IETF Hackathon

YANG SID Extensions End-To-End

IETF 126

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Vienna, Austria



Hackathon Plan

- SID Extension adds useful data to .sid files:
  - `type, key-mapping`: Convert JSON <-> CBOR (e.g. CORECONF)
- `pyang`: current version generates SID files that are NOT compliant with the data model.
  - How to represent “complex” types, i.e., ENUM, BITS, UNION.
- https://www.ietf.org/archive/id/draft-toutain-t2t-sid-extension-00.html

Use-case: SID DNS

YANG <--> SID Extension <--> Registry <--> Discovery <--> CORECONF

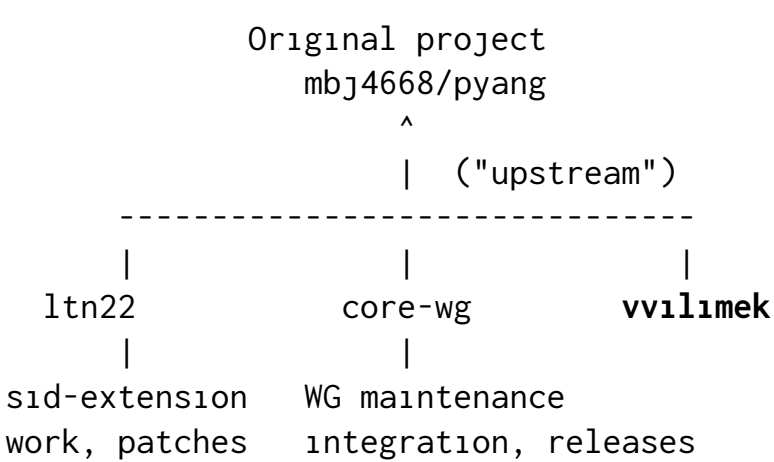
```
 %uv run query_test.py
======================================================================
CORECONF M2M Weather Station CORECONF Test
======================================================================

[*] Decoding CBOR back to JSON...
[DEBUG DNS] SID=100062 module=coreconf-m2m entry_point=100000
repository=http://user.plido.net/SIDs/coreconf-m2m@2026-06-07.sid
[+] Decoding successful

[*] Decoded JSON configuration:
----------------------------------------------------------------------
{
  "coreconf-m2m:transducers": {
    "transducer": [
      {
        "type": "coreconf-m2m:solar-radiation",
        "id": 0,
```

What got done

- Agreed on how to represent “type” so it matches the data model.
  - New data model revision.
    - Ietf-sid-file-extension.yang
  - Started updating pyang



What got done

Simple string leaf:

```
"sid": "60052"

"sid": "60052",
"ietf-sid-file-extension:type": [
  {
    "base-type": "string"
  }
]
```

Enumeration typed leaf:

```
"sid": "60053"

"sid": "60053",
"ietf-sid-file-extension:type": [
  {
    "base-type": "enumeration",
    "enumeration": [
      {
        "name": "down",
        "value": 0
      },
      {
        "name": "up",
        "value": 1
      }
    ]
  }
]
```

Future work

- Better maintain `pyang`.
- Validate generated .sid files against the data model (ietf-sid-file-extension).
- Parse new DM-compliant `type` field structure in `pycoreconf`.
- Evaluate/review solution, drafts, DM, use cases.

Wrap Up

Team members:

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- Laurent Toutain (ltn22)

First timers @ IETF/Hackathon:

- **Vojtech Vilimek (vvilimek)**
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`core-wg / pyang`
Issue #27