BIZCOMMUNITY

Understand your infrastructure's usage and load characteristics for online success

By Sven Hammar

27 Nov 2015

Black Friday and Cyber Monday are here and it is instrumental to keep your e-commerce platform in perfect health. Key areas to keep an eye on are usage and load characteristics - they are gauges for interpreting how much work an online platform performs, and how well it performs under stress.

Black Friday and Cyber Monday are here and it is instrumental to keep your e-commerce platform in perfect health. Key areas to keep an eye on are usage and load characteristics - they are gauges for interpreting how much work an online platform performs, and how well it performs under stress.

Understanding how your digital infrastructure performs is not as simple as assessing your car's odometer to measure distance travelled, or its speedometer to measure the maximum speed. Usage and load characteristics provide insight into the performance of the platform in real-world use cases, like analysing that metaphorical car's journey from point A to point B.

Understanding what kind of usage and load capacity your service concurrently supports, as well as changes to those factors in the future, is a vital part of providing an excellent online user experience. Cloud computing and scaling services are great assets because you have almost unlimited server resources to handle traffic spikes and growth; however, your service may suffer if you are not configured to use it.

On the other side, you do not want to be paying for more power than you need. Use your interpretation of usage and load characteristics to know your limits, check up on the user experience, and evaluate poor performance issues.

Usage: How much are you utilising?

Usage characteristics are a practical way to measure how much server power you need to run your web or mobile platform. Your usage characteristics are going to break down into CPU, memory, storage, page views and network load statistics, which can be measured over time or by time increments. The usage data sheds light on how much information your platform is moving to end-users, as well as when it moves.

Usage can also tell you how many users are accessing your service at a specific time and compare that against usage statistics to see how hard they are pushing the system. An example usage characteristic would be your web application moving 100GB of data within a month and 10,000 page views per hour.

Load: Can you take the heat?

Load characteristics can tell you how well your platform performs depending on how many end-users are accessing the service concurrently, as well as the maximum amount of work the service can handle before it starts to experience performance problems. Whereas usage testing identifies how much information moves, load testing examines how efficiently the service moves that information.

Load testing, whether performed during development or on a live, fully functioning application, is like test driving the user experience to make sure everything runs smoothly on a larger scale. Specialist suppliers like Apica provide testing tools to handle smaller-scale cloud services with up to 10,000 concurrent users, as well as enterprise solutions that support up to 2 million simultaneous users.

Using load-testing analytics, you can identify capacity shortcomings and single out bottleneck points where the platform or server instances can be improved. Load testing gauges how well a platform holds up in terms of service capacity, long-term high use endurance conditions, and demand spikes. It is great for identifying problems with latency as well - something usage data does not provide any insight into. An example load characteristic is the latency between users when a typical number is simultaneously using the service.

Combining the two for hosting capacity and programming efficiency analysis

Looking at your web service's usage and load characteristics helps answer the question of whether your platform needs to make programming efficiency improvements and adjust hosting resources.

If your service passes the test with little headroom, it is an indication that future growth will disrupt service quality. The performance data helps businesses avoid being victims of their own success. Unpredictable load and rapid use expansion can cause the service to falter if the hosting services are not prepared.

For example, when Pinterest first launched, they used a gated account approval method at first for gradually allowing new users to access the service. This prevented them from overloading the application and creating a poor user experience.

Take advantage of the information that usage and load characteristics provide, adjusting service capabilities and your auto scaling settings to address problems with real-world service use. Do not become a victim of your own online success!

ABOUT SVEN HAMMAR

Sven Hammar is co-founder and CEO of Apica, a provider of powerful, best-in-class technology for testing, monitoring, and optimizing the performance of cloud and mobile applications. He has decade-long experience and expertise in web performance and web optimization, e-commerce, cloud services, IT entrepreneurship and the Internet. He is also a serial entrepreneur who has founded several successful IT companies over the years.

- How to prevent ads from killing your website - 12 Dec 2016
- How to keep customers from abandoning your shopping cart - 30 Nov 2016
- Is your website ready for Black Friday? - 21 Nov 2016
- Four ways online retailers can shine this holiday season - 17 Dec 2015
- Understand your infrastructure's usage and load characteristics for online success - 27 Nov 2015

View my profile and articles...