The Ultimate Guide to Modern SAP Monitoring

Contents

SAP Platinum Partner

Today, every company is a software company.

That's because technology serves as the connective tissue behind myriad business processes — and, by extension — a wide variety of resources that companies use to enable the delivery of goods and services. No matter your industry, it's critical that resources are deployed efficiently to drive business forward. But as tech stacks grow more complex and data is distributed across the cloud, it's easier said than done.

That's why businesses rely on SAP's "enterprise resource planning" software — or "ERP" for short. With SAP, businesses have the ability to bring together data from across functional areas to give companies the ability to seamlessly plan, allocate, and deploy valuable resources across complex supply chains and applications.

SAP is an extensible ERP solution, but there are limitations

SAP is broadly adopted by enterprise companies the world over

In fact, 77% of all worldwide business transactions touch an SAP system in some form, and the company boasts over 150 million cloud users, making it the largest enterprise cloud company. This is in part because SAP is customizable for a variety of business use cases via modules that can be deployed across functional areas. There are also numerous business applications that depend entirely on the functionality of SAP to fulfill their purpose to end users, from the frontend — think e-commerce platforms — to backend logistics related to research and development, manufacturing, supply chain, procurement, and a plethora of other business areas.

But there are limitations to SAP, specifically when it comes to three core IT activities:

1. **Getting code-level visibility into problems**
2. **Managing and identifying important system alerts**
3. **Connecting issues within SAP to core transactions related to your business**

With regard to visibility, it's SAP's proprietary programming language, ABAP, that makes it impossible to monitor down to the statement level, leaving many IT managers without an efficient means of determining root cause. While SAP's own proprietary product lifecycle application, Solution Manager, offers some assistance, it only permits the implementation of static thresholds related to performance, resulting in alert storms that overwhelm IT teams, and make it impossible to prioritize the deployment of resources. In addition, Solution Manager has limited relevance in the enterprise context, where IT teams manage both SAP and non-SAP apps. Compounding the severity of the situation is the challenge associated with implementing Solution Manager, and the inability to connect your SAP environment to problems that arise within the context of your business.

When all is said and done, these limitations are a massive obstacle to effective troubleshooting, and can lead to outages, loss of revenue, and ultimately, skyrocketing mean-time-to-resolution (MTTR).

> 77% of all worldwide business transactions touch an SAP system

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Why you need a single source of truth about your SAP landscape

As IT organizations monitor and measure increasingly complex environments, there's been an explosion of data generated by the rise of cloud, microservices, continuous delivery, and, of course, SAP landscapes themselves. Without a comprehensive monitoring solution that automates the synthesis of key insights, prioritizes resources, and delivers a single source of truth for business health, IT teams are at risk for potentially disastrous consequences related to customer experience, brand loyalty, and most importantly, revenue.

That's why it's critical for IT teams to prioritize the monitoring of SAP landscape with a solution that will not only minimize risk today, but build a strategic and cost-effective approach to digital transformation tomorrow.

> "For the Fortune 1000...the average cost of a critical application failure per hour is $500,000 to $1 million."
>
> **-IDC Opinion, DevOps and the Cost of Downtime: Fortune 1000 Best Practice Metrics Quantified. December 2014**

