Dialogic® PowerMedia™ XMS Release 3.0

Release Notes

October 2017 05-2744-008

www.dialogic.com

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Revision History

This section summarizes the changes made in this and, if applicable, each previously published version of the Release Notes for PowerMedia XMS Release 3.0, which is a document that is planned to be periodically updated throughout the lifetime of the release.

Revision	Release Date	Notes
05-2744-008 (Updated)	October 2017	Release Issues: • Added the following Known Issues: 307865.
05-2744-008 (Updated)	February 2017	Release Issues: • Added the following Known (permanent) Issues: IPY00117920.
05-2744-008	December 2016	Updates to support PowerMedia XMS Release 3.0 Service Update 8 (Build 14707). Post-Release Developments: Added the MRB Adaptor Service Startup Control section. Release Issues: • Added the following Resolved Defects: IPY00118207, IPY00118244, IPY00118263, IPY00118266, IPY00118300, IPY00118314, IPY00118321, IPY00118327, IPY00118406, IPY00118408, IPY00118410.
05-2744-007 (Updated)	September 2016	Release Issues: • Added the limitation that MRB does not support MRCP in REST. • Added the following MRB Known (permanent) Issue: MRB-378.
05-2744-007	August 2016	Updates to support PowerMedia XMS Release 3.0 Service Update 6 (Build 13774) and PowerMedia MRB 1.4.26. Post-Release Developments: Added the SIP Message Counters section. Release Issues: • Added the following Resolved Defects: IPY00118154, IPY00118176, IPY00118199, IPY00118206, IPY00118214, IPY00118218, IPY00118220, IPY00118226, IPY00118227, IPY00118238, IPY00118241, IPY00118265.

Revision	Release Date	Notes
05-2744-006	July 2016	Updates to support PowerMedia XMS Release 3.0 Service Update 5 (Build 13402). Post-Release Developments: Added AMR File Format Playback and DTMF Pattern Matching Using rtk=#. Release Issues: • Added the following Resolved Defects: IPY00117945, IPY00118032, IPY00118131, IPY00118137, IPY00118140, IPY00118160, IPY00118172, IPY00118195, IPY00118199. • Updated the following Resolved Defects: IPY00118063.
05-2744-005 (Updated)	June 2016	Release Issues: • Added the following limitation regarding an HTTP Client memory leak when using the version of libcurl supplied in the CentOS 6.4 repositories: XMS-4294.
05-2744-005	June 2016	Updates to support PowerMedia XMS Release 3.0 Service Update 4. CentOS/RedHat 7.x Support: A note was added to upgrade libgc if VXML core issues are seen. Release Issues: • Added the following Resolved Defects: IPY00117847, IPY00117897, IPY00117958, IPY00118048, IPY00118059, IPY00118063, IPY00118066, IPY00118080, IPY00118100, IPY00118102, IPY00118106, IPY00118110, IPY00118118, IPY00118122, IPY00118123.
05-2744-004 (Updated)	May 2016	Supported Virtual Machines: Added the recommended number of VMs. Release Issues: • Added a limitation regarding the HTTP Client cache. • Added the following Known (permanent) Issues: IPY00117889.

Revision	Release Date	Notes
05-2744-004	April 2016	Updates to support PowerMedia XMS Release 3.0 Service Update 3. Release Issues: • Added the following Resolved Defects: IPY00117746, IPY00117937, IPY00117946, IPY00117950, IPY00117956, IPY00117957, IPY00117966, IPY00117970, IPY00117980, IPY00117990, IPY00117993, IPY00118010, IPY00118023, IPY00118030. • Added the following Known Issues: XMS-4187
05-2744-003	March 2016	Updates to support PowerMedia XMS Release 3.0 Service Update 2. Upgrading: Added a note about upgrading from PowerMedia XMS Release 3.0 Service Update 1 or PowerMedia XMS Release 2.4 Service Update 7 using the WebGUI. Release Issues: • Added the following Resolved Defects: IPY00117348, IPY00117507, IPY00117726, IPY00117768, IPY00117770, IPY00117800, IPY00117801, IPY00117804, IPY00117808, IPY00117809, IPY00117811, IPY00117812, IPY00117814, IPY00117815, IPY00117817, IPY00117820, IPY00117829, IPY00117830, IPY00117840, IPY00117844, IPY00117845, IPY00117847, IPY00117848, IPY00117852, IPY00117857, IPY00117861, IPY00117867, IPY00117869, IPY00117872, IPY00117901, IPY00117902, IPY00117903, IPY00117912, IPY00117918, IPY00117934. • Added a limitation about upgrading from PowerMedia XMS Release 3.0 Service Update 1 or PowerMedia XMS Release 2.4 Service Update 7 using the WebGUI.
05-2744-002 (Updated)	March 2016	Post-Release Developments: Added the Session Timeout Functionality section.

Revision	Release Date	Notes
05-2744-002	January 2016	Updates to support PowerMedia XMS Release 3.0 Service Update 1. System Requirements: Updated the operating system requirements. Release Issues: • Added the following Resolved Defects: IPY00117288, IPY00117547, IPY00117553, IPY00117568, IPY00117600, IPY00117602, IPY00117604, IPY00117605, IPY00117613, IPY00117616, IPY00117623, IPY00117625, IPY00117630, IPY00117631, IPY00117645, IPY00117654, IPY00117656, IPY00117661, IPY00117662, IPY00117665, IPY00117679, IPY00117682, IPY00117685, IPY00117686, IPY00117687, IPY00117690, IPY00117707, IPY00117713, IPY00117725, IPY00117735, IPY00117749, IPY00117773, IPY00117779, IPY00117784. • Added the following Known (permanent) Issues: XMS-1979, XMS-3232.
05-2744-001 (Updated)	November 2015	Upgrading: Updated the section. Release Issues: Updated XMS-2863.
05-2744-001 (Updated)	October 2015	Added the Discontinued Features section.
05-2744-001	October 2015	Initial release of this document.
Last modified: October 2017		

Refer to www.dialogic.com for product updates and for information about support policies, warranty information, and service offerings.

1. Welcome

These release notes address new features and issues associated with the Dialogic® PowerMedia™ Extended Media Server (also referred to herein as "PowerMedia XMS" or "XMS") Release 3.0. This is a document that is planned to be periodically updated throughout the lifetime of the release.

The release notes are organized into the following sections (click the section name to jump to the corresponding section):

- Overview: This section provides an overview of this release.
- Related Documentation: This section provides information about the documentation that supports this release.
- System Requirements: This section describes the system requirements for this release.
- Release Features: This section describes the new features and functionality in this release.
- Installation, Configuration, Licensing, and Upgrading: This section describes topics that are useful for getting started with this release, such as: Installation, Configuration, Licensing, and Upgrading.
- Release Issues: This section lists the issues that may affect this release.

2. Overview

Dialogic's PowerMedia XMS is a highly scalable, software-only media server that enables standards-based, real-time multimedia communications solutions for IMS, MRF, Enterprise, and WebRTC applications on premise or in the cloud. Built on 15+ years of software media processing experience, PowerMedia XMS is trusted by world-class service providers and large enterprises to power millions of rich media sessions.

With an extensive list of successful implementations that include MRF for VoLTE, carrier hosted contact centers, enterprise communications, voice messaging and "mission critical" next-generation 911 services, PowerMedia XMS has proven to be a key building block to new and innovative applications. When deployed with the optional Dialogic® PowerMedia™ Media Resource Broker (MRB), PowerMedia XMS scales to meet growing service-provider and business requirements.

PowerMedia XMS energizes application delivery by boosting performance with:

- State of the art mixing of media-rich communications
- Software providing a seamless transition to virtualization and cloud delivery
- Telco hardened scalability
- Supercharged WebRTC integration

PowerMedia XMS elevates what developers can create for their customers, from virtually any development environment, on virtually any network, and connecting to virtually any type of communication endpoint.

PowerMedia XMS is a powerful next-generation software-only media server or software Media Resource Function (MRF) IMS network element that enables standards-based, real-time multimedia communications solutions for SIP and WebRTC for mobile and broadband environments. PowerMedia XMS enables high density real-time multimedia communication functions including inbound and outbound session/call control, audio/video play and record, transcoding, transrating, transizing of video streams, multimedia conference mixing, content streaming, and a wide range of advanced supporting functions for communication sessions.

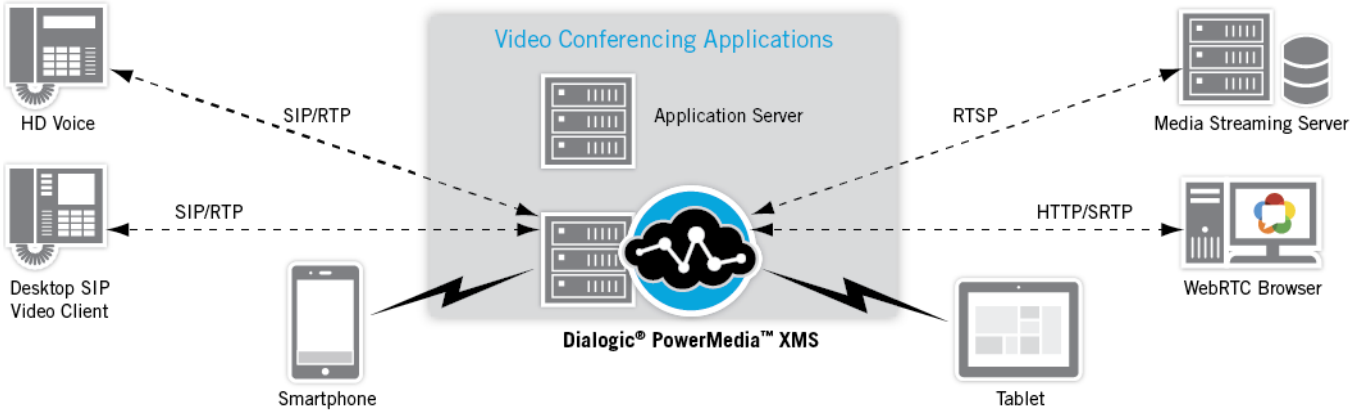
PowerMedia XMS is controlled by the business logic of applications deployed on SIP application servers and web application servers. PowerMedia XMS offers multiple media control protocols that can be used in a variety of network infrastructures. For example, a SIP application server (AS) can drive PowerMedia XMS using the MSML control interface or use the PowerMedia XMS VoiceXML (VXML) browser to execute VXML scripts and invoke MRCP speech services, like ASR and TTS. For Web 2.0 and Cloud development, a web application written in an appropriate language can control PowerMedia XMS using the HTTP RESTful interface. Similarly, the JSR 309 Connector Software for PowerMedia XMS (JSR 309 Connector) can enable Java EE developers to control real-time applications from converged application servers.

