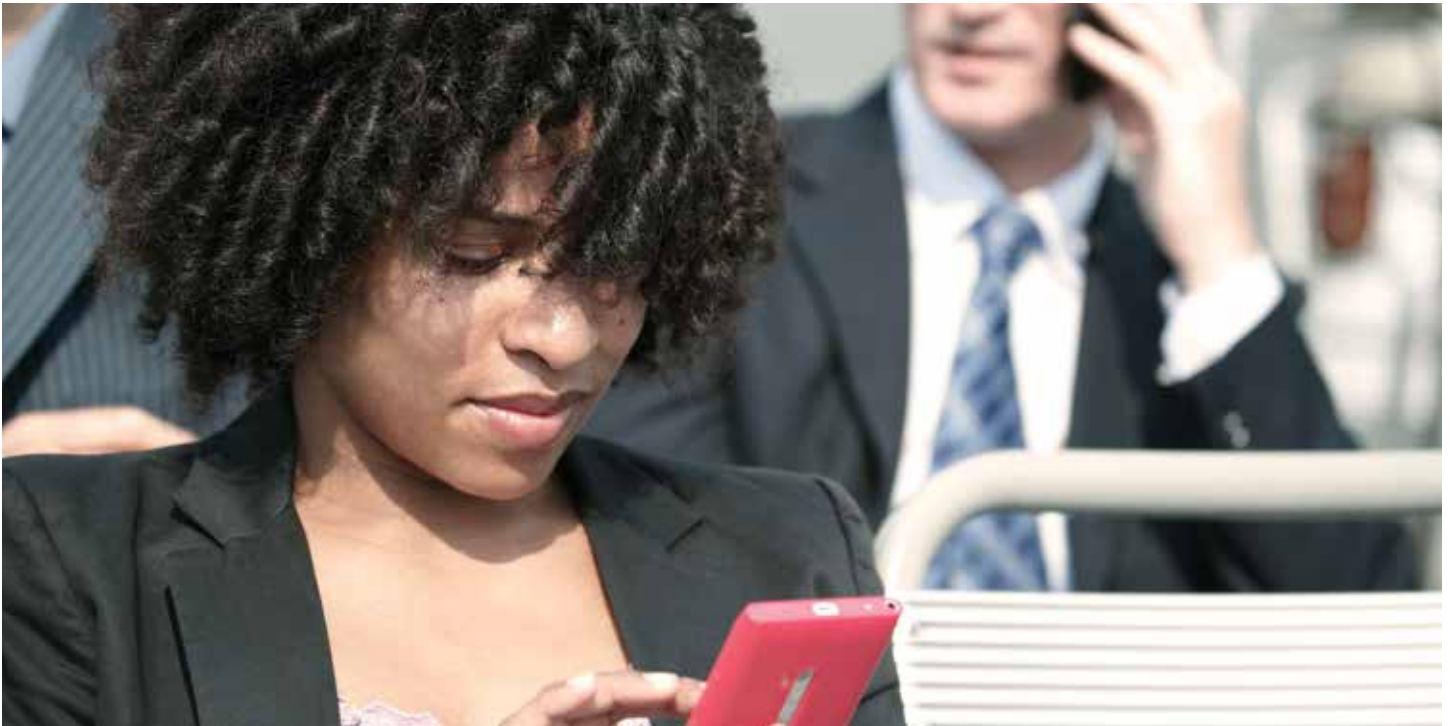# HP LoadRunner software

HP LoadRunner software is the industry-standard software for performance engineering. Generate real-life loads. Identify and diagnose problems. Deploy with high quality and confidence.

Getting a better grip on system behavior

How do you know whether your mission-critical applications meet the performance and scalability that your business requires? How do you decrease the risk of poor performance or catastrophic failure when deploying to production? Are your applications giving the best possible performance?

