



# **New Relic Integration with NeoLoad**

## **A Neotys Whitepaper**

## Table of Contents

Introduction.....	3
Installation.....	4
Setup.....	4
Optional Setup.....	7
Parameters.....	10
Analyze Results in NeoLoad.....	11
Analyze Results in New Relic Plugins.....	12
Analyze Results in New Relic Insights.....	13
NeoLoad Error Codes.....	15
About Neotys.....	16

## Introduction

This Advanced Action allows you to integrate [NeoLoad](#) with [New Relic](#) in order to correlate data from one tool to another.

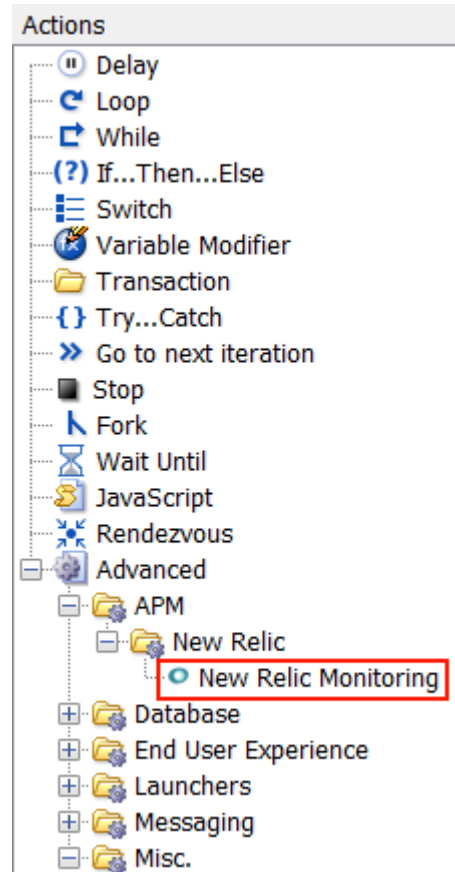
This bundle provides both an inbound and an outbound integration:

- **Inbound (New Relic → NeoLoad):** Retrieves metrics of the SUT from New Relic and injects them in NeoLoad Controller through the [Data Exchange API](#). This allows the correlation of load performance and APM results from the NeoLoad's [Dashboards](#).
- **Outbound (NeoLoad Web → New Relic):** With load testing data in New Relic, a tester can build complex dashboards correlating several types of metrics.
  - Retrieves the NeoLoad [Main Statistics](#) from NeoLoad Web (Indicators of the Test overview) and injects them to the [New Relic Plugins API](#) and [New Relic Insights API](#).
  - Retrieves the NeoLoad [Transaction values](#) from NeoLoad Web and injects them to [New Relic Insights API](#).

Property	Value
Maturity	Stable
Author	Neotys
License	<a href="#">BSD Simplified</a>
NeoLoad	From version 6.3
Requirements	<ul style="list-style-type: none"> <li>• License FREE edition, or Enterprise edition, or Professional with Integration &amp; Advanced Usage</li> <li>• New Relic account with Infrastructures and Plugins</li> </ul>
Optional	<ul style="list-style-type: none"> <li>• NeoLoad Web SaaS subscription (for option to send data from NeoLoad Web to New Relic)</li> <li>• New Relic account with Insights</li> </ul>
Bundled in NeoLoad	No
Download Binaries	See the <a href="#">latest release</a>

## Installation

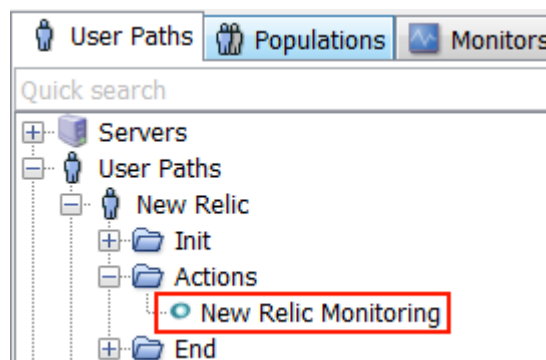
1. Download the [latest release](#).
2. Read the NeoLoad documentation to see [How to install a custom Advanced Action](#).



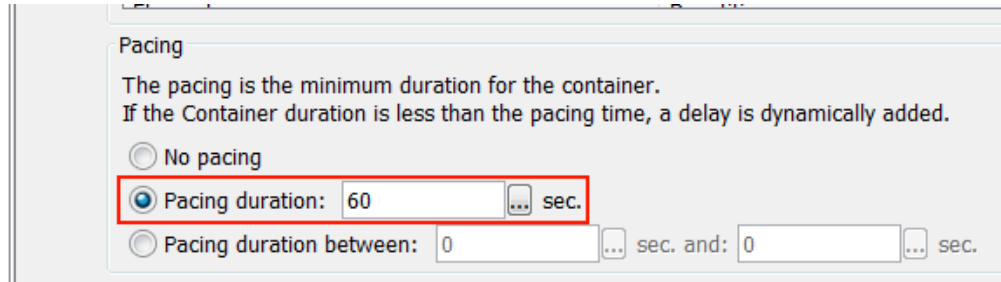
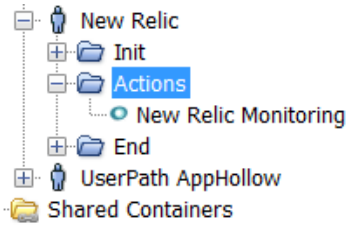
## Setup

Once installed, how to use in a given NeoLoad project:

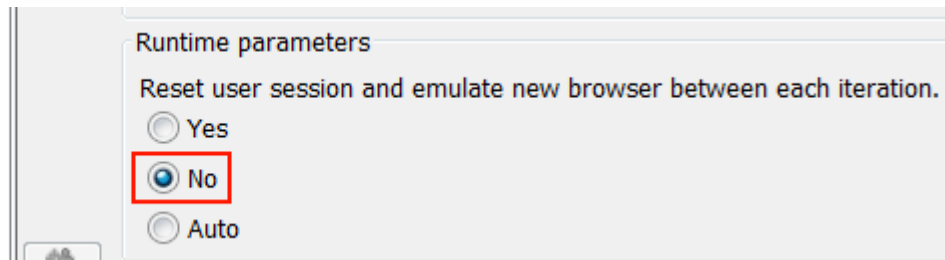
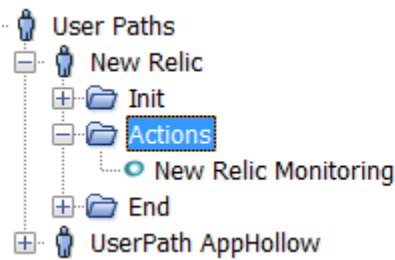
1. Create a User Path "New Relic".
2. Insert Custom action "New Relic Monitoring" in the **Actions** container (custom action is inside Advanced > APM > New Relic).



