Service Assurance for Intent-based Networking Architecture
&
YANG Modules for Service Assurance

draft-ietf-opsawg-service-assurance-architecture-03
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draft-ietf-opsawg-service-assurance-yang-02
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IETF 113, OPSAWG

One Slide Summary

- Issues:
  - When a service degrades, where is the fault? What are the symptoms? What is the root cause?
  - When a network component fails, which services are impacted?
- Service Assurance for Intent-based Networking Architecture proposal:
  - Decompose the problem into smaller components (=subservices)
  - The assurance graph links those subservices to map the service « intent »
  - The subservices are assured independently
  - Infer a service health score
- This complements the end-to-end monitoring

Architecture Draft: Update in v 03 Circular Dependencies

- In version 2, we covered circular dependencies
- In version 3, we integrated an example

We consider a concrete example to illustrate this transformation. Let's assume that Engineer A is building an assurance graph dealing with IS-IS and Engineer B is building an assurance graph dealing with OSPF. The graph from Engineer A could contain the following:

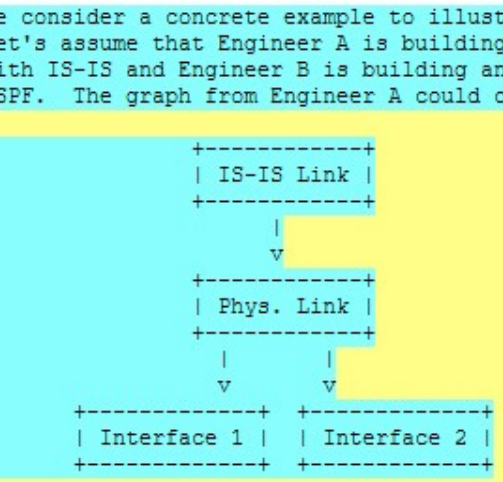


Figure 4: Fragment of assurance graph from Engineer A

The graph from Engineer B could contain the following:

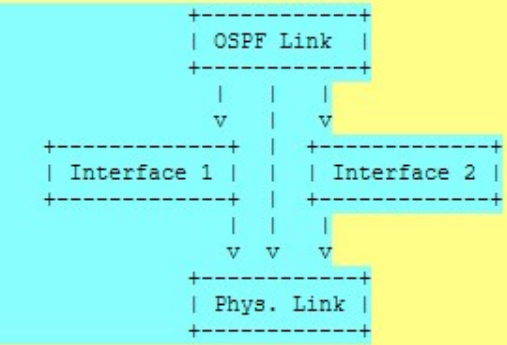


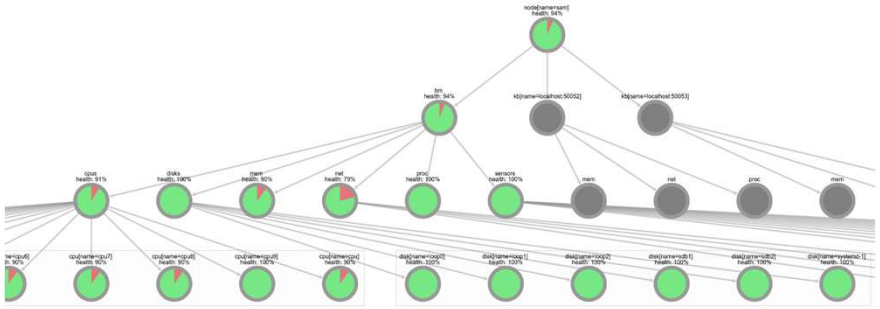
Figure 5: Fragment of assurance graph from Engineer B

YANG Module Draft: Update in v 02 Subservice Health Score

- Subservice Health Score modeled as union, with “missing”

```
leaf health-score {
  type union {
    type uint8 {
      range "0 .. 100";
    }
    type enumeration {
      enum missing {
        value -1;
        description
          "Explictly represent the fact that the health score is
           missing. This could be used when metrics crucial to
           establish the health score are not collected anymore.";
      }
    }
```

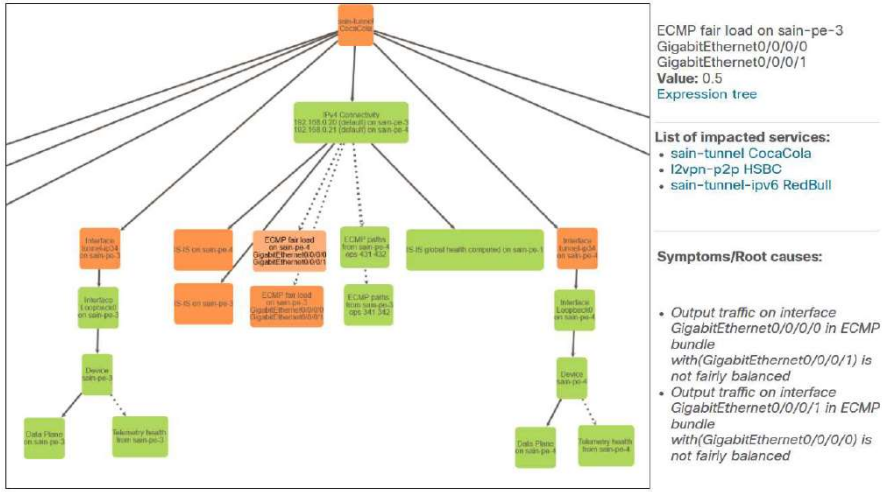
Existing Implementations



1. DxAgent, Liège University (Benoit Donnet and team), presented at IETF 110

   https://github.com/Advanced-Observability/dxagent

Assurance Graph PoC



2. Cisco prototype

3. Huawei prototype

Status

- Thanks to those who provided/will provide feedback (Eliot Lear and others)
- No more open issues
- The authors believe the draft is ready for WGLC