The MSML, JSR 309 Connector, VXML, RESTful, and NETANN interfaces support multimedia—both audio and video, using a variety of codecs. All PowerMedia XMS APIs provide support for handling RTP media, security (via DTLS/SRTP), and ICE negotiation from WebRTC media sources.

PowerMedia XMS provides powerful and user-friendly OA&M functionality, and can be managed remotely through a web-based operator console and the HTTP RESTful Management interface.

A wide variety of SIP endpoints can be handled by PowerMedia XMS, resulting in the delivery of rich full-duplex audio and video media streams to a variety of fixed and mobile devices. With the additional support for WebRTC media, PowerMedia XMS provides the power to mix diverse streams and enable connectivity between legacy networks, endpoints, and WebRTC.

The following figure illustrates an example of a video conferencing delivery platform for a PowerMedia XMS-based multimedia conferencing solution.



Related Information

See the following for additional information:

- PowerMedia XMS product page at http://www.dialogic.com/products/media-server-software/xms.
- PowerMedia XMS datasheet at http://www.dialogic.com/~/media/products/docs/media-server-software/12888-powermedia-xms-ds.pdf.
- PowerMedia XMS Developer Portal at http://developer.dialogic.com.
- PowerMedia XMS documentation at http://www.dialogic.com/manuals.
- Dialogic technical support at http://www.dialogic.com/support.

3. Related Documentation

This section provides information about the documentation that supports the PowerMedia XMS Release 3.0.

The following documents are available for the PowerMedia XMS Release 3.0 at http://www.dialogic.com/manuals/xms/xms3.0.aspx.

Document	Description
Dialogic® PowerMedia™ XMS Release 3.0 Release Notes	Addresses new features and issues associated with PowerMedia XMS Release 3.0.
Dialogic® PowerMedia™ XMS Quick Start Guide	Describes how to install software, access the PowerMedia XMS Admin Console for configuration management, and run the verification demo.
Dialogic® PowerMedia™ XMS Installation and Configuration Guide	Provides instructions for installing, configuring, administering, and maintaining PowerMedia XMS.
Dialogic® PowerMedia™ XMS WebRTC Demo Guide	Provides instructions for running WebRTC demos with PowerMedia XMS.
Dialogic® PowerMedia™ XMS Basic Network Media Services with SIP User's Guide	Provides detailed information about configuring Basic Network Media Services with SIP, focusing on Network Announcement (NETANN).
Dialogic® PowerMedia™ XMS Message Session Relay Protocol Feature Guide	Describes the Message Session Relay Protocol (MSRP), which is a session-oriented instant messaging protocol used to provide peer-to-peer file transfer, photo sharing, or chat services.
Dialogic® PowerMedia™ XMS MSML Media Server Software User's Guide	Provides guidelines for using the Media Sessions Markup Language (MSML) software. The MSML media server software enables a remote client, also known as an Application Server (AS), to control media resources on a media server (MS). The connection between the AS and MS is established using the SIP protocol, thereafter media control commands/responses (in the form of MSML control syntax) are exchanged in SIP messages, such as the INFO message or the 200 OK response.

Document	Description
Dialogic® PowerMedia™ XMS RESTful API User's Guide	Provides information for application developers using RESTful API over http transport to control media and call control resources of PowerMedia XMS.
Dialogic® PowerMedia™ XMS RESTful Management API User's Guide	Provides an alternative method of performing PowerMedia XMS system management tasks in an automated or distributed manner.
Dialogic® PowerMedia™ XMS Variable Content Announcements Feature Guide	Describes how to use variable content announcements for multiple languages in PowerMedia XMS.
Dialogic® PowerMedia™ XMS VoiceXML Reference Guide	Contains an alphabetical reference of supported VoiceXML elements and provides information about application properties, SSML support, session variables, and application variables.
Dialogic® PowerMedia™ XMS WebRTC JavaScript API User's Guide	Provides information on functionality to support connecting to and performing media operations on Web Real-Time Communication (WebRTC) compliant devices or endpoints (for example, browsers) with PowerMedia XMS.
JSR 309 Connector Software	
Dialogic® PowerMedia™ XMS JSR 309 Connector Software Installation and Configuration Guide	Provides the JSR 309 Connector installation and configuration information for the supported platforms. • Oracle Communications Converged Application Server (ver 5 and 7) • TeleStax Apache-Tomcat Application Server • TeleStax JBoss Application Server • TeleStax RestComm Application Server • IBM Liberty Application Server
Dialogic® PowerMedia™ XMS JSR 309 Connector Software Developer's Guide	Describes any extensions added to the JSR 309 Connector (based on JSR 309 specification) in addition to which methods/parameters are supported.

Document	Description
Media Resource Broker (MRB)	
Dialogic® PowerMedia™ Media Resource Broker (MRB) Quick Start Guide	Describes how to install software and configure the PowerMedia MRB to initiate a working test setup.
Dialogic® PowerMedia™ Media Resource Broker (MRB) Installation and Configuration Guide	Provides instructions for installing and configuring the PowerMedia MRB.

4. System Requirements

This section describes the system requirements for the PowerMedia XMS Release 3.0.

The **minimum** and **recommended** system requirements are as follows:

Item	Requirement
Hardware	Intel Architecture-based server
Operating System	**Note:** 32-bit operating systems are not supported. **ISO Method Installation:** Community ENTerprise Operating System (CentOS) 7.x **RPM Method Installation:** CentOS 7.x and 6.4 (or later) Red Hat Enterprise Linux (RHEL) 7.x and 6.4 (or later) Oracle Enterprise Linux (OEL) 6.4 **Note:** Before running the RPM Method installation, the following packages, available from the OS distributor, must first be installed: • perl-core • openssl version 1.0.1e or higher
Processor	**Minimum:** Intel Xeon E5-1620 Quad-Core (3.60 GHz, 1600 MHz, 10 MB Cache), Intel QPI (0 GT/s) for low end solutions **Recommended:** Intel Xeon E5-2665 Dual Octal-Core (2.40 GHz, 1333 MHz, 20 MB Cache), 2 Intel QPI (8 GT/s) or better for performance systems
Ethernet	Single or Dual NIC 1000Base-TX (RJ-45)
Memory	**Minimum:** 8 GB RAM **Recommended:** 16 GB RAM or higher
Storage	**Minimum:** 250 GB HDD **Recommended:** 2 TB HDD for advanced logging
Note: The recommended server configuration is applicable for higher density audio solutions of 1500 or greater sessions, video transcoding solutions, or solutions utilizing virtualization.	

Supported Virtual Machines

The supported virtual machines (VM) are as follows:

- VMWare ESXi 5.x
- Kernel Virtual Machine (KVM)
- Oracle VM
- XenServer VM

It is recommended to use two VMs when running XMS. If more than two VMs are used, there may be performance issues.

Note: Virtualization systems chosen for PowerMedia XMS should be configured for enterprise or private virtual environments that permit customization of virtual machine (VM) settings and hypervisor performance tuning. Virtual environments running PowerMedia XMS must also restrict the number of VMs hosted on a single platform to facilitate the real-time low-latency scheduling demands required for high quality media processing. Density capacity in virtual environments may vary and is generally a factor of the host platform capacity and the number of VMs running PowerMedia XMS. Generally, the aggregate density of all VMs running PowerMedia XMS will be less than the bare metal capacity of the platform.

Refer to *Dialogic® PowerMedia™ XMS Application Note: Optimizing VMware Host Hardware and Virtual Machine to Reduce Latency* at http://www.dialogic.com/webhelp/XMS/3.0/XMS_VMOptimizingAppNote.pdf for more information.

Cloud Environments

Support for cloud environments is available as a controlled introduction for Proof of Concepts (PoCs), development activities, and trials, but not for production use. For more information, refer to the following white papers:

- *Dialogic® PowerMedia™ XMS and the Rackspace Managed Cloud* at http://www.dialogic.com/~/media/products/media-server-software/download/xms-demos/Rackspace-XMS-Verification.pdf.
- *Dialogic® PowerMedia™ XMS and Amazon Web Services* at http://www.dialogic.com/~/media/products/media-server-software/download/xms-demos/AWS-XMS-Verification.pdf.

For more information on controlled introductions, refer to Controlled Introduction Features.

5. Release Features

This section describes the features and functionality supported in the PowerMedia XMS Release 3.0.

For more information, refer to the documents listed in the Related Documentation section.

PowerMedia XMS Release 3.0

The key new features and functionality include:

- Media Resource Broker (MRB)
- XMS 3.0 Licensing
- CentOS/RedHat 7.x Support
- Recording Enhancements
- Send/Receive RFC 4733 Tones Events
- HTTP-Based File Transfer
- MSML Multiple Dialog Support
- Fax Support
- Call Detail Record (CDR) Support
- Active Call Monitoring
- RESTful API Functionality
- Controlled Introduction Features
    - Video Encoder Sharing
    - Enhanced Multimedia Container Support

Media Resource Broker (MRB)

PowerMedia XMS Release 3.0 introduces integration support with the Dialogic® PowerMedia™ Media Resource Broker (PowerMedia MRB). The PowerMedia MRB is a separate software product, part of the Dialogic PowerMedia family, used to manage a pool of media servers, such as PowerMedia XMS. Each PowerMedia XMS server instance must be licensed to enable media resource management by the PowerMedia MRB.