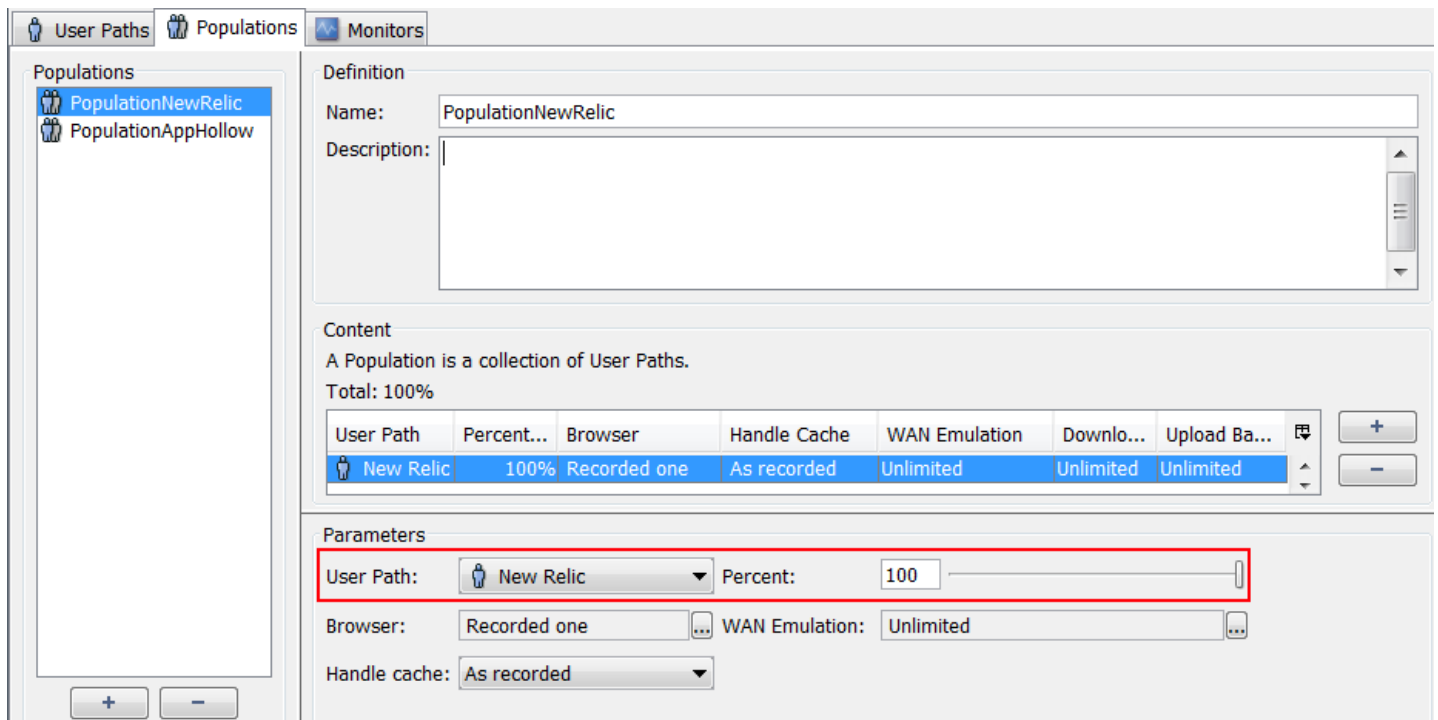
3. Select the **Actions** container and set a pacing duration of 60 seconds.



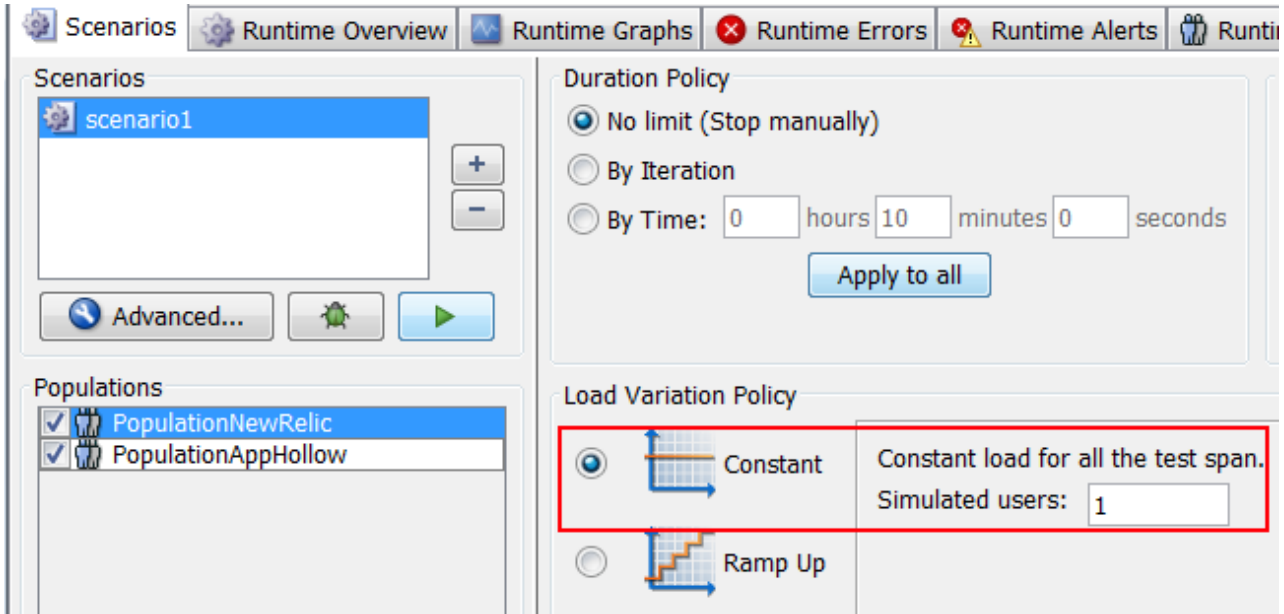
4. Select the **Actions** container and set the runtime parameters "Reset user session and emulate new browser between each iteration" to "No".



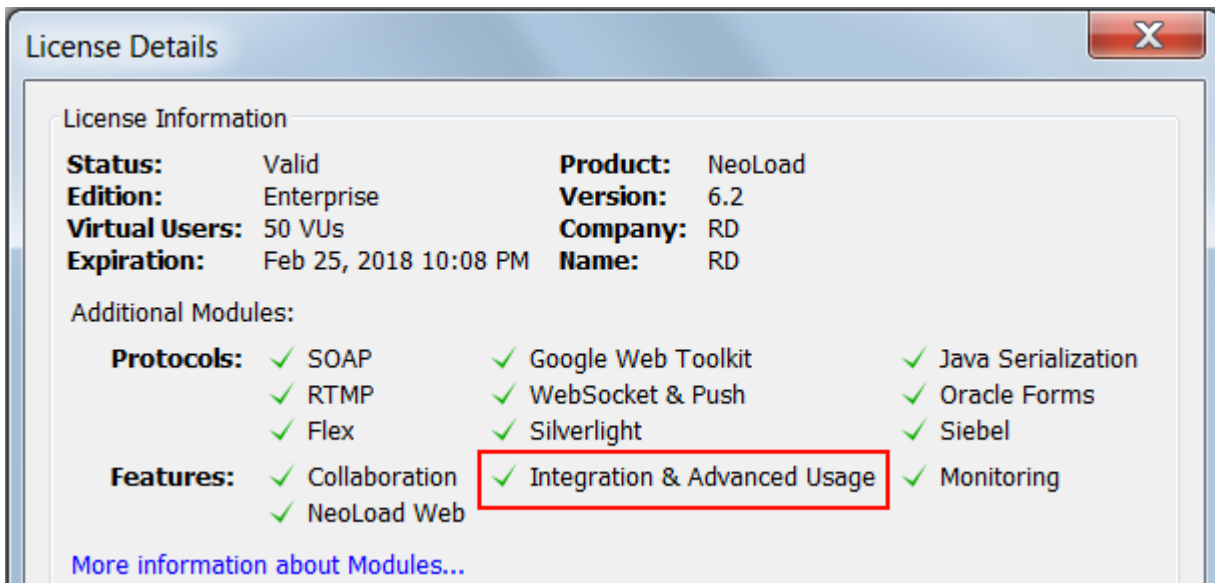
5. Create a Population "PopulationNewRelic" which contains 100% of User Path "New Relic".



6. In the **Runtime** section, select your scenario, select the "PopulationNewRelic" population and define a constant load of 1 user for the full duration of the load test.

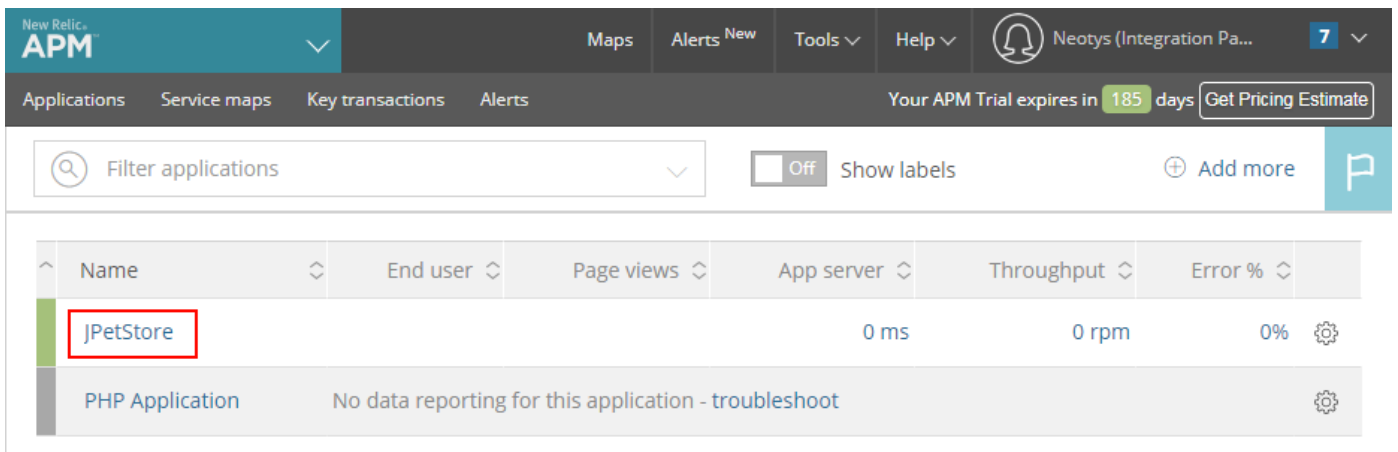


7. Do not use multiple load generators. Good practice should be to keep only the local one.
8. Verify to have a license with "Integration & Advanced Usage".



9. On the New Relic APM interface, create (or retrieve) a New Relic API key from menu **Account settings**, section **INTEGRATIONS**, subsection **API keys**.

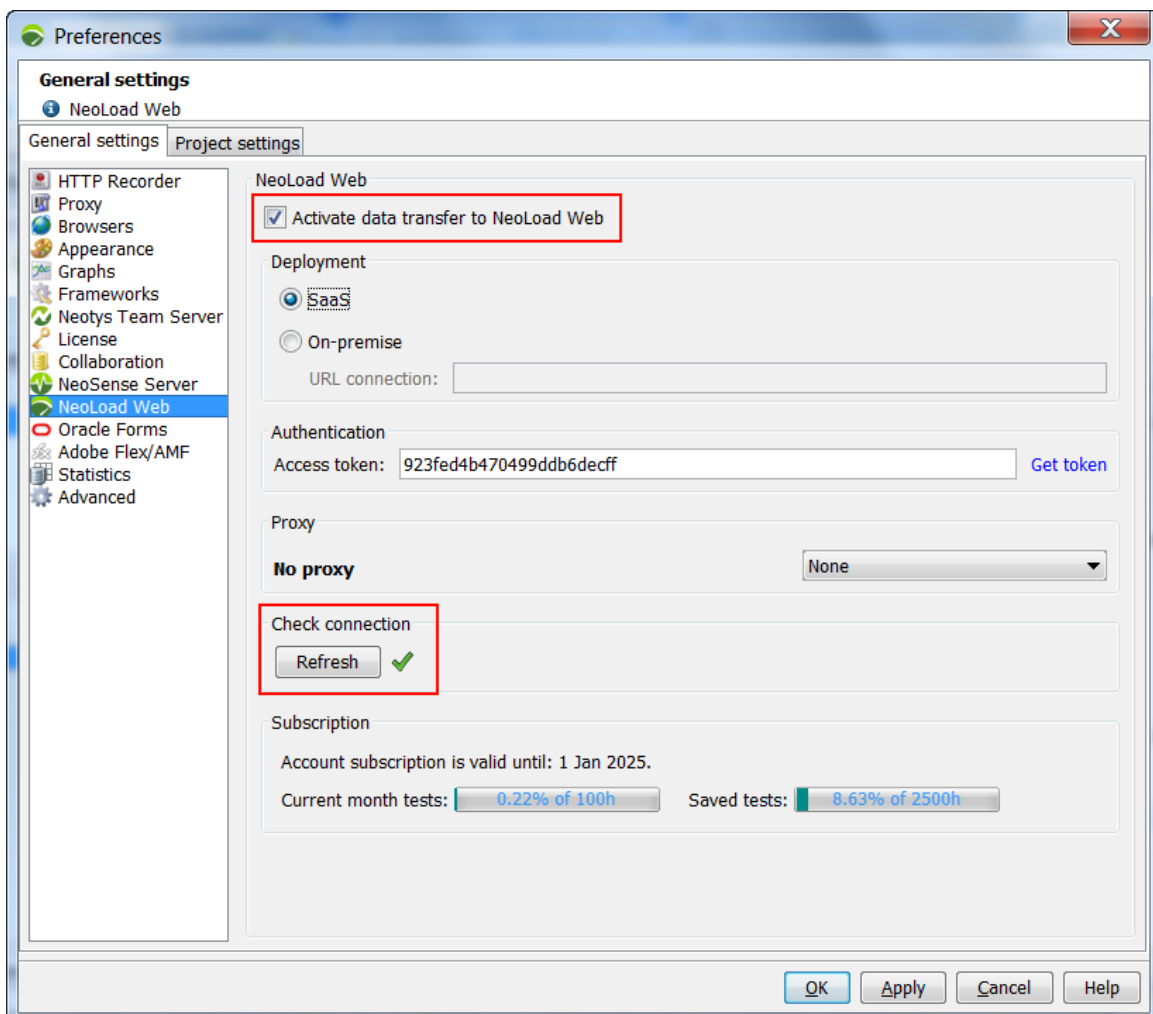
10. On the New Relic APM interface, find out the name of the application being tested.



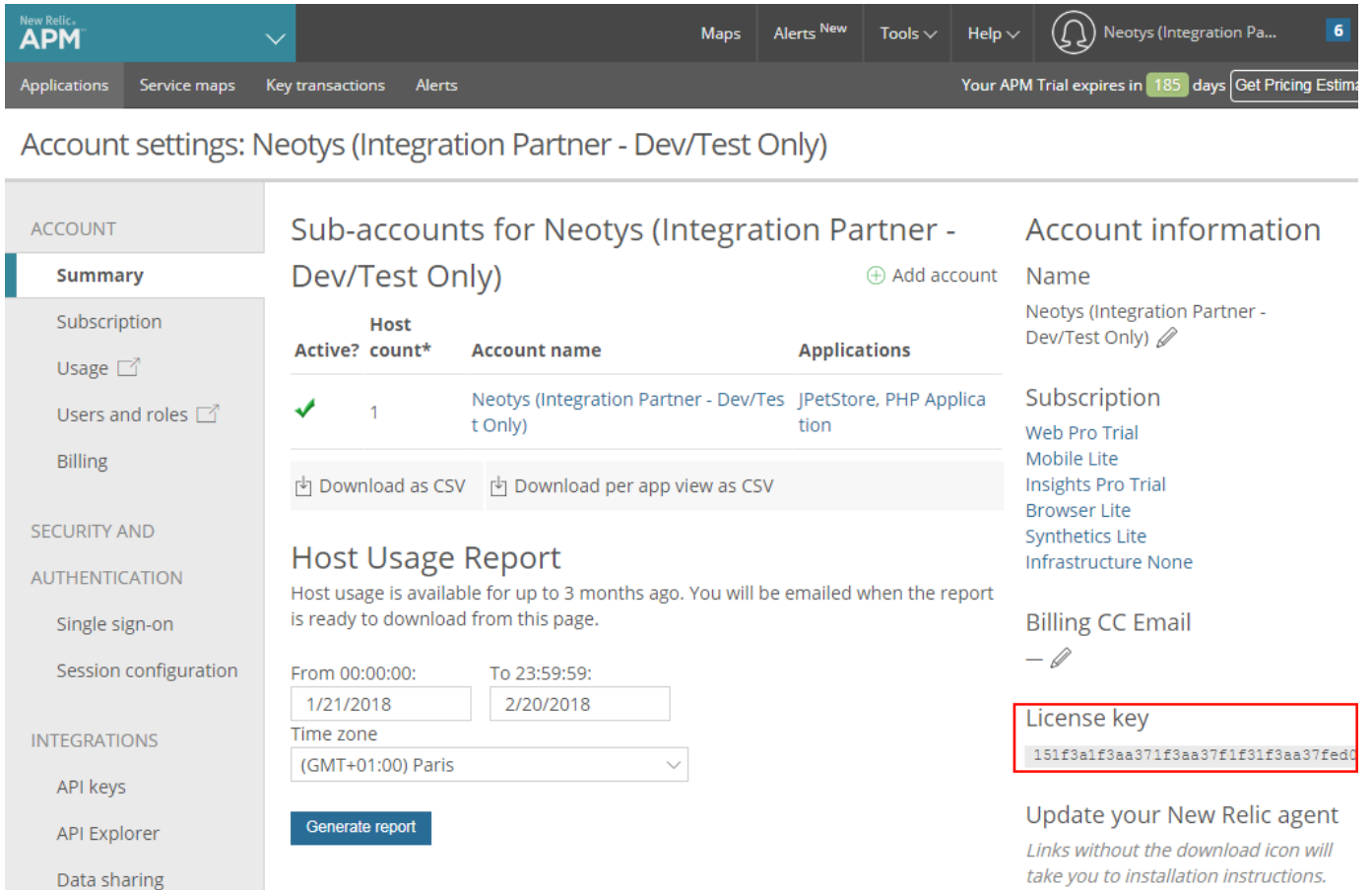
## Optional Setup

If you use option to send data from NeoLoad Web to New Relic, follow the steps below:

1. Verify that NeoLoad Web data transfer is properly configured on the Controller preferences (see **Preferences / General settings / NeoLoad Web**).



- On the New Relic interface, retrieve the New Relic License Key from menu **Account settings**, section **Account information**.



Account settings: Neotys (Integration Partner - Dev/Test Only)

**ACCOUNT**

- Summary
- Subscription
- Usage
- Users and roles
- Billing

**SECURITY AND AUTHENTICATION**

- Single sign-on
- Session configuration

**INTEGRATIONS**

- API keys
- API Explorer
- Data sharing

**Sub-accounts for Neotys (Integration Partner - Dev/Test Only)** ➕ Add account

Host Active?	count*	Account name	Applications
✓	1	Neotys (Integration Partner - Dev/Test Only)	JPetStore, PHP Application

Download as CSV | Download per app view as CSV

**Host Usage Report**

Host usage is available for up to 3 months ago. You will be emailed when the report is ready to download from this page.

From 00:00:00:  To 23:59:59:

Time zone:

[Generate report](#)

**Account information**

Name: Neotys (Integration Partner - Dev/Test Only) ✎

**Subscription**

- Web Pro Trial
- Mobile Lite
- Insights Pro Trial
- Browser Lite
- Synthetics Lite
- Infrastructure None

**Billing CC Email**

— ✎

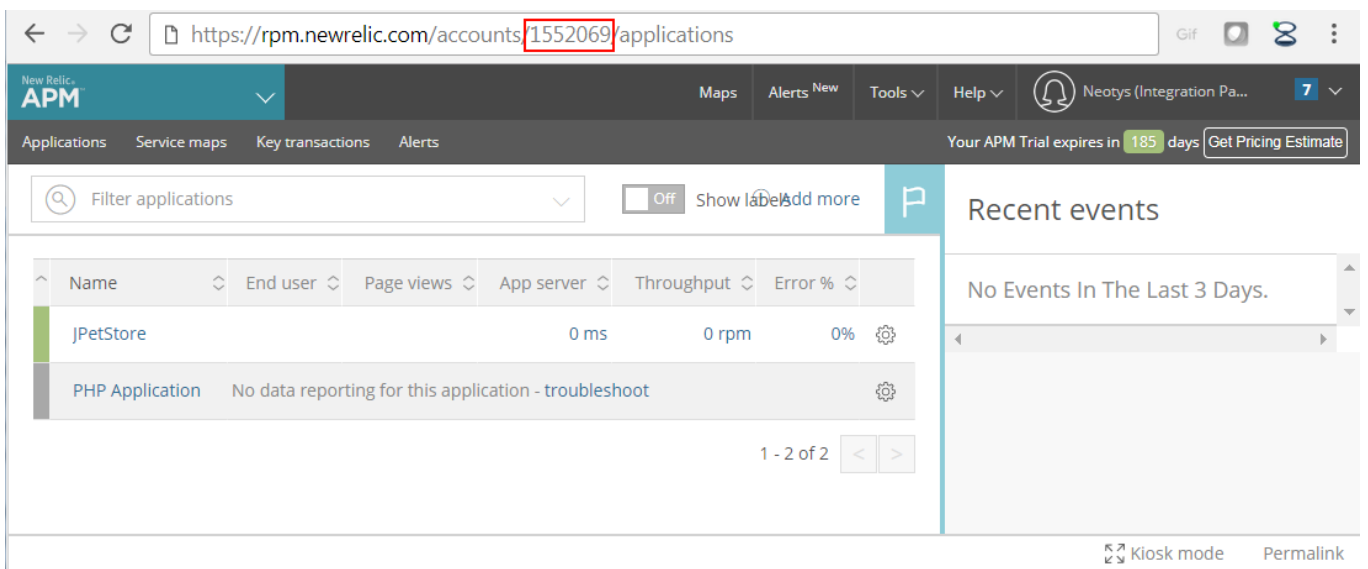
**License key**

151f3a1f3aa371f3aa37f1f31f3aa37fed0

**Update your New Relic agent**

Links without the download icon will take you to installation instructions.

- On the New Relic interface, retrieve the New Relic Account Id, displayed in the URL.



Browser address bar: <https://rpm.newrelic.com/accounts/1552069/applications>

New Relic APM interface showing:

- Filter applications:
- Off Show labels Add more
- Recent events: No Events In The Last 3 Days.

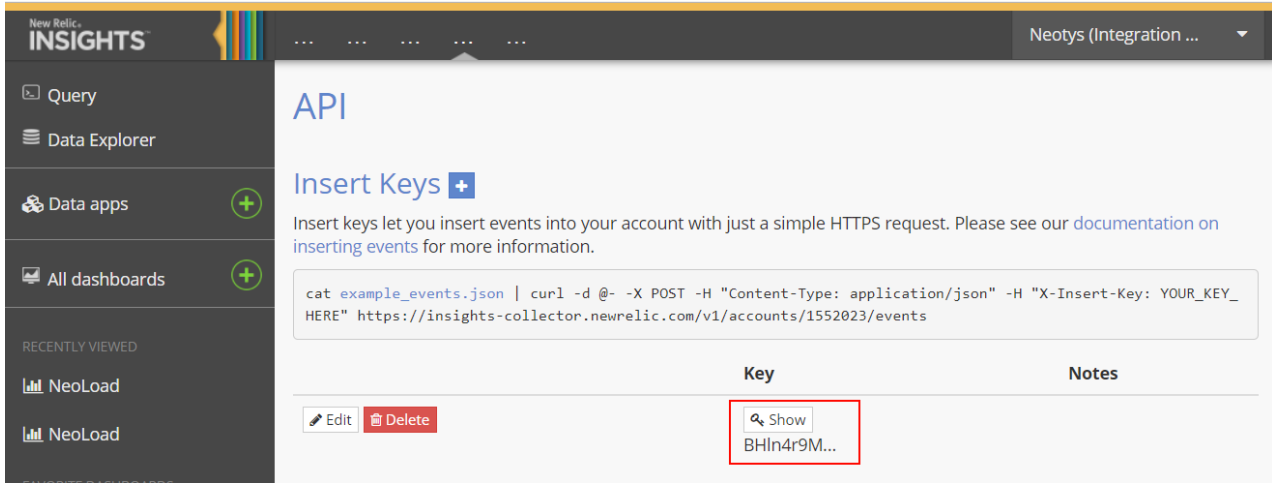
Name	End user	Page views	App server	Throughput	Error %
JPetStore			0 ms	0 rpm	0%
PHP Application	No data reporting for this application - troubleshoot				

1 - 2 of 2 < >

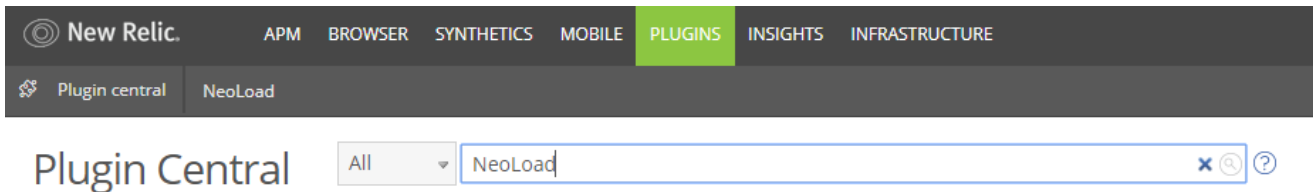
Kiosk mode Permalink



- On the New Relic interface, create (or retrieve) a New Relic Insights API key from menu **Insights**, section **Manage data**, subsection **API Keys**.

