

Network Working Group
Internet-Draft
Intended status: Standards Track
Expires: January 5, 2014

M. Bjorklund
Tail-f Systems
July 4, 2013

IANA Address Family Numbers and Subsequent Address Family Identifiers
YANG Module
draft-ietf-netmod-iana-afn-safi-00

Abstract

This document defines the initial version of the iana-afn-safi YANG module.

Status of this Memo

This Internet-Draft is submitted in full conformance with the provisions of [BCP 78](#) and [BCP 79](#).

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at <http://datatracker.ietf.org/drafts/current/>.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

This Internet-Draft will expire on January 5, 2014.

Copyright Notice

Copyright (c) 2013 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to [BCP 78](#) and the IETF Trust's Legal Provisions Relating to IETF Documents (<http://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Simplified BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Simplified BSD License.

Table of Contents

- [1. Introduction](#) [3](#)
- [2. IANA Maintained AFN and SAFI YANG Module](#) [4](#)
- [3. IANA Considerations](#) [16](#)
 - [3.1. URI Registrations](#) [17](#)
 - [3.2. YANG Module Registrations](#) [17](#)
- [4. Security Considerations](#) [18](#)
- [5. Normative References](#) [19](#)
- [Author's Address](#) [20](#)

1. Introduction

This document defines the initial version of the `iana-afn-safi` YANG module, for Address Family Numbers (AFN) and Subsequent Address Family Identifiers (SAFI).

The `iana-afn-safi` module reflects IANA's existing "Address Family Numbers" and "SAFI Values" registries.

Whenever a new address family number is added to the "Address Family Numbers" registry, the `IANA-ADDRESS-FAMILY-NUMBERS-MIB` and the `iana-afn-safi` YANG module are updated by IANA.

Whenever a new subsequent address family identifier is added to the "SAFI Values" registry, the `iana-afn-safi` YANG module is updated by IANA.

[2.](#) IANA Maintained AFN and SAFI YANG Module

```
<CODE BEGINS> file "iana-afn-safi.yang"
```

```
module iana-afn-safi {  
  namespace "urn:ietf:params:xml:ns:yang:iana-afn-safi";  
  prefix "ianaaf";
```

```
  organization
```

```
    "IANA";
```

```
  contact
```

```
    "      Internet Assigned Numbers Authority
```

```
      Postal: ICANN
```

```
        4676 Admiralty Way, Suite 330
```

```
        Marina del Rey, CA 90292
```

```
      Tel:    +1 310 823 9358
```

```
      E-Mail: iana@iana.org";
```

```
  description
```

```
    "This YANG module provides two typedefs containing YANG  
    definitions for the following IANA-registered enumerations:
```

```
    - Address Family Numbers (AFN)
```

```
    - Subsequent Address Family Identifiers (SAFI)
```

```
    The latest revision of this YANG module can be obtained from the  
    IANA web site.
```

Copyright (c) 2012 IETF Trust and the persons identified as authors of the code. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, is permitted pursuant to, and subject to the license terms contained in, the Simplified BSD License set forth in [Section 4.c](#) of the IETF Trust's Legal Provisions Relating to IETF Documents (<http://trustee.ietf.org/license-info>).

This version of this YANG module is part of RFC XXXX; see the RFC itself for full legal notices."
// RFC Ed.: replace XXXX with actual RFC number and remove this
// note.

// RFC Ed.: update the date below with the date of RFC publication
// and remove this note.
revision 2013-07-04 {

Bjorklund

Expires January 5, 2014

[Page 4]

Internet-Draft

IANA AFN and SAFI YANG Module

July 2013

```
description
  "Initial revision.";
reference
  "RFC XXXX: IANA Address Family Numbers and
  Subsequent Address Family Identifiers YANG Module";
}

typedef address-family {
  type enumeration {
    // value 0 is reserved by IANA
    enum ipv4 {
      value "1";
      description
        "IP version 4";
    }
    enum ipv6 {
      value "2";
      description
        "IP version 6";
    }
  }
  enum nsap {
    value "3";
```

```
        description
            "NSAP";
    }
    enum hdlc {
        value "4";
        description
            "HDLC (8-bit multidrop)";
    }
    enum bbn1822 {
        value "5";
        description
            "BBN 1822";
    }
    enum all802 {
        value "6";
        description
            "802 (includes all 802 media plus Ethernet 'canonical
            format')";
    }
    enum e163 {
        value "7";
        description
            "E.163";
    }
    enum e164 {
        value "8";
```

```
        description
            "E.164 (SMDS, FrameRelay, ATM)";
    }
    enum f69 {
        value "9";
        description
            "F.69 (Telex)";
    }
    enum x121 {
        value "10";
        description
            "X.121 (X.25, Frame Relay)";
    }
    enum ipx {
        value "11";
```

```

        description
            "IPX (Internetwork Packet Exchange)";
    }
    enum appletalk {
        value "12";
        description
            "Appletalk";
    }
    enum decnetIV {
        value "13";
        description
            "DECnet IV";
    }
    enum banyanVines {
        value "14";
        description
            "Banyan Vines";
    }
    enum e164withNsap {
        value "15";
        description
            "E.164 with NSAP format subaddress";
        reference
            "ATM Forum UNI 3.1";
    }
    enum dns {
        value "16";
        description
            "DNS (Domain Name System)";
    }
    enum distinguishedName {
        value "17";
        description