The PowerMedia MRB is a standards-compliant, software-based Media Resource Broker that supports the PowerMedia XMS MSML media control interface for rapid application integration allowing service providers and enterprises to dynamically scale and distribute a media server resource pool across disparate applications and geographically dispersed datacenters. When used with one or more PowerMedia XMS, the PowerMedia MRB provides a reliable and resource-efficient software-based media-processing platform for scaling rich media applications such as conferencing, transcoding, and Interactive Voice Response (IVR).

The PowerMedia MRB intelligent load balancing resource allocation features make a clustered pool of PowerMedia XMS appear as a single media server element to the application server. This helps to significantly reduce application complexity while improving application server performance by offloading media load balancing and management functions. High availability, active/standby redundancy, and smart failover with call preservation features provide scalability and reliability to PowerMedia XMS.

The PowerMedia MRB is IETF RFC 6917 in-line unaware compliant and also works in IMS environments to control a pool of Media Resource Function (MRF) resources as described in 3GPP TS 23.218. For more information, refer to the *Dialogic® PowerMedia™ Media Resource Broker (MRB) Quick Start Guide,* the *Dialogic® PowerMedia™ Media Resource Broker (MRB) Installation and Configuration Guide*, and the MRB datasheet: http://www.dialogic.com/~/media/products/docs/media-server-software/14160-powermediamrb-ds.pdf.

XMS 3.0 Licensing

PowerMedia XMS Release 3.0 has licensing for enhanced support in virtual and cloud environments. In this release, the PowerMedia XMS license is now locked to a 33-byte License Node ID retrieved from the **License > License Manager** page on the XMS system WebGUI or RESTful Management API. This licensing mechanism provides more consistent support within cloud and virtualization environments where the virtual machine configuration might change between stop and restart of the saved virtual machine instances.

The XMS 3.0 licensing is designed to work on bare metal systems and in supported virtual and cloud environments. PowerMedia XMS Release 3.0 is supported in VMWare, KVM, and Xen virtual environments and has tested successfully in cloud environments, such as Amazon Web Services (AWS) and Rackspace. The PowerMedia XMS Release 3.0 licensing automatically detects supported platform compatibility.

Note: PowerMedia XMS Release 2.x licenses must be upgraded to use the new 33-byte License Node ID. Customers who have currently valid support agreements can upgrade their license from PowerMedia XMS Release 2.x to PowerMedia XMS Release 3.0. Licenses can be upgraded through the Dialogic Product Center with a valid account or by contacting your authorized Dialogic distributor.

CentOS/RedHat 7.x Support

PowerMedia XMS Release 3.0 has been updated to support Red Hat Enterprise Linux 7.0 and Community ENTerprise Operating System (CentOS) 7.0.

The PowerMedia XMS Release 3.0 ISO installation includes CentOS 7.0 Operating System and is a complete system installation with CentOS, OS optimizations, and PowerMedia XMS software.

The PowerMedia XMS Release 3.0 RPM installation is available for CentOS/RedHat 7.0 and 6.4 operating systems. The RPM installation will install the PowerMedia XMS software and prerequisite packages required to run PowerMedia XMS on the supported operating system. The RPM installation method is available for those customers looking to upgrade from PowerMedia XMS Release 2.x to PowerMedia XMS Release 3.0 without upgrading the underlying operating system.

Note: Occasional VXML core issues were seen when running Red Hat Enterprise Linux 7.x and CentOS 7.x. To resolve the issues, upgrade the operating system's version of libgc:

- For Red Hat Enterprise Linux 7.x, refer to https://rhn.redhat.com/errata/RHBA-2016-1030.html.
- For CentOS 7.x, update to version 2.17-106.el7_2.6 or later.

Recording Enhancements

PowerMedia XMS Release 3.0 has been updated with new recording enhancements for greater record flexibility on RTP streams during joined, bridged, or conferenced audio and video calls. This feature is an API enhancement that provides applications the ability to capture separate call leg recordings and allows an application to start and stop the single party record independently of a call leg joining a conference or joining another endpoint. This feature is well-suited for speech analytics software or other call center applications that require surveillance and lawful intercept where a recording of the call leg is desired during the extent of the call scenario.

For example, if there are two parties in a conference, PowerMedia XMS can simultaneously record the first party (single party record), the second party (single party record), and the summed output of the conference. Similarly, PowerMedia XMS can record each party of a bridged/joined call through the system independently of the joined connection status.

Send/Receive RFC 4733 Tone Events

PowerMedia XMS Release 3.0 supports send/receive of the full range of RFC 4733 tone events (0-255). This feature allows an application to generate both DTMF and non-DTMF Telephony events from application control when the SDP is negotiated to RFC 2833/RFC 4733. This can be used in generating a non-DTMF Telephony event, such as a Hookflash event, or in generating DTMF RFC 2833/RFC 4733 RTP telephony events based on WebRTC signaling events in a WebRTC Gateway application.

The RFC 4733 (https://tools.ietf.org/html/rfc4733) recommendation specifies the "RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals" and obsoletes the original RFC 2833 specification. This release adds send/receive support of all RFC 4733 Tone Event definitions (0-255) beyond the initial set of DTMF telephony events (0-15) used to represent digits 0-9, A-D, *, #. The changes in this release also allow an application to support the modem and text tone event definitions specified in RFC 4734 (https://tools.ietf.org/html/rfc4734), or channel oriented signaling tone events specified in RFC 5244 (https://tools.ietf.org/html/rfc5244).

Send/Receive of RFC 4733 tone events have been implemented in MSML and RESTful API. The send/receive RFC 4733 tone event capability is integrated into the standard DTMF digit generation and detection API when RFC 2833/RFC 4733 mode is negotiated upon SDP media session establishment. The non-DTMF tone events are indicated by the 3-digit numerical representation of the tone event and have standard RTP telephony event packet characteristics.

HTTP-Based File Transfer

PowerMedia XMS Release 3.0 supports independent HTTP file transfer operations to offer applications flexible and robust HTTP file handling. The HTTP transfer APIs are supported in the MSML API.

The <fileop> and <transfer> methods have been updated to support HTTP GET from server to local storage and HTTP PUT from local storage to HTTP server locations. The independent HTTP file transfers can be called within MSML scripts to provide flexible manipulation and transfer of files between HTTP servers, local storage, and MSRP endpoints. The HTTP-based file transfer can also be called on a media-less control channel to perform HTTP transfers independent of call script processing.

For example, applications can now transfer files from HTTP server to local storage, manipulate the local file, and transfer the manipulated file back to HTTP storage. This capability provides an application the flexibility to transfer files locally for manipulation with file operations, such as "file append," that are otherwise not available for files stored remotely on an HTTP server. HTTP transfer also provides temporary local storage options to allow applications to perform independent HTTP transfer retries in the event of HTTP server failures or timeouts.

For more information, refer to the *Dialogic® PowerMedia™ XMS MSML Media Server Software User's Guide.*

MSML Multiple Dialog Support

PowerMedia XMS Release 3.0 MSML implementation supports multiple <dialogstart> methods in the same MSML script. The feature has been implemented per the MSML specification, RFC 5707 (https://tools.ietf.org/html/rfc5707), to allow "forked" execution of dialogs in separate parallel threads. The feature is useful for MSML applications that choose to embed multiple MSML dialogs in the same SIP INFO message for parallel processing.

For more information, refer to the *Dialogic® PowerMedia™ XMS MSML Media Server Software User's Guide.*

Fax Support

PowerMedia XMS Release 3.0 supports Fax Send and Fax Receive capability. PowerMedia XMS supports the v.17 ITU modem standard for both T.38 and G.711 fax transmission. The PowerMedia XMS MSML API has support for the Fax Send/Receive Package, along with a majority of the attributes and parameters defined by the specification for fax transmission. Fax is an optional licensable feature of PowerMedia XMS that can be added to the system to enable fax services on a new or existing installation.

The PowerMedia XMS software can support both T.38 FoIP transmission and provide fall-back to G.711 fax transmission for remote endpoints that do not support T.38 fax. Fax over G.711 is the transport method for standard FoIP as an extension of traditional PSTN audio-based faxing. T.38 fax is an ITU-T recommendation that allows fax data to be carried over IP network and supports data transmission of fax and controls redundancy to mitigate the effect of packet loss in order to promote the greatest interoperability with fax devices.

The PowerMedia XMS fax software provides many features, including multiple page faxes, header and footer insertion, and support for multiple fax resolutions, page sizes, baud rates, and encoding formats. The PowerMedia XMS software also supports RFC 6913, "Indicating Fax over IP Capability in SIP" to indicate that a fax resource is requested, simplifying the fax call flow.

For more information, refer to the *Dialogic® PowerMedia™ XMS MSML Media Server Software User's Guide.*

Call Detail Record (CDR) Support

PowerMedia XMS Release 3.0 supports Call Detail Record (CDR) generation. A CDR stores information about the details of a call. On PowerMedia XMS, a CDR is a stored data set record for each signaling and/or media transaction on the system. The CDR files are updated at multiple stages of the call and provide an administrator insight into the specific call handling. The CDR provides details such as session type, duration, timestamps, ports used, codecs negotiated and call success or failure. The PowerMedia XMS CDRs also provide Quality of Service (QoS) metrics such as jitter, packet transmission, packet reception and packet loss of the media sessions. The CDR files are collected in a PowerMedia XMS database and exported to flat text files in csv format for user consumption. The PowerMedia XMS CDR files can be used by system administrators for debugging, historical reporting, and tracing system usage.

For more information, refer to the *Dialogic® PowerMedia™ XMS Installation and Configuration Guide*.

Active Call Monitoring

The PowerMedia XMS Release 3.0 WebGUI has Active Call Monitoring capability. Active Call Monitoring provides system administrators with a continuously updated view of calls through the PowerMedia XMS to allow monitoring of channel state and call durations. Active Call Monitoring works with the PowerMedia XMS Call Detail Record (CDR) database to provide call level details of active CDR records and the ability to filter the query results for a customized filtered view. System administrators can use the Active Call Monitoring and CDR queries to filter the calls based on criteria such as call duration, call state, call protocol, called/calling URI, or QoS metrics.

RESTful API Functionality

PowerMedia XMS Release 3.0 provides functionality updates to the RESTful API, which include updates to the Call Resource, Call Sub-Resource, Conference Resource, Conference Sub-Resource, Events, Text and Image Overlay, and media file formats. In addition, RESTful now supports both HTTP and HTTPS. Application changes may be required depending on which features are used.

