

OnStream MediaPlayer+ Player API Upgrade

An Application Guide for

All Platforms

SDK Version 3.11

VisualOn, Inc.

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- 1 Added functions for iOS:
 - enableAudioDecoderLibrary**
 - setPreferredAudioLanguage**
 - setPreferredSubtitleLanguage**
 - setInitialBufferingTime**
 - setInitialBufferTime**
 - setMaxBufferingTime**
 - setMaxBufferTime**
- 2 Added functions for Android:
 - enableAudioDecoderLibrary**
 - setPreferredAudioLanguage**
 - setPreferredSubtitleLanguage**
 - setInitialBufferingTime**
 - setInitialBufferTime**
 - setMaxBufferingTime**
 - setMaxBufferTime**
 - resume**
- 3 Added functions for Plugin:
 - enableAudioDecoderLibrary**
 - setRenderType**
- 4 Deprecated followings for Android and iOS, they will be removed in the future:
 - setDefaultAudioLanguage**
 - setDefaultSubtitleLanguage**
 - VO_OSMP_SRC_CB_ADAPTIVE_STREAM_WARNING**
 - VO_OSMP_CB_SRC_BUFFER_TIME**
- 5 Added event IDs :
 - VO_OSMP_CB_SRC_BUFFERING_TIME**
 - VO_OSMP_SRC_CB_ADAPTIVE_STREAMING_WARNING**
 - VO_OSMP_SRC_FFSTREAMING_PUSHDP**
 - VO_OSMP_CB_OUTPUT_CONTROL_CAPTURE_SOFTWARE_RUNNING**
- 6 Changed return value for Plugin API. **getPlayingAsset.Returned** JSON content changed.

- 1 Added functions for iOS:
 - notifyViewSizeChanged**
 - setDefaultAudioLanguage**
 - setDefaultSubtitleLanguage**
- 2 Added event IDs :
 - VO_OSMP_CB_OUTPUT_CONTROL_BLOCK_PLAYBACK**
 - VO_OSMP_CB_OUTPUT_CONTROL_BLOCK_OUTPUT**
 - VO_OSMP_CB_OUTPUT_CONTROL_DOWNGRADE_RESOLUTION**
 - VO_OSMP_OUTPUT_CONTROL_TYPE**
 - VO_OSMP_CB_CODEC_NOT_SUPPORT**
- 3 Updated comments for **setZoomMode** and **setDisplayArea**.
- 4 Added **setDRMVerificationInfo**, **setDRMUniqueIdentifier**, **setDRMLibrary**, **getDuration**, and **deleteContent**.

- 1 Added two keys for **getAudioProperty** API, "**bitrate**" and "**channelcount**"
- 2 Added error codes :
VO_OSMP_HTTP_CONNECT_FAILED
VO_OSMP_HTTP_INVALID_RESPONSE
VO_OSMP_HTTP_CLIENT_ERROR
VO_OSMP_HTTP_SERVER_ERROR
- 3 Added APIs **playbackDuration**, **registerEventHandler**, **setOnEventHandler**, **getTotalCodecDropNum**, **getTotalDecodedNum**, **getTotalRenderDropNum**, **getTotalRenderedNum**, and **getTotalSourceDropNum**
- 4 Added APIs **getRootURL** and **getURL**.
- 5 Added API of **setHTTPRetryTimeout**
- 6 Added types **rootURL/URL/startTime/duration/timeScale** into **VOOSMPChunkInfo**
- 7 Added events of **VO_OSMP_ERR_MULTIPLE_INSTANCES_NOT_SUPPORTED**, **VO_OSMP_CB_AUDIO_RENDER_FAIL**, and **VO_OSMP_MODULE_TYPE_DRM_VENDOR_A**
- 8 Added **setSubtitleTypeface** (Typeface type)

