



InterAct ES for ThinkVantage™ Technologies

Experience Client Service Intelligence
from Serden and Lenovo

Measure the performance and quality of
service of applications and other computing
resources from the *end user perspective*.

HIGHLIGHTS

- Reduce calls to the help desk and the cost of end user support
- Elevate technical issues to determine the business impact and cost
- Set and negotiate realistic service level agreements
- Conduct trend analysis for groups of users or applications
- Understand the performance impact of infrastructure changes, workload growth, and application evolution
- Maintain and prove compliancy with software licenses

See www.Serden.com/Lenovo

END USERS: A KEY ENTRY POINT FOR BUSINESS PROCESSES

The newest discipline within IT Service Management is End User Service Management. EUSM analyzes the performance of applications and other computing resources from the perspective of the people who use those resources daily – the individual end users.

At the enterprise level, getting an accurate picture of your information technology's quality of service (QoS) right down to each end user is impossible unless you have the right tool to slice and dice data and turn it into *client service intelligence*.

With its patented analytic technology, InterAct ES for TVT is the preferred EUSM solution for Lenovo customers. InterAct ES for TVT works with all ThinkPad notebook and ThinkCentre desktop computers to deliver a cost-effective analysis of your business environment to find ways to decrease cost, increase performance, and improve the end user experience.

A NEW VIEW OF PRODUCTIVITY

InterAct ES for TVT delivers advanced PC performance reporting and analysis to IT managers for improved system management, end user productivity and business efficiency. InterAct ES for TVT was developed in collaboration with Serden Technologies, the leading provider of EUSM solutions, to identify root PC performance issues, project how applications and PCs will perform under specific conditions, and provide insight on how to improve end user computing satisfaction. The solution complements Lenovo's suite of ThinkVantage Technologies – software tools that are pre-loaded on every ThinkPad notebook and ThinkCentre desktop – to provide users and IT staff with improved manageability and reliability.

InterAct ES for TVT collects, analyzes and correlates user-centric performance data from each user's Windows configuration, client hardware and software/web applications. Data points such as resource usage, response time, application availability, CPU utilization, network flow and many others tell the story of how well a specific user's workstation and applications support his or her business needs – i.e., the end user computing experience. InterAct ES for TVT makes sense of the complexity that is typical of today's computing environment.

Data from all users' workstations is aggregated in a central Knowledge Database that provides immediate visualization of trends and investment priorities according to usage measurement and QoS actually provided to the workers on a specific business activity.

No desktop or systems management tool can detect and report on this level of detail about what is affecting the user experience. Forrester Research reports 74 percent of computing problems are reported by the end users through the service desk and are not detected by infrastructure management tools. InterAct ES for TVT reveals the root causes of these otherwise undetected issues.

Used together, InterAct ES and desktop management tools work in a complementary fashion to provide the IT organization with the broadest possible view of the health and productivity value of the end user computing environment.

WHAT YOU CAN MEASURE / WHAT YOU CAN DO

InterAct ES for TVT measures hundreds of data points that yield highly meaningful reports about your workers' end user computing experience. There are numerous canned reports, and you can customize or create your own. Here are some examples of what you can measure and learn through InterAct ES for TVT, and what you can do with the business intelligence derived from this solution.

"Serden Technologies is a young company with a solid enterprise-scalable passive agent end user monitoring offering. The company's Interact ES solution scored highly in our evaluation, with especially strong data repository and OLAP-based statistical manipulative and export abilities."

Jean-Pierre Garbani
Vice President, Forrester Research

The Forrester Wave™: Passive Agent End User Experience Monitoring, Q3 2007, Vendor Summary

Application Utilization and Availability Measurement

- Tracking run time and utilization of all launched applications
- Application resource usage
- Application unavailability, crash
- Application response time
- License management including installed applications, unused applications, non-license applications or unreferenced applications

Resource Utilization and Usage Measurement

- Measure the CPU utilization, memory, paging, disk space and I/O disk, network flow, bandwidth...
- Detect stress statement for CPU, memory, etc.
- Identify and recommend hardware replacement based on actual end-user usage, CPU, and availability trend analysis

WEB Applications (Usage, Performance, Availability....)