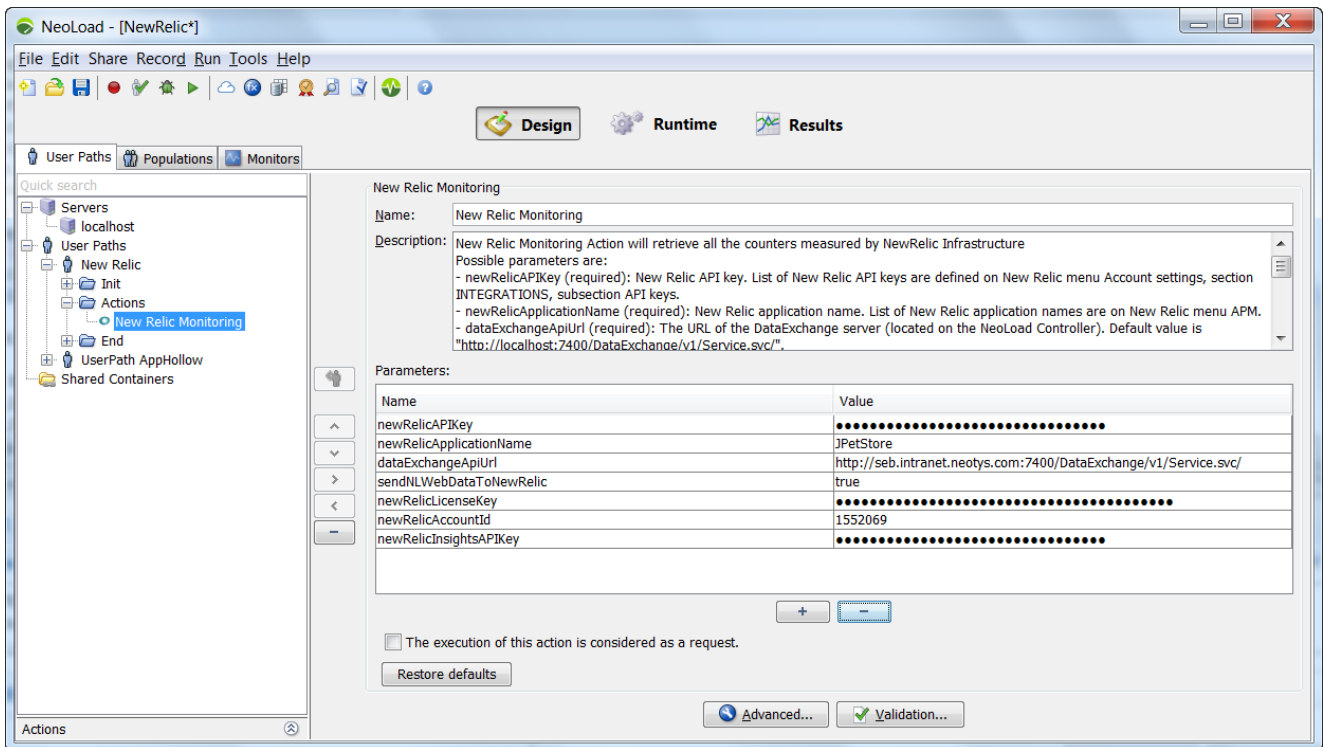


- On the New Relic interface, **Plugins** section, **Plugin central** field, search for plugin "NeoLoad", and install it.



