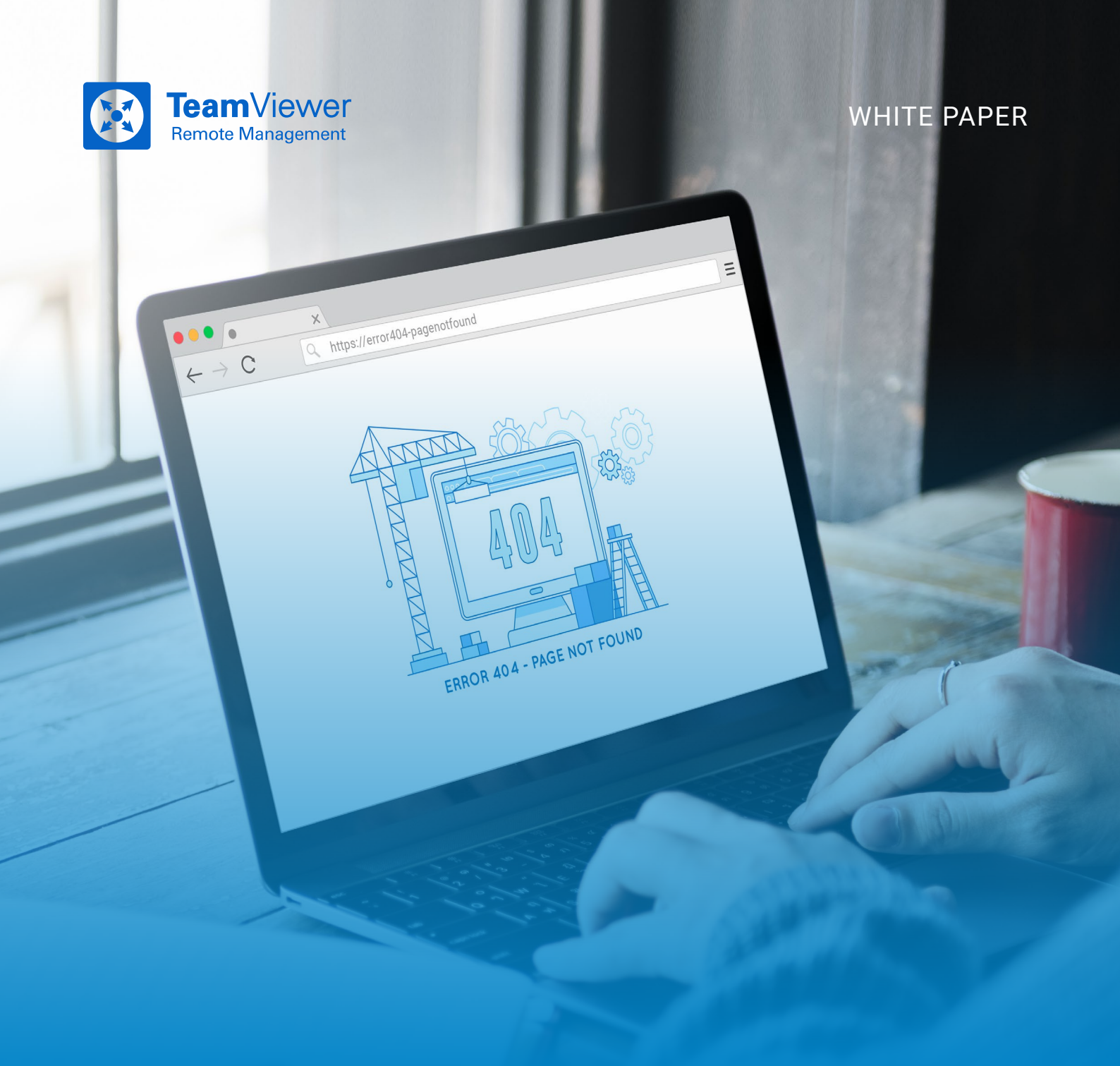
TeamViewer
Remote Management

WHITE PAPER



Web Monitoring Made Easy

Monitor the Performance and End User Experience of Your Website

Contents

Introduction

Slow and unresponsive websites affect user experience. And that can be costly. Broken processes, long loading pages, and downtime cause users to turn away from your business. You need to make sure your website runs at optimal performance.

