A Microsoft Azure User's Guide to Getting Started with New Relic

Get better visibility into complex cloud environments

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Intro

As a Microsoft Azure user, you know a thing or two about moving fast and saving money. And seeing that you downloaded this guide, you also understand the importance of performance.

Whether you've already moved to the Cloud or are getting ready to migrate, this document will walk you through everything you need to start improving the performance of your Azure applications with New Relic. From instructions to get started, a basic feature overview, to Azure monitoring best practices, this guide is full of useful information for New Relic newbies.

Although we recommend installing New Relic early on to monitor and ensure the success of your cloud migration, it's never too late to get better visibility into your application. So read on to learn more about what New Relic can do for you.

About Our Partnership

New Relic first started supporting Microsoft back in 2010, when we announced support for Java and Ruby web apps on the Microsoft Windows Azure platform. This gave development, deployment, and operations teams a cloud-ready solution they can use to monitor, tune, and optimize their critical applications deployed in Microsoft's cloud services platform.

The pairing proved so successful, we made our partnership with Microsoft official in 2012 by offering New Relic APM Standard free of charge to all Windows Azure users. It doesn't matter if you're using Microsoft Azure Infrastructure Services, Web Sites, Mobile Services, or Cloud Services, New Relic monitors it all. That's why our list of joint customers, which includes iTesso, Tribune Technology, Mural.ly, Cash Converters and more, continues to keep growing.

The New Relic engineering team has always been heavily invested in building integrations and other complementary features for Microsoft Azure. Most recently, New Relic APM became the first application performance management component available through Microsoft's Azure Marketplace. This means that whether you're deploying a small virtual machine (VM) or a complex VM farm, you can select New Relic to automatically spin up New Relic APM along with the VM. It's all about helping you build great software and get the most of your use of Microsoft Azure.

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How the partnership benefits you

Life gets easier when you pair Microsoft Azure and New Relic. As a software-as-a-service (SaaS) company, New Relic understands both the challenges and opportunities of running in the Cloud, especially the Microsoft Cloud. In fact, as a Microsoft Azure-certified partner, our APM product was the first third-party SaaS application to be integrated into the Azure portal. With New Relic, Azure users can:

- **Take the complexity out of cloud.** Understand the end-to-end performance of your applications, and make sure that changes being made in your Azure environment aren't negatively impacting performance.

- **Simplify performance monitoring.** View response time and error rate alongside other critical Azure information, all in the Azure portal, and easily switch to New Relic APM to get more in-depth performance details.

- **Monitor your entire stack.** Understand exactly how your app is interacting with other third-party services (including those from Microsoft), and drill across frontend and backend applications.

We provide the following support for Azure products and offerings:

- **Windows Server Monitoring:** Visibility into the performance and health of any and all of your Windows servers.

- **Infrastructure Services:** Real-time app performance for Windows Azure Virtual Machines.

- **Websites:** Immediate insight into the performance of your apps built on Windows Azure Web Sites. Users get an optimized New Relic .NET agent designed specifically for Azure Web Sites.

- **Mobile Services:** Visibility into the performance of your mobile apps using Windows Azure Mobile Services.

- **Cloud Services:** Real-time app performance for Windows Azure Cloud Services.

- **Azure Active Directory:** Single sign-on with New Relic and Azure Active Directory to manage users and groups and help secure access. Users can launch New Relic from their Access Panel using their company credentials.

- **Azure SQL Database:** Real-time performance and usage data from your SQL Azure databases.

With seamless integration and comprehensive monitoring, there's really no reason why you shouldn't be using New Relic to monitor your Azure environment, especially since you can get started for free.

That's right—all Azure customers get a New Relic Standard account free of charge, forever, on unlimited servers. To learn more about our Standard Plan, available exclusively through our partners, go to: newrelic.com/partners/standard.

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If you're interested in something a bit more powerful than Standard, we also offer the following special Azure-based pricing:

Pro 1 for XS VM or Shared Website	$8/month
Pro 1 for S/M VM or Shared Website	$40/month
Pro 5 for XS VMs or Shared Website	$40/month
Pro 10 for XS VMs or Shared Website	$80/month
Pro 1 for L/XL VM or Shared Website	$199/month
Pro 5 for S/M VMs or Shared Website	$200/month
Pro 10 for S/M VMs or Shared Website	$400/month
Pro 5 for L/XL VMs or Shared Website	$995/month
Pro 10 for L/XL VMs or Shared Website	$1990/month

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Getting Started

Ready to give New Relic a try? Great! This section will help you get up and running.

Sign up

To get started monitoring your Azure environment using New Relic, you'll first want to sign up for your free Standard account by going to newrelic.com/azure. You can also sign up by finding New Relic in the Microsoft Azure Marketplace, a one-stop shop for finding and deploying thousands of solutions to simplify the development and management of applications on Azure. To create an account, all you have to do is click that New Relic icon in the Marketplace, choose a pricing plan, and enter a little bit of information. That's all it takes. You don't even have to leave the Azure portal!
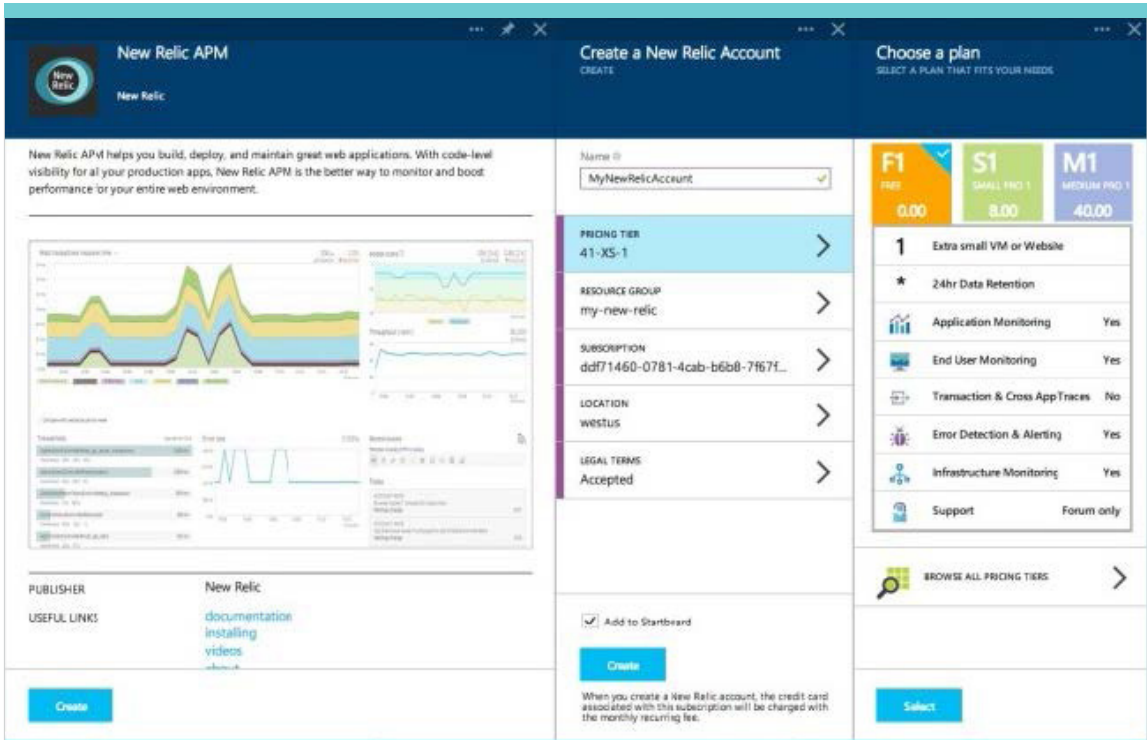
Deploy New Relic