Enterprise applications are becoming increasingly complex. With modern applications such as mobile apps and apps leveraging Web 2.0 technologies, there are many moving parts, which can easily become points of failure if not tested prior to deployment. Platforms such as mobile, cloud, and hybrid environments offer their own share of challenges. HP LoadRunner software, used by thousands of businesses around the world, is a comprehensive solution for testing system behavior and performance. It provides an efficient and robust means to verify that your application's architecture is built for more efficient performance and reliability.

Click here to learn how HP LoadRunner can help you deliver applications that perform well.

HP LoadRunner helps you:

- Test a broad range of applications, including the latest RIAs, Web 2.0 technologies, mobile applications, ERP/CRM applications, as well as legacy technologies

- Support testing on traditional platforms, as well as new platforms such as cloud, hybrid environments, and mobile

- Identify and reduce performance bottlenecks before deployment to avoid performance issues in production

- Obtain an accurate picture of end-to-end system performance before going live, and verify that new or upgraded applications meet specified performance requirements
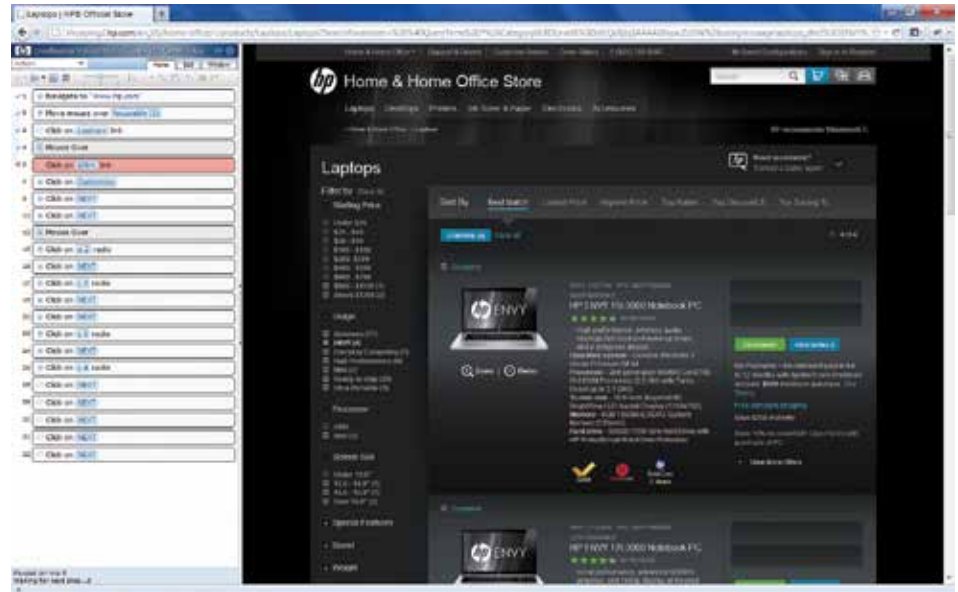
The inside story on HP LoadRunner

With an intuitive record and playback mechanism, including the patented HP TruClient technology, HP LoadRunner records real business processes that a user would perform in production. These can then be played back to emulate the real users.

Using minimal hardware resources, it then emulates hundreds or thousands of concurrent users to apply production workloads to almost any application platform or environment. HP LoadRunner stresses an application from end to end—applying consistent, measurable, and repeatable loads—then uses the data to identify scalability issues that can affect real users in production.

As it drives load against the system, HP LoadRunner captures end-user response times for business processes and transactions to determine whether the application can meet the required service-level agreements. Non-intrusive, real-time performance monitors obtain and display performance data from every tier, server, and system component. At the same time, HP Diagnostics collects application-tier and code-level data.

After the load test completes, the HP LoadRunner analysis engine provides a single view of end-user, system-level, and code-level performance data. It includes a patented autocorrelation engine to scan end-user, system, and diagnostics data to provide the most likely causes of system slowdown. The data is correlated to quickly pinpoint problem areas and identify the root cause of performance bottlenecks. This helps your engineers quickly determine whether they have met their performance goals, and if not, why not and who owns the problem.

