

INTERNATIONAL STANDARD

**OPC Unified Architecture -
Part 7: Profiles**



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CONTENTS

FOREWORD	9
1 Scope	11
2 Normative references	11
3 Terms, definitions and abbreviated terms	12
3.1 Terms and definitions.....	12
3.2 Abbreviated terms.....	13
4 Profile model	14
4.1 General.....	14
4.2 <i>ConformanceUnits</i> and Conformance Groups.....	15
4.3 Profiles	15
4.4 Profile Categories	15
4.5 Profile conformance	16
4.6 Conventions for Profile definitions.....	16
4.7 Profile versioning	16
4.8 Applications	16
5 <i>ConformanceUnits</i>	17
5.1 Conformance Groups	17
5.2 <i>ConformanceUnits</i> by <i>ConformanceGroup</i>	18
5.2.1 Miscellaneous.....	18
5.2.2 Address Space Model.....	20
5.2.3 Base Information	22
5.2.4 Base File Information.....	29
5.2.5 Base Services	30
5.2.6 Discovery Services	31
5.2.7 Session Services	32
5.2.8 View Services	33
5.2.9 Attribute Services	34
5.2.10 Subscription Services	35
5.2.11 Monitored Item Services	36
5.2.12 Method Services.....	38
5.2.13 Node Management Services	38
5.2.14 Auditing	39
5.2.15 Redundancy	40
5.2.16 Protocol and Encoding.....	40
5.2.17 Security General.....	41
5.2.18 Security User Token	46
5.2.19 Security Algorithms.....	48
5.2.20 Safety	54
5.2.21 Data Access	54
5.2.22 Alarms and Conditions.....	56
5.2.23 Historical Access	59
5.2.24 Aggregates	62
5.2.25 GDS	67
5.2.26 AliasName	68
5.2.27 Scheduler	68
5.2.28 PubSub General	69

5.2.29	PubSub Configuration	71
5.2.30	PubSub Discovery	74
5.2.31	PubSub Security	74
5.2.32	PubSub SKS	75
5.2.33	PubSub Limits (Deprecated)	76
6	Profiles	79
6.1	Profiles by Category	79
6.1.1	Application Profiles	79
6.1.2	Server	80
6.1.3	Client	82
6.1.4	Publisher	85
6.1.5	Subscriber	85
6.1.6	Transport	86
6.1.7	Security	87
6.1.8	Global Directory Service	88
7	Profile Definitions	88
7.1	Application Profiles	88
7.1.1	Nano Embedded Device 2022 Server Profile	88
7.1.2	Micro Embedded Device 2022 Server Profile	88
7.1.3	Embedded 2022 UA Server Profile	89
7.1.4	Standard 2022 UA Server Profile	89
7.1.5	Minimum UA Client 2022 Profile	89
7.1.6	Standard UA Client 2022 Profile	90
7.1.7	Global Discovery Server 2022 Profile	90
7.1.8	Global Discovery and Certificate Mgmt 2022 Server	91
7.1.9	Global Certificate Management Client 2022 Profile	91
7.1.10	Security Key Server Profile	91
7.1.11	Publisher UDP UADP Periodic Fixed 2022 Profile	92
7.1.12	Publisher UDP UADP Dynamic 2022 Profile	92
7.1.13	Publisher UDP UADP Flexible Layout 2022 Profile	93
7.1.14	Subscriber UDP UADP Periodic Fixed 2022 Profile	93
7.1.15	Subscriber UDP UADP Dynamic 2022 Profile	93
7.1.16	Subscriber UDP UADP Flexible Layout 2022 Profile	94
7.2	Server	94
7.2.1	Core 2022 Server Facet	94
7.2.2	Exposes Type System Server Facet	95
7.2.3	Base Server Behaviour Facet	97
7.2.4	Method 2022 Server Facet	97
7.2.5	File Access Server Facet	97
7.2.6	Temporary File Access Server Facet	97
7.2.7	Dictionary Reference Server Facet	98
7.2.8	AliasName Server Facet	98
7.2.9	AliasName Aggregating Server Facet	98
7.2.10	State Machine 2022 Server Facet	98
7.2.11	Scheduler Base Server Facet	99
7.2.12	Scheduler Configuration Server Facet	99
7.2.13	Node Management 2022 Server Facet	99
7.2.14	Attribute WriteMask Server Facet	99