Once you've signed up, the Azure Preview Portal and New Relic extension make it easy to deploy New Relic to your VM and Azure Websites. For example, if you browse to Azure Website, there's a part for Application Monitoring. Just click that box (see figure below), choose your New Relic account, and you're done! New Relic APM will be deployed to your Website and you'll be able to see your app reporting monitoring data directly from the Website blade.
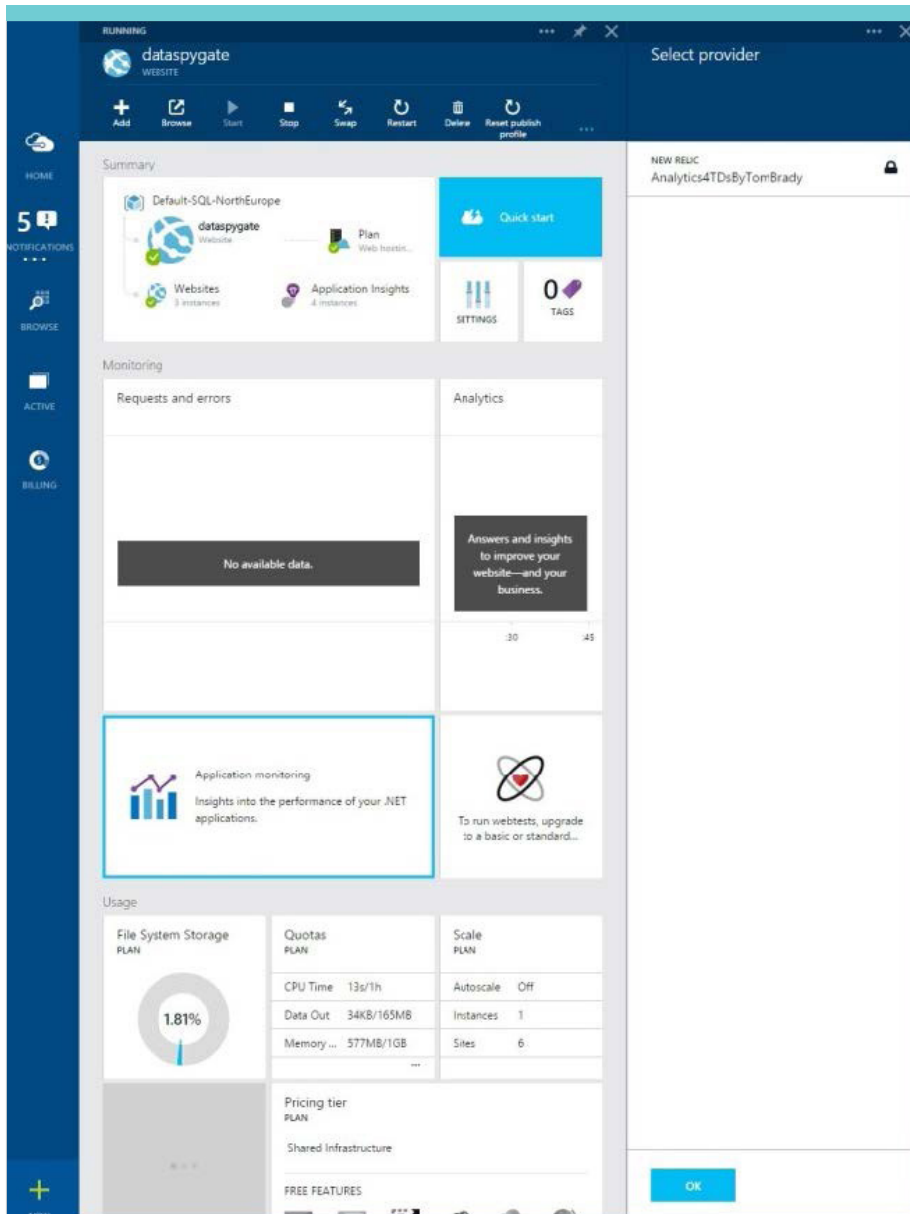
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Now that New Relic APM is running in your Website, you'll automatically start getting performance data. New Relic figures out what Web apps are running in your VM or Azure Website, and starts gathering real user data on all of them without excess setup or configuration.

Browse to your New Relic account in Azure and you'll see slick charts with throughput and error data from the moment you deployed New Relic. If you want more, click the "Visit New Relic" link to go directly to your New Relic account, where you can view transaction traces, cross application traces, and many more features designed to help improve the performance of your app.
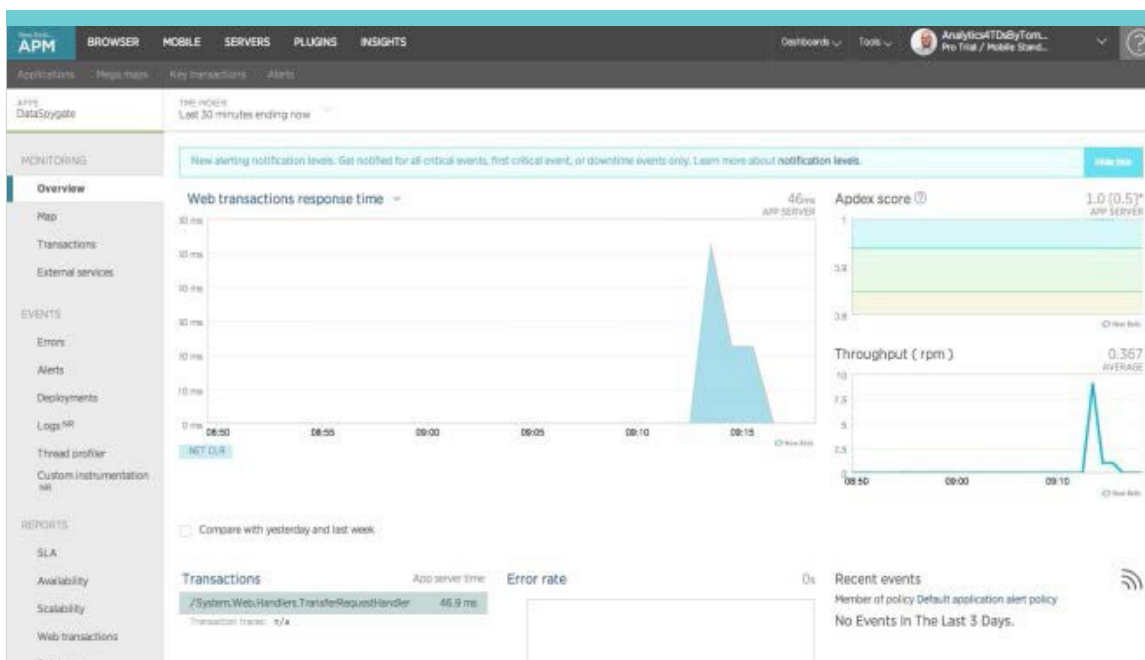
Install the Microsoft Plugins

