



New Relic Monitoring for SAP Solutions

Monitor SAP alongside other systems with a centralized view of infrastructure, application, and business processes.

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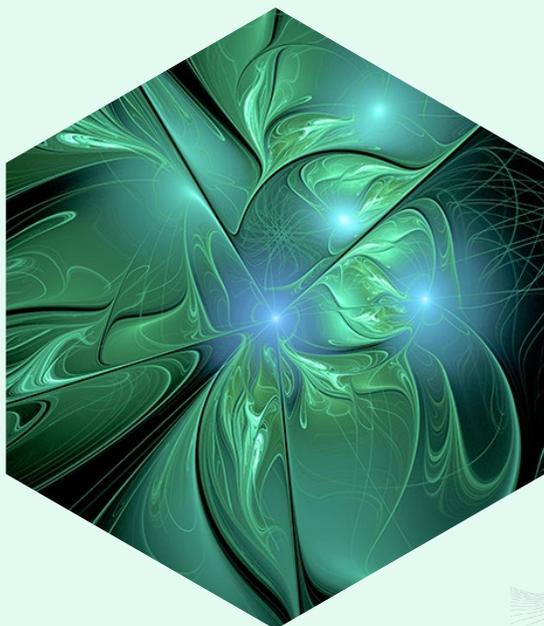
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Executive summary

With SAP powering a number of critical business processes, ITOps teams need to be able to quickly understand system health at a glance and immediately troubleshoot performance issues for SAP solutions within the context of their overall ecosystem.

New Relic Monitoring for SAP®, an SAP-certified solution, allows you to analyze the performance of your SAP systems alongside the rest of your technology stack, giving you a single view of your infrastructure, applications, and business processes.



New Relic Monitoring for SAP® allows you to:

See SAP application performance and overall health in one place.

Analyze your telemetry in a unified view across your SAP landscape.

Analyze the performance of your SAP business processes. Understand how business processes, such as order-to-cash and procure-to-pay, are impacted by low performance.

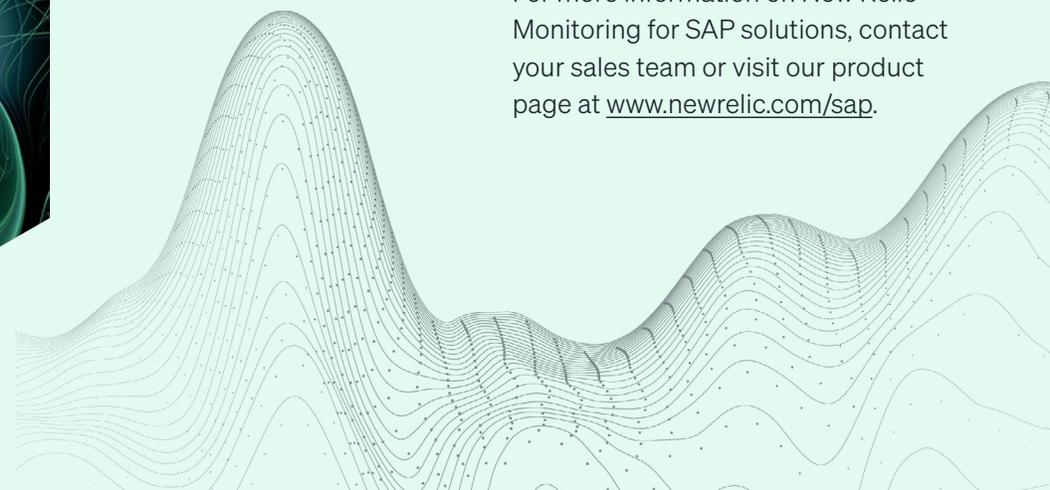
Spot problems quickly with visualizations. Identify the root cause of performance problems, or bottlenecks in the business processes and quickly identify the root cause to issues within the application and/or infrastructure layers.

Prevent problems before they occur.

Get notified about problems before they impact your customers with proactive detection, or as the system automatically learns of baseline behavior/patterns and detects anomalies.

Get SAP monitoring up and running within hours. With an out-of-the-box, SAP-certified solution that installs on a single server. You can have end-to-end visibility.

For more information on New Relic Monitoring for SAP solutions, contact your sales team or visit our product page at www.newrelic.com/sap.



Overview

The need for SAP observability

As businesses increasingly rely on a complex collection of software services to power their foundational business functions, performance issues can cause a severe impact. The complexity in the landscape is coming from the fact that SAP is a combination of many interconnected systems and components. Business processes span across multiple systems, and if one system has an issue at the application or infrastructure level, then the business process can be impacted, resulting in hits to revenue, costs, and user satisfaction. These issues, which stem from SAP systems and non-SAP systems alike, can be challenging to track down without a platform and a practice of observability.

Because of its strategic importance, and the complexity that requires specialized knowledge, SAP systems are usually managed independently from other systems and applications. When an incident occurs within any SAP system, it can be time-consuming to detect, attribute the root cause, and resolve the issue. These delays impact organizations' service level objectives (SLOs) and run the risk of violation of service level agreements (SLAs), making it challenging to understand the ramifications of SAP incidents on business processes or customer experiences.

Without observability, organizations lack a comprehensive view of performance across internal business processes on SAP or other systems. And in the rare circumstances where there is performance data, manually stitching it together from diverse sources is costly and time-consuming.