7.2.15	Publisher Information Model 2022 Facet.....	100
7.2.16	Subscriber Information Model 2022 Facet.....	100
7.2.17	Documentation Server Facet	101
7.2.18	Subnet Discovery Server Facet.....	101
7.2.19	Reverse Connect Server Facet.....	101
7.2.20	Sessionless Server Facet	101
7.2.21	Global Certificate Management Server Facet.....	102
7.2.22	Authorization Service Server Facet.....	102
7.2.23	KeyCredential Service Server Facet	102
7.2.24	User Role Base 2022 Server Facet.....	102
7.2.25	User Role Management 2022 Server Facet.....	102
7.2.26	User Token – Anonymous Server Facet.....	103
7.2.27	User Token – User Name Password Server Facet	103
7.2.28	User Token – X509 Certificate Server Facet	103
7.2.29	User Token – JWT Server Facet.....	103
7.2.30	Embedded DataChange Subscription 2022 Server Facet.....	104
7.2.31	Standard DataChange Subscription 2022 Server Facet.....	104
7.2.32	Durable Subscription 2022 Server Facet.....	104
7.2.33	Data Access Server Facet	105
7.2.34	ComplexType 2017 Server Facet.....	105
7.2.35	Standard Event Subscription 2022 Server Facet	106
7.2.36	Model Change Event Server Facet	106
7.2.37	Auditing 2022 Server Facet	107
7.2.38	Request State Change Server Facet.....	107
7.2.39	Address Space Notifier Server Facet	107
7.2.40	A & C Base Condition 2022 Server Facet	107
7.2.41	A & C Refresh2 2022 Server Facet.....	108
7.2.42	A & C Address Space Instance 2022 Server Facet	108
7.2.43	A & C Enable 2022 Server Facet	108
7.2.44	A & C Previous Instances 2022 Server Facet.....	108
7.2.45	A & C Acknowledgeable Alarm 2022 Server Facet.....	109
7.2.46	A & C Alarm 2022 Server Facet.....	109
7.2.47	A & C Exclusive Alarming 2022 Server Facet.....	110
7.2.48	A & C Non–Exclusive Alarming 2022 Server Facet	110
7.2.49	A & C Alarm Auditing Server Facet.....	110
7.2.50	A & C AlarmMetrics Server Facet	111
7.2.51	A & C CertificateExpiration 2022 Server Facet.....	111
7.2.52	A & C Dialog 2022 Server Facet	111
7.2.53	A & E Wrapper 2022 Facet	112
7.2.54	Historical Raw Data 2022 Server Facet	112
7.2.55	Historical Data AtTime 2022 Server Facet	113
7.2.56	Historical Aggregate 2022 Server Facet.....	113
7.2.57	Historical Access Modified Data 2022 Server Facet.....	114
7.2.58	Historical Annotation 2022 Server Facet.....	114
7.2.59	Historical Access Structured Data 2022 Server Facet.....	115
7.2.60	Historical Data Update 2022 Server Facet	115
7.2.61	Historical Data Insert 2022 Server Facet	115
7.2.62	Historical Data Replace 2022 Server Facet.....	116