```

```

        "Distinguished Name (per X.500)";
    }
    enum asNumber {
        value "18";
        description
            "Autonomous System Number";
    }
    enum xtpOverIpv4 {

```

```

    value "19";
    description
        "XTP over IP version 4";
}
enum xtpOverIpv6 {
    value "20";
    description
        "XTP over IP version 6";
}
enum xtpNativeModeXTP {
    value "21";
    description
        "XTP native mode XTP";
}
enum fibreChannelWWPN {
    value "22";
    description
        "Fibre Channel World-Wide Port Name";
}
enum fibreChannelWWNN {
    value "23";
    description
        "Fibre Channel World-Wide Node Name";
}
enum gwid {
    value "24";
    description
        "Gateway Identifier";
}
// FIXME: This one is actually called "afi" in the MIB, but
// that must be a mistake.
enum l2vpn {
    value "25";
    description
        "AFI for L2VPN information";
    reference
        "RFC 4761: Virtual Private LAN Service (VPLS): Using BGP
        for Auto-Discovery and Signaling

        RFC 6074: Provisioning, Auto-Discovery, and Signaling in

```



```

}
enum mplsTpSectionEndpointIdentifier {
    value "26";
    description
        "MPLS-TP Section Endpoint Identifier";
    reference
        "draft-ietf-mpls-gach-adv";
}
enum mplsTpLspEndpointIdentifier {
    value "27";
    description
        "MPLS-TP LSP Endpoint Identifier";
    reference
        "draft-ietf-mpls-gach-adv";
}
enum mplsTpPseudowireEndpointIdentifier {
    value "28";
    description
        "MPLS-TP Pseudowire Endpoint Identifier";
    reference
        "draft-ietf-mpls-gach-adv";
}
enum eigrpCommonServiceFamily {
    value "16384";
    description
        "EIGRP Common Service Family";
}
enum eigrpIpv4ServiceFamily {
    value "16385";
    description
        "EIGRP IPv4 Service Family";
}
enum eigrpIpv6ServiceFamily {
    value "16386";
    description
        "EIGRP IPv6 Service Family";
}
enum lispCanonicalAddressFormat {
    value "16387";
    description
        "LISP Canonical Address Format (LCAF)";
}
enum bgpLs {
    value "16388";
    description
        "BGP-LS";
    reference

```

```
        "draft-ietf-idr-ls-distribution";
    }
    enum 48BitMac {
        value "16389";
        description
            "48-bit MAC";
        reference
            "draft-eastlake-rfc5342bis";
    }
    enum 64BitMac {
        value "16390";
        description
            "64-bit MAC";
        reference
            "draft-eastlake-rfc5342bis";
    }
    // value 65535 is reserved by IANA
}
description
    "This typedef is a YANG enumeration of IANA-registered address
    family numbers (AFN).";
reference
    "IANA Address Family Numbers registry.
    <http://www.iana.org/assignments/address-family-numbers>";
}

typedef subsequent-address-family {
    type enumeration {
        // value 0 is reserved by IANA
        enum nlriUnicast {
            value "1";
            description
                "Network Layer Reachability Information used for unicast
                forwarding";
            reference
                "RFC 4760: Multiprotocol Extensions for BGP-4";
        }
        enum nlriMulticast {
            value "2";
            description
                "Network Layer Reachability Information used for multicast
                forwarding";
            reference
                "RFC 4760: Multiprotocol Extensions for BGP-4";
        }
    }
    // value 3 is reserved by IANA
```

```
enum nlrIMpls {
    value "4";
```

```
        description
            "Network Layer Reachability Information (NLRI) with MPLS
            Labels";
        reference
            "RFC 3107: Carrying Label Information in BGP-4";
    }
    enum mcastVpn {
        value "5";
        description
            "MCAST-VPN";
        reference
            "RFC 6514: BGP Encodings and Procedures for Multicast in
            MPLS/BGP IP VPNs";
    }
    enum nlrIDynamicMsPw {
        value "6";
        status "obsolete";
        description
            "Network Layer Reachability Information used for Dynamic
            Placement of Multi-Segment Pseudowires (TEMPORARY -
            Expires 2008-08-23)";
        reference
            "draft-ietf-pwe3-dynamic-ms-pw: Dynamic Placement of Multi
            Segment Pseudowires";
    }
    enum encapsulation {
        value "7";
        description
            "Encapsulation SAFI";
        reference
            "RFC 5512: The BGP Encapsulation Subsequent Address Family
            Identifier (SAFI) and the BGP Tunnel Encapsulation
            Attribute";
    }
    enum tunnel {
        value "64";
        status "obsolete";
        description
            "Tunnel SAFI";
```

```
reference
  "draft-nalawade-kapoor-tunnel-safi: BGP Tunnel SAFI";
}
enum vpls {
  value "65";
  description
    "Virtual Private LAN Service (VPLS)";
  reference
    "RFC 4761: Virtual Private LAN Service (VPLS): Using BGP
```