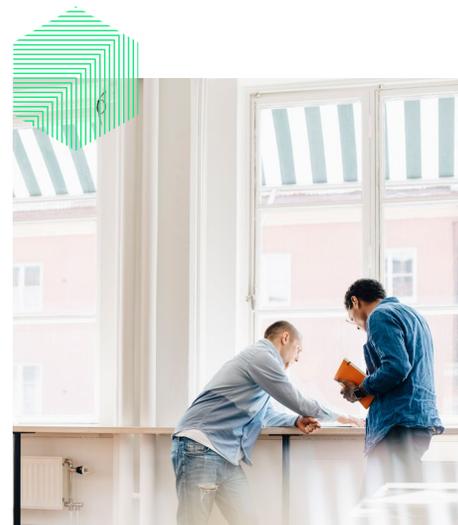
A comprehensive SAP observability solution equips teams to compress three key operational timeframes:

- MTTD - Mean time to detect, or the time it takes an organization to detect a problem with their SAP systems.
- MTTA - Mean time to acknowledge, or the time it takes a team member to recognize an incident and react to it.
- MTTR - Mean time to resolve, or the time it takes from when an incident occurs to when the issue is resolved.

SAP

SAP is the 3rd largest software vendor by revenue in the world. Founded in 1972 with around 110 thousand employees, SAP is headquartered in Walldorf, Germany. SAP global customers generate 87% of total global commerce (\$46 trillion) and 99/100 largest companies in the world are SAP customers.

SAP is an ERP (Enterprise Resource Planning) software provider for core business areas such as procurement, production, materials management, sales, marketing, finance, and human resources.



Problems & challenges

Business-process-flow interruptions

Business processes that rely on SAP infrastructure, such as procurement, production planning, financial management or sales operations, can be interrupted by Intermediate Document (IDoc) errors, remote function call (RFC) communication failures, and batch job delays or failures. Slowed or stalled business processes—from whatever cause—ultimately result in negative financial impact to the business. To expedite resolutions and guarantee better business process uptime, organizations and their IT teams need to be able to trace any SAP issues end-to-end at the transaction, order, or invoice level.

Slow resolution time

Despite these high stakes, when organizations that use SAP for mission-critical business processes become aware of an incident, it can take considerable effort to address the root cause and remediate the issue. Resolution is often performed manually, requiring digging through numerous SAP screens, tables, and logs. And further complications arise when the business and IT teams aren't in sync because systems, operational data, business process knowledge, or other information are not shared.



Solution overview

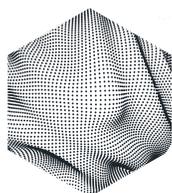
Best-in-class SAP observability from New Relic

New Relic Monitoring for SAP® enables you to understand the performance and overall health of your entire SAP system with an SAP-friendly integration. With New Relic, you can monitor the underlying entities that keep your business processes flowing while also gaining visibility into your SAP systems, whether they are running on-prem or on cloud platforms like Amazon Web Services (AWS) or Microsoft Azure.

New Relic Monitoring for SAP solutions helps organizations automate the manual and slow processes of being notified, identifying, finding root cause, and resolving incidents in SAP systems. The solution helps SAP teams compress the time they need to detect and fix problems, speeding time to resolution.

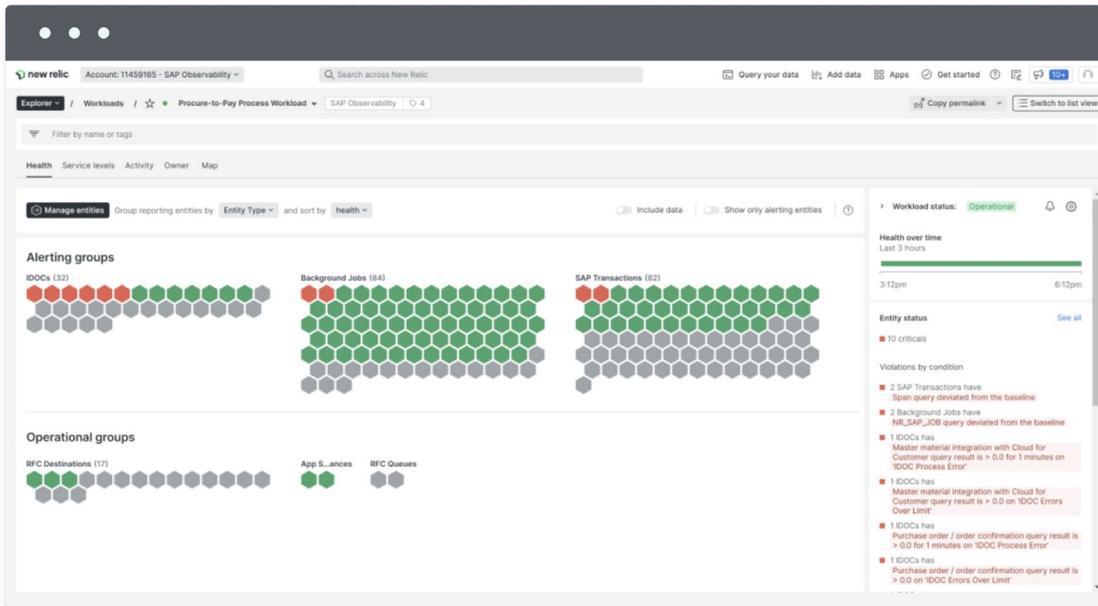
New Relic reduces time to detection with proactive alerts. These alerts are easy to set up, with no need for traditional static thresholds. Instead, they use dynamic baselining that automatically learns patterns over time and detects anomalies, allowing for more accurate alerts and early detection.

New Relic reduces time to resolution with visualizations that combine end-to-end views of multiple SAP systems and non-SAP systems. This complete picture points the way to direct correlations and faster incident resolutions.