For more information, refer to the *Dialogic® PowerMedia™ XMS RESTful API User's Guide.*

Controlled Introduction Features

In addition to General Availability of Release 3.0 features and functionality described above, PowerMedia XMS Release 3.0 also introduces new functionality in a controlled introduction. The Controlled Introduction features are those that are under development or that have a limited scope before being made generally available. These features are available for customers that are looking to perform Proof of Concept (PoC) with the listed functionality. Customers interested in these features should contact their Dialogic Sales Representative or Technical Support Service Engineer for further information on usage.

The following features are offered in Controlled Introduction:

- Video Encoder Sharing Support
- Enhanced Multimedia Container Support

Video Encoder Sharing Support

As a Controlled Introduction feature, PowerMedia XMS Release 3.0 supports Video Encoder Sharing. Video Encoder Sharing includes Dialogic patent-pending video technology that provides enhanced performance for video conferencing and video mixing applications. Video Encoder Sharing works by reducing the CPU required to perform the most CPU intensive video function: video encoding. In video conferencing applications, such as for WebRTC video conferencing between browsers, the video conference output can be encoded once and shared among various multiple users.

The Video Encoder Sharing technology provides the capability to encode once for a number of video conference participants and perform dynamic bitrate adaptation to each endpoint independently. This feature increases the number of supported sessions while treating the network conditions to each party uniquely, promoting better video quality at each endpoint. This feature, combined with the centralized video mixing, also provides reduced bandwidth over point-to-point video sharing between WebRTC browsers.

For more information, refer to the *Dialogic® PowerMedia™ XMS Installation and Configuration Guide*.

Enhanced Multimedia Container Support

As a Controlled Introduction feature, PowerMedia XMS Release 3.0 supports additional multimedia containers, MPEG4 (MP4) and Matroska (MKV). Both new multimedia container formats can be used for direct play and record of audio and/or video media.

MPEG4 (.mp4) Container Support

PowerMedia XMS Release 3.0 has been updated to support MP4 record and playback. The MP4 (MPEG-4 part 14 file format) container is one of the most popular Internet file formats and used in many mobile devices and Internet applications to stream multimedia data.

Some of the highlighted functionality provided in this release for the MP4 container includes the following:

- Play and record directly to and from .mp4
- Support for audio only, video only, and multimedia (A/V) files
- Supported video codecs: H.264, MPEG4, and H.263
- Supported audio codecs: AMR-NB and AMR-WB

  Note: AAC codec is not supported in .mp4 container.
- DVR modes: skip forward, skip back, pause, and resume

Matroska (.mkv) Container Support

PowerMedia XMS Release 3.0 has been updated to support MKV record and playback. The MKV container (Matroska container format) is an Open Standard and Open Source container format that can support a wide range of video, audio, and track data. The MKV container is popular because of its support as a container for WebRTC codecs, such as the VP8 video codec and the OPUS audio codec. Additionally, Google based its WebM (VP8/OPUS) container on the MKV format.

Some of the highlighted functionality provided in this release for the MKV container includes:

- Play and record directly to and from .mkv
- Support for audio only, video only, and multimedia (A/V) files
- Supported video codecs: VP8 and H.264
- Supported audio codecs: OPUS, AMR-NB, and AMR-WB
- DVR modes: skip forward, skip back, pause, and resume

Discontinued Features

Customers should make note of features that were removed or discontinued in PowerMedia XMS Release 3.0. The discontinued features are those that are still available and supported PowerMedia XMS Release 2.4 and earlier but will no longer be available after a product upgrade. Customers interested in these features should contact their Dialogic Sales Representative or Technical Support Service Engineer for further information on implications to their specific application and any workarounds that might exist.

The following features have been removed from PowerMedia XMS Release 3.0:

- **Legacy "MSML-Only" Mode:** XMS 3.0 fully supports MSML in standard distribution. The MSML-only XMS Admin Console setting has been removed and legacy MSML mode capped in XMS 3.0. The Legacy MSML-only mode functionality is supported for customers using XMS 2.4 and earlier.
- **RESTful API Call Resource "overlay" Property:** The RESTful Call resource overlay property was previously supported for text overlay on call resources for media plays/records. This specific video overlay functionality has been removed from XMS 3.0. XMS 3.0 fully supports video caption overlays and video region_overlays on conference resources. Refer to the RESTful API Functionality section and the *Dialogic® PowerMedia™ XMS RESTful API User's Guide* for more information.

PowerMedia XMS Release 2.4

For notable features and functionality included in PowerMedia XMS Release 2.4, refer to the *Dialogic® PowerMedia™ XMS Release 2.4 Release Notes* at:

http://www.dialogic.com/webhelp/XMS/2.4/XMS_ReleaseNotes.pdf

PowerMedia XMS Release 2.3

For notable features and functionality included in PowerMedia XMS Release 2.3, refer to the *Dialogic® PowerMedia™ XMS Release 2.3 Release Notes* at:

http://www.dialogic.com/webhelp/XMS/2.3/XMS_ReleaseNotes.pdf

PowerMedia XMS Release 2.2

For notable features and functionality included in PowerMedia XMS Release 2.2, refer to the *Dialogic® PowerMedia™ XMS Release 2.2 Release Notes* at:

http://www.dialogic.com/webhelp/XMS/2.2/XMS_ReleaseNotes.pdf

PowerMedia XMS Release 2.1

For notable features and functionality included in PowerMedia XMS Release 2.1, refer to the *Dialogic® PowerMedia™ XMS Release 2.1 Release Notes* at:

http://www.dialogic.com/webhelp/XMS/2.1/XMS_ReleaseNotes.pdf

PowerMedia XMS Release 2.0

For notable features and functionality included in PowerMedia XMS Release 2.0, refer to the *Dialogic® PowerMedia™ XMS Release 2.0 Release Notes* at:

http://www.dialogic.com/webhelp/XMS/2.0/XMS_ReleaseNotes.pdf

Applicable Third Party License Information

FFmpeg

This software uses libraries from the FFmpeg project licensed under the LGPLv2.1, and source code for these libraries can be downloaded from the distributable image for PowerMedia XMS.

6. Installation, Configuration, Licensing, Logging, and Upgrading

This section describes topics that are useful for getting started with the PowerMedia XMS Release 3.0, such as: Installation, Configuration, Licensing, and Upgrading.

For more details describing how to install software, access the PowerMedia XMS Admin Console for configuration management, and run the verification demo, refer to the *Dialogic® PowerMedia™ XMS Quick Start Guide*.

For more details providing instructions for installing, configuring, administering, maintaining, and upgrading PowerMedia XMS, refer to the *Dialogic® PowerMedia™ XMS Installation and Configuration Guide*.

For more details on running a WebRTC demo with PowerMedia XMS, refer to the *Dialogic® PowerMedia™ XMS WebRTC Demo Guide*. Because WebRTC demos require an HTTPS connection, the guide provides the necessary procedures to set up and establish the secure connection for each compatible web browser prior to running a WebRTC demo.

For more details providing instructions for installing and configuring the JSR 309 Connector, refer to the *Dialogic® PowerMedia™ XMS JSR 309 Connector Software Installation and Configuration Guide*.

For more details providing instructions for installing and configuring Dialogic® PowerMedia™ MRB, refer to the *Dialogic® PowerMedia™ Media Resource Broker (MRB) Quick Start Guide*. and the *Dialogic® PowerMedia™ Media Resource Broker (MRB) Installation and Configuration Guide*.

Note: For limitations or issues related to installing or upgrading PowerMedia XMS, refer to the Release Issues section beforehand for more information.

Installation

There are two installation methods available:

- ISO Method
- RPM Method (used for a CentOS or RHEL installation)

ISO Method

The ISO installation method is a complete system installation that includes the CentOS, OS optimizations, and PowerMedia XMS software. The ISO can be installed from a DVD drive to a physical or virtual machine.

For more information, refer to the *Dialogic® PowerMedia™ XMS Quick Start Guide* and *Dialogic® PowerMedia™ XMS Installation and Configuration Guide*.

RPM Method

The stand-alone RPM installation method is used for installation on top of a pre-existing CentOS or RHEL installation. The RPM installation will install the PowerMedia XMS software and prerequisite packages required to run PowerMedia XMS. The RPM installation will also make OS adjustments for real-time audio and video processing required for optimal performance.

For more information, refer to the *Dialogic® PowerMedia™ XMS Quick Start Guide* and *Dialogic® PowerMedia™ XMS Installation and Configuration Guide*.

Configuration

There are two configuration methods available:

- PowerMedia XMS Admin Console
- RESTful Management API

PowerMedia XMS Admin Console

The PowerMedia XMS Admin Console ("Console") is a secure web-based GUI used to manage PowerMedia XMS. The Console can be reached using a web browser and the PowerMedia XMS IP address.

For more information, refer to the *Dialogic® PowerMedia™ XMS Quick Start Guide* and *Dialogic® PowerMedia™ XMS Installation and Configuration Guide*.

RESTful Management API

The RESTful Management API is an alternate way of configuring and performing system management tasks for PowerMedia XMS. The RESTful Management API is a remote API carried over HTTP transport that allows the option to incorporate configuration elements into an application or web interface in a more automated or distributed manner.

For more information, refer to the *Dialogic® PowerMedia™ XMS RESTful Management API User's Guide*.

Licensing

PowerMedia XMS comes with a 4-port verification license to get started. The name of the license file is *verification.lic*.

PowerMedia XMS evaluation software can be requested by filling out a form through the Dialogic website at http://www.dialogic.com/products/media-server-software/xms/xms-download.aspx.

PowerMedia XMS production licenses or trial licenses for larger session installations can be obtained through your authorized Dialogic distributor or by contacting Dialogic Inside Sales (insidesales@dialogic.com).

The following licensing capabilities are supported in this release:

- **Hardware-Independent Licensing:** The license is locked to a 33-byte License Node ID retrieved from the XMS system WebGUI or RESTful Management API.
- **Additive Licensing:** To increase licensed resources or scale system capability, you can augment an existing license with multiple licenses. The licenses must be production (non-trial or non-verification) licenses.

