ISASecure-116

ISA Security Compliance Institute — ISASecure® certification programs
Policy for transition to EDSA 3.0.0 and SSA 3.0.0

Version 1.2

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Revision history

version	date	changes
1.2	2018.10.01	Initial version published to http://www.ISASecure.org

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FOREWORD

This is one of a series of documents that defines ISASecure® certification programs. This document describes the ISCI policy for transition of certification operations to the updated certification versions ISASecure EDSA 3.0.0 (Embedded Device Security Assurance) and SSA 3.0.0 (System Security Assurance). The list of ISASecure certification programs and documents for this program versions, and for the prior versions EDSA 2.1.0 and SSA 2.1.0, can be found on the web site http://www.ISASecure.org.

1 Background and scope

ISCI (ISCI) operates a product certification program for embedded devices, called ISASecure® EDSA (Embedded Device Security Assurance) and a certification program for control systems, called ISASecure SSA (System Security Assurance). The prior versions of these programs were denoted EDSA 2.1.0 and SSA 2.1.0. These prior programs both refer to the ISASecure specification EDSA-311 *Functional security assessment for embedded devices*. [EDSA-311] has been superseded in order to align with the approved standard to be published as ANSI/ISA-62443-4-2 and IEC 62443-4-2. The document that replaces EDSA-311 has been named CSA-311 *ISCI Component Security Assurance - Functional security assessment for components*. The revised versions of the ISASecure certification programs that are aligned with ANSI/ISA 62443-4-2 and that refer to CSA-311 specification, are called EDSA 3.0.0 and SSA 3.0.0.

This document specifies the timeline and related policies for transition of certification operations to EDSA 3.0.0 and SSA 3.0.0.

Modifications previously incorporated in EDSA 2.1.0 and SSA 2.1.0 to the process for maintaining ISASecure product certificates over time continue to apply for EDSA 3.0.0 and SSA 3.0.0. For convenience, since the transition to the 2.1.0 programs remains in progress as of the publication of the present document, Section 5 below provides an overview of those requirements. This is the same information provided previously in [ISASecure-115].

2 Normative references

The policy for the prior transition from EDSA 2.0.0 and SSA 2.0.0 to EDSA 2.1.0 and SSA 2.1.0 is described in:

[ISASecure-115] *ISCI ISASecure Certification Programs - Policy for transition to SDLA 2.0.0, EDSA 2.1.0 and SSA 2.1.0* as specified at http://www.ISASecure.org

The standard with which EDSA 3.0.0 and SSA 3.0.0 align is:

[ANSI/ISA-62443-4-2] ANSI/ISA-62443-4-2-2018 *Security for industrial automation and control systems Part 4-2: Technical security requirements for IACS components*

[IEC 62443-4-2] IEC 62443-4-2:2018 *Security for industrial automation and control systems Part 4-2: Technical security requirements for IACS components*

NOTE   The above IEC standard is pending final approval and publication as of the publication of the present document.

SDLA 2.0.0, EDSA 2.1.0, EDSA 3.0.0, SSA 2.1.0, and SSA 3.0.0 also align with the standard:

[ANSI/ISA-62443-4-1] ANSI/ISA-62443-4-1-2018 *Security for industrial automation and control systems Part 4-1: Secure product development lifecycle requirements*

[IEC 62443-4-1] IEC 62443-4-1:*2018 Security for industrial automation and control systems Part 4-1: Secure product development lifecycle requirements*

SSA 2.0.0 and SSA 2.1.0 also align with the standard:

[ANSI/ISA-62443-3-3] ANSI/ISA−62443−3−3 (99.03.03) - 2013 *Security for industrial automation and control systems Part 3-3: System security requirements and security levels*

[IEC 62443-3-3] IEC 62443−3−3:2013 *Industrial communication networks - Network and system security - Part 3-3: System security requirements and security levels*

An ISASecure certification program version program is defined by a set of associated specification documents and document versions. The documents associated with the programs named in Clause 1 are published at http://www.ISASecure.org.

The present document refers specifically to:

[EDSA-311] *ISCI Embedded Device Security Assurance – Functional security assessment for embedded devices* as specified at http://www.ISASecure.org

[CSA-311] *ISCI Component Security Assurance – Functional security assessment for components*, as specified at http://www.ISASecure.org

[EDSA-301] *ISCI Embedded Device Security Assurance – Maintenance of ISASecure certification,* as specified at http://www.ISASecure.org

[SSA-301] *ISCI System Security Assurance – Maintenance of ISASecure certification,* as specified at http://www.ISASecure.org

3 Definitions and abbreviations

3.1 Definitions

3.1.1
accreditation
for ISASecure certification programs, assessment and recognition process via which an organization is granted chartered laboratory or CRT laboratory status

NOTE   The CRT laboratory accreditation program is not otherwise referenced in, nor impacted by, the present document, since ISCI CRT laboratories are not certification bodies.

