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P802.1CS-2020/Cor1/D2.0

October 13, 2023

(Corrigendum to IEEE Std 802.1CS™–2020)

Draft Standard for Local and metropolitan area networks—

Link-local Registration Protocol

Corrigendum 1: Corrections to Management Modules and Protocol Encoding

Unapproved draft, prepared by the
Time-Sensitive Networking (TSN) Task Group of IEEE 802.1

Sponsored by the
LAN/MAN Standards Committee
of
IEEE Computer Society the

This page and the following cover pages are not part of the draft. They provide revision and other information for IEEE 802.1 Working Group members and participants in the IEEE Standards Association ballot process, and will be updated as convenient. Blank pages allow for the future addition of cross-references to changed text without forcing renumbering of all pages in the draft. Pages are numbered from 1 (including cover pages) for the convenience of reviewers whose PDF viewers do not easily accommodate different numbering sequences. Pages will of course be renumbered prior to publication as a standard.

The text proper of this draft begins with the [Title page](#).

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2 This draft P802.1CS-2020/Cor1/D2.0 is being issued for initial Standards Association ballot. The 802.1
3 Working Group ballot that preceded this Standards Association ballot closed with no Disapprove ballots and
4 no comments. The text of the draft (including page numbering) is unchanged from the balloted draft, with
5 the exception of updates to these cover pages (not part of this draft) and the consequent update of the date
6 shown in the header of most pages.

7 Information in the cover letter for this ballot is repeated below.

8 **Editorial suggestions**

9 Please note, that professional editing takes place once the document is approved, and as such, required
10 editorial changes will be reviewed/made then (e.g., punctuation, grammar, formatting, style consistency).
11 The following editorial suggestions will also be considered as part of this initial ballot: << >>.

12 **MIB and YANG modules**

13 The YANG module is attached in plain text (UTF-8) format to the draft pdf. Also included is a txt file
14 showing the differences between the YANG module in the base document IEEE Std 802.1CS-2020, and the
15 replacement YANG module specified in this corrigendum draft.

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¹ **Abstract:** Corrects errors in the YANG module, SNMP MIB and TLV encoding in IEEE Std
² 802.1CS-2020.

³ **Keywords:** Bridged Local Area Networks, bridges, bridging, IEEE 802®, IEEE 802.1CS™, IEEE
⁴ 802.1Q™, Link-local Registration Protocol, local area networks (LANs), LRP, MAC Bridges, Time-
⁵ Sensitive Networking, TSN, Virtual Bridged Local Area Networks (virtual LANs).

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2 <<The following lists will be updated in the usual way prior to publication>>

3 At the time this standard was completed, the IEEE 802.1 working group had the following membership:

4 **Glenn Parsons, *Chair***
5 **Jessy Rouyer, *Vice Chair***
6 **János Farkas, *TSN Task Group Chair***
7 **Norman Finn, *Editor***
8

9 The following members of the individual balloting committee voted on this standard. Balloters may have
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A.N. Other

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12

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10

1 Introduction

2

This introduction is not part of IEEE Std 802.1CS-2020/Cor1, IEEE Standard for Local and metropolitan area networks—Bridges and Bridged Networks—Corrigendum 1: Corrections to Management Modules and Protocol Encoding

3 This corrigendum to IEEE Std 802.1CS-2020 corrects errors in the YANG module, SNMP MIB and TLV
4 encoding.

5

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3 **Draft Standard for** 4 **Local and Metropolitan Networks —**

5 **Link-local Registration Protocol**

6 **Corrigendum 1: Corrections to Management** 7 **Modules and Protocol Encoding**

8 (Corrigendum to IEEE Std 802.1CS™–2020)

9 NOTE—The editing instructions contained in this corrigendum define how to merge the material contained therein into
10 the existing base standard and its amendments to form the comprehensive standard.

11 The editing instructions are shown in ***bold italics***. Four editing instructions are used: change, delete, insert,
12 and replace. ***Change*** is used to make corrections in existing text or tables. The editing instruction specifies
13 the location of the change and describes what is being changed by using ~~striketrough~~ (to remove old
14 material) and underscore (to add new material). ***Delete*** removes existing material. ***Insert*** adds new material
15 without disturbing the existing material. Deletions and insertions may require renumbering. If so,
16 renumbering instructions are given in the editing instruction. ***Replace*** is used to make changes in figures or
17 equations by removing the existing figure or equation and replacing it with a new one. Editing instructions,
18 change markings, and this note will not be carried over into future editions because the changes will be
19 incorporated into the base standard.

1 *Change ABSTRACT as follows:*

2 **Abstract:** This standard specifies protocols, procedures, and managed objects for a Link-local
3 Registration Protocol (LRP) to replicate a registration database from one end to the other of a
4 point-to-point link and to replicate changes to parts of that database. A facility is provided to purge
5 the replicated database if the source becomes unresponsive. LRP is optimized for databases on
6 the order of ~~1-Mbyte~~ [a million bytes](#).

7 **1. Overview**

8 **1.1 Scope**

9 *Change 1.1 as follows:*

10 This standard specifies protocols, procedures, and managed objects for a Link-local Registration Protocol
11 (LRP) to replicate a registration database from one end to the other of a point-to-point link and to replicate
12 changes to parts of that database. A facility is provided to purge the replicated database if the source
13 becomes unresponsive. Provision is made for a proxy system to operate LRP on behalf of a controlled
14 system. LRP is optimized for databases on the order of ~~1-Mbyte~~ [a million bytes](#).

6. Link-local Registration Protocol

6.3 Objectives and non-objectives

6.3.1 Objectives of LRP

Change 6.3.1 as follows:

The objectives of LRP are to:

- a) Serve application instances as described in 6.2.
- b) Remain independent of the syntax and semantics of the LRP application data contained in the applicant and registrar databases.
- c) Provide a facility for an application instance to discover its peers, and to make and break associations between application instances.
- d) Support multiple options for the transport mechanisms used to carry LRPDUs, in order to provide a range of capability/complexity trade-offs.
- e) Transfer the application instances' data quickly, reliably, and efficiently with respect to bandwidth.
- f) Efficiently transfer changes to parts of a database, without retransmitting the whole database.
- g) Serve applicant and registrar databases whose size, per port, is on the order of magnitude of ~~1-Mbyte~~ [a million bytes](#).
- h) Support only point-to-point associations between application instances.
- i) Support multiple point-to-point associations on one port.
- j) By the use of TCP as an LRP-DT transport mechanism, provide for placing the application instance and Portal in a separate Proxy system from its target port, in order to facilitate central control of a network.
- k) Support proxying for a Controlled system without requiring any new behaviors of the Controlled system, in order to make it possible to deploy a new LRP application without implementing an application instance in every system.
- l) Make efficient use of TCP connections.
- m) Support resource-constrained end systems.

12. YANG models for LRP

12.2 The YANG framework

Change 12.2 as follows:

This clause has been developed according to the YANG guidelines published in RFC6087 ([D12]) as applicable to IEEE standards. The YANG framework applies hierarchy in the following areas:

- 1) The uniform resource name (URN), as specified in IEEE Std 802d. ~~The structure of the URN is such that “ieee” is the root (i.e., name-space identifier), followed by the standard, then the working group developing the standard.~~
- 2) The YANG objects form a hierarchy of configuration and operational data structures that define the YANG model. These hierarchical relationships are described in 11.2 and 12.5.

12.6 Definition of LRP YANG module

Delete the YANG module in 12.6:

