SLOVENSKI STANDARD
SIST-TP CLC IEC/TR 62541-1:2021

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Nadomešča:
SIST-TP CLC/TR 62541-1:2010

Enotna arhitektura OPC - 1. del: Pregled in koncepti

OPC unified architecture - Part 1: Overview and concepts

OPC Unified Architecture - Teil 1: Übersicht und Konzepte

Architecture unifiée OPC - Partie 1: Vue d'ensemble et concepts

Ta slovenski standard je istoveten z: **CLC IEC/TR 62541-1:2021**

ICS:

25.040.40	Merjenje in krmiljenje industrijskih postopkov	Industrial process measurement and control
35.100.01	Medsebojno povezovanje odprtih sistemov na splošno	Open systems interconnection in general

SIST-TP CLC IEC/TR 62541-1:2021 **en,fr,de**

TECHNICAL REPORT

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English Version

OPC unified architecture - Part 1: Overview and concepts (IEC/TR 62541-1:2020)

Architecture unifiée OPC - Partie 1: Vue d'ensemble et concepts
(IEC/TR 62541-1:2020)

OPC Unified Architecture - Teil 1: Übersicht und Konzepte
(IEC/TR 62541-1:2020)

This Technical Report was approved by CENELEC on 2021-07-05.

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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

Ref. No. CLC IEC/TR 62541-1:2021 E

European foreword

This document (CLC IEC/TR 62541-1:2021) consists of the text of IEC/TR 62541-1:2020, prepared by SC 65E "Devices and integration in enterprise systems" of IEC/TC 65 "Industrial-process measurement, control and automation".

This document supersedes CLC/TR 62541-1:2010.

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Endorsement notice

The text of the International Technical Report IEC/TR 62541-1:2020 was approved by CENELEC as a European Technical Report without any modification.

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.

Publication	Year	Title	EN/HD	Year
IEC/TR 62541-2	-	OPC unified architecture – Part 2: Security Mode	CLC/TR 62541-2	-
IEC 62541-3	-	OPC Unified Architecture - Part 3: Address Space Model	EN IEC 62541-3	-
IEC 62541-4	-	OPC Unified Architecture - Part 4: Services	EN IEC 62541-4	-
IEC 62541-5	-	OPC Unified Architecture - Part 5: Information Model	EN IEC 62541-5	-
IEC 62541-6	-	OPC Unified Architecture - Part 6: Mappings	EN IEC 62541-6	-
IEC 62541-7	-	OPC unified architecture - Part 7: Profiles	EN IEC 62541-7	-
IEC 62541-8	-	OPC Unified Architecture - Part 8: Data Access	EN IEC 62541-8	-
IEC 62541-9	-	OPC Unified Architecture - Part 9: Alarms and Conditions	EN IEC 62541-9	-
IEC 62541-10	-	OPC Unified Architecture - Part 10: Programs	EN IEC 62541-10	-
IEC 62541-11	-	OPC Unified Architecture - Part 11: Historical Access	EN IEC 62541-11	-
IEC 62541-12	-	OPC unified architecture - Part 12: Discovery and global services	EN IEC 62541-12	-
IEC 62541-13	-	OPC Unified Architecture - Part 13: Aggregates	EN IEC 62541-13	-
IEC 62541-14	-	OPC unified architecture - Part 14: PubSub	EN IEC 62541-14	-
ITU X.509	-	Information technology – Open Systems Interconnection – The Directory: Public-key and attribute certificate frameworkshttps://www.itu.int/rec/T-REC-X.509		

IEC TR 62541-1

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TECHNICAL REPORT

colour inside

OPC unified architecture –
Part 1: Overview and concepts

INTERNATIONAL
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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OPC UNIFIED ARCHITECTURE –

Part 1: Overview and concepts

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC TR 62541-1, which is a Technical Report, has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

This third edition cancels and replaces the second edition of IEC TR 62541-1, published in 2016. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) added Subclauses 6.5 and 6.6 and other text throughout to include PubSub introduction;
b) added new transports and encodings to existing overview sections;
c) removed WS-SecureConversation example since this mapping has been deprecated;

d) improved the definition of Certificate.

The text of this Technical Report is based on the following documents:

Enquiry draft	Report on voting
65E/678/DTR	65E/702/RVDTR

Full information on the voting for the approval of this technical report 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.

Throughout this document and the referenced other Parts of the series, certain document conventions are used:

Italics are used to denote a defined term or definition that appears in the “Terms and definition” clause in one of the parts of the series.

Italics are also used to denote the name of a service input or output parameter or the name of a structure or element of a structure that are usually defined in tables.

The *italicized terms* and names are also often written in camel-case (the practice of writing compound words or phrases in which the elements are joined without spaces, with each element's initial letter capitalized within the compound). For example, the defined term is *AddressSpace* instead of Address Space. This makes it easier to understand that there is a single definition for AddressSpace, not separate definitions for Address and Space.

A list of all parts of the IEC 62541 series, published under the general title OPC Unified Architecture, 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.

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.

OPC UNIFIED ARCHITECTURE –

Part 1: Overview and concepts

1 Scope

This part of IEC 62541 presents the concepts and overview of the OPC Unified Architecture (OPC UA). Reading this document is helpful to understand the remaining parts of this multi-part document set. Each of the other parts of IEC 62451 is briefly explained along with a suggested reading order.

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.

IEC TR 62541-2, *OPC unified architecture – Part 2: Security Model*

IEC 62541-3, *OPC unified architecture – Part 3: Address Space Model*

IEC 62541-4, *OPC unified architecture – Part 4: Services*

IEC 62541-5, *OPC unified architecture – Part 5: Information Model*

IEC 62541-6, *OPC unified architecture – Part 6: Mappings*

IEC 62541-7, *OPC unified architecture – Part 7: Profiles*

IEC 62541-8, *OPC unified architecture – Part 8: Data access*

IEC 62541-9, *OPC unified architecture – Part 9: Alarms and Conditions*

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IEC 62541-13, *OPC Unified Architecture – Part 13: Aggregates*

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