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

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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.

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  authors of the code. All rights reserved.

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  without modification, is permitted pursuant to, and subject to
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  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 {
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
Layer 2 Virtual Private Networks (L2VPNs);
}
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

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

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";
    }
  }
}
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";
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 vpnv4DissFlow {
  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";
"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";
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>";
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.


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
prefix:      ianaaf
reference:   RFC XXXX
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


Author’s Address

Martin Bjorklund
Tail-f Systems

Email: mbj@tail-f.com