- Measure Internet Explorer utilization
- Specific application tracking (hits, response time)
- Process Unit tracking: sequence of actions executed by a user in his business activity
- Intranet application response time
- Tracking of the slowest URL

Alert Management

- Sending Alert (100 bytes) in case of predetermined threshold crossing (unavailability, response time, stress, etc.)
- Instantaneous alert and average time alert
- Understand concept of double threshold on sliding time windows
- The alerts can be routed to an external product, on the Web Console, or by e-mail, beeper, ...

Service Level (SLA/SLM)

- Tracking of the service level agreement (availability, response time, utilization, and display of the threshold crossing...)
- Provide comparison with an historical review, trend curve, visibility, ...

Business Cost Analysis

- Provided by user group or application
- Provide cost measurement of unavailability according to business activities

“Lenovo recently announced an alliance with Serden Technologies and the availability of InterAct ES for ThinkVantage Technologies. Given that Lenovo ThinkVantage technologies are strategic differentiators for Lenovo, this speaks volumes about the importance of end user service management.”

Linda Musthaler
Network World

End user service management grows in importance, Oct. 8, 2007

Capacity Planning

- Provide Impact Analysis before a new deployment
- Provide comparison between two application versions as well as comparison between two user groups or two different hardware configurations

Instant Status of Workstations and User conditions

- Software and Hardware status

Printer and USB Management

- Measure printer utilization
- Printer queue measurement
- Collect printing incidents
- Measure printing costs
- USB peripheral detections

Migration Readiness Analysis

- Provide a rapid, cost-effective analysis that helps determine the impact of migration and eases the decision making process
- Get a business view of the current Windows client environment
- Minimize the challenges and complexity of transitioning PC fleets to application upgrades (i.e.; Windows 2007, Office 2007, etc...)

System Boot Management

- Count and keep track of the involuntary or unattended "reboots" (not initiated by users)

Intelligent TVT Rejuvenation

- Determine and recommend when a restore of the workstation is needed
- Reclaim resources that had become unavailable
- Show the “before and after” benefit of running the Rejuvenation application

Green Power Analyzer (NEW)

- ✔ Workstation Level Power Consumption and Savings based on Actual USAGE
- ✔ Daily and Yearly Average Power Consumption/Costs
- ✔ Provide intelligent power usage data to facilitate effective input to Power Management profiles
- ✔ Life cycle management of the workstation (PC/Printer Life Cycle)
- ✔ Laptop Battery Centralized Health Monitor/Reporting (Exclusive Lenovo)

SMC (Secured Management Client) Analytical Manager (Exclusive Lenovo)

- Analyzes users, applications and system behavior to enable "End User Service Management" for SMC and PC devices.
- **Internet Response Time** - Providing average response time for web access, and reports on any response time outside of committed SLA (Service Level Agreement).
- **Application Response Time** – Measuring windows applications average response.
- **Network Usage** - track average network usage and bandwidth of the SMC client and the Lenovo Storage Array.
- **Client Availability** - report on the SMC clients average disk I/O, disk space, CPU and memory utilization.
- **Client Boot Time** – documents the average SMC clients boot time.
- **Incident Reporting** – delivers weekly insight into the applications that caused most user issues.

MINIMUM SYSTEM REQUIREMENTS

[For Database, Server, Web Server and InterAct ES for TVT Console](#)

Hardware

Dedicated workstation

Processor: 1.8 GHz

RAM: 512 MB

Minimum available storage on disk: 5 GB

Network connection, CD-ROM (Interconnection between all client workstations and the server)

Software

Windows 2000 (Professional or Server); Windows XP Professional; or Windows Server 2003

Internet Information Server version 5.0 (Internet Services), installed and operational (for InterAct ES for TVT Web Server)

For OLAP functionality (optional): Analysis Services 2000 SP3, installed and operational on the station

Adobe Reader version 5.0 or more, for the visualization of the reports and InterAct ES for TVT documentation.

