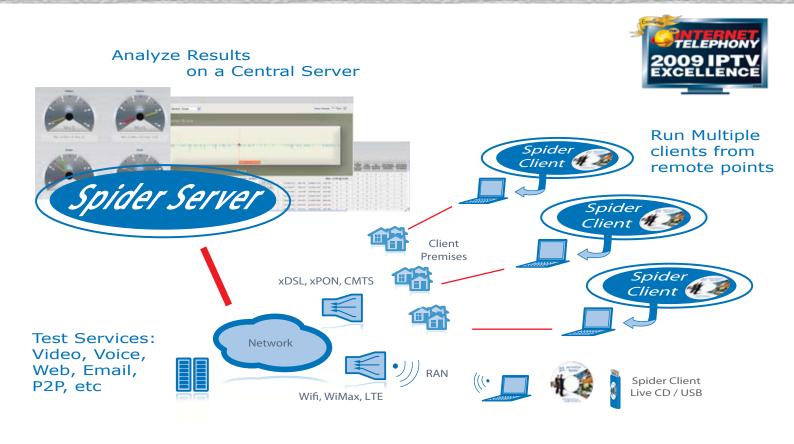


servicEye Spider

servicEye Spider™ is a customer premises based IP multiservice quality assurance solution providing per application performance and QoE metrics with centralized management and control.



servicEye Spider is made up of two key components - Centrally managed servicEye Spider Clients and the servicEye Spider Server. servicEye Spider Server is responsible for centralized control and remote management of Spider clients including configuration, monitoring, stats collection, processing test results and report generation. Spider servers may reside in a centralised lab or operations and maintenance center. servicEye Spider Clients operate as both passive monitoring and active test software probes. Clients can be distributed on a number of hosts including USB stick, CD or a dedicated PC.

Why servicEye Spider?

- 1) Introduction of new multiplay services such as IPTV, VoD, VoIP and bandwidth intensive Web applications such as streaming over the top video increases the pressure to deliver a high level of customer QoE (quality of experience).
- 2) QoE is key to preventing customer churn and ensuring profitable services.
- 3) Centrally managed testing of remote customer premises based quality data provides essential information to engineering lab, quality, operations, maintenance and planning teams while saving costs of on site visits.

How is servicEye Spider used in Pre and Post Service Deployment?

Pre : Pre deployment testing of new IP services such as VoD and IPTV can be tested remotely. Service Providers gain QoE metrics such as Video quality, IPTV Channel zap times, VoD response times, Voice call quality, call connection times, web page download times etc.

Post: Customers and field technicians can utilize servicEye Spider Client in post deployment when problems occur on their service. The initial test phase will verify the service QoE metrics, such as video quality, VoIP call quality or webpage download times. All information is sent back to the centralized Spider server for support, correlation, planning and operations analysis.

Who can use servicEye Spider?

The centrally collected data can be used by various groups who are focused on customer quality, reducing churn and increasing revenue :

- Network Operations and Planning Use Spider in Pre-deployment of new services such as IPTV/VoD, QoS and QoE monitoring and test.
- Field Operations Field Technicians can use the flexibility and power of Spider client to run a sophisticated range of L2-7 multi-play tests, diagnostics and monitoring with centralised collection of results
- Remote Customer Support and Trouble Shooting All diagnostics and monitoring data can be automatically fed back to central support and all tests can be remotely configured.
- Pre-Sales & Marketing use Spider to promote new services, feature demos and use of automated wizards.
- Service Activation use Spider to test Client Connection and test multi-play services such as combined video voice and data applications to determine QoE limits.

Functionality Overview



Central Resource Management

servicEye Spider Server manages the complete configuration of threshold, alarm settings and the collection of performance measurements for the field deployed Spider clients. Spider Client software can be downloaded from the Spider server.

Network Testing

Test performance on a per end point basis within the customer premise environment accessing services and servers.





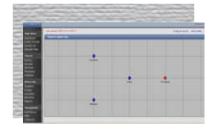
Real time Performance measurements

Assess in real time, live test performance of individual Spider client's. Quickly and easily browse historical performance measurements for the related Spider Clients. Hundreds of unique test metrics available for each class of service type IPTV, VoD, VoIP, HTTP, SMTP/POP, FTP, etc.

Central Test Configuration & Remote Client Control

Configure all tests for each class of service type under one window, delivering a standard test approach. Deployed Spider clients may access and run each and every test. Flexibility to access, take control and manage remote Spider clients.





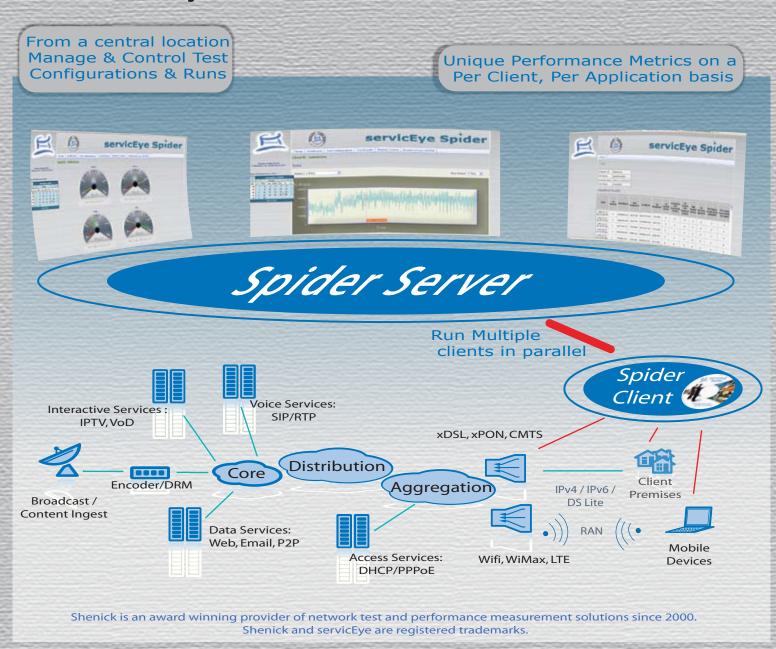
Event Management

Quickly and easily see when individual Spider Clients performance falls below acceptable levels through the integrated event management handler. Functionality includes flexible threshold settings on any number of metrics.

What benefits does Shenick servicEye Spider provide?

- Centralized test and monitoring, diagnostics engine, management control and access
- Reduction of expensive on site customer visits/truck rolls
- Flexibility to create single or multi-service concurrent applications such as IPTV, VoD, VoIP, FTP, HTTP, Email, P2P, TWAMP, etc.
- Full support for IPv4/IPv6. Support for mixed IPv4/v6 including Dual Stack Lite
- Flexibility to test against real network servers or Spider emulated central servers
- Easy customization of client side applications Live CD, USB stick or a dedicated PC
- Extensible client side options ex: DVB-C and IPTV comparison based on dedicated PC
- Centralized storage of test data for engineering, support, planning, maintenance and operations
- Ease of installation and use
- Fully automated
- Proactive quality testing. Analysis of individual emulated subscribers, including remote control of Spider clients.

End-user service testing



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