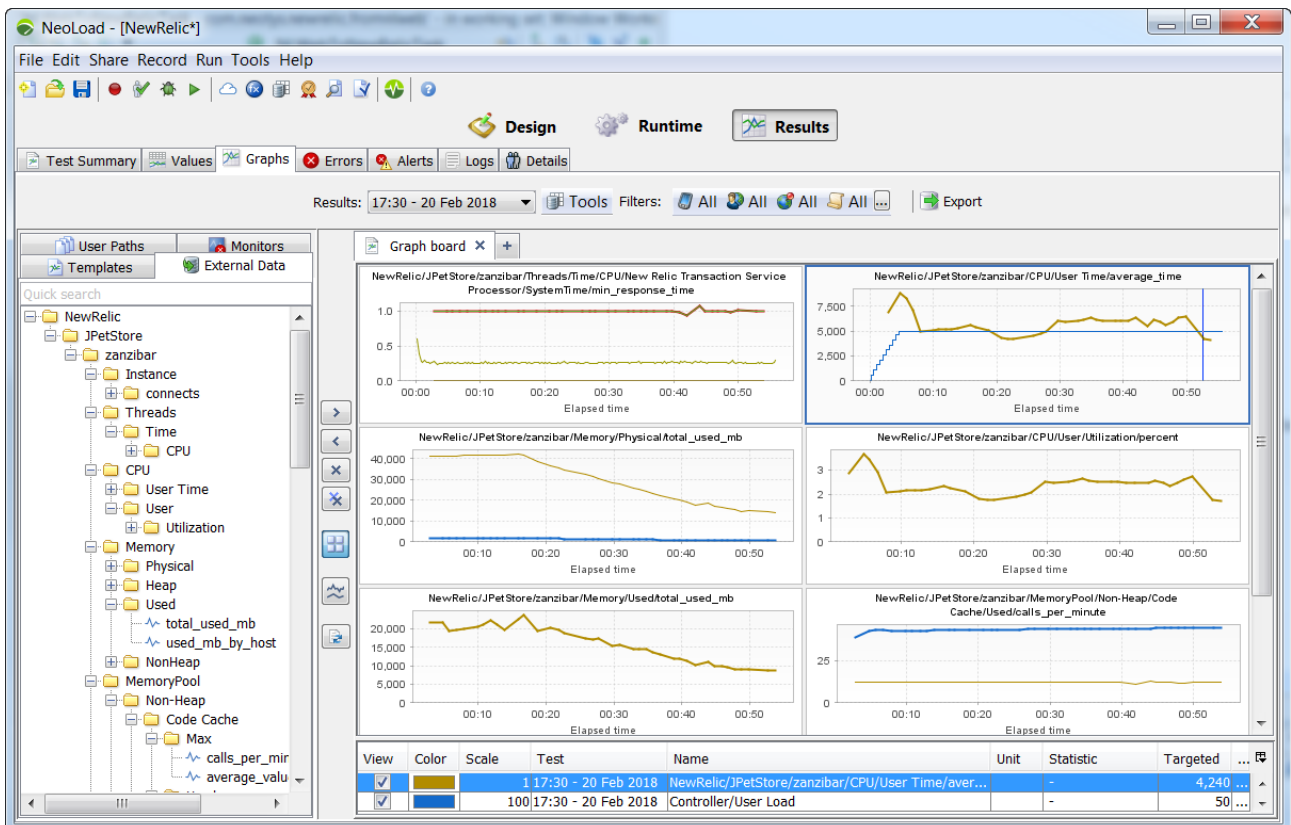
## Parameters

Name	Description	Required/Optional
newRelicAPIKey	New Relic API key. List of New Relic API keys are defined on New Relic menu <b>Account settings</b> , section <b>INTEGRATIONS</b> , subsection <b>API keys</b> .	Required
newRelicApplicationName	New Relic application name. List of New Relic application names are on New Relic menu <b>APM</b> .	Required
dataExchangeApiUrl	The URL of the DataExchange server (located on the NeoLoad Controller). Tip: Get NeoLoad API information in NeoLoad preferences: <b>Project Preferences / REST API</b> ( <a href="https://www.neotys.com/documents/doc/neoload/latest/en/html/#7652.htm">https://www.neotys.com/documents/doc/neoload/latest/en/html/#7652.htm</a> ).	Required
sendNLWebDataToNewRelic	When set to 'true', sends NeoLoad Web data to New Relic (requires NeoLoad Web module). When set to 'false', only retrieves data from New Relic. The Check User Path mode only works when value is 'false', as there is no NeoLoad Web interaction.	Optional
newRelicLicenseKey	The New Relic license key to send data. Required when argument 'sendNLWebDataToNewRelic' is true.	Optional
newRelicAccountId	The New Relic Account Id. It appears in the URL when going on New Relic menu <b>Account settings</b> ' <a href="https://rpm.newrelic.com/accounts/">https://rpm.newrelic.com/accounts/</a> '. Required when argument 'sendNLWebDataToNewRelic' is true.	Optional
newRelicInsightsAPIKey	The New Relic Insights API key. List of New Relic Insights API keys are defined on New Relic menu <b>Insights</b> , section <b>Manage data</b> , subsection <b>API Keys</b> . Required when argument 'sendNLWebDataToNewRelic' is true.	Optional
dataExchangeApiKey	Identification key specified in NeoLoad.	Optional
proxyName	The NeoLoad proxy name to access New Relic.	Optional
newRelicRelevantMetricNames	Specify the comma separated list of the matching names (contains) of the New Relic metric names to retrieve (by default: Datastore/statement,Datastore/instance,CPU,Memory,Error,/connects).	Optional
newRelicRelevantMetricValues	Specify the comma separated list of the matching names (contains) of the New Relic metric statistics to retrieve (by default: min,max,average,used_mb,percent).	Optional



## Analyze Results in NeoLoad

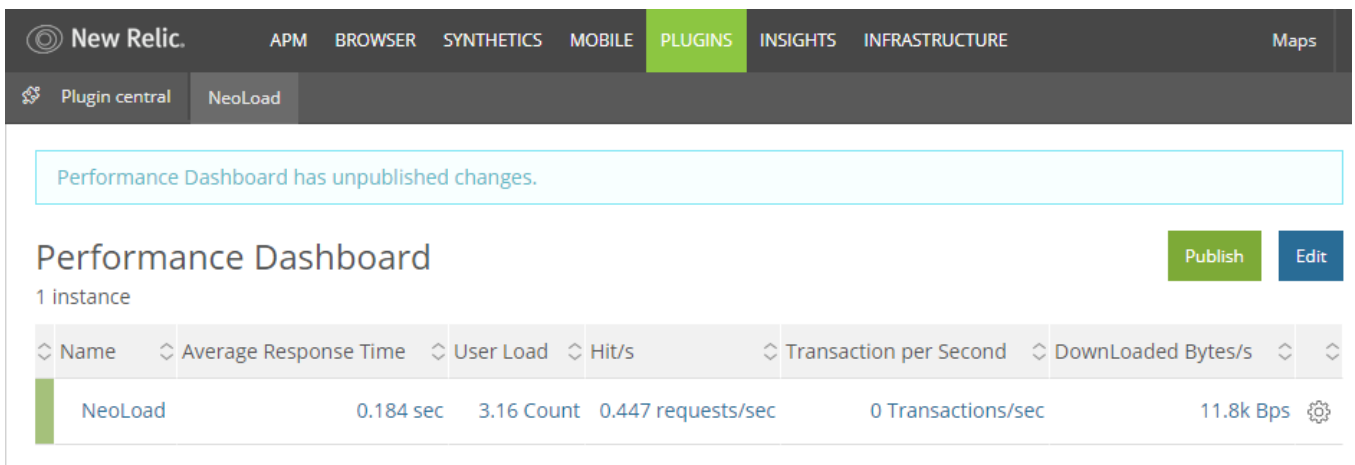
All the metrics retrieved from New Relic are available on the NeoLoad Controller (live during the test, and after the test is executed), in the **External Data** tab.



## Analyze Results in New Relic Plugins

The Performance Dashboard provides statistics below:

- Average Response Time
- User Load
- Hit/s
- Transactions per Second
- Downloaded Bytes/s



The screenshot shows the New Relic interface with the 'PLUGINS' tab selected. A notification at the top states 'Performance Dashboard has unpublished changes.' Below this, the 'Performance Dashboard' for the 'NeoLoad' plugin is displayed, showing 1 instance. A table lists the performance metrics for the NeoLoad instance.

Name	Average Response Time	User Load	Hit/s	Transaction per Second	Downloaded Bytes/s
NeoLoad	0.184 sec	3.16 Count	0.447 requests/sec	0 Transactions/sec	11.8k Bps

Transaction	
Success	512 Count
Count	1.05 Transactions/sec
Failure	0 Count

Request	
Success	2.72k Count
Count	15.4 requests/sec
Count	5.48 Requests/sec
Duration	0.238 sec
Failure	0 Count



## Analyze Results in New Relic Insights

In addition to their core APM product, New Relic offers New Relic Insights, which provides a wide variety of methods to analyze and present custom, real-time data visualizations. New Relic offers the ability to build precise dashboards with the help of their New Relic Query (NQR) language. Any data measured by New Relic (APM, Infrastructure, RUM, or Synthetic) can be accessed using NRQ.