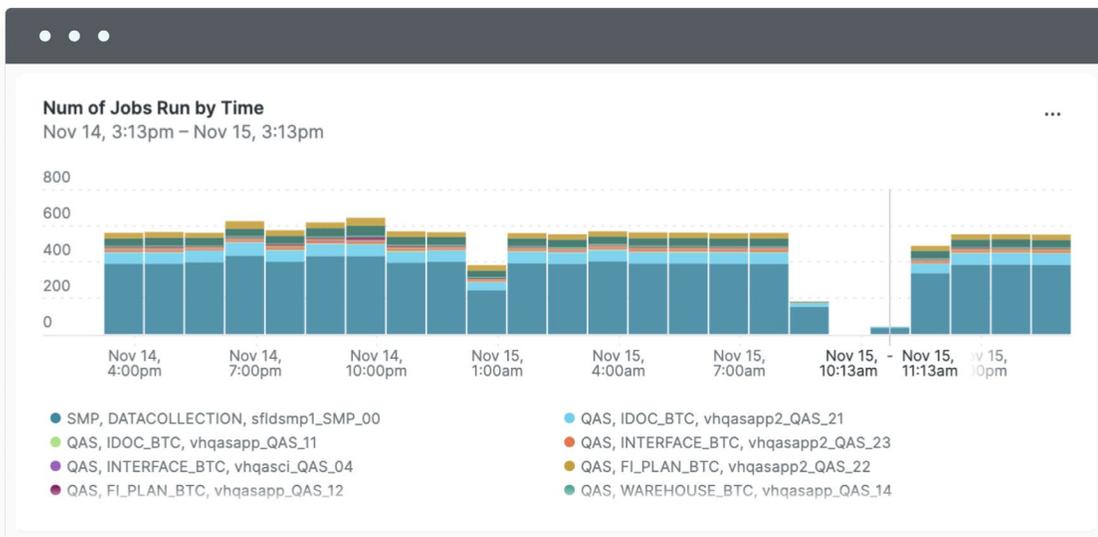
All the data in one place, with end-to-end view

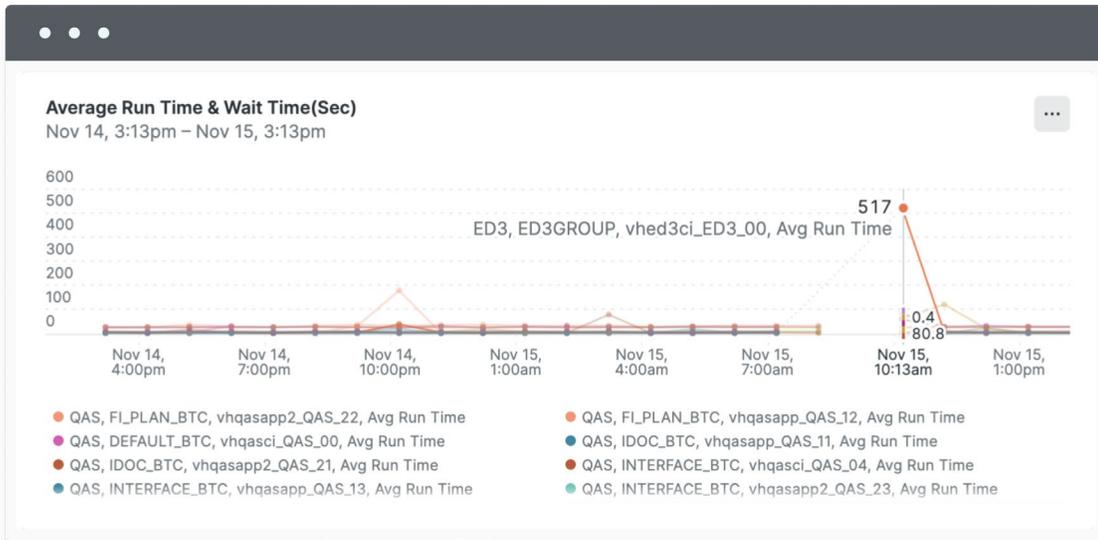
New Relic provides a centralized view of the overall health of your SAP systems allowing users to quickly focus on system or application components that need attention. This saves time by not having to log into multiple systems, execute multiple transactions, or write custom reports to get a picture of the system health.



Powerful Visualizations, available out-of-the-box

Take advantage of out-of-the box SAP dashboards containing powerful yet user-friendly visualizations of the monitoring data. For example, see the distribution of background jobs over time to quickly identify any uneven distribution and easily zoom in on a timeframe where spikes or anomalies occur to determine root cause and take corrective action.





With the ability to easily view historical system performance, users are able to easily and accurately plan for system sizing and migration to the cloud.

