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LoadRunner Enterprise

Your globally distributed performance testing teams have the responsibility of driving quality across your enterprise while testing a broad range of application types, managing costs and deploying applications that meet the performance requirements of your business. OpenText LoadRunner Enterprise delivers a collaborative testing platform that reduces complexity, centralizes resources and leverages shared assets and licenses to increase consistency across your enterprise.

Product Highlights

The way you handle transactions and serve your customers is more complex, so it's critical that your applications support any scenario. Your distributed performance testing teams have unique challenges such as managing many application types, testing tools, licenses, repositories and systems while working toward unified results.

Designed as a collaborative performance testing platform, LoadRunner Enterprise can help you alleviate these challenges, and help drive quality across your enterprise. Your global teams share a common infrastructure and can execute multiple performance tests concurrently and continuously with all relevant assets being shared to increase collaboration. License management is easier, redundancy of hardware and software is eliminated, and resources are more accessible to various projects. You won't be held back with limited application support, poor reporting or lack of scale. With broad coverage, innovative technologies, extensive integrations and powerful analytics, you can tackle any project. When combined with the rest of the LoadRunner family, your organization can build a performance engineering practice that scales. Simply choose the right tool for the right job while leveraging a connected ecosystem that delivers smarter insights, tighter collaboration and better cost savings.

Key Features

Share Best Practices

Increasing organizational efficiency through standardization of tools and resources can help balance your priorities and improve the results delivered by your testing team. Many companies adopt a shared IT services model or performance testing Center of Excellence (CoE), to increase productivity and standardize processes. The efficiencies gained by creating a CoE with LoadRunner Enterprise include increased testing productivity, improved collaboration across application teams, and the ability to outsource some or all 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.



Figure 1. Simplified user and project management, cloud management, maintenance task from LoadRunner Enterprise Administration

Key Benefits

- Quickly deliver enterprise engineering capabilities and facilitate sharing of assets and collaboration
- Reduce complexity and increase utilization of infrastructure and human resources
- Get the big picture with cross-project reporting and individual project drill downs
- Increase collaboration and consistency with unified storage and access to all relevant assets
- Reduce costs with centralized management and built-in support of cloud-based load generation
- Analyze end-to-end performance, including topology, infrastructure-level, and advanced insights
- Scale at your own pace with Virtual User Flex Days, a flexible usage-based license model

A CoE model increases your infrastructure and human resources utilization, and eventually drives better quality across the enterprise.

Increase Collaboration

Your globally distributed testing teams need to deliver applications quickly. Each member brings their own skills, tools, protocols and processes to the project. Often times, these skills or processes are not shared across a project team so each team member must start from scratch, however teams can consolidate available testing resources.

Using LoadRunner Enterprise, you will increase collaboration within your teams with features such as web-based access, license and asset sharing, and project grouping. Performance engineers gain 24x7 access to all testing operations, including uploading test scripts, scheduling load tests, creating load test scenarios, running multiple load tests, monitoring test executions and analyzing results. Everyone on the team can view load testing data, progress, and run information in real time leveraging this collaborative infrastructure. Using LoadRunner Enterprise, you can concurrently execute and monitor multiple tests from any location or schedule them to start unattended. Relevant testing assets such as test scripts, load test configurations, test data and analyzed results are stored in LoadRunner Enterprise for easy access, sharing, and reuse.

Manage Complexity

It's important to identify the performance testing model that suits your business needs. Managing testing, hardware, software, separate installations and people across multiple locations can be complex. For large organizations, LoadRunner Enterprise supports a dual-use model, allowing the CoE to focus on the most critical projects in a company, and a standard, shared testing platform that other groups can leverage to run their own performance testing efforts for smaller projects.

