Monitor, Debug, Improve.

New Relic

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June 27, 2025

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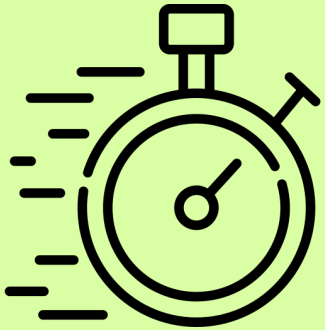
Intro

1. **Observability:** The ability to understand the internal state of a system based on its external outputs. This involves collecting and analyzing data like logs, metrics, and traces to gain insights into system behavior.

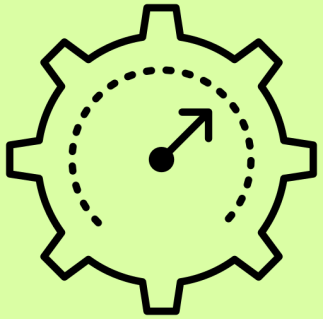
1. **Logs/Metrics:** Logs: Text records of events that occur within a system (e.g., error messages, user actions).
   Metrics: Time-series data that measure system performance (e.g., CPU usage, request latency).

1. **Alerting:** The process of notifying teams when something abnormal is happening based on observed data (logs, metrics). This can involve setting thresholds or detecting anomalies.

1. **Incident Response:** A coordinated set of actions taken to identify, analyze, and mitigate the impact of security incidents or system failures.



Identify issues faster.

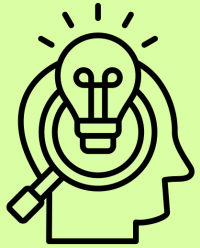


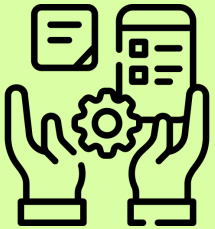
Optimize application performance.

reliability and seamless user experience.

Why observability matters?

New Relic provides **real-time insights** into **application performance** and **infrastructure health** enabling DevOps teams to proactively **manage and optimize** their technology stack.





This enables **DevOps teams** to proactively **manage and optimize** their technology stack.

What is new relic®

AI-Powered Insights

Anomaly detection and predictive analytics.

Key Features

APM

Gain detailed insights into app behavior.

Infrastructure

Monitor cloud and on-prem infrastructure.

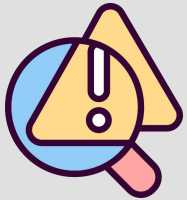
Synthetic

Simulate user interactions to find performance bottlenecks.

Dashboards & Alerts

Customizable metrics and real-time alerts.

Proactive performance testing that simulates real user interactions with your applications and APIs from various locations worldwide.



- **Early Issue Detection:** Identify and address performance bottlenecks before they impact real users.
- **Improved User Experience:** Ensure consistent application performance across different locations and devices.
- **Faster Troubleshooting:** Quickly pinpoint the root cause of performance issues and accelerate resolution times.

Synthetic Monitoring

Ping Monitors

SSL Check

Browser Monitors

Validate API

New Relic synthetics allows users to proactively monitor websites and APIs through automated scripts.

An e-commerce platform can use synthetic monitoring to ensure that their checkout process is always functional by enabling browser monitoring or as basic as ping monitors, preventing lost sales due to downtime.