To gain even more visibility into your Microsoft Azure environment, you also have the option to install New Relic's Microsoft plugins. By adding these plugins, you'll be able to monitor additional Microsoft services directly in your New Relic dashboard:

- **Microsoft Azure SQL Database:** Monitor real-time metrics from your Microsoft Azure SQL databases, including connections, service interruption events, requests, network I/O, memory usage, and sessions.

- **Microsoft SQL Server:** Gain greater visibility into your Microsoft SQL Server 2005+ databases, with metrics like memory usage, connections, network I/O, and file I/O.

To download the plugins, go to New Relic Platform.

Basic Feature Overview

The New Relic performance dashboard appearing as a live frame in the Azure portal is great for getting a quick glance at the response time and error rate of your applications. But if you're looking for a more in-depth and tailored view of your Azure environment, click over to New Relic APM. This section will walk you through all of the key capabilities available in New Relic APM.

Applications Overview dashboard

To view your app's dashboard, go to the New Relic menu bar, select **APM > (selected app)**.
The **Monitoring > Overview** dashboard automatically appears.

From here, you can drill down into a number of different areas, including:

• **Response time:** By default, the Applications Overview shows response time and Apdex charts for (back end) web transactions. To view the corresponding charts for (front end) browser monitoring transactions, select the Browser link above the chart. Or, to view any non-web transactions for your app, select the view option from the Response time drop-down.
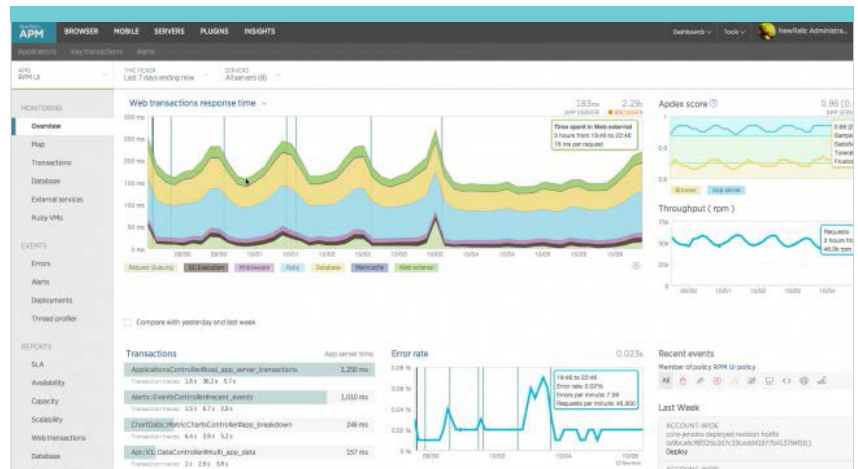
– **Average:** New Relic captures all the requests that come in through your agent and displays the average response time to give you a general sense of your app's performance. You can quickly identify any spikes in response time, and what the source of those spikes are, whether it's in the code, the database, external calls, or elsewhere.

– **Histograms:** In addition to showing you the average response time of your app, you can also get a bigger picture view of its performance with histograms. With this feature, all of your app's transactions are surfaced and plotted so that you can easily identify which ones are the most time consuming, and which ones are speeding past the rest.

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- **Percentiles:** This feature allows you to view the response times of the 99th percentile and 95th percentile of your app's transactions, alongside the median and average. Percentiles prevents you from relying only on the average response time of your app, and potentially ignoring transactions that slow your app down.

- **Selected window of time:** In the top right hand corner of New Relic you will see the selected time window (in this case the last 30 minutes). Expand the "time picker" menu to select the time period you wish to review.

- **Apdex score:** Your Apdex score is a measure of how much slow site performance contributed to poor customer experiences in your app.

- **Transactions:** This is where you'll see the top five most time consuming (by default) web transactions, along with their average response time and throughput (requests per minute).

- **Error rate:** This shows you the percentage of errors your app has encountered for a selected time period.

- **Recent events:** Problems and other events (such as deployments) appear in this list. Depending on how the app/server is performing, you'll notice icons with hyperlinks to information about alerts, deployments, notes, and more. The color-coded bar at the top of the dashboard (showing your app's name) provides a "traffic light" changing between green, yellow, red, or gray to indicate your app's current health status.

- **Servers:** Here's where the status of your servers is located. This list will show you the Apdex score, response time, throughput, CPU usage, and memory of each of your monitored servers.

But that's only the beginning! Now that you're familiar with the Applications Overview scree, let's move on to the good stuff.

Transaction Traces

Sometimes you need the nitty-gritty transaction details to find out what exactly might be slowing your application down. The New Relic Transaction Traces feature does just that by arming you with pro-level diagnostics down to the SQL while replacing the time-consuming task of digging through log files. The result? Problems fixed fast.

In most instances, New Relic only collects streaming metric data. This data is aggregated, so that if the ORM Layer (such as ActiveRecord or Hibernate) were invoked 100 times during a 60-second time period, New Relic would collect one metric that was an aggregate of the 100 invocations.

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However, with the Transaction Traces feature, just the opposite happens. Each minute, transaction tracing collects data for your slowest individual HTTP requests, giving you visibility all the way down to the SQL. If a transaction is taking longer than a configurable time period, New Relic captures the exact invocation pattern and details related to the invocation, such as the particular SQL statement that was issued. You can then view each segment of the trace as colored bars in the Transaction Trace Summary tab.

What's particularly nice about New Relic's Transaction Traces feature is its user-friendly interface. Unlike other APM solutions you may have used, the New Relic interface is super easy to navigate and find what you're looking for.

If you have a New Relic Pro account and want to give the feature a try, from the New Relic menu bar, go to **Applications > (selected app) > Monitoring > Overview**.

