Dialogic® IP Media Server

Release Notes

Release 2.4.0

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Contents

Dialogic® IP Media Server 2.4.0 Release Notes

These release notes provide information about Release 2.4.0 of the Dialogic® IP Media Server, including a summary of new features, issues resolved since Release 2.0, and known limitations.

Note: Release 2.1 was not made generally available to customers.

For detailed information about installing and configuring the Dialogic® IP Media Server, refer to the *Installation and Operations Guide*; for detailed information about developing applications for the Dialogic® IP Media Server, see the *Application Developer's Guide* and the *VoiceXML 2.0 Reference*; for detailed information about activating your IP Media Server license, see the *License Activation Guide*.

Please direct any questions or inquiries to Dialogic Technical Support at +1 (781) 433-9600 or americas.support@dialogic.com

New Features in Release 2.4.0

The following features have been added in the Dialogic® IP Media Server Release 2.4.0.

T.38 Fax Detection, Termination, and Initiation

Detection and Termination

This feature enables the Dialogic® IP Media Server to detect CNG Fax Tones embedded in a G.711 RTP audio stream, and to notify a VXML application script via a VXML event. The Dialogic® IP Media Server will then initiate a SIP Reinvite to the endpoint requesting a switch from the current voice coder mode to T.38 fax relay mode. Upon the completion of the SIP Reinvite, the Dialogic® IP Media Server will record the fax transmisstion to Tiff file stored locally on the Dialogic® IP Media Server and optionally convert the file to PDF format.

Initiation (Email to Fax)

This feature enables the Dialogic® IP Media Server to initiate a T.38 Fax Transmission of a file received as an attachment in an SMTP request.

For more information, refer to the Appendix, *T.38 Fax Detection, Termination, and Initiation in* the *Dialogic® IP Media Server Application Developer's Guide.*

Note: This feature is currently supported in the VoiceXML 1.0 Interpreter.

Media Server Availability via SIP Options

This feature extends the Dialogic® IP Media Server SIP Options response to return Media Server specific process availability as well as a snapshot of the current application sessions in use on the Media Server. This information will be made available when the endpoint includes in the SIP Options request an application/media_server_usage+xml accept type.

For more information, refer to the *Media Server Availability* section in the *Session Initiation Protocol (SIP)* chapter of the *Dialogic® IP Media Server Application Developer's Guide.*

Differentiated Services (DiffServ) Support

This feature enables the prioritization and servicing of incoming and outgoing SIP, RTP, RTCP, and HTTP packets based on the classification and marking of those packets.

For more information, refer to the *Configuring the Dialogic® IP Media Server* chapter in the *Dialogic® IP Media Server Application Developer's Guide.*

HTTP 301 Redirection Handling

The Dialogic® IP Media server now supports one HTTP 301 Moved Permanently with the Location Header of the alternate Application Server

The redirected URL of the App Server will be sustained throughout the VXML Dialog for subsequent submits.

Note: This feature only pertains to prompt and document fetching. This feature does not pertain to Outbound calls.

404 Media Not Found For Normal Announcements

When using the announcement service with normal media (early=no), the Dialogic® IP Media Server can now be configured to return a 404 Not Found if the content specified by the "play" parameter cannot be accessed.

Upgrading from Previous Releases

Important Note: After completion of the upgrade to Release 2.4.0, the WebUI Admin password will have been reset to <blank>. You should change your password immediately after initial login; see "Changing Administrator Password" (page 135) in the "Installation and Operations Guide".

If you are upgrading an existing installation of the Dialogic® IP Media Server from a previous release, refer to the upgrade instructions appropriate to your operating system platform, either Fedora Core 2 or Red Hat Enterprise Linux ES 4.0.

- *Upgrading from 2.2 to 2.4.0 on Red Hat Enterprise Linux ES Platforms*,
  Part Number: xxx-xxx-xx.
- *Upgrading from 2.0 to 2.2 on Fedora Core 2 Platforms*,
  Part Number: 939-030-03.

Note: If you are currently running a version of the Dialogic® IP Media Server earlier than Release 2.0, you must first upgrade your system to Release 2.0 before upgrading to release 2.4.0.