Real world scenario

Impacted Entities

Which alert policy was triggered and which website was impacted

Incident Graph

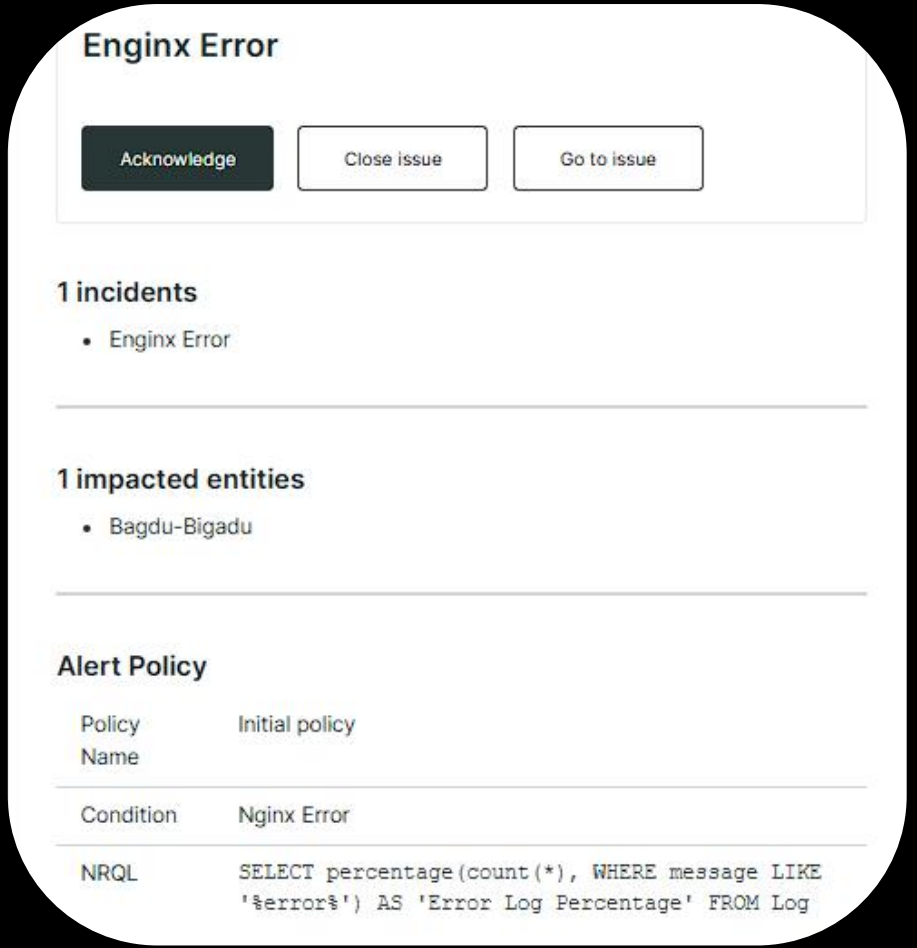
Visualizes the issues in the form of graph

