
Upravljanje elektroenergetskega sistema in pripadajoča izmenjava informacij - Varnost podatkov in komunikacij - 3. del: Varnost komunikacijskih omrežij in sistemov - Profili za TCP/IP - Dopolnilo A2

Power systems management and associated information exchange - Data and communications security - Part 3: Communication network and system security - Profiles including TCP/IP

Datenmodelle, Schnittstellen und Informationsaustausch für Planung und Betrieb von Energieversorgungsunternehmen - Daten- und Kommunikationssicherheit - Teil 3: Sicherheit von Kommunikationsnetzen und Systemen - Profile einschließlich TCP/IP

[SIST EN 62351-3:2015/A2:2020](https://standards.iteh.ai/catalog/standards/sist/d91f-258-9b1c-4a38-8422-2046/bs0100/sist-en-62351-3-2015-a2-2020)

Gestion des systèmes de puissance et échanges d'informations associés - Sécurité des communications et des données - Partie 3: Sécurité des réseaux et des systèmes de communication - Profils comprenant TCP/IP

Ta slovenski standard je istoveten z: EN 62351-3:2014/A2:2020

ICS:

29.240.30	Krmilna oprema za elektroenergetske sisteme	Control equipment for electric power systems
35.240.50	Uporabniške rešitve IT v industriji	IT applications in industry

SIST EN 62351-3:2015/A2:2020 **en**

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<https://standards.iteh.ai/catalog/standards/sist/d91fc258-9b1c-4a38-8422-2f0467b50100/sist-en-62351-3-2015-a2-2020>

EUROPEAN STANDARD

EN 62351-3:2014/A2

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2020

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English Version

Power systems management and associated information
exchange - Data and communications security - Part 3:
Communication network and system security - Profiles including
TCP/IP
(IEC 62351-3:2014/A2:2020)

Gestion des systèmes de puissance et échanges
d'informations associés - Sécurité des communications et
des données - Partie 3: Sécurité des réseaux et des
systèmes de communication - Profils comprenant TCP/IP
(IEC 62351-3:2014/A2:2020)

Management von Systemen der Energietechnik und
zugehöriger Datenaustausch - Daten- und
Kommunikationssicherheit - Teil 3: Sicherheit von
Kommunikationsnetzen und Systemen - Profile
einschließlich TCP/IP
(IEC 62351-3:2014/A2:2020)

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This amendment A2 modifies the European Standard EN 62351-3:2014; it was approved by CENELEC on 2020-04-02. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

<https://standards.iteh.ai/catalog/standards/sist/d91fc258-9b1c-4a38-8422-2f0467b50100/sist-en-62351-3-2015-a2-2020>

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN 62351-3:2014/A2:2020 (E)**European foreword**

The text of document 57/2149/FDIS, future IEC 62351-3/A2, prepared by IEC/TC 57 "Power systems management and associated information exchange" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62351-3:2014/A2:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-01-02
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-04-02

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

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Endorsement notice

SIST EN 62351-3:2015/A2:2020

The text of the International Standard IEC 62351-3:2014/A2:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 62351-7	NOTE	Harmonized as EN 62351-7
IEC 62351-14 ¹	NOTE	Harmonized as EN IEC 62351-14 ²

¹ To be published. Stage at the time of publication: IEC/PCC 62351-14:2020.

² To be published. Stage at the time of publication: prEN IEC 62351-14:2019.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Add the following reference:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62351-7	-	Power systems management and associated information exchange. Data and communications security - Part 7: Network and System Management (NSM) data object models	EN 62351-7	-

<https://standards.iteh.ai/catalog/standards/sist/d91fc258-9b1c-4a38-8422-2f0467b50100/sist-en-62351-3-2015-a2-2020>

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IEC 62351-3

Edition 1.0 2020-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 2
AMENDEMENT 2

**Power systems management and associated information exchange – Data and communications security –
Part 3: Communication network and system security – Profiles including TCP/IP**

**Gestion des systèmes de puissance et échanges d'informations associés –
Sécurité des communications et des données –
Partie 3: Sécurité des réseaux et des systèmes de communication – Profils
comprenant TCP/IP**

INTERNATIONAL
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FOREWORD

This amendment to International Standard IEC 62351-3 has been prepared by IEC technical committee 57: Power systems management and associated information exchange.

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

FDIS	Report on voting
57/2149/FDIS	57/2167/RVD

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 62351 series, published under the general title *Power systems management and associated information exchange – Data and communications security*, 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 web site 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.

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<https://standards.iteh.ai/catalog/standards/sist/d91fc258-9b1c-4a38-8422-2f0467b50100/sist-en-62351-3-2015-a2-2020>

INTRODUCTION to Amendment 2

This amendment to International Standard IEC 62351-3 and its Amendment 1 (2018) has been prepared in order to address the following issues:

- Support for TLS versions 1.1 and 1.0 is made optional instead of mandatory to address known weaknesses. This is aligned with the defined security warnings for TLS versions 1.1 and 1.0.
- Update of TLS version handling during renegotiation and resumption to avoid TLS version downgrade/upgrade within a same session.
- Updated explanatory text for session renegotiation to make the communication relations clearer.
- Deprecation of RSA1024 and SHA-1 algorithms. This underlines the desire to disallow them in the next edition.
- Inclusion of PICS section for mandatory and optional settings in TLS.
- Updated text for and enhancements of security events to better align with IEC 62351-14.
- Inclusion of general remarks for the security event handling.
- Update of references.

Moreover, explanatory text has been included to better describe certain options as well as an adjustment to the requirements for referencing standards.

2 Normative references

Add the following new document to the list of references:

IEC 62351-7, *Power systems management and associated information exchange – Data and communications security – Part 7: Network and System Management (NSM) data object models*

4 Security issues addressed by this standard

4.2 Security threats countered

Replace the existing text of the second paragraph of Subclause 4.2 as modified by Amendment 1 with the following new text:

TCP/IP and the security specifications in this part of IEC 62351 cover only the communication transport layers (OSI layers 4 and lower). Specifically, TLS protects the transported messages from OSI layer 5 and above in a transparent way. This part of IEC 62351 does not cover security functionality specific for the communication application layers (OSI layers 5 and above) or application-to-application security.

Add, after existing Subclause 4.3 as modified by Amendment 1, the following new Subclause 4.4:

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4.4 Handling of security events

Throughout the document security events are defined as warnings and alarms. These security events are intended to support the error handling and thus to increase system resilience. Implementations should provide a mechanism for announcing security events.

It is recommended that the security warning and alarms throughout the document are implemented by cyber security events as specified by IEC 62351-14 or by monitoring objects as specified by IEC 62351-7.

Note that warnings and alarms are used to indicate the severity of an event from a security point of view. The following notion is used:

- A warning was intended to raise awareness but to indicate that it may be safe to proceed.
- An alarm is an indication to not proceed.

In any case, it is expected that an operator's security policy determines the final handling based on the operational environment.

5 Mandatory requirements

5.1 Deprecation of cipher suites

Replace the existing text of the second paragraph of Subclause 5.1 with the following new text:

If the communication connection is encrypted the following cipher suites may be used:

- TLS_RSA_WITH_NULL_SHA
- TLS_RSA_WITH_NULL_SHA256

Replace the existing text of the fourth paragraph of Subclause 5.1 as added by Amendment 1 with the following new text: