


Configure Real-Time Monitoring

 For supported software information, click [here](#).

Versa Operating System™ (VOS™) real-time monitoring (RTM) monitors real-time audio, video, and voice flows for quality and user experience, which is reported in a mean opinion score (MOS) that represents the user experience of the audio, video, and voice applications. Network impairments, such as loss, jitter, delay over a link between clients, and the codec used affect the MOS score of real-time applications.

RTM works in conjunction with the VOS application identifier (AppID) engine to compute the MOS score. The AppID engine intercepts RTP and RTCP flows and sends a copy of the packets to RTM. RTM processes the stream to determine the codec, delay, loss, and jitter, and then uses this information to calculate the MOS score. RTM performs the MOS computation in real time, for example, when a voice call is active, not after the call ends. The VOS device then uses the computed MOS as an input for other components such as SD-WAN SLA profiles.

Enabling RTM has no impact on system load or performance.

VOS devices support the following audio, video and voice codecs:

C-3 Audio	SX7300	AMR-NB 7.95k	MS RT Audio NB (FEC)	Opus CELT NB
MPEG-4 AAC	SX9600			
MPEG-4 LD-AAC	G.711 A-law	AMR-NB 7.4k	GIPS G.729	Opus CELT WB
MPEG-4 HE-AAC	G.711 A-law/ PLC	AMR-NB 6.7k	Silk NB	Opus CELT SWB
WMA Professional	G.726 16k	AMR-NB	Silk NB	Opus CELT
MPEG-4 HE- AACv2	G.726 24k	5.9k	(FEC)	FB
MPEG-4 LC-AAC	G.726 32k	AMR-NB 5.15k	Silk MB	EVS NB
AMR-WB+	G.726 40k	AMR-NB	Silk MB	EVS NB (FEC)
Vorbis	GIPS Enhanced G.711 u-law	4.75k	(FEC)	EVS

JPEG-compressed Video	GIPS Enhanced G.711 A-law	iLBC 13.3k iLBC 15.2k	Silk WB	WB EVS WB (FEC)
MPEG-1 Video	GIPS iLBC	G.711 u-law 56k	Silk WB (FEC)	EVS SWB
MPEG-2 Video	GIPS iSAC	G.711 u-law/PLC 56k	Silk SWB (FEC)	EVS FB
H.261	GIPS iPCM-wb	G.711 A-law 56k	EVRC-WB	EVS FB (FEC)
H.263	G.729E 8.0k	G.711 A-law/PLC 56k	EVRC-NW	L16 NB
H.263+	G.729E 11.8k	G.723.1-Annex C	AMR-WB+	L16 NB/PLC
H.264	WB Linear PCM	Speex NB 2.15k	Siren7/G.722.1 16k	L16 WB
VC1	WB Linear PCM/PLC	Speex NB 5.95k	Siren14/G.722.1C 24k	L16 WB/PLC
On2 VP6	G.722 64k	Speex NB 8k	Siren14/G.722.1C 32k	L16 SWB
H.264 SVC	G.722 56k	Speex NB 11k	Siren14/G.722.1C 48k	L16 SWB/PLC
VP8	G.722 48k	Speex NB 15k	Siren14/G.722.1C 24k (LPR)	L16 FB
VP9	Siren7/G.722.1 32k	Speex NB 18.2k	Siren14/G.722.1C 32k (LPR)	L16 FB/PLC
H.265	Siren7/G.722.1 24k	Speex NB 24.6k	Siren14/G.722.1C 48k (LPR)	G.722 64k
G.711 u-law	AMR-WB/G.722.2 23.85k	Speex NB 3.95k	Siren14/G.722.1C 48k (LPR)	G.722 56k
G.711 u-law/PLC	AMR-WB/G.722.2 23.05k	Speex WB 34.2k		G.722 48k
G.723.1 5.3k	AMR-WB/G.722.2 19.85k			G.722 64k/PLC
G.723.1 6.3k	AMR-WB/G.722.2 18.25k			
G.728	AMR-WB/G.722.2			
G.729/ G.729B				
G.729A/ G.729AB				

GSM-FR	15.85k	Speex WB 42.2k	Siren22 32k	App. 3
GSM-HR	AMR-WB/G.722.2 14.25k	BroadVoice BV16	Siren22 48k	G.722 56k/PLC App. 3
GSM-EFR	AMR-WB/G.722.2 12.65k	BroadVoice BV32	Siren22 64k	G.722 48k/PLC App. 3
	AMR-WB/G.722.2 8.85k	IS 54	Siren22 32k (LPR)	G.722 64k/PLC App. 4
	AMR-WB/G.722.2 6.6k	PDC 6.7k	Siren22 48k (LPR)	G.722 56k/PLC App. 4
	QCELP8	AMBE2Plus 2.4k	Siren22 64k (LPR)	G.722 48k/PLC App. 4
	QCELP13	AMBE2Plus 3.2k		iSAC WB
	EVRC	AMBE2Plus 4k	G.719 32k	iSAC SWB
	SMV	AMBE2Plus 4.8k	G.719 48k	iSAC WB NetEQ
	AMR-NB 12.2k	EVRC-B	G.719 64k	iSAC SWB NetEQ
	AMR-NB 10.2k	MS RT Audio WB	Opus Silk NB	iSAC WB NetEQ4
	Speex WB 12.8k	MS RT Audio NB	Opus Silk NB (FEC)	iSAC SWB NetEQ4
	Speex WB 16.8k	MS RT Audio WB (FEC)	Opus Silk MB	AMR-NB (VBR)
	Speex WB 20.6k		Opus Silk MB (FEC)	AMR-WB (VBR)
	Speex WB 23.8k		Opus Silk WB	
	Speex WB 27.8k		Opus Silk WB (FEC)	

			Opus Hybrid SWB	
			Opus Hybrid SWB (FEC)	
			Opus Hybrid FB	
			Opus Hybrid FB (FEC)	

VOS devices have been tested with and support the following video conferencing applications:

- GTalk
- Microsoft Teams
- RingCentral Phones
- Skype for Business
- Webex (for Releases 21.2.1 and later)
- Zoom (for Releases 21.2.1 and later)

Enable RTM

To enable RTM on a VOS device, you configure an SD-WAN traffic steering forwarding profile, which you include in an SD-WAN traffic steering policy. You select the Evaluate Continuously field on the General tab, to have a real-time application change to a better path if one becomes available. You also enable MOS score monitoring.

For more information, see [Configure SD-WAN Traffic Steering](#) and [Configure MOS Score Monitoring](#).

Supported Software Information

Releases 20.2 and later support all content described in this article, except:

- Releases 21.2.1 and later support the Webex and Zoom video conferencing applications.

Additional Information

[Configure Application Performance Monitoring](#)

[Configure MOS Score Monitoring](#)

[Configure SD-WAN Traffic Steering](#)