Logging

In PowerMedia XMS Release 3.0, the default logging level is set to DEBUG. The DEBUG setting provides the most intensive logging levels. For production-level traffic or high density testing, it is recommended to set the logging level to ERROR because the ERROR setting provides the lightest logging levels. To set the logging level, go to the **System > Diagnostics** page in the PowerMedia XMS Admin Console.

When running XMS Diagnostics logging at increased logging levels (e.g., DEBUG), there is additional CPU and hard drive access loading. The loading is dependent on the channel density of the system and also the level of logging that has been enabled. If system performance issues are encountered, users may need to reduce the channel load or reduce some of the debugging prints.

Upgrading

As part of the PowerMedia XMS Admin Console, the **Upgrade** page of the **System** menu provides the option to upgrade the system by uploading a system upgrade package.

Perform the following steps to upgrade the system:

1. Select the **System** menu.
2. Click the **Upgrade** tab.
3. Click **Browse** from the **Upload System Upgrade Package** section to access a system upgrade package file (.tgz) that has been downloaded.
4. Once you select the system upgrade package file, click **Upload**. After the upload completes, the system upgrade package file will be listed in the **System Upgrade Package** section.
5. Locate the appropriate system upgrade package file and click **Upgrade**.

Note: If upgrading from XMS 3.0 Service Update 1 or XMS 2.4 Service Update 7, you must use the command line upgrade process. There is a known defect in the XMS 3.0 SU1 and XMS 2.4 SU7 WebGUI upgrade process. If you have already attempted to upgrade using the WebGUI, you can remove and reinstall XMS using the command line installation. Refer to "RPM Installation and Script Options" in the *Dialogic® PowerMedia™ XMS Installation and Configuration Guide* for information on how to upgrade your system using the command line upgrade script.

Note: If there is already a system upgrade package file listed in the **System Upgrade Package** section, you can click **Upgrade** on the appropriate system upgrade package file.

Note: XMS configuration settings are preserved when upgrading the XMS system. Direct user modifications to XMS files may be overwritten with upgraded versions.

7. Post-Release Developments

This section describes significant changes to the PowerMedia XMS Release 3.0 subsequent to the general availability release.

MRB Adaptor Service Startup Control

XMS 3.0 Service Update 8 provides the ability to enable or disable the MRB Adaptor from the WebGUI or RESTful Management API. Customers can now choose to enable or disable the MRB Adaptor service based on their deployment scenario. The MRB Adaptor is disabled by default on a clean installation of XMS 3.0 SU8. When upgrading an existing XMS system, the previous state of MRB Adaptor is preserved.

As of XMS 3.0 SU8, the MRB Adaptor is disabled at startup by default on a clean installation. In order to use the MRB with XMS, the MRB Adaptor must be enabled via the WebGUI or via command line during RPM installation.

The command line installation script provides an additional option (--xms-optsrv) that can be used to install XMS with the MRB Adaptor enabled or disabled. For example:

```
xms_install.pl --xms-optsrv adaptor=on
```

Refer to the *Dialogic® PowerMedia™ XMS Installation and Configuration Guide* for more information.

SIP Message Counters

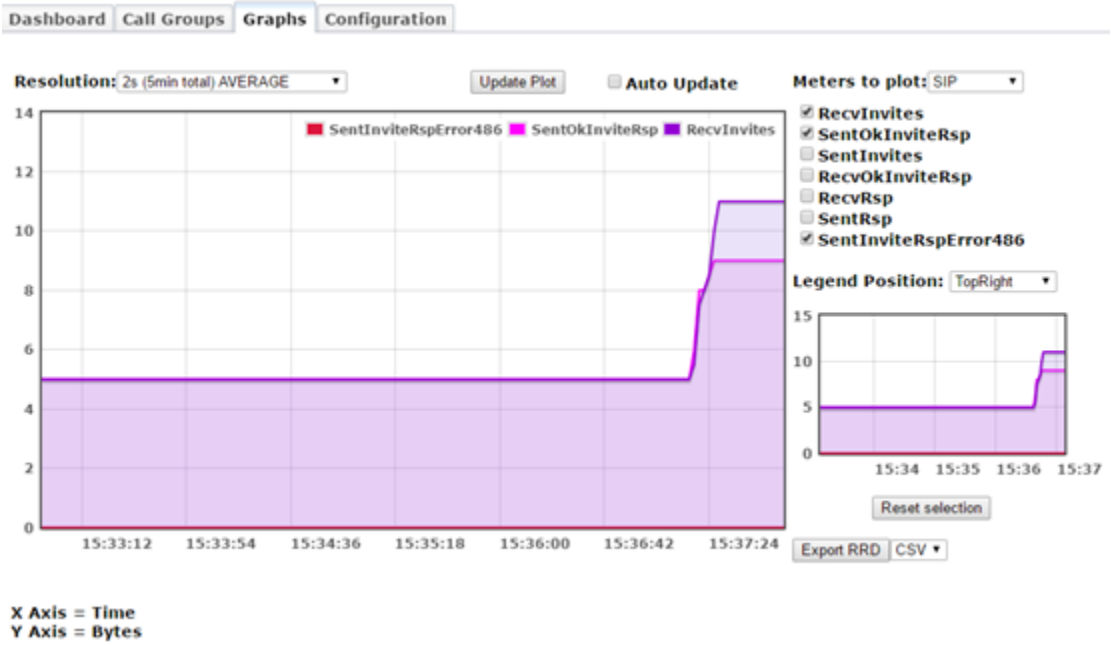
A new set of meters has been added to the XMS WebGUI **Monitor > Graphs** page as of XMS 3.0 Service Update 6. These meters track the count of various SIP messages sent and received. They allow you to monitor the number of INVITEs sent and received and track their success (200 OK).

These are the new meters available:

- **RecvInvites** - INVITE message received (inbound calls, reinvites, session timer refreshes, etc.).
- **SentOKInviteRsp** - 200 OK messages sent to a received INVITE.
- **SentInvites** - INVITE message sent (outbound calls, reinvites, session timer refreses, etc.).
- **RecvOkInviteRsp** - 200 OK message received to INVITEs sent.
- **RecvRsp** - Total number of responses received to all requests (100, 180, PRACK, etc.)
- **SentRsp** - Total number of responses sent to all requests (100, 180, PRACK, etc.).
- **SentInviteRspError486** - 486 messages sent out.

  Note: INVITEs that receive 486 responses due to license exhaustion may not be included in the RecvInvites count.

In the following example call graph, a few INVITEs presented were forced to receive a 503 error (Service Unavailable). In the graph, this is represented by the the SentOKInviteRsp being at a lower count than the RecvInvites line.



AMR File Format Playback

As of XMS 3.0 Service Update 5, XMS default behavior has changed to report a play complete with a zero duration when an AMR file that only contains a header is played. Prior to XMS 3.0 SU5, a dialog.exit.status=410 error message was returned. Depending on the desired business logic, application server changes may be needed to handle this new default behavior when playing an AMR file that only contains a header.

To revert to the default behavior prior to XMS 3.0 SU5, edit the */etc/xms/hmp/hmp.conf* file so that amr_file_validation=0, as shown below:

```
[mmrsc]
amr_file_validation=0
```

Note: The values of amr_file_validation are as follows:

- amr_file_validation=1 enables AMR file validation checking and return success.
- amr_file_validation=0 disables AMR file validation checking and returns an error if the AMR file is empty.

Note: Restart services after changing the default behavior.

DTMF Pattern Matching Using rtk=#

With XMS 3.0 Service Update 4, when performing DTMF pattern matching using MSML rtk=# and no digits are entered, XMS responds with MSML result code dtmf.noinput. Prior to XMS 3.0 SU4, XMS responded with dtmf.nomatch. Application changes may be required to accommodate the change in behavior.

Session Timeout Functionality

As of XMS 3.0 Service Update 1, the Session Timeout parameter on the **Protocol > SIP** WebGUI page is only applied if the application indicates to use the Session Timeout parameter in the initial INVITE offer. If an application does not indicate to use the Session Timeout parameter in the initial INVITE offer, the session will not be refreshed when the value of the Session Timeout parameter is met. For example, if an application does not indicate to use the Session Timeout parameter and there is no BYE for the session, the call will not be refreshed when the value of the Session Timeout parameter is met so the call will remain active indefinitely.

8. Release Issues

This section lists the issues that may affect the PowerMedia XMS Release 3.0 and PowerMedia MRB.

This section also lists all of the issues that were resolved (usually either fixed or documented) in the following releases:

- PowerMedia XMS Release 2.4 Service Update 12 (Release Notes)
- PowerMedia XMS Release 2.3 Service Update 6 (Release Notes)
- PowerMedia XMS Release 2.2 Service Update 11 (Release Notes)
- PowerMedia XMS Release 2.1 Service Update 2 (Release Notes)

Limitations

PowerMedia XMS Release 3.0 has the following limitations:

- The RPM installation method can automatically install prerequisite operating system packages. If installing PowerMedia XMS on an existing system, it is recommended to have the yum package manager configured to use the online repository or a repository consisting of a locally mounted DVD or ISO of the operating system version being installed on.
- When upgrading a previous PowerMedia XMS installation and using the RESTful programming interface, verify the route entries in the **Routes** page of the PowerMedia XMS Admin Console after the upgrade completes.
- When using the web upgrade method for PowerMedia XMS, ensure your system has net-snmp (x86_64), net-snmp-libs (x86_64), and net-snmp-libs (i686) installed before the upgrade, or have yum enabled with the standard repository that matches your OS (the prerequisite packages will be installed automatically).

  Note: When using the command line upgrade method for PowerMedia XMS, appropriate messages will be displayed instructing the user to install those packages if yum is not configured.

PowerMedia MRB Release 1.4 has the following limitations:

- The MRB does not support MRCP in REST.

Considerations

GNU Bourne Again Shell (Bash) Vulnerability

A vulnerability "Shellshock" has been reported in the GNU Bourne Again Shell (Bash), the common command-line shell used in most Linux/UNIX operating systems (OS). The flaw could allow an attacker to remotely execute shell commands by attaching malicious code in environment variables used by the OS. Patches have been released to fix this vulnerability for affected OS versions. Note that the current solution does not completely resolve the vulnerability. We recommend that the user install existing patches and pay attention for updated patches.

