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Definitions of Managed Objects

for the Communities Attribute of Border

Gateway Protocol (BGP-4)

<[draft-richardson-bgp4-communities-mib-00.txt](#)>

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Abstract

This memo is an extension to the SNMP MIB. It specifies an IAB standards track protocol for the Internet community, and requests discussion and suggestions for improvements. This memo extends the MIB defined in [[BGP-MIB](#)].

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[1.](#) Introduction

This memo defines extensions to the MIB defined in [[BGP-MIB](#)]. In particular, it describes managed objects based upon attributes defined in "BGP Communities" [[RFC1997](#)].

[2.](#) Overview

These objects are used to control and manage a BGP-4 implementation that supports the Communities attribute defined in [[RFC1997](#)]. This MIB extends a table defined in [[BGP-MIB](#)]: the BGP-4 Received Path Attribute Table.

The BGP Communities MIB is composed of the following primary objects:

- bgp4CommTable { bgp 10 1 }

A list of communities received with each route.

[3.](#) Definitions

BGP-COMMUNITIES-MIB DEFINITIONS ::= BEGIN

IMPORTS

MODULE-IDENTITY, OBJECT-TYPE, NOTIFICATION-TYPE,
IpAddress, mib-2

FROM SNMPv2-SMI

MODULE-COMPLIANCE, OBJECT-GROUP, NOTIFICATION-GROUP
FROM SNMPv2-CONF

bgp

FROM BGP-MIB;

bgpCommunities MODULE-IDENTITY

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REVISION "200102230000Z"

DESCRIPTION

"Extension of the MIB module for BGP-4 to include
information about the communities attribute defined
in BGP Communities."

REFERENCE

"[RFC 1997](#) - BGP Communities Attribute"

::= { bgp 10 }

bgp4CommTable OBJECT-TYPE

SYNTAX SEQUENCE OF Bgp4CommEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The BGP-4 Communities Table contains information about
the communities received with a route."

::= { bgpCommunities 1 }

bgp4CommEntry OBJECT-TYPE

SYNTAX Bgp4CommEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

AUGMENTS { bgp4PathAttrTable }

::= { bgp4CommTable 1 }

```

Bgp4CommEntry ::= SEQUENCE {
    bgp4PathAttrComm
        OCTET STRING
}

bgp4PathAttrComm OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE(0..4096))
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "A list of 4-octet long values, each representing a
        community.  Size zero (0) indicates the absence of
        such attributes.  Octets beyond the maximum size, if
        any, are not recorded by this object.  There are certain
        4-octet long values that carry additional semantics."
    REFERENCE
        "RFC 1997 - BGP Communities Attribute"
    ::= { bgp4CommEntry 1 }

END

```

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5. Acknowledgements

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J. Haas, NextHop Technologies

6. References

- [BGP-MIB] Hares, S., Haas, J., "Definitions of Managed Objects for the Fourth Version of Border Gateway Protocol (BGP-4)", [draft-ietf-idr-bgp4-mib-05.txt](#), December 2001.
- [RFC1997] Chandra, R., Traina, P., "BGP Communities Attribute", [RFC-1997](#), August 1996.

7. Security Considerations

Security considerations are beyond the scope of this document. See [\[BGP-MIB\]](#) for a more detailed discussion of the security implications of this document.

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