[For an InterAct ES for TVT Client](#)

Hardware

Minimum available storage on disk: 50 MB

Network connection

Software

Windows 2000; Windows XP (Home or Professional); or Windows Vista (Basic, Home Premium, Business or Ultimate)



Sample Report – Instant Status of Workstations and User Conditions

PC Ranking Analysis Report

This report is the PC Ranking Report which identifies the worst performing to best performing end user devices. This report assist IT to identify very quickly which end users are experiencing performance issues.

 **GU Enterprise** 01/26/2009 - 02/24/2009

		User Present (avg per day)	CPU (SLA: 35%) AVG Cons.	Memory (SLA: 55%) AVG Cons.	Unavailability Estimated Cost per Month	Suggested Replacement
1	SW-CALA-FLM02 (swn[redacted].com)  Compaq - Deskpro 1X Intel Pentium III processor 512 Mb RAM CPU 996 Mhz 9.0 Gb Avail. / 18.6 Gb	00:01:47 10 Days	26.6% 	56.95% 	 10.64% \$7	Recommendation: CPU 1.5Ghz Memory 1.0 Gb HD Size 27 Gb http://shop.lenovo.com/uj/66k7tgs
2	CALA-AM00353322 (swn[redacted].com)  IBM - 2668G3U 1X Intel(R) Pentium(R) M processor 2.13GHz 2.0 Gb RAM CPU 2.13 GHz 31.0 Gb Avail. / 55.9 Gb	04:38:11 8 Days	51.3% 	43.93% 	 9.60% \$979	Recommendation: CPU 4.2Ghz Memory 2.0 Gb HD Size 75 Gb http://shop.lenovo.com/uj/66k7tgs
3	CALA-KUHNS (swn[redacted].com)  LENOVO - 63634GU 2X Intel(R) Core(TM) Duo CPU L2400 @ 1.66GHz 1.0 Gb RAM CPU 1.66 GHz 27.9 Gb Avail. / 55.9 Gb	04:34:14 5 Days	21.3% 	56.12% 	 7.00% \$704	Recommendation: CPU 2.4Ghz Memory 2.0 Gb HD Size 84 Gb http://shop.lenovo.com/uj/66k7tgs
4	WW-DEVDDOS-8854 ([redacted].m)  LENOVO - 63634GU 2X Intel(R) Core(TM) Duo CPU L2400 @ 1.66GHz 1.0 Gb RAM CPU 1.66 GHz 34.2 Gb Avail. / 55.9 Gb	05:51:19 20 Days	11.4% 	67.34% 	 5.76% \$742	Recommendation: CPU 2.4Ghz Memory 2.0 Gb HD Size 65 Gb http://shop.lenovo.com/uj/66k7tgs
5	AW-NYNY-D14011P (nen[redacted].com)  Hewlett-Packard - HP Compaq dc7100 SFF(PP9) 2X Intel(R) Pentium(R) 4 CPU 2.80GHz 512 Mb RAM CPU 2.79 GHz 2.3 Gb Avail. / 37.3 Gb	04:50:59 13 Days	13.3% 	75.19% 	 6.00% \$533	Recommendation: CPU 4.1Ghz Memory 1.0 Gb HD Size 105 Gb http://shop.lenovo.com/uj/66k7tgs
6	SW-CAB-C20200 (swn[redacted].com)  Hewlett-Packard - HP d530 SFF(DC578AV) 1X Intel(R) Pentium(R) 4 CPU 2.66GHz 512 Mb RAM CPU 2.66 GHz 16.6 Gb Avail. / 37.3 Gb	06:41:35 22 Days	33.0% 	80.80% 	 3.23% \$476	Recommendation: CPU 5.2Ghz Memory 1.0 Gb HD Size 62 Gb http://shop.lenovo.com/uj/66k7tgs

InterAct recommends configuration changes/upgrades for solving the issues related with poor CPU/Memory/DASD and/or High Unavailability.