Bjorklund

Expires January 5, 2014

[Page 10]

Internet-Draft

IANA AFN and SAFI YANG Module

July 2013

for Auto-Discovery and Signaling

[RFC 6074](#): Provisioning, Auto-Discovery, and Signaling in
Layer 2 Virtual Private Networks (L2VPNs)";

```
}
enum bgpMdt {
  value "66";
  description
    "BGP MDT SAFI";
  reference
    "RFC 6037: Cisco Systems' Solution for Multicast in
    BGP/MPLS IP VPNs";
}
enum bgp4over6 {
  value "67";
  description
    "BGP 4over6 SAFI";
  reference
    "RFC 5747: 4over6 Transit Solution Using IP Encapsulation
    and MP-BGP Extensions";
}
enum bgp6over4 {
  value "68";
  description
    "BGP 6over4 SAFI";
}
enum l1VpnAutoDiscovery {
  value "69";
  description
    "Layer-1 VPN auto-discovery information";
  reference
    "RFC 5195: BGP-Based Auto-Discovery for Layer-1 VPNs";
```

```
}
enum mplsVpn {
  value "128";
  description
    "MPLS-labeled VPN address";
  reference
    "RFC 4364: BGP/MPLS IP Virtual Private Networks (VPNs)";
}
enum multicastBgpMplsVpn {
  value "129";
  description
    "Multicast for BGP/MPLS IP Virtual Private Networks
    (VPNs)";
  reference
    "RFC 6513: Multicast in MPLS/BGP IP VPNs
```

```
    RFC 6514: BGP Encodings and Procedures for Multicast in
    MPLS/BGP IP VPNs";
}
// values 130-131 are reserved by IANA
enum routeTargetConstraints {
  value "132";
  description
    "Route Target constraints";
  reference
    "RFC 4684: Constrained Route Distribution for Border
    Gateway Protocol/MultiProtocol Label Switching (BGP/MPLS)
    Internet Protocol (IP) Virtual Private Networks (VPNs)";
}
enum ipv4DissFlow {
  value "133";
  description
    "IPv4 dissemination of flow specification rules";
  reference
    "RFC 5575: Dissemination of Flow Specification Rules";
}
enum vpv4DissFlow {
  value "134";
  description
    "VPNv4 dissemination of flow specification rules";
  reference
```

```

    "RFC 5575: Dissemination of Flow Specification Rules";
}
// values 135-139 are reserved by IANA
enum vpnAutoDiscovery {
    value "140";
    status "obsolete";
    description
        "VPN auto-discovery";
    reference
        "draft-ietf-l3vpn-bgpvpn-auto: Using BGP as an
        Auto-Discovery Mechanism for VR-based Layer-3 VPNs";
}
// values 141-240 are reserved by IANA
enum private241 {
    value "241";
    description
        "Reserved for Private Use";
    reference
        "RFC 4760: Multiprotocol Extensions for BGP-4";
}
enum private242 {
    value "242";
    description

```

```

    "Reserved for Private Use";
    reference
        "RFC 4760: Multiprotocol Extensions for BGP-4";
}
enum private243 {
    value "243";
    description
        "Reserved for Private Use";
    reference
        "RFC 4760: Multiprotocol Extensions for BGP-4";
}
enum private244 {
    value "244";
    description
        "Reserved for Private Use";
    reference
        "RFC 4760: Multiprotocol Extensions for BGP-4";
}