Figure 1. The new HP TruClient technology provides a browser-embedded, interactive way of scripting next-generation AJAX applications

Test against a broad range of applications and protocols
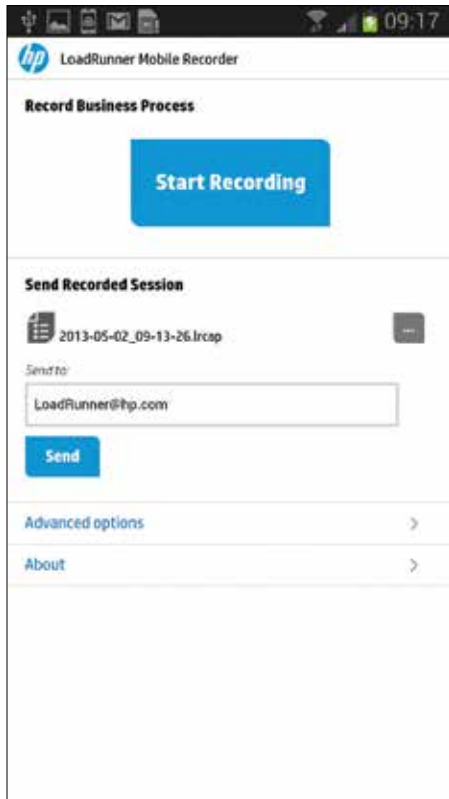
HP LoadRunner supports performance testing for a wide range of application environments and protocols, including AJAX, Flex, Microsoft® Silverlight, Web, SOA, Web services, RDP, Database, Terminal, Citrix, Java, .NET, Oracle, and SAP. An updated and easy-to-use scripting and debugging engine leverages data format extensions and correlation studio to make scripting faster and easier.

Record and replay a variety of Web 2.0 technologies

HP TruClient technology, available in HP LoadRunner and HP Performance Center, is a new, browser-based HP Virtual User Generator (VUGen) that supports next-generation AJAX applications. It is embedded in the browser and provides interactive recording and scripting, which removes the need for programming during scripting. It gives you the ability to record and replay at various levels, from the GUI level down to the transport and socket level, depending on the skill set available and the level of customization required. HP TruClient supports all AJAX applications, regardless of the framework or toolkit they were built with. HP TruClient makes testing of Web, Web 2.0, and mobile applications faster, easier, and more comprehensive.

Support for mobile applications

HP LoadRunner is the most completed solution for mobile application performance testing—both browser-based, as well as native applications. HP TruClient extends as HP Mobile TruClient to support testing for browser-based mobile applications. A mobile applications protocol provides support for native applications. HP solutions for mobile testing can be used to test mobile applications against any platform and OS. HP LoadRunner seamlessly integrates with Shunra Network Virtualization solution enabling WAN simulation conditions.

Support traditional as well as cloud and hybrid delivery environments

HP LoadRunner supports applications on all platforms. Regardless of whether it is an application running in the cloud, or in-house, on bare-metal or virtual machines, or in hybrid environments, HP LoadRunner can help create, load, and test the application before it goes live, so that you can deploy applications with confidence.