LoadRunner Enterprise provides enterpriselevel management, including user administration, tenant and rights management, role-based

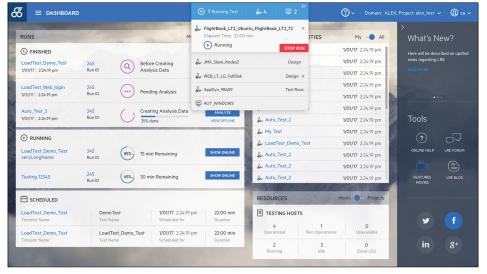


Figure 2. Increase collaboration with centralized storage and access to all relevant assets and informationtest scripts, configurations, data and analyzed results

privilege management, project-level resource allocation and usage auditing features. Robust systems management to operate, manage and maintain the load testing infrastructure is also available. LoadRunner Enterprise enables Administrators and Practitioners the ability view scheduling and execution of concurrent tests, license and resource usage, email alerts for completed tests, remote installation and management of resources and REST API's to provision and deprovision on-demand. Your system administrators can see the operational status of all LoadRunner Enterprise resources in real time.

Control Costs

Your team needs to be able to run high-scale tests efficiently, across both your physical and virtual environments without increasing the overall cost or provisioning time. LoadRunner Enterprise provides the ability to seamlessly leverage public cloud infrastructure to deploy load generators (LGs) to scale up and down based on your performance testing needs. With cloud testing, you can quickly and elastically scale up tests to meet the demands of your customer-facing business applications, reducing the cost and overhead of managing dedicated machines.

You can also take further advantage of Load-Runner Enterprise's ability to help control costs. The shared testing infrastructure means that licenses and resources that were previously distributed across various projects can now be consolidated into one central, easily accessible pool. This makes license management much easier, eliminates redundancy of hardware and software, and makes resources more accessible to various projects, saving you money.

Enterprise Coverage

It doesn't matter if you are testing the latest mobile and web technologies, ERP/CRM applications, or legacy applications—everything

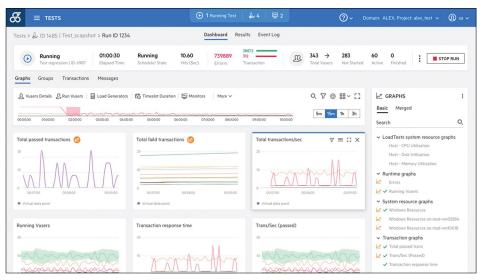


Figure 3. Enterprise-level Management including role-based privileges, remote patch and centralized control of the test infrastructure

is covered, as you need to ensure quality across all of your strategic IT initiatives. With LoadRunner Enterprise you can improve quality with performance testing across any application type or protocol, with support for more than <u>50 protocols</u> and technologies, including web, mobile, and CI/CD tools.

Continuous Testing Support

Broadening the integration of performance into the CI/CD process helps you balance and prioritize responsibilities across developers, testers, and performance engineers. However, integrating with today's complex toolchains and getting developers involved in the process isn't a simple feat. You need an open approach that brings together and enhances the technologies DevOps and Agile teams need to test their way. LoadRunner Enterprise has a rich selection of third-party tools to integrate with such as Jenkins, Azure DevOps and Bamboo.

Centralized Testing Approach

Utilizing non-standardized tools and processes, can mean limited visibility into the application performance and only seeing the applications as a system or component. You may not have the ability to view the full status of your testing phases.

With LoadRunner Enterprise you can add a "project" concept to the load testing process-all load testing goals, scripts, scenarios, results, users, and resources are assigned to and managed in the context of the project. It also supports project grouping such that smaller projects can inherit assets from larger projects. Your global teams can manage multiple, concurrent performance testing projects across different geographic locations, by combining the usage with other products, such as OpenText Service Virtualization and Application Performance Monitoring tools. They are also able to cover end to end testing and monitoring of your applications while the tests are being executed.

Project-level dashboards and business reports provide a clear view of cross-project progress, process, and resources used. Privileged management is role based and per project, allowing users to see and interact with only the projects relevant to them. Resources are allocated per project so that the correct amount of infrastructure is available on demand to the project team. In addition, you can track project progress across releases and over time.

