



INFORME TÉCNICO PREVIO DE EVALUACIÓN DE SOFTWARE DE PRUEBA DE STRESS PARA APLICACIONES WEB

INFORME N° 062-2010-MED-SPE-OFIN

1. NOMBRE DEL AREA

Oficina de Informática.

2. RESPONSABLES DE LA EVALUACIÓN

Hugo Zumaeta

Jackeline Melgarejo Reyes

3. CARGOS

Responsable del Área de Proyectos TIC de Gestión – OFIN

Especialista CAS

4. FECHA

Noviembre del 2010

5. JUSTIFICACIÓN

La Oficina de Informática tiene la necesidad de adquirir un software de Prueba de Stress con la finalidad de evaluar la performance de los aplicativos Web que desarrolla, implementa o adquiere. Muchas de las cuales tienen despliegue a nivel nacional.

Además, según Resolución Ministerial N° 0164-2010-ED, se aprobó el documento "Metodología del Ciclo de Vida del Software MCVS V1.0", que incluye la elaboración de pruebas funcionales y no funcionales. En este aspecto, el software de pruebas de stress es una herramienta para la elaboración pruebas no funcionales.

Para ello se busca contar con una herramienta que permita identificar problemas de rendimiento de las aplicaciones Web antes de salir a producción, además de anticipar potenciales cuellos de botella en las aplicaciones o infraestructura que no está bien dimensionada.

El software debe determinar qué tan bien se comportará una aplicación y cuántos usuarios concurrentes soportará en condiciones extremas.

Por lo expuesto y en el marco de Ley 28612 "Ley que norma el uso, adquisición y adecuación del software en la Administración Pública" se ha procedido a evaluar el Software de Prueba de Stress a aplicaciones Web.

Hugo Zumaeta
Jackeline Melgarejo
Jackeline
Melgarejo

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8. ANALISIS COMPARATIVO COSTO-BENEFICIO

Para realizar el análisis comparativo de las alternativas seleccionadas, se ha definido el costo de la licencia, mantenimiento y soporte.

Para el resultado final COSTO/BENEFICIO se está otorgando un peso de 60% a la parte técnica y un 40% a la parte económica.

Se adjunta Anexo 02.

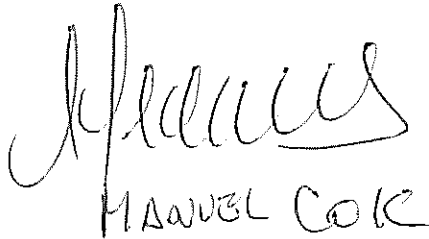
9. CONCLUSIONES

Del resultado de los análisis técnico y de beneficio/costo, se concluye que la mejor alternativa (ver anexo 01 y anexo 02), en base al requerimiento actual de la Oficina de Informática del Ministerio de Educación es el producto WAPT.

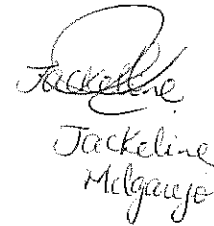
10.FIRMAS



Hugo Zumbado



MANUEL COTO



Jackeline Melgarejo

ANEXO 01
CARACTERÍSTICAS TÉCNICAS PARA LA EVALUACIÓN DE SOFTWARE DE PRUEBA DE STRESS PARA APLICACIONES WEB

Nº	Atributos	Descripción	Puntaje	Criterio de Calificación	Puntaje	Microsoft Visual Studio 2010	WebLoad	OpenLoad Express	SiikPerformer-Web	WAPT Pro	JMeter
ATRIBUTOS INTERNOS											
1	Múltiples pruebas	Permite llevar a cabo múltiples pruebas como: carga, capacidad, estrés, estabilidad.	5	Varios (Más de 2)	5	5	5	3	5	5	3
				Pocos (Solo 2)	3						
				Solo 1	1						
2	Generación de usuarios virtuales	Permite la generación de una cantidad igual o mayor a 400 usuarios virtuales.	5	Abundante	5	5	5	5	5	5	5
				Intermedia	3						
				Limitada	1						
3	Simulación	Simula condiciones reales de carga, usuarios de diferente procedencia (diferentes IP's, cookies, datos de entrada para diversos formularios de páginas, nombre, contraseña, velocidad de conexión, ruta de acceso específica a través del sitio).	10	Muy Dinámico	10						
				Dinámico	5	10	5	10	5	10	5
				Estático	1						
4	Tipo de aplicaciones	Debe permitir evaluar principalmente aplicaciones Web, con diferentes tipos de tecnología, pero principalmente .NET.	5	Evalúa aplicaciones web, .NET	5						
				Evalúa aplicaciones web, no .NET	3	5	5	5	5	5	3
				No evalúa aplicaciones web	0						
5	Perfiles	Permite la creación de usuarios con diferentes perfiles.	5	Si	5	5	5	0	5	5	0
				No	0						
		Sub Total	30		Sub Total	30	25	23	25	30	16
ATRIBUTOS EXTERNOS											
1	Escenarios	Permite seleccionar los escenarios deseados para la prueba. Esto incluye grabación de escenarios, con una fácil y rápida edición y configuración.	15	Incluye grabación fácil	15						
				Incluye grabación, pero es compleja	5	15	5	5	15	15	0
				No incluye grabación	0						
2	Rendimiento del Servidor Web	Permite medir distintos parámetros del rendimiento del servidor Web (CPU, memoria, uso de red, Base de Datos)	10	Todos	10						
				Alguno de ellos	5	10	10	10	10	0	5
				Ninguno	0						
3	Informes	Proporciona informes y gráficos de los resultados de las pruebas. Estos deben estar disponibles durante la prueba, para que se puede controlar los parámetros del rendimiento de las aplicaciones sobre la marcha. Además permite exportar los resultados.	10	Avanzado	10						
				Intermedio	5	10	10	10	5	10	5
				Básico	1						
4	Escalabilidad	Permite elegir un nivel de carga constante en toda la prueba y aumentar la carga en determinados intervalos de tiempo durante la prueba.	5	Alto	5						
				Medio	3	5	3	5	3	5	3
				Bajo	1						
5	Parametrización	Permite especificar el tiempo de prueba y el número de usuarios virtuales para cada perfil.	5	Ambas	5						
				Una de ellas	3	5	3	3	3	5	1
				Ninguna	1						
6	Gestión remota	Permite utilizar varios computadores en forma remota para generar mayor volumen de ensayos.	10	Si	10	0	0	0	0	0	10
				No	0						
		Sub Total	55		Sub Total	45	31	33	36	35	24

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N°	Atributos	Descripción	Puntaje	Criterio de Calificación	Puntaje	Microsoft Visual Studio 2010	WebLoad	OpenLoad Express	SIKPerformer-Web	WAPT	WAPT Pro	JMeter
ATRIBUTOS DE USO												
1	Facilidad de Instalación/configuración	La instalación del software debe ser fácil y rápida. No debe ocasionar ningún tipo de dificultad al usuario en el momento de la instalación/configuración.	5	Fácil Intermedio Complejo	5 3 1	5	5	5	5	5	5	5
2	Facilidad de uso	El uso de la interfaz debe ser fácil y amigable para el usuario.	5	Fácil Intermedio Complejo	5 3 1	3	3	3	3	3	3	3
3	Documentación	Disponibilidad de manuales y ayuda inmediata en línea.	5	Muy dinámico Dinámico Estático	5 3 1	3	3	3	3	3	3	3
		Sub Total	15		11	11	11	11	11	11	11	11
		TOTAL	100		86	67	67	72	76	96	51	

Jackeline Melgarejo
 Jackeline Melgarejo

Hugo Zuccato
 Hugo Zuccato



ANEXO 02

ANALISIS COSTO BENEFICIO

Costos Referenciales de Licenciamiento + mantenimiento + soporte por un año

Software	Costo de Licencia
VISUAL STUDIO ULTIMATE (*)	\$ 1,930.00
WEBCLOAD	\$ 18,000.00
OPENLOAD EXPRESS	\$ 5,000.00
SILKPERFORMER	\$ 85,000.00
WAPT	\$ 420.00
WAPT PRO	\$ 840.00
JMETER (**)	\$ 600.00

* Herramienta para programación Web, que incluye herramientas de testeo.

** Es software libre, se incluye costo aproximado de consultoría.

Precios referenciales en dólares no incluyen IGV

Análisis Costo - Beneficio

Software	Costo Total	Beneficio	Beneficio/Costo
VISUAL STUDIO ULTIMATE (*)	\$ 1,930.00	86	62.45
WEBCLOAD	\$ 18,000.00	67	42.81
OPENLOAD EXPRESS	\$ 5,000.00	67	45.24
SILKPERFORMER	\$ 85,000.00	72	45.20
WAPT	\$ 420.00	76	87.50
WAPT PRO	\$ 840.00	96	80.00
JMETER	\$ 600.00	51	59.88

Nota: Los precios son referenciales sacados de internet, los cuales pueden variar con el tiempo.

Hugo
Jessica

Jackeline
Milgarejo

PROFESSIONAL

PREMIUM

ULTIMATE

OTHER PRODUCTS

MICROSOFT VISUAL STUDIO

Comprehensive tools that help unleash your creativity and deliver impactful solutions.

[SEE THE COMPARISON CHART](#)



2010 PROFESSIONAL

For individuals to perform basic development tasks.

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2010 PREMIUM

For individuals and teams to deliver scalable, high-quality applications.

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2010 ULTIMATE

Comprehensive suite of tools to help teams ensure quality results, from design to deployment.

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TEST PROFESSIONAL 2010

Specialized toolset for QA teams to simplify test planning and manual test execution.

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TEAM FOUNDATION SERVER 2010

Collaboration platform at the core of Microsoft's ALM solution.