PowerMedia XMS makes use of the bash shell in several components. For ISO installations, we recommend that the user log into the PowerMedia XMS command line and update the bash package with the following command line:

```
# yum update bash
```

For PowerMedia XMS RPM installations, the user should check the version of bash package installed and apply any patches if required. Additional information about Shellshock can be found at http://www.us-cert.gov/ncas/alerts/TA14-268A.

Issues Tables

The following tables list issues that affect the PowerMedia XMS and PowerMedia MRB. The following information is provided for each issue.

Issue Type

This classifies the type of release issue based on its effect on users and its disposition:

- Known – A minor issue. This category includes interoperability issues and compatibility issues. Known issues are still open but may or may not be fixed in the future.
- Known (permanent) – A known issue or limitation that is not intended to be fixed in the future.
- Resolved – An issue that was resolved (usually either fixed or documented) in this release.

Defect No.

A unique identification number that is used to track each issue reported.

SU No.

For defects that were resolved in a Service Update, the Service Update number is shown.

Product or Component

The product or component to which the problem relates; for example, an API.

Description

A summary description of the issue. For non-resolved issues, a workaround is included when available.

Issues Sorted by Type, PowerMedia XMS

Issue Type	Defect No.	SU No.	Product or Component	Description
Resolved	IPY00118410	8	WebGUI	WebGUI does not restrict the character set in username and password.
Resolved	IPY00118408	8	XMS	The Call-Info from SIP header is not delivered to REST application.
Resolved	IPY00118406	8	Phrase Server	Digits are not being played in Spanish.
Resolved	IPY00118207	8	Nodecontroller	There is high memory usage when MRB adaptor is running.

Issue Type	Defect No.	SU No.	Product or Component	Description
Resolved	IPY00118300	8	Appmanager	XMS does not respond to re-INVITE because the media is sent to an incorrect connection end point.
Resolved	IPY00118314	8	CDR	No CDR files are being generated, and XMS reports a CDR creation failure trap.
Resolved	IPY00118266	8	MRCP	MRCP create session fails with a "5 Configuration Error" message.
Resolved	IPY00118263	8	WebGUI	Changes to the DNS search path parameter on the **Network > DNS Configuration** page of the WebGUI are not preserved after restart.
Resolved	IPY00118327	8	XMS	No RTP is detected when inbound call is connected.
Resolved	IPY00118321	8	XMS	XMS is not detecting DTMF during record collect operation using starttimer.
Resolved	IPY00118244	8	XMS	A memory leak on the SSP has been observed during recording that keeps increasing over time.

Issue Type	Defect No.	SU No.	Product or Component	Description
Known	307865	8	HMP	XMS will fail to start due to a xmserver crash after upgrading openssl to openssl-1.0.2.k-8.0.1.el7.x86_64. Do not update openssl until this issue is fixed in a future release of XMS. **Note:** Installing XMS software on a new installation of CentOS/RHEL 7.x (or later) that does not have the redhat-lsb package installed or upgrading the redhat-lsb package on existing systems will encounter this issue because the latest redhat-lsb package automatically pulls down the latest version of openssl. There is no simple way to revert back to the 1.0.1e version. For new systems, installing XMS using the ISO method may be used as a workaround as the ISO image contains compatible redhat-lsb and openssl packages.
Known (permanent)	IPY00117920	8	XMS	XMS is recognizing CED tone in VXML while playing a file even when no tones are being sent. **Workaround:** If a false positive occurs, comment out the CED tone definition in *system-tones.conf* under */etc/xms/tones.d*.
Resolved	IPY00118227	6	Appmanager	An outbound call from XMS is not processed correctly when the far end requires PRACK and call progress analysis (cpa) is enabled on XMS.
Resolved	IPY00118226	6	Appmanager	XMS rejects incoming INVITEs with "408 Request Timeout" or "no response", which causes the far end point to send a CANCEL.

Issue Type	Defect No.	SU No.	Product or Component	Description
Resolved	IPY00118199	6	Appmanager	XMS does not respond to an incoming SIP BYE message because the mrcpclient is trying to connect on a speak request, but TTS is not configured.
Resolved	IPY00118206	6	HMP	The aspect ratio of the participant's video stream is not maintained within the conference.
Resolved	IPY00118154	6	HMP	The maximum jitter buffer size is hard-coded to be double the nominal value.
Resolved	IPY00118218	6	MSML	The msmlserver service segfaults when the asterisk (*) and pound (#) keys are continuously pressed during a call.
Resolved	IPY00118265	6	MSRP	The MSRP service core dumps during traffic.
Resolved	IPY00118214	6	MSRP	The msrpservice process core dumps during load tests.
Resolved	IPY00118176	6	Nodecontroller	After XMS is rebooted, the NTP setting "Synchronize date and time over the network" resets to disabled.
Resolved	IPY00118220	6	VXML	The XMS VXML application log produces a "Form items must have unique names" error.
Resolved	IPY00118238	6	WebGUI	There is a 404 Error when adding a new MRCP server on the XMS WebGUI if the ID matches the ID that was used when creating the MRCP server.
Resolved	IPY00118241	6	XMS	When a caller is unjoined from a conference using the unjoin command, the caller can still be heard by the other conference participants because the audio stream into the conference is not removed.

Issue Type	Defect No.	SU No.	Product or Component	Description
Resolved	IPY00118199	5	Appmanager	XMS does not respond to an incoming SIP BYE message because the mrcpclient is trying to connect on a speak request, but TTS is not configured.
Resolved	IPY00118131	5	HMP	XMS MSML returns a dialog.exit.status=410 error message when XMS plays an AMR file without a payload (AMR header only). Refer to AMR File Format Playback for details.
Resolved	IPY00118032	5	HMP	Under production load, the server enters a state where it quickly exhausts all of the 750 LICs and starts rejecting calls. This state does not clear and requires the server to be reset.
Resolved	IPY00118140	5	Nodecontroller	The nodecontroller crashes when downloading a newly generated backup file from the WebGUI.
Resolved	IPY00118195	5	XMS	The display name is missing in outbound SIP REST calls.
Resolved	IPY00118172	5	XMS	Resource exhaustion is experienced during audio and video slamdown stress testing.
Resolved	IPY00118160	5	XMS	XMS does not include the SDP offer in a 180 provisional response for an INVITE that includes "require: 100rel" but does not include an SDP offer.
Resolved	IPY00118137	5	XMS	The audio_location and video_location fields are missing in end_record events.
Resolved	IPY00117945	5	XMS	Occasionally, XMS stops sending responses to REST requests coming from the application.
Resolved	IPY00118122	4	Appmanager	Video messages cause incorrect behavior over audio sessions.

Issue Type	Defect No.	SU No.	Product or Component	Description
Resolved	IPY00118080	4	HMP	Partial AMR-SID payload is sent out from XMS when using bandwidth-efficient mode.
Resolved	IPY00118066	4	HMP	A segfault occurs in SSP when recording video and all licenses are in use.
Resolved	IPY00117958	4	MRCP	After a few calls, there is no response for a set-asr-param request.
Resolved	IPY00118123	4	MSML	The DTMF starttimer event occurs when the MSML DTMF starttimer is disabled.
Resolved	IPY00118102	4	MSML	A static image overlay does not appear in the specified conference region.
Resolved	IPY00118100	4	MSML	The MSML service segfaults when DTMF collection terminates while still receiving digits.
Resolved	IPY00118063	4	MSML	XMS delays the MSML response in recognizing the return key (#) when no digits are entered and responds with result code dtmf.nomatch. Refer to DTMF Pattern Matching Using rtk=# for details.
Resolved	IPY00118059	4	Nodecontroller	When the nodecontroller is not running, the status of the nodecontroller is reported as still running.
Resolved	IPY00118110	4	VXML	There are core dumps for calls with longer call hold time that hit different VXML parts.
Resolved	IPY00117897	4	VXML	VXMLinterpreter crashes because of JavaScript.
Resolved	IPY00117847	4	VXML	The VXMLinterpreter crashes occassionally when 79 calls per second is reached.

Issue Type	Defect No.	SU No.	Product or Component	Description
Resolved	IPY00118118	4	XMS	When a MSML application sends an INVITE without SDP to the XMS, XMS responds with IPv4 address 0.0.0.0 instead of an IPv6 address.
Resolved	IPY00118106	4	XMS	Uploading and switching between license files results in the SIP section of *xmserver.conf* being deleted.
Resolved	IPY00118048	4	XMS	MKV recordings with OPUS and VP8 codecs cannot be played on non-XMS players. The audio codec is reported as undefined.
Resolved	IPY00118010	3	Appmanager	MSML SIP sessions are not released in certain hangup scenarios.
Resolved	IPY00117980	3	HMP	There are frames left behind in conference regions after a participant is unjoined from the stream/call.
Resolved	IPY00117956	3	HMP	Incorrect information about NAL units may be forwarded to the H.264 decoder when packets for fragmented NAL units are lost, which causes the H.264 decoder to crash.
Resolved	IPY00117746	3	HMP	The video stream in a video conference disappears when the layout is changed in certain scenarios.
Resolved	IPY00118030	3	MSML	When an application sends a BYE, XMS does not send an OK response.
Resolved	IPY00117946	3	MSRP	All MSRP transfer request dialogs exit with "[message]: 2 Not Found: error".
Resolved	IPY00117993	3	Nodecontroller	In the WebGUI, the DNS fields on the **Network > DNS Configuration** page are blank.

Issue Type	Defect No.	SU No.	Product or Component	Description
Resolved	IPY00117957	3	RESTful	There is a javax error when the xmsrest schema has a value of "none" for media_type.
Resolved	IPY00117966	3	Video	When a participant joins an existing video conference, the participant's video feed is black in the conference.
Resolved	IPY00117990	3	VXML	VXML is not parsing complex MRCP interpretations.
Resolved	IPY00118023	3	XMS	XMS does not respond with a 200 OK to an <unjoin> INFO request, and when the INFO request is resent, there is a 500 Cseq Too Small For This Call error message.
Resolved	IPY00117970	3	XMS	The XMS sends an SDP offer with the wrong ICE candidate IP address, which results in no audio.
Resolved	IPY00117950	3	XMS	XMS does not include the precondition option tag in the "Require" header in accordance with TS24.229.
Resolved	IPY00117937	3	XMS	XMS deletes the recorded file when the next <record> operation with append enabled fails at the prespeech timer.

