

P802.1Qcp

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Type of Project: Amendment to IEEE Standard 802.1Q-2014

PAR Request Date: 22-Jul-2015

PAR Approval Date: 03-Sep-2015

PAR Expiration Date: 31-Dec-2019

Status: PAR for an Amendment to an existing IEEE Standard

1.1 Project Number: P802.1Qcp

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: Standard for Local and Metropolitan Area Networks - Bridges and Bridged Networks Amendment: YANG Data Model

3.1 Working Group: Higher Layer LAN Protocols Working Group (C/LM/WG802.1)

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3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)

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4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 11/2017

4.3 Projected Completion Date for Submittal to RevCom

Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 08/2018

5.1 Approximate number of people expected to be actively involved in the development of this project: 20

5.2.a. Scope of the complete standard: This standard specifies Bridges that interconnect individual LANs, each supporting the IEEE 802 MAC

Service using a different or identical media access control method, to provide Bridged Networks and VLANs.

5.2.b. Scope of the project: This amendment specifies a Unified Modeling Language (UML) based information model and a YANG data model that allows configuration and status reporting for bridges and bridge components including Media Access Control (MAC) Bridges, Two-Port MAC Relays (TPMRs), Customer Virtual Local Area Network (VLAN) Bridges, and Provider Bridges (as specified by this standard) with the capabilities currently specified in clauses 12.4-12.7~~8~~, 12.10, [12.12.1](#), [12.12.2](#), 12.13, and 12.19 of this standard. It further defines the relationship between the information and data model and models for the other management capabilities specified in this standard and for IEEE Std 802.1AX and IEEE Std 802.1X.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: Bridges, as specified by this standard, allow the compatible interconnection of information technology equipment attached to separate individual LANs.

5.5 Need for the Project: YANG (Request For Comment (RFC) [7950](#)~~6020~~) is a formalized data modeling language that can be used by

NETCONF, a widely accepted protocol that is being used to simplify network configuration. Other standards development organizations (e.g. Internet Engineering Task Force (IETF) and the Metro Ethernet Forum) have adopted YANG, and are developing a broad range of data models. Development of a YANG data model for manageable entities specified in IEEE Std 802.1Q will support this industry wide effort.

5.6 Stakeholders for the Standard: Developers, providers, and users of networking services and equipment.

Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No

6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

7.1 Are there other standards or projects with a similar scope?: No

7.2 Joint Development

Is it the intent to develop this document jointly with another organization?: No

8.1 Additional Explanatory Notes: #2.1 While 'YANG' (developed by the IETF) appears to be an acronym its expansion 'Yet Another Next Generation' is not meaningful. It is vital that 'YANG' appear in the project title to inform potential participants and the target readership of the amendment.

#5.2B IEEE Std 802.1X includes:

IEEE Std 802.1X(TM)-2010 - Local and metropolitan area networks - Port-Based Network Access Control

IEEE Std 802.1Xbx(TM)-2014 - Local and metropolitan area networks - Amendment 1: MAC Security Key Agreement Protocol (MKA) extensions

IEEE Std 802.1Q includes:

IEEE Std 802.1Q(TM)-2014 - IEEE Standard for Local and metropolitan area networks -- Bridges and Bridged Networks

IEEE 802.1Qcd-2015 - IEEE Standard for Local and metropolitan area networks-- Bridges and Bridged Networks - Amendment 23: Application Virtual Local Area Network (VLAN) Type, Length, Value (TLV)

IEEE Std 802.1AX - IEEE Standard for Local and metropolitan area networks -- Link Aggregation

#5.5 RFC 6020 - YANG - A Data Modeling Language for the Network Configuration Protocol (NETCONF)

NETCONF (RFC 6241) is a network configuration protocol that provides mechanisms to install, manipulate, and delete the configuration of network devices.

[#5.5 RFC 7950 - The YANG 1.1 Data Modeling Language describes syntax and semantics of version 1.1 of the YANG language.](#)

#7.3A The base standard, IEEE Std 802.1Q, has already been adopted by ISO/IEC JTC1 under the PSDO Agreement and it is expected that this amendment will also be adopted via communication with JTC1 through existing channels.