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






















































































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COMPARE PRODUCT FEATURES

FEATURES	PROFESSIONAL WITH MSDN ESSENTIALS	PROFESSIONAL WITH MSDN	PREMIUM WITH MSDN	ULTIMATE WITH MSDN	TEST PROFESSIONAL WITH MSDN
 Debugging and Diagnostics					
 Testing Tools					
Unit Testing					
Code Coverage					
Test Impact Analysis					
Coded UI Test					
Web Performance Testing					
Load Testing ¹					
Microsoft Test Manager 2010					
Test Case Management ²					
Manual Test Execution					
Fast-forward for Manual Testing					
Isb Management					
 Integrated Development Environment					
 Database Development					
 Development Platform Support					

Architecture and Modeling	Professional	Professional	Premium	Ultimate	Test Professional
Lab Management	Professional	Professional	Premium	Ultimate	Test Professional
Team Foundation Server ²	Professional	Professional	Premium	Ultimate	Test Professional

VISUAL STUDIO

COMPARE SUBSCRIPTION BENEFITS

BENEFITS	PROFESSIONAL WITH MSDN ESSENTIALS	PROFESSIONAL WITH MSDN	PREMIUM WITH MSDN	ULTIMATE WITH MSDN	TEST PROFESSIONAL WITH MSDN
Software and Services for Production Use	Available	Available	Available	Available	Available
Software for Development and Testing ⁴	Available	Available	Available	Available	Available
Other Benefits	Available	Available	Available	Available	Available
System Requirements	View	View	View	View	View
Buy from (MSRP)	\$799	\$1,199	\$3,489	\$11,899	\$2,169
Renew from (MSRP)	\$549 (upgrade)	\$799	\$2,209	\$3,799	\$899

- May require one or more Microsoft Visual Studio Load Test Virtual User Pack 2010
- Team Foundation Server and a Team Foundation Server CAL are included as a benefit in some MSDN subscriptions and can also be purchased separately
- UML is a registered trademark of Object Management Group, Inc.
- Per-user license allows unlimited installations and use for designing, developing, testing, and demonstrating applications
- Requires Team Foundation Server and a Team Foundation Server CAL, which are not included in MSDN Essentials
- Availability varies by country and subscription level; details available on the MSDN site; future subscriber benefit (starting November 2010 or later)
- One Team Foundation Server CAL per subscription
- Feature Pack availability varies by subscription level
- Equivalent to Microsoft Expression Studio 4 Ultimate, but does not include SketchFlow

For detailed system requirements for Lab Management, click [here](#).
 For detailed system requirements for Team Foundation Server 2010, click [here](#).
 For detailed system requirements for Team Explorer Everywhere 2010, click [here](#).



LEGACY EDITIONS



VISUAL STUDIO 2008
 Introduced Language Integrated Query (LINQ).
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VISUAL STUDIO 2005
 First edition of Visual Studio Team System.
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Connecting people in new ways.  

The ultimate toolset for software development



Microsoft Visual Studio 2010 Ultimate provides an integrated environment of tools and server infrastructure that simplifies the entire application development process. Deliver business results using productive, predictable, customizable processes and increase transparency and traceability throughout the lifecycle with detailed analytics. Whether creating new solutions or enhancing existing applications, you can unleash your creativity and bring your vision to life with powerful prototyping, architecture and development tools that target an increasing number of platforms and technologies such as cloud and parallel computing. Realize increased team productivity and create high quality, low-cost solutions by using advanced collaboration features along with integrated, innovative testing and debugging tools.

 Microsoft®
Visual Studio 2010
Ultimate

Creativity Unleashed

Share your vision and build on the creative strengths of your team. Powerful prototyping, editing and visual design tools allow you to create what you can imagine. Spend less time debugging and more time creating code thanks to advanced code analysis and debugging tools. Explore new opportunities for your applications by unlocking the power of the processor on your local machine and in the cloud.

Simplicity Through Integration

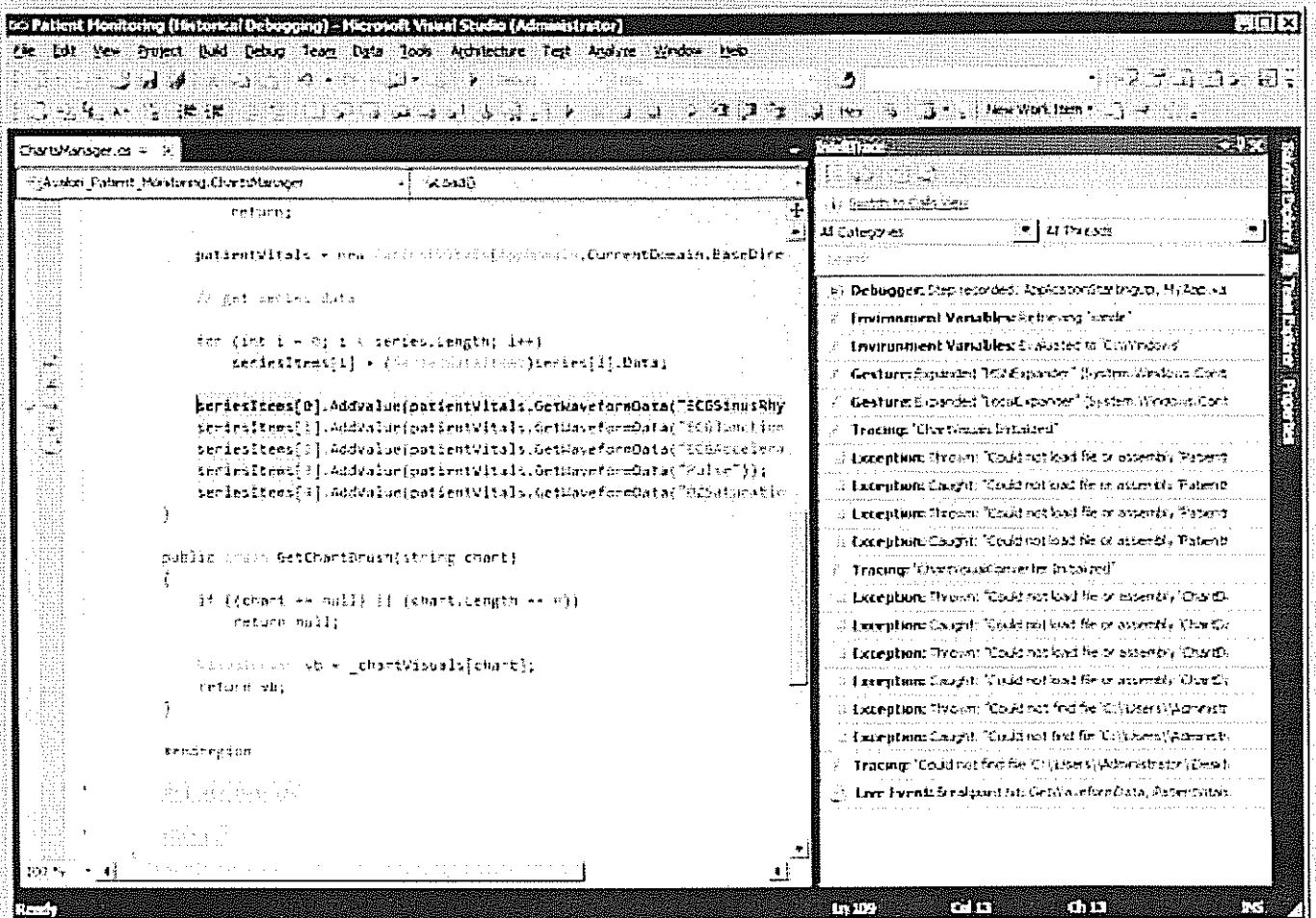
Simple and seamless, this integrated environment lets developers use existing skills to model, code, debug, test, and deploy a growing number of application types. Visual Studio 2010 Ultimate simplifies common tasks and helps all team members explore the depth of the platform and partner community.

Reliably Reproduce Issues

IntelliTrace™ makes the "no-repro" discussion a thing of the past. Testers can file rich and actionable bugs with system information including an environment snapshot that enables developers to reproduce the reported bug in the state it was found.

Quality Code Ensured

Powerful tools for managing projects, maintaining source code and finding and fixing bugs. Both testers and developers can use manual and automated testing coupled with advanced debugging tools to ensure they are building the right application, the right way.



Top ten benefits

• IntelliTrace™ Eliminates 'No Repro'

Easily step through code that was previously executed on the same or another machine in order to identify what happened during the code execution and significantly cut down on time spent reproducing a bug.

• Understand Existing Architectures

The Architecture Explorer and UML sequence diagrams help you explore and understand your existing code assets and their inter-dependencies.

• Ensure Architectural Compliance

Use layer diagramming to define and communicate logical application architecture and optionally enforce architecture rules with check-in policies as code is created.

• Profile Application Performance

Measure the performance of your applications and locate performance bottlenecks in CPU utilization, memory consumption, database interactions, Jscript/Ajax call patterns and concurrency synchronization. Use the performance profiler in conjunction with Load Testing to identify performance bottlenecks under stress and load.

• Discover Common Coding Errors

Code Analysis is now simple to configure with customizable rule sets that can be targeted at specific scenarios or areas of emphasis. Enforce rule sets with the code analysis check-in policy to reduce common coding errors in application or database code before they get into production.

• Prototype User Interface Ideas Quickly

By using SketchFlow in Expression Studio you can quickly deliver a functioning prototype that looks and feels like handwritten mockups.

• Build Collaboration Solutions on Microsoft SharePoint®

New support for SharePoint development, including tooling for Web Parts, Lists, Workflows, and Events and more, so you can bring great new customized collaboration tools to your company.

