Oracle® Communications WebRTC Session Controller

Release Notes

Release 7.1

E55133-03

July 2015

These release notes list the documentation updates since General Availability (GA), new features and known issues for WebRTC Session Controller.

Change Log

Table 1 lists the changes made to this documentation set since the original release date.

Table 1 WebRTC Session Controller Documentation Change Log

Date	Details
July 2015	▪ Added chapter on the installation and usage of the Flash extension patch to the *Oracle Communications WebRTC Session Controller Application Developer's Guide*. ▪ Added a Media Engine upgrade chapter to the *Oracle Communications WebRTC Session Controller Installation Guide*. ▪ Added Media Engine VMware installation instructions to the *Oracle Communications WebRTC Session Controller Installation Guide*. ▪ Fixed backlog bugs and enhancement comments from the feedback form for Signalling Engine and Media Engine.
April 2015	▪ Added a chapter on the iOS SDK to the *Oracle Communications WebRTC Session Controller Application Developer's Guide*. ▪ Added a chapter on the Android SDK to the *Oracle Communications WebRTC Session Controller Application Developer's Guide*. ▪ Added a section describing how to make arbitrary REST calls from Groovy script in the *Oracle Communications WebRTC Session Controller Extension Guide*. ▪ Fixed backlog bugs and enhancement comments from the feedback form for Signalling Engine and Media Engine.
March 2015	Original release.

WebRTC Session Controller New Features

This section briefly describes the new features of WebRTC Session Controller.

Protocol Extensibility

WebRTC Session Controller's JSON protocol, based upon the Session Description Protocol (SDP) offer-answer model, supports the following new extensibility scenario:

- Arbitrary Representational State Transformation (REST) calls from Groovy scripts to REST endpoints

For more information, see "Initiating REST Calls from Groovy" in *Oracle Communications WebRTC Session Controller Extension Developer's Guide*.

JavaScript Client Software Development Kit

WebRTC Session Controller supplies a comprehensive JavaScript Development Kit that provides a framework for creating and extending WebRTC applications, while shielding Web developers from much of the complexity of WebRTC application development.

The JavaScript library provides a set of Application Programming Interface (API) packages that handle the following new tasks:

- Capabilities exchange
- Stand alone messaging
- One on one and group chat
- File transfer

The JavaScript API maps to the underlying JSON-base protocol, and is completely extensible. In addition, the API is fully compatible with Firefox, Chrome, and Opera Web browsers on any of their supported platforms.

For more information on the WebRTC Session Controller JavaScript API, see *Oracle Communications WebRTC Session Controller Application Developer's Guide*.

Android and iOS Native Platform Support

The WebRTC Session Controller Android and iOS SDKs enable you to integrate your Android and iOS applications with core WebRTC Session Controller functions. You can use the Android and iOS SDKs to implement the following features:

- Audio calls between an Android or iOS application and any other WebRTC-enabled application, a Session Initialization Protocol (SIP) endpoint, or a Public Switched Telephone Network endpoint using a SIP trunk.
- Video calls between an Android or iOS application and any other WebRTC-enabled application, with suitable video conferencing support.
- Seamless upgrading of an audio call to a video call and downgrading of a video call to an audio call.
- Support for Interactive Connectivity Establishment (ICE) server configuration, including support for Trickle ICE.
- Transparent session reconnection following network connectivity interruption.

For more information on the Android SDK, see "Developing WebRTC-enabled Android Applications" in *Oracle Communications WebRTC Session Controller Application Developer's Guide*. For more information on the iOS SDK, see "Developing WebRTC-enabled iOS Applications" in *Oracle Communications WebRTC Session Controller Application Developer's Guide*.

Lightweight Proxy Registrar

The Lightweight Proxy Registrar introduces a layer between the WebRTC Session Controller Signaling Engine and the Proxy Registrar. The Lightweight Proxy Registrar reduces resources consumed in the Proxy Registrar, which reduces overall cost.

WebRTC-based clients come and go as people open and close their browsers. Each WebSocket connection to WebRTC Session Controller triggers a SIP registration. A single user often has multiple devices, which equates to multiple endpoints and requires more register and unregister requests. These factors make the number of registrations at any time difficult to predict, making it harder to plan needed resources. Any cost associated with registration might not be well known and could be problematic.

The Lightweight Proxy Register addresses these problems in one of two ways:

- Multiplexing registration requests from many WebRTC endpoints into a single SIP registration per user
- Managing all registrations, leaving no registrations for the Proxy Registrar. In this case, an external system must route inbound calls to WebRTC Session Controller, for example, by using static routes based on the domain.

Customers who do not want or need a SIP or IMS integration do not need to use them This case is suitable for an enterprise that only wants to connect WebRTC endpoints. For more information on the Lightweight Proxy Registrar, see "Using the Lightweight Proxy Registrar" in *Oracle Communications WebRTC Session Controller Administrator's Guide*.

Event Data Record Support

Signaling Engine now collects data in an event detail record (EDR) for each event that occurs in a subsession for the Call, Chat, and File Transfer packages. Each engine creates event detail records and writes them to a file, oracle.wsc.core.edr, for the sessions that it owns.

For more information, see "Accessing Event Detail Records" in *Oracle Communications WebRTC Session Controller System Administrator's Guide*.

