

HP OpenCall Media Platform 4.3

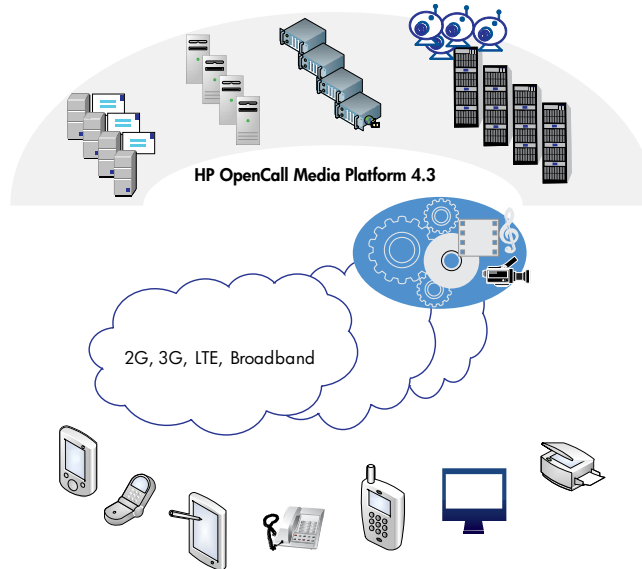
Data sheet

HP OpenCall Media Platform (OCMP) 4.3 meets the requirements of today's as well as tomorrow's networks. With its rich features, OCMP 4.3 supports applications ranging from traditional Interactive Voice Response (IVR) to advanced video portals and conferencing. OCMP 4.3 is also designed to be a common media server across different networks as well as being a corner-stone when for example providing an "IVR in the Cloud" service.

With an increased adoption of wireless data, 3G, IP Multimedia Subsystem (IMS) and Long Term Evolution (LTE), VoIP-enabled voice and video services are now essential. HP OpenCall Media Platform 4.3 is a carrier grade IP media server that integrates easily with many types of solutions that make transitions through network evolutions smooth. You can start with 2G, 3G, and all types of traditional networks, move to next-generation networks (NGN) and evolve to full IMS—all while using the same platform and having less impact on applications and operations. Widely deployed and backed by the HP global support and delivery organization, makes HP OpenCall Media Platform 4.3 an ideal choice for now and for the future.



Figure 1: Voice mail, video mail, conferencing, recording, IVR, voice portal, video portal.



Key differentiators

- Seamless support for different network deployment models including TDM and IP service node, Service Resource Function (SRF), Multimedia Resource Function (MRF), and Multimedia Resource Function/Processor (MRFP)
- Deployed and tested with a variety of different applications and in different environments
- Software solution that runs on industry-standard servers with commercial operating systems
- Has HP global support and delivery organization's support

Using a common media server

Service provider applications that require media-processing capabilities are numerous. Examples include:

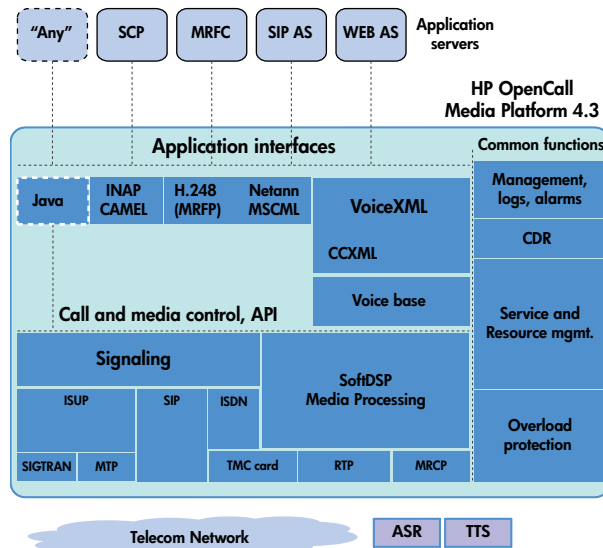
- Network IVR
- Voice/video portal
- Call completion
- Contact center
- Voice/video mail
- Voice/video conferencing

- Network recording
- Tele-voting
- Ring Back Tone
- Voice SMS
- SRF in an Intelligent Network (IN)
- MRF or MRFP in IMS network
- IVR for pre-paid

It is typically less expensive to buy and maintain 1 media server with 1000 ports and use it for 10 different applications, than buying a total of 1500 ports in 10 different media servers from 10 different vendors.

The benefits of using the same media server across different applications are becoming increasingly accepted in the marketplace. A common, de-coupled media server is also in-line with the modular architecture defined within IMS. HP OpenCall Media Platform 4.3 has been inherently designed for such use cases, including strong support for a seamless migration path towards achieving full IMS.

Figure 2: HP OpenCall Media Platform 4.3 outline



Efficient use of resource

Media handling resources are often expensive. This is true for both less advanced operations such as playing an audio or video prompt but even more so for features such as Automatic Speech Recognition (ASR) and Text To Speech (TTS). Different applications do not always peak at the same time, makes sharing media server capacity a clear value proposition. The common media server capacity need is less than the combined needs of its individual applications.

Preserve investments—adapt to changes

When adopting a common media server, it is important to make sure that applications can be deployed on different networks and can adapt to network changes. With HP OpenCall Media Platform 4.3, this is made possible through its application transparent multi-protocol support.

Applications developed for ISDN user part (ISUP) on Signaling System #7 (SS7) can typically migrate with little or no effort through Signal Transport (SIGTRAN) to Session Initiation Protocol (SIP) and, finally, IMS. Not only will this help avoid re-investments in existing applications, but the use of the same platform can deliver significant operational cost savings.

Rapid development

VoiceXML/CCXML is the foundation for rapid application development for many types of media applications. With its browser-server paradigm, VoiceXML/CCXML application development can fully benefit from the power of all available web server technologies and tools. In addition, the HP Network IVR solution provides a full set of components and services to complement HP OpenCall Media Platform 4.3 for efficient IVR service creation and execution.

Rapid deployment

With HP OpenCall Media Platform 4.3, going from development to deployment is an efficient process. In many cases, applications can be developed on SIP, for the benefit of a lightweight test and development environment, but can then be deployed to production on time-division multiplexing (TDM)—without any application changes. With its built-in support for simultaneous SIP and TDM access, HP OpenCall Media Platform 4.3 reduces the differences between testing and development, and enables a short deployment turnaround time.

Using an HP OpenCall Media 4.3 Platform as a common media server:

- Avoids “application silos” and vendor lock-ins
- Enables cost-efficient resource sharing between applications
- Preserves application investment throughout network migrations
- Provides a future proof investment—today

Proven Solution

With More than 900,000 ports shipped to over 50 countries with more than 150 major communications service providers, HP CMS has demonstrated 20 years expertise in developing and deploying voice and video media platform.

HP Network IVR

HP OpenCall Media Platform is a key component within the HP Network IVR. This solution complements the media server with components and services comprising a fully featured IVR development, deployment, and reporting environment. The HP Network IVR provides functionality such as prompt management, contact center plug-ins, VoiceXML service creation environment, and reporting and statistics.

HP OpenCall Media Platform 4.3 supports multiple applications and a range of network connectivity options—all within the same platform

Product overview

HP OpenCall Media Platform 4.3 offers a highly scalable, easy-to-manage, carrier-grade media platform that adapts to future networks and applications. Through its strong support of open standards and protocols, new applications can be rapidly developed and deployed in a way that preserves investments and reduces capital expenditures (CAPEX) and operational expenditure (OPEX).

Application development

Applications for HP OpenCall Media Platform 4.3 can be developed in different ways depending on developer and deployment preferences:

VoiceXML/CCXML applications

HP OpenCall Media Platform 4.3 comes with an industry leading VoiceXML 2.0/2.1 interpreter including support for Call Control XML (CCXML). Applications are hosted on Web application servers and accessed through standard HTTP/HTTPS. Any type of web server application framework can be used, including J2EE, JSP, ASP.NET, PHP, Ruby, and Perl. Though VoiceXML and CCXML are high-level scripting languages, thanks to an efficient caching support, very large scale and high-performing applications can still be developed.

Java™ applications

When uploaded directly onto HP OpenCall Media Platform, Java applications can be developed using an asynchronous call and media control API—ccAPI. This API provides low-level platform access, while at the same time still enables network-independent applications to be created.

SIP (NGN) applications

In a SIP/NGN scenario, applications typically partly or fully reside within a SIP Application Server (AS). This SIP AS has several possibilities to interact with HP OpenCall Media Platform 4.3 for example by using RFC4240 (NETANN), RFC5552 and RFC4722 (MSCML). Depending on the application design, all the benefits of a rapid VoiceXML dialog design can still be used.

IN SCP applications

Through its support for INAP/CAMEL, HP OpenCall Media Platform 4.3 can be used as an SRF for existing IN SCP applications. In addition to SRF standards support, these applications can also benefit from VoiceXML through script invocation.

IMS Applications

HP OpenCall Media Platform can be configured as an MRF or MRFP in an IMS network. Similar to SIP NGN, an AS and HP OpenCall Media Platform can interact by using RFC4240 (NETANN), RFC5552 and RFC 4722 (MSCML). When used as an MRFP, HP OpenCall Media Platform 4.3 also supports the H.248 protocol as required by IMS.



Resource management

An essential part of a media server's functionality is the ability to efficiently share its media processing capabilities. HP OpenCall Media Platform 4.3 provides a flexible resource sharing mechanism that helps make sure that each application gets its required capacity. It also allows the allocation of specific capacity to be shared between different applications to cover peak needs.

Media control and processing

All media processing with HP OpenCall Media Platform 4.3 is done with a mature and robust Soft Digital Signal Processing (SoftDSP) framework. With this software approach, the media server benefits from the ongoing evolution of server hardware in terms of faster and less expensive CPUs and memory. This also limits proprietary hardware dependencies and avoids vendor lock-ins. Built-in overload protection mechanisms offer the highest media quality regardless of application type and load. A complete suite of advanced media operations are supported, including play-record of audio or video streams, codec trans-coding and support for conferencing.

Management and operations

HP OpenCall Media Platform 4.3 comes with integrated cluster-level management and provides web access, as well as command line interface (CLI) and SNMP support. For call statistics and various call-related data collection, it generates extensive XML formatted Call Detail Records (CDRs).

Carrier grade characteristics

HP OpenCall Media platform 4.3 runs on industry-standard servers and achieves very high availability and extensive scaling using software and hardware, (servers and switches) N+1 duplication. Both rackmount and server blade are available in enterprise as well as NEBS configurations. Specific licensing schemes are available for site-redundant high-availability configurations.

Network deployment

The integrated support for a range of different network connectivity options is a key factor in the HP OpenCall Media Platform's ability to provide support for a smooth application evolution. The options range from ISDN or ISUP on SS7 through SIGTRAN to SIP and H.248. The HP OpenCall Media Platform 4.3 can be deployed as:

- A service node in both TMD and SIP networks
- An IN SRF using SS7, SIGTRAN or even SIP
- A media server in NGN
- An MRF or MRFP in an IMS network

HP OpenCall Media Platform also allows bridging between different networks, for example ISUP to SIP or ISDN to SIP.

An integrated solution

To enable a rapid and trouble-free deployment, HP OpenCall Media Platform is delivered in customizable pre-integrated hardware configurations, combined with an onsite activation service.