• Automate User Interface Testing

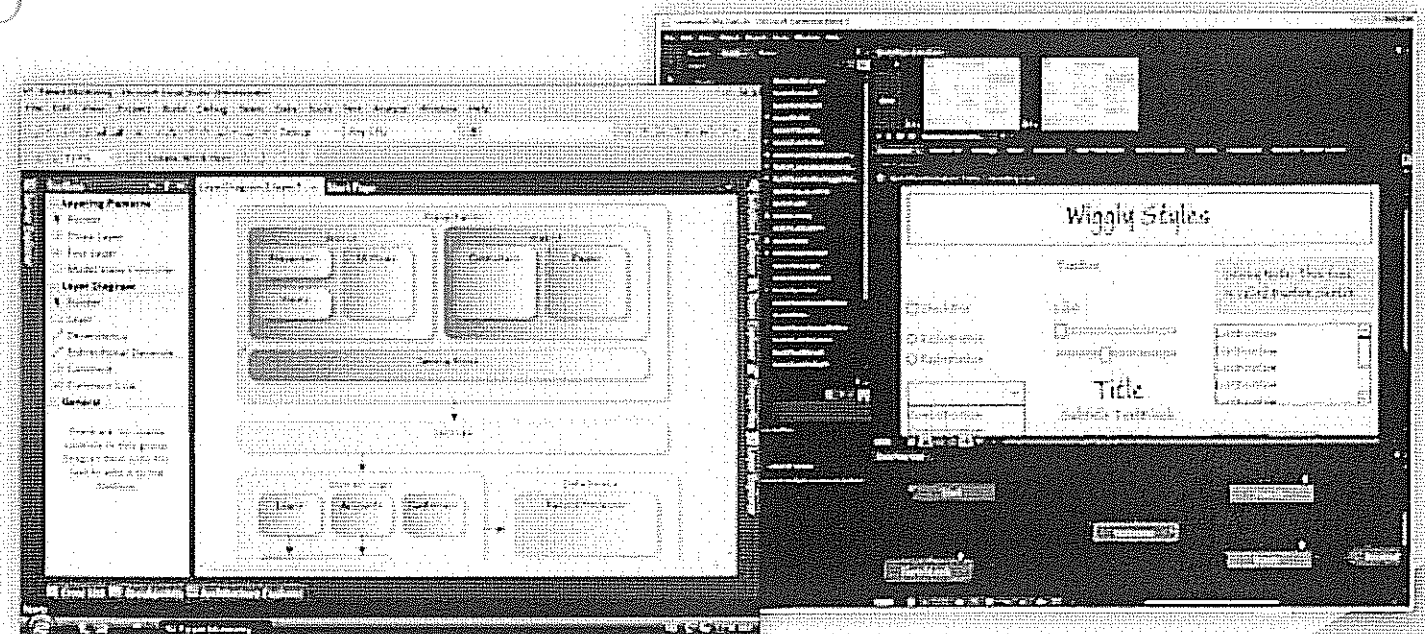
Use Coded User Interface Tests to automate the testing of UI elements in your applications. Visual Studio 2010 automatically generates test code that can be executed manually or incorporated as part of your build process to automate UI regression testing.

• Create, Manage and Execute Tests

Microsoft Test Manager 2010 lets you easily define your testing effort for a specific iteration in your project, run manual tests and measure your progress. In addition to creating and managing test assets like plans, suites and test cases you can also create and manage virtual lab configurations for your test environments.

• MSDN Subscription Included

MSDN Subscriptions are a convenient way to cost-effectively develop applications on the Microsoft platform with a simple licensing model and broad high quality information resources.



Visual Studio 2010 Feature Comparison

	Visual Studio 2010 Ultimate with MSDN	Visual Studio 2010 Premium with MSDN	Visual Studio 2010 Professional with MSDN	Visual Studio 2010 Test Professional with MSDN
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Development Platforms Support

Architecture and Modeling

Database Development

Debugging, Diagnostics and Testing

Test and Lab Management

Team Foundation Server

MSDN Subscription benefits

MSDN Subscription - Software for Production Use

MSDN Subscription - Software for Development and Test Use

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De: Gonzalo Calderón <gcalderon@cosapidata.com.pe>
Para: "JACKELINE JOHANA MELGAREJO REYES" <jmelgarejo@minedu.gob.pe>

Fecha: Lunes, 25 De Octubre De 2010 05:21p.m.
Asunto: RE: URGENTE- Revisión anual de Microsof

Jackeline, te lo reenvío por que hemos tenido problemas con el correo:

Estimada Jackeline,

Según tu consulta, te confirmo que las licencias que tienes dentro del contrato 4883085, no tendrán variación alguna.

Al cancelarse el grupo de productos de este contrato, lo que sucederá es que ya no se podrán adquirir licencias de Win 7 SA, a través de dicho contrato, pero uds. Cuentan con un contrato específico para Win 7, que es el : 7976516. Lo que vamos a hacer es transferir las licencias a este para un mejor orden.

Adjunto el precio de Visual Studio Ultimate:

9JD-00050	VSUltwMSDN ALNG LicSAPk MVL	\$ 1,930.00
-----------	-----------------------------	-------------

Precios en dólares

Precios no incluyen IGV

Saludos,

Gonzalo Calderón Sáez

Gerente de Unidad Microsoft

COSAPI
DATA



Teléfono: (511) 215 4530 | 2435

Fax: (511) 215 4540

Celular: (511) 99759 9472

Clle. Andrés Reyes 420, Piso 10, San Isidro
<http://www.cosapidata.com.pe>

From: JACKELINE JOHANA MELGAREJO REYES [mailto:jmelgarejo@minedu.gob.pe]

Sent: lunes, 25 de octubre de 2010 12:43 p.m.

To: Gonzalo Calderón

Subject: URGENTE- Revisión anual de Microsof

Gonzalo:

Por favor, no te olvides de enviarme tu respuesta,
Es necesario que lo que me mencionaste por teléfono me lo puedas describir por correo para tener el sustento del mismo.

Además, **el precio del Visual Studio Ultimate, con mantenimiento.**

Jackeline Melgarejo Reyes

Oficina de Informática

Anexo:21104

----- Remitido por JACKELINE JOHANA MELGAREJO REYES/MINISTERIO DE EDUCACION con fecha 25/10/2010 12:39 p.m. -----

De: JACKELINE JOHANA MELGAREJO REYES/MINISTERIO DE EDUCACION

Para: gcalderon@cosapidata.com.pe

Fecha: 19/10/2010 06:05 p.m.

Asunto: Revisión anual de Microsof

Buenas tardes:

Microsoft, ha enviado un documento titulado "Revisión anual del nivel de precio de la Inscripción: 4883095, Contrato: 96S60113 de Microsoft SELECT 6".

Donde menciona que es necesario adquirir durante el periodo inicial del contrato, licencias de productos por un valor total de al menos 1500 puntos. Si no se cumple con este mínimo, se cancelará el grupo de productos asociado.

La observación está en el grupo de sistemas, donde en el sitio web de MVLS solo figuran 9 licencias de Windows.

En el documento hace mención que hay hasta fines de mes para asegurarse que los pedidos se incluyan en el proceso de revisión anual del nivel de precio. Si los pedidos de licencias adicionales no se reciben dentro de este plazo, su contrato puede ser rescindido.

Si eso ocurre, qué pasará con esas 9 licencias?

Jackeline Melgarejo Reyes
Oficina de Informática
Anexo:21104

Products:
OpenLoad - Load Testing Software

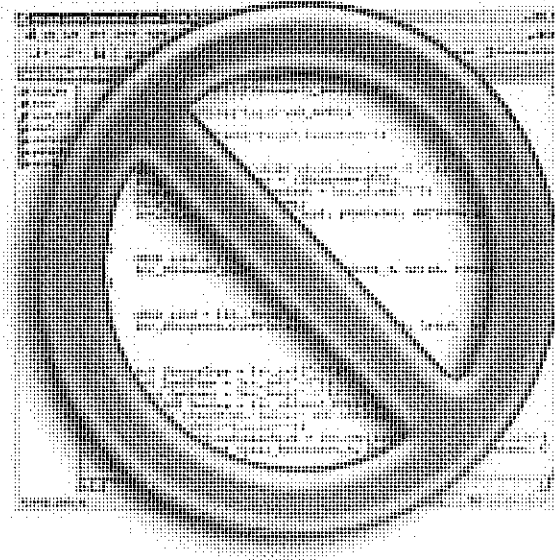
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 Number of downloads:
 30347

TEN QUESTIONS NOT EVERY TEST TOOL VENDOR IS READY TO ANSWER.

The OpenLoad™ product suite is designed to address a specific need in the market for simple, powerful and affordable Web testing tools. OpenLoad provides the first viable alternative to high priced and overly complex commercial load testing tools and low-end performance testing tools that are largely unsupported and lack the robust feature set required to adequately test today's enterprise-level Web applications and Service Oriented Architectures (SOA).



**Stop
scripting...
start
browsing!**

Product Overview

OpenLoad Tester V6.0 is the industry's first easy to use, browser based, performance optimization solution for functional and load testing as well as performance monitoring of dynamic Web applications and services. Powered by IBM Software, OpenLoad Tester V6.0 delivers unprecedented ease of use, accuracy and scalability, while eliminating the need for complex scripting and complicated data analysis.

OpenLoad Tester V6.0 substantially minimizes the time and skill set required to load test and tune the performance of Web based applications and services by simplifying the process of building real-world user scenarios, verifying expected functional behavior through automated regression testing and pinpointing performance bottlenecks within Web applications and IT infrastructure from both inside and outside the firewall, offering application development and testing teams the ability to perform fast and productive performance optimization of enterprise Web applications and services.

Script-Free Automation

OpenLoad's unique script-free approach to automated testing enables developers and quality assurance testers to quickly optimize the performance of the most popular Web-based platforms, including Oracle PeopleSoft, Java™ 2 Enterprise Edition (J2EE™), Microsoft ASP.NET and Adobe ColdFusion MX applications among many others Web Portals, CRM, SCM, ERP, e-Business and e-Learning solutions.



The family of OpenLoad products includes:

- **OpenLoad Express** - designed for small teams testing Web sites, applications and services with enterprise-level load testing requirements and medium sized workloads; capable of simulating up to 750 virtual users. Pricing starts as low as \$4995.
- **OpenLoad Advanced** - designed for medium to large size organizations testing Web sites, applications and services with enterprise-level load testing and monitoring requirements and large workloads; capable of simulating 1,000 or more virtual users.
- **OpenLoad On Demand** - designed for any size organization requiring pay-as-you-go or subscription-based load testing with term licensing options for testing inside and outside the firewall, capable of simulating any number of virtual users. This is a perfect option for System Integrators or software development firms that need to test on a project basis. Pricing starts as low as \$495 per rental.

