

INNOMEDIA

VSP-5000

CPE PROVISIONING SYSTEM

NEXT GENERATION CPE PROVISIONING SYSTEM

The VSP-5000 is an ideal solution for streamlining the myriad configuration and management tasks associated with the deployment, operation, and maintenance of Voice- and Video-over-broadband CPE devices. The VSP-5000 can allocate and manage CPE IP addresses; distribute initialization and firmware update files to authenticated CPE devices; and log all provisioning related messages and events for every registered device. This flexible and highly-available system has been designed from the ground up to meet the evolving challenges associated with managing broadband telephony equipment.

KEY BENEFITS

Dramatically reduces network operating expenses by fully automating device management and provisioning

Expedites new feature rollout with automatic CPE firmware update capability

Highly-secure device authentication and encrypted provisioning

Supports devices deployed behind NAT/ firewall routers



VSP-5000 Hardware Platform

The VSP-5000 solves many problems associated with the management of Voice- and Video-over-IP service deployments. New CPE devices can be installed and brought into service with zero configuration, either at the point-of-sale, the distribution center, or at the subscriber's premises. Devices deployed behind NAT firewall routers are managed effortlessly, with no firewall reconfiguration. New features can be enabled via automatic software upgrades. Device configuration issues may be diagnosed with the help of extensive, real-time log information. And the VSP-5000 integrates seamlessly with other network management equipment.

FEATURES

Highly-available server architecture

The VSP-5000 is built on a pair of dual, redundant servers with shared RAID storage. Thus in the event of a hardware failure, the provisioning services are migrated seamlessly to the backup node with a minimum of downtime, typically less than a minute.



FEATURES *continued*

Provisioning Protocols: The VSP-5000 supports a wide range of provisioning protocols and variants, for example:

- HTTP or secured HTTP
- Simple, legacy configuration schemes using TFTP
- Other customized combinations can also be supported

Security Features: Several security mechanisms are available for authenticating devices, and for exchanging encrypted provisioning messages:

- RFC 2617 basic and digest (challenge-response) authentication
- Flexible key generation algorithm
- Symmetric encryption of configuration data using AES or RC4 with dynamically generated keys

Network Integration: The VSP-5000 can be seamlessly integrated with other network management equipment via its OSS interface. The HTTP interface allows for device and class information to be added, updated or deleted from the database by authorized management computers. Customized batch importing of client records from proprietary databases is supported; InnoMedia will furnish sample applications to qualifying OEM vendors demonstrating the use of the OSS interface for this purpose.

Additional Provisioning Services

- As an additional convenience, the VSP-5000 can support legacy devices that rely on simple TFTP provisioning schemes

TECHNICAL HIGHLIGHTS

The VSP 5000 integrates several databases to facilitate automated device provisioning: a device configuration database; a device software repository and a provisioning log database. Authorized operators may read and modify all of these databases via a secure, graphical web interface. Bulk modifications and queries from other, trusted network management equipment are supported via HTTP.

Properly-registered devices are granted read-only access to the provisioning databases via TFTP or HTTP. They have limited write access to the log database via SYSLOG and HTTP.

External Interfaces

The VSP-5000 exports three external interfaces to the network operator:

Client Interface - The Client Interface allows the VSP-5000 to provision IP Phones, IP Videophones, standalone MTAs, and other CPE devices using HTTP and other protocols.

Operations Management Interface - The Operations Management Interface includes a secure, web-based GUI that allows the operator to add, delete, or modify client device records and client classes. It also provides access to current device status information and log messages.

OSS Interface - The OSS interface allows the VSP-5000 to receive and process commands, so that device and class management operations can be automatically executed by an external OSS system. Operations such as adding and modifying CPE client ID records and classes are supported. This CSV interface is available via HTTP.

PROTOCOL STANDARDS CONFORMANCE

Protocol	Conformance
HTTP 1.0	RFC 2616, RFC 2617
TFTP	RFC1350
SYSLOG	RFC 3164

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