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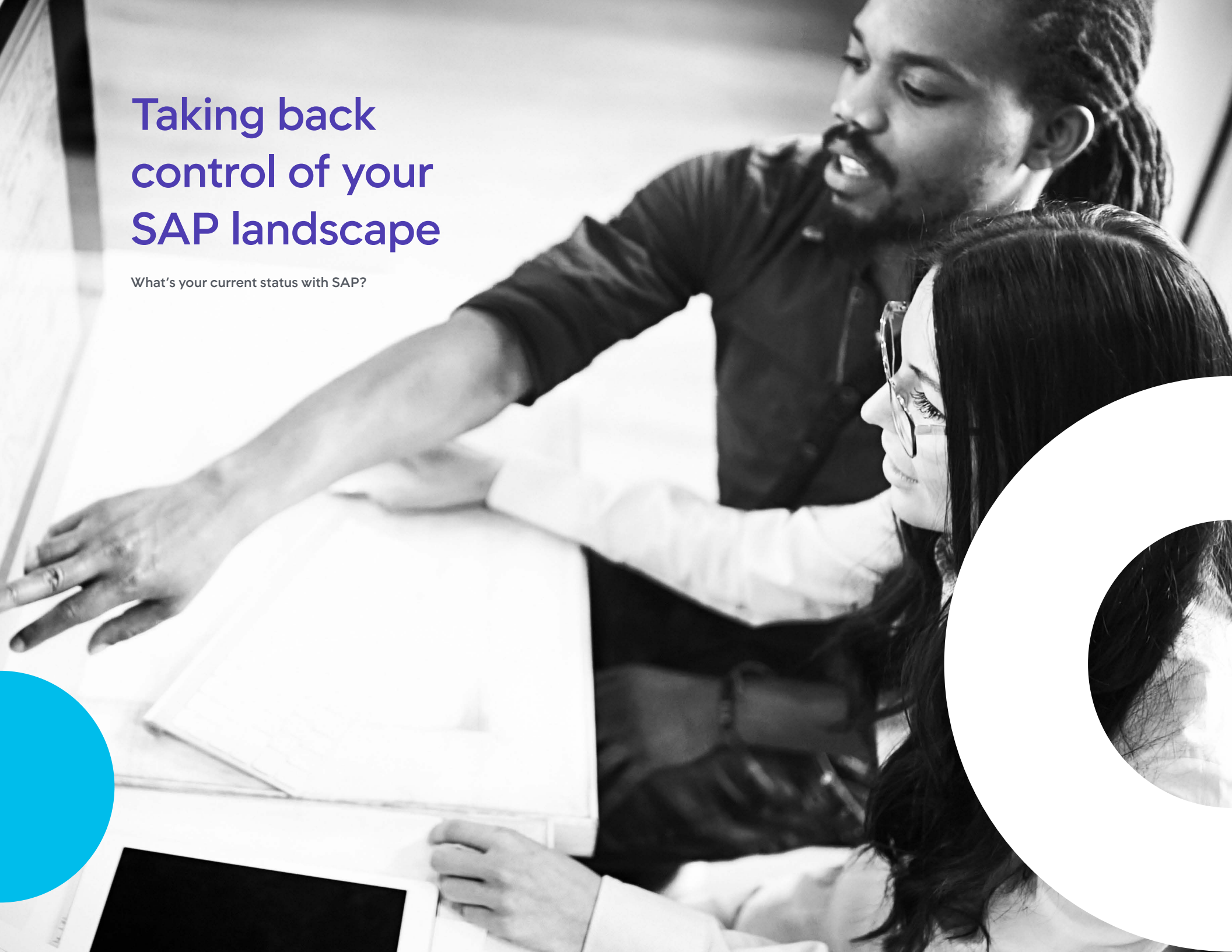
Taking back control of your SAP landscape

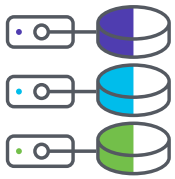
What's your current status with SAP?



It's true — SAP is an extensible solution for managing the resources related to your business operations. But in today's digital world, that management is only useful if you have the visibility needed to prevent and resolve problems that have a negative impact on your business. For companies that are planning or in the midst of a migration to S/4 HANA or to the cloud as part of their digital transformation roadmap, this lack of visibility can pose significant risks and extend migration timelines substantially.

Without a monitoring solution with the ability to proactively identify IT issues at the code-level, prioritize alerts, and provide business context for SAP issues that arise along the way, most IT teams find themselves in one or more of the following groups.

What's your current status with SAP?



You use separate tools to monitor dependent systems, or you've got a siloed tool monitoring SAP, completely independent from the rest of your IT stack.

With this fragmented approach, you're unable to correlate business performance to your SAP landscape. Essentially flying blind, you're at significant risk for business performance problems.

You have separate monitoring tools, but you're manually correlating SAP performance data to business events on an ad hoc basis, or just doing it after business problems occur.

Troubleshooting takes forever when you're manually sifting through logs, and MTTR is probably on the rise. Plus, it's nearly impossible to scale this approach as the influx of IT data increases.

You monitor, measure and react to everything.

Without the ability to intelligently prioritize key business transactions with static thresholds, you're in react mode all of the time, draining resources and getting trapped in war rooms.