Trickle ICE Support

To improve performance when Web applications negotiate connections from private networks behind Network Address Translation (NAT)-enabled routers using the Interactive Connectivity Establishment (ICE) protocol, WebRTC Session Controller supports the draft IETF Trickle ICE specification: `http://tools.ietf.org/html/draft-ietf-mmusic-trickle-ice-01`.

For more information, see "Enabling Trickle ICE to Improve Application Performance" in *Oracle Communications WebRTC Session Controller Application Developer's Guide*.

Media Engine New Features

The new features in WebRTC Session Controller Media Engine (Media Engine) include:

- Message Session Relay Protocol (MSRP) Interworking
- Configuring Static DTLS Certificates

- Call Management Enhancements
- Trickle ICE Support
- TURN Over TCP/TLS
- Certified Platforms for the Media Engine
- Data Channel Support
- TURN Implementation Updates

Message Session Relay Protocol Interworking

The Media Engine now supports Message Session Relay Protocol (MSRP) interworking.

MSRP interworking allows communication between WebRTC and Rich Communication Suite (RCS) endpoints. This protocol is used for transmitting a series of instant message chats and file transfers within the context of a session.

For more information on MSRP, see `https://tools.ietf.org/html/rfc4975`.

Configuring Static Datagram Transport Layer Security Certificates

The Media Engine supports Datagram Transport Layer Security in WebRTC environments. When you implement DTLS, you must configure a static certificate via the **default-dtls-settings** configuration object.

Trickle Interactive Connectivity Establishment Support

The Media Engine fully supports trickle ICE, a draft extension to RFC 5245 that allows ICE agents to incrementally exchange remote candidate information. Trickle ICE support considerably reduces call setup time by allowing ICE to run before the candidate harvesting phase has completed by sending empty or partial media candidate lists in the SDP.

> **Note:** Trickle ICE is not supported in augmented ICE scenarios. If both trickle ICE and augmented ICE are configured, disable augmented ICE to achieve the best possible performance.

Traversal Using Relay NAT Over Transmission Control Protocol

The Media Engine supports Traversal Using Relay NAT (TURN) over Transmission Control Protocol (TCP) for WebRTC. The TURN protocol assists clients located behind NAT devices to reach peers. In cases where clients and peers cannot create a direct communication path (for example, if both endpoints are behind individual NATs), it is necessary for an intermediate network device to relay data. The Media Engine TURN Server acts as a communication-enabling alternative for such cases, relaying data between the NAT-hidden clients. When used with ICE, the Media Engine TURN Server relay transport addresses are included in SDP ICE candidates received from clients. For more information on TURN, visit `http://tools.ietf.org/search/rfc5766`.

Certified Platforms

Several platforms have been tested and certified for use with the Media Engine.

The following platforms have been certified for use with the Media Engine:

- Sun Netra X3-2
- HPDL360 G7
- HPDL585 G7
- HPDL320 G8
- HPDL360 G8
- Cisco C200

The following VM platforms have been certified for use with the Media Engine:

- OVM 3.2.8
- VMware ESXi 5.5
- XEN 3.4.3

Data Channel Support

The Media Engine now supports data channels for anchored media.

Data channels use the SCTP protocol as a generic transport service which allows web browsers to exchange non-media data between peers.

For more information on data channels, see `https://tools.ietf.org/html/draft-ietf-rtcweb-data-channel-11`.

> **Note:** You must have media anchored for data channels to work properly.

New Configuration Objects

This section provides a list of the new configuration objects in this release.

- in-msrp-session-leg
- out-msrp-session-leg

New Configuration Properties

This section provides a summary of the new configuration properties added to this release.

cluster

- action-timeout-addon

event-settings

- event-filter

policy-group

- connection-mode

third-party-call-control

- inhibit-anchored-update

Management Information Base Changes

This section describes changes that have been applied to the Management Information Base (MIB) object definitions.

New Management Information Base Tables

The following table lists the new MIB tables.

Table 2 New MIB Tables

MIB Table Name	Description
msrpStats	MSRP statistics.

Changed Management Information Base Tables

The following table lists the changed MIB tables.

Table 3 Changed MIB Tables

MIB Object Name	Description
activeMsrpSessions	▪ CHANGED: activeMsrpSessionsInLegState range ▪ CHANGED: activeMsrpSessionsInLegState syntax from INTEGER to OCTET STRING ▪ CHANGED: activeMsrpSessionsOutLegState range ▪ CHANGED: activeMsrpSessionsOutLegState syntax from INTEGER to OCTET STRING
iceCandidatePairStatus	▪ ADDED: iceCandidatePairStatusRemoteMid
licenseDetails	▪ ADDED: licenseDetailsDefault, licenseDetailsHidden, licenseDetailsMax, licenseDetailsMin, licenseDetailsSecondary
msrpConnections	▪ ADDED: msrpConnectionsRefCount
processes	▪ ADDED: processesAwaitingRunLevelResponse
systemInfo	▪ ADDED: systemInfoBaseDirectory, systemInfoUserSpace

Known Issues

Table 4 lists the known issues in this release.

Table 4 Known Issues

Bug ID	Description
19761420	**Issue** The USB install does not recognize the RAID array and cannot be used to install the code. **Workaround** To mitigate this issue, turn the USB stick into a rescue stick and the installation succeeds.

Table 4 (Cont.) Known Issues

Bug ID	Description
20019513	**Issue** A SIP fault occurs when you use the **call-control-custom** command and your configuration includes the **request-uri-specification** object, **Workaround** Leave the **request-uri-specification** object unconfigured if you must use the **call-control-custom** command.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

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Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

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