

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:

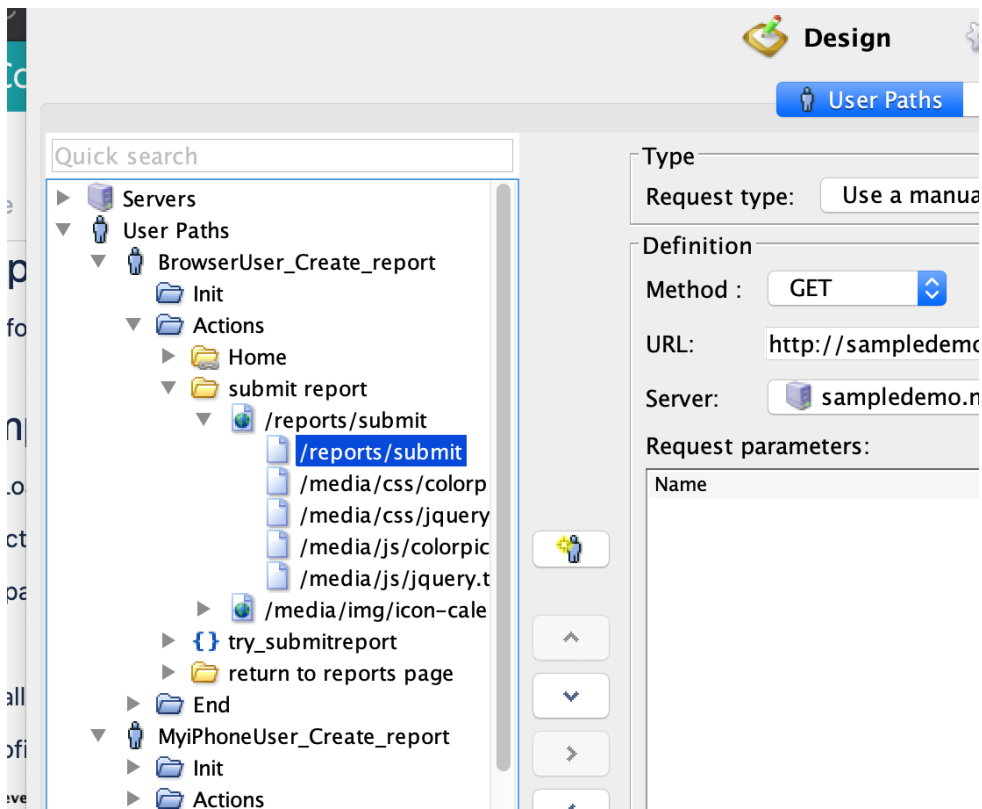
- integration with both Xray on Jira server/DC or cloud
- chart with an overview of the testing session
- global statistics of the test
- link to NeoLoad web, for more in-depth results about the testing session
- automatic provisioning of the test scenario
- overall test result and per SLA result
- from 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.

Service Level Agreement Profile Edition Wizard

1. Configure the SLA profile

1. SLA profile configuration
2. Apply to elements
3. Summary

Definition
Name: DefaultSLA
Description:

Details

Per Run
☐ Average Request Response Time (sec.)
☐ Average Page Response Time (sec.)
☒ Average Transaction Response Time (sec.)
☐ Percentile Transaction Response Time (se
☐ Average Requests per Second (Elt/sec.)
☐ Average Throughput per Second (Mbit/se
☐ Total Errors (err.)
☐ Total count (Elt)
☐ Total Throughput (MBytes)
☐ Error Rate (%)

Per Time Interval
☒ Average Response Time (sec.)
☐ Average Elements per Second (Elt/sec.)
☐ Average Throughput per Second (Mbit/se
☐ Errors per Second (err./sec.)
☐ Error Rate (%)


Average Transaction Response Time (sec.)
☒ Warning when >= 4.0
☒ Failed when >= 7.0

