

Cisco Internet OSS

Programmable Network Layer

Performance and Service-Level Agreements—Cisco Networking Services Performance Engine

Q. What is the Cisco Networking Services Performance Engine?

A. The Cisco Networking Services Performance Engine is a new product that sits within the programmable network layer of the Cisco Internet OSS architecture. The engine simplifies the collection, aggregation, and forwarding of performance and usage data from a wide variety of Cisco element types and data sources according to policies programmed into it by higher-layer applications. It also offers local processing and correlation of performance metrics for particular services and application domains, increasing the manageability of those services. This activity reduces the need for interpretation of large volumes of statistics by the network operator, enabling them to more quickly view the networks behavior including any trouble spots, such as gateways dropping voice calls.

Q. What are the product's key features?

A. Among its primary features, the engine:

- Provides a comprehensive set of in-built collectors that can be programmed to configure and collect: Management Information Base (MIB) data, Cisco NetFlow Collector files, voice-over-IP (VoIP) call statistics, Cisco Service Assurance Agent (SAA) operations, flat files of performance data from other operations support systems (OSSs), and tables of data through bulk-file MIB
- Allows the correlation of all legs of a VoIP call to produce meaningful information related to the network, such as average call success rate, call gateway use, and T1/E1 use
- Enables the correlation of Multiprotocol Label Switching (MPLS) virtual private network (VPN) traffic with VPN customer information to enable usage-based accounting and billing systems
- Provides a simple Extensible Markup Language (XML) interface for the programming of performance-data-collection policies
- Provides an interface to the Cisco Networking Services Integration Bus so that certain performance data can be shared with other programmable network layer (PNL) applications and so that the Cisco Networking Services Performance Engine can be driven by other PNL applications, such as Cisco Networking Services Configuration Engine
- Is part of the Cisco Joint Development Program (JDP), which helps to make the Cisco Networking Services Performance Engine available with and integrated to the best service monitoring and assurance partners

Q. What are the target markets?

A. The primary target markets of the Cisco Networking Systems Performance Engine Version 1.0 are service providers or owners of third-party performance management applications that want a simpler, more comprehensive source of performance and usage statistics from a Cisco network.

Secondarily targeted are service providers that want to gain better visibility in the performance of their long-distance VoIP network services. Service providers that want to bill their VPN customers based on simple VPN usage metrics are also targeted.

Q. When will the Cisco Networking Services Performance Engine be available?

A. The Cisco Networking Services Performance Engine v1.0 is available now for integration with third-party applications. It has been successfully integrated with a small number of partner applications, namely Digiquant's IMS and Janko's performance management system. The Cisco Networking Services Performance Engine v1.0 will be available pre-integrated with a wider range of best-in-class performance and service management applications

Q. Is the Cisco Networking Services Performance Engine supported globally?

A. Yes. Cisco Networking Services Performance Engine developer support is available directly from the Cisco Intelligent Network Services and Management Business Unit (INSMBU) JDP. Cisco Networking Services Performance Engine 1.0 Technical Assistance Center (TAC) support is available globally. As the company builds Cisco Networking Services Performance Engine partnerships, the product will also have presales support available through integrated partners.

Q. What are the components of the Cisco Networking Services Performance Engine?

A. The Cisco Networking Services Performance Engine consists of a programmable XML interface; a basic Web graphical user interface (GUI) for configuration and control, if desired; an embedded database (which does not need to be administered by the operator); and a number of software "collectors" specifically developed to retrieve particular types of performance information.

Q. Can the Cisco Networking Services Performance Engine integrate with other OSS vendor applications?

A. The Cisco Networking Services Performance Engine can easily be integrated with other OSS vendor applications by virtue of the Cisco Networking Services Integration Bus interface and simple XML programmable interface. Early proof-of-concept integration with service management systems have been possible in less than two weeks and complete product integration within 10 weeks.

Q. What are the minimal software and hardware requirements for the Cisco Networking Services Performance Engine?

A. The product requires a workstation running Sun Solaris 8. The recommended machine is an Ultra 20.

Q. What Cisco platforms are supported by the Cisco Networking Services Performance Engine?

A. The Cisco Networking Services Performance Engine is not bound by particular Cisco IOS[®] Software releases or hardware versions. The MIB collection functionality is generic. For the particular value-added applications (VoIP, Cisco NetFlow-VPN aggregation) the engine has been tested against Cisco 5300 Series voice gateways running Cisco IOS 12.2-based releases and against Cisco VPN Solution Center (VPNSC) Version 2.0.0.9 and Cisco NetFlow FlowCollector Version 3.6.

Q. What Cisco IOS Software releases does the Cisco Networking Services Performance Engine support?

A. See preceding answer. Also, note that when the Cisco Networking Services Performance Engine forms an integral part of any Cisco Internet OSS integrated offering or domain manager, it is tested with the relevant hardware and Cisco IOS Software releases that constitute the offering.

Q. Does the Cisco Networking Services Performance Engine support a Web GUI?

A. Not for the performance data being collected. The Cisco Networking Services Performance Engine is pre-integrated with partner reporting applications and can be integrated with other third-party or customer-specific applications. The engine supports a basic Web GUI for the configuration of the collectors and also to report the current configuration and collection status as well as the system status of the engine itself (memory usage, CPU utilization, and system version, for example).

Q. How many devices does each Cisco Networking Services Performance Engine support?

A. The number of devices the Cisco Networking Services Performance Engine supports depends on the type and amount of network performance-data collection and processing the engine executes. A deployment guide that will describe some representative scenarios is being planned. Until this is available, refer to the Cisco Networking Services Performance Engine marketing and development team for assistance.

In the case of VoIP call-usage statistics, one Cisco Networking Services Performance Engine can support about 75 Cisco AS5300 Series voice gateways, or about 180,000 calls per hour while conducting MIB polling for CPU load, memory utilization, and E1 utilization for 75 simulated Cisco AS5300 Series devices every five minutes. With an average call duration of three minutes, one engine can support 300 E1s. (Each E1 handles 600 calls per hour for its 30 channels.)

Q. Does the Cisco Networking Services Performance Engine have an embedded network inventory model?

A. No. The Cisco Networking Services Performance Engine relies on the higher-layer application that is driving it to have knowledge of the network (that is, to have an inventory or object model of the network). The design emphasis has been to make the engine a set of services that can be used by other applications.

Q. Will Cisco applications make use of the Cisco Networking Services Performance Engine?

A. Yes. Integration with Cisco Element Management Framework (EMF) Element Manager Software (EMS), and VPNSC are being planned. Integrated OSS offerings such as those that support H.323 Voice Over IP networks and Cisco Broadband Access Center will rely on the Cisco Networking Services Performance Engine for their network performance monitoring and aggregation requirements. The Cisco Networking Services Performance Engine roadmap focuses on support for other domain manager applications as well as requirements of the Cisco Cable MSO and Metro ETTx solutions.

Q. Where can I find more information?

A. For more information, see the product documentation available on Cisco.com. Also, you may visit the Cisco INSMBU Web site at <http://csg.cisco.com/nmtg/insmbu/products/cpe/index.cfm?qsolution=cpe&qsection=Overview>.



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