7.2.63	Historical Data Delete 2022 Server Facet	116
7.2.64	Base Historical Event 2022 Server Facet	116
7.2.65	Historical Event Update 2022 Server Facet.....	116
7.2.66	Historical Event Insert 2022 Server Facet.....	116
7.2.67	Historical Event Replace 2022 Server Facet	117
7.2.68	Historical Event Delete 2022 Server Facet.....	117
7.2.69	Aggregate Subscription 2022 Server Facet.....	117
7.2.70	Client Redundancy Server Facet	118
7.2.71	Redundancy Transparent Server Facet.....	118
7.2.72	Redundancy Visible Server Facet	118
7.3	Client.....	119
7.3.1	Core 2022 Client Facet	119
7.3.2	Minimum UA Client Facet	119
7.3.3	Base Client Behaviour Facet.....	120
7.3.4	AddressSpace Lookup Client Facet	120
7.3.5	Method Client Facet	120
7.3.6	Diagnostic Client Facet.....	121
7.3.7	Entry Level Support 2015 Client Facet.....	121
7.3.8	Multi-Server Client Connection Facet.....	121
7.3.9	File Access Client Facet	121
7.3.10	Temporary File Access Client Facet	121
7.3.11	Request State Change Client Facet.....	122
7.3.12	AliasName Client Facet	122
7.3.13	State Machine Client Facet.....	122
7.3.14	Scheduler Configuration Client Facet.....	122
7.3.15	Advanced Type Programming Client Facet	122
7.3.16	Node Management Client Facet.....	123
7.3.17	Documentation – Client	123
7.3.18	Discovery Client Facet.....	123
7.3.19	Subnet Discovery Client Facet.....	123
7.3.20	Global Discovery Client Facet.....	124
7.3.21	Reverse Connect Client Facet	124
7.3.22	Sessionless Client Facet	124
7.3.23	User Role Management Client Facet.....	124
7.3.24	User Token – Anonymous Client Facet	124
7.3.25	User Token – User Name Password Client Facet.....	125
7.3.26	User Token – X509 Certificate Client Facet	125
7.3.27	User Token – JWT Client Facet	125
7.3.28	Global Certificate Management Client Facet	125
7.3.29	KeyCredential Service Client Facet.....	125
7.3.30	Access Token Request Client Facet	126
7.3.31	Attribute Read Client Facet.....	126
7.3.32	Attribute Write Client Facet.....	126
7.3.33	DataChange Subscriber 2022 Client Facet	127
7.3.34	Durable Subscription Client Facet.....	127
7.3.35	DataAccess Client Facet.....	127
7.3.36	Event Subscriber Client Facet	128
7.3.37	Base Event Processing Client Facet	128

7.3.38	Auditing Client Facet	128
7.3.39	Notifier and Source Hierarchy Client Facet	129
7.3.40	A & C Base Condition Client Facet	129
7.3.41	A & C Refresh2 Client Facet	129
7.3.42	A & C Address Space Instance Client Facet	129
7.3.43	A & C Enable Client Facet	129
7.3.44	A & C Previous Instances Client Facet	130
7.3.45	A & C Alarm Client Facet	130
7.3.46	A & C Exclusive Alarming Client Facet	130
7.3.47	A & C Non-Exclusive Alarming Client Facet	131
7.3.48	A & C AlarmMetrics Client Facet	131
7.3.49	A & C CertificateExpiration Client Facet	131
7.3.50	A & C Dialog Client Facet	131
7.3.51	A & E Proxy Facet	132
7.3.52	Historical Access Client Facet	133
7.3.53	Historical Data AtTime Client Facet	133
7.3.54	Historical Aggregate Client Facet	133
7.3.55	Historical Annotation Client Facet	134
7.3.56	Historical Access Modified Data Client Facet	134
7.3.57	Historical Structured Data Access Client Facet	134
7.3.58	Historical Structured Data AtTime Client Facet	135
7.3.59	Historical Structured Data Modified Client Facet	135
7.3.60	Historical Access Client Server Timestamp Facet	135
7.3.61	Historical Data Update Client Facet	135
7.3.62	Historical Data Insert Client Facet	135
7.3.63	Historical Data Replace Client Facet	135
7.3.64	Historical Data Delete Client Facet	136
7.3.65	Historical Structured Data Update Client Facet	136
7.3.66	Historical Structured Data Insert Client Facet	136
7.3.67	Historical Structured Data Replace Client Facet	136
7.3.68	Historical Structured Data Delete Client Facet	136
7.3.69	Historical Events Client Facet	136
7.3.70	Historical Event Update Client Facet	137
7.3.71	Historical Event Insert Client Facet	137
7.3.72	Historical Event Replace Client Facet	137
7.3.73	Historical Event Delete Client Facet	137
7.3.74	Aggregate Subscriber Client Facet	137
7.3.75	Redundant Client Facet	138
7.3.76	Redundancy Switch Client Facet	139
7.4	Publisher	139
7.4.1	Publisher Message Security Facet	139
7.4.2	Publisher Cyclic Limits Facet (Deprecated)	139
7.4.3	Publisher Acyclic Limits Facet (Deprecated)	139
7.4.4	Publisher UADP Periodic Fixed Layout Facet	140
7.4.5	Publisher UADP Dynamic Data or Events Facet	140
7.4.6	Publisher UADP Flexible Layout Facet	140
7.4.7	Publisher Parameter Configuration Facet	140
7.4.8	Publisher Component Configuration Facet	141