- 1 Added new method **enableCPUAdaptation**.
- 2 Cleaned up API categorizations for iOS:
 - Moved followings to VOCommonPlayerStatus:
getPlayerType, getPlayerStatus, canBePaused, isLiveStreaming, getPosition, getMinPosition, getMaxPosition, getDuration, getScreenBrightness, getDRMUniqueIdentifier, getDRMUniqueIdentifier, getVersion, and getSEIInfo
 - Moved followings to VOCommonPlayerAnalytics:
enableAnalytics, startAnalyticsNotification, stopAnalyticsNotification, getAnalytics, getVideoDecodingBitrate, and getAudioDecodingBitrate

- 1 For Android/API3, the arguments of setDRMAdapter() were changed. If you are using this API, you have to modify your code. Except for this particular case, others API changes were additions only and do not require changes to code.
- 2 From V3.7.2, there is a clear distinction between what is selected and what is playing. Please check getCurrentSelection() and getPlayingAsset().
- 3 From 3.7.10, plugin, the function open added two more parameters. VO_OSMP_SRC_FORMAT sourceType, VOOSMPOpenParam* openParam. New added functions: getVideoDecodingBitrate, getAudioDecodingBitrate, getDRMUniqueIdentifier, setDRMUniqueIdentifier.
- 4 From V3.7.11, there are several functions changed return value. It can provide better debugging information.

API2: license check changed as below.

setParam(VOOSMP_PID_LICENSE_TEXT) is a must for formal licenses (it can be omitted on Android before). The general API call sequence for license check is:

- a. init()
- b. setParam(VOOSMP_PID_LICENSE_FILE_PATH, "Path here") or setParam(VOOSMP_PID_LICENSE_CONTENT, content)
- c. setParam(VOOSMP_PID_LICENSE_TEXT, "License key here")
- d. open()

API3: see guidelines below.

- 1 Type of parameter 1 of VOSyncEvent() was changed from VO_OSMP_CB_EVENT_ID to VO_OSMP_CB_SYNC_EVENT_ID. You must change the type in your code, otherwise you will get a compilation error.
- 2 VOCommonPlayerControl.open() and VOCommonPlayerControl.init() were overloaded. Use the new one, i.e.
VO_OSMP_RETURN_CODE open(String url, VO_OSMP_SRC_FLAG flag, VO_OSMP_SRC_FORMAT type, VOOSMPOpenParam openParam);
VO_OSMP_RETURN_CODE init(VO_OSMP_PLAYER_ENGINE playEngineType, VOOSMPInitParam initParam);
- 3 If you are using event ID VO_OSMP_SRC_CB_DRM_VERIFICATION, rename it to VO_OSMP_SRC_CB_SYNC_AUTHENTICATION_DRM_SERVER_INFO (It was actually moved from enum VO_OSMP_CB_EVENT_ID to VO_OSMP_CB_SYNC_EVENT_ID).
- 4 setPreAgreedLicense() is a must for formal licenses (it can be omitted on Android before). The general API call sequence for license check is:
 - a. init()
 - b. setLicenseFilePath() or setLicenseContent()
 - c. setPreAgreedLicense("License key here")
 - d. open()
- 5 Known issues:
Event VO_OSMP_SRC_CB_SYNC_IO_HTTP_DOWNLOAD_FAIL is not correct (with wrong Object type);
Implementation of enablePCMOutput() is not complete