Sample Reports – Migration Readiness Analysis

Windows Seven™ Migration Readiness Analysis...



RISK BASED ON ACTUAL USAGE
 Risk Evaluation is based on End User Experience data. Risk level is ranked high or low regardless what W7 version...

Workstation List	Basic		End User Experience			Risk Evaluation
	Basic	Premium	Memory	CPU	Unavailability	
A23581-4321 (na.ko.com) LENOVO 6397A74	CPU 2.66 GHz 2.5 Gb RAM 30.0 Gb HD 384 Mb VRAM DVD-ROM drive: YES	Green icons	27.07%	14.62%	2.52%	HIGH
A01215-3084 (na.ko.com) LENOVO 7434AG8	CPU 2.39 GHz 4.0 Gb RAM 149.0 Gb HD 1.0 Gb VRAM DVD-ROM drive: YES	Green icons	27.38%	13.30%	3.28%	LOW
O15183-4648 (na.ko.com) LENOVO 8813A96	CPU 1.86 GHz 3.0 Gb RAM 74.5 Gb HD 256 Mb VRAM DVD-ROM drive: YES	Green icons	32.04%	7.85%	1.88%	NONE
A15585-9125 (na.ko.com) LENOVO 6397A74	CPU 2.66 GHz 2.5 Gb RAM 30.0 Gb HD 384 Mb VRAM DVD-ROM drive: YES	Green icons	23.00%	11.00%	0.00%	HIGH
LENOVO-80D7BAE7 (na.ko.com) LENOVO 6397A74	CPU 2.66 GHz 2.5 Gb RAM 30.0 Gb HD 384 Mb VRAM DVD-ROM drive: YES	Green icons	20.95%	8.28%	0.31%	HIGH

W7 Capable ICON only appears if all green check marks appear under one of the W7 versions minimum requirements.

Risk Assessment

RISK: High = User Configuration Red Flag Low = Some Concern on Usage & Configuration None = No Risk Green Flag



Sample Reports – Migration Readiness Analysis



RISK BASED ON ACTUAL USAGE
 Risk Evaluation is based on End User Experience data. Risk level is ranked high or low regardless what W7 version...

Office 2003-2007 Migration Analysis

Workstation Running Office 2003 List	Standard	Enterprise	Ultimate	End User Experience			Risk Assessment
				Memory	CPU	Unavailability	
Machine 1 (domain : xyz.com) Hewlett-Packard HP Compaq dc7600 Small Form Factor CPU 2.99 GHz 2.0 Gb RAM HD: 60 Gb Free DVD-ROM/CDROM drive: YES/YES Microsoft Windows XP Professional Service Pack 2	✓	✓	✓	19.26%	8.16%	0.00%	NONE
Machine 2 (domain : xyz.com) Hewlett-Packard HP xw4400 Workstation CPU 1.87 GHz 1.0 Gb RAM HD: 60 Gb Free DVD-ROM/CDROM drive: YES/YES Microsoft Windows XP Professional Service Pack 2	✓	✓	✓	46.73%	6.94%	0.45%	LOW
Machine 3 (domain : xyz.com) Hewlett-Packard HP Compaq dc7600 Small Form Factor CPU 2.99 GHz 1.0 Gb RAM HD: 9 Gb Free DVD-ROM/CDROM drive: NO/YES Microsoft Windows XP Professional Service Pack 2	✓	✓	●●● ●●● ●●●	51.03%	7.76%	1.93%	HIGH
Machine 4 (domain : xyz.com) LENOVO 200766U CPU 2.00 GHz 2.0 Gb RAM HD: 71 Gb Free DVD-ROM/CDROM drive: YES/YES Microsoft Windows XP Professional Service Pack 2	✓	✓	✓	34.42%	13.57%	0.98%	LOW
Machine 5 (domain : xyz.com) LENOVO 200766U CPU 2.00 GHz 1.0 Gb RAM HD: 27 Gb Free DVD-ROM/CDROM drive: YES/YES Microsoft Windows XP Professional Service Pack 2	✓	✓	✓	53.91%	12.64%	3.54%	HIGH
Machine 6 (domain : xyz.com) LENOVO 200766U CPU 2.00 GHz 2.0 Gb RAM HD: 62 Gb Free DVD-ROM/CDROM drive: YES/YES Microsoft Windows XP Professional Service Pack 2	✓	✓	✓	42.76%	20.36%	3.26%	LOW
Machine 7 (domain : xyz.com) LENOVO 200766U CPU 2.00 GHz 2.0 Gb RAM HD: 62 Gb Free DVD-ROM/CDROM drive: YES/YES Microsoft Windows XP Professional Service Pack 2	✓	✓	✓	52.57%	8.29%	0.00%	LOW

