Dialogic® IP Media Server

Datasheet
IP Media Server

The Dialogic® IP Media Server is a robust software-based multimedia server that allows service providers to rapidly deliver cost-effective video solutions with a high-quality user experience over mobile and broadband networks.

As a fundamental element of a Service Delivery Platform (SDP), the Dialogic IP Media Server can power a wide variety of voice- and video-enabled value-added services (VAS), such as IVVR, MRBT, video portal, video mail, video call center, social interaction, and video advertisements.

Features	Benefits
Enables advanced video functionality, such as transcoding, transrating, transizing, and overlays, with Dialogic® control algorithms for video transcoding	Can deliver high Quality of Experience (QoE), a key element in customer satisfaction
Supplies rich voice processing for transcoding, tone detection and generation, speaker identification and verification, conference mixing, and speech; integrates Dialogic® Brooktrout® Fax Software	Can improve operator ROI by allowing the deployment of a broad range of services on a common platform
Powered by a flexible architecture that supports incremental capacity increases on industry-standard server hardware from leading manufacturers	Able to scale easily from a service trial on a single server to high-capacity solutions with redundancy on the hardware form factor chosen as most suitable for the customer's needs
Proven interoperability with application servers from major vendors; supports industry-standard interfaces and protocols, including SIP, VoiceXML, MSCML, JSR 309, NETANN, MRCP, and RTSP	Enables reduced development costs and time-to-market for deploying new services
Designed for carrier operations	Suitable for the demanding reliability, performance, and scalability requirements of a carrier environment

Solutions built with the Dialogic IP Media Server can be deployed in mobile, broadband, and wireline networks. The Dialogic IP Media Server can also be used as a Media Resource Function (MRF) network element in an IP Multimedia Subsystem (IMS) architecture for mobile and internet video solutions.

The Dialogic IP Media Server is field-proven on a wide range of industry-standard hardware platforms from leading manufacturers in a variety of form factors such as rack-mount servers, bladed servers, and AdvancedTCA. It is also offered as an application-ready appliance, with software pre-loaded on a rack-mount server.

In order to minimize operational costs for deployed solutions, the Dialogic IP Media Server can be managed remotely through a web-based operator console. It also supports remote real-time monitoring, alarming, logging, and tracing.

Solution Configuration Example

Figure 1 provides a configuration example for a VAS solution using the Dialogic IP Media Server and including the Dialogic® Vision™ CX Video Gateway for optional TDM connectivity.

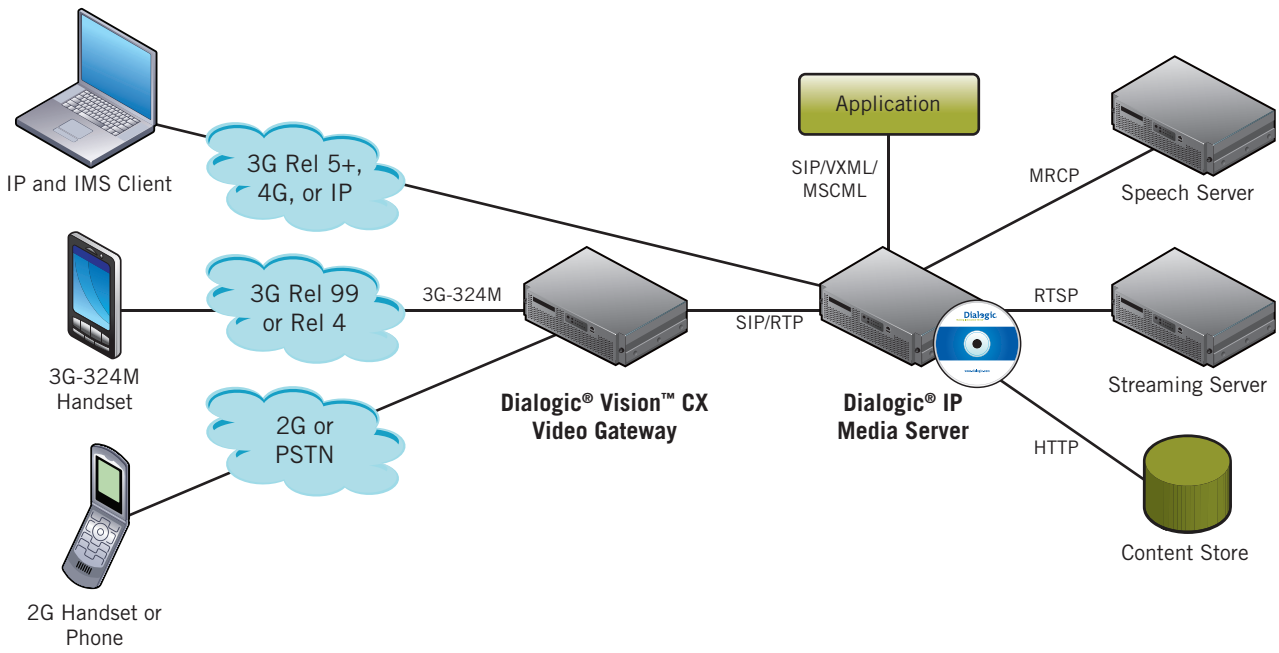

Figure 1. Configuration Example for VAS Solution

Because it supports standard protocols for speech streaming (MRCP), multimedia streaming (RTSP), and remote file access (HTTP), the Dialogic IP Media Server can provide such important functions as speech recognition and real-time access to multimedia content from streaming servers and other network-attached devices. The sample configuration in Figure 1 can be used to deliver such services as IVR and IVVR; voice and video mail, portals, and conferencing; CRBT and MRBT; prepaid calling; and call center applications connected to both TDM and IP networks.