Regardless of which group you fall into, the outcome is the same:
You lack control of your SAP landscape, and by extension, the valuable resources that can make or break your business.

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So, what do you need to do to take back control?

It's critical that IT teams focus on three core areas when thinking about how to take back control of the SAP landscape. Later on in this toolkit, you'll find specific recommendations regarding how AppDynamics can help.

Your SAP Monitoring checklist

☑ Visibility

Fragmented views of your SAP landscape leave you vulnerable to a host of issues, many of which have the tendency to compound in severity over time, in tandem with the complexity of your IT environment. As your SAP instance requires more custom code to pull data in from various parts of your business, you also increase dependencies without a corresponding increase in insights related to how they work together (or don't). However, with a focus on a solution that provides end-to-end visibility of your SAP environment, you can troubleshoot relatively smaller issues before they become major problems.

☑ Availability and optimization

The best monitoring solution for the SAP landscape is the one that builds on visibility with a focus on not just identifying and remediating issues as they arise, but before they do, with the help of automation, machine learning, and artificial intelligence (AI). Enterprises that want to build a proactive approach to managing availability of critical resources must be able to implement dynamic baselining in order to surface the most important issues while automatically triggering alerts when anomalies are detected, and pinpointing root cause(s) in both SAP and its integrated, non-SAP applications. Later on in this guide, we'll share our recommendation for leveraging the solution that gives you the power to both monitor availability and optimize SAP performance over time.

☑ Business context

Without crucial business context for SAP issues, it's impossible to determine the scope and impact of the problems that arise in your IT environment. In incredibly complex SAP landscapes, business context functions as a north star for your IT activities, identifying the impact of SAP on important business transactions and critical parts of the customer experience. That's why you need a monitoring solution that reports SAP performance in the context of business metrics and revenue streams.

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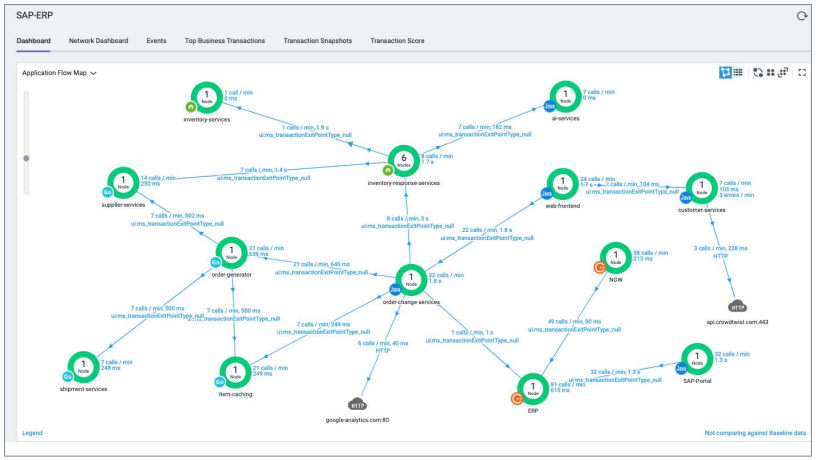
Putting business performance first

The most critical components of your SAP Monitoring solution

When your SAP landscape suffers, your entire business suffers



That's because SAP is at the heart of a multitude of business operations, and integrates with key functional areas and workflows across the organization, and outside of it, via customers and vendors. With such far-reaching influence, monitoring is critical for avoiding costly application failures and putting business performance first.

But when it comes to SAP Monitoring solutions, what should IT teams be looking for? Let's outline the critical components of an effective business performance monitoring solution and why they're needed in the enterprise.

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The most critical components of your SAP Monitoring solution

1. Deep visibility across all environments — on-premise, hybrid cloud, or cloud only

If SAP landscapes are a significant part of your application landscape, then you need a performance monitoring solution that sees all of your environments, whether they're on-premise, hybrid cloud or cloud only.

Problem is, SAP's proprietary programming language, ABAP, makes that hard to do — unless, of course, you've got an SAP Monitoring solution that can actually see down to the line of SAP code. With a solution that can get down to that level of specificity, troubleshooting problems and correlating them to application issues becomes dramatically easier. Additionally, this level of visibility creates more stability within your application environment, enhancing your ability to reliably meet IT, business, and customer expectations.

