



Load Testing with AWS VPC

Shift Your Performance Testing Left – and into the Cloud

Your websites and applications are built on multiple technologies, relying on vast networks of third-party providers and CDN's. Users can access your site or applications from anywhere in the world using different browsers, operating systems, and mobile devices, all with varying connection speeds, which is why it's critical for development teams to "shift left" and test their applications early and often. While the shift left approach has gained popularity over the last several years, due in part to meeting the demands of the continually changing IT landscape, the primary benefit is that it enables development teams to become more efficient and deliver consistent code, more quickly and more often.

Functional testing is commonplace in software development today, but non-functional testing, specifically load and stress testing, tends to take the back seat. These tests require additional infrastructure and resources that companies may not be able to manage and support. In addition, they require longer setup times and complex scripts that require developers to have specific working knowledge and background to perform them. These scripts can sometimes be difficult to automate and work only in a vendor-specific ecosystem.

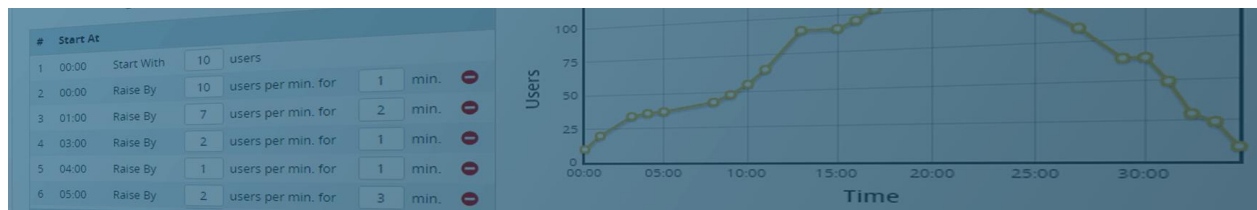
LoadView and Amazon EC2

The Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity within the Amazon Web Services (AWS) cloud. It was designed to make web-scale cloud computing easier for developers by eliminating the need for investing in additional hardware and utilizing your current infrastructure, so you can focus on developing, optimizing, and testing your code more often.

By automating performance testing with LoadView and AWS earlier in the development stages, you can run tests more frequently and focus on optimizing your applications, instead of worrying about adding infrastructure or resources.

Think of the AWS Cloud as an extension of your data center. Resources can now be used to conduct various types of performance testing, including load and stress testing with LoadView. Additionally, for companies in highly regulated industries, such as financial, telecommunications, and healthcare, AWS offers a secure environment that meets or exceeds compliance and regulatory requirements, so you have all the security you need, without any upfront expenses.

LoadView is an on-demand, cloud-based load and stress testing platform, helping to assess how a site, web application, or API will respond to various traffic levels, without adding any additional infrastructure. Internal testing can tell you how well your application or site handles an increase in traffic, but it will never reflect real-world conditions. LoadView can simulate thousands of concurrent users during a test and allows you to create scenarios based on a user's physical location.



The LoadView platform allows you to run several different types of stress tests:

- **HTTP/S**
- **Web Page Tests**
- **Web Applications**

The HTTP/S and Web Page Tests are ideal for generating a specific number of concurrent users over a given timeframe. These tests are important in very early stages of development and testing as it determines how the application behaves, so you can fix any issues before moving your application outside of the VPN and into your staging environment.

Response times, quality, and availability are critical factors that need to be assessed before committing your code into staging.

After your application has been tested and committed to your staging environment, you can run the stress test for Web Applications. This option utilizes the EveryStep Web Recorder to create scripts that simulate user actions within your application and run tests from multiple locations around the world.

The EveryStep Web Recorder can also simulate over 40 desktop/mobile browser and devices, giving you real-world results. EveryStep is one of the few tools on the market today that allows you to interact with Rich Internet Applications (RIAs), such as AJAX, Flash, HTML5, PHP, Ruby, etc.

Knowing exactly how much a site, application, or API can handle earlier in the development phase is extremely important, not only to uncover bugs and bottlenecks, but it helps to set baseline metrics and fine-tune code to see how it behaves before committing to staging and production. These performance metrics are also necessary to assist with capacity planning to meet the demands of your customers. Poor performing sites and applications directly impact conversions, and ultimately, revenue.



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