P802.1Qcz

This PAR is valid until 31-Dec-2022.

PAR Extension Request Date:
PAR Extension Approval Date:
Number of Previous Extensions Requested: 0

1. Number of years that the extension is being requested: 2
2. Why an Extension is Required (include actions to complete): The amendment is gated by the revision of IEEE Std 802.1Q-2018. The amendment can not be published until P802.1Q-Rev completes. The last IEEE P802.1Qcz SA recirculation ballot completed January 5, 2022. Actions to complete SA balloting include re-basing the text against IEEE Std 802.1Q-2022 which involves renumbering clauses and aligning text to changes made by IEEE P802.1Q-Rev.
Even though submittal to RevCom is anticipated for March 2023, a two-year extension is being requested in case more time is needed to complete the project.
3.1. What date did you begin writing the first draft: 11 May 2019
3.2. How many people are actively working on the project: 20
3.3. How many times a year does the working group meet?
   In person: 6
   Via teleconference: 40
3.4. How many times a year is a draft circulated to the working group: 4
3.5. What percentage of the Draft is stable: 98%
3.6. How many significant work revisions has the Draft been through: 10
4. When will/did initial Standards Association Balloting begin: Jan 2021

When do you expect to submit the proposed standard to RevCom: Mar 2023
Has this document already been adopted by another source? (if so please identify) No

For an extension request, the information on the original PAR below is not open to modification.

Type of Project: Amendment to IEEE Standard 802.1Q-2018
Project Request Type: Initiation / Amendment
PAR Request Date: 18 Jul 2018
PAR Approval Date: 27 Sep 2018
PAR Expiration Date: 31 Dec 2022
PAR Status: Active
Root Project: 802.1Q-2018

1.1 Project Number: P802.1Qcz
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Project Title: Standard for Local and Metropolitan Area Networks--Bridges and Bridged Networks
 Amendment: Congestion Isolation

3.1 Working Group: Higher Layer LAN Protocols Working Group(C/LM/802.1 WG)
   3.1.1 Contact Information for Working Group Chair:
   Name: Glenn Parsons
   Email Address: glenn.parsons@ericsson.com
   3.1.2 Contact Information for Working Group Vice Chair:
   Name: Jessy Rouyer
   Email Address: jessy.rouyer@nokia.com
3.2 Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee(C/LM)
   3.2.1 Contact Information for Standards Committee Chair:
   Name: Paul Nikolich
   Email Address: p.nikolich@ieee.org
   3.2.2 Contact Information for Standards Committee Vice Chair:
   Name: James Gilb
   Email Address: gilb@ieee.org
   3.2.3 Contact Information for Standards Representative:

Name: James Gilb
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4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot:
Jul 2021
4.3 Projected Completion Date for Submittal to RevCom: Oct 2022

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 protocols, procedures and managed objects that support the isolation of congested data flows within data center environments. This is achieved by enabling systems to individually identify flows creating congestion, adjust transmission selection for packets of those flows, and signal to neighbors. This mechanism reduces head-of-line blocking for uncongested flows sharing a traffic class in lossless networks. Congestion Isolation is intended to be used with higher layer protocols that utilize end-to-end congestion control in order to reduce packet loss and latency. This amendment also addresses errors and omissions in the description of existing functionality.

5.3 Is the completion of this standard contingent upon the completion of another standard? Yes
Explanation: This amendment will specify a new Link Layer Discovery Protocol (LLDP) Type-Length-Value (TLV) and its associated YANG model. IEEE P802.1ABcu is currently specifying the YANG model for IEEE Std 802.1AB which must be completed in order for this amendment to specify its extension.
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: There is significant customer interest and market opportunity for large scale, low-latency, lossless Ethernet data centers to support high-performance computing and distributed storage applications. Congestion is the primary cause of loss and delay. These environments currently use higher layer end-to-end congestion control coupled with priority-based flow control at Layer 2 to avoid performance degradation from packet loss due to congestion. As the Ethernet data center network scales in size, speed and number of concurrent flows, the current environment creates head-of-line blocking for flows sharing the same traffic class. Isolating flows that cause congestion reduces latency for flows not causing congestion and improves the scale and performance of the Ethernet data center network. This amendment will support the identification and isolation of the higher layer protocol flows that are creating congestion. The amendment will interoperate with existing congestion management. Use of a consolidated Ethernet data center network will realize operational and equipment cost benefits.
5.6 Stakeholders for the Standard: Developers and users of networking for data center environments including integrated circuit developers, switch and end-node adaptor vendors, network operators and users.

6.1 Intellectual Property
   6.1.1 Is the Standards Committee aware of any copyright permissions needed for this project?
   No
   6.1.2 Is the Standards Committee aware of possible registration activity related to this project?
   Yes
   Explanation: The YANG Data Model will be assigned a Uniform Resource Name (URN) based on the Registration Authority (RA) URN tutorial and IEEE Std 802d.

7.1 Are there other standards or projects with a similar scope? No
7.2 Is it the intent to develop this document jointly with another organization? No

8.1 Additional Explanatory Notes: #5.3: While 'YANG' (developed by the Internet Engineering Task Force) appears to be an acronym its expansion 'Yet Another Next Generation' is not meaningful.
   IEEE 802.1AB - IEEE Standard for Local and metropolitan area networks - Station and Media Access Control Connectivity Discovery
   IEEE P802.1AB - Draft Standard for Local and Metropolitan Area Networks - Station and Media Access Control Connectivity Discovery Amendment: YANG Data Model
#6.1.b IEEE Std 802 IEEE Standard for Local and Metropolitan Area Networks: Overview and Architecture
   IEEE Std 802d IEEE Standard for Local and Metropolitan Area Networks: Overview and Architecture Amendment 1: Allocation of Uniform
   Resource Name (URN) Values in IEEE 802 Standards
   RA URN tutorial: http://standards.ieee.org/develop/regauth/tut/ieeeurn.pdf