3.1.2
accreditation body
third party that performs attestation, related to a conformity assessment body, conveying a formal demonstration of its competence to carry out a specific conformity assessment

3.1.3
certification
third party attestation related to products, processes, or persons that conveys assurance that specified requirements have been demonstrated

NOTE   Here, this refers to either a successful authorized evaluation of a product or a process to ISASecure criteria. This outcome permits the product supplier or organization performing the process to advertise this achievement in accordance with certification program guidelines.

3.1.4
certification body
an organization that performs certification

3.1.5
chartered laboratory
organization chartered by ASCI to evaluate products or development processes under one or more ISASecure certification programs and to grant certifications under one or more of these programs

NOTE   A chartered laboratory is the conformity assessment body for the ISASecure certification programs. ASCI is the legal entity representing ISCI.

3.1.6
combined assessment
three-factor ISASecure product certification assessment that consists of certifier robustness testing (ERT or SRT), evaluation of security functionality (FSA) and process assessment (SDA/SDLPA), which may support an initial certification, or a "delta" certification for a modified product in accordance with the ISASecure EDSA-301 or SSA-301 documents

3.1.7
conformity assessment body
body that performs conformity assessment services and that can be the object of accreditation

NOTE   Examples are a laboratory, inspection body, product certification body, management system certification body and personnel certification body. This is an ISO/IEC term and concept.

3.1.8
control system
hardware and software components of an IACS

NOTE   Control systems include systems that perform monitoring functions.

3.1.9
embedded device
special purpose device running embedded software designed to directly monitor, control or actuate an industrial process

NOTE   Attributes of an embedded device are: no rotating media, limited number of exposed services, programmed through an external interface, embedded OS or firmware equivalent, real-time scheduler, may have an attached control panel, may have a communications interface. Examples are: PLC, field sensor devices, SIS controller, DCS controller.

3.1.10
industrial automation and control system
collection of personnel, hardware, software and policies involved in the operation of the industrial process and that can affect or influence its safe, secure, and reliable operation

3.1.11
initial certification
certification where the ISASecure certification process does not take into account any prior ISASecure certifications of a product under evaluation or of any of its prior versions

3.1.12
release
any software/hardware delivered by the supplier to the customer

3.1.13
update
incremental hardware or software change in order to address security vulnerabilities, bugs, reliability or operability issues

3.1.14
upgrade
incremental hardware or software change in order to add new features

3.1.15
version (of ISASecure certification)
ISASecure certification criteria in force at a particular point in time, defined by the set of document versions that define the certification program, and identified by a three-place number, such as ISASecure SDLA 2.6.1

3.1.16
version (of product)
identifier for a release, usually numerical

NOTE   For a system, may incorporate many individual component versions.

3.2 Abbreviations

The following abbreviations are used in this document.

ANSI	American National Standards Institute
ASCI	Automation Standards Compliance Institute
CRT	communication robustness testing
DCS	distributed control system
EDSA	embedded device security assurance
ERT	embedded device robustness testing
FSA	functional security assessment
IACS	industrial automation and control system(s)
IEC	International Electrotechnical Commission
ISA	International Society of Automation
ISCI	ISA Security Compliance Institute
OS	operating system
PLC	programmable logic controller
SDA	security development artifacts
SDL	security development lifecycle
SDLPA	security development lifecycle process assessment
SDLA	security development lifecycle assurance
SIS	safety instrumented system
SRT	system robustness testing
SSA	system security assurance

4 Transition policy

The following policies apply to ISASecure chartered laboratories, which are the certification bodies for the ISASecure certification programs.

- Any EDSA or SSA certification granted for a product whose SDL activity started after February 2019, SHALL use the EDSA 3.0.0 or SSA 3.0.0 specifications. This applies whether or not the certification granted is an initial certification.

- Any EDSA or SSA certification granted for a product whose SDL activity started during or before February 2019, MAY use the EDSA 3.0.0 or SSA 3.0.0 specifications.

NOTE The set of products described by the first bullet is the same set of products for which EDSA 2.1.0 and SSA 2.1.0 are required to be used per the transition policy to those certification versions described in [ISASecure-115]. This does not mean that an EDSA 2.1.0 or SSA 2.1.0 certification can never be granted because 3.0.0 must always be used. An EDSA 2.1.0 or SSA 2.1.0 certification may be granted for products whose SDL activity started during or before February 2019, in accordance with [ISASecure-115].

5 Maintenance of certification

5.1 Policy

The policy in this section describes how EDSA and SSA certificates are maintained over time. It supersedes information found in other published EDSA 2.1.0, EDSA 3.0.0, SSA 2.1.0, and SSA 3.0.0 specifications, which will be aligned with this policy. The policy applies for all certifications carried out under EDSA 2.1.0, EDSA 3.0.0, SSA 2.1.0, or SSA 3.0.0.