If all green check marks appear under one of the Office 2007 versions minimum requirements.

Risk Assessment

RISK: High = User Configuration Red Flag Low = Some Concern on Usage & Configuration None = No Risk Green Flag



Sample Report – Green Power Analyzer

This power usage report provides IT with the potential power savings... based on real usage of the machines. What is interesting as well is the projection of Annual consumption which shows that SMC machines are at least 1/3

02/03/2009 - 04/03/2009

lenovo ThinkVantage Technologies	User at keyboard		Power Consumption			>5 min inactivity periods	Profile Potential Saving	Useless Powered-on Time	Switch off Potential Saving	Total Potential Saving		
	Daily	Yearly	Daily	Yearly	Yearly					Daily	Yearly	Yearly
GU PC (3 Workstations)	20:43	10.92%	10.51 Kwh	2,522 Kwh	\$ 170	03:18	1.31 Kwh	15:09	8.20 Kwh	9.50 Kwh	2,281 Kwh	\$ 154
Top 10 Potential Saving Ws												
O08653-5751	23:58	1.45%	4.60 Kwh	1,105 Kwh	\$ 74	01:56	0.37 Kwh	21:44	4.16 Kwh	4.54 Kwh	1,089 Kwh	\$ 73
O15183-4648	23:58	14.28%	4.56 Kwh	1,093 Kwh	\$ 74	02:10	0.41 Kwh	18:23	3.49 Kwh	3.90 Kwh	937 Kwh	\$ 63
O08653-5239	13:57	21.88%	1.26 Kwh	301 Kwh	\$ 20	05:56	0.53 Kwh	04:57	0.45 Kwh	0.97 Kwh	234 Kwh	\$ 16

Based on usage provides IT with the potential power savings... in changing Power profiles. Only on several machines it is already important

02/03/2009 - 04/03/2009

lenovo ThinkVantage Technologies	User at keyboard		Power Consumption			>5 min inactivity periods	Profile Potential Saving	Useless Powered-on Time	Switch off Potential Saving	Total Potential Saving		
	Daily	Yearly	Daily	Yearly	Yearly					Daily	Yearly	Yearly
GU SMC Pilot (3 Workstations)	11:52	56.57%	6.74 Kwh	1,617 Kwh	\$ 109	01:46	1.00 Kwh	03:23	1.92 Kwh	2.92 Kwh	701 Kwh	\$ 47
Top 10 Potential Saving Ws												
LENOVO-DA368571	13:02	44.67%	2.47 Kwh	592 Kwh	\$ 40	02:25	0.46 Kwh	04:47	0.91 Kwh	1.36 Kwh	327 Kwh	\$ 22
LENOVO-F4D27FA2	13:58	52.06%	2.64 Kwh	635 Kwh	\$ 43	01:22	0.26 Kwh	05:20	1.01 Kwh	1.27 Kwh	304 Kwh	\$ 20
LENOVO-80D7BAE1	08:46	77.77%	1.66 Kwh	399 Kwh	\$ 27	01:40	0.32 Kwh	00:16	0.05 Kwh	0.37 Kwh	88 Kwh	\$ 6

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