AS/NZS IEC 60839.11.31:2020
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Australian/New Zealand Standard™

Alarm and electronic security systems

Part 11.31: Electronic access control systems — Core interoperability protocol based on Web services

AS/NZS IEC 60839.11.31:2020

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Australian Digital and Telecommunications Industry Association
Australian Industry Group
Australian Security Industry Association
Engineers Australia
Fire Protection Association Australia
Insurance Council of Australia
NSW Police Force
New Zealand Security Association
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First published as AS/NZS IEC 60839.11.31:2020.

Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-031, Intruder Alarm Equipment and Installations.

The objective of this document is to define procedures for communication between network clients and devices. This series of interoperability standards makes it possible to build an alarm and electronic security system with clients and devices from different manufacturers using common and well-defined interfaces. The functions defined in this document cover discovery, device management and event framework. Supplementary dedicated services are defined in separate documents.

The management and control interfaces defined in this document are described as Web services. This document also contains full XML schema and Web Service Description Language (WSDL) definitions.

In order to offer full plug-and-play interoperability, this document defines procedures for device discovery. The device discovery mechanisms in this document are based on the WS-Discovery specification with extensions.

This document does not in any way limit a manufacturer to add other protocol or extend the protocol defined here and rules on how to accomplish this are also provided in this document.

This document is identical with, and has been reproduced from, IEC 60839-11-31:2016, *Alarm and electronic security systems — Part 11-31: Electronic access control systems – Core interoperability protocol based on Web services*.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ALARM AND ELECTRONIC SECURITY SYSTEMS –

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FOREWORD

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International Standard IEC 60839-11-31 has been prepared by IEC technical committee 79: Alarm and electronic security systems.

The text of this standard is based on the following documents:

CDV	Report on voting
79/522/CDV	79/546/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60839 series, published under the general title *Alarm and electronic security systems*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

The object of this document is to provide the common base for a fully interoperable network implementation comprised of products from different network vendors. This document describes the network model, interfaces, data types and data exchange patterns. This document reuses existing relevant standards where available, and introduces new specifications only where necessary.

This document is based upon work done by the ONVIF open industry forum. The ONVIF Core specification is compatible with this document.

This document is accompanied by a set of computer readable interface definitions:

- Device Service WSDL, see Clause B.1;
- Device IO Service WSDL, see Clause B.2;
- Event Service WSDL, see Clause B.3;
- Common schema, see Clause B.4.

This document is divided into the following clauses:

Document overview: Gives an overview of the different standard parts and how they are related to each other.

Web services frame work: Offers a brief introduction to Web services and the Web services basis for this document.

IP configuration: Defines the network IP configuration requirements.

Device discovery: Describes how devices are discovered in local and remote networks.

Device management: Defines the configuration of basics like network and security related settings.

Device IO: Defines the handling of input and output ports on a device.

Event handling: Defines how to subscribe to and receive notifications (events) from a device.

Security: Defines the transport and message level security requirements.

ALARM AND ELECTRONIC SECURITY SYSTEMS –

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1 Scope

This part of IEC 60839 defines procedures for communication between network clients and devices. This series of interoperability standards makes it possible to build an alarm and electronic security system with clients and devices from different manufacturers using common and well defined interfaces. The functions defined in this document covers discovery, device management and event framework. Supplementary dedicated services are defined in separate documents.

The management and control interfaces defined in this document are described as Web services. This document also contains full XML schema and Web Service Description Language (WSDL) definitions.

In order to offer full plug-and-play interoperability, this document defines procedures for device discovery. The device discovery mechanisms in this document are based on the WS-Discovery specification with extensions.

This document does not in any way limit a manufacturer to add other protocol or extend the protocol defined here and rules on how to accomplish this are also provided in this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEEE 1003.1, *The Open Group Base Specifications Issue 6, IEEE Std 1003.1, 2004 Edition <http://pubs.opengroup.org/onlinepubs/009695399/>*

IEEE 802.11, *Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications*
<http://standards.ieee.org/getieee802/download/802.11-2007.pdf>

IEEE 802.1X, *Port-Based Network Access Control*
<http://standards.ieee.org/getieee802/download/802.1X-2004.pdf>

IETF RFC 952, Internet Host Table Specification
<https://tools.ietf.org/html/rfc952

IETF RFC 1123:1989, Requirements for Internet Hosts – Application and Support
<https://tools.ietf.org/html/rfc1123>

IETF RFC 2131, *Dynamic Host Configuration Protocol*
<http://www.ietf.org/rfc/rfc2131.txt>

IETF RFC 2136, *Dynamic Updates in the Domain Name System (DNS UPDATE) <http://www.ietf.org/rfc/rfc2136.txt>*