Deliver enterprise load generation, monitoring, and diagnostics

HP LoadRunner can generate realistic loads scaling up to hundreds and thousands of virtual users (Vusers). The load can be distributed across various load generators either inside or outside the firewall to reproduce realistic conditions. HP LoadRunner also has more than 60 non-intrusive monitors to monitor various types of systems.
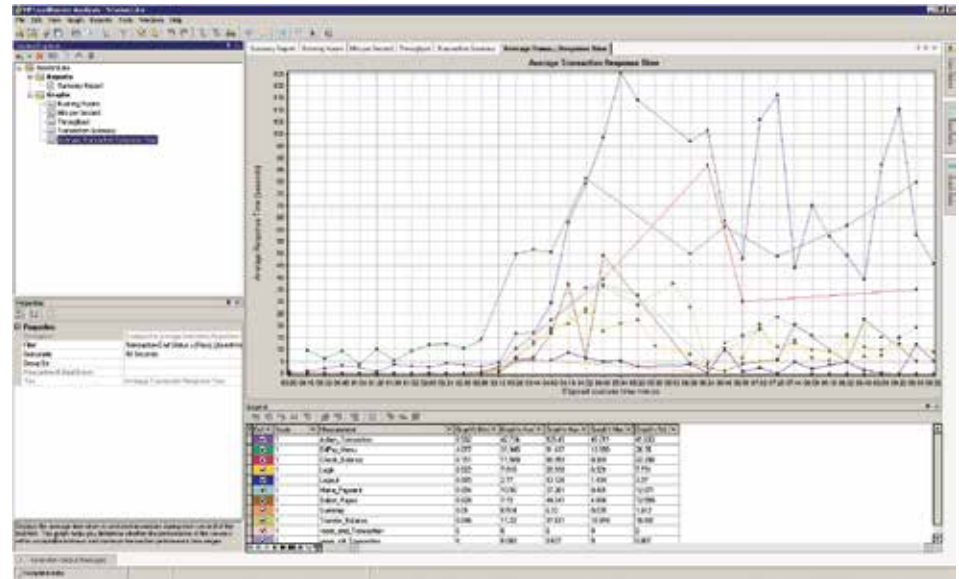
Simplify analysis and reporting

With its Bubble-Up analysis capabilities, HP LoadRunner helps you quickly determine which transactions passed or failed the set service-level objectives, as well as some potential causes of failure. A strong analysis engine helps you slice and dice data in many ways to easily pinpoint the root cause of the problems. You can also use templates to generate multiple custom reports to serve the needs of various stakeholders.

Integrated Diagnostics

HP LoadRunner has a seamless integration with HP Diagnostics, which drills down into applications level issues to find the root cause of problems. It supports various application stacks including J2EE, .Net, SAP, Oracle and SOA.

Figure 2. HP LoadRunner Analysis: A view of HP LoadRunner Analysis cross-results trending capabilities, showing a comparison of increased system scalability and optimized response-time performance.

Support testing across the application lifecycle

- **Integrations for developers:** To enable load testing earlier in the application lifecycle—which is particularly relevant in agile environments—HP LoadRunner integrates with the leading J2EE, Microsoft Visual Studio, Microsoft .NET, nUnit, jUnit, Selenium, Eclipse, and Jenkins environments. This integration lets you create HP LoadRunner scripts directly within the integrated development environment, so developers can participate in the performance testing efforts earlier. In addition, HP Diagnostics Profiler software allows developers to view and debug performance issues at the code level within their development environments and desktops. LoadRunner also provides APIs for integrating load testing into your build management or other automated system.

- **Integration with the community:** To learn easier and faster about HP performance testing, HP LoadRunner integrates with HP Live Network. HP Live Network provides a single portal for HP performance testing users and partners to share and distribute contents with the entire community. Users can access and automatically install contents from HP Live Network directly from HP LoadRunner.

- **Integrations with other quality solutions:** To facilitate intelligent release decisions, HP LoadRunner is integrated with industry-leading quality software, such as HP Unified Functional Testing (UFT), and HP Quality Center (QC), and Application Lifecycle Management (ALM). Leveraging these complementary products together with HP LoadRunner provides a comprehensive solution for managing release risk, so you can make informed decisions prior to going live.

HP LoadRunner also integrates with HP Service Test (ST) for testing Web services. This becomes particularly relevant when services are not yet completely integrated into the application, but need to be tested so that they perform and scale as expected.

An integration with HP Service Virtualization helps eliminate dependencies on other components so that testing can be performed unhindered.