End-to-End Data Visualization

Performance tests alone don't always paint the full picture. Incorporating application monitoring and user sentiment data allows you to take a centralized approach to data collection and connect the dots. LoadRunner Enterprise integrates with AppDynamics, New Relic and Dynatrace, as well as production log data from the likes of Microsoft IIS W3C, Google Analytics and Apache.. The correlation of data generates more granular results, increases cooperation, and centrally archives historical data for trending, automated comparisons and SLA validations across multiple data sets. Enhanced data visualization with Grafana and InfluxDB lets teams view real-time results and manipulate data to make smarter decisions.

Topology and Network

Often, you don't know the details of the infrastructure your teams are testing against. Having everything in one place with the tests helps keep a record of the configurations, so that you know exactly what you are testing against and can track changes between iterations. Included with LoadRunner Enterprise is a topology module, which helps you define the infrastructure topology of the system under test. The visual topology facilitates setting of monitors so that you can see exactly what is happening in the system as you run your tests. Using the integrated Network Virtualization capabilities, you can accurately simulate real-world conditions for an accurate analysis of user response time and throughput. With location-aware analytics, transaction analysis and optimization recommendations, your applications will live up to the expectations of your users.

"LoadRunner Enterprise's support of over 50 protocols gives us a consistent interface to work in, regardless of the target environment. We often liken it to a Swiss army pocketknife, with so many options available to us."

> EMIEL SMETSERS Technical Lead OrangeCrest Consulting

Connect with Us OpenText CEO Mark Barrenechea's blog

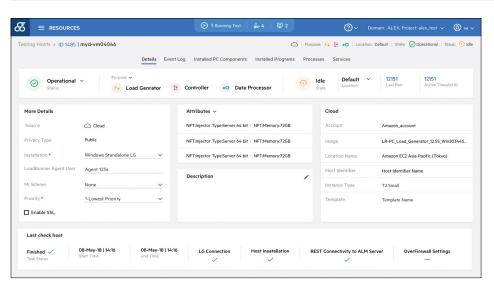


Figure 4. Monitor trends over time to see how performance is trending over subsequent iterations and against defined SLAs

Powerful Analytics and Insights

Understanding your test results may be time consuming, but it is important to interpret the results. Having the ability to view the results, determine performance trends or issues and depict them in a visual format can help simplify the process. LoadRunner Enterprise provides visibility into the test status across the entire enterprise and provides performance trending information across multiple tests. You can define a baseline and set up reports that help you quickly see how the application performance is trending over subsequent iterations, and how the application is performing against the defined SLAs. With detailed root cause analysis, users can get the test data displayed both in real time and offline. The online and offline analysis capabilities aid in trending and anomaly detection.

Deployment Options

You can deploy your way and minimize infrastructure needs with deployment options spanning on-premises, dockerized, Softwareas-a-Service or provision load generators in the cloud. If you have a subscription with public cloud providers (Amazon Web Services and Microsoft Azure Marketplaces) LoadRunner Enterprise offers that options as well so you can dynamically provision hosts on demand without having to manage complex infrastructures.

Performance Engineering with the LoadRunner Family

High performing teams adopt a proactive, continuous performance engineering approach that includes four key attributes: expansion of performance testing to new roles, tight integration into the CI/CD process, end-toend performance analysis, and continuous improvement. Combined these elements ensure that teams can engineer performance early in the lifecycle through the end-user experience. The LoadRunner Family is an integrated set of enterprise-grade performance engineering solutions that work independently or in a combined fashion. With any solution, you can confidently test complex load, stress, and performance scenarios across legacy, website, and mobile applications-while benefitting from shared capabilities and common technology. Ensuring that tools are right-sized for the different users while exploiting test reuse, and managing or delivering shared infrastructure helps you develop a performance engineering ecosystem for success. The LoadRunner familv includes:

- LoadRunner Enterprise—collaborative performance testing platform for globally distributed teams
- LoadRunner Professional—versatile and comprehensive performance testing for co-located teams
- LoadRunner Cloud—cloud-based performance testing for extreme scale and flexibility
- LoadRunner Developer—shift-left performance testing embedded throughout the development lifecycle

Learn more about LoadRunner Enterprise at **microfocus.com/LoadRunner-ent** or learn more about the LoadRunner family at **microfocus.com/performance-engineering**.

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