Note: Fedora Core versions of the software are now End of Life. The delivery of the last time buy was 6/30/08, and support for Fedora Core is set to end on 10/31/08.

Important Note: Before upgrading to Release 2.4.0, there are required Red Hat packages that must be installed. For the complete list of packages, please see the document titled "Red Hat 4.0 and MS 2.4"

As part of the upgrade process, command shell scripts are provided that enable you to back up and restore necessary file systems. The upgrade documents and command shell scripts are available at:

> www.cantata.com/support/Dialogic_media_server/index.cfm

If you do not have a username and password to access this site, contact Dialogic Technical Support.

Supported Platforms

The Dialogic® IP Media Server is distributed in two forms:

- An integrated server, including a hardware platform, is currently being qualified and availability is planned for Q3 2008.   Please contact Dialogic Sales for an update.

  The standard configuration of the integrated Dialogic® IP Media Server that is planned to ship with Release 2.4.0 installed will have the following specifications:

- Dual 2.8GHz Xeon processors
- 2GB RAM
- 70GB Hard Disk
- Red Hat Enterprise Linux 4.0 Update 4

Note: The MS-10A, MS-10B, MS-20A, and MS-20B hardware platforms, based on the Intel SR1300 and Intel SR2300, are no longer available for purchase.

- A software-only release for installation on an existing hardware platform meeting the standard specifications for the integrated server and running Red Hat Enterprise Linux 4.0 Update 5.

Issues Resolved

The following known issues in the Dialogic® IP Media Server (which is referred to below as "IP Media Server", "Media Server", or "IPMS") have been resolved since Release 2.0.

Issues Resolved in Release 2.4.0

Functional Area	Description
Logging	Resolved an issue where the audit.log would contain invalid XML data. (CQ53888)
Media Processing	Resolved an issue which could cause corrupt .wav recordings. (CQ53852)
	Resolved an issue where mserv would core dump during high call volume of T.30 Fax Detection and redirection to a third party Fax Server. (CQ53878)
	Resolved an issue where a recognition prompt play might fail with status "400" "Invalid XML'. (CQ53955)
SIP	Resolved an issue where received RFC2833 digits result in multiple SIP Info messages being sent for a single key press. (CQ53956)
System	Resolved an issue which could prevent Licensing from working properly during the software upgrade process. (brkt~6875)
	Resolved an issue that could cause a response failure from the License broker process. (brkt~6920)
	Resolved an issue with the SDPconnectionInSession= parameter missing after upgrading from a 2.0.6 or prior version of software. (brkt~7039)
VoiceXML1.0	Resolved an issue where certain VXML events were being properly handled during a transfer. (CQ53884)
	When calling into the IPMS and executing VXML1.0 scripts with a prompt play within a subdialog, the vxmld process encounters a core. (CQ53929)
	Resolved an issue where calls being initiated from a VXML script can be terminated using any DTMF tone before the transfer completes.

Functional Area	Description
	(CQ53941)
WebUI	Resolved an issue where the SDP Offer Codec selection list would not get displayed. (CQ53861)
	Resolved an issue where core files might not be listed in the WebUI. (CQ53901)

Issues Resolved in Release 2.3.1

Functional Area	Description
Media Processing	Resolved an issue which could cause corrupt .wav recordings. (CQ53850)
SIP	No SIP Info Response returned for a SIP Info Request made during a conference. (brkt~6915)
	Resolved an issue with having an extra channel= parameter within an MSCML mrcp_session_terminate response. (brkt~6999)
	Resolved an issue with MSCML mrcp_session_create response where the connection= and connectiontype= fields where not properly populated. (brkt~7043)
	A new configuration parameter, 'sipInviteRetries', is now supported in the Dialogic®.cfg file. The value for this parameter sets the number of 200ok retries the Media Server will send while waiting for an ACK response. (brkt~6977)
VoiceXML	When calling into the IPMS and executing VXML1.0 scripts with a prompt play within a subdialog, the vxmld process encounters a core. (CQ53925)