Issue Type	Defect No.	SU No.	Product or Component	Description
Known	N/A	3	HTTP Client	If the majority of media files being stored on an external HTTP server have unique file names (e.g., voicemail recordings for individual accounts), the HTTP Client cache may grow considerably as each uniquely named file is stored in the cache. **Workaround:** If the uniquely named files are rarely accessed, performance may be improved by disabling **HTTP Cache** on the **HTTP Client Configuration** page of the XMS WebGUI. If the uniquely named files are frequently accessed (e.g., standard greetings and prompts), **HTTP Cache** should remain enabled. **HTTP Cache** is enabled by default.
Known	XMS-4294	3	HTTP Client	An apparent memory leak in HTTP Client has been observed when running HTTP load tests. The memory leak occurs in an operating system supplied library (libcurl) used by HTTP Client. **Workaround:** If a memory leak is observed, upgrade libcurl to a version greater than the one supplied in the official CentOS 6.4 repositories.
Known	XMS-4187	3	MSML	MSML may become unresponsive when multiple MSML dialogs and conference instructions are mixed under a single INFO payload.
Known (permanent)	IPY00117889	3	XMS	When the creation of a call fails because the destination URI is invalid, the call failure response is not reported and the resources remain in the USE state. If a resource leak is discovered, verify that the destination URI is correct.
Resolved	IPY00117861	2	Appmanager	XMS does not send SIP PRACK when prack_mode is automatic.

Issue Type	Defect No.	SU No.	Product or Component	Description
Resolved	IPY00117845	2	Appmanager	XMS is unable to generate DTMF tones and an active media source error is returned.
Resolved	IPY00117840	2	Appmanager	XMS leaks RTP sessions.
Resolved	IPY00117808	2	Appmanager	Play fails with the error "9 Stream not ready" when multiple "1xx-reliable INVITE response" is received before the 200 OK.
Resolved	IPY00117852	2	CDR	CDR flat files are not being generated.
Resolved	IPY00117830	2	FAX	Sending a fax fails when the source URI is HTTP, the file-type is PDF, and "Allow Absolute Paths" is set to "NO".
Resolved	IPY00117912	2	HMP	There is noise when playing audio files in G.722 format.
Resolved	IPY00117857	2	HMP	Intermittent freeze in recorded video when using clients over WiFi.
Resolved	IPY00117844	2	HMP	When recording a file, the video and audio become unsynchronized.
Resolved	IPY00117820	2	HMP	SSP crash if network is not active and configured when XMS is started.
Resolved	IPY00117812	2	HMP	When updating the OS packages, the "yum update" command fails.
Resolved	IPY00117770	2	HMP	XMS returned a 486 Busy message when using an IPv6 address in the transfer.
Resolved	IPY00117918	2	HTTP Client	The HTTP connect timeout is not configurable below 10 seconds.
Resolved	IPY00117811	2	HTTP Client	DNS requests are sent every minute despite the TTL being less than one minute.

Issue Type	Defect No.	SU No.	Product or Component	Description
Resolved	IPY00117800	2	Install (RPM)	The upgrade process does not preserve all of the user-configured settings.
Resolved	IPY00117934	2	MSML	XMS uses V.34 for outbound calls, but V.34 is not a supported protocol.
Resolved	IPY00117902	2	MSML	The implementation of play maxtime is per child. **Note:** This issue has been resolved so that the implementation of play maxtime is per entire play, which is RFC 5707 compliant.
Resolved	IPY00117867	2	MSML	There is a missing play terminate event if an announcement to a conference is immediately terminated.
Resolved	IPY00117809	2	MSML	MSML service segfaults while unmuting a conference.
Resolved	IPY00117507	2	Video	There are video quality issues on an inbound stream to XMS from an H.263 client.
Resolved	IPY00117348	2	Video	There are video quality issues when transcoding video between different endpoints with asymmetric codecs (H.263/H.264).
Resolved	IPY00117903	2	VXML	The VXML variable length input is being set to undefined even though minlength and maxlength are defined.
Resolved	IPY00117901	2	VXML	The VXML variable length input is being set to undefined due to a parsing error in reading the content type from an MRCP server.
Resolved	IPY00117869	2	VXML	When using the say-as value set to builtin, XMS does not play back certain data.

Issue Type	Defect No.	SU No.	Product or Component	Description
Resolved	IPY00117848	2	VXML	A re-record of voicemail is not getting posted/saved.
Resolved	IPY00117847	2	VXML	vxmlinterpreter seg faults under load.
Resolved	IPY00117829	2	VXML	At high call rates, error.semantic errors occur occasionally.
Resolved	IPY00117872	2	WebGUI	When the Meters to plot is set to Network on the **Monitor > Graphs** page, data is displayed for a non-existent Eth0 interface.
Resolved	IPY00117817	2	WebGUI	If any parameter is changed on the WebGUI and the services are rebooted, then the flag sdpless_reinvite resets to "no".
Resolved	IPY00117815	2	WebGUI	When trying to apply a change to the **Monitor > Configuration** page, there is an error.
Resolved	IPY00117814	2	WebGUI	The **Hostname** field on the **Network > DNS Configuration** page is empty.
Resolved	IPY00117804	2	WebGUI	The HTTP cache in *xmserver.conf* is changed from default to disabled.
Resolved	IPY00117801	2	WebGUI	The NTP list is not shown on the **System > Time** tab.
Resolved	IPY00117768	2	WebGUI	XMS fails to start after uploading a license file that contains brackets.
Resolved	IPY00117726	2	XMS	The "msml.dialog.exit" event is not sent out to the application server after the play transaction complete.

Issue Type	Defect No.	SU No.	Product or Component	Description
Known	N/A	2	WebGUI	If upgrading from XMS 3.0 SU1 or XMS 2.4 SU7, you must use the command line upgrade process. There is a known defect in the XMS 3.0 SU1 and XMS 2.4 SU7 WebGUI upgrade process. If you have already attempted to upgrade using the WebGUI, you can remove and reinstall XMS using the command line installation. Refer to "RPM Installation and Script Options" in the *Dialogic® PowerMedia™ XMS Installation and Configuration Guide* for information on how to upgrade your system using the command line upgrade script.
Resolved	IPY00117665	1	CDR	The CDR Service fails.
Resolved	IPY00117656	1	FAX	HMP and xmserver services fail when using additive licensing that contains fax.
Resolved	IPY00117604	1	FAX	Faxserver segfaults if there is no extension provided in the filename with the fax receive request.
Resolved	IPY00117547	1	FAX	Fax send and receive when the URI length is more than 221 characters long.
Resolved	IPY00117725	1	HMP	There is a DTLS negotiation issue that causes calls to fail.
Resolved	IPY00117631	1	HMP	The HMP CLIAGENT service has a segmentation fault.
Resolved	IPY00117568	1	HMP	XMS stops accepting calls after running for a long period of time during moderate load testing.
Resolved	IPY00117553	1	HMP	During a video layout change, ssp_x86Linux_boot crashes.
Resolved	IPY00117713	1	HTTP Client	Audio URL PUT requests fail.

Issue Type	Defect No.	SU No.	Product or Component	Description
Resolved	IPY00117679	1	HTTP Client	XMS occasionally fails to play prompts and an HTTP 522 error is reported.
Resolved	IPY00117735	1	Install (RPM)	If the prelink package is installed on a CentOS 6.4 system, cdrserver and nodecontroller fail at startup.
Resolved	IPY00117645	1	Licensing	When using Xen paravirtualization, the License Node ID cannot be obtained.
Resolved	IPY00117779	1	MSML	The MSML <play> iterate value of -1 does not cause the <play> to repeat indefinitely.
Resolved	IPY00117707	1	Video	There are issues with video when using Oracle Communications WebRTC Session Controller.
Resolved	IPY00117749	1	VXML	When the logging level is set to WARNING or ERROR from the **System > Diagnostics** page of the WebGUI, the vxmlinterpreter and libssml log files exceed the number entered for the **Rotate Log Files** parameter.
Resolved	IPY00117687	1	VXML	VXML Interpreter has a segmentation fault.
Resolved	IPY00117661	1	VXML	The libssml log files exceed the number entered for the **Rotate Log Files** parameter on the **System > Diagnostics** page of the WebGUI.
Resolved	IPY00117654	1	VXML	VXML calls use the default VXML URI instead of the configured VXML URI.
Resolved	IPY00117602	1	VXML	VXML connection protocol sub-objects for media information return incorrect information, no information, warnings, and errors for certain media items.

Issue Type	Defect No.	SU No.	Product or Component	Description
Resolved	IPY00117630	1	WebGUI	On the **Monitor > Configuration** page of the WebGUI, an error message is displayed.
Resolved	IPY00117625	1	WebGUI	On the **Monitor > Graphs** page of the WebGUI, the timestamps are off by 1 hour.
Resolved	IPY00117623	1	WebGUI	When exporting a CSV file from the **Monitor > Graphs** page, the CSV file is empty.
Resolved	IPY00117605	1	WebGUI	When attempting to upgrade from XMS 2.2 SU9 to XMS 3.0 from the WebGUI, the upgrade fails.
Resolved	IPY00117784	1	XMS	When XMS is behind NAT and receives a re-INVITE, XMS sends the media server IP address instead of the NAT IP address in the SDP of the 200 OK.
Resolved	IPY00117773	1	XMS	XMS does not support sending more than one file per MSRP session extension.
Resolved	IPY00117690	1	XMS	The NETANN SIP Contact header includes URI parameters.
Resolved	IPY00117686	1	XMS	Intermittent RTP session failures when handling mixed IPv4 and IPv6 calls.
Resolved	IPY00117685	1	XMS	XMS rejects all inbound calls with a 503 Service Unavailable message.
Resolved	IPY00117682	1	XMS	After receiving a re-INVITE without SDP, XMS replies with 200 OK with SDP, but the SDP is inactive so there is no audio when the call is resumed after being held.