At this point, you might be thinking, "Wait, doesn't SAP's proprietary Solution Manager do exactly what's being described above?" If you're looking for comprehensive performance monitoring of every aspect of your SAP landscape, the answer is, unfortunately, no.

Solution Manager, besides being challenging for many companies to implement into their environment, is insufficient as a monitoring solution because it lacks the functionality required to instrument applications outside the SAP platform, making it impossible to talk to external systems. Add to that the fact that Solution Manager provides only manual baselines and alerting, and you have a tool that isn't up to the task of providing modern, end-to-end visibility into your application environment.

2. Unsurpassed, real-time insight into service availability

We live in an on-demand world. From customers and sales reps on the frontend, to inventory and fulfillment on the backend, all the parts of business rely on one another in order to drive success. So when critical order and fulfillment systems are unavailable due to an outage or other performance problem, businesses lose out and customers walk away.

That's why SAP Monitoring can't be a reactive process — it has to happen in real-time.

Businesses, then, must look for the monitoring solution that puts them in the best position to do that via rapid anomaly detection and automatic and intelligent alerting. But not all solutions are created equal, and while we'll dig into our solution recommendations shortly, it's important that IT teams consider only the one that's capable of not only ingesting large volumes of data from across today's complex business environments, but deciphering meaning from it with the help of artificial intelligence and machine learning.

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3. Powerful business context

Context changes everything, particularly when it comes to monitoring SAP and the health of your business. That's why having the right SAP Monitoring solution is akin to walking into a dark room and turning the lights on — you see everything.

IT teams looking for a modern approach to SAP Monitoring should focus on the solution that provides unparalleled connection with and insight into the health of your business. This means real-time monitoring of SAP health metrics alongside critical business KPI, like transactions, customer, user journeys, and more. Without this one-to-one connection between your SAP environment and business health, it's impossible to focus efforts and deploy the right resources when you need them the most.

How the world's leading enterprises monitor SAP landscapes

SAP is a critical part of business operations, giving enterprise companies the ability to deliver goods and services to customers around the world. But as application environments grow more complex and the speed with which we do business continues to accelerate, SAP's robust offerings and potential for customization can be problematic for IT teams, and costly for businesses.

That is, unless they're monitoring SAP landscapes with AppDynamics.

With SAP Monitoring from AppDynamics, you get a single source of truth about your SAP landscapes and how they're driving the performance of your entire business. Let's break that down a bit more to explicate what that means.

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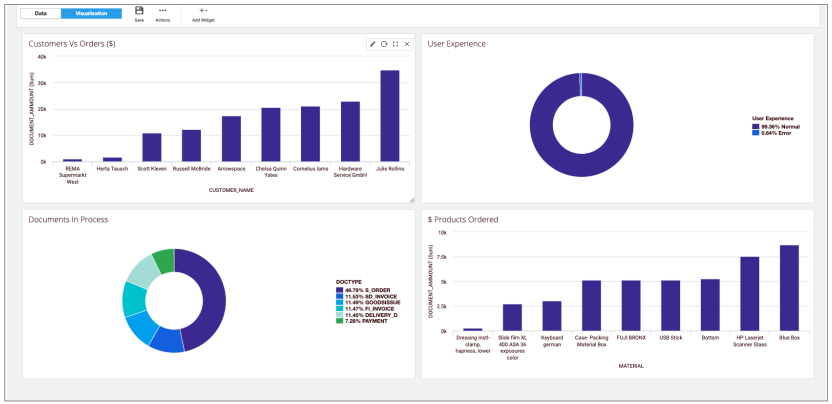
SAP Monitoring from AppDynamics



1. Deep, end-to-end visibility

With AppDynamics, you get comprehensive topography of your entire IT landscape, including both SAP and non-SAP applications. This gives you the ability to see and understand upstream service dependencies – as well as user experience – within SAP.

In addition, with SAP Monitoring from AppDynamics, you'll get access to dozens of out of the box dashboards built specifically for the kinds of SAP landscapes you need to monitor and optimize. Evaluate overall health of your system – application server, HANA DB, key background jobs, IDoCs, PI systems, and more – while getting access to real-time mapping of business transactions across distributed SAP systems. It's full, end-to-end visibility through powerful visualizations and proactive resolution.