Alternately, you can go to **Applications > (selected app) > Monitoring > Transactions**. Then, from the Transactions dashboard, select a link for any app server transaction trace. Once you're at the overview dashboard, you can then do a number of things, which are outlined below.
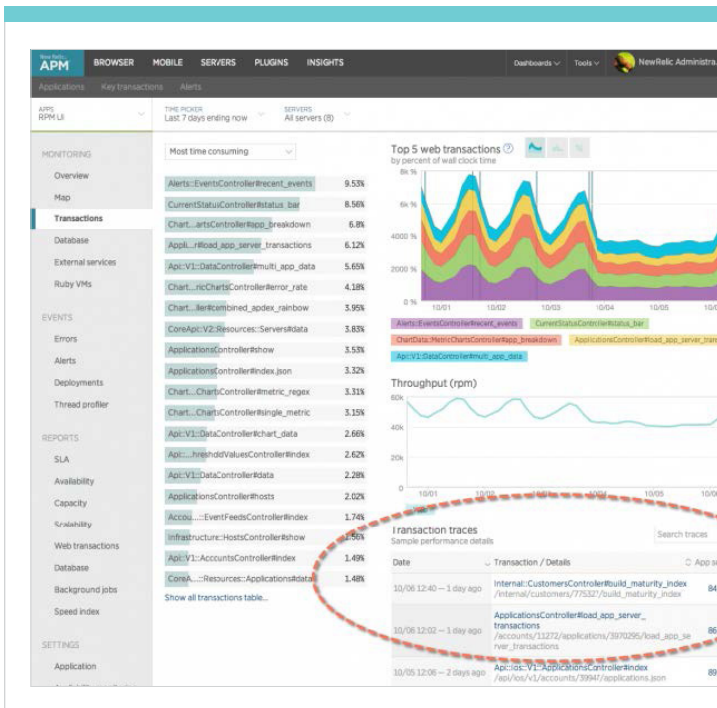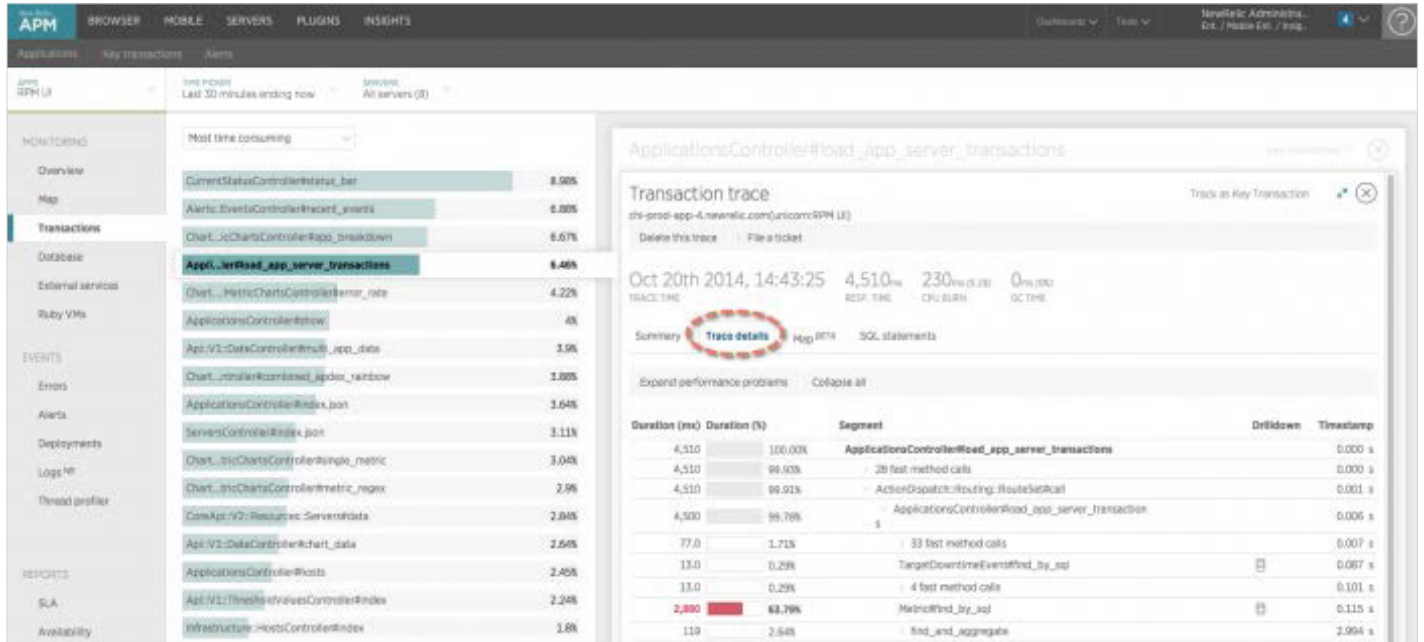

VIEWING THE TRANSACTION TRACE SUMMARY

New Relic sorts transaction traces by response time so that the slowest appears first. From New Relic APM's Transactions dashboard, you can view trace details for the transactions that take longer than your defined threshold.

Note: Depending on your selected app, the Type drop-down menu may not appear.

To view captured transaction traces for the selected time period:

- From the New Relic APM menu bar, select **Applications > (selected app) > Monitoring > Transactions**.
- If applicable, select the transaction **Type** (web, non-web, or all transactions).
- Optional: From the **Transaction traces** table in the Transactions dashboard, change the sort order, use the search window, or select **Show more slow transactions** to locate a transaction trace.
- Select a link to view details about a transaction trace.

VIEWING TRANSACTION TRACE DETAILS

New Relic APM's transaction trace **Details** dashboard shows the total duration in milliseconds and as a percentage of the trace. This duration includes the time consumed by all nested calls within the segment.

The duration, bar chart, and percentage of each segment are color coded according to the amount of time consumed by the segment, minus time consumed in all nested calls. Also, the **Timestamp** column shows the relative offset in time that each segment started.

COLORS

Colors indicate percentages of total trace time spent within the segment.

- **Red:** More than 25% of the total trace time was spent within the segment.
- **Yellow:** More than 5% of the total trace time was spent within the segment (excluding the duration of any nested segments).
- **Gray:** All other segments.

"APPLICATION CODE" IN TRACES

If you see the phrase "Application code" in your transaction trace details, it generally means the agent did not have enough insight into that part of your code. You can use custom instrumentation to see more detail in that part of the code. "Application code" often appears in partial traces.

PARTIAL TRACES

Occasionally you may see a notice in the transaction trace details that "This is a partial trace." For performance reasons,

New Relic APM only shows the first 2000 elements of a transaction trace (900 for Node.js). If a transaction trace exceeds that number of segments (nodes), the agent truncates the transaction trace before sending it to the collector.