Easily tailor for your needs

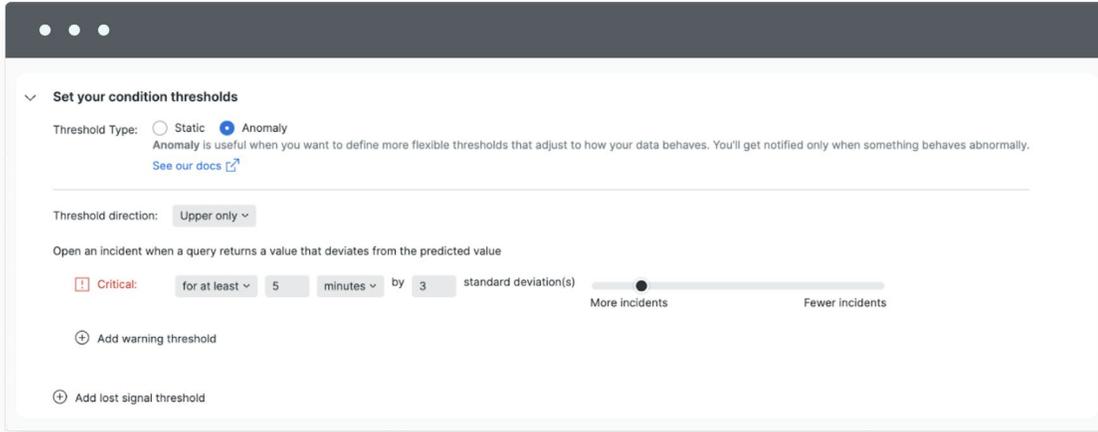
All telemetry data such as logs, metrics, events, and traces from all your SAP systems are stored centrally in New Relic and available for easy query. Within minutes, save monitoring queries as widgets and dashboards on the New Relic platform, without needing a change to the SAP system. For example, here is a query to monitor SAP transactions.

Transaction Detail
Nov 14, 3:10pm – Nov 15, 3:13pm

Timestamp	SAP EID	T Code	Task Type Name	Response Time	Process Time	Wait Time	Roll Wait Time	CPU Time	GUI Net Time
November 15, 2022 15:12:59	QAS/SAPMSSYC	DEL_THCALL	DEL_THCALL	16	14	0	0	10	0
November 15, 2022 15:12:59	QAS/<DELA'ab_APGMain>	DEL_THCALL	DEL_THCALL	35	1	0	0	0	0
November 15, 2022 15:12:59	QAS/(BATCH)	BACKGROUND	BACKGROUND	184	6	0	0	0	0
November 15, 2022 15:12:59	QAS/<AUTOSECURITYPROCESSING>	AUTOTH	AUTOTH	148	2	0	0	0	0
November 15, 2022 15:12:58	QAS/SAPMSSYC	DEL_THCALL	DEL_THCALL	598	207	0	0	10	0
November 15, 2022 15:12:57	QAS/SAPMSSYC	DEL_THCALL	DEL_THCALL	148	88	0	0	10	0

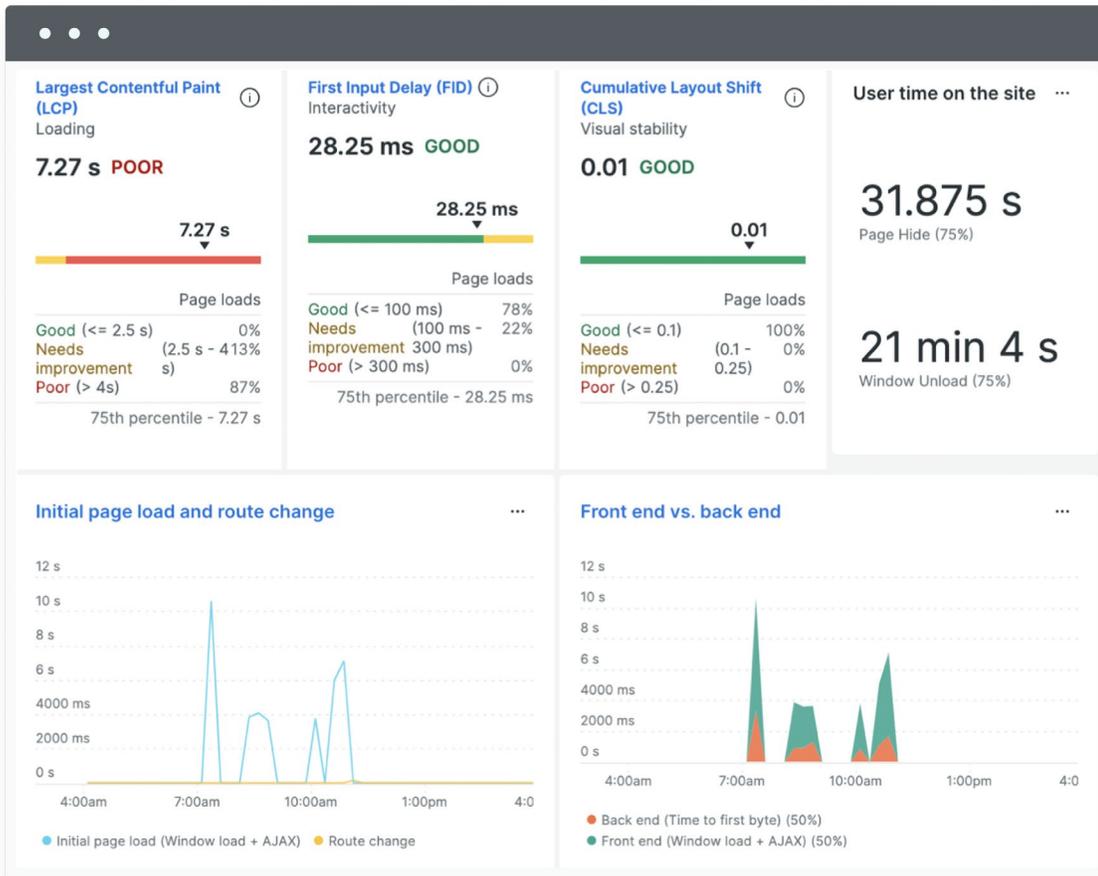
```
Account: 3452868 - SAP Observability1  
FROM NR_SAP_PROGRAM SELECT SAP_EID, T_Code, Task_Type_Name, Response_Time, Process_Time, Wait_Time, Roll_Wait_Time, CPU_Time, GUI_Net_Time,  
GUI_Time, DB_Time, User, Terminal_ID, BUSIPROC_0001 as 'Business Process', BUSIFUNC_0001 as 'Business Function' SINCE 1 day ago LIMIT MAX
```

Once a custom query is created, an alert condition can be easily with the push of a button. Rather than setting a static alert threshold, allow the New Relic system to automatically learn the system behavior and alert on anomalies exceeding certain standard deviations.