Manual testing is very time consuming and costly. Often, company employees test the availability and functionality of a website once or twice a day. However, irregular testing creates the risk that problems may last for hours. In addition, there are limits to testing because slow server responses and poorly functioning content delivery networks make testing difficult. The high level of effort required for manual testing can be replaced with an automated web monitoring solution, and the effort previously devoted to manual monitoring put into more important things.

What Is Web Monitoring?

Web monitoring is a solution that measures and reports website availability, loading times, and functionalities of the website and its web applications. You can be sure your website is always available and your visitors, customers, and prospects do not experience being unable to access your site, having to wait for website pages to load, being unable to buy something because the checkout process is broken, or other similar problems that frequently go unreported by website users and undetected by in-house manual monitoring efforts.

An automated web monitoring solution uses a number of computers all over the world to monitor your website where your customers are using it. This computer control point network interacts with your website to verify that the site works as expected.

Why Is it Important to Use a Web Monitoring Solution?

Prevent Loss of Sales Due to Website Failure

Amazon.com has become the poster child for losing money due to website outages, and with good reason given these headlines:

- **Amazon just lost $4.8M after going down for 40 minutes**[1]
- **Amazon's one hour of downtime on Prime Day may have cost it up to $100 million in lost sales**[2]

You won't lose revenue at the rate Amazon.com does if your website is suddenly unavailable, but the damage could still be significant. How bad could it be?

If your business serves other businesses and relies on your website to engage with major prospects who research everything as much as possible before contacting sales, there's no way to be certain of how much two days downtime would cost.

If you're a retailer and your peak e-commerce days are on the weekend, then you've got 104 days a year to make most of your money. Lose two of those days and your online revenue will be down 2 percent. That's a lot, but if you're depending on holiday sales, your site being down for two days during the wrong month could ruin your season.

But even a sluggish website can cost you significantly.

If your website is slow during peak times, users can become frustrated by delays and stop shopping or even abandon their shopping cart. While this could be considered a one-time loss, it's likely that some customers who find what they want on a better-functioning website will return there instead of to your website.

Maintain High Customer Satisfaction by Providing a Good User Experience

User experience is given the highest priority in customer satisfaction surveys for purchasing digital products.[3] Long loading times, poor accessibility, and disrupted processes have a negative impact on user experience and customer satisfaction. There is enough online competition that users don't have to tolerate an unsatisfactory experience.

Identify Hacker Attacks Faster

If someone has hacked your website, you need to know right away. Distributed denial of service (DDoS) attacks, domain name server (DNS) spoofing or man in the middle (MITM) attacks take your website offline, spy on data, and redirect visitors to other websites. With an effective web monitoring solution, you are alerted immediately when service is interrupted, giving you the best opportunity to recognize the nature of the attack and take action without delay.

Improve Search Engine Ranking

Search engine (SEO) ranking is important in the digital age. The better the ranking, the higher the traffic. Web crawlers from search engines like Google constantly analyze your website availability, loading times, and content. Google looks for fast and stable websites with high-quality content that will be relevant to searchers. A slow server response can frustrate users and lead to a high bounce rate — visitors leaving a site right after landing on it — which is a negative ranking factor. If the bounce rate is high, it shows a bad user experience, which means the search engine ranking will probably be low.

Preserve Brand Integrity

If your website is constantly crashing, it has a negative effect on your brand. Customers and prospects get their first impression of your company from your website. They won't trust a company that can't even keep its website up.

Efficiently Increase Reliability

Repeatedly conducting the same tests manually when they could be automated wastes time and money. An automated web monitoring solution is faster than manual testing and prevents human error. The same set of tests it takes days to run now can be done in minutes, which results directly in cost savings.

Key Benefits of Web Monitoring

- Increase website availability and stability
- Create a seamless user experience
- Detect bottlenecks and identify opportunities for performance improvement
- Gain and keep more customers with a stable website featuring a fast and intuitive user experience
- Gain insights into website performance and detect issues with 24/7 monitoring

Key Features

Web monitoring solutions offer different sets of features. These six features should be on your list of must-haves:

Easy to Use
It doesn't have to be complicated. A user-friendly interface keeps you in control and allows you to understand processes without having to be a technical expert.