Insert the following YANG module in 12.6:

```
module ieee802-dot1cs-lrp {
  yang-version 1.1;

  namespace "urn:ieee:std:802.1CS:yang:ieee802-dot1cs-lrp";
  prefix "dot1cs";

  import ietf-system { prefix "sys"; }
  import ietf-yang-types { prefix "yang"; }
  import ietf-interfaces { prefix if; }
  import ieee802-types { prefix ieee; }
  import ietf-inet-types { prefix inet; }

  organization
    "Institute of Electrical and Electronics Engineers";
  contact
    "WG-URL: http://ieee802.org/1/
    WG-EMail: stds-802-1-l@ieee.org
    Contact: IEEE 802.1 Working Group Chair
    Postal: C/O IEEE 802.1 Working Group
    IEEE Standards Association
    445 Hoes Lane
    Piscataway
    NJ 08854
    USA

    E-mail: stds-802-1-chairs@ieee.org";

  description
    "This module provides management of systems that support the
    Link-local Registration Protocol (LRP).

    Copyright (C) IEEE (2023).

    This version of this YANG module is part of IEEE Std 802.1CS-2020/Cor1;
    see the standard itself for full legal notices.";

  revision 2023-05-16 {
    description
      "Published as part of IEEE Std 802.1CS-2020/Cor1.

      The following reference statement identifies each referenced
      IEEE Standard as updated by applicable amendments.";

    reference
      "IEEE Std 802.1CS:
```

```
1 IEEE Std 802.1CS-2020 Link-local Registration Protocol,
2 IEEE Std 802.1CS-2020 Corrigendum 1: Corrections to
3 Management Modules and Protocol Encoding.";
4 }
5
6 revision 2020-12-03 {
7   description
8     "First defined in IEEE P802.1CS-2020";
9   reference
10    "IEEE Std 802.1CS-2020.";
11 }
12 /*-----*/
13 /* Feature */
14 /*-----*/
15
16 feature lrp {
17   description
18     "Feature Link-local Registration Protocol";
19 }
20
21 /*-----*/
22 /* Type Definitions */
23 /*-----*/
24 typedef lrp-dt-address-union {
25   type union {
26     type ieee:mac-address;
27     type inet:ipv4-address;
28     type inet:ipv6-address;
29   }
30 }
31
32 /*-----*/
33 /* Configuration Data */
34 /*-----*/
35 /*
36   Link-local Registration Protocol
37 */
38 augment "/sys:system" {
39   description "Link-local Registration Protocol";
40   container lrp {
41     if-feature lrp;
42     description
43       "Configure the Link-local Registration Protocol";
44     leaf lrp-ack-timer-init {
45       type uint32;
46       units "milliseconds";
47       config false;
48       description
49         "A read-only integer n specifying the number of milliseconds for
50         ackTimerInit (D.2.12.6 of IEEE Std 802.1Q-2018)";
51       reference
52         "11.3.1 of IEEE Std 802.1CS";
53     }
54     leaf lrp-reconnect-max {
55       type uint16;
56       units "seconds";
57       description
58         "An integer number of seconds which is the maximum value for
59         instReconnectReset.";
60       reference
61         "11.3.2 of IEEE Std 802.1CS";
62     }
63     list portal {
64       key "portal-id";
65       config false;
66       leaf portal-id {
67         type uint32;
68         config false;
69         description
70           "Local Identifier of portal";
71         reference
72           "Clause 10 of IEEE Std 802.1CS";
```

```
1     }
2     leaf target-port-interface-ref {
3         type if:interface-ref;
4         config false;
5         description
6             "The interface reference identifying the target
7             port to which this portal is attached to.";
8         reference
9             "8.2.2.1 of IEEE Std 802.1CS";
10    }
11    leaf lrp-dt-instance-id {
12        type leafref {
13            path "/sys:system/dot1cs:lrp/dot1cs:lrp-dt-instance/dot1cs:instance-id";
14        }
15        config false;
16        description
17            "The LRP-DT instance id that this portal is
18            attached to.";
19        reference
20            "8.2.2.1 of IEEE Std 802.1CS";
21    }
22    leaf application-id {
23        type string;
24        config false;
25        description
26            "The value transmitted in, and expected to be received in, the
27            appId field of Hello LRPDU's.";
28        reference
29            "8.2.2.1 of IEEE Std 802.1CS";
30    }
31    leaf my-chassis-id {
32        type ieee:chassis-id-type ;
33        config false;
34        description
35            "The value transmitted in the My Chassis ID TLV, and expected to be
36            received in the Neighbor Chassis ID TLV, of Hello LRPDU's";
37        reference
38            "8.2.2.2 of IEEE Std 802.1CS";
39    }
40    leaf my-port-id {
41        type ieee:port-id-type ;
42        config false;
43        description
44            "The value transmitted in the My Port ID TLV, and expected to be
45            received in the Neighbor Port ID TLV, of Hello LRPDU's.";
46        reference
47            "8.2.2.3 of IEEE Std 802.1CS";
48    }
49    leaf neighbor-chassis-id {
50        type ieee:chassis-id-type ;
51        config false;
52        description
53            "The value transmitted in the Neighbor Chassis ID TLV, and expected
54            to be received in the My Chassis ID TLV, of Hello LRPDU's.";
55        reference
56            "8.2.2.4 of IEEE Std 802.1CS";
57    }
58    leaf neighbor-port-id {
59        type ieee:port-id-type ;
60        config false;
61        description
62            "The value transmitted in the Neighbor Port ID TLV, and expected to
63            be received in the My Port ID TLV, of Hello LRPDU's.";
64        reference
65            "8.2.2.5 of IEEE Std 802.1CS";
66    }
67    leaf my-hello-status {
68        type enumeration {
69            enum hs-looking {
70                value 1;
71                description
72                    "This Portal has not yet received a successful Associate Portal
```



```
1         request.";
2     }
3     enum hs-connecting {
4         value 2;
5         description
6             "This Portal has received a successful Associate Portal
7             request, and a Hello LRPDU with the hsLooking status. The
8             Portal is ready to receive all LRPDU.";
9     }
10    enum hs-connected {
11        value 3;
12        description
13            "This Portal is up and ready to transfer LRP application data.
14            The Portal is allowed to transmit all LRPDU.";
15    }
16    }
17    config false;
18    description
19        "An enumerated value to be transmitted in the Hello status field
20        of any Hello LRPDU.";
21    reference
22        "8.2.2.8 of IEEE Std 802.1CS";
23    }
24    leaf local-overflow {
25        type boolean;
26        config false;
27        description
28            "Contains the last Boolean input from the Database overflow
29            request. A value of TRUE indicates that the partner applicant
30            database has exceeded the capacity of the local registrar LRP
31            application.";
32        reference
33            "8.2.2.10 of IEEE Std 802.1CS";
34    }
35    leaf neighbor-overflow {
36        type boolean;
37        config false;
38        description
39            "A Boolean copied from the last-received database overflow bit [bit
40            8] in the Error status field of the last-received Hello LRPDU.";
41        reference
42            "8.2.2.11 of IEEE Std 802.1CS";
43    }
44    leaf neighbor-acknowledged {
45        type boolean;
46        config false;
47        description
48            "A Boolean, equal to the AND of all of the actAcknowledged
49            variables for all of the Applicant state machines (records) on this
50            Portal.";
51        reference
52            "8.2.2.12 of IEEE Std 802.1CS";
53    }
54    leaf my-app-hello-info {
55        type string;
56        config false;
57        description
58            "Value to put in the Application Information TLV of a
59            transmitted Hello LRPDU.";
60        reference
61            "8.2.2.16 of IEEE Std 802.1CS";
62    }
63    leaf last-received-status {
64        type string;
65        config false;
66        description
67            "Used by the Receive Hello state machine to record the
68            Hello status field of a Hello LRPDU received from the
69            neighbor Portal.";
70        reference
71            "8.2.2.22 of IEEE Std 802.1CS";
72    }
```

```
1 leaf applicant-active-records {
2     type uint32;
3     config false;
4     description
5         "An integer reporting the number of records in the applicant
6         database.";
7     reference
8         "11.5.1 of IEEE Std 802.1CS";
9 }
10 leaf registrar-active-records {
11     type uint32;
12     config false;
13     description
14         "An integer reporting the number of records in the registrar
15         database.";
16     reference
17         "11.5.2 of IEEE Std 802.1CS";
18 }
19 leaf sent-hellos {
20     type yang:counter64;
21     config false;
22     description
23         "The number of Hello LRPDU's transmitted by the Send Hello state machines.";
24     reference
25         "11.5.3 of IEEE Std 802.1CS";
26 }
27 leaf accepted-hellos {
28     type yang:counter64;
29     config false;
30     description
31         "The number of valid Hello LRPDU's received by the Receive Hello
32         state machine.";
33     reference
34         "11.5.4 of IEEE Std 802.1CS";
35 }
36 leaf discarded-hellos {
37     type yang:counter64;
38     config false;
39     description
40         "The number of invalid Hello LRPDU's discarded by the Receive Hello
41         state machine.";
42     reference
43         "11.5.5 of IEEE Std 802.1CS";
44 }
45 leaf sent-records {
46     type yang:counter64;
47     config false;
48     description
49         "The number of Record LRPDU's transmitted by the Applicant state
50         machine.";
51     reference
52         "11.5.6 of IEEE Std 802.1CS";
53 }
54 leaf accepted-records {
55     type yang:counter64;
56     config false;
57     description
58         "The number of valid Record LRPDU's received by the Partial list
59         state machine.";
60     reference
61         "11.5.7 of IEEE Std 802.1CS";
62 }
63 leaf discarded-records {
64     type yang:counter64;
65     config false;
66     description
67         "The number of invalid Record LRPDU's discarded by the Partial list
68         state machine.";
69     reference
70         "11.5.8 of IEEE Std 802.1CS";
71 }
72 leaf record-errors {
```

```
1      type yang:counter64;
2      config false;
3      description
4          "The number of records discarded from otherwise-valid Record LRPDU
5          by regReceiveWriteRecord due to inconsistencies between the
6          Checksum, Application data, and Data length fields.";
7      reference
8          "11.5.9 of IEEE Std 802.1CS";
9  }
10 leaf sent-partials {
11     type yang:counter64;
12     config false;
13     description
14         "The number of Partial List LRPDU transmitted by the Applicant
15         state machine.";
16     reference
17         "11.5.10 of IEEE Std 802.1CS";
18 }
19 leaf accepted-partials {
20     type yang:counter64;
21     config false;
22     description
23         "The number of valid Partial List LRPDU received by the Applicant
24         state machine.";
25     reference
26         "11.5.11 of IEEE Std 802.1CS";
27 }
28 leaf discarded-partials {
29     type yang:counter64;
30     config false;
31     description
32         "The number of invalid Partial List LRPDU discarded by the
33         Applicant state machine.";
34     reference
35         "11.5.12 of IEEE Std 802.1CS";
36 }
37 leaf sent-complete {
38     type yang:counter64;
39     config false;
40     description
41         "The number of Complete List LRPDU transmitted by the Applicant
42         state machine.";
43     reference
44         "11.5.13 of IEEE Std 802.1CS";
45 }
46 leaf accepted-completes {
47     type yang:counter64;
48     config false;
49     description
50         "The number of valid Complete List LRPDU received by the Applicant
51         state machine.";
52     reference
53         "11.5.14 of IEEE Std 802.1CS";
54 }
55 leaf discarded-completes {
56     type yang:counter64;
57     config false;
58     description
59         "The number of invalid Complete List LRPDU discarded by the
60         Applicant state machine.";
61     reference
62         "11.5.15 of IEEE Std 802.1CS";
63 }
64 leaf discarded-unknowns {
65     type yang:counter64;
66     config false;
67     description
68         "The number of LRPDU of unknown type discarded by the Applicant
69         state machine or Partial list state machine.";
70     reference
71         "11.5.16 of IEEE Std 802.1CS";
72 }
```

```
1 } // end portal
2 list lrp-dt-instance {
3   key "instance-id";
4   config false;
5   leaf instance-id {
6     type uint32;
7     config false;
8     description
9       "Local data transport instance";
10    reference
11      "Clause 7 of IEEE Std 802.1CS";
12  }
13  leaf active-tcp-open {
14    type boolean;
15    config false;
16    description
17      "A Boolean value that is TRUE if and only if instMyAddress and
18      instNeighborAddress are TCP addresses and this LRP-DT instance is
19      using the active , not the passive , form of TCP OPEN";
20    reference
21      "7.3.2.1 of IEEE Std 802.1CS";
22  }
23  leaf my-dt-address {
24    type lrp-dt-address-union;
25    config false;
26    description
27      "The address of the local system for this LRP-DT instance; the
28      address used as a destination address by the neighbor LRP-DT
29      instance. The address includes a type (MAC, IPv4, or IPv6) and an
30      address of that type.";
31    reference
32      "7.3.2.2 of IEEE Std 802.1CS";
33  }
34  leaf my-tcp-port{
35    type inet:port-number;
36    config false;
37    description
38      "The local port number for this TCP connection, or 0, if this
39      connection uses ECP, instead of TCP.";
40    reference
41      "7.3.2.3 of IEEE Std 802.1CS";
42  }
43  leaf neighbor-dt-address {
44    type lrp-dt-address-union;
45    config false;
46    description
47      "The address of the neighbor LRP-DT instance; the address used as a
48      destination address by this LRP-DT instance. The address includes a
49      type (MAC, IPv4, or IPv6) and an address of that type.";
50    reference
51      "7.3.2.4 of IEEE Std 802.1CS";
52  }
53  leaf neighbor-tcp-port {
54    type inet:port-number;
55    config false;
56    description
57      "The remote port number for this TCP connection, or 0, if this
58      connection uses ECP, instead of TCP.";
59    reference
60      "7.3.2.5 of IEEE Std 802.1CS";
61  }
62  leaf discarded-lrpdus {
63    type yang:counter64;
64    config false;
65    description
66      "A counter indicating the number of LRPDUs discarded by the LRP-DT
67      instance that cannot be assigned to a Portal for processing.";
68    reference
69      "11.4.1 of IEEE Std 802.1CS";
70  }
71 } // end lrp-dt-instance
72 } // end lrp
```

```
1 } // end augment system
2 } // end ieee802-dot1cs-lrp
3
```

1 13. MIB modules for LRP¹

2 13.5 MIB modules²

3 13.5.1 LRP Textual conventions MIB

4 *Change the MIB module in 13.5.1 with as follows:*

```
5 LRP-TC-MIB DEFINITIONS ::= BEGIN
6
7 IMPORTS
8     MODULE-IDENTITY,
9     Unsigned32
10    FROM SNMPv2-SMI
11    ieee802dot1mibs
12    FROM IEEE8021-TC-MIB
13    TEXTUAL-CONVENTION
14    FROM SNMPv2-TC;
15
16
17
18
19
20 ieee8021LrpTcMIB MODULE-IDENTITY
21 LAST-UPDATED "202012030000Z" -- December 3, 2020
22 LAST-UPDATED "202303140000Z" -- March 14, 2023
23 ORGANIZATION "IEEE 802.1 Working Group"
24 CONTACT-INFO
25     "WG-URL:      http://1.ieee802.org
26      WG-EMail:    stds-802-1-l@ieee.org
27
28      Contact:     IEEE 802.1 Working Group Chair
29      Postal:      C/O IEEE 802.1 Working Group
30                  IEEE Standards Association
31                  445 Hoes Lane
32                  Piscataway
33                  NJ 08854
34                  USA
35      E-mail:      stds-802-1-chairs@ieee.org"
36
37
38 DESCRIPTION
39     "Textual conventions used throughout IEEE Std 802.1CS.
40
41     Unless otherwise indicated, the references in this
42     MIB module are to IEEE Std 802.1CS-2020.
43
44 Copyright (C) IEEE (2021). This version of this MIB module
45 is included in clause 13 of IEEE Std 802.1CS-2020;
46 Copyright (C) IEEE (2023). This version of this MIB module
47 is included in clause 13 of IEEE Std 802.1CS-2020/Cor1-2023;
48     see the standard itself for full legal notices."
49
50 REVISION      "202303140000Z" -- March 14, 2023
51 DESCRIPTION   "OID changed to avoid conflict with a MIB defined in
52               IEEE Std 802.1CBcv-2021."
53
54 REVISION      "202012030000Z" -- December 3, 2020
55 DESCRIPTION   "This MIB module included in IEEE Std 802.1CS-2020.
56               "
57
58 ::= { ieee802dot1mibs 34 }
59 ::= { ieee802dot1mibs 38 }
```

¹An ASCII version of this MIB module can be obtained by Web browser from the IEEE 802.1 Website at <http://www.ieee802.org/1/pages/MIBS.html>.

²Copyright release for MIBs: Users of this standard may freely reproduce the MIBs contained in this subclause so that they can be used for their intended purpose.

```
1
2 --
3 -- *****
4 -- Textual Conventions
5 -- *****
6
7 LrpHelloStatus ::= TEXTUAL-CONVENTION
8     STATUS current
9     DESCRIPTION
10         "This specifies the current state of the Hello Receive State
11         Machine. It can take the following values:
12
13         hsLooking(1) This Portal has not yet received a successful
14         Complete Portal create request.
15         hsConnecting(2) This Portal has received a successful
16         Complete Portal create request (10.2.4), and a
17         Hello LRPDU with the hsLooking status.
18         The Portal is ready to receive all LRPDU's.
19         hsConnected(3) This Portal is up and ready to transfer
20         LRP application data. The Portal is allowed to
21         transmit all LRPDU's
22
23         "
24     REFERENCE
25         "8.2.2.8"
26     SYNTAX INTEGER {
27         hsLooking (1),
28         hsConnecting (2),
29         hsConnected (3)
30     }
31
32 LrpAppId ::= TEXTUAL-CONVENTION
33     DISPLAY-HINT "x"
34     STATUS current
35     DESCRIPTION
36         "Identifies an LRP application type.
37         A 32 bit number. The most-significant 24 bits of the integer are
38         an OUI or CID (obtainable from the IEEE Registration Authority),
39         and the least-significant 8 bits are assigned by the owner of
40         the OUI or CID. This creates a world-wide unique identity for
41         the LRP application type.
42
43         "
44     REFERENCE "9.2"
45     SYNTAX Unsigned32
46
47 LrpInetAddressInfo ::= TEXTUAL-CONVENTION
48     STATUS current
49     DESCRIPTION
50         "An LRP TCP Discovery TLV has some number of
51         Application descriptors, each of which can have either one or
52         two Address info fields. The Address info field tells whether
53         the following Address field is present or not, and if present,
54         whether it contains an IPv4 or an IPv6 address.
55         LrpInetAddressInfo can take the following values:
56
57         noAddress(0), Address info present, Address field not present
58         addrIPv4(1), Address info present, Address field has IPv4
59         addrIPv6(2), Address info present, Address field has IPv6
60         notPresent(256) Address info not present
61
62         "
63     REFERENCE "C.2.2.6.2"
64     SYNTAX INTEGER {
65         noAddress(0),
66         addrIPv4(1),
67         addrIPv6(2),
68         notPresent(256)
```