Category	Ver	add	function	Android,iOS	Name	Description
API3	V3.11.0	deprecated	Event ID	Android,iOS	VO_OSMP_CB_SRC_BUFFER_TIME	replaced with VO_OSMP_CB_SRC_BUFFERING_TIME
API3	V3.11.0	add	Event ID	Android,iOS	VO_OSMP_CB_SRC_BUFFERING_TIME	
API3	V3.11.0	deprecated	Event ID	Android,iOS	VO_OSMP_SRC_CB_ADAPTIVE_STREAM_W ARNING	replaced with VO_OSMP_SRC_CB_ADAPTIVE_STREAMING_WARNING
API3	V3.11.0	add	Event ID	Android,iOS	VO_OSMP_SRC_CB_ADAPTIVE_STREAMING WARNING	
API3	V3.11.0	add	Event ID	all	VO_OSMP_CB_OUTPUT_CONTROL_CAPTU RE_SOFTWARE_RUNNING	
API3	V3.11.0	add	function	all	enableAudioDecoderLibrary	
API3	V3.11.0	add	function	Android	resume	
API3	V3.11.0	deprecated	function	Android,iOS	setDefaultAudioLanguage	replaced with setPreferredAudioLanguage
API3	V3.11.0	deprecated	function	Android,iOS	setDefaultSubtitleLanguage	replaced with setPreferredSubtitleLanguage
API3	V3.11.0	add	function	Android,iOS	setPreferredAudioLanguage	
API3	V3.11.0	add	function	Android,iOS	setPreferredSubtitleLanguage	
API3	V3.11.0	add	Event ID	Android,iOS	VO_OSMP_SRC_FFSTREAMING_PUSHPD	
API3	V3.11.0	add	function	Android,iOS	setInitialBufferingTime	
API3	V3.11.0	add	function	Android,iOS	setInitialBufferTime	
API3	V3.11.0	add	function	Android,iOS	setMaxBufferingTime	
API3	V3.11.0	add	function	Android,iOS	setMaxBufferTime	
API3	V3.11.0	change	function	Plugin	getPlayingAsset	return value JSON object content changed
API3	V3.11.0	add	function	Plugin	setRenderType	
API3	V3.10.0	add	Event ID	all	VO_OSMP_CB_CODEEC_NOT_SUPPORT	

Category	Ver	add	function	Android,iOS	Name	Description
API3	V3.10.0	add	Event ID	Android,iOS	VO_OSMP_CB_OUTPUT_CONTROL_BLOCK_OUTPUT	
API3	V3.10.0	add	Event ID	Android,iOS	VO_OSMP_CB_OUTPUT_CONTROL_BLOCK_PLAYBACK	
API3	V3.10.0	add	Event ID	Android,iOS	VO_OSMP_CB_OUTPUT_CONTROL_DOWN GRADE_RESOLUTION	
API3	V3.10.0	add	Event ID	Android,iOS	VO_OSMP_OUTPUT_CONTROL_TYPE	
API3	V3.10.0	add	function	all	setDefaultAudioLanguage	
API3	V3.10.0	add	function	all	setDefaultSubtitleLanguage	
API3	V3.10.0	add	function	Android,iOS	deleteContent	
API3	V3.10.0	add	function	Android,iOS	getDuration	
API3	V3.10.0	add	function	Android,iOS	setDRMLibrary	
API3	V3.10.0	add	function	Android,iOS	setDRMUniqueIdentifier	
API3	V3.10.0	add	function	Android,iOS	setDRMVerificationInfo	
API3	V3.10.0	add	function	iOS	notifyViewSizeChanged	
API3	V3.10.0	change	function	iOS	setDisplayArea	only change on comment.
API3	V3.10.0	change	function	iOS	setZoomMode	only change on comment.
API3	V3.9.3	add	add	all	VO_OSMP_ERR_MULTIPLE_INSTANCES_NOT_SUPPORTED	new return code
API3	V3.9.3	add	data	Plugin	VOOSMPChunkInfo	add type/rootURL/URL/startTime/duration/timeScale
API3	V3.9.3	add	Event ID	all	VO_OSMP_MODULE_TYPE_DRM_VENDOR_A	
API3	V3.9.3	add	Event ID	Android,iOS	VO_OSMP_CB_AUDIO_RENDER_FAIL	
API3	V3.9.3	add	function	all	getPlaybackDuration	
API3	V3.9.3	change	function	all	getRootURL	
API3	V3.9.3	add	function	all	getTotalCodecDropNum	
API3	V3.9.3	add	function	all	getTotalDecodedNum	
API3	V3.9.3	add	function	all	getTotalRenderDropNum	

