



Policy-Based SLA Compliance for Hosted Applications: Identifying the Weakest Link in Next Generation Services

Do you still base SLAs on server uptime?

Looking for more meaningful information? Business and IT executives who depend on reliable application delivery are increasingly challenged to know just how well their services are performing – *in real-time, at any time.*

Because IT outsourcing creates a complicated supply chain of service providers and business partners, reliable application service delivery is becoming increasingly complex. In many cases, the organizations responsible for guaranteeing service level compliance may not control the underlying infrastructure used to deliver the services.

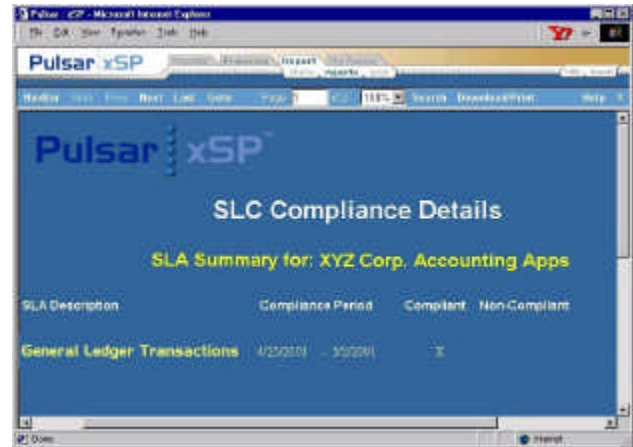
Since your SLAs are only as good as the weakest link in this service chain, knowing when end-user business transactions are out of compliance, and who is responsible, is critical to the success of any outsourcing or hosted services project.

As an enterprise executive responsible for managing outsourced application or service provider relationships, you need to:

- Establish performance-based SLAs with your service providers that reflect how you actually use business services, instead of just measuring the availability of generic IT components.
- Independently verify real-time SLA compliance so that you will have first-hand knowledge of how well your service providers are performing.
- Understand the quality of your end-users' experience with each particular application or service.
- Know that you are getting what you pay for.

Does your SLA mean CYA? It does not have to be that way. If you are responsible for xSP operations, your customers look to you first for guaranteed performance, reliability and, most importantly, peace of mind. To exceed expectations, xSPs need to:

- Creating SLAs that are based on the quality of end-user application experience, rather than IT metrics which customers cannot or do not want to understand.



Schedule and Publish SLA Compliance Reports for Business and Technical Users.

- Easily managing end-to-end service delivery across business partners, service providers, and customers.
- Automatically being notified when an SLA violation occurs, and smoothly integrating SLA alarms into front and back-end management systems like billing, provisioning, help desk, customer relationship, or event management.

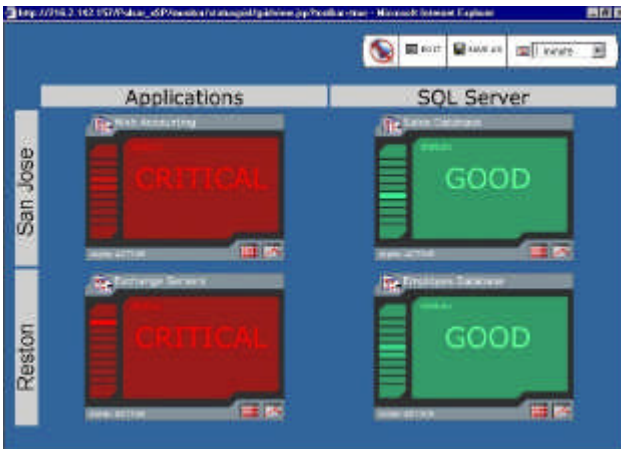
Do your services measure up?

Service provider executives know how expensive it is to capture new customers, and how important service differentiation is to winning accounts. Enhance your business by:

- Differentiating your service offerings by providing customers with performance-based SLAs that are tied to business application use.
- Reducing customer acquisition costs, improving customer retention, and enhancing customer satisfaction by actively demonstrating proof-of-performance.
- Proactively allowing customers to review SLA compliance information on demand.
- Rapidly building and deploying new, customer-specific revenue generating services that are backed by end-to-end performance-based guarantees rather than best efforts.

Introducing Pulsar xSP™

Pulsar xSP is a software solution for enforcing end-to-end service level compliance of networked applications. Pulsar measures the end-user experience for business transactions, creates policies for tracking SLA performance across an outsourced service provider supply chain, and performs real-time and historical performance analysis for millions of online transactions.



Browser-based heads-up display of real-time SLA threshold status and drill-down transaction performance.

Pulsar xSP is the first policy-based service level compliance platform designed specifically to monitor hosted applications from the end-user perspective. Providing both an inside-out and outside-in view of transaction performance, Pulsar xSP enables service providers to create SLA policies and then monitor compliance, in real-time, across the multiple network boundaries of an outsourcing supply chain.

Service providers that implement a branded Pulsar xSP solution can host Pulsar xSP as an SLA compliance service offering for their customers, partners, and suppliers.

By doing so, service providers can share actionable SLA information among them and allow each user to monitor SLA status and events, both real-time and historically. Enterprises using Pulsar xSP get true accountability and peace of mind.

Pulsar xSP has been designed for any organization that needs to manage SLAs across an application delivery supply chain of outsourced and internal infrastructure. Any user along the supply chain can access their relevant SLAs via a Web browser.

Pulsar xSP supports multiple administrators and permissions. For example, Pulsar xSP allows AIPs

to establish and monitor SLAs for their ASP customers. This permits ASPs, in turn, to establish, monitor, and publish SLAs for their enterprise clients.