```

```
enum private245 {
  value "245";
  description
    "Reserved for Private Use";
  reference
    "RFC 4760: Multiprotocol Extensions for BGP-4";
}
enum private246 {
  value "246";
  description
    "Reserved for Private Use";
  reference
    "RFC 4760: Multiprotocol Extensions for BGP-4";
}
enum private247 {
  value "247";
  description
    "Reserved for Private Use";
  reference
    "RFC 4760: Multiprotocol Extensions for BGP-4";
}
enum private248 {
  value "248";
  description
    "Reserved for Private Use";
  reference
    "RFC 4760: Multiprotocol Extensions for BGP-4";
}
enum private249 {
  value "249";
```

```
  description
    "Reserved for Private Use";
  reference
    "RFC 4760: Multiprotocol Extensions for BGP-4";
}
enum private250 {
  value "250";
  description
    "Reserved for Private Use";
  reference
    "RFC 4760: Multiprotocol Extensions for BGP-4";
```

```

}
enum private251 {
    value "251";
    description
        "Reserved for Private Use";
    reference
        "RFC 4760: Multiprotocol Extensions for BGP-4";
}
enum private252 {
    value "252";
    description
        "Reserved for Private Use";
    reference
        "RFC 4760: Multiprotocol Extensions for BGP-4";
}
enum private253 {
    value "253";
    description
        "Reserved for Private Use";
    reference
        "RFC 4760: Multiprotocol Extensions for BGP-4";
}
enum private254 {
    value "254";
    description
        "Reserved for Private Use";
    reference
        "RFC 4760: Multiprotocol Extensions for BGP-4";
}
// value 255 is reserved by IANA
}
description
    "This typedef is a YANG enumeration of IANA-registered
    subsequent address family identifiers (SAFI).";
reference
    "IANA SAFI Values registry.
    <http://www.iana.org/assignments/safi-namespace>";

```

```

}
}

```

<CODE ENDS>

3. IANA Considerations

This document defines the initial version of the IANA-maintained `iana-afn-safi` YANG module.

IANA is requested to extend the registries "Address Family Numbers" and "SAFI Values" with a "Name" column. IANA is also requested to add this new Note to these registries:

The name of an entry in this registry must be a legal SMIV2 enumeration label.

The existing entries in the "Address Family Numbers" registry should get their names from the corresponding "enum" statement in the "address-family" typedef.

The existing entries in the "SAFI Values" registry should get their names from the corresponding "enum" statement in the "subsequent-address-family" typedef.

The `iana-afn-safi` module is intended to reflect the "Address Family Numbers" and "SAFI Values" registries. When an AFN or SAFI is added to these registries, a new "enum" statement must be added to the "address-family" or "subsequent-address-family" typedefs. The name of the "enum" is the value of the "Name" column in the registry.

The following substatements to the "enum" statement should be defined:

"value": Replicate the value from the registry.

"status": Include only if a registration has been deprecated (use the value "deprecated") or obsoleted (use the value "obsolete").

"description": Replicate the description from the registry, if any.

"reference": Replicate the reference from the registry, if any, and add the title of the document.

If a parameter is marked as "reserved" in these registries, no "enum" statement is added to the corresponding typedef. Instead a comment is added, on the form:

```
// value NN is reserved by XX
```

Unassigned values are not present in the module.

When the iana-afn-safi YANG module is updated, a new "revision" statement must be added.

IANA is requested to add this new Note to the "Address Family Numbers" and "SAFI Values" registries:

When this registry is modified, the YANG module iana-afn-safi must be updated as defined in RFC XXXX.

The Reference text in the "Address Family Numbers" registry needs to be updated as:

OLD:

[[RFC2453](#)] [RFC2858]

NEW:

[[RFC2453](#)] [RFC2858] [RFCXXXX]

The Reference text in the "SAFI Values" registry needs to be updated as:

OLD:

[[RFC4760](#)]

NEW:

[[RFC4760](#)] [RFCXXXX]

[3.1.](#) URI Registrations

This document registers a URI in the IETF XML registry [[RFC3688](#)]. Following the format in [RFC 3688](#), the following registration is requested to be made.

URI: urn:ietf:params:xml:ns:yang:iana-afn-safi

Registrant Contact: IANA.

XML: N/A, the requested URI is an XML namespace.

[3.2.](#) YANG Module Registrations

This document registers a YANG module in the YANG Module Names registry [[RFC6020](#)].

name: iana-afn-safi
namespace: urn:ietf:params:xml:ns:yang:iana-afn-safi
prefix: ianaaf
reference: RFC XXXX

Bjorklund

Expires January 5, 2014

[Page 17]

Internet-Draft

IANA AFN and SAFI YANG Module

July 2013

[4.](#) Security Considerations

Since this document does not introduce any technology or protocol, there are no security issues to be considered for this document itself.

5. Normative References

- [RFC3688] Mealling, M., "The IETF XML Registry", [BCP 81](#), [RFC 3688](#), January 2004.

- [RFC6020] Bjorklund, M., "YANG - A Data Modeling Language for the Network Configuration Protocol (NETCONF)", [RFC 6020](#), October 2010.

Bjorklund

Expires January 5, 2014

[Page 19]

Internet-Draft

IANA AFN and SAFI YANG Module

July 2013

Author's Address

Martin Bjorklund
Tail-f Systems

Email: mbj@tail-f.com