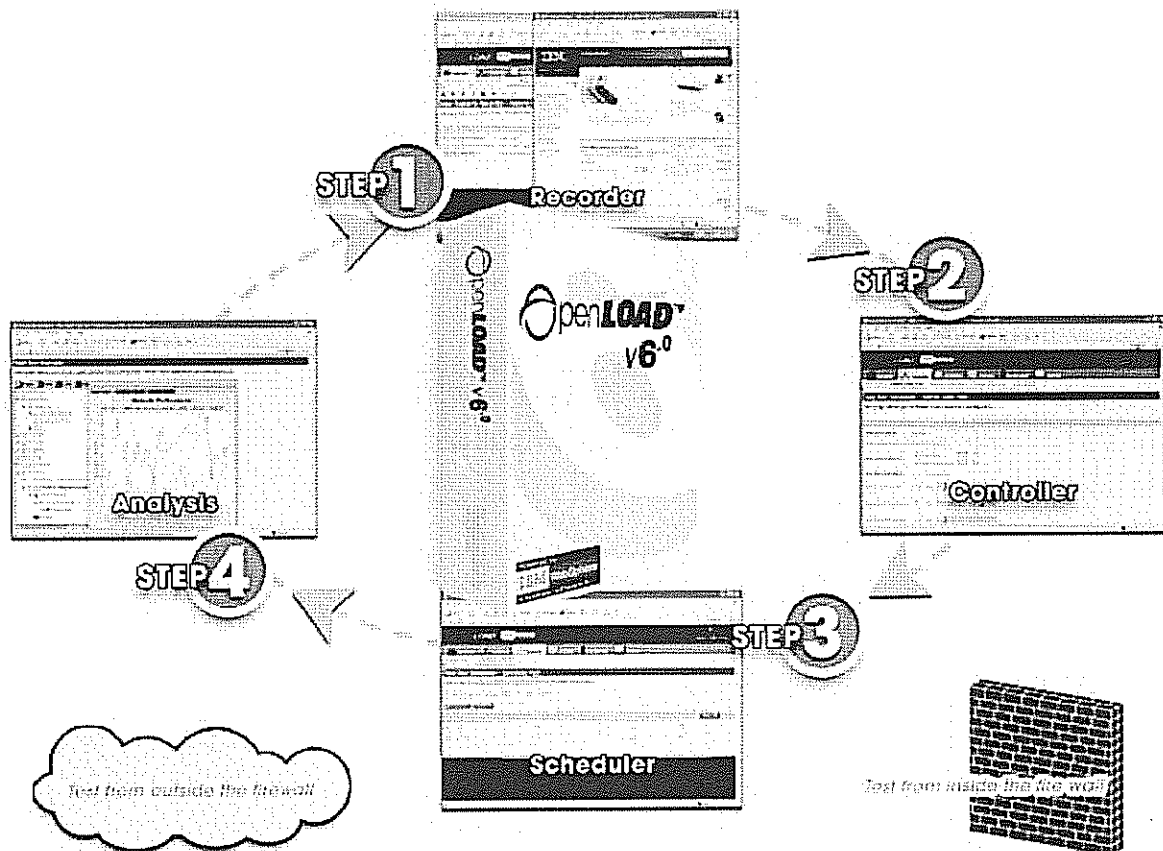
[Learn more >](#)



OpenLoad™ - The Next Generation Testing Solution

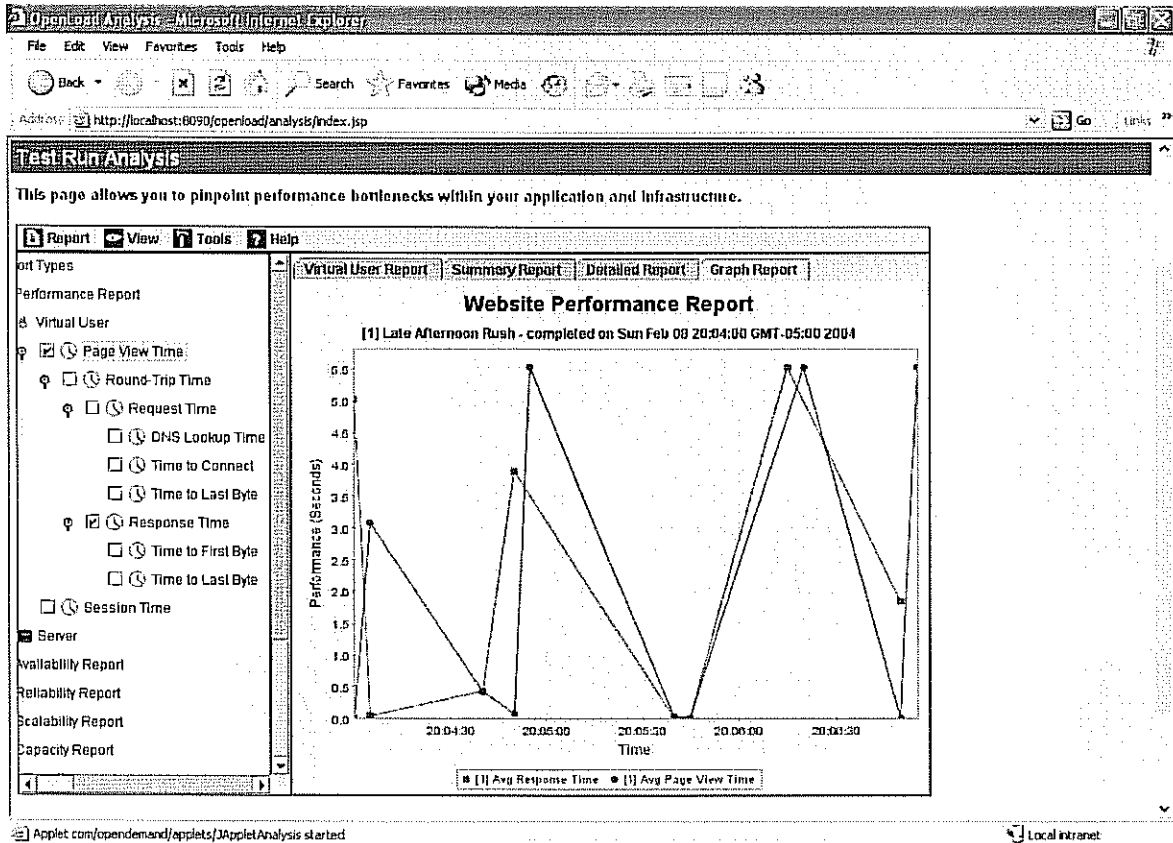
OpenLoad™ V6.0 is the industry's only truly easy-to-use and affordable, browser-based, enterprise functional, load testing and monitoring solution for dynamic Web sites, applications and services. Powered by IBM WebSphere and DB2 Universal Database, OpenLoad™ V6.0 delivers unmatched ease-of-use, accuracy and scalability enabling developers, testers and administrators to isolate performance bottlenecks and optimize the user experience within minutes.

OpenLoad™ V6.0 substantially minimizes the time and skill set required to optimize the performance of Web-based applications by simplifying the process of building real-world user scenarios, verifying expected functional behavior and pinpointing performance bottlenecks within Web applications and IT infrastructure from both inside and outside the firewall; offering application development and testing teams the ability to perform fast and productive performance optimization of dynamic websites.



The family of OpenLoad™ products includes:

- **OpenLoad Express** – designed for individuals testing Web sites, applications and services with enterprise-level testing requirements and medium sized workloads.
- **OpenLoad Advanced** – designed for teams testing Web sites, applications and services with enterprise-level testing requirements and large workloads.
- **OpenLoad On Demand** – designed for pay-as-you-go or subscription-based testing with term licensing options for testing inside and outside the firewall.



Extremely Easy-to-Use

OpenLoad™ V6.0 is the easiest way to optimize the performance of your Web applications and services. Ease-of-use features include:

- **Simple Four-Step Optimization Process:** OpenLoad™ enables you to quickly uncover opportunities to improve the performance of your applications and IT infrastructure within minutes.
- **Script Free Recorder:** OpenLoad™ goes beyond simply recording your Web traffic, it actually inspects the contents of each response and parameterizes the appropriate session variables for you automatically, thereby eliminating the need for complex scripting and debugging. Now you can effortlessly build complex data driven user scenarios in minutes. The OpenLoad™ Recorder includes full support for cookie based session management, JavaScript, Java applets, SOAP, XML, Flash, DHTML, frames, pop-up windows, redirects, SSL, form based authentication, basic authentication, integrated windows authentication (NTLM), Oracle Forms, .Net WebForms and more. All without the need for continuous scripting, debugging and maintenance rework.
- **Simplified Performance Analysis:** OpenLoad™'s reporting and analysis tools take all of the guess work and complexity out of identifying performance bottlenecks by automatically flagging problem areas within your application and providing recommendations for areas that require

further investigation. The OpenLoad™ Analysis engine automatically correlates user, application and server side metrics into a single simplified reporting view that is categorized by application performance, availability, reliability, scalability and capacity. This approach enables you to more effectively pinpoint resource contention issues within the various tiers of your application, including Web, application and database servers.

- **Anytime-Anywhere Access:** Use your favorite browser to access all aspects of your load testing projects, including user scenario recording, test configuration, scheduling, reporting and analysis, and user license management. With OpenLoad™ you can centralize and manage concurrent load testing projects across multiple teams and geographic locations allowing for real-time synchronization and collaboration between developers, testers and administrators in different locations, resulting in faster problem resolution and application deployment. This helps eliminate travel expenses for all testing personnel, since organizations can leverage testing expertise from any location, anytime, and enables you to centralize administration across your enterprise.

Incredibly Accurate

OpenLoad™ V6.0 offers unprecedented levels of realism by leveraging the tried and proven technology of IBM WebSphere and DB2 Universal Database, open industry standards.

Pin-point accuracy features include:

- **Metrics you can Trust:** OpenLoad™ sets new standards in real-world user simulation by leveraging the same Web technology that powers the most widely used middleware and database platforms on the market today—IBM WebSphere and DB2 Universal Database.
- **Real-world User Emulation:** OpenLoad™ provides extensive configuration of user defined page timeouts, think times, browsers, platforms, connection speeds, cookies, cache settings, SSL, page retries, user scenario iterations, virtual user ramping and much more.
- **True End-User View:** OpenLoad™ allows you to view the actual HTML or XML responses returned from the server during recording and playback to ensure the accurate display of content and timing of events from the end-user's true perspective.
- **Automatic Content Verification:** OpenLoad™ automatically performs a series of content verification checks using a powerful set of pre-built Regular Expression patterns to ensure your website is returning proper page content under load.

Highly Scalable

OpenLoad™ V6.0 raises the bar in scalability by leveraging the combined power and performance of IBM WebSphere and DB2 to generate more virtual users per machine than any other stress testing tool in the market.

Scalability features include:

- **Unlimited Capacity:** OpenLoad™ scales On Demand to reliably generate tens of thousands of virtual users from multiple distributed agents to meet your largest simulation requirements.
- **Small Footprint:** Each Virtual User footprint is less than 30KB, which enables greater load generation on existing hardware infrastructure. Savings on infrastructure can be used to fund testing at higher user loads.
- **Minimal Intrusion:** OpenLoad™ uses agent-less SNMP and RSTAT monitors to poll system resource statistics from multiple tiers of your system with minimal impact to performance.