When an SLA violation is identified, Pulsar xSP can generate real-time alerts forwarded via cell phone, email, pager, or third-party event management systems. Additionally, Pulsar xSP provides information necessary to perform diagnostic triage to isolate and identify problems.

With a short implementation time, Pulsar xSP also delivers a very fast return on investment as well as extensibility for linking with operational support systems, a necessity when making SLA compliance part of an organization's everyday business operations.

Pulsar xSP was built from the ground up specifically to serve large-scale enterprise and provider requirements. With its unique, standards-based distributed application architecture built on Sun Microsystems' Jini™ network technology, Java™ and XML, Pulsar xSP achieves a high degree of flexibility, reliability, scalability, and security.

The distributed Jini services architecture allows you to install and host multiple Pulsar xSP components on machines in multiple data centers in order to scale the application. In doing so, all the components can function cooperatively as a single, self-healing system. This is an important benefit for service providers who run multiple POP and data center facilities and need to maintain common management infrastructure and redundancy across all locations.

Pulsar xSP runs a set of Java processes that manage a distributed set of agents. The agent architecture is capable of simultaneously monitoring millions of transactions against all major application tiers and layers.

The metrics captured by these transactions provide the means to:

- Implement SLA compliance policies for a broad range of business applications.
- Verify compliance for Service Level Agreements and Quality of Service policies.
- Measure the end-users experience for business transactions.
- Baseline and analyze transaction performance trends.
- Provide early warnings of service degradation via real-time monitoring and alerts.

- Diagnose the source and type of application brownouts.
- Report on application, database, server, and network transaction performance, with views customized to the individual requirements of your users, customers, and business partners.
- Validate the results of system changes and upgrades.
- Integrate with network management, software distribution, help desk, billing and customer Relationship management software from industry leading third-party vendors.
- Deploy the Pulsar xSP as either a product or service offering.

The End-User Perspective

Pulsar xSP automatically generates application, database, server, or network transactions from distributed, lightweight agents that act as simulated end-users. Pulsar xSP then measures transaction performance against defined service level goals and policies to provide a true end-user perspective.

Because these agents perform the same business-critical activities that your users and customers do, they accurately and systematically measure true end-to-end performance every step of the way — from client, through the network, and up into servers, web pages, applications, databases, and back-end transactions — even across the Internet or an outsourced service provider network.

“Pulsar xSP is a comprehensive solution that gives service providers the ability to put some serious weight behind their SLAs.”

Rick Sturm, founder and CEO
Enterprise Management Associates

By measuring the total end-to-end response time of application transactions, Pulsar xSP allows the operator to monitor against service levels agreements in real-time. By breaking down end-to-end business transactions into their component parts, Pulsar xSP can help diagnose faults by location and type, as well as assign accountability and proof of performance for managing service level agreements or other contractual commitments to business partners and peers.

And, by relating end-user performance to business objectives, Pulsar xSP lets you reduce response time degradations that lead to costly and disruptive application brownouts by providing early warning when components in the application delivery chain are out of SLA compliance.

Use the SLA Policy Engine to Build and Package Reusable Service Level Policies for Different Customers or Business Units.

For example, in some cases, Pulsar xSP can cut in half the amount of time that is typically required to respond to end-user application performance problems.

Pulsar xSP then proactively reports service delivery to your customers and end-users through simple, intuitive web-based reports that can either be published on a schedule or viewed through an integrated portal.

CiscoWorks2000 Integration

Pulsar xSP's unique features integrate tightly with the CiscoWorks2000 Service Management Suite ("SMS"). This integration capability allows Pulsar xSP to retrieve and analyze Layer 3 and 4 IP performance data collected by Cisco devices enabled with the Cisco Service Assurance Agent ("SAA"), available with IOS 12 and higher.

This integration allows Pulsar xSP to become a front-end application for extracting service level management information from Cisco devices.

The Cisco SMS capability is highly complementary to Pulsar xSP's own unique class of performance data, because the data collection technique implemented by the Cisco SAA is similar to Pulsar xSP's active transaction monitoring technology.

"As a member of the Cisco Hosted Applications Initiative, Response Networks developed provider-class SLA management technology that frees-up AIPs and ASPs to accelerate market deployment by providing SLA monitoring to guarantee end-user quality of service."

Eugene Lee, VP Marketing, Cisco

Data is consolidated from the SAA-enabled devices at the Cisco SMS server, which responds to requests for response time and SLA data from the Pulsar xSP SMS client, and passes it data via an XML interface. Pulsar xSP then correlates and analyzes this information with its own class of Layer 3-7 end-to-end data on network, server, web page, application transaction, database, and other backend processes.

Enterprises and service providers are then able to use consolidated views of both network and application performance status to simplify and automate troubleshooting and service level management from both end-user and network perspectives. In addition, Pulsar xSP brings true provider-class scalability to CiscoWorks2000 SMS by allowing users to control and consolidate SLA metrics from multiple SMS servers under a single console view.

About Response Networks

Privately-held, Response Networks is an industry leader in creating provider-class service level management solutions that measure, manage, and maximize end-user application performance and reliability.

Response Networks' management solutions include ResponseCenter, a performance monitoring tool for enterprise applications, Pulsar eQM, a service enablement platform for web site monitoring, and Pulsar xSP, a software solution for enforcing end-to-end service level compliance of networked applications.

Response Networks' customers include First Tennessee Bank, Ideal Technology Solutions, Global Crossing and Express Services. Partners include Cisco Systems, KPMG Consulting and Sun Microsystems. In addition to its own direct sales force, Response Networks maintains distributor relationships with technology firms covering the United States, Europe, Latin America, and Asia.



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