Technical specifications

Servers	HP ProLiant rackmount servers HP ProLiant server blade HP Carrier grade rackmount servers and server blade
Operating system	Red Hat Linux, hardened
Signaling (call connect)	MTP, M3UA/SIGTRAN (through HP OpenCall USP-M) SIP (through HP OpenCall SIP) Euro ISDN/NI-2
Network interfaces	PCIe—8span E1/T1 (192/ 248 DS0) for TDM media and ISDN 4 port PCI—E1/T1 for SS7/TDM Signaling IEEE 802.3ab for 1000Base-T Gigabit Ethernet IPV4, IPV6
VoiceXML	2.0/2.1 with extensions for example for multimedia and audio control
CCXML	1.0 W3C working draft
Java	Java API (loaded on the platform, CCAP, OClets)
Content access	HTTP, HTTPS, RTSP
IN support	SRF INAP CS1, CS2 and CAMEL PH2, PH3
Fax	ITU T.30, T4, T6 on TDM T.30 fax “pass-through” on SIP/IP
ASR/TTS and pre-recorded announcements	MRCP 1.0 compliant ASR and TTS engines. Contact HP for details on engines that have been explicitly tested XML grammars as per W3C SRGS and ASR vendor SSML as per TTS vendor Native variable announcement support (currency, date, time) for multiple languages
Management	SNMP v2 GET/SET and traps (X.733) Web-based clustered GUI and logs
Audio codec	16 bit linear, G.711a/u-law, G.723.1, G.729ab, AMR-NB, AMR-WB, EVRC, G.722, G.726, MP3 (play), GSM 06.10, IMA ADPCM, OKI ADPCM
Video codec and format	Codecs: H.263, H.264, MPEG-4 Formats: QCIF,CIF, qVGA, VGA, HD(720p)
Multimedia file formats	.WAV, 3G2, .3GP, .MP3 and “raw” file formats
Audio processing	Examples include: Play, record, volume control DTMF generation and detection Audio trans-coding, bridging, sharing and conferencing Outbound call human/machine detection Voice activity detection VCR control for recorded files Video bridging and sharing Video trans-coding (format, bit-rate, scale, frame) Video I-frame request and VFU
Conferencing	Audio conferencing, video conferencing, active talker notification, gain control, DTMF clamping
SIP compliance	An extract of fully or partly supported RFCs related to SIP: RFC 3261, RFC 3262, RFC 3263, RFC 2976, RFC 4028, RFC 3264, RFC 2327, RFC 3550 (RTP/RTCP), RFC 2916 NAPTR. RFC 2782 SRV records, DTMF (RFC2833) RFC 2474 (Diffserv)
MRFP compliance	H.248.1, H.248.4, H.248.7, H.248.9, H.248.10, H.248.11, H.248.14, H.248.27, Q.1950
IP media server and MRF compliance	RFC4240 (Netann), RFC4722 (MSCML), RFC 5552
CDR	XML formatted CDRs (Call Detail Record)
Others	Service creation environment, application run-time environment, prompt management, contact center connectors, and advanced reporting provided through HP Network IVR.

HP CMS Services: Enabling smooth deployment

While deploying the HP OpenCall Media Platform 4.3, service providers want to have very little operational network disturbance and to maintain a good customer experience. HP Communications & Media Solutions (CMS) Services are packaged to map the service provider's service migration needs, enhance the network IVR availability, and upgrade access to media resources and networks from TDM to NGN and IMS. HP CMS Services offering encompasses a set of Solution Delivery Services and Solution Management Services that support service providers across the entire solutions lifecycle.

HP Solution Delivery Services facilitate a rapid and safe migration of the HP OpenCall Media Platform 4.3 to the network. They are delivered based on a proven four-step methodology—evaluate, capture, deploy, and operate.

- HP CMS consultants analyze the service provider's business and architectural strategies to propose a dedicated migration plan, which enables seamless HP OCMP deployment.
- Tailored together with HP Network IVR customization and services, HP OCMP can be developed and captured in the standard solution.
- To migrate existing services successfully, dedicated applications workshops can be conducted with the service providers and third-party partners to capture call-flow requirements and build development recommendations. A partner enablement project can include training and assistance to accompany the applications' design, development, and testing prior to a live deployment.
- HP CMS Services experts deploy and validate the solution, including application modifications, the operations support systems (OSS) and business

support systems (BSS) integration points, and system backup and restore. They also train the IT staff on solution operations.

- Operational services, such as performance optimization, HP OCMP upgrade, and next-generation service migration projects help service providers increase the operational efficiency of the deployed solution.

HP Solution Management Services, once deployed, can help enable high availability and operational efficiency for IVR solutions. Solution Management Services are delivered by HP CMS IVR experts and are governed to satisfy day-to-day challenges and long-term developments. The Solution Management Services include:

- Reactive Services—to immediately intervene and fix problems if they arise
- Proactive Services—to continually monitor and adjust the operation of the solution
- Operation Services—to help with routine day-to-day tasks

Ordering information

For information on ordering HP OpenCall Media Platform 4.3 solutions, contact your HP CMS sales representative.

The sooner we start, the better the business outcome

HP CMS can tailor the HP OpenCall Media Platform to suit unique service provider requirements, helping to reduce TCO and start delivering new revenue-generating services. Our solutions can help cut costs and at the same time build a foundation for competitive, compelling, revenue-generating services.

HP OpenCall Media Platform 4.3 provides an opportunity to reduce capital and operating costs as well as providing new revenue-generating services. To learn more about this, visit: www.hp.com/cms

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