Issues Resolved in Release 2.3.0

Functional Area	Description
Media Processing	Memory leak when playing local GSM-encoded audio files. (brkt~6552)
	EndSilence would be reported if InitialSilence was set to a value greater than EndSilence. (brkt~6759)
	When a second participant is added to a video conference, the RTP packets sequence numbers might be reset. (brkt~6554)
SIP	Fixed a potential core dump in Sipd when placing calls with default service as Dialog and using the default launch script to define the VXML script. (brkt~6553)
	When an INVITE to the Media Server contains a referred-By header, Sipd would core dump. (brkt~6633)
	Memory corruption would occur if the Media Server received three or more Byes for a single call. (brkt~6638)

Issues Resolved in Release 2.2.1

Functional Area	Description
SIP	Sipd would dump core when more than one simultaneous announcement call is made if the configured value 'SIPAllowEarlyWithout100REL=' is set to 'Y'. (brkt~6513)

Issues Resolved in Release 2.2

Functional Area	Description
Media Processing	Forwarded RFC2833 packets did not preserve the `volume` field. (brkt-6067)
	The IP Media Server did not recognize "long" tones if some packets were lost. The IP Media Server now reads the duration from the RFC2833 information instead of calculating it from the actual duration of the packets received. (brkt-6075)
	Mserv might dump core while recording a video/x-wave file. (brkt-6402)
Logging	In some circumstances, an application could induce an IP Media Server process to log a greater amount of data than normal to its respective log file. This could cause the system to run out of disk space while rotating and storing log files. A mechanism to compress log files for storage has been added. (brkt-5874)
	In some circumstances, an application could induce an IP Media Server process to log a greater amount of data than normal to its respective log file. This could cause the maximum log file size, defined by the operating system, to be reached prior to the minimum log rotation time of 1 hour. The IP Media Server now allows for 2 additional Log Rotation settings: 15 minutes and 30 minutes. (brkt-6037, brkt-5457)
	Not all DNS Configuration settings generated an entry in the Audit Log. (brkt-6042, brkt-6227)
	Failed configuration setting changes did not generate the proper Audit Log message. Now an "Alert"-level Audit Log message is generated for certain failed operations. (brkt-6223)
	Changes to the Configure Logs page did not generate the proper Audit Log messages. (brkt-6228)
	Changes to the Manage Certificates page did not generate the proper Audit Log messages. (brkt-6232)
	Activating or deactivating a network interface did not generate the proper Audit Log messages. (brkt-6226)
SIP	An outdial could cause the UAD process to dump core during a transfer. (brkt-6213)
SNMP	"0" was not the only valid value when setting `msVxmlNumberRecoveryFailures` OID. (brkt-6299)
Networking	Web UI support has been added for proper network configuration settings when the system has been manually configured to support bonded network interfaces. (brkt-6276, brkt-6278, brkt-6258, brkt-6268, brkt-6310)
VoiceXML	In VoiceXML 1.0, an `error.badfetch` was not thrown. (brkt-6281)
Web UI	After installing a license on the IP Media Server, the left-side Menu

Functional Area	Description
	Frame was not visible. (brkt-5517)
	Configuration parameters might not be set correctly when separated by an empty line in the `Dialogic.cfg` file. (brkt-6311)
	After retrieving a config file via the Web UI, a Submit button would be blank instead of including the text "Continue". (brkt-5969)
	Changing VoiceXML Version through Web UI did not notify user that they must reboot host. (brkt-6271)
	Changing VoiceXML Version through Web UI did not modify the `/opt/Dialogic/etc/Dialogic.cfg` file. (brkt-6275)

