seen on its Definition field) so it can be reused on subsequent result imports.
 - Note: It is also possible to override the auto-provision behavior and enforce results to be reported against an existing Test issue that would need be created beforehand; in this case, the Test issue key has to be specified as one of values in the "Tags" parameter of the SendXrayContent action.
3. Define and apply some SLAs



- a.
- Define the runtime parameters for your scenario (e.g. duration, load policy, VUs)
 - Execute it
 - See results in Xray
 - Test Execution

Test Execution of XRAYintegration of the test WANImpact Local

Attach

Create subtask

Link issue

Tests

Description

Performance testing results, for more information visit [NeoLoad Web](#)



Here are the global statistics of the test :

- User load:45
- Number of Requests/s : 51.034195
- Average Request duration (ms): 89.76852
- Average Transaction duration(ms) : 986.11694
- Failure rate:0
- Downloaded bytes : 214994447
- Downloaded bytes/s : 710258.2

i.
b. Test Run

Calculator / Test Execution: CALC-66 / Test: CALC-35

WANImpact Local

Return to Test ExecutionExecute with Exploratory AppImport Execution Results

Execution Status PASSED

Started On: 29/Apr/2020 08:51 AMFinished On: 29/Apr/2020 08:51 AM

Assignee: UnassignedVersion: v3.0Revision: -

Executed By: Sérgio FreireTest Environments: dev

CommentPreview commentExecution Defects (0)Execution Evidence (0)Add Evidence

Execution Details

Test Description

This Test corresponds to the XRAYintegration scenario WANImpact Local

Test Details

Results

Context	Output	Duration	Status
PerRun.BrowserUser.Create_report.return_to_reports_page.TRANSACTION	TRANSACTION with the name return to reports page SLA equal to 0.30571523 - the FAILED Threshold is value >= to 7.0	5 mins	PASSED
PerRun.BrowserUser.Create_report.Home.TRANSACTION	TRANSACTION with the name Home SLA equal to 1.1568713 - the FAILED Threshold is value >= to 7.0	5 mins	PASSED

i.
c. Test Plan (if you decide to report it against an existing Test Plan)

performance tests

Attach Create subtask Link issue Tests Test Executions

Description

Add a description...

Tests

View on Board

All Environments, final status

Create Test Execution

Add

Overall Execution Status

TOTAL TESTS: 1

1 PASSED

Filters 10 Columns

Key	Summary	Assignee	#Test Executions	Latest Status	Actions
CALC-35	WANImpact Local		1	PASSED	

Prev 1 Next

Total 1 issues

Test Executions

Add Test Executions

Filters 10 Columns

Key	Summary	Assignee	#Tests	Status	Actions
CALC-66	Test Execution of XRAYIntegration of the test WANImpact Local		1		

Prev 1 Next

Total 1 issues

7. Check in-depth details in NeoLoad Web

- From within the description field of the Test Execution issue, you have a link to the test results in NeoLoad Web where you can see finer details

The screenshot shows the NeoLoad Web interface. The top navigation bar includes Home, Tests, Resources, Test result, Dashboard, Trends, and Search. The left sidebar contains Documentation, Users, Account, and Profile. The main content area displays the test results for a specific test execution. The top section shows the test name 'Test Execution of XRAYIntegration of the test WANImpact Local' and a link to 'View on Board'. Below this, there are two tables: 'Per run' and 'Per time interval'. The 'Per run' table shows the results for the test execution, including the user path, status, element, parent, element type, SLA name, value, and failed threshold. The 'Per time interval' table shows the results for the test execution over a specific time interval, including the user path, status, element, parent, element type, SLA name, failed threshold, % failed, and warning threshold.

User Path	Status	Element	Parent	Element ty..	SLA name	Value	Failed threshold
BrowserUser_Create_report	✓	return to reports pa...	Actions	Transaction	Average Transaction Response Time (...)	0.3...	>= 7
BrowserUser_Create_report	✓	submit report	Actions	Transaction	Average Transaction Response Time (...)	1.855	>= 7
MyiPhoneUser_Create_repo...	✓	Submit report	Actions	Transaction	Average Transaction Response Time (...)	0.22	>= 7
BrowserUser_Create_report	✓	submit	Try	Transaction	Average Transaction Response Time (...)	1.15	>= 7
BrowserUser_Create_report	✓	Home	Actions	Transaction	Average Transaction Response Time (...)	1.161	>= 7

User Path	Status	Element	Parent	Element ty..	SLA name	Failed threshold	% Failed	Warning threshold
BrowserUser_Create_report	✓	Home	Actions	Transaction	Average Response Time (...)	>= 7	0%	>= 4
BrowserUser_Create_report	✓	submit report	Actions	Transaction	Average Response Time (...)	>= 7	0%	>= 4
BrowserUser_Create_report	✓	submit	Try	Transaction	Average Response Time (...)	>= 7	0%	>= 4
BrowserUser_Create_report	✓	return to reports pa...	Actions	Transaction	Average Response Time (...)	>= 7	0%	>= 4

Tips

- you may link your scenario to existent requirements in Jira and thus see the impact on the coverage calculated for them. You can link it as usual, by creating a "tests" link between the requirement and the Test issue or you can do it automatically whenever importing the results back to Xray. In the later, you need to add the issue key of the requirement as one value in the "Tags" parameter of the "SendXrayContext" action
- use a Test Plan for tracking performance-related results; report against an existent Test Plan by providing its key in the initial configuration of the "SendXrayContext" action

Learn more

For specific questions concerning NeoLoad, please use [Neotsys support resources](#).

Please refer to the following resources for more information:

- [NeoLoad web site](#)

- [NeoLoad integration with Xray](#)
- [NeoLoad documentation](#)