- Java, .NET, and Ruby agents truncate traces chronologically.
- Node.js: See Node.js agent configuration.
- PHP agent truncates traces based on priority: Database and memcache calls have highest priority. After those have all been captured, the PHP agent picks up the slowest functions or methods.

ROLLUP

A common problem when viewing transaction traces is deciding what is important and what is noise. New Relic makes smart guesses to make your job easier by automatically rolling up fast method calls and repeat calls.

- **Segments:** When New Relic detects four or more consecutive segments with a duration of 7.5 ms or less, the segments are collapsed into a rollup node. To view the details, expand the collapsed node.
- **Identical calls:** When New Relic detects four or more consecutive identical calls, this usually indicates an N+1 problem. The segments are collapsed into a rollup node. To view the first three calls in the sequence, expand the collapsed node.

DRILLDOWN OPTIONS

Click here to drill down into additional details of a trace.

Key Transactions

Depending on the nature of your web application, some transactions may be more important to you than to others. If you're an eCommerce company, for example, you're likely interested in seeing transactions for signups or purchase confirmations. Alternately, if your biggest concern is around performance, then transactions from searches or logins will probably be most important to you. These are what we would call your key transactions.

New Relic's Key Transactions feature lets you closely monitor and report on what you decide are your app's key transactions, such as end-user and app response time, call counts and error rates. You can also set alert threshold levels for notifications when your key transactions are performing poorly.

The first time you use the Key Transactions dashboard, a Welcome page appears. After you create one or more key transactions, the dashboard lists key transactions for all apps.
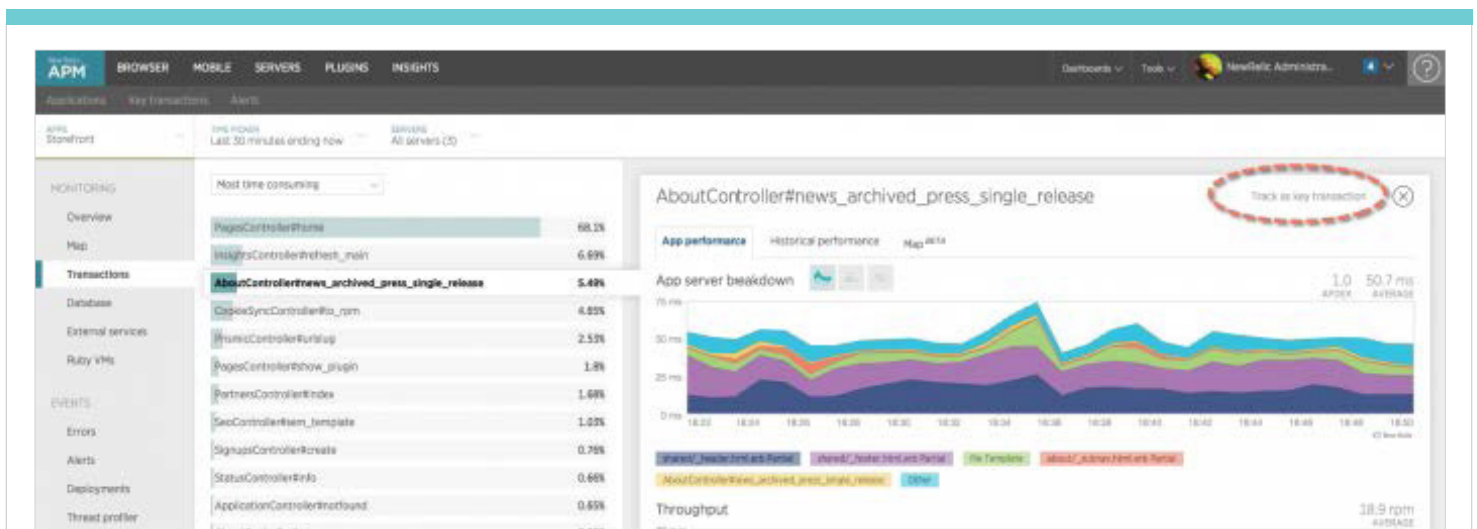
TO CREATE A KEY TRANSACTION

1. From the New Relic APM or New Relic Browser menu bar, select **Key transactions**, and select **Add more**. Then select the app and web transaction OR from the selected transaction, select **Track as Key Transaction**.
2. Type a name for the key transaction, and select **Track Key Transaction**.
3. Optional: If the agent for the selected app supports custom alerting, use the default values that New Relic automatically fills, or select **Edit key alert transaction policy** to set the Apdex and alert threshold values.
4. To view the key transaction dashboard details, select **View new key transaction**.

The Key Transactions dashboard immediately refreshes and shows the Overview dashboard for your new transaction.

The first time you use the Key Transactions dashboard, a Welcome page will appear. After you create one or more key transactions, that dashboard will include a list of transactions for you to take a closer look.

VIEWING KEY TRANSACTIONS

Once you've created one or more key transactions, here's how you can view them:

Select **Key Transactions** from the top navigation bar.
To drill down into details about a specific key transaction:

1. Select its name.
2. Select the type of view for app servers and browsers.

The Transactions menu lists each key transaction by its customized name, and the associated app's name appears below it. You can sort the list by any column heading and use any of the standard user interface functions.

To view detailed information, select the key transaction's name on the Transactions list. The dashboard immediately refreshes with the selected key transaction's Overview information.

The key transaction's Overview dashboard presents summary information about your key transaction in charts and tables. From here you can drill down into specific details or select other tabs to view additional data.

ALERTS FOR KEY TRANSACTIONS

You can also define alert conditions for each key transaction, or use the default key transaction alert policy. This includes:

- Apdex T levels for your end users and browser
- Caution (yellow) levels and Critical alert (red) levels for error rates

After you create and save your new key transaction, its color-coded "health" status (green, yellow, red, or gray) on the Transactions dashboard will indicate the alert level.

SLA REPORTS FOR KEY TRANSACTIONS

Interested in getting daily or weekly Service Level Agreement (SLA) reports for your key transactions? No problem. You can view the information from the New Relic Transactions dashboard, or download it as a file with comma-separated values (CSV). The SLA reports include information about requests, response times, and end user satisfaction levels (a.k.a. Apdex values).
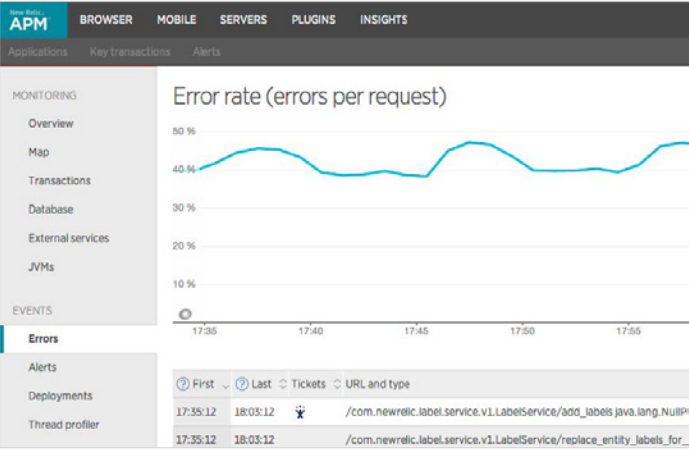
To view or download SLA reports for a key transaction:

1. From the New Relic APM or New Relic Browser menu bar, select **Transactions > (selected key transaction) > SLA report**.
2. Use any of New Relic's standard user interface functions and dashboard features to drill down into detailed information.
3. Select **Daily** or **Weekly** to view report data for that range.
4. Optional: To download the report as CSV file, select Download this report as .csv.