Issues Resolved in Release 2.0.4

Functional Area	Description
Media Processing	The IP Media Server did not offer the configured "Offer Codec" for outbound calls. The IP Media Server now uses the configured "Offer Codec" for audio on outbound calls. The offered video codec for outbound calls matches the video codec of the incoming call leg. (brkt~6254)
	The IP Media Server could not record media of a conference for more than 36 minutes. The IP Media Server now allows for a maximum record duration of 240 minutes (4 hours). (brkt~6480)
	Resolved an issue where mserv might core dump while processing a record request of v-wav file type. (brkt~6402)
SIP	When a record-route header is in an Invite, the IP Media Server sends all of its responses to the proxy. However, when the Bye is sent, the IP Media Server sends it directly to the endpoint, rather than using the address in the record-route header. Sipd was modified to determine if loose routing is being used and to subsequently modify the Send To address to be the address associated with the first route in the route list. (brkt~6456)
	Resolved an issue that may cause Sipd to core dump while processing an incoming SIP Re-Invite message. (brkt~6464)
	In some sessions, the IP Media Server may send SDP with a missing IP address in the "c=" line. Sipd was modified to detect the empty IP address in the media connection and copy the IP from an internal memory address. (brkt~6465)
VXML	VXML2.0 - A session with a request URI of more than 256 characters would fail. The Request URI parameter value is no longer restricted to 256 characters. (brkt~6349)
	VXML2.0 - The IP Media Server computed the value for record duration shadow variable in seconds. The IP Media Server now computes this value in milliseconds in accordance with the VXML2.0 specification. (brkt~6353)
	VXML2.0 - Resolved an issue where the end of prompt tone would play at an increased volume. (brkt~6354)

Functional Area	Description
	VXML2.0 - Simultaneous ASR and TTS sessions do not work from within the same VXML script. This was do to the IpPacketFiltering rule having a default setting of "on". In order to run simultaneous ASR and TTS sessions, the IpPacketFiltering rule must be set to "off" in the Dialogic.cfg configuration file. (brkt~6391) Example: # For filtering ip packets that come in with a different ip address then expected # 0 = filtering is off; 1 = filtering is on # 2 = ip filtering is on and port filtering is off IpPacketFiltering=0
System	Resolved an issue with the Initialization and Logging process that could cause the msinit to go into a 99% CPU infinite loop. (brkt~6367)

Issues Resolved in Release 2.0.3

Functional Area	Description
Media Processing	In conferences using RFC2833, the IP Media Server did not pass the volume parameter through the mixing mechanism to the other legs of the conference. The other RFC2833 conference legs now receive the volume parameter and no longer play all voices at the default level. (brkt-6067)
	The IP Media Server did not recognize "long" tones if some packets were lost. The IP Media Server now uses the RFC2833 duration value instead of calculating the elapsed time from the first and last packets received during DTMF digit transmission. (brkt-6075)
	Improved error handling on supported video formats for internal/diagnostic use only.
SIP	Enhanced SIP to support loose routing as defined in RFC 3261. (FR1148)
Diagnostics	Enhanced G2Check shell script to verify that core IP Media Server applications are running. (brkt-6202)

Issues Resolved in Release 2.0.2

Functional Area	Description
Media Processing	If the IP Media Server played a tone for more than 4 seconds (32768 timestamp units), the end packets (e bit = 1) indicated a 65535 duration. (brkt-6003)
	The IP Media Server now supports conference IDs of 64 characters in length, as stated in the *Application Developer's Guide*. (brkt-6026)
	Mlaw data was recorded, but 'alaw' encoding type was written to the .au file header. This resulted in a "fuzzy" sound when playing back the file. (brkt-6035)
	If an unregistered RTP stream was sent to a port on the IP Media Server, it could cause issues if the IP Media Server tried to use that port for a call. The IP Media Server now filters packets for a given session based on the packet source IP address. (brkt-6117)
Logging	With logging levels set to a high level, such as DEBUG, during periods of heavy traffic an IP Media Server could run out of disk space or a single log file could grow to exceed the maximum file size for the OS prior to reaching the next log rotation time. This would result in a crash of IP Media Server processes. The IP Media Server now compresses log files as they are rotated, and has two additional log rotation periods, 15 minutes and 30 minutes, which are shorter than the previous minimum rotation period of 60 minutes. (brkt-6037)
SNMP	There was a data type mismatch for the msFeature MIB, SIP and RTP Call Thresholds OIDs. (brkt-6119)
Squid	Disabled the `cache.log` by default to prevent excessive logging, which could cause squid to dump core. (brkt–6023, brkt-6059)
System	A potential issue within a system threading library could cause unpredictable results on the IP Media Server. (brkt-6040)