1 }
2
3 END

4 13.5.2 LRP MIB

5 *Change the MIB module in 13.5.2 with as follows:*

```
6 LRP-MIB DEFINITIONS ::= BEGIN
8 IMPORTS
9     MODULE-IDENTITY,
11    OBJECT-TYPE,
13    Unsigned32,
15    Counter64
17        FROM SNMPv2-SMI
18    TruthValue
20        FROM SNMPv2-TC
21    MODULE-COMPLIANCE,
23    OBJECT-GROUP
25        FROM SNMPv2-CONF
26    AddressFamilyNumbers
28        FROM IANA-ADDRESS-FAMILY-NUMBERS-MIB
29    InetPortNumber
31        FROM INET-ADDRESS-MIB
32    InterfaceIndex
34        FROM IF-MIB
35    LldpV2ChassisIdSubtype,
37    LldpV2ChassisId,
39    LldpV2PortIdSubtype,
41    LldpV2PortId,
43    LldpV2ManAddress
45        FROM LLDP-V2-TC-MIB
46    ieee802dot1mibs
48        FROM IEEE8021-TC-MIB
49    LrpAppId
51        FROM LRP-TC-MIB;
52
53 ieee8021LrpMIB MODULE-IDENTITY
54     LAST-UPDATED "202012030000Z" -- December 3, 2020
55     LAST-UPDATED "202303140000Z" -- March 14, 2023
56     ORGANIZATION "IEEE 802.1 Working Group"
57     CONTACT-INFO
58         "WG-URL:    http://1.ieee802.org
59          WG-EMail:  stds-802-1-l@ieee.org
60
61          Contact:   IEEE 802.1 Working Group Chair
62          Postal:    C/O IEEE 802.1 Working Group
63                   IEEE Standards Association
64                   445 Hoes Lane
65                   Piscataway
66                   NJ 08854
67                   USA
68          E-mail:    stds-802-1-chairs@ieee.org"
69
70     DESCRIPTION
71         "Management Information Base module for configuration of the
72          Link-local Registration Protocol.
73
74          This MIB module supports the managed objects described in
75          clause 11.
76
77          Unless otherwise indicated, the references in this
78          MIB module are to IEEE Std 802.1CS-2020.
79
80          Copyright (C) IEEE (2021). This version of this MIB module
81          is included in clause 13 of IEEE Std 802.1CS-2020;
```



```
1      Copyright (C) IEEE (2023). This version of this MIB module
2      is included in clause 13 of IEEE Std 802.1CS-2020/Cor1-2023;
3      see the standard itself for full legal notices."
4
5      REVISION      "202303140000Z" -- March 14, 2023
6      DESCRIPTION   "OID changed to avoid conflict with a MIB defined in
7      IEEE Std 802.1CBcv-2021.
8      "
9      REVISION      "202012030000Z" -- December 3, 2020
10     DESCRIPTION   "This MIB module included in IEEE Std 802.1CS-2020.
11     "
12
13  ::= { ieee802dot1mibs 35 }
14 ::= { ieee802dot1mibs 39 }
15
16 lrpObjects          OBJECT IDENTIFIER ::= { ieee8021LrpMIB 1 }
17 lrpConformance      OBJECT IDENTIFIER ::= { ieee8021LrpMIB 2 }
18
19
20
21 --
22 -- LRP MIB Objects
23 --
24
25 lrpConfiguration    OBJECT IDENTIFIER ::= { lrpObjects 1 }
26 lrpStatistics        OBJECT IDENTIFIER ::= { lrpObjects 2 }
27
28
29
30
31 -- *****
32 --                L R P      C O N F I G
33 -- *****
34
35
36 -- *****
37 -- The table containing information about each LRP-DT instance.
38 -- *****
39
40 lrpDtInstanceTable OBJECT-TYPE
41     SYNTAX      SEQUENCE OF LrpDtInstanceEntry
42     MAX-ACCESS   not-accessible
43     STATUS      current
44     DESCRIPTION
45         "A table presenting basic information about each LRP-DT instance
46         in the system.
47         "
48     REFERENCE
49         "11.4"
50     ::= { lrpConfiguration 1 }
51
52
53 lrpDtInstanceEntry OBJECT-TYPE
54     SYNTAX      LrpDtInstanceEntry
55     MAX-ACCESS   not-accessible
56     STATUS      current
57     DESCRIPTION
58         "A list of basic information about one LRP-DT instance.
59         "
60     INDEX { lrpDtInstNumber }
61     ::= { lrpDtInstanceTable 1 }
62
63
64 LrpDtInstanceEntry ::= SEQUENCE {
65     lrpDtInstNumber      Unsigned32,
66     lrpDtInstActiveTcp   TruthValue,
67     lrpDtInstAddressTypes AddressFamilyNumbers,
68     lrpDtInstMyAddress    LldpV2ManAddress,
69     lrpDtInstMyTcpPort    InetPortNumber,
70     lrpDtInstNeighborAddress LldpV2ManAddress,
71     lrpDtInstNeighborTcpPort InetPortNumber
72 }
```

```
1      }
2
3 lrpDtInstNumber OBJECT-TYPE
4     SYNTAX      Unsigned32(1..4294967295)
5     MAX-ACCESS   not-accessible
6     STATUS      current
7     DESCRIPTION
8         "A small integer identifying an LRP-DT instance. Each
9         LRP-DT instance in a system has a unique lrpDtInstNumber.
10
11         This object SHALL NOT contain the value 0.
12
13         "
14     REFERENCE
15         "11.2"
16     ::= { lrpDtInstanceEntry 1 }
17
18 lrpDtInstActiveTcp OBJECT-TYPE
19     SYNTAX      TruthValue
20     MAX-ACCESS   read-only
21     STATUS      current
22     DESCRIPTION
23         "TRUE if and only if lrpDtInstAddressTypes indicates an IPv4
24         or IPv6 address, and this LRP-DT instance uses an active TCP
25         OPEN, as opposed to a passive TCP OPEN, to initiate the TCP
26         connection.
27
28         "
29     REFERENCE
30         "11.4, 7.3.2.1"
31     ::= { lrpDtInstanceEntry 2 }
32
33 lrpDtInstAddressTypes OBJECT-TYPE
34     SYNTAX      AddressFamilyNumbers
35     MAX-ACCESS   read-only
36     STATUS      current
37     DESCRIPTION
38         "An enumerated value specifying the format of the addresses
39         in lrpDtInstMyAddress and lrpDtInstNeighborAddress.
40
41         If lrpDtInstAddressTypes has a value indicating a type of
42         Internet Protocol address, then this LRP-DT instance uses TCP.
43         Otherwise, it uses ECP.
44
45         "
46     REFERENCE
47         "11.4, 7.3.2.2, 7.3.2.4"
48     ::= { lrpDtInstanceEntry 3 }
49
50 lrpDtInstMyAddress OBJECT-TYPE
51     SYNTAX      LldpV2ManAddress
52     MAX-ACCESS   read-only
53     STATUS      current
54     DESCRIPTION
55         "The address used by the local end of the LRP-DT instance. The
56         format of the address is determined by lrpDtInstAddressTypes.
57
58         "
59     REFERENCE
60         "11.4, 7.3.2.2"
61     ::= { lrpDtInstanceEntry 4 }
62
63 lrpDtInstMyTcpPort OBJECT-TYPE
64     SYNTAX      InetPortNumber
65     MAX-ACCESS   read-only
66     STATUS      current
67     DESCRIPTION
68         "The local TCP port number used for the TCP connection, or 0,
69         if this connection uses ECP, instead of TCP.
70
```

```
1      "
2      REFERENCE
3      "11.4, 7.3.2.3"
4      ::= { lrpDtInstanceEntry 5 }
5
6 lrpDtInstNeighborAddress OBJECT-TYPE
7     SYNTAX      LldpV2ManAddress
8     MAX-ACCESS  read-only
9     STATUS      current
10    DESCRIPTION
11    "The address used by the partner end of the LRP-DT instance, if
12    lrpDtInstActiveTcp is TRUE or lrpDtInstAddressTypes indicates
13    a MAC address. Otherwise (this LRP-DT instance was created
14    from a passive TCP OPEN), lrpDtInstNeighborAddress contains a
15    zero-length string. The format of the address is determined by
16    lrpDtInstAddressTypes.
17    "
18    REFERENCE
19    "11.4, 7.3.2.4"
20    ::= { lrpDtInstanceEntry 6 }
21
22
23 lrpDtInstNeighborTcpPort OBJECT-TYPE
24    SYNTAX      InetPortNumber
25    MAX-ACCESS  read-only
26    STATUS      current
27    DESCRIPTION
28    "The remote TCP port number used for the TCP connection, or 0,
29    if this connection uses ECP, instead of TCP.
30    "
31    REFERENCE
32    "11.4, 7.3.2.5"
33    ::= { lrpDtInstanceEntry 7 }
34
35
36
37 -- *****
38 -- The table containing information about each LRP-DS Portal.
39 -- *****
40
41 lrpPortalTable OBJECT-TYPE
42    SYNTAX      SEQUENCE OF LrpPortalEntry
43    MAX-ACCESS  not-accessible
44    STATUS      current
45    DESCRIPTION
46    "A table containing the per-portal set of counters that record
47    LRP events. There is an entry in the table for every portal in
48    a system.
49    "
50    REFERENCE
51    "8.2.2"
52    ::= { lrpConfiguration 2 }
53
54
55 lrpPortalEntry OBJECT-TYPE
56    SYNTAX      LrpPortalEntry
57    MAX-ACCESS  not-accessible
58    STATUS      current
59    DESCRIPTION
60    "A list of counters for events occurring on one Portal.
61    "
62    INDEX { lrpPortalNumber }
63    ::= { lrpPortalTable 1 }
64
65
66 LrpPortalEntry ::= SEQUENCE {
67     lrpPortalNumber          Unsigned32,
68     lrpPortalIfIndex         InterfaceIndex,
69     lrpPortalDtInstanceIndex Unsigned32,
```

```
1      lrpPortalAppId      LrpAppId,
2      lrpPortalMyChassisIdType  LldpV2ChassisIdSubtype,
3      lrpPortalMyChassisId      LldpV2ChassisId,
4      lrpPortalMyPortIdType      LldpV2PortIdSubtype,
5      lrpPortalMyPortId          LldpV2PortId,
6      lrpPortalNbrChassisIdType  LldpV2ChassisIdSubtype,
7      lrpPortalNbrChassisId      LldpV2ChassisId,
8      lrpPortalNbrPortIdType      LldpV2PortIdSubtype,
9      lrpPortalNbrPortId          LldpV2PortId,
10     lrpPortalLocalOverflow      TruthValue
11   }
12
13 lrpPortalNumber OBJECT-TYPE
14   SYNTAX      Unsigned32
15   MAX-ACCESS  not-accessible
16   STATUS      current
17   DESCRIPTION
18     "A small integer identifying a portal.  Each portal in a system
19     has a unique lrpPortalNumber.
20
21     This object SHALL NOT contain the value 0.
22     "
23   ::= { lrpPortalEntry 1 }
24
25 lrpPortalIfIndex OBJECT-TYPE
26   SYNTAX      InterfaceIndex
27   MAX-ACCESS  read-only
28   STATUS      current
29   DESCRIPTION
30     "The interface index identifying the target port to which this
31     portal is attached.  The value is 0, if there is none.
32     "
33   ::= { lrpPortalEntry 2 }
34
35 lrpPortalDtInstanceIndex OBJECT-TYPE
36   SYNTAX      Unsigned32
37   MAX-ACCESS  read-only
38   STATUS      current
39   DESCRIPTION
40     "The same value as the lrpDtInstNumber object of the
41     lrpDtInstanceEntry describing the LRP-DT instance to which this
42     Portal is attached.
43     "
44   REFERENCE
45     "8.2.2.1"
46   ::= { lrpPortalEntry 3 }
47
48 lrpPortalAppId OBJECT-TYPE
49   SYNTAX      LrpAppId
50   MAX-ACCESS  read-only
51   STATUS      current
52   DESCRIPTION
53     "The application ID used for this Portal.
54     "
55   REFERENCE
56     "8.2.2.1"
57   ::= { lrpPortalEntry 4 }
58
59 lrpPortalMyChassisIdType OBJECT-TYPE
60   SYNTAX      LldpV2ChassisIdSubtype
61   MAX-ACCESS  read-only
62   STATUS      current
63   DESCRIPTION
64     "The My Chassis ID TLV type field used for this Portal.
65     "
```

```
1  REFERENCE
2  "8.2.2.2"
3  ::= { lrpPortalEntry 5 }
4
5 lrpPortalMyChassisId OBJECT-TYPE
6
7  SYNTAX      LldpV2ChassisId
8  MAX-ACCESS  read-only
9  STATUS      current
10 DESCRIPTION
11     "The My Chassis ID TLV Chassis ID field used for this Portal."
12     "
13 REFERENCE
14     "8.2.2.2"
15 ::= { lrpPortalEntry 6 }
16
17 lrpPortalMyPortIdType OBJECT-TYPE
18
19 SYNTAX      LldpV2PortIdSubtype
20 MAX-ACCESS  read-only
21 STATUS      current
22 DESCRIPTION
23     "The My Port ID TLV type field used for this Portal."
24     "
25 REFERENCE
26     "8.2.2.3"
27 ::= { lrpPortalEntry 7 }
28
29 lrpPortalMyPortId OBJECT-TYPE
30
31 SYNTAX      LldpV2PortId
32 MAX-ACCESS  read-only
33 STATUS      current
34 DESCRIPTION
35     "The My Port ID TLV Port ID field used for this Portal."
36     "
37 REFERENCE
38     "8.2.2.3"
39 ::= { lrpPortalEntry 8 }
40
41 lrpPortalNbrChassisIdType OBJECT-TYPE
42
43 SYNTAX      LldpV2ChassisIdSubtype
44 MAX-ACCESS  read-only
45 STATUS      current
46 DESCRIPTION
47     "The Neighbor Chassis ID TLV type field used for this Portal."
48     "
49 REFERENCE
50     "8.2.2.2"
51 ::= { lrpPortalEntry 9 }
52
53 lrpPortalNbrChassisId OBJECT-TYPE
54
55 SYNTAX      LldpV2ChassisId
56 MAX-ACCESS  read-only
57 STATUS      current
58 DESCRIPTION
59     "The Neighbor Chassis ID TLV Chassis ID field used for this
60     Portal."
61     "
62 REFERENCE
63     "8.2.2.2"
64 ::= { lrpPortalEntry 10 }
65
66 lrpPortalNbrPortIdType OBJECT-TYPE