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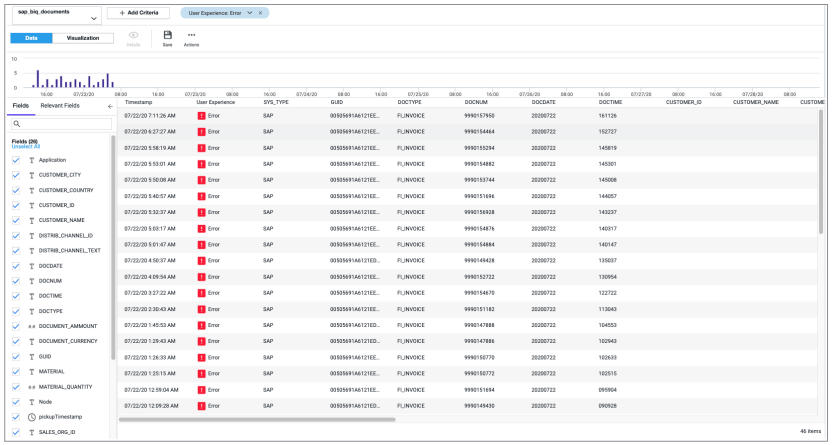
2. Proactive and real-time analysis of every facet of your SAP and non-SAP apps

Piece-meal and heavily manual methods of monitoring your SAP and non-SAP apps are, at best, time-consuming and ineffective. At worst, they're risks that have the potential to fail end users and erode your bottom line.

With dynamic baselining capabilities, AppDynamics SAP Monitoring frees you from having to manually update static thresholds as priorities change and environments evolve. And, instead of suffering endless alert storms, you'll be able to leverage AI to proactively evaluate transaction health as well as address emergent issues. This proactive functionality allows you to right-size your investment of resources based on scenarios that are unique to your business and potentially performance-impacting, like high volumes of traffic due to holiday shopping or other seasonal events, product launches, and other business activities. This is especially important when migrating to S/4 HANA or moving your SAP landscape to the cloud, since you'll get real-time performance metrics before, during, and post migration, helping you proactively address issues as they arise.

What's more, with the aforementioned proactive functionality combined with our support of SAP Java and the full ABAP stack, many SAP for AppDynamics users are able to complete faster root cause analysis and reduce mean time to resolution in the process.



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3. Comprehensive insight into how SAP impacts your business

With SAP Monitoring from AppDynamics, you finally get the full end-to-end visibility your IT team needs, but also, the performance insights your business demands. This helps with four key activities related to the health of your business:

a. **Deriving business data from SAP transactions**
b. **Quantifying business impact of technical issues and problems**
c. **Prioritizing remediation based on business impact**
d. **Setting proactive alerts based on key business metrics**

What's more, you can build business journeys around key SAP processes, like Order to Cash and Procure to Pay, which provides even more visibility into the processes that drive businesses forward.

When evaluating the health of business operations like Order to Cash, it's critical to identify where potential problems may be brewing. In the example above, we see an issue between when an invoice is created and when it's processed, which could signal future delays in the procurement period. With SAP Monitoring from AppDynamics, we can drill down into the issue to determine what's causing the latency, prioritize steps for remediation, and quickly get back to normal.

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Take back control of your SAP landscapes

While tech stacks grow more complex with each day, the goals of your business remain simple: Serve your customers and protect your bottom line.

With SAP Monitoring from AppDynamics, you get the power to do exactly that, without having to sacrifice the flexibility or control of your IT environment. That's why thousands of enterprise companies rely on AppDynamics to provide SAP Monitoring that will help you solve core challenges today for a more performant business tomorrow.

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About AppDynamics

AppDynamics is the Application Intelligence company. With AppDynamics, enterprises have real-time insights into application performance, user performance and business performance, enabling them to move faster in an increasingly sophisticated, software-driven world. AppDynamics' integrated suite of applications is built on its innovative, enterprise-grade App iQ Platform that allows its customers to make faster decisions that enhance customer engagement and improve operational and business performance. AppDynamics is uniquely positioned to enable enterprises to accelerate their digital transformations by actively monitoring, analyzing and optimizing complex application environments at scale. To learn about SAP Monitoring from AppDynamics, visit **https://www.appdynamics.com/supported-technologies/sap-monitoring.**