- **Integrations with production:** Application-performance and service-level management doesn't end when load testing is done. In fact, service-level management begins when the system goes live. During the transition from prerelease to production, you can use HP LoadRunner scripts within HP Business Systems Management (BSM) software to monitor application performance, availability, and service levels in production under real-user workloads. Common technologies in HP products such as HP Diagnostics and HP SiteScope, which integrate with both HP LoadRunner and HP BSM, help bridge the gap between testing and production.

These integrations, both upstream to QA and downstream into production, make HP LoadRunner an ideal solution for performance engineering across the application lifecycle.

Build a performance testing center of excellence

Increase organizational efficiencies, deliver better quality
In addition to the standard performance testing process, many companies are moving to an IT shared services model, called a performance testing Center of Excellence (CoE), to increase productivity and standardize processes.

The great news is that when your organization is ready for performance testing CoE, HP provides an easy migration path from HP LoadRunner to the HP Performance Center solution.

The efficiencies gained by creating a CoE with HP Performance Center include increased testing productivity, improved collaboration across application teams, and the ability to outsource some or all of the tactical work of load testing.

A CoE facilitates sharing of best practices and skills, and enhances your organizational efficiency by quickly delivering testing capability throughout the enterprise. In short, a CoE model increases your infrastructure and human resources utilization, and eventually drives better quality across the enterprise.

LoadRunner helps detect pre-production issues

"With the help of LoadRunner through load testing in general we have found many issues that we would not have been able to handle in production without loss of service and business."

IT manager, large enterprise financial services company (**TVID: F3E-C13-172**)

See what other customers are saying about the new **HP LoadRunner software**.

Key benefits

- Reduces cost of application downtime related to performance issues in production
- Supports performance testing of new technologies together with your existing, legacy applications
- Accurately tests a mix of mobile and Internet users, reducing the risk of performance bottleneck when bringing new mobile applications to production
- Decreases the risk of deploying systems that do not meet performance requirements
- Reduces hardware and software costs by accurately predicting application scalability and capacity
- Helps you establish intelligent service-level agreements before applications go live
- Shortens test cycles to accelerate delivery of high-quality applications
- Pinpoints end-user, system-level, and code-level bottlenecks rapidly and with ease
- Reduces the cost of defects by testing earlier in the application lifecycle

To generate real-life loads and identify and diagnose problems, visit **hp.com/go/performancevalidation**.

Connect with peers and HP Software experts at **hp.com/go/performancecommunity**.

Join our blog: **hp.com/go/lrblog**

For an overview of HP software services, visit **hp.com/go/hpswprofessionalservices**.

To access technical interactive support, visit Software Support Online at **support.openview.hp.com**.

To learn more about HP Software Customer Connection, a one-stop information and learning portal for software products and services, visit **hp.com/go/swcustomerconnection**.

About HP IT Performance Suite application solutions

HP ITPS application solutions help ensure modernization initiatives deliver business outcomes instead of failing under the burden of outdated, legacy delivery mechanisms. Where rival solutions mistake the software development lifecycle for a total picture of the application, HP sees core delivery in the context of the complete application lifecycle—from business idea through retirement. Furthermore, by providing unified management and automation solutions, HP offers customers not simply more tools and integrations, but greater simplicity. The result for enterprise application teams is improved predictability, repeatability, quality, and change readiness in both the core and complete lifecycle.

HP Performance Testing offerings

Performance testing from anywhere, for any size and any type of environment.
The agility in how business wants IT to deliver has drastically increased. HP's objective is to provide a menu of options on performance testing solutions to support any type of environment, application, methodology, maturity, and consumption model that the customer have to allow them to accelerate the delivery applications that perform with quality.

HP provides high-quality software and services that address all aspects of your software application lifecycle needs. With HP, you have access to standards-based, modular, multiplatform software coupled with global services and support.

HP Performance Testing is available via:

• Permanent Licenses

• Term Licenses (daily, monthly, 3 months, 6 months, 1 year terms)

• HP Performance testing in the Cloud

• HP Performance testing as a Service (TaaS)

• HP LoadRunner delivered by partners

Learn more at
hp.com/go/loadrunner