67
68 SYNTAX      LldpV2PortIdSubtype
69 MAX-ACCESS  read-only
70 STATUS      current
71 DESCRIPTION
```

```
1      "The Neighbor Port ID TLV type field used for this Portal.
2      "
3      REFERENCE
4      "8.2.2.3"
5      ::= { lrpPortalEntry 11 }
6
7      lrpPortalNbrPortId OBJECT-TYPE
9          SYNTAX      LldpV2PortId
10         MAX-ACCESS   read-only
11         STATUS       current
12         DESCRIPTION
13             "The Neighbor Port ID TLV Port ID field used for this Portal.
14             "
15         REFERENCE
16             "8.2.2.3"
17         ::= { lrpPortalEntry 12 }
18
19      lrpPortalLocalOverflow OBJECT-TYPE
21         SYNTAX      TruthValue
22         MAX-ACCESS   read-only
23         STATUS       current
24         DESCRIPTION
25             "A Boolean indicating whether or not the local registrar
26             database has overflowed its allotted memory.
27             "
28         REFERENCE
29             "8.2.2.10"
30         ::= { lrpPortalEntry 13 }
31
32 -- *****
33 --          P O R T A L      S T A T I S T I C S
34 -- *****
35
36      lrpPortalCountersTable OBJECT-TYPE
38         SYNTAX      SEQUENCE OF LrpPortalCountersEntry
39         MAX-ACCESS   not-accessible
40         STATUS       current
41         DESCRIPTION
42             "A table containing the per-portal set of counters that record
43             LRP events.  There is an entry in the table for every portal in
44             a system.
45             "
46         REFERENCE
47             "11.5"
48         ::= { lrpStatistics 1 }
49
50      lrpPortalCountersEntry OBJECT-TYPE
52         SYNTAX      LrpPortalCountersEntry
53         MAX-ACCESS   not-accessible
54         STATUS       current
55         DESCRIPTION
56             "A list of counters for events occurring on one Portal.
57             "
58         INDEX { lrpPortalNumber }
59         ::= { lrpPortalCountersTable 1 }
60
61      LrpPortalCountersEntry ::= SEQUENCE {
63          lrpPortalApplicantActiveRecords Unsigned32,
64          lrpPptCtRegistrarActiveRecords Unsigned32,
65          lrpPptCtSentHellos              Counter64,
66          lrpPptCtAcceptedHellos          Counter64,
67          lrpPptCtDiscardedHellos         Counter64,
68          lrpPptCtSentRecords             Counter64,
69          lrpPptCtAcceptedRecords         Counter64,
70          lrpPptCtDiscardedRecords        Counter64,
```

```
1      lrpPptCtRecordErrors      Counter64,
2      lrpPptCtSentPartials      Counter64,
3      lrpPptCtAcceptedPartials  Counter64,
4      lrpPptCtDiscardedPartials Counter64,
5      lrpPptCtSentCompletes     Counter64,
6      lrpPptCtAcceptedCompletes Counter64,
7      lrpPptCtDiscardedCompletes Counter64,
8      lrpPptCtDiscardedUnknowns Counter64
9  }
10
11 lrpPortalApplicantActiveRecords OBJECT-TYPE
13     SYNTAX      Unsigned32
14     MAX-ACCESS  read-only
15     STATUS      current
16     DESCRIPTION
17         "The number of records in the applicant database.
18         "
19     REFERENCE
20         "11.5.1"
21     ::= { lrpPortalCountersEntry 1 }
22
23 lrpPptCtRegistrarActiveRecords OBJECT-TYPE
25     SYNTAX      Unsigned32
26     MAX-ACCESS  read-only
27     STATUS      current
28     DESCRIPTION
29         "The number of records in the registrar database.
30         "
31     REFERENCE
32         "11.5.2"
33     ::= { lrpPortalCountersEntry 2 }
34
35 lrpPptCtSentHellos OBJECT-TYPE
37     SYNTAX      Counter64
38     MAX-ACCESS  read-only
39     STATUS      current
40     DESCRIPTION
41         "Incremented once for each Hello LRPDU transmitted by the
42         Send Hello state machines.
43         "
44     REFERENCE
45         "11.5.3"
46     ::= { lrpPortalCountersEntry 3 }
47
48 lrpPptCtAcceptedHellos OBJECT-TYPE
50     SYNTAX      Counter64
51     MAX-ACCESS  read-only
52     STATUS      current
53     DESCRIPTION
54         "Incremented once for each Hello LRPDU received by the
55         Receive Hello state machine.
56         "
57     REFERENCE
58         "11.5.4"
59     ::= { lrpPortalCountersEntry 4 }
60
61 lrpPptCtDiscardedHellos OBJECT-TYPE
63     SYNTAX      Counter64
64     MAX-ACCESS  read-only
65     STATUS      current
66     DESCRIPTION
67         "Incremented once for each invalid Hello LRPDU discarded by the
68         Receive Hello state machine
69         "
70     REFERENCE
```

```
1      "11.5.5"
2      ::= { lrpPortalCountersEntry 5 }
3
4 lrpPptCtSentRecords OBJECT-TYPE
5
6     SYNTAX      Counter64
7     MAX-ACCESS  read-only
8     STATUS      current
9     DESCRIPTION
10      "Incremented once for each Record LRPDU transmitted by the
11      Applicant state machine.
12      "
13     REFERENCE
14      "11.5.6"
15     ::= { lrpPortalCountersEntry 6 }
16
17 lrpPptCtAcceptedRecords OBJECT-TYPE
18
19     SYNTAX      Counter64
20     MAX-ACCESS  read-only
21     STATUS      current
22     DESCRIPTION
23      "Incremented once for each valid Record LRPDU received by the
24      Partial list state machine.
25      "
26     REFERENCE
27      "11.5.7"
28     ::= { lrpPortalCountersEntry 7 }
29
30 lrpPptCtDiscardedRecords OBJECT-TYPE
31
32     SYNTAX      Counter64
33     MAX-ACCESS  read-only
34     STATUS      current
35     DESCRIPTION
36      "Incremented once for each invalid Record LRPDU discarded by the
37      Partial list state machine.
38      "
39     REFERENCE
40      "11.5.8"
41     ::= { lrpPortalCountersEntry 8 }
42
43 lrpPptCtRecordErrors OBJECT-TYPE
44
45     SYNTAX      Counter64
46     MAX-ACCESS  read-only
47     STATUS      current
48     DESCRIPTION
49      "Incremented once for each record discarded from a Record LRPDU
50      because of inconsistencies among the Checksum, Application data,
51      and Data length fields.
52      "
53     REFERENCE
54      "11.5.9"
55     ::= { lrpPortalCountersEntry 9 }
56
57 lrpPptCtSentPartials OBJECT-TYPE
58
59     SYNTAX      Counter64
60     MAX-ACCESS  read-only
61     STATUS      current
62     DESCRIPTION
63      "Incremented once for each Partial List LRPDU transmitted by the
64      Applicant state machine.
65      "
66     REFERENCE
67      "11.5.10"
68     ::= { lrpPortalCountersEntry 10 }
69
70 lrpPptCtAcceptedPartials OBJECT-TYPE
```



```
1 SYNTAX Counter64
2 MAX-ACCESS read-only
3 STATUS current
4 DESCRIPTION
5     "Incremented once for each valid Partial List LRPDU received by
6     the Applicant state machine.
7     "
8 REFERENCE
9     "11.5.11"
10 ::= { lrpPortalCountersEntry 11 }
11
12 lrpPptCtDiscardedPartials OBJECT-TYPE
14 SYNTAX Counter64
15 MAX-ACCESS read-only
16 STATUS current
17 DESCRIPTION
18     "Incremented once for each invalid Partial List LRPDU discarded
19     by the Applicant state machine.
20     "
21 REFERENCE
22     "11.5.12"
23 ::= { lrpPortalCountersEntry 12 }
24
25 lrpPptCtSentCompletes OBJECT-TYPE
27 SYNTAX Counter64
28 MAX-ACCESS read-only
29 STATUS current
30 DESCRIPTION
31     "Incremented once for each Complete List LRPDU transmitted by
32     the Applicant state machine.
33     "
34 REFERENCE
35     "11.5.13"
36 ::= { lrpPortalCountersEntry 13 }
37
38 lrpPptCtAcceptedCompletes OBJECT-TYPE
40 SYNTAX Counter64
41 MAX-ACCESS read-only
42 STATUS current
43 DESCRIPTION
44     "Incremented once for each valid Complete List LRPDU received
45     by the Applicant state machine.
46     "
47 REFERENCE
48     "11.5.14"
49 ::= { lrpPortalCountersEntry 14 }
50
51 lrpPptCtDiscardedCompletes OBJECT-TYPE
53 SYNTAX Counter64
54 MAX-ACCESS read-only
55 STATUS current
56 DESCRIPTION
57     "Incremented once for each invalid Complete List LRPDU discarded
58     by the Applicant state machine.
59     "
60 REFERENCE
61     "11.5.15"
62 ::= { lrpPortalCountersEntry 15 }
63
64 lrpPptCtDiscardedUnknowns OBJECT-TYPE
66 SYNTAX Counter64
67 MAX-ACCESS read-only
68 STATUS current
69 DESCRIPTION
70     "Incremented once for each LRPDU of unknown type discarded by
```

```
1         the Applicant state machine or Partial list state machine.
2     "
3     REFERENCE
4         "11.5.16"
5     ::= { lrpPortalCountersEntry 16 }
6
7
8 -- *****
9 --          L R P - D T   I N S T A N C E   S T A T I S T I C S
10 -- *****
11
12 lrpDtInstanceCountersTable OBJECT-TYPE
13     SYNTAX      SEQUENCE OF LrpDtInstanceCountersEntry
14     MAX-ACCESS  not-accessible
15     STATUS      current
16     DESCRIPTION
17         "A table containing the per-LRP-DT instance set of counters that
18         record LRP events. There is an entry in the table for every
19         LRP-DT instance in a system.
20     "
21     REFERENCE
22         "11.4"
23     ::= { lrpStatistics 2 }
24
25
26 lrpDtInstanceCountersEntry OBJECT-TYPE
27     SYNTAX      LrpDtInstanceCountersEntry
28     MAX-ACCESS  not-accessible
29     STATUS      current
30     DESCRIPTION
31         "A list of statistics about one LRP-DT instance.
32     "
33     INDEX { lrpDtInstNumber }
34     ::= { lrpDtInstanceCountersTable 1 }
35
36
37 LrpDtInstanceCountersEntry ::= SEQUENCE {
38     lrpDtInstDiscardedLrpdus          Counter64
39 }
40
41
42 lrpDtInstDiscardedLrpdus OBJECT-TYPE
43     SYNTAX      Counter64
44     MAX-ACCESS  read-only
45     STATUS      current
46     DESCRIPTION
47         "The number of received Link-local Registration Protocol Data
48         Units discarded by the LRP-DT instance because it could not
49         determine to which Portal it should be given.
50     "
51     REFERENCE
52         "11.4, 11.4.1"
53     ::= { lrpDtInstanceCountersEntry 1 }
54
55
56
57 --
58 -- *****
59 --          L R P   M I B   C O N F O R M A N C E
60 -- *****
61 --
62
63 lrpCompliances OBJECT IDENTIFIER ::= { lrpConformance 1 }
64 lrpGroups      OBJECT IDENTIFIER ::= { lrpConformance 2 }
65
66
67
68 -- compliance statements
69
70 lrpCompliance MODULE-COMPLIANCE
71     STATUS      current
```

```
1  DESCRIPTION
2      "A compliance statement for all SNMP entities that
3      implement the LRP MIB.
4
5      This version defines compliance requirements for
6      LRP MIB module.
7      "
8  MODULE -- this module
9      MANDATORY-GROUPS {
10         lrpDsDtGroup
11     }
12
13     ::= { lrpCompliances 1 }
14
15 -- MIB groupings
16
17 lrpDsDtGroup    OBJECT-GROUP
18     OBJECTS {
19         lrpDtInstActiveTcp,
20         lrpDtInstAddressTypes,
21         lrpDtInstMyAddress,
22         lrpDtInstMyTcpPort,
23         lrpDtInstNeighborAddress,
24         lrpDtInstNeighborTcpPort,
25         lrpPortalIfIndex,
26         lrpPortalDtInstanceIndex,
27         lrpPortalAppId,
28         lrpPortalMyChassisIdType,
29         lrpPortalMyChassisId,
30         lrpPortalMyPortIdType,
31         lrpPortalMyPortId,
32         lrpPortalNbrChassisIdType,
33         lrpPortalNbrChassisId,
34         lrpPortalNbrPortIdType,
35         lrpPortalNbrPortId,
36         lrpPortalLocalOverflow,
37         lrpPortalApplicantActiveRecords,
38         lrpPptCtRegistrarActiveRecords,
39         lrpPptCtSentHellos,
40         lrpPptCtAcceptedHellos,
41         lrpPptCtDiscardedHellos,
42         lrpPptCtSentRecords,
43         lrpPptCtAcceptedRecords,
44         lrpPptCtDiscardedRecords,
45         lrpPptCtRecordErrors,
46         lrpPptCtSentPartials,
47         lrpPptCtAcceptedPartials,
48         lrpPptCtDiscardedPartials,
49         lrpPptCtSentCompletes,
50         lrpPptCtAcceptedCompletes,
51         lrpPptCtDiscardedCompletes,
52         lrpPptCtDiscardedUnknowns,
53         lrpDtInstDiscardedLrpdus
54     }
55
56     STATUS current
57     DESCRIPTION
58         "The collection of objects which are used to monitor the
59         status of LRP-DS and LRP-DT.
60         "
61     ::= { lrpGroups 1 }
62
63 END
```

