

Cisco Internet OSS for Voice over IP: Infrastructure Manager Release 1.0

Q. What is Cisco Internet OSS for Voice over IP?

A. Cisco Internet OSS for Voice over IP is a collection of network management systems to manage voice networks powered by Cisco equipment. These systems are architected according to a proprietary architecture that builds on a programmable network layer and element management functions to provide comprehensive and consistent network management to the telecommunications service provider market.

Q. What is the Cisco Internet OSS for Voice over IP: Infrastructure Manager?

A. The Infrastructure Manager is an integrated set of network management applications with an Internet OSS architecture that provides service fulfillment, service assurance, and usage reporting data for Cisco voice infrastructure service offerings. Infrastructure service offerings cover the interconnection of a Public Switched Telephone Network (PSTN) and voice-over-IP (VoIP) networks. The VoIP interconnection includes integration with Signaling System 7 (SS7) control protocols and provides long distance, prepaid, and other long-haul telephony and telecommunications services.

Q. Are multiple VoIP control protocols supported?

A. Release 1.0 supports networks based on the H.323 family of protocols. Future releases will extend the functionality to cover networks based on Media Gateway Control Protocol (MGCP) and Session Initiation Protocol (SIP) as well as multiprotocol networks.

Q. What kinds of networks are managed?

A. Currently the network management system (NMS) manages an H.323 network built from service provider-selected combinations of the following gateways, gatekeepers, and signaling controller platforms:

- *Gateway platforms*—Cisco 2600 and 3600 routers, Cisco AS5300, AS5400, AS5800, and AS5850 access servers, and Cisco 7200 routers
- *Gatekeeper platforms*—Cisco 3600 and 7200 routers
- *Signaling controller platforms*—Cisco PGW 2200 PSTN Gateway (signaling configuration)



Q. What value does a service provider receive from the Infrastructure Manager?

A. With Release 1.0, a service provider can expect the following benefits:

- *Reduced cost*—Total cost of ownership is reduced when the service provider purchases an integrated set of components; the service provider can avoid the cost of integrating a management system along with the increased ongoing maintenance.
- *More effective NOC operations*—The advanced functions, end-to-end views, and network verification will reduce the errors associated with manual operations.
- *Simplified NOC procedures*—The integrated high-level function provided by Cisco as well as the logical constructs such as virtual switches and zones simplify NOC operations and make them more efficient and faster.
- *Increased revenue*—The Cisco Internet OSS for Voice over IP increases quality of service, which results in revenue retention by improving overall network throughput and subscriber satisfaction. Additionally, reduction of the cost of the service-network-associated VoIP will benefit the service provider from an operational standpoint. The margin on revenue from VoIP services will increase as the contribution to the ongoing operations budget decreases.

Q. What are the key features of the NMS?

A. Release 1.0 offers an end-to-end management solution that is tested and deployed with documentation and support. The primary functions of the release include:

- Flow-through, automated, and template-based provisioning for infrastructure networks
- Logical (virtual) switch and virtual SS7 gateway views
- Centralized/end-to-end dial plan and routing management
- Bulk provisioning of virtual SS7 gateways
- End-to-end packet voice network view
- Network faults correlated to virtual switch, packet voice service, and customer accounts
- Normalized packet voice performance, usage, and quality-of-service (QoS) data with thresholds integrated with fault management
- Billing data forwarded to the service provider billing OSS
- Industry-standard northbound OSS interfaces
- Application security
- Web-based operator interfaces

Q. How does the OSS map to the FCAPS model?

A. The Internet OSS for Voice over IP: Infrastructure Manager provides Fault, Configuration, Accounting Data, Performance (data collection from Cisco and management from a customer selected 3rd party) and Secure applications.

Q. Does the Infrastructure Manager manage the IP core?

A. No. The Infrastructure Manager manages the voice overlay that originates calls, terminates calls and packetizes telephony traffic.

Q. Can the Infrastructure Manager be used in the initial “turn-up” of a new network?

A. Yes, the configuration, provisioning and troubleshooting capabilities all support initial network “turn up”.

Q. Can the Infrastructure Manager be introduced into a network that is already in place?

A. Yes, the OSS can discover existing networks and the capabilities of the manager can be used to establish logical constructs like virtual switches, zones and regions.

Q. What IOS versions are covered?

A. The target IOS version is 12.2.(11)T and 12.2.(7)C; additionally, the OSS has been verified against the following:

- *AS5xxx*—IOS 12.1(5)XM; 12.2(2)XB
- *C7200*—IOS 12.2(2)T2
- *C36xx*—IOS 12.2(2)XA1



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(0208R) LW3767 10/02