Multiple Locations
Servers geographically distributed in different locations should monitor your website. This allows an objective analysis to identify local problems.

Three Types of Monitoring
An efficient web monitoring solution keeps an eye on the availability of your website, but also on loading times and transactions (or processes). That means three types of monitoring should be integrated into the entire solution:

1. Uptime monitoring
2. Page loading monitoring (also called load time monitoring)
3. (Synthetic) Transaction monitoring

Alerts
If your website is not available or your webshop does not work, immediate notifications enable you to address problems immediately.

Reliability
Your web monitoring solution is supposed to give you peace of mind. For it to do that, you must know that the technology behind it has been proven effective and reliable.

Integration
The right monitoring solution can be integrated with other tools used to monitor IT performance, such as device monitoring, backup, and a security solution — all with one dashboard.

Web Monitoring Types

1. Uptime Monitoring

Uptime monitoring checks the availability and response time of a website from different locations and alerts you if there is a problem. If a site is not available in a location, it means that your company can't serve customers and prospects in that area on the internet. Your customers and prospects will be dissatisfied and may go to your competitors' websites instead. With an efficient Uptime Monitoring Solution, you will be notified immediately so you can react as quickly as possible.

Why Is Your Website Down?

Here are the most common reasons your website could go down:

Server Overload
Sudden spikes in website traffic are the primary cause of website crashes.

Hacker Attacks
Hackers can crash a website in several ways: They can overload servers with DDoS attacks, inject malicious code, or steal security information, forcing site owners to shut down the site and fix the problem.

Data Center Problems
Data center problems with the web hosting company can also cause downtime. Here, website availability monitoring tools are especially useful as they allow you to assess exactly how reliable your web hosting company really is.

Problems with Website Code
Bad programming can cause an unnecessarily high load on the servers, lead to various database errors, and cause the website to stop responding at all.

Problems with Internet Service Providers (ISPs)
ISPs can have issues with international routings that make your web page unavailable only from some locations.

Why You Need Your Website to Stay Online

Whether the primary business case for creating your website was to generate online sales, promote your brand, distribute content, generate demand and leads, or some combination of all of the above, your website is where many of your customers, prospects, and employees get their first impression of your organization.

A down or malfunctioning website can cause loss of sales, poor SEO ranking, damage to your reputation, and even the need to pay compensation to aggrieved parties.

Website failures that hurt brands and bottom lines:

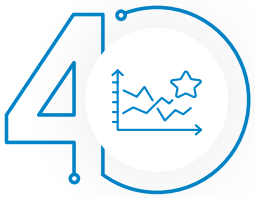
1. The Virgin Blue Airlines website failure of 2010, prevented passengers from boarding for 11 days, resulting in negative press, damage to their reputation, and millions of dollars lost.[4]
2. Wells Fargo Bank's website crash in 2019, caused customers to lose access to their accounts for many hours, resulting in negative press and damage to the bank's image.[5]

4 Ways a Properly Operating Website Helps You

Gain and keep customers.

Rank high on search engine result pages (SERP).

Enhance your brand and generate positive PR.



Differentiate your company from your competition.

2. Page Load Monitoring

With a page load monitoring solution, you constantly monitor the time it takes for your website to load completely from start to finish. A comprehensive report on all resources will immediately reveal the cause of an error if a page does not load within the expected time range, allowing you to detect and fix bottlenecks due to broken scripts or images that are too large.

What Does Loading Time Mean?

Page loading refers to the time required to download the content of an entire web page and display it in the browser window. The page load time is calculated from the beginning, when you click a link or enter a web address, to the completion, when the page is fully loaded. It is usually measured in seconds and has two components:

1. Network and server time: based on the speed of the internet connection and how fast static elements such as images are displayed.
2. Browser time: how long it takes to analyze and execute the entire document and make the page available for user interaction.

The same web page may have different loading times depending on the browser, device, and geographical location of the user.

Why Is the Loading Time of Your Website Important?

Ever go to a website that takes what feels like ages to load? Most people find that frustrating and leave the site. The people who go to your site to buy something or are there to find information about your products and services are no different. They don't have the patience to sit around and wait for a slow website to appear on their smartphone, tablet, or desktop. The longer you keep them waiting, the more they lose interest in your site and your business.