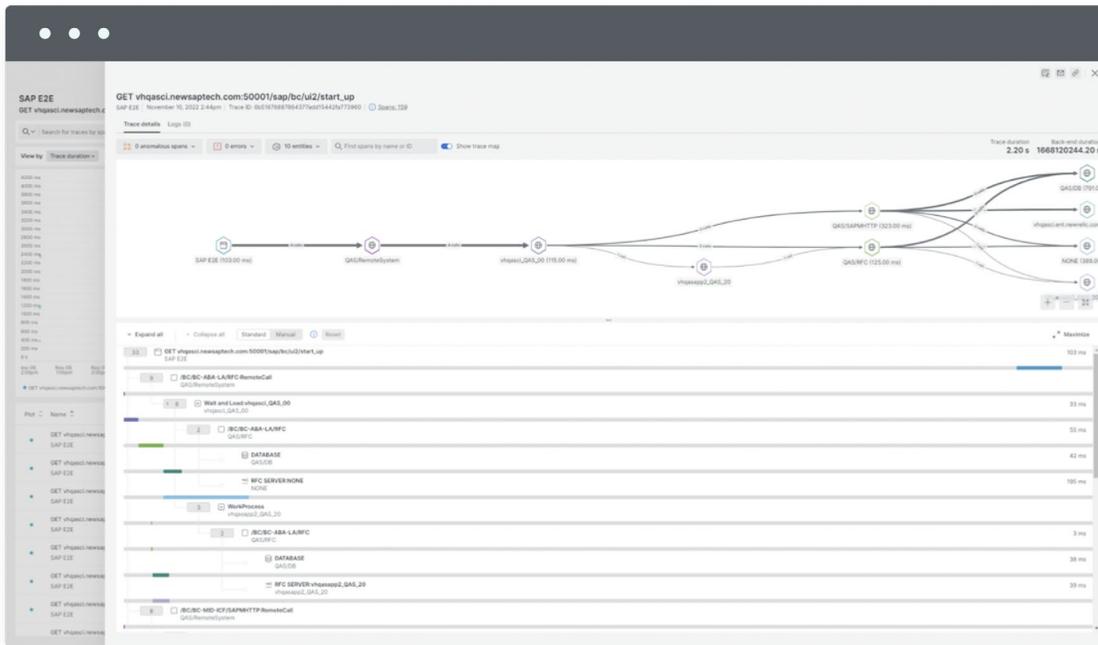
End-user Experience Monitoring

In addition to monitoring SAP back-end systems and applications, New Relic also monitors the SAP Fiori browser front-end. Out-of-the-box dashboards indicate the overall performance from the end user's perspective, page view and Ajax call data, and page errors that may eventually lead to problems.



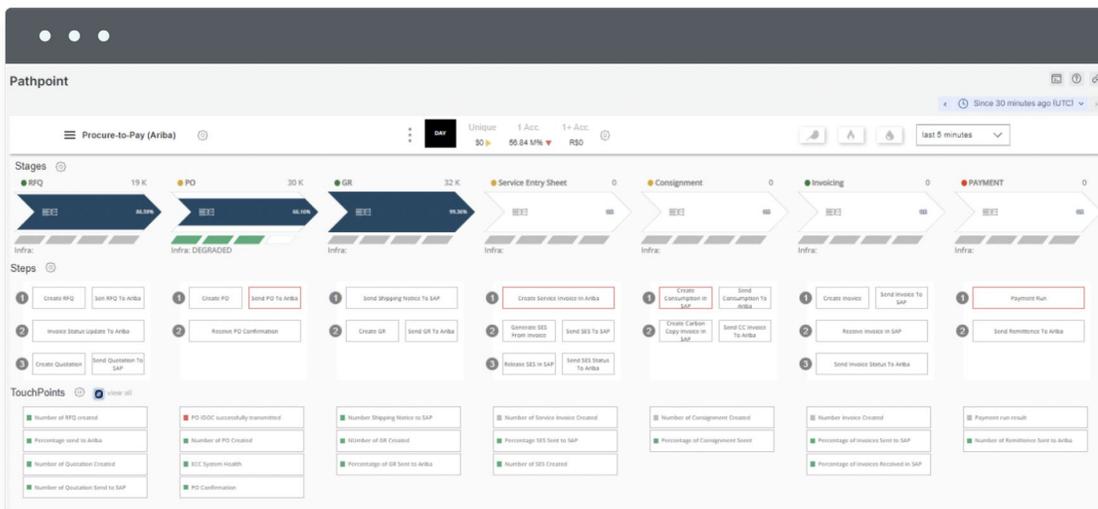
Fast root-cause identification with end-to-end traces

Get automatic insights into the possible root cause of issues, with an end-to-end trace from the SAP Fiori front-end, directly to the SAP back-end systems such as databases and programs. Such distributed traces are available for every transaction that is executed, without the need for agents installed in your back-end SAP production systems.