Category	Ver	add	function	Android,iOS	Name	Description
API3	V3.9.3	add	function	all	getTotalRenderedNum	
API3	V3.9.3	add	function	all	getTotalSourceDropNum	
API3	V3.9.3	change	function	all	getURL	
API3	V3.9.3	add	function	all	setHTTPRetryTimeout	
API3	V3.9.3	add	function	Android	setSubtitleTypeface	
API3	V3.9.3	add	function	Android, iOS	previewSubtitle	
API3	V3.9.3	change	function	Android, iOS	startAnalyticsNotification	Removed to PlayerControl
API3	V3.9.3	change	function	Android, iOS	stopAnalyticsNotification	Removed to PlayerControl
API3	V3.9.3	change	function	Plugin	playbackDuration	
API3	V3.9.3	change	function	Plugin	registerEventHandler	
API3	V3.9.3	change	function	Plugin	setOnEventHandler	
API3	V3.9.0	add	function	all	enableRTSPOverHTTP	
API3	V3.9.0	add	function	all	getRTSPStatistics	
API3	V3.9.0	add	function	all	setRTSPOverHTTPConnectionPort	
API3	V3.9.0	add	function	all	setSegmentDownloadRetryCount	
API3	V3.9.0	add	function	Android	setSurfaceHolder	
API3	V3.8.3	add	function	all	enableCPUAdaptation	default is Enabled.
API3	V3.7.11	change	function	Android	getmProxyHost	returns String
API3	V3.7.11	change	function	Android	getmProxyPort	returns int
API3	V3.7.11	change	function	Android	setDataFlag	returns VO_OSMP_RETURN_CODE
API3	V3.7.11	change	function	Android	setmProxyHost	returns VO_OSMP_RETURN_CODE
API3	V3.7.11	change	function	Android	setmProxyPort	returns VO_OSMP_RETURN_CODE
API3	V3.7.11	change	function	Android	setResponseString	returns VO_OSMP_RETURN_CODE
API3	V3.7.11	change	function	Android	setVerificationString	returns VO_OSMP_RETURN_CODE
API3	V3.7.10	add	function	all	getAudioDecodingBitrate	
API3	V3.7.10	add	function	all	getDRMUniqueIdentifier	
API3	V3.7.10	add	function	all	getVideoDecodingBitrate	
API3	V3.7.10	add	function	all	setDRMUniqueIdentifier	

Category	Ver	add	function	Android,iOS	Name	Description
API3	V3.7.10	change	function	Plugin	open	new added with parameters VO_OSMF_SRC_FORMAT sourceType, VOOSMFOpenParam* openParam. They are null by default.
API3	V3.7.7	add	Event ID	Android	VO_OSMF_AD_CB_PLAYBACKINFO	
API3	V3.7.7	add	function	all	enableLiveStreamingDVRPosition	The function will extend usage of getPosition, getMinPosition, getMaxPosition
API3	V3.7.6	add	Event ID	iOS	VO_OSMF_SRC_CB_PD_BUFFERING_PERCENT	
API3	V3.7.6	add	Event ID	iOS	VO_OSMF_SRC_CB_PD_DOWNLOAD_POSITION	
API3	V3.7.6	add	function	Android	addTrackingServer	
API3	V3.7.6	add	function	Android	enableFullScreen	
API3	V3.7.6	add	function	Android, iOS	enableSEI	
API3	V3.7.6	add	function	Android, iOS	getSEIInfo	
API3	V3.7.6	add	function	Android, iOS	startSEINotification	
API3	V3.7.6	add	function	Android, iOS	stopSEINotification	
API3	V3.7.6	add	function	iOS	captureVideoImage	
API3	V3.7.5	add	function	Android	setAdTrackingAPI	
API3	V3.7.5	add	function	Plugin	getDRMUniqueIdentifier	
API3	V3.7.5	add	function	Plugin	showCursor	
API3	V3.7.4	add	constant	Android, iOS	VO_OSMF_SEI_INFO_FLAG	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_CB_AD_END	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_CB_AD_LOAD_ERROR	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_CB_AD_START	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_CB_CONTENT_END	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_CB_CONTENT_START	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_CB_DATA_LOAD_ERROR	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_CB_NO_AD_CONTENT	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_CB_PLAYLIST_END	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_CB_PLAYLIST_START	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_CB_STATE_CHANGE	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_CB_VIDEO_DONE	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_CB_VIDEO_GEO_BLOCKED	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_CB_VIDEO_NOT_AVAILABLE	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_CB_VIDEO_PROGRESS	
API3	V3.7.4	add	Event ID	Android	VO_OSMF_AD_STATUS	
API3	V3.7.4	add	Event ID	Android, iOS	VO_OSMF_CB_SEI_INFO	