1 13.5.3 LLDPv2 LRP extension MIB

2 *Change the MIB module in 13.5.3 with as follows:*

```
3 LLDP-V2-LRP-EXT-MIB DEFINITIONS ::= BEGIN
5
6 IMPORTS
7     MODULE-IDENTITY,
9     OBJECT-TYPE,
11    Unsigned32
13        FROM SNMPv2-SMI
14    TruthValue
16        FROM SNMPv2-TC
17    MODULE-COMPLIANCE,
19    OBJECT-GROUP
21        FROM SNMPv2-CONF
22    TimeFilter
24        FROM RMON2-MIB
25    InterfaceIndex
27        FROM IF-MIB
28    InetAddress,
30    InetAddressIPv4,
32    InetAddressIPv6,
34    InetPortNumber
36        FROM INET-ADDRESS-MIB
37    LldpV2DestAddressTableIndex
39        FROM LLDP-V2-TC-MIB
40    lldpXdot1StandAloneExtensions
42        FROM LLDP-EXT-DOT1-EVB-EXTENSIONS-MIB
43    LrpAppId,
45    LrpInetAddressInfo
47        FROM LRP-TC-MIB;
48
49 lldpXdot1LrpExtensions MODULE-IDENTITY
51 LAST-UPDATED "202012030000Z" -- December 3, 2020
52 LAST-UPDATED "202303140000Z" -- March 14, 2023
53 ORGANIZATION "IEEE 802.1 Working Group"
54 CONTACT-INFO
55     "WG-URL: http://www.ieee802.org/1/
56     WG-EMail: stds-802-1-1@ieee.org
57
58     Contact: IEEE 802.1 Working Group Chair
59     Postal: C/O IEEE 802.1 Working Group
60             IEEE Standards Association
61             445 Hoes Lane
62             Piscataway
63             NJ 08854
64             USA
65     E-mail: stds-802-1-chairs@ieee.org"
66 DESCRIPTION
67     "The LLDP Management Information Base extension module for IEEE
68     802.1 organizationally-defined discovery information, as
69     specified in IEEE Std 802.1CS, Link-local Registration Protocol
70     (LRP).
71
72     The Link-Layer Discovery Protocol (LLDP) is defined in
73     IEEE Std 802.1AB.
74
75     lldpXdot1StandAloneExtensions is the OUI for LLDP-EXT-DOT1-EVB-EXTENSIONS-MIB.
76     which defines managed objects for IEEE 802.1-defined
77     organizationally-specified LLDP Type-Length Value (TLV)
78     discovery information. lldpXdot1StandAloneExtensions is branched
79     from lldpV2Extensions (defined in LLDP-V2-MIB) using the
80     Organizationally Unique Identifier (OUI) value 00-80-C1, which
81     belongs to IEEE 802.1. An OUI is a 24 bit globally-unique number
```

```
1      assigned by the IEEE Registration Authority -- see:
2
3      http://standards.ieee.org/develop/regauth/oui/index.html
4
5      In turn, lldpXdot1LrpExtensions and lldpV2ExtLrpConformance are
6      branched from lldpXdot1StandAloneExtensions, and thus are also
7      extensions from the IEEE 802.1 OUI.
8
9      Unless otherwise indicated, the references in this MIB module
10     are to IEEE Std 802.1CS-2020.
11
12     Copyright (C) IEEE (2020). This version of this MIB module is
13     included in clause 13 of IEEE Std 802.1CS-2020; see the
14     Copyright (C) IEEE (2023). This version of this MIB module is
15     included in clause 13 of IEEE Std 802.1CS-2020/Cor1-2023; see the
16     standard itself for full legal notices."
17
18     REVISION "202303140000Z" -- March 14, 2023
19     DESCRIPTION
20     "Description of lldpV2LocLrpTcpAddress1 corrected.
21     "
22     REVISION "202012030000Z" -- December 3, 2020
23     DESCRIPTION
24         "This MIB module included in IEEE Std 802.1CS-2020.
25         "
26
27     ::= { lldpXdot1StandAloneExtensions 3 }
28
29     -----
30     -----
31     --
32     -- Organizationally Defined Information Extension - IEEE 802.1
33     -- Definitions to support the IEEE Std 802.1AB LLDP TLVs defined in
34     -- IEEE Std 802.1CS Link-local Registration Protocol (LRP)
35     --
36     -----
37     -----
38
39     lldpV2ExtLrpObjects      OBJECT IDENTIFIER ::= { lldpXdot1LrpExtensions 1 }
40
41
42     -- LLDP IEEE 802.1CS extension MIB groups
43
44     lldpV2ExtConfigLrp      OBJECT IDENTIFIER ::= { lldpV2ExtLrpObjects 1 }
45     lldpV2ExtLrpLocalData   OBJECT IDENTIFIER ::= { lldpV2ExtLrpObjects 2 }
46     lldpV2ExtLrpRemoteData  OBJECT IDENTIFIER ::= { lldpV2ExtLrpObjects 3 }
47
48
49     -----
50     -- IEEE 802.1 - Configuration for the LRP TLV set
51     -----
52     -----
53
54     --
55     --
56     -- The table specifying, for each LRP application, what IP
57     -- addresses to advertise in LRP TCP Discovery TLVs in a
58     -- Controlled system.
59     --
60
61     lldpV2ConfigLrpTcpControlledTable OBJECT-TYPE
62     SYNTAX      SEQUENCE OF LldpV2LrpConfigTcpControlledEntry
63     MAX-ACCESS   not-accessible
64     STATUS       current
65     DESCRIPTION
66         "A table specifying what IP addresses are to be advertised as
67         the address of the Proxy system controlling this Controlled
68         system, for each particular LRP application. These IP addresses
69         and application identifiers can be transmitted in
```

```
1      LRP TCP Discovery TLVs.
2      "
3      REFERENCE
4      "11.6.1.1"
5      ::= { lldpV2ExtConfigLrp 1 }
6
7 lldpV2ConfigLrpTcpControlledEntry OBJECT-TYPE
9     SYNTAX      LldpV2LrpConfigTcpControlledEntry
10    MAX-ACCESS  not-accessible
11    STATUS      current
12    DESCRIPTION
13        "A table specifying what IP addresses are to be advertised as
14        the address of the Proxy system controlling this Controlled
15        system, for a particular LRP application. These IP addresses
16        and application identifiers can be transmitted in
17        LRP TCP Discovery TLVs.
18        "
19    INDEX { lldpV2ConfigLrpTcpControlledApplicationId }
20    ::= { lldpV2ConfigLrpTcpControlledTable 1 }
21
22 lldpV2LrpConfigTcpControlledEntry ::= SEQUENCE {
24     lldpV2ConfigLrpTcpControlledApplicationId  LrpAppId,
25     lldpV2ConfigLrpTcpControlledTcpPortNumber  InetPortNumber,
26     lldpV2ConfigLrpTcpControlledIPv4Enable     TruthValue,
27     lldpV2ConfigLrpTcpControlledIPv4Address    InetAddressIPv4,
28     lldpV2ConfigLrpTcpControlledIPv6Enable     TruthValue,
29     lldpV2ConfigLrpTcpControlledIPv6Address    InetAddressIPv6
30 }
31
32
33 lldpV2ConfigLrpTcpControlledApplicationId OBJECT-TYPE
35     SYNTAX      LrpAppId
36     MAX-ACCESS  not-accessible
37     STATUS      current
38     DESCRIPTION
39         "The application identifier to which the rest of the
40         lldpV2ConfigLrpTcpControlledEntry applies.
41         "
42     REFERENCE
43     "9.2"
44     ::= { lldpV2ConfigLrpTcpControlledEntry 1 }
45
46 lldpV2ConfigLrpTcpControlledTcpPortNumber OBJECT-TYPE
48     SYNTAX      InetPortNumber
49     MAX-ACCESS  read-write
50     STATUS      current
51     DESCRIPTION
52         "The destination TCP Port number to which TCP connections for
53         LRP to the addresses in lldpV2ConfigLrpTcpControlledIPv4Address
54         or lldpV2ConfigLrpTcpControlledIPv6Address, for the
55         application in lldpV2ConfigLrpTcpControlledApplicationId, are
56         to be made.
57
58         If this object contains the value 0, then no
59         Application descriptor with the indexed application ID is
60         transmitted.
61
62         The value of this object is restored from non-volatile
63         storage after a re-initialization of the management system.
64         "
65     REFERENCE
66     "C.2.2.6.1"
67     ::= { lldpV2ConfigLrpTcpControlledEntry 2 }
68
69 lldpV2ConfigLrpTcpControlledIPv4Enable OBJECT-TYPE
```

```
1 SYNTAX      TruthValue
2 MAX-ACCESS  read-write
3 STATUS      current
4 DESCRIPTION
5     "Specifies whether or not the indexed LRP application is
6     available through the LRP-DT TCP mechanism using TCP over IPv4.
7     It thus controls whether the LRP TCP Discovery TLVs transmitted
8     from this Controlled system include the IPv4 address in
9     lldpV2ConfigLrpTcpControlledIPv4Address in an
10    Application descriptor containing the indexed application ID.
11
12    If lldpV2ConfigLrpTcpControlledIPv4Enable and
13    lldpV2ConfigLrpTcpControlledIPv4Enable are both false(2), then
14    no Application descriptor with the indexed application ID is
15    transmitted.
16
17    The value of this object is restored from non-volatile
18    storage after a re-initialization of the management system.
19    "
20 REFERENCE
21     "C.2.2.6.2"
22 ::= { lldpV2ConfigLrpTcpControlledEntry 3 }
23
24 lldpV2ConfigLrpTcpControlledIPv4Address OBJECT-TYPE
25 SYNTAX      InetAddressIPv4
26 MAX-ACCESS  read-write
27 STATUS      current
28 DESCRIPTION
29     "Specifies an IPv4 address to be advertised in all of the
30     LRP TCP Discovery TLVs that carry the indexed application ID
31     that are transmitted by this Controlled system.
32
33     The value of this object is restored from non-volatile
34     storage after a re-initialization of the management system.
35     "
36 REFERENCE
37     "C.2.2.6.3"
38 ::= { lldpV2ConfigLrpTcpControlledEntry 4 }
39
40
41 lldpV2ConfigLrpTcpControlledIPv6Enable OBJECT-TYPE
42 SYNTAX      TruthValue
43 MAX-ACCESS  read-write
44 STATUS      current
45 DESCRIPTION
46     "Specifies whether or not the indexed LRP application is
47     available through the LRP-DT TCP mechanism using TCP over IPv6.
48     It thus controls whether the LRP TCP Discovery TLVs transmitted
49     from this Controlled system include the IPv6 address in
50     lldpV2ConfigLrpTcpControlledIPv6Address in an
51     Application descriptor containing the indexed application ID.
52
53     If lldpV2ConfigLrpTcpControlledIPv4Enable and
54     lldpV2ConfigLrpTcpControlledIPv4Enable are both false(2), then
55     no Application descriptor with the indexed application ID is
56     transmitted.
57
58     The value of this object is restored from non-volatile
59     storage after a re-initialization of the management system.
60     "
61 REFERENCE
62     "C.2.2.6.2"
63 ::= { lldpV2ConfigLrpTcpControlledEntry 5 }
64
65
66 lldpV2ConfigLrpTcpControlledIPv6Address OBJECT-TYPE
67 SYNTAX      InetAddressIPv6
```

```
1  MAX-ACCESS  read-write
2  STATUS      current
3  DESCRIPTION
4      "Specifies an IPv6 address to be advertised in all of the
5      LRP TCP Discovery TLVs that carry the indexed application ID
6      that are transmitted by this Controlled system.
7
8      The value of this object is restored from non-volatile
9      storage after a re-initialization of the management system.
10     "
11  REFERENCE
12      "C.2.2.6.3"
13      ::= { lldpV2ConfigLrpTcpControlledEntry 6 }
14
15 --
16 -- lldpV2ConfigLrpEcpTxTable: configure the transmission of the
17 --      LRP ECP Discovery TLVs on a set of ports.
18 --
19
20 lldpV2ConfigLrpEcpTxTable OBJECT-TYPE
21     SYNTAX      SEQUENCE OF LldpV2ConfigLrpEcpTxEntry
22     MAX-ACCESS  not-accessible
23     STATUS      current
24     DESCRIPTION
25         "This table contains one or more rows per physical network
26         connection known to this agent. The agent may wish to
27         ensure that only one lldpV2ConfigLrpEcpTxEntry is present for
28         each local port, or it may choose to maintain multiple
29         entries for the same local port."
30     REFERENCE
31         "11.6.2.1"
32     ::= { lldpV2ExtLrpLocalData 1 }
33
34 lldpV2ConfigLrpEcpTxEntry OBJECT-TYPE
35     SYNTAX      LldpV2ConfigLrpEcpTxEntry
36     MAX-ACCESS  not-accessible
37     STATUS      current
38     DESCRIPTION
39         "Information about a particular port component."
40     INDEX       { lldpV2ConfigLrpEcpTxLocalIfIndex,
41                  lldpV2ConfigLrpEcpTxLocalDestMACAddress }
42     ::= { lldpV2ConfigLrpEcpTxTable 1 }
43
44 lldpV2ConfigLrpEcpTxEntry ::= SEQUENCE {
45     lldpV2ConfigLrpEcpTxLocalIfIndex      InterfaceIndex,
46     lldpV2ConfigLrpEcpTxLocalDestMACAddress LldpV2DestAddressTableIndex,
47     lldpV2ConfigLrpEcpTxEnable            TruthValue
48 }
49
50 lldpV2ConfigLrpEcpTxLocalIfIndex OBJECT-TYPE
51     SYNTAX      InterfaceIndex
52     MAX-ACCESS  not-accessible
53     STATUS      current
54     DESCRIPTION
55         "The interface index value used to identify the port
56         associated with this entry. Its value is an index
57         into the interfaces MIB
58
59         The value of this object is used as an index to the
60         lldpV2ConfigLrpEcpTxTable.
61         "
62     ::= { lldpV2ConfigLrpEcpTxEntry 1 }
63
64 lldpV2ConfigLrpEcpTxLocalDestMACAddress OBJECT-TYPE
65     SYNTAX      LldpV2DestAddressTableIndex
```



```
1  MAX-ACCESS  not-accessible
2  STATUS      current
3  DESCRIPTION
4      "The index value used to identify the LLDPDU frame destination
5      MAC address associated with this entry. Its value identifies
6      the row in the lldpV2DestAddressTable where the MAC address
7      can be found.
8
9      The value of this object is used as an index to the
10     lldpV2ConfigLrpEcpTxTable.
11     "
12     ::= { lldpV2ConfigLrpEcpTxEntry 2 }
13
14 lldpV2ConfigLrpEcpTxEnable OBJECT-TYPE
15     SYNTAX      TruthValue
16     MAX-ACCESS  read-write
17     STATUS      current
18     DESCRIPTION
19         "The lldpV2ConfigLrpEcpTxEnable, which is defined
20         as a truth value and configured by the network management,
21         determines whether the IEEE 802.1 organizationally defined
22         LRP ECP Discovery TLV transmission is allowed on a given
23         LLDP transmission-capable port component.
24
25         The value of this object is restored from non-volatile
26         storage after a re-initialization of the management system."
27     DEFVAL { false }
28     ::= { lldpV2ConfigLrpEcpTxEntry 3 }
29
30
31
32 --
33 -- lldpV2ConfigLrpTcpTxTable: configure the transmission of the
34 --     LRP TCP Discovery TLVs on a set of ports.
35 --
36
37 lldpV2ConfigLrpTcpTxTable OBJECT-TYPE
38     SYNTAX      SEQUENCE OF LldpV2ConfigLrpTcpTxEntry
39     MAX-ACCESS  not-accessible
40     STATUS      current
41     DESCRIPTION
42         "This table contains one or more rows per physical network
43         connection known to this agent. The agent may wish to
44         ensure that only one lldpV2ConfigLrpTcpTxEntry is present for