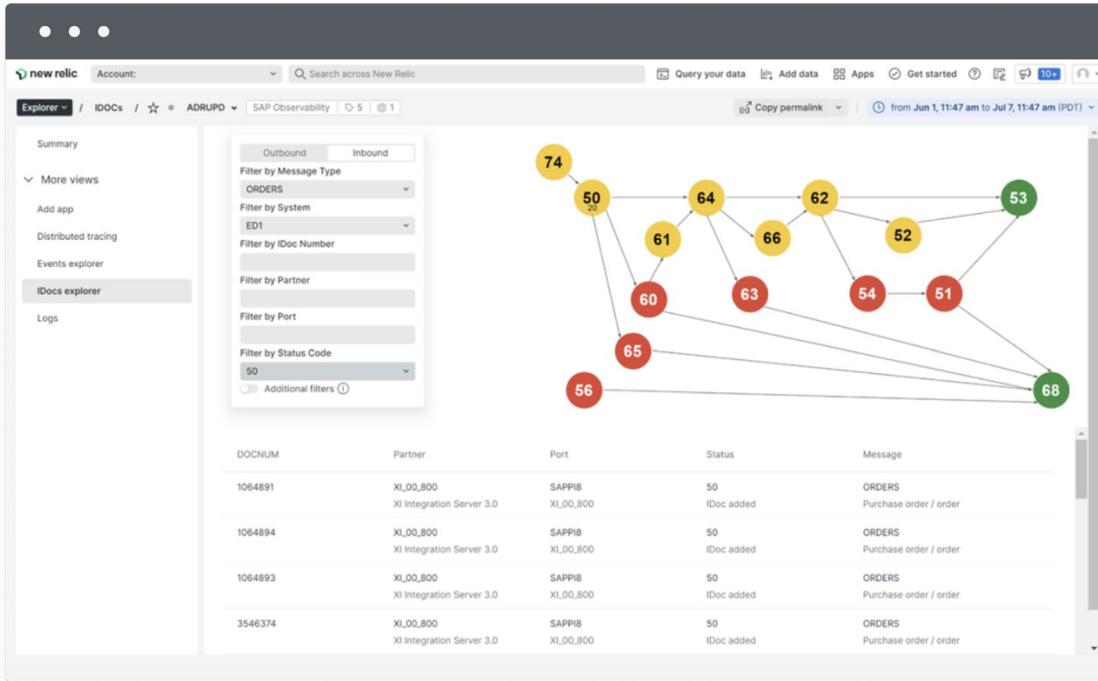
Business Process Monitoring

In addition to monitoring your SAP system and application layers, with New Relic you can also monitor your key business process flows. You can track business KPI's via real time dashboards, identify process bottlenecks, and drill down into the application and system layers to identify root cause. For example, visualize your procure-to-pay process in real-time:



In this case, the PO Creation step in the process is degraded because the PO IDOCs are erroring in the integration with SAP Ariba.

New Relic provides a convenient visualization to track the flow of every SAP IDOC type, identifying bottlenecks and quickly identifying root cause of IDOC errors.

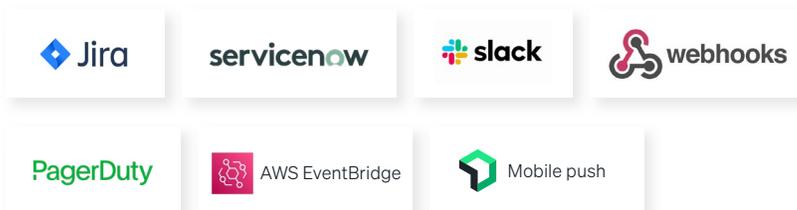


Automated Ticketing

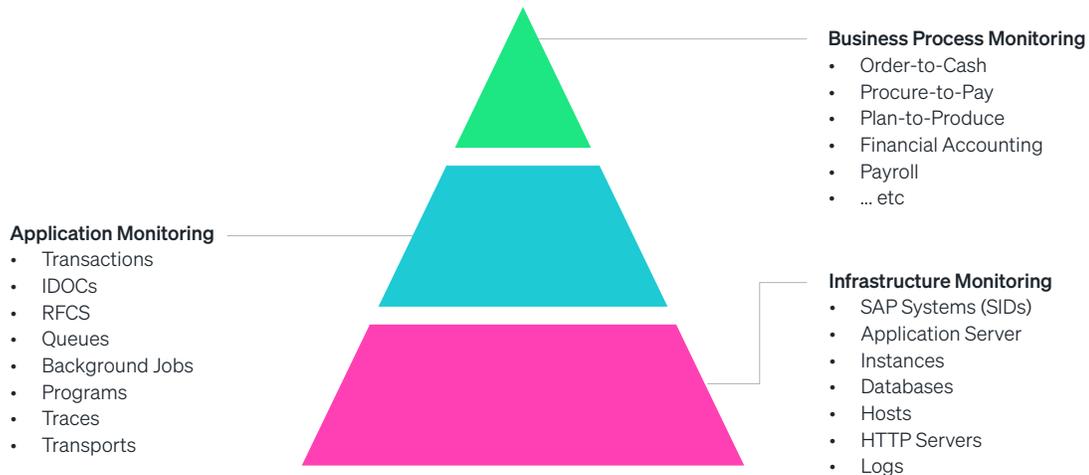
Keep issue resolution and awareness flowing with standard integrations between New Relic and third party ticketing systems such as ServiceNow.

Add a destination

Add destinations where we send notifications. Here are a few of the options available.



New Relic Monitoring for SAP Solutions



New Relic Monitoring for SAP Solutions connects directly to SAP data sources, not through agents in each system, monitoring ABAP-based (Advanced Business Application Programming) SAP systems such as ECC and S/4 HANA. With it, you get a single view of SAP systems that combine visibility to the **Infrastructure layer** and **Application layer** while organizing these components to create relevant **business-process views**.

