



## At a Glance

**INDUSTRY**

Mobile strategy, user experience and development

**LOCATION**

Quebec City, Quebec

**EMPLOYEES**

40

**USE CASE**

Monitor performance of web and mobile applications

**WHY NEW RELIC**

In-depth error reporting from the individual mobile user's perspective

**ENVIRONMENT**

Mirego is hosted on Amazon Web Services and the company's stack runs on Rails 3.

All client projects are native applications designed for a variety of mobile operating systems, including iOS, Android, Blackberry and Windows Mobile.

# Mirego Identifies Real Time API Errors in Native Mobile Apps with New Relic for Mobile Apps

Mirego is a leading mobile design and development team that helps its clients understand mobility, seize opportunities and reinvent themselves with the help of outstanding mobile applications. Since its founding in

2007, the company has worked with a wide range of clients and has built over 90 smartphones and tablets applications used everyday by millions of people around the world.

## Highlights

- Using New Relic for Server Monitoring, Mirego improved its MTTR by 400% reducing the average time from 24 hours to 6 hours for diagnosis and correction
- Using New Relic for Mobile Apps, troubleshooting API-related errors for native mobile apps has been reduced to minutes instead of days
- New Relic delivers real time data showing error rates from an end user's perspective, whether the user is on a laptop or an iPad

## Challenges

Understanding issues in a web application may be a challenge, but getting the same understanding from a mobile app is a flat-out guessing game. Just ask Pierre-Luc Simard, CTO at Mirego. “If you’re developing a web app, you can test in every single condition from your computer,” he says. “You can try every version of each browser. You can simulate any kind of network connection. With mobile applications, you can’t do it all. You make your best guess based on the limited evidence at hand, then you release a new version to every single user through the AppStore or Google Play. You can’t release it to a subset of users — it goes out to every single user. When working with the AppStore you may have to wait two weeks for the review, and then, at long last, you find out if you actually fixed the problem. It’s like driving blind, except you don’t know if you’ve wrecked the car until weeks afterward.”

In many cases, an issue emerges only after users have complained — which usually means a crop of one-star reviews in the various stores. “It can be very difficult to recover from a lot of bad reviews,” says Simard. “For every one-star review, you need a couple five-star reviews to get back on track. In other words, waiting for users to complain can be a very damaging approach to testing a mobile application.”

When issues emerge, Simard and his team start the difficult process of troubleshooting based on very limited information. For instance, many mobile devices have catchall error codes that may represent five or more distinct issues, making it difficult for developers to pinpoint the true source of the problem. “When we hear about errors in production, we search the app code for clues, but that tells us very little about the individual user’s experience,” he says. “Network errors

are especially difficult to troubleshoot. Why was the connection slow? Was it the distance from our data center to the user? Was it the network carrier? Or was it just an especially large file? Many times, we can’t know for sure, so we need to make the smartest possible guess.”

Simard and his team experimented with two types of mobile testing solutions. On the one hand, they worked with crash-reporting tools that send a notification when an app simply stopped working for an individual user. However, many errors don’t result in a crash, so those tools provided very little insight into the overall user experience. Mirego developers also relied on mobile analytics tools, which delivered genuinely helpful information about user behavior, but again offered limited visibility into error rates or network issues. “We had a lot of high level information about app usage, and we knew when crashes occurred,” says Simard. “But we had almost no useful data beyond that. With such limited information, we had very few options for troubleshooting. It was clear that we needed to find a better solution.”

“New Relic doesn’t change the way you run your mobile application. You don’t need to alter your network connection and you don’t have to trigger any special events. You get very good data right away with basically no effort.”

**Pierre-Luc Simard**  
CTO, Mirego

## Solution

Simard was already using New Relic to monitor Mirego's web servers, so he was familiar with the benefits of getting real time, in-depth information on app performance. "New Relic is unique in its intensely data-driven approach to application monitoring," he says. "We love what it's done for our web environment. So when we heard about the beta version of New Relic for Mobile Apps, we were very excited to give it a try."

Implementing the mobile version was simple. "You drag and drop a library into your app, and you add one line of code," says Simard. "It's a five-minute process, tops. New Relic doesn't change the way you run your mobile application. You don't need to alter your network connection, and you don't have to trigger any special events. You get very good data right away with basically no effort."

With New Relic for Mobile Apps, Simard and his team have access to the same detailed data they find in Real User Monitoring (RUM), but optimized for native mobile apps. "We've always loved RUM because it shows us performance data from the individual user's perspective," he says. "The mobile version of New Relic offers very similar information at a similarly granular level. We've never had that depth of insight into our clients' mobile apps before."

"With API-related errors on mobile apps, it used to take us a long time to identify the source of an issue. Now we can troubleshoot in a matter of minutes."

**Pierre-Luc Simard**  
*CTO, Mirego*

Now, when issues emerge during app testing, Simard and his team can see if the problems arise from the backend or from a bug within the app itself. "We can see which features the tester used, because we can see which API calls went through," he says. "If there's a problem, we can tell right away if it's coming from the web or from the app, so we know which side to investigate first."

Of all the features included in New Relic for Mobile Apps, Simard is especially pleased with the network error reporting capability, which is especially helpful in pinpointing issues related to API response time. He also appreciates the user location data, because he doesn't need to activate GPS to discover users' locations. "New Relic relies on IP addresses, so GPS is unnecessary," he says. "That means we can uncover finer-grain detail on users' whereabouts. We're getting better data with less hassle, and for us that's a win-win."

## Results

New Relic saves time: on the server side, Mirego reduced its mean time to resolution (MTTR) from 24 hours to 6 hours. The company is still in the early stages of evaluating the benefits of its mobile monitoring solution, but Simard anticipates that the impact of New Relic for Mobile Apps will be similarly dramatic. “With API-related errors on mobile apps, it used to take us a long time to identify the source of an issue,” he says. “Now we can troubleshoot in a matter of minutes.”

New Relic helps Simard and his team take the guesswork out of diagnostics. “Before implementing this software on the server, our error monitoring efforts were erratic, and mobile error monitoring was downright nonexistent,” he says. “Now we have real time data showing us error rates from an end user’s perspective, whether the user is on a laptop, iPhone, iPad or Android device.”

More accurate data means that Mirego’s developers can be more proactive in addressing errors and fixing bugs on clients’ mobile apps.



“With New Relic, we’re able to see issues before they arise, notify the client, and minimize the impact,” says Simard. “That’s a big differentiator when it comes to building and hosting applications, whether on the web or on a mobile device. It helps us win and retain customers, which in turn helps us move this business forward.”

## About New Relic

**New Relic** is changing - for the better - the way the world’s developers and operations teams build, deliver and manage software. Its 100% SaaS-based solution provides end-to-end, real time visibility into the operations of network-connected applications wherever they run – in browsers, mobile devices, or servers. New Relic’s platform-agnostic solution works right out of the box for web apps built with Java, .NET, Ruby, Python and PHP and for mobile apps on Android and iOS. New Relic is currently monitoring 1 million apps and collecting nearly a billion metrics a day for more than 35,000 customers, all of whom use New Relic to ensure a better online experience for their users. Learn more at: [www.newrelic.com](http://www.newrelic.com)