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

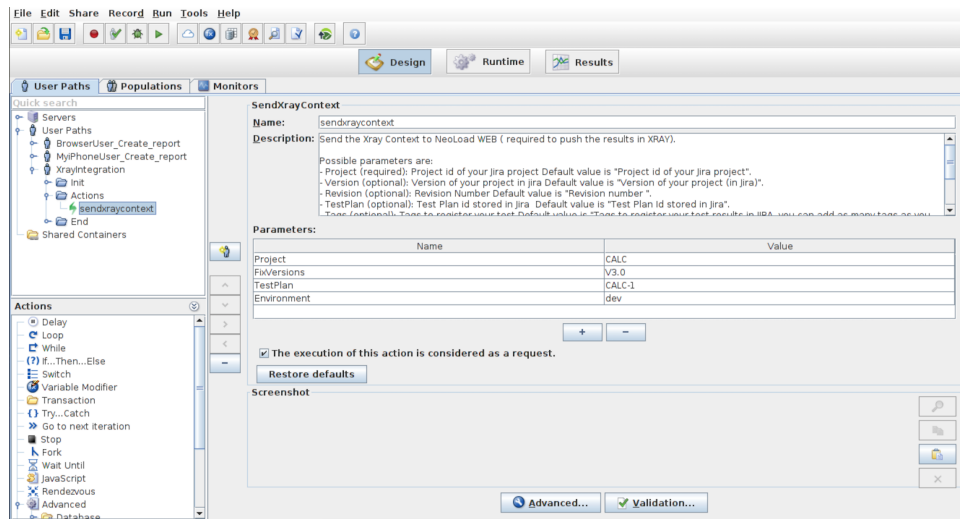
NeoLoad	Xray	Observations/examples												
(test) scenario	<p>Test (generic/unstructured)</p> <ul style="list-style-type: none">it may be linked to one, or more, requirements (e.g performance requirement) <p><u>Note</u>: this Test is usually auto-provisioned the first time whenever importing test results and reused afterwards</p>	<div><div> CALC / CALC-3</div><div>WANImpact Local</div></div> <div><div>Edit</div><div>Comment</div><div>Assign</div><div>More</div><div>Start Progress</div><div>Resolve Issue</div><div>Close Issue</div><div>Admin</div></div> <div><div>Details</div></div> <div><div>Description</div><p>This Test corresponds to the XRAYintegration scenario WANImpact LocalNeoLoad Web</p></div> <div><div>Test Details</div><p>Type: Generic</p><p>Definition: neoloadXRAYintegration.WANImpact Local</p></div>												
(scenario) test results	<p>Test Run within a Test Execution</p> <ul style="list-style-type: none">the Test Execution corresponds to the whole performance testing sessiona 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>BrowserUser_Create_report.PerRun.submit.TRANSACTION</td><td>TRANSACTION with the name submit sla equal to 1.1650823 - the FAILED Threshold is value >= to 7.0</td><td>10 min, 1 sec</td><td>PASS</td></tr><tr><td>BrowserUser_Create_report.PerRun.Home.TRANSACTION</td><td>TRANSACTION with the name Home sla equal to 1.1742911 - the FAILED Threshold is value >= to 7.0</td><td>10 min, 1 sec</td><td>PASS</td></tr></table>	Context	Output	Duration	Status	BrowserUser_Create_report.PerRun.submit.TRANSACTION	TRANSACTION with the name submit sla equal to 1.1650823 - the FAILED Threshold is value >= to 7.0	10 min, 1 sec	PASS	BrowserUser_Create_report.PerRun.Home.TRANSACTION	TRANSACTION with the name Home sla equal to 1.1742911 - the FAILED Threshold is value >= to 7.0	10 min, 1 sec	PASS
Context	Output	Duration	Status											
BrowserUser_Create_report.PerRun.submit.TRANSACTION	TRANSACTION with the name submit sla equal to 1.1650823 - the FAILED Threshold is value >= to 7.0	10 min, 1 sec	PASS											
BrowserUser_Create_report.PerRun.Home.TRANSACTION	TRANSACTION with the name Home sla equal to 1.1742911 - the FAILED Threshold is value >= to 7.0	10 min, 1 sec	PASS											
status of test results	status of the Test Run	based on the status of each SLA												