The **Infrastructure level** monitors the health of the overall systems, as well as their underlying components such as Application Server Instances, Databases, Hosts, and others.

The **Application level** monitors a wide range of components such as:

- **Transactions**, or dialog transitions users experience;
- **IDocs** that drive most business processes in SAP;
- **RFCs** or endpoints for communication with and between SAP systems;
- **Queues / Background jobs; Programs** or background programs,
- **Traces** for every evaluated program, and
- **Transports**.

These application components that New Relic monitors are the lifeblood of SAP systems and are essential to keeping organizations' business processes flowing efficiently.

Business-process views allow organizations to monitor and track mission-critical business processes that may include order-to-cash, procure-to-pay, plan-to-produce, and others.

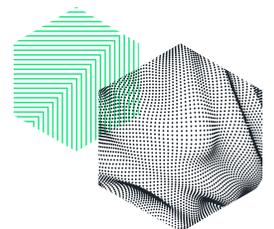
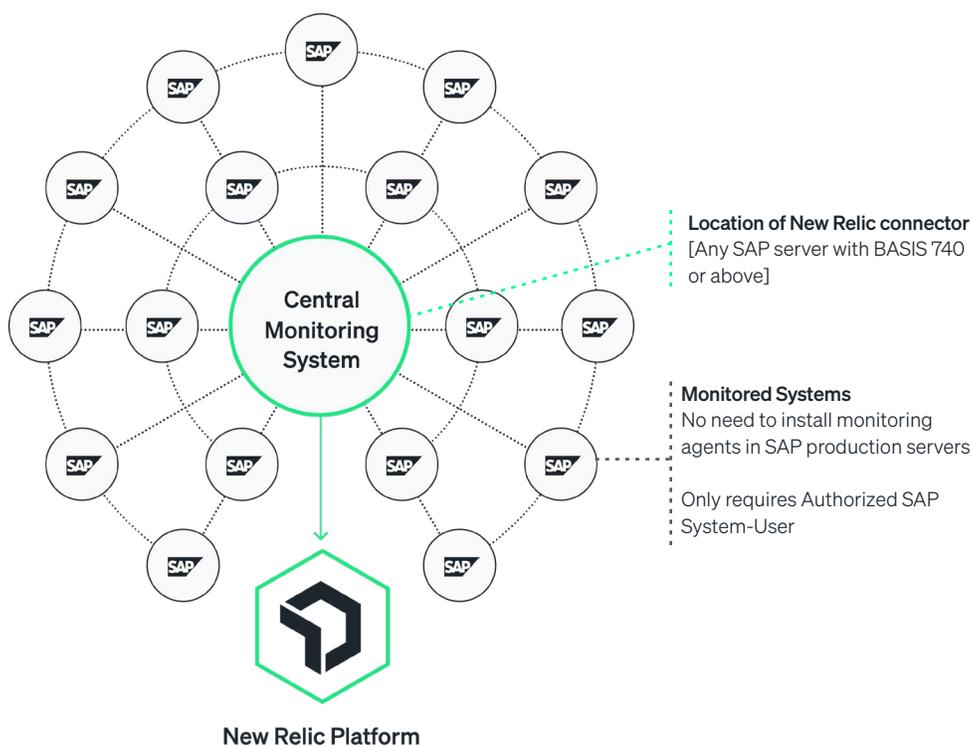
Agentless Architecture

SAP systems are key to running mission-critical business processes smoothly. At New Relic we have taken this to heart by designing a solution that does not add load to SAP production servers.

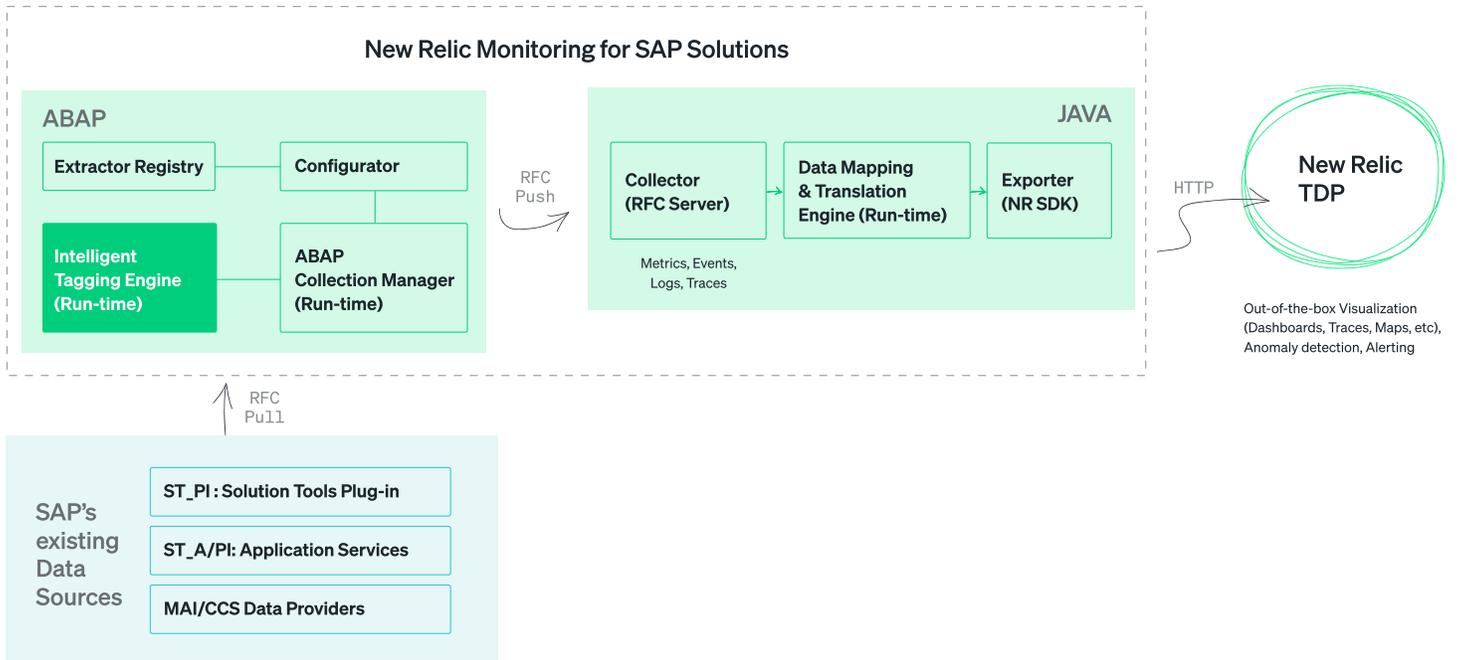
We've achieved this low impact through an agentless architecture that concentrates the monitoring load in a centralized monitoring system. SAP systems feed telemetry data into the central monitoring system without having to install monitoring agents in the source SAP systems. All that's required is an authorized user for RFC communication, for which New Relic provides an authorization profile with standard authorization objects. This RFC user sends telemetry data using existing SAP telemetry pipelines, represented by the dotted black lines.

