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Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks —

Part 1AE: Media access control (MAC) security

AMENDMENT 1: Galois Counter Model — Advanced Encryption Standard-256 (GCM-AES-256) Cipher Suite

Technologies de l'information — Télécommunications et échange d'information entre systèmes — Réseaux locaux et métropolitains —

Partie 1AE: Sécurité du contrôle d'accès aux supports (MAC)

AMENDEMENT 1

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IEEE Standard for 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 Computer Society

Sponsored by the
LAN/MAN Standards Committee

IEEE
3 Park Avenue
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USA

14 October 2011

IEEE Std 802.1AEbn™-2011
(Amendment to
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Sponsor

LAN/MAN Standards Committee
of the
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Approved 10 September 2011

IEEE-SA Standards Board

Abstract: This amendment specifies the GCM-AES-256 Cipher Suite as an option in addition to the existing mandatory to implement Default Cipher Suite, GCM-AES-128.

Keywords: authenticity, authorized port, confidentiality, data origin integrity, IEEE 802.1AEbn, LANs, local area networks, MAC Bridges, MAC security, MAC Service, MANs, metropolitan area networks, port based network access control, secure association, security, transparent bridging

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Introduction

This introduction is not part of IEEE Std 802.1AEbn-2011, IEEE Standard for Local and metropolitan area networks—Media Access Control (MAC) Security—Amendment 1: Galois Counter Mode—Advanced Encryption Standard—256 (GCM-AES-256) Cipher Suite.

The first edition of IEEE Std 802.1AE was published in 2006. This first amendment to that standard adds the option of using the GCM-AES-256 Cipher Suite.

Relationship between IEEE Std 802.1AE and other IEEE Std 802 standards

IEEE Std 802.1X-2010 specifies Port-based Network Access Control, and provides a means of authenticating and authorizing devices attached to a LAN, and includes the MACsec Key Agreement protocol (MKA) necessary to make use of IEEE 802.1AE.

This standard is not intended for use with IEEE Std 802.11 Wireless LAN Medium Access Control. An amendment to that standard, IEEE Std 802.11i-2004, also makes use of IEEE Std 802.1X, thus facilitating the use of a common authentication and authorization framework for LAN media to which this standard applies and for Wireless LANs.

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