Issue Type	Defect No.	SU No.	Product or Component	Description
Resolved	IPY00117662	1	XMS	When using early media, the same SDP is being sent in the 200 OK and the 183 responses. **Note:** As of the resolution of this issue, SDP is only sent in the 183 response.
Resolved	IPY00117616	1	XMS	The MRF chooses different codecs for voice and DTMF in the 200 OK.
Resolved	IPY00117613	1	XMS	There is a missing conference party video after the layout regions of a conference are modified using <ModifyConference>.
Resolved	IPY00117600	1	XMS	In a conference, playing media with an invalid URI on a call leg breaks the existing conference.
Resolved	IPY00117288	1	XMS	The H.264 fails to negotiate, which causes poor video quality because the session to negotiates down to QCIF.
Known	XMS-1979	1	HMP	Intermittent SSP crash while playing .3gp files.
Resolved	IPY00117549		HMP	XMS 3.0 fails to start after upgrading from XMS 2.4.
Resolved	IPY00117120		HMP	During voicemail deposit and retrieval, xmserver produces a segmentation fault (segfault) when full logging is enabled.
Resolved	IPY00117053		HMP	An invalid SIP header causes the XMS to stop responding to all inbound calls and to stop logging for a period of time.
Resolved	IPY00117558		MSML	The value of fax.totalpages shadow variable returns 0 with the <faxopcomplete> event even when fax send and receive is successful.

Issue Type	Defect No.	SU No.	Product or Component	Description
Resolved	IPY00117557		VXML	When running a VXML script that detects DTMF, it does not recognize * and #.
Resolved	IPY00117106		WebGUI	When the time zone is changed, a message appears that services have to be stopped. When services are stopped, the time zone has to be changed again.
Resolved	IPY00117581		XMS	When CPA is enabled, unattended transfers fail.
Resolved	IPY00117304		XMS	In a video only WebRTC connection where the physical network connection is disabled, XMS does not send the RESTful alarm event for rtp or rtcp timeout.
Known	XMS-2918		Fax	XMS will answer t.38 call request when no fax resources are enabled.
Known	XMS-2728		Fax	XMS incorrectly reports basic audio licenses as free once the call is switched over to fax.
Known	XMS-3004		HMP	AMR files sometimes take longer to play than expected.
Known	XMS-2933		HMP	The first digit on a string is omitted when a conference stream is modified to unmute sporadically.
Known	XMS-2983		HTTP	When running a var_silence test, a play operation failed error occurs.
Known	XMS-2965		MSML	MSML legacy is only supported on CentOS 6.x systems.
Known	XMS-2926		MSML	Conference recording feature may not return correct error responses when reporting an error condition.
Known	XMS-2897		MSML	XMS may respond with 408 request timeout to INVITE even though there are adequate resources to service the request.

Issue Type	Defect No.	SU No.	Product or Component	Description
Known	XMS-2892		MSML	When sending destroy conference request just before play/record starts the conference will not be destroyed until the play/record completes.
Known	XMS-2845		MSML	Resources (such as SIP licenses) may not be freed in certain situations leaving the resource permanently allocated and requiring the XMS services to be restarted in order to clear the condition.
Known	XMS-2782		MSML	XMS intermittently reports 430 error for <dialogend>.
Known	XMS-2662		MSML	Multiple MSML dialogs within a single SIP INFO message are processed in parallel. If dialogs reference the same call or conference, objects may fail with "transaction still active" error.
Known	XMS-2550		MSML	XMS responds with 200 OK and 180 without SDP after receiving a PRACK with SDP indicating preconditions.
Known	XMS-1880		MSML	When sending a forward event to a play operation, the stream may rewind to the nearest I-frame instead of fast forwarding.
Known	XMS-1795		MSML	The append attribute for the <transfer> and <fileop> elements is not supported for video (.vid or .3gp) or for audio (.3gp).
Known	XMS-1327		MSML	In certain call scenarios, join and unjoin may fail intermittently with either a 450 or 500 error response code.
Known	XMS-751		MSML	The terminate.finalsilence event will be accepted and terminate the recording; however, the final silence is not removed.

Issue Type	Defect No.	SU No.	Product or Component	Description
Known	XMS-3005		Licensing	When recording the audio and video of a conference, an additional video license for the transcoder is required.
Known	XMS-2920		REST	When a call is connected with SRTP, the REST server sends <call_response> with encryption="none" instead of encryption="SRTP".
Known	XMS-2874		RTP	Intermittent authentication failure of SRTP connections.
Known	XMS-2780		Verification Demo	The verification demo does not tear down the conference room once all parties have disconnected from the conference.

Issue Type	Defect No.	SU No.	Product or Component	Description
Known	XMS-1248		VMware VMXNET3	The VMware VMXNET3 NIC driver that is included in the CentOS/RHEL 6.x distribution has a known defect that may cause a kernel panic when the Linux ethtool command is used to set TX and RX ring buffer sizes. When installing XMS on a guest VMware virtual machine (ESXi 5.x or later) running RHEL 6.x / CentOS 6.x or later, it is highly recommended that the latest version of the VMware VMXNET3 driver is installed prior to installing XMS. The latest version of the VMware VMXNET3 driver can be found in the most recent version of the VMware Tools package. It should be noted when installing VMware Tools, you must set the "clobber-kernel-modules" option to override the version of the VMXNET3 driver that is included as part of standard Linux distributions. An example is as follows: `./vmware-install.pl --clobber-kernel-modules=vmxnet3` Failure to update the VMware VMXNET3 driver prior to attempting installation of XMS may result in a fatal kernel panic. For product documentation to install VMware Tools, refer to the following link: http://www.vmware.com/support/pubs For guidelines on VMware Tools installation and configuration, refer to the following link: http://www.vmware.com/pdf/vmware-tools-installation-configuration.pdf
Known	XMS-2135		WebRTC	Only initial party receives audio/video when using join_demo.

Issue Type	Defect No.	SU No.	Product or Component	Description
Known	XMS-2952		XMS	An error message is produced when running both audio and MSRP at or near the license limit.
Known	XMS-2473		XMS	Intermittent hang when restarting XMS services when using fax services.
Known	XMS-1866		XMS	Sending preconditions in a SIP re-INVITE is not supported.
Known	XMS-1783		XMS	When the Video Encoder Sharing option is set as static, TMMBR may have undesirable effects including low quality video.
Known	XMS-1287		XMS	A memory leak on the SSP has been observed at about 300MB every 24 hours during some scenarios when running WebRTC.
Known	XMS-1250		XMS	A memory leak on the xmserver has been observed at about 4MB every 24 hours during some scenarios.
Known	XMS-830		XMS	The xmserver does not respond with proper b=AS when receiving SDP offer with the attribute in session level.

Issue Type	Defect No.	SU No.	Product or Component	Description
Known (permanent)	XMS-2863		HTTP	When using both HTTPS and lighttpd under high stress, XMS performance is negatively impacted. The factors that cause this are as follows: • Lighttpd can cause performance issues when handling HTTPS transactions. • XMS uses libcurl, which has code that blocks during HTTPS transactions. The performance penalty of using both HTTPS and lighttpd grows under the constant load. This causes the XMS to perform negatively in various ways. For example, delays in fetching prompts and lost media transactions have been observed. During Dialogic® testing, these issues were not observed when using Apache, so consider using alternative HTTP servers for high volume deployments.
Known (permanent)	XMS-3028		Install (ISO)	In some cases, text and image overlays for conferencing captions are not visible in video conferences after installing XMS 3.0 on CentOS 7. To resolve the issue, open a terminal session on the XMS system, update the following packages, and restart the system: • yum update glib2 • yum update gdk-pixbuf2
Known (permanent)	XMS-2830		Install (ISO)	Newer servers require OS install boot media to be UEFI bootable.
Known (permanent)	IPY00102868		MSML	Simultaneous play and record with record beep is not possible because both play and record cannot transmit to the same connection.

Issue Type	Defect No.	SU No.	Product or Component	Description
Known (permanent)	IPY00102674		MSML	When playing audio and video, both files must reside on either local (file://) or server (http://).
Known (permanent)	IPY00102025		MSML	MSML returns error when using the <var> element with "duration" type and "yrs" subtype.
Known (permanent)	XMS-2579		MSML	MSML legacy does not accept session IDs and session versions longer than 9223372036854775807, which causes re-INVITEs to be ignored.
Known (permanent)	XMS-2999		SR140	When using driver modules that are not supplied by Red Hat, the following message is found after rebooting XMS: kernel: boston: module verification failed: signature and/or required key missing - tainting kernel. However, the message is not an indication of a problem.
Known (permanent)	XMS-2885		WebGUI	Changing user settings (user passwords, polling times in options menu) can make user credentials temporarily invalid. Refreshing the page in the browser resolves the issue.
Known (permanent)	XMS-3232		XMS	The API supports both 8 kHz and 16 kHz for the sampling rate of Opus recordings, but XMS internally uses the sampling rate of 16 kHz for generating Opus audio streams.

Issues Sorted by Type, PowerMedia MRB

Issue Type	Defect No.	SU No.	Product or Component	Description
Known (permanent)	MRB-378	6	MRB	If a MSML join command is sent to a media server prior to receiving an ACK and P-MRB headers are not used, the MSML join command does not function properly.
Known	MRB-178		MRB	If failover occurs while performing an unjoin, the MRB will fail to respond to the unjoin.
Known	MRB-134		MRB	MRB does not transmit MSML send events to the correct media server.
Known	MRB-129		MRB	When the conference is moved to the new MS such that all licensed ports are taken over, the Signaling Sessions are reduced to 0. This results in OPTIONS pings to the MS getting returned with a "486 Busy Here", which the MRB adaptor interprets to mean the MS has failed.
Known	MRB-97		MRB	There are active dialogs on the conference (such as record or play announcement into the conference) when the MRB decides to perform a failover. In this case, the active dialogs are not recreated on the conference after it has been failed over to the different XMS.
Known			MRB	MRB does not support the management of multiple MSML conference instances in a single SIP control channel.