Targeted Platform Support

OpenLoad V6.0 supports the following platforms:

- Windows XP Professional
- Windows 2008 Server
- Windows 2003 Server



Can your Internet applications handle the load? If not, you could be losing customers and revenue. RADVIEW's WebLOAD Professional is the solution. It's a powerful performance and load testing tool that helps you identify and resolve bottlenecks in your applications. With WebLOAD Professional, you can simulate thousands of users, test your application under real-world conditions, and generate detailed reports on performance and load. It's the only tool that can help you ensure your applications are ready for the future.

Can Your Internet Applications Handle the Load?



WebLOAD Professional

Performance and Load Testing for Internet Applications

Are Your Rich Internet Applications Ready for Primetime?

You're introducing Rich Internet Applications (RIAs) to your Enterprise because you demand the performance, functionality and simplicity that only RIAs can provide. And you understand the power and importance of engaging your consumers both in quantity and with quality. RIAs will help your business improve productivity, generate higher customer conversion rates, and encourage customers to stay loyal to you.

But before you go live to your target audience, do you know for sure that your RIA investment can handle the demands of real-world performance requirements?

Before you launch it's important that you ask:

- Will my web applications function properly under load?
- Will the response times meet my target requirements?
- And how many simultaneous users can my Internet application really handle?

WebLOAD Professional Makes Sure Your Rich Internet Applications Can Handle the Load

WebLOAD Professional is RadView's award winning software for performance and load testing of Internet applications. Installed with over 2,000 companies, WebLOAD is the premier field-proven solution for testing the ability of Rich Internet Applications to handle the demands of actual customer use.

By simulating traffic for up to tens of thousands of users, WebLOAD Professional lets you know exactly how your application functions under load - with what response times - and with how many simultaneous users.

WebLOAD Professional provides:

1. Performance testing - to determine the response time of a given request while the system is under load.
2. Scalability testing - to determine the parameters for planning hardware procurement in the face of growing concurrent requests.
3. Reliability testing - to reveal potential problems arising from extended runs.

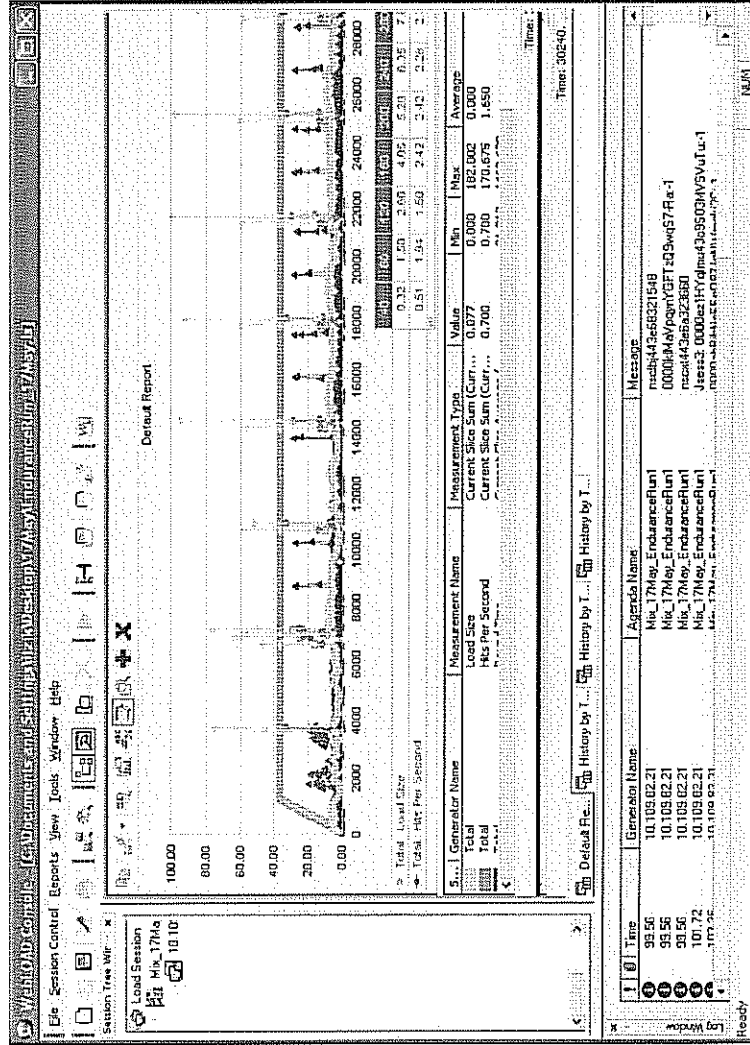
WebLOAD Professional supports the Widest Range of Rich Internet Application Environments

WebLOAD Professional is specially designed to support load testing of Web 2.0 and Rich Internet Applications, and has built-in support for AJAX technologies, JSON data types and different flavors of SOAP and XML web services. In addition, RadView has developed Add-on's that bring the full power of WebLOAD to additional Rich Internet Application environments, such as Adobe Flex and multimedia sites providing full coverage during the authoring, execution and analysis phases of the test.

WebLOAD Professional Add-on's are available for:

- **Adobe Flex** - for developers of RIA's using Adobe Flex and AIR frameworks.
- **Multimedia** - for testing multimedia sites with mixed content of HTML and streaming video based on RTP/RTSP streaming protocols.

WebLOAD Console: Load Session Execution



WebLOAD Professional Antages

- Out-of-the-box support for authoring and testing Web 2.0 and Ajax
- Add-on's for testing Adobe Flex, and Multimedia
- Script authoring with JavaScript - no need to learn another proprietary language
- Powerful recording, editing and debugging
- Intuitive user interface
- Drag-in DOM and XML parsers for identifying parameters of Ajax & SDA requests and response validation
- Multi-protocol support (HTTP/S, HTML, XML, WAP, I-Mode, ActiveX, Java applets, Web Services etc.)
- Online monitoring and analytics engine
- Multiple monitoring protocol support (SNMP, JMX, Windows-Perfmon, RSTAD)
- Multi-load support - Scalable load generator architecture- enabling load testing of your application with unlimited load capacity (virtual clients)
- Open standards - seamlessly embed your own Java, ActiveX or CDM objects in the test script

Business Benefits

- Easy handling for both novice testers & experienced users
- Quickly and accurately identifies performance bottlenecks
- Exactly pin-points the causes of problems
- Effectively creates real-life scenarios
- Standard scripting language - enables better communication between quality assurance professionals and developers
- Rapidly completes testing cycles

RadView's Value Proposition

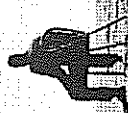
- Over 10 years of Internet application performance testing experience
- 2,000 customer installations worldwide
- Award-winning technology
- Dedicated support and professional services
- Portable License Program for partners

Founded in 1993, RadView™ Software Ltd. has established its expertise in performance testing for Internet applications by remaining focused on its core market. WebLOAD, our flagship product is installed at over 2,000 customer sites worldwide, providing companies with a highly efficient, robust solution for testing the performance, scalability and reliability of their Internet applications.

WebLOAD is the software of choice for leading organizations from all major industries including Best Western, Deutsche Bank, London Stock Exchange, Morning Star, Brown University, NASA, Adobe, Verizon Wireless and Airbus.

"RadView's WebLOAD has saved us quite a few times."

--David Bambrough, Quality Engineer, MorningStar Inc.



System Requirements:

	Game Portals Web Portal	Game Portals Web Portal	Game Portal
OS	Windows 2000 Professional, XP Pro, Server 2003	Windows 2000 Professional / Server, XP Pro, Server 2003; Red Hat Enterprise Linux 3, 4, 5; Fedora Core 3, 6; Sun Solaris 10 (coming soon)	
CPU	Pentium 4 and above	Pentium 4 and above; For Linux - any supported x86-32 based processor	Pentium 4 and above; For Linux - any supported x86-32 based processor
RAM	512MB, 1GB recommended	512MB, 1GB recommended	256MB

Contact Information

North America

800.441.8710
 800.441.8710
 800.441.8710
 800.441.8710
 800.441.8710
 800.441.8710

International

800.441.8710
 800.441.8710
 800.441.8710

800.441.8710 www.800.441.8710

De: "Tom O'Donnell" <todonnell@RadView.com>
Para: "JACKELINE JOHANA MELGAREJO REYES" <jmelgarejo@minedu.gob.pe>
Fecha: Jueves, 16 De Septiembre De 2010 11:44a.m.
Asunto: RE: WebLOAD Respuesta

Hola Jackeline,

Hemos tenido una pareja en Brasil, pero por ahora estamos de servicio de América del Sur de los EE.UU.. Me encantaría vender algún tipo de software en América del Sur! Me gustaría extender un precio muy especial de \$ 15,000 para una licencia de usuario 400 virtuales.

Por favor, hágamelo saber si este se adapte a sus necesidades presupuestarias. Espero con interés escuchar de usted muy pronto.

Saludos,

Regards,

Tom

Thomas J. O'Donnell | VP US Sales | office: 908.431.9448 | cell: 908.256.1409 |
fax: 908.864.8099

www.radview.com

Take a look at our new marketing video of WebLOAD in action: WebLOAD Defeats AJAX Cartoon (funny)

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-----Original Message-----

From: JACKELINE JOHANA MELGAREJO REYES [<mailto:jmelgarejo@minedu.gob.pe>]
Sent: Thursday, September 16, 2010 12:30 PM
To: Tom O'Donnell
Subject: Re: WebLOAD Respuesta

Buenos días Sr. O'Donnell:

Agradezco su respuesta.

Por favor, me podría indicar Cuál sería el costo del WebLOAD para 400 Usuarios virtuales?

Por otro lado, según me menciona, no tiene presencia local en Perú, pero ¿tiene presencia en algún país de Sudamérica?, de ser afirmativa su respuesta, puede remitirme la información de la (s) empresa (s).

Saludos.

Jackeline Melgarejo Reyes
Ministerio de Educación
Oficina de Informática
Teléfono: 6155800
Anexo:21104

De: "Tom O'Donnell"
<todonnell@RadView.com>

Para:
<jmelgarejo@minedu.gob.pe>

Fecha: 09/15/10 10:27
a.m.

Asunto: WebLOAD
Respuesta

Jackeline,

No tenemos una presencia local en Perú. Nuestro costo de software comienza en 7.000 dólares EE.UU. por un WebLOAD 100 con 100 usuarios virtuales en América del Sur. Si desea explorar esta, por favor envíeme una nota.