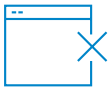
When visitors come to your website, you try to convert them by persuading them to fill out a form, subscribe to your newsletter, request information, or buy something. The percentage of visitors who convert is called your conversion rate, and it is an important metric for evaluating your website's success. The faster a page loads, the higher the conversion rate. According to a HubSpot study,[6] a delay of one second means a 7 percent reduction in conversion rates. How much would a seven percent drop in conversion rates cost your business?

The underperformance of a website has a ripple effect. Nearly half of all users share negative experiences with their peers and spread the news of heavy, unresponsive websites on review sites and social media, further damaging your brand.

Expert Marketing Neil Patel quotes these statistics on the importance of page loading time to consumers.[7]

47%

Consumers expect a web page to load in two seconds or less



40%

Abandon a website that takes more than three seconds to load

How Fast Should Your Website Be?

In a Google Webmaster video, Maile Ohye says, "2 seconds is the threshold for e-commerce website acceptability. At Google, we aim for under a half-second."[8] So, if pages on your e-commerce site take longer than two seconds to load, you're probably not ranking as well in search as you could. And as the stats above show, you're also losing customers.

10 Ways to Improve Your Page Load Time

1. Use a content delivery network (CDN)
2. Move your website to a better host
3. Minimize the number of Javascript and CSS files
4. Optimize image size and format
5. Optimize dependencies like plug-ins or tracking scripts
6. Optimize caching
7. Reduce cookie size
8. Avoid redirects
9. Avoid excessive HTTP requests
10. Use a web monitoring solution

3. Transaction Monitoring

Another important factor is the functional testing of websites. If you have an e-commerce platform that must be available 24/7, your customers need to perform each of the actions listed below:


Visit your website

Register/log in with their usernames and password


Shop for goods and/or services


Add items to their shopping cart


Pay with one of your integrated payment methods

If any of these steps is not completed successfully, you will lose customers and money. To avoid these losses, you need to regularly test each of these steps by performing the same actions as your users. Performing these tests manually takes a lot of time and effort. Instead, you can use automated transaction monitoring.

How Transaction Monitoring Works

Transaction monitoring uses predefined scripts to perform the same actions as your users. Record a script with the transaction recorder and then set up a monitor that uses the recorded script. The script will mimic the web transaction flow and check the functionality of each step. You choose the load time for each step or action, and if the time is greater than predefined, the monitor will generate an alert and notify you.

Why You Need Automated Transaction Monitoring

Even if your website is up and the initial page loads quicky, you may have multiple sub-pages and e-commerce pages with different flows and resources. With these underlying complexities, you may have issues that are very hard to identify manually. And while you might miss them, such problems never fail to frustrate users and diminish their user experience and customer satisfaction.

Once a user leaves your website because they recognize that it functions poorly, winning them back can be a bigger challenge than attracting them was. Using an automated solution to monitor user flows (based on actual user performance) is your best protection against transaction problems that turn off customers and cost you traffic and revenue.

4 Critical Questions Automated Transaction Monitoring Answers

1. Are transactions working?
2. Where is the failure or the slowdown?
3. How cost effective is my performance?
4. Are third-party components still operating?

You also need to consider that your users are from different geographical locations, and conditions specific to a location can affect your website's performance. There can even be problems that are not directly connected to your web page, including:

- Different ISP interconnections
- Routing
- Domain name server (DNS) issues
- Some firewalls (like the Great Firewall in China)

Therefore, you need to monitor your website from different countries and identify problems before they reach your users. You can check your website performance manually or maybe hire an agency or MSP to do that for you. But either option will cost you a lot of money, and the risk of human error is high.

Instead, you can use automated transaction monitoring. Not only does automated transaction monitoring save time and money while increasing accuracy, an effective and efficient solution can be set up with a transaction recorder that can record any step on your web page.

Benefits of Transaction Monitoring

Gain Visibility into All Activity
If all transactions are properly tracked and recorded, you can easily gain a complete view of what is happening in your organization.

Analyze Data to Inform Strategy
The data collected can provide strategic insights into where the business is doing well and where there is potentially more to gain.