7.5	Subscriber	141
7.5.1	Subscriber Message Security Facet	141
7.5.2	Subscriber Cyclic Limits Facet (Deprecated)	142
7.5.3	Subscriber Acyclic Limits Facet (Deprecated)	142
7.5.4	Subscriber UADP Periodic Fixed Layout Facet	142
7.5.5	Subscriber UADP Dynamic Data or Events Facet	142
7.5.6	Subscriber UADP Flexible Layout Facet	143
7.5.7	Subscriber Parameter Configuration Facet	143
7.5.8	Subscriber Component Configuration Facet	143
7.6	Transport	144
7.6.1	UA–TCP UA–SC UA–Binary	144
7.6.2	HTTPS UA–Binary	144
7.6.3	HTTPS UA–XML	144
7.6.4	HTTPS UA–JSON	144
7.6.5	WSS UA–SC UA–Binary	145
7.6.6	WSS UA–JSON	145
7.6.7	PubSub UDP UADP	145
7.6.8	PubSub ETH UADP	145
7.6.9	PubSub MQTT UADP	145
7.6.10	PubSub MQTT JSON	146
7.6.11	PubSub AMQP UADP	146
7.6.12	PubSub AMQP JSON	146
7.6.13	SecurityPolicy [B] – Basic256Sha256	146
7.6.14	SecurityPolicy – Basic256 (Deprecated)	147
7.6.15	SafetyAutomationComponent Facet (Deprecated)	147
7.6.16	SafetyProvider Facet	148
7.6.17	SafetyProviderServer Facet	148
7.6.18	SafetyProviderPubSub Facet	148
7.6.19	SafetyProviderServerMapper Facet	148
7.6.20	SafetyProviderPubSubMapper Facet	148
7.6.21	SafetyConsumer Facet	148
7.6.22	SafetyConsumerClient Facet	149
7.6.23	SafetyConsumerPubSub Facet	149
7.6.24	SafetyConsumerPubSubMapper Facet	149
7.7	Security	149
7.7.1	SecurityPolicy – None	149
7.7.2	SecurityPolicy [A] – Aes128–Sha256–RsaOaep	150
7.7.3	SecurityPolicy – Aes256–Sha256–RsaPss	150
7.7.4	SecurityPolicy [ECC–A] – ECC–curve25519	151
7.7.5	SecurityPolicy [ECC–B] – ECC–nistP256	151
7.7.6	SecurityPolicy – ECC–nistP384	152
7.7.7	SecurityPolicy – ECC–brainpoolP256r1	152
7.7.8	SecurityPolicy – ECC–brainpoolP384r1	153
7.7.9	SecurityPolicy – ECC–curve448	154
7.7.10	SecurityPolicy – Basic128Rsa15 (Deprecated)	154
7.7.11	SecurityPolicy [A] – PubSub–Aes128–CTR	155
7.7.12	SecurityPolicy – PubSub–Aes256–CTR	155
7.7.13	Security Time Synchronization	156

