Grammar for Enterprise YANG Module Namespace

draft-chen-netmod-enterprise-yang-namespace

Existing Specifications

- Namespaces must be globally unique
  - RFC 6020 Section 5.3 Paragraph 3
    - "…Namespace URIs MUST be chosen so that they cannot collide with standard or other enterprise namespaces…"
- Module and submodule names should be globally unique
  - Module/submodule names must be globally unique within a system
  - RFC 6020 Section 5.1 Paragraph 3
    - "…enterprise modules are RECOMMENDED to choose names that will have low probability of colliding with standard or other enterprise modules, e.g., by using the enterprise or organization name as a prefix for the module name."
  - RFC 6020 Section 6.2.1 Paragraph 1
    - "All module and submodule names share the same global module identifier namespace."

Proposal

- Add one sentence to RFC 6087
  - Vendors should include their reverse DNS names in the URI.
  - urn:com:vendor:…

Reason for Namespace Grammar

- RFC 6020 specifies globally unique namespaces
- Standardizing the use of reverse registered domain names as URNs allows for hassle-free creation of URNs
  - No need to re-register name with IANA
- What about URL?
  - http://www.example.com/yang/example-ospf is a unique identifier
  - Disadvantage is a URL is misleading because a URL implies a web page exists

Example (1)

- <namespace>
  - urn:<reverse-dns>:<sub-domain><module-name>
- <reverse-dns>
  - An organization's registered domain name in reverse
- <sub-domain>
  - Empty string
  - Additional levels of hierarchy within a domain, where each level is delimited by a colon
- <module-name>
  - <organitaion-prefix>-<function>
- <function>
  - A string that describes the function provided by the YANG module

Example (2)

- OSPF YANG module from Vendor with registered domain name “example.com”
- urn:com:example:yang:example-ospf
  - <reverse-dns> = com:example
  - <sub-domain> = yang
  - <module-name> = example-<function>, where
    - <function> = ospf