45         each local port, or it may choose to maintain multiple
46         entries for the same local port."
47     ::= { lldpV2ExtLrpLocalData 2 }
48
49
50 lldpV2ConfigLrpTcpTxEntry OBJECT-TYPE
51     SYNTAX      LldpV2ConfigLrpTcpTxEntry
52     MAX-ACCESS  not-accessible
53     STATUS      current
54     DESCRIPTION
55         "Information about a particular port component."
56     INDEX      { lldpV2ConfigLrpTcpTxLocalIfIndex,
57                 lldpV2ConfigLrpTcpTxLocalDestMACAddress }
58     ::= { lldpV2ConfigLrpTcpTxTable 1 }
59
60
61 lldpV2ConfigLrpTcpTxEntry ::= SEQUENCE {
62     lldpV2ConfigLrpTcpTxLocalIfIndex      InterfaceIndex,
63     lldpV2ConfigLrpTcpTxLocalDestMACAddress LldpV2DestAddressTableIndex,
64     lldpV2ConfigLrpTcpTxEnable            TruthValue
65 }
66
67
68 lldpV2ConfigLrpTcpTxLocalIfIndex OBJECT-TYPE
69     SYNTAX      InterfaceIndex
```

```
1  MAX-ACCESS  not-accessible
2  STATUS      current
3  DESCRIPTION
4      "The interface index value used to identify the port
5      associated with this entry. Its value is an index
6      into the interfaces MIB
7
8      The value of this object is used as an index to the
9      lldpV2ConfigLrpTcpTxTable.
10     "
11     ::= { lldpV2ConfigLrpTcpTxEntry 1 }
12
13 lldpV2ConfigLrpTcpTxLocalDestMACAddress OBJECT-TYPE
14     SYNTAX      LldpV2DestAddressTableIndex
15     MAX-ACCESS  not-accessible
16     STATUS      current
17     DESCRIPTION
18         "The index value used to identify the LLDPDU frame destination
19         MAC address associated with this entry. Its value identifies
20         the row in the lldpV2DestAddressTable where the MAC address
21         can be found.
22
23         The value of this object is used as an index to the
24         lldpV2ConfigLrpTcpTxTable.
25         "
26     ::= { lldpV2ConfigLrpTcpTxEntry 2 }
27
28
29 lldpV2ConfigLrpTcpTxEnable OBJECT-TYPE
30     SYNTAX      TruthValue
31     MAX-ACCESS  read-write
32     STATUS      current
33     DESCRIPTION
34         "The lldpV2ConfigLrpTcpTxEnable, which is defined
35         as a truth value and configured by the network management,
36         determines whether the IEEE 802.1 organizationally defined
37         LRP TCP Discovery TLV transmission is allowed on a given
38         LLDP transmission-capable port component.
39
40         The value of this object is restored from non-volatile
41         storage after a re-initialization of the management system."
42     REFERENCE
43         "9.1.2.1 of IEEE Std 802.1AB-2016"
44     DEFVAL { false }
45     ::= { lldpV2ConfigLrpTcpTxEntry 3 }
46
47
48 -----
49 -- IEEE 802.1CS LRP LLDP TLVs - Local System Information
50 -----
51
52 --
53 -- lldpV2LocLrpEcpTable
54 --
55
56 lldpV2LocLrpEcpTable OBJECT-TYPE
57     SYNTAX      SEQUENCE OF LldpV2LocLrpEcpEntry
58     MAX-ACCESS  not-accessible
59     STATUS      current
60     DESCRIPTION
61         "This table contains one or more rows per physical network
62         connection known to this agent. The agent may wish to
63         ensure that only one lldpV2ExtLrpLocEntry is present for
64         each local port, or it may choose to maintain multiple
65         lldpV2ExtLrpLocEntries for the same local port.
66         "
67     REFERENCE
```

```
1      "11.6.2.2"
2      ::= { lldpV2ExtLrpLocalData 3 }
3
4 lldpV2LocLrpEcpEntry OBJECT-TYPE
5     SYNTAX      LldpV2LocLrpEcpEntry
6     MAX-ACCESS  not-accessible
7     STATUS      current
8     DESCRIPTION
9         "Information about the C.2.1LRP ECP Discovery TLV that can
10        be transmitted from a particular LLDP port component.
11        Note that this MIB supports the transmission of only one
12        LRP ECP Discovery TLV per port component.
13        "
14     INDEX      { lldpV2LocLrpEcpLocalIfIndex,
15                  lldpV2LocLrpEcpLocalDestMACAddress,
16                  lldpV2LocLrpEcpApplicationIndex }
17     ::= { lldpV2LocLrpEcpTable 1 }
18
19
20 LldpV2LocLrpEcpEntry ::= SEQUENCE {
21     lldpV2LocLrpEcpLocalIfIndex      InterfaceIndex,
22     lldpV2LocLrpEcpLocalDestMACAddress LldpV2DestAddressTableIndex,
23     lldpV2LocLrpEcpApplicationIndex  Unsigned32,
24     lldpV2LocLrpEcpApplicationId     LrpAppId
25 }
26
27
28 lldpV2LocLrpEcpLocalIfIndex OBJECT-TYPE
29     SYNTAX      InterfaceIndex
30     MAX-ACCESS  not-accessible
31     STATUS      current
32     DESCRIPTION
33         "The interface index value used to identify the port
34         associated with this entry. Its value is an index
35         into the interfaces MIB
36
37         The value of this object is used as an index to the
38         lldpV2LocLrpEcpTable.
39         "
40     ::= { lldpV2LocLrpEcpEntry 1 }
41
42
43 lldpV2LocLrpEcpLocalDestMACAddress OBJECT-TYPE
44     SYNTAX      LldpV2DestAddressTableIndex
45     MAX-ACCESS  not-accessible
46     STATUS      current
47     DESCRIPTION
48         "The index value used to identify the LLDPDU frame destination
49         MAC address associated with this entry. Its value identifies
50         the row in the lldpV2DestAddressTable where the MAC address
51         can be found.
52
53         The value of this object is used as an index to the
54         lldpV2LocLrpEcpTable.
55         "
56     ::= { lldpV2LocLrpEcpEntry 2 }
57
58
59 lldpV2LocLrpEcpApplicationIndex OBJECT-TYPE
60     SYNTAX      Unsigned32 (0..255)
61     MAX-ACCESS  not-accessible
62     STATUS      current
63     DESCRIPTION
64         "A small integer that selects one entry in the
65         lldpV2LocLrpEcpTable. For every entry in lldpV2LocLrpEcpEntry,
66         there is one Application descriptor in the transmitted
67         LRP ECP Discovery TLV.
68
69         The value of the transmitted Application count field in the
```

```
1      LRP ECP Discovery TLV is equal to the number of different values
2      of lldpV2LocLrpEcpApplicationIndex for this port component.
3      "
4      REFERENCE "C.2.1.5, C.2.1.6"
5      ::= { lldpV2LocLrpEcpEntry 3 }
6
7 lldpV2LocLrpEcpApplicationId OBJECT-TYPE
9     SYNTAX      LrpAppId
10    MAX-ACCESS   read-only
11    STATUS       current
12    DESCRIPTION
13        "The AppId in one Application descriptor in the transmitted
14        LRP ECP Discovery TLV.
15        "
16    REFERENCE "C.2.1.5, C.2.1.6"
17    ::= { lldpV2LocLrpEcpEntry 4 }
18
19 --
20 -- lldpV2LocLrpTcpTable - indexed by ifIndex.
21 --
22
23 lldpV2LocLrpTcpTable OBJECT-TYPE
25    SYNTAX      SEQUENCE OF LldpV2LocLrpTcpEntry
26    MAX-ACCESS   not-accessible
27    STATUS       current
28    DESCRIPTION
29        "This table contains one or more rows per physical network
30        connection known to this agent, one for each port component.
31        "
32    ::= { lldpV2ExtLrpLocalData 4 }
33
34 lldpV2LocLrpTcpEntry OBJECT-TYPE
36    SYNTAX      LldpV2LocLrpTcpEntry
37    MAX-ACCESS   not-accessible
38    STATUS       current
39    DESCRIPTION
40        "Information about a particular LLDP port component's transmitted
41        LRP TCP Discovery TLV. Note that this MIB supports the
42        transmission of only one LRP TCP Discovery TLV per port
43        component.
44        "
45    INDEX      { lldpV2LocLrpTcpLocalIfIndex,
46                lldpV2LocLrpTcpLocalDestMACAddress,
47                lldpV2LocLrpTcpApplicationIndex }
48    ::= { lldpV2LocLrpTcpTable 1 }
49
50 LldpV2LocLrpTcpEntry ::= SEQUENCE {
52     lldpV2LocLrpTcpLocalIfIndex      InterfaceIndex,
53     lldpV2LocLrpTcpLocalDestMACAddress LldpV2DestAddressTableIndex,
54     lldpV2LocLrpTcpApplicationIndex  Unsigned32,
55     lldpV2LocLrpTcpApplicationId      LrpAppId,
56     lldpV2LocLrpTcpPortNumber         InetPortNumber,
57     lldpV2LocLrpTcpAddressInfo1       LrpInetAddressInfo,
58     lldpV2LocLrpTcpAddress1           InetAddress,
59     lldpV2LocLrpTcpAddressInfo2       LrpInetAddressInfo,
60     lldpV2LocLrpTcpAddress2           InetAddress
61 }
62
63 lldpV2LocLrpTcpLocalIfIndex OBJECT-TYPE
65    SYNTAX      InterfaceIndex
66    MAX-ACCESS   not-accessible
67    STATUS       current
68    DESCRIPTION
69        "The interface index value used to identify the port
70        associated with this entry. Its value is an index
```

```
1      into the interfaces MIB
2
3      The value of this object is used as an index to the
4      lldpV2LocLrpTcpTable.
5      "
6      ::= { lldpV2LocLrpTcpEntry 1 }
7
8 lldpV2LocLrpTcpLocalDestMACAddress OBJECT-TYPE
9     SYNTAX      LldpV2DestAddressTableIndex
10    MAX-ACCESS   not-accessible
11    STATUS       current
12    DESCRIPTION
13        "The index value used to identify the destination
14        MAC address associated with this entry. Its value identifies
15        the row in the lldpV2DestAddressTable where the MAC address
16        can be found.
17
18        The value of this object is used as an index to the
19        lldpV2LocLrpTcpTable.
20        "
21    ::= { lldpV2LocLrpTcpEntry 2 }
22
23 lldpV2LocLrpTcpApplicationIndex OBJECT-TYPE
24     SYNTAX      Unsigned32 (0..255)
25     MAX-ACCESS   not-accessible
26     STATUS       current
27     DESCRIPTION
28         "A small integer that selects one entry in the
29         lldpV2LocLrpTcpTable. For every entry in lldpV2LocLrpTcpEntry,
30         there is one Application descriptor in the transmitted
31         LRP TCP Discovery TLV.
32
33         The value of the transmitted Application count field in the
34         LRP TCP Discovery TLV is equal to the number of different values
35         of lldpV2LocLrpTcpApplicationIndex for this port component.
36         "
37     REFERENCE "C.2.2.5, C.2.2.6"
38     ::= { lldpV2LocLrpTcpEntry 3 }
39
40 lldpV2LocLrpTcpApplicationId OBJECT-TYPE
41     SYNTAX      LrpAppId
42     MAX-ACCESS   read-only
43     STATUS       current
44     DESCRIPTION
45         "The AppId in one Application descriptor in the transmitted
46         LRP TCP Discovery TLV.
47         "
48     REFERENCE "C.2.2.6"
49     ::= { lldpV2LocLrpTcpEntry 4 }
50
51 lldpV2LocLrpTcpPortNumber OBJECT-TYPE
52     SYNTAX      InetPortNumber
53     MAX-ACCESS   read-only
54     STATUS       current
55     DESCRIPTION
56         "The contents of the TCP Port number field in the transmitted
57         LRP TCP Discovery TLV. lldpV2LocLrpTcpPortNumber SHALL NOT
58         contain the value 0.
59         "
60     REFERENCE "C.2.2.6"
61     ::= { lldpV2LocLrpTcpEntry 5 }
62
63 lldpV2LocLrpTcpAddressInfo1 OBJECT-TYPE
64     SYNTAX      LrpInetAddressInfo
65     MAX-ACCESS   read-only
```

```
1 STATUS current
2 DESCRIPTION
3 "The contents of the first Address info field in the transmitted
4 Application descriptor. lldpV2LocLrpTcpAddressInfo1 SHALL NOT
5 contain the value, notPresent(256).
6 "
7 REFERENCE "C.2.2.6"
8 ::= { lldpV2LocLrpTcpEntry 6 }
9
10 lldpV2LocLrpTcpAddress1 OBJECT-TYPE
12 SYNTAX InetAddress
13 MAX-ACCESS read-only
14 STATUS current
15 DESCRIPTION
16 "The contents of the first Address field in the transmitted
17 Application descriptor. If lldpV2LocLrpTcpAddressInfo1 has the
18 value notPresent(256) or noAddress(0), lldpV2LocLrpTcpAddress1
19 SHALL contain a zero-length octet string. Otherwise,
20 lldpV2LocLrpTcpAddress1 SHALL contain an IPv4 or IPv6 address,
21 as specified by lldpV2LocLrpTcpAddressInfo1.
22 "
23 REFERENCE "C.2.2.6"
24 ::= { lldpV2LocLrpTcpEntry 7 }
25
26 lldpV2LocLrpTcpAddressInfo2 OBJECT-TYPE
28 SYNTAX LrpInetAddressInfo
29 MAX-ACCESS read-only
30 STATUS current
31 DESCRIPTION
32 "The contents of the second Address info field in the transmitted
33 Application descriptor. lldpV2LocLrpTcpAddressInfo2 has the
34 value notPresent(256) if there is no second Address info field
35 in the Application descriptor.
36 "
37 REFERENCE "C.2.2.6"
38 ::= { lldpV2LocLrpTcpEntry 8 }
39
40 lldpV2LocLrpTcpAddress2 OBJECT-TYPE
42 SYNTAX InetAddress
43 MAX-ACCESS read-only
44 STATUS current
45 DESCRIPTION
46 "The contents of the second Address field in the transmitted
47 Application descriptor. If lldpV2LocLrpTcpAddressInfo2 has the
48 value notPresent(256) or noAddress(0), lldpV2LocLrpTcpAddress2
49 SHALL contain a zero-length octet string. Otherwise,
50 lldpV2LocLrpTcpAddress2 SHALL contain an IPv4 or IPv6 address,
51 as specified by lldpV2LocLrpTcpAddressInfo2.
52 "
53 REFERENCE "C.2.2.6"
54 ::= { lldpV2LocLrpTcpEntry 9 }
55
56 -----
57 -- IEEE 802.1CS LRP LLDP TLVs - Remote (Neighbor) System Information
58 -----
59
60 --
61 -- lldpV2RemLrpEcpTable
62 --
63
64 lldpV2RemLrpEcpTable OBJECT-TYPE
66 SYNTAX SEQUENCE OF LldpV2RemLrpEcpEntry
67 MAX-ACCESS not-accessible
68 STATUS current
69 DESCRIPTION
```

```
1         "This table contains one or more rows per physical network
2         connection known to this agent. The agent may wish to
3         ensure that only one lldpV2ExtLrpRemEntry is present for
4         each local port, or it may choose to maintain multiple
5         lldpV2ExtLrpRemEntries for the same local port."
6     REFERENCE
7         "11.6.2.3"
8     ::= { lldpV2ExtLrpRemoteData 1 }
9
10 lldpV2RemLrpEcpEntry OBJECT-TYPE
11     SYNTAX      LldpV2RemLrpEcpEntry
12     MAX-ACCESS  not-accessible
13     STATUS      current
14     DESCRIPTION
15         "Information about a particular port component."
16     INDEX       { lldpV2RemLrpEcpTimeMark,
17                  lldpV2RemLrpEcpLocalIfIndex,
18                  lldpV2RemLrpEcpLocalDestMACAddress,
19                  lldpV2RemLrpEcpIndex,
20                  lldpV2RemLrpEcpApplicationIndex }
21     ::= { lldpV2RemLrpEcpTable 1 }
22
23
24 lldpV2RemLrpEcpEntry ::= SEQUENCE {
25     lldpV2RemLrpEcpTimeMark      TimeFilter,
26     lldpV2RemLrpEcpLocalIfIndex  InterfaceIndex,
27     lldpV2RemLrpEcpLocalDestMACAddress LldpV2DestAddressTableIndex,
28     lldpV2RemLrpEcpIndex         Unsigned32,
29     lldpV2RemLrpEcpApplicationIndex Unsigned32,