7.7.14	Security User Access Control Base	156
7.7.15	Security User Access Control Full.....	156
7.7.16	Best Practice – Audit Events.....	156
7.7.17	Best Practice – Alarm Handling	156
7.7.18	Best Practice – Random Numbers	157
7.7.19	Best Practice – Timeouts	157
7.7.20	Best Practice – Administrative Access	157
7.7.21	Best Practice – Strict Message Handling	157
7.7.22	Best Practice – Audit Events Client.....	157
7.7.23	TransportSecurity – TLS 1.2	157
7.7.24	TransportSecurity – TLS 1.2 with PFS	158
7.7.25	TransportSecurity – TLS 1.0 (Deprecated).....	158
7.7.26	TransportSecurity – TLS 1.1 (Deprecated).....	158
7.7.27	MQTT UserName.....	159
7.7.28	AMQP SASL Plain	159
7.8	Global Directory Service	159
7.8.1	Global Service Authorization Request Server Facet.....	159
7.8.2	Global Service KeyCredential Pull Facet.....	159
7.8.3	Global Service KeyCredential Push Facet.....	159
7.8.4	GDS AliasName Server Facet.....	160
Figure 1	Profile – ConformanceUnit – TestCases	14
Table 1	Profile Categories	15
Table 2	Conformance Groups	17
Table 3	Miscellaneous	18
Table 4	Address Space Model	20
Table 5	Base Information	22
Table 6	Base File Information	29
Table 7	Base Services	30
Table 8	Discovery Services.....	31
Table 9	Session Services.....	32
Table 10	View Services.....	33
Table 11	Attribute Services	34
Table 12	Subscription Services	35
Table 13	Monitored Item Services	36
Table 14	Method Services.....	38
Table 15	Node Management Services	38
Table 16	Auditing	39
Table 17	Redundancy	40
Table 18	Protocol and Encoding	40
Table 19	Security General	41
Table 20	Security User Token	46
Table 21	Security Algorithms	48
Table 22	Safety	54

Table 23 – Data Access	54
Table 24 – Alarms and Conditions	56
Table 25 – Historical Access	59
Table 26 – Aggregates	62
Table 27 – GDS	67
Table 28 – AliasName	68
Table 29 – Scheduler	68
Table 30 – PubSub General	69
Table 31 – PubSub Configuration	71
Table 32 – PubSub Discovery	74
Table 33 – PubSub Security	74
Table 34 – PubSub SKS	75
Table 35 – PubSub Limits	76
Table 36 – Application Profiles	79
Table 37 – Server	80
Table 38 – Client	82
Table 39 – Publisher	85
Table 40 – Subscriber	85
Table 41 – Transport	86
Table 42 – Security	87
Table 43 – Global Directory Service	88

INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPC Unified Architecture - Part 7: Profiles

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IEC 62541-7 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation. It is an International Standard.

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) Profiles and *ConformanceUnits* are not part of this document, but are solely managed in a public database as described in Clause 1.

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

Draft	Report on voting
65E/1184/FDIS	65E/1199/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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

Italics are used to denote a defined term or definition that appears in the "Terms and definitions" clause in one of the parts of the IEC 62541 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, with a few exceptions, 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 in 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 document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

1 Scope

This part of IEC 62541 specifies value and structure of *Profiles* in the OPC Unified Architecture.

OPC UA *Profiles* are used to segregate features with regard to testing of OPC UA products and the nature of the testing. The scope of this document includes defining functionality that can only be tested. The definition of actual *TestCases* is not within the scope of this document, but the general categories of *TestCases* are covered by this document.

Most OPC UA applications will conform to several, but not all of the *Profiles*.

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 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 62541-8, *OPC Unified Architecture - Part 8: Data Access*

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

IEC 62541-10, *OPC Unified Architecture - Part 10: Programs*

IEC 62541-11, *OPC Unified Architecture - Part 11: Historical Access*

IEC 62541-12, *OPC Unified Architecture - Part 12: Discovery and global services*

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

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

IEC 62541-15, *OPC Unified Architecture - Part 15: Safety*

IEC 62541-16, *OPC Unified Architecture - Part 16: State Machines*

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

IEC 62541-18, *OPC Unified Architecture - Part 18: Role-Based Security*

IEC 62541-19, *OPC Unified Architecture - Part 19: Dictionary Reference*

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

IEC 62541-22, *OPC Unified Architecture - Part 22: Base Network Model*

IEC 62541-24, *OPC Unified Architecture - Part 24: Scheduler* [viewed 2025-08-18]

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