DOTS Signal Channel

draft-reddy-dots-signal-channel-08

Feb 22\textsuperscript{nd} 2017
Interim Meeting
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Highlights

• DOTS YANG Data Models
  ▪ DOTS Mitigation request model
  ▪ DOTS Session configuration model
  ▪ Encoding rules defined in [I-D.ietf-core-yang-cbor] for CBOR encoding of data models with YANG
Highlights

- CBOR
  - All parameters in DOTS signal channel are mapped to CBOR types
Highlights

• DOTS mitigation request/response are marked as non-confirmable messages.
• Requests marked by the DOTS client as Non-confirmable messages are sent at regular intervals until a response is received from the DOTS server.
Highlights

- Heartbeat mechanism using “CoAP ping”
- (D)TLS 1.3
- Added support for vendor specific parameters.
- Added new Mitigation status parameters: bytes_dropped, bps_dropped, pkts_dropped and pps_dropped.
Proof of concept

Constrained Application Protocol, Non-Confirmable, PUT, MID: 2719

01.... = Version: 1
..01.... = Type: Non-Confirmable (1)
....1000 = Token Length: 8
Code: PUT (3)
Message ID: 2719
Token: 4ee7d4f8f01595e6

Opt Name: #1: Uri-Host: www.example.com
Opt Name: #2: Uri-Path: .well-known
Opt Name: #3: Uri-Path: v1
Opt Name: #4: Uri-Path: DOTS-signal
Opt Name: #5: Uri-Path: signal
Opt Name: #6: Content-Format: application/cbor

End of options marker: 255
[Response In: 339]

Payload: Payload Content-Format: application/cbor, Length: 27
Payload Desc: application/cbor

Concise Binary Object Representation

Map: (1 entries)
..0 0001 = Unsigned Integer: 1
Map: (2 entries)
..0 0010 = Unsigned Integer: 2
  Unsigned Integer: 123344
..0 1011 = Unsigned Integer: 11
Array: (2 elements)
  Text String: Server1
  Text String: Server2
Proof of concept

```
{
    1: {
        2: 99,
        11: [
            "Server1",
            "Server2"
        ]
    }
}

a1
  01
  a2
  02
  18 63
  0b
  82
  67
  67
  53657276657231 "Server1"
  67
  53657276657232 "Server2"
```

# map(1)  # unsigned(1)
# map(2)  # unsigned(2)
# unsigned(99)
# unsigned(11)
# array(2)
# text(7)
# text(7)
Comments and questions are welcome.