SLOVENSKI STANDARD
oSIST prEN IEC 62541-12:2024

01-marec-2024

Enotna arhitektura OPC - 12. del: Odkrivanje in globalne storitve

OPC unified architecture - Part 12: Discovery and global services

OPC Unified Architecture - Teil 12: Erkundung und globale Dienste

Architecture unifiée OPC - Partie 12: Services globaux et de découverte

Ta slovenski standard je istoveten z: **prEN IEC 62541-12:2024**

ICS:

25.040.40	Merjenje in krmiljenje industrijskih postopkov	Industrial process measurement and control
35.240.50	Uporabniške rešitve IT v industriji	IT applications in industry

oSIST prEN IEC 62541-12:2024 **en,fr,de**

65E/1051/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER:	
IEC 62541-12 ED2	
DATE OF CIRCULATION:	CLOSING DATE FOR VOTING:
2024-01-26	**2024-04-19**
SUPERSEDES DOCUMENTS:	
65E/973/RR	

IEC SC 65E : DEVICES AND INTEGRATION IN ENTERPRISE SYSTEMS

SECRETARIAT:	SECRETARY:
United States of America	Mr Donald (Bob) Lattimer
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.

FUNCTIONS CONCERNED:

☐ EMC ☐ ENVIRONMENT ☐ QUALITY ASSURANCE ☐ SAFETY

☒ SUBMITTED FOR CENELEC PARALLEL VOTING	☐ NOT SUBMITTED FOR CENELEC PARALLEL VOTING
Attention IEC-CENELEC parallel voting The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting. The CENELEC members are invited to vote through the CENELEC online voting system.	

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Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Recipients of this document are invited to submit, with their comments, notification of any relevant “In Some Countries” clauses to be included should this proposal proceed. Recipients are reminded that the CDV stage is the final stage for submitting ISC clauses. (SEE AC/22/2007 OR NEW GUIDANCE DOC).

TITLE:

OPC Unified Architecture - Part 12: Discovery and global services

PROPOSED STABILITY DATE: 2026

NOTE FROM TC/SC OFFICERS:

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FIGURES

TABLES

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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OPC UNIFIED ARCHITECTURE –

Part 12: Discovery and Global Services

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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International Standard IEC 62541-12 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

This fourth edition cancels and replaces the third edition published in 2020. This edition constitutes a technical revision.

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

a) Added a “Quantity Model” which can be referenced from EngineeringUnit Properties. The model defines quantities and assigned units. In addition it provides alternative units and the conversion to them.
b) Added additional rules for ValuePrecision Property:
   - Can also be used for other subtypes like Duration and Decimal.
   - Added rules when ValuePrecision has negative values.

394 The text of this International Standard is based on the following documents:

CDV	Report on voting
65E/XX/CDV	65E/XX/RVC

395
396 Full information on the voting for the approval of this International Standard can be found in the
397 report on voting indicated in the above table.

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

399 Throughout this document and the other parts of the IEC 62541 series, certain document
400 conventions are used:

401 *Italics* are used to denote a defined term or definition that appears in the "Terms and definition"
402 clause in one of the parts of the IEC 62541 series.

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

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

410 A list of all parts of the IEC 62541 series, published under the general title *OPC Unified Architecture*,
411 can be found on the IEC website.

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

415 • reconfirmed,
416 • withdrawn,
417 • replaced by a revised edition, or
418 • amended.

419

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.

420

OPC UNIFIED ARCHITECTURE

Part 12: Discovery and Global Services

1 Scope

This part specifies how OPC Unified Architecture (OPC UA) *Clients* and *Servers* interact with *DiscoveryServers* when used in different scenarios. It specifies the requirements for the *LocalDiscoveryServer, LocalDiscoveryServer-ME and GlobalDiscoveryServer.* It also defines information models for *Certificate* management, *KeyCredential m*anagement and *AuthorizationServices*.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments and errata) applies.

IEC 62541-1, OPC Unified Architecture - Part 1: Overview and Concepts

IEC 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 62541-9, OPC Unified Architecture - Part 9: Alarms and Conditions

IEC 62541-14, OPC Unified Architecture - Part 14: PubSub

IEC 62541-17, OPC Unified Architecture - Part 17: Alias Names

IEC 62541-20, OPC Unified Architecture - Part 20: File Transfer

IEC 62541-21, OPC Unified Architecture - Part 21: Device Onboarding

Auto-IP, Dynamic Configuration of IPv4 Link-Local Addresses

http://www.ietf.org/rfc/rfc3927.txt

DNS-Name, Domain Names – Implementation and Specification

http://www.ietf.org/rfc/rfc1035.txt

DHCP, Dynamic Host Configuration Protocol

http://www.ietf.org/rfc/rfc2131.txt

mDNS, Multicast DNS

http://www.ietf.org/rfc/rfc6762.txt

DNS-SD, DNS Based Service Discovery

http://www.ietf.org/rfc/rfc6763.txt

RFC 5958, Asymmetric Key Packages

http://www.ietf.org/rfc/rfc5958.txt