



HP LoadRunner and HP Performance Center with Shunra Network Virtualization

Improve the performance of mobile apps through effective testing



Demand for anywhere, anytime access to information has given rise to the mobile wave. As mobile applications continue to evolve into significant competitive differentiators, businesses are challenged to evolve continually and deploy applications that meet or exceed user expectations.

Performance testing is a critical step in the delivery of enterprise mobile applications. Because mobile applications have unique performance profiles, accurate performance testing can be challenging and elusive. Often, performance testing fails to incorporate the significant impact that mobile applications can have on the overall enterprise system. And when teams conduct mobile performance testing of their mobile applications, they often do not factor in the impact that the network can have on the user experience.

In the rush to create and release mobile applications, you should not overlook the effect of dynamic mobile network conditions on user experience. Deploying applications without testing against real-world network conditions cannot be an option—users should not be real-world testers, otherwise revenue, productivity, and brand image are at risk.

HP solves the mobile testing problem with a comprehensive solution for testing the performance of mobile applications. The solution is built with a combination of the tried and tested capabilities of HP LoadRunner software and HP Performance Center software, along with Shunra Network Virtualization capabilities.

The mobile performance testing solution of HP includes two new protocols:

- **HP Mobile TruClient**—Built on top of the innovative new HP TruClient technology, HP Mobile TruClient helps you record your browser-based applications directly through the browser. It makes scripting and testing of browser-based applications extremely fast, easy, and robust.
- **HP Mobile Applications**—For native mobile applications or for any other application that can't be recorded using HP Mobile TruClient, the HP Mobile Application protocol lets you build Web scripts by using agents on the device or through emulators.

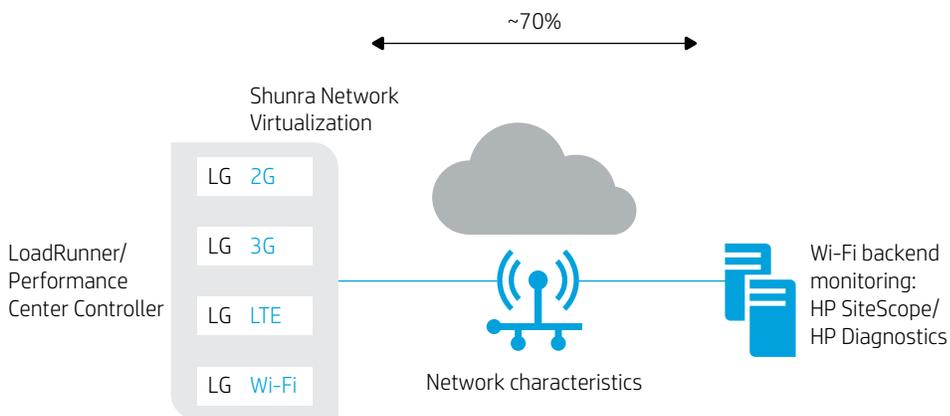
HP LoadRunner and HP Performance Center mobile testing protocols enable comprehensive performance testing of mobile applications for most mobile platforms—Android, iPhone®, Windows®, and others. Using the mobile protocols, the performance testing team is able to capture mobile traffic and generate realistic mobile load on the system under test.

Features and benefits

Shunra Network Virtualization, which integrates seamlessly into HP LoadRunner or Performance Center, enhances test accuracy by incorporating real-world network conditions into the load and performance test environment, ensuring that the test results are more reliable and accurate. From within the familiar HP software interface, you can leverage Shunra Network Virtualization to:

- Enable each load generator (LG) to emulate multiple different network location's transaction response time and reduce reliance on remote LGs
- Aggregate test results into a single database for ease and completeness of analysis
- Extend testing scripts with a single click
- Automate reporting and analysis for performance engineers, owners of lines of business, and other business constituents

Figure 1. Virtualize network conditions



Shunra Network Virtualization enables an effective engineering methodology for application performance, providing the capabilities to discover real-world network conditions, virtualize those conditions in the test environment, analyze test results to isolate potential bottlenecks, and automatically deliver custom performance optimization recommendations. It provides:

- **NetworkCatcher:** The ability to automatically gather real-world network conditions, collecting interval statistics that include bidirectional bandwidth, latency, jitter, and packet loss conditions
- **Global Library:** Access to Shunra's Global Library of mobile and broadband conditions provides up-to-date average, best-case, and worst-case network conditions from thousands of cities worldwide
- **Shunra Analytics:** Highly accurate, deep-dive analytics, that provide location-specific performance information, including identification of poorly performing business transactions and the root cause of performance issues
- **Shunra Predictor:** Robust reporting and filtering of aggregated test data to analyze service levels from a per location, per connection type or per user segment perspective

Shunra Network Virtualization features easy configuration and use. It requires no script editing and places no limits on test scheduling. In addition, test results and data are automatically stored within HP results files and segregated by emulated location for precise, actionable analysis.

The combination of HP LoadRunner or Performance Center and Shunra Network Virtualization is the path to robust, reliable, and accurate mobile performance testing.



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