

ISO/IEC/IEEE 8802-1CS:2022-07 (E)

Telecommunications and exchange between information technology systems - Requirements for local and metropolitan area networks - Part 1CS: Link-local registration protocol

Contents		Page
1.	Overview	13
1.1	Scope	13
1.2	Purpose	13
1.3	State diagram conventions	13
1.4	Specification model	13
1.5	Note on inter-table references	14
1.6	Specification precedence	14
1.7	Introduction	14
2.	Normative references	15
3.	Definitions	17
4.	Abbreviations	19
5.	Conformance	20
5.1	Introduction	20
5.2	Requirements terminology	20
5.3	Common Native and Proxy required behaviors	20
5.4	Native end system required behaviors	21
5.5	Native end system optional behaviors	21
5.6	Native relay system required behaviors	21
5.7	Native relay system optional behaviors	21
5.8	Proxy system required behaviors	22
5.9	Proxy system optional behaviors	22
5.10	Controlled system optional behaviors	22
6.	Link-local Registration Protocol	23
6.1	Introduction	23
6.2	Overview	23
6.3	Objectives and non-objectives	24
6.4	Proxy systems, Controlled systems, and target ports	25
6.5	Link Layer Discovery Protocol and target ports	28
6.6	Exploratory Hello LRPDU	29
6.7	Target port state	29
6.8	LRP database structure	30
6.9	LRP-DT data transport mechanisms	30
6.10	LRP-DS database synchronization mechanism	32
6.11	State machine creation	34
6.12	Security considerations	35
7.	LRP-DT Procedures	36
7.1	Introduction	36
7.2	LRP-DT instance maintenance	36
7.3	LRP-DT instance	41
8.	Portal	48
8.1	Introduction	48
8.2	Portal association maintenance	48

8.3	Applicant	54
8.4	Registrar	58
9.	Format and encoding of LRP Data Units	62
9.1	Introduction	62
9.2	AppId	62
9.3	LRP database synchronization protocol	62
9.4	LRPDU formats	63
9.5	LRP data transport protocols	69
10.	LRP-DS service interface	70
10.1	Introduction	70
10.2	Association primitives	71
10.3	Portal interface	74
11.	Managed objects	76
11.1	Introduction	76
11.2	Managed objects UML	76
11.3	System global managed objects	77
11.4	Per-LRP-DT instance managed objects	77
11.5	Per-Portal managed objects	78
11.6	LRP LLDP TLV managed objects	80
12.	YANG models for LRP	82
12.1	Introduction	82
12.2	The YANG framework	82
12.3	Security considerations	82
12.4	Relationship to other YANG modules	82
12.5	YANG data scheme definition	82
12.6	Definition of LRP YANG module	83
13.	MIB modules for LRP	92
13.1	Internet standard management framework	92
13.2	Structure of the LRP MIB	92
13.3	Relationship to the LLDP-V2-TC-MIB	93
13.4	Security considerations	93
13.5	MIB modules	96
Annex A (normative)	Protocol Implementation Conformance Statement (PICS) proforma	130
A.1	Introduction	130
A.2	PICS proforma for Link-local Registration Protocol	133
Annex B (normative)	LRP application specifications	138
B.1	Overview	138
B.2	LRP-DS versus IS-IS: LRP application responsibilities	138
B.3	Use of LLDP	139
B.4	Portal creation	139
B.5	Database locking issues	140
B.6	ECP vs. TCP issues	140
B.7	TCP active/passive OPEN	141
B.8	Resetting the databases	141
B.9	Application-level acknowledgments	141
B.10	Sequence number wrap-around	142
B.11	LRP applications' requirements on LRP	142
Annex C (normative)	IEEE 802.1 Organizationally Specific TLVs for LLDP.....	143
C.1	Overview	143
C.2	Organizationally Specific TLV definitions	143
Annex D (informative)	Bibliography	148