Errors Dashboard

If you're looking for a quick and easy way to view all your error information, New Relic's Traced Errors feature is the ticket. The Errors dashboard shows a chart with the error rate percentage for the selected time period, as well as a list of error messages. You can view and drill down details, use search and sort options, hide or delete the error, share it with others or file a ticket about it.

To view, use search options, or delete errors, go to the New Relic menu bar, select **Applications > (your application's name) > Events > Errors**. From here, you can use any of the available standard New Relic UI and dashboard drill-down functions.

VIEWING ERROR DETAILS

To view details about any error message on the Errors dashboard, click its **Message** link. From here, you can:

- Share the error message with others by email.
- File a ticket about it (for example Lighthouse, Pivotal Tracker, JIRA).
- Delete or hide the error.
- Return to the Errors dashboard.

Server Monitoring

In addition to a wide range of application performance monitoring tools, New Relic Servers also lets you see which servers have capacity issues and immediately take corrective action. After all, how can you know the application is healthy if you can't see the server it's running on? Specifically, New Relic Servers allows you to view and analyze critical system metrics, including CPU usage, physical memory, network activity, processes, and disk I/O utilization and capacity.

To start viewing details about your servers' health and recent server events, install the New Relic Servers agent for your server. Click here for details about installing **New Relic Servers for Linux**. Click here for details about installing **New Relic Servers for Windows**.

Once complete, go to the New Relic menu bar and select **Servers**. The Servers dashboard lists all of your servers reporting to New Relic's collector, including the server host names, current CPU, memory and disk usage. You'll notice a color-coded 'traffic light' indicating each server's current health.

UNDERSTANDING SERVER 'TRAFFIC LIGHTS'

- **Green:** The server is A-OK.
- **Yellow:** A warning that the server is experiencing some non-critical issues.
- **Red:** A critical alert that something is wrong with the server, or that the New Relic agent on this server is unable to communicate with the collector.
- **Gray:** No data is being reported for the server.

If you want to ...	Do this ...
Change the order that servers appear on the list	Click any column heading to sort in ascending or descending order.
Add a server to the dashboard	Click **Add more** and then follow the installation instructions for your specific platform.
Delete a server from the dashboard	To delete a server completely, make sure its 'traffic light' is gray. Then click **Delete**. If you want to remove it from the list without deleting it completely, use the filter or search options.
Filter the list of servers	To filter or search by server name, app name or tags, select the filter option. Or to search by host name, type the name in the search window.
Filter the list of recent events	Click the icon for specific types of events: notifications, critical alerts, warnings, deployments or **All**.
Set up an RSS feed for server events	On the **Recent Server Events** section of the dashboard, click the orange RSS icon.
View details about a server's health	Click the server's name to go to the Server Overview dashboard. Or, click the **CPU, Disk IO, Memory** or **Fullest Disk** field for a specific server to see details about that specific metric for a server. For example, to view the list of processes running on a server, sorted by CPU usage, select the **CPU** field for the server.
View details about an event	Click the corresponding link for the event.
Define the alert thresholds for one or more servers	Click the gear icon, and use the **Alerts and thresholds** popup to type in the Caution (yellow) and Critical (red) values. For more information, see Server monitoring alerts.
Identify who receives alert notifications about one or more servers	Click the gear icon, and then select **Configure server alerts**.

See a server that's not green and want to find out what's going on? To view summary and detail information about a specific server, select the server you want to check out from the **Servers** list. By default, the server's Overview page will appear.

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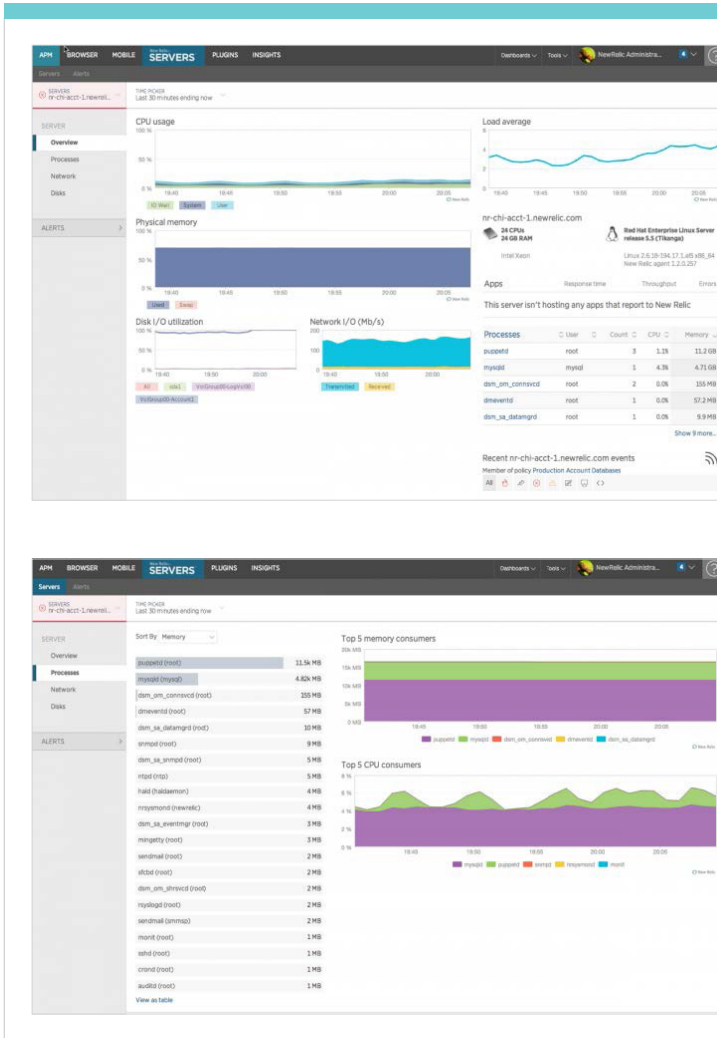
SERVER OVERVIEW

The Server Overview dashboard shows summary information about a specific server for a selected time period, including:

- Charts with CPU usage information, load averages, physical memory, disk utilization and network I/O.
- Information about the operating system and architecture, including the number of CPUs and the amount of RAM installed on the host.
- The list of applications being monitored by this server, including the response time, throughput, and errors. (**Tip:** For additional details, point the app's 'traffic light' or click on the app's name.)
- A sortable list of running processes, including the name, user, count, and CPU and memory usage.