30     lldpV2RemLrpEcpApplicationId LrpAppId
31 }
32
33
34 lldpV2RemLrpEcpTimeMark OBJECT-TYPE
35     SYNTAX      TimeFilter
36     MAX-ACCESS  not-accessible
37     STATUS      current
38     DESCRIPTION
39         "A TimeFilter for this entry. See the TimeFilter textual
40         convention in IETF RFC 4502 to see how TimeFilter works."
41     "
42     REFERENCE
43         "IETF RFC 4502 section 6"
44     ::= { lldpV2RemLrpEcpEntry 1 }
45
46
47
48 lldpV2RemLrpEcpLocalIfIndex OBJECT-TYPE
49     SYNTAX      InterfaceIndex
50     MAX-ACCESS  not-accessible
51     STATUS      current
52     DESCRIPTION
53         "The interface index value used to identify the port
54         associated with this entry. Its value is an index
55         into the interfaces MIB
56
57         The value of this object is used as an index to the
58         lldpV2RemLrpEcpTable.
59     "
60     ::= { lldpV2RemLrpEcpEntry 2 }
61
62
63 lldpV2RemLrpEcpLocalDestMACAddress OBJECT-TYPE
64     SYNTAX      LldpV2DestAddressTableIndex
65     MAX-ACCESS  not-accessible
66     STATUS      current
67     DESCRIPTION
68         "The index value used to identify the LLDPDU frame destination
69         MAC address associated with this entry. Its value identifies
```

```
1         the row in the lldpV2DestAddressTable where the MAC address
2         can be found.
3
4         The value of this object is used as an index to the
5         lldpV2RemLrpTcpTable.
6         "
7         ::= { lldpV2RemLrpEcpEntry 3 }
8
9
10 lldpV2RemLrpEcpIndex OBJECT-TYPE
11     SYNTAX      Unsigned32(1..2147483647)
12     MAX-ACCESS  not-accessible
13     STATUS      current
14     DESCRIPTION
15         "This object represents an arbitrary local integer value used
16         by this agent to identify a particular connection instance,
17         unique only for the indicated remote system.
18
19         An agent is encouraged to assign monotonically increasing
20         index values to new entries, starting with one, after each
21         reboot. It is considered unlikely that the
22         lldpV2RemLrpEcpIndex can wrap between reboots.
23         "
24     ::= { lldpV2RemLrpEcpEntry 4 }
25
26
27 lldpV2RemLrpEcpApplicationIndex OBJECT-TYPE
28     SYNTAX      Unsigned32 (0..255)
29     MAX-ACCESS  not-accessible
30     STATUS      current
31     DESCRIPTION
32         "A small integer that selects one entry in the
33         lldpV2RemLrpEcpTable. For every entry in lldpV2RemLrpEcpEntry,
34         there is one Application descriptor in the received
35         LRP ECP Discovery TLV.
36
37         The value of the received Application count field in the
38         LRP ECP Discovery TLV is equal to the number of different values
39         of lldpV2RemLrpEcpApplicationIndex for this connection instance.
40         "
41     REFERENCE "C.2.1.5, C.2.1.6"
42     ::= { lldpV2RemLrpEcpEntry 5 }
43
44
45 lldpV2RemLrpEcpApplicationId OBJECT-TYPE
46     SYNTAX      LrpAppId
47     MAX-ACCESS  read-only
48     STATUS      current
49     DESCRIPTION
50         "The AppId in one Application descriptor in the received
51         LRP ECP Discovery TLV.
52         "
53     REFERENCE "C.2.1.5, C.2.1.6"
54     ::= { lldpV2RemLrpEcpEntry 6 }
55
56
57 --
58 -- lldpV2RemLrpTcpTable
59 --
60
61 lldpV2RemLrpTcpTable OBJECT-TYPE
62     SYNTAX      SEQUENCE OF LldpV2RemLrpTcpEntry
63     MAX-ACCESS  not-accessible
64     STATUS      current
65     DESCRIPTION
66         "This table contains one or more rows per physical network
67         connection known to this agent. The agent may wish to
68         ensure that only one lldpV2ExtLrpRemEntry is present for
```



```
1          each local port, or it may choose to maintain multiple
2          lldpV2ExtLrpRemEntries for the same local port."
3      ::= { lldpV2ExtLrpRemoteData 2 }
4
5 lldpV2RemLrpTcpEntry OBJECT-TYPE
6     SYNTAX      LldpV2RemLrpTcpEntry
7     MAX-ACCESS  not-accessible
8     STATUS      current
9     DESCRIPTION
10        "Information about a particular port component."
11     INDEX      { lldpV2RemLrpTcpTimeMark,
12                  lldpV2RemLrpTcpLocalIfIndex,
13                  lldpV2RemLrpTcpLocalDestMACAddress,
14                  lldpV2RemLrpTcpIndex,
15                  lldpV2RemLrpTcpApplicationIndex }
16     ::= { lldpV2RemLrpTcpTable 1 }
17
18
19 lldpV2RemLrpTcpEntry ::= SEQUENCE {
20     lldpV2RemLrpTcpTimeMark          TimeFilter,
21     lldpV2RemLrpTcpLocalIfIndex      InterfaceIndex,
22     lldpV2RemLrpTcpLocalDestMACAddress LldpV2DestAddressTableIndex,
23     lldpV2RemLrpTcpIndex             Unsigned32,
24     lldpV2RemLrpTcpApplicationIndex  Unsigned32,
25     lldpV2RemLrpTcpApplicationId     LrpAppId,
26     lldpV2RemLrpTcpPortNumber        InetPortNumber,
27     lldpV2RemLrpTcpAddressInfo1      LrpInetAddressInfo,
28     lldpV2RemLrpTcpAddress1          InetAddress,
29     lldpV2RemLrpTcpAddressInfo2      LrpInetAddressInfo,
30     lldpV2RemLrpTcpAddress2          InetAddress
31 }
32
33
34 lldpV2RemLrpTcpTimeMark OBJECT-TYPE
35     SYNTAX      TimeFilter
36     MAX-ACCESS  not-accessible
37     STATUS      current
38     DESCRIPTION
39        "A TimeFilter for this entry. See the TimeFilter textual
40        convention in IETF RFC 4502 to see how TimeFilter works."
41     "
42     REFERENCE
43        "IETF RFC 4502 section 6"
44     ::= { lldpV2RemLrpTcpEntry 1 }
45
46
47
48 lldpV2RemLrpTcpLocalIfIndex OBJECT-TYPE
49     SYNTAX      InterfaceIndex
50     MAX-ACCESS  not-accessible
51     STATUS      current
52     DESCRIPTION
53        "The interface index value used to identify the port
54        associated with this entry. Its value is an index
55        into the interfaces MIB
56
57        The value of this object is used as an index to the
58        lldpV2RemLrpTcpTable.
59     "
60     ::= { lldpV2RemLrpTcpEntry 2 }
61
62
63 lldpV2RemLrpTcpLocalDestMACAddress OBJECT-TYPE
64     SYNTAX      LldpV2DestAddressTableIndex
65     MAX-ACCESS  not-accessible
66     STATUS      current
67     DESCRIPTION
68        "The index value used to identify the destination
69        MAC address associated with this entry. Its value identifies
```

```
1         the row in the lldpV2DestAddressTable where the MAC address
2         can be found.
3
4         The value of this object is used as an index to the
5         lldpV2RemLrpTcpTable.
6         "
7         ::= { lldpV2RemLrpTcpEntry 3 }
8
9
10 lldpV2RemLrpTcpIndex OBJECT-TYPE
11     SYNTAX      Unsigned32(1..2147483647)
12     MAX-ACCESS  not-accessible
13     STATUS      current
14     DESCRIPTION
15         "This object represents an arbitrary local integer value used
16         by this agent to identify a particular connection instance,
17         unique only for the indicated remote system.
18
19         An agent is encouraged to assign monotonically increasing
20         index values to new entries, starting with one, after each
21         reboot. It is considered unlikely that the
22         lldpV2RemLrpTcpIndex can wrap between reboots.
23         "
24         ::= { lldpV2RemLrpTcpEntry 4 }
25
26
27 lldpV2RemLrpTcpApplicationIndex OBJECT-TYPE
28     SYNTAX      Unsigned32 (0..255)
29     MAX-ACCESS  not-accessible
30     STATUS      current
31     DESCRIPTION
32         "A small integer that selects one entry in the
33         lldpV2RemLrpTcpTable. For every entry in lldpV2RemLrpTcpEntry,
34         there is one Application descriptor in the received
35         LRP TCP Discovery TLV.
36
37         The value of the received Application count field in the
38         LRP TCP Discovery TLV is equal to the number of different values
39         of lldpV2RemLrpTcpApplicationIndex for this connection instance.
40         "
41     REFERENCE "C.2.2.5, C.2.2.6"
42     ::= { lldpV2RemLrpTcpEntry 5 }
43
44
45 lldpV2RemLrpTcpApplicationId OBJECT-TYPE
46     SYNTAX      LrpAppId
47     MAX-ACCESS  read-only
48     STATUS      current
49     DESCRIPTION
50         "The AppId in one Application descriptor in the received
51         LRP TCP Discovery TLV.
52         "
53     REFERENCE "C.2.2.6"
54     ::= { lldpV2RemLrpTcpEntry 6 }
55
56
57 lldpV2RemLrpTcpPortNumber OBJECT-TYPE
58     SYNTAX      InetPortNumber
59     MAX-ACCESS  read-only
60     STATUS      current
61     DESCRIPTION
62         "The contents of the TCP Port number field in the received
63         Application descriptor. lldpV2RemLrpTcpPortNumber SHALL NOT
64         contain the value 0.
65         "
66     REFERENCE "C.2.2.6"
67     ::= { lldpV2RemLrpTcpEntry 7 }
68
69
```

```
1 lldpV2RemLrpTcpAddressInfo1 OBJECT-TYPE
3   SYNTAX      LrpInetAddressInfo
4   MAX-ACCESS  read-only
5   STATUS      current
6   DESCRIPTION
7       "The contents of the first Address info field in the received
8       Application descriptor. lldpV2RemLrpTcpAddressInfo1 SHALL NOT
9 contain the value, notPresent(256)."
10
11  REFERENCE "C.2.2.6"
12  ::= { lldpV2RemLrpTcpEntry 8 }
13
14 lldpV2RemLrpTcpAddress1 OBJECT-TYPE
16  SYNTAX      InetAddress
17  MAX-ACCESS  read-only
18  STATUS      current
19  DESCRIPTION
20      "The contents of the first Address field in the received
21      Application descriptor. If lldpV2RemLrpTcpAddressInfo1 has the
22      value notPresent(256) or noAddress(0), lldpV2RemLrpTcpAddress1
23      SHALL contain a zero-length octet string. Otherwise,
24      lldpV2RemLrpTcpAddress1 SHALL contain an IPv4 or IPv6 address,
25      as specified by lldpV2RemLrpTcpAddressInfo1."
26
27  REFERENCE "C.2.2.6"
28  ::= { lldpV2RemLrpTcpEntry 9 }
29
30 lldpV2RemLrpTcpAddressInfo2 OBJECT-TYPE
32  SYNTAX      LrpInetAddressInfo
33  MAX-ACCESS  read-only
34  STATUS      current
35  DESCRIPTION
36      "The contents of the second Address info field in the received
37      Application descriptor. lldpV2RemLrpTcpAddressInfo2 has the
38      value notPresent(256) if there is no second Address info field
39      in the Application descriptor."
40
41  REFERENCE "C.2.2.6"
42  ::= { lldpV2RemLrpTcpEntry 10 }
43
44 lldpV2RemLrpTcpAddress2 OBJECT-TYPE
46  SYNTAX      InetAddress
47  MAX-ACCESS  read-only
48  STATUS      current
49  DESCRIPTION
50      "The contents of the second Address field in the received
51      Application descriptor. If lldpV2RemLrpTcpAddressInfo2 has the
52      value notPresent(256) or noAddress(0), lldpV2RemLrpTcpAddress2
53      SHALL contain a zero-length octet string. Otherwise,
54      lldpV2RemLrpTcpAddress2 SHALL contain an IPv4 or IPv6 address,
55      as specified by lldpV2RemLrpTcpAddressInfo2."
56
57  REFERENCE "C.2.2.6"
58  ::= { lldpV2RemLrpTcpEntry 11 }
59
60 -----
61 -- Conformance Information for the basicSet TLV set
62 -----
63
64 lldpV2ExtLrpConformance
66  OBJECT IDENTIFIER ::= { lldpXdot1StandAloneExtensions 9 }
67 lldpV2ExtLrpCompliances
69  OBJECT IDENTIFIER ::= { lldpV2ExtLrpConformance 1 }
70 lldpV2ExtLrpGroups
72  OBJECT IDENTIFIER ::= { lldpV2ExtLrpConformance 2 }
```

```
1
2 -- compliance statements
3
4
5 lldpV2ExtLrpTxRxCompliance MODULE-COMPLIANCE
6
7     STATUS current
8     DESCRIPTION
9         "A compliance statement for SNMP entities that implement
10         the IEEE 802.1 organizationally defined LLDP extension MIB.
11
12         This group is mandatory for all agents that implement the
13         LLDP 802.1 organizational extension in TX and/or RX mode
14         for the basicSet TLV set.
15
16         This version defines compliance requirements for
17         V2 of the LLDP MIB."
18     MODULE -- this module
19     ::= { lldpV2ExtLrpCompliances 1 }
20
21
22
23 -- MIB groupings for the basicSet TLV set
24
25 lldpV2ExtLrpControlledTcpControlGroup OBJECT-GROUP
26     OBJECTS {
27         lldpV2ConfigLrpTcpControlledTcpPortNumber,
28         lldpV2ConfigLrpTcpControlledIPv4Enable,
29         lldpV2ConfigLrpTcpControlledIPv4Address,
30         lldpV2ConfigLrpTcpControlledIPv6Enable,
31         lldpV2ConfigLrpTcpControlledIPv6Address
32     }
33     STATUS current
34     DESCRIPTION
35         "The optional collection of objects which are required of a
36         Controlled system so that a Proxy system SNMP client can
37         configure the LRP TCP Discovery TLVs to be transmitted by the
38         Controlled system.
39         "
40     REFERENCE "5.10:b"
41     ::= { lldpV2ExtLrpGroups 1 }
42
43
44 lldpV2ExtLrpEcpTlvGroup OBJECT-GROUP
45     OBJECTS {
46         lldpV2ConfigLrpEcpTxEnable,
47         lldpV2LocLrpEcpApplicationId,
48         lldpV2RemLrpEcpApplicationId
49     }
50     STATUS current
51     DESCRIPTION
52         "The optional collection of objects which are required of any
53         system implementing the LRP-DT ECP mechanism so that an SNMP
54         client can observe the LRP ECP Discovery TLVs transmitted and
55         received by the system."
56     REFERENCE "Clause 5"
57     ::= { lldpV2ExtLrpGroups 2 }
58
59
60 lldpV2ExtLrpTcpTlvGroup OBJECT-GROUP
61     OBJECTS {
62         lldpV2ConfigLrpTcpTxEnable,
63         lldpV2LocLrpTcpApplicationId,
64         lldpV2LocLrpTcpPortNumber,
65         lldpV2LocLrpTcpAddressInfo1,
66         lldpV2LocLrpTcpAddress1,
67         lldpV2LocLrpTcpAddressInfo2,
68         lldpV2LocLrpTcpAddress2,
69         lldpV2LocLrpTcpAddress2,
```

```
1      lldpV2RemLrpTcpApplicationId,  
2      lldpV2RemLrpTcpPortNumber,  
3      lldpV2RemLrpTcpAddressInfo1,  
4      lldpV2RemLrpTcpAddress1,  
5      lldpV2RemLrpTcpAddressInfo2,  
6      lldpV2RemLrpTcpAddress2  
7  }  
8  STATUS current  
9  DESCRIPTION  
10     "The optional collection of objects which are required of any  
11     system implementing the LRP-DT TCP mechanism so that an SNMP  
12     client can observe the LRP TCP Discovery TLVs transmitted and  
13     received by the system."  
14  REFERENCE "Clause 5"  
15  ::= { lldpV2ExtLrpGroups 3 }  
16  
17 END  
18
```