The monitoring server can be a clean ABAP server with BASIS 740 or above, or simply installed alongside SAP Solution Manager on the same server. From there, the solution consolidates, processes, and sends the telemetry data to the New Relic platform via secured HTTPS communication.

This results in a simple, elegant architecture that protects the performance of the SAP system.



Detailed Architecture View



In this detailed view, the dotted box on the image represents the software that's installed on the Central Monitoring Server. It's also known as the SAP connector, an integral part of New Relic Monitoring for SAP Solutions.



The SAP connector consists of two components:

- An ABAP component, installed as an SAP Certified, ABAP add-on, directly within SAP, or installed as part of a SAP Add-On Installation Tool (transaction SAINT).
- A Java component, installed on the same Java Virtual Machine (JVM) component of the ABAP stack, and does not require a separate Java stack.

At the bottom of the diagram are the existing SAP data sources; SAP Basis experts will recognize these data sources as “STPI”, “STAPI”, etc., which provide access to all telemetry data from within SAP.

The brains of the solution is the ABAP Collection Manager, which selectively pulls the relevant data from those data sources. The manager is highly configurable in that teams managing the solution can:

- Change the frequency of each metric collected from, say, 2 seconds to 2 minutes to 2 hours.
- Turn collection on or off, by type of metric.
- Easily configure additional metrics for collection.

Out of the box, there is a baseline configuration of the most common metrics, with optimal collection frequency.

New Relic not only collects the telemetry data, but tags it with its relevant SAP system to provide an end-to-end view of all infrastructure and applications for a particular system ID. The solution also tags infrastructure and application components with their relevant business processes to present a complete business-process view. We built the SAP certified data connector so that it can be easily installed in under two hours.

By delivering the connector as well as the visualizations, New Relic ensures a tight integration and seamless process for managing the relevant tags necessary to visualize the SAP telemetry data in useful ways.

As the data passes through the tool's Java component to convert it to the New Relic data model, the integration sends it via HTTPS to New Relic's platform. There is no storage required in the ABAP server, as data is transmitted in real time to New Relic where it can be stored for default or extended data retention options.

Storing telemetry data from multiple SAP systems in New Relic's unified database makes it easy to track historical data, compare current performance against historical baselines, and provide convenient reporting for internal stakeholders.



A complement for SAP Solution Manager

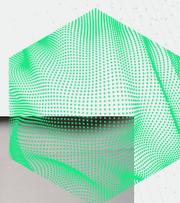
New Relic taps into existing data sources, the same used by SAP Solution Manager adding functionality from our platform that complements Solution Manager with the following:

- Powerful, user-friendly visualizations.
- Unified telemetry database, eliminating the need to log into multiple systems and transactions to analyze issues.
- An end-to-end view of multiple systems including infrastructure and application layers
- Real-time view of business process flows and KPI's, identifying process bottlenecks with drill down to root cause.
- Automated alerts that are more timely and reliable.
- Simple and convenient ways to make changes to the monitoring system, as well as add additional monitoring points.
- Easy ways to generate management reports such as service levels, or other historically based performance reports.
- Additional integrations, such as to ticketing systems like ServiceNow and many others.

Next Steps

For more information on New Relic Monitoring for SAP solutions contact your sales team or visit our product page.

[Learn More](#)



About New Relic

As a leader in observability, New Relic empowers engineers with a data-driven approach to planning, building, deploying, and running great software. New Relic delivers the only unified data platform with all telemetry—metrics, events, logs, and traces—paired with powerful full-stack analysis tools to help engineers do their best work with data, not opinion.

Delivered through the industry's first usage-based pricing that's intuitive and predictable, New Relic gives engineers more value for their money by helping improve planning cycle times, change failure rates, release frequency, and MTTR. This helps the world's leading brands and hyper-growth startups to improve uptime, reliability, and operational efficiency and deliver exceptional customer experiences that fuel innovation and growth.