Issues Resolved in Release 2.0.1

Functional Area	Description
Media Processing	The IP Media Server did not handle sending 2833 digits when the conference leg was parked. (brkt-5914)
	2833 DTMF forwarded into a conference might not be maintained for the correct duration. (brkt-5927)
	Conference participants received endless tone when 2833 RX packet with end bit set was lost. (brkt-5941)
	Setting logging levels for mserv had no effect. (brkt-5761).
	A situation in the mserv application could cause a slow memory leak, if digit collect was pending and a call ended. (brkt-5964)
	While processing non-standard Ethernet interface names (names containing an underbar character), msinit could dump core. (brkt-5800)
Web UI	An issue prevented clearing cache from the IP Media Server Web UI. (brkt-5798)
Squid	Disabled the cache_assess.log file to prevent squid core dump. (brkt-5998)
HTTP Proxy	The Squid application could exit because store.log was not rotated. The IP Media Server was unable to perform HTTP fetches when the Squid application exited. (brkt-5764)
Video	A few-seconds of delay occurred when playing a video silence file if the first I-frame was missing. (brkt-5573, brkt-5783)
SNMP	A situation in the snmpDeamon application could cause a slow memory leak. (brkt-5923)
	In ms_install, the snmpd.conf file would not be updated to vxml2.0 when a user was upgrading a system that had vxml 1.0 selected. (brkt-5727)
VXML	There was unnecessary fetching of VXML root document when VoiceXML browser already had it loaded. (brkt-5911)
	An audio/wav recording could not be recovered. (brkt-5756)
	Situations in vxmld application could cause a slow memory leak. (brkt-5973, brkt-5994)
SIP	Enhanced the IP Media Server to support SIP Diversion header with multiple entries. Increased the maximum size of the SIP "Diversion" header from 127 to 511 characters. Quotation marks are now allowed in the "Diversion" header. (brkt-5674)
	Fido did not post the complete value of the SIP Diversion header (i.e., posted only what was within the first set of double-quotes). (brkt-5907).
	On active talker report with multiple conferences, sipd would dump core. Before this fix was made, the IP Media Server would stop sending Activetalkers Notifications after it had been running for a

Functional Area	Description
	few days. (brkt-5759)
	Messages with unknown content-body and optional content-disposition were rejected; now they are accepted. Before this fix was made, the IP Media Server would reject the invite from Nortel CS1000 with 415 message. (brkt-5720)
	sipd would dump core on SNMP access when the configured value for max_legs was less than 300. (brkt-5799)
	A logging message could cause sipd to dump core if the inbound media direction attribute was `recvonly`. (brkt–5813)
	sipd would dump core when incoming SDP was set to `recvonly`. (brkt-5878)
	Enhanced the VoiceXML hardening feature to better handle sipd or mserv failures. (brkt-5810)
	Some configuration settings would not be read from the `Dialogic.cfg` configuration file. (brkt-5461)
Installation	The Kickstart CD, if left sitting idle for more than 3 minutes, attempted to install the IP Media Server. (brkt-5750)
	VoiceGenie files were not owned by "pw" after kickstart installation. (brkt-5806)

Known Issues and Limitations

The following are known issues and limitations in Dialogic® IP Media Server Release 2.4.0.

Functional Area	Description
Announcement Service	The maximum value of the "repeat" URI parameter for announcements is 250. If a larger value is supplied, only 250 repetitions will occur and the duration timer will not limit the announcement.
Apache	The Apache parameter MaxClients is currently set to 310.
Backup/Restore	The backup function does not back up the current user database. After a restore, the database will remain the same as it was prior to the restore.
Console	The following message might appear on the console of the IP Media Server: 　　　NFS mount version older than kernel This does not interrupt operation of the system, and can be ignored.
Error Messages	The error code contained in MSCML responses may not always indicate a failure (4XX) when the request does not conform to the MSCML grammar. This does not cause issues for the IP Media Server, but it may make application debugging more difficult.
	If establishing sessions using a complex codec (e.g., G.726, G.729ab) on the EDP–10 processing card, be aware that it takes about a minute for the card to initialize after the rest of the IP Media Server is up and running. If calls that require a complex codec are placed during this initialization period, the following SIP response will be returned: 480 BUSY HERE.
	The Fido process may generate a core dump during normal process termination due to a problem in a standard Linux library. This occurs infrequently and is not harmful because the process is being shut down. (brkt-4161)
Interoperability	Conference participants using certain Cisco phones may hear a click at regular intervals if the session timer is set on both the IP Media Server and the phone. Disabling the Session Timer on the IP Media Server is an acceptable workaround.
Logging	In VXML, the transferred calls do not show up on the statistics page of the Web UI. (brkt-3509)
Media Processing	Currently, the IP Media Server supports an RFC–1890 compliant version of G726–32 with a payload as specified in ITU-T Recommendation I.366.2 Annex E. This is the reverse of what is currently specified in RFC-3551 for G726-32. (brkt-6180)