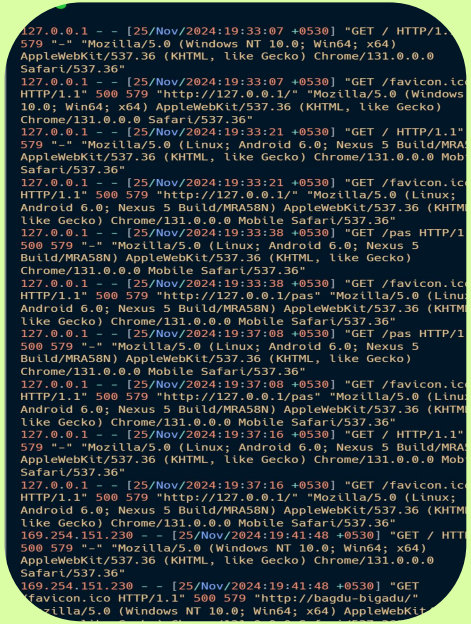
NRQL

Exact query which failed to execute

Custom Details

Displays custom description and details you may provide





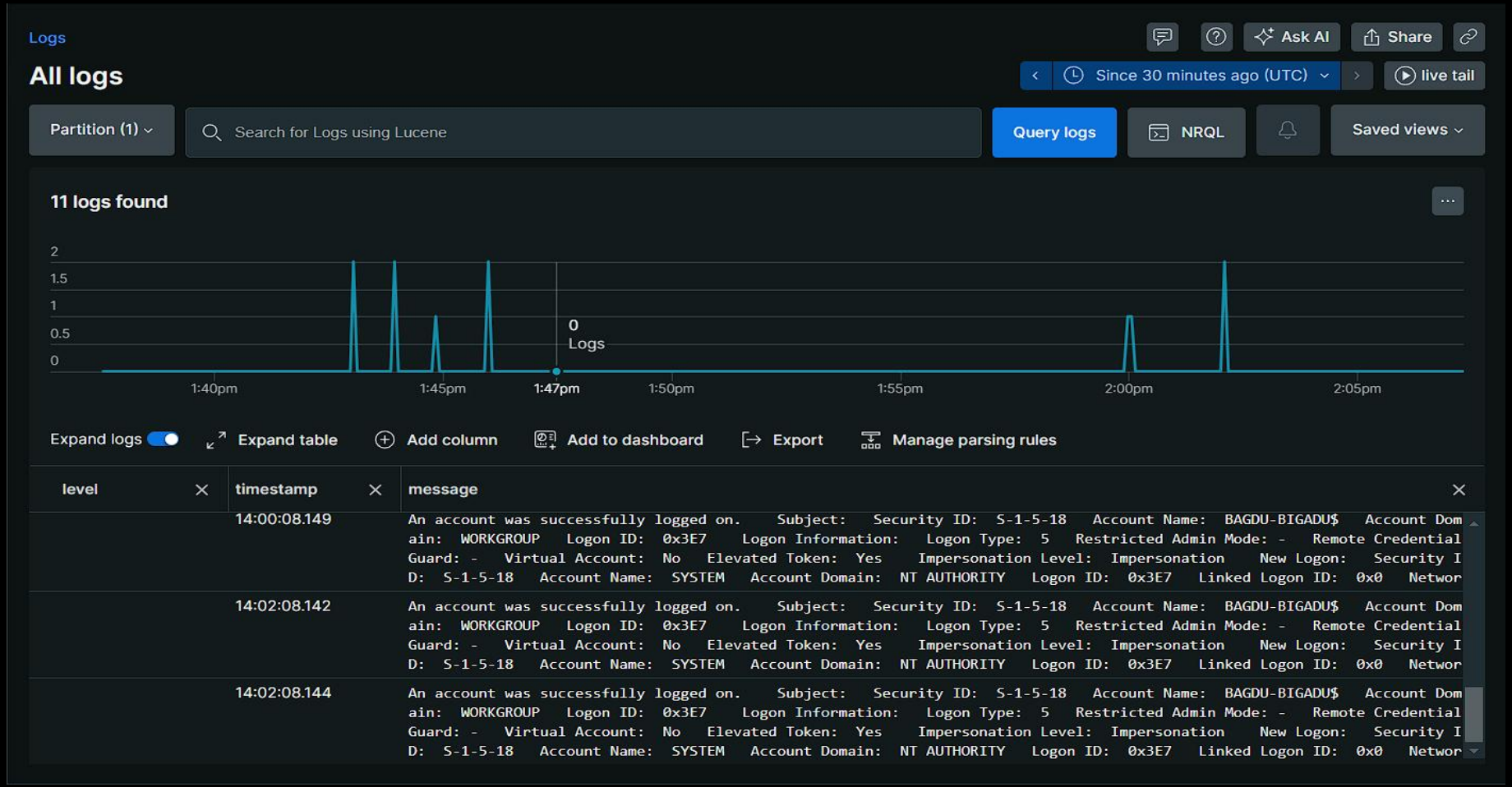
Logging

Logging is the foundation of observability in DevOps.

It provides a detailed record of events and data generated by applications and systems, allowing teams to understand their behavior, identify issues, and optimize performance.

In essence, logging is not just about recording events; it's about harnessing the power of data to gain deep insights into system behavior