Category	Ver	add	function	Android,iOS	Name	Description
API3	V3.7.4	add	Event ID	Plugin	VO_OSMP_SRC_CB_SYNC_AUTHENTICATIO N_DRM_SERVER_INFO	
API3	V3.7.4	add	Event ID	Plugin	VO_OSMP_SRC_CB_SYNC_IO_HTTP_DOWN LOAD_FAIL	
API3	V3.7.4	add	Event ID	Plugin	VO_OSMP_SRC_CB_SYNC_IO_HTTP_START DOWNLOAD	
API3	V3.7.4	add	function	Android	getVideoAdClickThru	
API3	V3.7.4	add	function	Android	loadAdCall	
API3	V3.7.4	add	function	Android	loadVideoByUrl	
API3	V3.7.4	add	function	Android, iOS	enableSEI	
API3	V3.7.4	add	function	Android, iOS	getSEIInfo	
API3	V3.7.4	add	function	Android, iOS	startSEINotification	
API3	V3.7.4	add	function	Android, iOS	stopSEINotification	
API3	V3.7.3	add	function	Android	loadVideoById	
API3	V3.7.2	add	constant	all	VO_OSMP_RATIO_AUTO	
API3	V3.7.2	add	constant	all	VO_OSMP_RATIO_ORIGINAL	
API3	V3.7.2	rename	constant	Android, Plugin	INDEX_VIDEO_AUTO	Rename to VO_OSMP_ASSET_AUTO_SELECTED
API3	V3.7.2	add	constant	Android, Plugin	VO_OSMP_ASSET_NOT_SELECTED	
API3	V3.7.2	add	Event ID	all	VO_OSMP_SRC_CB_NOT_APPLICABLE_MED IA	
API3	V3.7.2	change	function	all	getPlayingAsset	Return the actual indices of video/audio/subtitle tracks which are being played. 1. If a track is being played, its index is returned through VOOSMPAssetIndex. 2. If no track of a specific type (mostly likely subtitle) is being played, then the corresponding index in VOOSMPAssetIndex is set to VO_OSMP_ASSET_NOT_SELECTED.
API3	V3.7.2	add	function	all	setAnewBufferingTime	
API3	V3.7.2	add	function	Android, Plugin	getCurrentSelection	
API3	V3.7	add	Event ID	Plugin	VO_OSMP_CB_FULLSCREEN_INDICATOR	
API3	V3.7	add	function	all	Configuration::setPresentationDelay	
API3	V3.7	change	function	Android	setDRMAdapter	Argument changed: from setDRMAdapter(int adapter) to setDRMAdapter(Object adapter, boolean isLibraryName)
API3	V3.7	add	function	Android, iOS	Configuration::getVersion	For plugin, use .version property of plug in object instead
API3	V3.7	add	function	iOS	getCurrentSelection	
API3	V3.7	add	function	Plugin	isFullScreen	

