P802.1Qek

Type of Project: Amendment to IEEE Standard 802.1Q-2022
Project Request Type: Initiation / Amendment
PAR Request Date:
PAR Approval Date:
PAR Expiration Date:
PAR Status: Draft
Root Project: 802.1Q-2022

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

2.1 Project Title: IEEE Standard for Local and Metropolitan Area Networks--Bridges and Bridged Networks Amendment: Additions for Robustness in Engineered Networks

3.1 Working Group: Higher Layer LAN Protocols Working Group(C/LAN/MAN/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/LAN/MAN)
3.2.1 Contact Information for Standards Committee Chair:
Name: James Gilb
Email Address: gilb_ieee@tuta.com
3.2.2 Contact Information for Standards Committee Vice Chair:
Name: David Halasz
Email Address: dave.halasz@ieee.org
3.2.3 Contact Information for Standards Representative:
Name: George Zimmerman
Email Address: george@cmephyconsulting.com

4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot: Jul 2028
4.3 Projected Completion Date for Submittal to RevCom: Sep 2030

5.1 Approximate number of people expected to be actively involved in the development of this project: 30
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 enhancements to avoid disruptions to planned traffic in engineered networks including minimum service data unit size filtering. It includes the specification of corresponding procedures, managed objects, configuration capabilities, and YANG data models. 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 depends on the completion of the ongoing revision of the base standard.
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: Additional robustness mechanisms are needed to prevent or contain disruption to planned traffic in engineered networks from faulty or misconfigured equipment. For instance, minimum service data unit size filtering is needed for networks that have to provide strict latency bounds and high bandwidth utilization in the presence of faulty traffic.
5.6 Stakeholders for the Standard: Manufacturers, distributors, vendors, certifiers, and users of bridging equipment and components thereof. Relevant environments include but are not limited to aerospace, automotive, and industrial automation applications.

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 is expected to be assigned a Uniform Resource Name (URN) based on the IEEE Registration Authority (RA) URN tutorial and IEEE Std 802.
The amendment is expected to use the IEEE 802.1 Organizationally Unique Identifier (OUI) to create a globally unique application identifier as required.
The amendment may allow an OUI or Company Identifier (CID) to be used to create code points used in managed objects and protocol fields.

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

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8.1 Additional Explanatory Notes: #5.2.b: While 'YANG' (developed by the Internet Engineering Task Force) appears to be an acronym, its expansion is not meaningful. YANG is a data modeling language for the definition of data sent over network management protocols (IETF Request For Comments (RFC) 7950, The YANG 1.1 Data Modeling Language)
#5.3: IEEE Std 802.1Q IEEE Standard for Local and Metropolitan Area Networks – Bridges and Bridged Networks
#6.1.2: IEEE Std 802 IEEE Standard for Local and Metropolitan Area Networks: Overview and Architecture
link to the IEEE RA URN tutorial: https://standards.ieee.org/wp-content/uploads/import/documents/tutorials/ieeeurn.pdf
link to the IEEE RA Object Identifier (OID) tutorial: https://standards.ieee.org/wp-content/uploads/import/documents/tutorials/oid.pdf