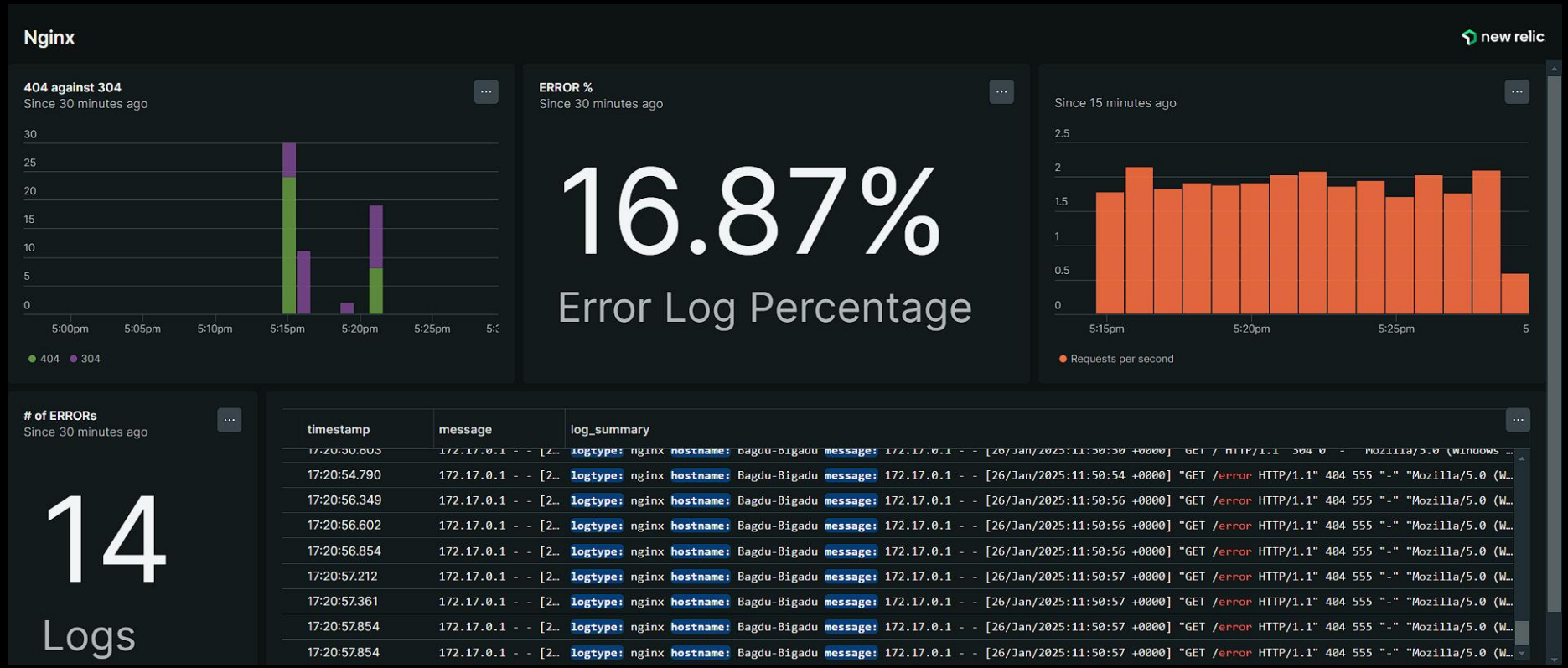
127.0.0.1 - - [25/Jan/2025:07:51:30 +0000] "GET /api/coffee HTTP/1.1" 418 I'm a teapot "-" "Desperate Coffee Addict/1.0"


Logs
All logs
Ask AI
Share
Since 30 minutes ago (UTC)
live tail
Partition (1)
Search for Logs using Lucene
Query logs
NRQL
Saved views
11 logs found
2
1.5
1
0.5
0
0
Logs
1:40pm
1:45pm
1:47pm
1:50pm
1:55pm
2:00pm
2:05pm
Expand logs
Expand table
Add column
Add to dashboard
Export
Manage parsing rules
level
timestamp
message
14:00:08.149
An account was successfully logged on. Subject: Security ID: S-1-5-18 Account Name: BAGDU-BIGADU$ Account Dom ain: WORKGROUP Logon ID: 0x3E7 Logon Information: Logon Type: 5 Restricted Admin Mode: - Remote Credential Guard: - Virtual Account: No Elevated Token: Yes Impersonation Level: Impersonation New Logon: Security I D: S-1-5-18 Account Name: SYSTEM Account Domain: NT AUTHORITY Logon ID: 0x3E7 Linked Logon ID: 0x0 Networ
14:02:08.142
An account was successfully logged on. Subject: Security ID: S-1-5-18 Account Name: BAGDU-BIGADU$ Account Dom ain: WORKGROUP Logon ID: 0x3E7 Logon Information: Logon Type: 5 Restricted Admin Mode: - Remote Credential Guard: - Virtual Account: No Elevated Token: Yes Impersonation Level: Impersonation New Logon: Security I D: S-1-5-18 Account Name: SYSTEM Account Domain: NT AUTHORITY Logon ID: 0x3E7 Linked Logon ID: 0x0 Networ
14:02:08.144
An account was successfully logged on. Subject: Security ID: S-1-5-18 Account Name: BAGDU-BIGADU$ Account Dom ain: WORKGROUP Logon ID: 0x3E7 Logon Information: Logon Type: 5 Restricted Admin Mode: - Remote Credential Guard: - Virtual Account: No Elevated Token: Yes Impersonation Level: Impersonation New Logon: Security I D: S-1-5-18 Account Name: SYSTEM Account Domain: NT AUTHORITY Logon ID: 0x3E7 Linked Logon ID: 0x0 Networ

Now that you have the data, how to make effective use of it?