Category	Ver	add	function	Android,iOS	Name	Description
API3	V3.7	add	function	Plugin	toggleOverlayUI	
API3	V3.6	add	Error Code	all	VO_OSMF_ERR_LICENSE_FAIL	
API3	V3.6	add	Event ID	all	VO_OSMF_CB_LICENSE_FAIL	
API3	V3.6	add	Event ID	all	VO_OSMF_CB_PCM_OUTPUT	
API3	V3.6	rename	Event ID	all	VO_OSMF_SRC_CB_DRM_VERIFICATION	to VO_OSMF_SRC_CB_SYNC_AUTHENTICATION_DRM_SERVER_INFO
API3	V3.6	add	function	all	Configuration: setAudioPlaybackSpeed	
API3	V3.6	change	function	all	onVOSyncEvent	type of argument 1: from VO_OSMF_CB_EVENT_ID to VO_OSMF_CB_SYNC_EVENT_ID
API3	V3.6	add	function	Android	OpenParam: getDecoderType	
API3	V3.6	add	function	Android	OpenParam: setDecoderType	
API3	V3.6	add	function	Android, iOS	Buffer: getBuffer	
API3	V3.6	add	function	Android, iOS	Buffer: getBufferSize	
API3	V3.6	add	function	Android, iOS	Buffer: getTimestamp	
API3	V3.6	add	function	Android, iOS	Configuration: enablePCMOOutput	
API3	V3.6	add	function	Android, iOS	Configuration: setDRMAdapter	
API3	V3.6	add	function	Android, iOS	HTTPDownloadFailure: getReason	
API3	V3.6	add	function	Android, iOS	HTTPDownloadFailure: getResponse	
API3	V3.6	add	function	Android, iOS	HTTPDownloadFailure: getURL	
API3	V3.6	add	function	Plugin	Control: setOnEventHandler	
API3	V3.6	add	function	Plugin	RTSPConfiguration: getRTSPStatistics	
API3	V3.6	add	function	Plugin	RTSPConfiguration: setRTSPConnectionPort	
API3	V3.6	add	function	Plugin	RTSPConfiguration: setRTSPConnectionType	
API3	V3.5	overload	function	all	Control:init	
API3	V3.5	overload	function	all	Control:open	
API3	V3.5	add	function	all	onVOSyncEvent	
API2	V3.10.0	add	Param ID	Android, iOS	VOOSMP_PID_OUTPUT_CONTROL_ACTIVE	
API2	V3.10.0	add	Param ID	Android, iOS	VOOSMP_PID_OUTPUT_CONTROL_ENFORCE	
API2	V3.7.4	add	Event ID	Android	VOOSMP_PID_SUBTITLE_TIME_OFFSET	
API2	V3.7.2	add	constant	Android, iOS	VOOSMP_RATIO_2331	API3 already has it
API2	V3.7.2	add	constant	Android, iOS	VOOSMP_RATIO_AUTO	
API2	V3.7.2	add	constant	Android, iOS	VOOSMP_RATIO_ORIGINAL	
API2	V3.7.2	add	Event ID	Android, iOS	VOOSMP_SRC_CB_Not_Applicable_Media	
API2	V3.7	add	Event ID	Android, iOS	VOOSMP_SRC_CB_DRM_Init_Data	
API2	V3.7	add	Event ID	Plugin	VOOSMP_CB_FullScreen	

Category	Ver	add	function	Android,iOS	Name	Description
API2	V3.7	add	Param ID	Android, iOS	VOOSMP_PID_DRM_UNIQUE_IDENTIFIER	
API2	V3.7	add	Param ID	Android, iOS	VOOSMP_PID_MODULE_VERSION	
API2	V3.7	add	Param ID	Android, iOS	VOOSMP_SRC_PID_PRESENTATION_DELAY	
API2	V3.6	add	Error Code	all	VOOSMP_ERR_LicenseFailed	
API2	V3.6	add	Event ID	all	ID_STREAMING_VOLIBLICENSEERROR	
API2	V3.6	add	Event ID	all	VOOSMP_CB_LicenseFailed	
API2	V3.6	add	Param ID	all	VOOSMP_PID_AUDIO_PLAYBACK_SPEED	
API2	V3.6	define	Param ID	all	VOOSMP_PID_MODULE_VERSION	
API2	V3.6	add	Param ID	all	VOOSMP_SRC_PID_DRM_ADAPTER_OBJECT	

Action	Description
add	type/constant/function added
remove	type/constant/function removed
change	argument changed in a function
rename	function renamed; constant renamed or moved from one enum to another
define	defined, but not really used or not implemented
overload	added function with same name but different arguments
deprecate	not recommended, will be removed in the future.