P802.1Xck

Submitter Email: mick_seaman@ieee.org
Type of Project: Amendment to IEEE Standard 802.1X-2010
PAR Request Date: 09-Jun-2015
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, PAR for an Amendment to an existing IEEE Standard

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

2.1 Title: Standard for Local and metropolitan area networks--Port-Based Network Access Control 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: 03/2017
4.3 Projected Completion Date for Submittal to RevCom: 10/2017

5.1 Approximate number of people expected to be actively involved in the development of this project: 12
5.2.a. Scope of the complete standard: For the purpose of providing compatible authentication, authorization, and cryptographic key agreement mechanisms to support secure communication between devices connected by IEEE 802(R) Local Area Networks (LANs), this standard

a) Specifies a general method for provision of port-based network access control.
b) Specifies protocols that establish secure associations for IEEE Std 802.1AE(TM) MAC Security.

c) Facilitates the use of industry standard authentication and authorization protocols.

5.2.b. Scope of the project: This amendment specifies a YANG data model that allows configuration and status reporting for port-based network access control in the scenarios described in Clause 7 of this standard and Clause 11 of IEEE Std 802.1AE, using the information model already specified in clause 12.9 of IEEE Std 802.1X. This amendment will also resolve any maintenance items that have been submitted on IEEE Std 802.1X.

5.3 Is the completion of this standard dependent upon the completion of another standard: No
5.4 Purpose: IEEE 802 LANs are deployed in networks that convey or provide access to critical data, that support mission critical applications, or that charge for service. Protocols that configure, manage, and regulate access to these networks and network-based services and applications typically run over the networks themselves. Port-based network access control regulates access to the network, guarding against transmission

and reception by unidentified or unauthorized parties, and consequent network disruption, theft of service, or data loss.

5.5 Need for the Project: YANG (Request For Comment (RFC) 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 the manageable entities specified in IEEE Std 802.1X 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

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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

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8.1 Additional Explanatory Notes (Item Number and Explanation): #2.1 While 'YANG' (developed by the IETF) appears to be an acronym it's 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.

#5.2A IEEE Std 802.1AE includes:
IEEE Std 802.1AE(TM)-2006 Local and metropolitan area networks -
Media Access Control (MAC) Security
IEEE Std 802.1AEbn(TM)-2011 Local and metropolitan area networks - Media Access Control (MAC) Security - Amendment 1: Galois Counter Mode - Advanced Encryption Standard - 256 (GCM-AES-256) Cipher Suite
IEEE Std 802.1AEbw(TM)-2013 Local and metropolitan area networks - Media Access Control (MAC) Security - Amendment 2: Extended Packet Numbering

#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

#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.

#7.3A The base standard, IEEE Std 802.1X, 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.