Functional Area	Description
MSCML	A maximum of 16 direct URL references can appear in an MSCML <play>, <playcollect> or <playrecord> request. However, these direct references can expand to a URL list, so the effective limitation is 250 prompts in a single request using this indirect method. A SIP request would look like: sip:annc@MS_IP; play=http://appserver.carrier.net; prompt=afterhours The IP Media Server first retrieves the sequence of URLs from the application server and then fetches the audio files. The audio file list must include the URL scheme and the full path to the files. (brkt-3444)
Networking	During a software update to a Red Hat Enterprise Linux ES 4.0 system, the IP Media Server may lose network connectivity. In this rare event, reboot the IP Media Server.
	If the following command is entered: ssh -l maint MS_IP the connection is closed right away (TCP socket goes away). This issue does not happen under Red Hat Enterprise Linux. A workaround is to regenerate the public and private ssh host key files. (brkt-5965)
SIP	The IP Media Server does not support sequential late media re-INVITEs with hold SDP. (brkt-4905)
	The call-id is currently limited to 63 characters. (brkt-4952)
	The IP Media Server requires at least one m= line in an SDP body. (brkt-4996).
	The IP Media Server SIP implementation limits the size of some header fields to conserve memory, even though the SIP specification does not have such a limitation. The SIP RFC does not dictate maximums for these fields. This is planned to be changed in a future release. (brkt-5016)
	The IP Media Server does not respond to messages that have missing or malformed required header fields. This includes, but is not limited to, the TO and FROM headers. (brkt-5124)
	The total length of the string passed from SIPD to VXML is limited to 1024 bytes. This string includes the request-URI portion of the request line, the user name portions of the from and to headers, the content of the top-most diversion header, the entire "to" and "from" headers (including parameters), the call-id, the audio and video codecs, the hostname, port value of the audio RTP destination, and keywords. (brkt-5399)
	H.263 video is offered by the IP Media Server for late media invites when "Offer Video Codec" is configured to "None." A workaround is to manually edit the file Dialogic.cfg and change the line "SDPVideoCodec=" to "SDPVideoCodec=None". (brkt-6428)

Functional Area	Description
	The sipd application may dump core after kickstart installation. This issue does not occur after the Web UI is used to configure the network interfaces. (brkt-6350)
	With the "Media Server Availability via SIP Options" feature added in 2.4.0, the application/media_server_usage+xml Content-Type might return a packet larger than the negotiated MTU size. (CQ53885)
	An Early Announcment will return 404 status code when 1+ errors exist in CGI/URI file lists (CQ53928)
Video	It is not currently possible to have a video-only recording session with the IP Media Server. This is the case even if the silence timeout is disabled. (brkt-3837)
	If an original INVITE message does not have a video SDP section, and video SDP is then added in a re-INVITE message, the IP Media Server fails to create a video stream. This issue is currently seen only with the eyeBeam softphone, and that softphone has a configuration option that sends the video SDP in the original INVITE. (brkt-6380)
VoiceXML	The IP Media Server erroneously shows the message "cmp-proxy cannot be started" during startup. Upon login, the cmp-proxy is shown as running. (brkt-5687)
	In VoiceXML 2.0, if a requested file does not exist, no badfetch error is generated. (brkt-6376)