Setup

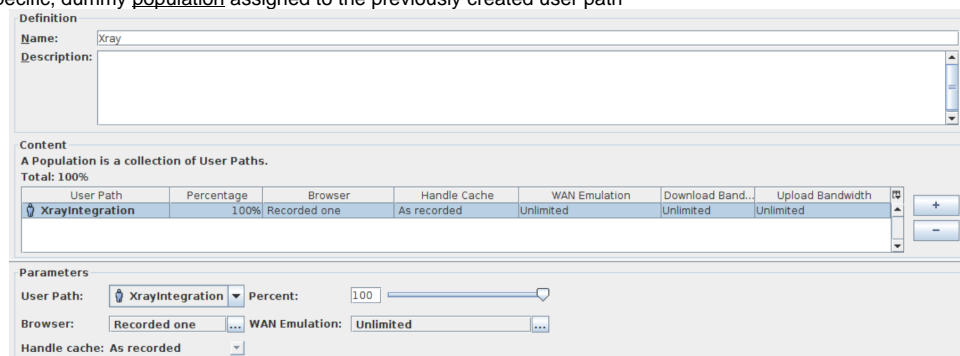
Please follow the instructions detailed by NeoLoad's team [here](#).

Example

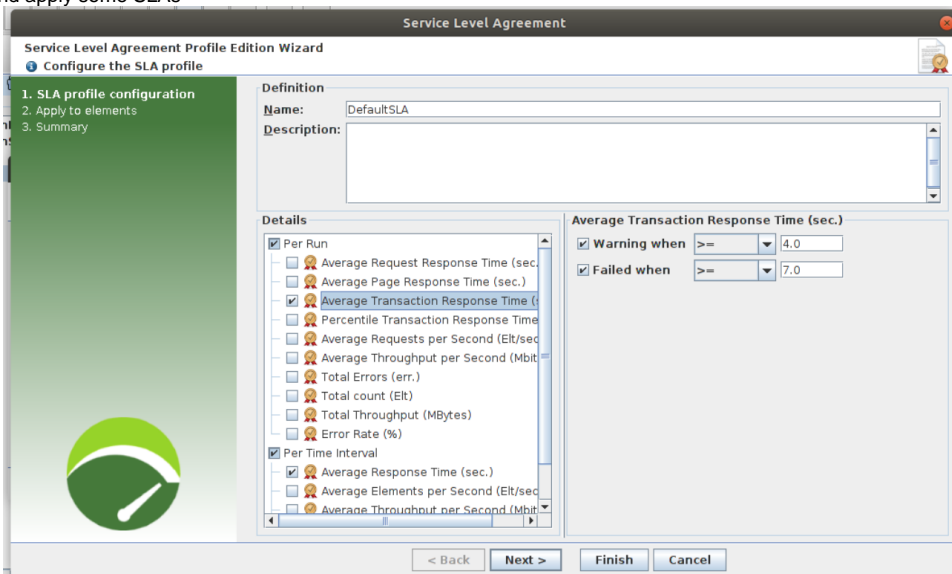
1. Setup
 - a. use a specific, dummy user path for configuration the integration with Xray by including the "SendXrayContext" action in the "Actions" section
 - b. configure the Xray integration parameters



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



- i.
2. Create your test scenario (e.g. user paths) in NeoLoad
 - a. 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.
 - i. 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.
4. Define the runtime parameters for your scenario (e.g. duration, load policy, VUs)
5. Execute it
6. See results in Xray
 - a. Test Execution



CALC / CALC-2

Test Execution of XRAYintegration of the test WANImpact Local

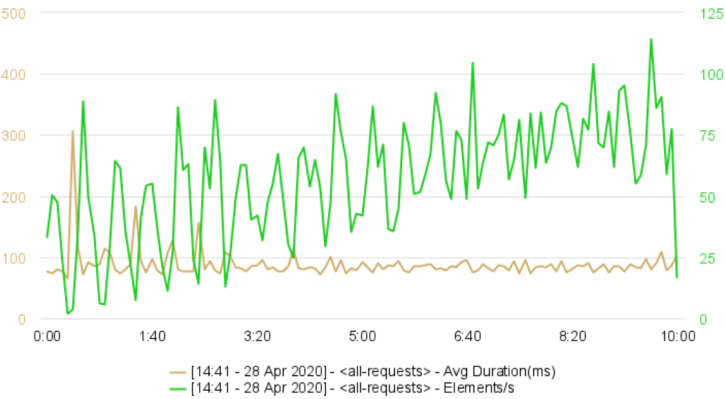
[Edit](#) [Comment](#) [Assign](#) [More](#) [Close Issue](#) [Reopen Issue](#) [Admin](#)

Details

Type: [Test Execution](#) Status: **RESOLVED** ([View Workflow](#))
Priority: [Trivial](#) Resolution: **Fixed**
Affects Version/s: **None** Fix Version/s: **v3.0**
Labels: **None**
Test Plan: [CALC-1](#)
Test Environments: [dev](#)

Description

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



i.
b. Test Run

CALC / Test Plan: CALC-1 / Test Execution: CALC-2 / Test: CALC-3
WANImpact Local

Execution details are Read-only because you do not have permission to execute this Test Run or the Test is a non-executable Workflow status.