- You can query the logs and extract specific details, incidents, time specific data and metrics.
- Here comes the AI-powered query generation. Simply describe the metric you're interested in, and the AI will generate the corresponding NRQL(New Relic Query Language).
- No need to write complex queries or spend time learning NRQL syntax.
- Visualize your queries in better way for easy understanding, boost your productivity and gain faster insights into your application performance.

AI-Powered Query Generation



Dashboards created with Gen AI Queries

Users define specific criteria (performance metrics) that trigger alerts when breached. This allows for tailored monitoring based on application needs

Alert Conditions

When an alert condition is violated, New Relic automatically generates an incident, providing context for investigation

Incident Creation

Users can group multiple alert conditions under a single policy, streamlines management and ensures related conditions are addressed

Alert Policies

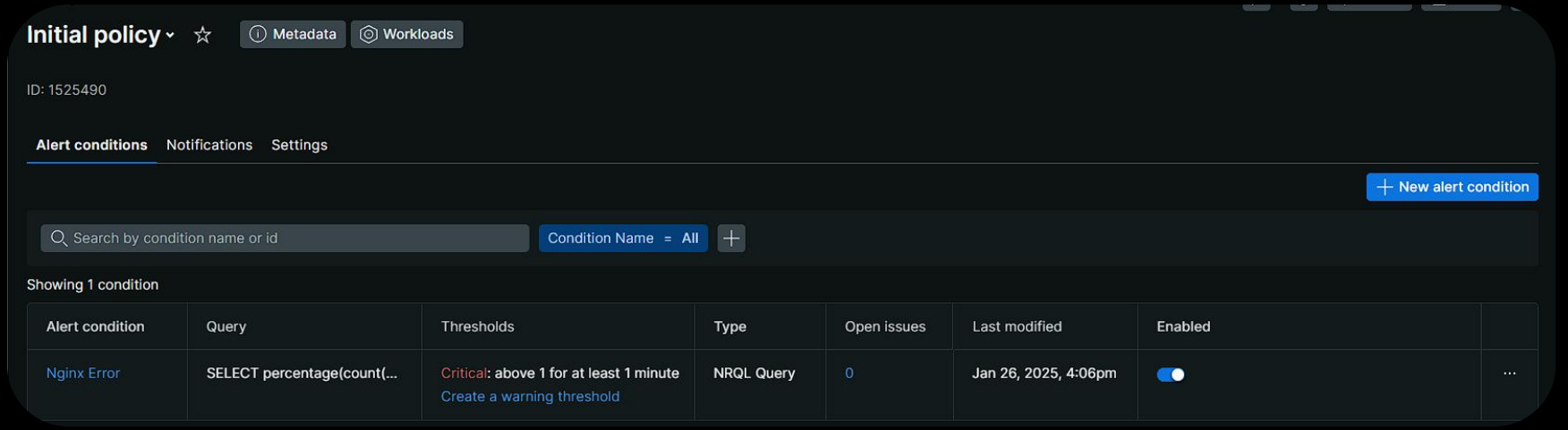
Alerts can be sent through various channels such as email, Slack, or integrated tools like PagerDuty, ensuring that the right teams are notified promptly

