PERCONA

Database Checklist for High-Traffic Events

The database performance experts at Percona can help maximize the performance of your database deployment with a performance audit, tuning, or optimization.

Protect your environment against expensive outages and unplanned downtime with Percona.

Percona can:

- Assist you with projects of all sizes and complexities.
- Provide a detailed analysis and plan for optimal performance.
- Implement the plan on your own, or with our help.
- Provide staff augmentation or take over the full management of your servers to ensure continued performance and availability.

Every business relies on data to reach customers with product and service offerings. Whether it's listing items on your site, contacting your distributor for inventory, or tracking shipments, payments, or customer data, your database should always be running, optimized, and available for your business to be successful. Most importantly, your customers' experience and satisfaction rely on how successfully your data is managed.

The performance of your database environment is even more critical during high-traffic events such as Black Friday, Cyber Monday, the Olympics, or other worldwide sport or industry events that drive high-traffic visitors to your site. If your database isn't prepared for a sudden increase in demand, it can lead to unresponsive and slow load times. If you aren't able to handle spikes in traffic, it could result in a poor experience for your users, which can add up to lost revenue and brand value.

Traffic spikes can cause your site and applications to crash at the worst possible time. Studies show that **79% of customers are less likely to return to a slow website**, so if your website isn't performing, it may drive potential customers away for good.

Is your database ready for a huge workload spike? Can it handle a high-traffic scenario? If you don't know the answer, we can help. Follow this checklist and measure your database for a high-traffic, high-availability situation.

1. Measure your past traffic, then increase by 10%

One of the best ways to see whether your database environment can handle a workload spike is to measure it at last year's traffic levels, and then increase it by 10%. Not only does past traffic give you a benchmark to work with, if you encountered problems before, you'll also discover whether they've been resolved. Also, by increasing by a specified amount, you can gauge whether your solution is sufficient for expected year-over-year growth. Then, depending on your business plan, you can run the same scenario with even more increased traffic to model additional scenarios (25-50%).

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Percona can help you plan for your next high-traffic event through support contracts, managed services, or consulting expertise.

To put together a custom database performance package that helps guarantee your database performance – no matter what the workload, contact us online or at sales@percona.com.

2. Determine a backup and disaster recovery strategy

You've set up your database environment, you've tuned its performance, established high availability, and optimized the queries accessing your data. However, no matter how well you've planned, a database disaster can still strike at any time. If the database goes down – even from events beyond your control – your applications grind to a halt. To be prepared for this worst-case scenario, you need to ensure that you have a good data backup and recovery plan in place. Make sure to document the process, and share it with all the key stakeholders. Documenting the process will both encourage adoption and help your organization avoid a single point of failure if a key member is unavailable during the outage.

3. Develop a monitoring plan

You should monitor your database environment before, during, and after high-traffic events. Look at things like the number of queries and any increase in query response times, as well as disk and CPU utilization and saturation. A solid monitoring plan can help you anticipate problems, develop backup plans, and set aside resources to prevent a database crash.

4. Have resources in place

Your database environment is not just about how hardware, software, and architecture interact with applications and web pages. It can be easy for a database manager or team to become overwhelmed during high-traffic events putting out fires and fixing glitches in the system, especially in a global environment where there is no "down time." Make sure you have an adequate staff in place, or on-call, around-the-clock to cover all time zones, and with the expert knowledge to quickly diagnose problems and implement solutions.

5. Test and Verify

Once you have your database environment in place, test it. Make sure it reacts the way you expect, and that your contingency plans are fully understood by the stakeholders. Increase loads to find your database breaking point. Run several failure scenarios and measure the time until restoration. It is better to figure out any failures in the system before an emergency occurs.

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