SBC SWe Traffic Profiles

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Modified: for 6.2.1

Overview

The performance of the SBC VM can be optimized if the call mix is provided while configuring the SBC SWe instance. A set of predefined call mixes are provided, these are called standard traffic profiles. Additionally, a user can create custom traffic profiles, with a call mix that is more appropriate for the SBC SWe.

The supported standard profiles are:

Table 1: Supported Standard Profiles

Profile Name	Description
default	By default, non-cloud instances comes up with default profile. This profile retains the SBC SWe behavior of earlier releases (5.0.x and 5.1.x), where signaling and media vCPUs overlapped.
standard_signaling_profile	This profile utilizes the vCPUs for signaling (direct media) calls and it is auto-configured on the cloud-based S-SBC instance.
standard_passthrough_profile	This profile utilizes the vCPUs for passthrough calls.
standard_transcoding_profile	This profile utilizes the vCPUs for transcoding calls.
standard_callmix_profile	This profile supports callmix which contain a combination of 90% pass-through and 10% transcoding.
standard_msbc_profile	The purpose of this profile is to utilize the vCPUs primarily for passthrough calls. This profile gets auto-configured on cloud-based M-SBC instance.
standard_highcps_callmix_profile	This profile is similar to standard passthrough profile with higher CPS and the corresponding CHT is 25.

Once the distribution of vCPUs is set, the SBC SWe overload behavior functions the same way as the hardware SBC (5000/7000 series).

⚠ **Caution**
This feature is applicable only when the vcpu is more than or equal to four.

Profiles

Standard Profiles

When any standard profile is activated, the application automatically optimizes the vCPU usage of the SBC SWe VM for the activated profile.

> ⚠️ **Caution**
> - SBC SWe instances reboots automatically to activate the profile. All active calls are lost during this process, it is recommended to activate the profile during maintenance.
> - A trap is generated when a new traffic profile is activated.

Appropriate profiles are auto-configured on the D-SBC (microservices) based on the personality as follows:

Table 2: Personality Types per Profile Name

Personality Type	Profile Name
I-SBC	default
S-SBC	standard_signaling_profile
M-SBC	standard_msbc_profile

> ⓘ **Note**
> On the D-SBC, the auto-configured profiles prevent reboot during instantiation.

Table 3: Configuration Tables

Table Name	Description
sweTrafficProfiles	Contains all the standard profiles and their fixed call-mix.
sweActiveProfile	Contains the name of active profile and time-stamp of activation.
sweCodecMixProfile	Contains the standard codec_mix profiles. 1. G711_20ms with 100% G711 (20 ms) calls. 2. G711_G729_20ms which is initialized with 50% of G729AB (20 ms) and 50% G711 (20ms).

Table 4: Operational Tables

Table Name	Description
sweProcessorCapacity	This table contains the real processor capacity indices relative to a 2690v2 processor with the recommended BIOS/ESXi setting.
sweCapacityEstimate	This table contains the capacity estimations for all the standard profiles.

Custom Profiles

If the call mix is different from one of those corresponding to the standard profiles, a custom profile can be created. You can create custom profiles based on the call mix requirements. While creating a custom profile, you must provide the call mix through CLI.

> ⚠️ **Caution**
> The estimated calls per second (cps) numbers are calculated based on certain conditions. The actual traffic may have a different number of signaling messages per call, message size, or call features for which the estimate could be inaccurate.