1 Annex C

2 (normative)

3 IEEE 802.1 Organizationally Specific TLVs for LLDP

4 C.2 Organizationally Specific TLV definitions

5 C.2.2 LRP TCP Discovery TLV

6 C.2.2.6 Application descriptor

7 *Change C.2.2.6 as follows:*

8 An Application descriptor for the LRP TCP Discovery TLV contains four octets with an AppId, followed by
9 one or two addresses to use to make the TCP association, as shown in Figure C-1. The first three octets
10 contain the OUI or CID of the organization assigning the AppId, and the fourth octet identifies a specific
11 LRP application that connects using TCP. Following these four octets is a two-octet TCP port number,
12 followed in turn by the descriptions of one or two IP addresses, as shown in Table C-1.

Offset	0	3	4	6	7	varies	varies
	OUI or CID for AppId (3 octets)	AppId subtype (1 octet)	TCP port number (2 octets)	Address info 1 (1 octet)	Address 1 (0, 4, or 16 octets)	Address info 2 (1 octet)	Address 2 (0, 4, or 16 octets)

Figure C-1—LRP TCP Discovery TLV application descriptor format

Table C-1—Allowed address information encodings and lengths

Address info 1	Address 1 length	Address info 2	Address 2 length	Total length of address infor- mation
noAddress	0	addrIPv4	4	6
		addrIPv6	16	18
addrIPv4	4	not present ^a	0	5
		noAddress	0	6
		addrIPv6	16	22
addrIPv6	16	not present ^a	0	17
		noAddress	0	18
		addrIPv4	4	22

^a [Allowed only at the end of the TLV. See C.2.2.7.](#)

1 **C.2.2.7 LRP TCP Discovery TLV usage rules**

2 *Change section C.2.2.7 as follows:*

3 The LRP TCP Discovery TLV is used to establish TCP associations among the Portals on a physical link. A
4 Native or Controlled system should transmit this TLV if and only if the information transmitted in the
5 LLDPDU matches the information in an entry in the imTargetPortList (7.2.2.1) in the Native system or the
6 Controlled's Proxy system.

7 A system shall not transmit the same AppId value in more than one Application descriptor of the same LRP
8 TCP Discovery TLV. A system can transmit more than one LRP TCP Discovery TLV for different sets of
9 AppId values, but the same AppId value shall not appear in more than one LRP TCP Discovery TLV in the
10 same LLDPDU. At least one IP address shall be included in an LRP TCP Discovery TLV. If two addresses
11 are included, they shall be of different types (addrIPv4 vs. addrIPv6). The second AddressInfo field can be
12 omitted from an application descriptor (be not present in Table C-2) only if it would be the last octet of the
13 LRP TCP Discovery TLV.

14 NOTE—The provision for sending or receiving multiple LRP TCP Discovery TLVs is made to facilitate control of these
15 LLDP TLVs by more than one LRP application.

16 This standard does not specify the actions to be taken if a received LRP TCP Discovery TLV violates these
17 usage rules.

18 As explained in 9.2.7.7.2 of IEEE Std 802.1AB-2016, a received LRP TCP Discovery TLV is not invalid if
19 the value of the TLV information string length field is larger than the total amount of information indicated
20 by the Application count and Application descriptors. A system receiving such a TLV shall interpret the
21 TLV as described in this standard, and ignore any information following the Application descriptor.

22