Regards,
Tom

Thomas J. O'Donnell | VP US Sales | office: 908.431.9448 | cell:
908.256.1409 | fax: 908.864.8099

www.radview.com

Take a look at our new marketing video of WebLOAD in action: WebLOAD
Defeats AJAX Cartoon (funny)

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Borland® SilkPerformer®

The Quality Choice for Load and Performance Testing

ENSURE THE SCALABILITY, RESPONSIVENESS AND RELIABILITY OF CRITICAL APPLICATIONS

Borland® SilkPerformer® is a proven, powerful and easy-to-use load and stress testing solution for optimizing the performance of business applications. Easy-to-create, accurate and realistic tests simulate tens or even tens of thousands of IT system users in a wide range of enterprise environments and platforms. The tests isolate issues and bottlenecks that could impact reliability, performance and scalability. Versatile visual scenario modeling enables any load scenario to be tested and compared – whether it involves a single, massive flood of requests to a website or the expected behavior of an enterprise application under daily load. Any bottlenecks are identified, then intuitive diagnostic and analysis capabilities help resolve the issue quickly, reducing test-and-fix cycles, accelerating time-to-market, and supporting critical release decisions related to application performance. To further reduce costs and promote more testing by more people, SilkPerformer removes the usage restrictions common in other solutions with its flexible, sharable deployment model.

FEATURES AND BENEFITS

REDUCE COSTS, FEWER RISKS OF PERFORMANCE-RELATED FAILURES

SilkPerformer ensures the quality of business applications by measuring their performance from the end-user perspective—while also monitoring system performance—in a variety of scenarios under dynamic load conditions. SilkPerformer can reduce costs and minimize performance risks by helping you:

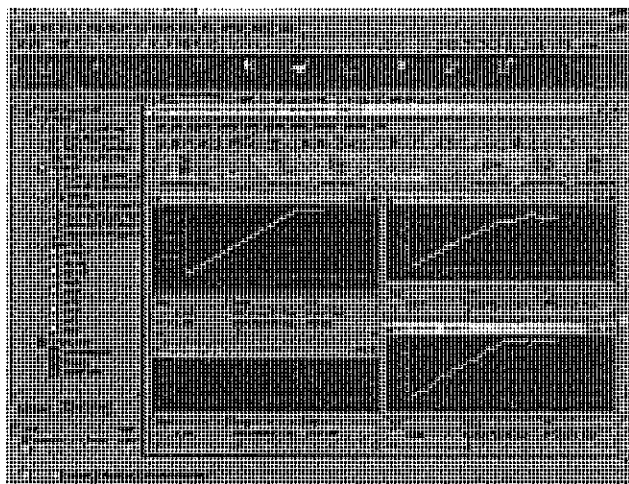
- Accurately assessing application performance, scalability and reliability characteristics before deployment
- Create realistic, reproducible load test scenarios to cover all critical use cases and requirements
- Isolate and resolve the root cause of performance problems in cross-platform systems quickly and easily
- Lower IT infrastructure costs through tuning and accurate capacity planning before deployment
- Provide automated test environment control through Load Test Resource Management (LTRM)

REALISTIC, LIGHTWEIGHT & ACCURATE SIMULATION

The innovative SilkPerformer technology minimizes the hardware resources needed per virtual user, enabling more and larger load tests using significantly less hardware than other popular solutions, reducing this often hidden cost. With remotely managed load agent machines, the performance of various configurations, user scenarios and network connections can be measured and contrasted. And, within a single load test, virtual users working with different Internet, middleware and database protocols—across varied computing environments—can be simulated. For internationalized applications that utilize Unicode®, SilkPerformer supports multibyte character sets and UTF-8. Client IP address simulation allows for the testing of load-balanced sites.

PROBLEM ISOLATION AND CORRECTION

Powerful end-to-end diagnostics capabilities help identify the root cause of performance problems, then take corrective action and report on activities.



Borland SilkPerformer executes load tests and monitors results in real time.

Client-Side Diagnostics

The unrivaled TrueLog™ technology of SilkPerformer provides visual front-end diagnostics from the end-user perspective. TrueLog visually re-creates the data that users provide and receive during load tests—for HTML pages this includes all embedded objects—enabling you to visually analyze the behavior of your application as errors occur during load tests. Detailed response timer statistics help you uncover the root causes of missed service levels before your application goes live.

Server-Side Diagnostics

With the addition of the Server Analysis Module, you can monitor server statistics and automatically correlate data with load test results to identify ongoing problems with your system's back-end servers, even those located behind firewalls.

Code-Level Root-Cause Resolution

For deep-down, code-level resolution of performance issues, Borland offers dynaTrace Diagnostics. Fully integrated, click-through drill down delivers a multi-tier performance breakdown to identify the root cause of performance bottlenecks, down to the offending line of code for both Java™ and .NET applications.

Borland® SilkPerformer®

FEATURES AND BENEFITS (CONTINUED)

RELEVANT TESTING EARLY IN DEVELOPMENT

Dramatically reduce the cost of bugs in multi-tier enterprise applications, or in Agile development environments, by testing the functionality, interoperability and performance of remote application components under concurrent access early in the development cycle—even before client applications have been built. You can rapidly generate test drivers for Web services, .NET and COM+ server components as well as for Enterprise JavaBeans™ (EJB™) and Java RMI objects, by exploring them via a point-and-click interface. Alternatively, you can directly import JUnit/PHPUnit tests written by developers for concurrency tests. Or, build new test cases directly in Java and other .NET languages, such as C# and VB.NET, using the SilkPerformer Java Editor, Eclipse Plug-in or Microsoft® Visual Studio add-in.

EFFICIENT TEST CREATION AND TEST CYCLES

SilkPerformer facilitates testing while taking no shortcuts in quality:

- Discover ease of use with the built-in step-by-step workflow wizards
- Create tests and executions with SilkPerformer's intuitive interface, or leverage the Eclipse IDE
- Test a wide range of enterprise environments with versatile, sharable, multi-protocol virtual-user types
- Easily customize tests with random user data—without programming a single line of code
- Reuse test cases in different environments and scenarios without changing test scripts
- Handle version control of test scripts via Borland® StarTeam® or any other SCCI-compliant tool

- Quickly create realistic workloads by using the integrated workload wizard
- Analyze load tests in real time to avoid invalid test results that require time-intensive test-case reruns
- Maximise the potential of your environment for load-test execution through Load Test Resource Management

SUPPORTING TOMORROW'S TECHNOLOGY TODAY

Borland is committed to investing in supporting the needs for their customers, now and in the future. SilkPerformer now provides support for an even wider range of technologies than ever before. In addition to the previously supported technologies, SilkPerformer now also allows your application performance to be tested in the following areas.

- Remedy
 - Remedy ARS (6.3, 7.0.x, 7.1) Web Support
- Additional Protocols for MBCS/UTF-8 Support
 - Oracle Forms, Citrix
- Flex/AMF3 Support
- AJAX Enhancements
 - Automatic detection of AJAX requests (JSON/XML data format)
 - JSON/XML pretty printing, enhanced TLE rendering and visual customization/verification
- Technology Updates & Maintenance
 - SAPGUI 7.10
 - Oracle Applications 12
- CSV 2 TSD tool
 - Import external monitoring data that, for security reasons, cannot be directly monitored by SilkPerformer

SYSTEM REQUIREMENTS

Operating System

- Microsoft® Windows® 2003, Windows Vista, Windows XP®, Windows 2000

Memory

- 512 MB RAM (1024 MB recommended)

Networking

- 10 MBit Ethernet (100 MBit recommended)

SUPPORTED ENVIRONMENTS

Protocols and Interfaces for Load Testing

- HTTP(S)/HTML, Unicode (UTF-8), SOAP (XML), WAP2 (WTLS, MMS), i-mode, streaming media (MS, Real), Macromedia AMF, FTP, LDAP, MAPI, IMAP, SMTP/POP, SSL, CORBA (IIOP), Java RMI (EJB/J2EE), .NET Remoting, (D)COM, Oracle Forms, Citrix ICA, ODBC, ADO, Oracle Call Interface (OCI), DB2 CLI, TCP/IP, UDP, Tuxedo ATMI, Jolt, Jacada, TN3270E, TN5250, and VT100/200+

Open Interfaces

- .NET Framework
- Java Framework
- VB Framework
- COM Interface
- DLL Interface

Packaged Applications (CRM/ERP)

- Remedy ARS
- SAP
- PeopleSoft
- Siebel
- Oracle Applications

Real-time Server Monitors

- Windows and UNIX® system/network counters
- JMX
- SNMP
- Server counters for Microsoft IIS
- Apache™
- IBM® WebSphere®
- BEA® WebLogic®
- Oracle®
- IBM® DB2®
- Microsoft® SQL Server™

Borland is the leading vendor of Open Application Lifecycle Management (ALM) solutions - open to customers' processes, tools and platforms - providing the flexibility to manage, measure and improve the software delivery process.

Borland®
THE OPEN ALM COMPANY

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www.borland.com

De: "Alejandra Tefel" <atefel@mainsoft.com.pe>
Para: "'JACKELINE JOHANA MELGAREJO REYES'" <jmelgarejo@minedu.gob.pe>
cc: 'Félix Velasquez' <fvelasquez@mainsoft.com.pe>, "Catherine Fernandez"
<cfernandez@mainsoft.com.pe>

Fecha: Lunes, 20 De Septiembre De 2010 08:39p.m.
Asunto: RE: Mainsoft: Solución Microfocus - SilkPerformer

Hola Jacqueline,

Si la aplicación corre en la Web, lo que necesitas es el Script Web.

Si es para aplicaciones cliente servidor, entonces sí requerirías el Script Standard (que además contiene el Web).

El precio de las licencias permanentes con script Web para 400 UV es de S/238,000 y con script Standard es de S/298,000.

Cualquier otra consulta, me la dejas saber.

Saludos,

Alejandra Tefel

Country Manager

Mainsoft Perú

Av. Las Camelias 790 Of. 506

San Isidro

Tel: (511) 440-3448

Cel: (511) 990-418-363

-----Mensaje original-----

De: JACKELINE JOHANA MELGAREJO REYES [mailto:jmelgarejo@minedu.gob.pe]
Enviado el: Lunes, 20 de Septiembre de 2010 11:37 a.m.
Para: atefel@mainsoft.com.pe
Asunto: Rm: Mainsoft: Solución Microfocus - SilkPerformer

Buenos días Srta. Alejandra:

Gracias por su respuesta.