SERVER PROCESSES

If you want to check out all the processes running on a specific server, go to **Servers > (selected server) > Processes**. From the selected server's Processes dashboard, you can:

- View the list of processes as a graph (default) or table.
- Sort the list of processes by memory or CPU usage*.
- View a chart of the top five memory consumers and a chart of the top five CPU consumers for the server.
- Point to or select any process for additional details, including memory and CPU statistics over time.
- Use any of New Relic's standard user interface functions and dashboard features to drill down into detailed information.

New Relic averages CPU usage for the time reported, not for the time window. This helps highlight processes that had high CPU usage but only reported briefly.

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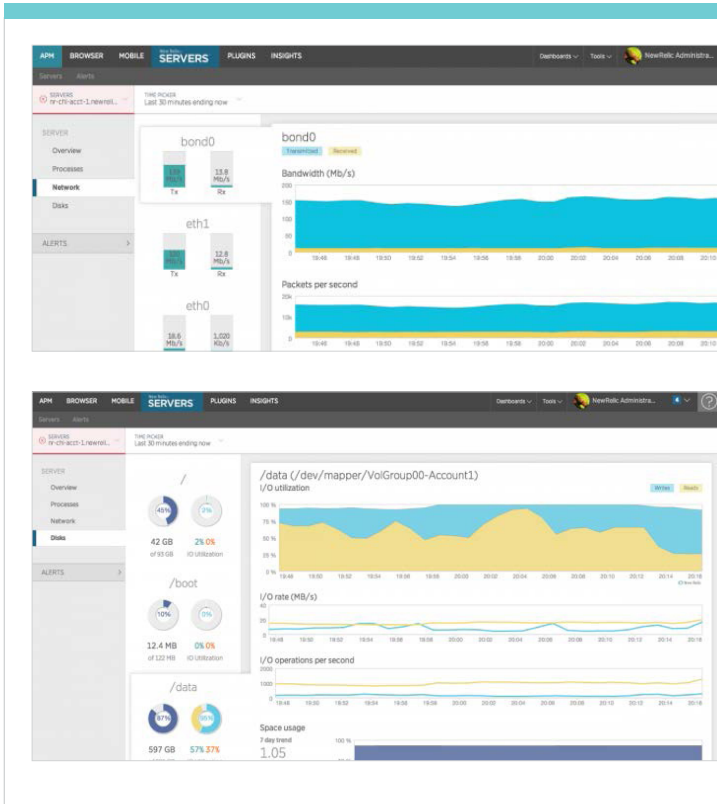
NETWORK PERFORMANCE

Curious to see what's going on in a specific server's network? You can view a list of network interfaces and an indication of network transmit/receive throughput by going to **Servers > (selected server) > Network**.

From here, you can select a network interface from the list to view details about **Bandwidth (Kb/s), Packets per Second** or **Errors Per Second** over time. You can also point to, click or drag anywhere on the charts for additional details.

DISK PERFORMANCE AND UTILIZATION

The Server UI also lets you view information about I/O utilization. To view these details, go to **Servers > (selected server) > Disks**.

The Disks dashboard shows a list of disks along with an indication of how much space is in use on the disk, and how much I/O utilization is taking place. Click any disk on the list to view a detailed breakdown of **I/O Utilization, I/O Rate (MB/s), I/O Operations per Second,** and **Space Usage** over time. For example, the Space Usage indicates how much space might be in use seven days from now, and an estimate of when the disk might reach capacity.

As outlined above, there's a lot you can do with New Relic Servers. And getting a glimpse into your server health is just as important as viewing the application — because the greater visibility you have, the greater ability you have to stop any potential issues from escalating.

Apdex and Alert Policies

Sometimes it's difficult to stay on top of every transaction and traced error. That's why New Relic makes it easy by giving you the ability to set thresholds for alerts on several metrics, including:

- Your application's error rate and Apdex score

- Server CPU, disk and memory

- Key transactions' customized error rates and Apdex scores

WHAT'S AN APDEX SCORE?

Apdex is an industry standard to measure users' satisfaction with the response time of an application or service. It's a simplified Service Level Agreement (SLA) solution that gives application owners better insight into how satisfied users are, in contrast to traditional metrics like average response time, which can be skewed by a few very long responses.

These metrics are evaluated in real time using a recent time window and moving average. When a monitored metric crosses a threshold for an extended period, this triggers a problem event and corresponding alert notifications.
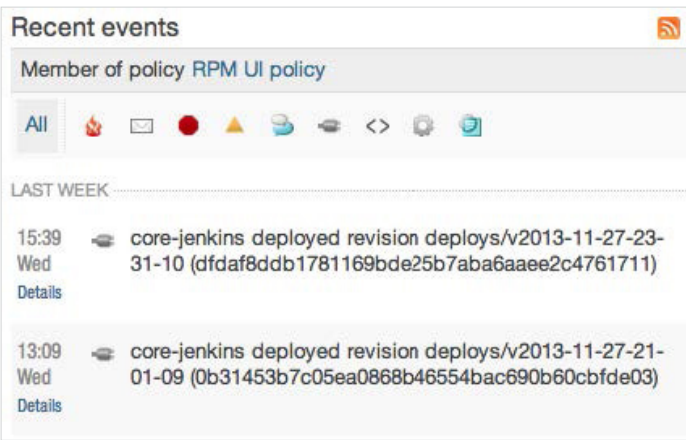
Alert Details and Responses

When an event triggers an alert, the alert summary information automatically pops up on your New Relic dashboard's Recent Events list. For details about the alert, including history and charts, click the alert's corresponding link. From the details page, you can also acknowledge that you received the alert notification.

Tip: To filter the Recent Events list to a specific type of event, click the corresponding icon. You can also view dashboard details about alerts, errors, and deployments by selecting **Applications > (selected app) > Events or by selecting Tools > Alerts**.

So what exactly happens when an Apdex or Error Rate problem triggers an alert? First, New Relic will send you an initial notification, and you will see an icon on your Recent Events list for the type of event. If availability monitoring detects a site outage while the alert is still open, it escalates the problem to a Downtime alert and sends another notification. When all Critical or Downtime problems are resolved, New Relic sends one final, closing notification to indicate that you're back on track, and an envelope icon appears on your Applications Overview Recent Events list. You can click it to view details of the entire event from start to finish.