NeoLoad sends statistics in two Insights tables: "NeoLoadData" and "NeoLoadValues"

### NeoLoadData Insights Table

These data are the [Main Statistics](#) from NeoLoad Web. They are retrieved from [NeoLoad Web API](#) with REST call `"/tests/{testId}/statistics"`.

NeoLoadData table has all the global statistics of the test:

- Timestamp
- Metric Unit
- Account
- App ID

- Application Name
- Average Transaction Duration
- Dow Loaded Bytes
- Downloaded Bytes Per Second
- Global Count Failure
- Iteration Failure
- Iteration Success
- Request

### NeoLoadValues Insights Table

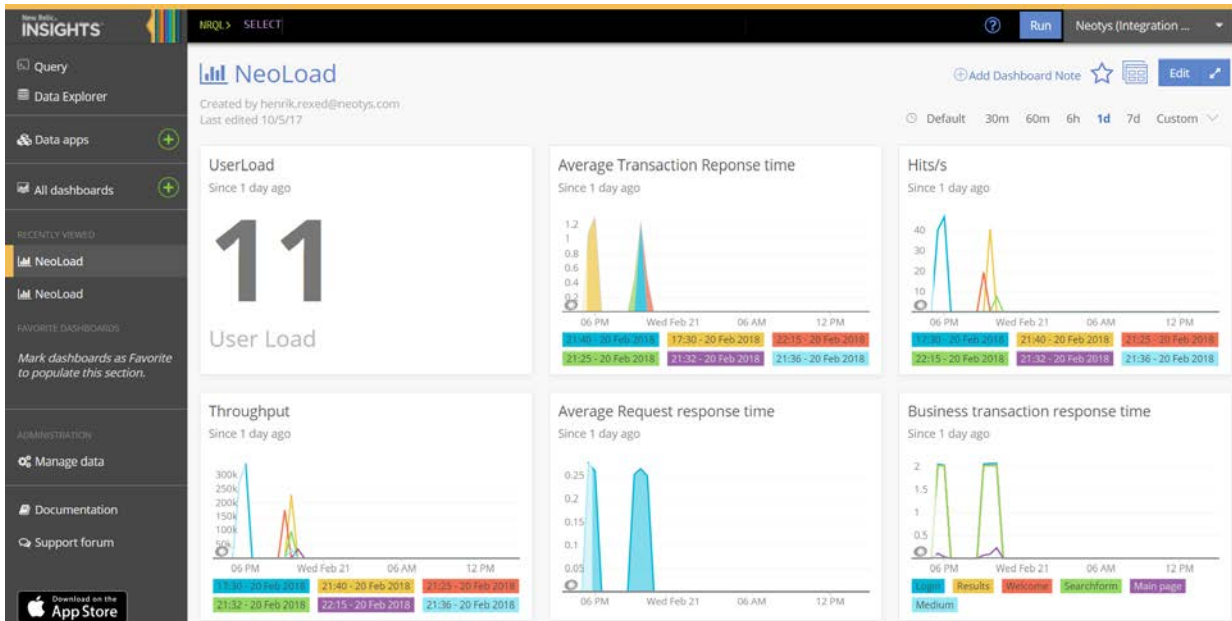
These data are the [Transaction values](#) from NeoLoad Web. They are retrieved from [NeoLoad Web API](#) with REST call `"/tests/{testId}/elements/{elementId}/values"`.

NeoLoadValues table has all the Transaction values of the test:

- Timestamp
- Account
- App ID
- Application Name
- Downloaded Bytes Per Second
- Element Per Second
- Path
- Response Time
- Scenario Name
- Test Name
- Transaction Name
- Trendfield
- Type
- User Path Name

### How to Build New Relic Insights Dashboards

See New Relic [Documentation](#).



## NeoLoad Error Codes

- NL-NEW\_RELIC\_ACTION-01: Issue while parsing advanced action arguments.
- NL-NEW\_RELIC\_ACTION-02: Technical Error. See details for more information.
- NL-NEW\_RELIC\_ACTION-03: A NeoLoad Web test should be running when argument 'sendNLWebDataToNewRelic' is true.
- NL-NEW\_RELIC\_ACTION-04: Not enough delay between the two executions of the New Relic advanced action. Make sure to have at least 60 seconds pacing on the Actions container.

## About Neotys

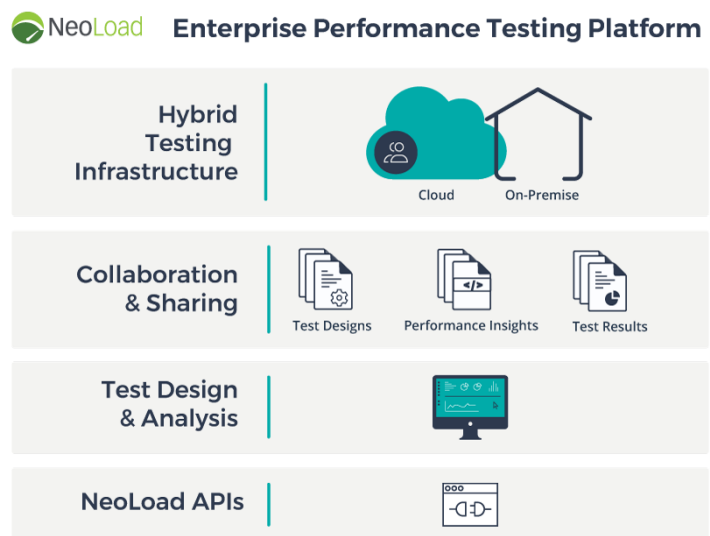
The success of your digital strategy relies on your ability to deliver fast and reliable software, regularly. Creating great software quickly, using an optimized performance testing process is your competitive advantage – Agile and DevOps are part of the solution.

Neotys has over 12 years of development investment into NeoLoad – the performance testing platform designed to accelerate Agile and DevOps processes. It’s built by engineers who recognized that in order to achieve their own Agile adoption objective, they needed to create a product that could facilitate superior load and performance testing continuously. The end result – up to 10x faster test creation and maintenance with NeoLoad.

### The end result – up to 10x faster test creation and maintenance with NeoLoad.

We truly believe that the Performance Engineer can become the critical application performance partner providing the best testing coverage while respecting the cadence of the Continuous Delivery process. As performance becomes the responsibility of the wider team, continued delivery of an optimized performance testing platform is what drives our work every day.

**For more information about Neotys and NeoLoad visit: [www.neotys.com](http://www.neotys.com) or contact [sales@neotys.com](mailto:sales@neotys.com)**



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