Consolidate Tasks in One Uniform IT Environment
Using one monitoring system for your entire global presence ensures efficiency and makes work easier,

Increase Efficiency
The transition from a manual to an automated process reduces human error and frees up additional time for your employees,

Keep Your Third-party Suppliers Accountable
Modern applications rely on several third-party components for functionality and data. The most common third-party integrations are CDNs, payment processing solutions, plug-ins for searching websites and recommendations, analysis solutions, and so on. Monitoring enables users of third-party services to measure and record the effectiveness of these services and hold the providers responsible for performance losses or disruptions in availability.

The TeamViewer Web Monitoring Solution

TeamViewer Web Monitoring incorporates all three types of essential web monitoring in one easy-to-use console.

	Uptime Monitoring	Page Load Monitoring	Transaction Monitoring
30+ Locations	Check the availability and response time of your websites from over 30 locations worldwide.	Monitor page load speeds from over 30 locations worldwide to make sure visitors from around the world enjoy the best user experience possible.	Monitor transactions from over 30 locations worldwide to ensure all business-critical processes are running flawlessly.
Check Frequency	Get real-time information and check your website as frequently as every minute.	Check the full-page load times of your website at the frequency you determine to ensure top performance and end user experience at all times.	Review transactions at the frequency rate you specify to ensure that key processes are functioning properly at all times.
Multiple Protocols	HTTP, HTTPS, and PING protocols.		
Webpage Content Check	Receive an instant notification if the website loads without a specific piece of content that you designate.		
Instant Alerts	Get real-time alerts when a page is not available or exceeds your maximum response time from at least one checking location.	Set individual load time thresholds and receive alerts as soon as those are reached, or when certain elements don't load.	Receive immediate email notifications if your transaction checks fail and take action to prevent minor issues from escalating.
Real Browsers		TeamViewer checks the full page load time of your site with both Mozilla Firefox and Google Chrome.	
Waterfall View		Get a detailed, sequential overview of your website's load time. View single load times of every element on your website to quickly spot and fix bottlenecks.	
Funnel Visualization			How long does each step take? Visualize response times along the funnel process to identify problems and reduce bounce and shopping cart abandonment rates.
Diagnostics	Drill down into the data and identify problems to improve your websites' performance and ultimate ROI.		
Multi-step Thresholds			Based on the transaction, multiple steps and websites may be involved. Set individual thresholds for each step of the transaction funnel and get instant alerts for exceeded thresholds.

TeamViewer Web Monitoring is integrated with all other TeamViewer Remote Management solutions, so users can monitor and manage their websites, devices, backups, patching, and endpoint protection from a single centralized dashboard.

Conclusion

Your website plays a large part in how your customers, prospects, and employees view your company. The impression you create comes not just from the words, images and videos you use, but the complete user experience you create for website visitors.

The user experience includes how fast your site loads, how quickly visitors can move from page to page, and how easily they can transact business, such as making purchases and submitting forms to subscribing to your newsletter or downloading content. If the website is down for some reason, loads slowly, has broken links, or fails to process transactions seamlessly, the visitor has a poor user experience and is likely to go elsewhere. And if your e-commerce site is down for even a few hours, the results can be devastating.

With Uptime Monitoring, Page Load Monitoring, and Transaction Monitoring, TeamViewer Web Monitoring makes sure you know whether your website is functioning as it should or if there are problems. It monitors your website automatically from dozens of locations around the world, because it's possible for a website to be working fine in some places and not in others. And it sends you alerts immediately if a problem is detected.

Next Step

See firsthand how TeamViewer Web Monitoring works with a free trial.

Request Free Trial

Resources

Request a free demo of TeamViewer Remote Management with Web Monitoring

Learn more at teamviewer.com/rm

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TeamViewer

About TeamViewer

As a leading global remote connectivity platform, TeamViewer empowers users to connect anyone, anything, anywhere, anytime. The company offers secure remote access, support, control, and collaboration capabilities for online endpoints of any kind and supports businesses of all sizes to tap into their full digital potential. TeamViewer has been activated on approximately 2.2 billion devices, up to 45 million devices are online at the same time.

Founded in 2005 in Göppingen, Germany, TeamViewer is a publicly held company listed on the Frankfurt Stock Exchange, employing about 1,350 people in offices across Europe, the US, and Asia Pacific.

www.teamviewer.com

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