Según lo que menciona, para testear una aplicación Web desarrollada en .NET es necesario utilizar la versión STANDARD, y la adquisición de una licencia para 100 UV, es de S/. 132,083.

Por favor, podría enviarme su cotización para 400 UV (para la adquisición del tipo STANDARD)?

Saludos

Jackeline Melgarejo Reyes

Oficina de Informática

Anexo:21104

----- Remitido por JACKELINE JOHANA MELGAREJO REYES/MINISTERIO DE EDUCACION
con fecha 09/20/10 11:27 a.m. -----

De: "Alejandra Tefel"
<atefel@mainsoft.com.pe>

Para: "'JACKELINE JOHANA MELGAREJO REYES'"
<jmelgarejo@minedu.gob.pe>

Fecha: 09/17/10 09:00
a.m.

Asunto: RE: Mainsoft: Solución Microfocus -
SilkPerformer

Estimada Jacqueline,

A continuación te detallo los precios de la solución SilkPerformer en las tres modalidades que se permite licenciarla: Perpetua (o compra de licencias), 1 mes de arriendo y 1 semana de arriendo (esta última modalidad es posible luego del arriendo mínimo de un mes).

Usuarios	Descripción	Script	Tipo	Vigencia	Soles
100	Silk Performer	Web	Node Locked	Perpetual	105,863
100	Silk Performer	Standard	Node Locked	Perpetual	132,083

100	Silk	Premium	Node	Perpetual	158,631
	Performer		Locked		

100	Silk	Web	Node	1 mes	17,542
	Performer		Locked		

100	Silk	Standard	Node	1 mes	21,888
	Performer		Locked		

100	Silk	Premium	Node	1 mes	26,286
	Performer		Locked		

100	Silk	Web	Node	1 semana	7,644
	Performer		Locked		

100	Silk	Standard	Node	1 semana	9,539
	Performer		Locked		

100	Silk	Premium	Node	1 semana	11,454
	Performer		Locked		

*Los precios no incluyen IGV.

Se han considerado 100 usuarios virtuales como referencia para la presente cotización. El precio está sujeto también al tipo de

script a requerirse (Web, Standard, Premium):

Web Virtual Users incluye soporte para HTTP(S), HTTP(S)/XML, SAP NetWeaver, WebDAV, Email (SMTP/POP), FTP, TCP/IP, UDP, i-Mode

(HTTP), Macromedia Flash Remoting, Add-Onstreaming Media (MS, Real)m DLL Interface

Standard Virtual Users incluyen soporte para All Web +.Net Add-On, Java Add-On, DB2-CLI, OCI, ODBC, (D)Com, Visual Basic Add-On

(Framework), LDAP, CORBA.

Premium Virtual Users incluyen soporte para All Standard + GUI Level Testing, SAPGUI, Oracle Forms, PeopleSoft, Siebel, Citrix,

Terminal Emulation, Tuxedo/ATMI, WAP, Remedy.

Curso de Capacitación SilkPerformer (duración 32 horas):

- n Módulo 1: Visión general Pruebas de rendimiento.
 - " Conceptos de pruebas de rendimiento y proceso de pruebas.

- n Módulo 2: Visión general producto.
 - " Características, arquitectura, componentes de software y licenciamiento.

- n Módulo 3: Módulo Script Development Workbench.
 - " Características
 - " Creación de un script de pruebas
 - " Ejercicios prácticos

- n Módulo 4: Módulo Conductor, Player, Analyze parte 1.
 - " Qué son los módulos Conductor, Player y Analyze.
 - " Creación de escenarios e interacción entre los módulos.
 - " Ejercicios prácticos

- n Módulo 5: Módulo Conductor, Player, Analyze parte 2.
 - " Soporte de monitoreo
 - " Monitoreo remoto
 - " Ejercicios prácticos

- n Módulo 6: Resumen.
 - " Propósito de las pruebas de rendimiento
 - " Proceso de pruebas
 - " Planificación
 - " Análisis
 - " Tips

- n Valor Total: S/17,000 (no incluye IGV)

- n Máximo 10 personas por grupo.

- n Incluye materiales
- n Incluye alojamiento, movilidad y pasaje del consultor.

Por favor cualquier consulta me dices.

Saludos,

Alejandra Tefel

Country Manager

Mainsoft Perú

Av. Las Camelias 790 Of. 506

San Isidro

Tel: (511) 440-3448

Cel: (511) 990-418-363

De: "Alejandra Tefel"

<atefel@mainsoft.com.pe>

Para:

<jmelgarejo@minedu.gob.pe>

cc: 'Félix Velasquez' <fvelasquez@mainsoft.com.pe>, "'Catherine Fernandez'" <cfernandez@mainsoft.com.pe>

Fecha: 09/08/10 03:50

p.m.

Asunto: Mainsoft: Solución Microfocus -

SilkPerformance

Estimada Jacqueline,

Por el momento te adjunto información del producto, mañana te paso la propuesta comercial.

Saludos,

Alejandra Tefel

Country Manager

Mainsoft Perú

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San Isidro

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Cel: (511) 990-418-363

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ESET NOD32 Antivirus ha comprobado este mensaje.

<http://www.eset.com>

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Get an answer on how your website performs under various load conditions



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WAPT 7.0 is a load and stress testing tool that provides you with an easy-to-use, consistent and cost-effective way of testing web sites, web servers, and intranet applications with web interfaces. You may test and analyze the performance characteristics under various load conditions to find bottlenecks of your web applications. WAPT has a set of features to test web sites with dynamic content and secure HTTPS pages. It provides informative test results through descriptive graphs and reports.

Today thousands of businesses worldwide face the challenge of establishing their web presence - a goal difficult to achieve without efficient web site development and testing tools. Why load and stress testing is so important? Most performance issues arise only when the server is stressed with a high user load. This means that you should perform load testing to know how many concurrent visitors your site can serve flawlessly. It can be difficult to organize such testing without the help of a group of real users. The right way is to use advanced automatic load and stress testing tools. WAPT can simulate up to several thousands real users to check the performance of your site and find any bottlenecks.

WAPT is designed for Microsoft Windows 2000/XP/2003/Vista/2008/Win7. It is competitively priced and does not require expensive hardware to run. If you have been looking for an easy to use yet powerful web load testing solution, look no further. Download the 30-day trial version and see for yourself.

We provide flexible discount program for volume purchase orders. See Order section for more information. If you happen to have a problem or a question, see our Support section for more information on how to contact us. We will be happy to answer your questions.

All registered users of previous versions may upgrade to WAPT 7.0 free of charge.

INSTALLED/USED



Not your father's testing tool: As a matter of fact, WAPT takes user simulation to a higher level...
Edmond Woychowsky, CNET Networks



We've been using WAPT and have been quite pleased with the result. Great tool for benchmarking/replay. I have to admit the tool is rock-solid, incredibly performant itself, and delivers dependable, repeatable data. Don't be put off by the price. I have saved significantly more than that \$350 just in time. In most cases, WAPT is a great investment. John Ovarbaugh, QA professional



People who buy WAPT also often purchase:

SERVER SUPERVISOR

Better Together
Total list price: \$550
Buy together: \$477

Buy Both Now!



NEWSLETTER

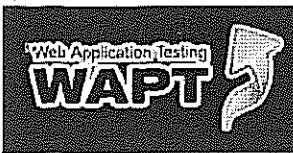
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WAPT 7.0

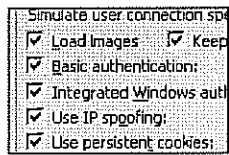
WAPT PRO 2.1



WAPT is a load, stress and performance testing tool for web sites and applications with web interface. The product applies load to the web site under the test by emulating the typical activity of hundreds or even thousands concurrent site visitors. The web site responds to such test load the same way it would respond to the emulated real life conditions. By specifying the behavior of virtual site users so that it would be very similar to the behavior of the real life users, and by adjusting their number, you can measure the performance of the site and determine its maximum productivity.

You can test web sites running under any OS, including all Unix and Windows platforms, and web applications using any technologies including AJAX, ASP, ASP.NET, ColdFusion, Java, Perl, PHP, Python, Ruby, etc. You can also test multilingual sites using different language encoding options.

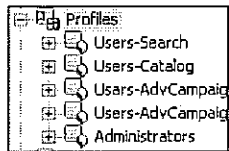
Accurate simulation of real user activity



WAPT uses a number of techniques to simulate real life conditions as accurate as possible. Different types of virtual users can visit different pages, automatically fill forms, click buttons and perform any other usual activity of real users. The behavior of each user can be programmed so that it would depend on the web site responses. Each virtual user has its own specific parameters, such as cookies, input data for various page forms, name and password (NTLM and basic authentication schemes are supported), connection speed, delays between clicks, etc. **WAPT** can use a pool of IP addresses available on the system to emulate users coming from different IPs.

delays between clicks, etc. **WAPT** can use a pool of IP addresses available on the system to emulate users coming from different IPs.

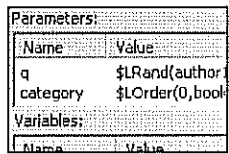
Different types of users in one test



If you want to simulate thousands of users, you do not need to specify the behavior for each of them separately. You can divide all proposed visitors of your web site into several different types and create a virtual user profile for each type. **WAPT** will emulate the behavior of each virtual user according to its profile. The most important attribute of a profile is a set of pages visited by the user. This set is specified in the most convenient form. Instead of asking you to type long URLs, **WAPT** will automatically record all your actions while you are

browsing your web site in a regular browser window. Using that procedure you can record the typical behavior of each type of users you want to emulate.

Testing of dynamic web applications

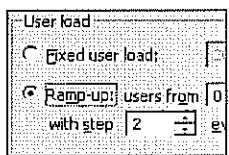


Even though all users with the same profile share the set of pages they can visit and a number of other options, each user has a unique session with specific session parameters and its actions can depend on the server responses. For example, each user of the same profile can login with its unique name/password and fill web forms with specific data which is different for different users.

Of course, you need to specify how to produce the values of changing parameters for each new session. This is done with help of functions and variables. For example, you can specify a long list of username/password pairs and have **WAPT** use them one by one or randomly. Before sending any request **WAPT** will calculate or simply substitute the values of all request parameters according to your scheme. Fortunately you do not need to specify manually how to compile all the parameters of each request. **WAPT** automatically finds such parameters during the recording stage and lets you adjust the way their values are calculated for the purpose of testing.

