

IETF 89



SDP Attributes Multiplexing

draft-ietf-mmusic-sdp-mux-attributes

Suhas Nandakumar
snandaku@cisco.com¹

Updates Summary

- Submitted WG versions -00 and -01 since IETF88
- Incorporated PM-Dir Review comments.
- 63/65 sections reviewed - Let's do it 65/65 TODAY 😊
- Added references to BUNDLE draft for dealing with PT Reuse and SSRC SDP attributes.
- Added new sections on guidelines for dealing with
 - DSCP Markings
 - Encapsulating Attributes (ex:SDP CapNeg)

Q1 – IMS Attributes for IPTV

Ref:http://www.etsi.org/deliver/etsi_ts/183000_183099/183063/03.05.02_60/ts_183063v030502p.pdf

- **PSCid** (Personalized Service Composition Id) – Section 5.1.11.2 indicates PSCid must be globally unique in a session
→ *Proposed-Category: NORMAL*
- **bc_service** (Broadcast Service) – Identifies the BC service channel ID which the UE intends to join. [a=bc_service:CCTV-5-Sports]
→ *Proposed-Category: NORMAL*
- **bc_program** – Signals BC program ID. [a=bc_program:USA-Movie-Superman]
→ *Proposed-Category: NORMAL*
- **bc_service_package** (BroadCast Service Package) – Identifies the package to which BC Service is part of.
→ *Proposed-Category: NORMAL*

Q2 – SDP Source Filters

- RFC4570 express one or more source addresses as source filters for one or more destination connection addresses.
- Example

<media-desc - SSM>

c=IN IP4 232.3.4.5/127

a=source-filter: incl IN IP4 232.3.4.5
192.0.2.10

<media-desc – Unicast Exclusion>

c=IN IP4 192.0.2.11

a=source-filter: excl IN IP4 192.0.2.11
192.0.2.10

- Proposed-Category: TRANSPORT

Multiplexing Streams with DSCP Markings

REF: [I-D.dhesikan-tsvwg-rtcweb-qos]

Data Type	Very Low	Low	Medium	High
Audio	CS1	BE	EF	EF
Interactive Video with/without Audio	CS1	BE	AF42, AF43	AF41, AF42
Non Interactive Video with/with out Audio	CS1	BE	AF32, AF33	AF31, AF32
Data	CS1	BE	AF1X	AF2X

DART Working Group being formed to provide advice on what to say here

Few initial observations on likely advice:

1. For a given “flow” (single encoding of a single MStreamTrack) the DSCP values from a single cell in table above
2. When multiplexing over a congestion responsive transport such as TCP, all multiplexed “flows” need to be from same cell in table because DSCP in different cells can be reordered which is likely to confuse congestion control algorithms.
3. Considerations around DSCP policy enforcement in ensuring proper treatment of marked traffic.

Dealing with Encapsulating Attributes

- Category assignment for the attributes that represents Capability Descriptions in SDP (a.k.a Encapsulating Attributes) as defined in the RFC3407, RFC5939 & RFC6781
Example : a=pcfg, a=lcfg, a=mscap

Proposed Solution

- Assign category INHERIT for attributes whose multiplexing behavior depends on the attribute encapsulated
Ex: a=mscap (RFC6871), a=cpar(RF3407)
- Assign category SPECIAL for other attributes and provide general guidelines for dealing with such encapsulating attributes
Ex: a=pcfg, a=acfg (RFC5939)

INHERIT Example

- RFC5939 acap attribute

```
m=audio 10000 RTP/SAVPF 97
```

```
a=acap:1 ptime:20
```

```
a=pcfg:1 a=1
```

```
m=audio 10000 RTP/SAVPF 97
```

```
a=acap:2 ptime:30
```

```
a=pcfg:3 a=2
```

- acap is assigned INHERIT indicating that the multiplexing behavior inherits from the ptime category assignment (NORMAL).

Next Steps

- Complete pending section reviews and updates.
- Sync-up with BUNDLE draft on any dependencies.
- Finish the SDP CapNeg handling section.
- Finish the Security Considerations Section.
- Looks promising for the proposed deadline*
* probably

Thank You