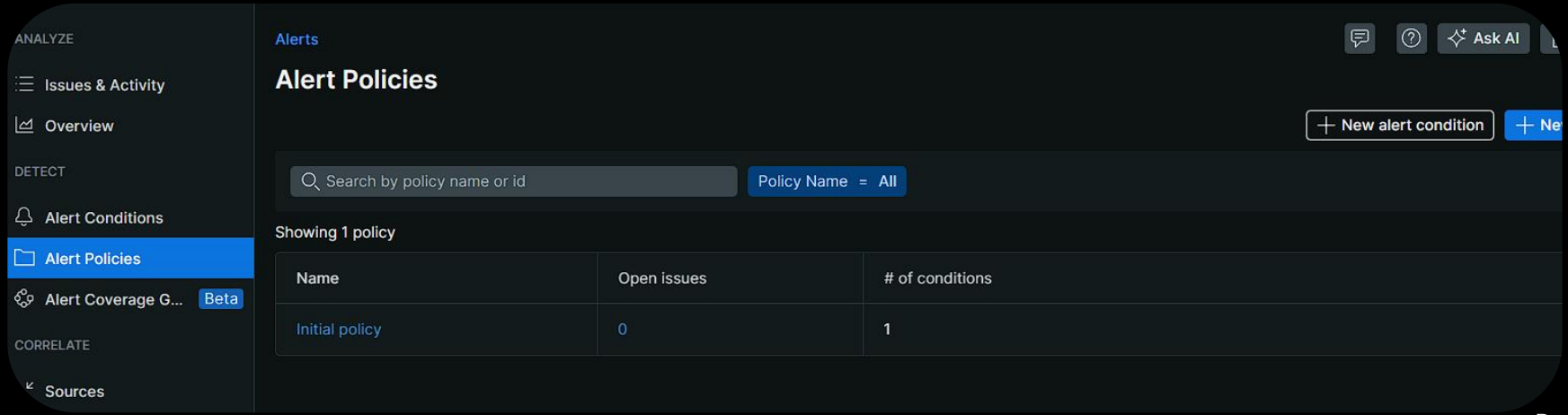
Notification Channels

Alerting

New Relic provides a sophisticated alerting system that integrates seamlessly with its observability platform

The process of notifying relevant stakeholders when specific conditions or thresholds are met, indicating potential issues.


Initial policy
Metadata
Workloads
ID: 1525490
Alert conditions
Notifications
Settings
New alert condition
Search by condition name or id
Condition Name = All
Showing 1 condition
Alert condition
Query
Thresholds
Type
Open issues
Last modified
Enabled
Nginx Error
SELECT percentage(count(...
Critical: above 1 for at least 1 minute
Create a warning threshold
NRQL Query
0
Jan 26, 2025, 4:06pm


ANALYZE
Issues & Activity
Overview
DETECT
Alert Conditions
Alert Policies
Alert Coverage G...
Beta
CORRELATE
Sources
Alerts
Alert Policies
Ask AI
New alert condition
Search by policy name or id
Policy Name = All
Showing 1 policy
Name
Open issues
# of conditions
Initial policy
0
1

Parent issue: Policy: 'Initial policy'. Condition: 'Nginx Error'

Incident

Bagdu-Bigadu violated Nginx Error

Opened Critical Opened **11 mins ago** at **6:02pm**

```
SELECT percentage(count(*), WHERE message LIKE '%error%') AS 'Error Log Percentage' FROM Log TIMESERIES 1 MINUTE SINCE '2025-01-26 06:39:51' UNTIL
 '2025-01-26 12:38:51'
```

Enginx Error

View query

Incident

Metadata

Type	Query
Account	Account 6359222
Condition type	NRQL
Condition	Nginx Error
Policy	Initial policy
Issue	Policy: 'Initial policy'. Condition: 'Nginx Error'

View incident payload

Tags (18)

Detailed Analysis

Automate Insights

AI analyzes telemetry data, providing actionable insights without the need for complex queries, making it accessible to all team members, including non-technical users.

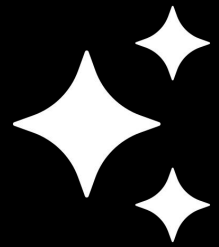
Predictive Analytics

The AI engine predicts potential issues before they escalate, allowing teams to proactively address problems and minimize downtime.

Gen-AI Queries

New Relic's AI capabilities allow users to generate queries using natural language. This simplifies data retrieval and analysis by enabling users to ask questions in plain English rather than using complex query languages.

How AI Enhances New Relic



Resources

- **Icons:**
  - https://www.freepik.com/
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  - Personal account demo of new relic
  - AI Generated images by Google Gemini.
- **Slides:**
  - Google Slides
- **Content:**
  - https://docs.newrelic.com/
  - https://www.perplexity.ai/
  - https://chatgpt.com/
  - https://runcloud.io/

As much as I wish I could say this whole presentation was made by an AI, we are not quite there.

Ultimately human interaction is the key.

Thank you