This functionality is very important to test web sites that include essentially dynamic content. They are often implemented with modern technologies including AJAX, ASP, ASP.NET, ColdFusion, Java, Perl, PHP, Python, Ruby, etc.

Flexible load level definition



The overall load created by **WAPT** on a web site is determined by the number of concurrent virtual users accessing the site simultaneously. **WAPT** can create up to several thousand virtual users for the test. However this number significantly depends on your test profiles, network bandwidth and hardware.

Usually the number of concurrent virtual users is increased linearly during the test. When it reaches some critical number, the server experiences significant slowdowns or produces errors. This way you can measure or test its maximum capability.

However in other types of tests you may need to apply constant load volume during the whole test or even increase and decrease it periodically several times. The latter may be useful, for example, to test the correct resource reallocation on the server system. You can also specify the number of virtual users separately for each user profile to approximate the real life ratio between different types of site visitors.

Testing of HTTPS/SSL content



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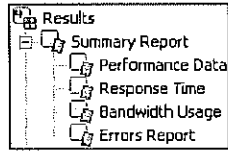
Stop losing clients due to late detection of web server glitches. Monitor availability and performance of your servers and network resources.

and network resources.

URI:	/regsoft/viewords
Method:	GET
Port:	443 <input checked="" type="checkbox"/> Secure
	 Use Variable...

WAPT supports testing of web sites and applications secured by SSL. You do not need to perform any additional actions and can easily work with HTTPS sites just as you do with any other ones.

Descriptive test reports and graphs



During the test WAPT collects exhaustive information about web site behavior under the load. That information is represented in form of descriptive reports and graphs. You can view them either inside the program or save as HTML or MS Excel files to share with your colleagues.







Each report consists of more than 20 different tables containing various performance data (e.g. number of pages and hits by second), response time data, bandwidth usage

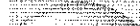
and errors occurred during the test. Each table shows how the value of the corresponding measured parameter was changing during the test.

Graphs contain essentially the same information represented in form of charts for better perception. With help of these tools you can easily identify any performance problem or an error, as well as the time when it took place and load conditions that could cause it. Graphs and reports containing intermediate results are available during the test run. This is useful to monitor key parameters of the web site performance on the fly. You do not need to wait for the completion of a long test, if an apparent problem takes place during the first minutes of it.

If the information contained in reports is not sufficient to identify or examine a problem, you can enable logging and analyze site behavior on a much more detailed level. WAPT has a built in log viewer that lets you browse test data down to each HTTP request sent to the server.

Other Features

-  Support of different language encodings;
-  Support of all types of proxy servers: HTTP(S), SOCKS4(5);
-  Additional command-line interface;
-  Scheduled run option to start testing at a specified time;
-  Ability to add custom strings to HTTP headers;
-  Support for redirects, including redirects to a different server.





Get an answer on how your website performs under various load conditions

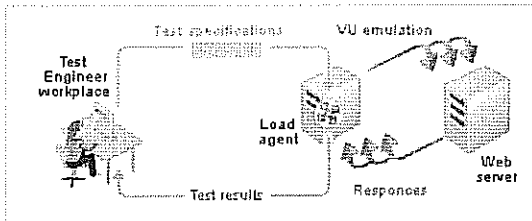


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WAPT 7.0

WAPT PRO 2.1

WAPT Pro provides a testing environment consisting of two different components connected to each other over TCP/IP. The workplace component provides a convenient user interface for a test engineer and manages the load agent service component. The latter is used to generate the test volume. Such distributed architecture allows you to use a productive server for load generation and manage the whole testing process remotely from your own workstation. You can use many load agents and easily switch between them depending on your testing needs.



[Read more about remote test management.](#)

To achieve maximum productivity WAPT Pro can use several computers to generate required test volume. Each of these computers runs a special service called WAPT Pro load agent. They all are managed from a different workstation running WAPT Pro workplace component. It is responsible for assigning tasks to each load agent and gathering test results. The work is divided between load agents automatically depending on the available system resources on each system. When all agents experience overload and can not produce the maximum load specified in the test scenario, the system produces corresponding warnings. In this case the problem can be resolved by simply adding more load agents to the system and restarting the test without making any changes in the test specification.

[Read more about distributed load generation.](#)

WAPT Pro can measure various parameters of the web server performance during the test. This way you can see how your web application responds to the increasing load in terms of CPU, RAM or network usage. You can also measure various parameters of the database performance, which is essential for web applications that use databases. The data is included in the test results along with other parameters.

[Read more about server performance monitoring.](#)

You can include the execution of a JavaScript code into virtual user profiles. This provides you with a universal way to perform any specific and complex calculations required to set the correct values of the request parameters. You can even take JavaScript code from your web pages and insert it into your profiles.

[Read more about java script support.](#)

WAPT Pro can be extended with a special Module for Flash applications testing. This module is installed separately on the system running the workplace component of the product.

[Read more about Module for Adobe Flash testing.](#)



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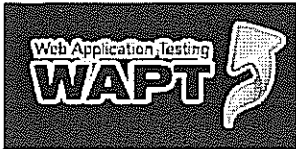
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You can order WAPT by credit card online using RegNow purchase form. PayPal, Fax, Bank/Wire transfer, Check/Money order or Invoice options are also available. The prices are quoted in US Dollars.

Service is provided by RegNow.com, Inc. (a Digital River company, DRIV); 9625 West 76th Street, Suite 150, Eden Prairie, MN 55344, USA

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Units* From	Up to	Price per unit
1	2	\$350
3	4	\$315
5	9	\$280
10	19	\$245
20	Unlimited	\$210

* - One unit means one installation on a single computer. Please note that WAPT License Agreement has no restrictions on the number of virtual users.

Take into account that this number significantly depends on your test profiles, network bandwidth, hardware and operating system used on computer where you run WAPT.

WAPT PRO \$700 ORDER NOW!

WAPT Pro original license allows you to install the workplace component of the product on a single computer and use up to 2 load agents simultaneously. This means that you can create test volume with help of two different computers and manage this process from your workstation.

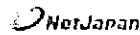
Get more Load Agents

To create greater test volume you can purchase additional load agent licenses at \$200 per agent and add more systems to your testing environment.

Order Module for Adobe Flash testing!

To enable testing of web applications created with help of Adobe Flex you can purchase Module for Adobe Flash testing at \$500 per license. This module is installed separately on the system where you run the workplace component of the product.

Local Distributors



NetJapan, Inc.
8 Kandakonya-cho, Chiyoda-ku, Tokyo 101-0035, Japan
Tel: +81-3-5256-0855, Fax: +81-3-5256-0856

Registration instructions

Once you've purchased WAPT and received your registration key, you need to register your copy of the program. Please follow the instructions below:

1. Run the program.
2. Go to the Help menu.
3. Select "Enter your serial number...".
4. Enter the registration key provided to you.
5. Press a button to register online or via email.

If you experience any problems during the registration process, please, contact us at support@loadtestingtool.com. We will be happy to assist you with the registration.

We are looking for resellers and distributors. For more information please visit Reselling section.

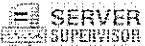


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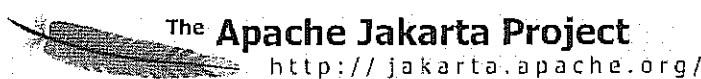
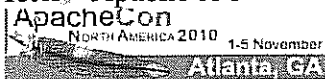
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About

Apache JMeter

- [Overview](#)
- [Changes](#)
- [Known Bugs](#)
- [License](#)
- [Contributors](#)

Apache JMeter is open source software, a 100% pure Java desktop application designed to load test functional behavior and measure performance. It was originally designed for testing Web Applications but has since expanded to other test functions.

Download

- [Download Releases](#)
- [Developer \(Nightly\) Builds](#)

What can I do with it?

Apache JMeter may be used to test performance both on static and dynamic resources (files, Servlets, Perl scripts, Java Objects, Data Bases and Queries, FTP Servers and more). It can be used to simulate a heavy load on a server, network or object to test its strength or to analyze overall performance under different load types. You can use it to make a graphical analysis of performance or to test your server/script/object behavior under heavy concurrent load.

Documentation

- [User Manual](#)
- [Javadocs](#)
- [Localisation \(Translator's Guide\)](#)
- [Building JMeter and Add-Ons](#)
- [JMeter Wiki](#)
- [FAQ \(Wiki\)](#)

What does it do?

Apache JMeter features include:

- Can load and performance test many different server types:
 - Web - HTTP, HTTPS
 - SOAP
 - Database via JDBC
 - LDAP
 - JMS
 - Mail - POP3(S) and IMAP(S)
- Complete portability and 100% Java purity .
- Full multithreading framework allows concurrent sampling by many threads and simultaneous sampling of different functions by separate thread groups.
- Careful GUI design allows faster operation and more precise timings.
- Caching and offline analysis/replaying of test results.
- **Highly Extensible:**
 - Pluggable Samplers allow unlimited testing capabilities.
 - Several load statistics may be chosen with **pluggable timers** .
 - Data analysis and **visualization plugins** allow great extensibility as well as personalization.
 - Functions can be used to provide dynamic input to a test or provide data manipulation.
 - Scriptable Samplers (BeanShell is fully supported; and there is a sampler which supports BSF-compatible languages)

Tutorials (PDF format)

- [Distributed Testing](#)
- [Recording Tests](#)
- [JUnit Sampler](#)
- [Access Log Sampler](#)
- [Extending JMeter](#)

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- [Thanks](#)

JMeter is not a browser

JMeter is not a browser. As far as web-services and remote services are concerned, JMeter looks like a browser (or rather, multiple browsers); however JMeter does not perform all the actions supported by browsers. In particular, JMeter does not execute the Javascript found in HTML pages. Nor does it render the HTML pages as a browser does (it's possible to view the response as HTML etc, but the timings are not included in any samples, and only one sample in one thread is ever viewed at a time).

How do I do it?

- [Using JMeter](#)
- [JMeter Wiki](#)
- [JMeter FAQ \(Wiki\)](#)
- [Javadoc API documentation](#)
- [JMeter Localisation \(Translator's Guide\)](#)
- [Building JMeter and Add-Ons](#)

Tutorials (PDF)

- [Distributed Testing](#)
- [Recording Tests](#)
- [JUnit Sampler](#)
- [Access Log Sampler](#)
- [Extending JMeter](#)

Further Information About JMeter

- [Change List](#)
- [Known Bugs](#)
- [License](#)
- [Contributors](#)