For prior certification versions EDSA 2010.1, SSA 2014.1, EDSA 2.0.0 and SSA 2.0.0, certificates applied to a specific product version, and were valid indefinitely. For EDSA 2.1.0, EDSA 3.0.0, SSA 2.1.0, and SSA 3.0.0, the following policy applies.

- Certification applies to a product version and its updates (as clarified next), rather than to a single product version.

- A supplier shall reach agreement with the chartered laboratory on a policy that can be applied based upon examining product version numbers, that determines whether a new product version falls under an existing certificate or requires a new certification. The intent of the policy is that upgrades (see 3.1.14) require a new certification, and updates (see 3.1.13) do not.

- In order to obtain a certification for a product, a supplier shall hold an ISASecure SDLA certification of a security development lifecycle process that applies to development of product updates going forward.

- A supplier shall inform the certifying chartered lab when the certified product has transitioned to a minimal or no support status, such that the certified SDL process for security management no longer applies.

- A supplier earns a product certification using the same approach as for EDSA 2.0.0 or SSA 2.0.0, by passing a combined assessment for a specific product version (see 3.1.6).

- Once a supplier holds an EDSA 2.1.0, EDSA 3.0.0, SSA 2.1.0, or SSA 3.0.0 certification, that certificate remains valid as long as:

  - The product remains in a support status such that a certified SDL process for security management still applies; AND

  - The supplier retains their SDLA certification.

A grace period of one year shall apply before a product certificate would become invalid due to loss of SDLA certification. A certificate will be updated to record combined and SDL assessments passed, related to the product. It will also record the current product versions at the time of each assessment, as illustrated in Figure 1 below. When first issued, the certificate will have a single row in the table of assessments.

Certified Device
ISA**Secure**

Certificate
SEC 08693
Issued: March 15, 2020; Last update Sep 30, 2024

Certifiers Inc. hereby confirms that the:

2931 Version 1.3.x Programmable Logic Controller
Secure Control, Inc.
Some City, CA

Conforms to 62443 requirements listed, and to requirements shown in the table:

ANSI/ISA-62443-4-1-2018, IEC 62443-4-1:2018 Secure product development lifecycle requirements

ANSI/ISA-62443-4-2-2018, IEC 62443-4-2:2018 Technical security requirements for IACS components

Meeting requirements for: Capability Security Level 1

The normative documents and issue dates that define this certification are listed at www.isasecure.org.

Application restrictions: The unit shall be operated in a network and operational environment meeting the assumptions in the product certification report.

Product certificate remains valid under conditions:
- The following SDLA certificate remains valid: ISASecure® Security Development Lifecycle Assurance certificate number SEC 08691 issued to *Secure Control*, Inc.
- 2931 Version 1.3.x Programmable Logic Controller remains under the security management practices thereby certified

Assessment	Subject under Assessment	Requirements	Date	Current releases at time of assessment
ISASecure® EDSA evaluation	2931 Version 1.3x Programmable Logic Controller	ISASecure Embedded Device Security Assurance 3.0.0 Level 1 referencing errata EDSA-102 v5.0	March 15, 2020	1.3.1
SDLA recertification for SEC 08691	Development process for supplier through Aug 31, 2021	ISASecure Security Development Lifecycle Assurance v2.0.0	Sep 30, 2021	1.3.2, 1.3.3
SDLA recertification For SEC 08691	Development process for supplier through Aug 31, 2024	ISASecure Security Development Lifecycle Assurance v2.0.0	Sep 30, 2024	1.3.5, 1.3.6, 1.3.7

_____
Authorized representative

Chartered Laboratory:
Certifiers, Inc.
Another City, NY, USA
License: nnnnn

Figure 1. Example EDSA 3.0.0 Certificate

5.2 End user perspective

For the end user considering a product purchase or installation of a new product version, the existence of valid ISASecure certificate means that a specific version of the product passed a combined assessment, and that the overall security development process for the supplier passed an assessment within the last three years. It also means that updates for the product remain under the certified SDL. When judging the assurance provided by the certificate for a later product version that is not shown on the certificate, the end user will consider the length of time since the last combined assessment and the last SDLA recertification, the nature and extent of subsequent changes to the product, and the anticipated support status of the

product. The end user will also consider the supplier's version numbering policy for identifying upgrades, to consider when a later upgrade version may undergo a new combined assessment.

5.3 Supplier perspective

A supplier that intends to certify products to EDSA or SSA 2.1.0 or 3.0.0, will obtain an SDLA certification for an SDL process that applies to those products. The supplier will formulate and agree on a policy with their product certifier, for identifying updates to products, versus upgrades that would require new certifications. The policy will be based upon the version numbering of the product releases. For example, a supplier that versions products using the format a.b.c, might have a policy that every change to the "b" digit indicates a new certification, as those releases represent an upgrade. In this example, a certificate might be issued for version 6.x.y, where x and y represent placeholders that can be any digit.