The benefit of Apdex in practice is that it highlights discrepancies in response time that are otherwise hidden by an average. So if you set your Apdex goal to match your average response time, you'll get a lot more value out of it. But just remember: As the performance of your application improves, be sure to lower your Apdex score so it stays relevant.

Recent events

Member of policy RPM UI policy

All

LAST WEEK

15:39 Wed   core-jenkins deployed revision deploys/v2013-11-27-23-
Details   31-10 (dfdaf8ddb1781169bde25b7aba6aaee2c4761711)

13:09 Wed   core-jenkins deployed revision deploys/v2013-11-27-21-
Details   01-09 (0b31453b7c05ea0868b46554bac690b60cbfde03)

DON'T WORRY: NO 'FLAPPING' HERE

Just because a threshold is crossed, that doesn't mean New Relic will immediately start sending you a flurry of notifications. For example, if your Apdex score goes below your Critical threshold, New Relic won't immediately turn on your app's traffic light red or send an alert. This helps avoid excessive notifications and 'flapping' of alerts. Depending on the alert type, it usually takes a couple minutes before New Relic determines the problem is not just a temporary spike and changes the traffic light to red.

If you'd like to send an email to your team letting them know you've acknowledged an event, you can go to the alert's detail page and click **Acknowledge alert**. New Relic automatically records your name in the alert.

Alert Notifications

New Relic provides alert notifications by using alert policies for applications monitored by New Relic APM, servers monitored by New Relic Servers, and key transactions. New Relic also provides downtime alerts for applications and servers. Alert notifications can be set up for all New Relic account types, including Lite.

You can modify alert notifications by defining alert policies or by using the alert API settings in New Relic's REST API. You can have alerts sent to:

- PagerDuty

- Campfire

- HipChat

- Webhooks

- Email accounts

- The New Relic iOS and Android apps

Event types

New Relic defines three grades of problem severity:

Icon		Description
	Caution	An event has occurred that should be monitored before it becomes critical.
	Send alerts	A critical event requiring attention has occurred.
	Downtime	The server is not reporting to New Relic, or the application could not be pinged successfully by New Relic for more than the period of time specified in the alert policy.

Problems and other events (such as deployments) appear in the app's or server's Recent Events list. The associated application or server status indicator also changes color in their respective dashboards.

To learn more about setting conditions for critical and caution alerts, click here.

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Color	Description
Green	The server or application is fine.
Yellow	A Caution calls attention to some non-critical issues.
Red	A Critical alert indicates something is wrong, or that the New Relic agent is unable to communicate with the collector.
Gray	No data is being reported for the server at this time.

Alert Policies

Account Administrators or Owner: You can configure alert policies for applications, servers, and key transactions. Alert policies define when alerts are triggered and who gets notified.

Alert conditions define when alerts are triggered, and notification channels define who (or what) gets notified. Applications, servers, and key transactions with common alert conditions can be grouped into policies. You can define groups of notification channels that can be assigned to any alert policy. This provides a simple yet powerful mechanism for distributing alert notifications that mimic your organization's structure.

You can customize these settings in the New Relic user interface, or you can use New Relic's REST API for alerts (v1 or v2).

To learn more about alert policy configuration, go here.
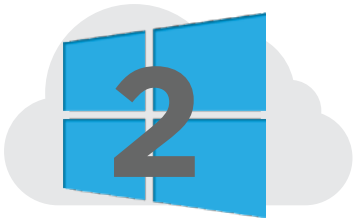
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Best Practices

Now that you've got a basic understanding of New Relic's key features, you're ready to start getting serious with your Azure monitoring. Here are five best practices that can help you enhance the performance, customer experience, and business success of your Azure applications.
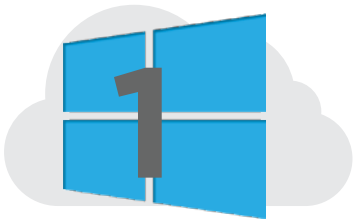
Take advantage of the one-click install. With the Microsoft Azure Gallery, you can effortlessly deploy a complete Azure infrastructure in a few clicks, including New Relic APM to manage the applications. This means that whether you're deploying a small Azure virtual machine (VM) or a complex VM farm, all you have to do is simply click a button to get New Relic automatically set up along with the VM. The whole point of our integration into the Microsoft Azure Gallery was to create a frictionless experience for developers, operations managers, and others working in Azure, so take advantage of it!

Set up synthetic monitoring. Sometimes it can be hard to always know how your cloud applications are performing. But with New Relic Synthetics, you can stay informed of the availability and reliability of your software, and ensure an error-free experience for your customers. Setting up a test monitor is super easy—just enter a URL and select a few configuration options. You can also customize and monitor using straightforward scripting to meet your specific needs. With synthetic monitoring, you'll get an alert every time something goes wrong, so that you can fix the issue before it escalates.
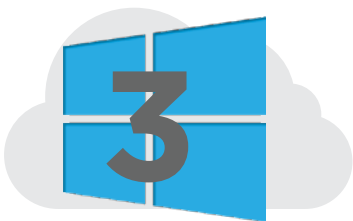
Look beyond the page load. If you're an engineer trying to figure out why a page load error occurred in your Microsoft Azure application, one of the most valuable assets to you is context. Beyond identifying long load times and specific errors, New Relic's Browser Session Traces provide the story that happened before and after an error or performance issue. See what's going on at the interaction level, with the option to pivot from AJAX requests and JavaScript errors into a Session Trace or conversely pivot from a Session Trace to a specific JavaScript or network error.

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4 **Keep an eye on third-party services.** From Microsoft SQL Server database and Microsoft Dynamics CRM to Facebook, Twitter, and PayPal, your Azure app likely relies on numerous third-party services to deliver the best user experience possible. With the App Map and New Relic's external service feature, you can see how Microsoft services and third-party APIs are affecting your app's performance, and make sure that none of them are slowing things down.

5 **Create performance dashboards.** The primary New Relic performance dashboards you see within the Azure portal are great when you're looking for a quick glance at the response time and error rate of your applications. But if you're looking for a more in-depth and tailored view of performance metrics, click over to New Relic Insights and build your own dashboards. You can include charts and graphs showing the number of logged in users and where they're located, so that you can easily scale up and down as needed. It's just another level of visibility to give you a better picture of what's going on in your Azure environment.

Conclusion

From faster triage and problem resolution to improved end-user experiences, there are countless ways New Relic helps Azure customers optimize their cloud applications. Now that you have a better idea of how New Relic works and all it has to offer, we hope you'll take the opportunity to move forward in your cloud journey with greater visibility and confidence. And if you ever find yourself in need of advice, know that the engineers at New Relic are more than happy to help.

For more information

To get in touch with New Relic, email: azure@newrelic.com.

To learn how to use New Relic's additional capabilities, visit: http://docs.newrelic.com.

To learn more about using New Relic with Azure visit: newrelic.com/azure.

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