
YANG Types for DNS Classes and Resource Record Types

draft-lhotka-dnsop-iana-class-type-yang-01

Ladislav Lhotka

⟨lhotka@nic.cz⟩

Petr Špaček

⟨petr.spacek@nic.cz⟩

26 March 2019

Summary

Two IANA registries from [1] are defined as YANG derived types:

- DNS CLASSes
- Resource Record (RR) Types

Changes since -00

- Only in the I-D text: more details about the context and use cases.
- The YANG module is exactly the same as in -00.

Issues raised

1. Can the YANG module and registry ever get out of sync?
2. Semantics of *deprecated*.

[1] <https://www.iana.org/assignments/dns-parameters/dns-parameters.xhtml>

YANG Derived Types

One type is an enumeration of mnemonic names, the other also permits a numeric reference (cf. RFC 3597).

```
typedef dns-class-name {  
    type enumeration {  
        enum IN {  
            value "1";  
            ...  
        }  
        enum CH {  
            value "3";  
            ...  
        }  
        ...  
    }  
}
```

```
typedef dns-class {  
    type union {  
        type uint16;  
        type dns-class-name;  
    }  
    ...  
}
```

```
typedef rr-type-name {  
    type enumeration {  
        enum A {  
            value "1";  
            ...  
        }  
        enum NS {  
            value "2";  
            ...  
        }  
        ...  
    }  
}
```

```
typedef rr-type {  
    type union {  
        type uint16;  
        type rr-type-name;  
    }  
    ...  
}
```

Issue #1: YANG module versus registry

If there is a flaw in the registry, can it be fixed in the YANG module independently of the registry?

We recommend not to do so: it could break the assumption that further updates to the module will be done by IANA based on the registry changes.

Issue #2: semantics of *deprecated*

- RFC 8126 (IANA registries):

Specific entries in a registry can be marked as “obsolete” (no longer in use) or “deprecated” (use is not recommended).

- RFC 7950 (YANG):

“deprecated” indicates an obsolete definition, but it permits new/continued implementation in order to foster interoperability with older/existing implementations.

This issue is currently being discussed in the NETMOD WG, and should be resolved in the next version of YANG.