When streaming video content, the Dialogic IP Media Server can improve user QoE by transforming video to a format that displays on user endpoints or terminals of different sizes. It can also modify video in real time for ad insertion and other purposes. In order to provide these capabilities, the Dialogic IP Media Server supports a rich variety of video transformation functions, including transcoding, transrating, transizing, and overlays.

Using the Dialogic IP Media Server also enables service providers to rapidly develop new services with open-standard SIP-based control protocols. As shown in Figure 1, applications are deployed using a separate application server available from a Dialogic partner or provided by the customer. The application server controls the Dialogic IP Media Server remotely over an Ethernet interface using protocols such as VoiceXML with video support, NETANN, or MSCML.

In addition, the Dialogic IP Media Server supports JSR 309, a Java-based media server control interface that provides an abstraction layer agnostic to the underlying media server control protocol. JSR 309 enables developers to create multimedia communications services using a Java-based application development environment.

Solutions developed using JSR 309 can be deployed with products that provide SIP- and Java-based service creation and execution environments, such as, for example, the Oracle Communications Converged Application Server, a SIP-based converged Java EE-IMS-SOA application server.

The JSR 309 API is only available as a separate software release, and is not included in releases of the Dialogic IP Media Server. For more details, contact your local Dialogic sales representative.

Also shown in Figure 1 is a Dialogic® Vision™ CX Video Gateway that can be used to connect a VAS solution to a TDM-based wireless and/or wireline network, if required.

Technical Specifications

Media and Coders

Audio

Voice play/record, tone generation/detection (DTMF, RFC2833, custom), call progress analysis, PVD/PAMD
Audio conferencing with active talker detection, DTMF clamping, coach-pupil mode, per party gain/volume control

Audio codecs:
RFC 2833 (DTMF)
G.711 μ-Law, A-Law
G.726 @ 32 kbps
G.729AB
AMR-NB

Speech support: ASR/TTS validated with third-party speech servers

Video

Video codecs:
H.263, H.263+, H.263++ Baseline Profile up to Level 30
H.264 Baseline Profile up to Level 1.3

Image size: CIF, QCIF
Frame rate: Up to 30 FPS
Bitrate: Up to 768 kbps
Video transcoding, transrating, transizing
Video Fast Update (VFU): Configurable dynamic responses to I-Frame update requests from clients
Text overlay with scrolling, transparency and multi-language support
Image overlay for logo insertion (planned for a future release)
Video conferencing — based on switched active talker
Video conferencing — continuous presence with stream mixing (planned for a future release)

File containers: .3GP, WAV, MS-GSM
File operations: HTTP and/or NFS, RTSP/RTP

Signaling, Media, and Control Interfaces

IPv4, IPv6
RTP, RTCP
SIP (RFC 3261-compliant)
SIP+MSCML
SIP+VoiceXML 2.0 with extensions for advanced video
JSR 309 (available as a separate software release)
MRCP v 1.0 and v 2.0
RTSP client support for streaming multimedia content from RTSP servers

Fax

CNG fax tone detection
ITU T.30 fax detection and termination using T.38 as a transport
ITU T.38 fax detection, reception, and transmission

Technical Specifications *(continued)*

Security
Secure Shell (SSH)
Secure logging

Capacity
Typical media sessions per server:
Audio sessions – Up to 1000 (any supported codec), depending on the system capacity
Video transcoding – Up to 400 unidirectional sessions per system (also includes audio transcoding), depending on the system capacity, codec, resolution, and frame rate.

System Management
WEB UI
FTP
SNMPv2c/v3
Command Line Interface (CLI)
Ethernet trace with packet capture

Standard Intel-Architecture-Based Platform Support:
Rack mount servers
IBM eServer BladeCenter
HP Blade Server
Dell servers
AdvancedTCA servers

Interfaces Required
Media and Signaling: 1000Base-TX Ethernet
Management: 1000Base-TX Ethernet and RS-232C serial port

Minimum System Requirements
Operating System: Red Hat Enterprise Linux 5 Update 2 (32-bit only)
Processor: Intel Dual Xeon 2.8 GHz or greater
Ethernet: Dual 1000Base-TX (RJ-45)
Memory: 2GB RAM minimum
Storage: 30GB HD minimum

Software Pre-Loaded on Servers
Servers available with Dialogic® IP Media Server pre-loaded: Rack Mount Servers based on Intel Architecture with Intel Dual Quad-core processor
Note: For information about availability, contact your local Dialogic sales representative.

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