Execution Status: **FAIL** Assigned: **None** Version: **v3.0**
Started On: **29/Apr/20 8:24 AM** Finished On: **29/Apr/20 9:24 AM** Executed By: **Henrik Røed** Revision: **-**
Tests: **dev**
environments:

[Comment](#) [Preview Comment](#) [Execution Defects \(0\)](#) [Execution Evidence \(0\)](#)

Execution Details

Test Description

This Test corresponds to the XRAYIntegration scenario WANImpact Local

Test Details

Test Type: **Generic**
Definition: **neoloadXRAYIntegration.WANImpact Local**

Results

Context	Output	Duration	Status
PerRun.BrowserUser_Create_report.submit.TRANSACTION	TRANSACTION with the name submit SLA equal to 1.1987175 - the FAILED Threshold is value >= to 7.0	15 min, 1 sec	PASS
PerRun.MyPhoneUser_Create_report.Submit_report.TRANSACTION	TRANSACTION with the name Submit report SLA equal to 0.21238904 - the FAILED Threshold is value >= to 7.0	15 min, 1 sec	PASS
PerRun.BrowserUser_Create_report.Home.TRANSACTION	TRANSACTION with the name Home SLA equal to 1.1681814 - the FAILED Threshold is value >= to 7.0	15 min, 1 sec	PASS
PerRun.BrowserUser_Create_report.submit_report.TRANSACTION	TRANSACTION with the name submit report SLA equal to 1.8945915 - the FAILED Threshold is value >= to 7.0	15 min, 1 sec	PASS
PerRun.BrowserUser_Create_report.return_to_reports.page.TRANSACTION	TRANSACTION with the name return to reports page SLA equal to 0.11778774 - the FAILED Threshold is value >= to 7.0	15 min, 1 sec	PASS
PerTimeInterval.BrowserUser_Create_report.submit_report.TRANSACTION	TRANSACTION with the name submit report SLA equal to 7.0 - the FAILED Threshold is value >= to 7.0	15 min, 1 sec	FAIL
PerTimeInterval.BrowserUser_Create_report.submit_report.TRANSACTION	TRANSACTION with the name submit SLA equal to 6.0 - the WARNING Threshold is value >= to 6.0	15 min, 1 sec	FAIL

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

performance tests

[Edit](#)
[Comment](#)
[Assign](#)
[More](#)
[Start Progress](#)
[Resolve Issue](#)
[Close Issue](#)
[Admin](#)

Details

Description
Click to add description

Tests

[Test Plan Board](#)
[+ Create Test Execution](#)
[+ Add](#)

Overall Execution Status

1 FAIL

Total Tests: 1

Filter(s)

Show 10 entries All Environments Columns

Key	Summary	Requirements	#Test Executions	Issue Assignee	Latest Status
CALC-3	WANImpact Local		3	Unassigned	FAIL

Showing 1 to 1 of 1 entries

First Previous 1 Next Last

Test Executions

[Add Test Executions](#)

Show 10 entries Columns

Key	Summary	#Tests	Issue Assignee	Status
CALC-5	Test Execution of XRAYIntegration of the test WANImpact Local	1	Unassigned	FAIL

- i. 7. Check in-depth details in NeoLoad Web
 - a. 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

NeoLoad 14:08 - 28 Apr 2020

Home Overview Values Events **SLA** [Select in Dashboard](#)

Element type ☐ Transaction ☐ Page ☐ Request ☒ Status ☐ Failed ☐ Warning ☐ Passed

Per run 5

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

Per time interval 6

User Path	Status	Element	Parent	Element ty...	SLA name	Failed threshold	% Failed	Warning threshol
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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](#)